

MAX TNT Reference Guide

Ascend Communications, Inc.
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Telephone outside the United States	(510) 769-8027
Asia Pacific (except Japan)	(+61) 3 9656 7000
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Benelux	(+33) 492 96 5674
France	(+33) 492 96 5673
Italy	(+33) 492 96 5676
Japan	(+81) 3 5325 7397
Middle East/Africa	(+33) 492 96 5679
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- Email from within the U.S.—support@ascend.com
- Email from Europe, the Middle East, or Asia—EMEAsupport@ascend.com
- Fax—(510) 814-2312
- Customer Support BBS (by modem)—(510) 814-2302
- Write to Ascend at the following address:

Attn: Customer Service
Ascend Communications, Inc.
One Ascend Plaza
1701 Harbor Bay Parkway
Alameda, CA 94502-3002

Finding information and software on the Internet

Visit Ascend's Web site at `http://www.ascend.com` for technical information, product information, and descriptions of available services.

Visit Ascend's FTP site at `ftp.ascend.com` for software upgrades, release notes, and addenda to this manual.

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About This Guide

How to use this guide

This guide provides an alphabetical reference to all the MAX TNT profiles, parameters, and commands, and details the settings and options you can specify. For step-by-step instructions on setting up the MAX TNT hardware, see the *MAX TNT Hardware Installation Guide*. For step-by-step instructions on configuring your network connections, see the *MAX TNT Network Guide*.

Note: This guide describes the full set of features for the MAX TNT running software version 7.0.0. Some features might not be available with earlier versions or specialty loads of the software.

What you should know

This guide is intended for the person who will configure and maintain the MAX TNT. To use it effectively, you must have a basic understanding of MAX TNT security and configuration, and be familiar with authentication servers and networking concepts.

Documentation conventions

This manual uses the following typographical conventions:

Convention	Meaning
Monospace text	Represents text that appears on your computer's screen, or that could appear on your computer's screen.
Boldface mono-space text	Represents characters that you enter exactly as shown (unless the characters are also in <i>italics</i> —see <i>Italics</i> , below). If you could enter the characters but are not specifically instructed to, they do not appear in boldface.
<i>Italics</i>	Represent variable information. Do not enter the words themselves in the command. Enter the information they represent. In ordinary text, italics are used for titles of publications, for some terms that would otherwise be in quotation marks, and to show emphasis.
[]	Square brackets indicate an optional argument you might add to a command. To include such an argument, type only the information inside the brackets. Do not type the brackets unless they appear in bold type.
|	Separates command choices that are mutually exclusive.

Convention	Meaning
>	Points to the next level in the path to a parameter or menu item. The item that follows the angle bracket is one of the options that appears when you select the item that precedes the angle bracket.
Key1-Key2	Represents a combination keystroke. To enter a combination keystroke, press the first key and hold it down while you press one or more other keys. Release all the keys at the same time. (For example, Ctrl-H means hold down the Control key and press the H key.)
Press Enter	Means press the Enter, or Return, key or its equivalent on your computer.
Note:	Introduces important additional information.

Manual set

The MAX TNT documentation set consists of the following manuals:

- *The MAX TNT Command-Line Interface*. Shows you how to use the MAX TNT command-line interface effectively.
- *MAX TNT Hardware Installation Guide*. Describes how to install the MAX TNT hardware and use the command-line interface to configure its slot cards for a variety of supported uses. Describes how calls are routed through the system. Includes the MAX TNT technical specifications.
- *MAX TNT Network Guide*. Describes how to configure the MAX TNT for network connectivity.
- *MAX TNT RADIUS Guide*. Contains installation instructions, descriptions of RADIUS attributes, accounting information, and details about call logging.
- *MAX TNT Reference Guide* (this manual). An alphabetic reference to all MAX TNT profiles, parameters, and commands.
- *MAX TNT Glossary*. An alphabetic reference to technical terms and acronyms commonly found in Ascend documentation.
- *MAX TNT Administration Guide*. Describes how to administer the MAX TNT, including how to monitor the system and the cards, troubleshoot the unit, and use SNMP to manage it.

Related publications

Many external references are readily available on the Web or in technical bookstores. You'll find a partial list of such references below.

Related RFCs

RFCs are available on the Web at <http://ds.internic.net>.

Information about PPP connections

For information about PPP connections and authentication, you might want to download one or more of the following:

- RFC 1662: *PPP in HDLC-like Framing*
- RFC 1661: *The Point-to-Point Protocol (PPP)*
- RFC 1994: *PPP Challenge Handshake Authentication Protocol (CHAP)*
- RFC 1934: *Ascend's Multilink Protocol Plus (MP+)*
- RFC 1969: *The PPP DES Encryption Protocol (DESE)*
- RFC 1989: *PPP Link Quality Monitoring*
- RFC 1990: *The PPP Multilink Protocol (MP)*
- RFC 2125: *The PPP Bandwidth Allocation Control Protocol (BACP)*
- RFC 2153: *PPP Vendor Extensions*
- RFC 1962: *The PPP Compression Control Protocol (CCP)*
- RFC 1974: *PPP Stac LZS Compression Protocol*
- RFC 1877: *PPP Internet Protocol Control Protocol Extensions for Name Server Addresses*
- RFC 1618: *PPP over ISDN*
- RFC 1332: *The PPP Internet Protocol Control Protocol (IPCP)*
- RFC 1552: *The PPP Internetwork Packet Exchange Control Protocol (IPXCP)*
- RFC 1378: *The PPP AppleTalk Control Protocol (ATCP)*

Information about IPX routing

For information about IPX routing, see RFC 1634: *Novell IPX Over Various WAN Media (IPXWAN)*.

Information about IP routers

RFCs that describe the operation of IP routers include:

- RFC 1812: *Requirements for IP Version 4 Routers*
- RFC 1519: *Classless Inter-Domain Routing (CIDR): An Address Assignment and Aggregation Strategy*
- RFC 2002: *IP Mobility Support*
- RFC 2030: *Simple Network Time Protocol (SNTP) Version 4 for IPv4, IPv6 and OSI*
- RFC 1256: *ICMP Router Discovery Messages*
- RFC 1393: *Traceroute Using an IP Option*
- RFC 1433: *Directed ARP*
- RFC 1582: *Extensions to RIP to Support Demand Circuits*
- RFC 1787: *Routing in a Multi-provider Internet*

Information about OSPF routing

For information about OSPF routing, see:

- RFC 1850: *OSPF Version 2 Management Information Base*
- RFC 1587: *The OSPF NSSA Option*
- RFC 1245: *OSPF protocol analysis*
- RFC 1246: *Experience with the OSPF protocol*
- RFC 1583: *OSPF Version 2*
- RFC 1586: *Guidelines for Running OSPF Over Frame Relay Networks*

Information about multicast

For information about multicast, see:

- RFC 1458: *Requirements for Multicast Protocols*
- RFC 1584: *Multicast Extensions to OSPF*
- RFC 1949: *Scalable Multicast Key Distribution*

Information about packet filtering

An RFC that describes packet filters is RFC 1858: *Security Considerations for IP Fragment Filtering*.

Information about general network security

RFCs pertinent to network security include:

- RFC 1704: *On Internet Authentication*
- RFC 1636: *Report of IAB Workshop on Security in the Internet Architecture*
- RFC 1281: *Guidelines for the Secure Operation of the Internet*
- RFC 1244: *Site Security Handbook*

Information about external authentication

For information about RADIUS and TACACS authentication, see:

- RFC 2138: *Remote Authentication Dial In User Service (RADIUS)*
- RFC 1492: *An Access Control Protocol, Sometimes Called TACACS*

ITU-T recommendations

ITU-T recommendations (formerly CCITT) are available commercially. You can order them at <http://www.itu.ch/publications/>.

Related books

The following books are available in technical bookstores.

- *Routing in the Internet*, by Christian Huitema. Prentice Hall PTR, 1995. Recommended for information about IP, OSPF, CIDR, IP multicast, and mobile IP.
- *SNMP, SNMPV2 and RMON: Practical Network Management*, by William Stallings. Addison-Wesley, 1996. Recommended for network management information.
- *Enterprise Networking: Fractional T1 to Sonet Frame Relay to Bisdn*, by Daniel Minoli. Artech House, 1993. Recommended as a WAN reference.
- *TCP/IP Illustrated*, volumes 1&2, by W. Richard Stevens. Addison-Wesley, 1994.

MAX TNT Command Reference

1

The information contained here is designed for quick reference, and does not include tutorials. All commands are listed alphabetically. For an overall alphabetic listing, see the general table of contents.

You can display a usage summary for any command by entering a question mark and the name of the command:

```
admin> ? command-name
```

For an alphabetic list of commands, just enter a question mark:

```
admin> ?
```

The command line accepts a maximum of 80 characters, including the prompt.

Note: If the list of commands displayed as output does not include all of the commands described in this chapter, you might need to authenticate a User profile that has more extensive permissions. For details, see “Auth” on page 1-4.

?

Description: Displays a list of all available commands, or help text about a specific command. A list of all available commands also shows the permission level required for the use of each command.

Permission level: User

Usage: ? [*-a*] | [*command-name*]

Option	Description
<i>-a</i>	List all commands. (Without this option, the list includes only commands authorized by the current User profile.)
<i>command-name</i>	Display information about the specified command.

Example: To display a list of commands authorized for your current login:

```
admin> ?
?                               ( user )
auth                            ( user )
callroute                       ( diagnostic )
clear                           ( user )
clock-source                    ( diagnostic )
clr-history                     ( system )
connection                      ( system )
date                            ( update )
debug                           ( diagnostic )
delete                          ( update )
device                          ( diagnostic )
dir                             ( system )
dircode                         ( system )
ether-display                   ( diagnostic )
fatal-history                   ( system )
format                          ( code )
fsck                            ( code )
get                             ( system )
hdlc                           ( system )
help                            ( user )
if-admin                        ( diagnostic )
igmp                            ( system )
[More? <ret>=next entry, <sp>=next page, <^C>=abort]
```

To display help text about a command:

```
admin> ? dir
dir                               list all profile types
dir profile-type                  list all profiles of the specified type
dir profile-type profile-index   list the specified profile
instance
```

Dependencies: The current security level is set by the current User profile and determines which commands are displayed in response to the ? command. If the current User profile does not have sufficient privileges to execute a command, that command is not displayed unless you include the -a option. By default, commands with the User security level are always displayed. For details, see “Auth” on page 1-4.

See Also: Help, Auth

ARPTable

Description: Displays or modifies the MAX TNT Address Resolution Protocol (ARP) table. Each entry in the ARP table associates a known IP address with a physical address. For remote IP addresses, the MAX TNT can use the ARP table to respond with its own MAC address to ARP requests.

Permission level: System

Usage: `arptable [VRoutername] [-a IP_address MAC_address] | [-d IP_address] [-f]`

Option	Description
VRoutername	The name of the Virtual Router (VRouter). If you do not specify a VRouter name, the system assumes the global VRouter.
-a IP_address MAC_address	Add an ARP table entry for the device with the specified IP address and MAC address.
-d IP_address	Delete the ARP table entry for the device at the specified IP address.
-f	Clear the ARP table.

Example: To display the ARP table:

```
admin> arptable
```

IP Address	MAC Address	Type	IF	Retries/Pkts/RefCnt	Time Stamp
10.103.0.2	00:C0:7B:7A:AC:54	DYN	0	0/0/552	22760
10.103.0.220	00:C0:7B:71:83:02	DYN	0	0/0/2791	22760
10.103.0.1	08:00:20:7B:24:27	DYN	0	0/0/4296	22811
10.103.0.8	00:00:0C:05:B3:A2	DYN	0	0/0/6493	23058
10.103.0.7	00:00:0C:76:58:4E	DYN	0	0/0/6572	23233
10.103.0.49	00:C0:80:89:19:95	DYN	0	0/0/397	23208

The ARP table displays the following information:

Column	Description
IP Address	The address contained in ARP requests.
MAC Address	The MAC address of the host.
Type	How the address was learned, that is, dynamically (DYN) or by specification of a static route (STAT).
IF	The interface on which the MAX TNT received the ARP request.
Retries	The number of retries needed to refresh the entry after it timed out.
Pkts	The number of packets sent out to refresh the entry after it timed out.
RefCnt	The number of times the MAX TNT consulted the entry.
Time Stamp	The number of seconds since the system has come up. The MAX TNT updates this column every time an ARP entry is refreshed.

To add an ARP table entry for a device with the physical address 00A024A61535 at IP address 10.9.8.20:

```
admin> arptable -a 10.9.8.20 00A024A61535
```

See Also: NSlookup

Auth

Description: Authenticates your current login by applying a specified User profile. Use this command to increase or decrease the permissions of the current login. For information about permission levels in User profiles, see the description of the User profile.

Permission level: User

Usage: `auth user-name`

Option	Description
<i>user-name</i>	Authenticate the specified User profile.

Example: To login as Joe:

```
admin> auth joe
Password:
```

If you supply the proper password for the User profile you've specified, the MAX TNT enables the privileges in that profile and then displays the system prompt again. Note that the User profile may specify its own system prompt, which is a useful way to flag certain permission levels. For example:

```
admin> auth admin
Password:
```

If you supply the wrong password at the prompt, you'll see the following message:

```
Login incorrect
User:
```

Enter the user name again to display the Password prompt.

See Also: Whoami

BRChannels

Description: Displays the status of all the BRI channels on the MAX TNT.

Permission level: System

Usage: `brichannels -a | -d | -c | -i`

Option	Description
<code>-a</code>	Display all available BRI channels.
<code>-d</code>	Display disabled BRI channels.
<code>-c</code>	Display all possible BRI channels.
<code>-i</code>	Display in-use BRI channels.

Example: To display all BRI channels, specify the `-a` option:

```
admin> brichannels -a
```

The BRChannels command displays the following information:

Column	Description
<code>dvOp</code>	The current operational state of the channel (also specified by the Device-State setting): <ul style="list-style-type: none"> Down indicates that the channel is in a nonoperational state. Up indicates that the channel is in normal operations mode.
<code>dvUpSt</code>	The status of a channel in normal operations mode: <ul style="list-style-type: none"> Idle indicates that no call is on the line. Reserved indicates that the channel is reserved for an incoming call. Assigned indicates that the channel is handling a call.
<code>dvRq</code>	The required state of the channel as specified by the ReqD-State setting: <ul style="list-style-type: none"> Down indicates that the channel is required to be in a nonoperational state. Up indicates that the channel is required to be in normal operations mode.
<code>SAdm</code>	The desired administrative state of the channel (also specified by the Desired-State setting): <ul style="list-style-type: none"> Down specifies that the channel should terminate all operations and enter the down state. Up specifies that the channel should come up in normal operations mode. <p>The actual state of the channel can differ from the desired state, as when a device is powering up, or you change the desired state on a running slot. Changing the desired state does not force a channel to the new state. It indicates that the MAX TNT should change the channel state in a graceful manner.</p>

BRIdisplay

Description: Displays D-channel traffic for an IDSL card. You must first execute the Open command to open a session with the card.

Permission level: Diagnostic

Usage: `bridisplay count [channel]`

Syntax element	Description
<i>count</i>	The number of bytes to display.
<i>channel</i>	A number from 0 to 31, specifying one of 32 D channels on the IDSL card. If you specify a channel number, only traffic on that D channel is displayed. If you do not specify a channel number, all traffic on all D channels is displayed.

Example: The following commands open a session with an IDSL card in slot 7, and display up to 12 bytes of the traffic in every D channel on the card:

```
admin> open 1 7
```

```
idsl-1/7> bridisplay 12
```

To turn off the display, set *count* to zero:

```
idsl-1/7> bridisplay 0
```

CADSLlines

Description: Displays all ADSL-Cap lines, including disabled, busy, and unused channels.

Permission level: System

Usage: `cadslLines -a|-d|-f|-u`

Option	Description
-a	Display all channels.
-d	Display all disabled channels.
-f	Display all free channels.
-u	Display all in-use channels.

Example: To display all ADSL-Cap channels:

```
admin> cadsllines -a
```

All CAP ADSL lines:

	(OperState	UpStatus	ReqState	AdminState)
Line { 1 14 1 }	(Down	Idle	UP	UP)
Line { 1 14 2 }	(Down	Idle	UP	UP)
Line { 1 14 3 }	(Down	Idle	UP	UP)
Line { 1 14 4 }	(Down	Idle	UP	UP)
Line { 1 14 5 }	(Down	Idle	UP	UP)
Line { 1 14 6 }	(Down	Idle	UP	UP)

The output contains the following fields:

Field	Description
OperState	The current operational state of the channel (also specified by the Device-State setting): <ul style="list-style-type: none"> Down indicates that the channel is nonoperational. Up indicates that the channel is in normal operations mode.
UpStatus	The status of a channel in normal operations mode: <ul style="list-style-type: none"> Idle indicates that no call is on the channel. Active indicates that the channel is handling a call.
ReqState	The required state of the channel as specified by the ReqState setting: <ul style="list-style-type: none"> Down indicates that the channel is required to be nonoperational. Up indicates that the channel must be in normal operations mode.
AdminState	The desired administrative state of the channel (also specified by the Desired-State setting): <ul style="list-style-type: none"> Down specifies that the channel should terminate all operations and enter the down state. Up specifies that the channel should come up in normal operations mode.

Note: The actual state of the channel can differ from the desired state, as when a device is powering up, or you change the desired state on a running slot. Changing the desired state does not force a channel to the new state. It indicates that the MAX TNT should change the channel state in a graceful manner.

Callroute

Description: Displays the call-routing database (the total set of all Call-Route profiles). For information about how call routing works and about how to create Call-Route profiles, see the description of the Call-Route profile, and refer to the *MAX TNT Hardware Installation Guide*.

Permission level: Diagnostic

Usage: `callroute -ah | -an | -ad | -d | -t | -?`

Option	Description
<code>-ah</code>	List available host-side call routing entries.
<code>-an</code>	List available network-side call routing entries.
<code>-ad</code>	List available host-side and network-side call routing entries.
<code>-d</code>	List call routing tables by device.
<code>-t</code>	Toggle module debug level.
<code>-?</code>	Display a usage summary.

Example: In the following display, the output shows host-side call routing entries directed to a modem card. All the entries are defaults, except for one Call-Route profile that specifies an inbound phone number.

```
admin> callroute -ah
device      # source      type              tg sa phone
1:12:02/0   0 0:00:00/0   any-call-type     0 0  4812
1:12:01/0   0 0:00:00/0   voice-call-type   0 0
1:12:03/0   0 0:00:00/0   voice-call-type   0 0
...
1:12:47/0   0 0:00:00/0   voice-call-type   0 0
1:12:48/0   0 0:00:00/0   voice-call-type   0 0
```

A zero or null field always means *any*.

The call-routing database displays the following information:

Column	Description
Device	Interface address to which the MAX TNT routes the incoming or outgoing call. Host-side addresses show incoming-call routes, while network-side addresses show outgoing-call routes. When the MAX TNT has an incoming route for a call, it answers the call, and the host-side address points to the device (such as a modem or HDLC processor) that terminates the WAN circuit. When the MAX TNT places an outgoing call, the network-side address points to the line on which the call goes out.
#	Entry number in the call-routing database.
Source	The network-side address at which the incoming call connects to the MAX TNT, or the host-side interface address at which the outgoing call originates.
Type	Call-route type, which can be any-call-type, voice-call-type (voice bearer capability), digital-call-type (data bearer service), or trunk-call-type.
TG	Trunk-group number.
SA	Subaddress number.
Phone	Add-on number.

See Also: Modem, HDLC, Show, T1channels

Clear

Description: Clears the terminal session screen and places the system prompt at the top row of the VT100 window.

Permission level: User

Usage: `clear [-r]`

Option	Description
-r	Reset the terminal session's VT100 attributes.

Example: To clear the screen:

```
admin> clear
```

Clock-Source

Description: Displays the current clock-source settings for the system. If a line is specified as the master clock-source, it provides the source of timing information for synchronous connections throughout the multishef system. The clock allows the sending device and the receiving device to determine where one block of data ends and the next begins. If multiple lines specify that they are eligible to be the clock-source, you can assign clock-source priority among multiple lines. In the output of the Clock-Source command, the value 1 signifies the highest priority. For information about setting clock-source priority, see the *MAX TNT Hardware Installation Guide*.

The Clock-Source command applies to units with T1, E1, T3, or FrameLine cards. It lists only currently eligible local clock sources. Sources with layer 2 up, which are preferred, are marked with an asterisk. In addition, a message is logged whenever the system clock source changes. You can execute this command on the shelf controller or on an individual T1, E1, T3, or FrameLine card. You must first execute the Open command to open a session with the card.

Permission level: Diagnostic

Usage: `clock-source`

Example: The Clock-Source command on the shelf controller shows the master clock's slot card line number:

```
admin> clock-source
Master line: 1
Source List:
      Source: line 1 Available*      priority: 2
      Source: line 3 Available      priority: 2
```

On the slot cards, the Clock-Source command uses one-base indexes for the card's lines. For example, to open a session with a T1 card and display its clock-source settings:

```
admin> open 1 1
t1-1/15> clock-source
Master line: 1
Source List:
      Source: line 1 Available*      priority: 2
      Source: line 3 Available      priority: 2
```

Following are examples of log messages generated for clock-source transitions:

```
LOG notice, Shelf 1, Controller, Time: 19:44:39--
  Master clock source changed to slot-1/8 line 1
LOG notice, Shelf 1, Controller, Time: 10:34:56--
  Master clock source changed to local oscillator
```

See Also: Line, Open, T1channels

Clr-History

Description: Clears the fatal-error history log.

Permission level: System

Usage: `clr-history`

Example: To display the fatal-error history log, enter the Fatal-History command:

```
admin> fatal-history
OPERATOR RESET:  Index:  99  Revision: 1.0F Controller (tntsr)
                  Date: 09/20/1998.      Time: 16:56:01
                  Reset from unknown, user profile super.
OPERATOR RESET:  Index:  99  Revision: 1.0F Controller (tntsr)
                  Date: 09/24/1998.      Time: 11:56:10
                  Reset from unknown, user profile super.
```

To clear the log:

```
admin> clr-history
```

See Also: Fatal-History

Connection

Description: Specifies that the upper-left portion of the status window should display connection status information. If the status window is not already displayed, this command opens it with the connection status information displayed.

Permission level: System

Usage: `connection`

Example: An administrator opens a window with connection status information displayed:

```
admin> connection
```

2 Connections	Status
001 tomw PPP 1/7/14 19200	Serial number: 6201732 Version: 1.0F
002 timl MP 1/7/3 56000	
	Rx Pkt: 11185897
	Tx Pkt: 42460
	Col: 129
	12/27/1998 12:20:15 Up: 3 days, 21:47:32
	M: 29 L: info Src: shelf-1/controller
	48 out of 48 modems passed POST
	Issued: 16:48:02, 09/27/1998

[Next/Last Conn: <dn/up arw>, Next?Last Page: <pg dn/up>, Exit: <esc>]

For each active connection, the displays includes a line that shows the user or station name, type of connection, T1 shelf/line/channel on which the call was placed or received, and the bandwidth or baud rate. You can press the Down-Arrow key to scroll through the list of active connections.

To display a prompt below the status window, press the Escape key. To close the status window, enter the Status command:

```
admin> status
```

See Also: Line, List, Log, Status, View

Date

Description: Displays or sets the MAX TNT system date and time. The date and time are stored in the Timedate profile.

Permission level: Update

Usage: **date** [*yyymmddhhmm*]

Option	Description
<i>yy</i>	A two-character representation of the current year
<i>mm</i>	A two-character representation of the current month
<i>dd</i>	A two-character representation of the current day
<i>hh</i>	A two-character representation of the hour
<i>mm</i>	A two-character representation of the minute

Example: To set the MAX TNT system date and time to noon, December 31, 1998:

```
admin> date 9812311200
```

Debug

Description: Enables or disables diagnostic output.

Permission level: Diagnostic

Usage: **debug** **on** | **off**

Syntax element	Description
on	Enables diagnostic output.
off	Disables diagnostic output.

Example: To enable diagnostic output:

```
admin> debug on
Diagnostic output enabled
admin> FRMAIN: Setting timer DCE
FRMAIN: time 88121200, mkstatus type 1, seq (026,025)
```

Delete

Description: Permanently deletes a profile from local storage. Any flash space that was used by the profile becomes available to the system.

Permission level: Update

Usage: `delete [-f] profile-type [profile-index]`

Syntax element	Description
<code>-f</code>	Delete without prompting for confirmation.
<code>profile-type</code>	A type of profile, as listed by the Dir command.
<code>profile-index</code>	The index of the specified profile type. Not all profile types require an index.

Example: To delete the Connection profile previously created for Tom Lynch:

```
admin> delete conn tlynch
Delete profile CONNECTION /tlynch? [y/n] y
CONNECTION /tlynch deleted
```

Dependencies: Deleting a VRouter profile deletes the Virtual Router. If you delete a VRouter with active connections, you must perform a system reset. If a system reset is not possible, you should manually tear down the VRouter's active connections and then modify the local Connection, IP-Interface, and IP-Route profiles that point to the VRouter.

See Also: Get, New, Read

Device

Description: Initiates a state change in a specified device. The device is specified by its interface address. This command is typically used to administratively up or down a device. For a list of devices supported by the MAX TNT, see the description of Device-Address.

Permission level: Diagnostic

Usage: **device** **-d|-t|-u|-?** *interface_address*

Option	Description
-d	Bring the specified device down.
-t	Toggle debug output level.
-u	Bring the specified device up.
-?	Display a usage summary.
<i>interface_address</i>	The interface address of the device, specified as shelf, slot, item number, and logical item number.

Example: To administratively down modem #24 in slot #3 on shelf #1:

```
admin> device -d {{1 3 24} 0}
```

See Also: Show, Slot

Dir

Description: Lists profiles. With no options, the Dir command lists all profile types supported by the MAX TNT. It can also be used to list all profiles of a certain type, or to list file-system information about a specific profile.

Permission level: System

Usage: **dir** [*profile-type* [*profile-index*]]

Option	Description
<i>profile-type</i>	List all the profiles of the specified type.
<i>profile-index</i>	Display information about the specified profile.

Example: To list all profile types, enter the Dir command with no options:

```
admin> dir
ADMIN-STATE-PERM-IF  SNMP Permanent Interface Admin State
ADMIN-STATE-PHYS-IF  SNMP Physical Interface Admin State
ADSL-CAP              Cap adsl line parameters
ADSL-CAP-STAT         Cap adsl line status
ANSWER-DEFAULTS       Answer profile
ATALK-GLOBAL          Global Appletalk parameters
ATALK-INTERFACE       Appletalk interfaces
ATMP                  ATMP profile
BASE                  System version and enabled features
CALL-INFO             Active call information
CALL-LOGGING          Call logging
CALL-ROUTE            Call routing attributes
CONNECTION            Connection (WAN) profiles
DEVICE-STATE          Device Operational State
DEVICE-SUMMARY        Device availability summary information
```

ERROR	Fatal Error log
ETHER-INFO	Ethernet Interfaces Information
ETHERNET	Ethernet Interfaces Configuration
EXT-TSRV	Remote Terminal Server Config Information
EXTERNAL-AUTH	External authentication info
FILTER	Filter Profile
FRAME-RELAY	Frame-Relay link configuration
IDSL	BRI line parameters
IDSL-STAT	BRI line status
IP-GLOBAL	Global TCP/IP parameters
IP-INTERFACE	IP interfaces
IP-ROUTE	Static IP routes
IPX-GLOBAL	Global IPX parameters
IPX-INTERFACE	IPX interfaces
IPX-ROUTE	Static IPX routes
IPX-SAP-FILTER	IPX Sap Filters
L2-TUNNEL-GLOBAL	Layer 2 tunnel global profile
LAN-MODEM	LAN Modem Disable State
LOAD-SELECT	Code images to load
LOG	System event logging configuration
SDSL	Sdsl line parameters
SDSL-STAT	Sdsl line status
SERIAL	Serial interfaces
SLOT-INFO	Slot Info profile
SLOT-STATE	Slot Operational State
SLOT-TYPE	Slot Type profile
SNMP	SNMP configuration
SWAN	Swan line parameters
SWAN-STAT	Swan line status
SYSTEM	System-wide basic parameters
T1	DS1 line parameters
T1-STAT	DS1 line status
T3	DS3 line parameters
T3-STAT	DS3 line status
TERMINAL-SERVER	Terminal server parameters
TIMEDATE	Current system date and time
TRAP	SNMP trap destinations
TUNNEL-SERVER	Tunnel server profiles
USER	Administrative user accounts
VRROUTER	Virtual Router

Example: To list all Connection profiles, as well as all RADIUS profiles for nailed-up connections, specify `conn` as the profile type. For example:

```
admin> dir conn
169  08/31/1998 22:21:07  dallas
195  09/12/1998 10:14:08  chicago
189  11/14/1998 09:34:44  nyc1
177  11/14/1998 11:38:09  nyc2
187  10/22/1998 15:34:53  la
201  10/14/1998 14:29:32  sacto
```

This form of the command is useful for displaying valid profile indexes. The index is in the rightmost field. The listing includes the following information:

- The first field shows the number of bytes the profile uses.
- The second field shows the date that the profile was last modified.
- The third field shows the time that the profile was last modified.
- The fourth field shows the profile index. If the profile does not have an index, the fourth field contains a period. If only one profile exists, the field displays that profile's name.

To list information about a specific profile, include its index on the command line:

```
admin> dir conn dallas
169  08/31/1998 22:21:07  dallas
```

See Also: List, Get

Dircode

Description: Displays the contents of the PCMCIA flash-card code directory. The flash cards contain code for the slot cards, run-time shelf controller, and profiles. The system configuration is stored in the onboard NVRAM.

Permission level: System

Usage: `dircode`

The following error messages can appear when you use the Dircode command:

Card N is not formatted for use with this system

The flash card is blank, corrupted, or formatted for another environment, such as DOS. To use this card, you must issue a Format command first.

Card N is temporarily unavailable

The flash card is currently coming up or is being formatted.

Card N is unavailable

The flash card experienced an error and is inaccessible. Check that the card is inserted properly.

Card N uses a format which is no longer supported

The flash card was formatted for a MAX TNT 1.3x system. You must reformat the card to use it with release 2.0.0 or later.

Example: To display the contents of the flash-card code directory:

```
admin> dircode
Flash card code directory:
  Card 1, directory size 16
    slot-card-8t1 reg    good    146634 Dec 26 10:15      v1.2
    slot-card-8e1 reg    good    259484 Jan 16 21:58      v1.2
    slot-card-48modem reg    good    386566 Dec 26 10:15      v1.2
    slot-card-hdlc2 reg    good    457360 Jan  5 12:21      v1.2
```

The information displayed by this command includes the card number (1 or 2) and the size of the code directory. For each expansion module installed in the system, it also shows the following information:

- The type of card the load is for, such as modem, T1, Frameline, or HDLC.
- The subtype of the load: regular, debug, or diagnostic.
- The status of the load: good (present and complete), write (being copied), or bad (incomplete or corrupt).
- The size of the code related to the card.
- The date the load was copied to the flash card.
- The code version.

See Also: Format, Fsck, Load

DNStab

Description: Displays the local DNS host table, which supplies host IP addresses when DNS fails to successfully resolve a hostname. This table is not a DNS cache, but a fallback option, listing up to eight host addresses for important or frequently used connections.

Permission level: System

Usage: `dnstab -s [entry-number]`

Option	Description
-s	Display the local DNS table. This options is supported on all slot cards that support DNS.
entry-number	Display an entry from the local DNS table. You can specify an integer from 1 to 8.

Example: To display the local DNS table:

```
admin> dnstab -s
Local DNS Table:enabled, AutoUpdate: enabled.
Local DNS Table
```

Name	IP Address	# Reads	Time of last read
1: "barney"	200.65.212.12 *	2	Feb 10 10:40:44 98
2: "rafael"	200.65.212.23	3	Feb 10 9:30:00 98
3: "donatello"	200.65.212.67	1	Feb 11 11:41:33 98
4: "wheelers"	200.65.212.9	1	Feb 12 8:35:22 98

The output contains the following fields:

Field	Description
Local DNS Table	Specifies whether Enabled=Yes in the DNS-Local-Table subprofile of the IP-Global profile.
AutoUpdate	Specifies whether Auto-Update=Yes in the DNS-Local-Table subprofile of the IP-Global profile.
Name	Hostname.
IP address	IP address. An asterisk (*) indicates that the entry has been automatically updated by a DNS query.
# Reads	Number of accesses since the entry was created.
Time of last read	Time and date the entry was last accessed. If SNTP is not in use, the field contains hyphens.

DS3link

Description: Enables you to carry out a diagnostic session with the DS3 card. You must first execute the Open command to open a session with the card.

Permission level: Diagnostic

Usage: `ds3link -a | -c | -d | -l | -i | -s | -t | -?`

Option	Description
<code>-a</code>	Display current DS3 line alarms.
<code>-c</code>	Display and clear line error statistics.
<code>-d 1-7</code>	Display current DS2 line state.
<code>-l on|off</code>	Perform an external loopback test.
<code>-i on|off</code>	Perform an internal loopback test.
<code>-s</code>	Display line error statistics without clearing.
<code>-t</code>	Toggle debug output.
<code>-?</code>	Display summary.

Opening a session with a DS3 card

Before you can use the DS3link command, you must open a session with the card on which you wish to perform diagnostics. For example, to open a session with the card in slot 15 on shelf 1:

```
admin> open 1 15
t3-1/15>
```


Displaying alarms on the DS3 line

To display alarms on the line, specify the `-a` option. For example:

```
t3-1/15> ds3link -a
Loss of Signal:           false
Out of Frame:            false
Alarm Indication Signal: false
Idle Signal:             false
Yellow Signal:           false
In Red Alarm:            false
C-bit parity framing:    false
```

An alarm condition of `true` has the following significance:

Alarm	Description (if the condition is true)
Loss of Signal	The DS3 line is not functioning. A sequence of 175 consecutive zeroes was detected.
Out of Frame	The DS3 line cannot receive or transmit data because the MAX TNT has lost the frame alignment on the received signal.
Alarm Indication Signal (AIS)	A device on the line has sent the AIS signal, rather than regular data, in order to take the line out of service.
Idle Signal	The remote device has no data to send.
Yellow Signal	Also called Remote Alarm Indicator, (RAI). A device on the DS3 line is detecting framing-error conditions in the signal it receives.
In Red Alarm	An out-of-frame condition has lasted for more than 2.23 msec.
C-bit parity	The remote end is using C-bit parity.

Displaying and clearing line error statistics

To display and clear line error statistics, specify the `-c` option. For example:

```
t3-1/15> ds3link -c
Line Code Violations:    2136611
Framing Errors:         67279
Excessive Zeros:        2098353
P-bit Parity Errors:    217318
C-bit Parity Errors:     0
Far End Block Errors:    0
DS2 1 Framing Errors:   8415
DS2 2 Framing Errors:   8415
DS2 3 Framing Errors:   8415
DS2 4 Framing Errors:   8415
DS2 5 Framing Errors:   8415
DS2 6 Framing Errors:   8415
DS2 7 Framing Errors:   8415
Statistics cleared.
```

Following are descriptions of the fields in the output:

Field	Description
Line Code Violations (LCV)	The MAX TNT detected a Bipolar Violation, indicating that one of the low-level rules for encoding data was violated in the received signal.
Framing Errors (FERR)	The number of errors in the bits used to frame the DS3 signal. DS2 and DS3 framing requires that certain bit positions in the signal (framing bits) have fixed values. These known points of reference are used to determine where frames begin and end. If enough framing-bit errors occur, the signal is Out Of Frame (OOF).
Excessive Zeros	Three or more zeroes were seen in a row, which violates the density requirements of B2ZS.
P-bit Parity Errors (PERR)	The number of times that the P-bit parity check failed. The P bits in a DS3 frame are used to encode parity for the entire frame. Each PERR indicates that a received frame's content did not match its parity bits, a condition that implies data corruption. The P bits are recalculated by each device that forwards the DS3 signal, and therefore measure errors between sections.
C-bit Parity Errors (CPERR)	The number of times that the C-bit parity check failed. This parity check is offered under C-Bit-Parity framing only.
Far End Block Errors (FEBE)	The number of times the remote end has sent an FEBE signal, indicating it has received DS3 frames with either Framing Errors (FERR) or C-bit Parity Errors (CPERR).
DS2 # Framing Errors (FERR)	The number of errors in the bits used to frame the DS2 signal.

Displaying the line state of a DS2

To display the line state of a DS2, specify the `-d 1-7` option. For example, to display the state of the third DS2:

```
t3-1/15> ds3link -d 3
State of DS2 3:
Out of Frame:           false
Alarm Indication Signal: false
Yellow Signal:          false
In Red Alarm:            false
Reserved Bit:            false
```

An alarm condition of `true` has the following significance:

Alarm	Description (if condition is true)
Out of Frame	The third DS2 stream in the DS3 line cannot receive or transmit data because the TNT has lost the frame alignment on the received signal.
Alarm Indication Signal (AIS)	The unit is receiving an AIS on this DS2 stream of the DS3 line. A device on the line has sent the AIS signal, rather than regular data, in order to take the line out of service.
Yellow Signal	Also called Remote Alarm Indicator (RAI). A device on the DS2 stream is detecting framing-error conditions in the signal it receives.
In Red Alarm	An out-of-frame condition has lasted for more than 9.9 msec.
Reserved Bit	The state of the reserved bit does not have any significance in diagnosing the state of the DS2 stream.

Performing an external loopback test

To perform an external loopback test, specify the `-l on` option:

```
t3-1/15> ds3link -l on
DS3 remote loopback activated
```

When the DS3 remote loopback is activated, the unit returns the signal it receives on the DS3 line. After the test, enter the DS3link command with the `-l off` option:

```
t3-1/15> ds3link -l off
DS3 remote loopback deactivated
```

Performing an internal loopback test

The `-i` option connects the DS3 receive path to the DS3 transmit path at the D3MX. The transmitted DS3 signal is still sent to the network as well. The following example shows how to activate and then deactivate a DS3 internal loopback:

```
t3-1/15> ds3link -i on
DS3 internal loopback activated
t3-1/15> ds3link -i off
DS3 internal loopback deactivated
```

E1sig

Description: Displays the state of all E1 channels. You must first execute the Open command to open a session with the E1 card.

Permission level: Diagnostic

Usage: **e1sig**

Example: To diagnose the state of all E1 channels:

```
admin> open 1 10
e1-1/10>
e1-1/10> e1sig
DSL: 0, Channel: 1, state: 1
DSL: 0, Channel: 2, state: 1
DSL: 0, Channel: 3, state: 1
DSL: 0, Channel: 4, state: 1
DSL: 0, Channel: 5, state: 1
DSL: 0, Channel: 6, state: 1
DSL: 0, Channel: 7, state: 1
DSL: 0, Channel: 8, state: 1
DSL: 0, Channel: 9, state: 1
DSL: 0, Channel: 10, state: 1
DSL: 0, Channel: 11, state: 1
DSL: 0, Channel: 12, state: 1
DSL: 0, Channel: 13, state: 1
DSL: 0, Channel: 14, state: 1
DSL: 0, Channel: 15, state: 1
DSL: 0, Channel: 17, state: 1
DSL: 0, Channel: 18, state: 1
DSL: 0, Channel: 19, state: 1
DSL: 0, Channel: 20, state: 1
DSL: 0, Channel: 21, state: 1
DSL: 0, Channel: 22, state: 1
DSL: 0, Channel: 23, state: 1
DSL: 0, Channel: 24, state: 1
DSL: 0, Channel: 25, state: 1
DSL: 0, Channel: 26, state: 1
DSL: 0, Channel: 27, state: 1
DSL: 0, Channel: 28, state: 1
DSL: 0, Channel: 29, state: 1
DSL: 0, Channel: 30, state: 1
DSL: 0, Channel: 31, state: 1
```

E1-Stats

Description: Reports DS1-level line errors on an E1 card. You must first execute the Open command to open a session with the card.

Permission level: Diagnostic

Usage: `e1-stats [-c] line`

Syntax element	Description
<code>-c</code>	Display statistics for the line, and reset the statistics to 0 (zero).
<code>line</code>	Line on the card.

Example: To open a session with a card in shelf 1, slot 13:

```
admin> open 1 13
e1-1/13>
```

To display and reset the statistics on line 2:

```
e1-1/13> e1-stats -c 2
DS1 Line 2:
CRC Errors:                0
Frame Slips:               9872
Framing Bit Errors:       0
Out of Frame Events       0
Far End Block Errors:     0
Line Code Violations:     0
    Statistics cleared.
```

The significance of each number in the output is as follows:

Field	Description
CRC errors	Data corruption in the signal.
Frame slips	The MAX TNT received E1 data at a greater or less frequency than that of the internal line clock. In the process of realigning itself to the transmitter, the MAX TNT can skip or repeat a frame.
Framing bit errors	The MAX TNT detected a framing bit that was incorrect. E1 framing requires that certain bit positions (known as framing bits) have a fixed value in the signal. The framing bits enable the MAX TNT to determine where frames begin and end.
Out of Frame Events	The MAX TNT no longer detects a framing pattern in the receiving signal, or it detects a pattern at a different relative offset than expected.
Far end block errors	How frequently the remote end reported errors in E1 frames transmitted by the MAX TNT.
Line Code Violations	The MAX TNT detected either a Bipolar Violation or Excessive Zeros, indicating that one of the low-level E1 rules for encoding data was violated in the received signal.
Statistics cleared	The statistics have been reset to 0 (zero), because the command included the <code>-c</code> option.

Ether-Display

Description: Displays the contents of Ethernet packets.

Permission level: Diagnostic

Usage: `ether-display port# n`

Syntax element	Description
<code>port#</code>	The Ethernet port on which the packets are received or transmitted. If you specify 0 (zero) for the port number, the MAX TNT displays all ports on the shelf.
<code>n</code>	The number of octets to display in each Ethernet packet.

Example: To display Ethernet packet contents for port 0 in 12-octet sizes:

```
admin> ether-display 0 12
ETHER XMIT: 12 of 60 octets
10799E40: 08 00 20 75 80 6b 00 c0 7b 5e ad 3c      .. u.k.. {^.<
ETHER RECV: 12 of 60 octets
1077D980: 00 c0 7b 5e ad 3c 00 80 c7 2f 27 ca      ..{^.<... ./'.
ETHER XMIT: 12 of 509 octets
1079A480: 00 80 c7 2f 27 ca 00 c0 7b 5e ad 3c      .../'... {^.<
ETHER XMIT: 12 of 330 octets
1079AAC0: 08 00 20 75 80 6b 00 c0 7b 5e ad 3c      .. u.k.. {^.<
ETHER RECV: 12 of 60 octets
1077DFD0: 00 c0 7b 5e ad 3c 08 00 20 75 80 6b      ..{^.<... u.k
ETHER XMIT: 12 of 451 octets
1079B100: 08 00 20 75 80 6b 00 c0 7b 5e ad 3c      .. u.k.. {^.<
ETHER XMIT: 12 of 723 octets
1079B740: 00 20 af f8 0f 1d 00 c0 7b 5e ad 3c      . .... {^.<
ETHER XMIT: 12 of 84 octets
1078F580: 08 00 20 75 80 6b 00 c0 7b 5e ad 3c      .. u.k.. {^.<
ETHER RECV: 12 of 60 octets
1077E620: 00 c0 7b 5e ad 3c 00 20 af f8 0f 1d      ..{^.<. ....
ETHER XMIT: 12 of 238 octets
1078FBC0: 00 20 af f8 0f 1d 00 c0 7b 5e ad 3c      . .... {^.<
ETHER XMIT: 12 of 373 octets
10790200: 00 20 af f8 0f 1d 00 c0 7b 5e ad 3c      . .... {^.<
ETHER RECV: 12 of 60 octets
1077EC70: 00 c0 7b 5e ad 3c 00 20 af f8 0f 1d      ..{^.<. ....
ETHER XMIT: 12 of 267 octets
10790840: 00 20 af f8 0f 1d 00 c0 7b 5e ad 3c      . .... {^.<
```

To stop displaying the Ethernet statistics, enter:

```
admin> ether-display 0 0
```

Note: You must set Debug On for Ether-Display to have any effect.

Fatal-History

Description: Displays the MAX TNT fatal-error log. Every time a fatal error occurs on the MAX TNT, it is logged to the fatal-error history log. Available flash space limits the number of entries in the log. You can clear the log with the Clr-History command.

Permission level: System

Usage: **fatal-history**

Example: To display the fatal-history log:

```
admin> fatal-history
OPERATOR RESET:  Index:  99  Revision: 1.3Ap6 Shelf 1 (tntsr)
                  Date: 09/20/1998.      Time: 16:56:01
                  Reset from unknown, user profile super.
OPERATOR RESET:  Index:  99  Revision: 1.3Ap6 Shelf 9 (tntsr)
                  Date: 09/24/1998.      Time: 11:56:10
                  Reset from unknown, user profile super.
```

See Also: Clr-History

FE-Loop

Description: Performs a line loopback at the transceiver of a T1, E1, or T3 card. You must first execute the Open command to open a session with the card.

Permission level: Diagnostic

Usage: **fe-loop** *line* **in|out** **on|off**

Syntax element	Description
<i>line</i>	DS1 line.
in	Perform local loopback. This option is useful for performing a check of the line-card hardware. It is not supported by the T3 card.
out	Perform remote loopback. This option is useful when a line is being provisioned or diagnosed.
on	Enable loopback.
off	Disable loopback.

Example: To loop the CSU towards the network for the first DS1 in slot 1:

```
admin> open 1 1
t1-1/1>
t1-1/1> fe-loop 1 out on
```

The receive side of the T1 is not bridged to the MAX TNT. To turn the loopback off:

```
t1-1/1> fe-loop 1 out off
```

See Also: DS3link

Format

Description: Formats a PCMCIA flash card, preparing it for use in the MAX TNT. You must format the card before you can use the Load command to load code.

Permission level: Code

Usage: `format [-f] device`

Syntax element	Description
<code>-f</code>	Force format without asking for verification.
<code>device</code>	The name of the flash card to be formatted. The following are valid names: <ul style="list-style-type: none">• <code>[flash-card-]1</code>• <code>[flash-card-]2</code> Note that device names may be abbreviated as 1 and 2.

The following error messages can appear when you use the Format command:

error: flash card N is not present

No flash card is detected in the specified slot (1 or 2).

error: flash card N is unavailable

The flash card in the specified slot is already being formatted, is just coming up, or is in an error condition.

error: flash card N is write-protected

The write-protect switch is set on the card in the specified slot (1 or 2).

error: flash card N is currently in use

One or more images on the flash card are currently in use (being read by a slot card in LOAD state or being written as part of a code download).

Example: After inserting a PCMCIA flash card in the second (rightmost) slot on the shelf controller, you would format it as follows:

```
admin> format flash-card-2
format will erase existing card 2 data; confirm: [y/n] y
```

See Also: Dircode, Fsck, Load

Fsck

Description: Audits inconsistent file conditions (which can include file contents) on a PCMCIA flash card. For each file found, the command displays the type-name, type-number, decimal and hex byte counts, date written to flash, and whether blocks that were in use were allocated to a file. Any detected errors are reported. No errors are fixed.

Permission level: Code

Usage: `fsck [-b -c -v] device`

Syntax element	Significance
-b	Try to ignore bad magic. Each flash card file system contains two directory blocks: an in-use block and an empty block used when deleting information. Both directory blocks contain a <i>magic</i> identifier, which indicates that they are indeed directory blocks. A candidate directory block is one that is missing the magic identifier but contains information that can be interpreted as directory-block information. If Fsck finds no valid directory block but does find a candidate directory block, this option causes it to ignore the bad magic and go ahead and use the candidate directory block anyway. This option allow the file system to be used normally until the next reboot, assuming that the Fsck command found no other errors.
-c	Do not check file contents. By default, Fsck checks the file contents for validity, which involves opening and reading every file, checking the file header, verifying the data length and CRC value, and performing other functions. This option causes Fsck to check only the file-system format.
-v	Display verbose messages, including the number of blocks used, a block list, and (unless the <code>-c</code> option is specified) various information about the files found. See the example below.
device	The name of the flash card to be checked. The following are valid names: <ul style="list-style-type: none"> • [flash-card-]1 • [flash-card-]2 <p>Note that device names may be abbreviated as 1 and 2.</p>

Example: To run a file-system check of the card named flash-card-1:

```
admin> fsck 1
ffs check in progress for card 1...
Dir 1 not in use
Dir 2 has magic, size 16, sequence 0x8
Using dir entry: 2, total data blocks: 0x40, directory size: 16
8t1-card:(0x04)
    reg    good    153759 (0x02589f) Jan 13 19:38
hdlc2-card:(0x07)
    reg    good    276920 (0x0439b8) Jan 13 19:38
48modem-card:(0x06)
    reg    good    398850 (0x061602) Jan 13 19:39
flash card 1 fsck: good.
```

The next example shows verbose messages for only one file. The actual output would show these messages for each file found.

```
admin> fsck -v 1
ffs check in progress for card 1...
Dir 1 not in use
Dir 2 has magic, size 16, sequence 0x8
Using dir entry: 2, total data blocks: 0x40, directory size: 16
8t1-card:(0x04)
    reg    good    153759 (0x02589f) Jan 13 19:38
    Total Blocks: 0x02, First Block list:
    x02 x04
    checking in-use list...
    checking in-use count...
    checking file contents...
    Image Info:
    hdrVers(2) imageVers(1.2) totParts(1) execAddr(0x80000000)
    Part Info:
    totFrag(0x0259) loadAddr(0x80000000) fragSize(0x0100)
    data(Compressed) partLen(0x25867) partCrc(0x60c905e1)
    ...
checking free list...
checking that allocated blocks are in a file...
error: block 0x02 allocated but not in a file
error: block 0x03 allocated but not in a file
error: block 0x04 allocated but not in a file
ensuring all blocks are accounted for...
flash card 1 fsck: good.
```

See Also: Dircode, Format, Load

FWALLdblog

Note: The FWALLdblog command is not supported by the MAX TNT at this time.

Description: Displays firewall messages.

Permission level: Diagnostic

Usage: **FWALLdblog**

The Secure Access Manager default specifies that a firewall generate a message for every packet it blocks. Firewall messages are sent to the logging mechanism, such as Syslog or the console, configured in the Log profile. Messages generated by firewalls have the following format:

```
date time router-name ASCEND: interface message
```

Following the date and time the message was logged is the name of the router from which the message was sent. The name of the interface (for example, ie0) is also shown. The message itself can contain one or more of the following fields:

```
protocol local direction remote length frag log tag
```

Each field has the following significance:

Field	Description
<i>protocol</i>	<p>For non-IP protocols, shows the 4-digit hexadecimal Ether Type or the network protocol name. For IP protocols, shows either the IP protocol number (up to 3 decimal digits) or one of the following names:</p> <ul style="list-style-type: none"> • <code>ip-in-ip</code> • <code>tcp</code> • <code>icmp</code> (which might also include the ICMP Code and Type as: <code>[code]/[type]/icmp</code>) • <code>udp</code> • <code>esp</code> • <code>ah</code> <p>For a list of IP protocols, see the description of the Protocol setting.</p>
<i>local</i>	<p>For non-IP packets, shows the packet's source or destination Ethernet MAC address (depending on whether the packet is inbound or outbound). On a WAN connection, the two MAC addresses are all zeros.</p> <p>For IP packets, indicates the packet's source or destination IP address. In the case of TCP or UDP, also includes the TCP or UDP port number as (<code>[IP_address];[port]</code>).</p>
<i>direction</i>	<p>An arrow shows the direction in which the packet was traveling (<- for inbound or -> for outbound).</p>
<i>remote</i>	<p>For non-IP packets, specifies the packet's source or destination Ethernet MAC address (depending on whether the packet is inbound or outbound). For IP packets, specifies the packet's source or destination IP address. In the case of TCP or UDP, also includes the TCP or UDP port number as (<code>[IP_address];[port]</code>).</p>
<i>length</i>	<p>Specifies the length of the packet in octets (8-bit bytes).</p>
<i>frag</i>	<p>Indicates packet fragmentation. This field is present if the packet has a nonzero IP offset or the IP More-Fragments bit is set in the IP header.</p>
<i>log</i>	<p>Reports packet status or header flags. Packet status messages include:</p> <ul style="list-style-type: none"> • <code>corrupt</code>—The packet is internally inconsistent. • <code>unreach</code>—The packet was generated by an <i>unreach</i> rule in the firewall. • <code>!pass</code>—The packet was blocked by the data firewall. <p>Packet header flags are TCP flag bits, including <code>syn</code>, <code>fin</code>, and <code>rst</code>. The <code>syn</code> flag should only be displayed for the initial packet, which has the <code>syn</code> flag set and the <code>ack</code> flag not set.</p>
<i>tag</i>	<p>Contains user-defined tags in the template used by the Secure Access Manager.</p>

See Also: FWALLversion

FWALLversion

Note: The FWALLversion command is not supported by the MAX TNT at this time.

Description: Displays the firewall versions supported by the current system software.

Permission level: Diagnostic

Usage: **FWALLversion**

Example: To display the supported firewall versions:

```
admin> FWALLversion
1 2
```

The output shows all firewall versions supported in the current code. The version numbers are separated by spaces. The Secure Access Manager uses this information to verify that firewalls you uploaded are supported.

See Also: FWALLdblog

Get

Description: Displays the contents of a profile or subprofile, but does not make it writable. Only the working profile can be modified. For information about reading a profile into the edit buffer to make it the working profile, see “Read” on page 1-89.

The Get command recognizes the period character (.) as a shorthand for the working profile (the profile in the edit buffer).

Permission level: System

Usage: **get** *profile-type* [*profile-index*] [*sub-profile*]
[*param-name* [*param-index*]]

Syntax element	Description
<i>profile-type</i>	The type of profile to be displayed, which might require an index as well. A period represents the working profile (the profile in the edit buffer).
<i>profile-index</i>	The profile index (the name or address that distinguishes a profile from others of the same type). To see profile indexes, use the Dir command.
<i>sub-profile</i>	A subprofile within the specified profile.
<i>param-name</i>	A parameter within the specified profile. If the parameter is in a subprofile, you must specify the subprofile name first.
<i>param-index</i>	Complex parameters have an index. For example, the Interface-Address parameter contains both the physical-address and logical-item indexes.

Example: To display the contents of a Connection profile called Dallas:

```
admin> get connection dallas
[in CONNECTION/dallas]
station*=dallas
active=yes
encapsulation-protocol=mpp
called-number-type=national
dial-number=85283
clid=""
ip-options={ yes yes 1.1.1.1/8 0.0.0.0/0 7 100 255 no no 0 +
session-options={ "" "" no 120 no-idle 120 "" }
telco-options={ ans-and-orig no off 1 no no 64k-clear 0 "" "" +
ppp-options={ ***** stac 1524 no 600 600 }
mp-options={ 1 1 2 }
mpp-options={ "" quadratic transmit 1 1 15 5 10 70 }
tcp-clear-options={ "" 0 }
answer-options={ }
usrRad-options={ global 0.0.0.0 1646 "" 1 acct-base-10 }
calledNumber=""
```

To display the OSPF subprofile:

```
admin> get connection dallas ip-options ospf
[in CONNECTION/dallas:ip-options:ospf-options]
active=no
area=0.0.0.0
area-type=normal
hello-interval=30
dead-interval=120
priority=5
authen-type=simple
auth-key=ascend0
cost=10
down-cost=1000
ase-type=type-1
ase-tag=c0:00:00:00
transit-delay=1
retransmit-interval=5
```

Several additional examples follow. The first shows how to use the *param-name* argument for the IP address of an Ethernet interface:

```
admin> get ip-int {{1 c 1}0} ip-address
[in IP-INTERFACE/{ { shelf-1 controller 1 } 0 }:ip-address]
ip-address=10.65.12.224/24
```

The next example shows how to use a parameter index on the Get command line:

```
admin> get ip-int {{1 c 1}0} interface-address physical-address
[in IP-INTERFACE/{ {shelf-1 controller 1} 0}:interface-address:
physical-address]
shelf=shelf-1
slot=controller
item-number=1
```

The Get command, followed by a period, displays the contents of the current location in the working profile:

```
admin> get .
[in CONNECTION/dallas:ip-options:ospf-options]
active=no
area=0.0.0.0
area-type=normal
hello-interval=30
dead-interval=120
priority=5
authen-type=simple
auth-key=ascend0
cost=10
down-cost=1000
ase-type=type-1
ase-tag=c0:00:00:00
transit-delay=1
retransmit-interval=5
```

As when you use the List command, you can modify “Get .” with “..” to display a higher context than the current location in the working profile:

```
admin> get . ..
[in CONNECTION/dallas:ip-options]
ip-routing-enabled=yes
vj-header-prediction=yes
assign-address=no
remote-address=10.9.5.6/24
if-remote-address=0.0.0.0
local-address=0.0.0.0/0
routing-metric=7
down-metric=7
preference=100
down-preference=255
private-route=no
multicast-allowed=no
address-pool=0
auth-pool-address=0.0.0.0
ip-direct=0.0.0.0
rip=routing-off
ospf-options={ no 0.0.0.0 normal 10 30 120 5 simple ***** 10 +
multicast-rate-limit=100
client-dns-primary-addr=0.0.0.0
client-dns-secondary-addr=0.0.0.0
client-dns-addr-assign=yes
client-default-gateway=0.0.0.0/0
```

To display a deeper context than the current location in the working profile, specify one or more subprofiles after the period:

```
admin> get . ip ospf
[in CONNECTION/dallas:ip-options:ospf-options]
active=no
area=0.0.0.0
area-type=normal
hello-interval=30
dead-interval=120
priority=5
authen-type=simple
auth-key=ascend0
cost=10
down-cost=1000
ase-type=type-1
ase-tag=c0:00:00:00
transit-delay=1
retransmit-interval=5
```

See Also: Read, Write, List

HDLC

Description: Displays information about the channels handled by the HDLC controller card. The HDLC controller card handles all channels except those using Serial Line Internet Protocol (SLIP), Compressed Serial Line Internet Protocol (CSLIP), or asynchronous PPP. A multichannel connection uses multiple HDLC channels.

Permission level: System

Usage: `hdlc -a | -d | -f | -i | -p`

Option	Description
-a	Display all available HDLC channels.
-d	Display disabled HDLC channels.
-f	Display failed/nonexistent HDLC channels.
-i	Display in-use HDLC channels.
-p	Display all possible HDLC channels.

Example: To display information about all available HDLC channels, specify the `-a` option:

```
admin> hdlc -a
HDLC channels available for use:

      (dvOp  dvUpSt  dvRq  sAdm)
HDLC { { 1 5 1 } 1 } (Up  Idle  UP  UP )
HDLC { { 1 5 1 } 2 } (Up  Idle  UP  UP )
HDLC { { 1 5 1 } 3 } (Up  Idle  UP  UP )
HDLC { { 1 5 1 } 4 } (Up  Idle  UP  UP )
HDLC { { 1 5 1 } 5 } (Up  Idle  UP  UP )
HDLC { { 1 5 1 } 6 } (Up  Idle  UP  UP )
HDLC { { 1 5 1 } 7 } (Up  Idle  UP  UP )
HDLC { { 1 5 1 } 8 } (Up  Idle  UP  UP )
HDLC { { 1 5 1 } 9 } (Up  Idle  UP  UP )
HDLC { { 1 5 1 } 10 } (Up  Idle  UP  UP )
HDLC { { 1 5 1 } 11 } (Up  Idle  UP  UP )
HDLC { { 1 5 1 } 12 } (Up  Idle  UP  UP )
HDLC { { 1 5 1 } 13 } (Up  Idle  UP  UP )
HDLC { { 1 5 1 } 14 } (Up  Idle  UP  UP )
HDLC { { 1 5 1 } 15 } (Up  Idle  UP  UP )
HDLC { { 1 5 1 } 16 } (Up  Idle  UP  UP )
HDLC { { 1 5 1 } 17 } (Up  Idle  UP  UP )
[More? <ret>=next entry, <sp>=next page, <^C>=abort]
```

The data displayed includes the physical address and channel number, and the following status information about each channel:

Column	Description
dvOp	The current operational state of the channel (also specified by the Device-State setting): <ul style="list-style-type: none"> Down indicates that the channel is in a nonoperational state. Up indicates that the channel is in normal operations mode.
dvUpSt	The status of the channel in normal operations mode: <ul style="list-style-type: none"> Idle indicates that no call is on the line. Active indicates that the channel is handling a call.
dvRq	The required state of the channel as specified by ReqD-State: <ul style="list-style-type: none"> Down indicates that the channel is required to be in a nonoperational state. Up indicates that the channel is required to be in normal operations mode.
SAdm	The desired administrative state of the channel (also specified by the Desired-State setting): <ul style="list-style-type: none"> Down specifies that the channel should terminate all operations and enter the down state. Up specifies that the channel should come up in normal operations mode.

The actual state of the channel can differ from the desired state, as when a device is powering up, or you change the desired state on a running slot. Changing the desired state does not force a channel to the new state. It indicates that the MAX TNT should change the channel state in a graceful manner.

See Also: Modem, Show, Slot

Help

Description: Displays a list of all available commands or help text about a specific command. The question-mark (?) is a shortcut version of this command.

Permission level: User

Usage: `help [-a] | [command-name]`

Option	Description
-a	List all commands. (Without this option, the list includes only commands authorized by the current User profile.)
command-name	Display information about the specified command.

Example: To display a list of commands authorized for your current login:

```
admin> help
?                ( user )
arp              ( system )
auth            ( user )
callroute       ( diagnostic )
clear           ( user )
clock-source    ( diagnostic )
clr-history     ( system )
connection      ( system )
date            ( update )
delete          ( update )
device          ( diagnostic )
dir             ( system )
dircode         ( system )
ether-display   ( diagnostic )
fatal-history   ( system )
format          ( code )
get             ( system )
hdlc            ( system )
help            ( user )
if-admin        ( diagnostic )
line            ( system )
[More? <ret>=next entry, <sp>=next page, <^C>=abort]
```

To display help text about the Dir command, for example:

```
admin> help dir
dir                list all profile types
dir profile-type   list all profiles of the specified type
dir profile-type profile-index list the specified profile
instance
```

Dependencies: The current security level is set by the current User profile and determines which commands are displayed in response to this command. If the current User profile does not have sufficient privileges to execute a command, the command is not displayed unless you specify the `-a` option. Commands with the User security level are always displayed. For detailed information, see “Auth” on page 1-4.

See Also: `?`, Auth

IDSLcmd

Description: Enables you to perform loopback and error tests on an IDSL card. You must first execute the Open command to open a session with the card.

Permission level: Diagnostic

Usage: `idslcmd -1|-2|-a|-f|-z|-c|-u|-r|-n|-? [channel]`

Option	Description
<code>-1</code>	Perform a loopback on the first B channel.
<code>-2</code>	Perform a loopback on the second B channel.
<code>-a</code>	Perform an analog loopback on the B channels.
<code>-f</code>	Perform block-error fetching.
<code>-z</code>	Clear block-error counters.
<code>-c</code>	Generate artificial CRC errors by inverting the CRC value.
<code>-u</code>	Cancel the <code>-c</code> option.
<code>-r</code>	Request that the remote TA invert the CRC value.
<code>-n</code>	Cancel the <code>-n</code> option.
<code>-?</code>	Display the command summary.
<i>channel</i>	The channel to test. You can specify a channel from 0 to 31. If you do not specify a channel, IDSLcmd tests all channels.

Performing an EOC loopback over the B channels

The first two options, `-1` and `-2`, initiate an Embedded Operations Channel (EOC) loopback on the specified B channel. EOC refers to the out-of-band mechanism available in the BRI-U interface to implement maintenance functions. Instead of using the D or B channels, the mechanism uses the maintenance bits of U-interface superframe, so it is nonintrusive. Maintenance functions include test loopbacks, statistics gathering (in the form of block error counters), and requests to generate errors (to verify that the counters work).

When you use the -1 or -2 option, IDSLcmd accepts additional arguments in the following syntax:

```
idsl-1/7> idslcmd -channel [EOC_address] [count] [buffersize]
```

Syntax element	Description
channel	The number 1 represents the first B channel. The number 2 represents the second B channel.
EOC_address	A number from 0 to 7. The default is zero, which addresses the remote TA (NT). The number 7 broadcasts the EOC loopback to all the nodes. The numbers 1 to 6 address the nodes between the IDSL card and the remote TA, with 1 being closest to the IDSL card.
count	The number of buffers to send in the loopback. The default is 10.
buffersize	The size of the buffer to send. The default is 128 bytes.

For example, to request that the remote TA or BRI-U device (specified by the EOC address) go into loopback mode over the B1 channel and send 64 frames of 32 bytes each:

```
idsl-1/7> idslcmd -1 0 64 32
```

A message appears, reporting the number of frames received from the TA.

Performing an analog loopback over the B channels

With the -a option, IDSLcmd requests an analog loopback for testing data paths between components of the card itself. The -a option requires that you specify a channel number, and accepts additional arguments in the following syntax:

```
idsl-1/7> idslcmd -a channel [count] [buffersize]
```

Syntax element	Description
channel	The number 1 represents the first B channel. The number 2 represents the second B channel.
count	The number of buffers to send in the loopback. The default is 10.
buffersize	The size of the buffer to send. The default is 128 bytes.

For example, to put the U-interface echo canceller (IEC-2091) in analog loopback mode and send 64 frames of 32 bytes each over channel B1:

```
idsl-1/7> idslcmd -a 1 64 32
```

A message appears, reporting the number of frames received. This test is adequate to verify the path between the HDLC controllers and the IEC-2091 echo canceller.

Block error fetching and error clearing

The remote U-interface/echo canceller provides internal counters for remote and local block errors. This mechanism facilitates comfortable surveillance of the transmission quality at the U-interface. A block error is detected when the calculated checksum of the received data does not correspond to the control checksum transmitted in the next superframe. One block error indicates that one U-superframe has not been transmitted correctly. You cannot determine the number of bit errors by examining the block-error counters.

All error reports are from the point of view of the remote TA, because the mechanism fetches error counters from the remote TA. A near-end block error (NEBE) indicates that the error has been detected in the receive direction. A far-end block error (FEBE) identifies errors in the transmit direction.

With the `-f` option, IDSLcmd fetches block-error counters for the specified channel. For example:

```
idsl-1/7> idslcmd -f 1
```

Block error counters are cumulative. They stop accumulating when they reach their upper limit of 65534. To clear the block-error counters for a channel, use the `-z` option:

```
idsl-1/7> idslcmd -z 1
```

Performing CRC error tests

To test the NEBE and FEBE counters, you can simulate transmission errors by artificially corrupting CRCs. With the `-c` option, IDSLcmd inverts the CRC values to purposely generate CRC errors. The remote FEBE should then increment for every corrupt frame it receives. For example, to invert the CRC value on channel 2 by one:

```
idsl-1/7> idslcmd -c 2
```

To cancel the command and return the CRC values to normal, use the `-u` option:

```
idsl-1/7> idslcmd -u 2
```

Conversely, you can use the `-r` option to request that the remote TA invert the CRC values. For example:

```
idsl-1/7> idslcmd -r 1
```

The remote NEBE should increment by one for every corrupt frame sent. To cancel the command and return the CRC values to normal, use the `-n` option:

```
idsl-1/7> idslcmd -n 1
```

If-Admin

Description: Displays information about or changes the state of an SNMP interface. Each device in the system has a unique SNMP interface number assigned to the device when a card is installed. Interface numbers are stored in NVRAM, which is not affected by system resets, so a physical device keeps the same interface number across system resets or power failures.

Permission level: Diagnostic

Usage: `if-admin -a | -d interface | -l | -u interface | -r interface | -?`

Option	Description
-a	List available SNMP interface numbers.
-d interface	Administratively down a specified SNMP interface
-l	List SNMP interface/device address mappings.
-u interface	Administratively bring up a specified SNMP interface.
-r interface	Reset an SNMP interface.
-?	Display a usage summary.

Example: To display a list of available SNMP interface numbers, specify the `-a` option:

```
admin> if-admin -a
Available SNMP interface numbers
      118 - infinity
```

To display a list of all SNMP interface numbers assigned by the system, specify the `-l` option:

```
admin> if-admin -l
SNMP-IF    DEVICE ADDRESS
  101      -    { 1 11 32 }
    1      -    { 1 17 1  }
  102      -    { 1 11 33 }
    2      -    { 1 3 1  }
  103      -    { 1 11 34 }
    3      -    { 1 3 2  }
  104      -    { 1 11 35 }
    4      -    { 1 3 3  }
  105      -    { 1 11 36 }
    5      -    { 1 3 4  }
  106      -    { 1 11 37 }
    6      -    { 1 3 5  }
  107      -    { 1 11 38 }
    7      -    { 1 3 6  }
  108      -    { 1 11 39 }
    8      -    { 1 3 7  }
```

[More <ret>=next entry, <sp>=next page, <^C>=abort]

To bring up SNMP interface number 111:

```
admin> if-admin -u 111
interface 111 state change forced
```

IGMP

Description: Displays multicast information about Internet Group Membership Protocol (IGMP) groups and clients. The IGMP command applies only if the MAX TNT forwards multicast packets to members of multicast groups. It lists the members of groups to which the MAX TNT forwards multicast packets, and displays information about the groups.

Permission level: System

Usage: `igmp group | client | debug | hbdebug`

Keyword	Description
group	Display active multicast group addresses and interfaces.
client	Display multicast clients.
debug	Display IGMP debug information, such as statistics about queries to clients and replies from clients.
hbdebug	Display heartbeat messages.

Example: To display active multicast group addresses and interfaces for each group, specify the `group` argument:

```
admin> igmp group
IGMP Group address Routing Table Up Time: 0:0:22:17
Hash      Group Address  Members  Expire time  Counts
N/A       Default route  * (Mbone)  .....      2224862
10        224.0.2.250
                                2          0:3:24      3211 :: 0 S5
                                1          0:3:21      145  :: 0 S5
                                0 (Mbone)  .....      31901 :: 0 S5
```

The output contains the following fields:

Field	Description
Hash	Index to a hash table (displayed for debugging purposes only). N/A indicates that the Default route is not an entry in the hash table.
Group address	IP multicast address used for the group. An asterisk indicates the IP multicast address being monitored, meaning that members join this address by local application. The Default route is the MBONE interface (the interface on which the multicast router resides). If the MAX TNT finds that there is no member in a group, it forwards multicast traffic for the group to the MBONE interface.
Members	ID of each member of each multicast group. The zero ID represents members on the same Ethernet interface as the MAX TNT. All other IDs go to members of each group as they inform the MAX TNT that they have joined the group. If a client is a member of more than one group to which the MAX TNT forwards multicast packets, it has more than one multicast ID. The interface labeled Mbone is the interface on which the multicast router resides.

Field	Description
Expire time	When this membership expires. The MAX TNT sends out IGMP queries every 60 seconds, so the expiration time is usually renewed. If the expiration time is reached, the MAX TNT removes the entry from the table. If the field contains periods, this membership never expires. A string of periods means that the default route never times out.
Counts	Number of packets forwarded to the client, the number of packets dropped due to lack of resources, and the state of the membership. The state is displayed for debugging purposes.

To display a list of multicast clients, use the `client` argument:

```
admin> igmp client
IGMP Clients
Client      Version  RecvCount  CLU      ALU
0 (Mbone)   1        0          0        0
2           1        39         68       67
1           1       33310      65       65
```

The output contains the following fields:

Field	Description
Client	Interface ID on which the client resides. The value 0 (zero) represents the Ethernet. Other numbers are WAN interfaces, numbered according to when they became active. The interface labeled Mbone is the interface on which the multicast router resides.
Version	Version of IGMP being used.
RecvCount	Number of IGMP messages received on that interface.
CLU	CLU is Current Line Utilization, and ALU is Average Line Utilization. Both indicate the percentage of bandwidth utilized across this interface. If bandwidth utilization is high, some IGMP packet types are not forwarded.
ALU	

Dependencies: This command is not applicable if IP multicast forwarding is not enabled.

IPcache

Description: Displays information about IP route caches. A route cache enables a slot card to route IP packets to another slot, reducing the route-processing overhead on the shelf controller. The shelf controller is still responsible for managing routing protocols and the route caches themselves, but each slot card is able to check a small IP cache and route packets to a destination slot. When a slot card receives an IP packet for which it has no cache entry, it forwards that packet to the shelf controller. The shelf controller routes it to the proper slot and writes a cache entry. The cache entry is downloaded to the route cache of all slot cards via the control bus.

Permission level: System

Usage: **ipcache** [-r *VRoutername*] **cache** | **debug** | **disable** | **enable**

Option	Description
-r VRoutername	The name of the Virtual Router (VRouter). If you do not specify a VRouter name, the system assumes the global VRouter.
cache	Display the cache.
debug	Turn on debugging.
disable	Disable the route cache. (Available only on slot cards.)
enable	Enable the route cache. (Available only on slot cards.)

Example: To display the cache:

```
admin> ipcache cache
```

```
Hash      Address      Gateway      Ifname      Type      MTU
40         40.0.0.40     40.0.0.40     wan10(1/10) DYNAMIC 1524
Cache Limit 0 Cache Count 0 Cache over limit 0 No.packets 5
Mem Usage: Allocated 1k bytes
Free block count 26
```

IP-Pools

Description: Displays the status of the IP address pools configured in the IP-Global profile.

Permission level: System

Usage: **ip-pools** [*VRoutername*]

Syntax element	Description
-r VRoutername	The name of the Virtual Router (VRouter). If you do not specify a VRouter name, the system assumes the global VRouter.

Example: admin> **ip-pools**

```
Pool#      Base      Count      InUse
1           10.154.3.50    50         0
3           10.154.3.150   50         1
Number of remaining allocated addresses: 99
```

The sample output shows two configured pools, with the base address, address count, and number of addresses in use for each pool.

IProute

Description: Enables you to manually add or delete IP routes. Changes to the routing table do not persist across system resets.

Permission level: System

Usage: `iproute add|delete`

Syntax element	Description
<code>add</code>	Add an IP route to the routing table.
<code>delete</code>	Delete an IP route from the routing table.

Adding a static IP route to the routing table

To add a static IP route to the MAX TNT unit's routing table, use the IProute Add command.

```
iproute add [-r VRoutername] dest_IPaddr[/subnet_mask]  
gateway_IPaddr[/subnet_mask] [pref] [metric]
```

Syntax element	Description
<code>-r VRoutername</code>	The name of the Virtual Router (VRouter). If you do not specify a VRouter name, the system assumes the global VRouter.
<code>dest_IPaddr/subnet_mask</code>	Destination network address and subnet mask (in bits). The default is 0.0.0.0/0.
<code>gateway_IPaddr/subnet_mask</code>	IP address of the router that can forward packets to the destination network, and subnet mask (in bits). The default is 0.0.0.0.
<code>pref</code>	Route preference. The default is 100.
<code>metric</code>	Virtual hop count of the route. You can enter a value between 1 and 15. The default is 1.

For example, consider the following command:

```
admin> iproute add 10.1.2.0/24 10.0.0.3/24 1
```

It adds a route to the 10.1.2.0 network, through the IP router located at 10.0.0.3/24. The metric to the route is 1 (one hop away).

If you try to add a route to a destination that is already in the routing table, the MAX TNT does not replace the existing route unless it has a higher metric than the route you attempt to add. If you get the message **Warning: a better route appears to exist**, the MAX TNT has rejected your attempt to add a route. Note that RIP and OSPF updates can change the metric for the route.

Note: Any routes you add with the IProute Add command are lost when you reset the MAX TNT.

Deleting a static IP route from the routing table

To remove a static IP route from the MAX TNT unit's routing table, enter the IProute Delete command.

```
iproute delete [-r VRoutername] dest_IPaddr/subnet_mask
[gateway_IPaddr[/subnet_mask]]
```

For example, the following command removes the route to the 10.1.2.0 network:

```
admin> iproute delete 10.1.2.0/24 10.0.0.3/24
```

Note: RIP and OSPF updates can add back any route you remove with IProute Delete. Also, the MAX TNT restores all routes listed in the IP-Route profile after a system reset.

Line

Description: Specifies that the upper-right or lower-right portion of the status window (or both) should display T1, E1, or DS3 line and channel status information. If the status window is not already displayed, this command opens it with the connection status information displayed.

Permission level: System

Usage: **line** **all** | **enabled** **top** | **bottom**

Option	Description
all	Display status information about all T1 lines.
enabled	Display status information only about enabled T1 lines.
top	Display line status in the upper portion of the status window.
bottom	Display line status in the lower portion of the status window (the default).

Example: To display line status information in the upper part of the status window:

```
admin> line top
```

```

2 Connections
001 tomw PPP 1/7/14 19200 SanFran+ 1/13/8 RA I.....
002 timl MP 1/7/3 56000 Berkeley 1/01/04 RA N.....
                        1/01/05 RA T.....
Clevela+ 1/01/01 RA T.....
Oakland 1/01/02 RA S.....

M: 48 L: info Src: shelf-1/controller
48 out of 48 modems passed POST

Issued: 16:48:02, 09/27/1998

[Next/Last Conn <dn/up arw>, Next?Last Page: <pg dn/up>, Exit: <esc>]
```

Line status information includes the following identifiers and codes:

- A line identifier in shelf/slot/line format.
- A two-character code indicating the line's link status.
- A single-character code indicating channel status. For an SS7 data trunk, this character code is always 7.
- A single-character code indicating channel type.

Following are the link-status codes:

Code	Description
LA (T1 lines)	Link Active. The line is active and physically connected.
TE (E1 lines)	
LS (UDS3 lines)	Loss of Signal. No signal has been detected.
LF (UDS3 lines)	Loss of Frame. A signal is present but is not valid for framing.
RA	Red Alarm. The line is not connected, or it is improperly configured, experiencing a very high error rate, or supplying inadequate synchronization.
YA	Yellow Alarm. The MAX TNT is receiving a Yellow Alarm pattern, which indicates that the other end of the line cannot recognize the signals the MAX TNT is transmitting.
DF	D-channel Fail. The D channel for a PRI line is not currently communicating.
1S	All Ones. The network is sending a keepalive signal to the MAX TNT to indicate that the line is currently inoperative.
DS	Disabled. The line might be physically connected, but the T1 or E1 profile specifies that it is inactive.

Following are the channel-status codes:

Code	Description
.	The channel is not available for one of the following reasons: <ul style="list-style-type: none"> • The line is disabled. • The channel has no physical link or does not exist. • The channel configuration specifies that the channel is unused. • The channel is reserved for framing (first E1 channel only).
*	The channel is connected in a current call.
-	The channel is currently idle (but in service).
b	The channel is a backup NFAS D channel (T1 PRI only).
c	The channel is currently not available because it is in the process of clearing the most recent call, or because it is in the process of sending echo cancellation tones to receive a call (inband signaling on T1 only).
d	The MAX TNT is dialing from this channel for an outgoing call.

Code	Description
r	The channel is ringing for an incoming call.
m	The channel is in maintenance/backup mode (ISDN and SS7 only).
n	The channel is nailed.
o	The channel is out of service (ISDN and SS7 only).
s	The channel is an active D channel (ISDN only).

Following are the channel-type codes:

Code	Description
T	T1 inband signaling
I	T1 PRI signaling
P	NFAS Primary
S	NFAS Secondary
N	All other NFAS types

To display a prompt below the status window, press the Escape key. To scroll through the list of lines, press the Up-Arrow or Down-Arrow key, or to page up or down through the lines, press the Page Up or Page Dn key. To close the status window:

```
admin> status
```

See Also: Connection, Log, Status, T1channels, View

List

Description: Lists the contents of the current or specified context in the working profile. Listing a subprofile changes the current context to that subprofile. Specifying two periods (..) as the command argument changes the current context back to one level higher in the working profile (“closing” the subprofile). The List command works only on the working profile.

Permission level: System

Usage: `list` [*...*] [*param-name* [*param-index*] [*sub-profile*]]

Option	Description
<i>..</i> (two periods)	Close the current subprofile and return to the previous higher context.
<i>param-name</i>	A parameter in the current context. If the parameter is in a subprofile, you must specify the subprofile name first.
<i>param-index</i>	Complex parameters have an index. For example, the Interface-Address parameter contains both the physical-address and logical-item indexes.
<i>sub-profile</i>	List the contents of a subprofile that is visible in the current context, and make that subprofile the current context.

Example: To make a Connection profile named Dallas the working profile:

```
admin> read connection dallas
```

To list its contents:

```
admin> list
[in CONNECTION/dallas]
station*=dallas
active=yes
encapsulation-protocol=mpp
called-number-type=national
dial-number=85283
clid=""
ip-options={ yes yes 1.1.1.1/8 0.0.0.0/0 7 100 255 no no 0 +
session-options={ "" "" no 120 no-idle 120 "" }
telco-options={ ans-and-orig no off 1 no no 64k-clear 0 "" "" +
ppp-options={ ***** stac 1524 no 600 600 }
mp-options={ 1 1 2 }
mpp-options={ "" quadratic transmit 1 1 15 5 10 70 }
tcp-clear-options={ "" 0 }
answer-options={ }
usrRad-options={ global 0.0.0.0 1646 "" 1 acct-base-10 }
calledNumber=""
```

To list the PPP-Options subprofile:

```
admin> list ppp
[in CONNECTION/dallas:ppp-options]
send-password=*****
recv-password=*****
enabled=yes
link-compression=stac
mru=1524
lqm=no
disconnect-on-auth-timeout=yes
lqm-minimum-period=600
lqm-maximum-period=600
```

To return to the top-level context of the profile:

```
admin> list ..
```

To use the List command to display the Answer-Options subprofile:

```
admin> list .. answer
[in CONNECTION/dallas:answer-options]
profile-required=no
ans-default=no
profile-source=no
clid-auth-mode=ignore
```

Dependencies: The List command works only on the working profile. To make an existing profile the working profile, use the Read command. When you create a new profile, it becomes the working profile automatically.

See Also: Dir, Get, Read, New, Set, Write

Load

Uploads a code image to flash or runs a remote configuration script. The code image or script may be located on the disk of the PC you are using for the terminal session with the MAX TNT or on a network host that supports TFTP.

Permission level: Update

Usage: `load [-v] load-type [-subtype] source [device]`

Syntax element	Description
<code>-v</code>	Display verbose output for configuration loads.
<code>load-type</code>	<p>The load type:</p> <ul style="list-style-type: none"> • <code>amdm</code>—code for an Analog Modem card • <code>boot-sr</code>—shelf-router boot load • <code>capadsl</code>—code for an ADSL-CAP card • <code>config</code>—configuration file • <code>csmx</code>—code for a Series56 II card • <code>ds3-atm</code>—code for an ATM-DS3 card • <code>e1-8</code>—code for an 8-port E1 card • <code>enet</code>—code for an Ethernet card • <code>enet2</code>—code for an Ethernet-2 card • <code>hdlc</code>—code for an HDLC card • <code>hdlc2</code>—code for an HDLC-2 card • <code>hssi</code>—code for a High-Speed Serial Interface (HSSI) • <code>idsl</code>—code for an IDSL card • <code>mdm56k</code>—code for a Series56 Digital Modem card • <code>modem</code>—code for a modem card • <code>sdsl</code>—code for an SDSL card • <code>sdsl70d</code>—code for an SDSL data card • <code>sdsl70v</code>—code for an SDSL voice card • <code>sr</code>—shelf-router runtime load (resides in onboard flash) • <code>swan</code>—code for a serial WAN card • <code>t1-8</code>—code for an 8-port T1 card • <code>T3</code>—code for a T3 card • <code>tar</code>—a tar file containing all slot card code images • <code>uds3</code>—code for an unchannelized DS3 card • <code>ue1</code>—code for an unchannelized E1 card • <code>unchan-t1</code>—code for an unchannelized T1 line

Syntax element	Description
-subtype	<p>The subtype of the image:</p> <ul style="list-style-type: none"> -normal (for regular image, the default) -debug (for debugging image) -diagnostic (for diagnostic image) <p>The Load command supports subtype alignment, which enables you to change the subtype of the image. For example, if you load an image whose header specifies that it is a normal image, but you specify the -debug subtype, the image saved in flash has a subtype of Debug instead of Normal.</p>
source	<p>The location from which the file will be loaded:</p> <ul style="list-style-type: none"> <code>network host filename</code>—After typing the word <code>network</code>, you can specify a hostname or IP address and the path to the file on a TFTP host. <code>console</code>—The PC connected to the MAX TNT via the serial port.
device	<p>The name of the flash card to load. The valid device names are:</p> <ul style="list-style-type: none"> [flash-card-]1 (default) [flash-card-]2 <p>Note that device names may be abbreviated as 1 and 2.</p>

Example: To load a configuration file named `maxtnt.cfg` from a network host 10.8.7.2 to flash-card-1:

```
admin> load config network 10.8.7.2 /maxtnt.cfg
```

To load a software update for a T1 card from the PC you are using to flash-card-2:

```
admin> load t1-8 console 2 tntt1.ffi
```

To load the `tntrel.tar` file from a network host named `host1`:

```
admin> load tar net host1 tntrel.tar
```

If the system terminates the process of loading a tar file, one of the following messages might appear:

```
load aborted: not a tar image
```

```
load aborted: a tar image, inconsistent with the specified
load-type.
```

```
load aborted: invalid/unknown image header.
```

```
load aborted: mismatched image for the specified load-type.
```

```
load aborted: invalid image, unsupported by load tar command.
```

The Load command supports type checking to verify that the load type specified on the command line matches the image header. The above messages indicate that the type checking process discovered inconsistencies between the load type and the image header. Check your command line. If necessary, download the tar file again.

The following warning message does not terminate the Load, but indicates that you are not loading the most recent software version:

```
load: warning: old image header version detected, load
continued...
```

Finally, the following error messages can also appear when you use the Load command:

```
load: error: flash card write failed: card full
```

There is no space to load software on the flash card.

```
load: error: specified flash card not present
```

No flash card is detected in the specified slot (1 or 2).

```
load: error: specified flash card not formatted
```

A Format command is required before loading the software.

```
load: error: specified flash card has obsolete format
```

A Format is required because a 1.3A file system was detected.

```
load: error: specified flash card is write-protected
```

The flash card's write-protect switch is set.

```
load: error: specified flash image is currently in use
```

A slot card in the LOAD state is currently accessing the flash card.

Dependencies: You can set parameters in the Load-Select profile to specify which slot-card images to load to flash when you use a Load Tar command. An explicit Load command for a particular card type overrides the settings in the Load-Select profile. The Load command supports type checking to verify that the load type specified on the command line matches the image header.

See Also: Dircode, Format, Fsck, Save

Loadslave

Description: Enables you to update slave-shelf code from the master-shelf interface.

Permission level: Update

Usage: `loadslave shelf [image1 | image2]`

Syntax element	Description
<i>shelf</i>	The shelf number of a slave shelf.
<i>image1</i> , <i>image2</i>	The two load images maintained in the master shelf controller's NVRAM. The MAX TNT uses one of the images to update the specified shelf. The <i>image1</i> option specifies the low boot image of the Master. The <i>image2</i> option specifies the high boot image of the Master. The default is <i>image2</i> .

When you load a binary to the master shelf controller via TFTP or a serial connection, the compressed image is stored in the high-address section of NVRAM, referred to as image2 in Figure 1-1. When you then reset the system to execute the new shelf-controller software, the system first verifies that the compressed image is good and copies it into the low-address section of memory. The copy is referred to as image1. The system then decompresses image1, loads it into memory, and boots from image1.

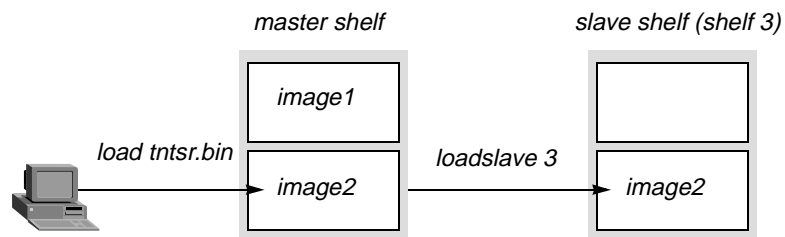


Figure 1-1. Loading new shelf-controller software

The slave shelf always stores the code image in the high-address section of its NVRAM (image2). However, you can specify in the Loadslave command whether you want it to load the binary from image1 or image2 in the master shelf. After you reset the master shelf, both images are identical.

Log

Description: Specifies that the upper-right or lower-right portion of the status window (or both) should display a message from the MAX TNT log buffer that contains the most recent system events. If the status window is not already displayed, this command opens it with the connection status information displayed.

The Log profile controls whether logs are sent to a Syslog host, as well as how many logs are stored in the MAX TNT buffer. The number of events stored in the log is set by the Save-Number parameter. For more information about the Log profile, see the description of the Log profile.

Permission level: System

Usage: `log top|bottom`

Option	Description
<code>top</code>	Display the log in the upper-right portion of the status window.
<code>bottom</code>	Display the log in the lower-right portion of the status window.

```
admin> log bottom
```

The first line of the event-log window shows the log entry number (M: 00 through M: N, where N is set in the Save-Number parameter of the Log profile), the level of message, and the device on which the event occurred. The last line shows the date and time when the event occurred.

Level	Description
emergency	A failure or major error has occurred, and normal operation is doubtful.
alert	A failure or major error has occurred, but normal operation can probably continue.
critical	An interface has gone down, or there has been a security error.
error	Something that should not occur has occurred.
warning	Something out of the ordinary, such as a login failure due to an invalid user name or password, has happened in otherwise normal operations.
notice	Something of interest, such as a link going up or down, has happened during normal operation.
info	A change in state or status was noticed. Such messages are not of general interest.
debug	The message is of interest only if you are debugging a unit configuration.

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Following are some sample informational messages:

Informational message	Description
48 out of 48 modems passed POST	All of the modems on a card passed the power-on self test.
Incoming call	A call has been received but not yet routed.
Outgoing call	The MAX TNT has dialed a call.
Added Bandwidth	The MAX TNT has added bandwidth to an active call.
Ethernet up	The Ethernet interface has been initialized and is running.
LAN session up	A PPP session has been established.
LAN session down	A PPP session has been terminated.
Assigned to port	The MAX TNT has determined the assignment of an incoming call to a digital modem or HDLC channel.
Call Terminated	An active call was disconnected normally, although not necessarily by operator command.
Removed Bandwidth	The MAX TNT has removed bandwidth from an active call.
RADIUS config error	The MAX TNT has detected an error in the configuration of a RADIUS user profile.
Requested Service Not Authorized	This message appears in the terminal server interface if the user requests a service not authorized by the RADIUS server.

Following are some sample warning messages:

Warning message	Description
Busy	The phone number was busy when the call was dialed.
No connection	The remote end did not answer when the call was dialed.
Network problem	The call setup was faulty because of problems in the WAN or in the Line profile configuration. The D channel might be getting an error message from the switch, or the telco might be experiencing a problem.
Call disconnected	The call has ended unexpectedly.
Far end hung up	The remote end terminated the call normally.
Incoming glare	The MAX TNT could not place a call because it saw an incoming <i>glare</i> signal from the switch. If you receive this error message, you have probably selected incorrect Line profile parameters. Check the Robbed-Bit-Mode setting.
LAN security error	A PPP session has failed authentication, another session by the same name already exists, or remote authentication timed out.
Call Refused	An incoming call could not be connected.

Press the Escape key to display a prompt below the status window. Then, to close the status window, enter the Status command:

```
admin> status
```

See Also: Connection, Line, Status, View

Modem

Description: Displays information about digital modems in the MAX TNT. Each modem card provides 48 modems.

Permission level: System

Usage: `modem -a | -d | -f | -g | -i | -m | -s`

Option	Description
-a	Display all available modems.
-d	Display disabled modems.
-f	Display failed or nonexistent modems.
-g	Display available good modems.
-i	Display in-use modems.
-m	Display all possible modems.
-s	Display suspect modems.

Example: To display all the good modems that are available for use, use the `-g` option:

```
admin> modem -g
```

Non-suspect modems available for use:

		(dvOp	dvUpSt	dvRq	sAdm	mDis)
Modem {	1 11 1 }	(Up	Idle	UP	UP	ENABLE)
Modem {	1 11 2 }	(Up	Idle	UP	UP	ENABLE)
Modem {	1 11 3 }	(Up	Idle	UP	UP	ENABLE)
Modem {	1 11 4 }	(Up	Idle	UP	UP	ENABLE)
Modem {	1 11 5 }	(Up	Idle	UP	UP	ENABLE)
Modem {	1 11 6 }	(Up	Idle	UP	UP	ENABLE)
Modem {	1 11 7 }	(Up	Idle	UP	UP	ENABLE)
Modem {	1 11 8 }	(Up	Idle	UP	UP	ENABLE)
Modem {	1 11 9 }	(Up	Idle	UP	UP	ENABLE)
Modem {	1 11 10 }	(Up	Idle	UP	UP	ENABLE)
Modem {	1 11 11 }	(Up	Idle	UP	UP	ENABLE)
Modem {	1 11 12 }	(Up	Idle	UP	UP	ENABLE)
Modem {	1 11 13 }	(Up	Idle	UP	UP	ENABLE)
Modem {	1 11 14 }	(Up	Idle	UP	UP	ENABLE)

[More? <ret>=next entry, <sp>=next page, <^C>=abort]

The data displayed includes the physical address of the modem and the following information:

Column	Description
dvOp	The current operational state of the modem (also specified by Device-State): <ul style="list-style-type: none"> Down indicates that the modem is in a nonoperational state. Up indicates that the modem is in normal operations mode.
dvUpSt	The status of the modem in normal operations mode: <ul style="list-style-type: none"> Idle indicates that the modem is not handling a call. Active indicates that the modem is handling a call.
dvReq	The required state of the modem as specified by the Req-State setting: <ul style="list-style-type: none"> Down indicates that the modem is required to be in a nonoperational state. Up indicates that the modem is required to be in normal operations mode.
SAdm	The desired administrative state of the modem (also specified by Desired-State): <ul style="list-style-type: none"> Down specifies that the modem should terminate operations and enter the down state. Up specifies that the modem should come up in normal operations mode. <p>The actual state of the modem can differ from the desired state, as when a device is powering up, or you change the desired state on a running slot. Changing the desired state does not force a modem to the new state. It indicates that the MAX TNT should change the modem state gracefully.</p>
mDis	Modem disable mode (as indicated by the LAN-Modem profile): <ul style="list-style-type: none"> Enable specifies that the modem is operational. Disable specifies that the modem has been disabled.

See Also: Open, Show, Slot

Netstat

Description: Displays the MAX TNT interface and routing tables, protocol statistics, and active sockets.

Permission level: System

Usage: `netstat [VRoutername] [-i] [-r[host]] [?] [-n | -d] [-s identifiers] [-z]`

Option	Description
no arguments	Display UDP and TCP statistics.
VRoutername	The name of the Virtual Router (VRouter). If you specify a VRouter name, the command returns statistics only for the specified VRouter. If you do not specify a VRouter name, the system assumes the global VRouter.
-i	Display the IP interface table.

Option	Description
-r <i>host</i>	Display the IP routing table. You can specify a hostname after the -r option to display the routing table entry for that host.
-?	Display a usage summary.
-n	Display numeric addresses rather than symbolic names. This option is the default.
-d	Display symbolic names rather than numeric addresses.
-s <i>identifiers</i>	Display protocol statistics. If no identifiers follow the -s option, all protocol statistics are printed. If you specify one or more identifiers, they determine the type of protocol statistics to display. The valid identifiers are <code>udp</code> , <code>tcp</code> , <code>icmp</code> , <code>ip</code> , <code>igmp</code> , and <code>mcast</code> .
-z	Display Zombie routes created for RIP. Zombie routes are those that have been deleted from the main routing table and are advertised with an infinite metric (16) for a period of 2 minutes to cause neighboring router to flush this route from their tables.

Displaying UDP and TCP statistics

To display both UDP and TCP statistics, do not specify any options. For example:

```
admin> netstat
```

```
udp:
```

-Socket-	Local	Port	InQLen	InQMax	InQDrops	Total	Rx
1/c 0		1023	0	1	0		0
1/c 1		route	0	0	0		25
1/c 2		echo	0	32	0		0
1/c 3		ntp	0	32	0		1
1/c 4		1022	0	128	0		0
1/c 5		snmp	0	128	0		0
1/1 0		1	0	256	0		0
1/1 1		1018	0	128	0		0
1/3 0		3	0	256	0		0
1/3 1		1021	0	128	0		0
1/5 0		5	0	256	0		0
1/5 1		1020	0	128	0		0
1/8 0		8	0	256	0		0
1/8 1		1019	0	128	0		0

```
tcp:
```

Socket	Local	Remote	State
1/c 0	*.23	*.*	LISTEN
1/c 1	10.2.3.114.23	15.5.248.121.44581	ESTABLISHED

The display contains the following information:

Column	Description
Socket	The shelf, slot, and socket corresponding to a local UDP or TCP port.
Local Port	The port on which the MAX TNT is listening for UDP packets.
InQLen	The number of packets in the input queue for the socket. The packets are waiting to be processed.
InQMax	The maximum number of packets that can reside in the input queue for the socket. A value of 0 (zero) means no limit. The MAX TNT drops excess packets.
InQDrops	The number of packets dropped from the input queue because the value of InQMax was reached.
Total Rx	The total number of packets received on the socket, including dropped packets.
Local	The local IP address and port for a TCP session. For example, in the value 10.2.3.114.23, 10.2.3.114 specifies the IP address and 23 specifies the port for a TCP session. If the address portion contains only an asterisk (*), the MAX TNT is listening for the start of a TCP session.
Remote	The remote IP address and port for a TCP session. For example, in the value 15.5.248.121.44581, 15.5.248.121 specifies the IP address and 44581 specifies the port for a TCP session. If the specification contains only asterisks (*.*), the MAX TNT is listening for the start of a TCP session.
State	The state of the session. The possible state values are: CLOSED—The socket is not in use. LISTEN—The socket is listening for incoming connections. Note that no session is associated with the LISTEN state, because this state precedes the establishment of a TCP session. SYN_SENT—The socket is trying to establish a connection. SYN_RECEIVED—The connection is being synchronized. ESTABLISHED—The connection is established. CLOSE_WAIT—The remote side has shut down the connection, and the MAX TNT is waiting for the socket to close. FIN_WAIT_1—The socket is closed, and the MAX TNT is shutting down the connection. CLOSING—The socket is closed. The MAX TNT is waiting for acknowledgment that the remote end has shut down. LAST_ACK—The remote end has shut down and closed the socket, and it is waiting for an acknowledgment from the MAX TNT. FIN_WAIT_2—The socket is closed, and the MAX TNT is waiting for the remote end to shut down the connection. TIME_WAIT—The socket is closed, and the MAX TNT is waiting for a remote-shutdown retransmission.

For UDP, Netstat reports the following services:

Service	UDP port number
Route	520
Echo	7
NTP	123
SNMP	161
SNMPTrap	162

For TCP, Netstat reports the following services:

Service	TCP port number
Telnet	23
TACACS+	49
Finger	79

Displaying the interface table

The MAX TNT interface table shows the address of each interface. To display the MAX TNT interface table, specify the `-i` option:

```
admin> netstat -i
```

The entries in the interface table associated with the MAX TNT Ethernet interfaces use the following naming convention:

```
ie[shelf]-[slot]-[item]
```

For example, the following output shows a four-port Ethernet card in slot 13:

Name	MTU	Net/Dest	Address	Ipkts	Ierr	Opkts	Oerr
ie0	1500	12.65.212.0/24	12.65.212.227	107219	0	54351	0
lo0	1500	127.0.0.1/32	127.0.0.1	4867	0	4867	0
rj0	1500	127.0.0.2/32	127.0.0.2	0	0	0	0
bh0	1500	127.0.0.3/32	127.0.0.3	0	0	0	0
wan4	1500	10.122.99.1	-	0	0	0	0
ie1-12-1	1500	11.168.6.0/24	11.168.6.227	430276	651	0	0
ie1-12-2	1500	10.122.72.0/24	10.122.72.1	0	0	0	3144
ie1-12-3	1500	10.122.73.0/24	10.122.73.1	0	0	3142	0
ie1-12-4	1500	10.122.74.0/24	10.122.74.1	0	0	3141	0

The columns in the interface table contain the following information:

Column	Description
Name	The name of the interface: <ul style="list-style-type: none"> ie0 or ie[<i>shelf</i>]-[<i>slot</i>]-[<i>item</i>] is an Ethernet interface. lo0 is the loopback interface. rj0 is the reject interface, used in network summarization. bh0 is the blackhole interface, used in network summarization. wan<i>N</i> is a WAN connection, entered as it becomes active. wanabe indicates an inactive RADIUS dialout profile.
MTU	(Maximum Transmission Unit) The maximum packet size allowed on the interface.
Net/Dest	The network or the target host this interface can reach.
Address	The address of this interface.
Ipkts	The number of packets received.
Ierr	The number of packets that contain errors.
Opkts	The number of packets transmitted.
Oerr	The number of transmitted packets that contain errors.

Displaying the routing table

To display the routing table, specify the `-r` option. For example:

```
admin> netstat -r
```

Destination Age	Gateway	IF	Flg	Pref	Metric	Use
0.0.0.0/0 48630	206.65.212.1	ie0	SG	100	1	4891
10.0.0.0/24 9236	11.168.6.249	ie1-12-1	RGT	100	3	0
10.0.100.0/24 48601	11.168.6.86	ie1-12-1	RGT	100	2	0
10.0.200.0/24 48601	11.168.6.86	ie1-12-1	RGT	100	2	0
10.122.72.0/24 48630	-	ie1-12-2	C	0	0	3141
10.122.72.1/32 48630	-	lo0	CP	0	0	0
10.122.73.0/24 48630	-	ie1-12-3	C	0	0	3140
10.122.73.1/32 48630	-	lo0	CP	0	0	0
10.122.74.1/32 48630	-	lo0	CP	0	0	0
10.122.99.0/24	10.122.99.1	wan4	SG	100	7	0

```

48630
10.122.99.1/32    10.122.99.1    wan4    S        100    7        1
48630
127.0.0.1/32    -              local   CP        0    0        0
48672
127.0.0.2/32    -              rj0     CP        0    0        0
48672
127.0.0.3/32    -              bh0     CP        0    0        0
48672
11.0.2.0/24     11.168.6.249  ie1-12-1 RGT       100    2        0
48626
11.168.6.0/24   -              ie1-12-1 C         0    0    14589
48630
11.168.6.0/24   11.168.6.116  ie1-12-1 *RGTM    100    8        0
48606
11.168.6.0/24   11.168.6.142  ie1-12-1 *RGTM    100    8        0
48610
11.168.6.0/24   11.168.6.96   ie1-12-1 *RGTM    100    8        0
48624
11.168.6.102/32 11.168.6.86   ie1-12-1 RGT       100    8        0
48601
11.168.6.115/32 11.168.6.116  ie1-12-1 RGT       100    8        0
48606
255.255.255.255/32-
48630

```

The columns in the routing table contain the following information:

Column	Description
Destination	The route's target address. To send a packet to this address, the MAX TNT uses this route. If the target address appears more than once in the routing table, the MAX TNT uses the most specific route (having the largest subnet mask) that matches that address.
Gateway	The next hop router that can forward packets to the given destination. Direct routes (without a gateway) show a hyphen in this column.
IF	The name of the interface through which to send packets over this route: <ul style="list-style-type: none"> • <code>ie0</code> or <code>ie[shelf]-[slot]-[item]</code> is an Ethernet interface. • <code>lo0</code> is the loopback interface. • <code>rj0</code> is the reject interface, used in network summarization. • <code>bh0</code> is the blackhole interface, used in network summarization. • <code>wanN</code> is a WAN connection, entered as it becomes active. • <code>wanabe</code> indicates an inactive RADIUS dialout profile. • <code>local</code> indicates a single route targeted at the local machine. • <code>mcast</code> indicates a route to a virtual device. The route encapsulates the multicast forwarder for the entire class D address space.

Column	Description
Flg	One or more of the following flags: <ul style="list-style-type: none"> • C—a directly connected route, such as Ethernet • I—an ICMP redirect dynamic route • N—placed in the table via SNMP MIB II • O—A route learned from OSPF • R—a route learned from RIP • r—a transient RADIUS-like route • S—a static route • ?—a route of unknown origin, which indicates an error • G—an indirect route via a gateway • P—a private route • T—a temporary route • M—a multipath route • *—a backup static route for a transient RADIUS-like route
Pref	The preference value. See the description of the Preference parameter for information about defaults for route preferences.
Metric	A RIP-style metric for the route, with a range of 0-16. Routes learned from OSPF show a RIP metric of 10. OSPF cost-infinity routes show a RIP metric of 16.
Use	A count of the number of times the route was referenced since it was created. (Many of these references are internal, so this is not a count of the number of packets sent over this route.)
Age	The age of the route in seconds. RIP and ICMP entries are aged once every 10 seconds.

Displaying protocol statistics

You can include identifiers in the command line to display IP, UDP, TCP, ICMP, IGMP, and multicast protocol statistics. The system displays TCP statistics collected from slot cards as well as the shelf controller. All other types of statistics are collected for the shelf controller only. The following example contains the `tcp` identifier:

```
admin> netstat -s tcp
tcp:
    17 active opens
    160 passive opens
    0 connect attempts failed
    9 connections were reset
    4294967215 connections currently established
    75620 segments received
    82645 segments transmitted
    313 segments retransmitted
    1 active closes
    1 passive closes
    0 disconnects while awaiting transmission
```

Note: There is no support for IP multicast on per-VRouter basis, so the IGMP and MCast statistics relate only to the global VRouter.

See Also: NSlookup, Ping, Rlogin, Traceroute

New

Description: Creates an instance of the specified profile type and makes the new profile the working profile. You can also use the command to assign the profile its index value. To write a new profile, you must uniquely identify it by setting its index field. In a profile listing, a parameter name followed by an asterisk identifies the index field.

In most cases, the profile's parameters are assigned default values. However, depending on the profile type, the index chosen might affect the factory default values set in the profile. (For details, see page 1-63.)

Permission level: System

Usage: `new profile-type [profile-index] [-f]`

Syntax element	Description
<i>profile-type</i>	The type of profile you want to create.
<i>profile-index</i>	The index value of the profile.
-f	Do not prompt for confirmation when issuing a New command that would overwrite the unsaved contents of the edit buffer .

If you create a new indexed profile without using the *profile-index* argument, a default index (usually null or zero) is used. For example:

Profile type	Default index
User	""
Serial	{ any-shelf any-slot 0 }
Ethernet	{ any-shelf any-slot 0 }
IP-Interface	{ { any-shelf any-slot 0 } 0 }

If you specify the *profile-index* on the command line, it is validated before use. For example:

```
admin> new t1 {12 2 3}
error: bad index: unknown value "12"

admin> new system foo
error: profile has no index
```

If you specify a valid index, it is applied to the new profile, which is read into the edit buffer.
For example:

```
admin> new t1 {1 2 3}
T1/{ shelf-1 slot-2 3 } read
admin> list
[in T1/{ shelf-1 slot-2 3 } (new)]
physical-address*={ shelf-1 slot-2 3 }
line-interface={ no d4 ami eligible middle-priority inband +
```

Example: To create a new Connection profile called Tim:

```
admin> new conn tim
CONNECTION/tim read
admin> list
[in CONNECTION/tim (new)]
station*=tim
active=no
encapsulation-protocol=mpp
called-number-type=national
dial-number=""
clid=""
ip-options={ yes yes 0.0.0.0/0 0.0.0.0/0 7 100 255 no no 0 +
session-options={ "" "" no 120 no-idle 120 "" }
telco-options={ ans-and-orig no off 1 no no 56k-restricted 0 +
ppp-options={ "" "" stac 1524 no 600 600 }
mp-options={ 1 1 2 }
mpp-options={ "" quadratic transmit 1 1 15 5 10 70 }
tcp-clear-options={ "" 0 }
answer-options={ }
usrRad-options={ global 0.0.0.0 1646 "" 1 acct-base-10 }
calledNumber=""
admin> write
CONNECTION/tim written
```

Dependencies: The index you choose might affect the factory default values set in the profile.
For example, if you specify the profile-index default for a User profile, the factory default permission settings are as follows:

```
admin> new user default
USER/default read
```

```
admin> list
[in USER/default (new)]
name*=default
password=" "
active-enabled=yes
allow-termserv=no
allow-system=no
allow-diagnostic=no
allow-update=no
allow-password=no
allow-code=no
allow-debug=no
idle-logout=0
prompt=*
default-status=no
top-status=general-info
bottom-status=log-window
left-status=connection-list
use-scroll-regions=no
log-display-level=none
```

If you specify admin instead, the factory-default permissions are set as follows:

```
admin> new user admin
USER/admin read

admin> list
[in USER/admin (new)]
name*=admin
password=Ascend
active-enabled=yes
allow-termserv=yes
allow-system=yes
allow-diagnostic=yes
allow-update=yes
allow-password=no
allow-code=yes
allow-debug=no
idle-logout=0
prompt=*
default-status=no
top-status=general-info
bottom-status=log-window
left-status=connection-list
use-scroll-regions=no
log-display-level=error
```

See Also: Delete, List, Read, Set, Write

NSlookup

Description: Resolves the IP address of a specified hostname by performing a DNS lookup. The IP-Global profile must be configured with the address of at least one DNS server. For information about configuring DNS, see the *MAX TNT Network Configuration Guide*.

Permission level: Diagnostic

Usage: `nslookup hostname`

Syntax element	Description
<i>hostname</i>	The hostname for which you want to obtain an IP address.

Example: To look up a host's IP address in DNS:

```
admin> nslookup host-231
Resolving host host-231.
IP address for host host-231 is 10.65.12.231.
```

See Also: ARPtable, Netstat

NVRAM

Description: Provides functions for managing or clearing onboard nonvolatile random access memory (NVRAM). The onboard NVRAM stores the system configuration. Clearing NVRAM initializes the system. It comes up unconfigured, just as it was when you first installed it. You can then restore the configuration from a recent backup. For details, see the *MAX TNT Administration Guide*.

Permission level: Update

Usage: `nvr -f | -t | -u | -c | -?`

Option	Description
<code>-f</code>	Clear NVRAM without prompting for confirmation.
<code>-t</code>	Toggle module debug level.
<code>-u</code>	Display NVRAM usage statistics.
<code>-c</code>	Compact the NVRAM storage.
<code>-?</code>	Display a usage summary.

Example: To display memory usage information, specify the `-u` option:

```
admin> nvram -u
NVRAM seg[0]:start 14000098 size 258040 avail 191680 cmpct 0
```

You can enter the command without any arguments to clear NVRAM and reset the unit:

```
admin> nvram
Clear configuration and reboot? [y/n]
```

Dependencies: You must reset the MAX TNT after clearing NVRAM and reloading a configuration.

See Also: Load, Save, Reset

OAMloop

Description: Sends ATM Operation-And-Maintenance (OAM) loopback cells on an ATM interface:

Permission level: Diagnostic

Usage: `oamloop -e|-s [-c count][-i sec] shelf slot vpi vci`

Argument	Description
<code>-e</code>	(End-to-End). Transmit an end-to-end OAM loop cell, to be looped by the user connection point.
<code>-s</code>	(Segment). Transmit a segment OAM loop cell, to be looped by the first network connection point.
<code>-c count</code>	Transmit the specified number of cells. If this argument is not specified, the count defaults to 0 (zero), which means that the cells are transmitted continuously until the administrator sends an interrupt by pressing Ctrl-C.
<code>-i sec</code>	Transmit the cells at the specified interval in seconds. If this argument is not specified, the interval defaults to one second.
<code>shelf</code>	Specifies the shelf in which the DS3 ATM card is located.
<code>slot</code>	Specifies the slot in which the DS3 ATM card is located.
<code>vpi</code>	Specifies the Virtual Path Identifier (VPI) on which to transmit the looped-back cells.
<code>vci</code>	Specifies the Virtual Channel Identifier (VCI) on which to send the looped-back cells.

Example: Following is an example OAMloop command line and output:

```
admin> oamloop -c 10 -e 1 2 1 32
Received our End2End OAM loopback cell, Id=9
Received our End2End OAM loopback cell, Id=10
Received our End2End OAM loopback cell, Id=11
Received our End2End OAM loopback cell, Id=12
Received our End2End OAM loopback cell, Id=13
Received our End2End OAM loopback cell, Id=14
Received our End2End OAM loopback cell, Id=15
Received our End2End OAM loopback cell, Id=16
Received our End2End OAM loopback cell, Id=17
Received our End2End OAM loopback cell, Id=18
--- OAM loop statistics ---
10 cells transmitted, 10 cells received, 0% cell loss
```

Open

Description: Each slot card has its own processor, memory, operating system, and set of debug commands. The Open command sets up a Telnet-like session across the control bus to one of the slot cards. Then you can execute commands on that slot card.

Permission level: Diagnostic

Usage: `open 1..9 [1..16]`

Syntax element	Description
<code>1..9</code>	The shelf number in a multishelf system.
<code>1..16</code>	The number of the expansion slot you want to diagnose.

Example: On the master shelf of a multishelf system, you might open a session with a slave shelf (for example, shelf 3) as follows:

```
admin> open 3
```

You can then execute commands on the slave shelf as usual, except that you cannot use the Open command from the slave shelf. If you do execute the Open command, the following error message appears:

```
Can't use open command on a slave shelf.
```

To open a session with a T1 card installed in shelf 1, slot 13:

```
admin> open 1 13
```

The prompt changes to show your location, and you can list the available commands:

```
t1-1/13> ?  
?  
auth ( user )  
cbcardif ( debug )  
checkd ( debug )  
clear ( user )  
clock-source ( diagnostic )  
debug ( diagnostic )  
debugd ( debug )  
display ( debug )  
dp-ram-display ( debug )  
dpram-test ( debug )  
dspBypassClients ( debug )  
dspDial ( debug )  
dspSetDddTimeslot ( debug )  
fe-loop ( diagnostic )  
fill ( debug )  
frreset ( debug )  
gdb ( debug )  
help ( user )  
lifDebug ( debug )  
logdebug ( debug )  
logtest ( debug )  
mibcbagt ( debug )  
mibcbreq ( debug )  
mibmgr ( debug )  
modify ( debug )  
nailedState ( debug )  
nlcb ( debug )  
open ( diagnostic )  
pools ( debug )  
priDisplay ( diagnostic )  
quiesce ( debug )  
quit ( user )  
revision ( debug )  
slots ( debug )  
stackLimit ( debug )  
stackUsage ( debug )  
tdm ( debug )  
timedMsgTest ( debug )  
tntuart ( debug )  
tprofmgr ( debug )  
tss ( debug )  
update ( debug )  
version ( system )  
whoami ( user )
```

To return to the shelf controller:

```
t1-1/13> quit
```

See Also: Show, Slot

OSPF

Description: Displays information related to OSPF routing, including Link-State Advertisements (LSAs), border routers' routing tables, and the OSPF areas, interfaces, statistics, and routing table.

Permission level: Diagnostic

Usage: `ospf options`

where *options* may be one or more of the following:

Option	Description
<code>?</code>	Display help information.
<code>size</code>	Display size of the OSPF routing table.
<code>areas</code>	Display OSPF areas.
<code>stats</code>	Display OSPF statistics.
<code>intf [ip_addr]</code>	Display information about one or more OSPF interfaces.
<code>lsa area ls-type ls-id ls-orig</code>	Display detailed information about OSPF Link-State Advertisements (LSAs). <i>area</i> is the area ID. <i>ls-type</i> is the LSA type. You can specify one of the following options for <i>ls-type</i> : <ul style="list-style-type: none">• <i>rtr</i> (Type 1) is a router-LSA that describes the collected states of the router's interfaces.• <i>net</i> (Type 2) is network-LSA that describes the set of routers attached to the network.• <i>sum</i> (Types 3 and 4) describes routes to networks in remote areas, or AS boundary routers. <i>ls-id</i> is the target address of the router. <i>ls-orig</i> is the address of the advertising router.
<code>lsdb [area]</code>	Display an OSPF link-state database summary for an area. If you do not specify the <i>area</i> option, the summary for the first configured area (or for the only defined area) is displayed. If you specify the <i>area</i> option, the unit displays a summary for the specified area. The area option is meaningful if the unit is operating as an Area Border Router (ABR).
<code>nbrs [ip_addr]</code>	Display information about one or more OSPF neighbors.
<code>routers</code>	Display OSPF router information.
<code>ext</code>	Display OSPF external Autonomous System (AS) advertisements.
<code>rtab</code>	Display OSPF routing table.
<code>database ext</code>	Display OSPF database summary.
<code>internal</code>	Display OSPF internal routes.

Displaying the size of the OSPF routing table

To display information about the size of the OSPF routing table, include the `size` option with the OSPF command. For example:

```
admin> ospf size
# Router-LSAs:                2
# Network-LSAs:               0
# Summary-LSAs:               0
# Summary Router-LSAs:        0
# AS External-LSAs (type-5):   1
# AS External-LSAs (type-7):   0

# Intra-area routes:          4
# Inter-area routes:           0
# Type 1 external routes:      0
# Type 2 external routes:      0
```

The fields in the output contain the following information:

Field	Specifies
Router-LSAs	Number of router link advertisements known as Type 1 Link State Advertisements (LSAs).
Network-LSAs	Number of network link advertisements known as Type 2 LSAs.
Summary-LSAs	Number of summary link advertisements known as Type 3 LSAs. Type 3 LSAs describe routes to networks.
Summary Router-LSAs	Number of summary link advertisements known as Type 4 LSAs. Type 4 LSAs describe routes to AS boundary routers.
AS External-LSAs (type-5)	Number of AS external link advertisements known as Type 5 LSAs.
AS External-LSAs (type-7)	Number of ASE-7 link advertisements known as Type 7 LSAs.
Intra-area routes	Number of routes that have a destination within the area.
Inter-area routes	Number of routes that have a destination outside the area.
Type 1 external routes	Number of external type-1 routes that are typically in the scope of OSPF-IGP.
Type 2 external routes	Number of external type-2 routes that are typically outside the scope of OSPF-IGP.

Displaying OSPF areas

To display information about OSPF areas, include the `areas` option with the OSPF command. For example:

```
admin> ospf areas
Area ID   Authentication   Area Type #ifcs  #nets  #rtrs  #brdrs  #intnr
0.0.0.0   Simple-passwd    Normal    1       0       2       0       3
```

The fields in the output contain the following information:

Field	Specifies
Area ID	Area number in dotted-decimal format.
Authentication	Type of authentication: Simple-passwd, MD5, or Null.
Area Type	Type of OSPF area: Normal, Stub, or NSSA.
#ifcs	Number of MAX TNT interfaces specified in the area.
#nets	Number of reachable networks in the area.
#rtrs	Number of reachable routers in the area.
#brdrs	Number of reachable area border routers in the area.
#intnr	Number of reachable internal routers in the area.

Displaying general information about OSPF

To display general information about OSPF, include the `stats` option with the OSPF command. For example:

```
admin> ospf stats
      OSPF version:                2
      OSPF Router ID:              200.192.192.2
      AS boundary capability:      Yes
Attached areas:                    1   Estimated # ext.(5) routes:      300
OSPF packets rcvd:                94565   OSPF packets rcvd w/ errs:      0
Transit nodes allocated:          3058   Transit nodes freed:           3056
LS adv. allocated:                1529   LS adv. freed:                 1528
Queue headers alloc:              32   Queue headers avail:           32
# Dijkstra runs:                  4   Incremental summ. updates:      0
Incremental VL updates:           0   Buffer alloc failures:           0
Multicast pkts sent:              94595   Unicast pkts sent:              5
LS adv. aged out:                 0   LS adv. flushed:                0
Incremental ext.(5) updates:      0   Incremental ext.(7) updates:    0
External (type-5) LSA database -
Current state:                    Normal
Number of LSAs:                   1
Number of overflows:              0
```

The fields in the output contain the following information:

Field	Specifies
OSPF version	Version of the OSPF protocols running.
OSPF Router ID	IP address assigned to the MAX TNT, which is typically the address specified for the Ethernet interface.
AS boundary capability	Yes if the MAX TNT functions as an ASBR or No if it does not function as an ASBR.
Attached areas	Number of areas to which this MAX TNT attaches.
Estimated # ext.(5) routes	Number of ASE-5 routes that the MAX TNT can maintain before it goes into an overload state.
OSPF packets rcvd	Total number of OSPF packets received by the MAX TNT.
OSPF packets rcvd w/ errs	Total number of OSPF errored packets received by the MAX TNT.
Transit nodes allocated	Allocated transit nodes generated only by Router LSAs (Type 1) and Network LSAs (Type 2).
Transit nodes freed	Freed transit nodes generated only by Router LSAs (Type 1) and Network LSAs (Type 2).
LS adv. allocated	Number of LSAs allocated.
LS adv. freed	Number of LSAs freed.
Queue headers alloc	Number of queue headers allocated. LSAs can reside in multiple queues. Queue headers are the elements of the queues that contain the pointer to the LSA.
Queue headers avail	Available memory for queue headers. To prevent memory fragmentation, the MAX TNT allocates memory in blocks. The MAX TNT allocates queue headers from the memory blocks. When the MAX TNT frees all queue headers from a specific memory block, the MAX TNT returns the block to the pool of available memory blocks.
# Dijkstra runs	Number of times that the MAX TNT has run the Dijkstra algorithm (short path computation).
Incremental summ. updates	Number of summary updates that the MAX TNT runs when small changes cause generation of Summary LSAs (Type 3) and Summary Router LSAs (Type 4).
Incremental VL updates	Number of incremental virtual link updates that the MAX TNT performs.
Buffer alloc failures	Number of buffer allocation problems that the MAX TNT has detected and from which it has recovered.
Multicast pkts sent	Number of multicast packets sent by OSPF.
Unicast pkts sent	Number of unicast packets sent by OSPF.
LS adv. aged out	Number of LSAs that the MAX TNT has aged and removed from its tables.

Field	Specifies
LS adv. flushed	Number of LSAs that the MAX TNT has flushed.
Incremental ext.(5) updates	Number of incremental ASE-5 updates.
Incremental ext.(7) updates	Number of incremental ASE-7 updates.
Current state	State of the External (Type-5) LSA database: Normal or Overload.
Number of LSAs	Number of LSAs in the External (Type-5) LSA database.
Number of overflows	Number of ASE-5s that exceeded the limit of the database.

Displaying information about OSPF interfaces

To display either summarized information about all OSPF interfaces or specific information about a single interface, include the `intf` option with the OSPF command.

Displaying summarized information

To display summarized information on OSPF interfaces, enter the following command:

```
admin> ospf intf
```

Ifc Address	Phys	Assoc. Area	Type	State	#nbrs	#adjs	DInt
200.194.194.2	phani	0.0.0.0	P-P	P-P	1	1	120

The fields in the output contain the following information:

Field	Specifies
Ifc Address	Address assigned to the MAX TNT's Ethernet interface. To identify WAN links, use the Type and Cost fields.
Phys	Name of the interface or the Connection profile for WAN links.
Assoc. Area	Area in which the interface resides.
Type	Point-to-Point (P-P) or Broadcast (Bcast). WAN links are P-P links.
State	State of the link according to RFC 1583. There are many possible states, and not all states apply to all interfaces.
#nbrs	Number of neighbors of the interface.
#adjs	Number of adjacencies on the interface.
DInt	Number of seconds that the MAX TNT waits for a router update before removing the router's entry from its table. The interval is called the Dead Interval.

Displaying specific information about a specific interface

To display detailed information for a specific interface, enter the following command:

```
admin> ospf intf ip_addr
```

For example:

```
admin> ospf intf 200.194.194.2
      Interface address:      200.194.194.2
      Attached area:         0.0.0.0
      Physical interface:    phani (wan1)
      Interface mask:        255.255.255.255
      Interface type:        P-P
      State:                  (0x8) P-P
      Designated Router:     0.0.0.0
      Backup DR:             0.0.0.0
      Remote Address:        200.194.194.3
DR Priority:      5  Hello interval:  30  Rxmt interval:  5
Dead interval:   120 TX delay:         1  Poll interval:  0
Max pkt size:   1500 TOS 0 cost:       10
# Neighbors:    1  # Adjacencies:    1  # Full adjs.:   1
# Mcast floods: 1856 # Mcast acks:   1855
```

The fields in the output contain the following information:

Field	Specifies
Interface Address	IP address of the MAX TNT unit's Ethernet interface.
Attached Area	Area in which the interface resides.
Physical interface	Name of the interface or the Connection profile for WAN links.
Interface type	Point-to-Point (P-P) or Broadcast (Bcast).
State	State of the link according to RFC 1583. There are many possible states, and not all states apply to all interfaces.
Designated Router	IP address of the designated router for the interface.
Backup DR	IP address of the backup designated router for the interface.
Remote Address	IP address of the remote end of a Point to Point (WAN) link.
DR Priority	Priority of the designated router.
Hello interval	Interval in seconds that the MAX TNT sends Hello packets.
Rxmt interval	Retransmission interval.
Dead interval	Number of seconds that the MAX TNT waits for a router update before removing the router's entry from its table.
TX delay	Interface transmission delay.
Poll interval	Poll interval of nonbroadcast multiaccess networks.
Max pkt size	Maximum size of a packet that the MAX TNT can send to the interface.
TOS 0 cost	Type of Service normal (0) cost.

Field	Specifies
# neighbors	Number of neighbors.
# adjacencies	Number of adjacencies.
# Full adjs.	Number of fully-formed adjacencies.
# Mcast floods	Number of multicast floods on the interface.
# Mcast acks	Number of multicast acknowledgments on the interface.

Displaying OSPF link-state advertisements

To specify a link-state advertisement to be expanded, use the following format for the OSPF command:

```
ospf lsa area ls-type ls-id ls-orig
```

The command requires that you include the first four fields of the LSA as listed in the database. You can select the first four fields and paste them in after typing the command. For example, to show an expanded view of an AS-external-LSA for area 0.0.0.0, where the target address of the router is 10.5.2.160 and the address of the advertising router is 10.5.2.162, enter the following command:

```
admin> ospf lsa 0.0.0.0 ase 10.5.2.160 10.5.2.162
LSA  type: ASE ls id: 10.5.2.160 adv rtr: 110.5.2.162 age: 568
      seq #: 80000037 cksum: 0xffffa
      Net mask: 255.255.255.255 Tos 0 metric: 10 E type: 1
      Forwarding Address: 0.0.0.0 Tag: c0000000
```

The fields in the output contain the following information:

Field	Specifies
LSA type	Type of Link-State Advertisement.
ls id	Target address of the router.
adv rtr	Address of the advertising router.
age	Age of the route in seconds.
seq #	Number that begins with 80000000 and increments by one for each LSA received.
cksum	Checksum for the LSA.
Net mask	Subnet mask of the LSA.
Tos	Type of Service for the LSA.
metric	Cost of the link, not of a route. The cost of a route is the sum of all intervening links, including the cost of the connected route.
E type	External type of the LSA indicating either 1 (Type 1) or 2 (Type 2)
Forwarding Address	Forwarding Address of the LSA (described in RFC 1583).
Tag	Tag of the LSA (described in the OSPF RFC).

To show an expanded view of a router LSA, use the **rtr** option. For example:

```
admin> ospf lsa 0.0.0.0 rtr 202.1.1.1 202.1.1.1
LS age: 66
LS options: (0x2) E
LS type: 1
LS ID (destination): 202.1.1.1
LS originator: 202.1.1.1
LS sequence no: 0x80000399
LS checksum: 0xb449
LS length: 48
Router type: (0x2) ASBR
# router ifcs: 2
    Link ID: 10.105.0.8
    Link Data: 10.105.0.7
    Interface type: (2) TrnsNetwork
        No. of metrics: 0
        TOS 0 metric: 10 (0)
    Link ID: 10.123.0.6
    Link Data: 10.123.0.7
    Interface type: (2) TrnsNetwork
        No. of metrics: 0
        TOS 0 metric: 10 (0)
```

The fields in the output contain the following information:

Field	Specifies
LS age	Age of the LSA in seconds.
LS options	Optional functions associated with the LSA. When E is specified, an OSPF area can be configured as a stub area. When T is specified, routes only for TOS 0 are calculated.
LS type	Type of link as defined in RFC 1583: <ul style="list-style-type: none">• Type 1 (RTR) are router-LSAs that describe the collected states of the router's interfaces.• Type 2 (NET) are network-LSAs that describe the set of routers attached to the network.• Types 3 and 4 (SUM) describe routes to networks in remote areas, or AS boundary routers.• Type 5 (ASE) are AS-external-LSAs that describe routes to destinations external to the AS. A default route for the AS can also be described by an AS-external-LSA.
LS ID (destination)	IP address of the advertisement's destination.
LS originator	IP address of the advertisement's source.
LS sequence no	Number that begins with 80000000 and increments by one for each LSA. It is used for detecting old and duplicate LSAs.
LS checksum	A checksum covering the entire packet, except for the 64-bit authentication field.

Field	Specifies
LS length	Length of the LSA in bytes.
Router type	Type of router, either Autonomous System Border Router (ASBR) or Area Border Router (ABR).
# router ifcs	Number of interfaces on the router.
Link ID	IP address of the associated router interface.
Link Data	Name of the device on the other side of the link.
Interface type	Type of interface: <ul style="list-style-type: none"> • TrnsNetwork (Transit Network)—A network that carries traffic that does not have its source or destination in the network itself. • Stub (Stub Network)—A network in which all external routes are summarized by a default route. • P-P (Point-to-Point)—A link over a serial line.
No. of metrics	Metric for TOS 0.
TOS	Type of Service for the LSA.
metric	Cost of the link, not of a route. The cost of a route is the sum of all intervening links, including the cost of the connected route.

To show an expanded view of a network LSA, include the **net** option. For example:

```
admin> ospf lsa 0.0.0.0 net 100.103.100.204 10.103.0.204
LS age:      814
LS options:  (0x2) E
LS type:     2
LS ID (destination): 100.103.100.204
LS originator: 10.103.0.204
LS sequence no: 0x80000027
LS checksum:  0x8f32
LS length:    36
Network mask: 255.255.0.0
Attached Router: 10.103.0.204 (1)
Attached Router: 10.103.0.254 (1)
Attached Router: 10.123.0.254 (1)
```

The fields in the output contain the following information:

Field	Specifies
LS age	Age of the LSA in seconds.
LS options	Optional functions associated with the LSA. When E is specified, entire OSPF areas can be configured as stub areas. When T is specified, routes only for TOS 0 are calculated.
LS type	Type of link as defined in RFC 1583: <ul style="list-style-type: none">• Type 1 (RTR) are router-LSAs that describe the collected states of the router's interfaces.• Type 2 (NET) are network-LSAs that describe the set of routers attached to the network.• Types 3 and 4 (SUM) describe routes to networks in remote areas, or AS boundary routers.• Type 5 (ASE) are AS-external-LSAs that describe routes to destinations external to the AS. A default route for the AS can also be described by an AS-external-LSA.
LS ID (destination)	IP address of the advertisement's destination.
LS originator	IP address of the advertisement's source.
LS sequence no	Number that begins with 80000000 and increments by one for each LSA. It is used for detecting old and duplicate LSAs.
LS checksum	A checksum covering the entire packet, except for the 64-bit authentication field.
LS length	Length of the LSA in bytes.
Network mask	Subnet mask.
Attached Router	Another router running OSPF on the network. The number in parentheses is the cost to that router.

Displaying the OSPF link-state database

To display the link-state database for the first configured area (or for the only defined area), include the `lsdb` option with the OSPF command. For example:

```
admin> ospf lsdb

Area: 0.0.0.0

Type LS ID          LS originator      Seqno      Age      Xsum
RTR  200.192.192.2    200.192.192.2      0x800005f8  696      0x6f0b
RTR  200.192.192.3    200.192.192.3      0x800005f8  163      0x6f09
      # advertisements: 2
      Checksum total:   0xde14
```

The fields in the output contain the following information:

Field	Specifies
Area	Area ID.
Type	Type of link as defined in RFC 1583: <ul style="list-style-type: none"> • Type 1 (RTR) are router-LSAs that describe the collected states of the router's interfaces. • Type 2 (NET) are network-LSAs that describe the set of routers attached to the network. • Types 3 and 4 (SUM) describe routes to networks in remote areas, or AS boundary routers. • Type 7 are ASE-7 link advertisements that are only flooded within an NSSA.
LS ID	Specifies the target address of the route.
LS originator	Specifies the address of the advertising router.
Seqno	Indicates a hexadecimal number that begins with 80000000 and increments by one for each LSA received.
Age	Specifies the age of the route in seconds.
Xsum	Indicates the checksum of the LSA.
advertisements	Specifies the total number of entries in the link-state database.
Checksum total	Indicates the checksum of the link-state database.

You can expand each entry in the link-state database to view additional information about a particular LSA.

Displaying OSPF neighbor information

To display information about OSPF neighbors to the MAX TNT, include the `nbrs` options with the OSPF command. For example:

```
admin> ospf nbrs
```

Neighbor ID	Neighbor addr	State	LSrxl	DBsum	LSreq	Prio	Ifc
200.192.192.3	200.194.194.3	Full/-	0	0	0	5	phani

The fields in the output contain the following information:

Field	Specifies
Neighbor ID	Address assigned to the interface. In the MAX TNT, the IP address is always the address assigned to the Ethernet interface.
Neighbor addr	IP address of the router used to reach a neighbor (often the same address as the neighbor itself).
State	State of the link-state database exchange. Full indicates that the databases are fully aligned between the MAX TNT and its neighbor.
LSrxl	Number of LSAs in the retransmission list.
DBsum	Number of LSAs in the database summary list.
LSreq	Number of LSAs in the request list.
Prio	Designated router election priority assigned to the MAX TNT.
Ifc	Interface name for the Ethernet or Connection profile name for the WAN.

To display information about a specific neighbor, include the neighbor's IP address specification with the `nbrs` option. For example:

```
admin> ospf nbrs 10.105.0.4
OSPF Router ID:      10.105.0.4
      Neighbor IP address: 10.105.0.4
      Neighbor State:      (0x8) 2Way
      Physical interface:  ie1-7-1 (ie1-7-1)
      DR choice:           10.105.0.8
      Backup choice:       10.105.0.49
      DR Priority:          5
DB summ qlen:          0  LS rxmt qlen:          0  LS req qlen:          0
Last hello:            6
# LS rxmits:           0  # Direct acks:          0  # Dup LS rcvd:          0
# Old LS rcvd:         0  # Dup acks rcv:         0  # Nbr losses:          0
# Adj. resets:         0
```

The fields in the output contain the following information:

Field	Specifies
OSPF Router ID	IP address of the neighbor.
Neighbor IP address	IP address of the router used to reach the neighbor (often the same address as the neighbor itself).
Neighbor State	State of the link-state database exchange.
Physical interface	The name of the interface on which the unit and the neighbor communicate: <ul style="list-style-type: none"> ie0 or ie[<i>shelf</i>]-[<i>slot</i>]-[<i>item</i>] is an Ethernet interface. wan<i>N</i> is a WAN connection, entered as it becomes active.
DR choice	IP address of the neighbor's designated router.
Backup choice	IP address of the neighbor's backup designated router.
DR Priority	Priority of the designated router.
DB summary qlen	Number of LSAs in the database summary list.
LS rxl qlen	Number of LSAs in the retransmission list.
LS req qlen	Number of LSAs in the request list.
Last hello	How long ago (in seconds) a Hello packet was received.
# LS rxmits	Number of Link-State Update retransmissions.
# Direct acks	Number of direct acknowledgments sent.
# Dup LS rcvd	Number of duplicate LSAs received.
# Old LS rcvd	Number of old Link-State Updates received.
# Dup acks rcv	Number of duplicate acknowledgments received.
# Nbr losses	Number of times the neighbor went offline.
# Adj. resets	Number of times the adjacency has been re-established after a reset.

Displaying OSPF routers

To display OSPF routers, include the `routers` option with the OSPF command. For example:

```
admin> ospf routers
DType  RType  Destination      Area      Cost      Next hop(s)      #
ASBR   OSPF   200.192.192.3    0.0.0.0    10        200.194.194.3    2
```

The fields in the output contain the following information:

Field	Specifies
DType	Internal route type.
RType	internal router type.
Destination	Router's IP address.
Area	Area in which the router resides.
Cost	Cost of the router.
Next hop(s)	Next hop in the route to the destination.
#	Number of the interface used to reach the destination.

Displaying OSPF External AS advertisements

To display OSPF External AS advertisements, include the `ext` option with the OSPF command. For example:

```
admin> ospf ext
Type LS ID          LS originator      Segno      Age      Xsum
ASE5 200.192.192.0    200.192.192.2      0x800005f6 751      0xc24d
# advertisements:    1
Checksum total:      0xc24d
```

The fields in the output contain the following information:

Field	Specifies
Type	ASE5.
LS ID	Target address of the route.
LS originator	Address of the advertising router.
Segno	Hexadecimal number that begins with 80000000 and increments by one for each LSA received.
Age	Age of the route in seconds.
Xsum	Checksum of the LSA.
# advertisements	Total number of entries in the ASE5 database.
Checksum total	Checksum of the ASE5 database.

Displaying the OSPF routing table

To display the OSPF routing table, include the `rtab` option with the OSPF command. For example:

```
admin> ospf rtab
```

DType	RType	Destination	Area	Cost	Flags	Next hop(s)	#
RTE	FIX	200.192.192.0/24	-	1	0x82	0.0.0.170	170
RTE	OSPF	200.194.194.2/32	0.0.0.0	20	0x1	200.194.194.3	2
ASBR	NONE	200.192.192.2/32	-	0	0x0	None	-1
RTE	OSPF	200.192.192.2/32	0.0.0.0	0	0x1	0.0.0.170	170
RTE	OSPF	200.194.194.3/32	0.0.0.0	10	0x101	200.194.194.3	2
RTE	NONE	200.194.194.0/24	-	0	0x2	None	-1
ASBR	OSPF	200.192.192.3/32	0.0.0.0	10	0x100	200.194.194.3	2
RTE	OSPF	200.192.192.3/32	0.0.0.0	10	0x1	200.194.194.3	2

The fields in the output contain the following information:

Field	Specifies
DType	Internal route type. DType displays one of the following values: RTE (generic route), ASBR (AS border route), or BR (area border route).
RType	Internal router type. RType displays one of the following values: FIX (static route), NONE, DEL (deleted or bogus state), OSPF (OSPF-computed), OSE1 (type 1 external), or OSE2 (type 2 external).
Destination	Destination address and subnet mask of the route.
Area	Area ID of the route.
Cost	Cost of the route.
Flags	Hexadecimal number representing an internal flag.
Next hop(s)	Next hop in the route to the destination.
#	Number of the interface used to reach the destination.

Displaying summarized OSPF database information

To display summarized information about the OSPF database, include the database option with the OSPF command. For example:

```
admin> ospf database

Router Link States (Area: 0.0.0.0)
Type LS ID          LS originator      Seqno      Age      Xsum
RTR  200.192.192.2    200.192.192.2      0x800005f8  783     0x6f0b
RTR  200.192.192.3    200.192.192.3      0x800005f8  250     0x6f09
      # advertisements:      2
      Checksum total:        0xde14

External ASE5 Link States
Type LS ID          LS originator      Seqno      Age      Xsum
ASE5 200.192.192.0    200.192.192.2      0x800005f6  783     0xc24d
      # advertisements:      1
      Checksum total:        0xc24d
```

If you specify the **ext** option, the MAX TNT displays only ASE5 LSAs.

The fields in the output contain the following information:

Field	Specifies
Type	Type of link as defined in RFC 1583: <ul style="list-style-type: none">Type 1 (RTR) are router-LSAs that describe the collected states of the router's interfaces.Type 2 (NET) are network-LSAs that describe the set of routers attached to the network.Types 3 and 4 (SUM) describe routes to networks in remote areas, or AS boundary routers.Type 5 (ASE) are AS-external-LSAs that describe routes to destinations external to the AS. A default route for the AS can also be described by an AS-external-LSA.Type 7 are ASE-7 link advertisements that are only flooded within an NSSA.
LS ID	Target address of the route.
LS originator	Address of the advertising router.
Seqno	Hexadecimal number that begins with 80000000 and increments by one for each LSA received.
Age	Age of the route in seconds.
Xsum	Checksum of the LSA.
# advertisements	Total number of entries in the database.
Checksum total	Checksum of the database.

Displaying internal OSPF routes

When the MAX TNT uses the internal routes feature, it exports routes by means of the router LSA (Type1), instead of by means of the usual ASE-5. If the MAX TNT resides in a stub area and needs to export routes, it cannot use the ASE-5 method. To display internal routes, include the `internal` option with the OSPF command. For example:

	Area: 0.0.0.0	
Destination	Mask	Cost
10.5.2.160	255.255.255.255	10
10.5.2.161	255.255.255.255	10
100.5.4.78	255.255.255.0	10

The fields in the output contain the following information:

Field	Specifies
Area	Name of the area.
Destination	Destination of the route.
Mask	Subnet mask for the route.
Cost	Cost of the route.

Dependencies: You use the OSPF and OSPF-Options profiles to configure OSPF routing.

Ping

Description: Sends ICMP echo_request packets to the specified host as a way to verify that the host is up and the transmission path to the host is open. The host returns ICMP echo_response packets, and the command generates statistics about the exchange.

Permission level: Diagnostic

Usage: `ping [-q|-v][-c count][-i delay][-s packetsize]
[-r VRoutername] hostname`

Syntax element	Description
<code>-q</code>	Quiet. Do not display informational messages. Just display the summary lines at the beginning and end of the command.
<code>-v</code>	Verbose. List every ICMP packet received, except echo_response packets.
<code>-c count</code>	Send only the specified number of packets.
<code>-i delay</code>	Wait the specified number of seconds before sending the next packet. The default delay period is one second.
<code>-s packetsize</code>	Send the specified number of data bytes. The default size is 64 bytes, not including the 8-byte ICMP header. The minimum is 16.
<code>-r VRoutername</code>	The name of the Virtual Router (VRouter). If you do not specify a VRouter name, the system assumes the global VRouter.
<code>hostname</code>	The station's IP address or DNS hostname.

Example: Pinging a host named Host-231 on a local network:

```
admin> ping host-231
PING host-231 (10.65.12.231): 56 data bytes
64 bytes from 10.65.12.231: icmp_seq=0 ttl=255 time=0 ms
64 bytes from 10.65.12.231: icmp_seq=1 ttl=255 time=0 ms
64 bytes from 10.65.12.231: icmp_seq=2 ttl=255 time=0 ms
64 bytes from 10.65.12.231: icmp_seq=3 ttl=255 time=0 ms
64 bytes from 10.65.12.231: icmp_seq=4 ttl=255 time=0 ms
^C
--- host-231 ping statistics ---
5 packets transmitted, 5 packets received, 0% packet loss
round-trip min/avg/max=0/0/0 ms
```

Press Ctrl-C to stop. To exchange only 3 packets, each of which contains only 16 bytes:

```
admin> ping -c 3 -s 16 host-231
PING host-231 (10.65.12.231): 8 data bytes
16 bytes from 10.65.12.231: icmp_seq=0 ttl=255 time=0 ms
16 bytes from 10.65.12.231: icmp_seq=1 ttl=255 time=0 ms
16 bytes from 10.65.12.231: icmp_seq=2 ttl=255 time=0 ms
--- host-231 ping statistics ---
3 packets transmitted, 3 packets received, 0% packet loss
round-trip min/avg/max=0/0/0 ms
```

To exchange 3 packets and suppress the output for each exchange:

```
admin> ping -c3 -q host-231
PING host-231 (10.65.12.231): 56 data bytes
--- host-231 ping statistics ---
3 packets transmitted, 3 packets received, 0% packet loss
round-trip min/avg/max=0/0/0 ms
```

See Also: Netstat Rlogin, Telnet, Terminal-Server, Traceroute

Power

Description: Checks the status of the MAX TNT redundant power supplies and displays the results.

Permission level: System

Usage: power

Example: To check the power supply:

```
admin> power
Power supply A present, OK
Power supply B not present
```

PRIdisplay

Description: For a T1, E1, or T3 card, displays general PRI messages, shows a timestamp relative to the time the card booted, and identifies PRI messages that have bad CRCs or are too long.

You can use PRIdisplay on a T1, E1, or T3 card only. You must first execute the Open command to open a session with the card.

Permission level: Diagnostic

Usage: `pridisplay octets [line]`

Syntax element	Description
<i>octets</i>	The maximum number of octets to display per message. If you specify 0 (zero), the MAX TNT does not display any data.
<i>line</i>	The line whose D channel you want to monitor.

Example: To open a session with a T3 card in shelf 1, slot 15, and then display the first 160 bytes of PRI messages:

```
admin> open 1 15
t3-1/15> pridisplay 160
Display the first 160 bytes of PRI messages
PRI-XMIT-24: 01:38:53: 3 of 3 octets
1010A850: 00 01 7f
PRI-RCV-24: 01:38:55: 3 of 3 octets
10112C10: 00 01 7f
PRI-RBAD-22: 01:38:53: 2 of 2 octets
1010A850: 00 01
```

In the following example, the first command displays the first 32 bytes of PRI messages for line 12 only. The second command enables display of the first 32 bytes of messages for any line on the card, and the third command turns off the message display:

```
t3-1/15> prid 32 12
Display the first 32 bytes of PRI messages for line 12
t3-1/15> prid 32 0
Display the first 32 bytes of PRI messages
t3-1/15> prid 0
PRI message display terminated
```

To close the session with the card and return to the shelf controller:

```
t3-1/15> quit
admin>
```

Quiesce

Description: Allows you to Busy Out or take Out Of Service (OOS) individual ISDN T1 PRI lines or channels connected to the MAX TNT. These actions are known as *quiescing* the line or channel to make it available for maintenance. Quiescing the line does not tear down calls that are currently active on the line. When an active call disconnects, that channel is taken OOS.

Quiescing a line is equivalent to setting the Maintenance-State parameter in the T1 profile to Yes. Unquiescing the line sets the parameter to No. When the parameter is set to Yes, individual channels on that line cannot be restored. See Chapter 2, “MAX TNT Profile and Parameter Reference.” This setting is preserved across power ups.

Whether the command takes a channel or line out of service or busies it out depends on the type of switch.

Type of switch	Description
AT&T switches running Custom generics	AT&T Custom generics support Service Messages that allow the MAX TNT to tell the switch to take channels on an ISDN PRI line OOS. The line-status window displays the condition as an o in an OOS channel. When all channels on the line are OOS, the switch can route incoming calls to other lines in a particular hunt group.
AT&T switches running NI-2 generics and Northern Telecom switches	Neither AT&T nor Northern Telecom switches running NI-2 software support Service Messages to take channels OOS. There is no sure way for the MAX TNT to tell the switch to take a channel OOS. Because channels cannot be taken OOS, incoming calls are presented to the MAX TNT even if the ISDN T1 PRI line is quiesced. The MAX TNT rejects the call with a cause code of 17, User Busy. The user originating the call receives a busy signal. This situation can pose a problem for ISPs who would like to have the switch automatically route incoming calls to another, nonquiesced trunk in the hunt group.

Note: Restoring a quiesced line or channel can take up to 3.5 minutes. Only 1 service message per channel is sent to the switch, at the rate of one per second.

Permission level: System

Usage: `quiesce -d|-e|-r line|-q line|-t`

Option	Description
<code>-d</code>	Quiesce a single DS0 channel (a B channel on any T1 PRI line).
<code>-e</code>	Restore a single DS0 channel that has been quiesced.
<code>-r line</code>	Restore the specified T1 PRI line that has been quiesced.
<code>-q line</code>	Quiesce the specified T1 PRI line.
<code>-t</code>	Toggle debug display.

Example: To quiesce a T1 PRI line in port 4 of a card installed in shelf 1, slot 2:

```
admin> quiesce -q {1 2 4}
QUIESCE: line 1/2/4, enable=T, isPri=T
```

Dependencies: The specified T1 line must be enabled and configured for ISDN PRI.

See Also: Chapter 2, “MAX TNT Profile and Parameter Reference”

Quit

Description: Terminates the current Telnet session.

Permission level: User

Usage: `quit`

Example: To terminate the current Telnet session:

```
admin> quit
Connection closed by foreign host.
my-station%
```

Read

Description: Reads a copy of the specified profile into the edit buffer, making it the working profile. If the profile is one of a kind, such as the IP-Global profile, it has no index field. If an index field exists for a profile, it must be specified on the command line.

Only the working profile can be modified. The Set and List commands apply only to the working profile.

Note: The working profile remains in the edit buffer until you overwrite the buffer with another Read command or the New command. To save changes made in the buffer, you must use the Write command.

Permission level: System

Usage: `read profile-type [profile-index] [-f]`

Syntax element	Description
<i>profile-type</i>	The type of profile to be read (or the profile itself if it does not require an index specification).
<i>profile-index</i>	The name or address that distinguishes a profile from others of the same type. To see profile indexes, enter the Dir command (<code>dir profile-type</code>).
-f	Do not prompt for confirmation when overwriting the unsaved contents of the edit buffer.

By default, when you issue a Read command that would overwrite the contents of the edit buffer when the buffer contains unsaved changes, the system displays a message prompting for confirmation. For example:

```
admin> read connection david
Reading will overwrite the changes you've made.
Read anyway? [y/n] y
CONNECTION/david read
```

You can avoid this prompt by using the `-f` flag on the Read command line.

Example: To find the right index for an IP-Interface profile, read that profile, and list its contents:

```
admin> dir ip-interface
66 12/20/1998 14:02:02 { { shelf-1 slot-12 1 } 0 }
66 12/27/1998 16:34:40 { { shelf-1 slot-12 2 } 0 }
66 12/27/1998 16:34:47 { { shelf-1 slot-12 3 } 0 }
66 12/27/1998 16:34:54 { { shelf-1 slot-12 4 } 0 }
66 12/28/1998 00:21:06 { { shelf-1 controller 1 } 0 }

admin> read ip-int {{1 c 1} 0}
IP-INTERFACE/{ { shelf-1 controller 1 } 0 } read

admin> list
[in IP-INTERFACE/{ { Shelf-1 controller 1 } 0 }]
interface-address*={ { shelf-1 controller 1 } 0 }
ip-address=10.6.212.227/24
rip-mode=routing-send-and-recv
ospf={ no 0.0.0.0 normal 10 10 40 5 simple ***** 1 16777215 +
multicast-allowed=no
multicast-rate-limit=100
rip2-use-multicast=yes
```

The profile remains in the edit buffer until another Read command or a New command overwrites the buffer. The Set command modifies the profile. The Write command saves changes without clearing the buffer.

```
admin> set multicast-allowed=yes

admin> write
IP-INTERFACE/{ { shelf-1 controller 1 } 0 } written
```

The working profile is represented by a period character. Even after you have used the Get command to display other profiles, or have executed other commands, you can still use the Get command to display the working profile:

```
admin> get .
[in IP-INTERFACE/{ { Shelf-1 controller 1 } 0 }]
interface-address*={ { shelf-1 controller 1 } 0 }
ip-address=10.6.212.227/24
rip-mode=routing-send-and-recv
ospf={ no 0.0.0.0 normal 10 10 40 5 simple ***** 1 16777215 +
multicast-allowed=yes
multicast-rate-limit=100
rip2-use-multicast=yes
```

See Also: Get, List, New, Set, Write

Refresh

Description: Opens a connection to a RADIUS server and retrieves the latest configuration information. See the *MAX TNT RADIUS Guide*.

Permission level: System

Usage: `refresh -a | -n | -p | -r | -t`

Option	Description
<code>-a</code>	Refresh all types of configuration.
<code>-n</code>	Refresh nailed profiles configuration.
<code>-p</code>	Refresh address pools configuration.
<code>-r</code>	Refresh static routes configuration.
<code>-t</code>	Refresh terminal server configuration.
<code>-s</code>	Clears the current Source Auth information (purging all existing Source Auth entries from the cache) and reloads it from RADIUS.

Example: RADIUS profiles can support up to 50 IP address pools. To refresh the address pool configuration on the MAX TNT:

```
admin> refresh -p
Refreshing remote config.
```

Reset

Description: Resets the MAX TNT. When you reset the unit, it restarts, and all active connections are terminated. All users are logged out and the default security level is reactivated. In addition, a system reset can cause a WAN line to temporarily be shut down due to momentary loss of signaling or framing information. After a reset, the MAX TNT runs POST (power-on self tests).

Permission level: Update

Usage: `reset [-f] [-a]`

Option	Description
<code>-f</code>	Force a reset without prompting for confirmation.
<code>-a</code>	Reset the master shelf and all slaves in a multishelf system. You can use the <code>-a</code> option only when logged into the master shelf. The <code>-a</code> option is not valid on slave shelves.

Example: To reset the unit:

```
admin> reset
```

See Also: NVRAM

Rlogin

Description: Opens a login session across the network with the specified host. The Rlogin command is supported only on the modem and HDLC cards. You must first execute the Open command to open a session with the card.

Permission level: Diagnostic

Usage: `rlogin [-l user] [-ec] hostname`

Syntax element	Description
<code>-l <i>user</i></code>	Log into the remote host using the specified user name.
<code>-ec</code>	Define an escape character other than the default tilde. You can use the escape character to log out of the session.
<code><i>hostname</i></code>	The name of a networked host.

Example: Logging in across a network to a host named Host-231:

```
admin> open 1 7
modem-1/7> rlogin host-231
Password:
Last login: Wed Dec 18 10:31:36 from marcel.marceau
SunOS Release 4.1.4 (HOST-231-BQE) #1: Wed Sep 4 08:56:59 PDT
1998
host-231%
```

You can log out of the remote host by typing the escape sequence (tilde-dot). For example:

```
host-231% ~.
Connection closed.
```

Or, you can log out explicitly:

```
host-231% logout
Connection closed.
```

If your user name is different on the MAX TNT and the remote host, you can specify a user name on the Rlogin command line. For example:

```
modem-1/7> rlogin -l marcel host-231
Password:
```

If you wish, you can change the default escape character from a tilde to any other character.

See Also: Netstat, Ping, Telnet, Terminal-Server

Save

Description: Saves configuration information to a file. The file may reside either on the hard disk of the PC you are using to issue commands to the MAX TNT or on a networked host. The file is saved in a format that can be loaded into the MAX TNT to restore a configuration. The Save command uses TFTP to transfer the configuration across the network. To save the MAX TNT configuration on a remote host, you must have the necessary permissions in the directory.

Permission level: Update

Usage: `save [-a|-m] target [profile-type [profile-index]]`

Syntax element	Description
-a	Explicitly save all fields, even those with default values. If you do not specify this option, the file stores only those fields whose values have been changed from the default.
-m	Use MIB tags instead of field and value names, and use profile-type numbers rather than profile-type text names.
target	The destination of the file to be saved. Valid specifications are: <ul style="list-style-type: none">• <code>network host filename</code>— A network hostname or IP address and the path to the file on that host.• <code>console</code>— The PC you are using in a terminal session.
profile-type	The type of profile to be read, or the profile itself if it does not require an index specification.
profile-index	The name or address that distinguishes a profile from others of the same type. To see profile indexes, enter the Dir command (<code>dir profile-type</code>).

Example: Saving all Connection profiles to a file on a PC's hard disk (after starting the capture utility in the VT100 emulation software):

```
admin> save console connection
; saving profiles of type CONNECTION
; profile saved Thu Jan 2 13:02:54 1998
new CONNECTION dallas
set active=yes
set ip-options remote-address=10.122.99.1/24
write -f
;
```

```
; profile saved Thu Jan 2 13:02:54 1998
new CONNECTION chicago
set active=yes
set dial-number=999
set ip-options remote-address=10.168.6.57/24
set ip-options routing-metric=2
set ppp-options send-auth-mode=chap-ppp-auth
set ppp-options send-password=*****
set ppp-options recv-password=*****
set mp-options base-channel-count=6
set mp-options minimum-channels=6
set mp-options maximum-channels=20
write -f
;
```

To save the file, stop the capture in the VT100 emulation software. To save the entire configuration to hard disk, start the capture utility and specify the console option:

```
admin> save console
; saving all profiles
...
```

All configured profiles and parameters scroll to the capture buffer. When the entire configuration has been displayed, the following output appears:

```
;
;
; all profiles saved
```

To save the file, stop the capture. The following example shows how to save a specific profile to a file on a network host:

```
admin> save network host-231 /users/marcel/ipglobal ip-g
configuration being saved to 10.65.12.231
file /users/marcel/ipglobal...save
admin>
```

The following example shows how to specify a profile type by its internal number when saving:

```
admin> save -m console system
; saving profiles of type SYSTEM
; profile saved Sat Mar 29 13:29:42 1998
new 3
set 1=1
set 2=eng-lab-43
write -f
```

Note: If the first item following a New, Read, or Dir command is numeric, it is assumed to be a profile-type number.

See Also: Load, NVRAM

Screen

Description: Changes window display sizes for the current session only.

Permission level: Update

Usage: `screen screen-length [status-length]`

Syntax element	Description
<i>screen-length</i>	The number of lines displayed in the command-line window. The default is 24 lines, which is the minimum size. The maximum size is 999 lines
<i>status-length</i>	The number of lines displayed in the Status window, including dividing lines. The default is 18 lines, which is the minimum size. The maximum size is 993 lines. The <i>status-length</i> value must be less than the <i>screen-length</i> by at least six lines

If the Status window is open when you execute the Screen command, the window is resized dynamically. If it is not open, the Status window is resized when you next open it.

Example: `admin> screen 55 22`

If only the *screen-length* argument is specified, and the stored *status-length* is not less than the specified value by 6 lines, the *status-length* is automatically adjusted. This scenario is demonstrated in the following example:

```
admin> screen 55 22
new screen-length 55
new status-length 22

admin> screen 24
error: screen-length conflict, adjusting status-length from 22
to 18
new screen-length 24
new status-length 18
```

SDSLlines

Description: Displays SDSL channel information.

Permission level: System

Usage: `sdsllines -a|-d|-f|-u`

Option	Description
-a	Display all available channels.
-d	Display the disabled channels.
-f	Display all possible channels.
-u	Display in-use channels.

Example: To display all SDSL channels available, use the `-a` option:

```
admin> sdsllines -a
```

All SDSL lines:

		(dvOp	dvUpSt	dvRq	sAdm	nailg)
Line	{ 1 3 1 }	(Up	Idle	UP	UP	00001)
Line	{ 1 3 2 }	(Up	Assigned	UP	UP	00002)
Line	{ 1 3 3 }	(Up	Assigned	UP	UP	00003)
Line	{ 1 3 4 }	(Up	Idle	UP	UP	00004)
Line	{ 1 3 5 }	(Up	Idle	UP	UP	00005)
Line	{ 1 3 6 }	(Up	Assigned	UP	UP	00006)
Line	{ 1 3 7 }	(Up	Idle	UP	UP	00007)
Line	{ 1 3 8 }	(Up	Assigned	UP	UP	00008)
Line	{ 1 3 9 }	(Up	Assigned	UP	UP	00009)
Line	{ 1 3 10 }	(Up	Assigned	UP	UP	00010)
Line	{ 1 3 11 }	(Up	Assigned	UP	UP	00011)
Line	{ 1 3 12 }	(Up	Assigned	UP	UP	00012)
Line	{ 1 3 13 }	(Up	Assigned	UP	UP	00013)
Line	{ 1 3 14 }	(Up	Assigned	UP	UP	00014)
Line	{ 1 3 15 }	(Up	Assigned	UP	UP	00015)
Line	{ 1 3 16 }	(Up	Idle	UP	UP	00016)

The data displayed includes the physical address and channel number, and the following status information about each channel:

Column	Description
--------	-------------

dvOp	<p>The current operational state of the channel (also specified by Device-State):</p> <ul style="list-style-type: none"> Down indicates that the channel is in a nonoperational state. Up indicates that the channel is in normal operations mode.
dvUpSt	<p>The status of the channel in normal operations mode:</p> <ul style="list-style-type: none"> Idle indicates that no call is on the line. Active indicates that the channel is handling a call.
dvRq	<p>The required state of the channel as specified by the Reqd-State setting:</p> <ul style="list-style-type: none"> Down indicates that the channel is required to be nonoperational. Up indicates that the channel is required to be in normal mode.
SAdm	<p>The desired administrative state of the channel (also specified by Desired-State):</p> <ul style="list-style-type: none"> Down specifies that the channel should terminate all operations and enter the down state. Up specifies that the channel should come up in normal operations mode. <p>The actual state of the channel can differ from the desired state, as when a device is powering up, or you change the desired state on a running slot. Changing the desired state does not force a channel to the new state. It indicates that the MAX TNT should change the channel state in a graceful manner.</p>
nailg	<p>The nailed group to which the line is assigned.</p>

Set

Description: Sets a parameter's value or displays help text for a parameter in the current or specified context of the working profile. To save the new setting, you must write the profile.

Permission level: System

Usage: `set param-name [param-index] [subprofile]=value|?`

Syntax element	Description
param-name	Name of the parameter in the current or specified context of the working profile.
param-index	Parameter index, which might be required for some complex or array parameters. (See the Physical-Address example below.)
subprofile	Subprofile name within the working profile. By specifying its name on the command line, you can set a parameter in a subprofile without opening the subprofile.
value	Legal parameter value.
?	Display help text about the specified parameter.

Example: Enter the following commands to display help about a T1 line's physical address:

```
admin> read t1 {1 2 1}
T1/{ shelf-1 slot-2 1 } read

admin> list
[in T1/{ shelf-1 slot-2 1 }]
physical-address*={ shelf-1 slot-2 1 }
line-interface={ no d4 ami eligible middle-priority inband +

admin> set physical-address slot ?
slot: The number of the slot that the addressed physical device
resides on. Enumerated field, values:
any-slot: Special value used to specify 'any' slot.
slot-1: Slot 1.
slot-2: Slot 2.
slot-3: Slot 3.
slot-4: Slot 4.
slot-5: Slot 5.
slot-6: Slot 6.
slot-7: Slot 7.
slot-8: Slot 8.
slot-9: Slot 9.
slot-10: Slot 10.
slot-11: Slot 11.
slot-12: Slot 12.
slot-13: Slot 13.
slot-14: Slot 14.
slot-15: Slot 15.
slot-16: Slot 16.
controller: The shelf-controller pseudo-slot.
```

The following example shows how to open the Line-Interface subprofile and set the phone number for channel 1:

```
admin> list line
[in T1/{ shelf-1 slot-2 1 }:line-interface]
enabled=no
frame-type=d4
encoding=ami
clock-source=eligible
clock-priority=middle-priority
signaling-mode=inband
robbed-bit-mode=wink-start
switch-type=att-pri
nfas-id=0
call-by-call=0
data-sense=normal
idle-mode=flag-idle
FDL=none
front-end-type=dsx
DSX-line-length=1-133
CSU-build-out=0-db
channel-config=[{ switched-channel 9 "" { any-shelf any-slot +
maintenance-state=no
admin> set channel 1 phone=5551212
admin> write
T1/{ shelf-1 slot-2 1 } written
```

See Also: List, New, Read, Write

Show

Description: Displays information about installed slot cards and their status, including slot 17 (the controller) on slave shelves.

Permission level: System

Usage: `show shelf-number [slot-number [item-number]]`

Syntax element	Description
<i>shelf-number</i>	The number of a MAX TNT shelf.
<i>slot-number</i>	The number of an expansion slot in the specified shelf (1–16).
<i>item-number</i>	The number of a specific item (device or channel) on the slot card.

Example: To display all installed expansion modules on shelf 1:

```
admin> show 1
{ shelf-1 slot-1 0 }      UP      8t1-card
{ shelf-1 slot-11 0 }     UP      48modem-56k-card
{ shelf-1 slot-12 }       OCCUPIED
{ shelf-1 slot-14 0 }     UP      48modem-card
{ shelf-1 slot-15 }       OCCUPIED
```


The output includes the address of each slot in which an expansion slot card is installed, the status of the card, and the type of card installed. The status can be one of the following:

Status	Description
UP	Normal operational mode.
DOWN	Not in an operational mode.
POST	The devices in the card are running power-on self tests.
LOAD	The card is loading code as part of coming up.
RESET	The card is being reset.
NONE	The card has been swapped out, but its configuration remains in flash space.
OCCUPIED	The card is using two slots.

The following example shows how to display information about the HDLC card in slot 3:

```
admin> show 1 3
{ shelf-1 slot-3 0 }      RESET      hdlc2-card:
{ shelf-1 slot-3 1 }      hdlc-1
{ shelf-1 slot-3 2 }      hdlc-2
{ shelf-1 slot-3 3 }      hdlc-3
{ shelf-1 slot-3 4 }      hdlc-4
{ shelf-1 slot-3 5 }      hdlc-5
{ shelf-1 slot-3 6 }      hdlc-6
```

On the master shelf, the Show command output includes slave shelf controllers that are Up. For example:

```
admin> show 1
Shelf 1 ( master ):
{ shelf-1 slot-1 0 }      UP      8t1-card
{ shelf-1 slot-4 0 }      UP      128hdlc-card
{ shelf-3 slot-1 0 }      UP      128hdlc-card
{ shelf-3 slot-2 0 }      UP      4ether-card
{ shelf-3 slot-3 0 }      UP      8t1-card
{ shelf-3 slot-4 0 }      UP      48modem-56k-card
{ shelf-3 slot-5 }        OCCUPIED
{ shelf-3 controller 0 }  UP      shelf-controller
```

See Also: Device, HDLC, Modem, Slot, T1channels

Slot

Description: Changes the administrative state of a slot card, forcing a state change (up or down). The down state allows temporary removal of a card without the loss of its configuration.

Permission level: Diagnostic

Usage: `slot -u|-d|-r|-t|-b|? [shelf-number] slot-number]`

Syntax element	Description
-u	Bring up the specified slot card.
-d	Bring down the specified slot card.
-r	Delete the profiles for a card that has been removed.
-t	Toggle module debug level.
-b	Force hardware reset. The modem card can be reset while a connection is up.
-w	Change or display watchdog failure limit.
-?	Display a usage summary.
<i>shelf-number</i>	The number of a MAX TNT shelf.
<i>slot-number</i>	The number of an expansion slot in the specified shelf (1–16).

Example: To bring up the expansion module in slot 5:

```
admin> slot -u 5
slot 1/5 state change forced
```

In the next example, a card has been removed, as indicated by a status of NONE in the output of the Show command:

```
admin> show 1 13
Shelf 1 ( standalone ):
  { shelf-1 slot-13 0 }      NONE      8t1-card:
    { shelf-1 slot-13 1 }      t1-line-1
    { shelf-1 slot-13 2 }      t1-line-2
    { shelf-1 slot-13 3 }      t1-line-3
    { shelf-1 slot-13 4 }      t1-line-4
    { shelf-1 slot-13 5 }      t1-line-5
    { shelf-1 slot-13 6 }      t1-line-6
    { shelf-1 slot-13 7 }      t1-line-7
    { shelf-1 slot-13 8 }      t1-line-8
```

The NONE status indicates that the card was removed but that its profiles have been saved. The MAX TNT remembers that a card was in that slot and saves its profiles until a card of a different type is installed in the same slot, or until you delete the profile:

```
admin> slot -r 13
slot 1/13 removed
```

Either action deletes all the old profiles associated with the slot. When you insert a different type of card, the system creates appropriate new profiles.

Dependencies: You cannot change the state of a slave shelf controller by using the Slot -u or Slot -d commands. If you do attempt to bring the slave shelf up or down by using one of these commands, the following error message appears:

can't force slot 3/17 state change

See Also: Device, HDLC, Open, Modem, Show, T1channels

Status

Description: Displays the status windows. You can configure the content of the windows to show connection, line, or log-message information. For detailed information, see the *MAX TNT Administration Guide*.

Permission level: System

Usage: **status** [**on**|**off**]

Syntax element	Description
on	Display the status windows.
off	Hide the status windows.

Example: To display status windows:

admin> **status**

or

admin> **status on**

2 Connections 001 tomw PPP 1/7/14 19200 002 timl MP 1/7/3 56000	Status Serial number: 6201732 Version: 1.0F Rx Pkt: 11185897 Tx Pkt: 42460 Col: 129 12/26/1998 12:20:15 Up: 3 days, 21:47:32 M: 29 L: info Src: shelf-1/controller 48 out of 48 modems passed POST <div>Issued: 16:48:02, 09/27/1998</div>
---	--

[Next/Last Conn: <dn/up arw>, Next?Last Page: <pg dn/up>, Exit: <esc>]

To hide the windows:

admin> **status**

or

admin> **status off**

See Also: Connection, Line, Log, View

SWANlines

Description: Displays all SWAN lines, including disabled, busy, and unused channels.

Permission level: System

Usage: `swanlines -a | -d | -f | -u`

Option	Description
-a	Display all channels.
-d	Display all disabled channels.
-f	Display all free channels.
-u	Display in-use channels.

Example: To display all SWAN channels:

```
admin> swanlines -a
```

All SWAN lines:

		(OperState	UpStatus	ReqState	AdminState)
Line {	1 14 1 }	(Down	Idle	UP	UP)
Line {	1 14 2 }	(Down	Idle	UP	UP)
Line {	1 14 3 }	(Down	Idle	UP	UP)
Line {	1 14 4 }	(Down	Idle	UP	UP)
Line {	1 14 5 }	(Down	Idle	UP	UP)
Line {	1 14 6 }	(Down	Idle	UP	UP)

The output contains the following fields:

Field	Description
OperState	The current operational state of the channel: <ul style="list-style-type: none">Down indicates that the channel is in a nonoperational state.Up indicates that the channel is in normal operations mode.
UpStatus	The status of a channel in normal operations mode: <ul style="list-style-type: none">Idle indicates that no call is on the channel.Active indicates that the channel is handling a call.
ReqState	The required state of the channel as specified by the ReqState setting: <ul style="list-style-type: none">Down indicates that the channel is required to be nonoperational.Up indicates that the channel is required to be in normal operations mode.
AdminState	The desired administrative state of the channel: <ul style="list-style-type: none">Down specifies that the channel should terminate all operations and enter the down state.Up specifies that the channel should come up in normal operations mode.

Note: The actual state of the channel can differ from the desired state, as when a device is powering up, or you change the desired state on a running slot. Changing the desired state does not force a channel to the new state. It indicates that the MAX TNT should change the channel state gracefully.

T1channels

Description: Displays administrative information about T1 channels.

Permission level: System

Usage: `t1channels -a | -c | -d | -i`

Option	Description
-a	Display information about all available T1 channels.
-c	Display information about all possible T1 channels (all channels on all installed T1 cards).
-d	Display information about disabled T1 channels.
-i	Display information about all T1 channels that are currently in use.

The T1channels command displays the following information:

Column	Description
dvOp	The current operational state of the channel (also specified by Device-State): <ul style="list-style-type: none"> Down indicates that the channel is in a nonoperational state. Up indicates that the channel is in normal operations mode.
dvUpSt	The status of the channel in normal operations mode: <ul style="list-style-type: none"> Idle indicates that no call is on the line. Busy indicates that the channel is handling a call.
dvRq	The required state of the channel as specified by Req-State: <ul style="list-style-type: none"> Down indicates that the channel is required to be in a nonoperational state. Up indicates that the channel is required to be in normal operations mode.
SAdm	The desired administrative state of the channel (also specified by Desired-State): <ul style="list-style-type: none"> Down specifies that the channel should terminate all operations and enter the down state. Up specifies that the channel should come up in normal operations mode.

Note: The actual state of the channel can differ from the desired state, as when a device is powering up, or you change the desired state on a running slot. Changing the desired state does not force a channel to the new state. It indicates that the MAX TNT should change the channel state in a graceful manner.

Example: Include the `-a` option with the `T1channels` command to display information about all available T1 channels:

```
admin> t1 -a
T1 channels available for use:
```

		(dvOp	dvUpSt	dvRq	sAdm)
Channel	{ { 1 13 1 } 1 }	(UP	Idle	UP	UP)
Channel	{ { 1 13 1 } 2 }	(UP	Idle	UP	UP)
Channel	{ { 1 13 1 } 3 }	(UP	Idle	UP	UP)
Channel	{ { 1 13 1 } 4 }	(UP	Idle	UP	UP)
Channel	{ { 1 13 1 } 5 }	(UP	Idle	UP	UP)
Channel	{ { 1 13 1 } 6 }	(UP	Idle	UP	UP)
Channel	{ { 1 13 1 } 7 }	(UP	Idle	UP	UP)
Channel	{ { 1 13 1 } 8 }	(UP	Idle	UP	UP)
Channel	{ { 1 13 1 } 9 }	(UP	Idle	UP	UP)
Channel	{ { 1 13 1 } 10 }	(UP	Idle	UP	UP)
Channel	{ { 1 13 1 } 11 }	(UP	Idle	UP	UP)

If you suspect that some channels might be disabled, you can use the `-d` option to list any disabled channels. For example:

```
admin> t1 -d
Disabled T1 channels:
```

		(dvOp	dvUpSt	dvRq	sAdm)
Channel	{ { 1 13 1 } 12 }	(Down	Idle	UP	UP)
Channel	{ { 1 13 1 } 13 }	(Down	Idle	UP	UP)
Channel	{ { 1 13 1 } 14 }	(Down	Idle	UP	UP)

The following example shows how to display all T1 channels known to the system:

```
admin> t1 -c
All T1 channels:
```

		(dvOp	dvUpSt	dvRq	sAdm)
Channel	{ { 1 13 1 } 1 }	(UP	Idle	UP	UP)
Channel	{ { 1 13 1 } 2 }	(UP	Idle	UP	UP)
Channel	{ { 1 13 1 } 3 }	(UP	Idle	UP	UP)
Channel	{ { 1 13 1 } 4 }	(UP	Idle	UP	UP)
Channel	{ { 1 13 1 } 5 }	(UP	Idle	UP	UP)
Channel	{ { 1 13 1 } 6 }	(UP	Idle	UP	UP)
Channel	{ { 1 13 1 } 7 }	(UP	Idle	UP	UP)
Channel	{ { 1 13 1 } 8 }	(UP	Idle	UP	UP)
Channel	{ { 1 13 1 } 9 }	(UP	Idle	UP	UP)
Channel	{ { 1 13 1 } 10 }	(UP	Idle	UP	UP)
Channel	{ { 1 13 1 } 11 }	(UP	Idle	UP	UP)
Channel	{ { 1 13 1 } 12 }	(Down	Idle	UP	UP)
Channel	{ { 1 13 1 } 13 }	(Down	Idle	UP	UP)
Channel	{ { 1 13 1 } 14 }	(Down	Idle	UP	UP)

[More? <ret>=next entry, <sp>=next page, <^C>=abort]

The `-i` option displays information about which T1 channels are in use. For example:

```
admin> t1 -i
T1 channels allocated/in-use:

Channel { { 1 13 1 } 15 } (dvOp dvUpSt dvRq sAdm)
Channel { { 1 13 1 } 16 } (UP Busy UP UP )
Channel { { 1 13 1 } 17 } (UP Busy UP UP )
Channel { { 1 13 1 } 18 } (UP Busy UP UP )
Channel { { 1 13 1 } 19 } (UP Busy UP UP )
Channel { { 1 13 1 } 20 } (UP Busy UP UP )
Channel { { 1 13 1 } 21 } (UP Busy UP UP )
```

See Also: Line, Show, Slot

T1-Stats

Description: Reports DS1-level line errors on a T1 or T3 card. You must first execute the `Open` command to open a session with the card.

Permission level: Diagnostic

Usage: `t1-stats [-c] line`

Syntax element	Description
<code>-c</code>	Reset statistics to 0 (zero) after displaying them.
<code>line</code>	Line on the card.

Example: To open a session with a card in shelf 1, slot 13:

```
admin> open 1 13
```

Then, to display DS1-level statistics for the first line on the card:

```
t1-1/13> t1-stats 1
Line 1:
CRC Errors:          0
Frame Slips:         8
Framing Bit Errors:  0
Out of Frame Events: 0
Line Code Violations: 0
```

Finally, to display statistics for line 2, and reset the statistics to zero:

```
t1-1/13> t1-stats -c 2
Line 2:
CRC Errors:          2
Frame Slips:         3
Framing Bit Errors:  0
Out of Frame Events: 0
Line Code Violations: 3
Statistics cleared.
```

The output contains the following fields:

Field	Event that increments the field's value
CRC errors	Data corruption in the signal.
Frame slips	The MAX TNT received T1 data at a greater or less frequency than that of the internal line clock. In the process of realigning itself to the transmitter, the MAX TNT can skip or repeat a frame.
Framing bit errors	The MAX TNT detected a framing bit that was incorrect. T1 framing requires that certain bit positions (known as framing bits) have a fixed value in the signal. The framing bits enable the MAX TNT to determine where frames begin and end.
Out of Frame Events	The MAX TNT no longer detects a framing pattern in the receiving signal, or it detects a pattern at a different relative offset than expected.
Line Code Violations	The MAX TNT detected either a Bipolar Violation or Excessive Zeros, indicating that one of the low-level T1 rules for encoding data was violated in the received signal.
Statistics cleared	This field does not display a count. It simply indicates that the statistics have been reset to 0 (zero), because the command included the <code>-c</code> option.

Telnet

Description: Opens a Telnet session across the network to the specified host.

Permission level: Diagnostic

Usage: `telnet [-a|-b|-t] [-v Vroutername] [-l[e]|-r[e]] hostname [portnumber]`

Syntax element	Description
-a	ASCII mode, or standard 7-bit mode. In 7-bit mode, bit 8 is set to 0 (zero). This value is the default if no other mode is specified.
-b	Binary mode. The MAX TNT attempts to negotiate the Telnet 8-bit binary option with the server at the remote end. You can run X-Modem and other 8-bit file transfer protocols in this mode.
-t	Transparent mode. You can send and receive binary files, and run the same file-transfer protocols, without having to be in Binary mode.
-v VRoutername	The name of the Virtual Router (VRouter). If you do not specify a VRouter name, the system assumes the global VRouter.
-l[e]	Local echo. As you type a line, it echoes on your terminal screen, but is not actually transmitted until you enter a carriage return.
-r[e]	Remote echo. Turn local echo off.
hostname	The IP address or DNS name of a networked host.
portnumber	A port number for Telnet sessions. The default port is 23.

Example: To open a Telnet session to Host-231:

```
admin> telnet host-231
Connecting to host-231 (10.65.12.231)...
Escape character is '^]'
Connected
```

You can also open a session after starting the Telnet program. To display the available commands:

```
admin> telnet
telnet> ?
?                Displays this information.
help             "      "      "
open            Connect to a site.
quit            Quit Telnet.
close           Close current Telnet connection.
send            Send Telnet command. Type 'send ?' for help.
set             Set special char. Type 'set ?' for help.
```

Note: During an open Telnet connection, type Ctrl-] to display the telnet> prompt and the Telnet command-line interface. Any valid Telnet command returns you to the open session. Note that Ctrl-] does not function in binary mode Telnet. If you log into the MAX TNT by Telnet, you might want to change its escape sequence from Ctrl-] to a different setting.

See Also: Ping, Rlogin

Terminal-Server

Description: Starts terminal-server mode, which has its own command interface.

Permission level: Termserv

Usage: terminal-server

Example: To enter terminal-server mode and display the list of available commands:

```
admin> terminal-server

** Ascend TNT Terminal Server **

ascend% ?
?                Display help information
help            "      "      "
quit            Closes terminal server session
hangup          "      "      "      "
local           Go to local mode
remote          remote <station>
set             Set various items. Type 'set ?' for help
show            Show various tables. Type 'show ?' for help
iproute         Manage IP routes. Type 'iproute ?' for help
telnet          telnet [-a|-b|-t] <host-name> [<port-number>]
tcp             tcp <host-name> <port-number>
ping            ping <host-name>
traceroute      Trace route to host. Type 'traceroute -?' for help
rlogin          rlogin [-l user -ec] <host-name>
```

To exit terminal server mode:

```
ascend% quit
admin>
```

See Also: Ping, Rlogin, Telnet

TNTMP

Description: Displays information about MP and MP+ bundles and their channels. You can execute the TNTMP command on the shelf controller or on an HDLC card. You must first execute the Open command to open a session with the card.

Permission level: Debug

Usage: `tntmp -i`

Example: To display information about MP and MP+ bundles and their channels:

```
admin> tntmp -i
mpBundleID=13 masterSlot=1/15 masterMpID=2 ifCount=2 rtIf=1/17:6
      routeID      slot      ifNum localIfNum  localMpID
          32        1/15         1          1         2
          33        9/ 2        193          1         2
```

This command works on HDLC cards as well. First, open a session with HDLC card, and then execute the TNTMP command. For example:

```
admin> open 1 15
hdlc-1/15> tntmp -i
mpBundleID=13 masterSlot=1/15 masterMpID=2 ifCount=2 rtIf=1/17:6
      routeID      slot      ifNum localIfNum  localMpID
          32        1/15         1          1         2
          33        9/ 2        193          1         2
```

In this example, the output shows a two-channel MP or MP+ bundle, with the first channel in slot 1/15 and the second (slave) channel in slot 9/2.

The command displays the following information:

Field	Description
mpBundleID	The globally known bundle ID for the whole system. If the connection adds channels for additional bandwidth on demand, the call for those channels is compared to the current bundle and assigned the same bundle ID as the other channels of the call.
masterSlot	The channel that was established as the base channel of the connection. After the MAX TNT authenticates a call that is not part of an existing bundle, it establishes the base channel of the connection. That channel becomes the <i>master</i> of the multilink connection.
masterMpID	The bundle ID at the master slot card. (The masterMpID is always the same as the localMpID for channels on the master slot card.)
ifCount	The number of channels in the bundle.

Field	Description
rtIf	The shelf/slot: id for the Route Logical Interface.
routeID	The globally known ID for each call.
slot	The shelf/slot numbers of the channels in the MP or MP+ bundle.
ifnum	Channel number on the master slot card.
localIfNum	The channel number on the local slot card. For HDLC cards, the channels are numbered 1–192. In the output in the example, the master slot (1/15) shows channel number 1. The interface number for the slave slot (9/2) is also 1, meaning the first channel on that card. However, at the master slot card, the slave interface number is mapped to a pseudo-interface number greater than 192, so it is not confused with channels on the master slot.
localMpID	The bundle ID known locally to the slot card.

Traceroute

Description: Traces the route an IP packet follows by launching UDP probe packets with a low TTL (Time-To-Live) value and then listening for an ICMP *time exceeded* reply from a router. Probes start with a TTL of one and increase by one until either a probe packet reaches the destination host or the TTL reaches the maximum.

Three probes are sent at each TTL setting. The second line of command output shows the address of the router and round-trip time of each probe. If the probe answers come from different gateways, the address of each responding system is printed. If there is no response within a 3-second timeout interval, the command output is an asterisk.

The destination host isn't supposed to process the UDP probe packets, so the destination port is set to an unlikely value, such as 33434. When the packets reach the destination host, it sends back an ICMP `port unreachable` message.

Permission level: Diagnostic

Usage: `traceroute [-n] [-v] [-m max_ttl] [-p port] [-q nqueries] [-w waittime] [-r VRoutername] [-s src_IPaddr] hostname [datasize]`

Syntax element	Description
-n	Print hop addresses numerically rather than symbolically and numerically (this eliminates a nameserver address-to-name lookup for each gateway found on the path).
-v	Verbose output. Include received ICMP packets other than Time Exceeded and ICMP Port Unreachable.
-m max_ttl	Set the maximum time-to-live (maximum number of hops) used in outgoing probe packets. The default is 30 hops.

Syntax element	Description
-p <i>port</i>	Set the base UDP port number used in probes. If a device is listening on a port in the default range, this option can be used to pick an unused port range. The default is 33434.
-q <i>nqueries</i>	Set the maximum number of queries for each hop. The default is 3.
-w <i>waittime</i>	Set the time to wait for a response to a query. The default is 3 seconds.
-r <i>VRoutername</i>	The name of the Virtual Router (VRouter). If you do not specify a VRouter name, the system assumes the global VRouter.
-s <i>src_IPaddr</i>	The IP address of the source host.
<i>hostname</i>	The IP address or DNS name of a networked host.
<i>datasize</i>	Set the size of the data field of the UDP probe datagram sent by Traceroute. The default is 0. This results in a datagram size of 38 bytes (a UDP packet carrying no data).

Example: To trace the route to Host-231:

```
admin> traceroute host-231
traceroute to host-231 (10.65.12.231), 30 hops max, 0 byte packets
 1 host-231.abc.com (10.65.12.231) 0 ms 0 ms 0 ms
```

To perform the same trace, but with a maximum TTL of 60 hops:

```
admin> traceroute -m 60 host-231
traceroute to host-231 (10.65.12.231), 60 hops max, 0 byte packets
 1 host-231.abc.com (10.65.12.231) 0 ms 0 ms 0 ms
```

The following annotations can appear after the time field:

Annotation	Description
!H	Host reached.
!N	Network unreachable.
!P	Protocol unreachable.
!S	Source route failed. This event should not occur, and might indicate that there is a problem with the associated device.
!F	Fragmentation needed. This event should not occur, and might indicate that there is a problem with the associated device.
!h	Communication with the host is prohibited by filtering.
!n	Communication with the network is prohibited by filtering.
!c	Communication is otherwise prohibited by filtering.
!?	An ICMP subcode. This event should not occur.
!??	Reply received with inappropriate type. This event should not occur.

See Also: Ping, Netstat

Uptime

Description: Reports how long the system has been up and how long individual cards have been up.

Permission level: System

Usage: `uptime [[-a] | [[shelf] slot]]`

Syntax element	Description
No arguments	Display the system uptime.
-a	Display the uptime for all slot cards.
slot	Display the uptime for the specified slot card on the master shelf.
shelf slot	Display the uptime for the slot card specified by shelf and slot.

Example: The following example shows the uptime for all slot cards in the Up state. (Cards that are not in the Up state are not reported.)

```
admin> uptime -a
19:15:26
{ shelf-1 slot-1 }      8t1-card      0 days 01:05:40      7.0.0
{ shelf-1 slot-2 }      4ether-card    0 days 01:05:28      7.0.0
{ shelf-1 slot-3 }      hdlc2-card     0 days 01:04:02      7.0.0
{ shelf-1 slot-4 }      48modem-56k-card 0 days 01:03:40      7.0.0
{ shelf-1 slot-6 }      48modem-card   0 days 01:04:30      7.0.0
{ shelf-1 controller } shelf-controller 0 days 01:06:10      7.0.0
```

To enable network management stations to obtain uptime information, the following SNMP variable has been added to the Ascend Enterprise MIB:

```
slotLastChange    OBJECT-TYPE
    SYNTAX          TimeTicks
    ACCESS           read-only
    STATUS           mandatory
    DESCRIPTION     "The value of sysUpTime at the time the TNT slot card
                     entered its current state. For non-TNT systems 0 is
                     always reported."
    ::= { slotEntry 9 }
```

The `slotLastChange` variable reports the value of `sysUpTime` at the time the slot card entered its current state.

Userstat

Description: Displays user session status.

Permission level: System

Usage: `userstat [-s|-l|-d|-k sessionid]`

Syntax element	Description
-s	Show session information in an 80-character-wide format (the default).
-l	Show enhanced status information in a 140-character-wide format.
-d	Dump the output to the display, rather than show it one page at a time.
-k <i>sessionid</i>	Terminate a user session that uses PPP, SLIP, MP+, Telnet, Telnet binary, Raw TCP, or the terminal server. The -k option does not terminate Frame Relay or DTPT service types.

Example: To display user session status:

```
admin> userstat
SessionID Line/Chan Slot:Item Tx/Rx Rate Svc Address Username
228687860 1.01.02/01 1:03:01/01 56K/56K PPP 10.100.0.1 barney
228687861 1.02.03/02 1:04:02/00 28800/33600 PPP 10.168.6.24 jake
<end user list> 2 active user(s)
```

The output contains the following fields:

Field	Description
SessionID	Unique ID assigned to the session.
Line/Chan	Physical address (shelf.slot.line/channel) of the network port on which the connection was established, such as a T1 line/channel.
Slot:Item	Shelf:slot:item/logical-item of the host port to which the call was routed.
Tx/Rx Rate	Transmit and receive rates. Note that for modem connections, the transmit rate is set automatically to the receive rate, because modem cards do not support asymmetric data-rate connections.
Svc	Type of service in use for the session. Following are the possible values: --- (The service is being negotiated.) PPP (Point-to-Point Protocol) SLP (Serial Line IP) MPP (Multilink Protocol Plus) MP (Multilink Protocol) FRY (Frame Relay) TLN (Telnet) BTN (Binary Telnet) TCP (raw TCP) TRM (Terminal Server) VCN (Virtual Connect) DTP (DTPT)

Field	Description
Dialed# (displays only with -l option)	The number dialed to initiate this session.
ConnTime (displays only with -l option)	The amount of time (in hours:minutes:seconds format) since the session was established.
IdleTime (displays only with -l option)	The amount of time (in hours:minutes:seconds format) since data was last transmitted across the connection.

To terminate a user session, include the -k option and session ID with the Userstat command.
For example:

```
admin> userstat
SessionID Line/Chan Slot:Item Rate Svc Address Username
246986325 1.01.02/01 1:13:01/000 33600 PPP 100.100.8.2 100.100.8.2
<end user list> 1 active user(s)

admin> userstat -k 246986325
Session 246986325 cleared
```

Version

Description: Displays the current system software version.

Permission level: System

Usage: `version`

Example: To display the current system software version:

```
admin> version
Software version 1.2
```

View

Description: Changes the information displayed in the top or bottom status window.

Permission level: System

Usage: `view position status-type`

Syntax element	Description
<i>position</i>	The window position may be <code>top</code> , <code>bottom</code> , or <code>left</code> , indicating which area of the status window will be affected by the command.
<i>status-type</i>	<p>If the specified window position is <code>top</code> or <code>bottom</code>, the window can display one of the following types of status information:</p> <ul style="list-style-type: none"> • <code>general</code> (general status information) • <code>log</code> (the 32-message log buffer) • <code>line</code> (T1 line and channel status) <p>If the specified window position is <code>left</code>, the window can display one of the following types of status information:</p> <ul style="list-style-type: none"> • <code>connection</code> (WAN connection status) • <code>session</code> (management status)

Example: To display session information:

admin> `view left session`

```

4 Sessions
0 - serial - admin
1 - telnet - tommy
2 - telnet - super
3 - telnet - pubs

1/13/8  RA .....

M: 48 L: info Src: shelf-1/controller
48 out of 48 modems passed POST

Issued: 16:48:02, 09/27/1998

[Next/Last Conn:<dn/up arw>, Next?Last Page: <pg dn/up>, Exit: <esc>]
```

See Also: Connection, Line, Log, Status

WANdisplay

Description: Shows all WAN data as it is received and transmitted for each session. This information can be very helpful in troubleshooting PPP negotiation problems.

If your MAX TNT has several simultaneous active connections, WANdisplay might not be the most efficient command, because the MAX TNT displays all traffic from all connections in a constant stream. You might prefer to use WANDsess or WANopening, depending on the types of data you are interested in gathering.

Use the WANdisplay command with host cards only. You must first execute the Open command to open a session with the modem or HDLC card.

Permission level: Debug

Usage: `wandisplay octets`

The *octets* value specifies the maximum number of octets to display per packet. If you specify 0 (zero), the MAX TNT does not log WAN data.

Example: To open a session with a modem card, and activate the display of the card's WAN data:

```
admin> open 1 7
modem-1/7> wandisplay
Display the first 24 bytes of WAN messages
RECV-272:: 1 octets @ 5E138F74
  [0000]: 0D
RECV-272:: 13 octets @ 5E13958C
  [0000]: 0A 41 63 63 65 70 74 3A 20 69 6D 61 67
XMIT-276:: 1011 octets @ 2E12D8A4
  [0000]: 7E 21 45 00 03 EE 54 2B 40 00 37 06 BA 09 CF 2B
  [0010]: 00 86 D0 93 91 90 1A 0A
```

Note that the bytes are displayed in hexadecimal format.

See Also: WANDsess, WANopening

WANdsess

Description: Shows WAN data as it is received and transmitted for a particular user. The WANdsess command is very similar to the WANdisplay command, but when you use WANdsess, the MAX TNT displays only incoming and outgoing packets for a specific user. WANdsess is particularly helpful on a MAX TNT with several simultaneous active connections. The command acts as a filter, allowing you to focus your troubleshooting.

Use the WANdsess command with host cards only. You must first execute the Open command to open a session with the modem or HDLC card.

Permission level: Debug

Usage: `wandsess session-name octets`

Syntax element	Description
<i>session-name</i>	The name of a local Connection profile or a RADIUS user profile.
<i>octets</i>	The maximum number of octets to display per packet. If you specify 0 (zero), the MAX TNT does not display any data.

Example: To open a session with a modem card, and activate the display of WAN data for Tim's sessions:

```
admin> open 1 7
modem-1/7> wandsess tim
RECV-tim:300:: 1 octets @ 3E13403C
  [0000]: 7E 21 45 00 00 3E 15 00 00 00 20 7D 31 C2 D2
RECV-tim:300:: 15 octets @ 3E133A24
  [0000]: D0 7D B3 7D B1 B3 D0 7D B3 90 02 04 03 00 35
XMIT-tim:300:: 84 octets @ 3E12D28C
  [0000]: 7E 21 45 00 00 4E C4 63 00 00 1C 7D 31 17 5F D0
  [0010]: 93 90 02 D0 93 91 B3 00
```

Note that the bytes are displayed in hexadecimal format.

See Also: WANdisplay, WANopening

WANopening

Description: Shows WAN data as it is received and transmitted during connection establishment for all users. The WANopening command is particularly helpful for troubleshooting connection problems in which users make the initial connection, but are disconnected within a few seconds. The output of WANopening is very similar to the output of WANDisplay, but WANopening only shows packets to the point at which the connection has been completely negotiated.

Use the WANopening command with host cards only. You must first execute the Open command to open a session with the modem or HDLC card.

Permission level: Debug

Usage: `wanopening octets`

The *octets* value specifies the maximum number of octets to display per packet. If you specify 0 (zero), the MAX TNT does not log WAN data.

Example: To open a session with a modem card, and activate the display of WAN data received and transmitted during connection establishment:

```
admin> open 1 7
modem-1/7> wanopening
Display the first 24 bytes of WAN messages
RECV-272:: 1 octets @ 5E138F74
  [0000]: 0D
RECV-272:: 13 octets @ 5E13958C
  [0000]: 0A 41 63 63 65 70 74 3A 20 69 6D 61 67
XMIT-276:: 1011 octets @ 2E12D8A4
  [0000]: 7E 21 45 00 03 EE 54 2B 40 00 37 06 BA 09 CF 2B
  [0010]: 00 86 D0 93 91 90 1A 0A
```

Note that the bytes are displayed in hexadecimal format.

See Also: WANDisplay, WANDsess

Whoami

Description: Displays the name of the User profile associated with the current session.

Permission level: User

Usage: `whoami`

Example: To display the name of your User profile:

```
admin> whoami
tommy
```

See Also: Auth

Write

Description: Validates the settings of the working profile and then writes it from the edit buffer to NVRAM.

Note: If the working profile has an index field (a parameter followed by an asterisk), that parameter must have a value or the write is not allowed. If you modify a profile and do not use the Write command before reading another profile, the changes are lost.

Permission level: Update

Usage: `write [-f]`

Syntax element	Description
<code>-f</code>	Force the write without prompting for confirmation, overwriting an existing profile if one exists with the same index.

If you issue a Write command when the current profile has not been modified from the saved version, the write does not occur and the following message is displayed:

```
admin> write
Nothing new to write; nothing written.
```

You can force the write to occur by using the `-f` flag on the Write command line. Note that the write always occurs if the profile has not been written previously.

Example: To create a new Connection profile, modify it, and write it to NVRAM:

```
admin> new conn newyork
CONNECTION/newyork read

admin> list
[in CONNECTION/newyork (new)]
station*=newyork
active=no
encapsulation-protocol=mpp
called-number-type=national
dial-number=""
clid=""
ip-options={ yes yes 0.0.0.0/0 0.0.0.0/0 7 100 255 no no 0 +
session-options={ "" "" no 120 no-idle 120 "" }
telco-options={ ans-and-orig no off 1 no no 56k-restricted 0 +
ppp-options={ "" "" stac 1524 no 600 600 }
mp-options={ 1 1 2 }
mpp-options={ "" quadratic transmit 1 1 15 5 10 70 }
tcp-clear-options={ "" 0 }
answer-options={ }
usrRad-options={ global 0.0.0.0 1646 "" 1 acct-base-10 }
calledNumber=""

admin> write
CONNECTION/newyork written
```

See Also: List, New, Read, Set

XDSLcmd

Description: Enables you to manually activate a loopback test. XDSLcmd is supported on SDSL and RADSL cards only. You must first execute the Open command to open a session with the card.

Permission level: Diagnostic

Usage: `xdslcmd -1 [channel] [[count] [buffersize]]`

Syntax element	Description
<code>-1 [<i>channel</i>]</code>	The channel to test. Specify a number from 0 to 15 for an SDSL card, and from 1 to 5 for a RADSL card. If you do not specify a channel number, or if you specify 0 (zero), all channels are tested.
<code><i>count</i></code>	The number of frames to be sent in the loopback. The default is 10.
<code><i>buffersize</i></code>	The size of the looped frames to be sent. The default is 128 bytes.

Example: To run a loopback test on channel 8 of an SDSL card in shelf 1, slot 6:

```
admin> open 1 6
```

```
sdsl-1/6> xsdlcmd -1 8
```

The test collects statistics until you press Ctrl-C, which stops the test and displays the collected statistics.

MAX TNT Profile and Parameter Reference

2

Numeric	2-2
A.....	2-4
B.....	2-54
C.....	2-62
D.....	2-91
E.....	2-122
F.....	2-133
G.....	2-146
H.....	2-148
I	2-157
K.....	2-184
L.....	2-185
M	2-205
N.....	2-229
O.....	2-239
P.....	2-244
Q.....	2-268
R.....	2-269
S.....	2-291
T.....	2-335
U.....	2-365
V.....	2-374
W	2-378
X.....	2-379
Y.....	2-380

Numeric

7-Even

Description: Specifies whether the MAX TNT applies 7-bit even parity to data it sends toward a dial-in terminal-server user.

Usage: Specify Yes or No. The default is No. Accept the default value for most applications.

- Yes enables the use of 7-bit even parity for data sent to dial-in terminal-server users.
- No specifies 8-bit communication, in which no parity bit applies.

Example: `set 7-even=no`

Dependencies: If terminal services are disabled, 7-Even does not apply.

Location: Terminal-Server > Modem-Configuration

See Also: Modem-Configuration

8E1

Description: Specifies the action to take when the code image for an 8-port E1 card is present in a Tar file.

Usage: Specify one of the following settings:

- Auto (the default) causes the system to load images for cards that are installed in the MAX TNT, and to skip images for cards that are not installed.
- Load causes the system to load the image, even if there is no card of that type installed.
- Skip causes the system to skip the image, even if there is a card of that type installed.

Dependencies: A card is considered present in the system if a Slot-Type profile exists for that card type. The system creates a Slot-Type profile when it first detects the presence of a card, and does not delete the profile unless the administrator uses the Slot -r command to permanently remove a card that is no longer installed in the system, or clears NVRAM. To ensure that the system does not load unnecessary images, use Slot -r to remove Slot-Type profiles for cards that are no longer installed in the system.

Location: Load-Select

See Also: 8T1, AMDM, CAPADSL, DMTADSL, DS3-ATM, Enet, Enet2, HDLC, HDLC2, IDSL, MDM56K, MDM-V34, SDSL, SDSL70D, SDSL70V, SWAN, T3, UDS3, UE1, Unknown-Cards, UT1

8T1

Description: Specifies the action to take when the code image for an 8-port T1 card is present in a Tar file.

Usage: Specify one of the following settings:

- Auto (the default) causes the system to load images for cards that are installed in the MAX TNT, and to skip images for cards that are not installed.
- Load causes the system to load the image, even if there is no card of that type installed.
- Skip causes the system to skip the image, even if there is a card of that type installed.

Dependencies: A card is considered present in the system if a Slot-Type profile exists for that card type. The system creates a Slot-Type profile when it first detects the presence of a card, and does not delete the profile unless the administrator uses the Slot -r command to permanently remove a card that is no longer installed in the system, or clears NVRAM. To ensure that the system does not load unnecessary images, use Slot -r to remove Slot-Type profiles for cards that are no longer installed in the system.

Location: Load-Select

See Also: 8E1, AMDM, CAPADSL, DMTADSL, DS3-ATM, Enet, Enet2, HDLC, HDLC2, IDSL, MDM56K, MDM-V34, SDSL, SDSL70D, SDSL70V, SWAN, T3, UDS3, UE1, Unknown-Cards, UT1

A

Acct-Drop-Stop-On-Auth-Fail

Description: Specifies whether RADIUS Accounting Stop packets are dropped for connections that fail authentication.

Usage: Specify Yes or No. The default is No.

- Yes specifies that RADIUS Accounting Stop packets are dropped for connections that fail authentication.
- No specifies that RADIUS Accounting Stop packets are sent for connections that fail authentication.

Example: `set acct-drop-stop-on-auth-fail=yes`

Location: External-Auth > Rad-Acct-Client

See Also: Acct-ID-Base, Acct-Key, Acct-Limit-Retry, Acct-Port, Acct-Server-N (N=1–3), Acct-Sess-Interval, Acct-Src-Port, Acct-Stop-Only, Acct-Timeout

Acct-Host

Description: Specifies a RADIUS accounting server for the MAX TNT to use for the connection.

Usage: Enter the IP address of a RADIUS accounting server. The default is 0.0.0.0, which causes the MAX TNT to look for an accounting server at the address specified by the External-Auth profile.

Example: `set acct-host=10.9.8.2/24`

Location: Connection *station* > UsrRad-Options

See Also: Acct-ID-Base, Acct-Key, Acct-Port, Acct-Reset-Time, Acct-Server-N (N=1–3), Acct-Sess-Interval, Acct-Src-Port, Acct-Timeout, Acct-Type, UsrRad-Options

Acct-ID-Base

Description: Specifies whether the numeric base of the RADIUS Acct-Session-ID attribute is 10 or 16. You can set Acct-ID-Base globally and for each connection.

Usage: Specify one of the following values:

- Acct-Base-10 (the default) specifies a decimal base.
- Acct-Base-16 specifies a hexadecimal base.

The value you specify controls how the MAX TNT presents the Acct-Session-ID attribute to the accounting server.

Example: `set acct-id-base=acct-base-10`

Dependencies: Consider the following:

- If Acct-Type does not specify RADIUS, Acct-ID-Base does not apply.
- Changing the value of Acct-ID-Base while accounting sessions are active results in inconsistent reporting between the Start and Stop records.
- The Acct-Session-ID attribute is defined in section 5.5 of the RADIUS accounting specification.

Location: Connection *station* > UsrRad-Options, External-Auth > Rad-Acct-Client

See Also: Acct-Drop-Stop-On-Auth-Fail, Acct-Key, Acct-Limit-Retry, Acct-Port, Acct-Reset-Time, Acct-Server-N (N=1–3), Acct-Sess-Interval, Acct-Src-Port, Acct-Stop-Only, Acct-Timeout, Acct-Type, Rad-Acct-Client, UsrRad-Options

Acct-Key

Description: Specifies a RADIUS or TACACS+ shared secret. A shared secret acts as a password between the MAX TNT and the accounting server.

Usage: Specify the text of the shared secret. The value you specify must match the value in the RADIUS `clients` file or in the TACACS+ configuration file. If you specify a null value, the system logs the following warning:

warning: acct-key is empty (bad for security)

Example: `set acct-key=Ascend`

Dependencies: If Acct-Type does not specify RADIUS or TACACSPlus, Acct-Key does not apply.

Location: Connection *station* > UsrRad-Options, External-Auth > Rad-Acct-Client, External-Auth > TacPlus-Acct-Client

See Also: Acct-Drop-Stop-On-Auth-Fail, Acct-ID-Base, Acct-Limit-Retry, Acct-Port, Acct-Reset-Time, Acct-Server-N (N=1–3), Acct-Sess-Interval, Acct-Src-Port, Acct-Stop-Only, Acct-Timeout, Acct-Type, Rad-Acct-Client, TacPlus-Acct-Client, UsrRad-Options

Acct-Limit-Retry

Description: Specifies the maximum number of retries for Accounting packets.

When the MAX TNT is configured for RADIUS accounting, it sends Accounting Start and Stop packets to the RADIUS server to record connections. If the server does not acknowledge a packet within the number of seconds you specify for Acct-Timeout, the MAX TNT tries again, resending the packet until the server responds, or dropping the packet if the queue of packets to be resent is full. You can limit the number of retries by setting a maximum.

Usage: To set the maximum number of retries for Accounting packets, set Acct-Limit-Retry to a value greater than 0 (zero). A value of 0 (the default) indicates an unlimited number of retries.

Note: The MAX TNT always makes at least one attempt. For example, if you set the number of retries to 10, the MAX TNT makes 11 attempts: the original attempt plus 10 retries.

Example: `set acct-limit-retry=10`

Location: External-Auth > Rad-Acct-Client

See Also: Acct-Drop-Stop-On-Auth-Fail, Acct-ID-Base, Acct-Key, Acct-Port, Acct-Server-N (N=1–3), Acct-Sess-Interval, Acct-Src-Port, Acct-Stop-Only, Acct-Timeout

Acct-Port

Description: Specifies the UDP destination port to use for external accounting requests. When using RADIUS accounting, you can set Acct-Port globally and for each connection.

Usage: Specify a UDP port number from 1 to 32767. The value must match the port number the accounting daemon uses. For RADIUS, the default in a Connection profile is 1646, and the default in the External-Auth profile is 0 (zero). For TACACS+, the default is 49.

Example: `set acct-port=1500`

Dependencies: If Acct-Type does not specify RADIUS or TACACSPlus, Acct-Port does not apply.

Location: Connection *station* > UsrcRad-Options, External-Auth > Rad-Acct-Client, External-Auth > TacPlus-Acct-Client

See Also: Acct-Drop-Stop-On-Auth-Fail, Acct-ID-Base, Acct-Limit-Retry, Acct-Key, Acct-Reset-Time, Acct-Server-N (N=1–3), Acct-Sess-Interval, Acct-Src-Port, Acct-Stop-Only, Acct-Timeout, Acct-Type, Rad-Acct-Client, TacPlus-Acct-Client

Acct-RADIUS-Compat

Description: Enables or disables Vendor-Specific Attribute (VSA) compatibility mode when the MAX TNT is using RADIUS for accounting purposes.

Usage: Specify one of the following settings:

- Old-Ascend (the default) specifies that the MAX TNT does not send the Vendor-Specific attribute to the RADIUS server and does not recognize the Vendor-Specific attribute if the server sends it.

In this mode, the system uses the Ascend algorithm of encrypting and decrypting the User-Password attribute, which differs from the RFC-defined algorithm. The Ascend algorithm does not null fill the password string to a multiple of 16 bytes before encryption, and, when the password is longer than 16 bytes, the Ascend algorithm does not use the previous segment's hash to calculate the next intermediate value .

- Vendor-Specific specifies that the MAX TNT uses the Vendor-Specific attribute to encapsulate Ascend vendor attributes, and uses the RFC-defined User-Password encryption algorithm as well.

Example: `set acct-radius-compat=vendor-specific`

Location: External-Auth > Rad-Acct-Client

See Also: Auth-RADIUS-Compat, Call-Log-RADIUS-Compat, RADIUS-Server-Compat

Acct-Reset-Time

Description: Specifies the number of seconds that must elapse before the MAX TNT returns to using the primary RADIUS accounting server.

Usage: Specify the number of seconds. The default is 0 (zero), which specifies that the MAX TNT does not return to using the primary RADIUS accounting server.

Example: `set acct-reset-time=60`

Dependencies: For Acct-Reset-Time to apply, you must specify at least one value for Acct-Server-*N*.

Location: External-Auth > Rad-Acct-Client

See Also: Acct-ID-Base, Acct-Key, Acct-Port, Acct-Server-*N* (*N*=1–3), Acct-Sess-Interval, Acct-Src-Port, Acct-Timeout, Acct-Type, Rad-Acct-Client

Acct-Server-*N* (*N*=1–3)

Description: Specifies the IP addresses of up to three external accounting servers. The MAX TNT first tries to connect to server #1. If it receives no response, it tries to connect to server #2. If it still receives no response, it tries to connect to server #3.

Usage: Specify an IP address in dotted decimal notation. The default is 0.0.0.0, which indicates that no accounting server exists.

Example: `set acct-server-1=10.2.3.4/24`

Dependencies: Consider the following:

- If Acct-Type does not specify RADIUS or TACACSPlus, Acct-Server-*N* does not apply.
- If the MAX TNT connects to a server other than server #1, and Acct-Reset-Time=0, the MAX TNT continues to use that server until it fails to service requests, even if the first server comes back online. If Acct-Reset-Time is set to a value other than 0 (zero), the MAX TNT returns to using the primary accounting server after the number of seconds specified by Acct-Reset-Time has elapsed.

Location: External-Auth > Rad-Acct-Client, External-Auth > TacPlus-Acct-Client

See Also: Acct-Drop-Stop-On-Auth-Fail, Acct-ID-Base, Acct-Key, Acct-Limit-Retry, Acct-Port, Acct-Reset-Time, Acct-Sess-Interval, Acct-Src-Port, Acct-Stop-Only, Acct-Time-out, Acct-Type, Rad-Acct-Client, TacPlus-Acct-Client

Acct-Sess-Interval

Description: Specifies the number of seconds between RADIUS accounting reports recording the number of open sessions.

Usage: Specify a number of seconds from 0 to 65535. The default is 0 (zero), which turns off regular RADIUS open-session reports.

Example: `set acct-sess-interval=15`

Dependencies: If Acct-Type does not specify RADIUS, Acct-Sess-Interval does not apply. Acct-Sess-Interval has no effect unless the Ascend RADIUS daemon is running.

Location: External-Auth > Rad-Acct-Client

See Also: Acct-Drop-Stop-On-Auth-Fail, Acct-ID-Base, Acct-Key, Acct-Limit-Retry, Acct-Port, Acct-Reset-Time, Acct-Server-N (N=1–3), Acct-Src-Port, Acct-Stop-Only, Acct-Timeout, Acct-Type, Rad-Acct-Client

Acct-Src-Port

Description: Represents the UDP source port to use for RADIUS accounting.

Usage: Specify a value from 0 to 65535. The default is 0 (zero), which specifies that the MAX TNT selects the source port from the nonprivileged port range (1024–2000).

Example: `set acct-src-port=3278`

Dependencies: The MAX TNT uses the source port number to demultiplex the RADIUS reply packets to the appropriate slot cards. The system uses a separate source port for each slot card and shelf controller. On the MAX TNT, the actual source port is the value of Acct-Src-Port plus the slot number, where the slot number is 0 (zero) for the shelf controller. So, if you set Acct-Src-Port to 1000, packets originating from the shelf controller have a source port value of 1000, while packets originating from slot 6 have a source port value of 1006.

Location: External-Auth > Rad-Acct-Client, External-Auth > TacPlus-Acct-Client

See Also: Acct-Drop-Stop-On-Auth-Fail, Acct-ID-Base, Acct-Key, Acct-Limit-Retry, Acct-Port, Acct-Reset-Time, Acct-Server-N (N=1–3), Acct-Sess-Interval, Acct-Stop-Only, Acct-Timeout, Acct-Type, Rad-Acct-Client, TacPlus-Acct-Client

Acct-Stop-Only

Description: Specifies whether the MAX TNT should send an Accounting Stop packet that does not contain a user name. (At times, the MAX TNT can send an Accounting Stop packet to the RADIUS server without having sent an Accounting Start packet. These Stop packets have no user name.)

Usage: Specify Yes or No. Yes is the default.

- Yes specifies that the MAX TNT should send an Accounting Stop packet even if it does not contain a user name.
- No specifies that the MAX TNT should not send an Accounting Stop packet if it does not contain a user name.

Example: `set acct-stop-only=no`

Location: External-Auth > Rad-Acct-Client

See Also: Acct-Drop-Stop-On-Auth-Fail, Acct-ID-Base, Acct-Key, Acct-Limit-Retry, Acct-Port, Acct-Server-N (N=1–3), Acct-Sess-Interval, Acct-Src-Port, Acct-Timeout

Acct-Timeout

Description: Specifies the amount of time (in seconds) that the MAX TNT waits for a response to a RADIUS accounting request. You can set Acct-Timeout globally and for each connection.

If it does not receive a response within the specified time, the MAX TNT sends the accounting request to the next server specified by Acct-Server-N. If all RADIUS accounting servers are busy, the MAX TNT stores the accounting request and tries again at a later time. It can queue up to 154 requests.

Usage: Specify an integer from 1 to 10. The default for a Connection profile is 1. The default for the External-Auth profile is 0 (zero).

Example: `set acct-timeout=5`

Dependencies: If Acct-Type does not specify RADIUS, Acct-Timeout does not apply. You use Acct-Timeout only for RADIUS accounting. Because TACACS+ uses TCP, it has its own timeout method.

Location: Connection *station* > UsrRad-Options, External-Auth > Rad-Acct-Client

See Also: Acct-Drop-Stop-On-Auth-Fail, Acct-ID-Base, Acct-Key, Acct-Limit-Retry, Acct-Port, Acct-Reset-Time, Acct-Server-N (N=1–3), Acct-Sess-Interval, Acct-Src-Port, Acct-Stop-Only, Acct-Type, Rad-Acct-Client, UsrRad-Options

Acct-Type

Description: Specifies whether to use RADIUS accounting, TACACS+ accounting, or no accounting at all. You can specify accounting globally and for each connection.

Usage: To enable or disable accounting in the External-Auth profile, specify one of the following values:

- None (the default) disables accounting.
- RADIUS enables RADIUS accounting.
- TACACSPlus enables TACACS+ accounting.

To set accounting policy for a particular connection, specify one of the following values in the Connection profile:

- Global (the default) specifies that the MAX TNT sends accounting information to one of the accounting servers specified by the External-Auth profile.
- Local specifies that the MAX TNT sends accounting information to the accounting server specified by Acct-Host in the Connection profile.
- Both specifies that the MAX TNT sends accounting information to both the global and local servers.

Example: `set acct-type=acct-radius`

Dependencies: Consider the following:

- If you set Auth-Type=RADIUS/Logout, the MAX TNT disables RADIUS accounting. For Acct-Type to have any effect in a Connection profile, you must set Auth-Type to RADIUS or TACACSPlus.
- If you set Acct-Type to RADIUS or TACACSPlus, you must set Acct-Server to specify at least one accounting server, and that server must be running a version of the daemon that specifically supports accounting.

Location: Connection *station* > UsrRad-Options, External-Auth

See Also: Acct-ID-Base, Acct-Key, Acct-Port, Acct-Reset-Time, Acct-Server-N (N=1–3), Acct-Sess-Interval, Acct-Src-Port, Acct-Timeout, Rad-Acct-Client, TacPlus-Acct-Client

Action

Description: Specifies the action the MAX TNT takes when it finds a matching route in a route-filter specification.

Usage: Specify one of the following values:

- None (the default) specifies that the MAX TNT takes no action.
- Accept directs the MAX TNT to accept the route and allow it to affect the routing table.
- Deny directs the MAX TNT to deny the route and keep it from affecting the routing table.
- Add directs the MAX TNT to add the Add-Metric value to the route metric, and to accept the route.

Location: Filter > Input-Filters > Route-Filter *filter-name*,
Filter > Output-Filters > Route-Filter *filter-name*

See Also: Add-Metric, Input-Filters, Output-Filters, Route-Address, Route-Filter (subprofile), Route-Mask, Source-Address, Source-Address-Mask

Activation

Description: Selects the signals, at the serial WAN port, that indicate that the Data Circuit-Terminating Equipment (DCE) is ready to connect. Flow control is always handled by the Clear To Send (CTS) signal.

Usage: Specify one of the following values:

- Static (the default) specifies that the MAX TNT does not use flow control signals because the DCE is always connected.
- DSR-Active specifies that the DCE raises the Data Set Ready (DSR) signal when it is ready.
- DCD-DSR-Active specifies that the DCE raises the DSR and Data Carrier Detect (DCD) signals when it is ready.

Example: `set activation=static`

Location: SWAN {shelf-*N* slot-*N* *N*} > Line-Config

See Also: Call-Route-Info, Line-Config, Nailed-Group, Trunk-Group

Active

Description: Activates an interface or feature. An active interface is available for use.

Usage: Specify Yes or No. The default is No.

- Yes activates the interface or feature. In the BOOTP-Relay subprofile, setting Active=Yes enables the MAX TNT to forward BOOTP requests and responses between specified BOOTP servers and booting hosts on any of the MAX TNT unit's IP interfaces.
- No makes the interface or feature unavailable for use.

Example: `set active=yes`

Location: Connection *station*, Connection *station* > IP-Options > OSPF-Options, Connection *station* > IP-Options > TOS-Options, Frame-Relay *fr-name*, IP-Interface { {shelf-*N* slot-*N* *N*} *N*} > OSPF, IP-Global > BOOTP-Relay

See Also: BOOTP-Relay, BOOTP-Servers, Enabled

Active-Enabled

Description: Disables or enables a User profile. A disabled profile is not available for use. A dash appears before each inactive profile.

Usage: Specify Yes or No. The default is No.

- Yes enables the User profile.
- No disables the User profile.

Example: `set active-enabled=yes`

Location: User *name*

See Also: User

Active-Route

Description: Specifies whether the MAX TNT adds a static route to the routing table.

Usage: Specify Yes or No. The default is Yes, except for the IP-Route profile called `default`. For the `default` IP-Route profile, the default is No.

- Yes activates the static route and causes the MAX TNT to add it to the routing table.
- No disables the route. An inactive route does not affect packet routing.

Example: `set active-route=yes`

Dependencies: The default route for an IP-Route profile always has the name `default` and a destination address of 0.0.0.0/0. To activate the default route, you must set Gateway-Address to the IP address of the default router, and set Active-Route=Yes.

Location: IP-Route *name*, IPX-Route *name*

See Also: ASE-Tag, ASE-Type, Cost, Dest-Address, Dest-Network, Gateway-Address, Hops, Metric, Name, Preference, Private-Route, Profile-Name, Server-Node, Server-Socket, Server-Type, Third-Party, Ticks

Add-Metric

Description: Specifies the metric to add to the route metric for a route filter.

Usage: Specify a number. The number you specify must not result in a route metric greater than 15. The default is 0 (zero).

Dependencies: Add-Metric does not apply unless Action=Add.

Location: Filter > Input-Filters > Route-Filter *filter-name*,
Filter > Output-Filters > Route-Filter *filter-name*

See Also: Action, Input-Filters, Output-Filters, Route-Address, Route-Filter (subprofile), Route-Mask, Source-Address, Source-Address-Mask

Add-Persistence

Description: Specifies the number of seconds that average line utilization (ALU) must persist beyond the Target-Utilization threshold before the MAX TNT adds bandwidth from available channels. When adding bandwidth, the MAX TNT adds the number of channels specified by Increment-Channel-Count.

Usage: Specify an integer from 1 to 300. The default is 5.

Example: `set add-persistence=15`

Dependencies: When the Seconds-History value is high, Add-Persistence has little effect.

Location: Answer-Defaults > MPP-Answer, Connection *station* > MPP-Options

See Also: Bandwidth-Monitor-Direction, Base-Channel-Count, Decrement-Channel-Count, Dynamic-Algorithm, Increment-Channel-Count, Maximum-Channels, Minimum-Channels, MPP-Answer, MPP-Options, Seconds-History, Sub-Persistence, Target-Utilization

Address-Pool

Description: Specifies up to 128 IP address pools from which the MAX TNT can assign a caller an IP address. You can define up to 128 pools in a Connection profile, and up to 50 in a RADIUS user profile. Each pool may contain up to 255 addresses.

Usage: Specify a number from 0 to 128. The default is 0 (zero).

Example: `set address-pool=5`

Dependencies: If Address-Pool=0 and Assign-Address=Yes, the MAX TNT gets IP addresses from the first defined address pool.

Location: Connection *station* > IP-Options

See Also: Assign-Address, Assign-Count, IP-Options, Pool-Base-Address, Pool-Summary

Admin-State

Description: A profile that stores the desired state and SNMP interface number of a device. The profile resides in NVRAM, so a physical device keeps the same interface number across system reset or power failures.

When you install the FrameLine card, the MAX TNT creates 20 Admin-State profiles. Ten are associated with the T1 lines, and 10 are associated with the SCA devices that do HDLC framing.

Usage: To make Admin-State the working profile and list its contents, use the Read and List commands. For the Read command, specify a shelf, slot, and item number. Item numbers 1 through 10 identify a T1 line. Item numbers 11 through 20 identify an SCA device on the card. SCA 11 is associated with line 1, SCA 12 with line 2, and so on. For example, to make the Admin-State profile for the SCA device on shelf 1, slot 9 the working profile:

```
admin> read admin-state {1 9 19}
ADMIN-STATE/{ shelf-1 slot-9 19 } read

admin> list
[in ADMIN-STATE/{ shelf-1 slot-9 19 }]
device-address*={ shelf-1 slot-9 19 }
slot-type=48modem-card
snmp-interface=189
modem-table-index=0
desired-state=admin-state-up
```

Dependencies: At system startup, the MAX TNT reads the Admin-State profiles. If the addressed device is not present in the system and has been replaced by a device of another type, the MAX TNT deletes the profile associated with the device. The next time the system is reset or power cycled, the old device's SNMP interface number is made available for reassignment. Removing a slot card and leaving the slot empty does not, however, free up interface numbers. If you reinstall the slot card, the MAX TNT reassigns the same interface number.

In addition, removing a slot card and replacing it with a slot card of another type does not immediately free up the old interface numbers. New numbers are assigned to the new slot card, and the old numbers are made available at the next power cycle or system reset.

See Also: Desired-State, Device-Address, Modem-Table-Index, Slot-Type, SNMP-Interface

Admin-State-Perm-If

Description: A profile that holds information about the MAX TNT nailed-up interfaces. The system creates a profile for an active nailed-up interface and assigns it an interface index. The Admin-State-Perm-If profile contains only read-only settings.

Usage: To make Admin-State-Perm-If the working profile and list its contents, use the Read and List commands. For example:

```
admin> read admin-state-perm-if frswan1
ADMIN-STATE-PERM-IF/frswan1 read

admin> list
[in ADMIN-STATE-PERM-IF/frswan1]
station*=frswan1
snmp-interface=19
desired-state=admin-state-up
desired-trap-state=trap-state-enabled
inet-profile-type=1
```

See Also: Desired-State, Desired-Trap-State, Inet-Profile-Type, SNMP-Interface, Station

Admin-State-Phys-If

Description: A profile that holds information about the system's physical interfaces. The system creates a profile for each of its physical interfaces.

Usage: To make Admin-State-Phys-If the working profile and list its contents, use the Read and List commands. For example, to make the Admin-State-Phys-If profile for the device on shelf 1, slot 13 the working profile:

```
admin> read admin-state-Phys-If {1 13 1}
ADMIN-STATE-PHYS-IF/{ shelf-1 slot-13 1 } read

admin> list
[in ADMIN-STATE-PHYS-IF/{ shelf-1 slot-13 1 }]
device-address*={ shelf-1 slot-13 1 }
slot-type=hdlc2-card
snmp-interface=0
modem-table-index=0
desired-state=admin-state-up
desired-trap-state=trap-state-enabled
```

See Also: Desired-State, Desired-Trap-State, Device-Address, Modem-Table-Index, Slot-Type, SNMP-Interface

ADSL-CAP

Description: A profile containing configuration settings for the RADSL card.

Usage: Use the Read and List commands to make ADSL-CAP the working profile and list its contents. For example:

```
admin> read adsl-cap {1 1 0}
ADSL-CAP/{ shelf-1 slot-1 0 } read

admin> list
[in ADSL-CAP/{ shelf-1 slot-1 0 }]
name=" "
physical-address*={ shelf-1 slot-1 0 }
enabled=no
line-config={ 0 0 static { any-shelf any-slot 0 } autobaud }
```

You can then use the Set command to modify the settings in the profile. To close the profile and save your changes, execute the Write command. For example:

```
admin> write
ADSL-CAP/{ shelf-1 slot-1 0 } written
```

See Also: Enabled, Line-Config, Name, Physical-Address

ADSL-CAP-Stat

Description: A profile indicating the status of the RADSL line.

Usage: Use the Read and List commands to make ADSL-CAP-Stat the working profile and list its contents. For example:

```
admin> read adsl-cap-stat { 1 9 1 }
ADSL-CAP-STAT/{ shelf-1 slot-9 1 } read

admin> list
[in ADSL-CAP-STAT/ {shelf-1 slot-9 1}]
physical-address*={ shelf-1 slot-9 1 }
line-state=active
error-count=0
physical-status={ 0 coe port-up 784000 784000 13 2 2 }
physical-statistic={ { 0 0 15 } yes 10 2 passed 5 +
```

See Also: Error-Count, Line-State, Physical-Address, Physical-Statistic, Physical-Status

ADSL-DMT

Description: A profile containing configuration settings for the ADSL-DMT card.

Usage: Use the Read and List commands to make ADSL-DMT the working profile and list its contents. For example:

```
admin> read adsl-dmt {1 1 0}
ADSL-DMT/{ shelf-1 slot-1 0 } read

admin> list
[in ADSL-DMT/{ shelf-1 slot-1 0 }]
name=" "
physical-address*={ shelf-1 slot-1 0 }
enabled=no
line-config={ auto auto 3 2 }
```

You can then use the Set command to modify the settings in the profile. To close the profile and save your changes, execute the Write command. For example:

```
admin> write
ADSL-DMT/{ shelf-1 slot-1 0 } written
```

See Also: Enabled, Line-Config, Name, Physical-Address

Advanced-Agent-Enabled

Description: Indicates whether the Advanced MIB is in use. The Advanced MIB is the name of the SNMP MIB previously called the WAN MIB.

Usage: The Advanced-Agent-Enabled setting is read only. Yes indicates that the Advanced MIB is in use. No indicates that the Advanced MIB is not in use.

Example: advanced-agent-enabled=yes

Location: Base

See Also: AIM-Enabled, Countries-Enabled, Data-Call-Enabled, D-Channel-Enabled, Firewalls-Enabled, Frame-Relay-Enabled, MAXLink-Client-Enabled, Modem-Dialout-Enabled, Multi-Rate-Enabled, Network-Management-Enabled, PHS-Support, R2-Signaling-Enabled, Selectools-Enabled, Serial-Number, Shelf-Number, Software-Level, Software-Revision, Software-Version, Switched-Enabled, TNT-ADSL-Enabled, TNT-IDSL-Enabled, TNT-SDSL-Enabled

Agent-Mode

Description: Specifies whether the MAX TNT operates as a Foreign Agent, a Home Agent, or both on a tunnel-by-tunnel basis in an Ascend Tunnel Management Protocol (ATMP) configuration.

Usage: Specify one of the following values:

- Tunnel-Disabled (the default) disables ATMP.
- Home-Agent specifies that the MAX TNT operates as a Home Agent.
- Foreign-Agent specifies that the MAX TNT operates as a Foreign Agent.
- Home-And-Foreign-Agent specifies that the MAX TNT operates as both a Home Agent and a Foreign Agent.

Example: `set agent-mode=foreign-agent`

Dependencies: If you change the Agent-Mode setting from its default, the new value does not take effect until you reset the system.

Location: ATMP

See Also: Agent-Type, Password, Retry-Limit, Retry-Timeout, UDP-Port

Agent-Type

Description: Specifies whether the MAX TNT reaches the Home Network as a gateway or a router in an Ascend Tunnel Management Protocol (ATMP) configuration.

Usage: Specify one of the following values:

- Gateway-Home-Agent (the default) specifies that the Home Agent delivers tunneled data to the Home Network without routing. The tunneled data does not bring up a connection to the Home Network, so the connection between the Home Agent and the Home Network must already be up, as in a nailed-up connection.
- Router-Home-Agent specifies that the Home Agent routes tunneled data to the Home Network.

Example: `set agent-type=router-home-agent`

Dependencies: You must set Agent-Mode=Home-Agent for the Agent-Type setting to apply.

Location: ATMP

See Also: Agent-Mode, Password, Retry-Limit, Retry-Timeout, UDP-Port

AIM-Enabled

Description: Indicates whether the unit enables Ascend Inverse Multiplexing (AIM).

Usage: The AIM-Enabled setting is read only. Yes indicates that AIM is enabled. No indicates that AIM is not enabled.

Example: aim-enabled=yes

Location: Base

See Also: Data-Call-Enabled, Frame-Relay-Enabled, MAXLink-Client-Enabled, Modem-Dialout-Enabled, Multi-Rate-Enabled, R2-Signaling-Enabled, Switched-Enabled

AIS-Receive

Description: Indicates whether the remote end is sending an Alarm Indication Signal (AIS) on the T1 line. The remote end sends an AIS (instead of normal data) to take the line out of service.

Usage: The AIS-Receive setting is read only. True indicates that the remote end is sending an AIS. False indicates that the remote end is not sending an AIS.

Example: ais-receive=true

Location: T1-Stat {shelf-*N* slot-*N* *N*}

See Also: Yellow-Receive

Alarm-Enabled

Description: Specifies whether the MAX TNT traps alarm events and sends a traps-PDU (Protocol Data Unit) to the SNMP manager. The Ascend Enterprise MIB defines the following alarm events (see the Ascend Enterprise MIB for the most up-to-date information):

Alarm event	Indicates that the MAX TNT unit
coldStart (RFC-1215 trap-type 0)	Is reinitializing itself in such a way that it might alter the configuration of either the SNMP manager or the unit.
warmStart (RFC-1215 trap-type 1)	Is reinitializing itself so that neither the configuration of the SNMP manager nor that of the unit will change.
linkDown (RFC-1215 trap-type 2)	Recognizes a failure in one of the communication links represented in the SNMP manager's configuration.
linkUp (RFC-1215 trap-type 3)	Recognizes that one of the communication links represented in the SNMP manager's configuration has come up.
frDLCIStatusChange (RFC-1315 trap-type 1)	Recognizes that one of the virtual circuits has changed states. The link has been created, invalidated, or toggled between the active and inactive states.
eventTableOverwrite (Ascend trap-type 16)	Detected that a new event has overwritten an unread event. The unit sends this trap only for systems that support Ascend's accounting MIB. Once sent, additional overwrites will not cause another trap to be sent until at least one table's worth of new events has occurred.

Usage: Specify Yes or No. The default is Yes.

- Yes specifies that the MAX TNT sends alarm-event traps to the host at Host-Address.
- No specifies that the MAX TNT does not send alarm-event traps.

Example: `set alarm-enabled=yes`

Location: Trap *host-name*

See Also: Community-Name, Host-Address, Host-Name, Port-Enabled, Security-Mode

Allow-As-Client-DNS-Info

Description: Specifies whether the local DNS servers should be made accessible to PPP connections if the client DNS servers are unavailable.

A client DNS configuration defines DNS server addresses that the MAX TNT presents to WAN connections during IPCP negotiation. The client DNS configuration provides a way to protect your local DNS information from WAN users. Client DNS has two levels: a global configuration (in the IP-Global profile) that applies to all PPP connections, and a connection-specific configuration (in a Connection profile). The MAX TNT uses the global client addresses only if none are specified for the particular connection.

Usage: Specify Yes or No. The default is No.

- Yes specifies that the MAX TNT makes the local DNS servers accessible to PPP connections if the client DNS servers are unavailable.
- No specifies that the MAX TNT does not make local DNS servers accessible to PPP connections if the client DNS servers are unavailable.

Example: `set allow-as-client-dns-info=no`

Location: IP-Global

See Also: Client-DNS-Addr-Assign, Client-DNS-Primary-Addr, Client-DNS-Secondary-Addr, Client-Primary-DNS-Server, Client-Secondary-DNS-Server, Connection, DNS-Primary-Server, DNS-Secondary-Server

Allow-Code

Description: Enables or disables permission to upload code to the MAX TNT system and use the following code-level commands:

- Format (to prepare a flash card for use)
- Fsck (to check file system on a flash card)

Usage: Specify Yes or No. The default is No.

- Yes grants permission to upload code to the MAX TNT.
- No denies permission to upload code to the MAX TNT.

Example: `set allow-code=yes`

Location: User *name*

See Also: Allow-Diagnostic, Allow-Password, Allow-System, Allow-Termserve, Allow-Update

Allow-Diagnostic

Description: Enables or disables permission to use the following diagnostic commands:

Command	Description
BRIdisplay	Display D-channel traffic for an IDSL card.
Callroute	Display the call routing database.
Clock-Source	Display clock-source statistics.
Debug	Enables or disables diagnostic output.
Device	Bring a device up or down.
DS3link	Carry out a diagnostic session with a DS3 card.
E1-Stats	Report DS1-level line errors on E1 cards.
Ether-Display	Display the contents of received Ethernet packets.
FE-Loop	Perform a line loopback for a T1 or E1 card.
FWALLdblog	Display firewall messages. (The FWALLdblog command is not supported at this time.)
FWALLversion	Display the firewall versions supported by the current system software. (The FWALLversion command is not supported at this time.)
IDSLcmd	Perform loopback and error tests on an IDSL card.
If-Admin	Administer an interface.
NSlookup	Perform a DNS lookup.
Open	Start a session with a slot card.
Ping	Ping the specified host.
PRIdisplay	Display general PRI messages.
Rlogin	Open an Rlogin session.
Slot	Administer a slot card.
T1-Stats	Report DS1-level line errors on T1 and T3 cards.
Telnet	Open a Telnet session.
Traceroute	Display route statistics.
Uptime	Report how long the system has been up and how long individual cards have been up.
XDSLcmd	Activate a loopback test.

Usage: Specify Yes or No. The default is No.

- Yes grants permission to use diagnostic commands.
- No denies permission to use diagnostic commands.

Example: `set allow-diagnostic=yes`

Location: User *name*

See Also: Allow-Code, Allow-Password, Allow-System, Allow-Termserve, Allow-Update

Allow-Password

Description: Enables or disables permission to view passwords.

Usage: Specify Yes or No. The default is No.

- Yes grants permission to view passwords.
- No denies permission to view passwords.

Example: `set allow-password=yes`

Location: User *name*

See Also: Allow-Code, Allow-Diagnostic, Allow-System, Allow-Termserv, Allow-Update

Allow-System

Description: Enables or disables permission to use the following system commands:

Command	Description
ARPTable	Display or modify the MAX TNT ARP table.
BRIchannels	Display the status of all the BRI channels on the MAX TNT.
CADSLlines	Display the status of all ADSL CAP lines and channels.
Clr-History	Clear the fatal-error history log.
Connection	Display the connection-status window.
Dir	List profiles and profile types.
Dircode	Show the contents of the PCMCIA card code.
DNStab	Display the local DNS table.
Fatal-History	List the fatal-error history log.
Get	Display settings in a profile.
HDLC	Display HDLC-channel information.
IGMP	Display IGMP multicast statistics.
IPcache	Display IP-route caches.
IP-Pools	Display the status of the IP address pools configured in the IP-Global profile.
IProute	Add or delete IP routes.
Line	Display the line-status window.
List	List settings in the working profile.
Log	Display and control the event-log window.
Modem	Display modem information.
Netstat	Display the routing or interface tables.
New	Create a new profile.
OSPF	Display information related to OSPF routing.
Power	Display power-supply statistics.
Quiesce	Temporarily disable a modem or DS0 channel.

Command	Description
Read	Make the specified profile the working profile.
Refresh	Refresh the remote configuration.
Set	Specify a value.
Show	Show shelves, slots, or items.
Status	Display the system status or hide the status window.
SWANlines	Display the status of all SWAN lines and channels.
T1channels	Display T1-channel information.
Userstat	Display user session status.
Version	Display software-version information.
View	Change the contents of a status window.

Usage: Specify Yes or No. The default is No.

- Yes grants permission to use system commands.
- No denies permission to use system commands.

Example: `set allow-system=yes`

Location: User *name*

See Also: Allow-Code, Allow-Diagnostic, Allow-Password, Allow-Termserve, Allow-Update

Allow-Termserve

Description: Enables or disables permission to use the terminal server and its commands.

Usage: Specify Yes or No. The default is No.

- Yes grants permission to use the terminal server and its commands.
- No denies permission to use the terminal server and its commands.

Example: `set allow-termserve=yes`

Location: User *name*

See Also: Allow-Code, Allow-Diagnostic, Allow-Password, Allow-System, Allow-Update

Allow-Update

Description: Enables or disables permission to use the following update commands:

Command	Description
Date	Set the system date.
Delete	Delete the specified profile.
Load	Load code or saved configuration to flash.
Loadslave	Update slave-shelf code.
NVRAM	Clear the configuration and reboot the system.
Reset	Reboot the system.
Save	Save a profile for a future restore.
Write	Store the working profile and save changes.

Usage: Specify Yes or No. The default is No.

- Yes grants permission to use update commands.
- No denies permission to use update commands.

Example: `set allow-update=yes`

Location: User *name*

See Also: Allow-Code, Allow-Diagnostic, Allow-Password, Allow-System, Allow-Termserv

AMDM

Description: Specifies the action to take when the code image for an Analog Modem card is present in a Tar file.

Usage: Specify one of the following settings:

- Auto (the default) causes the system to load images for cards that are installed in the MAX TNT, and to skip images for cards that are not installed.
- Load causes the system to load the image, even if there is no card of that type installed.
- Skip causes the system to skip the image, even if there is a card of that type installed.

Dependencies: A card is considered present in the system if a Slot-Type profile exists for that card type. The system creates a Slot-Type profile when it first detects the presence of a card, and does not delete the profile unless the administrator uses the Slot -r command to permanently remove a card that is no longer installed in the system, or clears NVRAM. To ensure that the system does not load unnecessary images, use Slot -r to remove Slot-Type profiles for cards that are no longer installed in the system.

Location: Load-Select

See Also: 8E1, 8T1, CAPADSL, DMTADSL, DS3-ATM, Enet, Enet2, HDLC, HDLC2, IDSL, MDM56K, MDM-V34, SDSL, SDSL70D, SDSL70V, SWAN, T3, UDS3, UE1, Unknown-Cards, UT1

Analog-Encoding

Description: Specifies the encoding standard for digitized analog data. The MAX TNT uses the value you specify for all codecs on the MAX TNT.

Usage: Specify one of the following values:

- U-Law specifies U-Law encoding, the default for T1.
- A-Law specifies A-Law encoding, the default for E1.

Example: `set analog-encoding=u-law`

Location: System

See Also: E1, T1

Answer-N (N=1–2)

Description: Specifies the phone number to match when routing by incoming phone number.

Usage: Specify a phone number. The default is null. You may enter up to 18 characters, and you must limit your specification to the following characters:

1234567890 () [] ! z - * # |

Example: `set answer-1=555-1212`

Location: IDSL {shelf-N slot-N N} > Line-Interface

See Also: Enabled

Answer-Defaults

Description: A profile containing system defaults for incoming calls. The MAX TNT uses the values in this profile until a caller passes authentication and the MAX TNT retrieves a copy of the caller's profile. In addition, you can use the Answer-Defaults profile to supply defaults for profiles retrieved from remote authentication servers.

Usage: Use the Read and List commands to make Answer-Defaults the working profile and list its contents. For example:

```
admin> read answer
ANSWER-DEFAULTS read
```

```
admin> list
[in ANSWER-DEFAULTS]
use-answer-for-all-defaults=no
force-56kbps=no
profiles-required=yes
clid-auth-mode=ignore
ppp-answer={ yes any-ppp-auth yes 0 none 1524 no 600 600 }
mp-answer={ yes 1 2 }
mpp-answer={ yes quadratic transmit 0 0 15 5 10 70 }
fr-answer={ yes }
tcp-clear-answer={ yes no " " 256 20 }
ara-answer={ no }
v120-answer={ yes 256 }
ip-answer={ yes yes yes 1 }
session-info={ " " " " no 120 no-idle 120 0 }
framed-only=no
```

You can then use the Set command to modify the settings in the profile. To close the profile and save your changes:

```
admin> write
ANSWER-DEFAULTS written
```

See Also: ARA-Answer, CLID-Auth-Mode, Force-56Kbps, FR-Answer, Framed-Only, IP-Answer, MP-Answer, MPP-Answer, PPP-Answer, Profiles-Required, Session-Info, TCP-Clear-Answer, Use-Answer-For-All-Defaults, V120-Answer

Answer-Delay

Description: Specifies the number of milliseconds the MAX TNT waits before answering an incoming R2 call.

Usage: Specify a number from 100 to 3000. The default is 200. Change the value if the MAX TNT answers calls too quickly.

Example: `set answer-delay=500`

Location: E1 {shelf-*N* slot-*N* *N*} > Line-Interface

See Also: Line-Interface, Signaling-Mode

Answer-Originate

Description: Specifies whether the Connection profile enables incoming calls, outgoing calls, or both.

Usage: Specify one of the following values:

- **Ans-And-Orig** (the default) specifies that the MAX TNT can both initiate and receive calls over the connection defined in the profile.
- **Orig-Only** specifies that the profile can be used only for outgoing calls. The MAX TNT will not answer calls from the profile.
- **Ans-Only** specifies that the profile can be used only for incoming calls. The MAX TNT will not initiate calls from the profile.

Example: `set answer-originate=ans-and-orig`

Dependencies: Answer-Originate does not apply to nailed-up call types.

Location: Connection *station* > Telco-Options

See Also: Call-Type, Telco-Options

AppleTalk-Options

Description: A subprofile containing settings for AppleTalk connections.

Usage: With a Connection profile as the working profile, list the AppleTalk-Options subprofile. For example:

```
admin> list appletalk-options
[ in CONNECTION/tim:appletalk-options ]
atalk-routing-enabled=no
atalk-static-ZoneName=" "
atalk-static-NetStart=0
atalk-static-NetEnd=0
atalk-peer-mode=router-peer
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: Connection *station*

See Also: Atalk-Peer-Mode, Atalk-Routing-Enabled, Atalk-Static-NetEnd, Atalk-Static-Net-Start, Atalk-Static-ZoneName

Apply-To

Description: Specifies the direction in which Type-of-Service (TOS) is enabled.

Usage: Specify one of the following values:

- Input (the default) specifies that bits are set in packets received on the interface.
- Output specifies that bits are set in outgoing packets only.
- Both specifies that both incoming and outgoing packets are tagged.

Example: `set apply-to=both`

Dependencies: You must set Active=Yes in the TOS-Options subprofile for the Apply-To setting to apply.

Location: Connection *station* > IP-Options > TOS-Options

See Also: Active, Precedence, Type-of-Service

ARA-Answer

Description: A subprofile that lets you enable AppleTalk Remote Access (ARA) for incoming calls.

Usage: With Answer-Defaults as the working profile, list the ARA-Answer subprofile. For example:

```
admin> list ara-answer
[in ANSWER-DEFAULTS:ara-answer]
enabled=no
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: Answer-Defaults

See Also: Enabled

ARA-Enabled

Description: Enables or disables AppleTalk Remote Access (ARA) processing for the connection.

Usage: Specify Yes or No. The default is No.

- Yes enables ARA processing.
- No disables ARA processing.

Example: `set ara-enabled=yes`

Dependencies: For ARA-Enabled to apply, you must set Enabled=Yes in the ARA-Answer subprofile. You do not need to enable AppleTalk routing for ARA connections.

Location: Connection *station* > ARA-Options

See Also: Maximum-Connect-Time

ARA-Options

Description: A subprofile that enables you to configure AppleTalk Remote Access (ARA) connections.

Usage: With a Connection profile as the working profile, list the ARA-Options subprofile. For example:

```
admin> list ara-options
[in CONNECTION/tim:ara-options]
ara-enabled=no
maximum-connect-time=0
recv-password=" "
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: Connection *station*

See Also: ARA-Enabled, Maximum-Connect-Time, Recv-Password

Area

Description: Specifies the OSPF area the connection or interface belongs to.

Usage: Specify an area ID in dotted decimal notation. The default is 0.0.0.0, which represents the backbone network.

Example: `set area=0.0.0.1`

Location: Connection *station* > IP-Options > OSPF-Options,
IP-Interface { { shelf-*N* slot-*N* *N* } *N* } > OSPF

See Also: Area-Type, ASE-Tag, ASE-Type, IP-Options, OSPF, OSPF-ASE-Pref, OSPF-Options, OSPF-Pref, Third-Party

Area-Type

Description: Specifies the type of OSPF area the connection or interface belongs to. If your network is large, then the size of the database, the time required for route computation, and any related network traffic can all become excessive. You can partition an autonomous system (AS) into areas to provide hierarchical routing connected by a backbone. The backbone area is special and always has the area number 0.0.0.0. Other areas have area numbers that are unique within the AS.

Usage: Specify one of the following values:

- Normal (the default) specifies that the router maintains information about external routes.
- Stub specifies that all external routes are summarized by a default route. A stub area is similar to a regular area, except that the routers do not enter external routes in the area's databases. For an area that has only one exit point, you need not maintain information about external routes.
- NSSA specifies an OSPF NSSA.

Example: `set area-type=normal`

Dependencies: You must set Area-Type consistently on all OSPF routers within the area.

Location: Connection *station* > IP-Options > OSPF-Options,
IP-Interface { {shelf-*N* slot-*N* *N*} *N*} > OSPF

See Also: Area, ASE-Tag, ASE-Type, IP-Options, OSPF, OSPF-ASE-Pref, OSPF-Options, OSPF-Pref, Third-Party

AS-Boundary-Router

Description: Specifies whether the MAX TNT performs Autonomous System Boundary Router (ASBR) calculations.

ASBRs perform calculations related to external routes. Normally, when the MAX TNT imports external routes from RIP (for example, when it establishes a WAN link with a caller that does not support OSPF), it performs the ASBR calculations for those routes. However, you can use the AS-Boundary-Router setting to prevent the MAX TNT from performing ASBR calculations.

Usage: Specify Yes or No. The default is Yes.

- Yes specifies that the MAX TNT performs ASBR calculations.
- No specifies that the MAX TNT does not perform ASBR calculations.

Example: `set as-boundary=router=no`

Location: IP-Global > OSPF-Global

See Also: OSPF-Global

Ascend-Enabled

Description: Specifies whether a trap is generated to indicate a change of state in a host interface. All port connections are monitored in a state machine and reported via this trap.

Usage: Specify Yes or No. The default is Yes.

- Yes specifies that a trap is generated to indicate a change of state in a host interface.
- No specifies that a trap is not generated to indicate a change of state in a host interface.

Example: `set ascend-enabled=no`

Dependencies: If you set Ascend-Enabled=Yes, you must also set Port-Enabled=Yes.

Location: Trap *host-name*

See Also: Port-Enabled

ASE-Tag

Description: Specifies the OSPF ASE tag for the link. The tag is attached to each external route.

Usage: Specify a 32-bit hexadecimal number. The default is c0:00:00:00.

Example: `set ase-tag=c8000000`

Dependencies: The ASE-Tag setting is not used by the OSPF protocol itself. Border area routers can use it to filter a record.

Location: Connection *station* > IP-Options > OSPF-Options,
IP-Interface { {shelf-*N* slot-*N* *N*} *N*} > OSPF, IP-Route *name*

See Also: Area, Area-Type, ASE-Type, IP-Options, OSPF, OSPF-ASE-Pref, OSPF-Options, OSPF-Pref, Third-Party

ASE-Type

Description: Specifies the OSPF ASE type of the Link-State Advertisement (LSA).

Usage: Specify one of the following settings:

- Type-1 (the default) specifies a Type-1 external metric. This metric is expressed in the same units as the link-state metric.
- Type-2 specifies a Type-2 external metric. This metric is considered larger than any link-state path. Using a Type-2 external metric assumes that routing between autonomous systems is the major cost of routing a packet. A Type-2 metric eliminates the need for conversion of external costs to internal link-state metrics.

Example: `set ase-type=type-1`

Location: Connection *station* > IP-Options > OSPF-Options,
IP-Interface { {shelf-*N* slot-*N* *N*} *N*} > OSPF, IP-Route *name*

See Also: Area, Area-Type, ASE-Tag, IP-Options, OSPF, OSPF-ASE-Pref, OSPF-Options, OSPF-Pref, Third-Party

Assign-Address

Description: Enables or disables dynamic IP address assignment for incoming calls.

Usage: Specify Yes or No. The default is No.

- Yes enables the MAX TNT to assign dynamic IP addresses to incoming calls.
- No disables dynamic IP address assignment.

Example: `set assign-address=yes`

Dependencies: The MAX TNT must have at least one configured pool of IP addresses. You can configure the pool locally or in RADIUS.

Location: Answer-Defaults > IP-Answer

See Also: Assign-Count, Address-Pool, IP-Answer, Must-Accept-Address-Assign, Pool-Base-Address

Assign-Count

Description: Specifies the number of contiguous host addresses contained in each of up to 128 address pools. The defined pool of addresses is available for dynamic assignment to PPP software during negotiation of a connection.

Usage: For each pool, specify a number from 0 to 500. The default is 0 (zero).

Example: `set 3=254`

Dependencies: The pool's initial address must be specified by Pool-Base-Address. In a VRouter profile, the address pool is exclusive to one VRouter. If you do not specify an address pool in a VRouter profile, VRouters can share the address pools defined in the IP-Global profile.

Location: IP-Global, VRouter

See Also: Assign-Address, Must-Accept-Address-Assign, Pool-Base-Address, Pool-Summary, VRouter-IP-Address

Atalk-Default-Zone

Description: Specifies the zone assigned to an AppleTalk service on the interface if the service does not select a zone in which to reside.

Usage: Specify the name of an AppleTalk zone. You may enter up to 32 characters. The default is null.

Example: `set atalk-default-zone=Alameda`

Dependencies: If Atalk-Routing-Enabled=No, Atalk-Router=Atlk-Router-Off, or Atalk-Router=Atlk-Router-Non-Seed, Atalk-Default-Zone does not apply.

Location: Atalk-Interface {shelf-*N* slot-*N* *N*}

See Also: Atalk-Net-End, Atalk-Net-Start, Atalk-Router, Atalk-Routing-Enabled, Atalk-Zone-List, Hint-Net-Hi, Hint-Net-Lo, Hint-Net-Node, Hint-Zone, Interface-Address

Atalk-Dialin-Pool-End

Description: Specifies the end of the network range for an AppleTalk network.

A network range is a contiguous range of integers. Each network range must be unique. No two networks may use the same range, and no two network ranges may overlap. Each number in the range can be associated with up to 253 nodes, so the range determines how many clients can dial in.

Usage: Specify an integer from 1 to 65,199. The default is 200.

Example: `set atalk-dialin-pool-end=300`

Location: Atalk-Global

See Also: Atalk-Dialin-Pool-Start

Atalk-Dialin-Pool-Start

Description: Specifies the beginning of the network range for an AppleTalk network.

A network range is a contiguous range of integers. Each network range must be unique. No two networks may use the same range, and no two network ranges may overlap. Each number in the range can be associated with up to 253 nodes, so the range determines how many clients can dial in.

Usage: Specify an integer from 1 to 65,199. The default is 100.

Example: `set atalk-dialin-pool-start=250`

Location: Atalk-Global

See Also: Atalk-Dialin-Pool-End

Atalk-Global

Description: A profile that enables you to define a virtual AppleTalk network.

Usage: Use the Read and List commands to make Atalk-Global the working profile and list its contents. For example:

```
admin> read atalk-global
ATALK-GLOBAL read
admin> list
[in ATALK-GLOBAL]
atalk-dialin-pool-start=100
atalk-dialin-pool-end=200
```

You can then use the Set command to modify the settings in the profile. To close the profile and save your changes:

```
admin> write
ATALK-GLOBAL written
```

See Also: Atalk-Dialin-Pool-End, Atalk-Dialin-Pool-Start

Atalk-Interface

Description: A profile in which you enable AppleTalk routing and specify whether the MAX TNT operates as a seed router or a nonseed router on the interface. Only the built-in Ethernet interface on the shelf controller can be configured as an AppleTalk interface.

Usage: Use the Read and List commands to make Atalk-Interface the working profile and list its contents. For example:

```
admin> read atalk-interface { { 1 c 1 } 0 }
ATALK-INTERFACE/ { { shelf-1 controller 1 } 0 } read

admin> list
[in ATALK-INTERFACE/ { { shelf-1 controller 1 } 0 }]
interface-address*={ { shelf-1 controller 1 } 0 }
atalk-routing-enabled=yes
hint-net-lo=1001
hint-net-hi=1010
hint-net-node=0
hint-zone="SLC Engineering"
atalk-Router=atlk-router-seed
atalk-Net-Start=1001
atalk-Net-End=1010
atalk-Default-Zone="SLC Engineering"
atalk-Zone-List=[ "SLC Engineering" "SLC Test 1" "SLC Test "
```

You can then use the Set command to modify the settings in the profile. To close the profile and save your changes, execute the Write command. For example:

```
admin> write
ATALK-INTERFACE/ { { shelf-1 controller 1 } 0 } written
```

See Also: Atalk-Default-Zone, Atalk-Net-End, Atalk-Net-Start, Atalk-Router, Atalk-Routing-Enabled, Atalk-Zone-List, Hint-Net-Hi, Hint-Net-Lo, Hint-Net-Node, Hint-Zone, Interface-Address

Atalk-Net-End

Description: Specifies the end of the network range for an AppleTalk network.

A network range is a contiguous range of integers. Each network range must be unique. No two networks may use the same range, and no two network ranges may overlap. Each number in the range can be associated with up to 253 nodes, so the range determines how many clients can dial in.

Usage: Specify an integer from 1 to 65,199. The default is 0 (zero).

Example: `set atalk-net-end=300`

Dependencies: If Atalk-Routing-Enabled=No, Atalk-Router=Atlk-Router-Off, or Atalk-Router=Atlk-Router-Non-Seed, Atalk-Net-End does not apply.

Location: Atalk-Interface {shelf-*N* slot-*N* *N*}

See Also: Atalk-Default-Zone, Atalk-Net-Start, Atalk-Router, Atalk-Routing-Enabled, Atalk-Zone-List, Hint-Net-Hi, Hint-Net-Lo, Hint-Net-Node, Hint-Zone, Interface-Address

Atalk-Net-Start

Description: Specifies the beginning of the network range for an AppleTalk network.

A network range is a contiguous range of integers. Each network range must be unique. No two networks may use the same range, and no two network ranges may overlap. Each number in the range can be associated with up to 253 nodes, so the range determines how many clients can dial in.

Usage: Specify an integer from 1 to 65,199. The default is 0 (zero).

Example: `set atalk-net-start=150`

Dependencies: If Atalk-Routing-Enabled=No, Atalk-Router=Atlk-Router-Off, or Atalk-Router=Atlk-Router-Non-Seed, Atalk-Net-Start does not apply.

Location: Atalk-Interface {shelf-*N* slot-*N N*}

See Also: Atalk-Default-Zone, Atalk-Net-End, Atalk-Router, Atalk-Routing-Enabled, Atalk-Zone-List, Hint-Net-Hi, Hint-Net-Lo, Hint-Net-Node, Hint-Zone, Interface-Address

Atalk-Peer-Mode

Description: Specifies whether the remote site is a dial-in AppleTalk Remote Access (ARA) client or another AppleTalk router.

Usage: Specify one of the following values:

- Router-Peer (the default) specifies a routed connection. The MAX TNT acquires the remote site's network information during session negotiation.
- Dialin-Peer specifies that the MAX TNT negotiates a routing session with the dial-in ARA client by assigning the client a node address on the virtual AppleTalk network defined in the Atalk-Global profile. The client must accept the network number the MAX TNT assigns.

Example: `set atalk-peer-mode=dialin-peer`

Dependencies: If Atalk-Routing-Enabled=No in the Atalk-Interface profile or AppleTalk-Options subprofile of the Connection profile, or if Enabled=No in the ARA-Answer subprofile, Atalk-Peer-Mode has no effect.

Location: Connection *station* > AppleTalk-Options

See Also: Atalk-Routing-Enabled, Atalk-Static-NetEnd, Atalk-Static-NetStart, Atalk-Static-ZoneName

Atalk-Router

Description: Specifies whether the AppleTalk router is a seed router or a nonseed router.

Usage: Specify one of the following values:

- Atlk-Router-Off (the default) specifies that no AppleTalk router exists.
- Atlk-Router-Seed specifies a seed router. A seed router has its own hard-coded network and zone configuration.
- Atlk-Router-Non-Seed specifies that the router is not a seed router. A nonseed router acquires its network and zone configuration from another router on the network.

Example: `set atalk-router=atlk-router-seed`

Dependencies: Consider the following:

- If there are other AppleTalk routers on the LAN interface and you set Atalk-Router=Atlk-Router-Seed, you must specify the network range (using Atalk-Net-Start and Atalk-Net-End), zone list (using Atalk-Zone-List), and default zone (using Atalk-Default-Zone). The information you specify must be completely consistent with the corresponding specifications for other AppleTalk routers on the interface.
- If you set Atalk-Router=Atlk-Router-Non-Seed, a seed router must be available at startup time, or the MAX TNT cannot come up in AppleTalk routing mode. If the MAX TNT comes up without AppleTalk routing enabled because no seed routers were available at startup, you must reset the system after a seed router is up.
- To optimize the process by which a nonseed router acquires a configuration across the network after a system reset or power cycle, you can set the Hint-Net-Hi, Hint-Net-Lo, Hint-Net-Node, and Hint-Zone values to known good information.
- If Atalk-Routing-Enabled=No, Atalk-Router does not apply.

Location: Atalk-Interface {shelf-*N* slot-*N* *N*}

See Also: Atalk-Default-Zone, Atalk-Net-End, Atalk-Net-Start, Atalk-Routing-Enabled, Atalk-Zone-List, Hint-Net-Hi, Hint-Net-Lo, Hint-Net-Node, Hint-Zone, Interface-Address

Atalk-Routing-Enabled

Description: Specifies whether AppleTalk routing is enabled:

- In the Atalk-Interface profile, Atalk-Routing-Enabled specifies whether AppleTalk routing is enabled on the shelf-controller Ethernet interface.
- In the Connection profile, Atalk-Routing-Enabled specifies whether AppleTalk routing is enabled for the connection.

Usage: Specify Yes or No. The default is No.

- Yes enables AppleTalk routing.
- No disables AppleTalk routing.

Example: `set atalk-routing-enabled=yes`

Dependencies: Consider the following:

- If Atalk-Routing-Enabled=No in the Atalk-Interface profile, or if Enabled=No in the ARA-Answer subprofile, Atalk-Routing-Enabled has no effect in a Connection profile.
- AppleTalk routing must be enabled at the system level to enable intrashelf AppleTalk routing.
- AppleTalk routing must be enabled for incoming PPP connections, but it is not required for ARA client connections.
- You must reset the MAX TNT in order to begin AppleTalk routing.

Location: Atalk-Interface {shelf-*N* slot-*N* *N*}, Connection *station* > AppleTalk-Options

See Also: AppleTalk-Options, Atalk-Default-Zone, Atalk-Net-End, Atalk-Net-Start, Atalk-Peer-Mode, Atalk-Router, Atalk-Static-NetEnd, Atalk-Static-NetStart, Atalk-Static-ZoneName, Atalk-Zone-List, Hint-Net-Hi, Hint-Net-Lo, Hint-Net-Node, Hint-Zone, Interface-Address

Atalk-Static-NetEnd

Description: Specifies the end of the network range for packets that the MAX TNT routes to a remote site for a dialout AppleTalk connection.

A network range is a contiguous range of integers. Each network range must be unique. No two networks may use the same range, and no two network ranges may overlap. Each number in the range can be associated with up to 253 nodes, so the range determines how many clients can dial in.

Usage: Specify an integer from 1 to 65,199. The default is 0 (zero).

Example: `set atalk-static-netend=300`

Dependencies: If Atalk-Routing-Enabled=No in the Atalk-Interface profile or AppleTalk-Options subprofile, Atalk-Static-NetEnd does not apply.

Location: Connection *station* > AppleTalk-Options

See Also: Atalk-Peer-Mode, Atalk-Routing-Enabled, Atalk-Static-NetStart, Atalk-Static-ZoneName

Atalk-Static-NetStart

Description: Specifies the beginning of the network range for packets that the MAX TNT routes to a remote site for a dialout AppleTalk connection. A network range is a contiguous range of integers. Each network range must be unique. No two networks may use the same range, and no two network ranges may overlap. Each number in the range can be associated with up to 253 nodes, so the range determines how many clients can dial in.

Usage: Specify an integer from 1 to 65,199. The default is 0 (zero).

Example: `set atalk-static-netstart=200`

Dependencies: If Atalk-Routing-Enabled=No in the Atalk-Interface profile or AppleTalk-Options subprofile, Atalk-Static-NetStart does not apply.

Location: Connection *station* > AppleTalk-Options

See Also: Atalk-Peer-Mode, Atalk-Routing-Enabled, Atalk-Static-NetEnd, Atalk-Static-ZoneName

Atalk-Static-ZoneName

Description: Specifies the zone name the MAX TNT uses when routing packets to a remote site for a dialout AppleTalk connection.

Usage: Specify a zone name of up to 32 characters. The default is null.

Example: `set atalk-static-zonename=myzone`

Dependencies: If Atalk-Routing-Enabled=No in the Atalk-Interface profile or AppleTalk-Options subprofile, Atalk-Static-ZoneName does not apply.

Location: Connection *station* > AppleTalk-Options

See Also: Atalk-Peer-Mode, Atalk-Routing-Enabled, Atalk-Static-NetEnd, Atalk-Static-NetStart

Atalk-Zone-List

Description: Specifies a list of AppleTalk zone names for the local network.

Usage: Specify a list of up to 32 space-delimited zone names. Each name may consist of up to 32 characters, including embedded spaces. Enclose each name in quotation marks. The characters must be in the standard printing character set, and must not include an asterisk (*). Enclose the list in brackets, with a space after the opening bracket and before the closing bracket. The default is null.

Example: `set atalk-zone-list=["Alameda" "WC" "LA"]`

Dependencies: If Atalk-Routing-Enabled=No, Atalk-Router=Atlk-Router-Off, or Atalk-Router=Atlk-Router-Non-Seed, Atalk-Zone-List does not apply.

Location: Atalk-Interface {shelf-*N* slot-*N* *N*}

See Also: Atalk-Default-Zone, Atalk-Net-End, Atalk-Net-Start, Atalk-Router, Atalk-Routing-Enabled, Hint-Net-Hi, Hint-Net-Lo, Hint-Net-Node, Hint-Zone, Interface-Address

AT-Answer-String

Description: Specifies extra AT commands in the answer string of the system's modem configuration:

Usage: Specify one or more valid AT commands, up to a limit of 36 characters. The default is null.

Example: The following example sets AT-Answer-String to S37=11:

```
admin> read term
TERMINAL-SERVER read
admin> set modem AT-answer-string=S37=11
admin> write
TERMINAL-SERVER written
```

The new AT-Answer-String setting causes the following string to be sent to the modem:

ATS37=11A

When the modem receives this string, it forces a V.32bis 14400 connection.

Dependencies: Consider the following:

- Do not begin the string with the characters *AT*. These two characters are automatically added to the beginning of the string, before the MAX TNT sends the commands to the modem.
- Do not include an A (answer) or a D (dial) command anywhere in the string. An A command is automatically added to the end of the string. A D command in the answer string causes the call to fail.
- The answer string is the last of four strings sent to the modem when the MAX TNT answers a call. Therefore, the commands you enter can overwrite settings specified elsewhere. For example, if Max-Baud-Rate sets the maximum baud rate and the AT-Answer-String setting specifies a +MS command with a different baud rate, the AT-Answer-String value overwrites the Max-Baud-Rate value.
- Be very careful when entering AT commands for AT-Answer-String. The system does not prevent you from entering incorrect strings.

Location: Terminal-Server > Modem-Configuration

See Also: 7-Even, Cell-Level, Cell-Mode-First, Max-Baud-Rate, Modem-Transmit-Level, V42/MNP

ATMP

Description: A profile that enables you to configure an Ascend Tunnel Management Protocol (ATMP) tunnel.

Usage: Use the Read and List commands to make ATMP the working profile and list its contents. For example:

```
admin> read atmp
ATMP read

admin> list
[in ATMP]
agent-mode=tunnel-disabled
agent-type=gateway-home-agent
udp-port=5150
password=" "
retry-timeout=3
retry-limit=10
mtu-limit=0
force-fragmentation=no
```

You can then use the Set command to modify the settings in the profile. To close the profile and save your changes:

```
admin> write
ATMP written
```

Dependencies: You must reset the MAX TNT in order to begin ATMP operations.

See Also: Agent-Mode, Agent-Type, Force-Fragmentation, MTU-Limit, Password, Retry-Limit, Retry-Timeout, UDP-Port

ATMP-HA-RIP

Description: Specifies whether to use RIP-v2 for the Home Agent's Gateway-Profile in an Ascend Tunnel Management Protocol (ATMP) configuration.

Usage: Specify one of the following values:

- RIP-Off (the default) specifies that the profile does not use RIP.
- RIP-Send-v2 specifies that the Home Agent constructs a RIP-v2 Response(2) packet at every RIP interval and sends it to the Home Network from all tunnels using the Gateway-Profile. For each tunnel, the Response packet contains the Mobile-Client IP address, the subnet mask, the next hop set to 0.0.0.0, and the metric set to 1. There is no support for RIP-v2 authentication or route tag.

Example: `set atmp-ha-rip=rip-send-v2`

Dependencies: The Home Network router should not send RIP updates, because the Home Agent does not inspect them. The RIP updates would be forwarded to the Mobile Clients instead.

Location: Connection *station* > Tunnel-Options

See Also: Home-Network-Name, Max-Tunnels, Password, Primary-Tunnel-Server, Profile-Type, Secondary-Tunnel-Server, Tunneling-Protocol, UDP-Port

Auth-Attribute-Type

Description: Specifies the attribute(s) used for session matching.

Usage: Specify one of the following values:

- Rad-Serv-Attr-Any (the default) specifies that the first RADIUS attribute is used for session matching.
- Rad-Serv-Attr-Key specifies that the session key is used for session matching.
- Rad-Serv-Attr-All specifies that all attributes must match for session matching.

Example: `set auth-attribute-type=rad-serv-attr-any`

Dependencies: If Rad-Serv-Enable is set to No, Auth-Attribute-Type does not apply.

Location: External-Auth > Rad-Auth-Server

See Also: Rad-Auth-Server, Rad-Serv-Enable

Auth-Boot-Host

Note: This setting is for a customer-specific application outside of the United States. It is not intended for general use.

Description: Specifies the IP address of the primary RADIUS server to which ZGR answer-number requests, subaddress requests, and external-configuration requests are sent. External-configuration requests include requests for banner configurations, IP address pools, Frame Relay link configurations, dialout profiles, answer numbers, ZGR answer numbers, and dialout routes.

Usage: Specify an IP address in dotted decimal notation. The default is 0.0.0.0.

Example: `set auth-boot-host=200.54.6.78`

Location: External-Auth > Rad-Auth-Client

See Also: Auth-Boot-Host-2, Auth-Boot-Port

Auth-Boot-Host-2

Note: This setting is for a customer-specific application outside of the United States. It is not intended for general use.

Description: Specifies the IP address of the secondary RADIUS server to which ZGR answer-number requests, subaddress requests, and external-configuration requests are sent. External-configuration requests include requests for banner configurations, IP address pools, Frame Relay link configurations, dialout profiles, answer numbers, ZGR answer numbers, and dialout routes.

Usage: Specify an IP address in dotted decimal notation. The default is 0.0.0.0.

Example: `set auth-boot-host-2=200.54.6.79`

Location: External-Auth > Rad-Auth-Client

See Also: Auth-Boot-Host, Auth-Boot-Port

Auth-Boot-Port

Note: This setting is for a customer-specific application outside of the United States. It is not intended for general use.

Description: Specifies the port on the RADIUS server to which ZGR answer-number requests, subaddress requests, and external-configuration requests are sent. External-configuration requests include requests for banner configurations, IP address pools, Frame Relay link configurations, dialout profiles, answer numbers, ZGR answer numbers, and dialout routes.

Usage: Specify a port number. The default is 0 (zero).

Example: `set auth-boot-port=200`

Location: External-Auth > Rad-Auth-Client

See Also: Auth-Boot-Host, Auth-Boot-Host-2

Auth-Client N (N=1–9)

Description: Specifies up to nine IP addresses of RADIUS clients permitted to issue RADIUS commands for session termination and filter changes.

Usage: Specify an IP address in dotted decimal notation. The address 255.255.255.255 indicates that any client can issue RADIUS commands. (Currently, a maximum of nine clients is supported.) The default is 0.0.0.0, which indicates that no client can issue RADIUS commands.

Example: `set auth-client 1=10.2.3.4`

Dependencies: If Rad-Serv-Enable is set to No, Auth-Client does not apply. In addition, if you do not use Auth-Netmask to supply a subnet mask, the system supplies a default subnet mask based on the address class.

Location: External-Auth > Rad-Auth-Server

See Also: Auth-Key, Auth-Netmask N (N=1–9), Auth-Port, Auth-Server-N (N=1–3), Auth-Src-Port, Auth-Timeout, Rad-Auth-Server, Rad-Serv-Enable

Authentication-Enabled

Description: Specifies whether the system generates a trap when an authentication failure occurs.

Usage: Specify Yes or No. The default is Yes.

- Yes specifies that the system generates a trap when an authentication failure occurs.
- No specifies that the system does not generate a trap when an authentication failure occurs.

Example: `set authentication-enabled=no`

Location: Trap *host-name*

See Also: Auth-Type

Authen-Type

Description: Specifies the type of authentication to use for validating OSPF packet exchanges.

Usage: Specify one of the following values:

- None specifies that routing exchanges are not authenticated. The 64-bit authentication field in the OSPF header may contain data, but it is not examined on packet reception. When you use this setting, the MAX TNT performs a checksum on the entire contents of each OSPF packet (other than the 64-bit authentication field) to ensure against data corruption.
- Simple (the default) requires that you specify a 64-bit value for Auth-Key. Each packet sent on a particular network must have the configured value in its OSPF header's 64-bit authentication field. Simple authentication is designed to prevent configuration errors from affecting the OSPF routing database. It is not designed for firewall protection.
- MD5 specifies that the MAX TNT validates OSPF packet exchanges using MD5 encryption and an authentication key ID that you specify by means of the Key-ID setting. Packets must contain the specified value in the OSPF header Key ID field to be allowed into the router's OSPF area.

Example: `set authen-type=simple`

Location: Connection *station* > IP-Options > OSPF-Options,
IP-Interface { {shelf-*N* slot-*N* *N*} *N*} > OSPF

See Also: Auth-Key, IP-Options, Key-ID, OSPF, OSPF-Options

Auth-Frm-Adr-Start

Description: Specifies whether to send a second RADIUS Accounting Start record when the RADIUS Framed-Address value is assigned.

Usage: Specify Yes or No. The default is No.

- Yes enables the MAX TNT to send a second RADIUS Accounting Start record when the RADIUS Framed-Address value is assigned.
- No prevents the MAX TNT from sending a second RADIUS Accounting Start record.

Example: `set auth-frm-adr-start=yes`

Location: External-Auth > Rad-Auth-Client

See Also: Rad-Auth-Client

Auth-ID-Fail-Return-Busy

Description: Specifies whether the MAX TNT returns User Busy (decimal 17) or Normal Call Clearing (decimal 16) as the Cause Element in ISDN Disconnect packets when CLID or called-number authentication fails.

Usage: Specify Yes or No. The default is No.

- Yes specifies that the MAX TNT returns User Busy (decimal 17) when CLID or called-number authentication fails.
- No specifies that the MAX TNT returns Normal Call Clearing (decimal 16) when CLID or called-number authentication fails.

Example: `set auth-id-fail-return-busy=yes`

Location: External-Auth > Rad-Auth-Client

See Also: Auth-ID-Timeout-Return-Busy

Auth-ID-Timeout-Return-Busy

Description: Specifies whether the MAX TNT returns User Busy (decimal 17) or Normal Call Clearing (decimal 16) as the Cause Element in ISDN Disconnect packets when CLID or called-number authentication times out.

Usage: Specify Yes or No. The default is No.

- Yes specifies that the MAX TNT returns User Busy (decimal 17) when CLID or called-number authentication times out.
- No specifies that the MAX TNT returns Normal Call Clearing (decimal 16) when CLID or called-number authentication times out.

Example: `set auth-id-timeout-return-busy=yes`

Location: External-Auth > Rad-Auth-Client

See Also: Auth-ID-Fail-Return-Busy

Auth-Keep-User-Name

Description: Specifies User-Name attribute handling.

Usage: Specify one of the following settings:

- Change-Name (the default) indicates that the name provided by the server is used for the status display and for RADIUS accounting purposes.
- Keep-Name specifies that the MAX TNT does not use the User-Name returned by the server. If a name has been specified (that is, if CLID or DNIS authentication is not used), the system uses that name. Otherwise, it uses the name sent to the server for authentication.
- Keep-Realm-Name specifies that if the user name sent to the server for authentication is in a realm (for example, if it contains one of the characters @\/%), the system behaves as if Auth-Keep-User-Name were set to Keep-Name. Otherwise, the system behaves as if Change-Name were specified.

Example: `set auth-keep-user-name=keep-name`

Dependencies: A user authenticated by CLID or DNIS will appear to have the CLID or DNIS number as his or her user name. If this condition is a problem, set Auth-Keep-User-Name to Keep-Realm-Name.

Location: External-Auth > Rad-Auth-Client

See Also: Auth-Realm-Delimiters

Auth-Key

Description: Specifies an authentication key that appears in OSPF and external authentication configurations:

- For OSPF configurations, the value of Auth-Key is a 64-bit clear password inserted into the OSPF packet header. It is used by OSPF routers to allow packets into or exclude packets from an area.
- For RADIUS, the value is a string of up to 22 characters. Because the MAX TNT can act both as a client to external servers and as a server responding to client commands, you can configure Auth-Key in both the Rad-Auth-Client and Rad-Auth-Server subprofiles.
- If the MAX TNT is acting as a TACACS or TACACS+ client, Auth-Key is a password that the MAX TNT supplies to the server.

Usage: Specify a string of up to nine characters (for OSPF), or up to 22 characters (for RADIUS). The default for OSPF is `ascend0`. The default for RADIUS is `null`. For security purposes, the string is hidden when Auth-Key is displayed. If you specify a null value, the system logs the following warning:

warning: auth-key is empty (bad for security)

Example: `set auth-key=Ascend`

Dependencies: For OSPF routing, Auth-Key does not apply if Authen-Type is None.

Location: Connection *station* > IP-Options > OSPF-Options,
External-Auth > Rad-Auth-Client, External-Auth > Rad-Auth-Server,
External-Auth > Tac-Auth-Client, External-Auth > TacPlus-Auth-Client,
IP-Interface { {shelf-*N* slot-*N* *N*} *N*} > OSPF

See Also: Authen-Type, Auth-Netmask *N* (*N*=1–9), Auth-Port, Auth-Server-*N* (*N*=1–3), Auth-Src-Port, Auth-Timeout, IP-Options, OSPF, OSPF-Options, Rad-Auth-Client, Rad-Auth-Server, Tac-Auth-Client, TacPlus-Auth-Client

Auth-Netmask N (N=1–9)

Description: Specifies up to nine subnet masks. The MAX TNT matches each mask to the IP addresses of a RADIUS client permitted to issue RADIUS commands for session termination and filter changes.

Usage: Specify a subnet mask in dotted decimal notation. The default is 0.0.0.0.

Example: `set auth-netmask 1=255.255.255.248`

Dependencies: If Rad-Serv-Enable is set to No, or if no Auth-Client setting specifies an IP address, Auth-Netmask does not apply.

Location: External-Auth > Rad-Auth-Server

See Also: Auth-Client N (N=1–9), Auth-Key, Auth-Port, Auth-Server-N (N=1–3), Auth-Src-Port, Auth-Timeout, Rad-Auth-Server, Rad-Serv-Enable

Auth-Pool

Description: Enables or disables dynamic address assignment for RADIUS-authenticated IP-routing connections.

Usage: Specify Yes or No. The default is No.

- Yes enables the MAX TNT to assign dynamic IP addresses to RADIUS-authenticated IP-routing connections.
- No prevents dynamic address assignment for RADIUS-authenticated IP-routing connections.

Example: `set auth-pool=no`

Dependencies: The RADIUS server must be configured with at least one pool of addresses for assignment, and must be running the Ascend daemon. If Auth-Type does not specify RADIUS or RADIUS/Logout, Auth-Pool does not apply.

Location: External-Auth > Rad-Auth-Client

See Also: Auth-Type, Rad-Auth-Client

Auth-Port

Description: Specifies the UDP port to use for communication with the external authentication server. It must match the port specified for use in the server's configuration.

Usage: Specify a UDP port number. Make sure that the number you specify matches the value that the external authentication daemon uses on the server.

- If the MAX TNT is acting as a RADIUS, TACACS, or TACACS+ client, specify the UDP destination port to use for authentication. The default UDP port used by the RADIUS daemon is specified in the `/etc/services` file (UNIX). The default for TACACS or TACACS+ is 49.
- If the MAX TNT is acting as a RADIUS server, specify the UDP port to use for the accepting client requests. The default is 1700.

Example: `set auth-port=1565`

Location: External-Auth > Rad-Auth-Client, External-Auth > Rad-Auth-Server, External-Auth > Tac-Auth-Client, External-Auth > TacPlus-Auth-Client

See Also: Auth-Client N (N=1–9), Auth-Server-N (N=1–3), Rad-Auth-Client, Rad-Auth-Server, Tac-Auth-Client, TacPlus-Auth-Client

Auth-RADIUS-Compat

Description: Enables or disables Vendor-Specific Attribute (VSA) compatibility mode when the MAX TNT is using RADIUS for authentication and authorization purposes.

Usage: Specify one of the following settings:

- Old-Ascend (the default) specifies that the MAX TNT does not send the Vendor-Specific attribute to the RADIUS server and does not recognize the Vendor-Specific attribute if the server sends it.

In this mode, the system uses the Ascend algorithm of encrypting and decrypting the User-Password attribute, which differs from the RFC-defined algorithm. The Ascend algorithm does not null fill the password string to a multiple of 16 bytes before encryption, and, when the password is longer than 16 bytes, the Ascend algorithm does not use the previous segment's hash to calculate the next intermediate value .

- Vendor-Specific specifies that the MAX TNT uses the Vendor-Specific attribute to encapsulate Ascend vendor attributes, and uses the RFC-defined User-Password encryption algorithm as well.

Example: `set auth-radius-compat=vendor-specific`

Location: External-Auth > Rad-Auth-Client

See Also: Acct-RADIUS-Compat, Call-Log-RADIUS-Compat, RADIUS-Server-Compat

Auth-Realm-Delimiters

Description: Specifies the characters that delimit a realm from the user name.

Usage: Specify up to seven characters in any order. The default is @\/%. If you do not specify any characters, the system behaves as though Auth-Keep-User-Name=Change-Name.

Example: `set auth-realm-delimiters="%"`

Dependencies: The Auth-Realm-Delimiters setting does not apply unless Auth-Keep-User-Name=Keep-Realm-Name.

Location: External-Auth > Rad-Auth-Client

See Also: Auth-Keep-User-Name

Auth-Reset-Time

Description: Specifies the authentication-timeout period in seconds, after which the MAX TNT returns to the primary RADIUS authentication server. (The Auth-Server-*N* setting specifies the primary RADIUS authentication server.)

Usage: Specify the number of seconds. The default is 0 (zero), which specifies that the MAX TNT does not return to using the primary RADIUS authentication server.

Example: `set auth-reset-time=60`

Dependencies: For Auth-Reset-Time to apply, you must specify at least one value for Auth-Server-*N*.

Location: External-Auth > Rad-Auth-Client

See Also: Auth-Server-*N* (*N*=1–3), Auth-Timeout, Rad-Auth-Client

Auth-Retries

Description: Specifies the number of times the MAX TNT attempts to connect to a backup TACACS+ server.

Usage: Specify a number. The default is 0 (zero), which specifies that the MAX TNT does not attempt to connect to a backup TACACS+ server.

Example: `set auth-retries=2`

Location: External-Auth > TacPlus-Auth-Client

See Also: Auth-Key, Auth-Port, Auth-Server-*N* (*N*=1–3), Auth-Src-Port, Auth-Timeout-Time, TacPlus-Auth-Client

Auth-Rsp-Required

Description: Determines how the MAX TNT responds if an authentication request times out after a call has been CLID authenticated.

Usage: Specify Yes or No. The default is Yes.

- Yes specifies that the MAX TNT drops calls that have passed CLID authentication.
- No specifies that the MAX TNT allows CLID-authenticated connections even if there is no response from the external server.

Example: `set auth-rsp-required=yes`

Dependencies: For Auth-Rsp-Required to apply, CLID authentication must be in use, and CLID-Auth-Mode must be set to Required.

Location: External-Auth > Rad-Auth-Client

See Also: CLID, CLID-Auth-Mode, Rad-Auth-Client

Auth-Send67

Description: Specifies whether the MAX TNT requires RADIUS attributes 6 (User-Service) and 7 (Framed-Protocol) in a RADIUS user profile when a user wants to initiate PPP.

Usage: Specify Yes or No. The default is No.

- Yes specifies that if a user wants to initiate PPP, his or her RADIUS profile must include attributes 6 and 7.
- No specifies that attributes 6 and 7 need not be present in a RADIUS user profile for a user to initiate PPP.

Example: `set auth-send67=yes`

Location: External-Auth > Rad-Auth-Client

See Also: Rad-Auth-Client

Auth-Server-N (N=1–3)

Description: Specifies the IP address of an external authentication server.

The MAX TNT first tries to connect to server #1. If it receives no response, it tries to connect to server #2. If it still receives no response, it tries server #3. If the MAX TNT connects to a server other than server #1, it continues to use that server until it fails to service requests, even if the first server has come back online.

Usage: Specify an IP address in dotted decimal notation, separating the optional subnet mask value from the address with a forward slash character. The addresses must all point to servers of the same type, as specified by the Auth-Type setting. The default is 0.0.0.0, which indicates that no authentication server exists.

Example: `set auth-server-1=10.2.3.4/24`

Location: External-Auth > Rad-Auth-Client, External-Auth > Tac-Auth-Client, External-Auth > TacPlus-Auth-Client

See Also: Auth-Key, Auth-Port, Auth-Src-Port, Auth-Timeout, Auth-Type, Rad-Auth-Client, Tac-Auth-Client, TacPlus-Auth-Client

Auth-Sess-Interval

Description: Specifies the number of seconds between RADIUS authentication reports concerning the number of open sessions.

Usage: Specify a number of seconds from 0 to 65535. The default is 0 (zero), which turns off regular RADIUS open-session reports.

Example: `set auth-sess-interval=15`

Dependencies: Auth-Sess-Interval applies only if Auth-Type=RADIUS or RADIUS/Logout.

Location: External-Auth > Rad-Auth-Client

See Also: Auth-Type, Rad-Auth-Client

Auth-Session-Key

Description: Enables or disables session-key assignments.

Usage: Specify Yes or No. The default is No.

- Yes enables session-key assignments.
- No disables session-key assignments.

Example: `set auth-session-key=no`

Dependencies: If Rad-Serv-Enable=No, Auth-Session-Key does not apply.

Location: External-Auth > Rad-Auth-Server

See Also: Rad-Serv-Enable

Auth-Src-Port

Description: Identifies the UDP source port to use for external authentication.

Usage: Specify a value from 0 to 65535. The default is 0 (zero), which specifies that the source port is selected from the nonprivileged port range (1024–2000).

Dependencies: The MAX TNT uses the source port number to demultiplex the RADIUS reply packets to the appropriate slot cards. A separate source port is used for each slot card and shelf controller. On the MAX TNT, the actual source port is the value of Auth-Src-Port plus the slot number, where the shelf controller has a slot number of 0 (zero). So, if Auth-Src-Port is set to 1000, packets originating from the shelf controller have a source port value of 1000, while packets originating from slot 6 have a source port value of 1006.

Location: External-Auth > Rad-Auth-Client, External-Auth > Tac-Auth-Client, External-Auth > TacPlus-Auth-Client

See Also: ,Auth-Key, Auth-Port, Auth-Server-N (N=1–3), Auth-Timeout, Auth-Type, Rad-Auth-Client, Rad-Auth-Server, Tac-Auth-Client, TacPlus-Auth-Client

Auth-TS-Secure

Description: Acts as a flag to prevent access to the terminal-server interface when the RADIUS Login-Host value is not specified.

Usage: Specify Yes or No. The default is Yes.

- Yes specifies that the terminal-server must be secure. If the Login-Host is not specified, the MAX TNT drops the call.
- No specifies that if the Login-Host is not specified, the MAX TNT allows the dial-in connection to access the terminal-server interface.

Example: `set auth-ts-secure=yes`

Location: External-Auth > Rad-Auth-Client

See Also: Rad-Auth-Client

Auth-Timeout

Description: Sets the number of seconds between attempts to reach an external authentication server. The MAX TNT waits the specified number of seconds for a response to a RADIUS or TACACS authentication request. If it does not receive a response within that time, it times out and sends the authentication request to the next authentication server (for example, Auth-Server-2).

Usage: Specify an integer from 1 to 10. The default is 1.

Example: `set auth-timeout=5`

Dependencies: If Auth-Type=None, Auth-Timeout does not apply.

Location: External-Auth > Rad-Auth-Client, External-Auth > Tac-Auth-Client

See Also: Auth-Key, Auth-Server-N (N=1–3), Auth-Type, Rad-Auth-Client, Tac-Auth-Client

Auth-Timeout-Time

Description: Specifies the number of seconds that must elapse before the MAX TNT attempts to connect to a backup TACACS+ server.

Usage: Specify the number of seconds. The default is 0 (zero), which specifies that the MAX TNT does not attempt to use a backup TACACS+ server.

Example: `set auth-timeout-time=60`

Location: External-Auth > TacPlus-Auth-Client

See Also: Auth-Key, Auth-Port, Auth-Retries, Auth-Server-N (N=1–3), Auth-Src-Port

Auth-Type

Description: Specifies the type of external authentication server to access for incoming connections.

Usage: Specify one of the following values:

- None (the default) disables the use of an authentication server.
- TACACS specifies that the MAX TNT accesses a TACACS server. TACACS supports PAP, but not CHAP authentication.
- TACACSPlus specifies that the MAX TNT accesses a TACACS+ server. TACACS+ supports PAP, but not CHAP authentication. It also provides more extensive accounting statistics and a higher degree of control than does TACACS authentication.
- RADIUS specifies that the MAX TNT accesses a RADIUS server. In a RADIUS query, the MAX TNT provides a user ID and password to the server. If the validation succeeds, the server sends back a complete profile. The profile specifies routing, packet filtering, destination-specific static routes, and usage restrictions for the user. RADIUS supports PAP and CHAP, and terminal-server validation.
- RADIUS/Logout is identical to RADIUS, except that when you select RADIUS/Logout, the MAX TNT sends a request to the RADIUS server to initiate logout when the session ends.

Example: `set auth-type=radius`

Dependencies: If Auth-Type is set to a value other than None, you must specify at least one authentication server address.

Location: External-Auth

See Also: Auth-Server-N (N=1–3)

Auto-Logout

Description: Specifies whether or not to log out the current User profile and go back to default privileges upon loss of Data Transmit Ready (DTR) from the serial port.

Usage: Specify Yes or No. The default is No.

- Yes specifies that the MAX TNT automatically logs out the current User profile if DTR is lost on the serial port.
- No specifies that the current User profile remains logged in.

Example: `set auto-logout=yes`

Location: Serial {shelf-N slot-N N}

See Also: Idle-Logout, User

Auto-Telnet

Description: Causes the terminal server to interpret an unknown command as the name of a host for a Telnet session.

Usage: Specify Yes or No. The default is No.

- Yes specifies that a user can omit the keyword `Telnet` and specify a hostname in order to initiate a Telnet session.
- No specifies that if a user types only a hostname at the terminal-server prompt, the MAX TNT rejects it as an unknown command.

Example: `set auto-telnet=yes`

Dependencies: When terminal services are disabled, Auto-Telnet does not apply.

Location: Terminal-Server > Terminal-Mode-Configuration > Telnet-Options

See Also: Telnet, Telnet-Options, Terminal-Mode-Configuration

Auto-Update

Description: Specifies whether the local DNS table is automatically updated by regular successful DNS queries.

Usage: Specify Yes or No. The default is No.

- Yes specifies that when a regular DNS query succeeds, the system makes a lookup on that hostname to the local table. If there is an entry for the hostname, the system replaces the entry's IP address(es) with the query response. Therefore, you can use the Auto-Update setting to build the local table.
- No specifies that the contents of the local DNS table are not affected by successful DNS queries.

Example: `set auto-update=yes`

Dependencies: The DNS-List-Attempt and DNS-List-Size settings affect how the table is updated when Auto-Update=Yes.

Location: IP-Global > DNS-Local-Table

See Also: DNS-List-Attempt, DNS-List-Size, Enabled, Table-Config N

Aux-Send-Password

Description: Specifies the password the MAX TNT sends when it adds channels to an MP+ call that uses PAP-Token-CHAP authentication. The MAX TNT obtains authentication of the first channel of the MP+ call from the user's hand-held security card.

Usage: Enter the same password specified by Ascend-Receive-Secret in the RADIUS user profile for the MAX TNT.

Example: `set aux-send-password=Ascend`

Dependencies: For Aux-Send-Password to apply, the call must use MP+.

Location: Connection *station* > MPP-Options

See Also: MPP-Options, Send-Password

B

Back-To-Back

Description: Indicates whether the E1 line is connected back-to-back with another Ascend unit.

Usage: Specify True or False. False is the default.

- True specifies that the E1 line is connected back-to-back with another Ascend unit.
- False specifies that the E1 line is not connected back-to-back with another Ascend unit.

Example: `set back-to-back=false`

Location: E1 {shelf-*N* slot-*N* *N*}

See Also: E1

Backup

Description: Specifies the name of a backup Connection profile for a nailed-up connection. The backup connection can be a switched PPP link or a Frame Relay Permanent Virtual Connection (PVC). The profile serves as a backup if the remote device goes out of service. It is not intended to provide alternative lines for getting to a single destination.

When the system detects that the primary interface is unavailable, it puts the primary interface in a Backup Active state. *It does not remove the routes to the primary interface.* It then diverts traffic from the primary to the backup interface. When the system detects that the primary interface is available again, it diverts traffic back to the primary interface. If the backup interface is a switched connection, the MAX TNT then brings it down.

Usage: Specify the name of a Connection profile. You may enter up to 32 characters. The default is null.

Example: `set backup=newyork`

Dependencies: Consider the following:

- One of the side effects of the datalink-layer backup interface is that, when a nailed-up interface specifies a backup interface, the routes to the nailed-up interface never go down.
- Nested backups are not supported. (The profile for a backup interface cannot specify another backup interface.)
- The profile for a backup interface does not inherit attributes (such as filters or firewalls) from the profile for the primary nailed-up connection.

Location: Connection *station* > Session-Options

See Also: Call-Type, Session-Options

Bandwidth-Monitor-Direction

Description: Specifies the direction in which the MAX TNT monitors link utilization for multilink PPP calls.

Usage: Specify one of the following values:

- None (the default) turns off bandwidth monitoring.
- Transmit specifies that the MAX TNT monitors link utilization on transmitted packets only.
- Transmit-And-Receive specifies that the MAX TNT monitors link utilization in both directions.

Example: `set bandwidth-monitor-direction=none`

Location: Answer-Defaults > MPP-Answer, Connection *station*

See Also: Add-Persistence, Base-Channel-Count, Decrement-Channel-Count, Dynamic-Algorithm, Increment-Channel-Count, Maximum-Channels, Minimum-Channels, MPP-Answer, MPP-Options, Seconds-History, Sub-Persistence, Target-Utilization

Banner

Description: Specifies the terminal-server login banner.

Usage: Specify the banner text. You may enter up to 84 alphanumeric characters. The default is `** Ascend Terminal Server **`.

Example: `set banner="Welcome to the MAX TNT"`

Dependencies: If terminal services are disabled, Banner does not apply.

Location: Terminal-Server > Terminal-Mode-Configuration

See Also: Host-N (N=1–4), Remote-Configuration, Terminal-Mode-Configuration, Text-N (N=1–4)

Banner N

Description: Specifies the menu banners for terminal-server logins in menu mode, downloaded from RADIUS.

Usage: This setting is read only.

Example: `banner [1]="Welcome to the Terminal Server"`

Location: Ext-Tsrv

See Also: Hosts-Info N, Init-Banner N

Base

Description: A read-only profile that displays the software versions in use, the enabled features, network interfaces, and other system information.

Usage: Use the Get command to display the Base profile values. For example:

```
admin> get base
[ in BASE ]
shelf-number=1
software-version=1
software-revision=0
software-level=E
d-channel-enabled=yes
aim-enabled=yes
switched-enabled=yes
multi-rate-enabled=yes
frame-relay-enabled=yes
maxlink-client-enabled=enabled
data-call-enabled=yes
r2-signaling-enabled=no
serial-number=6201734
countries-enabled=511
modem-dialout-enabled=yes
firewalls-enabled=no
network-management-enabled=no
advanced-agent-enabled=no
phs-support=no
selecttools-enabled=no
tnt-adsl-enabled=no
tnt-sdsl-enabled=no
tnt-idsl-enabled=no
hardware-level=0
```

See Also: Advanced-Agent-Enabled, AIM-Enabled, Countries-Enabled, Data-Call-Enabled, D-Channel-Enabled, Firewalls-Enabled, Frame-Relay-Enabled, Hardware-Level, MAXLink-Client-Enabled, Modem-Dialout-Enabled, Multi-Rate-Enabled, Network-Management-Enabled, PHS-Support, R2-Signaling-Enabled, Selecttools-Enabled, Serial-Number, Shelf-Number, Software-Level, Software-Revision, Software-Version, Switched-Enabled, TNT-ADSL-Enabled, TNT-IDSL-Enabled, TNT-SDSL-Enabled

Base-Channel-Count

Description: Specifies the number of channels the MAX TNT uses when setting up a connection. If the session uses MP (RFC 1990), Base-Channel-Count specifies the total number of channels to use for the call. If the session uses MP+, Base-Channel-Count specifies the initial number of channels to use for the call.

Usage: Specify a number from 0 (zero) to the value of Maximum-Channels. The default is 1.

Example: `set base-channel-count=3`

Dependencies: If the Base-Channel-Count value exceeds the Maximum-Channels value or falls below the Minimum-Channels value, an error results.

Location: Connection *station* > MP-Options

See Also: Maximum-Channels, Minimum-Channels, MP-Options

BER-Receive

Description: Indicates whether the bit-error rate threshold has been reached.

Usage: The BER-Receive setting is read only. True indicates that the threshold has been reached. False indicates that the threshold has not been reached.

Example: `ber-receive=true`

Location: T1-Stat {shelf-*N* slot-*N* *N*}

See Also: AIS-Receive, Yellow-Receive

BERT-Enable

Description: Enables or disables the Bit-Error Rate Test (BERT). In order to check the data integrity of the connection, the BERT counts data errors that occur on each channel. If the two ends of the RADSL connection are physically connected, the BERT is run between the two units. If the two ends are not connected, the BERT is run within the card itself. Note that both ends of the connection must enable the BERT.

Note: During a BERT, normal data transmission is interrupted.

Usage: Specify Yes or No. The default is No.

- Yes enables the BERT.
- No disables the BERT.

Example: `set bert-enable=yes`

Dependencies: Consider the following:

- The BERT-Enable setting is not saved to the MAX TNT unit's permanent memory. If you reset the card or the unit, the setting reverts to its default.
- The BERT-Timer setting determines the duration of the BERT.

Location: ADSL-CAP-Stat {shelf-*N* slot-*N* *N*} > Physical-Statistic
SDSL-Stat {shelf-*N* slot-*N* *N*} > Physical-Statistic

See Also: BERT-Error-Counter, BERT-Operation-State, BERT-Timer

BERT-Error-Counter

Description: Indicates the number of errors received during the Bit-Error Rate Test (BERT).

Usage: BERT-Error-Counter is read only.

Dependencies: You must set BERT-Enable=Yes for BERT-Error-Counter to apply.

Location: ADSL-CAP-Stat {shelf-*N* slot-*N* *N*} > Physical-Statistic
SDSL-Stat {shelf-*N* slot-*N* *N*} > Physical-Statistic

See Also: BERT-Enable, BERT-Operation-State, BERT-Timer

BERT-Operation-State

Description: Indicates the state of the Bit-Error Rate Test (BERT).

Usage: The BERT-Operation-State setting is read only. It can have one of the following values:

- Waiting-For-511-Sync indicates that the node is waiting for the other node to start its BERT.
- Local-Loop-Active indicates that the interface is in local analog loopback and is running the BERT. During an analog loopback, the card itself is looped back. No remote device is involved.
- Active indicates that the node is connected to the remote node and the BERT is running.
- Stopped indicates that the BERT is not enabled.
- Loop-Back-Setup indicates that the interface is being placed into analog loopback. During an analog loopback, the card itself is looped back. No remote device is involved.
- Start-Up indicates the BERT is starting up.
- Data-Overflow indicates that during the test, a sudden surge of errors were received, causing the RADSL buffers to overflow. This situation could occur if the remote end stopped the test.
- 511-Sync-Loss indicates the BERT went out of sync.

Dependencies: If the two ends or the connection are not connected, the BERT-Operation-State setting does not apply. In this case, you must set BERT-Enabled to No to end the BERT.

Location: ADSL-CAP-Stat {shelf-*N* slot-*N* *N*} > Physical-Statistic,
SDSL-Stat {shelf-*N* slot-*N* *N*} > Physical-Statistic

See Also: BERT-Enable, BERT-Error-Counter, BERT-Timer

BERT-Timer

Description: Specifies the duration of the Bit-Error Rate Test (BERT).

Usage: Specify one of the following values:

- 1 minute
- 2 minutes (the default)
- 3 minutes
- 4 minutes
- 5 minutes
- 10 minutes
- 15 minutes
- 20 minutes
- 30 minutes

Example: `set bert-timer=1 minute`

Dependencies: Consider the following:

- If the two ends or the connection are not connected, the BERT-Timer does not apply. In this case, you must set BERT-Enabled to No to end the BERT.
- The BERT-Timer setting is not saved to the MAX TNT unit's permanent memory. If you reset the card or the unit, the setting reverts to its default.

Location: ADSL-CAP-Stat {shelf-*N* slot-*N* *N*} > Physical-Statistic
SDSL-Stat {shelf-*N* slot-*N* *N*} > Physical-Statistic

See Also: BERT-Enable, BERT-Error-Counter, BERT-Operation-State

Billing-Number

Description: Specifies a telephone number that the MAX TNT uses for billing purposes.

Usage: Specify the billing number provided by the carrier. You may enter up to 24 characters. The default is null.

Example: `set billing-number=510-555-1972`

Dependencies: Consider the following:

- For nailed-up Frame-Relay datalink connections, Billing-Number does not apply.
- The MAX TNT uses the value that you specify as a billing suffix or as the calling party number. For T1 robbed-bit lines, the MAX TNT uses the Billing-Number as a suffix appended to each phone number it dials for the call. For T1 PRI lines, the MAX TNT uses the Billing-Number value rather than the phone number ID to identify itself to the answering party.
- If you specify a value for Billing-Number, there is no guarantee that the phone company will send it to the answering device.

Location: Connection *station* > Telco-Options, Frame-Relay *fr-name*

See Also: CalledNumber, CLID, CLID-Auth-Mode, Telco-Options

BOOTP-Enabled

Description: Specifies whether the MAX TNT uses BOOTP to get settings and check for a new software load.

Usage: Specify Yes or No. The default is No.

- Yes enables the MAX TNT to use BOOTP.
- No disables the use of BOOTP.

Example: `set bootp-enabled=yes`

Location: IP-Global

See Also: SLIP-BOOTP

BOOTP-Relay

Description: A subprofile containing options for configuring the BOOTP Relay feature.

Usage: With IP-Global as the working profile, list the BOOTP-Relay subprofile. For example:

```
admin> list bootp-relay
[in IP-GLOBAL:bootp-relay]
active = no
bootp-servers = [ 0.0.0.0 0.0.0.0 ]
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: IP-Global

See Also: Active, BOOTP-Servers

BOOTP-Servers

Description: Specifies the IP address of up to two BOOTP servers. If you specify more than one BOOTP server, the MAX TNT uses the first server until it becomes unavailable. When the MAX TNT starts using the second BOOTP server, it continues to use that server until it becomes unavailable, at which time it switches to using the first server again.

Usage: For each BOOTP-Server setting, specify an IP address in dotted decimal notation. The default is 0.0.0.0.

Example: `set 1=12.34.56.78`

Location: IP-Global > BOOTP-Relay

See Also: Active, BOOTP-Relay

Boot-SR-Version

Description: Displays the version of the current tntsrbin file (the boot-loader).

Usage: The Boot-SR-Version value is read only. The boot-loader updates the value of this setting with its version at every system reset.

Example: `boot-sr-version=2.1`

Location: System

See Also: System

Bottom-Status

Description: Specifies the default contents of the bottom-right portion of the status window.

Usage: Specify one of the following values:

- General-Info causes the MAX TNT to display general information and statistics for the system.
- Log-Window (the default) causes the MAX TNT to display saved system-event log entries.
- Line-Status causes the MAX TNT to display the status of the system telephony interfaces.

Example: `set bottom-status=general-info`

Location: User *name*

See Also: Default-Status, Left-Status, Top-Status

Buffer-Chars

Description: Specifies whether the MAX TNT buffers input characters in a terminal-server session, or processes each character as you enter it.

Usage: Specify Yes or No. The default is Yes.

- Yes specifies that the MAX TNT buffers input characters for 100 ms.
- No specifies that the MAX TNT processes each input character as you enter it.

Example: `set buffer-chars=yes`

Dependencies: If terminal services are disabled, Buffer-Chars does not apply.

Location: Terminal-Server > Terminal-Mode-Configuration

See Also: Terminal-Mode-Configuration

C

Callback

Description: Enables or disables callback security. When you enable callback security, the MAX TNT hangs up after receiving a call and calls back the calling device by using the Dial-Number value.

Usage: Specify Yes or No. The default is No.

- Yes causes the MAX TNT to hang up on a dial-in connection and dial back the device specified in the profile.
- No specifies that the MAX TNT does not hang up and call back, but authenticates the connection as usual.

Example: `set callback=yes`

Dependencies: If you are using nailed-up call types, or if Answer-Originate does not enable outgoing calls, Callback does not apply. In addition, you must specify a value for Dial-Number.

Location: Connection *station* > Telco-Options

See Also: Answer-Originate, Call-Type, Dial-Number

Call-By-Call

Description: In a T1 profile, specifies the Call-By-Call signaling value to set for routing calls from a local device through the MAX TNT to the network. In a Connection profile, specifies the Call-By-Call signaling value for PRI lines.

Usage: Specify a number from 0 to 65535, corresponding to the type of Call-By-Call service in use. The default is 0 (zero), which disables Call-By-Call service.

The following Call-By-Call services are available if the service provider is AT&T:

- 0—Disable Call-By-Call service
- 1—SDN, including GSDN
- 2—Megacom 800
- 3—Megacom
- 6—ACCUNET Switched Digital Services
- 7—Long Distance Service, including AT&T World Connect
- 8—International 800—I800
- 16—AT&T MultiQuest

The following VPN and GVPN Call-By-Call services are available if the service provider is Sprint:

- 0—Reserved
- 1—Private
- 2—Inwatts
- 3—Outwatts
- 4—FX
- 5—Tie Trunk

The following Call-By-Call services are available if the service provider is MCI:

- 1—VNET/Vision
- 2—800
- 3—PRISM1, PRISM II, WATS
- 4—900
- 5—DAL

Example: `set call-by-call=7`

Location: Connection *station* > Telco-Options, T1 {shelf-*N* slot-*N* *N*} > Line-Interface

See Also: Call-By-Call-ID, Line-Interface, Telco-Options

Call-By-Call-ID

Description: Specifies the PRI service to use when placing a call.

Usage: Specify a number from 0 to 65535, corresponding to the type of Call-By-Call-ID service in use. The default is 0, which disables Call-By-Call-ID service.

The following Call-By-Call-ID services are available if the service provider is AT&T:

- 0—Disable Call-By-Call-ID service
- 1—SDN, including GSDN
- 2—Megacom 800
- 3—Megacom
- 6—ACCUNET Switched Digital Services
- 7—Long Distance Service, including AT&T World Connect
- 8—International 800—I800
- 16—AT&T MultiQuest

The following VPN and GVPN Call-By-Call-ID services are available if the service provider is Sprint:

- 0—Reserved
- 1—Private
- 2—Inwatts
- 3—Outwatts
- 4—FX
- 5—Tie Trunk

The following Call-By-Call-ID services are available if the service provider is MCI:

- 1—VNET/Vision
- 2—800
- 3—PRISM1, PRISM II, WATS
- 4—900
- 5—DAL

Example: `set call-by-call-id=7`

Location: Frame-Relay *fr-name*

See Also: Call-By-Call

Called-Number-Type

Description: Specifies the type of phone number entered in the Connection profile or Frame-Relay profile. When the MAX TNT dials an outgoing call on a T1 PRI line, the carrier uses the value of Called-Number-Type in a Connection profile to interpret the dialed phone number.

Usage: Specify one of the following values:

- Unknown specifies that the phone number is of an unknown type.
- International specifies phone numbers outside the U.S.
- National (the default) specifies phone numbers within the U.S.
- Local specifies phone numbers within your Centrex group.
- Abbrev specifies add-on numbers only.
- Network-Specific specifies that the dialed network interprets the phone number. This setting uses TypeOfNumber=3 in the called party's Information Element.

Example: `set called-number-type=international`

Dependencies: Called-Number-Type does not apply to nailed-up connections.

Location: Connection *station*, Frame-Relay *fr-name*

See Also: Dial-Number, Trunk-Group

CalledNumber

Description: For called-number authentication, specifies the number the remote end called to establish the connection. In many cases, the number will be the same as the Dial-Number, but without a trunk group or dial prefix.

Usage: Specify the called number. The default is null.

Example: `set callednumber=5551212`

Location: Connection *station*

See Also: CLID-Auth-Mode

Caller-ID

Description: Specifies whether the MAX TNT requests the Calling Line ID (CLID) from the switch. This setting applies only when Signaling-Mode=E1-Chinese-Signaling, E1-Argentina-Signaling, E1-Philippine-Signaling, E1-Brazil-Signaling, E1-Malaysia-Signaling, or E1-Indian-Signaling, which require that you set Caller-ID=Get-Caller-ID for CLID authentication to work.

Usage: Specify one of the following values:

- No-Caller-ID (the default) specifies that the MAX TNT does not request the CLID from the switch.
- Get-Caller-ID specifies that the MAX TNT requests the CLID from the switch.

Example: `set caller-id=get-caller-id`

Location: E1 {shelf-*N* slot-*N* *N*} > Line-Interface

See Also: CLID, CLID-Auth-Mode, Line-Interface

Call-Filter

Description: Specifies the name of a call filter.

The MAX TNT uses a call filter to determine whether or not a packet should cause the unit to reset the idle timer or place a call. If you apply both a call filter and data filter to a connection, the MAX TNT applies the call filter after applying the data filter. Only those packets that the data filter forwards can reach the call filter.

Usage: Specify the filter name. The default is null, which specifies that the MAX TNT does not apply a call filter.

Example: `set call-filter=ignore-bcast`

Dependencies: If all channels of a link are nailed up, or if the Filter-Name setting does not specify a call filter, Call-Filter does not apply.

Location: Answer-Defaults > Session-Info, Connection *station* > Session-Options

See Also: Data-Filter, Filter, Filter-Name, Filter-Persistence, Idle-Timer, Session-Info, Session-Options

Call-Info

Description: Specifies whether, at the time an authenticated call ends, the MAX TNT reports to Syslog the following information about the call:

- Station name
- Calling phone number
- Called phone number
- Encapsulation protocol
- Data rate (in bits per second)
- Progress code or disconnect reason
- Number of seconds before authentication
- Number of bytes or packets received during authentication
- Number of bytes or packets sent during authentication
- Length of session (in seconds)
- Number of bytes or packets received during the session
- Number of bytes or packets sent during the session

A one-line Syslog message contains information about the terminated call. The information also appears in the connection status window, and is logged as a message at level INFO. For example:

```
"Conn=( "c jones-p50" 5106785291->? PPP 56000 60/185) \  
Auth=(3 347/12 332/13) \  
Sess=(1 643/18 644/19), Terminated"
```

If some of the information is not available, that field is displayed as either a question-mark (for strings) or a zero (for numerals).

Usage: To specify that the MAX TNT reports the information to Syslog, specify End-Of-Call. To specify that the MAX TNT does not report the information, specify None (the default).

Dependencies: Use Call-Info only for diagnosing session problems. The reports to Syslog rely on the UDP protocol, which does not guarantee delivery. Therefore, you should not use Call-Info for billing purposes.

Location: Log

See Also: Facility, Host, Port, Save-Level, Save-Number, Syslog-Enabled

Call-Log-Enable

Description: Enables or disables call logging.

Usage: Specify Yes or No. No is the default.

- Yes enables call logging.
- No disables call logging.

Example: `set call-log-enable=yes`

Dependencies: If you set Call-Log-Enable=Yes, you must specify the IP address of at least one call-log host for the Call-Log-Host-*N* setting.

Location: Call-Logging

See Also: Call-Log-Host-*N*, Call-Log-ID-Base, Call-Log-Key, Call-Log-Limit-Retry, Call-Log-Port, Call-Log-Reset-Time, Call-Log-Stop-Only, Call-Log-Timeout

Call-Logging

Description: A profile that enables you to configure the MAX TNT to communicate with one or more call-log hosts.

Call logging is a RADIUS-accounting based feature for logging call information from the MAX TNT. Its main purpose is to duplicate accounting information for sites that wish to keep accounting records separate from call-logging details used to manage resources or troubleshoot call problems.

Once you have configured call logging, the MAX TNT sends Start Session, Stop Session, and Failure-to-Start Session packets to a call-log host. A call-log host is a local host that supports the RADIUS accounting protocol and is configured properly to communicate with the MAX TNT (for example, a RADIUS accounting server or a host running NavisAccess). The call-log information is sent independently of RADIUS accounting records. If both call logging and RADIUS accounting are in use, the information is sent in parallel.

Usage: Use the Read and List commands to make Call-Logging the working profile and list its contents. For example:

```
admin> read call-logging
CALL-LOGGING read
admin> list
[in CALL-LOGGING]
call-log-enable=no
call-log-host-1=0.0.0.0
call-log-host-2=0.0.0.0
call-log-host-3=0.0.0.0
call-log-port=0
call-log-key=" "
call-log-timeout=0
call-log-id-base=acct-base-10
call-log-reset-time=0
call-log-stop-only=yes
call-log-limit-retry=0
```

You can then use the Set command to modify the settings in the profile. To close the profile and save your changes:

```
admin> write  
CALL-LOGGING written
```

See Also: Call-Log-Enable, Call-Log-Host-N, Call-Log-ID-Base, Call-Log-Key, Call-Log-Limit-Retry, Call-Log-Port, Call-Log-Reset-Time, Call-Log-Stop-Only, Call-Log-Timeout

Call-Log-Host-N

Description: Specifies the IP address of a call-log host.

The MAX TNT first tries to connect to host #1. If it receives no response, it tries to connect to host #2. If it still receives no response, it tries host #3. If the MAX TNT connects to a host other than host #1, it continues to use that host until it fails to service requests, even if the first host has come back online.

Usage: Specify an IP address in dotted decimal notation. The default is 0.0.0.0.

Example: `set call-log-host-1=10.1.2.3`

Dependencies: If Call-Log-Enable=No, Call-Log-Host-N does not apply.

Location: Call-Logging

See Also: Call-Log-Enable, Call-Log-ID-Base, Call-Log-Key, Call-Log-Limit-Retry, Call-Log-Port, Call-Log-Reset-Time, Call-Log-Stop-Only, Call-Log-Timeout

Call-Log-ID-Base

Description: Specifies whether the MAX TNT presents a session ID to the call-log host in base 10 or base 16.

Usage: Specify one of the following values:

- Acct-Base-10 (the default) specifies a decimal base.
- Acct-Base-16 specifies a hexadecimal base.

Example: `set call-log-id-base=acct-base-16`

Dependencies: Consider the following:

- If Call-Log-Enable=No, Call-Log-ID-Base does not apply.
- Changing the value of Call-Log-ID-Base while call-logging sessions are active results in inconsistent reporting between the Start and Stop records.

Location: Call-Logging

See Also: Call-Log-Enable, Call-Log-Host-N, Call-Log-Key, Call-Log-Limit-Retry, Call-Log-Port, Call-Log-Reset-Time, Call-Log-Stop-Only, Call-Log-Timeout

Call-Log-Key

Description: Specifies a shared secret that enables the call-logging host to recognize data from the MAX TNT. A shared secret acts as a password between the MAX TNT and the call-log host.

Usage: Specify the text of the shared secret. The value you specify must match the value configured on the call-log-host. The default is null.

Example: `set call-log-key=Ascend`

Dependencies: If Call-Log-Enable=No, Call-Log-Key does not apply.

Location: Call-Logging

See Also: Call-Log-Enable, Call-Log-Host-N, Call-Log-ID-Base, Call-Log-Limit-Retry, Call-Log-Port, Call-Log-Reset-Time, Call-Log-Stop-Only, Call-Log-Timeout

Call-Log-Limit-Retry

Description: Specifies the maximum number of retries for call-logging packets.

When the MAX TNT is configured for call logging, it sends Start and Stop packets to the call-log host in order to record connections. If the host does not acknowledge a packet within the number of seconds you specify for Call-Log-Timeout, the MAX TNT tries again, resending the packet until the host responds, or dropping the packet if the queue of packets to be resent is full. You can limit the number of retries by setting a maximum.

Usage: To set the maximum number of retries for Start and Stop packets, set Call-Log-Limit-Retry to a value greater than 0 (zero). A value of 0 (the default) indicates an unlimited number of retries.

Example: `set call-log-limit-retry=10`

Dependencies: The MAX TNT always makes at least one attempt. For example, if you set the number of retries to 10, the MAX TNT makes 11 attempts: the original attempt plus 10 retries.

Location: Call-Logging

See Also: Call-Log-Enable, Call-Log-Host-N, Call-Log-ID-Base, Call-Log-Key, Call-Log-Port, Call-Log-Reset-Time, Call-Log-Stop-Only, Call-Log-Timeout

Call-Log-Port

Description: Specifies the UDP destination port to use for call-logging requests.

Usage: Specify a UDP port number from 1 to 32767. The value must match the port number configured on the call-log host. The default of 0 (zero) indicates any UDP port.

Example: `set call-log-port=1500`

Dependencies: If Call-Log-Enable=No, Call-Log-Port does not apply.

Location: Call-Logging

See Also: Call-Log-Enable, Call-Log-Host-N, Call-Log-ID-Base, Call-Log-Key, Call-Log-Limit-Retry, Call-Log-Reset-Time, Call-Log-Stop-Only, Call-Log-Timeout

Call-Log-RADIUS-Compat

Description: Enables or disables Vendor-Specific Attribute (VSA) compatibility mode when the MAX TNT is using RADIUS for call-logging to NavisAccess.

Usage: Specify one of the following settings:

- Old-Ascend (the default) specifies that the MAX TNT does not send the Vendor-Specific attribute to the RADIUS server and does not recognize the Vendor-Specific attribute if the server sends it. In this mode, the system uses the Ascend algorithm of encrypting and decrypting the User-Password attribute, which differs from the RFC-defined algorithm. The Ascend algorithm does not null fill the password string to a multiple of 16 bytes before encryption, and, when the password is longer than 16 bytes, the Ascend algorithm does not use the previous segment's hash to calculate the next intermediate value .
- Vendor-Specific specifies that the MAX TNT uses the Vendor-Specific attribute to encapsulate Ascend vendor attributes, and uses the RFC-defined User-Password encryption algorithm as well.

Example: `set call-log-radius-compat=vendor-specific`

Location: Call-Logging

See Also: Acct-RADIUS-Compat, Auth-RADIUS-Compat, RADIUS-Server-Compat

Call-Log-Reset-Time

Description: Specifies the number of seconds that must elapse before the MAX TNT returns to using the primary call-log host (Call-Log-Host-1).

Usage: Specify the number of seconds. The default is 0 (zero), which specifies that the MAX TNT does not return to using the primary call-log host.

Example: `set call-log-reset-time=60`

Dependencies: For Call-Log-Reset-Time to apply, you must set Call-Log-Enable=Yes and specify at least one value for Call-Log-Host-N.

Location: Call-Logging

See Also: Call-Log-Enable, Call-Log-Host-N, Call-Log-ID-Base, Call-Log-Key, Call-Log-Limit-Retry, Call-Log-Port, Call-Log-Stop-Only, Call-Log-Timeout

Call-Log-Stop-Only

Description: Specifies whether the MAX TNT should send a Stop packet that does not contain a user name. (At times, the MAX TNT can send a Stop packet to the call-log host without having sent a Start packet. Such a Stop packet has no user name.)

Usage: Specify Yes or No. Yes is the default.

- Yes specifies that the MAX TNT should send a Stop packet even if it does not contain a user name.
- No specifies that the MAX TNT should not send a Stop packet that does not contain a user name.

Example: `set call-log-stop-only=no`

Location: Call-Logging

See Also: Call-Log-Enable, Call-Log-Host-N, Call-Log-ID-Base, Call-Log-Key, Call-Log-Limit-Retry, Call-Log-Port, Call-Log-Reset-Time, Call-Log-Timeout

Call-Log-Timeout

Description: Specifies the amount of time (in seconds) that the MAX TNT waits for a response to a call-logging request.

If it does not receive a response within the specified time, the MAX TNT sends the request to the next host specified by Call-Log-Host-N. If all call-logging hosts are busy, the MAX TNT stores the request and tries again at a later time. It can queue up to 154 requests.

Usage: Specify an integer from 1 to 10. The default is 0 (zero), which disables the timer.

Example: `set call-log-timeout=5`

Dependencies: If Call-Log-Enable=No, Call-Log-Timeout does not apply.

Location: Call-Logging

See Also: Call-Log-Enable, Call-Log-Host-N, Call-Log-ID-Base, Call-Log-Key, Call-Log-Limit-Retry, Call-Log-Port, Call-Log-Reset-Time, Call-Log-Stop-Only

Call-Route

Description: A profile that the MAX TNT uses to control the routing of incoming and outgoing calls. Every possible destination within a MAX TNT system has one or more profiles of this type.

Usage: Use the Read and List commands to make Call-Route the working profile and list its contents. For example:

```
admin> read call-route { { {1 9 33} 0} 0}
CALL-ROUTE/{ { { shelf-1 slot-9 33 } 0 } 0 } read

admin> list
[in CALL-ROUTE/{ { { shelf-1 slot-9 33 } 0 } 0 }]
index*={ { { shelf-1 slot-9 33 } 0 } 0 }
trunk-group=0
phone-number=" "
preferred-source={ { shelf-1 slot-13 0 } 0 }
call-route-type=any-call-type
```

You can then use the Set command to modify the settings in the profile. To close the profile and save your changes:

```
admin> write
CALL-ROUTE/{ { { shelf-1 slot-9 33 } 0 } 0 } written
```

See Also: Call-Route-Type, Index, Phone-Number, Preferred-Source, Trunk-Group

Call-Route-Info

Description: A deprecated setting that specifies a device to which the MAX TNT should route calls received on a particular channel.

As with the call routing method used by Ascend products older than the MAX TNT, Call-Route-Info indicates “route any call received on this channel to the specified device.” This value is a mirror-image of the Preferred-Source setting in a Call-Route profile, which indicates “route any call received on the specified T1 channel to me (the index address).”

The preferred method of call routing is to use the Call-Route profile. However, although Call-Route-Info is deprecated, any nondefault setting you specify for it takes precedence over a Preferred-Source specification in a Call-Route profile.

Usage: Specify a device address within the MAX TNT. The default indicates any device and passes the responsibility for call routing to Call-Route profiles. Ascend recommends that you accept the default.

Example: `set call-route-info={ 1 6 48 }`

Location: E1 {shelf-*N* slot-*N* *N*} > Line-Interface > Channel-Config *N*,
SWAN {shelf-*N* slot-*N* *N*} > Line-Config,
T1 {shelf-*N* slot-*N* *N*} > Line-Interface > Channel-Config *N*

See Also: Call-Route, Channel-Config, Line-Config, Preferred-Source

Call-Route-Type

Description: Specifies the type of call that the MAX TNT can route to a host device.

Usage: Specify one of the following values:

- Any-Call-Type specifies that the MAX TNT can route any type of call to a host device.
- Voice-Call-Type specifies that the MAX TNT can route voice bearer calls, not including 3.1 Khz audio, to a host device.
- Digital-Call-Type specifies that the MAX TNT can route general digital calls, including 3.1 Khz audio bearer channel calls, to a host device. As far as the MAX TNT is concerned, 3.1 Khz audio calls are voice-bearer. The MAX TNT routes them to a modem, not an HDLC controller.
- Trunk-Call-Type (trunk calls) specifies that the MAX TNT routes calls to a trunk device.

Example: `set call-route-type=any-call-type`

Location: Call-Route { { {shelf-N slot-N N} N} N}

See Also: Call-Route, Index, Phone-Number, Preferred-Source, Trunk-Group

Call-Routing-Sort-Method

Description: Specifies whether to use the old slot-first call-routing sort method or the new item-first sort method for analog calls.

When the system resets, the MAX TNT creates the call-routing database by sorting the list of all installed devices. During active use, the MAX TNT resorts the list on the basis of system activity, but the initial sort order determines the initial order in which the MAX TNT uses host cards. In previous software releases, the order in which the MAX TNT sorted device addresses caused all channels of a host card to be grouped together, forcing a single card to be completely full before the MAX TNT started using another card.

The old sort-order default processed the components of device addresses in the following order:

shelf slot item logical-item

The current sort-order default provides load balancing across cards by ordering device-address components in the following manner:

item shelf slot logical-item

This sort order causes the channels of different cards to be interspersed, resulting in load balancing across all cards, even after a system reset.

Usage: Specify one of the following values:

- Item-First (the default) specifies that the MAX TNT sorts by item number, then shelf, and then slot number. This setting tends to distribute incoming calls evenly across multiple host cards.
- Slot-First specifies that the MAX TNT sorts by shelf and slot number, and then by item number. This setting tends to concentrate incoming calls on one host card at a time.

Example: `set call-routing-sort-method=slot-first`

Location: System

See Also: Call-Route, Call-Route-Info, Call-Route-Type, Digital-Call-Routing-Sort-Method

Call-Type

Description: Specifies nailed-up-channel usage for a connection.

Usage: Specify one of the following values:

- Off (the default) specifies that the connection does not use any nailed-up channels.
- FT1 specifies that the connection uses only nailed-up channels.
- FT1-MPP specifies that the MAX TNT might augment nailed-up channels with switched channels for increased bandwidth during an MP+ call.
- FT1-BO specifies that a nailed-up connection can use switched channels, both for additional bandwidth and for a backup method of reaching the site if the nailed-up connection is down.

Example: `set call-type=off`

Dependencies: If Nailed-Groups is set to 0 (zero), Call-Type does not apply.

Location: Connection *station* > Telco-Options

See Also: Nailed-Groups, Telco-Options

CAPADSL

Description: Specifies the action to take when the code image for an ADSL-CAP card is present in a Tar file.

Usage: Specify one of the following settings:

- Auto (the default) causes the system to load images for cards that are installed in the MAX TNT, and to skip images for cards that are not installed.
- Load causes the system to load the image, even if there is no card of that type installed.
- Skip causes the system to skip the image, even if there is a card of that type installed.

Dependencies: A card is considered present in the system if a Slot-Type profile exists for that card type. The system creates a Slot-Type profile when it first detects the presence of a card, and does not delete the profile unless the administrator uses the Slot -r command to permanently remove a card that is no longer installed in the system, or clears NVRAM. To ensure that the system does not load unnecessary images, use Slot -r to remove Slot-Type profiles for cards that are no longer installed in the system.

Location: Load-Select

See Also: 8E1, 8T1, AMDM, DMTADSL, DS3-ATM, Enet, Enet2, HDLC, HDLC2, IDSL, MDM56K, MDM-V34, SDSL, SDSL70D, SDSL70V, SWAN, T3, UDS3, UE1, Unknown-Cards, UT1

Carrier-Established

Description: Indicates whether error conditions exist on the T1 line.

Usage: The Carrier-Established setting is read only. True indicates that no error conditions exist. False indicates error conditions on the line.

Example: `carrier-established=true`

Location: T1-Stat {shelf-*N* slot-*N* *N*}

See Also: AIS-Receive, BER-Receive, Loss-Of-Carrier, Loss-Of-Sync, Yellow-Receive

Cell-Level

Description: Specifies the modem cellular-communications transmit and receive level.

Usage: Specify one of the following values:

- -18-dB-Cell-Level (the default)
- -17-dB-Cell-Level
- -16-dB-Cell-Level
- -15-dB-Cell-Level
- -14-dB-Cell-Level
- -13-dB-Cell-Level
- -12-dB-Cell-Level
- -11-dB-Cell-Level
- -10-dB-Cell-Level

Example: `set cell-level=-18-db-cell-level`

Dependencies: If terminal services are disabled, Cell-Level does not apply.

Location: Terminal-Server > Modem-Configuration

See Also: Cell-Mode-First, Modem-Configuration

Cell-Mode-First

Description: Determines whether the MAX TNT attempts a cellular connection before a land-based connection.

Usage: Specify Yes or No. The default is No.

- Yes specifies that the MAX TNT attempts a cellular connection first.
- No specifies that the MAX TNT attempts a land-based connection before attempting a cellular connection.

Example: `set cell-mode-first=no`

Dependencies: If terminal services are disabled, Cell-Mode-First does not apply.

Location: Terminal-Server > Modem-Configuration

See Also: Cell-Level, Modem-Configuration

Channel-Config

Description: A subprofile containing channel-configuration subprofiles, one for each channel of a T1 or E1 line.

Usage: With a T1 or E1 profile as the working profile, enter **list line channel** to display the Channel-Config subprofile. For example:

```
admin> list line channel
[in T1/{ shelf-1 slot-2 3 }:line-interface:channel-config]
channel-config[1]={switched-channel 9 "" {any-shelf any-slot 0 }0}
channel-config[2]={switched-channel 9 "" {any-shelf any-slot 0 }0}
channel-config[3]={switched-channel 9 "" {any-shelf any-slot 0 }0}
channel-config[4]={switched-channel 9 "" {any-shelf any-slot 0 }0}
...
```

To close the Channel-Config subprofile and return to a higher context in the profile:

```
admin> list ..
```

Location: E1 {shelf-*N* slot-*N N*} > Line-Interface, T1 {shelf-*N* slot-*N N*} > Line-Interface

See Also: Channel-Config *N*, Channel-State, Channel-State *N*, Channel-Usage, Line-Interface

Channel-Config *N*

Description: A subprofile of the Channel-Config subprofile. Channel-Config *N* contains configuration options for an individual channel of an E1, ISDN BRI, or T1 line. The index for each subprofile is a channel number.

Usage: With an ISDL, T1, or E1 profile as the working profile, use the List command to display the configuration for one of the channels.

For example, to display the configuration for channel 1 in the T1 profile:

```
admin> list line channel 1
[in T1/{ shelf-1 slot-2 3 }:line-interface:channel-config[1]]
channel-usage=switched-channel
trunk-group=9
phone-number=""
call-route-info={ any-shelf any-slot 0 }
nailed-group=0
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: E1 {shelf-*N* slot-*N N*} > Line-Interface > Channel-Config,

ISDL {shelf-*N* slot-*N N*} > Line-Interface > Channel-Config,

T1 {shelf-*N* slot-*N N*} > Line-Interface > Channel-Config

See Also: Call-Route-Info, Channel-Config, Channel-State, Channel-State *N*, Channel-Usage, Line-Interface, Nailed-Group, Phone-Number, Trunk-Group

Channel-State

Description: An array listing the state of each channel of a T1 or ISDN BRI line. The index to each array component is a channel number (1–24 for T1, 1–2 for ISDN BRI).

Usage: Use the List command to display the array. In the following example, T1-Stat is the working profile:

```
admin> list channel
[in T1-STAT/{ shelf-1 slot-1 1 }:channel-state]
channel-state[1]=idle
channel-state[2]=idle
channel-state[3]=dialing
...
```

To close the array and return to a higher context in the profile:

```
admin> list ..
```

Location: IDSL-Stat {shelf-*N* slot-*N* *N*}, T1-Stat {shelf-*N* slot-*N* *N*}

See Also: Channel-Config, Channel-Config *N*, Channel-State *N*, Channel-Usage, Line-State

Channel-State *N*

Description: Specifies the individual state of a channel in a T1 or ISDN BRI line. The index to each component is a channel number (1–24 for T1, 1–2 for ISDN BRI).

Usage: The Channel-State *N* setting may be one of the following:

Setting	Description
Unavailable	The channel is not available.
Unused	The channel is not in use.
Out-Of-Service	The channel has been taken out of service.
Nailed-Up	The channel is nailed-up (rather than switched).
Held	The channel is on hold.
Idle	The channel is not being used for a call.
Clear-Pending	Call clearing is in process.
Dialing	A number is being dialed for the channel.
Ringing	The MAX TNT is attempting a connection on the channel.
Connected	The channel is being used for an established connection.
Signaling	The channel is a D channel.
Current-D	The channel is a current D channel in an NFAS configuration.
Backup-D	The channel is the backup D channel in an NFAS configuration.
Maintenance	The channel is in a maintenance state.
Spc-Up	A semipermanent circuit is up (Australian installations only).

Location: T1-Stat {shelf-*N* slot-*N* *N*} > Channel-State

See Also: Channel-Config, Channel-Config *N*, Channel-State, Channel-Usage, Line-State

Channel-Usage

Description: Specifies the usage for a channel.

Usage: For a T1, E1, or ISDN BRI channel, specify one of the following values:

- Unused-Channel specifies that the channel is unused. The MAX TNT sends the single idle code defined for the channel.
- Switched-Channel (the default) specifies a switched channel, which uses either robbed-bit or D-channel signaling.
- Nailed-64-Channel specifies a clear-channel 64K circuit. It does not require any setup information.

T1 and E1 channels also support the D-Channel setting, which specifies a channel used for ISDN D-channel signaling. For T1, the D channel is channel 24. For E1, it is channel 16.

Only T1 channels support the following additional usage values:

- NFAS-Primary-D-Channel specifies the primary D channel for a group of T1 lines with the same NFAS ID. You must set all other channels on the NFAS line to Switched-Channel, Nailed-64-Channel, or Unused-Channel. Within an NFAS group, you should configure only one line to provide the primary ISDN D channel.
- NFAS-Secondary-D-Channel specifies the secondary D channel for a group of T1 lines with the same NFAS ID. You must set all other channels on the NFAS line to Switched-Channel, Nailed-64-Channel, or Unused-Channel. Within an NFAS group, you should configure only one line to provide the secondary (backup) D channel.

Example: `set channel-usage=switched-channel`

Dependencies: Channel usage may be different from the usage specified for the line itself. For example, the line might specify switched usage, while individual channels within that line might specify nailed-up usage.

Location: E1 {shelf-*N* slot-*N* *N*} > Line-Interface > Channel-Config *N*,
IDSL {shelf-*N* slot-*N* *N*} > Line-Interface > Channel-Config *N*,
T1 {shelf-*N* slot-*N* *N*} > Line-Interface > Channel-Config *N*

See Also: Channel-Config, Channel-Config *N*, Channel-State, Line-Interface, NFAS-ID, Signaling-Mode

Circuit-Name

Description: Specifies a name for a Data Link Connection Indicator (DLCI) endpoint.

Usage: Specify a name for the circuit. You may enter up to 16 characters. The other endpoint of the Permanent Virtual Connection (PVC) must specify the same name in its circuit configuration.

Example: `set circuit-name=circuit-1`

Dependencies: If FR-Direct-Enabled=Yes, Circuit-Name does not apply. It applies only to gateway or circuit connections.

Location: Connection *station* > FR-Options

See Also: Encapsulation-Protocol, FR-Direct-Enabled, FR-Options

Clear-Call

Description: Specifies whether the MAX TNT clears a dial-in connection when an interactive Telnet, Rlogin, or TCP session terminates.

Usage: Specify Yes or No. The default is No.

- Yes specifies that the MAX TNT clears a dial-in connection when an interactive Telnet, Rlogin, or TCP session terminates.
- No specifies that the MAX TNT does not clear a dial-in connection when an interactive session terminates. Instead, the MAX TNT returns the user to the terminal-server menu.

Example: `set clear-call=yes`

Dependencies: If terminal services are disabled, Clear-Call does not apply.

Location: Terminal-Server > Terminal-Mode-Configuration

See Also: Terminal-Mode-Configuration

Clear-Screen

Description: Specifies whether the MAX TNT clears the screen when a terminal-server session begins.

Usage: Specify Yes or No. The default is Yes.

- Yes specifies that the MAX TNT clears the screen of all status messages and echoed scripts when it establishes a terminal-server session.
- No specifies that the MAX TNT establishes the terminal-server session without clearing the screen.

Example: `set clear-screen=yes`

Dependencies: If terminal services are disabled, Clear-Screen does not apply.

Location: Terminal-Server > Terminal-Mode-Configuration

See Also: Terminal-Mode-Configuration

CLID

Description: Specifies the phone number of the remote station (the calling line ID). If present for an incoming call, the MAX TNT can use the CLID value for CLID authentication before answering the call.

Usage: Specify the calling party's phone number. You may enter up to 24 characters. The default is null.

Example: `set clid=510-555-1213`

Location: Connection *station*

See Also: CLID-Auth-Mode

CLID-Auth-Mode

Description: Specifies how the MAX TNT uses the telco-provided Calling-Line ID (CLID) for authenticating incoming calls.

Usage: Specify one of the following values:

- **Ignore** (the default) specifies that the MAX TNT does not require a matching ID from incoming calls.
- **CLID-Prefer** specifies that the MAX TNT uses the CLID, if available, to authenticate the call. If the CLID is not provided by the switch, the MAX TNT uses the type of authentication specified by the Answer-Defaults profile. If the CLID is provided by the switch but does not match the calling number specified in a local Connection profile or RADIUS user profile, the MAX TNT drops the call.
- **CLID-Require** specifies that the MAX TNT must receive a CLID from the incoming call, and the CLID must match the calling number specified in a local Connection profile or RADIUS user profile. If the MAX TNT does not receive a CLID, or does not find a matching number in a profile, the MAX TNT does not answer the call. A matching RADIUS user profile can require name and password authentication after CLID authentication by setting `Ascend-Require-Auth=Require-Auth`.
- **CLID-Fallback** specifies that the MAX TNT must receive a CLID in the incoming call. Otherwise, the MAX TNT does not answer the call. If the CLID matches a calling number specified in a local Connection profile or RADIUS user profile, the MAX TNT authenticates the call with the CLID. If the MAX TNT does not receive a response from the RADIUS server, it uses the authentication configured in the Answer-Defaults profile.
- **DNIS-Require** specifies that the called number must match the number specified in a local Connection profile or RADIUS user profile. If the MAX TNT does not find a matching number in a profile, the MAX TNT does not answer the call. You can configure a matching RADIUS user profile to require name and password authentication after called-number authentication by setting `Ascend-Require-Auth=Require-Auth`.
- **DNIS-Pref** specifies that the MAX TNT uses the called number, if available, to authenticate the call. If the called number is not provided by the switch, the MAX TNT uses the type of authentication specified by the Answer-Defaults profile. If the called number is provided by the switch but does not match the called number specified in a local Connection profile or RADIUS user profile, the MAX TNT drops the call.

Example: `set clid-auth-mode=dnis-pref`

Location: Answer-Defaults

See Also: CalledNumber, CLID

Client-Default-Gateway

Description: Specifies the default gateway to use for traffic from this connection if no specific route appears in the IP routing table.

Usage: Specify an IP address in dotted decimal notation. The default is 0.0.0.0, which causes the system to use the Default route.

Example: `set client-default-gateway=10.207.23.13`

Location: Connection *station* > IP-Options

See Also: Ignore-Def-Route, IP-Options

Client-DNS-Addr-Assign

Description: Specifies whether the MAX TNT presents client DNS server addresses while the connection is being negotiated.

Usage: Specify Yes or No. The default is No.

- Yes specifies that the MAX TNT makes the client DNS server addresses available to the connection.
- No specifies that MAX TNT makes the client DNS server addresses unavailable.

Example: `set client-dns-addr-assign=no`

Location: Connection *station* > IP-Options

See Also: Allow-As-Client-DNS-Info, Client-DNS-Primary-Addr, Client-DNS-Secondary-Addr, Client-Primary-DNS-Server, Client-Secondary-DNS-Server

Client-DNS-Primary-Addr

Description: Specifies a primary DNS server address to send to a client that is connecting to the MAX TNT.

A client configuration defines DNS servers that the MAX TNT presents to WAN connections during IPCP negotiation. These servers provide a way to protect your local DNS information from WAN users. Client DNS has two levels: a global configuration that applies to all PPP connections, and a connection-specific configuration. The Client-DNS-Primary-Addr setting applies to the connection-specific level.

The MAX TNT uses the global client addresses only if the Connection profile specifies no DNS server addresses. You can also choose to present your local DNS servers to clients if no other servers are defined or available.

Usage: Specify the IP address of the primary DNS server for the connection. Separate the optional subnet mask from the address by using a forward slash. The default is 0.0.0.0/0, which specifies that no primary DNS server is available for the connection.

Example: `set client-dns-primary-addr=10.1.2.3/24`

Dependencies: If Client-DNS-Addr-Assign=No, Client-DNS-Primary-Addr does not apply.

Location: Connection *station* > IP-Options

See Also: Allow-As-Client-DNS-Info, Client-DNS-Addr-Assign, Client-DNS-Secondary-Addr, Client-Primary-DNS-Server, Client-Secondary-DNS-Server

Client-DNS-Secondary-Addr

Description: Specifies a secondary DNS server address to send to a client that is connecting to the MAX TNT. The MAX TNT presents this server address only if the server specified by Client-DNS-Primary-Addr is inaccessible.

Usage: Specify the IP address of the secondary DNS server for the connection. Separate the optional subnet mask from the address by entering a forward slash. The default is 0.0.0.0/0, which specifies that no secondary DNS server is available for the connection.

Example: `set client-dns-secondary-addr=10.5.6.7/24`

Dependencies: If Client-DNS-Addr-Assign=No, Client-DNS-Secondary-Addr does not apply.

Location: Connection *station* > IP-Options

See Also: Allow-As-Client-DNS-Info, Client-DNS-Addr-Assign, Client-DNS-Primary-Addr, Client-Primary-DNS-Server, Client-Secondary-DNS-Server

Client-Primary-DNS-Server

Description: Specifies a primary DNS server address to send to a client that is connecting to the MAX TNT.

Client DNS has two levels: a global configuration that applies to all PPP connections, and a connection-specific configuration. The Client-Primary-DNS-Server setting defines the global level. The MAX TNT uses the global client addresses only if the Connection profile specifies no DNS server addresses. You can also choose to present your local DNS servers to clients if no other servers are defined or available.

Usage: Specify the IP address of a DNS server to use for all connections that do not have a defined DNS server. Separate the optional subnet mask from the address by entering a forward slash. The default is 0.0.0.0/0, which specifies that no primary DNS server is available on a global level.

Example: `set client-primary-dns-server=10.9.8.7/24`

Location: IP-Global

See Also: Allow-As-Client-DNS-Info, Client-DNS-Addr-Assign, Client-DNS-Primary-Addr, Client-DNS-Secondary-Addr, Client-Secondary-DNS-Server

Client-Secondary-DNS-Server

Description: Specifies a secondary DNS server address to send to any client connecting to the MAX TNT.

Client DNS has two levels: a global configuration that applies to all PPP connections, and a connection-specific configuration. The Client-Primary-DNS-Server setting defines the global level. The MAX TNT uses the global client addresses only if the Connection profile specifies no DNS server addresses. You can also choose to present your local DNS servers to clients if no other servers are defined or available.

Usage: Specify the IP address of a secondary DNS server to use for all connections that do not have a DNS server defined. Separate the optional subnet mask from the address by entering a forward slash. The default is 0.0.0.0/0, which specifies that no secondary DNS server is available on a global level.

Example: `set client-secondary-dns-server=10.9.8.3/24`

Location: IP-Global

See Also: Allow-As-Client-DNS-Info, Client-DNS-Addr-Assign, Client-DNS-Primary-Addr, Client-DNS-Secondary-Addr, Client-Primary-DNS-Server

Clocking

Description: A subprofile containing settings for an internal clock on the SWAN line.

Usage: With the Line-Config subprofile as the working profile, list the Clocking settings. For example:

```
admin> list clocking
[in SWAN {shelf-1 slot-13 2}:line config:clocking]
clock-mode=external-clock
divider=1
exp=2
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: SWAN {shelf-*N* slot-*N* *N*} > Line-Config

See Also: Clock-Mode, Divider, Exp

Clock-Mode

Description: Specifies whether the SWAN card generates an internal clock.

Usage: Specify one of the following values:

- External-Clock (the default) specifies that the SWAN line receives a clock from an external source.
- Internal-Clock specifies that the SWAN line generates its own clock.

Example: `set clock-mode=internal-clock`

Location: SWAN {shelf-*N* slot-*N* *N*} > Line-Config > Clocking

See Also: Divider, Exp

Clock-Priority

Description: Assigns a clock priority to a T1 or E1 line. When multiple lines are eligible to be the clock source for synchronous transmissions, the MAX TNT uses the value you specify to select a line as the master clock source. If multiple lines are eligible to be the clock source, and each line has an equal Clock-Priority value, the MAX TNT chooses a source at random.

Usage: Specify one of the following values:

- High-Priority specifies the highest priority. The MAX TNT chooses a line with this priority setting as the clock source over other lines with a lower priority. If more than one line has the highest priority, the first available line becomes the clock source.
- Middle-Priority specifies the second priority. The MAX TNT chooses a line with this priority setting if every line with a High-Priority setting is unavailable. If more than one line has a Middle-Priority setting, the first available Middle-Priority line becomes the clock source.
- Low-Priority specifies the lowest priority. The MAX TNT chooses a line with this priority only if every line with a higher priority setting is unavailable. If more than one line has a Low-Priority setting, the first available Low-Priority line becomes the clock source.

Once the MAX TNT chooses a line as the clock source, it uses that line until the line becomes unavailable, or a until a higher-priority source becomes available.

Example: `set clock-priority=middle-priority`

Location: E1 {shelf-*N* slot-*N* *N*} > Line-Interface, T1 {shelf-*N* slot-*N* *N*} > Line-Interface

See Also: Clock-Source, Line-Interface

Clock-Source

Description: Specifies whether the MAX TNT can use the T1 or E1 line as the master clock source for synchronous connections.

The entire multishelf MAX TNT system uses a single PLL synchronous clock source. The MAX TNT chooses the clock source from lines configured with Clock-Source set to Eligible. If there are no eligible external sources, the system uses an internal clock generated from the master shelf-controller.

You can use the Clock-Source diagnostic command to determine the current master clock source. If you execute the command on the shelf-controller, the output tells which slot (if any) is the clock source. If you execute the command on a T1 or E1 card, the output tells which line is the clock source.

Usage: Specify one of the following values:

- Eligible (the default) specifies that the MAX TNT can use the line as the master clock source.
- Not-Eligible specifies that the MAX TNT cannot use the line as the master clock source.

Example: `set clock-source=eligible`

Location: E1 {shelf-*N* slot-*N* *N*} > Line-Interface, T1 {shelf-*N* slot-*N* *N*} > Line-Interface

See Also: Clock-Priority, Line-Interface

Coldstart-Enabled

Description: Specifies whether the system generates a trap when the MAX TNT reinitializes itself so that the configuration of the SNMP manager or the system itself might be altered.

Usage: Specify Yes or No. The default is Yes.

- Yes specifies that the system generates a trap when the MAX TNT reinitializes itself so that the configuration of the SNMP manager or the system itself might be altered.
- No specifies that the system does not generate a trap when the MAX TNT reinitializes itself so that the configuration of the SNMP manager or the system itself might be altered.

Example: `set coldstart-enabled=no`

Location: Trap *host-name*

See Also: Warmstart-Enabled

Collect-Incoming-Digits

Description: Specifies whether the Digital Signal Processor (DSP) decodes the calling and called DTMF digits on a T1 line that uses inband signaling, making DNIS and CLID information presented by the switch available for authentication and accounting.

Usage: Specify Yes or No. The default is No.

- Yes specifies that the DSP decodes the DTMF digits.
- No specifies that the DSP does not decode the DTMF digits.

Example: `set collect-incoming-digits=yes`

Dependencies: You must set Signaling-Mode=Inband for Collect-Incoming-Digits to have any effect.

Location: T1 {shelf-*N* slot-*N* *N*} > Line-Interface

See Also: DSP-DTMF-Input-Sample-Count, Signaling-Mode

Community-Name

Description: Specifies the SNMP community name associated with SNMP PDUs (Protocol Data Units). The string you specify becomes a password that the MAX TNT sends to the SNMP manager when an SNMP trap event occurs. The password authenticates the sender identified by Host-Address.

Usage: Specify the community name. You may enter up to 31 characters. The default is `public`.

Example: `set community-name=Ascend`

Location: Trap *host-name*

See Also: Alarm-Enabled, Host-Address, Host-Name, Port-Enabled, Security-Mode

Comp-Neq

Description: Specifies the type of comparison to make between a packet's contents and the Value specified for a filter.

Usage: Specify Yes or No. The default is No.

- Yes specifies that the comparison succeeds when the values are not equal.
- No specifies that the comparison succeeds when the values are equal.

Example: `set comp-neq=no`

Dependencies: Comp-Neq applies only when Type=Generic-Filter.

Location: Filter *filter-name* > Input-Filters > Gen-Filter,
Filter *filter-name* > Output-Filters > Gen-Filter

See Also: Gen-Filter, Input-Filters, Output-Filters, Type

Connection

Description: A profile containing connection-specific information, including authentication settings, compression values, filter specifications, and telco options.

The MAX TNT uses the settings in the Answer-Defaults profile to answer a call and determine whether to attempt to build a connection. It then looks for a Connection profile or RADIUS user profile.

Usage: Use the Read and List commands to create a new Connection profile and list its contents. For example:

```
admin> read conn newyork
CONNECTION/newyork read

admin> list
[in CONNECTION/newyork]
station*=newyork
active=yes
encapsulation-protocol=mpp
called-number-type=national
dial-number=""
clid=""
ip-options={ yes yes 10.122.99.1/24 0.0.0.0/0 7 100 255 no no +
ipx-options={ no router-peer both both no 00:00:00:00 +
session-options={ "" "" no 120 no-idle 120 "" 0}
telco-options={ ans-and-orig no off 1 no no 56k-restricted 0 +
ppp-options={ "" "" stac 1524 no 600 600 }
mp-options={ 1 1 2 }
mpp-options={ "" quadratic transmit 1 1 15 5 10 70 }
fr-options={ frlink 16 "" no "" 16 }
tcp-clear-options={ "" 0 no "" 256 20 }
ara-options={ "" 0 }
appletalk-options={ no "" 0 0 peer-router }
usrRad-options={ global 0.0.0.0 1646 "" 1 acct-base-10 }
calledNumber=""
framed-only=no
tunnel-options={ disabled 0 "" "" 5150 "" "" }
```

You can then use the Set command to modify the settings in the profile. To close the profile and save your changes:

```
admin> write
CONNECTION/newyork written
```

See Also: Active, CalledNumber, Called-Number-Type, CLID, Dial-Number, Encapsulation-Protocol, IP-Options, PPP-Options, Session-Options, Station, Telco-Options, UsrRad-Options

Connection-SQ

Description: Indicates the signal quality (SQ) reading.

Usage: The Connection-SQ value is read only.

Dependencies: If the difference between the Line-Quality value and the Connection-SQ value is greater than 6dB (for 22 seconds or more), the MAX TNT disconnects the line. This situation occurs when a line becomes open or the remote unit loses power.

Location: ADSL-CAP-Stat {shelf-*N* slot-*N* *N*} > Physical-Statistic

See Also: HDLC-RX-CRC-Error-Cnt, Line-Quality, Line-Up-Timer, Physical-Address, RS-Corrected-Errors, RS-Errors, RX-Attenuation, RX-Signal-Present, Self-Test, Transmit-Power, Up-Down-Cntr

Console-Enabled

Description: Specifies whether the system generates a trap when the console has changed state. The console entry can be read to see what its current state is.

Usage: Specify Yes or No. The default is Yes.

- Yes specifies that the system generates a trap when the console has changed state.
- No specifies that the system does not generate a trap when the console has changed state.

Example: `set console-enabled=no`

Location: Trap *host-name*

See Also: Ascend-Enabled

Contact

Description: Specifies the person or department to contact for reporting error conditions. The Contact value is SNMP readable and settable.

Usage: Specify the name of a contact person or department. You may enter up to 80 characters. The default is null.

Example: `set contact=rchu`

Location: SNMP

See Also: Location

Cost

Description: Specifies the cost of an OSPF link. The lower the cost, the more likely OSPF will use the interface to forward data traffic.

Usage: Specify a number greater than 0 and less than 16777215. The default is 1 on the Ethernet interface, or 10 on a WAN link.

With the exception of links to stub networks, the output cost must always be nonzero. A link with a cost of 0xFFFFF (16777215) is considered nonoperational.

Dependencies: In a static route, interpretation of the Cost value depends on the type of external metric set by ASE-Type. If the MAX TNT is advertising Type 1 metrics, OSPF can use the specified number as the cost of the route. Type 2 external metrics are an order of magnitude larger. Any Type 2 metric is considered greater than the cost of any path internal to the AS.

Example: `set cost=50`

Location: Connection *station* > IP-Options > OSPF-Options,
IP-Interface { {shelf-*N* slot-*N* *N*} *N*} > OSPF, IP-Route *name*

See Also: ASE-Type, IP-Options, OSPF, OSPF-Options

Countries-Enabled

Description: Contains a bit set identifying the enabled countries.

Usage: The Countries-Enabled setting is read only.

Example: `countries-enabled=0`

Location: Base

See Also: AIM-Enabled, Data-Call-Enabled, Frame-Relay-Enabled,
MAXLink-Client-Enabled, Modem-Dialout-Enabled, Multi-Rate-Enabled,
R2-Signaling-Enabled, Switched-Enabled

CSU-Build-Out

Description: Specifies the line buildout value for T1 lines with an internal Channel Service Unit (CSU). The buildout value is the amount of attenuation the MAX TNT should apply to the line's network interface in order to match the cable length from the MAX TNT to the next repeater.

Attenuation is a measure of the power lost on a transmission line or on a portion of that line. When you specify a buildout value, the MAX TNT applies an attenuator to the T1 line, reducing the line's power. Repeaters boost the signal on a T1 line, and can make the signal too strong. If the MAX TNT is too close to a repeater, you need to add some attenuation.

Usage: After checking with your carrier to determine the correct value, specify one of the following decibel values:

- 0-dB (the default)
- 7.5-dB
- 15-dB
- 22.5-dB

Example: `set csu-build-out=0-db`

Dependencies: CSU-Build-Out applies only if the T1 line has an internal CSU.

Location: T1 {shelf-*N* slot-*N* *N*} > Line-Interface

See Also: Front-End-Type, Line-Interface

Current-State

Description: Indicates the current operational state of the slot.

Usage: The Current-State value is read only. It can have one of the following values:

State	Description
Oper-State-Down	The slot is in a nonoperational state.
Oper-State-Up	The slot is in normal operations mode.
Oper-State-Diag	The slot is in diagnostics mode.
Oper-State-Dump	The slot is dumping its memory.
Oper-State-Pend	While the slot is no longer down, it is not yet ready for normal operation. This value denotes a transitional state in which additional shelf-to-slot communications are required to make the slot fully operational.
Oper-State-Post indicates	The slot is running a self-test.
Oper-State-None	The slot is empty.

Example: `current-state=oper-state-up`

Location: Slot-State {shelf-*N* slot-*N* *N*}

See Also: Channel-State, Line-State

D

Data

Note: The MAX TNT does not support firewalls at this time.

Description: Contains information about the firewall definition.

Usage: Only the Secure Access Manager should specify a Data value. If you list the Data setting separately, it appears as a sparse array:

```
admin> list data
[ in FIREWALL/berkeley]
data[0]=ACAFiwgAAAAAAADE2RmZDTiz0zOLeDkBAAFTVl4DAAA
data[33]=AA==
data[66]=
```

Location: Firewall *name*

See Also: Version

Data-Call-Enabled

Description: Indicates whether the MAX TNT supports data calls over ISDN lines.

Usage: The Data-Call-Enabled setting is read only. Yes indicates that the MAX TNT supports data calls over ISDN lines. No indicates that the MAX TNT does not support data calls over ISDN lines.

Example: data-call-enabled=yes

Location: Base

See Also: AIM-Enabled, Countries-Enabled, D-Channel-Enabled, Firewalls-Enabled, Frame-Relay-Enabled, MAXLink-Client-Enabled, Modem-Dialout-Enabled, Multi-Rate-Enabled, Network-Management-Enabled, R2-Signaling-Enabled, Selectools-Enabled, Switched-Enabled, TNT-ADSL-Enabled, TNT-IDSL-Enabled, TNT-SDSL-Enabled

Data-Filter

Description: Specifies the name of a filter the MAX TNT uses to determine whether it should forward or drop a packet. If the MAX TNT applies both a call filter and a data filter to a connection, it applies the data filter first. Only those packets that the data filter forwards can reach the call filter.

Usage: Specify the filter name. The default is null, which specifies that the MAX TNT does not apply a data filter.

Example: set data-filter=ip-spoof

Dependencies: Data-Filter applies only when the Filter-Name setting specifies a data filter.

Location: Answer-Defaults > Session-Info, Connection *station* > Session-Options

See Also: Call-Filter, Filter, Filter-Name, Filter-Persistence, Session-Info, Session-Options

Data-Rate-Mode

Description: Specifies the per-session DSL data-rate mode.

Usage: Currently, only the Autobaud setting is supported on the RADSL card, and only the Singlebaud setting is supported on the SDSL card.

- Autobaud specifies that a DSL modem should train up to a set data rate. If a DSL modem cannot train to this data rate, it connects to the closest rate to which it can train (the modem's ceiling rate).
- Singlebaud causes the system to train to a single data rate, even if the DSL modem can train at a higher or lower data rate.

Location: ADSL-CAP {shelf-*N* slot-*N* *N*} > Line-Config,
SDSL {shelf-*N* slot-*N* *N*} > Line-Config

See Also: Ses-ADSL-CAP-Down-Rate, Ses-ADSL-CAP-Up-Rate, Ses-Rate-Mode, Ses-Rate-Type

Data-Sense

Description: Specifies whether the D channel uses normal or inverted data. Inverted data has 1s changed into 0s, and 0s into 1s. In some connections, you need to invert the data to avoid transmitting a pattern that the connection cannot handle. If you use inverted data, you should do so on both sides of the connection.

Usage: Specify one of the following values:

- Normal (the default) specifies noninverted data.
- Inv specifies inverted data.

Example: `set data-sense=normal`

Location: T1 {shelf-*N* slot-*N* *N*} > Line-Interface

See Also: Line-Interface

Data-Service

Description: For a switched connection, specifies the type of service requested of the switch. For a nailed-up connection, specifies the bandwidth to use per channel.

Usage: Specify one of the following settings:

Setting	Specifies
Voice (switched calls only)	The call should be set up as a voice call, even if the MAX TNT transmits data over the channel.
56K	The data rate to use with a switched-services line that does not use inband signaling, such as an ISDN line.
56K-Restricted (the default)	Data is transmitted to meet the density requirements for AMI-encoded T1 lines. These requirements dictate that you cannot transmit 16 consecutive zeroes. Use this setting only with robbed-bit signaling.
56K-Clear	The call should be set up as a data call that uses 56 Kbps of the bandwidth of the data channel. This setting is common for T1 PRI lines. When you specify 56K-Clear, bit number 7 is always set to 1, guaranteeing that the data meets the line's density requirements.
64K-Restricted	The call should be set up as a data call at a rate of 64 Kbps on an AMI-encoded line. A binary 1 is inserted with each transmission in the least significant bit.
64K-Clear	The call should be set up as a data call that uses the full 64-Kbps bandwidth of the data channel.
384K-Clear (switched calls only)	The call should be set up as a data call that connects to the Switched-384 data service. This AT&T data service does not require Multi-Rate or GlobanD.
384K-Restricted (switched calls only)	The call should be set up as a data call that connects to Multi-Rate or GlobanD data services at 384 Kbps.
DWS-384-clear (switched calls only)	A 384-Kbps call coded as Multi-Rate, not H0.
1536K-Clear (switched calls only)	The call should be set up as a data call that connects to the Switched-1536 data service at 1536 Kbps. NFAS signaling is required for the Switched-1536 data service. (Because all 24 channels of the T1 PRI line carry user data, the D channel must be on another line.)
1536K-Restricted (switched calls only)	The same as 1536K-Clear, but with a request for restricted data transfer. A binary 1 is inserted with each transmission in the least significant bit.
128- to 1472-Kbps clear in multiples of 64 (switched calls only)	Available on a T1 PRI line with Multi-Rate or GlobanD data services. You can specify the following values: 128K-Clear, 192K-Clear, 256K-Clear, 320K-Clear, 448K-Clear, 512K-Clear, 576K-Clear, 640K-Clear, 704K-Clear, 768K-Clear, 832K-Clear, 896K-Clear, 960K-Clear, 1024K-Clear, 1088K-Clear, 1152K-Clear, 1216K-Clear, 1280K-Clear, 1344K-Clear, 1408K-Clear, 1472K-Clear
Modem (switched calls only)	The call should be set up as a voice call. When the call is up, it goes to a digital modem.

Example: `set data-service=voice`

Dependencies: To ensure data integrity when Data-Service=Voice:

- Use only digital end-to-end connectivity. No analog signals should be present anywhere in the link.
- Make sure that the phone company is not using any intervening loss plans to economize on voice calls.
- Do not use echo cancellation. Analog lines can echo, and the technology that takes out the echoes can also scramble data in the link.
- Do not make any modifications that can change the data in the link.

Location: Connection *station* > Telco-Options

See Also: Call-Type, Telco-Options

Date

Description: A subprofile that shows the day of the week and the current system date.

Usage: With the Timedate profile as the working profile, list the Date subprofile. For example:

```
admin> list date
[in TIMEDATE]
weekday=Friday
month=October
day=18
year=1996
```

You can then use the Set command to modify the settings in the subprofile.

```
admin> set weekday=Saturday
admin> set day=19
```

Note: You can also use the Date command to set the day of the week and the system date.

Example: `set date day=19`

Location: Timedate

See Also: Time

DCEN392-Val

Description: Specifies the total number of errors, during DCE-N39-monitored events, that causes the network side to declare the user side's procedures inactive.

Usage: Specify a value from 1 to 10. The value you specify must be less than DCEN393-Val. The default is 3.

Example: `set dcen392-val=7`

Dependencies: If Link-Type=DTE, DCEN392-Val does not apply.

Location: Frame-Relay *fr-name*

See Also: DCEN393-Val, Link-Type

DCEN393-Val

Description: Specifies the DCE-monitored event count.

Usage: Specify a value from 1 to 10. The value you specify must be greater than DCEN392-Val. The default is 4.

Example: `set dcen393-val=8`

Dependencies: If Link-Type=DTE, DCEN393-Val does not apply.

Location: Frame-Relay *fr-name*

See Also: DCEN392-Val, Link-Type

D-Channel-Enabled

Description: Indicates whether the unit enables D-channel (ISDN) signaling.

Usage: The D-Channel-Enabled setting is read only. Yes indicates that the unit supports D-channel signaling. No indicates that the unit does not support D-channel signaling.

Location: Base

See Also: Data-Call-Enabled, Multi-Rate-Enabled, R2-Signaling-Enabled, Switched-Enabled

Dead-Interval

Description: Specifies the number of seconds the OSPF router waits for Hello packets before deciding that its neighbor is down.

Usage: Specify a number from 0 to 65535. The default is 40 for a connected route, and 120 for a WAN connection.

Example: `set dead-interval=40`

Location: Connection *station* > IP-Options > OSPF-Options,
IP-Interface { { shelf-*N* slot-*N* *N* } *N* } > OSPF

See Also: Hello-Interval, IP-Options, OSPF, OSPF-Options

Decrement-Channel-Count

Description: Specifies the number of channels the MAX TNT removes as a bundle when bandwidth changes, either manually or automatically, during a call.

Usage: Specify an integer from 1 to 32. The default is 1.

Example: `set decrement-channel-count=1`

Dependencies: You cannot clear a call by decrementing channels.

Location: Answer-Defaults > MPP-Answer, Connection *station* > MPP-Options

See Also: Add-Persistence, Bandwidth-Monitor-Direction, Base-Channel-Count, Dynamic-Algorithm, Increment-Channel-Count, Maximum-Channels, Minimum-Channels, MPP-Answer, MPP-Options, Seconds-History, Sub-Persistence, Target-Utilization

Default-Call-Type

Description: Specifies a default call type for calls on non-ISDN T1 lines. The MAX TNT uses the default type for call routing if no explicit routes are found.

Usage: Specify one of the following values:

- Digital (the default) specifies that the MAX TNT treats incoming calls as digital.
- Voice specifies that the MAX TNT treats incoming calls as voice calls from a modem.

Example: `set default-call-type=voice`

Location: T1 {shelf-*N* slot-*N* *N*} > Line-Interface

See Also: Line-Interface

Default-Status

Description: Specifies whether or not the MAX TNT displays the status screen by default when the user logs in.

Usage: Specify Yes or No. The default is No.

- Yes (the default) specifies that the MAX TNT displays the status screen when it authenticates the profile.
- No specifies that the MAX TNT does not display the status screen when it authenticates the profile.

Example: `set default-status=yes`

Dependencies: Default-Status applies to Telnet and console logins. It does not apply to use of the Auth command.

Location: User *name*

See Also: Bottom-Status, Left-Status, Top-Status

Delay

Description: On an incoming modem or V.120 call, specifies the number of seconds the MAX TNT waits for PPP packets before it changes to terminal-server mode. If it detects PPP, the MAX TNT routes the packets to its router. Otherwise, it displays the Telnet or terminal-server login prompt. If the caller's Connection profile specifies PAP or CHAP authentication, and the first data received at the Telnet or terminal-server login prompt is PPP-encapsulated, the MAX TNT transitions to packet-mode processing immediately.

Usage: Specify an integer from 1 to 60. The default is 5.

Example: `set delay=15`

Dependencies: If terminal services are disabled, Delay does not apply.

Location: Terminal-Server > PPP-Mode-Configuration

See Also: PPP-Mode-Configuration

Delay-Callback

Description: Specifies the number of seconds the MAX TNT waits before calling back a remote user.

Description: Specify an integer from 0 to 60. The unit treats values of 0–3 as 3 seconds. The default is 0 (zero).

Example: `set delay-callback=5`

Dependencies: If Callback=No, Delay-Callback does not apply.

Location: Connection > Telco-Options

See Also: Answer-Originate, Billing-Number, Callback, Call-By-Call, Call-Type, Data-Service, Dialout-Allowed, Expect-Callback, Force-56Kbps, FT1-Caller, Nailed-Groups, Transit-Number

Desired-State

Description: Specifies the desired administrative state of a device. The actual state of the device can differ from the desired state, as when a device is powering up, or if you change the desired state on a running slot. Changing the desired state does not force a device to the new state. It indicates that the MAX TNT should change the device state in a graceful manner.

Usage: Specify one of the following values:

- Admin-State-Down specifies that the addressed device should terminate all operations and enter the down state.
- Admin-State-Up specifies that the addressed device should come up in normal operations mode.

Dependencies: You can change the administrative state of a device by using the SNMP Set commands, or the MAX TNT Slot-d and Slot -u commands.

Example: `set desired-state=admin-state-up`

Location: Admin-State {shelf-*N* slot-*N* *N*}, Admin-State-Perm-If *station*, Admin-State-Phys-If {shelf-*N* slot-*N* *N*}

See Also: Desired-Trap-State, Device-Address, Inet-Profile-Type, Modem-Table-Index, Slot-Type, SNMP-Interface

Desired-Trap-State

Description: Indicates the desired up/down enable state of the interface.

Usage: The Desired-Trap-State setting is read only. The system can set it to one of the following values:

- Trap-State-Enabled indicates that an operator has specified that linkUp/linkDown traps should be generated for the interface.
- Trap-State-Disabled indicates that an operator has specified that linkUp/linkDown traps should not be generated for the interface.

Example: `set desired-state=admin-state-up`

Location: Admin-State-Perm-If *station*, Admin-State-Phys-If {*shelf-N slot-N N*}

See Also: Desired-State, Device-Address, Modem-Table-Index, Slot-Type, SNMP-Interface

Dest-Address

Description: Specifies a destination IP address.

Usage: Specify an IP address. The default is 0.0.0.0. In an IP-Route profile, the null address represents a default route. Packets whose destinations do not match an entry in the routing table are forwarded to the default route. In a Filter profile, the MAX TNT compares Dest-Address to a packet's destination address after applying the Dest-Address-Mask value.

Example: `set dest-address=10.2.3.4`

Dependencies: In a Filter profile, Dest-Address applies only if Type=IP-Filter or Type=TOS-Filter.

Location: Filter *filter-name* > Input-Filters > IP-Filter,
Filter *filter-name* > Output-Filters > IP-Filter,
Filter *filter-name* > Input-Filters > TOS-Filter,
Filter *filter-name* > Output-Filters > TOS-Filter, IP-Route *name*

See Also: Input-Filters, IP-Filter, Output-Filters, Type

Dest-Address-Mask

Description: Specifies a mask to apply to a filter's Dest-Address value before comparing the value to the destination address in a packet. You can use the Dest-Address-Mask value to hide either the host portion of an address, or both the host and subnet portion.

After the mask and address are both translated into binary format, the MAX TNT performs a logical AND to apply the mask to the address. The mask hides the address bits that are behind its binary 0s (zeroes).

Usage: Specify a mask of ones and zeros in dotted decimal notation. The default is 0.0.0.0, which masks all bits. A mask of all ones (255.255.255.255) masks no bits, and specifies the full destination address of a single host.

Example: `set dest-address-mask=255.255.255.0`

Dependencies: Dest-Address-Mask applies only if Type=IP-Filter or Type=TOS-Filter.

Location: Filter *filter-name* > Input-Filters > IP-Filter,
Filter *filter-name* > Output-Filters > IP-Filter,
Filter *filter-name* > Input-Filters > TOS-Filter,
Filter *filter-name* > Output-Filters > TOS-Filter

See Also: Input-Filters, IP-Filter, Output-Filters, Type

Dest-Net-Address

Description: Specifies an IPX network address that the MAX TNT compares to a packet's destination IPX network address.

Usage: Specify an IPX network address in hexadecimal format. The default is 00:00:00:00, which matches all packets.

Example: `set dest-net-address=01:01:01:01`

Dependencies: Dest-Net-Address applies only if Type=IPX-Filter.

Location: Filter *filter-name* > Input-Filters > IPX-Filter,
Filter *filter-name* > Output-Filters > IPX-Filter

See Also: Input-Filters, IPX-Filter, Output-Filters, Type

Dest-Network

Description: Specifies the unique internal network number for the NetWare server.

Usage: Specify a hexadecimal number of up to eight characters. The default is 00000000. NetWare servers are assigned an internal IPX network number by the network administrator.

Example: `set dest-network=00000001`

Location: IPX-Route *name*

See Also: Active-Route, Hops, Name, Profile-Name, Server-Node, Server-Socket, Server-Type, Ticks

Dest-Node-Address

Description: Specifies an IPX node number that the MAX TNT compares to a packet's destination IPX node number.

Usage: Specify an IPX node number in hexadecimal format. The default is 00:00:00:00, which matches all packets.

Example: `set dest-node-address=01:01:01:01`

Dependencies: Dest-Node-Address applies only if Type=IPX-Filter.

Location: Filter *filter-name* > Input-Filters > IPX-Filter,
Filter *filter-name* > Output-Filters > IPX-Filter

See Also: Input-Filters, IPX-Filter, Output-Filters, Type

Dest-Port

Description: Specifies a value to compare with a packet's destination-port field.

Usage: Specify a number from 0 to 65535. The default is 0 (zero), which matches any port. Port 25 is reserved for SMTP, and is dedicated to receiving mail messages. Port 20 is reserved for FTP data messages, port 21 for FTP control sessions, and port 23 for Telnet.

Example: `set dest-port=25`

Dependencies: Consider the following:

- Dest-Port applies only if Type=IP-Filter or Type=TOS-Filter.
- Only TCP and UDP packets contain destination-port fields.
- The Dst-Port-Cmp setting specifies the type of comparison the MAX TNT makes.

Location: Filter *filter-name* > Input-Filters > IP-Filter,
Filter *filter-name* > Output-Filters > IP-Filter,
Filter *filter-name* > Input-Filters > TOS-Filter,
Filter *filter-name* > Output-Filters > TOS-Filter

See Also: Dst-Port-Cmp, Input-Filters, IP-Filter, Output-Filters, Type

Dest-Socket

Description: Specifies an IPX socket number that the MAX TNT compares to a packet's destination IPX socket number.

Usage: Specify an IPX socket number. The default is 00:00, which matches all packets.

Example: `set dest-socket=01:01`

Dependencies: Dest-Socket applies only if Type=IPX-Filter.

Location: Filter *filter-name* > Input-Filters > IPX-Filter,
Filter *filter-name* > Output-Filters > IPX-Filter

See Also: Input-Filters, IPX-Filter, Output-Filters, Type

Detect-End-Of-Packet

Description: Specifies whether the MAX TNT buffers incoming data from TCP-Clear dial-in sessions that do not require V.120 processing.

Usage: Specify Yes or No. The default is No.

- Yes specifies that after authenticating the session, the MAX TNT begins buffering incoming WAN data. The MAX TNT continues buffering data until it receives the specified End-Of-Packet-Pattern, until it reaches the timeout specified by Flush Time, or until the data reaches the maximum packet length specified by Flush-Length, whichever occurs first.
- No specifies that the MAX TNT does not buffer incoming data from a TCP-Clear dial-in session.

Example: `set detect-end-of-packet=yes`

Location: Answer-Defaults > TCP-Clear-Answer, Connection *station* > TCP-Clear-Options

See Also: Enabled, End-Of-Packet-Pattern, Flush-Length, Flush-Time

Device-Address

Description: Specifies the address of any of the following devices:

- HDLC processor on an HDLC card
- Channel on an E1, T1, or T3 card
- Modem on a modem card
- V.35 interface on a Serial WAN (SWAN) card
- Ethernet interface on an Ethernet card
- Channel on an ISDL, SDSL, RADSL, or FrameLine card

Usage: The device address has the format { *shelf slot item* }, where:

Syntax element	Description
<i>shelf</i>	Specifies the shelf in which the item resides. If you are using a single-shelf system, the shelf number is always 1. For call-routing purposes, a value of 0 (zero) or <i>any-shelf</i> specifies any shelf.
<i>slot</i>	Specifies the number of the item's expansion slot. Physical expansion slots are numbered from 1 to 16, starting with 1 for the slot just below the shelf controller. The slot value 17, <i>controller</i> , or <i>c</i> specifies the shelf controller card. For call-routing purposes, a value of 0 (zero) or <i>any-slot</i> specifies any slot. For example, to address the first slot on shelf 1: { 1 1 0 }
<i>item</i>	Specifies an item, such as a digital modem or T1 line, on the slot card. Items are numbered starting with #1 for the leftmost item on the card. An item number of 0 (zero) denotes the entire slot. For example, to address modem #48 on a modem card in slot #2 on shelf 1: { 1 2 48 }

In most cases, the Device-Address value is obtained from the system. However, you can clone a profile by reading an existing one and changing its device address. Use the List and Set commands to modify the Device-Address value. For example:

```
admin> list device
[ in ADMIN-STATE { shelf-1 slot-9 37 } ]
shelf=shelf-1
slot=slot-9
item-number=37

admin> set shelf=shelf-2
```

As an alternative, you can just use the Set command. For example:

```
admin> set device shelf=shelf-2
```

Location: Admin-State {shelf-*N* slot-*N* *N*}, Admin-State-Phys-If {shelf-*N* slot-*N* *N*}, Device-State {{shelf-*N* slot-*N* *N*} *N*}

See Also: Item-Number, Physical-Address, Shelf, Slot

Device-Class

Description: Indicates the class of a device described by the Device-Summary profile.

Usage: The Device-Class setting is read only. It can specify Modem, HDLC, or Unknown.

Example: `device-class=modem`

Location: Device-Summary

See Also: Disabled-Count, Operational-Count, Total-Count

Device-ID

Description: Specifies the identification number of the Access SS7 Gateway (ASG).

Usage: Accept the default of 0 (zero).

Dependencies: If Enabled=No in the SS7-Gateway profile, Device-ID does not apply.

Location: SS7-Gateway

See Also: Enabled, Primary-IP-Address, Primary-TCP-Port, Secondary-IP-Address, Secondary-TCP-Port

Device-State

Description: Indicates the current operational state of a device.

Usage: Device-State is read only. It can have one of the following values:

- Down-Dev-State indicates that the device is in a nonoperational state.
- Up-Dev-State indicates that the device is in normal operations mode.
- None-Dev-State indicates that the device does not currently exist.

Example: `device-state=up-dev-state`

Location: Device-State {{shelf-*N* slot-*N* *N*} *N*}

See Also: Req'd-State

Device-State (profile)

Description: A profile that stores the current state of a device. The MAX TNT creates a Device-State profile for each DS0 and each SCA when the card enters the Up state.

The MAX TNT does not store the Device-State profile in NVRAM, so the profile's settings do not persist across system resets or power cycles. The Device-State setting might differ from the Req'd-State setting during state changes, such as when a device is being brought down. State changes are complete when the Device-State and the Req'd-State match.

Usage: To make Device-State the working profile, use the Read command, and specify a shelf, slot, item, and logical item number.

Item numbers 1 through 10 identify a line on the card. Item numbers 11 through 20 identify an SCA device on the card. The logical item number refers to a DS0 channel number from 0 to 24. For an SCA, the logical item number is always 0 (zero).

Example: To make Device-State the working profile for the device at interface address {{1 4 2}15}:

```
admin> read device {{1 4 2}15}
DEVICE-STATE/{ { shelf-1 slot-4 2 } 15 } read
admin> list
[in DEVICE-STATE/{ { shelf-1 slot-4 2 } 15 }]
device-address*={ { shelf-1 slot-4 2 } 15 }
device-state=down-dev-state
up-status=idle-up-status
reqd-state=up-reqd-state
```

You can then use the Set command to modify the settings in the profile. To close the profile and save your changes:

```
admin> write
DEVICE-STATE/{ { shelf-1 slot-4 2 } 15 } written
```

Dependencies: An SNMP manager can read the Device-State profile.

See Also: Device-Address, Device-State, Req'd-State, Up-Status

Device-Summary

Description: A read-only profile that supplies information about different classes of host devices available in the system.

Usage: Use the Read and List commands to make Device-Summary the working profile and list its contents. For example:

```
admin> read device-summary modem
DEVICE-SUMMARY/modem read
```

```
admin> list
[ in DEVICE-SUMMARY/modem ]
device-class*=modem
total-count=48
operational-count=48
disabled-count=48
```

Dependencies: The Device-Summary profile is available in RAM only. It is not stored in NVRAM or by the Save command.

See Also: Device-Class, Disabled-Count, Operational-Count, Total-Count

Dev-Line-State

Description: Indicates the status of the RADSL or SDSL interface.

Usage: The Dev-Line-State value is read only.

RADSL values

For the RADSL card, Dev-Line-State can have one of the following values:

Value	Description
Port-Up	The RADSL connection is operating normally, and data can be transferred between nodes.
Test	The unit is undergoing a Power-On Self Test (POST).
Startup-Handshake	The RADSL units are trying to establish a connection. The local node is waiting for the remote node's connection request. If this condition persists, the connection between the units could be faulty.
Startup-Training	The units are negotiating a connection.
Startup-Download	The unit is downloading firmware code into the RADSL card.
Idle	The unit has been reset and has not yet downloaded its firmware.
Down	The RADSL port is down. Data cannot be transmitted between nodes. The link goes down if one of the nodes loses power or if the line quality deteriorates. The unit determines the line quality from the Line-Quality reading. If the difference between the Line-Quality value and the Connection-SQ value is greater than 6dB for 22 seconds, the unit disconnects the line. This situation can occur when a line becomes open or when the remote unit loses power.
Out-Of-Service	The port has been administratively disabled.

SDSL values

For the SDSL card, Dev-Line-State can have one of the following values:

Value	Description
Config	The physical interface is being configured.
Deactivate	The interface is going to a port-down state.
Deactive-Lost	The interface is waiting for the Loss of Signal (LOS) timer to expire.
Inactive	The interface is starting up.
Activating	The interface is waiting for the remote side to start up.
Active-RX	The interface is waiting for the remote side to start a 4-level transmission.
Port-Up	The SDSL connection is operating normally, and data can be transferred between nodes.
Port-Up-Pending-Deactive	The interface experienced an LOS or noise-margin error. This condition occurs when the line detects noise of about -5dB.

Location: ADSL-CAP-Stat {shelf-*N* slot-*N* *N*} > Physical-Status
SDSL-Stat {shelf-*N* slot-*N* *N*} > Physical-Status

See Also: Down-Stream-Constellation, Down-Stream-Operational-Baud, Down-Stream-Rate, Hardware-Ver, IF-Group-Index, Major-Firmware-Ver, Minor-Firmware-Ver, Physical-Address, Unit-Type, Up-Stream-Constellation, Up-Stream-Rate

Dial-Number

Description: Specifies the phone number used to dial the connection.

Usage: Specify the phone number of the remote station. You may enter up to 24 characters. The default is null.

Example: `set dial-number=510-555-1212`

Location: Connection *station*

See Also: CalledNumber

Dialout-Allowed

Description: Specifies whether the connection can use the MAX TNT unit's digital modems to dial out.

Usage: Specify Yes or No. The default is No.

- Yes specifies that the user can dial out on digital modems.
- No specifies that the user cannot dial out on digital modems.

Example: `set dialout-allowed=yes`

Location: Connection *station* > Telco-Options

See Also: Dialout-Configuration, LAN-Modem, Telco-Options

Dialout-Configuration

Description: A subprofile that contains configuration options for modem dialout. If modem dialout is enabled, local users can dial connections with the MAX TNT unit's digital modems. Each user can issue AT commands to the modem as if connected locally to the modem's asynchronous port.

Usage: With Terminal-Server as the working profile, list the Dialout-Configuration subprofile. For example:

```
admin> list dialout
[in TERMINAL-SERVER:dialout-configuration]
enabled=no
direct-access=yes
port-for-direct-access=5000
security-for-direct-access=none
password-for-direct-access=mypassword
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: Terminal-Server

See Also: Direct-Access, Enabled, Password-For-Direct-Access, Port-For-Direct-Access, Security-For-Direct-Access

Dialout-Poison

Description: Specifies whether the MAX TNT should stop advertising its IP dialout routes (poison the routes) when no trunks are available.

The Yes setting solves a problem that can otherwise occur when two or more Ascend units on the same network are configured with redundant profiles and routes. If Dialout-Poison is set to No, and one of the redundant units loses its trunks temporarily, that unit continues to receive outgoing packets that should be forwarded to one of the other redundant Ascend units.

Usage: Specify Yes or No. The default is No.

- Yes specifies that the MAX TNT stops advertising its IP dialout routes if no trunks are available.
- No specifies that the MAX TNT continues to advertise its dialout routes, even if no trunks are currently available. No is the appropriate setting unless you have redundant Ascend units or don't use dialout routes.

Example: `set dialout-poison=no`

Location: IP-Global

See Also: RIP-Policy

Dial-Query

Description: Specifies whether or not the MAX TNT brings up a connection when it receives a SAP query for service type 0x04 (File Server), and that service type is not present in the MAX TNT SAP table.

Usage: Specify Yes or No. The default is No.

- Yes specifies that the MAX TNT brings up a connection.
- No specifies that the MAX TNT does not bring up a connection.

Example: `set dial-query=yes`

Dependencies: Consider the following:

- If the MAX TNT has no SAP table entry for service type 0x04, it brings up every connection that has Dial-Query=Yes. For example, if 20 Connection profiles specify Dial-Query=Yes, the MAX TNT brings up all 20 connections in response to the query. However, if the MAX TNT has a static IPX route for even one remote server, it brings up that connection instead.
- If the MAX TNT does not route IPX for the connection, or if IPX routing is globally disabled, Dial-Query does not apply.

Location: Connection *station* > IPX-Options

See Also: IPX-Header-Compression, IPX-Routing-Enabled, IPX-SAP-HS-Proxy, IPX-SAP-HS-Proxy-Net, Net-Alias, Net-Number, Peer-Mode, RIP, SAP, SAP-Filter

Digital-Call-Routing-Sort-Method

Description: Specifies whether to use the old slot-first call-routing sort method or the new item-first sort method for digital calls.

When the system resets, the MAX TNT creates the call-routing database by sorting the list of all installed devices. During active use, the unit resorts the list on the basis of system activity, but the initial sort order determines the initial order in which the MAX TNT uses HDLC channels. In previous software releases, the order in which the MAX TNT sorted device addresses caused all channels of an HDLC card to be grouped together, forcing a single card to be completely full before the MAX TNT started using another card.

The old sort-order processed the components of device addresses in the following order:

shelf slot item logical-item

The new sort-order processes device-address components in the following manner, causing the channels of different HDLC cards to be interspersed:

item shelf slot logical-item

Usage: Specify one of the following values:

- Slot-First (the default) specifies that the MAX TNT sorts by shelf and slot number, and then by item number. This setting improves system performance for MP and MP+ calls by concentrating the channels of a call on one HDLC card.
- Item-First specifies that the MAX TNT sorts by item number, then shelf, and then slot number. This setting distributes incoming calls evenly across multiple HDLC cards. Distributing calls across cards for bundled channels creates extra processing overhead.

Example: `set digital-call-routing-sort-method=slot-first`

In this example, the system has an HDLC card in slots 1/15 and 9/2. The system creates the following call-routing database after a reset:

```
admin> callroute -a
1:15:01/1    0 0:00:00/0    digital-call-type  0  0
1:15:01/2    0 0:00:00/0    digital-call-type  0  0
1:15:01/3    0 0:00:00/0    digital-call-type  0  0
.
.
.
1:15:01/32   0 0:00:00/0    digital-call-type  0  0
```

The calls are concentrated on one HDLC card.

Location: System

See Also: Call-Route, Call-Route-Info, Call-Route-Type, Call-Routing-Sort-Method

Dirdo-Enabled

Description: Specifies whether the system generates a trap when a T-Online call comes in and no answer/subaddress has been received.

Usage: Specify Yes or No. Yes is the default.

- Yes specifies that the system generates a trap.
- No specifies that the system does not generate a trap.

Example: `set dirdo-enabled=no`

Location: Trap *host-name*

See Also: T-Online

Direct

Description: Specifies whether PPP negotiation is initiated immediately after an interactive user enters the PPP command in the terminal-server interface.

Usage: Specify Yes or No. The default is No.

- Yes enables direct PPP negotiation.
- No specifies that the terminal server waits to receive a PPP packet before beginning PPP negotiation.

Example: `set direct=no`

Dependencies: If terminal services are disabled, Direct does not apply.

Location: Terminal-Server > PPP-Mode-Configuration

See Also: PPP, PPP-Mode-Configuration

Direct-Access

Description: Enables or disables the direct-access dialout feature.

Usage: Specify Yes or No. The default is No.

- Yes specifies that a user can access a modem for direct-access dialout service by initiating a Telnet session on the port specified by Port-For-Direct-Access.
- No disables the direct-access dialout feature.

Example: `set direct-access=yes`

Dependencies: If terminal services are disabled, Direct-Access does not apply.

Location: Terminal-Server > Dialout-Configuration

See Also: Dialout-Configuration, Password-For-Direct-Access, Port-For-Direct-Access, Security-For-Direct-Access

Directed-Broadcast-Allowed

Description: Specifies whether the MAX TNT forwards directed broadcast traffic onto the interface and its network.

Usage: Specify Yes or No. The default is Yes.

- Yes specifies that the MAX TNT forwards directed broadcast traffic onto the interface and its network.
- No specifies that the MAX TNT drops directed broadcast traffic that is not generated locally, preventing it from propagating onto intermediary networks.

Example: `set directed-broadcast-allowed=no`

Dependencies: To protect all of the LAN interfaces against Denial of Services (DoS) attacks that use directed broadcast traffic, you must set Directed-Broadcast-Allowed=No in all IP-Interface profiles.

Location: IP-Interface { {shelf-*N* slot-*N* *N*} *N*}

See Also: ICMP-Reply-Directed-Bcast

Disabled-Count

Description: Indicates the number of devices that are in the down state.

Usage: The Disabled-Count setting is read only.

Example: `disabled-count=0`

Location: Device-Summary

See Also: Device-Class, Operational-Count, Total-Count

Disconnect-On-Auth-Timeout

Description: Instructs the MAX TNT to disconnect a PPP connection if it times out while waiting for RADIUS authentication.

Usage: Specify Yes or No. The default is No.

- Yes causes the MAX TNT to hang up a PPP connection upon a RADIUS timeout.
- No causes the MAX TNT to shut down cleanly after a RADIUS timeout.

Example: `set disconnect-on-auth-timeout=yes`

Location: Answer-Defaults > PPP-Answer

See Also: PPP, PPP-Answer

Divider

Description: Specifies the number by which the SCA internal clock speed (16.667 MHz) is divided in order to arrive at the internal clock speed on a SWAN line.

Usage: Specify a value from 1 to 256. The default is 1.

Example: `set divider=5`

Dependencies: If Clock-Mode=External-Clock, Divider does not apply.

Location: SWAN {shelf-*N* slot-*N* *N*} > Line-Config > Clocking

See Also: Clock-Mode, Exp

DLCI

Description: Specifies a Data Link Connection Indicator (DLCI) number for a Frame Relay gateway or switch. A DLCI is not an address, but a local label that identifies a logical link between a device and the Frame Relay switch. The switch uses the DLCI to route frames through the network, and the DLCI can change as frames are passed through multiple switches.

Usage: Specify an integer from 16 to 991. The default is 16. Ask your Frame Relay network administrator for the value you should enter.

Example: `set dlci=17`

Dependencies: Consider the following:

- If FR-Direct-Enabled=Yes, DLCI does not apply. It applies only to gateway or circuit connections.
- The T1 Frameline (UT1) card supports a maximum of 240 active DLCIs.
- The SWAN card supports a maximum of 120 active DLCIs.

Location: Connection *station* > FR-Options

See Also: Encapsulation-Protocol, FR-Direct-Enabled, FR-Options

DMTADSL

Description: Specifies the action to take when the code image for an ADSL-DMT card is present in a Tar file.

Usage: Specify one of the following settings:

- Auto (the default) causes the system to load images for cards that are installed in the MAX TNT, and to skip images for cards that are not installed.
- Load causes the system to load the image, even if there is no card of that type installed.
- Skip causes the system to skip the image, even if there is a card of that type installed.

Dependencies: A card is considered present in the system if a Slot-Type profile exists for that card type. The system creates a Slot-Type profile when it first detects the presence of a card, and does not delete the profile unless the administrator uses the Slot -r command to permanently remove a card that is no longer installed in the system, or clears NVRAM. To ensure that the system does not load unnecessary images, use Slot -r to remove Slot-Type profiles for cards that are no longer installed in the system.

Location: Load-Select

See Also: 8E1, 8T1, AMDM, CAPADSL, DS3-ATM, Enet, Enet2, HDLC, HDLC2, IDSL, MDM56K, MDM-V34, SDSL, SDSL70D, SDSL70V, SWAN, T3, UDS3, UE1, Unknown-Cards, UT1

DNS-List-Attempt

Description: Specifies whether the MAX TNT returns multiple addresses for a host when DNS responds with more than one address.

Usage: Specify Yes or No. The default is No.

- Yes specifies that the MAX TNT returns the number of addresses it finds for the host, up to the limit specified by DNS-List-Size. The new addresses are stored in the DNS table in RAM, overwriting the configured addresses or the addresses received from earlier DNS queries. To prevent stale entries in the table in RAM, the system clears the number of addresses over the amount specified by DNS-List-Size.
- No specifies that the MAX TNT returns only one address from any successful DNS query. In the local DNS table in RAM, the returned address is stored and the remaining 34 addresses are cleared and set to null.

Dependencies: If Telnet and immediate Telnet are both disabled, DNS-List-Attempt does not apply.

Example: An administrator configures 8 hostnames with null addresses and then sets Auto-Update to Yes. The DNS-Local-Table changes are propagated to RAM, and successful DNS queries to the specified hostnames will build the table with up to 14 addresses for each of the hosts.

```
admin> read ip-global
IP-GLOBAL read

admin> set dns-list-attempt=yes

admin> set dns-list-size=14

admin> list dns-local
[in IP-GLOBAL:dns-local-table]
enabled=no
auto-update=no
table-config=[ { " 0.0.0.0 } { " 0.0.0.0 } { " 0.0.0.0 } { " +
admin> set enabled=yes
admin> set auto-update=yes
```

```
admin> list table
[In IP-GLOBAL:dns-local-table:table-config]
table-config[1]={ " " 0.0.0.0 }
table-config[2]={ " " 0.0.0.0 }
table-config[3]={ " " 0.0.0.0 }
table-config[4]={ " " 0.0.0.0 }
table-config[5]={ " " 0.0.0.0 }
table-config[6]={ " " 0.0.0.0 }
table-config[7]={ " " 0.0.0.0 }
table-config[8]={ " " 0.0.0.0 }

admin> set 1 host=mercury
admin> set 2 host=venus
admin> set 3 host=earth
admin> set 4 host=mars
admin> set 5 host=jupiter
admin> set 6 host=saturn
admin> set 7 host=uranus
admin> set 8 host=neptune
admin> write
IP-GLOBAL written
```

Location: IP-Global

See Also: Auto-Update, DNS-List-Size, Host, Immediate-Mode-Options, TCP-Timeout

DNS-List-Size

Description: Specifies the maximum number of hosts listed in response to a DNS query. Users logging in through Telnet or immediate Telnet see a list containing up to the specified number of hosts. The DNS list can come from either a DNS server or a local DNS table.

Usage: Enter a number from 0 to 35. The default is 6.

Example: `set dns-list-size=10`

Location: IP-Global

See Also: Auto-Update, DNS-List-Attempt

DNS-Local-Table

Description: A subprofile that enables you to configure a local DNS table of up to eight hostnames and their IP addresses. At system startup, the unit copies the values from the subprofile to the table in RAM. If you subsequently modify the DNS-Local-Table subprofile, the changes are propagated to the table in RAM when you Write the subprofile.

Note: The local DNS table has space for the number of addresses per hostname specified by the DNS-List-Size setting. However, the DNS-Local-Table subprofile allows only a single IP address per hostname.

Usage: With IP-Global as the working profile, list the DNS-Local-Table subprofile. For example:

```
admin> list dns-local-table
[in IP-GLOBAL:dns-local-table]
enabled=no
auto-update=no
table-config=[ { " 0.0.0.0 } { " 0.0.0.0 } { " 0.0.0.0 } +
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Dependencies: Consider the following

- The local DNS table applies to all slot cards that support DNS.
- If you modify the DNS-Local-Table subprofile, assigning a single address to a host, the newly configured address is propagated to the table in RAM. The first address of the hostname entry is overwritten with the configured address, and all remaining addresses are cleared. If Auto-Update=Yes, the next successful DNS query overwrites the configured address and restores the multiple addresses (up to DNS-List-Size).

Location: IP-Global

See Also: Auto-Update, DNS-List-Size, Enabled, Table-Config N

DNS-Primary-Server

Description: Specifies the IP address of the primary DNS server for use on connected interfaces. If you do not configure client DNS, you can allow the MAX TNT to make your primary and secondary DNS servers available to both WAN users and users on connected networks.

Usage: Specify the IP address of a DNS server. The default is 0.0.0.0, which specifies that no local primary DNS server is available.

Example: `set dns-primary-server=10.1.2.3/24`

Location: IP-Global

See Also: Allow-As-Client-DNS-Info, Client-DNS-Addr-Assign, Client-DNS-Primary-Addr, Client-DNS-Secondary-Addr, Client-Primary-DNS-Server, Client-Secondary-DNS-Server, DNS-Secondary-Server

DNS-Secondary-Server

Description: Specifies the IP address of the secondary DNS server for use on connected interfaces. The MAX TNT accesses the secondary server if the primary server is not available. If you do not configure client DNS, you can allow the MAX TNT to make your primary and secondary DNS servers available to both WAN users and users on connected networks.

Usage: Specify the IP address of the secondary DNS server. The default is 0.0.0.0, which indicates no secondary server.

Example: `set dns-secondary-server=10.57.23.11/24`

Location: IP-Global

See Also: Allow-As-Client-DNS-Info, Client-DNS-Addr-Assign, Client-DNS-Primary-Addr, Client-DNS-Secondary-Addr, Client-Primary-DNS-Server, Client-Secondary-DNS-Server, DNS-Primary-Server

Domain-Name

Description: Specifies the local domain name for DNS lookups.

Usage: Specify the local domain name. The default is null.

Example: `set domain-name=abc.com`

Location: IP-Global

See Also: DNS-Primary-Server, DNS-Secondary-Server

Down-Preference

Description: Specifies the preference for an inactive IP route. The MAX TNT uses this value to determine when to bring a route online.

When choosing which route to use, the router first compares the preference values, preferring the lower number. If the preference values are equal, the router compares the metric values, using the route with the lower metric.

Usage: Enter a number from 0 to 214748364. The lower the preference, the more likely the MAX TNT will bring the route online.

Example: `set down-preference=255`

Location: Connection *station* > IP-Options

See Also: IP-Options, OSPF-ASE-Pref, OSPF-Pref, Preference, RIP-Pref, Static-Pref

Down-Stream-Constellation

Description: Indicates the operational downstream constellation. A constellation is the number of points within the digital spectrum.

Usage: The Down-Stream-Constellation value is read only. A value of 0 (zero) indicates that the downstream constellation is unknown. A value of 1 (one) indicates automatic.

Example: `down-stream-constellation=1`

Location: ADSL-CAP-Stat {shelf-*N* slot-*N* *N*} > Physical-Status

See Also: Dev-Line-State, Down-Stream-Operational-Baud, Down-Stream-Rate, Hardware-Ver, IF-Group-Index, Major-Firmware-Ver, Minor-Firmware-Ver, Physical-Address, Unit-Type, Up-Stream-Constellation, Up-Stream-Rate

Down-Stream-Margin

Description: Specifies the minimum requirement in dB for downstream transmission on the line.

Usage: Specify a value from 0 to 25. The default is 3. The higher the value, the less noise and interference on the line.

Example: `set down-stream-margin=10`

Dependencies: If you change the value of Down-Stream-Margin, the line retrains with the new value immediately after you write the profile. If the line cannot train to the specified margin or higher, the session does not come up.

Location: ADSL-DMT {shelf-*N* slot-*N* *N*} > Line Config

See Also: Up-Stream-Margin

Down-Stream-Operational-Baud

Description: Indicates the downstream operational baud rate.

Usage: The Down-Stream-Operational-Baud setting is read only.

Location: ADSL-CAP-Stat {shelf-*N* slot-*N* *N*} > Physical-Status

See Also: Dev-Line-State, Down-Stream-Constellation, Down-Stream-Rate, Hardware-Ver, IF-Group-Index, Major-Firmware-Ver, Minor-Firmware-Ver, Physical-Address, Unit-Type, Up-Stream-Constellation, Up-Stream-Rate

Down-Stream-Rate

Description: Indicates the downstream data rate for the RADSL or SDSL interface.

Usage: The Down-Stream-Rate setting is read only. A value of 0 (zero) indicates that the data rate is unknown.

Dependencies: RADSL and SDSL ensure maximum throughput for the particular condition of the line. The better the line quality, the higher the data rate.

Location: ADSL-CAP-Stat {shelf-*N* slot-*N* *N*} > Physical-Status
SDSL-Stat {shelf-*N* slot-*N* *N*} > Physical-Status

See Also: Dev-Line-State, Down-Stream-Constellation, Down-Stream-Operational-Baud, Hardware-Ver, IF-Group-Index, Major-Firmware-Ver, Minor-Firmware-Ver, Physical-Address, Unit-Type, Up-Stream-Constellation, Up-Stream-Rate

Drop-Source-Routed-IP-Packets

Description: Specifies whether the MAX TNT forwards IP packets with the source-route option set.

Usage: Specify Yes or No. The default is No.

- Yes specifies that the MAX TNT drops all packets that have a Loose or a Strict source route among their IP options.
- No specifies that the MAX TNT forwards all source-routed packets, as described in RFC 1812.

Example: `set drop-source-routed-ip-packets=no`

Location: IP-Global

See Also: IP-Global

DS2-State

Description: An array listing the state of each DS2 line in a DS3 line. The index to each array component is an integer from 1 to 7. Following are the possible values for DS2-State:

- Does-Not-Exist specifies that the line is not installed.
- Disabled specifies that the line is disabled.
- Loss-Of-Sync specifies that the line is in a red-alarm state.
- Yellow-Alarm specifies that a device on the DS2 stream is detecting certain framing errors in the signal.
- AIS-Receive specifies that the line is receiving a keepalive signal.
- Active specifies that multipoint service is established on the line.

Usage: Use the List command to display the array. In the following example, T3-Stat is the working profile:

```
admin> list ds2-state
[in T3-STAT:ds2-state]
ds2-state[1]=idle
ds2-state[2]=idle
ds2-state[3]=dialing
...
```

To close the array and return to a higher context in the T3-Stat profile:

```
admin> list ..
```

Location: T3-Stat {shelf-*N* slot-*N* *N*}

See Also: Line-State, Physical-Address

DS3-ATM

Description: Specifies the action to take when the code image for an ATM-DS3 card is present in a Tar file.

Usage: Specify one of the following settings:

- Auto (the default) causes the system to load images for cards that are installed in the MAX TNT, and to skip images for cards that are not installed.
- Load causes the system to load the image, even if there is no card of that type installed.
- Skip causes the system to skip the image, even if there is a card of that type installed.

Dependencies: A card is considered present in the system if a Slot-Type profile exists for that card type. The system creates a Slot-Type profile when it first detects the presence of a card, and does not delete the profile unless the administrator uses the Slot -r command to permanently remove a card that is no longer installed in the system, or clears NVRAM. To ensure that the system does not load unnecessary images, use Slot -r to remove Slot-Type profiles for cards that are no longer installed in the system.

Location: Load-Select

See Also: 8E1, 8T1, AMDM, CAPADSL, DMTADSL, Enet, Enet2, HDLC, HDLC2, IDSL, MDM56K, MDM-V34, SDSL, SDSL70D, SDSL70V, SWAN, T3, UDS3, UE1, Unknown-Cards, UT1

DSP-DTMF-Input-Sample-Count

Description: Specifies the number of Goertzel input samples to compute in order to decode a DTMF digit.

Usage: Specify One-Sample or Two-Samples. The default is One-Sample. A setting of Two-Samples creates a more accurate result.

Example: `set dsp-dtmf-input-sample-count=two-samples`

Dependencies: You must set Signaling-Mode=Inband for DSP-DTMF-Input-Sample-Count to have any effect.

Location: T1 {shelf-*N* slot-*N* *N*} > Line-Interface

See Also: Collect-Incoming-Digits, Signaling-Mode

Dst-Port-Cmp

Description: Specifies the type of comparison to use when comparing the Dest-Port value to the destination port in a packet.

Usage: Specify one of the following values:

- None (the default) specifies that the MAX TNT does not compare the packet's destination port number to the Dest-Port value.
- Less specifies that port numbers with a value less than the value specified by Dest-Port match the filter.
- Eql specifies that port numbers equal to the value specified by Dest-Port match the filter.
- Gtr specifies that port numbers with a value greater than the value specified by Dest-Port match the filter.
- Neq specifies that port numbers not equal to the value specified by Dest-Port match the filter.

Example: `set dst-port-cmp=less`

Dependencies: For Dst-Port-Cmp to apply, you must set Type=IP-Filter or Type=TOS-Filter. In addition, only TCP and UDP packets contain destination ports.

Location: Filter *filter-name* > Input-Filters > IP-Filter,
Filter *filter-name* > Output-Filters > IP-Filter, Filter *filter-name* > Input-Filters > TOS-Filter,
Filter *filter-name* > Output-Filters > TOS-Filter

See Also: Input-Filters, IP-Filter, Output-Filters, Type

Dst-Socket-Cmp

Description: Specifies the type of comparison to use when comparing the Dest-Socket value to the destination socket in a packet.

Usage: Specify one of the following values:

- None (the default) specifies that the MAX TNT does not compare the packet's destination socket number to the Dest-Socket value.
- Less specifies that socket numbers with a value less than the value specified by Dest-Socket match the filter.
- Eql specifies that socket numbers equal to the value specified by Dest-Socket match the filter.
- Gtr specifies that socket numbers with a value greater than the value specified by Dest-Socket match the filter.
- Neq specifies that socket numbers not equal to the value specified by Dest-Socket match the filter.

Example: `set dst-socket-cmp=less`

Dependencies: For Dst-Socket-Cmp to apply, you must set Type=IPX-Filter.

Location: Filter *filter-name* > Input-Filters > IPX-Filter,
Filter *filter-name* > Output-Filters > IPX-Filter

See Also: Input-Filters, IPX-Filter, Output-Filters, Type

DSX-Line-Length

Description: Specifies the length (in feet) of the physical T1 (DSX) line.

Usage: The value you specify should reflect the longest line length you expect to encounter in your installation. Specify one of the following values:

- 1-133 (the default).
- 134-266
- 267-399
- 400-533
- 534-655

Example: `set dsx-line-length=133`

Dependencies: If the MAX TNT has an internal Channel Service Unit (CSU) at the interface to the line, DSX-Line-Length does not apply.

Location: T1 {shelf-*N* slot-*N* *N*} > Line-Interface

See Also: Front-End-Type, Line-Interface

Duplex-Mode

Description: Specifies whether the physical Ethernet interface of the 100BaseT port on the Ethernet-2 card uses full-duplex or half-duplex mode.

Usage: Specify one of the following settings:

- Full-Duplex (the default) provides increased throughput.
- Half-Duplex enables operation with older equipment that does not support full-duplex mode.

Example: In the following example, the port is set to half-duplex mode:

```
admin> read ethernet { 1 7 4 }
ETHERNET/{ shelf-1 slot-7 4 } read
admin> list
[in ETHERNET/{ shelf-1 slot-7 4 }]
interface-address*={ shelf-1 slot-7 4 }
link-state-enabled=no
enabled=yes
ether-if-type=utp
bridging-enabled=no
filter-name=""
duplex-mode=full-duplex
admin> set duplex-mode=half
admin> write
ETHERNET/{ shelf-1 slot-7 4 } written
```

Location: Ethernet {shelf-*N* slot-*N* *N*}

See Also: Ether-IF-Type, Enabled, Filter-Name, Interface-Address, Link-State-Enabled

Dynamic-Algorithm

Description: Specifies the algorithm to use to calculate the average link utilization (ALU) over a specified number of seconds (Seconds-History). After calculating the average, the MAX TNT compares it to the Target-Utilization value. If the average exceeds or falls below the target for a specified number of seconds, the MAX TNT adjusts the bandwidth of the connection.

Usage: Specify one of the following values:

- Quadratic (the default) gives more weight to recent samples of bandwidth usage than to older samples. The weighting grows at a quadratic rate.
- Linear gives more weight to recent samples of bandwidth usage than to older samples. The weighting grows at a linear rate.
- Constant gives equal weight to all samples.

Example: `set dynamic-algorithm=quadratic`

Location: Answer-Defaults > MPP-Answer, Connection *station* > MPP-Options

See Also: Add-Persistence, Bandwidth-Monitor-Direction, Base-Channel-Count, Decrement-Channel-Count, Increment-Channel-Count, Maximum-Channels, Minimum-Channels, MPP-Answer, MPP-Options, Seconds-History, Sub-Persistence, Target-Utilization

E

E1

Description: A profile that contains configuration settings for an E1 line and its channels.

Usage: Use the Read and List commands to make E1 the working profile and list its contents. For example:

```
admin> read e1 {1 8 2}
E1/{ shelf-1 slot-8 2 } read

admin> list
[in E1/{ shelf-1 slot-8 2 }]
name=trunk-1
physical-address*={ shelf-1 slot-8 2 }
line-interface={ no g703 eligible middle-priority isdn +
back-to-back=false
t302-timer=6000
t-online-type=te
```

You can then use the Set command to modify the settings in the profile. To close the profile and save your changes:

```
admin> write
E1/{ shelf-1 slot-8 2 } written
```

See Also: Back-To-Back, Line-Interface, Name, Physical-Address, T302-Timer, T-Online

Enabled

Description: Enables or disables a feature, interface, or line.

Usage: Specify Yes or No. The default for the Ethernet profile is Yes. The default for other profiles is No.

- Yes enables a feature, interface, or line.
- No disables a feature, interface, or line. If Enabled=No in the Ethernet profile, packets routed to and received by the interface are discarded.

Example: `set enabled=yes`

Dependencies: In the DNS-Local-Table subprofile of the IP-Global profile, the Enabled setting specifies whether the local DNS table in RAM is available if a DNS query fails. If Enabled=No (the default), and a DNS query times out, the request fails. If Enabled=Yes, the MAX TNT attempts to resolve the query by using the host-to-address mappings in the DNS table in RAM. If the query has an entry in the table in RAM, the system returns the associated IP address(es) to the requester.

Location: ADSL-CAP {shelf-*N* slot-*N* *N*}, ADSL-DMT {shelf-*N* slot-*N* *N*}, Answer-Defaults, Connection *station*, E1 {shelf-*N* slot-*N* *N*}, Ethernet {shelf-*N* slot-*N* *N*}, IDSL {shelf-*N* slot-*N* *N*}, IP-Global, SDSL {shelf-*N* slot-*N* *N*}, SNMP, SS7-Gateway, SWAN {shelf-*N* slot-*N* *N*}, T1 {shelf-*N* slot-*N* *N*}, T3 {shelf-*N* slot-*N* *N*}, Terminal-Server, Tunnel-Server *name*

See Also: ADSL-CAP, Answer-Defaults, Connection, DNS-Local-Table, E1, Ethernet, IDSL (profile), IP-Global, SDSL (profile), SNMP, SWAN (profile), T1, T3 (profile), Terminal-Server

Encapsulation-Protocol

Description: Specifies the encapsulation method to use for the connection. Both sides of the connection must support the specified encapsulation method. Usually, encapsulation protocols have their own configuration options within the subprofile of a Connection profile.

Usage: Specify one of the following values:

- PPP for single-channel PPP connections.
- MP (Multilink Protocol, as specified in RFC 1990) for multichannel connections with MP-compliant devices from other vendors.
- MPP (Multilink Protocol Plus) for multichannel connections with other Ascend units. This value is the default.
- Frame-Relay for Frame Relay gateway configurations.
- Frame-Relay-Circuit for Frame Relay switch configurations.
- TCP-Raw (unencapsulated TCP) for use with a proprietary encapsulation method.
- DTPT for T-Online.
- ARA (AppleTalk Remote Access) for AppleTalk connections.

Example: `set encapsulation-protocol=ppp`

Location: Connection *station*

See Also: FR-Options, MP-Options, MPP-Options, PPP-Options, TCP-Clear-Options, V120-Answer

Encoding

Description: Sets the layer-1 line encoding to use for the physical link. The Encoding value refers to the way in which data is represented by the digital signals on the line. Both sender and receiver must agree on the type of encoding in use in order to accurately interpret the value of a signal.

Usage: Specify one of the following values:

- AMI (the default) specifies Alternate Mark Inversion encoding.
- B8ZS specifies Bipolar encoding with 8-Zero Substitution. B8ZS is often required for ISDN lines (for which Signaling-Mode=ISDN).
- None specifies encoding identical to AMI, but without density enforcement.

Example: `set encoding=ami`

Location: T1 {shelf-*N* slot-*N* *N*} > Line-Interface

See Also: Line-Interface, Signaling-Mode

End-Of-Packet-Pattern

Description: Defines a character pattern that signals the end of a packet. When the pattern matches the buffered data, the system immediately flushes the buffer by writing all data, up to and including the pattern, into TCP packets.

Usage: Specify up to 64 characters. The default is null. You can enter both ASCII characters and binary data, using the backslash (\) as an escape mechanism. For example:

- To insert a literal backslash in the pattern, enter two backslash characters (\\).
- To insert a 1- to 3-digit octal number, use a single backslash. (To avoid confusion between the literal ASCII characters 1 through 7 and an octal value, you can pad the octal value with leading zeroes.) For example, the pattern \015 represents a carriage return (octal 15).
- To insert a 1- or 2-digit hexadecimal number in the pattern, precede the number with the pattern \x. For example, the pattern \x0D represents a carriage return (hex 0D).

Following are other special escape sequences:

Escape Sequence	Description	Value
\a	Alarm	7
\b	Backspace	8
\f	Form feed	12
\n	New line	10
\r	Carriage return	13
\t	Tab	9
\v	Vertical tab	11
\\	Backslash	92
\'	Apostrophe	44
\"	Double Quote	34
\?	Wildcard	Matches any single character

Example: `set end-of-packet-pattern=\015`

Dependencies: If Detect-End-Of-Packet=No, End-Of-Packet-Pattern does not apply.

Location: Answer-Defaults > TCP-Clear-Answer, Connection *station* > TCP-Clear-Options

See Also: Detect-End-Of-Packet, Enabled, Flush-Length, Flush-Time

Enet

Description: Specifies the action to take when the code image for an Ethernet card is present in a Tar file.

Usage: Specify one of the following settings:

- Auto (the default) causes the system to load images for cards that are installed in the MAX TNT, and to skip images for cards that are not installed.
- Load causes the system to load the image, even if there is no card of that type installed.
- Skip causes the system to skip the image, even if there is a card of that type installed.

Dependencies: A card is considered present in the system if a Slot-Type profile exists for that card type. The system creates a Slot-Type profile when it first detects the presence of a card, and does not delete the profile unless the administrator uses the Slot -r command to permanently remove a card that is no longer installed in the system, or clears NVRAM. To ensure that the system does not load unnecessary images, use Slot -r to remove Slot-Type profiles for cards that are no longer installed in the system.

Location: Load-Select

See Also: 8E1, 8T1, AMDM, CAPADSL, DMTADSL, DS3-ATM, Enet2, HDLC, HDLC2, IDSL, MDM56K, MDM-V34, SDSL, SDSL70D, SDSL70V, SWAN, T3, UDS3, UE1, Unknown-Cards, UT1

Enet2

Description: Specifies the action to take when the code image for an Ethernet-2 card is present in a Tar file.

Usage: Specify one of the following settings:

- Auto (the default) causes the system to load images for cards that are installed in the MAX TNT, and to skip images for cards that are not installed.
- Load causes the system to load the image, even if there is no card of that type installed.
- Skip causes the system to skip the image, even if there is a card of that type installed.

Dependencies: A card is considered present in the system if a Slot-Type profile exists for that card type. The system creates a Slot-Type profile when it first detects the presence of a card, and does not delete the profile unless the administrator uses the Slot -r command to permanently remove a card that is no longer installed in the system, or clears NVRAM. To ensure that the system does not load unnecessary images, use Slot -r to remove Slot-Type profiles for cards that are no longer installed in the system.

Location: Load-Select

See Also: 8E1, 8T1, AMDM, CAPADSL, DMTADSL, DS3-ATM, Enet, HDLC, HDLC2, IDSL, MDM56K, MDM-V34, SDSL, SDSL70D, SDSL70V, SWAN, T3, UDS3, UE1, Unknown-Cards, UT1

Enforce-Address-Security

Description: Specifies whether the MAX TNT should validate the IP address of an SNMP manager attempting to access the unit. If address security is not enforced, any SNMP manager who presents the appropriate community name is allowed in.

Usage: Specify Yes or No. The default is No.

- Yes specifies that, before allowing access, the MAX TNT compares the source IP address of an SNMP manager to the host addresses specified by Read-Access-Hosts and Write-Access-Hosts.
- No specifies that the MAX TNT does not compare IP addresses, but uses only the community name to validate SNMP access.

Example: `set enforce-address-security=yes`

Dependencies: Read-Access-Hosts and Write-Access-Hosts do not restrict access unless Enforce-Address-Security=Yes.

Location: SNMP

See Also: Read-Access-Hosts, Write-Access-Hosts

Entry-Number

Description: Specifies an entry number in the call-routing database. The MAX TNT uses the entry number to discriminate among multiple entries for the same device.

Usage: Specify a number greater than 0 (zero). Entry numbers do not have to be sequential, as long as they are unique.

Example: `set index entry=1`

Location: Call-Route { { {shelf-*N* slot-*N* *N*} *N*} *N*}

See Also: Index

Error

Description: A read-only profile that provides information about any errors that occur when the MAX TNT is running.

Usage: Use the Read and List commands to make Error the working profile and list its contents. For example:

```
admin> read error 1
ERROR/1 read
```

```
admin> list
[in ERROR/1]
is-post=no
type=100
slot=17
version=2.1a0e0
user-profile=""
ip-address=0.0.0.0
stack-trace=[ 0 0 0 0 0 0 ]
loadname=tntsr
index*=1
shelf=1
```

See Also: Index, IP-Address, IS-Post, Loadname, Shelf, Slot, Stack-Trace, Type, User-Profile, Version

Error-Count

Description: Indicates the number of errors experienced, since the last reset, by a T1 line, an IDSN BRI line, a SWAN line, an RADSL line, or an SDSL line. For a T1 line, the value is an array that indicates errors for each channel of the line.

Usage: For a T1 line, use the List command to display an array of values indicating the number of errors for each channel. For example:

```
admin> list error
[in T1-STAT/{ shelf-1 slot-1 1 }:error-count]
error-count[1]=0
error-count[2]=0
error-count[3]=0
error-count[4]=0
...
```

For an ISDN BRI line, SWAN line, RADSL line, or SDSL line, use the List command to display the number of errors:

```
admin> list error
[in IDSL-STAT/{ shelf-1 slot-1 1 }:error-count]
error-count=0
```

Location: ADSL-CAP-Stat {shelf-*N* slot-*N* *N*}, IDSL-Stat {shelf-*N* slot-*N* *N*}, SDSL-Stat {shelf-*N* slot-*N* *N*}, SWAN-Stat {shelf-*N* slot-*N* *N*}, T1-Stat {shelf-*N* slot-*N* *N*}

See Also: ADSL-CAP-Stat, IDSL-Stat, SDSL-Stat, SWAN-Stat, T1-Stat

Ether-IF-Type

Description: Indicates the type of physical Ethernet interface in use.

Usage: The Ether-IF-Type setting is read only. It can have one of the following values:

- UTP indicates unshielded twisted pair (thin Ethernet) as specified in IEEE 802 (10Base5) Ethernet.
- AUI (Auxiliary Unit Interface) indicates a thick Ethernet transceiver as specified in IEEE 802.3 (10BaseT) Ethernet.
- Coax indicates coaxial cable.

Location: Ethernet {shelf-*N* slot-*N* *N*}

See Also: Enabled, Filter-Name, Interface-Address, Link-State, Link-State-Enabled, MAC-Address

Ether-Info

Description: A profile that specifies the MAC address and link state of an Ethernet interface. The Ether-Info profile is created when the Ethernet card enters an active state, and deleted when the slot is brought down. The contents of the profile are not written to NVRAM.

Usage: Use the Read and List commands to make Ether-Info the working profile and list its contents. For example:

```
admin> read ether-info { 1 2 1 }
ETHER-INFO/{ shelf-1 slot-2 1 } read
admin> list
[in ETHER-INFO/{ shelf-1 slot-2 1 }]
interface-address*={ shelf-1 slot-2 1 }
mac-address=00:c0:7b:68:ef:98
link-state=up
```

Dependencies: The Ether-Info profile is read only.

See Also: Interface-Address, Link-State, MAC-Address

Ethernet

Description: A profile that defines the physical components of a system Ethernet interface.

Usage: To make Ethernet the working profile and list its contents:

```
admin> read ethernet {1 c 1}
ETHERNET/{ shelf-1 controller 1 } read
admin> list
[in ETHERNET/{ shelf-1 controller 1 }]
interface-address*={ shelf-1 controller 1 }
ether-if-type=utp
filter-name=""
enabled=yes
link-state-enabled=no
duplex-mode=full-duplex
```

You can then use the Set command to modify the settings in the profile. To close the profile and save your changes, execute the Write command. For example:

```
admin> write  
ETHERNET/{ shelf-1 controller 1 } written
```

See Also: Duplex-Mode, Ether-IF-Type, Enabled, Filter-Name, Interface-Address, Link-State-Enabled

Event-Overwrite-Enabled

Description: Specifies whether the system generates a trap when a new event has overwritten an unread event.

This trap is sent only for systems that support Ascend's accounting MIB. Once sent, additional overwrites will not cause another trap to be sent until at least one table's worth of new events have occurred.

Usage: Specify Yes or No. The default is Yes.

- Yes specifies that the system generates a trap when a new event has overwritten an unread event.
- No specifies that the system does not generate a trap when a new event has overwritten an unread event.

Example: `set event-overwrite-enabled=no`

Location: Trap *host-name*

See Also: RADIUS-Change-Enabled

Exp

Description: Specifies the exponent used to calculate the internal clock speed on a SWAN line.

Usage: Specify a value from 0 to 9. The default is 2.

Example: `set exp=5`

Dependencies: Exp does not apply if Clock-Mode=External-Clock.

Location: SWAN {shelf-*N* slot-*N* *N*} > Line-Config > Clocking

See Also: Clock-Mode, Divider

Expect-Callback

Description: Specifies whether the MAX TNT expects outgoing calls to result in a call back from the remote device.

Usage: Specify Yes or No. The default is No.

- Yes specifies that the MAX TNT expects the remote device to hang up and call back. Use this setting if Ping or Telnet is in use and the MAX TNT cannot dial back to the calling device.
- No specifies that the MAX TNT does not expect callback.

Example: `set expect-callback=yes`

Location: Connection *station* > Telco-Options

See Also: Callback

External-Auth

Description: A profile containing configuration options for RADIUS, TACACS, and TACACS+.

Usage: Use the Read and List commands to make External-Auth the working profile and list its contents. For example:

```
admin> read extern
EXTERNAL-AUTH read

admin> list
[in EXTERNAL-AUTH]
auth-type=radius
acct-type=none
rad-serv-enable=no
rad-auth-client={ 200.168.6.153 0.0.0.0 0.0.0.0 1645 0 +
rad-acct-client={ 0.0.0.0 0.0.0.0 0.0.0.0 0 0 " 0 0 +
rad-auth-server={ 0 no rad-serv-attr-any [ 0.0.0.0 0.0.0.0 +
tac-auth-client={ 0.0.0.0 0.0.0.0 0.0.0.0 0 0 " 0 }
tacplus-auth-client={ 0.0.0.0 0.0.0.0 0.0.0.0 0 0 " }
tacplus-acct-client={ 0.0.0.0 0.0.0.0 0.0.0.0 0 0 " }
rad-id-source-unique=system-unique
rad-id-space=unified
local-profiles-first=lpf=yes
noattr6-use-termsrv=yes
```

You can then use the Set command to modify the settings in the profile. To close the profile and save your changes:

```
admin> write
EXTERNAL-AUTH written
```

See Also: Acct-Type, Auth-Type, Local-Profiles-First, NoAttr6-Use-Termsrv, Rad-Acct-Client, Rad-Auth-Client, Rad-Auth-Server, Rad-ID-Source-Unique, Rad-ID-Space, Rad-Serv-Enable, Tac-Auth-Client, TacPlus-Acct-Client, TacPlus-Auth-Client

Ext-Tsrv

Description: A read-only profile that stores banner and hosts information loaded from RADIUS.

Usage: The `Refresh -t` command requests initial-banner and banner/hosts information from RADIUS as two separate requests, which independently update the Ext-Tsrv profile. If the information changes the profile contents, the system notifies the slot cards and they update their information.

Use the `Read` and `List` commands to make Ext-Tsrv the working profile and list its contents. For example:

```
admin> read ext-tsrv
EXT-TSRV read

admin> list init-banner
[ in EXT-TSRV:init-banner ]
init-banner[1]=" "
init-banner[2]=" "
init-banner[3]=" "
init-banner[4]=" "
init-banner[5]=" "
init-banner[6]=" "
init-banner[7]=" "
init-banner[8]=" "
init-banner[9]=" "
init-banner[10]=" "
init-banner[11]=" "
init-banner[12]=" "
init-banner[13]=" "
init-banner[14]=" "
init-banner[15]=" "
init-banner[16]=" "

admin> list banner
[ in EXT-TSRV:banner ]
banner[1]=" "
banner[2]=" "
banner[3]=" "
banner[4]=" "
banner[5]=" "
banner[6]=" "
banner[7]=" "
banner[8]=" "
banner[9]=" "
banner[10]=" "
banner[11]=" "
banner[12]=" "
banner[13]=" "
banner[14]=" "
banner[15]=" "
banner[16]=" "
```

```
admin> list hosts-info
[in EXT-TSRV:hosts-info]
hosts-info[1]={ 0.0.0.0 " " }
hosts-info[2]={ 0.0.0.0 " " }
hosts-info[3]={ 0.0.0.0 " " }
hosts-info[4]={ 0.0.0.0 " " }
hosts-info[5]={ 0.0.0.0 " " }
hosts-info[6]={ 0.0.0.0 " " }
hosts-info[7]={ 0.0.0.0 " " }
hosts-info[8]={ 0.0.0.0 " " }
hosts-info[9]={ 0.0.0.0 " " }
hosts-info[10]={ 0.0.0.0 " " }
```

See Also: Banner, Hosts-Info N, Init-Banner N

F

Facility

Description: Specifies the Syslog daemon facility code for messages logged from the MAX TNT. For detailed information, see the `syslog.conf` manual page entry on the UNIX Syslog server.

Usage: Specify one of the following values:

- Local0 (the default)
- Local1
- Local2
- Local3
- Local4
- Local5
- Local6
- Local7

Example: `set facility=local0`

Dependencies: If Syslog is not enabled, Facility does not apply.

Location: Log

See Also: Host, Syslog-Enabled

Far-End-dB-Attenuation

Description: Indicates the attenuation of the signal received from the remote end.

Usage: The Far-End-dB-Attenuation setting is read only.

Location: SDSL-Stat {shelf-*N* slot-*N* *N*} > Physical-Statistic

See Also: Line-Quality, Line-Up-Timer, Physical-Address, RX-Signal-Present, Self-Test, Up-Down-Cntr

FDL

Description: Specifies the Facilities Data Link (FDL) protocol that the telephone company uses to monitor the quality and performance of a T1 line. The protocol provides information at regular intervals to your carrier's maintenance devices.

Usage: Specify one of the following values:

- None (the default) disables FDL signaling.
- AT&T specifies AT&T FDL signaling.
- ANSI specifies ANSI FDL signaling.
- Sprint specifies Sprint FDL signaling.

Example: `set fdl=at&t`

Dependencies: FDL does not apply to D4-framed T1 lines. However, even if you do not choose an FDL protocol, the MAX TNT accumulates D4 and ESF performance statistics in the FDL Stats windows.

Location: T1 {shelf-*N* slot-*N* *N*} > Line-Interface

See Also: Frame-Type, Line-Interface

Filter

Description: A profile that specifies filter rules for an interface.

When you apply a filter to an interface, the MAX TNT monitors the data stream and takes a specified action when packet contents match the filter rules. Depending on how you define the filter, it might apply to incoming packets, outgoing packets, or both. You can apply the specified action (forward or drop) to all packets that match the rules, or to all packets *except* those that match the rules.

Usage: Use the New and List commands to create a new filter and list its contents. For example:

```
admin> new filter test-name
FILTER/test-name read

admin> list
[in FILTER/test-name (new)]
filter-name*=test-name
input-filters=[ { no no generic-filter { 0 0 no no +
output-filters=[ { no no generic-filter { 0 0 no no +
```

You can then use the Set command to modify the settings in the profile. To close the profile and save your changes:

```
admin> write
FILTER/test-name written
```

See Also: Call-Filter, Data-Filter, Filter-Name, Filter-Persistence, Input-Filters, Output-Filters

Filter-Name

Description: Specifies the name of a Filter profile. In a Filter profile, the name you assign becomes the Filter profile's index. In an Ethernet profile, the name specifies the data filter that the MAX TNT applies to the Ethernet interface.

Usage: Specify a filter name of up to 16 characters. The default is null.

Example: `set filter-name=ip-spoof`

Location: Ethernet {shelf-*N* slot-*N* *N*}, Filter *filter-name*

See Also: Call-Filter, Data-Filter, Filter-Persistence

Filter-Persistence

Description: Specifies whether filters persist across state changes. A state change occurs when a connection temporarily goes down because of inactivity on the line.

Usage: Specify Yes or No. The default is No.

- Yes specifies that filters persist across state changes.
- No specifies that filters do not persist across state changes.

Example: `set filter-persistence=yes`

Location: Answer-Defaults > Session-Info, Connection *station* > Session-Options

See Also: Call-Filter, Data-Filter, Filter, Filter-Name, Session-Info, Session-Options

Finger

Description: Specifies whether the MAX TNT accepts Finger queries and returns active session details to a remote client.

Usage: Specify Yes or No. The default is No.

- Yes enables the MAX TNT to accept Finger queries and return the requested active session details to a remote client. The client can ask for short or wide format. For example, a UNIX client can request the wide format by using the `-l` option. The following command:

```
# finger @tnt1
```

displays the narrow (80-character-wide) format. The following command:

```
# finger -l @tnt1
```

displays a wide (140-character-wide) format of session information. The client can also request the details of all sessions, or of a single session. For example, to request information about a single user named Gavin:

```
# finger gavin@tnt1
```

- No causes the MAX TNT to reject queries from Finger clients with the following message:

```
Finger online user list denied.
```

Example: `set finger=yes`

Dependencies: Finger is described in RFC 1288. The Finger forwarding service, which uses the hostname format `@host1@host2`, is not supported. If the remote client uses the forwarding request format, the client sees the following message:

```
Finger forwarding service denied.
```

Location: IP-Global

See Also: Allow-As-Client-DNS-Info, Assign-Count, BOOTP-Enabled, Client-Primary-DNS-Server, Client-Secondary-DNS-Server, Dialout-Poison, DNS-List-Attempt, DNS-List-Size, DNS-Primary-Server, DNS-Secondary-Server, Domain-Name, Drop-Source-Routed-IP-Packets, Ignore-Def-Route, Ignore-ICMP-Redirects, IPRoute-Cache-Enable, IPRoute-Cache-Size, Must-Accept-Address-Assign, NetBIOS-Primary-NS, NetBIOS-Secondary-NS, OSPF-ASE-Pref, OSPF-Pref, Pool-Base-Address, Pool-Summary, RARP-Enabled, RIP-ASE-Type, RIP-Policy, RIP-Pref, RIP-Tag, Sec-Domain-Name, Shared-Prof, Soft-IP-Interface-Addr, Static-Pref, Summarize-RIP-Routes, System-IP-Addr, Telnet-Password, UDP-Cksum, User-Profile

Firewall

Note: The MAX TNT does not support firewalls at this time.

Description: A profile created when you upload a firewall by means of the Secure Access Manager.

Usage: Use the Read and List commands to make Firewall the working profile and list its contents. For example:

```
admin> read firewall foo
Firewall/foo read

admin> list
[ in FIREWALL/foo ]
name*=foo
version=2
data=[ ACAfiwgAAAAAAADE2RmZDTiz0zOLeDkBAAFTVl4DAAAAA== ]
link=" "
```

See Also: Data, Name, Version

Firewalls-Enabled

Note: The MAX TNT does not support firewalls at this time.

Description: Indicates whether Secure Access is enabled.

Usage: The Firewalls-Enabled setting is read only. Yes indicates that Secure Access is enabled. No indicates that Secure Access is disabled.

Example: firewalls-enabled=yes

Location: Base

See Also: Advanced-Agent-Enabled, AIM-Enabled, Countries-Enabled, Data-Call-Enabled, D-Channel-Enabled, Frame-Relay-Enabled, MAXLink-Client-Enabled, Modem-Dialout-Enabled, Multi-Rate-Enabled, Network-Management-Enabled, PHS-Support, R2-Signaling-Enabled, Selectools-Enabled, Serial-Number, Shelf-Number, Software-Level, Software-Revision, Software-Version, Switched-Enabled, TNT-ADSL-Enabled, TNT-IDSL-Enabled, TNT-SDSL-Enabled

Flow-Control

Description: Specifies the flow control method used on the serial port.

Usage: Specify one of the following values:

- None (the default)
- Xon-Xoff
- Hardware-Handshake

Example: `set flow-control=xon-xoff`

Location: Serial {shelf-*N* slot-*N* *N*}

See Also: Serial

Flush-Length

Description: Specifies the maximum number of bytes to buffer when handling incoming TCP-Clear data that does not require V.120 processing. If the system buffers the specified number of bytes without matching the End-Of-Packet-Pattern value, the MAX TNT flushes the buffer by writing the data into TCP packets.

Usage: Specify an integer from 1 to 8192. The default is 256. Note that buffering large packets consumes a larger amount of system resources than buffering small packets.

Example: `set flush-length=300`

Dependencies: If Detect-End-Of-Packet=No, Flush-Length does not apply.

Location: Answer-Defaults > TCP-Clear-Answer, Connection *station* > TCP-Clear-Options

See Also: Detect-End-Of-Packet, Enabled, End-Of-Packet-Pattern, Flush-Time

Flush-Time

Description: Specifies the amount of time (in milliseconds) to buffer TCP-Clear data that does not require V.120 processing. The timer begins counting down upon receiving the first byte of buffered data. If the specified number of milliseconds elapses before the buffered data matches the End-Of-Packet-Pattern value, the MAX TNT flushes the buffer by writing the data into TCP packets.

Usage: Specify an integer from 1 to 1000. The default is 20.

Example: `set flush-time=300`

Dependencies: If Detect-End-Of-Packet=No, Flush-Time does not apply.

Location: Answer-Defaults > TCP-Clear-Answer, Connection *station* > TCP-Clear-Options

See Also: Detect-End-Of-Packet, Enabled, End-Of-Packet-Pattern, Flush-Length

Force-56Kbps

Description: Specifies whether the MAX TNT uses only the 56-Kbps portion of a channel, even when all 64 Kbps appear to be available.

The default bandwidth for data calls coming in over E1 channels using R2 signaling is now 64K. To configure a connection to use 56K instead, set Force-56Kbps=Yes. In addition, you should specify this setting when you place calls to European or Pacific Rim countries from within North America, if the complete path cannot distinguish between the Switched-56 and Switched-64 data services. You need not set this value for calls within North America.

Usage: Specify Yes or No. The default is No.

- Yes causes the MAX TNT to use only the 56-Kbps portion of a channel.
- No specifies that the MAX TNT uses the full 64-Kbps bandwidth, if it is available.

Example: `set force-56kbps=no`

Location: Answer-Defaults, Connection *station* > Telco-Options

See Also: Data-Service, Telco-Options

Force-Fragmentation

Description: Specifies whether or not the MAX TNT prefragments incoming packets that have the Don't Fragment (DF) bit set, when the packets are larger than the negotiated Maximum Receive Unit (MRU).

Usage: Specify Yes or No.

- Yes specifies that when the MTU-Limit setting is a nonzero value, the MAX TNT ignores the DF bit and performs the fragmentation that normally should be performed by the client. It prefragments those packets at the specified MTU-Limit size, and then adds the GRE and IP headers.

Setting the Force-Fragmentation setting to Yes causes the MAX TNT to bypass the standard MTU discovery mechanism and fragment larger packets before encapsulating them in GRE. Because this scenario changes expected behavior, it is not recommended except for ATMP interoperation with outdated client software that does not handle fragmentation properly.

- No (the default) specifies that the MAX TNT does not fragment an incoming packet that has the DF bit set.

Dependencies: You must set MTU-Limit to a nonzero value for a setting of Force-Fragmentation=Yes to have any effect.

Location: ATMP

See Also: Agent-Mode, Agent-Type, MTU-Limit, Password, Retry-Limit, Retry-Timeout, UDP-Port

Forward

Description: Specifies the forwarding action for a filter. For a data filter, the Forward value specifies whether the MAX TNT forwards or drops packets that match the filter rules. For a call filter, the Forward value specifies whether matching packets reset the session timer or bring up a connection.

Usage: Specify Yes or No. When no filters are in use, the MAX TNT forwards all packets by default. When a filter is in use, the MAX TNT discards all packets by default.

- Yes specifies that the MAX TNT forwards packets that match the filter rules.
- No specifies that the MAX TNT drops packets that match the filter rules.

Example: `set forward=yes`

Location: Filter *filter-name* > Input-Filters, Filter *filter-name* > Output-Filters

See Also: Input-Filters, Input-Filters N, Output-Filters, Output-Filters N

Framed-Only

Description: Specifies whether an incoming call must use a framed protocol.

Usage: Specify Yes or No. The default is No.

- Yes specifies that an incoming call must use a framed protocol.
- No specifies that an incoming call need not use a framed protocol.

Example: `set framed-only=yes`

Location: Answer-Defaults, Connection *station*

See Also: Encapsulation-Protocol, Frame-Length, Frame-Type, Protocol

Frame-Length

Description: For incoming V.120 calls, specifies the frame length. For packets sent by X.75 TAs, specifies the number of bytes in the information field.

Usage: For V.120 calls, specify an integer from 30 to 260, or accept the default of 256, which enables the MAX TNT to operate with an AT&T ISDN phone without reconfiguration. For X.75 calls, specify an integer from 128 to 1532. For X.75 calls, the default is 1024.

Example: `set frame-length=260`

Location: Answer-Defaults > V120-Answer

Answer-Defaults > X75-Answer

Connection > X75-Options

See Also: Encapsulation-Protocol, Framed-Only, Frame-Type, V120-Answer

Frame-Relay

Description: A profile that specifies the datalink to a Frame Relay switch or Customer Premises Equipment (CPE).

Usage: Use the New and List commands to create a Frame-Relay profile and list its contents. For example:

```
admin> new frame-relay pacbell
FRAME-RELAY/pacbell read

admin> list
[in FRAME-RELAY/pacbell (new)]
fr-name*=pacbell
active=no
nailed-up-group=1024
nailed-mode=ft1
called-number-type=national
switched-call-type=56k-restricted
phone-number=" "
billing-number=" "
transit-number=" "
link-mgmt=none
call-by-call-id=0
n391-val=6
n392-val=3
n393-val=4
t391-val=10
t392-val=15
mru=1532
link-type=dte
dceN392-val=3
dceN393-val=4
```

You can then use the Set command to modify the settings in the profile. To close the profile and save your changes:

```
admin> write
FRAME-RELAY/pacbell written
```

See Also: Active, Billing-Number, Call-By-Call-ID, Called-Number-Type, DCEN392-Val, DCEN393-Val, FR-Name, Link-Mgmt, Link-Type, MRU, N391-Val, N392-Val, N393-Val, Nailed-Mode, Nailed-Up-Group, Phone-Number, Switched-Call-Type, T391-Val, T392-Val, Transit-Number

Frame-Relay-Enabled

Description: Indicates whether Frame Relay is enabled on the MAX TNT.

Usage: The Frame-Relay-Enabled setting is read only. Yes indicates that Frame Relay is enabled. No indicates that Frame Relay is not enabled.

Example: `frame-relay-enabled=no`

Location: Base

See Also: Frame-Relay

Frame-Relay-Profile

Description: Specifies the name of the Frame-Relay profile to use when the MAX TNT is configured as a Frame Relay gateway or Frame Relay switch.

Usage: Specify the name of a Frame-Relay profile, exactly as specified by the FR-Name value, including case changes.

Example: `set frame-relay-profile=att-dce`

Dependencies: If FR-Direct-Enabled=Yes, Frame-Relay-Profile does not apply. The Frame-Relay-Profile setting applies only to gateway or circuit connections.

Location: Connection *station* > FR-Options

See Also: Encapsulation-Protocol, FR-Direct-Enabled, FR-Name, FR-Options

Frame-Type

Description: Specifies the framing mode in use on the physical links of a T1, E1, or DS3 line. Your carrier can tell you which framing mode to choose.

Usage: For a T1 or E1 line, specify one of the following values:

- D4 specifies the superframe format, which consists of 12 consecutive frames, separated by framing bits. Do not use this setting with ISDN D-channel signaling (when Signaling-Mode=ISDN).
- ESF specifies the Extended Superframe Format, which consists of 24 consecutive frames, separated by framing bits. The ISDN specification advises that you use ESF with ISDN D-channel signaling (when Signaling-Mode=ISDN).

An E1 line supports the following additional Frame-Type values:

- G703 specifies that the trunk interface uses CRC-4.
- 2DS specifies that the trunk interface does not use CRC-4.

A DS3 line supports only the following values:

- M13 specifies an M23 application.
- C-Bit-Parity specifies a C-bit parity application.

Example: `set frame-type=esf`

Location: E1 {shelf-*N* slot-*N* *N*} > Line-Interface,
T1 {shelf-*N* slot-*N* *N*} > Line-Interface, T3 {shelf-*N* slot-*N* *N*}

See Also: Framed-Only, Line-Interface, Signaling-Mode

FR-Answer

Description: A subprofile in the Answer-Defaults profile. The FR-Answer subprofile can enable the MAX TNT to answer incoming connections that use Frame Relay encapsulation.

Usage: With Answer-Defaults as the working profile, list the FR-Answer subprofile. For example:

```
admin> list fr-answer
[ in ANSWER-DEFAULTS:fr-answer ]
enabled=yes
```

You can then use the Set command to modify the setting in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: Answer-Defaults

See Also: Enabled

FR-Direct-Enabled

Description: Specifies that the MAX TNT uses the connection for Frame Relay Direct.

Usage: Specify Yes or No. The default is No.

- Yes specifies that the MAX TNT uses the connection for Frame Relay Direct.
- No specifies that the MAX TNT does not use the connection for Frame Relay Direct.

Example: `set fr-direct-enabled=yes`

Dependencies: If Encapsulation-Protocol=Frame-Relay or Frame-Relay-Circuit, FR-Direct-Enabled does not apply.

Location: Connection *station* > FR-Options

See Also: Encapsulation-Protocol, FR-DLCI, FR-Options, FR-Profile

FR-DLCI

Description: Specifies a Frame Relay DLCI number to use for Frame Relay Direct connections.

Usage: Specify the DLCI obtained from the Frame Relay administrator for Frame Relay Direct links. The default is null. More than one direct PPP connection can share an FR-DLCI number.

Example: `set fr-dlci=72`

Dependencies: Consider the following:

- If FR-Direct-Enabled=No, FR-DLCI does not apply. FR-DLCI does not apply to gateway or circuit connections.
- The T1 Frameline (UT1) card supports a maximum of 240 active DLCIs.
- The SWAN card supports a maximum of 120 active DLCIs.

Location: Connection *station* > FR-Options

See Also: Encapsulation-Protocol, FR-Direct-Enabled, FR-Options, FR-Profile

FR-LinkDown-Enabled

Description: Specifies whether a trap is sent whenever a DLCI is brought down.

Usage: Specify Yes or No. The default is Yes.

- Yes specifies that a trap is sent whenever a DLCI is brought down.
- No specifies that a trap is not sent whenever a DLCI is brought down.

Example: `set fr-linkdown-enabled=no`

Dependencies: If you set FR-LinkDown-Enabled=Yes, you must also set Alarm-Enabled=Yes for a trap to be sent whenever a DLCI is brought down.

Location: Trap *host-name*

See Also: Alarm-Enabled, FR-LinkUp-Enabled

FR-LinkUp-Enabled

Description: Specifies whether a trap is sent whenever a DLCI is brought up.

Usage: You can specify Yes or No. The default is Yes.

- Yes specifies that a trap is sent whenever a DLCI is brought up.
- No specifies that a trap is not sent whenever a DLCI is brought up.

Example: `set fr-linkup-enabled=no`

Dependencies: If you set FR-LinkUp-Enabled=Yes, you must also set Alarm-Enabled=Yes for a trap to be sent whenever a DLCI is brought up.

Location: Trap *host-name*

See Also: Alarm-Enabled, FR-LinkDown-Enabled

FR-Name

Description: Specifies the name of a Frame-Relay profile.

Usage: Specify a name for the profile. The name must be unique and cannot exceed 15 characters. The default is null.

Example: `set fr-name=att-dce`

Location: Frame-Relay *fr-name*

See Also: Frame-Relay-Profile

Front-End-Type

Description: Specifies the front-end type of the T1 or E1 transceiver.

Usage: For a T1 line, specify one of the following values:

- CSU specifies a Channel Service Unit, a device that ensures that only clean signals go out on the line,
- DSX specifies Digital Signal Cross-Connect interfaces for connecting DS1 and DS3 signals.

For an E1 line, specify one of the following values:

- Long-Haul (120-ohm termination only)
- Short-Haul

Example: `set front-end-type=csu`

Location: E1 {shelf-*N* slot-*N N*} > Line-Interface, T1 {shelf-*N* slot-*N N*} > Line-Interface

See Also: CSU-Build-Out, DSX-Line-Length, Line-Interface

FR-Options

Description: A subprofile containing settings for Frame Relay connections.

Usage: With a Connection profile as the working profile, list the FR-Options subprofile. For example:

```
admin> list fr-options
[in CONNECTION/tim:fr-options]
frame-relay-profile=" "
dlci=16
circuit-name=" "
fr-direct-enabled=no
fr-profile=" "
fr-dlci=16
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Dependencies: Frame Relay calls must be enabled in the Answer-Defaults profile.

Location: Connection *station*

See Also: Circuit-Name, DLCI, Frame-Relay-Profile, FR-Direct-Enabled, FR-DLCI, FR-Profile

FR-Profile

Description: Specifies the name of the Frame-Relay profile to use for a Frame Relay Direct connection.

Usage: Specify the name of a configured Frame-Relay profile, exactly as specified by the FR-Name setting, including case changes.

Example: `set fr-profile=att-dce`

Dependencies: For FR-Profile to apply, you must set FR-Direct-Enabled=Yes. FR-Profile does not apply to gateway or circuit connections.

Location: Connection *station* > FR-Options

See Also: Encapsulation-Protocol, FR-Direct-Enabled, FR-DLCI, FR-Options

FT1-Caller

Description: Specifies whether the MAX TNT initiates fractional T1 calls.

Usage: Specify Yes or No. The default is No.

- Yes enables the MAX TNT to initiate the FT1 call. The MAX TNT dials to bring online any switched circuits that are part of the call.
- No specifies that the MAX TNT cannot originate the FT1 call.

Example: `set ft1-caller=yes`

Dependencies: The FT1-Caller value applies when both nailed-up and switched channels are in use for the connection (that is, when Call-Type=FT1-MPP). Only one side of the connection should have FT1-Caller set to Yes.

Location: Connection *station* > Telco-Options

See Also: Call-Type, Telco-Options

G

Gateway-Address

Description: Specifies the address of the next-hop router the MAX TNT uses to reach the destination address specified by a static route. A next-hop router is directly connected to the MAX TNT on the Ethernet, or is one hop away on a WAN link.

Usage: Specify the IP address of the router the MAX TNT uses to reach the target host for the route. The default is 0.0.0.0.

Example: `set gateway-address=10.207.23.1`

Location: IP-Route *name*

See Also: Dest-Address

Gen-Filter

Description: A subprofile containing a generic filter specification.

Usage: With a Filter profile as the working profile, list the Gen-Filter subprofile. For example:

```
admin> list input 1 gen-filter
[in FILTER/test:input-filters[1]:gen-filter]
offset=2
len=8
more=no
comp-neq=no
mask=0f:ff:ff:ff:00:00:00:f0:00:00:00:00
value=07:fe:45:70:00:00:00:90:00:00:00:00
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: Filter *filter-name* > Input-Filters, Filter *filter-name* > Output-Filters

See Also: Comp-Neq, Input-Filters, Input-Filters N, Len, Mask, More, Offset, Output-Filters, Output-Filters N, Value

Global-VRouter

Description: Specifies a name for the global Virtual Router (VRouter).

Usage: Specify a name. The default is main.

Example: `set global-vrouter=global-1`

Location: IP-Global

See Also: System-IP-Addr

Group-II-Signal

Description: Specifies the group-II signal, which the MAX TNT sends on an outgoing call immediately after the called end acknowledges that it has received all the necessary address digits.

Usage: Specify Signal-II-1, Signal-II-2, and so on, up to Signal-II-15. The default is Signal-II-2. Systems in Mexico and Korea should use the default. Systems in Argentina should set Group-II-Signal to Signal-II-1. For information about the proper settings for other countries, please contact your carrier.

Example: `set group-ii-signal=signal-ii-2`

Location: E1 {shelf-*N* slot-*N* *N*} > Line-Interface

See Also: Group-B-Answer-Signal, Group-B-Busy-Signal, Line-Interface

Group-B-Answer-Signal

Description: Specifies the group-B signal that the MAX TNT sends immediately before answering an incoming call.

Usage: Specify Signal-B-1, Signal-B-2, and so on, up to Signal-B-15. The default is Signal-B-6, which is the recommended setting for E1-R2 Israeli signaling. The relevant specifications for E1-R2 Israeli signaling are in ITU-T recommendations Q.400 to Q.490 and Israeli MFC-R2 Register Signaling documentation.

Systems in Mexico and Korea should set Group-B-Answer-Signal to Signal-B-1. Systems in Argentina should use Signal-B-6 (the default). For information about the proper settings for other countries, please contact your carrier.

Example: `set group-b-answer-signal=signal-b-6`

Location: E1 {shelf-*N* slot-*N* *N*} > Line-Interface

See Also: Group-II-Signal, Group-B-Busy-Signal, Line-Interface

Group-B-Busy-Signal

Description: Specifies the group-B signal that the MAX TNT sends as a busy signal.

Usage: Specify Signal-B-1, Signal-B-2, and so on, up to Signal-B-15. The default is Signal-B-3, which is the recommended setting for E1-R2 Israeli signaling. The relevant specifications for E1-R2 Israeli signaling are in ITU-T recommendations Q.400 to Q.490 and Israeli MFC-R2 Register Signaling documentation.

Example: `set group-b-busy-signal=signal-b-3`

Location: E1 {shelf-*N* slot-*N* *N*} > Line-Interface

See Also: Group-II-Signal, Group-B-Answer-Signal, Line-Interface

H

Hardware-Level

Description: Indicates a one- or two-character string representing the hardware revision level of the card.

Usage: The Hardware-Level setting is read only. A value of 0 (zero) means that the revision level is unknown.

Location: Base, Slot-Info {shelf-*N* slot-*N* *N*}

See Also: Software-Level

Hardware-Rework-Count

Description: Indicates the number of times the card has been reworked.

Usage: The Hardware-Rework-Count setting is read only.

Location: Slot-Info {shelf-*N* slot-*N* *N*}

See Also: Hardware-Level

Hardware-Ver

Description: Indicates the hardware version of the RADSL or SDSL card.

Usage: The Hardware-Ver setting is read only.

Location: ADSL-CAP-Stat {shelf-*N* slot-*N* *N*} > Physical-Status
SDSL-Stat {shelf-*N* slot-*N* *N*} > Physical-Status

See Also: Dev-Line-State, Down-Stream-Constellation, Down-Stream-Operational-Baud, Down-Stream-Rate, IF-Group-Index, Major-Firmware-Ver, Minor-Firmware-Ver, Physical-Address, Unit-Type, Up-Stream-Constellation, Up-Stream-Rate

HDLC

Description: Specifies the action to take when the code image for an HDLC card is present in a Tar file.

Usage: Specify one of the following settings:

- Auto (the default) causes the system to load images for cards that are installed in the MAX TNT, and to skip images for cards that are not installed.
- Load causes the system to load the image, even if there is no card of that type installed.
- Skip causes the system to skip the image, even if there is a card of that type installed.

Dependencies: A card is considered present in the system if a Slot-Type profile exists for that card type. The system creates a Slot-Type profile when it first detects the presence of a card, and does not delete the profile unless the administrator uses the Slot -r command to permanently remove a card that is no longer installed in the system, or clears NVRAM. To ensure that the system does not load unnecessary images, use Slot -r to remove Slot-Type profiles for cards that are no longer installed in the system.

Location: Load-Select

See Also: 8E1, 8T1, AMDM, CAPADSL, DMTADSL, DS3-ATM, Enet, Enet2, HDLC2, IDSL, MDM56K, MDM-V34, SDSL, SDSL70D, SDSL70V, SWAN, T3, UDS3, UE1, Unknown-Cards, UT1

HDLC2

Description: Specifies the action to take when the code image for an HDLC-2 card is present in a Tar file.

Usage: Specify one of the following settings:

- Auto (the default) causes the system to load images for cards that are installed in the MAX TNT, and to skip images for cards that are not installed.
- Load causes the system to load the image, even if there is no card of that type installed.
- Skip causes the system to skip the image, even if there is a card of that type installed.

Dependencies: A card is considered present in the system if a Slot-Type profile exists for that card type. The system creates a Slot-Type profile when it first detects the presence of a card, and does not delete the profile unless the administrator uses the Slot -r command to permanently remove a card that is no longer installed in the system, or clears NVRAM. To ensure that the system does not load unnecessary images, use Slot -r to remove Slot-Type profiles for cards that are no longer installed in the system.

Location: Load-Select

See Also: 8E1, 8T1, AMDM, CAPADSL, DMTADSL, DS3-ATM, Enet, Enet2, HDLC, IDSL, MDM56K, MDM-V34, SDSL, SDSL70D, SDSL70V, SWAN, T3, UDS3, UE1, Unknown-Cards, UT1

HDLC-RX-CRC-Error-Cnt

Description: Indicates the number of CRC errors that have occurred. Occurrence of a few CRC errors is normal, but the line is disconnected if 1500 errors occur within a two-second time period.

Usage: The HDLC-RX-CRC-Error-Cnt setting is read only.

Location: ADSL-CAP-Stat {shelf-N slot-N N} > Physical-Statistic

See Also: Connection-SQ, Far-End-dB-Attenuation, Line-Quality, Line-Up-Timer, Physical-Address, RS-Corrected-Errors, RS-Errors, RX-Attenuation, RX-Signal-Present, Self-Test, Transmit-Power, Up-Down-Cntr

Hello-Interval

Description: Specifies the number of seconds between the Hello packets that the OSPF router sends on the interface.

Usage: Specify an integer. The defaults are 10 seconds for connected routes and 30 seconds for WAN connections.

Example: `set hello-interval=30`

Location: Connection *station* > IP-Options > OSPF-Options,
IP-Interface { {shelf-*N* slot-*N* *N*} *N*} > OSPF

See Also: Dead-Interval, IP-Options, OSPF, OSPF-Options

Hint-Net-Hi

Description: Specifies the end of the network range for an AppleTalk network. If the MAX TNT is the first router up and is in nonseed mode, it uses the Hint settings to try to find another router. To optimize the process by which a nonseed router acquires a configuration across the network after a system reset or power cycle, you set Hint-Net-Hi, Hint-Net-Lo, Hint-Net-Node, and Hint-Zone with known good information. A seed router must be available at startup time, or the MAX TNT cannot come up in AppleTalk routing mode.

Usage: Specify an integer from 1 to 65,199. The default is 0 (zero).

Example: `set hint-net-hi=300`

Dependencies: If Atalk-Routing-Enabled=No, Atalk-Router=Atlk-Router-Off, or Atalk-Router=Atlk-Router-Seed, Hint-Net-Hi does not apply.

Location: Atalk-Interface {shelf-*N* slot-*N* *N*}

See Also: Atalk-Default-Zone, Atalk-Net-End, Atalk-Net-Start, Atalk-Router, Atalk-Routing-Enabled, Atalk-Zone-List, Hint-Net-Lo, Hint-Net-Node, Hint-Zone, Interface-Address

Hint-Net-Lo

Description: Specifies the beginning of the network range for an AppleTalk network. If the MAX TNT is the first router up and is in nonseed mode, it uses the Hint settings to try to find another router. To optimize the process by which a nonseed router acquires a configuration across the network after a system reset or power cycle, you set Hint-Net-Hi, Hint-Net-Lo, Hint-Net-Node, and Hint-Zone with known good information. A seed router must be available at startup time, or the MAX TNT cannot come up in AppleTalk routing mode.

Usage: Specify an integer from 1 to 65,199. The default is 0 (zero).

Example: `set hint-net-lo=200`

Dependencies: If Atalk-Routing-Enabled=No, Atalk-Router=Atlk-Router-Off, or Atalk-Router=Atlk-Router-Seed, Hint-Net-Lo does not apply.

Location: Atalk-Interface {shelf-*N* slot-*N* *N*}

See Also: Atalk-Default-Zone, Atalk-Net-End, Atalk-Net-Start, Atalk-Router, Atalk-Routing-Enabled, Atalk-Zone-List, Hint-Net-Hi, Hint-Net-Node, Hint-Zone

Hint-Net-Node

Description: Specifies an AppleTalk node number that the MAX TNT can use when it comes up as a nonseed router.

Usage: Specify a node number. The default is 0 (zero).

Example: `set hint-net-node=5`

Dependencies: If Atalk-Routing-Enabled=No, Atalk-Router=Atk-Router-Off, or Atalk-Router=Atk-Router-Seed, Hint-Net-Node does not apply.

Location: Atalk-Interface {shelf-*N* slot-*N* *N*}

See Also: Atalk-Default-Zone, Atalk-Net-End, Atalk-Net-Start, Atalk-Router, Atalk-Routing-Enabled, Atalk-Zone-List, Hint-Net-Hi, Hint-Net-Lo, Hint-Zone

Hint-Zone

Description: Specifies the AppleTalk zone in which the MAX TNT resides. The MAX TNT can include the zone name in the ZipGetNetInfo request packet it sends out to get its configuration from a seed router, and the router can return a valid network range for the zone.

Usage: Specify a zone name of up to 32 characters. The default is null.

Example: `set hint-zone=Alameda`

Dependencies: If Atalk-Routing-Enabled=No, Atalk-Router=Atk-Router-Off, or Atalk-Router=Atk-Router-Seed, Hint-Zone does not apply.

Location: Atalk-Interface {shelf-*N* slot-*N* *N*}

See Also: Atalk-Default-Zone, Atalk-Net-End, Atalk-Net-Start, Atalk-Router, Atalk-Routing-Enabled, Atalk-Zone-List, Hint-Net-Hi, Hint-Net-Lo, Hint-Net-Node

Home-Network-Name

Description: Specifies the name of the Home Network connection in an Ascend Tunnel Management Protocol (ATMP) configuration.

Usage: If Profile-Type=Mobile-Client and Agent-Type=Gateway-Home-Agent, enter the setting specified for Station in the Connection profile on the Home Agent. Otherwise, accept the default of null.

Example: `set home-network-name=myhome`

Location: Connection *station* > Tunnel-Options

See Also: Agent-Mode, Agent-Type, Max-Tunnels, Password, Primary-Tunnel-Server, Profile-Type, Retry-Limit, Retry-Timeout, Secondary-Tunnel-Server, UDP-Port

Hops

Description: Specifies the distance to the destination network, in hops.

Usage: Specify a value from 1 to 8. The default is 8.

Location: IPX-Route *name*

See Also: Active-Route, Dest-Network, Name, Profile-Name, Server-Node, Server-Socket, Server-Type, Ticks

Host

Description: Specifies the DNS hostname or address of a host on the network, as follows:

- In a Connection profile, the Host value specifies the first host that the MAX TNT attempts to use for a TCP-Clear connection.
- In the Log profile, the Host value specifies the IP address of a UNIX Syslog server.
- In the Terminal-Server profile, the Host value specifies the name, IP address, or X.121 address of the host to use for immediate service. When the MAX TNT authenticates a connection, it immediately directs the data stream to the specified host.

Usage: Your usage depends on the profile:

- For a Connection profile, specify the name of one or more login hosts to use for TCP-Clear connections. You can enter up to 32 characters for each host. The default is null.
- For the Log profile, specify the IP address of a UNIX Syslog server. The default is 0.0.0.0.
- For the Terminal-Server profile, specify the name, IP address, or X.121 address of the host to use for immediate service. The default is a null string or null address.

Example: The following example specifies two login hosts:

```
admin> read conn fred
CONNECTION/fred read

admin> set tcp host=mercury
admin> set tcp host1=venus
admin> write
CONNECTION/fred written
```

Dependencies: In a Connection profile, the Host, Host1, Host2, and Host3 values specify the names of up to four login hosts to use for TCP-Clear connections. If the TCP connection to the first specified host fails, the system attempts to connect to the next specified host. If the connection to the next host fails, the system attempts to connect to the third host, and so forth. If all connection attempts fail, the session terminates and the MAX TNT returns a TCP connection error to the dial-in client.

Location: Connection *station* > TCP-Clear-Options, Log,
Terminal-Server > Immediate-Mode-Options

See Also: Facility, Host1, Host2, Host3, Immediate-Mode-Options, Port, Port1, Port2, Port3, Save-Level, Save-Number, Service, Syslog-Enabled, TCP-Clear-Options

Host1

Description: Specifies the name of the second login host the MAX TNT attempts to use for TCP-Clear connections.

Usage: Specify the name of the second login host the MAX TNT attempts to use for TCP-Clear connections. You can enter up to 32 characters. The default is null.

Example: The following example specifies two login hosts:

```
admin> read conn fred
CONNECTION/fred read
admin> set tcp host=mercury
admin> set tcp host1=venus
admin> write
CONNECTION/fred written
```

Dependencies: The Host, Host1, Host2, and Host3 values specify the names of up to four login hosts to use for TCP-Clear connections. If the TCP connection to the first specified host fails, the system attempts to connect to the next specified host. If the connection to the next host fails, the system attempts to connect to the third host, and so forth. If all connection attempts fail, the session terminates and the MAX TNT returns a TCP connection error to the dial-in client.

Location: Connection *station* > TCP-Clear-Options

See Also: Facility, Host, Host2, Host3, Immediate-Mode-Options, Port, Port1, Port2, Port3, Save-Level, Save-Number, Service, Syslog-Enabled, TCP-Clear-Options

Host2

Description: Specifies the name of the third login host the MAX TNT attempts to use for TCP-Clear connections.

Usage: Specify the name of the third login host the MAX TNT attempts to use for TCP-Clear connections. You can enter up to 32 characters. The default is null.

Example: The following example specifies three login hosts:

```
admin> read conn fred
CONNECTION/fred read
admin> set tcp host=mercury
admin> set tcp host1=venus
admin> set tcp host2=neptune
admin> write
CONNECTION/fred written
```

Dependencies: The Host, Host1, Host2, and Host3 values specify the names of up to four login hosts to use for TCP-Clear connections. If the TCP connection to the first specified host fails, the system attempts to connect to the next specified host. If the connection to the next host fails, the system attempts to connect to the third host, and so forth. If all connection attempts fail, the session terminates and the MAX TNT returns a TCP connection error to the dial-in client.

Location: Connection *station* > TCP-Clear-Options

See Also: Facility, Host, Host1, Host3, Immediate-Mode-Options, Port, Port1, Port2, Port3, Save-Level, Save-Number, Service, Syslog-Enabled, TCP-Clear-Options

Host3

Description: Specifies the name of the fourth login host the MAX TNT attempts to use for TCP-Clear connections.

Usage: Specify the name of the fourth login host the MAX TNT attempts to use for TCP-Clear connections. You can enter up to 32 characters. The default is null.

Example: The following example specifies four login hosts:

```
admin> read conn fred
CONNECTION/fred read
admin> set tcp host=mercury
admin> set tcp host1=venus
admin> set tcp host2=neptune
admin> set tcp host3=pluto
admin> write
CONNECTION/fred written
```

Dependencies: The Host, Host1, Host2, and Host3 values specify the names of up to four login hosts to use for TCP-Clear connections. If the TCP connection to the first specified host fails, the system attempts to connect to the next specified host. If the connection to the next host fails, the system attempts to connect to the third host, and so forth. If all connection attempts fail, the session terminates and the MAX TNT returns a TCP connection error to the dial-in client.

Location: Connection *station* > TCP-Clear-Options

See Also: Facility, Host, Host1, Host2, Immediate-Mode-Options, Port, Port1, Port2, Port3, Save-Level, Save-Number, Service, Syslog-Enabled, TCP-Clear-Options

Host-N (N=1–4)

Description: Specifies the IP addresses of the Telnet hosts the MAX TNT displays in the terminal-server menu. You can specify up to four host addresses. If the user cannot use the terminal-server command-line interface, the hosts you specify are the only ones to which the user has access.

Usage: Specify an IP address in dotted decimal notation. Separate the optional subnet mask from the address by entering a forward slash. The default is 0.0.0.0.

Example: `set host-1=10.1.2.3/29`

Dependencies: If terminal services are disabled, Host-N does not apply. In addition, the MAX TNT ignores the host addresses if Remote-Configuration=Yes. If you want to specify more than four addresses, you must do so in RADIUS.

Location: Terminal-Server > Menu-Mode-Options

See Also: Menu-Mode-Options, Remote-Configuration

Host-Address

Description: Specifies the address to which the MAX TNT sends trap-PDUs.

Usage: Specify an IP address in dotted decimal notation. The default is 0.0.0.0. If Host-Address is set to 0.0.0.0 and DNS (or YP/NIS) is supported, the MAX TNT looks up the host address and sends trap-PDUs. If Host-Address is set to 0.0.0.0 and Community-Name is null, traps are disabled.

Example: `set host-address=10.2.3.4/24`

Location: Trap *host-name*

See Also: Alarm-Enabled, Community-Name, Host-Name, Port-Enabled, Security-Mode

Host-Name

Description: In the Trap profile, specifies the hostname of a station running SNMP manager utilities. In a Table-Config subprofile, specifies a hostname for a local DNS table entry.

Usage: In the Trap profile, specify a hostname of up to 16 characters. In the Table-Config subprofile, specify a hostname that begins with an alphabetic character and consists of fewer than 256 characters. For both profiles, the default is null.

Example: `set host-name=sparky`

Dependencies: For the Host-Name setting in the Trap profile, consider the following:

- If Host-Address is set, the MAX TNT does not use the Host-Name value.
- The MAX TNT sends SNMP traps to the host you specify.
- When DNS or YP/NIS is supported, but Host-Address is not specified, the MAX TNT uses the hostname to look up the LAN address of the SNMP manager.

For the Host-Name setting in the Table-Config subprofile, consider the following:

- You can specify either a local hostname or a hostname that contains the domain name. If your setting does not specify a domain name, the system appends the value specified by Domain-Name or Sec-Domain-Name.
- Trailing periods are ignored.

Location: IP-Global > DNS-Local-Table > Table-Config *N*, Trap *host-name*

See Also: Alarm-Enabled, Community-Name, Domain-Name, Host-Address, IP-Address, Port-Enabled, Sec-Domain-Name, Security-Mode

Hosts-Info *N*

Description: Specifies up to ten IP addresses and hostnames for the menu displayed in Terminal-Server menu mode.

Usage: The Hosts-Info setting is read only.

Example: `hosts-info [1]={ 200.50.40.5 }`

Location: Ext-Tsrv

See Also: Banner *N*, Init-Banner *N*

Hunt-Grp-Phone-Number-*N*

Description: Specifies a hunt-group phone number associated with the line.

Usage: Specify a phone number of up to 24 characters. The default is null.

Example: `set hunt-grp-phone-number-1=555-1212`

Location: T1 {shelf-*N* slot-*N* *N*} > Line-Interface

See Also: Line-Interface

/

ICMP-Reply-Directed-Bcast

Description: Specifies whether the MAX TNT responds to directed-broadcast ICMP echo requests.

Usage: Specify Yes or No. The default is Yes.

- Yes specifies that the MAX TNT responds to directed-broadcast ICMP echo requests.
- No specifies that the MAX TNT does not respond to directed-broadcast ICMP echo requests.

Example: `set icmp-reply-directed-bcast=no`

Location: IP-Global

See Also: Directed-Broadcast-Allowed

ID-Auth-Prefix

Description: Specifies the string inserted as a prefix to the phone number presented to the RADIUS server in CLID or DNIS authentication requests.

Usage: Specify up to 16 characters. The default is null.

Example: `set id-auth-prefix=test`

Location: External-Auth > Rad-Auth-Client

See Also: Auth-ID-Fail-Return-Busy, Auth-ID-Timeout-Return-Busy

Idle-Logout

Description: Specifies the number of seconds a Telnet session can remain logged in with no keyboard activity.

Usage: Specify a number of seconds. The default is 0 (zero), which specifies that the station can remain logged in indefinitely.

Example: `set idle-logout=60`

Location: System, User *name*

See Also: Auto-Logout, Idle-Mode, Idle-Timer

Idle-Mode

Description: Specifies whether the D channel looks for a flag pattern (01111110) or a mark pattern (11111111) as the idle indicator.

Usage: Specify one of the following values:

- Flag-Idle (the default) specifies that the D channel looks for a flag pattern.
- Mark-Idle specifies that the D channel looks for a mark pattern.

Example: `set idle-mode=flag-idle`

Location: T1 {shelf-*N* slot-*N* *N*} > Line-Interface

See Also: Idle-Logout, Idle-Timer, Line-Interface

Idle-Timer

Description: In the Answer-Defaults and Connection profiles, specifies the number of seconds the MAX TNT waits before clearing a call when a session is inactive. In the ATMP profile, specifies the number of minutes that the Home Agent maintains an idle tunnel before disconnecting it.

Usage: Specify a number from 0 to 65535. In the Answer-Defaults and Connection profiles, the default setting is 120 seconds. In the ATMP profile, the default is 0 (zero) minutes. In any of the three profiles, setting a value of 0 (zero) disables the idle timer, so that an idle call or tunnel is maintained indefinitely.

Example: `set idle-timer=30`

Dependencies: In the Answer-Defaults and Connection profiles, the Idle-Timer value applies only to sessions in which the MAX TNT transmits data in packets through the router to the WAN connection. Idle-Timer does not apply to nailed-up or terminal-server connections. For a terminal-server connection, use TS-Idle-Timer.

Location: Answer-Defaults > Session-Info, ATMP, Connection *station* > Session-Options

See Also: Agent-Mode, Agent-Type, Call-Filter, Data-Filter, Filter-Persistence, Force-Fragmentation, MTU-Limit, Password, Retry-Limit, Retry-Timeout, Session-Info, Session-Options, TS-Idle-Timer, UDP-Port

IDSL

Description: Specifies the action to take when the code image for an IDSL card is present in a Tar file.

Usage: Specify one of the following settings:

- Auto (the default) causes the system to load images for cards that are installed in the MAX TNT, and to skip images for cards that are not installed.
- Load causes the system to load the image, even if there is no card of that type installed.
- Skip causes the system to skip the image, even if there is a card of that type installed.

Dependencies: A card is considered present in the system if a Slot-Type profile exists for that card type. The system creates a Slot-Type profile when it first detects the presence of a card, and does not delete the profile unless the administrator uses the Slot -r command to permanently remove a card that is no longer installed in the system, or clears NVRAM. To ensure that the system does not load unnecessary images, use Slot -r to remove Slot-Type profiles for cards that are no longer installed in the system.

Location: Load-Select

See Also: 8E1, 8T1, AMDM, CAPADSL, DMTADSL, DS3-ATM, Enet, Enet2, HDLC, HDLC2, MDM56K, MDM-V34, SDSL, SDSL70D, SDSL70V, SWAN, T3, UDS3, UE1, Unknown-Cards, UT1

IDSL (profile)

Description: A profile that enables you to configure an IDSL card.

Usage: Use the Read and List commands to make IDSL the working profile and list its contents. For example:

```
admin> read idsl {1 1 0}
IDSL/{ shelf-1 slot-1 0 } read

admin> list
[in IDSL/{ shelf-1 slot-1 0 }]
name=1:1:0
line-interface={yes "" ""}
physical-address*={ shelf-1 slot-1 0 }
```

You can then use the Set command to modify the settings in the profile. To close the profile and save your changes, execute the Write command. For example:

```
admin> write
IDSL/{ shelf-1 slot-1 0 } written
```

See Also: Line-Interface, Name, Physical-Address

IDSL-Stat

Description: A profile that displays information about the state of an ISDN BRI line and its individual channels.

Usage: Use the Read and List commands to make IDSL-Stat the working profile and list its contents. For example:

```
admin> read idsl-stat {1 8 1}
IDSL-STAT/{ shelf-1 slot-8 1 } read

admin> list
[in IDSL-STAT/{ shelf-1 slot-8 1 }]
physical-address*={ shelf-1 slot-8 1 }
line-state=disabled
channel-state=[ unavailable unavailable ]
error-count=[ 0 0 ]
```

See Also: Channel-State, Error-Count, Line-State, Physical-Address

IF-Group-Index

Description: Indicates the SNMP interface group index assigned to the port.

Usage: The IF-Group-Index setting is read only.

Location: ADSL-CAP-Stat {shelf-*N* slot-*N* *N*} > Physical-Status
SDSL-Stat {shelf-*N* slot-*N* *N*} > Physical-Status

See Also: Dev-Line-State, Down-Stream-Constellation, Down-Stream-Operational-Baud, Down-Stream-Rate, Hardware-Ver, Major-Firmware-Ver, Minor-Firmware-Ver, Physical-Address, Unit-Type, Up-Stream-Constellation, Up-Stream-Rate

IF-Remote-Address

Description: Specifies the IP address of the numbered interface at the remote end of a link.

Usage: Specify the IP address of the numbered interface in dotted decimal notation. The default is 0.0.0.0.

Dependencies: For IF-Remote-Address to apply, you must enable IP for the Connection profile.

Location: Connection *station* > IP-Options

See Also: IP-Options

Ignore-Def-Route

Description: Specifies whether the MAX TNT ignores the default route when applying RIP updates to its routing table. The default route specifies a static route to another IP router, which is often a local router. When you configure the MAX TNT to ignore the default route, RIP updates do not modify the default route in the MAX TNT routing table.

Usage: Specify Yes or No. The default is No.

- Yes specifies that the MAX TNT ignores advertised default routes. Ascend recommends that you specify Yes.
- No specifies that the MAX TNT can modify its default route on the basis of RIP updates.

Example: `set ignore-def-route=yes`

Location: IP-Global

See Also: Client-Default-Gateway, RIP

Ignore-ICMP-Redirects

Description: Specifies whether the MAX TNT processes incoming ICMP redirect packets.

ICMP redirects are one of the oldest route-discovery mechanisms on the Internet, and one of the least secure, because they can be used to redirect packets dynamically. Most secure sites configure the MAX TNT to ignore redirect packets.

Usage: Specify Yes or No. The default is No.

- Yes causes the MAX TNT to ignore ICMP redirect packets.
- No causes the MAX TNT to process ICMP redirect packets.

Example: `set ignore-icmp-redirects=yes`

Location: IP-Global

See Also: OSPF-ASE-Pref, OSPF-Pref, Preference, RIP-Pref, Static-Pref

Immediate-Mode-Options

Description: A subprofile containing terminal-server configuration options for immediate mode. In immediate mode, the MAX TNT makes a connection to an IP host immediately upon login.

Usage: With Terminal-Server as the working profile, list the Immediate-Mode-Options subprofile. For example:

```
admin> list imm
[ in TERMINAL-SERVER:immediate-mode-options ]
service=none
telnet-host-auth=no
host=" "
port=0
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: Terminal-Server

See Also: Host, Port, Service, Telnet-Host-Auth

Increment-Channel-Count

Description: Specifies the number of channels the MAX TNT adds for a manual or automatic bandwidth change during a call.

Usage: Specify an integer from 1 to 32. The default is 1.

Example: `set increment-channel-count=3`

Location: Answer-Defaults > MPP-Answer, Connection *station* > MPP-Options

See Also: Add-Persistence, Bandwidth-Monitor-Direction, Base-Channel-Count, Decrement-Channel-Count, Dynamic-Algorithm, Maximum-Channels, Minimum-Channels, MPP-Answer, MPP-Options, Seconds-History, Sub-Persistence, Target-Utilization

Index

Description: In a Call-Route profile, specifies the address of the device that should receive the call if the call information matches other settings in the same Call-Route profile. In an Error profile, indicates the internal index of the entry.

In a Call-Route profile, the Index setting contains an entry number in the following format:

`{{{shelf slot port} logical-item } entry }`

A 0 (zero) in any field specifies *any*. That is, it matches any shelf, slot, port, or item. (For more information, see the description for Interface-Address.)

In an Error profile, the Index number is an integer.

Usage: If you have only one Call-Route profile for the specified address, accept the default of 0 (zero) for the entry number. When you specify the same address in more than one Call-Route profile, you must assign a nonzero entry number to distinguish the entries from one another in the database. You can assign any number, as long as it is unique for each entry. The entry numbers do not have to be sequential.

You can use the Index setting to clone Call-Route profiles. Just read an existing profile, and change the device address. You can also create multiple entries for a device by reading an existing profile and setting a new entry number.

In an Error profile, the Index setting is read only.

Example: `set index entry=1`

Location: Call-Route {{{shelf-*N* slot-*N* *N*} *N*} *N*}, Error *index*

See Also: Call-Route-Type, Entry-Number, Interface-Address, Phone-Number, Preferred-Source, Trunk-Group

Inet-Profile-Type

Description: Specifies whether the nailed-up profile is a local profile or a RADIUS profile.

Usage: The Inet-Profile-Type setting is read only. The number 0 (zero) indicates a local profile. The number 1 (one) indicates a RADIUS profile.

Example: `inet-profile-type=1`

Location: Admin-State-Perm-If *station*

See Also: Desired-State, Desired-Trip-State, Device-Address, SNMP-Interface, Station

Info

Description: Specifies the PPP startup message. If you specify a value, the MAX TNT displays it when an interactive user initiates a PPP session from the terminal-server interface.

Usage: Specify one of the following values:

- None specifies that no startup message appears.
- Mode-PPP specifies that the startup message is PPP Mode.
- Session-PPP (the default) specifies that the startup message is PPP Session.

Example: `set info=mode-ppp`

Dependencies: If terminal services are disabled, Info does not apply.

Location: Terminal-Server > PPP-Mode-Configuration

See Also: IP-Add-Msg, PPP, PPP-Mode-Configuration

Init-Banner N

Description: Specifies the initial-banners for terminal-server logins, downloaded from RADIUS.

Usage: The Init-Banner setting is read only.

Example: `init-banner [1]="Welcome"`

Location: Ext-Tsrv

See Also: Banner N, Hosts-Info N

Input-Filters

Description: A subprofile containing 12 input-filter configuration subprofiles.

Usage: With a Filter profile as the working profile, use the List command to display the input filters in the Input-Filters subprofile. For example:

```
admin> list input
[in FILTER/test:input-filters]
input-filters[1]={ no no generic-filter { 0 0 no no +
input-filters[2]={ no no generic-filter { 0 0 no no +
input-filters[3]={ no no generic-filter { 0 0 no no +
input-filters[4]={ no no generic-filter { 0 0 no no +
...
```

To close the Input-Filters subprofile and return to a higher context in the profile:

```
admin> list ..
```

Location: Filter *filter-name*

See Also: Filter-Name, Input-Filters N, Output-Filters, Output-Filters N

Input-Filters N

Description: A subprofile containing the first level of an input-filter specification.

Usage: With a Filter profile as the working profile, use the List command to display an input filter. For example:

```
admin> list input 1
[in FILTER/test:input-filters[1]]
valid-entry=no
forward=no
type=generic-filter
gen-filter={ 0 0 no no 00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00 +
ip-filter={ 0 0.0.0.0 0.0.0.0 0.0.0.0 0.0.0.0 none 0 none 0 no }
route-filter={ 0.0.0.0 0.0.0.0 0.0.0.0 0.0.0.0 0 none }
ipx-filter={ 00:00:00:00 00:00:00:00 00:00:00:00:00:00:00:00 +
tos-filter={ 0 0.0.0.0 0.0.0.0 0.0.0.0 0.0.0.0 none 0 none 0 +
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: Filter *filter-name* > Input-Filters

See Also: Forward, Gen-Filter, IP-Filter, TOS-Filter (subprofile), Type, Valid-Entry

Input-IPX-SAP-Filters

Description: A subprofile that defines up to eight input filters for SAP packets. The MAX TNT applies input filters to all SAP packets received by the MAX TNT. Input filters screen advertised services and exclude them from (or include them in) the MAX TNT service table as specified by the filter conditions.

Usage: With an IPX-SAP-Filter as the working profile, use the List command to display one of the input filters for SAP packets. For example:

```
admin> list input 1
[in IPX-SAP-FILTER/test:input-ipx-sap-filters[1]]
valid-filter=no
type-filter=exclude
server-type=00:00
server-name=" "
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: IPX-SAP-Filter

See Also: Server-Name, Server-Type, Type-Filter, Valid-Filter

Interface-Address

Description: Identifies an interface address in the following format:

```
{ {shelf slot item} logical-item }
```

This format specifies the physical address and a logical item. For information about the physical address format, see the description for Physical-Address. The logical item number is 0 (zero), except when the device is further divided, such as for a channelized T1 line. For a T1 line, each channel can have its own logical item number (1–24).

Usage: In most cases, the Interface-Address value is obtained from the system. However, you can clone a profile by reading an existing one and changing its device address. To modify the value, use the List and Set commands. For example:

```
admin> list interface
[in ATALK-INTERFACE/{ { shelf-1 slot-8 } 5 }:interface-address]
physical-address={ shelf-1 slot-8 5 }
logical-item=0

admin> set logical-item=11
```

Alternatively, just use the Set command:

```
admin> set interface logical-item=11
```

Location: Atalk-Interface {shelf-*N* slot-*N* *N*}, Ether-Info {shelf-*N* slot-*N* *N*}, Ethernet {shelf-*N* slot-*N* *N*}, IP-Interface {{shelf-*N* slot-*N* *N*}, IPX-Global, IPX-Interface {shelf-*N* slot-*N* *N*}

See Also: Device-Address, Item-Number, Physical-Address, Shelf, Slot

Internal-Call-Processing

Description: Specifies how the MAX TNT processes incoming calls on a T1 line.

Usage: For the Access SS7 Gateway (ASG), specify Internal-Processing.

Example: `set internal-call-processing=internal-processing`

Location: T1 {shelf-*N* slot-*N* *N*} > Line-Interface

See Also: Signaling-Mode

Inter-VRouter

Description: Specifies the name of a Virtual Router (VRouter) to use as the route's next hop. Packets destined for the Dest-Address are sent to the specified VRouter, which consults its routing table to route the packets.

Usage: Specify the name of a VRouter. The default is null.

Example: `set inter-vrouter=next-router`

Dependencies: You must set Gateway-Address=0.0.0.0 for the Inter-VRouter setting to apply.

Location: IP-Route *name*

See Also: Dest-Address, Gateway-Address, VRouter

IP-Add-Msg

Description: Specifies a string that precedes the IP address when a terminal-server user initiates a PPP session.

Usage: Specify a text string of up to 20 characters. The default is `IP address is:`

Example: `set ip-add-msg="Your IP address is: "`

Dependencies: If terminal services are disabled, IP-Add-Msg does not apply.

Location: Terminal-Server > Terminal-Mode-Configuration

See Also: Info, Terminal-Mode-Configuration

IP-Address

Description: In an IP-Interface profile, assigns an IP address to an Ethernet interface. In a Table-Config subprofile, specifies an IP address for a local DNS table entry. In an Error profile, indicates the address or subnet from which an operator reset was requested.

Usage: In an IP-Interface profile or Table-Config subprofile, specify an IP address in dotted decimal notation. The default is 0.0.0.0. To allow the Auto-Update feature to build the local DNS table, accept the default for IP-Address in the Table-Config subprofile. In an Error profile, the IP-address setting is read only.

Example: `set ip-address=10.2.3.4/24`

Location: Error, IP-Global > DNS-Local-Table> Table-Config *N*,
IP-Interface { {shelf-*N* slot-*N* *N*} *N*}

See Also: Auto-Update, Host-Name, IP-Direct, IP-Route, IP-Routing-Enabled

IP-Answer

Description: A subprofile containing default settings for IP calls, regardless of their encapsulation protocol.

Usage: With Answer-Defaults as the working profile, list the IP-Answer subprofile. For example:

```
admin> list ip-answer
[in ANSWER-DEFAULTS:ip-answer]
enabled=yes
vj-header-prediction=yes
assign-address=yes
routing-metric=1
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: Answer-Defaults

See Also: Assign-Address, Enabled, Routing-Metric, VJ-Header-Prediction

IP-Direct

Description: Specifies the address to which the MAX TNT immediately directs all incoming IP traffic on the link, without consulting the IP-routing table. If you enable RIP updates in both directions, the MAX TNT forwards all RIP packets to the IP address you specify.

Usage: Specify an IP address in dotted decimal notation. The default is 0.0.0.0, which disables IP-Direct routing.

Example: `set ip-direct=10.1.2.3/24`

Dependencies: When you use IP-Direct routing, a remote user cannot establish a Telnet session directly to the MAX TNT.

Location: Connection *station* > IP-Options

See Also: IP-Address, IP-Options, IP-Route, IP-Routing-Enabled

IP-Filter

Description: A subprofile containing an IP filter specification. A Filter profile contains several levels of subprofiles. An IP-Filter subprofile is in an Input-Filters *N* or Output-Filters *N* subprofile.

Usage: With a Filter profile as the working profile, list an IP-Filter subprofile. For example:

```
admin> list input 1 ip-filter
[in FILTER/test:input-filters[1]:ip-filter]
protocol=0
source-address-mask=255.255.255.192
source-address=200.100.50.128
dest-address-mask=0.0.0.0
dest-address=0.0.0.0
Src-Port-Cmp=none
source-port=0
Dst-Port-Cmp=none
dest-port=0
tcp-estab=no
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: Filter *filter-name* > Input-Filters > Input-Filters *N*,
Filter *filter-name* > Output-Filters > Output-Filters *N*

See Also: Dest-Address, Dest-Address-Mask, Dest-Port, Dst-Port-Cmp, Input-Filters *N*,
Output-Filters *N*, Protocol, Source-Address, Source-Address-Mask, Source-Port,
Src-Port-Cmp, TCP-Estab

IP-Global

Description: A profile that contains global settings for TCP/IP.

Usage: Use the Read and List commands to make IP-Global the working profile and list its contents. For example:

```
admin> read ip-g
IP-GLOBAL read

admin> list
[in IP-GLOBAL]
domain-name=abc.com
dns-primary-server=10.65.212.178
dns-secondary-server=0.0.0.0
system-ip-addr=0.0.0.0
soft-ip-interface-addr=0.0.0.0
netbios-primary-ns=0.0.0.0
netbios-secondary-ns=0.0.0.0
must-accept-address-assign=no
pool-summary=no
pool-base-address=[ 0.0.0.0 0.0.0.0 0.0.0.0 0.0.0.0 0.0.0.0 +
assign-count=[ 0 0 0 0 0 0 0 0 0 0 ]
pool-name=" "
rip-policy=poison-rvrs
summarize-rip-routes=no
bootp-enabled=no
ignore-icmp-redirects=no
drop-source-routed-ip-packets=no
ignore-def-route=yes
rarp-enabled=no
udp-cksum=yes
tcp-timeout=0
dialout-poison=no
telnet-password=" "
user-profile=" "
shared-prof=no
dns-list-attempt=no
static-pref=100
rip-pref=100
ospf-pref=10
ospf-ase-pref=150
ospf-global={ yes }
rip-tag=c8:00:00:00
rip-ase-type=1
```

```
pool-ospf-adv-type=type-1
iproute-cache-enable=yes
iproute-cache-size=0
dns-list-size=6
client-primary-dns-server=0.0.0.0
client-secondary-dns-server=0.0.0.0
allow-as-client-dns-info=true
multicast-forwarding=no
mbone-profile=" "
mbone-lan-interface={ { any-shelf any-slot 0 } 0 }
multicast-hbeat-addr=0.0.0.0
multicast-hbeat-port=0
multicast-hbeat-slot-time=0
multicast-hbeat-Number-Slot=0
multicast-hbeat-Alarm-threshold=0
multicast-hbeat-src-addr=0.0.0.0
multicast-hbeat-src-addr-mask=0.0.0.0
sec-domain-name=" "
multicast-member-timeout=360
finger=no
ip-port-cache-enable=yes
dns-local-table=[ no no table-config { " " 0.0.0.0. " " 0.0.0.0.+
icmp-reply-directed-bcast=yes
bootp-relay=[ no bootp-servers { 0.0.0.0 0.0.0.0 } ]
rip-trigger=yes
suppress-host-routes=no
```

You can then use the Set command to modify the settings in the profile. To close the profile and save your changes:

```
admin> write
IP-GLOBAL written
```

See Also: Allow-As-Client-DNS-Info, Assign-Count, BOOTP-Enabled, Client-Primary-DNS-Server, Client-Secondary-DNS-Server, Dialout-Poison, DNS-List-Attempt, DNS-List-Size, DNS-Local-Table, DNS-Primary-Server, DNS-Secondary-Server, Domain-Name, Drop-Source-Routed-IP-Packets, Finger, ICMP-Reply-Directed-Bcast, Ignore-Def-Route, Ignore-ICMP-Redirects, IP-Port-Cache-Enable, IPRoute-Cache-Enable, IPRoute-Cache-Size, Must-Accept-Address-Assign, NetBIOS-Primary-NS, NetBIOS-Secondary-NS, OSPF-ASE-Pref, OSPF-Global, OSPF-Pref, Pool-Base-Address, Pool-Summary, RARP-Enabled, RIP-ASE-Type, RIP-Policy, RIP-Pref, RIP-Tag, RIP-Trigger, Sec-Domain-Name, Shared-Prof, Soft-IP-Interface-Addr, Static-Pref, Summarize-RIP-Routes, Suppress-Host-Routes, System-IP-Addr, Telnet-Password, UDP-Cksum, User-Profile

IP-Interface

Description: A profile containing configuration options for an IP interface.

Each packet-handling slot card operates as a router subsystem with its own local interface table. The MAX TNT router card (the master shelf-controller in the current release) holds the global interface table. The interface address of an IP-Interface profile is the local address on a slot card. Each interface has its own IP address.

When the MAX TNT generates IP packets, the packets have the source address of the IP interface on which they are forwarded. If the MAX TNT receives IP packets destined for one of its IP addresses, it accepts the packets, even if they arrive on a different interface and the destination-address interface is not active.

Usage: You can specify up to 16 IP-Interface profiles for each Ethernet card. Each profile specifies a single IP address.

The MAX TNT creates a default IP-Interface profile when it first detects the presence of an Ethernet card or the shelf-controller Ethernet port. For example, for the first Ethernet port on a card in shelf 1, slot 12, the default IP-Interface profile uses the following index:

```
{{1 12 1} 0}
```

The index consists of a physical address and a logical-item number in the following format:

```
{{shelf slot item} logical-item}
```

The logical item number addresses a specific logical interface or port. The logical item number is 0 (zero), except when you configure multiple interfaces or the device supports multiple channels. For example, another IP-Interface profile for { 1 12 1 } might use the following index:

```
{{1 12 1} 1}
```

The logical-item numbers do not have to be consecutive, but they must be unique.

To specify an interface-independent address, create an IP-Interface profile with the default index. For example, the following commands set the soft interface address to 11.168.7.100:

```
admin> new ip-interface
IP-INTERFACE/{ { any-shelf any-slot 0 } 0 } read
admin> set soft-ip-interface-addr=11.168.7.100
admin> write
IP-INTERFACE/{ { any-shelf any-slot 0 } 0 } written
```

The IP-Interface profile with the default index is reserved for the interface-independent IP address.

Dependencies: Consider the following:

- For IP-Interface profiles, the default profile (with the zero logical-item number) must have an IP address configured, or none of the other IP-Interface profiles for the same port will function. Do not delete the default profile if you want your other configurations to work.
- If Proxy-Mode is enabled in any of the IP-Interface profiles for a given Ethernet port, it is enabled for all ARP requests coming into the physical port.

See Also: Directed-Broadcast-Allowed, Interface-Address, IP-Address, Management-Only-Interface, Multicast-Allowed, Multicast-Group-Leave-Delay, Multicast-Rate-Limit, OSPF, Proxy-Mode, RIP2-Use-Multicast, RIP-Mode

IP-Options

Description: A subprofile containing IP-routing settings.

Usage: With a Connection profile as the working profile, list the IP-Options subprofile. For example:

```
admin> list ip
[in CONNECTION/tim:ip-options]
ip-routing-enabled=yes
vj-header-prediction=yes
remote-address=0.0.0.0/0
local-address=0.0.0.0/0
routing-metric=7
preference=100
down-preference=255
private-route=no
temporary-route=no
multicast-allowed=no
address-pool=0
ip-direct=0.0.0.0
rip=routing-off
ospf-options={ no 0.0.0.0 normal 10 30 120 5 simple ***** 10 +
multicast-rate-limit=100
client-dns-primary-addr=0.0.0.0
client-dns-secondary-addr=0.0.0.0
client-dns-addr-assign=yes
client-default-gateway=0.0.0.0
route-filter=" "
if-remote-address=0.0.0.0
multicast-group-leave-delay=0
tos-options={ no 00 normal input }
tos-filter=" "
source-ip-check=no
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Dependencies: IP-routing calls must be enabled in the Answer-Defaults profile.

Location: Connection *station*

See Also: Active, Address-Pool, Apply-To, Client-Default-Gateway, Client-DNS-Addr-Assign, Client-DNS-Primary-Addr, Client-DNS-Secondary-Addr, Down-Preference, IP-Direct, IP-Routing-Enabled, Local-Address, Multicast-Allowed, Multicast-Group-Leave-Delay, Multicast-Rate-Limit, OSPF-Options, Precedence, Preference, Private-Route, Remote-Address, RIP, Routing-Metric, Source-IP-Check, Temporary-Route, Type-of-Service, VJ-Header-Prediction

IP-Port-Cache-Enable

Description: Enables or disables card-to-card IP packet forwarding on the basis of the packet destination IP address and port.

Usage: Specify Yes or No. The default is Yes.

- Yes specifies that packets destined for the MAX TNT itself are correctly forwarded from the receiving slot card to the destination slot card, bypassing the router.
- No specifies that packets destined for the MAX TNT itself are delivered to the router, and then forwarded to the modem card.

Example: `set ip-port-cache-enable=no`

Location: IP-Global

See Also: IPRoute-Cache-Enable, IPRoute-Cache-Size

IP-Route

Description: A profile containing the information required by the IP router for setting up static routes. The MAX TNT passes the static routes to the router at startup, and updates the routing table whenever a route changes.

Usage: Use the Read and List commands to make IP-Route the working profile and list its contents. For example:

```
admin> read ip-route default
IP-ROUTE/default read

admin> list
[in IP-ROUTE/default]
name*=default
dest-address=0.0.0.0/0
gateway-address=0.0.0.0
metric=1
cost=1
preference=100
third-party=no
ase-type=type-1
ase-tag=c0:00:00:00
private-route=yes
active-route=no
```

You can then use the Set command to modify the settings in the profile. To close the profile and save your changes:

```
admin> write
IP-ROUTE/default written
```

See Also: Active-Route, ASE-Tag, ASE-Type, Cost, Dest-Address, Gateway-Address, Metric, Nailed-Up-Group, Preference, Private-Route, Third-Party

IPRoute-Cache-Enable

Description: Enables or disables route caches.

A route cache enables a slot card to route IP packets to another slot, reducing the route-processing overhead on the shelf controller. The shelf controller is still responsible for managing routing protocols and the route caches themselves, but each slot card is able to check a small IP cache and route packets to a destination slot. When a slot card receives an IP packet for which it has no cache entry, it forwards that packet to the shelf controller, which routes it to the proper slot. The shelf controller then writes a cache entry and, using the control bus, downloads it to the route cache of each slot card.

Usage: Specify Yes or No. The default is Yes, which is the recommended setting.

- Yes enables the router on the shelf controller to offload some route processing to the slot cards.
- No specifies that all route processing occurs on the shelf controller.

Example: `set iproute-cache-enable=yes`

Location: IP-Global

See Also: IPRoute-Cache-Size

IPRoute-Cache-Size

Description: Specifies the limit for the number of cache entries in slot-card route caches.

Usage: Specify an integer. The default is 0 (zero), which sets no limit on cache size. In general, no limit is required. But you can set one if you need to control memory usage.

Example: `set iproute-cache-size=16`

Location: IP-Global

See Also: IPRoute-Cache-Enable

IP-Routing-Enabled

Description: Enables or disables the routing of IP data packets for the connection.

Usage: Specify Yes or No. The default is Yes.

- Yes enables IP routing for the link. For your setting to have any effect, IP routing must be enabled on both the dialing and answering sides of the link.
- No disables IP routing for the link.

Example: `set ip-routing-enabled=yes`

Location: Connection *station* > IP-Options

See Also: IP-Address, IP-Global, IP-Interface, IP-Options, IP-Route

IPX-Answer

Description: A subprofile containing default settings for IPX calls.

Usage: With Answer-Defaults as the working profile, list the IPX-Answer subprofile. For example:

```
admin> list ipx-answer  
[in ANSWER-DEFAULTS:ipx-answer]  
enabled=yes
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: Answer-Defaults

See Also: Enabled

IPX-Dialin-Pool

Description: Specifies a virtual IPX network that the MAX TNT assigns to all dial-in NetWare clients.

Dial-in clients do not belong to an IPX network. Therefore, to establish a routing connection, the MAX TNT must assign each client an IPX network number. The MAX TNT advertises the route to the virtual network and assigns it as the network address for dial-in clients.

The dial-in Netware client must accept the network number, although it can provide its own node number. If the client does not have a unique node address, the MAX TNT assigns the node address as well.

Usage: Specify an IPX network number that is unique in the IPX routing domain. The default is 00:00:00:00.

Example: `set ipx-dialin-pool=00000001`

Dependencies: If IPX routing is globally disabled, IPX-Dialin-Pool does not apply.

Location: IPX-Global

See Also: Interface-Address, IPX-Frame, IPX-Net-Number, IPX-Options, IPX-Route, IPX-Routing-Enabled, IPX-SAP-Filter-Name, IPX-Type-20

IPX-Filter

Description: A subprofile containing an IPX filter specification. A Filter profile contains several levels of subprofiles. An IPX-Filter subprofile is in an Input-Filters *N* or Output-Filters *N* subprofile.

Usage: When a Filter profile is the working profile, list an IPX-Filter subprofile. For example:

```
admin> list input 1 ipx-filter
[ in FILTER/test:input-filters[1]:ipx-filter ]
src-net-address=00:00:00:00
dest-net-address=00:00:00:00
src-node-address=00:00:00:00:00:00
dest-node-address=00:00:00:00:00:00
src-socket=00:00
src-socket-cmp=none
dest-socket=0
dst-socket-cmp=none
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: Filter *filter-name* > Input-Filters > Input-Filters *N*,
Filter *filter-name* > Output-Filters > Output-Filters *N*

See Also: Dest-Net-Address, Dest-Node-Address, Dest-Socket, Dst-Socket-Cmp, Input-Filters *N*, Output-Filters *N*, Src-Net-Address, Src-Node-Address, Src-Socket, Src-Socket-Cmp

IPX-Frame

Description: Specifies the type of packet frame the MAX TNT will route on an Ethernet connection.

Usage: Specify one of the following values:

- None (the default) disables IPX-specific features. If you choose this setting, the MAX TNT can route IPX, but without automatic RIP and SAP handling.
- 802.2 (NetWare 3.12 or later) specifies that the IPX clients and servers on the local Ethernet cable follow the IEEE 802.2 protocol for the Media Access Control (MAC) header. The frame contains the Logical Link Control (LLC) header in addition to the MAC header.
- 802.3 (for NetWare 3.11 or earlier) specifies that IPX clients and servers on the local Ethernet cable follow the IEEE 802.3 protocol for the MAC header, also called Raw 802.3. The frame contains the MAC header, but not the LLC header.
- SNAP specifies that the IPX clients and servers on the local Ethernet network follow the SubNetwork Access Protocol (SNAP) for the MAC header. This specification includes the IEEE 802.3 protocol format plus additional information in the MAC header.
- Enet-II specifies that IPX clients and servers on the local Ethernet network follow the Ethernet II protocol for the MAC header.

Example: set ipx-frame=802.2

Dependencies: Consider the following:

- If the MAX TNT does not route IPX on the specified interface, or if IPX routing is globally disabled, IPX-Frame does not apply.
- The MAX TNT routes only the IPX frame type specified by IPX-Frame. If a NetWare server transmits IPX in a different frame type, the MAX TNT drops the packets.

Location: IPX-Interface {shelf-*N* slot-*N* *N*}

See Also: Interface-Address, IPX-Dialin-Pool, IPX-Net-Number, IPX-Options, IPX-Route, IPX-Routing-Enabled, IPX-SAP-Filter-Name, IPX-Type-20

IPX-Global

Description: A profile that contains global settings for IPX.

Usage: Use the Read and List commands to make IPX-Global the working profile and list its contents. For example:

```
admin> read ipx-global
IPX-GLOBAL read

admin> list
[in IPX-GLOBAL]
interface-address={ { any shelf any slot 0 } }
ipx-routing-enabled=no
ipx-dialin-pool=00:00:00:00
```

You can then use the Set command to modify the settings in the profile. To close the profile and save your changes:

```
admin> write
IPX-GLOBAL written
```

See Also: Interface-Address, IPX-Dialin-Pool, IPX-Routing-Enabled

IPX-Header-Compression

Description: Specifies whether the MAX TNT should use IPX header compression on the connection if the encapsulation method in use supports it.

Usage: Specify Yes or No. The default is No.

- Yes specifies that the MAX TNT should use IPX header compression if the encapsulation method supports it.
- No specifies that the MAX TNT should not use IPX header compression.

Example: `set ipx-header-compression=yes`

Dependencies: If the MAX TNT does not route IPX on the connection, or if IPX routing is globally disabled, IPX-Header-Compression does not apply.

Location: Connection *station* > IPX-Options

See Also: Dial-Query, IPX-Routing-Enabled, IPX-SAP-HS-Proxy, IPX-SAP-HS-Proxy-Net, Net-Alias, Net-Number, Peer-Mode, RIP, SAP, SAP-Filter

IPX-Interface

Description: A profile that contains configuration options for an IPX interface.

Usage: Use the Read and List commands to make IPX-Interface the working profile and list its contents. For example:

```
admin> read ipx-interface { { shelf-1 controller 1 } 0 }
IPX-INTERFACE/{ { shelf-1 controller 1 } 0} read

admin> list
[in IPX-INTERFACE/{ { shelf-1 controller 1 } 0}]
interface-address*={ { shelf-1 controller 1 } 0 }
ipx-routing-enabled=no
ipx-frame=none
ipx-net-number=00:00:00:00
ipx-type-20=no
ipx-sap-filter-name=" "
```

You can then use the Set command to modify the settings in the profile. To close the profile and save your changes:

```
admin> write
IPX-INTERFACE written
```

See Also: Interface-Address, IPX-Frame, IPX-Net-Number, IPX-Routing-Enabled, IPX-SAP-Filter-Name, IPX-Type-20

IPX-Net-Number

Description: Specifies the IPX network number of the remote router.

Usage: Specify the IPX network number of the remote device only when the router requires that the MAX TNT know its network number before connecting. If you specify a value for IPX-Net-Number, the MAX TNT creates a static route to the device. In addition, the MAX TNT becomes a seed router, and other routers can learn the IPX network number from the MAX TNT.

If there are other NetWare routers on the LAN interface, the IPX number assigned to the MAX TNT for that interface must be consistent with the number in use by the other routers. The best way to ensure consistency is to accept the default null address for IPX-Net-Number. The null address causes the MAX TNT to learn its network number from another router on the interface, or from the RIP packets received from the local IPX server.

The default of 00000000 is appropriate for most installations. If you accept the default, the MAX TNT does not advertise the route until it makes a connection to the remote network.

Dependencies: If the MAX TNT does not route IPX on the specified interface, or if IPX routing is globally disabled, IPX-Net-Number does not apply.

Location: IPX-Interface {shelf-*N* slot-*N* *N*}

See Also: Interface-Address, IPX-Dialin-Pool, IPX-Frame, IPX-Options, IPX-Route, IPX-Routing-Enabled, IPX-SAP-Filter-Name, IPX-Type-20

IPX-Options

Description: A subprofile containing settings for IPX routing.

Usage: With a Connection profile as the working profile, list the IPX-Options subprofile. For example:

```
admin> list ipx
[in CONNECTION/tim:ipx-options]
ipx-routing-enabled=no
peer-mode=router-peer
rip=both
sap=both
dial-query=no
net-number=00:00:00:00
net-alias=00:00:00:00
sap-filter=" "
ipx-sap-hs-proxy=no
ipx-sap-hs-proxy-net=[000000]
ipx-header-compression=yes
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Dependencies: To globally enable IPX routing, set IPX-Routing-Enabled=Yes in the IPX-Global profile. To enable IPX routing for an interface, set IPX-Routing-Enabled=Yes in the IPX-Interface profile.

Location: Connection *station*

See Also: Dial-Query, IPX-Header-Compression, IPX-Routing-Enabled, IPX-SAP-HS-Proxy, IPX-SAP-HS-Proxy-Net, Net-Alias, Net-Number, Peer-Mode, RIP, SAP, SAP-Filter

IPX-Route

Description: A profile containing the information required by the IPX router to set up static routes. The MAX TNT passes the static routes to the router at startup, and updates the routing table whenever a route changes.

Usage: Use the Read and List commands to make IPX-Route the working profile and list its contents. For example:

```
admin> read ipx-route default
IPX-ROUTE/default read
```

```
admin> list
[in IPX-ROUTE/default]
name*=default
server-type=00:00
dest-network=00:00:00:00
server-node=00:00:00:00:00:00
server-socket =00:00
hops=8
ticks=12
profile-name=" "
active-route=yes
```

You can then use the Set command to modify the settings in the profile. To close the profile and save your changes:

```
admin> write
IPX-ROUTE/default written
```

See Also: Active-Route, Dest-Network, Hops, Name, Profile-Name, Server-Node, Server-Socket, Server-Type, Ticks

IPX-Routing-Enabled

Description: Enables or disables the routing of IPX data packets, as follows:

- In the IPX-Global profile, IPX-Routing-Enabled controls IPX routing for the entire system. When you write the profile, the MAX TNT comes up in IPX-routing mode. At that time, it creates an IPX-Interface profile for each installed Ethernet port.
- In the IPX-Interface profile, IPX-Routing-Enabled controls IPX routing for the particular interface. To enable the MAX TNT to route IPX on an Ethernet interface, you must set both the IPX-Routing-Enabled and IPX-Frame values.
- In the IPX-Options subprofile of the Connection profile, IPX-Routing-Enabled controls IPX routing for a particular connection.

Usage: Specify Yes or No. The default is No.

- Yes enables IPX routing.
- No disables IPX routing.

Example: `set ipx-routing-enabled=yes`

Dependencies: Consider the following:

- IPX routing must be enabled on both the dialing and answering sides of the link.
- To enable IPX routing for a particular interface, you must set IPX-Routing-Enabled=Yes in both the IPX-Global and IPX-Interface profiles.

Location: Connection *station* > IPX-Options, IPX-Global, IPX-Interface {shelf-*N* slot-*N N*}

See Also: Dial-Query, Interface-Address, IPX-Dialin-Pool, IPX-Frame, IPX-Header-Compression, IPX-Net-Number, IPX-Options, IPX-Route, IPX-SAP-Filter-Name, IPX-SAP-HS-Proxy, IPX-SAP-HS-Proxy-Net, IPX-Type-20, Net-Alias, Net-Number, Peer-Mode, RIP, SAP, SAP-Filter

IPX-SAP-Filter

Description: A profile containing IPX SAP filter specifications for including or excluding services from the MAX TNT SAP table.

Usage: Use the Read and List commands to make IPX-SAP-Filter the working profile and list its contents. For example:

```
admin> read ipx-sap-filter default
IPX-SAP-FILTER/default read

admin> list
[ in IPX-SAP-FILTER/default ]
ipx-sap-filter-name*=no-server1
input-ipx-sap-filters=[ { no exclude 00:00 " " } { no exclude +
output-ipx-sap-filters=[ { no exclude 00:00 " " } { no exclude +
```

You can then use the Set command to modify the settings in the profile. To close the profile and save your changes:

```
admin> write
IPX-SAP-FILTER/default written
```

See Also: Input-IPX-SAP-Filters, IPX-SAP-Filter-Name, Output-IPX-SAP-Filters

IPX-SAP-Filter-Name

Description: Specifies an IPX SAP filter, as follows:

- In the IPX-Interface profile, IPX-SAP-Filter-Name applies a SAP filter to the IPX interface.
- In the IPX-SAP-Filter profile, IPX-SAP-Filter-Name specifies the name of the SAP filter being configured.

Usage: Specify the name of an IPX SAP filter. You can enter up to 15 characters. The default is null.

Example: `set ipx-sap-filter-name=filter1`

Dependencies: If the MAX TNT does not route IPX on the specified interface, or if IPX routing is globally disabled, IPX-SAP-Filter-Name does not apply.

Location: IPX-Interface {shelf-*N* slot-*N* *N*}, IPX-SAP-Filter

See Also: Interface-Address, IPX-Dialin-Pool, IPX-Frame, IPX-Net-Number, IPX-Options, IPX-Route, IPX-Routing-Enabled, IPX-Type-20

IPX-SAP-HS-Proxy

Description: Enables or disables the home-server proxy feature.

For mobile NetWare clients, you can specify the network numbers of from one to six NetWare servers that should receive SAP queries across the connection. Without this feature, when the client is in a distant location and sends a Get Nearest Server Request query, the client receives responses from servers closer to that location, rather than the expected home server or servers. With the home-server proxy feature, mobile clients can bring up a connection to the server or servers they usually use.

Usage: Specify Yes or No. The default is No.

- Yes enables the home-server proxy feature.
- No disables the home-server proxy features.

Example: `set ipx-sap-hs-proxy=yes`

Dependencies: If you set IPX-SAP-HS-Proxy=Yes, you must use IPX-SAP-HS-Proxy-Net to configure from one to six IPX network numbers. The MAX TNT then directs the client's SAP queries to the specified networks.

Location: Connection *station* > IPX-Options

See Also: Dial-Query, IPX-Header-Compression, IPX-Routing-Enabled, IPX-SAP-HS-Proxy-Net, Net-Alias, Net-Number, Peer-Mode, RIP, SAP, SAP-Filter

IPX-SAP-HS-Proxy-Net

Description: Specifies from one to six IPX networks to which the MAX TNT directs a client's SAP queries when IPX-SAP-HS-Proxy=Yes.

Usage: Specify from one to six IPX network numbers. The default is six null addresses.

Example: `set ipx-sap-hs-proxy-net=00000002`

Dependencies: If IPX-SAP-HS-Proxy=No, IPX-SAP-HS-Proxy-Net does not apply.

Location: Connection *station* > IPX-Options

See Also: Dial-Query, IPX-Header-Compression, IPX-Routing-Enabled, IPX-SAP-HS-Proxy, Net-Alias, Net-Number, Peer-Mode, RIP, SAP, SAP-Filter

IPX-Type-20

Description: Specifies whether IPX Type 20 (NetBIOS) packets are propagated on the IPX interface.

Some applications, such as NetBIOS over IPX, use IPX Type 20 packets to broadcast names over a network. By default, these broadcasts are not propagated over routed links, and are not forwarded over links that have less than 1-Mbps throughput. However, if you are using an application such as NetBIOS over IPX, which requires these packets in order to operate, you can set the IPX-Type-20 value to direct the MAX TNT to forward the broadcast packets.

Usage: Specify Yes or No. The default is No.

- Yes specifies that the MAX TNT forwards IPX Type 20 packets.
- No specifies that the MAX TNT does not forward IPX Type 20 packets.

Example: `set ipx-type-20=yes`

Dependencies: If the MAX TNT does not route IPX on the specified interface, or if IPX routing is globally disabled, IPX-Type-20 does not apply.

Location: IPX-Interface {shelf-*N* slot-*N* *N*}

See Also: Interface-Address, IPX-Dialin-Pool, IPX-Frame, IPX-Net-Number, IPX-Options, IPX-Route, IPX-Routing-Enabled, IPX-SAP-Filter-Name

IS-Post

Description: Indicates whether the error specified in the Error profile occurred during a Power-On Self Test (POST).

Usage: The IS-Post setting is read only. Yes indicates that the error occurred during a POST. No indicates that the error did not occur during a POST.

Example: `is-post=no`

Location: Error

See Also: Index, IP-Address, Loadname, Shelf, Slot, Stack-Trace, Type, User-Profile, Version

Item-Number

Description: Specifies an item on a slot card. Items are numbered starting with #1 for the leftmost item on the card.

Description: Specify a number from 0 to 65535. The default is 0 (zero), which denotes the entire slot.

Example: `set item-number=24`

Location: Call-Route-Info, Device-Address, Physical-Address

See Also: Call-Route-Info, Device-Address, Physical-Address, Shelf, Slot

K

Key-ID

Description: Specifies an authentication key used to validate OSPF packet exchanges when Authen-Type=MD5.

Usage: Specify a number from 0 to 255. The default is 0 (zero).

Example: `set key-id=10`

Dependencies: Authen-Type must be set to MD5 for Key-ID to have any effect.

Location: Connection *station* > IP-Options > OSPF-Options,
IP-Interface { { shelf-*N* slot-*N* *N* } *N* } > OSPF

See Also: Auth-Key, Authen-Type, IP-Options, OSPF, OSPF-Options

K-Frames-Outstanding

Description: Establishes the maximum number of data packets that can be outstanding in an X.75 connection before acknowledgment is required.

Usage: Specify a number between 2 and 7. The default is 7.

Example: `set k-frames-outstanding=3`

Location: Answer-Defaults > X75-Answer
Connection > X75-Options

See Also: Frame-Length, N2-Retransmissions, T1-Retrans-Timer

L

L2TP-Auth-Enabled

Description: Enables or disables L2TP tunnel authentication.

Usage: Specify Yes or No. The default is No.

- Yes specifies that the MAX TNT authenticates the L2TP Network Server (LNS) with a Shared-Secret before passing calls to the system.
- No specifies that the MAX TNT does not authenticate the LNS.

Example: `set l2tp-auth-enabled=yes`

Dependencies: If you are using RADIUS with L2TP, the RADIUS server must be able to encrypt the Tunnel-Password attribute. Not all RADIUS servers can do so. Ascend RADIUS and Ascend Access Control can encrypt the Tunnel-Password value.

Location: L2-Tunnel-Global

See Also: L2TP-Mode, L2TP-RX-Window

L2TP-Mode

Description: Specifies the system-wide type of L2TP functionality the MAX TNT supports.

Usage: Specify one of the following values:

- LAC specifies that the MAX TNT can function as an L2TP Access Concentrator (LAC) only.
- LNS specifies that the MAX TNT can function as an L2TP Network Server (LNS) only.
- Both specifies that the MAX TNT can function as either an LAC or an LNS.
- Disabled (the default) specifies that L2TP functionality on the MAX TNT is disabled.

Example: `set l2tp-mode=lac`

Location: L2-Tunnel-Global

See Also: L2TP-Auth-Enabled, L2TP-RX-Window

L2TP-RX-Window

Description: Specifies the advertised L2TP receive window size for data channels.

Usage: Specify an integer. The default is 0 (zero), which indicates that the MAX TNT will ask for no flow control for inbound L2TP payloads.

Example: `set l2tp-rx-window=10`

Location: L2-Tunnel-Global

See Also: L2TP-Auth-Enabled, L2TP-Mode

L2-Tunnel-Global

Description: A profile that contains system-wide configuration options for L2TP and PPTP tunnels.

Usage: Use the Read and List commands to make L2-Tunnel-Global the working profile:

```
admin> read l2-tunnel-global
L2-TUNNEL-GLOBAL read

admin> list
[ in L2-TUNNEL-GLOBAL ]
l2tp-mode=disabled
l2tp-auth-enabled=no
l2tp-rx-window=0
pptp-enabled=no
server-profile-required=no
```

You can then use the Set command to modify the settings in the profile. To close the profile and save your changes:

```
admin> write
L2-TUNNEL-GLOBAL written
```

See Also: L2TP-Auth-Enabled, L2TP-Mode, L2TP-RX-Window, PPTP-Enabled, Server-Profile-Required

LAN-Modem

Description: A profile created by the system for each installed modem card.

Usage: Use the Read and List commands to make LAN-Modem the working profile and list its contents. For example:

```
admin> read lan {1 6 0}
LAN-MODEM/{ shelf-1 slot-6 0 } read

admin> list
[ in LAN-MODEM/{ shelf-1 slot-6 0 } ]
physical-address*={ shelf-1 slot-6 0 }
modem-disable-mode=[ enable enable enable enable enable +
```

You can then use the Set command to modify the settings in the profile. To close the profile and save your changes:

```
admin> write
LAN-MODEM/{ shelf-1 slot-6 0 } written
```

Dependencies: The LAN-Modem profile exists until a different slot card is detected in the slot. Removing or downing a modem card does not delete the profile or change its contents.

See Also: Modem-Disable-Mode, Physical-Address

LAN-Modem-Enabled

Description: Specifies whether the system generates a trap when a digital modem is moved to the suspect list.

Usage: Specify Yes or No. The default is Yes.

- Yes specifies that the system generates a trap when a digital modem is moved to the suspect list.
- No specifies that the system does not generate a trap when a digital modem is moved to the suspect list.

Example: `set lan-modem-enabled=no`

Location: Trap *host-name*

See Also: Modem-Disable-Mode

Layer3-End

Description: Specifies CCITT Layer 3, which must be set to its default when a DPNSS or DASS2 switch type is in use.

Usage: Specify one of the following values:

- X-Side (the default) specifies that Layer 3 favors the outgoing call when a call collision occurs.
- Y-Side specifies that Layer 3 does not favor the outgoing call when a call collision occurs.

Example: `set layer3-end=x-side`

Location: E1 {shelf-*N* slot-*N* *N*} > Line-Interface

See Also: Line-Interface, Switch-Type

Left-Status

Description: Specifies the default content of the left side of the status window.

Usage: Specify one of the following values:

- Session-List specifies that the MAX TNT displays current system administration sessions on the left side of the status window.
- Connection-List specifies that the MAX TNT displays current system WAN sessions on the left side of the status window.

Example: `set left-status=connection-list`

Location: User *name*

See Also: Bottom-Status, Default-Status, Top-Status

Len

Description: Specifies the number of bytes to test in a frame. Starting at the specified Offset, the MAX TNT compares the contents of the bytes to the generic filter's Value setting.

Usage: Specify a number from 0 to 8. The default is 0 (zero), which specifies that the MAX TNT does not compare packet contents and that all packets match the filter.

Example: offset=2

```
len=8
more=no
comp-neq=no
mask=0f:ff:ff:ff:00:00:00:f0:00:00:00:00
value=07:fe:45:70:00:00:00:90:00:00:00:00
```

In this Gen-Filter specification, the filter applies the mask to the eight bytes following the two-byte offset.

Location: Filter *filter-name* > Input-Filters > Gen-Filter,
Filter *filter-name* > Output-Filters > Gen-Filter

See Also: Gen-Filter, Input-Filters, Output-Filters

Line-Config

Description: A subprofile containing line configuration options for an ADSL-DMT, Serial WAN, RADSL, or SDSL card.

Usage: With ADSL-CAP, ADSL-DMT, SDSL, or SWAN as the working profile, list the Line-Config subprofile. For example:

```
admin> list line
[ in SDSL:line-config ]
trunk-group=0
nailed-group=2
activation=static
call-route-info={ any-shelf any-slot 0 }
data-rate-mode=singlebaud
max-rate=784000
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: ADSL-CAP {shelf-*N* slot-*N N*}, ADSL-DMT {shelf-*N* slot-*N N*},
SDSL {shelf-*N* slot-*N N*}, SWAN {shelf-*N* slot-*N N*}

See Also: Activation, Call-Route-Info, Data-Rate-Mode, Down-Stream-Margin,
Max-Down-Stream-Rate, Max-Rate, Max-Up-Stream-Rate, Nailed-Group, Trunk-Group,
Up-Stream-Margin

Line-Interface

Description: A subprofile containing T1 PRI, E1 PRI, or ISDN BRI line configuration options.

Usage: With a T1 profile as the working profile, list the Line-Interface subprofile. For example:

```
admin> list line
[in T1:line-interface]
enabled=no
frame-type=d4
encoding=ami
clock-source=eligible
clock-priority=middle-priority
signaling-mode=inband
robbed-bit-mode=wink-start
default-call-type=digital
switch-type=att-pri
nfas-id=0
call-by-call=0
data-sense=normal
idle-mode=flag-idle
fdl=none
front-end-type=dsx
DSX-line-length=1-133
CSU-build-out=0-db
channel-config={ { switched-channel 9 "" { any-shelf any-slot +
maintenance-state=no
sendDisc-val=0
hunt-grp-phone-number-1=""
hunt-grp-phone-number-2=""
hunt-grp-phone-number-3=""
overlap-receiving=yes
pri-prefix-number=3069
trailing-digits=2
t302-timer=10000
r1-use-anir=no
r1-first-digit-timer=240
r1-anir-delay=350
r1-anir-timer=200
r1-modified=no
collect-incoming-digits=no
dsp-dtmf-input-sample-count=one-sample
```

With an E1 profile as the working profile, list the Line-Interface subprofile. For example:

```
admin> list line
[in E1:line-interface]
enabled=yes
frame-type=g703
clock-source=eligible
clock-priority=middle-priority
signaling-mode=isdn
switch-type=net5-pri
front-end-type=short-haul
channel-config=[ { unused-channel 9 " " { any-shelf any-slot 0 +
layer3-end=x-side
nl-value=64
loop-avoidance=7
number-complete=end-of-pulsing
group-b-answer-signal=signal-b-6
group-b-busy-signal=signal-b-3
group-ii-signal=signal-ii-2
answer-delay=200
caller-id=no-caller-id
overlap-receiving=yes
pri-prefix-number=3069
trailing-digits=2
t302-timer=10000
```

With an IDSL profile as the working profile, list the Line-Config subprofile:

```
admin> list line
[in IDSL:line-config]
line-enabled=yes
answer-number-1=" "
answer-number-2=" "
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: E1 {shelf-*N* slot-*N* *N*}, IDSL {shelf-*N* slot-*N* *N*}, T1 {shelf-*N* slot-*N* *N*}

See Also: Answer-*N* (*N*=1–2), Answer-Delay, Call-By-Call, Caller-ID, Channel-Config, Clock-Priority, Clock-Source, Collect-Incoming-Digits, CSU-Build-Out, Data-Sense, Default-Call-Type, DSP-DTMF-Input-Sample-Count, DSX-Line-Length, Enabled, Encoding, FDL, Frame-Type, Front-End-Type, Group-II-Signal, Group-B-Answer-Signal, Group-B-Busy-Signal, Hunt-Grp-Phone-Number-*N*, Idle-Mode, Layer3-End, Loop-Avoidance, Maintenance-State, NFAS-ID, NL-Value, Number-Complete, Overlap-Receiving, PRI-Prefix-Number, R1-ANIR-Delay, R1-ANIR-Timer, R1-First-Digit-Timer, R1-Modified, R1-Use-ANIR, Robbed-Bit-Mode, SendDisc-Val, Signaling-Mode, Switch-Type, T302-Timer, Trailing-Digits

Line-Length

Description: Specifies the length of the Rx and Tx lines to a DSX-3 Cross Connect.

Usage: Specify either of the following values:

- 0-255 (0 to 255 feet)
- 226-450 (226 to 450 feet)

For a direct connection, double the values.

Location: T3 {shelf-*N* slot-*N* *N*}

See Also: Enabled, Frame-Type, Name, Physical-Address

Line-Quality

Description: Indicates the line quality (in decibels). For an SDSL interface, a reading of -5dB or better is required for reliable data transfer.

Usage: The Line-Quality setting is read only.

Location: ADSL-CAP-Stat {shelf-*N* slot-*N* *N*} > Physical-Statistic
SDSL-Stat {shelf-*N* slot-*N* *N*} > Physical-Statistic

See Also: Connection-SQ, Far-End-dB-Attenuation, HDLC-RX-CRC-Error-Cnt, Line-Up-Timer, Physical-Address, RS-Corrected-Errors, RS-Errors, RX-Attenuation, RX-Signal-Present, Self-Test, Transmit-Power, Up-Down-Cntr

Line-State

Description: Reports the state of a T1 PRI, DS3, ISDN BRI, RADSL, SDSL, or SWAN line.

Usage: The Line-State setting is read only. You cannot set Line-State directly. For a T1 PRI line, the state can have one of the following values:

Value	Indicates
Does-Not-Exist	The line is not installed.
Disabled	The line is disabled.
Loss-Of-Sync	A red-alarm state has occurred.
Yellow-Alarm	A device on the line is detecting framing errors in the signal.
AIS-Receive	The line is receiving a keepalive signal.
No-D-Channel	A D-channel failure has occurred.
Active	Multipoint is established.

For a DS3 line, the state can have the same values as a T1 PRI line (except No-D-Channel). In addition, a DS3 line can have one of the following values:

- Idle-Receive indicates that the line is receiving an idle signal.
- Wrong-Frame indicates that the remote end is configured for a different DS3 application.

For an ISDN BRI line, the state can have one of the following values:

Value	Indicates
Does-Not-Exist	The line is not installed.
Disabled	The line is disabled.
No-Physical	No physical link exists.
No-Logical	A logical link failure has occurred.
No-Mgmt	Layer 2 is established, but management entities have not been initialized.
Point-To-Point	Point-to-Point service has been established.
Multipoint-1	Multipoint-1 service has been established.
Multipoint-2	Multipoint-2 service has been established.

For a RADSL line, Line-State can have one of the following values:

- Disabled indicates that the line is disabled.
- Active indicates that the line is up and operating normally.

For an SDSL or SWAN line, Line-State can have one of the following values:

- Does-Not-Exist indicates that the line is not installed.
- Disabled indicates that the line is disabled.
- Active indicates that the line is up and operating normally.

Example: `line-state=active`

Location: ADSL-CAP-Stat {shelf-*N* slot-*N* *N*}, IDSL-Stat {shelf-*N* slot-*N* *N*}, SDSL-Stat {shelf-*N* slot-*N* *N*}, SWAN-Stat {shelf-*N* slot-*N* *N*}, T1-Stat {shelf-*N* slot-*N* *N*}, T3-Stat {shelf-*N* slot-*N* *N*}

See Also: Channel-State, DS2-State

Line-Up-Timer

Description: Indicates the length of time the line has been in the up state.

Usage: The Line-Up-Timer value is read only. It has the following format:

`{ hh mm ss }`

where *hh* is the number of hours, *mm* is the number of minutes, and *ss* is the number of seconds

Location: ADSL-CAP-Stat {shelf-*N* slot-*N* *N*} > Physical-Statistic
SDSL-Stat {shelf-*N* slot-*N* *N*} > Physical-Statistic

See Also: Connection-SQ, Far-End-dB-Attenuation, HDLC-RX-CRC-Error-Cnt, Physical-Address, RS-Corrected-Errors, RS-Errors, RX-Attenuation, RX-Signal-Present, Self-Test, Transmit-Power, Up-Down-Cntr

Link-Compression

Description: Specifies the link-compression method for a PPP, MP, and MP+ call.

Usage: Specify one of the following values:

- None specifies no link compression. In the Answer-Defaults profile, None is the default.
- Stac specifies an Ascend-modified version of draft 0 of the CCP protocol. In a Connection profile, Stac is the default.
- Stac-9 specifies draft 9 of the Stac LZS Compression protocol.
- MS-Stac specifies Microsoft/Stac compression (the method used by Windows95). If the caller does not acknowledge Microsoft/Stac compression, the MAX TNT attempts to use standard Stac compression. If the caller does not acknowledge Stac compression, the link uses no compression.

Example: `set link-compression=stac-9`

Dependencies: Only PPP, MP, and MP+ links support Link-Compression. Both sides of the connection must specify the same type of link compression. Otherwise, your setting has no effect.

By default, NetWare relies on the Data Link layer (also called Layer 2) to validate and guarantee data integrity. When you configure Stac compression, the system performs an eight-bit checksum, which is inadequate for NetWare data. Therefore, for NetWare connections, carry out one of the following tasks:

- Select Stac-9 or MS-Stac compression, which use a more robust error-checking method.
- Disable link compression by setting Link-Compression=None. When you do so, the MAX TNT guarantees data integrity by means of PPP.
- Accept the default Stac setting, and enable IPX checksums on your NetWare servers and clients. Both the server and the client must support IPX checksums. If you enable checksums on your servers, but not on your clients, all logins will fail.

Location: Answer-Defaults > PPP-Answer, Connection *station* > PPP-Options

See Also: PPP-Answer, PPP-Options, VJ-Header-Prediction

LinkDown-Enabled

Description: Specifies whether the system generates a trap when a failure occurs in a communication link between the unit and the SNMP manager.

Usage: Specify Yes or No. The default is Yes.

- Yes specifies that the system generates a trap when a failure occurs in a communication link between the unit and the SNMP manager.
- No specifies that the system does not generate a trap when a failure occurs in a communication link between the unit and the SNMP manager.

Example: `set linkdown-enabled=no`

Location: Trap *host-name*

See Also: LinkUp-Enabled

Link-Mgmt

Description: Specifies the link management protocol to use between the MAX TNT and the Frame Relay switch. The Frame Relay administrator or service provider can tell you which value to use.

Usage: Specify one of the following values:

- None specifies no link management. The MAX TNT assumes that the physical link is up and that all Data Link Connection Indicators (DLCIs) are active on the physical link. None is the default.
- ANSI-T1.617d specifies the link management protocol defined in ANSI T1.617 Annex D.
- CCITT-Q.933a specifies the link management protocol defined Q.933 Annex A.

Example: `set link-mgmt=ansi-t1.617d`

Location: Frame-Relay *fr-name*

See Also: DCEN392-Val, DCEN393-Val, FR-Name, Link-Type, N391-Val, N392-Val, N393-Val, T391-Val, T392-Val

Link-Mgmt-DLCI

Description: Specifies the DLCI to use for link management on the Frame Relay datalink.

Usage: Specify DLCI0 (the default) or DLCI1023.

Example: `set link-mgmt-dlci=dlci1023`

Location: Frame-Relay *fr-name*

See Also: Link-Mgmt

Link-State

Description: Indicates the physical state of the LAN interface.

Usage: The Link-State setting can be Up, Down, or Unknown. The value can only be set by the Ethernet driver.

- Up specifies that the LAN interface can transmit and receive network traffic.
- Down specifies that the LAN interface cannot transmit and receive network traffic (for example, if the Ethernet cable is unplugged or the Ethernet hub on the interface is down).
- Unknown specifies the shelf-controller Ethernet interface.

Location: Ether-Info {shelf-*N* slot-*N* *N*}

See Also: Interface-Address, Link-State-Enabled, MAC-Address

Link-State-Enabled

Description: Specifies whether the value of Link-State affects the IP routing tables.

Usage: Specify Yes or No. The default is No.

- Yes specifies that the MAX TNT deletes routes to an interface when Link-State is Down, and adds them when the interface comes up again.
- No specifies that the MAX TNT routes packets to an interface regardless of the Link-State setting. If the interface is down, the MAX TNT discards the packets. They cannot use an alternative route.

Example: `set link-state-enabled=yes`

Location: Ethernet {shelf-*N* slot-*N* *N*}

See Also: Link-State

Link-Type

Description: Specifies the kind of logical interface between the MAX TNT and the Frame Relay network on the datalink:

- The UNI (User to Network Interface) is the interface between an end-user and a network endpoint (a router or a switch) on the Frame Relay network.
- A DCE (Data Circuit-Terminating Equipment) is a device that connects the DTE (Data Terminal Equipment) to a communications channel, such as a telephone line.
- A DTE refers to a device that an operator uses, such as a computer or a terminal.
- NNI (Network-to-Network Interface) operation allows the MAX TNT to act as a Frame Relay switch communicating with another Frame Relay switch.

Usage: Specify one of the following values:

- DCE specifies a UNI-DCE connection. The MAX TNT operates as the network side, communicating with the user side (UNI-DTE) of a Frame Relay terminating unit.
- DTE specifies a UNI-DTE connection. The MAX TNT operates as the user side, communicating with the network-side DCE switch.
- NNI specifies an NNI connection. The MAX TNT performs both DTE and DCE link management.

Example: `set link-type=dte`

Location: Frame-Relay *fr-name*

See Also: DCEN392-Val, DCEN393-Val, N391-Val, N392-Val, N393-Val, T391-Val, T392-Val

LinkUp-Enabled

Description: Specifies whether the system generates a trap when the communication link between the unit and the SNMP manager comes back up.

Usage: Specify Yes or No. The default is Yes.

- Yes specifies that the system generates a trap when the communication link between the unit and the SNMP manager comes back up.
- No specifies that the system does not generate a trap when the communication link between the unit and the SNMP manager comes back up.

Example: `set linkup-enabled=no`

Location: Trap *host-name*

See Also: LinkDown-Enabled

Loadname

Description: Indicates the name of the software load that was running on a slot that failed.

Usage: The Loadname setting is read only.

Example: `loadname=load1`

Location: Error

See Also: Index, IP-Address, IS-Post, Shelf, Slot, Stack-Trace, Type, User-Profile, Version

Load-Select

Description: A profile that specifies which slot-card images to load to flash when you use a Load Tar command.

Following a system reset, the MAX TNT creates the Load-Select profile if it is not present. The profile lists the entire set of supported slot-card images and an intended load action for each card type when the image is present in a Tar file. It also contains an Unknown-Cards setting, which represents new cards that were not supported in the previous system version.

When loading the Tar file, the system uses settings in the Load-Select profile to load only specific slot-card images. To prevent version-related problems, it then deletes code images that were present on the flash card but were not updated.

Usage: Use the Read and List commands to make Load-Select the working profile and list its contents. For example:

```
admin> read load-select
LOAD-SELECT read

admin> list
[in LOAD-SELECT]
unknown-cards=auto
8t1=auto
8e1=auto
t3=auto
ut1=auto
ue1=auto
uds3=auto
ds3-atm=auto
enet=auto
enet2=auto
mdm-v34=auto
mdm56k=auto
amdm=auto
hdlc=auto
hdlc2=auto
swan=auto
idsl=auto
capadsl=auto
dmtadsl=auto
sdsl=auto
sdsl70d=auto
sdsl70v=auto
```

You can then use the Set command to modify the settings in the profile. To close the profile and save your changes:

```
admin> write
LOAD-SELECT written
```

Dependencies: An explicit Load command for a particular card type overrides the settings in the Load-Select profile.

See Also: 8E1, 8T1, AMDM, CAPADSL, DMTADSL, DS3-ATM, Enet, Enet2, HDLC, HDLC2, IDSL, MDM56K, MDM-V34, SDSL, SDSL70D, SDSL70V, SWAN, T3, UDS3, UE1, Unknown-Cards, UT1

Local-Address

Description: Specifies an IP address for the local side of a numbered-interface connection.

Usage: Specify an IP address in dotted decimal notation. Separate the optional subnet mask from the address by entering a forward slash. The address must be unique to the connection. You can assign a fake IP address or an IP address from one of the local subnets. The MAX TNT accepts IP packets destined for the specified address and treats them as destined for the system itself. The packets might arrive on any interface, and the destination numbered interface need not be in the active state. The default is 0.0.0.0, which indicates an unnumbered interface.

Example: `set local-address=10.2.3.4/24`

Dependencies: The Local-Address value cannot be an address assigned in an IP-Interface profile to one of the MAX TNT unit's physical LAN interfaces, nor can it be the IP address of the shelf-controller Ethernet port.

Location: Connection *station* > IP-Options

See Also: IP-Options, Remote-Address

Local-Echo

Description: Allows you to configure local-echo mode for a terminal-server session.

Local-echo mode is a line-by-line mode. The line appears as the user types it, but is not transmitted until the user enters a carriage return. If local echo is enabled, the line transmitted is echoed on the local MAX TNT terminal screen.

Local echo allows MAX TNT terminal-server users to connect to nonstandard Telnet ports and programs. If the remote server turns local echo on or off in its option negotiation for a Telnet session, the negotiated setting overrides the value of Local-Echo.

Usage: Specify Yes or No. The default is No.

- Yes turns on local echo.
- No disables local echo.

Example: `set local-echo=yes`

Dependencies: If terminal services are disabled, Local-Echo does not apply. A terminal-server user can override the Local Echo setting from the command line by using the `-e` option of the Telnet command.

Location: Terminal-Server > Terminal-Mode-Configuration > Telnet-Options

See Also: Telnet-Options, Terminal-Mode-Configuration

Local-Profiles-First

Description: Specifies whether the MAX TNT should attempt local authentication before remote external authentication.

Usage: Specify one of the following settings:

- LPF-Yes (the default) specifies that the MAX TNT first attempts to authenticate the connection with a local profile. If the profile exists and the password matches, the MAX TNT allows the connection. If no local profile exists, or if a local profile exists but the password fails, the MAX TNT tries to authenticate the connection through an external authentication server.
- LPF-No specifies that the MAX TNT first tries to authenticate the connection through a remote authentication server. If the server acknowledges the request, it allows the connection. If the server NAKs the request and remote authentication fails (because no remote profile exists, or a remote profile exists but the password fails), or if the remote authentication server cannot be reached, the MAX TNT attempts to authenticate the connection with a local profile.
- LPF-RNo specifies that the MAX TNT first tries to authenticate the connection through a remote authentication server. If the profile exists and the password matches, the MAX TNT allows the connection. If the server doesn't respond, the MAX TNT checks for a matching local profile. If the server NAKs the request and remote authentication fails, the MAX TNT terminates the connection.

Example: `set local-profiles-first=lpf-no`

Dependencies: Consider the following:

- If Auth-Type=None, Local-Profiles-First does not apply.
- PAP-Token authentication does not produce a challenge with a local profile. Using a local profile defeats the security of using PAP-Token.
- When you use a local profile, PAP-Token-CHAP brings up one channel, but all other channels fail.
- If the remote end of the connection has ever been authenticated with a challenge, Cache-Token does not work with a local profile. If the remote end has never been authenticated, no problem occurs when using a local profile.
- When you set Local-Profiles-First=LPF-No, the MAX TNT waits for the remote authentication to time out before attempting to authenticate locally. This timeout might take longer than the timeout specified for the connection and could cause all connection attempts to fail. Therefore, set the authentication timeout value low enough to guard against the line going down, but high enough to permit the unit to respond if it can. The recommended time is 3 seconds.

Location: External-Auth

See Also: Auth-Timeout, Auth-Type

Location

Description: Specifies the physical location of the MAX TNT. An SNMP manager can both read and set the Location value.

Usage: Specify text describing where the MAX TNT is located. You can enter up to 80 characters. The default is null.

Example: `set location=building 64`

Location: SNMP

See Also: Contact

Log

Description: A profile that specifies system-wide event-logging settings. System-wide event logging includes the MAX TNT log buffer accessed by the Log command, and any Syslog host designated by the Log profile. For information about the Log command, see “Log” on page 1-51.

Usage: Use the Read and List commands to make Log the working profile and list its contents. For example:

```
admin> read log
LOG read

admin> list
[in LOG]
save-level=info
save-number=100
call-info=none
syslog-enabled=no
host=0.0.0.0
port=514
facility=local0
syslog-format=tnt
```

You can then use the Set command to modify the settings in the profile. To close the profile and save your changes:

```
admin> write
LOG written
```

See Also: Facility, Host, Save-Level, Save-Number, Syslog-Enabled, Syslog-Format

Log-Display-Level

Description: Specifies the lowest level of the log messages that the MAX TNT displays to a logged-in user.

Usage: Specify one of the following settings:

Setting	Lowest-level message indicates
None (the default)	The MAX TNT does not display log messages.
Emergency	The unit has an error condition and is unlikely to be operating normally.
Alert	The unit has an error condition but is still operating normally.
Critical	An interface has gone down or a security error has occurred.
Error	An error event has occurred.
Warning	An unusual event has occurred, but the unit is otherwise operating normally. For example, this type of message appears when a login attempt has failed because the user entered an incorrect user name or password.
Notice	Events of interest in normal operation have occurred (a link going up or down, for example).
Info	State and status changes that are commonly not of general interest have occurred.
Debug	Helpful debugging information.

Example: `set log-display-level=debug`

Dependencies: Do not confuse Log-Display-Level with Save-Level in the Log profile. Save-Level determines which messages are displayed in the event-log status window.

Location: User *name*

See Also: Log, Save-Level

Login-Prompt

Description: Specifies the string that acts as a prompt for a user name in the terminal-server interface.

Description: If Prompt-Format=No, you can specify up to 15 characters, not including a newline or tab character.

If Prompt-Format=Yes, you can specify up to 80 characters in multiple lines by including the newline (\n) and tab (\t) characters. To include an actual backslash character, you must precede it with another backslash. For example, suppose you enter the following string:

Welcome to\n\t\\Ascend Remote Server\\\nEnter your user name:

The terminal server displays the following text as the login prompt:

```
Welcome to
  \Ascend Remote Server\
Enter your user name:
```

Regardless of the Prompt-Format setting, the default setting for Login-Prompt is `Login:.`

Example: `set login-prompt=Login Name:`

Dependencies: If terminal services are disabled, Login-Prompt does not apply.

Location: Terminal-Server > Terminal-Mode-Configuration

See Also: Password-Prompt, Prompt, Prompt-Format, Terminal-Mode-Configuration, Third-Login-Prompt, Third-Prompt-Sequence

Login-Timeout

Description: Specifies the number of seconds a user can wait to log into the terminal server. When a user attempts to log into the terminal server in terminal mode, a login prompt appears. If the user does not proceed any further than the login prompt within the number of seconds you specify, the login times out.

Usage: Specify a number between 0 and 300. The default is 300. If you set Login-Timeout to 0 (zero), the login never times out.

Example: `set terminal login-timeout=60`

Location: Terminal-Server > Terminal-Mode-Configuration

See Also: Password-Prompt, Prompt, Prompt-Format, Terminal-Mode-Configuration, Third-Login-Prompt, Third-Prompt-Sequence

Loop-Avoidance

Description: Specifies the number of transit devices through which the MAX TNT may route a call.

Usage: Specify an integer from 1 to 26. The default is 7.

Example: `set loop-avoidance=7`

Location: E1 {shelf-*N* slot-*N* *N*} > Line-Interface

See Also: Line-Interface, NL-Value

Loss-Of-Carrier

Description: Indicates a loss of the carrier signal on a T1 line.

Usage: The Loss-Of-Carrier setting is read only. True indicates a loss of carrier. False indicates that the carrier is maintaining a connection.

Location: T1-Stat {shelf-*N* slot-*N* *N*}

See Also: AIS-Receive, BER-Receive, Carrier-Established, Loss-Of-Sync, Yellow-Receive

Loss-Of-Sync

Description: Indicates whether the T1 line has lost synchronization.

Usage: The Loss-Of-Sync setting is read only. True indicates that synchronization has been lost. False indicates that synchronization is intact.

Location: T1-Stat {shelf-*N* slot-*N* *N*}

See Also: AIS-Receive, BER-Receive, Carrier-Established, Loss-Of-Carrier, Yellow-Receive

LQM

Description: Specifies whether the MAX TNT requests link-quality monitoring when answering a PPP call. Link-quality monitoring counts the number of packets sent across the link and periodically asks the remote end how many packets it has received. Discrepancies are evidence of packet loss and indicate link-quality problems. Link-quality monitoring also generates periodic link-quality reports, and the two ends of the link exchange the reports.

Usage: Specify Yes or No. The default is No.

- Yes specifies that the MAX TNT requests link-quality monitoring.
- No specifies that the MAX TNT does not request link-quality monitoring.

Example: `set lqm=yes`

Dependencies: The LQM value applies only to PPP links. When LQM is enabled, the system selects a random number (called a *magic number*) and negotiates that number with the far-end device during LCP negotiation of the link. If the far-end device does not negotiate magic numbers, the magic-number field in transmitted packets is set to 0 (zero). If the number is successfully negotiated, the local magic-number field is set to the selected random number. The WANDisplay command on an HDLC card shows information about LQM magic number negotiations, and the periodic LQM reports show the assigned local and remote magic numbers.

The MAX TNT inspects the magic-number field in received packets. If it is equal to 0 (zero) or the peer's unique magic number, the packet is processed normally. If the magic-number field is equal to the local magic number, indicating a loopback link, the MAX TNT brings down the link.

Location: Answer-Defaults > PPP-Answer, Connection *station* > PPP-Options

See Also: LQM-Maximum-Period, LQM-Minimum-Period, PPP-Answer, PPP-Options

LQM-Maximum-Period

Description: Specifies the maximum period, in one-hundredths of a second, during which the MAX TNT will accept and send link-quality monitoring packets when answering a PPP call.

Usage: Specify a number from 0 to 600. The default is 600.

Example: `set lqm-maximum-period=300`

Dependencies: If LQM=No, LQM-Maximum-Period does not apply.

Location: Answer-Defaults > PPP-Answer, Connection *station* > PPP-Options

See Also: LQM, LQM-Minimum-Period, PPP-Answer, PPP-Options

LQM-Minimum-Period

Description: Specifies the minimum period, in one-hundredths of a second, during which the MAX TNT will accept link-quality monitoring packets when answering a PPP call.

Usage: Specify a number from 0 to 600. The default is 600.

Example: `set lqm-minimum-period=200`

Dependencies: If LQM=No, LQM-Minimum-Period does not apply.

Location: Answer-Defaults > PPP-Answer, Connection *station* > PPP-Options

See Also: LQM, LQM-Maximum-Period, PPP-Answer, PPP-Options

M

MAC-Address

Description: Specifies the Media Access Control (MAC) address of an Ethernet interface. An Ethernet MAC address is a 12-digit hexadecimal number denoting the physical address encoded in the controller.

Usage: In most cases, the MAC-Address value is obtained from the system. However, you can clone a profile by reading an existing one and changing its physical address.

Example: `set mac-address=00:c0:6c:4e:ac:5a`

Location: Ether-Info {shelf-*N* slot-*N* *N*}

See Also: Interface-Address, Link-State

Maintenance-State

Description: Allows you to Busy Out or take Out Of Service (OOS) a T1 PRI line. Doing so is known as *quiescing* the line to make it available for maintenance. Active calls on the line are not torn down. When an active call disconnects, the MAX TNT takes the channel out of service. When the entire line is out of service, it is available for maintenance.

Usage: Specify Yes or No. The default is No.

- Yes quiesces the line, making it available for maintenance when all active calls have been dropped.
- No specifies that the line is available for active service. If you specify No after the line has been quiesced, it returns to service.

Example: `set maintenance-state=yes`

Dependencies: If the line's Signaling-Mode is not ISDN, Maintenance-State does not apply. When the MAX TNT reboots, all T1 PRI lines come up available for service.

Location: T1 {shelf-*N* slot-*N* *N*} > Line-Interface

See Also: Line-Interface, Signaling-Mode

Major-Firmware-Ver

Description: Indicates the major firmware version of the RADSL or SDSL card.

Usage: The Major-Firmware-Ver setting is read only.

Location: ADSL-CAP-Stat {shelf-*N* slot-*N* *N*} > Physical-Status
SDSL-Stat {shelf-*N* slot-*N* *N*} > Physical-Status

See Also: Dev-Line-State, Down-Stream-Constellation, Down-Stream-Operational-Baud, Down-Stream-Rate, Hardware-Ver, IF-Group-Index, Minor-Firmware-Ver, Physical-Address, Unit-Type, Up-Stream-Constellation, Up-Stream-Rate

Management-Only-Interface

Description: Enables or disables management-only on the IP interface. The management-only interface can be the shelf-controller port or a port on an installed Ethernet card.

Usage: Specify Yes or No. The default is No.

- Yes specifies that incoming traffic on the interface terminates in the system itself, and is not forwarded on any other interface. In addition, only traffic generated by the system is forwarded on the management-only interface. Traffic generated externally is dropped on the interface.
- No specifies that the management-only feature is disabled.

Example: `set management-only-interface=yes`

Location: IP-Interface {shelf-*N* slot-*N* *N*}

See Also: Directed-Broadcast-Allowed, Interface-Address, IP-Address, Multicast-Allowed, Multicast-Group-Leave-Delay, Multicast-Rate-Limit, OSPF, Proxy-Mode, RIP2-Use-Multicast, RIP-Mode

Mask

Description: Specifies a 12-byte mask to apply to a generic filter's Value setting before comparing the Value to the packet contents at the specified Offset. You can use the mask to specify exactly which bits you want to compare.

After translating Mask and Value into binary format, the MAX TNT applies the mask to the specified value by performing a logical AND. The mask hides the bits that appear behind each binary 0 (zero) in the mask. A mask of all ones (FF:FF:FF:FF:FF:FF:FF:FF) masks no bits, so the full specified value must match the packet contents.

Usage: Specify a hexadecimal number of up to 12 bytes. The default is 000000000000.

Example: `offset=2
len=8
more=no
comp-neq=no
mask=0f:ff:ff:ff:00:00:00:f0:00:00:00:00
value=07:fe:45:70:00:00:00:90:00:00:00:00`

Suppose you want to apply these Gen-Filter settings to the following packet contents:

2A 31 97 FE 45 70 12 22 33 99 B4 80 75

The MAX TNT applies the mask as shown below, resulting in a value that matches the Value setting.

	2-byte Byte Offset		8-byte Comparison											
	2A	31	97	FE	45	70	12	22	33	99	B4	80	75	
Mask	.....		0F	FF	FF	FF	00	00	00	F0			
Result of mask	.....		07	FE	45	70	00	00	00	90			
Value to test	.....		07	FE	45	70	00	00	00	90			

The packet matches the filter. Because Forward=No, the MAX TNT drops the packet. The byte comparison works as follows:

- The first two bytes, 2A and 31, are ignored because of the two-byte offset.
- The 9 in the third byte is ignored, because the mask has a 0 (zero) in its place. The 7 in the third byte matches the 7 in the Value setting for that byte.
- The F and E in the fourth byte match the Value setting for that byte.
- The 4 and 5 in the fifth byte match the Value setting for that byte.
- The 7 and 0 in the sixth byte match the Value setting for that byte.
- The 12, 22, and 33 in the seventh, eighth, and ninth bytes, respectively, are ignored because the mask has a 0 (zero) in those places.
- The first 9 in the tenth byte matches the Value setting of 9 in the first half of that byte. The second 9 in the packet's tenth byte is ignored because the mask has a 0 (zero) in its place.

Location: Filter *filter-name* > Input-Filters > Gen-Filter,
Filter *filter-name* > Output-Filters > Gen-Filter

See Also: Gen-Filter, Input-Filters, Output-Filters

Master-Shelf-Controller

Description: Specifies the number of the master shelf in a multishelf system.

Usage: Specify the number you set on the rotary switch. All shelves must agree upon the master shelf.

Example: set master-shelf-controller=1

Dependencies: If Shelf-Controller-Type=Master, Master-Shelf-Controller does not apply. You can set Master-Shelf-Controller for a slave shelf only.

Location: System

See Also: Shelf-Controller-Type

Max-Baud-Rate

Description: Specifies the highest baud rate that digital modems should attempt to negotiate. Typically, the digital modems start with the highest possible baud rate (33600) and negotiate down to the rate accepted by the remote modem. You can adjust the maximum rate to bypass some of the negotiation cycles, provided that no incoming calls use a baud rate higher than the value you specify for Max-Baud-Rate.

Usage: Specify one of the following values:

- 33600-Max-Baud (the default)
- 31200-Max-Baud
- 28800-Max-Baud
- 26400-Max-Baud
- 2400-Max-Baud
- 21600-Max-Baud
- 19200-Max-Baud
- 16800-Max-Baud
- 14400-Max-Baud
- 12000-Max-Baud
- 9600-Max-Baud
- 7200-Max-Baud
- 4800-Max-Baud
- 2400-Max-Baud

Example: `set max-baud-rate=31200-max-baud`

Dependencies: If terminal services are disabled, Max-Baud-Rate does not apply.

Location: Terminal-Server > Modem-Configuration

See Also: Down-Stream-Operational-Baud, Modem-Configuration

Max-Call-Duration

Description: Specifies the maximum number of minutes an incoming call can remain connected. For a multichannel call, the maximum applies to each channel.

Usage: Specify a number from 0 to 1440. The MAX TNT checks the connection once per minute, so the actual time the call is connected is slightly longer than the time you set. The default is 0 (zero), which specifies that the MAX TNT does not set a limit on the duration of an incoming call.

Location: Connection *station* > Session-Options

See Also: Session-Options

Max-Dialout-Time

Description: Specifies the maximum number of seconds the system waits for a Call Setup Complete from the remote side when dialing out.

Usage: Specify an integer from 0 to 255. The default is 20 seconds. If set to Max-Dialout-Time to 0 (zero), the MAX TNT uses its internal default of 20 seconds.

Example: In the following example, the dialout timer is set to 60 seconds:

```
admin> read system
SYSTEM read

admin> set max-dialout-time=60

admin> write
SYSTEM written
```

Dependencies: The Max-Dialout-Time setting does not influence the modem timeout to detect carrier. Modems have an internal timer that counts down from dialout to establishing carrier with the remote modem (including training), which for Rockwell modems has a default of 45 seconds.

Location: System

See Also: Analog-Encoding, Call-Routing-Sort-Method, Idle-Logout, Master-Shelf-Controller, Name, New-NAS-Port-ID-Format, Parallel-Dialing, Perm-Conn-Upd-Mode, SessionID-Base, Shelf-Controller-Type, Single-File-Incoming, System-Rmt-Mgmt, Userstat-Format, Use-Trunk-Groups

Max-Down-Stream-Rate

Description: Specifies the maximum downstream rate supported by the ADSL-CAP or ADSL-DMT card.

Usage: Specify one of the following settings to indicate the maximum downstream rate the transceiver supports:

```
256000
384000
512000
640000
960000
1280000
1600000
1920000
2240000
2560000
2688000
3200000
4480000
5120000
6272000
7160000
7168000
```

The CPE maximum downstream rate defaults to 7,160,000. The COE maximum downstream rate defaults to 2,560,000. To adjust the downstream rates, configure the COE ADSL-CAP profile. The loop trains to the lower of the two rates.

If the loop quality is poor, the transceiver chooses a rate lower than the Max-Down-Stream-Rate setting. Good loop quality causes the transceiver to choose a rate close to or equal to the Max-Down-Stream-Rate setting. If the loop quality is very poor, the transceiver cannot train at all, and is unable to connect to the remote side. In the case of poor loop quality, you must specify a lower maximum downstream rate, because the transceiver does not cross rate boundaries.

For example, if the transceiver is configured for 7,160,000 bps, and the loop quality is so poor that the transceiver cannot connect to the remote side, the transceiver does not automatically adjust the downstream rate into the 5,120,000 bps range. You must configure Max-Down-Stream-Rate to the lower rate.

Example: An administrator sets the maximum downstream rate to 5.12Mbps:

```
admin> read adsl-cap {1 11 1}
ADSL-CAP/{ shelf-1 slot-11 1 } read
admin> set line-config max-down-stream-rate=5120000
admin> write
ADSL-CAP/{ shelf-1 slot-11 1 } written
```

Dependencies: Consider the following:

- You can set the maximum downstream rate for using SNMP utilities by writing the DownRate object in the AdslCapLineStatusEntry MIB. The DownRate object supports Read and Write operations. Valid values are 7168000, 5120000, and 2560000.
- If you change the value of Max-Down-Stream-Rate, the line retrains with the new value immediately after you write the profile. The device attempts to train to the specified value or lower.

Location: ADSL-CAP {shelf-*N* slot-*N* *N*} > Line-Config,
ADSL-DMT {shelf-*N* slot-*N* *N*} > Line-Config

See Also: Down-Stream-Margin, Down-Stream-Rate, Max-Down-Stream-Rate, Up-Stream-Margin

Maximum-Channels

Description: Specifies the maximum number of channels in a multichannel call.

Usage: Specify an integer from 1 to 32. The default is 2.

Example: `set maximum-channels=5`

Location: Answer-Defaults > MP-Answer, Connection *station* > MP-Options

See Also: Base-Channel-Count, Enabled, Minimum-Channels, MP-Answer, MP-Options

Maximum-Connect-Time

Description: Specifies the maximum number of minutes an AppleTalk Remote Access (ARA) session can remain connected.

Usage: Specify an integer. The default is 0 (zero), which disables the timer. The maximum connect time for an ARA connection has nothing to do with the MAX TNT idle timer. If you specify a maximum connect time, the MAX TNT initiates an ARA disconnect when that time is up. The ARA link goes down cleanly, but remote users are not notified. Users will find out the ARA link is gone only when they try to access a device

Example: `set maximum-connect-time=10`

Dependencies: For Maximum-Connect-Time to apply, you must set Enabled=Yes in the ARA-Answer subprofile and ARA-Enabled=Yes in the ARA-Options subprofile.

Location: Connection *station* > ARA-Options

See Also: ARA-Enabled

MAXLink-Client-Enabled

Description: Indicates whether the MAXLink client software is enabled.

Usage: The MAXLink-Client-Enabled setting is read only. Yes indicates that the MAXLink client software is enabled. No indicates that the MAXLink client software is not enabled.

Example: `maxlink-client-enabled=enabled`

Location: Base

See Also: Frame-Relay-Enabled, Modem-Dialout-Enabled

Max-Rate

Description: Specifies the SDSL line rate in bits per second (bps).

Usage: Specify one of the following values:

144000
272000
400000
528000
784000 (the default)
1168000
1552000

Example: `set max-rate=528000`

Location: SD SL {shelf-*N* slot-*N* *N*} > Line-Config

See Also: Data-Rate-Mode

Max-Source-Port

Description: Specifies the highest Rlogin source port value.

Usage: Specify an integer from 128 to 1023. The default is 1023. The value you specify should be greater than or equal to the setting of Min-Source-Port.

Example: `set max-source-port=250`

Dependencies: Rlogin must be enabled for Max-Source-Port to have any effect.

Location: Terminal-Server > Terminal-Mode-Configuration > Rlogin-Options

See Also: Min-Source-Port, Rlogin

Max-Tunnels

Description: Specifies the maximum number of Mobile Clients that can use Ascend Tunnel Management Protocol (ATMP) to tunnel into the Home Network at the same time through the connection.

Usage: Specify an integer. The default is 0 (zero), which specifies that no limit is enforced.

Example: `set max-tunnels=5`

Dependencies: You must set Profile-Type=Gateway-Profile for Max-Tunnels to apply.

Location: Connection *station* > Tunnel-Options

See Also: Primary-Tunnel-Server, Secondary-Tunnel-Server

Max-Up-Stream-Rate

Description: Specifies the maximum transmission rate from the Customer Premises Equipment (CPE) to the Central Office Equipment (COE).

Usage: Specify one of the following settings to indicate the maximum upstream rate the transceiver supports:

128000
256000
384000
512000
640000
960000
1280000
1600000
1920000
2240000
2560000
2688000
3200000
4480000
5120000
6272000
7160000
7168000

Dependencies: If you change the value of Max-Up-Stream-Rate, the line retrains with the new value immediately after you write the profile. The device attempts to train to the specified value or lower.

Location: ADSL-DMT {shelf-*N* slot-*N* *N*} > Line-Config

See Also: Down-Stream-Margin, Max-Down-Stream-Rate, Up-Stream-Margin

MBONE-LAN-Interface

Description: Specifies the interface address of the local Ethernet port on which the MBONE router resides (the MBONE interface). The address can denote a local Ethernet port or a WAN link, but not both.

Usage: Specify the MBONE interface address. The default is null.

Example: `set mbone-lan-interface={ {shelf-1 slot-6 2} 0 }`

Dependencies: Do not set both the MBONE-LAN-Interface and MBONE-Profile settings.

Location: IP-Global

See Also: Interface-Address, MBONE-Profile, Multicast-Forwarding

MBONE-Profile

Description: Specifies the name of a Connection profile the MAX TNT uses to reach the MBONE router.

Usage: Specify the name of a Connection profile. The default is null.

Example: `set mbone-profile=mbone`

Dependencies: Do not set both the MBONE-LAN-Interface and MBONE-Profile settings.

Location: IP-Global

See Also: MBONE-LAN-Interface, Multicast-Forwarding

Mcast-Monitor-Enabled

Description: Specifies whether the system generates a trap when multicast heartbeat monitoring is configured and the system did not receive the configured number of heartbeat packets on a multicast interface.

Usage: Specify Yes or No. The default is Yes.

- Yes specifies that the system generates a trap when it does not receive the configured number of heartbeat packets on a multicast interface.
- No specifies that the system does not generate a trap when it does not receive the configured number of heartbeat packets on a multicast interface.

Example: `set mcast-monitor-enabled=no`

Location: Trap *host-name*

See Also: Multicast-Hbeat-Alarm-Threshold, Multicast-Hbeat-Number-Slot, Multicast-Hbeat-Port, Multicast-Hbeat-Slot-Time, Multicast-Hbeat-Src-Addr, Multicast-Hbeat-Src-Addr-Mask

MDM56K

Description: Specifies the action to take when the code image for a Series 56 Digital Modem card is present in a Tar file.

Usage: Specify one of the following settings:

- Auto (the default) causes the system to load images for cards that are installed in the MAX TNT, and to skip images for cards that are not installed.
- Load causes the system to load the image, even if there is no card of that type installed.
- Skip causes the system to skip the image, even if there is a card of that type installed.

Dependencies: A card is considered present in the system if a Slot-Type profile exists for that card type. The system creates a Slot-Type profile when it first detects the presence of a card, and does not delete the profile unless the administrator uses the Slot -r command to permanently remove a card that is no longer installed in the system, or clears NVRAM. To ensure that the system does not load unnecessary images, use Slot -r to remove Slot-Type profiles for cards that are no longer installed in the system.

Location: Load-Select

See Also: 8E1, 8T1, AMDM, CAPADSL, DMTADSL, DS3-ATM, Enet, Enet2, HDLC, HDLC2, IDSL, MDM-V34, SDSL, SDSL70D, SDSL70V, SWAN, T3, UDS3, UE1, Unknown-Cards, UT1

MDM-V34

Description: Specifies the action to take when the code image for a V.34 Digital Modem card is present in a Tar file.

Usage: Specify one of the following settings:

- Auto (the default) causes the system to load images for cards that are installed in the MAX TNT, and to skip images for cards that are not installed.
- Load causes the system to load the image, even if there is no card of that type installed.
- Skip causes the system to skip the image, even if there is a card of that type installed.

Dependencies: A card is considered present in the system if a Slot-Type profile exists for that card type. The system creates a Slot-Type profile when it first detects the presence of a card, and does not delete the profile unless the administrator uses the Slot -r command to permanently remove a card that is no longer installed in the system, or clears NVRAM. To ensure that the system does not load unnecessary images, use Slot -r to remove Slot-Type profiles for cards that are no longer installed in the system.

Location: Load-Select

See Also: 8E1, 8T1, AMDM, CAPADSL, DMTADSL, DS3-ATM, Enet, Enet2, HDLC, HDLC2, IDSL, MDM56K, SDSL, SDSL70D, SDSL70V, SWAN, T3, UDS3, UE1, Unknown-Cards, UT1

Menu-Mode-Options

Description: A subprofile containing terminal-server configuration options for menu mode.

Usage: With Terminal-Server as the working profile, list the Menu-Mode-Options subprofile. For example:

```
admin> list menu
[in TERMINAL-SERVER:menu-mode-options]
start-with-menus=no
toggle-screen=no
remote-configuration=no
text-1=" "
host-1=0.0.0.0
text-2=" "
host-2=0.0.0.0
text-3=" "
host-3=0.0.0.0
text-4=" "
host-4=0.0.0.0
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: Terminal-Server

See Also: Host-N (N=1–4), Remote-Configuration, Start-With-Menus, Text-N (N=1–4), Toggle-Screen

Metric

Description: Specifies a RIP-style metric for the route.

Usage: Specify an integer from 1 to 15. The default is 1. The higher the metric, the less likely that the MAX TNT uses the route.

Example: `set metric=8`

Location: IP-Route *name*

See Also: RIP, RIP-Mode, Routing-Metric

Minimum-Channels

Description: Specifies the minimum number of channels in a multichannel call.

Usage: Specify an integer from 1 to 32. The default is 1.

Example: `set minimum-channels=1`

Location: Answer-Defaults > MP-Answer, Connection *station* > MP-Options

See Also: Base-Channel-Count, Enabled, Maximum-Channels, MP-Answer, MP-Options

Minor-Firmware-Ver

Description: Indicates the minor firmware version of the RADSL or SDSL card.

Usage: The Minor-Firmware-Ver setting is read only.

Location: ADSL-CAP-Stat {shelf-*N* slot-*N* *N*} > Physical-Status
SDSL-Stat {shelf-*N* slot-*N* *N*} > Physical-Status

See Also: Dev-Line-State, Down-Stream-Constellation, Down-Stream-Operational-Baud, Down-Stream-Rate, Hardware-Ver, IF-Group-Index, Major-Firmware-Ver, Physical-Address, Unit-Type, Up-Stream-Constellation, Up-Stream-Rate

Min-Source-Port

Description: Specifies the lowest Rlogin source port value.

Usage: Specify an integer from 128 to 1023. The default is 1023. The value you specify should be less than or equal to the setting of Max-Source-Port.

Example: `set min-source-port=250`

Dependencies: Rlogin must be enabled for Min-Source-Port to have any effect.

Location: Terminal-Server > Terminal-Mode-Configuration > Rlogin-Options

See Also: Max-Source-Port, Rlogin

Modem-Configuration

Description: A subprofile containing options for configuring the unit's digital modems.

Usage: With Terminal-Server as the working profile, list the Modem-Configuration subprofile. For example:

```
admin> list modem
[in TERMINAL-SERVER:modem-configuration]
v42/mnp=will-v42
max-baud-rate=33600-max-baud
modem-transmit-level=-10-db-mdm-trn-level
cell-mode-first=no
cell-level=-18-db-cell-level
7-even=no
AT-answer-string=" "
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: Terminal-Server

See Also: 7-Even, AT-Answer-String, Cell-Level, Cell-Mode-First, Max-Baud-Rate, Modem-Transmit-Level, V42/MNP

Modem-Dialout-Enabled

Description: Indicates whether modem dialout is enabled for the unit.

Usage: The Modem-Dialout-Enabled setting is read only. Yes indicates that modem dialout is enabled. No indicates that modem dialout is disabled.

Example: modem-dialout-enabled=yes

Location: Base

See Also: Modem-Configuration, Modem-Disable-Mode, Modem-Table-Index, Modem-Transmit-Level

Modem-Disable-Mode

Description: Specifies the state of each of the 48 modems in a card. The setting might also affect a B channel of a T1 PRI line.

Usage: Specify one of the following values:

- Enable (the default) enables the modem. When you change the value from Disable or DIS-Channel to Enable, the MAX TNT removes the modem from the Disabled list and places it on the Good or the Suspect list, provided that the Device-State and Admin-State are both enabled.
- Disable disables the modem. The MAX TNT moves the modem to the Disabled list. If the modem has an active call, it is not disabled until the call terminates. For idle modems, changes are effective immediately.
- DIS-Channel temporarily disables the modem and an arbitrary idle B channel of a T1 PRI line. The MAX TNT moves the modem to the Disabled list. If the modem card goes down, the MAX TNT restores a DS0 channel for each modem whose setting is DIS-Channel. Restoring a channel might take a few minutes.

Even if the modem failed POST, the DIS-Channel setting still quiesces a DS0 channel. Although the modem cannot be made available, changing this setting to Enable restores the quiesced DS0 channel. If the unit has no T1 PRI lines enabled, the DIS-Channel setting has the same effect as Disable.

Example: To disable modem 20 on shelf 1, slot 6:

```
admin> read lan {1 6 0}
LAN-MODEM/{ shelf-1 slot-6 0 } read
admin> list
[in LAN-MODEM/{ shelf-1 slot-6 0 }]
physical-address*={ shelf-1 slot-6 0 }
modem-disable-mode=[enable enable enable enable enable enable enable +
admin> list modem-dis
[in LAN-MODEM/{ shelf-1 slot-6 0 }:modem-disable-mode]
...(All 48 modem settings are displayed)
admin> list 20
admin> set modem-dis=disable
```

Location: LAN-Modem {shelf-N slot-N N}

See Also: Modem-Configuration, Modem-Dialout-Enabled, Modem-Table-Index, Modem-Transmit-Level

Modem-Mod

Description: Sets the modem modulation to use when answering calls on a 56K modem.

Usage: Specify one of the following values:

- K56-Modulation specifies that a 56K modem card can operate at a normal rate.
- V34-Modulation specifies that a 56K modem card never exceeds V.34 speeds (33.6K) and does not send the V.8bis tone.

To support the ITU standard V.8bis (Voice Call Ready), a 56K modem in the MAX TNT normally sends a tone at the beginning of modem training. This is commonly referred to as CRe, and is a dual tone (1375Hz + 2002 Hz), followed by a single tone at 400Hz, with a combined duration of approximately 500 ms. Although V.8bis is designed not to interfere with V.32bis modem negotiation (which supports a maximum rate of 14.4 Kbps), some V.32 and V.34 modems do not successfully complete modem training after reception of the V.8bis tone. When you set Modem-Mod=V34-Modulation, you suppress the V.8bis tone.

- V90-Modulation (the default) specifies that a 56K modem card operates at V.90 modulation.

Example: `set modem-mod=v34-modulation`

Location: Terminal-Server > Modem Configuration

See Also: 7-Even, Cell-Level, Cell-Mode-First, Max-Baud-Rate, Modem-Transmit-Level, V42/MNP

Modem-Table-Index

Description: Indicates the SNMP modem table index number of the device whose state is described by the Admin-State or Admin-State-Phys-If profile.

Usage: The Modem-Table-Index setting is read only.

Location: Admin-State {shelf-*N* slot-*N* *N*}, Admin-State-Phys-If {shelf-*N* slot-*N* *N*}

See Also: Modem-Configuration, Modem-Dialout-Enabled, Modem-Disable-Mode, Modem-Transmit-Level

Modem-Transmit-Level

Description: Specifies the transmit attenuate level for a digital modem. When a modem calls the MAX TNT, the unit attempts to connect at the transmit level you specify.

Usage: Generally, you do not need to change the transmit level. However, when the carrier is aware of line problems or irregularities, you might need to alter the modem's transmit level by specifying one of the following values:

- 13-dB-Mdm-Trn-Level (-13 dB, the default)
- 14-dB-Mdm-Trn-Level (-14 dB)
- 15-dB-Mdm-Trn-Level (-15 dB)
- 16-dB-Mdm-Trn-Level (-15 dB)
- 17-dB-Mdm-Trn-Level (-15 dB)
- 18-dB-Mdm-Trn-Level (-15 dB)

Example: `set modem-transmit-level=-13-db-mdm-trn-level`

Dependencies: If terminal services are disabled, Modem-Transmit-Level does not apply. For a 56K modem card, accept the default of -10-dB-Mdm-Trn-Level.

Location: Terminal-Server > Modem-Configuration

See Also: Modem-Configuration, Modem-Dialout-Enabled, Modem-Disable-Mode, Modem-Table-Index

More

Description: Specifies whether the MAX TNT includes the next filter rule before determining whether the frame matches the generic filter.

Usage: Specify Yes or No. The default is No.

- Yes links the current filter rule to the next one so that the filter can examine multiple noncontiguous bytes within a packet. The MAX TNT applies the next filter before deciding whether to forward the packet. The match occurs only if *both* sets of noncontiguous bytes contain the specified values.
- No does not link the current filter rule to the next one. The MAX TNT makes its forwarding decision solely on the basis of the current rule.

Example: `set more=no`

Dependencies: If you set More=Yes, the next filter must be enabled. Otherwise, the MAX TNT ignores the filter.

Location: Filter *filter-name* > Input-Filters > Gen-Filter,
Filter *filter-name* > Output-Filters > Gen-Filter

See Also: Gen-Filter, Input-Filters, Output-Filters

MP-Answer

Description: An Answer-Defaults subprofile containing MP (RFC 1990) encapsulation settings.

Usage: With Answer-Defaults as the working profile, list the MP-Answer subprofile. For example:

```
admin> list mp-answer
[in ANSWER-DEFAULTS:mp-answer]
enabled=yes
minimum-channels=1
maximum-channels=2
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: Answer-Defaults

See Also: Enabled, Minimum-Channels, Maximum-Channels

MP-Options

Description: A Connection subprofile containing MP (RFC 1990) encapsulation settings.

Usage: With a Connection profile as the working profile, list the MP-Options subprofile. For example:

```
admin> list mp-options
[in CONNECTION/tim:mp-options]
enabled=yes
base-channel-count=1
minimum-channels=1
maximum-channels=2
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Dependencies: MP encapsulation must be enabled in the Answer-Defaults profile.

Location: Connection *station*

See Also: Base-Channel-Count, Enabled, Minimum-Channels, Maximum-Channels

MPP-Answer

Description: An Answer-Defaults subprofile containing MP+ encapsulation settings.

Usage: With Answer-Defaults as the working profile, list the MPP-Answer subprofile. For example:

```
admin> list mpp-answer
[ in ANSWER-DEFAULTS:mpp-answer ]
enabled=yes
dynamic-algorithm=quadratic
bandwidth-monitor-direction=transmit
increment-channel-count=1
decrement-channel-count=1
seconds-history=15
add-persistence=5
sub-persistence=10
target-utilization=70
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: Answer-Defaults

See Also: Add-Persistence, Bandwidth-Monitor-Direction, Decrement-Channel-Count, Dynamic-Algorithm, Enabled, Increment-Channel-Count, Seconds-History, Sub-Persistence, Target-Utilization

MPP-Options

Description: A Connection subprofile containing MP+ encapsulation settings.

Usage: With a Connection profile as the working profile, list the MPP-Options subprofile. For example:

```
admin> list mpp-options
[ in CONNECTION/tim:mpp-options ]
enabled=yes
aux-send-password=" "
dynamic-algorithm=quadratic
bandwidth-monitor-direction=transmit
increment-channel-count=1
decrement-channel-count=1
seconds-history=15
add-persistence=5
sub-persistence=10
target-utilization=70
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Dependencies: MP+ encapsulation must be enabled in the Answer-Defaults profile.

Location: Connection *station*

See Also: Add-Persistence, Aux-Send-Password, Bandwidth-Monitor-Direction, Decrement-Channel-Count, Dynamic-Algorithm, Enabled, Increment-Channel-Count, Seconds-History, Sub-Persistence, Target-Utilization

MRU

Description: Specifies the maximum number of bytes the MAX TNT can receive in a single packet.

Usage: In most cases, you should accept the default setting for the connection. If you must change the default, specify a value less than the default value.

- For a PPP connection, the default is 1524. Accept the default unless the device at the remote end of the link cannot support it.
- For a Frame Relay connection, the default is 1532.

Example: `set mru=1524`

Location: Answer-Defaults > PPP-Answer, Connection *station* > PPP-Options, Frame-Relay *fr-name*

See Also: PPP-Answer, PPP-Options

MTU-Limit

Description: Specifies a lower Maximum Transmission Unit (MTU) value than the actual path MTU of the link between an Ascend Tunnel Management Protocol (ATMP) Foreign Agent and Home Agent. The actual path MTU is determined by the type of connection.

Mobile Clients use standard MTU discovery mechanisms to determine the path MTU, and then fragment packets at the appropriate size. However, to transmit packets through an ATMP tunnel, the MAX TNT adds an 8-byte GRE header and a 20-byte IP header to the frames it receives. This action can make the packet size larger than the MTU of the tunneled link, in which case the MAX TNT must either fragment the packet after encapsulating it, or reject the packet.

Usage: To avoid fragmenting packets after encapsulating them, set MTU-Limit to a value that is 28 bytes less than the path MTU. If MTU-Limit is set to zero (the default), the MAX TNT might have to fragment encapsulated packets before transmission. The other ATMP agent must then reassemble the packets. If MTU-Limit is set to a nonzero value, the MAX TNT reports that value to the client software as the path MTU, causing the client to send packets at the specified size. Setting MTU-Limit to a nonzero value pushes the task of fragmentation and reassembly out to the connection endpoints, lowering the overhead on the ATMP agents.

Example: `set mtu-limit=1472`

Location: ATMP

See Also: Agent-Mode, Agent-Type, Force-Fragmentation, Password, Retry-Limit, Retry-Timeout, UDP-Port

Multicast-Allowed

Description: Enables or disables multicasting on the IP interface.

Usage: Specify Yes or No. The default is No.

- Yes enables the MAX TNT to respond to IGMP client requests and responses.
- No specifies that the MAX TNT does not respond to multicast clients on the interface.

Example: `set multicast-allowed=yes`

Dependencies: If you set Multicast-Allowed=Yes and Multicast-Rate-Limit remains at the default of 100, the MAX TNT handles IGMP responses and requests on the interface but does not forward multicast traffic. You must set Multicast-Rate-Limit to a nondefault value before the MAX TNT can forward multicast traffic.

Location: Connection *station* > IP-Options, IP-Interface {shelf-*N* slot-*N* *N*}

See Also: IP-Global, IP-Options, Multicast-Forwarding, Multicast-Member-Timeout, Multicast-Rate-Limit

Multicast-Forwarding

Description: Enables or disables multicast forwarding for the MAX TNT.

Usage: Specify Yes or No. The default is No.

- Yes enables multicast forwarding.
- No disables multicast forwarding.

Example: `set multicast-forwarding=yes`

Dependencies: Consider the following:

- For Multicast-Forwarding to have any effect, you must set MBONE-LAN-Interface or MBONE-Profile to specify the interface on which the MBONE router resides.
- When the value of Multicast-Forwarding changes from No to Yes, the multicast subsystem reads the values in the IP-Global profile and initiates the forwarding function. If you modify a multicast value in the IP-Global profile, you must set Multicast-Forwarding to No and then Yes again to force a read of the new values.

Location: IP-Global

See Also: Multicast-Allowed, Multicast-Member-Timeout, MBONE-LAN-Interface, MBONE-Profile

Multicast-Group-Leave-Delay

Description: Specifies the number of seconds the MAX TNT waits before forwarding an IGMP version 2 `leave group` message from a multicast client.

Usage: Specify a number of seconds from 0 to 120. The default is 0 (zero). If you specify a value other than the default, and the MAX TNT receives a `leave group` message, the unit sends an IGMP query to the WAN interface or client from which it received the `leave group` message. If the MAX TNT does not receive a response from an active multicast client that belongs to the client group, it sends a `leave group` message when the time you specify expires.

If you accept the default, the MAX TNT forwards a `leave group` message immediately. If users might establish multiple multicast sessions for identical groups, set Multicast-Group-Leave-Delay to a value of 10 to 20 seconds.

Example: `set multicast-group-leave-delay=15`

Dependencies: Multicast-Group-Leave-Delay applies only if you set Multicast-Forwarding=Yes and Multicast-Allowed=Yes.

Location: Connection > IP-Options, IP-Interface

See Also: Multicast-Allowed, Multicast-Forwarding, Multicast-Member-Timeout, Multicast-Rate-Limit

Multicast-Hbeat-Addr

Description: Specifies a multicast address for heartbeat monitoring. The MAX TNT listens for packets to and from the associated group

When it runs as a multicast forwarder, the MAX TNT continually receives multicast traffic. Using heartbeat monitoring, you can monitor for possible connectivity problems by polling for multicast traffic. The MAX TNT generates an SNMP alarm trap if a traffic breakdown occurs.

Usage: Specify a multicast address in dotted decimal notation. The default is 0.0.0.0.

Example: `set multicast-hbeat-addr=224.1.1.4`

Dependencies: Consider the following:

- All the Multicast-Hbeat values interact to enable heartbeat monitoring. Heartbeat monitoring is an optional function. It is not required for multicast forwarding.
- Using the Multicast-Hbeat-Port, Multicast-Hbeat-Src-Addr, and Multicast-Hbeat-Src-Addr-Mask settings, you can fine-tune the specification for which packets the MAX TNT monitors.

Location: IP-Global

See Also: Multicast-Hbeat-Alarm-Threshold, Multicast-Hbeat-Number-Slot, Multicast-Hbeat-Port, Multicast-Hbeat-Slot-Time, Multicast-Hbeat-Src-Addr, Multicast-Hbeat-Src-Addr-Mask

Multicast-Hbeat-Alarm-Threshold

Description: Specifies the minimum number of packets the MAX TNT can receive without generating an alarm trap. If the number of monitored packets falls below the Multicast-Hbeat-Alarm-Threshold value, the MAX TNT sends the following SNMP alarm trap:

```
Trap type:  TRAP_ENTERPRISE
Code:       TRAP_MULTICAST_TREE_BROKEN (19)
Arguments:
1) Multicast group address being monitored (4 bytes),
2) Source address of last heartbeat packet received (4 bytes)
3) Slot time interval configured in seconds (4 bytes),
4) Number of slots configured (4 bytes).
5) Total number of heartbeat packets received before the MAX TNT
   started sending SNMP Alarms (4 bytes).
```

Usage: Specify an integer. The default is 0 (zero), which disables heartbeat monitoring.

Example: `set multicast-hbeat-alarm-threshold=3`

Dependencies: All the Multicast-Hbeat values interact to enable heartbeat monitoring. Heartbeat monitoring is an optional function. It is not required for multicast forwarding.

Location: IP-Global

See Also: Multicast-Hbeat-Addr, Multicast-Hbeat-Number-Slot, Multicast-Hbeat-Port, Multicast-Hbeat-Slot-Time, Multicast-Hbeat-Src-Addr, Multicast-Hbeat-Src-Addr-Mask

Multicast-Hbeat-Number-Slot

Description: Specifies how many times the MAX TNT polls before comparing the number of multicast packets it received to the Multicast-Hbeat-Alarm-Threshold value.

Usage: Specify the number of times the MAX TNT polls for packets. The default is 0 (zero).

Example: `set multicast-hbeat-number-slot=5`

In this example, if you set Multicast-Hbeat-Number-Slot to 5, and Multicast-Hbeat-Slot-Time to 3 seconds, the MAX TNT polls 5 times at 3-second intervals. After 60 seconds of elapsed time, it compares the number of multicast packets received to the alarm threshold.

Dependencies: All the Multicast-Hbeat values interact to enable heartbeat monitoring. Heartbeat monitoring is an optional function. It is not required for multicast forwarding.

Location: IP-Global

See Also: Multicast-Hbeat-Addr, Multicast-Hbeat-Alarm-Threshold, Multicast-Hbeat-Port, Multicast-Hbeat-Slot-Time, Multicast-Hbeat-Src-Addr, Multicast-Hbeat-Src-Addr-Mask

Multicast-Hbeat-Port

Description: Specifies a UDP port number. If specified, heartbeat monitoring listens only for multicast packets received on that port.

Usage: Specify a UDP port number. The default is 0 (zero).

Example: `set multicast-hbeat-port=16834`

Dependencies: All the Multicast-Hbeat values interact to enable heartbeat monitoring. Heartbeat monitoring is an optional function. It is not required for multicast forwarding.

Location: IP-Global

See Also: Multicast-Hbeat-Addr, Multicast-Hbeat-Alarm-Threshold, Multicast-Hbeat-Number-Slot, Multicast-Hbeat-Slot-Time, Multicast-Hbeat-Src-Addr, Multicast-Hbeat-Src-Addr-Mask

Multicast-Hbeat-Slot-Time

Description: Specifies the interval (in seconds) in which the MAX TNT polls for multicast traffic.

Usage: Specify the number of seconds between polling cycles. The default is 0 (zero).

Example: `set multicast-hbeat-slot-time=6`

Dependencies: All the Multicast-Hbeat values interact to enable heartbeat monitoring. Heartbeat monitoring is an optional function. It is not required for multicast forwarding.

Location: IP-Global

See Also: Multicast-Hbeat-Addr, Multicast-Hbeat-Alarm-Threshold, Multicast-Hbeat-Number-Slot, Multicast-Hbeat-Port, Multicast-Hbeat-Src-Addr, Multicast-Hbeat-Src-Addr-Mask

Multicast-Hbeat-Src-Addr

Description: Specifies a multicast address. When it performs heartbeat monitoring, the MAX TNT ignores packets from the IP address you specify.

Usage: Specify an IP address in dotted decimal notation. The default is 0.0.0.0.

Example: `set multicast-hbeat-src-addr=10.1.2.3`

Dependencies: All the Multicast-Hbeat values interact to enable heartbeat monitoring. Heartbeat monitoring is an optional function. It is not required for multicast forwarding.

Location: IP-Global

See Also: Multicast-Hbeat-Addr, Multicast-Hbeat-Alarm-Threshold, Multicast-Hbeat-Number-Slot, Multicast-Hbeat-Port, Multicast-Hbeat-Slot-Time, Multicast-Hbeat-Src-Addr-Mask

Multicast-Hbeat-Src-Addr-Mask

Description: Specifies a subnet mask that the MAX TNT applies to the Multicast-Hbeat-Src-Addr value.

Usage: Specify a subnet mask in dotted decimal notation. The default is 0.0.0.0.

Example: `set multicast-hbeat-src-addr-mask=255.255.255.0`

Dependencies: All the Multicast-Hbeat values interact to enable heartbeat monitoring. Heartbeat monitoring is an optional function. It is not required for multicast forwarding.

Location: IP-Global

See Also: Multicast-Hbeat-Addr, Multicast-Hbeat-Alarm-Threshold, Multicast-Hbeat-Number-Slot, Multicast-Hbeat-Port, Multicast-Hbeat-Slot-Time, Multicast-Hbeat-Src-Addr

Multicast-Member-Timeout

Description: Specifies the timeout (in seconds) for client responses to multicast polling messages.

When you configure the MAX TNT as a multicast forwarder, it forwards polling messages generated by the multicast router, and keeps track of active memberships from its client interfaces. If no client responds to the polling messages within the amount of time you specify for Multicast-Member-Timeout, the MAX TNT stops forwarding multicast traffic on that interface.

Usage: Specify an integer from 60 to 65535. The default is 360.

Example: `set multicast-member-timeout=60`

Dependencies: If Multicast-Forwarding=No, Multicast-Member-Timeout does not apply.

Location: IP-Global

See Also: Multicast-Allowed, Multicast-Forwarding

Multicast-Rate-Limit

Description: Determines the rate at which the MAX TNT accepts multicast responses from clients on the interface, and enables the MAX TNT to forward multicast traffic on the interface (provided that Multicast-Allowed=Yes). The Multicast-Rate-Limit setting helps the forwarder prevent multicast clients from creating response storms to multicast transmissions. It does not affect the MBONE interface.

Usage: To begin forwarding multicast traffic on the interface, specify an integer lower than 100. The default is 100, which disables the forwarding of multicast traffic on the interface.

Example: `set multicast-rate-limit=5`

In this example, the MAX TNT accepts a packet from multicast clients on the interface every five seconds. The MAX TNT discards any subsequent packets received in that five-second window.

Dependencies: If you set Multicast-Allowed=Yes and Multicast-Rate-Limit remains at the default of 100, the MAX TNT handles IGMP responses and requests on the interface but does not forward multicast traffic. You must set Multicast-Rate-Limit to a nondefault value before the MAX TNT can forward multicast traffic.

Location: Connection *station* > IP-Options, IP-Interface {shelf-*N* slot-*N* *N*}

See Also: Multicast-Allowed

Multi-Rate-Enabled

Description: Indicates whether the unit can make DWS calls.

Usage: The Multi-Rate-Enabled setting is read only. Yes indicates that the unit can make DWS calls. No indicates that the unit cannot make DWS calls.

Example: multi-rate-enabled=yes

Location: Base

See Also: R2-Signaling-Enabled, Switched-Enabled

Multishelf-Enabled

Description: Specifies whether the system generates a trap when a master shelf detects up/down state changes of the peer shelf in a multishelf configuration.

Usage: Specify Yes or No. The default is Yes.

- Yes specifies that the system generates a trap when a master shelf detects up/down state changes of the peer shelf.
- No specifies that the system does not generate a trap when a master shelf detects up/down state changes of the peer shelf.

Example: set multishelf-enabled=no

Location: Trap *host-name*

See Also: Trap

Must-Accept-Address-Assign

Description: Instructs the MAX TNT to hang up if a caller rejects dynamic IP address assignment.

Usage: Specify Yes or No. The default is No.

- Yes specifies that the caller must accept dynamic IP address assignment.
- No specifies that the MAX TNT allows the caller to reject the IP address offered by the MAX TNT and present its own IP address for consideration.

Example: set must-accept-address-assign=yes

Location: IP-Global

See Also: Assign-Address, Assign-Count, Pool-Base-Address, Pool-Summary

N

N2-Retransmissions

Description: Specifies the retry limit—the maximum number of times the MAX TNT can resend a frame on an X.75 connection when the T1 Retransmission Timer expires.

Usage: Specify a number from 2 to 10. The default value is 10. A higher value increases the probability of a correct transfer of data. A lower value allows for quicker detection of an error condition.

Location: Answer-Defaults > X75-Answer
Connection > X75-Options

See Also: Frame-Length, K-Frames-Outstanding, T1-Retrans-Timer

N391-Val

Description: Specifies the number of T391 polling cycles between full Status Enquiry messages.

Usage: Specify an integer from 1 to 255. The default is 6, which indicates that after six status requests spaced T391-Val seconds apart, the UNI-DTE device requests a full status report.

Example: `set n391-val=15`

Dependencies: If Link-Type=DCE, N391-Val does not apply.

Location: Frame-Relay *fr-name*

See Also: Link-Type, T391-Val

N392-Val

Description: Specifies the number of errors, during DTE-N393-monitored events, that cause the user side to declare the network side's procedures inactive.

Usage: Specify an integer from 1 to 10. The value you enter should be less than N393-Val. The default is 3.

Example: `set n392-val=5`

Dependencies: If Link-Type=DCE, N392-Val does not apply.

Location: Frame-Relay *fr-name*

See Also: Link-Type, N393-Val

N393-Val

Description: Specifies the DTE-monitored event count.

Usage: Specify an integer from 1 to 10. The value you enter should be greater than N392-Val. The default is 4.

Example: `set n393-val=6`

Dependencies: If Link-Type=DCE, N393-Val does not apply.

Location: Frame-Relay *fr-name*

See Also: Link-Type, N392-Val

Nailed-Group

Description: Assigns a group number to a T1 or E1 channel, to a nailed IDSL channel, or to a SWAN line. You can then refer to the number in the Connection profile's Nailed-Groups setting to specify the nailed-up channels a connection uses.

Usage: Specify a number from 0 to 1024. The default is 0 (zero).

Example: `set nailed-group=7`

Dependencies: Do not associate a group number with more than one active profile. For a T1 or E1 line, channels in a nailed-up group must be contiguous.

Location: E1 {shelf-*N* slot-*N* *N*} > Line-Interface > Channel-Config *N*,
IDSL {shelf-*N* slot-*N* *N*} > Line-Interface > Channel-Config *N*,
SWAN {shelf-*N* slot-*N* *N*} > Line-Config,
T1 {shelf-*N* slot-*N* *N*} > Line-Interface > Channel-Config *N*

See Also: Channel-Config *N*, Line-Config, Line-Interface, Nailed-Groups

Nailed-Groups

Description: Specifies one or more nailed-up groups belonging to a session.

Usage: Specify a number assigned to a group of nailed-up channels. For an MP+ connection, you can assign more than one group number, separated by commas. The default is 1.

Example: `set nailed-groups=1, 3`

Dependencies: Only MP+ supports the use of multiple nailed-up groups.

Location: Connection *station* > Telco-Options

See Also: Call-Type, Nailed-Group, Telco-Options

Nailed-Mode

Description: Specifies how the MAX TNT uses the link's nailed-up channels, and whether the link uses nailed-up channels alone, or a combination of nailed-up and switched channels.

Usage: Specify one of the following values:

- FT1 (the default) specifies that the link uses only nailed-up channels.
- FT1-MPP specifies that the link uses a combination of nailed-up and switched channels.
- FT1-BO specifies that the link uses a combination of nailed-up and switched channels with backup and overflow.

In providing backup bandwidth, the MAX TNT drops all the nailed-up channels when the quality of a nailed-up channel falls to Marginal or Poor in an FT1-BO call. The MAX TNT then attempts to replace dropped nailed-up channels with switched channels. It also monitors dropped nailed-up channels. When the quality of all dropped channels changes to Fair or Good, the MAX TNT reinstates them.

In providing overflow protection, the MAX TNT supplies supplemental dial-up bandwidth during times of peak demand in order to prevent saturation of a nailed-up line. The circuit remains in place until the traffic subsides, and then it is removed.

Example: `set nailed-mode=ft1`

Location: Frame-Relay *fr-name*

See Also: Nailed-Up-Group

Nailed-Up-Group

Description: Specifies the group number assigned to the nailed-up channels of a Frame Relay link.

Usage: Specify a number assigned to a group of nailed-up channels. The maximum value you can enter is 1024.

Example: `set nailed-up-group=5`

Location: Frame-Relay *fr-name*

See Also: Nailed-Mode

Name

Description: Assigns a name to a profile, user, route, host, Virtual Router (VRouter), or the MAX TNT system itself.

Usage: Specify a descriptive name with no embedded spaces. For all profiles except the IP-Route, IPX-Route, Trap, and VRouter profiles, you can specify up to 24 characters. For the IP-Route, IPX-Route, and Trap profiles, you can specify up to 31 characters. For the VRouter profile, you can specify up to 15 characters. The default is null in all except User profiles, where the default is `default`.

Example: `set name=newyork`

Dependencies: Consider the following:

- If the MAX TNT uses the specified value for authentication, it is case sensitive.
- In the SWAN profile, the Name setting identifies the line for administrative purposes only. The unit uses only the Physical-Address setting to identify the SWAN line.
- Interfaces belonging to the VRouter are grouped by specifying the value of Name in the IP-Interface or Connection profile.

Location: ADSL-CAP {shelf-*N* slot-*N* *N*}, E1 {shelf-*N* slot-*N* *N*}, Firewall name, IDSL {shelf-*N* slot-*N* *N*}, IP-Route *name*, IPX-Route *name*, SDSL {shelf-*N* slot-*N* *N*}, SWAN {shelf-*N* slot-*N* *N*}, System, T1 {shelf-*N* slot-*N* *N*}, T3 {shelf-*N* slot-*N* *N*}, Trap *host-name*, User *name*, VRouter *name*

See Also: ADSL-CAP, E1, Firewall, IP-Route, IPX-Route, Physical-Address, SDSL (profile), SWAN (profile), System, T1, T3 (profile), Trap, User

Net-Alias

Description: Specifies the IPX network number of a remote router. The MAX TNT uses this network number only when connecting to a non-Ascend router that uses numbered interfaces.

Usage: Specify the IPX network number of the remote device. The default of 00000000 is appropriate for most installations. If you accept the default, the MAX TNT does not advertise the route until it makes a connection to the remote network.

Dependencies: If the MAX TNT does not route IPX for the connection, or if IPX routing is globally disabled, Net-Alias does not apply.

Location: Connection *station* > IPX-Options

See Also: Dial-Query, IPX-Header-Compression, IPX-Routing-Enabled, IPX-SAP-HS-Proxy, IPX-SAP-HS-Proxy-Net, Net-Number, Peer-Mode, RIP, SAP, SAP-Filter

NetBIOS-Primary-NS

Description: Specifies the IP address of the primary NetBIOS server.

Usage: Specify the IP address in dotted decimal notation. The default is 0.0.0.0, which indicates that no NetBIOS server exists.

Example: `set netbios-primary-ns=10.1.2.3/24`

Location: IP-Global

See Also: Domain-Name, NetBIOS-Secondary-NS

NetBIOS-Secondary-NS

Description: Specifies the IP address of the secondary NetBIOS server. The MAX TNT accesses the secondary server if the primary NetBIOS server is unavailable.

Usage: Specify the IP address in dotted decimal notation. The default is 0.0.0.0, which indicates that no secondary NetBIOS server exists.

Example: `set netbios-secondary-ns=10.57.24.11/24`

Location: IP-Global

See Also: Domain-Name, NetBIOS-Primary-NS

Net-Number

Description: Specifies the IPX network number of the remote router.

Usage: Specify the IPX network number of the remote device only when the router requires that the MAX TNT know its network number before connecting. If you specify a value for Net-Number, the MAX TNT creates a static route to the device. In addition, the MAX TNT becomes a seed router, and other routers can learn the IPX network number from the MAX TNT.

If there are other NetWare routers on the LAN interface, the IPX number assigned to the MAX TNT for that interface must be consistent with the number in use by the other routers. The best way to ensure consistency is to accept the default null address for Net-Number. The null address causes the MAX TNT to learn its network number from another router on the interface, or from the RIP packets received from the local IPX server.

The default of 00000000 is appropriate for most installations. If you accept the default, the MAX TNT does not advertise the route until it makes a connection to the remote network.

Dependencies: If the MAX TNT does not route IPX for the connection, or if IPX routing is globally disabled, Net-Number does not apply.

Location: Connection *station* > IPX-Options

See Also: Dial-Query, IPX-Header-Compression, IPX-Routing-Enabled, IPX-SAP-HS-Proxy, IPX-SAP-HS-Proxy-Net, Net-Alias, Peer-Mode, RIP, SAP, SAP-Filter

Network-Loopback

Description: Indicates whether the T1 line is looped back to the network.

Usage: The Network-Loopback setting is read only. True indicates that the T1 line is looped back to the network. False indicates that the T1 line is not looped back to the network.

Location: T1-Stat {shelf-*N* slot-*N* *N*}

See Also: AIS-Receive, BER-Receive, Carrier-Established, Channel-State, Error-Count, Line-State, Loss-Of-Carrier, Loss-Of-Sync, Physical-Address, Port-Enabled, Yellow-Receive

Network-Management-Enabled

Description: Indicates whether the network-management option is enabled.

Usage: The Network-Management-Enabled option is read only. Yes indicates that the network-management option is enabled. No indicates that the network-management option is disabled.

Example: network-management-enabled=yes

Location: Base

See Also: AIM-Enabled

New-NAS-Port-ID-Format

Description: Specifies whether the MAX TNT reports a value for the RADIUS NAS-Port attribute appropriate to the multishelf and multislot architecture of the system.

Usage: Specify Yes or No. The default is Yes.

- Yes specifies that the MAX TNT reports an NAS-Port value appropriate to the multishelf and multislot architecture. The value has the following format:

shelf slot line channel

where *shelf* indicates the shelf number (0–3), *slot* indicates the slot number (0–15), *line* indicates the line number (0–31), and *channel* indicates the channel number (0–31) for an ISDN call. For an analog call, the values are the same, except that the line number can be 0–63, and the channel number is always 1. When using the attribute for accounting purposes, you must add 1 to each component to ascertain the actual shelf, slot, line, and channel number.

- No specifies that the MAX TNT reports an NAS-Port value in the following format:

tllcc

where *t* indicates 1 for a digital call or 2 for an analog call, *ll* indicates the line number, and *cc* indicates the channel number.

Example: set new-nas-port-id-format=no

Dependencies: If you set New-NAS-Port-ID-Format=No, the following conditions must be met:

- Multishelf is not supported.
- All line cards must be placed contiguously in the first slots of the standalone system. Lines must be numbered 1 through 8 for slot 1, 9 through 16 for slot 2, and so on.

If RADIUS accounting or call logging is in use, do not change the New-NAS-Port-ID-Format setting while the system has active sessions.

Location: System

See Also: Analog-Encoding, Call-Routing-Sort-Method, Idle-Logout, Master-Shelf-Controller, Name, Parallel-Dialing, SessionID-Base, Shelf-Controller-Type, Single-File-Incoming, System-Rmt-Mgmt, Use-Trunk-Groups

NFAS-Group-ID

Description: Specifies the number of a Non-Facility Associated Signaling (NFAS) group.

Some sites require multiple NFAS groups on a single card to enable grouped DS1s. An NFAS group contains a minimum of two PRIs, so the T1 card supports up to four NFAS groups, and the T3 card supports up to 14 NFAS groups.

Usage: For a T1 card, set NFAS-Group-ID to a value from 0 to 3. For a T3 card, valid values are from 0 to 13. Lines with the same NFAS-Group-ID value are in the same NFAS group.

Example: Two NFAS groups are configured on a T1 card, each containing four lines. This example uses the NFAS group IDs 1 and 2, but you can assign any valid NFAS-Group-ID values. The following commands configure NFAS group 1, which contains lines 1 through 4:

```
admin> read t1 {1 2 1}
T1/{ shelf-1 slot-2 1 } read
admin> set line signaling-mode=isdn-nfas
admin> set line nfas-id=0
admin> set line nfas-group-id=1
admin> set channel 24 channel=nfas-primary
admin> write
T1/{ shelf-1 slot-2 1 } written
admin> read t1 {1 2 2}
T1/{ shelf-1 slot-2 2 } read
admin> set line sig=isdn-nfas
admin> set line nfas-id=1
admin> set line nfas-group-id=1
admin> set line channel 24 channel=nfas-secondary
admin> write
T1/{ shelf-1 slot-2 2 } written
admin> read t1 {1 2 3}
T1/{ shelf-1 slot-2 3 } read
admin> set line sig=isdn-nfas
```

```
admin> set line nfas-id=2
admin> set line nfas-group-id=1
admin> write
T1/{ shelf-1 slot-2 3 } written
admin> read t1 {1 2 4}
T1/{ shelf-1 slot-2 4 } read
admin> set line sig=isdn-nfas
admin> set line nfas-id=3
admin> set line nfas-group-id=1
admin> write
T1/{ shelf-1 slot-2 4 } written
```

The following commands configure NFAS group 2, which contains lines 5 through 8:

```
admin> read t1 {1 2 5}
T1/{ shelf-1 slot-2 5 } read
admin> set line signaling-mode=isdn-nfas
admin> set line nfas-id=0
admin> set line nfas-group-id=2
admin> set channel 24 channel=nfas-primary
admin> write
T1/{ shelf-1 slot-2 5 } written
admin> read t1 {1 2 6}
T1/{ shelf-1 slot-2 6 } read
admin> set line sig=isdn-nfas
admin> set line nfas-id=1
admin> set line nfas-group-id=2
admin> set line channel 24 channel=nfas-secondary
admin> write
T1/{ shelf-1 slot-2 6 } written
admin> read t1 {1 2 7}
T1/{ shelf-1 slot-2 7 } read
admin> set line sig=isdn-nfas
admin> set line nfas-id=2
admin> set line nfas-group-id=2
admin> write
T1/{ shelf-1 slot-2 7 } written
admin> read t1 {1 2 8}
T1/{ shelf-1 slot-2 8 } read
admin> set line sig=isdn-nfas
admin> set line nfas-id=3
admin> set line nfas-group-id=2
admin> write
T1/{ shelf-1 slot-2 8 } written
```

Dependencies: To configure multiple NFAS groups, you must set both NFAS-Group-ID and NFAS-ID for each DS1. Within the group, all PRIs share the same NFAS-Group-ID value and have different, unique NFAS-ID values.

Location: T1 {shelf-*N* slot-*N* *N*}

See Also: NFAS-ID

NFAS-ID

Description: Specifies a group ID for T1 lines that use Non-Facility Associated Signaling (NFAS). You must ask your service provider about the NFAS ID number to specify for each line.

Usage: Specify a number from 0 to 31.

Example: `set nfas-id=2`

Dependencies: Consider the following:

- You assign a T1 line to an NFAS group by setting Signaling-Mode=ISDN-NFAS.
- Within the NFAS group, configure only a single line to provide the primary ISDN D channel, and another line to provide the secondary (backup) D channel.

Location: T1 {shelf-*N* slot-*N* *N*} > Line-Interface

See Also: Line-Interface, Signaling-Mode, Switch-Type

NL-Value

Description: Specifies the number of retransmissions the MAX TNT sends on the line.

Usage: Specify an integer from 1 to 255. The default is 64. You must accept the default when the line connects to a DPNSS or DASS2 switch.

Example: `set nl-value=64`

Location: E1 {shelf-*N* slot-*N* *N*} > Line-Interface

See Also: Line-Interface, Signaling-Mode, Switch-Type

NoAttr6-Use-Termsrv

Description: Specifies how the system behaves when it does not receive RADIUS attribute 6 (User-Service).

Usage: Specify Yes or No. The default is Yes.

- Yes specifies that the MAX TNT initiates a terminal-server login if Attribute 6 is not received, regardless of whether Attribute 7 is received or not.
- No specifies that:
 - If Attribute 6 is not received, but Attribute 7 is received, a framed-protocol login is initiated.
 - If neither Attribute 6 nor 7 is received, a terminal-server login is initiated.

Example: The following example instructs the MAX TNT to start a framed-protocol login if Attribute 7 is received without Attribute 6:

```
admin> read external-auth
EXTERNAL-AUTH read

admin> set noattr6-use-termsrv=no

admin> write
EXTERNAL-AUTH written
```

Location: External-Auth

See Also: Acct-Type, Auth-Type, Local-Profiles-First, Rad-Acct-Client, Rad-Auth-Client, Rad-Auth-Server, Rad-ID-Source-Unique, Rad-ID-Space, Rad-Serv-Enable, Tac-Auth-Client, TacPlus-Acct-Client, TacPlus-Auth-Client

Non-Multicast

Description: Specifies whether all multicast packets are remapped to a directed neighbor address.

Usage: Specify Yes or No. The default is No.

- Yes specifies that all multicast packets are remapped to a directed neighbor address, enabling adjacencies to form between neighbors. This setting is ignored on Ethernet (a broadcast network). Its use is not recommended for unnumbered interfaces. If you specify it for a non-numbered interface, the MAX TNT drops the packets.
- No specifies that multicast packets are not remapped to a directed neighbor address.

Example: `set non-multicast=yes`

Location: Connection *station* > IP-Options > OSPF-Options

See Also: Active, Area, Area-Type, ASE-Tag, ASE-Type, Authen-Type, Auth-Key, Cost, Dead-Interval, Hello-Interval, Key-ID, Priority, Retransmit-Interval, Transit-Delay

Number-Complete

Description: Specifies the criteria for having received enough digits on an incoming call that uses R2 signaling.

Usage: Specify 1-Digits, 2-Digits, and so on, up to 10-Digits, to specify up to ten digits of a phone number. Or, to indicate that the full number has been received, accept the default End-Of-Pulsing setting. For call-routing purposes, the digits received before the call is answered are considered the called number.

Example: `set number-complete=end-of-pulsing`

Location: E1 {shelf-*N* slot-*N* *N*} > Line-Interface

See Also: Line-Interface, Signaling-Mode, Switch-Type

O

Offset

Description: Specifies a byte-offset from the start of a frame to the data the MAX TNT tests against the generic filter. If the current filter is linked to the previous one (if More=Yes in the previous filter), the offset starts at the endpoint of the previous segment.

Usage: Specify a number from 0 to 8. The default is 0 (zero), which indicates no offset.

Example: `set offset=2`

Location: Filter *filter-name* > Input-Filters > Gen-Filter,
Filter *filter-name* > Output-Filters > Gen-Filter

See Also: Gen-Filter, Input-Filters, Output-Filters

Operational-Count

Description: Indicates the number of devices that are in the up state.

Usage: The Operational-Count setting is read only.

Example: `operational-count=10`

Location: Device-Summary

See Also: Device-Class, Disabled-Count, Total-Count

OSPF

Description: A subprofile that enables you to configure OSPF routing on an Ethernet interface.

Note: For information about how to display statistical information related to OSPF routing, see “OSPF” on page 1-69.

Usage: With IP-Interface as the working profile, list the OSPF subprofile. For example:

```
admin> list ospf
[in IP-INTERFACE/{ { shelf-1 slot-15 2 } 0 } :ospf]
active=no
area=0.0.0.0
area-type=normal
hello-interval=10
dead-interval=40
priority=5
authen-type=simple
key-id=0
auth-key=ascend0
cost=1
ase-type=type-1
ase-tag=c0:00:00:00
transit-delay=1
retransmit-interval=5
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Dependencies: You must reset the MAX TNT in order to begin OSPF routing.

Location: IP-Interface { {shelf-*N* slot-*N* *N*} *N*}

See Also: Active, Area, Area-Type, ASE-Tag, ASE-Type, Authen-Type, Auth-Key, Cost, Dead-Interval, Hello-Interval, Key-ID, Priority, Retransmit-Interval, Transit-Delay

OSPF-ASE-Pref

Description: Specifies the preference value for OSPF routes that the router learns about by means of RIP, ICMP, or another non-OSPF protocol.

When choosing the routes to put in the routing table, the router first compares their preference values, preferring the lowest number. If the preference values are equal, the router compares the metric values, using the route with the lowest metric.

Usage: Specify a number from 0 to 255. A value of 255 prevents the use of the route. Following are the default preferences for different types of routes:

- 0 (zero)—Connected routes
- 10—OSPF routes
- 30—Routes learned from ICMP redirects
- 100—Routes learned from RIP
- 100—Static routes

Example: `set ospf-ase-pref=100`

Location: IP-Global

See Also: Down-Preference, OSPF-Pref, Preference, RIP-Pref, Static-Pref

OSPF-Global

Description: A subprofile that enables you to define global OSPF behavior.

Usage: With IP-Global as the working profile, list the OSPF-Global subprofile. For example:

```
admin> list ospf-global
[ in IP-GLOBAL:ospf-global ]
as-boundary-router=yes
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: IP-Global

See Also: AS-Boundary-Router

OSPF-Options

Description: A subprofile that contains settings for OSPF routing.

Usage: With a Connection profile as the working profile, list the OSPF-Options subprofile. For example:

```
admin> list ip-options ospf
[in CONNECTION/tim:ip-options:ospf-options]
active=no
area=0.0.0.0
area-type=normal
hello-interval=30
dead-interval=120
priority=5
authen-type=simple
key-id=0
auth-key=ascend0
cost=10
ase-type=type-1
ase-tag=c0:00:00:00
transit-delay=1
retransmit-interval=5
non-multicast=no
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: Connection *station* > IP-Options

See Also: Active, Area, Area-Type, ASE-Tag, ASE-Type, Authen-Type, Auth-Key, Cost, Dead-Interval, Hello-Interval, Key-ID, Non-Multicast, Priority, Retransmit-Interval, Transit-Delay

OSPF-Pref

Description: Specifies the preference for routes that the router learns about by means of the OSPF protocol.

When choosing the routes to put in the routing table, the router first compares their preference values, preferring the lowest number. If the preference values are equal, the router compares the metric values, using the route with the lowest metric.

Usage: Specify a number from 0 to 255. A value of 255 prevents the use of the route. Following are the default preferences for different types of routes:

- 0 (zero)—Connected routes
- 10—OSPF routes
- 30—Routes learned from ICMP redirects
- 100—Routes learned from RIP
- 100—Static routes
- 100—ATMP routes

Example: `set ospf-pref=10`

Location: IP-Global

See Also: Down-Preference, OSPF-ASE-Pref, Preference, RIP-Pref, Static-Pref

Output-Filters

Description: A subprofile containing 12 output-filter configuration subprofiles. The MAX TNT applies output filters to outgoing packets.

Usage: With a Filter profile as the working profile, use the List command to display the 12 subprofiles of the Output-Filters subprofile. For example:

```
admin> list output
[in FILTER/test:output-filters]
output-filters[1]={ no no generic-filter { 0 0 no no +
output-filters[2]={ no no generic-filter { 0 0 no no +
output-filters[3]={ no no generic-filter { 0 0 no no +
output-filters[4]={ no no generic-filter { 0 0 no no +
```

To close the Output-Filters subprofile and return to a higher context in the profile:

```
admin> list ..
```

Location: Filter *filter-name*

See Also: Filter-Name, Input-Filters, Input-Filters N, Output-Filters N

Output-Filters N

Description: A subprofile containing one of the 12 levels of an output-filter specification in an Output-Filters subprofile.

Usage: With a Filter profile as the working profile, list one of the 12 subprofiles. For example:

```
admin> list output 1
[in FILTER/test:output-filters[1]]
valid-entry=no
forward=no
type=generic-filter
gen-filter={ 0 0 no no 00:00:00:00:00:00:00:00:00:00:00:00 +
ip-filter={ 0 0.0.0.0 0.0.0.0 0.0.0.0 0.0.0.0 none 0 none 0 no }
route-filter={ 0.0.0.0 0.0.0.0 0.0.0.0 0.0.0.0 0 none }
ipx-filter={ 00:00:00:00 00:00:00:00 00:00:00:00:00:00 +
tos-filter={ 0 0.0.0.0 0.0.0.0 0.0.0.0 0.0.0.0 none 0 none 0 +
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: Filter *filter-name* > Output-Filters

See Also: Filter-Name, Forward, Gen-Filter, Input-Filters, Input-Filters N, IP-Filter, Output-Filters, TOS-Filter (subprofile), Type, Valid-Entry

Output-IPX-SAP-Filters

Description: A subprofile that defines up to eight output filters for SAP packets. The MAX TNT applies output filters to SAP response packets it transmits. If it receives a SAP request packet, the MAX TNT applies output filters before transmitting the SAP response, and excludes services from (or includes them in) the response packet as specified by the filter conditions.

Usage: With IPX-SAP-Filter as the working profile, use the List command to display one of the Output-IPX-SAP-Filters subprofiles. For example:

```
admin> list output 1
[ in IPX-SAP-FILTER/test:output-ipx-sap-filters[1]]
valid-filter=no
type-filter=exclude
server-type=00:00
server-name=" "
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: IPX-SAP-Filter

See Also: Server-Name, Server-Type, Type-Filter, Valid-Filter

Overlap-Receiving

Description: Enables or disables overlap receiving for incoming calls on the PRI line.

Overlap receiving affects the procedure of establishing an incoming call received on a T1 or E1 PRI line in the MAX TNT. When using overlap receiving, the MAX TNT can gather the complete called-number from the network switch via a series of Information messages, enabling the use of features such as called-number authentication.

The Q.931 specification states that either en-bloc receiving or overlap receiving can be used to handle an incoming call. With en-bloc receiving, the Setup message received from the network switch must contain all information required to process the call. With overlap receiving, the Setup message may contain incomplete called number information, with the remainder of the call information (if any) sent in one or more additional Information messages after the network switch receives a Setup Acknowledge message from the called unit.

Usage: Specify Yes or No. The default is No.

- Yes enables overlap receiving.
- No disables overlap receiving.

Example: `set overlap-receiving=yes`

Dependencies: If Overlap-Receiving=No, the PRI-Prefix-Number, Trailing-Digits, and T302-Timer settings do not apply.

Location: T1 {shelf-N slot-N N} > Line-Interface, E1 {shelf-N slot-N N} > Line-Interface

See Also: PRI-Prefix-Number, T302-Timer, Trailing-Digits

P

Parallel-Dialing

Description: Specifies the number of call-setup requests the system sends to the network side at any given time.

Usage: Specify an integer from 1 to 64. If the MAX TNT has trouble establishing an initial connection at the full bandwidth for calls from the U.S. to another country, reduce Parallel-Dialing to a value of 1. For ADSL or SDSL operation, you must set Parallel-Dialing to the number of ADSL or SDSL interfaces. The default is 2.

Example: `set parallel-dialing=12`

Dependencies: If the system is processing the maximum number of calls when it receives a new call request, it queues the request and processes it after the network side sends a call-proceeding message for a previous request. If the network side is delayed more than 30 to 40 seconds, the modems can time out.

Location: System

See Also: Dial-Number

Password

Description: In a User profile, specifies a password that the user must enter in order to log in. In a Tunnel-Options subprofile, specifies the password a Foreign Agent must supply in order to establish a tunnel with the MAX TNT.

Usage: Specify a text string of up to 20 characters. The default is null. The value you enter is case sensitive.

Example: `set password=Ascend`

Dependencies: You must set Agent-Mode=Home-Agent for the Password setting to apply in a Tunnel-Options subprofile.

Location: ATMP, Connection *station* > Tunnel-Options, User *name*

See Also: Aux-Send-Password, Recv-Password, Security-Mode, Send-Password, System-Password, Telnet-Password

Password-Enabled

Description: Specifies whether all failed Telnet login attempts generate a trap.

Usage: Specify Yes or No. The default is Yes.

- Yes specifies that all failed Telnet login attempts generate a trap.
- No specifies that all failed Telnet login attempts do not generate a trap.

Example: `set password-enabled=no`

Dependencies: When Password-Enabled=Yes, you must also set Security-Enabled=Yes for all failed Telnet login attempts to generate a trap.

Location: Trap *host-name*

See Also: Security-Enabled

Password-For-Direct-Access

Description: Specifies the password the user must enter when Security-For-Direct-Access=Global.

Usage: Specify a password of up to 64 characters. The default is null.

Example: `set password-for-direct-access=mypassword`

Dependencies: Consider the following:

- If Security-For-Direct-Access is not set to Global, the Password-For-Direct-Access setting is ignored.
- If Direct-Access=No, Password-For-Direct-Access does not apply.

Location: Terminal-Server > Dialout-Configuration

See Also: Direct-Access, Port-For-Direct-Access, Security-For-Direct-Access

Password-Prompt

Description: Specifies the string the terminal server uses to prompt for the System-Password when authentication is in use and an interactive user initiates a connection.

Usage: Specify up to 15 characters. The default is Password:

Example: `set password-prompt=Your Password:`

Dependencies: If terminal services are disabled, Password-Prompt does not apply.

Location: Terminal-Server > Terminal-Mode-Configuration

See Also: Login-Prompt, Prompt, Prompt-Format, Terminal-Mode-Configuration, Third-Login-Prompt, Third-Prompt-Sequence

Peer-Mode

Description: Specifies whether the remote IPX caller is an IPX router or a dial-in client.

Usage: Specify one of the following values:

- Router-Peer (the default) specifies that the caller is an IPX router.
- Dialin-Peer specifies a dial-in client.

Dependencies: Consider the following:

- If you specify Dialin-Peer, the MAX TNT negotiates a routing session with the client by assigning the client a node address on the virtual IPX network defined by IPX-Dialin-Pool. The client must accept the network number that the MAX TNT assigns. If the client has its own node number, the MAX TNT uses that number to form the full network address. If the client does not have a node number, the MAX TNT assigns it a unique node address on the virtual network.
- For dial-in clients, the MAX TNT does not send RIP and SAP advertisements across the connection, and it ignores RIP and SAP advertisements received from the remote end. However, it does respond to RIP and SAP queries it receives from dial-in clients.
- If the MAX TNT does not route IPX for the connection, or if IPX routing is globally disabled, Peer-Mode does not apply.

Location: Answer-Defaults > IPX-Answer, Connection *station* > IPX-Options

See Also: Atalk-Peer-Mode, Dial-Query, IPX-Dialin-Pool, IPX-Header-Compression, IPX-Routing-Enabled, IPX-SAP-HS-Proxy, IPX-SAP-HS-Proxy-Net, Net-Alias, Net-Number, Peer-Mode, RIP, SAP, SAP-Filter

Perm-Conn-Upd-Mode

Description: Specifies under what circumstances the MAX TNT performs nonintrusive remote updates of the configurations of permanent connections.

Usage: Specify one of the following values:

- All (the default) specifies that, if they are fetched from the RADIUS server, all existing permanent connections will be torn down and reestablished following the update. This setting causes service interruption every time any nailed profile is updated or added.
- Changed specifies that only changed permanent connections will be torn down and reestablished.

Example: `set perm-conn-upd-mode=changed`

Location: System

See Also: Analog-Encoding, Call-Routing-Sort-Method, Idle-Logout, Master-Shelf-Controller, Name, New-NAS-Port-ID-Format, Parallel-Dialing, SessionID-Base, Shelf-Controller-Type, Single-File-Incoming, System-Rmt-Mgmt, Use-Trunk-Groups

Phone-Number

Description: Specifies a phone number.

- In a Call-Route profile, the Phone-Number setting indicates “route any calls received on this number to me (the index address).”
- In a Frame-Relay profile, the Phone-Number setting indicates the number the MAX TNT dials to reach the switch.
- In a T1 or E1 profile, the Phone-Number setting assigns a channel an add-on number for outgoing calls.

Usage: Specify a phone number of up to 24 characters, limited to the following:

1234567890 () [] ! z - * |

The default is null.

Example: `set phone-number=1212`

Dependencies: If a nailed-up Frame-Relay datalink connection is in use, Phone-Number does not apply.

Location: Call-Route { { {shelf-*N* slot-*N* *N*} *N*} *N*},
E1 {shelf-*N* slot-*N* *N*} > Line-Interface > Channel-Config *N*, Frame-Relay *fr-name*,
T1 {shelf-*N* slot-*N* *N*} > Line-Interface > Channel-Config *N*

See Also: Call-Route-Type, Channel-Config *N*, Index, Line-Interface, Preferred-Source, Trunk-Group

PHS-Support

Description: Indicates whether support for the Personal Handyphone System (PHS) is enabled.

Usage: The PHS-Support setting is read only. Yes indicates that PHS support is enabled. No indicates that PHS support is disabled.

Example: `phs-support=yes`

Location: Base

See Also: Countries-Enabled, MAXLink-Client-Enabled, Multi-Rate-Enabled, R2-Signaling-Enabled, Selectools-Enabled

Physical-Address

Description: Identifies a physical address.

Usage: The physical address has the format `{shelf slot item}`, where:

Syntax element	Description
<i>shelf</i>	Specifies the shelf in which the item resides. If you are using a single-shelf system, the shelf number is always 1. For call-routing purposes, a value of 0 (zero) or <code>any-shelf</code> specifies any shelf.
<i>slot</i>	Specifies the number of the item's expansion slot. Physical expansion slots are numbered from 1 to 16, starting with 1 for the slot just below the shelf controller. The slot value 17, <code>controller</code> , or <code>c</code> specifies the shelf controller card. For call-routing purposes, a value of 0 (zero) or <code>any-slot</code> specifies any slot. For example, to address the first slot on shelf 1: <code>{ 1 1 0 }</code>
<i>item</i>	Specifies an item, such as a digital modem or T1 line, on the slot card. Items are numbered starting with #1 for the leftmost item on the card. An item number of 0 (zero) denotes the entire slot. For example, to address modem #48 on a modem card in slot #2 on shelf 1: <code>{ 1 2 48 }</code>

In most cases, the value of Physical-Address is obtained from the system. However, you can clone a profile by reading an existing one and changing its physical address. Use the List and Set commands to modify the Physical-Address value. For example:

```
admin> list physical
[in T1/{ shelf-1 slot-1 1 }:physical-address]
shelf=shelf-1
slot=slot-9
item-number=37
admin> set shelf=shelf-2
```

As an alternative, you can just use the Set command. For example:

```
admin> set physical shelf=shelf-2
```

Location: ADSL-CAP {shelf-*N* slot-*N* *N*},
ADSL-CAP-Stat {shelf-*N* slot-*N* *N*},
E1 {shelf-*N* slot-*N* *N*},
IDSL {shelf-*N* slot-*N* *N*},
IDSL-Stat {shelf-*N* slot-*N* *N*},
LAN-Modem {shelf-*N* slot-*N* *N*},
SDSL {shelf-*N* slot-*N* *N*},
SDSL-Stat {shelf-*N* slot-*N* *N*},
Serial {shelf-*N* slot-*N* *N*},
SWAN {shelf-*N* slot-*N* *N*},
SWAN-Stat {shelf-*N* slot-*N* *N*},
T1 {shelf-*N* slot-*N* *N*},
T1-Stat {shelf-*N* slot-*N* *N*},
T3 {shelf-*N* slot-*N* *N*},
T3-Stat {shelf-*N* slot-*N* *N*}

See Also: Device-Address, Interface-Address, Item-Number, Shelf, Slot

Physical-Statistic

Description: A subprofile that reports statistics about the RADSL or SDSL interface.

Usage: With ADSL-CAP-Stat or SDSL-Stat as the working profile, list the Physical-Statistic subprofile. For example:

```
admin> list
[in ADSL-CAP-STAT { shelf-1 slot-1 0 }:physical-statistic]
line-up-timer={ 0 0 0 }
rx-signal-present=yes
line-quality=15
up-down-cntr=1
self-test=passed
rs-errors=0
rs-corrected-errors=0
transmit-power=0
rx-attenuation=0
connection-sq=0
hdlc-rx-crc-error-cnt=0
bert-timer=2 minutes
bert-enable=no
bert-operation-state=stopped
bert-error-counter=0
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: ADSL-CAP-Stat {shelf-*N* slot-*N* *N*}, SDSL-Stat {shelf-*N* slot-*N* *N*}

See Also: BERT-Enable, BERT-Error-Counter, BERT-Operation-State, BERT-Timer, Connection-SQ, Far-End-dB-Attenuation, HDLC-RX-CRC-Error-Cnt, Line-Quality, Line-Up-Timer, RS-Corrected-Errors, RS-Errors, RX-Signal-Present, Self-Test, Transmit-Power, Up-Down-Cntr

Physical-Status

Description: A subprofile that indicates the status of the RADSL or SDSL interface.

Usage: With ADSL-CAP-Stat or SDSL-Stat as the working profile, list the Physical-Status subprofile. For example:

```
admin> list physical-status
[in ADSL-CAP-STAT { shelf-1 slot-1 0 }:physical-status ]
physical-address*={ shelf-1 slot-1 0 }
if-group-index=0
unit-type=coe
dev-line-state=startup-handshake
up-stream-rate=784000
down-stream-rate=784000
major-firmware-ver=13
minor-firmware-ver=2
hardware-ver=2
up-stream-constellation=auto
down-stream-constellation=auto
down-stream-operational-baud=0
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: ADSL-CAP-Stat { shelf-*N* slot-*N* *N* }, SDSL-Stat { shelf-*N* slot-*N* *N* }

See Also: Dev-Line-State, Down-Stream-Constellation, Down-Stream-Operational-Baud, Down-Stream-Rate, Hardware-Ver, IF-Group-Index, Major-Firmware-Ver, Minor-Firmware-Ver, Physical-Address, Unit-Type, Up-Stream-Constellation, Up-Stream-Rate

Ping

Description: Enables and disables the terminal-server Ping command.

Usage: Specify Yes or No. The default is No.

- Yes enables terminal-server users to use the Ping command.
- No disables the Ping command in the terminal-server interface.

Example: `set ping=yes`

Location: Terminal-Server > Terminal-Mode-Configuration

See Also: PPP, Rlogin, SLIP, TCP, Telnet, Terminal-Mode-Configuration, Traceroute

Pool-Base-Address

Description: Specifies the base addresses of up to 128 IP address pools. A contiguous block of addresses must be available, starting with the address you specify.

Usage: For each pool, specify the base IP address of a block of contiguous addresses. The default is 0.0.0.0.

Note: For PPP interfaces, the Windows operating system uses a default subnet mask of /24. Therefore, if NetBIOS over IP is enabled, connected Windows users will broadcast to .255, causing a performance problem for anyone connected at that address.

Example: `set 3=10.207.23.1`

Dependencies: Consider the following:

- An address in a pool does not accept a subnet mask modifier, because pool addresses are advertised as host routes. If you allocate IP addresses on a separate IP network or subnet, make sure you inform other IP routers about the route to that network or subnet.
- The number of addresses in the pool must be specified by Assign-Count.
- If you are using network summarization (by means of the Pool-Summary setting), the address you specify must be network aligned.
- In a VRouter profile, the address pool is exclusive to one VRouter. If you do not specify an address pool in a VRouter profile, VRouters can share the address pools defined in the IP-Global profile.
- If you change the value of Pool-Base-Address to a lower number, you must reset the unit for the change to take effect.

Location: IP-Global, VRouter *name*

See Also: Assign-Address, Assign-Count, Must-Accept-Address-Assign, Pool-Name, Pool-Summary, VRouter-IP-Address

Pool-Name

Description: Assigns a name to an IP address pool for TACACS+ authentication or VRouter operation. Each pool configuration consists of a base address (specified by Pool-Base-Address), address count (specified by Assign-Count), and name (specified by Pool-Name).

Usage: Specify a name of up to 11 characters. The default is null.

Example: `set pool-name 1=newyork`

Dependencies: Consider the following:

- If TACACS+ authentication is not in use, the MAX TNT treats a pool name specification as a comment.
- In a VRouter profile, the address pool is exclusive to one VRouter. If you do not specify an address pool in a VRouter profile, VRouters can share the address pools defined in the IP-Global profile.

Location: IP-Global, VRouter

See Also: Assign-Address, Assign-Count, Must-Accept-Address-Assign, Pool-Base-Address, Pool-Summary, VRouter-IP-Address

Pool-OSPF-Adv-Type

Description: Specifies how to import summarized pool addresses into OSPF.

Usage: Specify one of the following values:

- Type-1 (the default) instructs the MAX TNT to import the pool addresses into OSPF as external Type-1 routes.
- Type-2 instructs the MAX TNT to import the pool addresses into OSPF as external Type-2 routes.
- Internal instructs the MAX TNT to import the pool addresses into OSPF as Intra-Area routes.

Example: `set pool-ospf-adv-type=type-2`

Dependencies: For Pool-OSPF-Adv-Type to apply, you must set Pool-Summary=Yes and enable OSPF. For a change in the Pool-OSPF-Adv-Type setting to take effect, you must reset the MAX TNT.

Location: IP-Global

See Also: Active, Pool-Summary

Pool-Summary

Description: Specifies whether pool summarization is in use.

When Pool-Summary=Yes, the MAX TNT adds IP addresses from an address pool to the routing table as individual host routes, and summarizes the series of host routes into a network route advertisement. It advertises the entire pool as a route, and only privately knows which IP addresses in the pool are active. If a remote network sends a packet to an inactive IP address, the MAX TNT either bounces the packet back to the remote network or silently discards it.

When you use pool summarization, you significantly reduce the size of routing table advertisements.

Usage: Specify Yes or No. The default is No.

- Yes enables pool summarization.
- No disables pool summarization.

Example: `set pool-summary=yes`

Dependencies: In a VRouter profile, the address pool is exclusive to one VRouter. If you do not specify an address pool in a VRouter profile, VRouters can share the address pools defined in the IP-Global profile.

If you set Pool-Summary=Yes, you must create a network-aligned pool that adheres to the following rules:

- The value of Assign-Count must be two less than the total number of addresses in the pool. Add two to Assign-Count for the total number of addresses in the subnet, and calculate the subnet mask for the subnet on the basis of the total.
- Pool-Base-Address must be the first host address. Subtract 1 from the Pool-Base-Address to obtain the base address for the subnet.

For example, the following configuration creates a network-aligned address pool and enables pool summarization:

```
admin> set pool-base-address=10.12.253.1
admin> set assign-count=62
admin> set pool-summary=yes
```

Note the following:

- When you subtract one from the value of Pool-Base-Address in this example, you get 10.12.253.0, which is a valid base address for the 255.255.255.192 subnet mask. (Note that 10.12.253.64, 10.12.253.128, and 10.12.253.192 are also valid zero addresses for the same subnet mask.) The resulting address pool network is 10.12.253.0/26.
- When you add 2 to Assign-Count, you get 64. The subnet mask for 64 addresses is 255.255.255.192 (256–64=192). The Ascend notation for a 255.255.255.192 subnet mask is /26.

Location: IP-Global, VRouter

See Also: Assign-Count, Pool-Base-Address, Pool-Name, VRouter-IP-Address

Port

Description: Specifies the port number, as follows:

- In a Connection profile, the Port setting specifies a port on the login host to which TCP-Clear sessions connect.
You can specify one port for each of four login hosts. If the TCP connection to the first specified host/port combination fails, the system attempts to connect to the next specified host and port. If the connection to the next host/port combination fails, the system attempts to connect to the third host and port, and so forth. If all connection attempts fail, the session terminates and the MAX TNT returns a TCP connection error to the dial-in client.
- In the Terminal-Server profile, the Port setting specifies the port on the login host to which the user connects in immediate mode.
- In a Log profile, the Port setting specifies the destination port of the Syslog host.

Usage: Specify a port number. For a Connection or Terminal-Server profile, the default is 0 (zero). For the Log profile, the default is 514.

Example: The following example specifies two login host/port combinations:

```
admin> read conn fred
CONNECTION/fred read
admin> set tcp host 1=mercury
admin> set tcp host 2=venus
admin> set tcp port 1=155
admin> set tcp port 2=256
admin> write
CONNECTION/fred written
```

Dependencies: In the Log profile, Port does not apply if Syslog is disabled.

Location: Connection *station* > TCP-Clear-Options, Log,
Terminal-Server > Immediate-Mode-Options

See Also: Facility, Host, Host1, Host2, Host3, Immediate-Mode-Options, Port1, Port2, Port3, Save-Level, Save-Number, Service, Syslog-Enabled, TCP-Clear-Options

Port1

Description: Specifies a port on the second login host to which a TCP-Clear session attempts to connect.

Usage: Specify a port number. The default is 0 (zero).

Example: The following example specifies two login host/port combinations:

```
admin> read conn fred
CONNECTION/fred read
admin> set tcp host=mercury
admin> set tcp host1=venus
admin> set tcp port=155
admin> set tcp port1=256
admin> write
CONNECTION/fred written
```

Dependencies: You can specify one port for each of four login hosts. If the TCP connection to the first specified host/port combination fails, the system attempts to connect to the next specified host and port. If the connection to the next host/port combination fails, the system attempts to connect to the third host and port, and so forth. If all connection attempts fail, the session terminates and the MAX TNT returns a TCP connection error to the dial-in client.

Location: Connection *station* > TCP-Clear-Options

See Also: Facility, Host, Host1, Host2, Host3, Immediate-Mode-Options, Port, Port2, Port3, Save-Level, Save-Number, Service, Syslog-Enabled, TCP-Clear-Options

Port2

Description: Specifies a port on the third login host to which a TCP-Clear session attempts to connect.

Usage: Specify a port number. The default is 0 (zero).

Example: The following example specifies three login host/port combinations:

```
admin> read conn fred
CONNECTION/fred read
admin> set tcp host=mercury
admin> set tcp host1=venus
admin> set tcp host2=neptune
admin> set tcp port=155
admin> set tcp port1=256
admin> set tcp port2=170
admin> write
CONNECTION/fred written
```

Dependencies: You can specify one port for each of four login hosts. If the TCP connection to the first specified host/port combination fails, the system attempts to connect to the next specified host and port. If the connection to the next host/port combination fails, the system attempts to connect to the third host and port, and so forth. If all connection attempts fail, the session terminates and the MAX TNT returns a TCP connection error to the dial-in client.

Location: Connection *station* > TCP-Clear-Options

See Also: Facility, Host, Host1, Host2, Host3, Immediate-Mode-Options, Port, Port1, Port3, Save-Level, Save-Number, Service, Syslog-Enabled, TCP-Clear-Options

Port3

Description: Specifies a port on the fourth login host to which a TCP-Clear session attempts to connect.

Usage: Specify a port number. The default is 0 (zero).

Example: The following example specifies four login host/port combinations:

```
admin> read conn fred
CONNECTION/fred read
admin> set tcp host=mercury
admin> set tcp host1=venus
admin> set tcp host2=neptune
admin> set tcp host3=pluto
admin> set tcp port=155
admin> set tcp port1=256
admin> set tcp port2=170
admin> set tcp port3=180
```

```
admin> write  
CONNECTION/fred written
```

Dependencies: You can specify one port for each of four login hosts. If the TCP connection to the first specified host/port combination fails, the system attempts to connect to the next specified host and port. If the connection to the next host/port combination fails, the system attempts to connect to the third host and port, and so forth. If all connection attempts fail, the session terminates and the MAX TNT returns a TCP connection error to the dial-in client.

Location: Connection *station* > TCP-Clear-Options

See Also: Facility, Host, Host1, Host2, Host3, Immediate-Mode-Options, Port, Port1, Port2, Save-Level, Save-Number, Service, Syslog-Enabled, TCP-Clear-Options

Port-Enabled

Description: Specifies whether the MAX TNT sends trap-PDUs to the SNMP manager.

Usage: Specify Yes or No. The default is No.

- Yes specifies that the MAX TNT sends trap-PDUs to the host specified by Host-Address.
- No specifies that the MAX TNT does not send trap-PDUs.

Example: `set port-enabled=yes`

Location: Trap *host-name*

See Also: Alarm-Enabled, Community-Name, Host-Address, Host-Name, Security-Mode

Port-For-Direct-Access

Description: Specifies a Telnet port number to use for direct-access dialout service.

To dial out, a local operator uses Telnet to connect to the specified port. When the connection to the modem is established, the user can issue AT commands to the modem as if connected locally to its asynchronous port.

Usage: Specify a port number from 5000 to 32767. The default is 5000.

Example: `set port-for-direct-access=23`

Dependencies: If terminal services are disabled or Direct-Access=No, Port-For-Direct-Access does not apply.

Location: Terminal-Server > Dialout-Configuration

See Also: Dialout-Allowed, Dialout-Configuration, Direct-Access, Password-For-Direct-Access, Port-For-Direct-Access, Security-For-Direct-Access, Telnet

Power-Supply-Enabled

Description: Specifies whether the system generates a trap when a power supply module is added or removed.

Usage: Specify Yes or No. The default is Yes.

- Yes specifies that the system generates a trap when a power supply module is added or removed.
- No specifies that the system does not generate a trap when a power supply module is added or removed.

Example: `set power-supply-enabled=no`

Location: Trap *host-name*

See Also: Trap

PPP

Description: Enables or disables the use of the PPP command in the terminal-server interface.

Usage: Specify Yes or No. The default is No.

- Yes enables the use of the PPP command in the terminal-server interface.
- No disables the use of the PPP command in the terminal-server interface.

Example: `set ppp=yes`

Dependencies: If terminal services are disabled, PPP does not apply.

Location: Terminal-Server > PPP-Mode-Configuration

See Also: Ping, PPP-Mode-Configuration, Rlogin, SLIP, TCP, Telnet, Terminal-Mode-Configuration, Traceroute

PPP-Answer

Description: A subprofile containing default settings for PPP calls. The MAX TNT also uses the PPP-Answer settings for the PPP variants, MP and MP+.

Usage: With Answer-Defaults as the working profile, list the PPP-Answer subprofile. For example:

```
admin> list ppp-answer
[ in ANSWER-DEFAULTS:ppp-answer ]
enabled=yes
receive-auth-mode=no-ppp-auth
disconnect-on-auth-timeout=yes
link-compression=none
mru=1524
lqm=no
lqm-minimum-period=600
lqm-maximum-period=600
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: Answer-Defaults

See Also: Disconnect-On-Auth-Timeout, Enabled, Link-Compression, LQM, LQM-Maximum-Period, LQM-Minimum-Period, MRU, Receive-Auth-Mode

PPP-Mode-Configuration

Description: A subprofile containing terminal-server options for PPP sessions.

Usage: With Terminal-Server as the working profile, list the PPP-Mode-Configuration subprofile. For example:

```
admin> list ppp-mode-configuration
[in TERMINAL-SERVER:ppp-mode-configuration]
ppp=yes
delay=5
direct=no
info=session-ppp
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: Terminal-Server

See Also: Delay, Direct, Info, PPP

PPP-Options

Description: A subprofile that contains settings for PPP calls. The MAX TNT also uses the PPP-Options settings for the PPP variants, MP and MP+.

Usage: With a Connection profile as the working profile, list the PPP-Options subprofile. For example:

```
admin> list ppp-options
[in CONNECTION/tim:ppp-options]
send-password=" "
recv-password=" "
enabled=yes
link-compression=stac
mru=1524
lqm=no
disconnect-on-auth-timeout=yes
lqm-minimum-period=600
lqm-maximum-period=600
split-code-dot-user-enabled=no
```


You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Dependencies: PPP calls must be enabled in the Answer-Defaults profile.

Location: Connection *station*

See Also: Disconnect-On-Auth-Timeout, Enabled, Link-Compression, LQM, LQM-Maximum-Period, LQM-Minimum-Period, MRU, Recv-Password, Send-Password, Split-Code-Dot-User-Enabled

PPTP-Enabled

Description: Enables or disables PPTP tunneling.

Usage: Specify Yes or No. The default is No.

- Yes enables PPTP tunneling.
- No disables PPTP tunneling.

Example: `set pptp-enabled=yes`

Location: L2-Tunnel-Global

See Also: Server-Profile-Required

Precedence

Description: Specifies the priority level of the data stream.

Usage: The three most significant bits of the Type-of-Service (TOS) byte are priority bits used to set precedence for priority queuing. When TOS is enabled, you can set those bits to one of the following values (most significant bit first):

- 000 specifies normal priority (the default).
- 001 specifies priority level 1.
- 010 specifies priority level 2.
- 011 specifies priority level 3.
- 100 specifies priority level 4.
- 101 specifies priority level 5.
- 110 specifies priority level 6.
- 111 specifies priority level 7 (the highest priority).

Example: `set precedence=001`

Dependencies: For the Precedence setting to apply, you must set Active=Yes in the TOS-Options subprofile or Type=TOS-Filter in the Input-Filters or Output-Filters subprofile.

Location: Connection *station* > IP-Options > TOS-Options,
Filter *filter-name* > Input-Filters > TOS-Filter,
Filter *filter-name* > Output-Filters > TOS-Filter

See Also: Active, Apply-To, Type-of-Service

Preference

Description: Specifies the preference for the route.

When choosing the routes to put in the routing table, the router first compares their preference values, preferring the lowest number. If the preference values are equal, the router compares the metric values, using the route with the lowest metric.

Usage: Specify a number from 0 to 255. A value of 255 prevents the use of the route, and is valid only for a WAN route specified by a Connection profile. Following are the default preferences for different types of routes:

- 0 (zero)—Connected routes
- 10—OSPF routes
- 30—Routes learned from ICMP redirects
- 100—Routes learned from RIP
- 100—Static routes
- 100—ATMP routes

Example: `set preference=100`

Location: Connection *station* > IP-Options, IP-Route *name*

See Also: Down-Preference, IP-Options, OSPF-ASE-Pref, OSPF-Pref, RIP-Pref, Static-Pref

Preferred-Source

Description: Specifies the address of a network port used as a T1 or E1 channel. The Preferred-Source setting indicates “route calls received on this channel to me (the index address).”

Usage: Specify the address of a T1 or E1 channel. The default is null.

Example: `set preferred-source={{1 7 7} 0}`

Location: Call-Route {{ {shelf-*N* slot-*N* *N*} *N*} *N*}

See Also: Call-Route-Type, Index, Phone-Number, Trunk-Group

Primary-IP-Address

Description: Specifies the primary IP address of the Access SS7 Gateway (ASG).

Usage: Specify an IP address in dotted decimal notation. The default is null.

Example: `set primary-ip-address=10.1.2.3`

Dependencies: If Enabled=No in the SS7-Gateway profile, Primary-IP-Address does not apply. In addition, for the ASG messaging interface to be enabled, you must set Enabled=Yes and then specify valid values for Primary-IP-Address and Primary-TCP-Port.

Location: SS7-Gateway

See Also: Primary-TCP-Port, Secondary-IP-Address

Primary-TCP-Port

Description: Specifies the primary TCP Port of the Access SS7 Gateway (ASG).

Usage: Specify a port number.

Example: `set primary-tcp-port=5000`

Dependencies: If Enabled=No in the SS7-Gateway profile, Primary-TCP-Port does not apply. In addition, for the ASG messaging interface to be enabled, you must set Enabled=Yes and then specify valid values for Primary-IP-Address and Primary-TCP-Port.

Location: SS7-Gateway

See Also: Primary-IP-Address, Secondary-TCP-Port

Primary-Tunnel-Server

Description: Specifies the IP address or hostname of the Ascend Tunnel Management Protocol (ATMP) primary Home Agent, L2TP Network Server (LNS) endpoint, PPTP Network Server (PNS) endpoint, or intermediate destination that will decapsulated IP packets that use IP-in-IP tunneling.

Usage: Specify an IP address in dotted decimal notation, or a symbolic hostname containing up to 31 characters. The default is 0.0.0.0.

If you specify a hostname, the MAX TNT uses the Domain Name System (DNS) to look up the host IP address. If the unit requires a UDP port number different from the value specified by UDP-Port, you can specify a port value by appending a colon character (:) and the port number to the IP address or hostname. For example:

```
admin> set primary-tunnel-server=10.11.22.33:8877
```

```
admin> set primary-tunnel-server=tunnel-server.company.com:6969
```

The IP address should be the system address, not the IP address of the interface on which the unit receives tunneled data.

Dependencies: You must set Profile-Type=Mobile-Client for the Primary-Tunnel-Server setting to apply.

Location: Connection *station* > Tunnel-Options

See Also: Home-Network-Name, Max-Tunnels, Password, Profile-Type, Secondary-Tunnel-Server, Tunneling-Protocol, UDP-Port

Priority

Description: Specifies the priority of the OSPF router with regard to designated-router (DR) and backup designated-router (BDR) election. The MAX TNT can function as either a DR or a BDR. However, many sites choose to assign these functions to LAN-based routers in order to dedicate the MAX TNT to WAN processing.

Usage: Specify an integer. The default is 5.

Choose the DR- and BDR- election priority on the basis of each device's processing power and reliability. Assigning a priority of 1 or greater places the MAX TNT on the list of possible DRs and BDRs. A priority value of 0 (zero) excludes the MAX TNT from becoming a DR or BDR. The higher the priority value of the MAX TNT relative to other OSPF routers on the network, the better the chances that it will become a DR or BDR.

Example: `set priority=10`

Location: IP-Interface { {shelf-*N* slot-*N* *N*} *N*} > OSPF,
Connection *station* > IP-Options > OSPF-Options

See Also: IP-Options, OSPF, OSPF-Options

PRI-Prefix-Number

Description: Specifies the portion of the line's phone number to be used when matching the called-party number in the Setup message from the network switch.

When overlap receiving is in use, the number you specify enables the MAX TNT to quickly determine when the called-party number is complete. The MAX TNT uses this number and the specified number of trailing digits to recognize that the called-party number is complete, even if the caller did not include a Sending Complete code (for example, by dialing the pound-sign).

Usage: Specify a prefix. Typically, the PRI prefix is an ISDN-subscriber number, which may include an area code or an area-and-country code combination. The area code or area-and-country code must be separated from the ISDN-subscriber number by a hyphen. The MAX TNT looks for just the first match of PRI-Prefix-Number against the called-party number in the Setup message (first with an area code, and if that fails, without an area code).

The default null value disables the T302-Timer optimization.

Example: `set pri-prefix-number=413-555-1234`

Dependencies: You must set Overlap-Receiving=Yes for PRI-Prefix-Number to have any effect.

Location: T1 {shelf-*N* slot-*N* *N*} > Line-Interface, E1 {shelf-*N* slot-*N* *N*} > Line-Interface

See Also: Overlap-Receiving, T302-Timer, Trailing-Digits

Private-Route

Description: Specifies whether the MAX TNT advertises route information by means of routing protocols.

Usage: Specify Yes or No. The default is No.

- Yes makes the route private. The MAX TNT uses the route internally, but does not advertise it.
- No specifies that the MAX TNT advertises the route by means of routing protocols.

Example: `set private-route=yes`

Location: IP-Route *name*, Connection *station* > IP-Options

See Also: IP-Options, IP-Routing-Enabled, OSPF, RIP, RIP-Mode

Profile-Name

Description: Specifies the name of the Connection profile the MAX TNT uses to reach the IPX network. When the MAX TNT receives a query for the specified server or a packet addressed to that server, it finds the Connection profile and dials the connection.

Usage: Specify a text string representing the name of the Connection profile. You can enter up to 24 characters. The default is null.

Example: `set profile-name=tim`

Location: IPX-Route *name*

See Also: Active-Route, Dest-Network, Host, Name, Server-Node, Server-Socket, Server-Type, Ticks

Profiles-Required

Description: Specifies whether the MAX TNT rejects incoming calls for which it could find neither a Connection profile nor an entry on a remote authentication server. If you do not require a configured profile for all callers, the MAX TNT builds a temporary profile for unknown callers. Many sites consider the use of a temporary profile a security breach, and require that all callers have a configured profile.

Usage: Specify Yes or No. The default is Yes.

- Yes specifies that the MAX TNT requires a configured profile for all callers. The unit rejects calls for which it cannot find a configured profile.
- No specifies that if the MAX TNT cannot find a configured profile, it creates a temporary profile for the caller.

Example: `set profiles-required=no`

Dependencies: You cannot set Profiles-Required for terminal-server calls.

Location: Answer-Defaults

See Also: Local-Profiles-First, Receive-Auth-Mode

Profile-Type

Description: Specifies the type of Ascend Tunnel Management Protocol (ATMP) or Layer 2 Tunneling Protocol (L2TP) connection.

Usage: Specify one of the following values:

- Disabled (the default) specifies that the connection is not used for ATMP.
- Mobile-Client specifies that the Connection profile is used to authenticate a Mobile Client.
- Gateway-Profile specifies that the Connection profile sets up a gateway connection to a Home Network.

Example: `set profile-type=gateway-profile`

Location: Connection *station* > Tunnel-Options

See Also: Home-Network-Name, Max-Tunnels, Password, Primary-Tunnel-Server, Secondary-Tunnel-Server, UDP-Port

Prompt

Description: Specifies a string that the MAX TNT uses as a command-line prompt.

Usage: Specify a string to be used as a prompt. You can specify up to 15 characters. The defaults are as follows:

- In a User profile, the default is an asterisk, which causes the MAX TNT to substitute the value of the profile's name upon successful login.
- In a Terminal-Server profile, the default is `ascend%`

Example: `set prompt=virginia>`

Location: Terminal-Server > Terminal-Mode-Configuration, User *name*

See Also: Login-Prompt, Password-Prompt, Prompt-Format, Terminal-Mode-Configuration, Third-Login-Prompt, Third-Prompt-Sequence

Prompt-Format

Description: Specifies whether the MAX TNT interprets carriage-return/linefeed and tab characters in the string specified by Login-Prompt.

Usage: Specify Yes or No. The default is No.

- Yes causes the MAX TNT to interpret carriage-return/linefeed and tab characters in the string specified by Login-Prompt.
- No causes the MAX TNT to ignore carriage-return/linefeed or tab characters in the string specified by Login-Prompt.

Example: `set prompt-format=no`

Dependencies: If terminal services are disabled, Prompt-Format does not apply.

Location: Terminal-Server > Terminal-Mode-Configuration

See Also: Login-Prompt, Password-Prompt, Prompt, Terminal-Mode-Configuration, Third-Login-Prompt, Third-Prompt-Sequence

Protocol

Description: Specifies a protocol type by number. The MAX TNT compares the number you specify to the protocol number field in a packet. The default protocol number of 0 (zero) matches all protocols.

Usage: Specify one of the following values:

- 0—Disregard protocol type when applying the filter
- 1—ICMP (Internet Control Message protocol)
- 2—IGMP (Internet Group Management protocol)
- 3—GGP (Gateway-to-Gateway Protocol)
- 4—IP (Internet Protocol)
- 5—ST (Stream)
- 6—TCP (Transmission Control Protocol)
- 7—UCL
- 8—EGP (Exterior Gateway Protocol)
- 9—Any private interior gateway protocol
- 10—BBN-RCC-MON (BBN RCC Monitoring)
- 11—NVP-II (Network Voice Protocol II)
- 12—PUP
- 13—ARGUS
- 14—EMCOM
- 15—XNET (Cross-Net Debugger)
- 16—CHAOS
- 17—UDP (User Datagram Protocol)
- 18—MUX (Multiplexing)
- 19—DCN-MEAS (DCN Measurement Subsystems)
- 20—HMP (Host Monitoring Protocol)
- 21—PRM (Packet Radio Measurement)
- 22—XNS IDP (Xerox Networking System Internetwork Datagram Protocol)
- 23—TRUNK-1
- 24—TRUNK-2
- 25—LEAF-1
- 26—LEAF-2
- 27—RDP (Reliable Data Protocol)
- 28—IRTP (Internet Reliable Transport Protocol)
- 29—ISO-TP4 (International Standards Organization Transport Protocol Class 4)
- 30—NETBLT (Bulk Data Transfer Protocol)
- 31—MFE-NSP (MFE Network Services Protocol)
- 32—MERIT-INP (MERIT Internodal Protocol)
- 33—SEP (Sequential Exchange Protocol)
- 34—3PC (Third Party Connect Protocol)
- 35—IDPR (Inter-Domain Policy Routing Protocol)
- 36—XTP
- 37—DDP (Datagram Delivery Protocol)
- 38—IDPR-CMTP (IDPR Control Message Transport Protocol)
- 39—TP++ (TP++ Transport Protocol)
- 40—IL (IL Transport Protocol)
- 41—SIP (Simple Internet Protocol)
- 42—SDRP (Source Demand Routing Protocol)
- 43—SIP-SR (SIP Source Route)
- 44—SIP-FRAG (SIP Fragment)

45—IDRP (Inter-Domain Routing Protocol)
46—RSVP (Reservation Protocol)
47—GRE (General Routing Encapsulation)
48—MHRP (Mobile Host Routing Protocol)
49—BNA
50—SIPP-ESP (SIPP Encap Security Payload)
51—SIPP-AH (SIPP Authentication Header)
52—I-NLSP (Integrated Net Layer Security Protocol)
53—SWIPE (IP with Encryption)
54—NHRP (Next Hop Resolution Protocol)
55-60—Unassigned
61—Any Host Internet Protocol
62—CFTP
63—Any local network
64—SAT-EXPAK (SATNET and Backroom EXPAK)
65—KRYPTOLAN
66—RVD (MIT Remote Virtual Disk Protocol)
67—IPPC (Internet Pluribus Packet Core)
68—Any distributed file system
69—SAT-MON (SATNET Monitoring)
70—VISA (VISA Protocol)
71—IPCU (Internet Packet Core Utility)
72—CPNX (Computer Protocol Network Executive)
73—CPHB (Computer Protocol Heart Beat)
74—WSN (Wang Span Network)
75—PVP (Packet Video Protocol)
76—BR-SAT-MON (Backroom SATNET Monitoring)
77—SUN-ND PROTOCOL-Temporary
78—WB-MON (WIDEBAND Monitoring)
79—WB-EXPAK (WIDEBAND EXPAK)
80—ISO-IP (International Standards Organization Internet Protocol)
81—VMTP
82—SECURE-VMTP
83—VINES
84—TTP
85—NSFNET-IGP (National Science Foundation Network Interior Gateway Protocol)
86—DGP (Dissimilar Gateway Protocol)
87—TCF
88—IGRP
89—OSPF (Open Shortest Path First)
90—Sprite-RPC
91—LARP (Locus Address Resolution Protocol)
92—MTP (Multicast Transport Protocol)
94—IPIP (IP-within-IP Protocol)
95—MICP (Mobile Internetworking Control Protocol)
96—SCC-IP (Semaphore Communications Security Protocol)
97—ETHERIP (Ethernet-within-IP Protocol)
98—ENCAP (Encapsulation Header)
99—Any private encryption scheme
100—GMTP
101-254—Unassigned
255—Reserved

Example: `set protocol=94`

Location: Filter *filter-name* > Input-Filters > IP-Filter,
Filter *filter-name* > Output-Filters > IP-Filter,
Filter *filter-name* > Input-Filters > TOS-Filter,
Filter *filter-name* > Output-Filters > TOS-Filter

See Also: Input-Filters, IP-Filter, Output-Filters, Type

Proxy-Mode

Description: Specifies under what conditions the MAX TNT responds to Address Resolution Protocol (ARP) requests with its own Media Access Control (MAC) address.

The main use of proxy ARP on the MAX TNT is for dial-in hosts to which the MAX TNT supplies IP addresses, such as SLIP connections. However, you only need to use proxy ARP if both the following conditions are true:

- The supplied IP addresses are within the local subnet of the MAX TNT.
- The hosts on the local subnet need to send packets to the dial-in hosts.

Usage: Specify one of the following values:

- Off (the default) specifies that the MAX TNT does not proxy any addresses.
- Active specifies that the MAX TNT responds to an ARP request with its own MAC address if the request matches an active Connection profile over which the MAX TNT routes IP.
- Inactive specifies that the MAX TNT responds to an ARP request if the request matches the IP address of any inactive Connection profile over which the MAX TNT routes IP.
- Always specifies that the MAX TNT responds to an ARP request with its own MAC address if the request matches any IP address to which the MAX TNT has a route.

Example: `set proxy-mode=inactive`

Location: IP-Interface

See Also: Atalk-Peer-Mode, RARP-Enabled

Q

Queue-Depth

Description: Specifies the queue depth for SNMP requests.

Usage: Specify a number from 0 to 1024. The default is 0 (zero), which means that the MAX TNT does not drop packets, no matter how far behind the SNMP subsystem gets. If the queue were to grow too large in a heavily loaded routing environment, the system could ultimately run out of memory.

Example: `set queue-depth=32`

Location: SNMP

See Also: RIP-Queue-Depth

R

R1-ANIR-Delay

Description: Specifies the time in milliseconds to wait before sending the Automatic Number Id Request (ANIR) signal after receipt of the ST pulse from the switch.

Usage: Specify a number from 300 to 2000. The default is 350.

Dependencies: You must set Signaling-Mode=T1-R1-Inband for R1-ANIR-Delay to have any effect.

Location: T1 {shelf-*N* slot-*N* *N*} > Line-Interface

See Also: R1-ANIR-Timer, R1-First-Digit-Timer, R1-Modified, R1-Use-ANIR, Signaling-Mode

R1-ANIR-Timer

Description: Specifies the duration in milliseconds of the Automatic Number Id Request (ANIR) signal.

Usage: Specify a number from 180 to 400. The default is 200.

Dependencies: You must set Signaling-Mode=T1-R1-Inband for R1-ANIR-Timer to have any effect.

Location: T1 {shelf-*N* slot-*N* *N*} > Line-Interface

See Also: R1-ANIR-Delay, R1-First-Digit-Timer, R1-Modified, R1-Use-ANIR, Signaling-Mode

R1-First-Digit-Timer

Description: Specifies the time in milliseconds to wait for the first digit from the switch after sending the KP pulse.

Usage: Specify a number from 0 to 1000. The default is 340.

Example: `set r1-first-digit-timer=300`

Dependencies: You must set Signaling-Mode=T1-R1-Inband for R1-First-Digit-Timer to have any effect.

Location: T1 {shelf-*N* slot-*N* *N*} > Line-Interface

See Also: R1-ANIR-Delay, R1-ANIR-Timer, R1-Modified, R1-Use-ANIR, Signaling-Mode

R1-Modified

Description: Enables or disables a modified version R1 signaling required in Taiwan.

Usage: MAX TNT systems located in Taiwan should set R1-Modified=Yes. It is set to No by default, which indicates regular R1 signaling (described in the ITU recommendation Q.310-332).

Dependencies: You must set Signaling-Mode=T1-R1-Inband for R1-Modified to have any effect.

Location: T1 {shelf-*N* slot-*N* *N*} > Line-Interface

See Also: R1-ANIR-Delay, R1-ANIR-Timer, R1-First-Digit-Timer, R1-Use-ANIR, Signaling-Mode

R1-Use-ANIR

Description: Enables and disables Automatic Number Identification (ANI) processing

Usage: Specify Yes or No. The default is No.

- Yes specifies that the system performs ANI processing on incoming calls.
- No specifies that the system does not perform ANI processing on incoming calls.

Example: `set r1-use-anir=yes`

Dependencies: You must set Signaling-Mode=T1-R1-Inband for R1-Use-ANIR to have any effect.

Location: T1 {shelf-*N* slot-*N* *N*} > Line-Interface

See Also: R1-ANIR-Delay, R1-ANIR-Timer, R1-First-Digit-Timer, R1-Modified, Signaling-Mode

R2-Signaling-Enabled

Description: Indicates whether R2 signaling is enabled.

Usage: The R2-Signaling-Enabled setting is read only. Yes indicates that R2 signaling is enabled. No indicates that R2 signaling is not enabled.

Example: `r2-signaling-enabled=no`

Location: Base

See Also: AIM-Enabled, Countries-Enabled, Data-Call-Enabled, D-Channel-Enabled, Frame-Relay-Enabled, MAXLink-Client-Enabled, Modem-Dialout-Enabled, Multi-Rate-Enabled, Switched-Enabled

Rad-Acct-Client

Description: A subprofile that enables you to define how the MAX TNT interacts as a client to RADIUS accounting servers.

Usage: With External-Auth as the working profile, list the Rad-Acct-Client subprofile. For example:

```
admin> list rad-acct-client
[in EXTERNAL-AUTH:rad-acct-client]
acct-server-1=0.0.0.0
acct-server-2=0.0.0.0
acct-server-3=0.0.0.0
acct-port=0
acct-src-port=0
acct-key=" "
acct-timeout=0
acct-sess-interval=0
acct-id-base=acct-base-10
acct-limit-retry=0
acct-drop-stop-on-auth-fail=no
acct-stop-only=yes
acct-radius-compat=old-ascend
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: External-Auth

See Also: Acct-Drop-Stop-On-Auth-Fail, Acct-ID-Base, Acct-Key, Acct-Limit-Retry, Acct-Port, Acct-RADIUS-Compat, Acct-Server-N (N=1–3), Acct-Sess-Interval, Acct-Src-Port, Acct-Stop-Only, Acct-Timeout

Rad-Auth-Client

Description: A subprofile that enables you to define how the MAX TNT interacts as a client to RADIUS authentication servers.

Usage: With External-Auth as the working profile, list the Rad-Auth-Client subprofile. For example:

```
admin> list rad-auth-client
[in EXTERNAL-AUTH:rad-auth-client]
auth-server-1=0.0.0.0
auth-server-2=0.0.0.0
auth-server-3=0.0.0.0
auth-port=0
auth-src-port=0
auth-key=" "
auth-pool=no
auth-timeout=0
auth-rsp-required=no
auth-sess-interval=0
```

```
auth-ts-secure=yes
auth-Send67=yes
auth-frm-adr-start=no
auth-boot-host=0.0.0.0
auth-boot-host-2=0.0.0.0
auth-boot-port=0
auth-id-fail-return-busy=no
auth-id-timeout-return-busy=no
auth-radius-compat=old-ascend
auth-keep-user-name=change-name
auth-realm-delimiters="@/\%"
id-auth-prefix=" "
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: External-Auth

See Also: Auth-Boot-Host, Auth-Boot-Host-2, Auth-Boot-Port, Auth-Frm-Adr-Start, Auth-ID-Fail-Return-Busy, Auth-ID-Timeout-Return-Busy, Auth-Keep-User-Name, Auth-Key, Auth-Pool, Auth-Port, Auth-RADIUS-Compat, Auth-Realm-Delimiters, Auth-Rsp-Required, Auth-Send67, Auth-Server-N (N=1–3), Auth-Sess-Interval, Auth-Src-Port, Auth-Timeout, Auth-TS-Secure, ID-Auth-Prefix

Rad-Auth-Server

Description: A subprofile that enables you to define how RADIUS clients interact with the MAX TNT. With the appropriate software, clients can issue RADIUS commands for session termination and filter changes.

Usage: With External-Auth as the working profile, list the Rad-Auth-Server subprofile. For example:

```
admin> list rad-auth-server
[ in EXTERNAL-AUTH:rad-auth-server ]
auth-port=0
auth-session-key=no
auth-attribute-type=rad-serv-attr-any
auth-client=[ 0.0.0.0 0.0.0.0 0.0.0.0 0.0.0.0 0.0.0.0 0.0.0.0 +
auth-netmask=[ 0.0.0.0 0.0.0.0 0.0.0.0 0.0.0.0 0.0.0.0 0.0.0.0 +
auth-key=" "
radius-server-compat=old-ascend
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: External-Auth

See Also: Auth-Attribute-Type, Auth-Client N (N=1–9), Auth-Key, Auth-Netmask N (N=1–9), Auth-Port, Auth-Session-Key, RADIUS-Server-Compat

Rad-ID-Source-Unique

Description: Specifies whether each RADIUS accounting request should be identified by the UDP source port value, as well as by RADIUS ID, in order to extend the available number of unique IDs for accounting requests.

RADIUS uses ID values in Request-Response matching. For each unique accounting request (including retries, if a response is not received within the configured timeout period), RADIUS assigns an 8-bit ID value. The assigned value is freed when the request is no longer pending—that is, when RADIUS matches a request with a response, or the request times out.

When the MAX TNT runs at high capacity, RADIUS can run out of unique IDs. By default, when the server reaches its limit of 256 outstanding requests, no unique values are available for the next accounting request. To overcome this limitation, you can specify that each request be identified by the UDP source port as well as by the RADIUS ID value.

Usage: Specify one of the following values:

- System-Unique (the default) specifies that the MAX TNT uses only the RADIUS ID in Request-Response matching.
- Port-Unique specifies that the MAX TNT uses the source UDP port number as well as the RADIUS ID in Request-Response matching.

Example: `set rad-id-source-unique=port-unique`

Location: External-Auth

See Also: Acct-Type, Auth-Type, Local-Profiles-First, Rad-Acct-Client, Rad-Auth-Client, Rad-Auth-Server, Rad-ID-Space, Rad-Serv-Enable, Tac-Auth-Client, TacPlus-Acct-Client, TacPlus-Auth-Client

Rad-ID-Space

Description: Specifies whether the MAX TNT uses a single sequence space for the RADIUS ID number.

RADIUS uses an ID value to aid in Request-Response matching. By default, the MAX TNT uses a single sequence space for the RADIUS ID number in all RADIUS messages, which limits the number of IDs available for assignment to 256. A combined total of 256 authentication and accounting packets are sent before the ID sequence rolls over. However, by setting Rad-ID-Space=Distinct, you can configure distinct ID sequence spaces for RADIUS accounting and authentication packets.

Usage: Specify one of the following values:

- Unified (the default) specifies that the MAX TNT uses a single sequence space for the RADIUS ID number.
- Distinct specifies that RADIUS authentication and accounting packets do not share the same ID sequence space. The MAX TNT can send a total of 256 authentication packets before the authentication ID sequence rolls over, and 256 accounting packets before the accounting ID sequence rolls over. Three sequence spaces are allocated: one for the Unified sequence space, one for the authentication ID sequence, and one for the accounting ID sequence.

Example: `set rad-id-space=distinct`

Dependencies: When you configure the MAX TNT to use distinct ID sequence spaces, the RADIUS server must perform additional checks for duplicate detection. The server should check the RADIUS ID value as well as the service type and destination UDP port in each packet. The service type can be determined by sorting all values of the `code` field into two classes—Auth and Acct—and then comparing the received `code` value to the sorted list in order to determine which class it belongs to. The destination UDP port can be the same for both services when a single RADIUS server performs them.

Location: External-Auth

See Also: Acct-Type, Auth-Type, Local-Profiles-First, Rad-Acct-Client, Rad-Auth-Client, Rad-Auth-Server, Rad-ID-Source-Unique, Rad-Serv-Enable, Tac-Auth-Client, TacPlus-Acct-Client, TacPlus-Auth-Client

RADIUS-Change-Enabled

Description: Specifies whether the system generates a trap when a new RADIUS server is being accessed. This trap returns the objectID and IP address of the new server.

Usage: Specify Yes or No. The default is Yes.

- Yes specifies that the system generates a trap when a new RADIUS server is being accessed.
- No specifies that the system does not generate a trap when a new RADIUS server is being accessed.

Example: `set radius-change-enabled=no`

Location: Trap *host-name*

See Also: Event-Overwrite-Enabled

RADIUS-Server-Compat

Description: Enables or disables Vendor-Specific Attribute (VSA) compatibility mode when the MAX TNT is acting as a RADIUS server that is able to accept requests for certain limited purposes, such as changing a filter or disconnecting a user.

Usage: Specify one of the following settings:

- Old-Ascend (the default) specifies that the MAX TNT does not send the Vendor-Specific attribute to the RADIUS server and does not recognize the Vendor-Specific attribute if the server sends it.
In this mode, the system uses the Ascend algorithm of encrypting and decrypting the User-Password attribute, which differs from the RFC-defined algorithm. The Ascend algorithm does not null fill the password string to a multiple of 16 bytes before encryption, and, when the password is longer than 16 bytes, the Ascend algorithm does not use the previous segment's hash to calculate the next intermediate value .
- Vendor-Specific specifies that the MAX TNT uses the Vendor-Specific attribute to encapsulate Ascend vendor attributes, and uses the RFC-defined User-Password encryption algorithm as well.

Example: `set radius-server-compat=vendor-specific`

Location: External-Auth > Rad-Auth-Server

See Also: Acct-RADIUS-Compat, Auth-RADIUS-Compat, Call-Log-RADIUS-Compat

Rad-Serv-Enable

Description: Specifies whether RADIUS clients can send RADIUS commands for session termination and filter changes to the MAX TNT.

Usage: Specify Yes or No. The default is No.

- Yes specifies that RADIUS clients can send RADIUS commands to the MAX TNT.
- No specifies that RADIUS clients cannot send RADIUS commands to the MAX TNT.

Example: `set rad-server-enable=no`

Location: External-Auth

See Also: Auth-Attribute-Type, Auth-Client N (N=1–9), Auth-Key, Auth-Netmask N (N=1–9), Auth-Port, Auth-Session-Key, Rad-Auth-Server

RARP-Enabled

Description: Enables the MAX TNT to use the Reverse Address Resolution Protocol (RARP) to obtain its IP address from a RARP server.

Usage: Specify Yes or No. The default is No.

- Yes enables the MAX TNT to use RARP to obtain its IP address from a RARP server.
- No disables the MAX TNT unit's ability to use RARP.

Example: `set rarp-enabled=yes`

Location: IP-Global

See Also: Atalk-Peer-Mode, Proxy-Mode

Read-Access-Hosts

Description: An array containing up to five IP addresses of SNMP managers that have Read permission. If Enforce-Address-Security=Yes, the MAX TNT responds to SNMP Get and Get-Next commands only from the SNMP managers you specify in the array.

Usage: Each element in the array can specify an IP address. When SNMP is the working profile, you can use the List command to display the array elements. For example:

```
admin> list read-access
[in SNMP:read-access-hosts]
read-access-hosts[1]=0.0.0.0
read-access-hosts[2]=0.0.0.0
read-access-hosts[3]=0.0.0.0
read-access-hosts[4]=0.0.0.0
read-access-hosts[5]=0.0.0.0
```

You can then set a value in Read-Access-Hosts by specifying the numeric index of one of the array elements and the value for that element. For example:

```
admin> set 1 10.2.3.4/24
```

Or, you can set an array element without listing the array. For example:

```
admin> set read-access-hosts 1 10.2.3.4/24
```

Dependencies: You must set Enforce-Address-Security=Yes for Read-Access-Hosts to have any effect.

Location: SNMP

See Also: Enforce-Address-Security, Read-Community, Read-Write-Community, Write-Access-Hosts

Read-Community

Description: Specifies an SNMP community name. An SNMP manager must send the correct community name to access the SNMP Get and Get-Next commands.

Usage: Specify the community name. You can enter up to 32 characters. The default is `public`.

Example: `set read-community=Ascend`

Location: SNMP

See Also: Enforce-Address-Security, Read-Access-Hosts, Read-Write-Community, Write-Access-Hosts

Read-Write-Community

Description: Specifies a read/write SNMP community name. An SNMP manager must send the correct community name to access the SNMP Get, Get-Next, and Set commands.

Usage: Specify the community name. You can enter up to 32 characters. The default is `write`.

Example: `set read-write-community=secret`

Location: SNMP

See Also: Enforce-Address-Security, Read-Access-Hosts, Read-Community, Write-Access-Hosts

Receive-Auth-Mode

Description: Specifies the authentication protocol to use for incoming PPP, MP, and MP+ calls.

Usage: Specify one of the following settings:

Setting	Description
No-PPP-Auth (the default)	No authentication is required.
PAP-PPP-Auth	The connection must use Password Authentication Protocol (PAP). The remote end sends its password in the clear. The password is not encrypted.
CHAP-PPP-Auth	The connection must use Challenge Handshake Authentication Protocol (CHAP). The remote end does not send its password in the clear. An MD5 digest calculated from the password and a random challenge are sent instead.
Any-PPP-Auth	The connection must use PAP, CHAP or MS-CHAP (Microsoft's extension of CHAP).
DES-PAP-PPP-Auth	The connection must use PAP with dynamic passwords.
Token-PAP-PPP-Auth	The connection must use PAP with dynamic passwords. When you specify this setting, the system uses one-time DES password encryption and sends a challenge in the token.
Token-CHAP-PPP-Auth	The connection must use PAP-Token for the first call of a multichannel session, and CHAP for additional channels.
Cache-Token-PPP-Auth	The connection must use CHAP with dynamic passwords. The system uses CHAP with challenges, but caches token responses and uses them for authenticating additional channels.
MS-CHAP-PPP-Auth	The connection must use MS-CHAP, designed mostly for Windows NT/Lan Manager platforms. (For more information, see ftp://ftp.microsoft.com/DEVELOPR/RFC/chapexts.txt .)

Example: `set receive-auth-mode=both-ppp-auth`

Dependencies: You must specify a password for each PPP call if Receive-Auth-Mode is set to any value other than No-PPP-Auth.

Location: Answer-Defaults > PPP-Answer

See Also: PPP-Answer, Recv-Password, Send-Auth-Mode

Recv-Password

Description: Specifies the password that the MAX TNT must receive from the caller.

Usage: Specify a text string of up to 20 characters. The password is case sensitive. If the MAX TNT does not require a password from the remote end, accept the default of null.

Example: `set recv-password=remote`

Dependencies: If Receive-Auth-Mode=No-PPP-Auth, Recv-Password does not apply for PPP calls. You must specify a value for Recv-Password if Receive-Auth-Mode specifies an authentication mode.

Location: Connection *station* > PPP-Options, Connection *station* > ARA-Options

See Also: ARA-Enabled, ARA-Options, PPP-Options, Receive-Auth-Mode, Send-Password

Remote-Address

Description: Specifies the IP address of the remote station. The MAX TNT uses the value you specify to match the address presented by an incoming IP connection.

Usage: Specify an IP address in dotted decimal notation. Separate the optional subnet mask from the address by entering a forward slash. The default is 0.0.0.0.

Example: `set remote-address=10.77.156.4/24`

Location: Connection *station* > IP-Options

See Also: IP-Options, Local-Address

Remote-Configuration

Description: Specifies whether a RADIUS server remotely configures a login banner and a list of Telnet hosts.

Usage: Specify Yes or No. The default is No.

- Yes enables the MAX TNT to retrieve the login banner and list of Telnet hosts from RADIUS.
- No specifies that you must specify the banner and list of Telnet hosts in a local Terminal-Server profile.

Example: `set remote-configuration=no`

Dependencies: If terminal services are disabled or RADIUS is not in use, Remote-Configuration does not apply.

Location: Terminal-Server > Menu-Mode-Options

See Also: Banner, Host-N (N=1–4), Menu-Mode-Options, Text-N (N=1–4)

Reqd-State

Description: Specifies the required operational state of a slot or device.

Changing the value of Reqd-State initiates a state change. The state change is complete when the Reqd-State value is equal to the Device-State or Current-State value.

Usage: In a Device-State profile, specify one of the following values:

- Down-Reqd-State requires the device to be in a nonoperational state.
- Up-Reqd-State requires the device to be in normal operations mode.

In a Slot-State profile, specify one of the following values:

- Reqd-State-Down requires the slot to be in a nonoperational state.
- Reqd-State-Up requires the slot to be in normal operations mode.

Example: `set reqd-state=down-req-state`

Dependencies: You can also set Reqd-State by using the Device or Slot command. In a Slot-State profile, setting Reqd-State=Down-Reqd-State does not persist across system resets.

Location: Device-State { {shelf-*N* slot-*N* *N*} *N*}, Slot-State {shelf-*N* slot-*N* *N*}

See Also: Current-State, Device-State

Retransmit-Interval

Description: Specifies the number of seconds between retransmissions of OSPF protocol packets. OSPF uses the Retransmit-Interval value for Link-State Advertisement (LSA) transmissions, and for retransmitting Database-Description and Link-State-Request packets.

Usage: Specify a number greater than zero. The default is 5.

Example: `set retransmit-interval=15`

Location: IP-Interface { {shelf-*N* slot-*N* *N*} *N*} > OSPF,
Connection *station* > IP-Options > OSPF-Options

See Also: IP-Options, OSPF, OSPF-Options, Transit-Delay

Retry-Limit

Description: Controls the maximum number of attempts the MAX TNT makes to establish an Ascend Tunnel Management Protocol (ATMP) tunnel before switching to an alternative Home Agent.

Usage: Specify an integer from 1 to 100. The default is 10.

Example: `set retry-limit=25`

Location: ATMP

See Also: Agent-Mode, Agent-Type, Password, Retry-Timeout, UDP-Port

Retry-Timeout

Description: Controls the time (in seconds) to wait between retries when attempting to establish an Ascend Tunnel Management Protocol (ATMP) tunnel.

Usage: Specify the number of seconds. The default is 3, which is appropriate for most sites.

Example: `set retry-timeout=5`

Location: ATMP

See Also: Agent-Mode, Agent-Type, Password, Retry-Timeout, UDP-Port

RIP

Description: Specifies RIP behavior for a Connection profile:

- In the IP-Options subprofile, the RIP setting specifies whether the link should run RIP version 1 or RIP version 2, and whether it should send updates, receive them, or both.
- In the IPX-Options subprofile, the RIP setting specifies whether the link should run IPX RIP when the peer is a router.

Note: The IETF has voted to move RIP-v1 into the *historic* category, and its use is no longer recommended. You should upgrade all routers and hosts to RIP-v2. If you must maintain RIP-v1, Ascend recommends that you create a separate subnet, and place all RIP-v1 routers and hosts on that subnet.

Usage: In the IP-Options subprofile, specify one of the following settings:

Setting	Description
Routing-Off (the default)	The MAX TNT does not send routing updates, and ignores any routing updates it receives for the connection.
Routing-Send-Only	The MAX TNT sends RIP-v1 routing updates, but ignores any it receives for the connection.
Routing-Recv-Only	The MAX TNT does not send RIP-v1 routing updates, but accepts any routing updates it receives for the connection.
Routing-Send-And-Recv	The MAX TNT both sends RIP-v1 routing updates and accepts any it receives for the connection.
Routing-Send-Only-V2	The MAX TNT sends RIP-v2 routing updates, but ignores any it receives for the connection.
Routing-Recv-Only-V2	The MAX TNT does not send RIP-v2 routing updates, but accepts any routing updates it receives for the connection.
Routing-Send-And-Recv-V2	The MAX TNT both sends RIP-v2 routing updates and accepts any it receives for the connection.

In the IPX-Options subprofile, specify one of the following settings:

Setting	Description
Off (the default)	IPX RIP is turned off for the connection.
Send	The MAX TNT sends IPX RIP packets, but does not accept any on the connection.
Recv	The MAX TNT accepts IPX RIP packets, but does not send any on the connection.
Both	The MAX TNT both sends and accepts IPX RIP packets on the connection.

Example: `set rip=routing-send-only-v2`

Dependencies: If the MAX TNT does not route either IP or IPX for the connection, or if both IP routing and IPX routing are globally disabled, RIP does not apply.

Location: Connection *station* > IP-Options, Connection *station* > IPX-Options

See Also: Dial-Query, IP-Options, IPX-Header-Compression, IPX-Options, IPX-Routing-Enabled, IPX-SAP-HS-Proxy, IPX-SAP-HS-Proxy-Net, Net-Alias, Net-Number, Peer-Mode, RIP, RIP2-Use-Multicast, RIP-ASE-Type, RIP-Mode, RIP-Policy, RIP-Pref, RIP-Tag, SAP, SAP-Filter, Summarize-RIP-Routes

RIP2-Use-Multicast

Description: Enables or disables the default RIP-v2 behavior of using the multicast address (224.0.0.9) to send and receive updates.

Usage: Specify Yes or No. The default is Yes.

- Yes enables RIP-v2 to use the multicast address (224.0.0.9) instead of the broadcast address for its updates.
- No disables the use of the multicast address for RIP updates. The updates revert to the use of the broadcast address. Use this setting if you must use the broadcast address for backward compatibility with other systems.

Example: `set rip2-use-multicast=yes`

Dependencies: The RIP2-Use-Multicast setting does not apply to RIP-v1.

Location: IP-Interface

See Also: RIP, RIP-ASE-Type, RIP-Mode, RIP-Policy, RIP-Pref, RIP-Tag, Summarize-RIP-Routes

RIP-ASE-Type

Description: Specifies the OSPF ASE type associated with RIP routes.

Usage: Specify one of the following values:

- A value of 1 indicates Type-1 metrics. A Type-1 external metric is expressed in the same units as the link-state metric (interface cost). Type-1 is the default.
- A value of 2 indicates Type-2 metrics. A Type-2 external metric is considered larger than any link-state path. Use of Type-2 external metrics assumes that routing between autonomous systems is the major cost of routing a packet, and eliminates the need for conversion of external costs to internal link-state metrics.

Example: `set rip-ase-type=1`

Location: IP-Global

See Also: ASE-Type

RIP-Mode

Description: Specifies whether the interface should run RIP version 1 or RIP version 2, and whether it should send updates, receive them, or both.

The IETF has voted to move RIP-v1 into the *historic* category, and its use is no longer recommended. You should upgrade all routers and hosts to RIP-v2. If you must maintain RIP-v1, Ascend recommends that you create a separate subnet, and place all RIP-v1 routers and hosts on that subnet.

Usage: Specify one of the following settings:

Setting	Description
Routing-Off (the default)	The MAX TNT does not send routing updates, and ignores any routing updates it receives for the connection.
Routing-Send-Only	The MAX TNT sends RIP-v1 routing updates, but ignores any it receives for the connection.
Routing-Recv-Only	The MAX TNT does not send RIP-v1 routing updates, but accepts any routing updates it receives for the connection.
Routing-Send-And-Recv	The MAX TNT both sends RIP-v1 routing updates and accepts any it receives for the connection.
Routing-Send-Only-V2	The MAX TNT sends RIP-v2 routing updates, but ignores any it receives for the connection.
Routing-Recv-Only-V2	The MAX TNT does not send RIP-v2 routing updates, but accepts any routing updates it receives for the connection.
Routing-Send-And-Recv-V2	The MAX TNT both sends RIP-v2 routing updates and accepts any it receives for the connection.

Example: `set rip-mode=routing-send-only-v2`

Location: IP-Interface { {shelf-*N* slot-*N* *N*} *N*}

See Also: RIP, RIP2-Use-Multicast, RIP-ASE-Type, RIP-Policy, RIP-Pref, RIP-Tag, Summarize-RIP-Routes

RIP-Policy

Description: Specifies whether the MAX TNT propagates routes back to the subnet from which they were received. If the router is running RIP, the RIP-Policy setting must specify a policy for outgoing update packets that include routes received on the same interface as the one that sent the update.

Usage: Specify one of the following values:

- `Poison-Rvrs` (the default) specifies that the MAX TNT propagates routes back to the subnet from which they were received, but with a metric of 16 (infinite metric).
- `Split-Horzn` specifies that the MAX TNT does not propagate routes back to the subnet from which they were received.

Dependencies: All the default RIP-related settings in a VRouter profile are the values recommended for most sites. Unless the system supports RIP-v1, the RIP-Policy setting does not apply.

Example: `set rip-policy=split-horzn`

Location: IP-Global, VRouter

See Also: RIP, RIP2-Use-Multicast, RIP-ASE-Type, RIP-Mode, RIP-Pref, RIP-Tag, Summarize-RIP-Routes

RIP-Pref

Description: Specifies the default preference for routes the MAX TNT learns from the Routing Information Protocol (RIP).

When choosing the routes to put in the routing table, the router first compares their preference values, preferring the lowest number. If the preference values are equal, the router compares the metric values, using the route with the lowest metric.

Usage: Specify a number from 0 to 255. A value of 255 prevents the use of the route. Following are the default preferences for different types of routes:

- 0 (zero)—Connected routes
- 10—OSPF routes
- 30—Routes learned from ICMP redirects
- 100—Routes learned from RIP
- 100—Static routes
- 100—ATMP routes

Example: `set rip-pref=50`

Location: IP-Global

See Also: Down-Preference, OSPF-ASE-Pref, OSPF-Pref, Preference, Static-Pref

RIP-Queue-Depth

Description: Specifies the queue depth for RIP packets.

Usage: Specify a number between 0 and 1024. The default is 0 (zero), which means that the MAX TNT does not drop the packets, no matter what the state of the routing subsystem or system memory.

Example: `set rip-queue-depth=128`

Location: IP-Global

See Also: Queue-Depth

RIP-Tag

Description: Specifies a tag to associate with RIP routes. A tag is a 32-bit hexadecimal number. OSPF border routers can use the tag to filter a record.

Usage: Specify a 32-bit hexadecimal number. The default is c8:00:00:00.

Example: `set rip-tag=cfc80000`

Location: IP-Global

See Also: ASE-Tag

RIP-Trigger

Description: Specifies whether the IP router or Virtual Router (VRouter) tags routes that have been updated in the routing table and sends updates that include only the changed routes.

Usage: Specify Yes or No. The default is Yes.

- Yes specifies that the router tags changes to its routing table and includes only the tagged routes in its next update. Changes occur when a call arrives or disconnects, RIP or OSPF learns a route from another router, or the administrator modifies a route-related profile. The router broadcasts updates 5 to 8 seconds after the first change in the routing table is detected. The delay helps to prevent constant updates during peak traffic conditions. The result is reduced processing overhead in the router as well as its neighbors.
- No specifies that the router sends full table updates every 20 to 40 seconds. The full table update is no longer broadcasted at fixed 30-second intervals, to prevent RIP routers on a network from synchronizing and sending large updates in unison.

Example: `set rip-trigger=no`

Location: IP-Global, VRouter

See Also: RIP, RIP-Policy, Summarize-RIP-Routes

Rlogin

Description: Enables or disables the use of the Rlogin command from the terminal-server interface.

Usage: Specify Yes or No. The default is No.

- Yes enables the use of the Rlogin command.
- No disables the use of the Rlogin command. If Rlogin=No and a user attempts to initiate an Rlogin session in the terminal-server interface, the following message appears:

```
rlogin: not enabled
```

Example: `set rlogin=yes`

Dependencies: If terminal services are disabled, Rlogin does not apply.

Location: Terminal-Server > Terminal-Mode-Configuration > Rlogin-Options

See Also: Max-Source-Port, Min-Source-Port

Rlogin-Options

Description: A subprofile containing options for configuring Rlogin connections.

Usage: With Terminal-Mode-Configuration subprofile as the working profile, list the Rlogin-Options subprofile. For example:

```
admin> list rlogin-options
[ in TERMINAL-SERVER:terminal-mode-configuration:rlogin-options ]
rlogin=no
max-source-port=1023
min-source-port=128
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: Terminal-Server > Terminal-Mode-Configuration

See Also: Max-Source-Port, Min-Source-Port, Rlogin

Robbed-Bit-Mode

Description: Specifies the call-control mechanism for robbed-bit signaling. The mechanisms you can specify are based on the AT&T Special Access Connections specification for ACCUNET T1.5 services (AT&T TR 41458).

Usage: Specify one of the following values:

- Wink-Start (the default) specifies that the switch can seize the trunk by going off hook. The local unit requires the switch to wait for a 200 msec wink when it seizes a trunk.
- Idle-Start specifies that both ends seize a trunk by simply going off hook.
- Inc-W-200 specifies wink-wink signaling with a 200 msec wink time.
- Inc-W-400 specifies wink-wink signaling with a 400 msec wink time. Some switches that miss a wink might require the Inc-W-400 setting.
- Loop-Start specifies that the MAX TNT uses loop-start signaling instead of wink signaling. If you specify this setting, only MP+ and PPP provide an indication of call establishment or call termination. Using this setting for other types of calls is strongly discouraged. Specify it only if you cannot get wink signaling on your T1 access line.
- Ground-Start specifies that the MAX TNT uses ground-start signaling.

Example: `set robbed-bit-mode=wink-start`

Dependencies: Consider the following:

- Robbed-Bit-Mode applies only when Signaling-Mode is set to Inband.
- Regardless of the type of call-control mechanism you choose, the switch should not forward dialed digits to the MAX TNT. Doing so disrupts the handshaking process during multichannel calls.

Location: T1 {shelf-*N* slot-*N* *N*} > Line-Interface

See Also: Line-Interface, Signaling-Mode

Route-Address

Description: Specifies a route address that the MAX TNT compares to a packet's route address (after applying the mask specified by Route-Mask).

Usage: Specify an IP address in dotted decimal notation. The default is 0.0.0.0, which matches all route addresses in all packets.

Example: `set route-address=10.62.201.56`

Location: Filter *filter-name* > Input-Filters > Route-Filter,
Filter *filter-name* > Output-Filters > Route-Filter

Dependencies: Route-Address applies only if Type=Route-Filter.

See Also: Action, Add-Persistence, Input-Filters, Output-Filters, Route-Filter, Route-Filter (subprofile), Route-Mask, Source-Address, Source-Address-Mask, Type

Route-Filter

Description: Specifies the route filter to apply to a LAN interface (in an IP-Interface profile) or a WAN interface (in a Connection profile).

Usage: Specify the name of the Filter profile that contains the route-filter definition. The default is null.

Example: `set route-filter=route-test`

Dependencies: The Route-Filter setting applies only if you have defined a route filter in the Route-Filter subprofile.

Location: Connection *station* > IP-Options, IP-Interface { {shelf-*N* slot-*N* *N*} *N*}

See Also: Action, Add-Persistence, Route-Address, Route-Filter (subprofile), Route-Mask, Source-Address, Source-Address-Mask, Type

Route-Filter (subprofile)

Description: A subprofile containing a route-filter specification.

Usage: With a Filter profile as the working profile, list the Route-Filter subprofile. For example:

```
admin> list input 1 route-filter
[in FILTER/test:input-filters[1]:route-filter]
source-address-mask=255.255.255.192
source-address=200.100.50.128
route-mask=0.0.0.0
route-address=0.0.0.0
add-metric=0
action=none
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: Filter *filter-name* > Input-Filters, Filter *filter-name* > Output-Filters

See Also: Action, Add-Persistence, Input-Filters, Output-Filters, Route-Address, Route-Filter, Route-Mask, Source-Address, Source-Address-Mask, Type

Route-Mask

Description: Specifies a mask to apply to the Route-Address before comparing the resulting value to the route address in a packet. You can use Route-Mask to hide the host portion of a route, or the host and subnet portion.

After translating the Mask and Route-Address into binary format, the MAX TNT applies the mask to the specified Route-Address by performing a logical AND. The mask hides the bits that appear behind each binary 0 (zero) in the mask.

Usage: Specify a mask in dotted decimal notation. A mask of all ones (FF:FF:FF:FF:FF:FF:FF:FF) masks no bits, so the Route-Address value must match the full route address for a single host. The default is 0.0.0.0, which matches all route addresses.

Example: `set route-mask=255.255.255.0`

Dependencies: Route-Mask applies only if Type=Route-Filter.

Location: Filter *filter-name* > Input-Filters > Route-Filter,
Filter *filter-name* > Output-Filters > Route-Filter

See Also: Action, Add-Persistence, Input-Filters, Output-Filters, Route-Address, Route-Filter, Route-Filter (subprofile), Source-Address, Source-Address-Mask, Type

Routing-Metric

Description: Assigns a RIP-style metric to a route.

Usage: Specify an integer from 1 to 15. The default is 7.

Example: `set routing-metric=1`

Location: Answer-Defaults > IP-Answer, Connection *station* > IP-Options

See Also: IP-Answer, IP-Options, Private-Route, RIP

RS-Corrected-Errors

Description: Indicates the number of Reed Solomon (RS) errors that have been corrected.

Usage: The RS-Corrected-Errors setting is read only.

Location: ADSL-CAP-Stat {shelf-*N* slot-*N* *N*} > Physical-Statistic

See Also: RS-Errors

RS-Errors

Description: Indicates the number of Reed Solomon (RS) errors that have not been corrected.

Usage: The RS-Errors setting is read only.

Dependencies: Only the Customer Premises Equipment (CPE) unit uses the value of RS-Errors. If the CPE unit detects a very high rate of RS errors (255 every 50ms) for eight consecutive seconds, it disconnects the line.

Location: ADSL-CAP-Stat {shelf-*N* slot-*N* *N*} > Physical-Statistic

See Also: RS-Corrected-Errors

RX-Attenuation

Description: Indicates the attenuation level of the signal transmitted by the remote end.

Usage: The RX-Attenuation setting is read only.

Location: ADSL-CAP-Stat {shelf-*N* slot-*N* *N*} > Physical-Statistic

See Also: RX-Signal-Present

RX-Data-Rate-Limit

Description: Specifies the maximum data rate (in k-bits per second) to be received across the connection. You can use this setting to limit bandwidth for a connection according to the rate charged for the account.

Usage: Specify a number from 0 to 64000. The default is 0 (zero), which disables the data-rate limit feature. If the value you specify is larger than the actual bandwidth provided by the line, the connection behaves as though the data rate limit were disabled, except that additional computations are performed unnecessarily.

Example: `set rx-data-rate-limit=32000`

Dependencies: The system activates configurable receive data-rate limits only for connections that use CAP-RADSL, SDSL, and unchannelized DS3 cards. If you specify a value for a connection that does not use these cards, the system ignores the settings.

Location: Connection > Session-Options

See Also: TX-Data-Rate-Limit

RX-Signal-Present

Description: Indicates whether the local node is receiving a signal from the remote node.

Usage: The RX-Signal-Present setting is read only. Yes indicates that the local node is receiving a signal from the remote node. No indicates that the local node is not receiving a signal from the remote node.

Location: ADSL-CAP-Stat {shelf-*N* slot-*N* *N*} > Physical-Statistic
SDSL-Stat {shelf-*N* slot-*N* *N*} > Physical-Statistic

See Also: RX-Attenuation

S

SAP

Description: Specifies IPX SAP behavior for the connection when the peer is a router.

Usage: Specify one of the following values:

- Off (the default) specifies that SAP is turned off for the connection.
- Send specifies that the MAX TNT sends SAP packets, but does not accept any on the connection.
- Recv specifies that the MAX TNT accepts SAP packets, but does not send any on the connection.
- Both specifies that the MAX TNT both sends and accepts SAP packets on the connection.

Example: `set sap=both`

Dependencies: If the MAX TNT does not route IPX for the connection, or if IPX routing is globally disabled, SAP does not apply.

See Also: Dial-Query, IPX-Header-Compression, IPX-Routing-Enabled, IPX-SAP-HS-Proxy, IPX-SAP-HS-Proxy-Net, Net-Alias, Net-Number, Peer-Mode, RIP, SAP-Filter

SAP-Filter

Description: Specifies the SAP filter to apply to the connection.

A SAP filter includes or excludes specific servers or services from the MAX TNT unit's SAP table. If the directory services feature is not supported, servers or services that are not in the MAX TNT table are inaccessible to clients across the WAN.

Usage: Specify the name of a SAP filter defined in the IPX-SAP-Filter profile. The default is null.

Example: `set sap-filter=Alameda`

Dependencies: If the MAX TNT does not route IPX for the connection, or if IPX routing is globally disabled, SAP-Filter does not apply.

Location: Connection *station* > IPX-Options

See Also: Dial-Query, IPX-Header-Compression, IPX-Routing-Enabled, IPX-SAP-HS-Proxy, IPX-SAP-HS-Proxy-Net, Net-Alias, Net-Number, Peer-Mode, RIP, SAP

Save-Level

Description: Indicates the lowest level of log messages the MAX TNT displays in the log status window.

Usage: Specify one of the following settings:

Setting	Lowest-level message indicates
None (the default)	The MAX TNT does not display log messages.
Emergency	The unit has an error condition and is unlikely to be operating normally.
Alert	The unit has an error condition but is still operating normally.
Critical	An interface has gone down or a security error has occurred.
Error	An error event has occurred.
Warning	An unusual event has occurred, but the unit is otherwise operating normally. For example, this type of message appears when a login attempt has failed because the user entered an incorrect user name or password.
Notice	Events of interest in normal operation have occurred (a link going up or down, for example).
Info	State and status changes that are commonly not of general interest have occurred.
Debug	Helpful debugging information.

Example: `set save-level=error`

Dependencies: Log levels are also configurable on a per-user basis in User profiles.

Location: Log

See Also: Facility, Host, Log-Display-Level, Save-Number, Syslog-Enabled

Save-Number

Description: Specifies the maximum number of log messages that the MAX TNT saves for display in the status windows.

Usage: Specify an integer. The default is 100.

Example: `set save-number=150`

Location: Log

See Also: Facility, Host, Log-Display-Level, Save-Level, Syslog-Enabled

Screen-Length

Description: Specifies the number of lines displayed in the command-line window. (For the values to take effect, the user must log in again.)

Usage: Specify a number between 24 and 999. The default is 24 lines.

Example: `set screen-length=68`

Location: User

See Also: Status-Length

SDSL

Description: Specifies the action to take when the code image for an SDSL card is present in a Tar file.

Usage: Specify one of the following settings:

- Auto (the default) causes the system to load images for cards that are installed in the MAX TNT, and to skip images for cards that are not installed.
- Load causes the system to load the image, even if there is no card of that type installed.
- Skip causes the system to skip the image, even if there is a card of that type installed.

Dependencies: A card is considered present in the system if a Slot-Type profile exists for that card type. The system creates a Slot-Type profile when it first detects the presence of a card, and does not delete the profile unless the administrator uses the Slot -r command to permanently remove a card that is no longer installed in the system, or clears NVRAM. To ensure that the system does not load unnecessary images, use Slot -r to remove Slot-Type profiles for cards that are no longer installed in the system.

Location: Load-Select

See Also: 8E1, 8T1, AMDM, CAPADSL, DMTADSL, DS3-ATM, Enet, Enet2, HDLC, HDLC2, IDSL, MDM56K, MDM-V34, SDSL70D, SDSL70V, SWAN, T3, UDS3, UE1, Unknown-Cards, UT1

SDSL (profile)

Description: A profile containing configuration settings for an SDSL card.

Usage: Use the Read and List commands to make SDSL the working profile and list its contents. For example:

```
admin> read sdsl {1 1 0}
SDSL/{ shelf-1 slot-1 0 } read
admin> list
[in SDSL/{ shelf-1 slot-1 0 }]
name=" "
physical-address*={ shelf-1 slot-1 0 }
enabled=no
line-config={ 0 0 static { any-shelf any-slot 0 } }
```

You can then use the Set command to modify the settings in the profile. To close the profile and save your changes:

```
admin> write
SDSL/{ shelf-1 slot-1 0 } written
```

See Also: Enabled, Line-Config, Name, Physical-Address

SDSL70D

Description: Specifies the action to take when the code image for an SDSL data card is present in a Tar file.

Usage: Specify one of the following settings:

- Auto (the default) causes the system to load images for cards that are installed in the MAX TNT, and to skip images for cards that are not installed.
- Load causes the system to load the image, even if there is no card of that type installed.
- Skip causes the system to skip the image, even if there is a card of that type installed.

Dependencies: A card is considered present in the system if a Slot-Type profile exists for that card type. The system creates a Slot-Type profile when it first detects the presence of a card, and does not delete the profile unless the administrator uses the Slot -r command to permanently remove a card that is no longer installed in the system, or clears NVRAM. To ensure that the system does not load unnecessary images, use Slot -r to remove Slot-Type profiles for cards that are no longer installed in the system.

Location: Load-Select

See Also: 8E1, 8T1, AMDM, CAPADSL, DMTADSL, DS3-ATM, Enet, Enet2, HDLC, HDLC2, IDSL, MDM56K, MDM-V34, SDSL, SDSL70V, SWAN, T3, UDS3, UE1, Unknown-Cards, UT1

SDSL70V

Description: Specifies the action to take when the code image for an SDSL voice card is present in a Tar file.

Usage: Specify one of the following settings:

- Auto (the default) causes the system to load images for cards that are installed in the MAX TNT, and to skip images for cards that are not installed.
- Load causes the system to load the image, even if there is no card of that type installed.
- Skip causes the system to skip the image, even if there is a card of that type installed.

Dependencies: A card is considered present in the system if a Slot-Type profile exists for that card type. The system creates a Slot-Type profile when it first detects the presence of a card, and does not delete the profile unless the administrator uses the Slot -r command to permanently remove a card that is no longer installed in the system, or clears NVRAM. To ensure that the system does not load unnecessary images, use Slot -r to remove Slot-Type profiles for cards that are no longer installed in the system.

Location: Load-Select

See Also: 8E1, 8T1, AMDM, CAPADSL, DMTADSL, DS3-ATM, Enet, Enet2, HDLC, HDLC2, IDSL, MDM56K, MDM-V34, SDSL, SDSL70D, SWAN, T3, UDS3, UE1, Unknown-Cards, UT1

SDSL-Stat

Description: A profile indicating the status of the SDSL line.

Usage: Use the Read and List commands to make SDSL-Stat the working profile and list its contents. For example:

```
admin> read sdsl-stat { 1 9 1 }
SDSL-STAT/{ shelf-1 slot-9 1 } read
admin> list
[in SDSL-STAT/ {shelf-1 slot-9 1}]
physical-address*={ shelf-1 slot-9 1 }
line-state=active
error-count=0
physical-status={ 0 coe port-up 784000 784000 13 2 2 }
physical-statistic={ { 0 0 15 } yes 10 2 passed 5 +
```

See Also: Error-Count, Line-State, Physical-Address, Physical-Statistic, Physical-Status

Sec-Domain-Name

Description: Specifies a secondary domain name that the MAX TNT searches by means of the Domain Name System (DNS).

Usage: Specify a secondary domain name. The default is null.

Example: `set sec-domain-name=xyz.com`

Location: IP-Global

See Also: Domain-Name, DNS-Primary-Server, DNS-Secondary-Server

Secondary-IP-Address

Description: Specifies the secondary IP address of the Access SS7 Gateway (ASG).

Usage: Specify an IP address in dotted decimal notation. The default is null.

Example: `set secondary-ip-address=10.1.2.3`

Dependencies: If Enabled=No in the SS7-Gateway profile, Secondary-IP-Address does not apply.

Dependencies:

Location: SS7-Gateway

See Also: Primary-IP-Address, Secondary-TCP-Port

Secondary-TCP-Port

See Also: Specifies the secondary TCP Port of the Access SS7 Gateway (ASG).

Usage: Specify a port number.

Example: `set secondary-tcp-port=5000`

Dependencies: If Enabled=No in the SS7-Gateway profile, Secondary-TCP-Port does not apply.

Location: SS7-Gateway

See Also: Primary-TCP-Port, Secondary-IP-Address

Secondary-Tunnel-Server

Description: Specifies the IP address or hostname of the Ascend Tunnel Management Protocol (ATMP) secondary Home Agent or L2TP Network Server (LNS) endpoint. The MAX TNT initiates a connection to the host after a connection attempt to Primary-Tunnel-Server times out or the Foreign Agent receives an error code in an ATMP Register-Reply or Challenge-Request message.

Usage: Specify an IP address in dotted decimal notation, or a symbolic hostname containing up to 31 characters. The default is 0.0.0.0.

If you specify a hostname, the MAX TNT uses the Domain Name System (DNS) to look up the host IP address. If the unit requires a UDP port number different from the value specified by UDP-Port, you can specify a port value by appending a colon character (:) and the port number to the IP address or hostname. For example:

```
admin> set secondary-tunnel-server=10.11.22.33:8877
```

```
admin> set secondary-tunnel-server=tunnel.company.com:6969
```

The IP address should be the system address, not the IP address of the interface on which the unit receives tunneled data.

Dependencies: You must set Profile-Type=Mobile-Client for the Secondary-Tunnel-Server setting to apply.

Location: Connection *station* > Tunnel-Options

See Also: Home-Network-Name, Max-Tunnels, Password, Primary-Tunnel-Server, Profile-Type, UDP-Port

Seconds-History

Description: Specifies the number of seconds to use as the basis for calculating average line utilization (ALU). When the ALU exceeds or falls below the Target-Utilization percentage for a specified number of seconds, the MAX TNT adds or subtracts bandwidth.

Usage: Specify an integer from 1 to 300. The default is 15 seconds.

Example: `set seconds-history=60`

Dependencies: The number of seconds you specify should be related to traffic patterns. For example, if you want to average spikes with normal traffic flow, you might want the MAX TNT to base ALU on a longer time period. If, on the other hand, traffic patterns consist of many spikes that are short in duration, you might want to specify a shorter period of time. Doing so gives less weight to the short spikes.

Location: Answer-Defaults > MPP-Answer, Connection *station* > MPP-Options

See Also: Add-Persistence, Aux-Send-Password, Bandwidth-Monitor-Direction, Decrement-Channel-Count, Dynamic-Algorithm, Enabled, Increment-Channel-Count, MPP-Answer, MPP-Options, Sub-Persistence, Target-Utilization

Security-Enabled

Description: Specifies whether the MAX TNT traps security events and sends a traps-PDU to the SNMP manager.

Security events notify users of security problems and track access to the unit. (For the most up-to-date information about security events, see the Ascend Enterprise MIB.) The MAX TNT traps the following security events:

Event	Indication
authenticationFailure (RFC-1215 trap-type 4)	The MAX TNT sending the trap is the addressee of a protocol message that is not properly authenticated.
consoleStateChange (Ascend trap-type 12)	The console associated with the passed console index has changed state. To read the console's state, get ConsoleEntry from the Ascend Enterprise MIB.
maxTelnetAttempts (Ascend trap-type 15)	There have been three consecutive failed attempts to log into the MAX TNT via Telnet.

Usage: Specify Yes or No. The default is Yes.

- Yes specifies that the MAX TNT sends security-event traps to the host specified by Host-Address.
- No specifies that the MAX TNT does not send security-event traps.

Example: `set security-enabled=yes`

Location: Trap *host-name*

See Also: Alarm-Enabled, Community-Name, Host-Address, Host-Name, Port-Enabled

Security-For-Direct-Access

Description: Specifies the type of security required for the direct-access dialout service.

Usage: Specify one of the following values:

- None (the default) specifies that no password is required for the direct-access dialout service.
- User specifies that a local Connection profile or remote RADIUS profile must be configured to allow dialout.
- Global specifies that a user must specify the password indicated by the Password-For-Direct-Access setting.

Example: `set security-for-direct-access=global`

Dependencies: If Direct-Access=No, Security-For-Direct-Access does not apply.

Location: Terminal-Server > Dialout-Configuration

See Also: Direct-Access, Password-For-Direct-Access, Port-For-Direct-Access

Security-Mode

Description: Specifies the type of terminal-server security in use.

Usage: Specify one of the following values:

- None (the default) specifies that a user name and password are not required for terminal-server access.
- Partial specifies that a user name, password, or both are required in command mode, but not in menu mode. If an interactive user toggles between menu mode and command mode, a password and user name are required only upon entry to command mode.
- Full specifies that a user name, password, or both are required in order to enter the terminal server in both command mode and menu mode.

Example: `set security-mode=full`

Location: Terminal-Server

See Also: Menu-Mode-Options, System-Password

Selectools-Enabled

Description: Indicates whether Selectools are enabled.

Usage: The Selectools-Enabled setting is read only. Yes indicates that Selectools are enabled. No indicates that Selectools are disabled.

Example: `selectools-enabled=yes`

Location: Base

See Also: MAXLink-Client-Enabled, PHS-Support

Self-Test

Description: Indicates whether the card has passed the Power-On Self Test (POST).

Usage: The Self-Test setting is read only. Passed indicates that the card passed the POST. Failed indicates that the card failed the POST.

Location: ADSL-CAP-Stat {shelf-*N* slot-*N* *N*} > Physical-Statistic
SDSL-Stat {shelf-*N* slot-*N* *N*} > Physical-Statistic

See Also: Connection-SQ, Far-End-dB-Attenuation, HDLC-RX-CRC-Error-Cnt, Line-Quality, Line-Up-Timer, Physical-Address, RX-Signal-Present, Up-Down-Cntr, RS-Corrected-Errors, RS-Errors, RX-Attenuation, Transmit-Power

Send-Auth-Mode

Description: Specifies the authentication protocol that the MAX TNT requests when initiating an outgoing call with PPP, MP, or MP+ encapsulation. The answering side of the connection determines which authentication protocol the connection uses (if any).

Usage: Specify one of the following settings:

Setting	Description
No-PPP-Auth (the default)	No authentication is requested.
PAP-PPP-Auth	The connection requests Password Authentication Protocol (PAP). The remote end sends its password in the clear. The password is not encrypted. The remote device must support PAP, and you must specify a password by means of the Send-Password setting.
CHAP-PPP-Auth	The connection requests Challenge Handshake Authentication Protocol (CHAP). The remote end does not send its password in the clear. An MD5 digest calculated from the password and a random challenge are sent instead.
MS-CHAP-PPP-Auth	The connection requests MS-CHAP, designed mostly for Windows NT/Lan Manager platforms. (For more information, see ftp://ftp.microsoft.com/DEVELOPR/RFC/chapexts.txt .)

Example: `set send-auth-mode=any-ppp-auth`

Dependencies: Consider the following:

- For incoming calls, the Send-Auth-Mode setting has no effect.
- The MAX TNT uses the Recv-Auth-Mode setting to specify the authentication method for incoming PPP calls.
- If you specify PAP-PPP-Auth, the remote device must support PAP, and you must enter a password for Send-Password.
- If you specify CHAP-PPP-Auth, the remote device must support CHAP, and you must enter a password for Send-Password.

Location: Connection *station* > PPP-Options

See Also: PPP-Options, Receive-Auth-Mode, Send-Password

SendDisc-Val

Description: Specifies the number of seconds the MAX TNT waits before sending an ISDN disconnect to the switch.

Usage: Specify an integer. The default is 0 (zero).

Example: `set sendDisc-val=10`

Location: T1 {shelf-*N* slot-*N* *N*} > Line-Interface

See Also: Line-Interface

Send-Password

Description: Specifies the password the MAX TNT sends to the remote end during authentication of an outgoing PPP connection.

Usage: Specify up to 20 characters. The password is case sensitive. If the remote end does not require a password, accept the default of null.

Example: `set send-password=Ascend`

Dependencies: You must specify a value for Send-Password when PAP, CHAP, or Cache-Token authentication is in use. If the Connection profile does not make outgoing calls, do not enter a value for Send-Password.

Location: Connection *station* > PPP-Options

See Also: PPP-Options, Recv-Password, Send-Auth-Mode

Serial

Description: A profile that specifies physical interface settings for a system serial interface.

Usage: Use the Read and List commands to make Serial the working profile and list its contents. For example:

```
admin> read serial { 1 c 2 }
SERIAL/{ shelf-1 controller 2 } read

admin> list
[in SERIAL/{ shelf-1 controller 2 }]
physical-address*={ shelf-1 controller 2 }
term-rate=9600-bps
flow-control=none
user-profile=admin
auto-logout=no
```

You can then use the Set command to modify the settings in the profile. To close the profile and save your changes:

```
admin> write
SERIAL/{ shelf-1 controller 2 } written
```

See Also: Auto-Logout, Flow-Control, Physical-Address, Term-Rate, User-Profile

Serial-Number

Description: Displays the MAX TNT unit's serial number.

Usage: The Serial-Number setting is read only.

Example: `serial-number=6201732`

Location: Base, Slot-Info {shelf-*N* slot-*N* *N*}

See Also: Software-Level, Software-Revision, Software-Version

Server-Endpoint

Description: Specifies the DNS hostname or dotted IP address of the L2TP Network Server (LNS) or PPTP Network Server (PNS) endpoint.

Usage: Specify a symbolic hostname or IP address in dotted decimal notation. The default is null.

Example: `set server-endpoint=200.40.50.2`

Location: Tunnel-Server *name*

See Also: Enabled, PPTP-Enabled, Server-Profile-Required, Shared-Secret

Server-Name

Description: Specifies a local or remote NetWare server. If the server is on the local network and you are specifying a SAP output filter, the Server-Type setting specifies whether to include or exclude advertisements for the server in SAP response packets. If the server is on the remote IPX network and you are specifying a SAP input filter, Server-Type specifies whether to include or exclude the server in the MAX TNT SAP table.

Usage: Specify the name of a NetWare server. You can use the wildcard characters * and ? for partial name matches. The default is null.

Example: `set server-name=server_1`

Location: IPX-SAP-Filter > Input-IPX-SAP-Filters,
IPX-SAP-Filter > Output-IPX-SAP-Filters

See Also: Server-Type, Type-Filter, Valid-Filter

Server-Node

Description: Specifies the node number for the NetWare server.

Usage: Specify a hexadecimal number of up to 12 digits. The default is 00:00:00:00:00:01 (the typical node number for a NetWare file server).

Example: `set server-node=00:00:00:00:00:01`

Location: IPX-Route *name*

See Also: Active-Route, Dest-Network, Hops, Name, Profile-Name, Server-Socket, Server-Type, Ticks

Server-Profile-Required

Description: Specifies whether PPTP requires a Tunnel-Server profile that matches the PPTP Network Server (PNS) specification in a Connection profile before it creates a tunnel.

Usage: Specify Yes or No. The default is No.

- Yes specifies that PPTP requires a Tunnel-Server profile that matches the PNS specification in a Connection profile before it creates a tunnel to the server.
- No specifies that PPTP first looks for a matching Tunnel-Server profile, and if it finds one, uses the settings in that profile to create (or refuse) the tunnel. However, if it does not find a matching Tunnel-Server profile, it attempts to create a tunnel anyway.

Example: `set server-profile-required=yes`

Location: L2-Tunnel-Global

See Also: PPTP-Enabled, Tunnel-Server

Server-Socket

Description: Specifies the socket number for the NetWare server.

Usage: Enter a hexadecimal number of up to four digits. Typically, the NetWare file server uses socket 0451. The default is 0000.

Example: `set server-socket=04:51`

Dependencies: The number you specify must be a well-known socket number. Services that use dynamic socket numbers might use a different socket each time they load and will not work with IPX-Route profiles. To bring up a connection to a remote service that uses a dynamic socket number, specify a master server that uses a well-known socket number on the remote network.

Location: IPX-Route *name*

See Also: Active-Route, Dest-Network, Hops, Name, Profile-Name, Server-Node, Server-Type, Ticks

Server-Type

Description: Specifies the Service Advertising Protocol (SAP) service type of the NetWare server.

Usage: Specify a hexadecimal number of up to four digits. A NetWare file server has SAP service type 0004. You can use the wildcard characters * and ? for partial type matches. FFFF is a wildcard setting that matches all server types. The default is 0000.

Example: `set server-type=0004`

Dependencies: In a SAP output filter, Server-Type specifies whether to include or exclude advertisements for the service type in SAP response packets. In a SAP input filter, Server-Type specifies whether to include or exclude services of this type in the SAP table. For complete information on SAP service types, refer to your NetWare documentation.

Location: IPX-Route *name*, IPX-SAP-Filter > Input-IPX-SAP Filters,
IPX-SAP-Filter > Output-IPX-SAP-Filters

See Also: Active-Route, Dest-Network, Hops, Name, Profile-Name, Server-Name,
Server-Node, Server-Socket, Ticks, Type-Filter, Valid-Filter

Service

Description: Enables or disables immediate mode, and specifies the immediate service type. In immediate mode, an interactive user immediately connects to a host by means of a specified service.

Usage: Specify one of the following values:

- None (the default) specifies no immediate service.
- Telnet specifies immediate Telnet service.
- Raw-TCP specifies an immediate TCP connection.
- Rlogin specifies immediate Rlogin service.

Example: `set service=rlogin`

Dependencies: If terminal services are disabled, Service does not apply.

Location: Terminal-Server > Immediate-Mode-Options

See Also: Host, Immediate-Mode-Options, Port, Service, Telnet-Host-Auth

Ses-ADSL-CAP-Down-Rate

Description: Specifies the ADSL-CAP downstream data rate.

Usage: Specify one of the following settings (in bps):

7168000 (the default)
6272000
5120000
4480000
3200000
2688000
2560000
2240000
1920000
1600000
1280000
960000
640000

Location: Connection > Session-Options

See Also: Ses-ADSL-CAP-Up-Rate, Ses-Rate-Mode, Ses-Rate-Type

Ses-ADSL-CAP-Up-Rate

Description: Specifies the per-session ADSL-CAP upstream data rate.

Usage: The Ses-ADSL-CAP-Up-Rate setting is not yet supported.

Location: Connection > Session-Options

See Also: Ses-ADSL-CAP-Down-Rate, Ses-Rate-Mode, Ses-Rate-Type, Ses-SDSL-Rate

Ses-Rate-Mode

Description: Specifies the per-session DSL data rate mode.

Usage: Currently, only the Autobaud setting is supported on the RADSL card, and only the Singlebaud setting is supported on the SDSL card.

- Autobaud specifies that a DSL modem should train up to a set data rate. If a DSL modem cannot train to this data rate, it connects to the closest rate to which it can train (the modem's ceiling rate).
- Singlebaud causes the system to train to a single data rate, even if the DSL modem can train at a higher or lower data rate.

Location: Connection > Session-Options

See Also: Ses-ADSL-CAP-Down-Rate, Ses-ADSL-CAP-Up-Rate, Ses-Rate-Type, Ses-SDSL-Rate

Ses-Rate-Type

Description: Specifies the per-session modem type for rate control.

Usage: Specify one of the following settings:

- Disabled (the default) specifies that modem rate control is not active for the connection.
- ADSL-CAP specifies ADSL-CAP modem rate control.
- SDSL specifies SDSL modem rate control.

Location: Connection > Session-Options

See Also: Ses-ADSL-CAP-Down-Rate, Ses-ADSL-CAP-Up-Rate, Ses-Rate-Mode, Ses-SDSL-Rate

Ses-SDSL-Rate

Description: Specifies the symmetrical data rate. This setting applies to connections on the 24-port SDSL data or voice card.

Usage: Specify one of the following values:

144000
272000
400000
528000
784000
1168000
1552000

Location: Connection > Session-Options

See Also: Ses-Rate-Mode, Ses-Rate-Type

SessionID-Base

Description: Specifies the base number the MAX TNT uses for generating a unique ID for each session.

The MAX TNT can pass a session ID to SNMP, RADIUS, or other external entities. If the value of SessionID-Base is nonzero, the MAX TNT uses it as the initial base for calculating session IDs after a system reset. The ID for each subsequent session is incremented by 1.

If SessionID-Base is zero, the MAX TNT sets the initial base for session IDs to the absolute clock. For example, if the clock is 0x11cf4959, the subsequent session IDs use 0x11cf4959 as a base. However, if the clock is changed and the system reboots or clears NVRAM, session IDs might be duplicated.

Usage: Specify an integer from 1 to 2147483647. The default is 0 (zero), which causes the MAX TNT to generate a session ID base using the absolute clock.

Example: `set sessionid-base=5`

Dependencies: You can also set a session ID base by using the Set SessID command in the terminal-server interface. The terminal server provides a Show SessID command to display the next session ID the unit will use.

Location: System

See Also: Analog-Encoding, Call-Routing-Sort-Method, Idle-Logout, Master-Shelf-Controller, Name, Parallel-Dialing, Shelf-Controller-Type, Single-File-Incoming, System-Rmt-Mgmt, Use-Trunk-Groups

Session-Info

Description: A subprofile containing default settings for incoming connections. The settings in the Session-Info subprofile are not specific to any encapsulation method or network protocol.

Usage: With Answer-Defaults as the working profile, list the Session-Info subprofile. For example:

```
admin> list session-info
[ in ANSWER-DEFAULTS:session-info ]
call-filter=" "
data-filter=" "
filter-persistence=no
idle-timer=120
ts-idle-mode=no-idle
ts-idle-timer=120
max-call-duration=0
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: Answer-Defaults

See Also: Call-Filter, Data-Filter, Filter-Persistence, Idle-Timer, Max-Call-Duration, TS-Idle-Mode, TS-Idle-Timer

Session-Options

Description: A subprofile that specifies session settings not specific to any encapsulation method or network protocol.

Usage: With a Connection profile as the working profile, list the Session-Options subprofile. For example:

```
admin> list session
[ in CONNECTION/tim:session-options ]
call-filter=" "
data-filter=" "
filter-persistence=no
idle-timer=120
ts-idle-mode=no-idle
ts-idle-timer=120
backup=" "
max-call-duration=0
rx-data-rate-limit=0
tx-data-rate-limit=0
ses-adsl-cap-down-rate=7168000
ses-rate-mode=autobaud
ses-rate-type=disabled
```


You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: Connection *station*

See Also: Backup, Call-Filter, Data-Filter, Filter-Persistence, Idle-Timer, Max-Call-Duration, RX-Data-Rate-Limit, Ses-ADSL-CAP-Down-Rate, Ses-Rate-Mode, Ses-Rate-Type, TS-Idle-Mode, TS-Idle-Timer, TX-Data-Rate-Limit

Shared-Prof

Description: Specifies whether multiple incoming calls can share a Connection profile.

Usage: Specify Yes or No. The default is No.

- Yes specifies that the MAX TNT allows more than one caller to share the same profile, provided that no IP address conflicts result.
- No specifies that the MAX TNT does not allow shared profiles.

Example: `set shared-prof=no`

Dependencies: Use the Shared-Prof setting only when the MAX TNT dynamically assigns each caller an IP address. A shared profile must not contain a hard-coded remote IP address.

Location: IP-Global

See Also: Address-Pool, Assign-Count, Must-Accept-Address-Assign, Pool-Base-Address

Shared-Secret

Description: Specifies the shared secret required to bring up an L2TP Control Channel with the specified Server-Endpoint.

Usage: Specify the text of the shared secret. The default is null.

Example: `set shared-secret=3f4tr`

Location: Tunnel-Server *name*

See Also: Enabled, Server-Endpoint

Shelf

Description: Specifies the shelf in which an item resides. If you are using a single-shelf system, the shelf number is always 1. For call-routing purposes, a value of 0 (zero) or `any-shelf` specifies any shelf.

Usage: For a Device-Address, Physical-Address, or Call-Route-Info setting, specify an integer from 1 to 6. In an Error profile, the Shelf setting is read only.

Example: `set shelf=1`

Location: Call-Route-Info, Device-Address, Error, Physical-Address

See Also: Call-Route-Info, Device-Address, Item-Number, Physical-Address, Slot

Shelf-Controller-Type

Description: Specifies the type of controller on the shelf.

Usage: Specify one of the following values:

- Standalone (the default) specifies a single-shelf system.
- Master specifies the master shelf. In a multishelf system, you can set only one shelf to Master.
- Slave specifies any shelf other than the master shelf.

Example: `set shelf-controller-type=master`

Location: System

See Also: Master-Shelf-Controller

Shelf-Number

Description: Indicates the shelf number of the MAX TNT unit.

Usage: The Shelf-Number setting is read only.

Example: `shelf-number=1`

Location: Base

See Also: Master-Shelf-Controller, Shelf, Shelf-Controller-Type

Signaling-Mode

Description: Specifies the type of signaling used on a T1 or E1 line.

Usage: For a T1 line, specify one of the following values:

- Inband (the default) specifies inband, robbed-bit signaling. When you specify Inband, the MAX TNT reads Robbed-Bit-Mode for the call-control mechanism.
- ISDN specifies ISDN signaling on the D channel.
- ISDN-NFAS specifies Non-Facility Associated Signaling (NFAS). NFAS enables a group of T1 lines on the same card to share a D channel. All NFAS lines that share a D channel must use the same NFAS group ID. You must configure one of the lines to provide the primary D channel and secondary (backup) D channel.
- T1-R1-Inband specifies R1 inband signaling.
- SS7-Data-Trunk specifies that the line carries no signaling, provides 64K circuits, and is registered with the Access SS7 Gateway (ASG). The ASG takes control of the line, telling the MAX TNT when to bring calls up or down.

For an E1 line, specify one of the following values:

- ISDN specifies ISDN signaling on the D channel.
- E1-R2-Signaling specifies R2 signaling.
- R1-Inband specifies R1 inband signaling.
- E1-Korean-Signaling specifies a version of the R2 signaling protocol for use in Korea.
- E1-P7-Signaling specifies P7 signaling.
- E1-Chinese-Signaling specifies a version of the R2 signaling protocol for use in China.
- E1-Metered-Signaling specifies the metered R2 signaling protocol, used in Brazil and South Africa.
- E1-No-Signaling specifies a nailed-up line.
- E1-DPNSS-Signaling specifies DPNSS or DASS 2 signaling.
- E1-Czech-Signaling specifies KR2 processing, a variation of R2 signaling for the Czech Republic.
- E1-Indian-Signaling specifies R2 signaling for India.
- E1-Argentina-Signaling specifies R2 signaling for Argentina.
- E1-Philippine-Signaling specifies R2 CLID signaling for the Philippines.
- E1-Brazil-Signaling specifies R2 CLID signaling for Brazil.
- E1-Malaysia-Signaling specifies R2 CLID processing for Malaysia.

Example: `set signaling-mode=isdn`

Dependencies: Consider the following:

- Signaling-Mode must be set to ISDN (or ISDN-NFAS, for T1) if you are using overlap receiving (Overlap-Receiving=Yes). If it is set to any other value, overlap receiving does not apply.
- R1 signaling may optionally be used with Automatic Number Identification (ANI), which is similar to Caller ID (CLID). When ANI is in use, you can specify whether to send an Automatic Number Id Request (ANIR) to the switch. If you specify that the unit should send an ANIR to the switch, you can also specify how long it waits before sending the request, and how long the ANIR signal lasts.

Location: T1 {shelf-*N* slot-*N* *N*} > Line-Interface, E1 {shelf-*N* slot-*N* *N*} > Line-Interface

See Also: Call-By-Call, Caller-ID, Channel-Usage, Data-Service, D-Channel-Enabled, Encoding, FDL, Frame-Type, Line-Interface, NFAS-ID, Number-Complete, Overlap-Receiving, R1-ANIR-Delay, R1-ANIR-Timer, R1-First-Digit-Timer, R1-Modified, R1-Use-ANIR, R2-Signaling-Enabled, Robbed-Bit-Mode, Switch-Type

Silent-Mode

Description: Specifies whether the MAX TNT suppresses status messages upon establishment of an interactive terminal-server connection.

Usage: Specify Yes or No. The default is No.

- Yes specifies that the MAX TNT suppresses status messages upon establishment of an interactive terminal-server connection.
- No specifies that the MAX TNT sends all status messages upon establishment of an interactive terminal-server connection.

Example: `set silent-mode=yes`

Dependencies: If terminal services are disabled, Silent-Mode does not apply.

Location: Terminal-Server > Terminal-Mode-Configuration

See Also: Terminal-Mode-Configuration

Single-File-Incoming

Description: Specifies whether the MAX TNT treats incoming calls as a single-file list, or handles them in parallel.

Usage: Specify Yes or No. The default is Yes.

- Yes specifies that the MAX TNT answers and routes one call before answering and routing the next call.
- No specifies that the MAX TNT answers and routes an incoming call immediately.

Example: `set single-file-incoming=yes`

Location: System

See Also: Parallel-Dialing

SLIP

Description: Enables or disables the use of the terminal-server SLIP command.

Usage: Specify Yes or No. The default is No.

- Yes enables a user to begin SLIP sessions from the terminal-server interface.
- No disables a user from beginning SLIP from the terminal-server interface.

Example: `set slip=yes`

Dependencies: If terminal services are disabled, SLIP does not apply.

Location: Terminal-Server > SLIP-Mode-Configuration

See Also: Ping, PPP, Rlogin, SLIP-Mode-Configuration, TCP, Telnet, Traceroute

SLIP-BOOTP

Description: Specifies whether the MAX TNT responds to BOOTP within SLIP sessions.

Usage: Specify Yes or No. The default is No.

- Yes enables the MAX TNT to respond to a BOOTP request from the calling unit during a SLIP session. An interactive user who initiates a SLIP session can use BOOTP to get an IP address from the designated IP address pool.
- No disables BOOTP for a SLIP session. The user is prompted to accept an IP address at the start of the SLIP session.

Example: `set slip-bootp=yes`

Dependencies: If terminal services are disabled, SLIP-BOOTP does not apply.

Location: Terminal-Server > SLIP-Mode-Configuration

See Also: Address-Pool, Assign-Count, Pool-Base-Address, SLIP, SLIP-Mode-Configuration

SLIP-Mode-Configuration

Description: A subprofile with terminal-server configuration options for asynchronous Serial Line IP (SLIP) users.

Usage: With Terminal-Server as the working profile, list the SLIP-Mode-Configuration subprofile. For example:

```
admin> list slip
[in TERMINAL-SERVER:slip-mode-configuration]
slip=no
slip-bootp=no
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: Terminal-Server

See Also: SLIP, SLIP-BOOTP

Slot

Description: Specifies the number of the item's expansion slot. Physical expansion slots are numbered from 1 to 16, starting with 1 for the slot just below the shelf controller. The slot value 17, `controller`, or `c` specifies the shelf controller card.

For call-routing purposes, a value of 0 (zero) or `any-slot` specifies that the item can use any slot. For example, to address the first slot on shelf 1:

```
{ 1 1 0 }
```

For a 48-modem card, which uses two slots, the slot number is always the lower of the two slots. For example, if the card uses slots 2 and 3, the following specification addresses the entire slot card:

```
{ 1 2 0 }
```

Usage: For a Device-Address, Physical-Address, or Call-Route-Info setting, specify an integer from 1 to 17. In an Error profile, the Slot setting is read only.

Example: `set slot=10`

Location: Call-Route-Info, Device-Address, Error, Physical-Address

See Also: Call-Route-Info, Device-Address, Item-Number, Physical-Address, Shelf

Slot-Address

Description: Indicates the physical address of the slot.

Usage: In most cases, the value of Slot-Address is obtained from the system. However, you can clone a profile by reading an existing one and changing its physical address. To modify the value after reading a Slot-Info, Slot-State, or Slot-Type profile, use the List and Set commands. For example:

```
admin> list slot
[in SLOT-INFO/{ shelf-1 slot-9 37 }:slot-address]
shelf=shelf-1
slot=slot-9
item-number=37
admin> set shelf=shelf-2
```

As an alternative, you can simply use the Set command. For example:

```
admin> set slot shelf=shelf-2
```

Location: Slot-Info {shelf-*N* slot-*N* *N*}, Slot-State {shelf-*N* slot-*N* *N*}, Slot-Type {shelf-*N* slot-*N* *N*}

See Also: Physical-Address

Slot-Enabled

Description: Specifies whether the host specified by Host-Address receives a multishelf trap when the SNMP MIB object `multiShelfStateTrapState` (multiShelf 6) is set to Enabled. This object determines whether a trap is generated when a multishelf link is down (if one of the shelves is down). If it is set to Disabled (2), the trap is not sent, regardless of your Trap profile configuration.

Usage: Specify Yes or No. The default is Yes.

- Yes specifies that the host receives a multishelf trap.
- No specifies that the host does not receive a multishelf trap.

Example: `set slot-enabled=yes`

Dependencies: If the administrator sets the `multiShelf.multiShelfStatTrap-State` object to 2 (disabled), neither host receives multishelf traps.

Location: Trap *host-name*

See Also: Host-Address, Host-Name

Slot-Info

Description: A profile that displays the software version, serial number, and other system information about the MAX TNT.

Usage: The Slot-Info profile is read only. Use the Get command to display its contents. For example:

```
admin> get slot-info
[in SLOT-INFO]
slot-address={ shelf-1 slot-7 0 }
serial-number=77777777
software-version=1
software-revision=2
software-level=E
software-release=" "
hardware-level=0
hardware-rework-count=0
```

See Also: Hardware-Level, Hardware-Rework-Count, Serial-Number, Slot-Address, Software-Level, Software-Release, Software-Revision, Software-Version

Slot-Profile-Change-Enabled

Description: Specifies whether the system generates a trap when a Slot-State profile is created due to slot insertion, or the current-state transitions into Oper-State-Down, Oper-State-Up, Oper-State-Dump, or Oper-State-None.

Usage: Specify Yes or No. The default is Yes.

- Yes specifies that the system generates a trap.
- No specifies that the system does not generate a trap.

Example: `set slot-profile-change-enabled=no`

Location: Trap *host-name*

See Also: Current-State, Slot- State

Slot-State

Description: A profile that stores the current state of a slot card. The Slot-State profile does not reside in NVRAM, so it does not persist across system resets or power cycles. SNMP managers can read the Slot-State profile.

Usage: Use the Read and List commands to make Slot-State the working profile and list its contents. For example:

```
admin> read slot-state {1 2 0}
SLOT-STATE/{ shelf-1 slot-2 0 } read

admin> list
[in SLOT-STATE/{ shelf-1 slot-2 0 }]
slot-address*={ shelf-1 slot-2 0 }
current-state=oper-state-none
reqd-state=reqd-state-up
```

You can then use the Set command to modify the settings in the profile. To close the profile and save your changes:

```
admin> write
SLOT-STATE/{ shelf-1 slot-2 0 } written
```

See Also: Current-State, Reqd-State, Slot-Address

Slot-Type

Description: Specifies the type of device in the slot. If the actual type of device discerned by the system at startup differs from the type specified by Slot-Type, the MAX TNT assumes that you have changed slot cards. It then deletes the old SNMP interface numbers.

Usage: Specify one of the following values:

Value	Specifies
None	No card is installed.
Unknown	The software does not recognize the card.
Shelf-Controller	MAX TNT shelf controller.
Router-Card	Standalone router card.
8T1-Card	Eight-line T1 card.
8E1-Card	Eight-line E1 card.
48Modem-Card	48-modem card.
128HDLC-Card	128-channel HDLC card.
4Ether-Card	Four-interface Ethernet card.
4SWAN-Card	Four-interface serial WAN card.
4HSSI-card	Four-interface high-speed serial card.
10FT1-Card	Ten-interface unchannelized T1 card.
Analog-Modem-Card	36-analog-modem card.
T3-Card	Single-interface channelized DS3.

Example: `set slot-type=8t1-card`

Dependencies: You can also display the slot type for a particular device by using the terminal-server Show command.

Location: Admin-State {shelf-*N* slot-*N N*}, Admin-State-Phys-If {shelf-*N* slot-*N N*}, Slot-Type {shelf-*N* slot-*N N*}

See Also: Slot, Slot-Address, Slot-Info, Slot- State, Slot-Type (profile)

Slot-Type (profile)

Description: A profile that stores the type of slot card installed in each shelf/slot location. The Slot-Type profile resides in NVRAM and persists over system resets.

Usage: Use the Read and List commands to make Slot-Type the working profile and list its contents. For example:

```
admin> read slot-type {1 8 0}
SLOT-TYPE/{ shelf-1 slot-8 0 } read
```

```
admin> list
[in SLOT-TYPE/{ shelf-1 slot-8 0 }]
slot-address*={ shelf-1 slot-8 0 }
slot-type=8e1-card
```

You can then use the Set command to modify the settings in the profile. To close the profile and save your changes:

```
admin> write
SLOT-TYPE/{ shelf-1 slot-8 0 } written
```

See Also: Slot, Slot-Address, Slot-Info, Slot- State, Slot-Type

SNMP

Description: A profile containing settings that determine SNMP security, specify a contact and location, and control which hosts can access the MAX TNT by means of the SNMP manager utilities.

Usage: Use the Read and List commands to make SNMP the working profile and list its contents. For example:

```
admin> read snmp
SNMP read

admin> list
[in SNMP]
enabled=no
read-community=public
read-write-community=write
enforce-address-security=no
read-access-hosts=[ 0.0.0.0 0.0.0.0 0.0.0.0 0.0.0.0 0.0.0.0 ]
write-access-hosts=[ 0.0.0.0 0.0.0.0 0.0.0.0 0.0.0.0 0.0.0.0 ]
contact=" "
location=" "
```

You can then use the Set command to modify the settings in the profile. To close the profile and save your changes:

```
admin> write
SNMP written
```

See Also: Contact, Enabled, Enforce-Address-Security, Location, Read-Access-Hosts, Read-Community, Read-Write-Community, Write-Access-Hosts

SNMP-Interface

Description: Indicates the SNMP interface number assigned to the device by the system.

Usage: The SNMP-Interface setting is read only.

Example: `snmp-interface=65`

Dependencies: At system startup, the MAX TNT reads the Admin-State, Admin-State-Perm-If, and Admin-State-Phys-If profiles. If the addressed device is not present in the system and has been replaced by a device of another type, the MAX TNT deletes the profile associated with the device. The next time the system is reset or power cycled, the old device's SNMP interface number is made available for reassignment. Removing a slot card and leaving the slot empty, however, does not free up interface numbers. If you reinstall the slot card, the MAX TNT reassigns the same interface number.

In addition, removing a slot card and replacing it with a slot card of another type does not immediately free up the old interface numbers. New numbers are assigned to the new slot card, and the old numbers become available at the next power cycle or system reset.

Location: Admin-State {shelf-*N* slot-*N* *N*}, Admin-State-Perm-If *station*, Admin-State-Phys-If {shelf-*N* slot-*N* *N*}

See Also: SNMP

Soft-IP-Interface-Addr

Description: Specifies an IP address that is not associated with a physical interface.

A soft interface is just like any other interface on the MAX TNT, except that it is never down. In general, the soft IP address is used for packets destined for the MAX TNT. You can specify the soft interface address as the system IP address, in which case it becomes the source address for the traffic generated by the MAX TNT.

Usage: Specify an IP address in dotted decimal notation. The default is 0.0.0.0. The address you specify for the soft interface has the same requirements as an address assigned to a physical interface. Routing protocols advertise the address, with a mask of 32, as a host route that uses the loopback interface.

Example: To specify an interface-independent address, create an IP-Interface profile with the default index. For example, the following commands set the soft interface address to 11.168.7.100:

```
admin> new ip-interface
IP-INTERFACE/{ { any-shelf any-slot 0 } 0 } read
admin> set soft-ip-interface-addr=11.168.7.100
admin> write
IP-INTERFACE/{ { any-shelf any-slot 0 } 0 } written
```

The IP-Interface profile with the default index is reserved for the interface-independent IP address.

Dependencies: Consider the following:

- To create an interface-independent address for a VRouter, create a new IP-Interface profile with the logical-item value greater than zero. For example:

```
admin> new ip-interface
IP-INTERFACE/{ { any-shelf any-slot 0 } 0 } read

admin> set interface-address={{0 0 0}1}
(New index value; will save profile as IP-INTERFACE/{ {
any-shelf any-slot 0 } 1 }.)

admin> set soft-ip-interface-addr=10.10.1.1

admin> write
IP-INTERFACE/{ { any-shelf any-slot 0 } 1 } written
The MAX TNT adds soft addresses in its interface table with the name sip# where # is
the logical-item number from the IP-Interface profile index.
```

- If routing updates (RIP or OSPF) are enabled, the MAX TNT advertises the interface address as a host route with a mask of /32 using the loopback interface.
- If RIP or OSPF is not enabled, routers one hop away from the MAX TNT must have a static route to the soft address. To verify that other hosts in your network have a route to the soft address, use Ping or Traceroute from the other hosts.

Location: IP-Global

See Also: OSPF, RIP, RIP-Mode, System-IP-Addr

Software-Level

Description: Indicates the software-version level of the shelf-controller code.

Usage: The Software-Level setting is read only.

Example: software-level=H

Location: Base, Slot-Info {shelf-*N* slot-*N* *N*}

See Also: Hardware-Level, Software-Release, Software-Revision, Software-Version

Software-Release

Description: Displays the engineering or candidate release number of the code image.

Usage: The Software-Release setting is read only.

Example: software-release=7.0

Location: Slot-Info {shelf-*N* slot-*N* *N*}

See Also: Software-Level, Software-Revision, Software-Version

Software-Revision

Description: Indicates the software revision number of the MAX TNT unit.

Usage: The Software-Revision setting is read only.

Example: `software-revision=1`

Location: Base, Slot-Info {shelf-*N* slot-*N* *N*}

See Also: Software-Level, Software-Release, Software-Version

Software-Version

Description: Indicates the software version of the MAX TNT unit.

Usage: The Software-Version setting is read only.

Example: `software-version=1.0`

Dependencies: You can also use the Version command to view the current system software version.

Location: Base, Slot-Info {shelf-*N* slot-*N* *N*}

See Also: Software-Level, Software-Release, Software-Revision

Source-Address

Description: Specifies a source IP address that the MAX TNT compares to a packet's source IP address (after applying the mask specified by Source-Address-Mask).

Usage: Specify an IP address in dotted decimal notation. The default is 0.0.0.0, which matches all packets.

Example: `set source-address=10.62.201.56`

Dependencies: Source-Address applies only if Type=IP-Filter or Type=TOS-Filter.

Location: Filter *filter-name* > Input-Filters > IP-Filter,
Filter *filter-name* > Output-Filters > IP-Filter,
Filter *filter-name* > Input-Filters > TOS-Filter,
Filter *filter-name* > Output-Filters > TOS-Filter

See Also: Input-Filters, IP-Filter, Output-Filters, Source-Address-Mask

Source-Address-Mask

Description: Specifies a mask to apply to the Source-Address value before comparing the value to the source address in a packet. You can use the Source-Address-Mask value to hide the host portion of an address, or its host and subnet portion.

After translating the mask and address into binary format, the MAX TNT applies the mask to the address by performing a logical AND. The mask hides the portion of the address that appears behind each binary 0 (zero) in the mask.

Usage: Specify a mask of ones and zeros in dotted decimal notation. The default is 0.0.0.0, which masks all bits. A mask of all ones (255.255.255.255) masks no bits, and specifies the full source address of a single host.

Example: `set source-address-mask=255.255.255.0`

Dependencies: Source-Address-Mask applies only if Type=IP-Filter or Type=TOS-Filter.

Location: Filter *filter-name* > Input-Filters > IP-Filter,
Filter *filter-name* > Output-Filters > IP-Filter,
Filter *filter-name* > Input-Filters > TOS-Filter,
Filter *filter-name* > Output-Filters > TOS-Filter

See Also: Input-Filters, IP-Filter, Output-Filters, Source-Address

Source-IP-Check

Description: Enables or disables anti-spoofing for the session.

Usage: Specify Yes or No. The default is No.

- Yes specifies that the system checks all packets received on the interface. The source IP address in each packet must match the far-end remote address or the address agreed upon in IPCP negotiation. If the addresses do not match, the system discards the packet.
- No disables anti-spoofing for the session.

Example: `set source-ip-check=yes`

Location: Connection *station* > IP-Options

See Also: IP-Address

Source-Port

Description: Specifies a value to compare with the source-port field in a packet.

Usage: Specify a number from 0 to 65535. The default is 0 (zero), which matches any port.

Example: `set source-port=25`

Dependencies: Consider the following:

- Source-Port applies only if Type=IP-Filter or Type=TOS-Filter.
- Only TCP and UDP packets have source-port fields.
- The Src-Port-Cmp setting specifies the type of comparison the MAX TNT makes.

Location: Filter *filter-name* > Input-Filters > IP-Filter,
Filter *filter-name* > Output-Filters > IP-Filter,
Filter *filter-name* > Input-Filters > TOS-Filter,
Filter *filter-name* > Output-Filters > TOS-Filter

See Also: Input-Filters, IP-Filter, Output-Filters, Src-Port-Cmp

Split-Code-Dot-User-Enabled

Description: Specifies whether the system can split user names longer than five characters under CACHE-TOKEN authentication.

Usage: Specify Yes or No. The default is No.

- Yes specifies local splitting of user name. This setting permits the use of user names longer than five characters, so long as you use a typical four-digit pin and six-digit ACE token code.
- No specifies that the system cannot split user names.

Example: `set split-code-dot-user-enabled=yes`

Location: Connection > PPP-Options

See Also: Disconnect-On-Auth-Timeout, Enabled, Link-Compression, LQM, LQM-Maximum-Period, LQM-Minimum-Period, MRU, Recv-Password, Send-Password

Src-Net-Address

Description: Specifies an IPX network address that the MAX TNT compares to a packet's source IPX network address.

Usage: Specify an IPX network address in hexadecimal format. The default is 00:00:00:00, which matches all packets.

Example: `set src-net-address=01:01:01:01`

Dependencies: Src-Net-Address applies only if Type=IPX-Filter.

Location: Filter *filter-name* > Input-Filters > IPX-Filter,
Filter *filter-name* > Output-Filters > IPX-Filter

See Also: Input-Filters, IPX-Filter, Output-Filters, Type

Src-Node-Address

Description: Specifies an IPX node number that the MAX TNT compares to a packet's source IPX node number.

Usage: Specify an IPX node number in hexadecimal format. The default is 00:00:00:00, which matches all packets.

Example: `set src-node-address=01:01:01:01`

Dependencies: Src-Node-Address applies only if Type=IPX-Filter.

Location: Filter *filter-name* > Input-Filters > IPX-Filter,
Filter *filter-name* > Output-Filters > IPX-Filter

See Also: Input-Filters, IPX-Filter, Output-Filters, Type

Src-Port-Cmp

Description: Specifies the type of comparison to use when comparing the value of Source-Port to a packet's source-port field.

Usage: Specify one of the following values:

- None (the default) specifies that the MAX TNT does not compare the packet's source port number to the Source-Port value.
- Less specifies that port numbers with a value less than the value specified by Source-Port match the filter.
- Eql specifies that port numbers equal to the value specified by Source-Port match the filter.
- Gtr specifies that port numbers with a value greater than the value specified by Source-Port match the filter.
- Neq specifies that port numbers not equal to the value specified by Source-Port match the filter.

Example: `set src-port-cmp=less`

Dependencies: For Src-Port-Cmp to apply, you must set Type=IP-Filter or Type=TOS-Filter. In addition, only TCP and UDP packets contain source ports.

Location: Filter *filter-name* > Input-Filters > IP-Filter,
Filter *filter-name* > Output-Filters > IP-Filter,
Filter *filter-name* > Input-Filters > TOS-Filter,
Filter *filter-name* > Output-Filters > TOS-Filter

See Also: Input-Filters, IP-Filter, Output-Filters, Source-Port

Src-Socket

Description: Specifies an IPX socket number that the MAX TNT compares to a packet's source IPX socket number.

Usage: Specify an IPX socket number. The default is 00:00, which matches all packets.

Example: `set src-socket=01:01`

Dependencies: Src-Socket applies only if Type=IPX-Filter.

Location: Filter *filter-name* > Input-Filters > IPX-Filter,
Filter *filter-name* > Output-Filters > IPX-Filter

See Also: Input-Filters, IPX-Filter, Output-Filters, Type

Src-Socket-Cmp

Description: Specifies the type of comparison to use when comparing the Src-Socket value to a packet's source-socket field.

Usage: Specify one of the following values:

- None (the default) specifies that the MAX TNT does not compare the packet's source socket number to the Src-Socket value.
- Less specifies that socket numbers with a value less than the value specified by Src-Socket match the filter.
- Eql specifies that socket numbers equal to the value specified by Src-Socket match the filter.
- Gtr specifies that socket numbers with a value greater than the value specified by Src-Socket match the filter.
- Neq specifies that socket numbers not equal to the value specified by Src-Socket match the filter.

Example: `set src-socket-cmp=less`

Dependencies: For Src-Socket-Cmp to apply, you must set Type=IPX-Filter.

Location: Filter *filter-name* > Input-Filters > IPX-Filter,
Filter *filter-name* > Output-Filters > IPX-Filter

See Also: Input-Filters, IPX-Filter, Output-Filters, Type

SS7-Gateway

Description: A profile that contains settings for configuring the Access SS7 Gateway (ASG) interface.

Usage: Use the Read and List commands to make SS7-Gateway the working profile and list its contents. For example:

```
admin> read ss7-gateway
SS7-GATEWAY read

admin> list
[in SS7-GATEWAY]
enabled=yes
primary-ip-address=200.168.8.130
primary-tcp-port=5000
secondary-ip-address=0.0.0.0
secondary-tcp-port=2000
bay-id=" "
system-type=IASCTNT1B
device-id=0
```

You can then use the Set command to modify the settings in the profile. To close the profile and save your changes:

```
admin> write
SS7-GATEWAY written
```

Dependencies: The Bay-ID and System-Type settings do not apply to configuring the ASG interface.

See Also: Device-ID, Enabled, Primary-IP-Address, Primary-TCP-Port, Secondary-IP-Address, Secondary-TCP-Port

Stack-Trace

Description: Indicates the stack trace record created when an error occurred.

Usage: The Stack-Trace setting is read only. It consists of an array of 6 elements.

Example: stack-trace= [000000]

Location: Error

See Also: Index, IP-Address, IS-Post, Loadname, Shelf, Slot, Type, User-Profile, Version

Start-With-Menus

Description: Determines whether the terminal server presents a menu interface for an interactive user initiating a connection.

Usage: Specify Yes or No. The default is No.

- Yes specifies that the terminal server starts user logins in menu mode.
- No specifies that the terminal server starts user logins in command mode.

Example: `set start-with-menus=yes`

Dependencies: If terminal services are disabled, Start-With-Menus does not apply.

Location: Terminal-Server > Menu-Mode-Options

See Also: Menu-Mode-Options

Static-Pref

Description: Specifies the default preference given to static IP routes. When choosing the routes to put in the routing table, the router first compares their preference values, preferring the lowest number. If the preference values are equal, the router compares the metric values, using the route with the lowest metric.

Usage: Specify a number from 0 to 255. A value of 255 prevents the use of the route. Following are the default preferences for different types of routes:

- 0 (zero)—Connected routes
- 10—OSPF routes
- 30—Routes learned from ICMP redirects
- 100—Routes learned from RIP
- 100—Static routes
- 100—ATMP routes

Example: `set static-pref=50`

Location: IP-Global

See Also: Down-Preference, OSPF-ASE-Pref, OSPF-Pref, Preference, RIP-Pref

Station

Description: In a Connection profile, specifies the name of the remote device that communicates with the MAX TNT. In the Admin-State-Perm-If profile, specifies the name of a nailed-up PPP or Frame Relay connection indicated by a Connection profile or RADIUS user profile.

Usage: In a Connection profile, specify the name of the remote station. You can enter up to 31 characters. The value you specify is case sensitive, and must exactly match the name of the remote device. If you are not sure about the exact name, contact the administrator of the remote network. The default is null.

In the Admin-State-Perm-If profile, the Station setting is read only.

Example: `set station=robin-gw`

Dependencies: The name you specify for Station is not necessarily a DNS hostname. The MAX TNT does not use the Station name to obtain an IP address.

Location: Admin-State-Perm-If, Connection

See Also: Index, Name

Status-Length

Description: Specifies the number of lines displayed in the Status window, including dividing lines. (For the values to take effect, the user must log in again.)

Usage: Specify a number from 18 to 993. The default is 18 lines.

Example: `set status-length=60`

Dependencies: Status-Length must be less than Screen-Length by at least six lines.

Location: User

See Also: Screen-Length

Sub-Persistence

Description: Specifies the number of seconds that average line utilization (ALU) must persist below the Target-Utilization threshold before the MAX TNT subtracts bandwidth from the connection. When subtracting bandwidth, the MAX TNT removes the number of channels specified by Decrement-Channel-Count. However, it does not clear the base channel of the call, or cause the number of channels to fall below the Minimum-Channels value.

Usage: Specify an integer from 1 to 300. The default is 10.

Example: `set sub-persistence=15`

Dependencies: Sub-Persistence has little effect when the Seconds-History value is high.

Location: Answer-Defaults > MPP-Answer, Connection *station* > MPP-Options

See Also: Add-Persistence, Bandwidth-Monitor-Direction, Base-Channel-Count, Decrement-Channel-Count, Dynamic-Algorithm, Increment-Channel-Count, Maximum-Channels, Minimum-Channels, Seconds-History, Target-Utilization

Summarize-RIP-Routes

Description: Specifies whether the MAX TNT or Virtual Router (VRouter) summarizes RIP-v1 subnet information when advertising routes.

If the MAX TNT summarizes RIP routes, it advertises one route to all the subnets of the same class in the same network. For example, it advertises the route to 200.5.8.13/28 (a class C address) as a route to 200.5.8.0. When the MAX TNT does not summarize information, it advertises each route as it appears in its routing table. For the route to 200.5.8.13/28, the MAX TNT advertises a route to 200.5.8.13.

Usage: Specify Yes or No. The default is Yes.

- Yes specifies that the MAX TNT summarizes RIP-v1 subnet information.
- No specifies that the MAX TNT advertises each route as it appears in the routing table.

Example: `set summarize-rip-routes=no`

Dependencies: The Summarize-RIP-Routes setting is not applicable if RIP-v2 is in use or if RIP is turned off.

Location: IP-Global, VRouter

See Also: RIP, RIP-Mode, RIP-Policy

Suppress-Host-Routes

Description: Specifies whether the MAX TNT advertises host routes in each update, which can cause excessive routing overhead:

Usage: Specify Yes or No. The default is No.

- Yes specifies that host routes are suppressed,
- No specifies that host routes are advertised.

Example: The following set of commands configures the MAX TNT to suppress host routes:

```
admin> read ip-global
IP-GLOBAL read

admin> set suppress-host-routes=yes

admin> write
IP-GLOBAL written
```

Dependencies: If you set Suppress-Host-Routes to Yes, routes are suppressed according to the following rules:

- If a Connection profile specifies a Remote-Address setting with a subnet mask of less than 32 bits, host routes for the interface are suppressed while the session is being negotiated. After the session is established, only network routes are advertised for the interface.
- If a Connection profile specifies a Remote-Address setting with a subnet mask of /32, host routes for the interface are not suppressed.

Location: IP-Global

See Also: Pool-Summary

SWAN

Description: Specifies the action to take when the code image for a SWAN card is present in a Tar file.

Usage: Specify one of the following settings:

- Auto (the default) causes the system to load images for cards that are installed in the MAX TNT, and to skip images for cards that are not installed.
- Load causes the system to load the image, even if there is no card of that type installed.
- Skip causes the system to skip the image, even if there is a card of that type installed.

Dependencies: A card is considered present in the system if a Slot-Type profile exists for that card type. The system creates a Slot-Type profile when it first detects the presence of a card, and does not delete the profile unless the administrator uses the Slot -r command to permanently remove a card that is no longer installed in the system, or clears NVRAM. To ensure that the system does not load unnecessary images, use Slot -r to remove Slot-Type profiles for cards that are no longer installed in the system.

Location: Load-Select

See Also: 8E1, 8T1, AMDM, CAPADSL, DMTADSL, DS3-ATM, Enet, Enet2, HDLC, HDLC2, IDSL, MDM56K, MDM-V34, SDSL, SDSL70D, SDSL70V, T3, UDS3, UE1, Unknown-Cards, UT1

SWAN (profile)

Description: A profile that contains line-configuration settings for the Serial WAN card.

Usage: Use the Read and List commands to make SWAN the working profile and list its contents. For example:

```
admin> read swan {1 15 2}
SWAN/{ shelf-1 slot-15 2 } read
admin> list
[in SWAN/{ shelf-1 slot-15 2 }]
name=1:15:2
physical-address*={ shelf-1 slot-15 2 }
enabled=no
line-config={ 0 0 static { any-shelf any-slot 0 } }
```

You can then use the Set command to modify the settings in the profile. To close the profile and save your changes:

```
admin> write
SWAN/{ shelf-1 slot-15 2 } written
```

See Also: Enabled, Line-Config, Name, Physical-Address

SWAN-Stat

Description: A profile that displays information about the state of a Serial WAN line.

Usage: Use the Read and List commands to make SWAN-Stat the working profile and list its contents. For example:

```
admin> read swan-stat {1 8 1}
SWAN-STAT/{ shelf-1 slot-8 1 } read

admin> list
[in SWAN-STAT/{ shelf-1 slot-8 1 }]
physical-address*={ shelf-1 slot-8 1 }
line-state=disabled
error-count=0
```

See Also: Error-Count, Line-State, Physical-Address

Switch-Type

Description: Specifies the type of network switch that provides ISDN service.

Usage: For a PRI line, you can specify one of the following switch-type settings:

Setting	Specifies
ATT-PRI	AT&T, the default in the U.S.
NT1-PRI	Northern Telecom
GloBanD-PRI	Q.931W GloBanD
Japan-PRI	ISDN PRI in Japan
VN3-PRI	French VN3 ISDN PRI
OneTR6-PRI	German ITR6
Net5-PRI	Euro ISDN services in Belgium, the Netherlands, Switzerland, Sweden, and Singapore
Danish-PRI	ISDN services in Denmark
Austral-PRI	PRI service in Australia
NAT-ISDN-2-PRI	National ISDN-2

E1 lines support the following additional DPNSS and DASS-2 switch types:

- ISDX-DPNSS
- ISLX-DPNSS
- Mercury-DPNSS
- DASS2 (U.K. only)
- Switch-CAS (for E1 R1 and R2 signaling)

Example: `set switch-type=nt1-pri`

Dependencies: The Switch-Type setting is required for ISDN NFAS signaling.

Location: T1 {shelf-*N* slot-*N* *N*} > Line-Interface, E1 {shelf-*N* slot-*N* *N*} > Line-Interface

See Also: Line-Interface, Signaling-Mode

Switched-Call-Type

Description: Specifies the type of bearer-channel capability the MAX TNT sets up for each switched call in a session.

Usage: Specify one of the following values:

Value	Specifies
Voice	The MAX TNT sets up a voice call, even though the MAX TNT will transmit data over the channel. The Voice setting assumes that only 56 Kbps is available.
56K-Restricted (the default)	The MAX TNT sets up a data call with an explicit request for 56-Kbps restricted data transfer. Data is transmitted to meet the density requirements for AMI-encoded T1 lines. These requirements dictate that you cannot transmit 16 consecutive zeroes. Use this setting only for a connection that uses robbed-bit signaling.
56K-Clear	The MAX TNT sets up a data call that uses 56-Kbps of the data channel. 56K-Clear is a common setting for T1 PRI lines.
64K-Restricted	The MAX TNT sets up a data call with an explicit request for 64-Kbps restricted data transfer. The call should be set up as a data call at a rate of 64 Kbps on an AMI-encoded line. With each transmission, a binary 1 is inserted in the least significant bit position.
64K-Clear	The MAX TNT sets up a data call that uses the full 64-Kbps bandwidth of the data channel.
384K-Restricted	The MAX TNT sets up a data call that connects to Multi-Rate or GlobanD data services at 384 Kbps.
384K-Clear	The MAX TNT sets up a data call that connects to the Switched-384 data service. This AT&T data service does not require Multi-Rate or GlobanD.
DWS-384-Clear	A 384-Kbps call coded as Multi-Rate, not H0.
1536K-Clear	The MAX TNT sets up a data call that connects to the Switched-1536 data service at 1536 Kbps. NFAS signaling is required for the Switched-1536 data service. (Because all 24 channels of the T1 PRI line carry user data, the D channel must be on another line.)
1536K-Restricted	The same service as 1536K-Clear, but with a request for restricted data transfer. With each transmission, a binary 1 is inserted in the least significant bit position.
128K-Clear to 1472K-Clear (in multiples of 64)	Multi-Rate bit rates.
Modem	The MAX TNT sets up the call as a voice call. When the call is up, the MAX TNT routes it to a digital modem.

Example: `set switched-call-type=56k-restricted`

Dependencies: To ensure data integrity:

- Use only digital end-to-end connectivity. No analog signals should be present anywhere in the link.
- Make sure that the phone company is not using any intervening loss plans to economize on voice calls.
- Do not use echo cancellation. The technology designed to remove echoes from analog lines can scramble data in the link.
- Do not make any modifications that can change the data in the link.

If a nailed-up connection is in use, Switched-Call-Type does not apply.

Location: Frame-Relay *fr-name*

See Also: Data-Service

Switched-Enabled

Description: Indicates whether the unit can make switched calls.

Usage: The Switched-Enabled setting is read only. Yes indicates that the unit can make switched calls. No indicates that the unit can use only nailed-up links.

Example: `switched-enabled=yes`

Location: Base

See Also: Data-Call-Enabled, D-Channel-Enabled, Multi-Rate-Enabled, R2-Signaling-Enabled

Syslog-Enabled

Description: Enables or disables forwarding of log messages to the UNIX Syslog server.

Syslog is not a MAX TNT status display, but a facility that sends system status messages to a host computer, known as the Syslog host. (For information about the syslog daemon, see the UNIX man pages for `logger(1)`, `syslog(3)`, `syslog.conf(5)`, and `syslogd(8)`.) The Syslog function requires UDP port 514.

Usage: Specify Yes or No. The default is No.

- Yes enables Syslog updating.
- No disables Syslog updating.

Example: `set syslog-enabled=yes`

Location: Log

See Also: Facility, Host

Syslog-Format

Description: Specifies the format that the MAX TNT uses for Syslog messages.

Usage: Specify one of the following settings:

- TNT (the default) specifies that the MAX TNT writes Syslog messages in a format that is appropriate to the multishelf and multislot architecture of the system, as in the following output:

```
'date' 'time' 'ip-address' 1/4: [1/4/1/2] Call Connected  
[MBID 124]
```

The port address is 1/4/1/2 (shelf 1, slot 4, line 1, port/channel 2).

- MAX specifies that the MAX TNT uses the same Syslog format used by other Ascend MAX platforms, as in the following output:

```
'date' 'time' 'ip-address' ASCEND: shelf 1 slot 4 port 1,  
line 1, channel 2, Call Connected.\, MBID 047 [MBID 47]
```

Example: `set syslog-format=max`

Location: Log

See Also: Facility, Host, Save-Level, Save-Number, Syslog-Enabled

System

Description: A profile that contains system-wide settings for call management.

Usage: Use the Read and List commands to make System the working profile and list its contents. For example:

```
admin> read sys  
SYSTEM read  
  
admin> list  
[in SYSTEM]  
name=test-227  
system-rmt-mgmt=yes  
use-trunk-groups=yes  
call-routing-sort-method=item-first  
idle-logout=0  
parallel-dialing=2  
single-file-incoming=yes  
analog-encoding=u-law  
sessionid-base=0  
shelf-controller-type=standalone  
master-shelf-controller=1  
new-nas-port-id-format=yes  
perm-conn-upd-mode=all  
userstat-format=%i %l %s %r %d %a %u %c %t %n  
max-dialout-time=20  
boot-sr-version=2.1
```

You can then use the Set command to modify the settings in the profile. To close the profile and save your changes:

```
admin> write
SYSTEM written
```

See Also: Analog-Encoding, Boot-SR-Version, Call-Routing-Sort-Method, Idle-Logout, Master-Shelf-Controller, Name, Max-Dialout-Time, New-NAS-Port-ID-Format, Parallel-Dialing, Perm-Conn-Upd-Mode, SessionID-Base, Shelf-Controller-Type, Single-File-Incoming, System-Rmt-Mgmt, Userstat-Format, Use-Trunk-Groups

System-IP-Addr

Description: Designates the source address for IP traffic originating from the MAX TNT or from the global VRouter.

By default, the system address is the IP address assigned to the shelf-controller Ethernet interface, and the source address for outgoing IP traffic is the address of the interface on which the MAX TNT transmits a packet.

Usage: Specify an IP address. The default is 0.0.0.0.

Example: `set system-ip-addr=10.2.3.4`

Dependencies: If the System-IP-Addr becomes unreachable because of a topology change in the network, you can still use Telnet to reach any of the unit's interface addresses (subject to packet filtering throughout the network).

The following algorithm determines the source address of packets from the MAX TNT:

- 1 The source address of IP-routing protocol packets (RIP and OSPF) is always the local address of the transmitting interface.
- 2 For incoming Telnet sessions, the source address of transmitted packets is the destination address of the originating TCP SYN packet.
- 3 If the IP-Global profile setting for System-IP-Addr is nonzero, all other transmitted packets have System-IP-Addr as the source address.
- 4 The source address of all other transmitted packets is the local address of the transmitting interfaces.

Protocols that follow this algorithm include:

- TCP: Defender, Rlogin, TACACS+, Telnet
- UDP: Ascend Password Protocol (APP), Ascend Tunnel Management Protocol (ATMP), DNS, MAX TNT Stacking Protocol, RADIUS accounting, RADIUS authentication, SECURID, SNMP, Syslog, TFTP, Traceroute, Virtual Tunnel Protocol (VTP)

Location: IP-Global

See Also: Global-VRouter, IP-Address, Local-Address, Remote-Address, Soft-IP-Interface-Addr

System-Password

Description: Specifies a password for access to the terminal server.

Usage: Specify a password of up to 20 characters. The password is case sensitive. The default is null.

Example: `set system-password=Ascend`

Dependencies: If terminal services are disabled, System-Password does not apply. If Security-Mode=None, the terminal server does not require a password.

Location: Terminal-Server > Terminal-Mode-Configuration

See Also: Aux-Send-Password, Password, Recv-Password, Security-Mode, Send-Password, Telnet-Password, Terminal-Mode-Configuration

System-Rmt-Mgmt

Description: Enables or disables remote management across multichannel calls.

Usage: Specify Yes or No. The default is Yes.

- Yes allows remote management of the MAX TNT.
- No prevents remote management of the MAX TNT.

Example: `set system-rmt-mgmt=yes`

Location: System

See Also: Remote-Configuration

T

T1

Description: A profile that contains configuration settings for a T1 line and its channels.

Usage: Use the Read and List commands to make T1 the working profile and list its contents. For example:

```
admin> read t1 {1 15 2}
T1/{ shelf-1 slot-15 2 } read

admin> list
[in T1/{ shelf-1 slot-15 2 }]
name=trunk-1
nfas-group-id=0
physical-address*={ shelf-1 slot-15 2 }
line-interface={ no d4 ami eligible middle-priority inband +
```

You can then use the Set command to modify the settings in the profile. To close the profile and save your changes:

```
admin> write
T1/{ shelf-1 slot-15 2 } written
```

See Also: Line-Interface, Name, Physical-Address

T1-Retrans-Timer

Description: Specifies the maximum amount of time in ticks the transmitter should wait for an acknowledgment before initiating a recovery procedure.

Usage: Specify a number between 500 and 2000. The default value is 1000 (1 second).

Location: Answer-Defaults > X75-Answer
Connection > X75-Options

See Also: Frame-Length, K-Frames-Outstanding, N2-Retransmissions

T1-Stat

Description: A profile that displays information about the state of a T1 line and its channels.

Usage: Use the Read and List commands to make T1-Stat the working profile and list its contents. For example:

```
admin> read t1-stat {1 8 1}
T1-STAT/{ shelf-1 slot-8 1 } read
```

```

admin> list
[in T1-STAT/{ shelf-1 slot-8 1 }]
physical-address*={ shelf-1 slot-8 1 }
line-state=loss-of-sync
channel-state=[unavailable unavailable unavailable unavailable+
error-count=[ 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 ]
loss-of-carrier=False
loss-of-sync=True
ais-receive=False
yellow-receive=False
ber-receive=False
carrier-established=False
network-loopback=False

```

See Also: AIS-Receive, BER-Receive, Carrier-Established, Channel-State, Error-Count, Line-State, Loss-Of-Carrier, Loss-Of-Sync, Network-Loopback, Physical-Address, Yellow-Receive

T3

Description: Specifies the action to take when the code image for a T3 card is present in a Tar file.

Usage: Specify one of the following settings:

- Auto (the default) causes the system to load images for cards that are installed in the MAX TNT, and to skip images for cards that are not installed.
- Load causes the system to load the image, even if there is no card of that type installed.
- Skip causes the system to skip the image, even if there is a card of that type installed.

Dependencies: A card is considered present in the system if a Slot-Type profile exists for that card type. The system creates a Slot-Type profile when it first detects the presence of a card, and does not delete the profile unless the administrator uses the Slot -r command to permanently remove a card that is no longer installed in the system, or clears NVRAM. To ensure that the system does not load unnecessary images, use Slot -r to remove Slot-Type profiles for cards that are no longer installed in the system.

Location: Load-Select

See Also: 8E1, 8T1, AMDM, CAPADSL, DMTADSL, DS3-ATM, Enet, Enet2, HDLC, HDLC2, IDSL, MDM56K, MDM-V34, SDSL, SDSL70D, SDSL70V, SWAN, UDS3, UE1, Unknown-Cards, UT1

T3 (profile)

Description: A profile that contains configuration settings for a DS3 line.

Usage: Use the Read and List commands to make T3 the working profile and list its contents. For example:

```
admin> read t3 {1 15 2}
T3/{ shelf-1 slot-15 2 } read
admin> list
[in T3/{ shelf-1 slot-15 2 }]
name=trunk-3
physical-address*={ shelf-1 slot-15 2 }
enabled=no
frame-type=m13
line-length=0-255
```

You can then use the Set command to modify the settings in the profile. To close the profile and save your changes:

```
admin> write
T3/{ shelf-1 slot-15 2 } written
```

See Also: Enabled, Frame-Type, Line-Length, Name, Physical-Address

T302-Timer

Description: Specifies the number of milliseconds the system waits for additional called number information for an incoming call.

The MAX TNT begins collecting the trailing digit information, and for each call Setup message from the switch that does *not* include the Sending Complete Information Element, it starts the T302 timer (the Setup Ack timer). The MAX TNT stops the timer when it receives a message that includes the Sending Complete Information Element. The MAX TNT assumes there are no more trailing digit digits to collect when the T302 timer stops or expires.

Usage: Specify a value from 100 to 30000 (.10 second to 30 seconds). The default is 10000 (10 seconds).

Location: T1 {shelf-*N* slot-*N* *N*} > Line-Interface, E1 {shelf-*N* slot-*N* *N*} > Line-Interface

See Also: Overlap-Receiving, PRI-Prefix-Number , Trailing-Digits

T391-Val

Description: Sets the Link Integrity Verification polling timer.

Usage: Specify the number of seconds as an integer from 5 to 30. The value you enter should be less than the value of T392-Val. The default is 10, which indicates that after N391-Val status requests spaced 10 seconds apart, the UNI-DTE device requests a full status report.

Example: `set t391-val=15`

Dependencies: If Link-Type=DCE, T391-Val does not apply.

Location: Frame-Relay *fr-name*

See Also: Link-Type, N391-Val, T392-Val

T392-Val

Description: Specifies the interval (in seconds) in which Status Enquiry messages should be received. The network records an error if it does not receive a Status Enquiry within T392 seconds.

Usage: Specify an integer from 5 to 30. The default is 15.

Example: `set t392-val=20`

Dependencies: If Link-Type is DTE, T392-Val does not apply.

Location: Frame-Relay *fr-name*

See Also: Link-Type, T391-Val

T3-Stat

Description: A profile that displays information about the state of a DS3 line and its individual multiplexed DS2 lines.

Usage: Use the Read and List commands to make T3-Stat the working profile and list its contents. For example:

```
admin> read t3-stat {1 8 1}
T3-STAT/{ shelf-1 slot-8 1 } read
admin> list
[in T3-STAT/{ shelf-1 slot-8 1 }]
physical-address*={ shelf-1 slot-8 1 }
line-state=active
ds2-state=[active active active active active active active]
```

See Also: DS2-State, Line-State, Physical-Address

Table-Config N

Description: A subprofile that enables you to configure entries for a local DNS table.

Usage: With DNS-Local-Table as the working profile, list the Table-Config subprofiles. For example:

```
admin> list table-config
[in IP-GLOBAL:dns-local-table:table-config]
table-config[1]={ host1.abc.com 10.1.2.3 }
table-config[2]={ " " 0.0.0.0 }
table-config[3]={ " " 0.0.0.0 }
table-config[4]={ " " 0.0.0.0 }
table-config[5]={ " " 0.0.0.0 }
table-config[6]={ " " 0.0.0.0 }
table-config[7]={ " " 0.0.0.0 }
table-config[8]={ " " 0.0.0.0 }
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: IP-Global > DNS-Local-Table

See Also: Auto-Update, Enabled

Tac-Auth-Client

Description: A subprofile that defines how the MAX TNT interacts as a client of TACACS authentication servers.

Usage: With External-Auth as the working profile, list the Tac-Auth-Client subprofile. For example:

```
admin> list tac-auth-client
[in EXTERNAL-AUTH:tac-auth-client]
auth-server-1=0.0.0.0
auth-server-2=0.0.0.0
auth-server-3=0.0.0.0
auth-port=0
auth-src-port=0
auth-key=" "
auth-timeout=0
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: External-Auth

See Also: Auth-Key, Auth-Port, Auth-Server-N (N=1–3), Auth-Src-Port, Auth-Timeout

TacPlus-Acct-Client

Description: A subprofile that defines how the MAX TNT interacts as a client of TACACS+ accounting servers.

Usage: With External-Auth as the working profile, list the TacPlus-Acct-Client subprofile. For example:

```
admin> list tacplus-acct-client
[in EXTERNAL-AUTH:tacplus-acct-client]
acct-server-1=0.0.0.0
acct-server-2=0.0.0.0
acct-server-3=0.0.0.0
acct-port=0
acct-src-port=0
acct-key=" "
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: External-Auth

See Also: Acct-Key, Acct-Port, Acct-Server-N (N=1–3), Acct-Src-Port

TacPlus-Auth-Client

Description: A subprofile that defines how the MAX TNT interacts as a client of TACACS+ authentication servers.

Usage: With External-Auth as the working profile, list the TacPlus-Auth-Client subprofile. For example:

```
admin> list tacplus-auth-client
[in EXTERNAL-AUTH:tacplus-auth-client]
auth-server-1=0.0.0.0
auth-server-2=0.0.0.0
auth-server-3=0.0.0.0
auth-port=0
auth-src-port=0
auth-key=" "
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: External-Auth

See Also: Auth-Key, Auth-Port, Auth-Server-N (N=1–3), Auth-Src-Port

Target-Utilization

Description: Specifies a percentage of line utilization to use as a threshold for determining when to add or subtract bandwidth. The device adds bandwidth when average line utilization (ALU) exceeds the Target-Utilization value, and subtracts bandwidth when it falls below that value.

Usage: Specify a number from 0 to 100. The default is 70.

Example: `set target-utilization=70`

Location: Answer-Defaults > MPP-Answer, Connection *station* > MP-Options

See Also: Add-Persistence, Bandwidth-Monitor-Direction, Base-Channel-Count, Decrement-Channel-Count, Dynamic-Algorithm, Increment-Channel-Count, Maximum-Channels, Minimum-Channels, MPP-Answer, MPP-Options, Seconds-History, Sub-Persistence

TCP

Description: Enables or disables the TCP command from the terminal-server interface.

Usage: Specify Yes or No. The default is No.

- Yes enables a user to initiate a TCP session from the terminal server.
- No prevents a user from initiating a TCP session from the terminal server.

Example: `set tcp=yes`

Dependencies: If terminal services are disabled, TCP does not apply.

Location: Terminal-Server > Terminal-Mode-Configuration

See Also: Ping, PPP, Rlogin, SLIP, Telnet, Terminal-Mode-Configuration, Traceroute

TCP-Clear-Answer

Description: A subprofile containing default settings for TCP-Clear connections.

Usage: With Answer-Defaults as the working profile, list the TCP-Clear-Answer subprofile. For example:

```
admin> list tcp-clear-answer
[ in ANSWER-DEFAULTS:tcp-clear-answer ]
enabled=yes
detect-end-of-packet=no
end-of-packet-pattern=" "
flush-length=256
flush-time=20
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: Answer-Defaults

See Also: Detect-End-Of-Packet, Enabled, End-Of-Packet-Pattern, Flush-Length, Flush-Time

TCP-Clear-Options

Description: A subprofile with default settings for TCP-Clear connections.

Usage: With a Connection profile as the working profile, list the TCP-Clear-Options subprofile. For example:

```
admin> list tcp
[in CONNECTION/tim:tcp-clear-options]
host=" "
port=0
host1=" "
port1=0
host2=" "
port2=0
host3=" "
port3=0
detect-end-of-packet=no
end-of-packet-pattern=" "
flush-length=256
flush-time=20
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Dependencies: Consider the following:

- For TCP-Clear-Options to apply, you must set Enabled=Yes in the TCP-Clear-Answer subprofile.
- TCP-Clear connections are managed on a per-VRouter basis. If a Connection profile or RADIUS profile is associated with a VRouter and configured for TCP-Clear, the system locates the specified host only in the VRouter's routing table.

Location: Connection *station*

See Also: Detect-End-Of-Packet, End-Of-Packet-Pattern, Flush-Length, Flush-Time, Host, Host1, Host2, Host3, Port, Port1, Port2, Port3, TCP-Clear-Answer

TCP-Estab

Description: Specifies whether a filter should match only established TCP connections.

Usage: Specify Yes or No. The default is No.

- Yes specifies that the filter matches only packets that are part of established TCP connections.
- No specifies that the filter can match packets that are not part of an established TCP connection.

Example: `set tcp-estab=yes`

Dependencies: TCP-Estab applies only if Protocol=6 (TCP).

Location: Filter *filter-name* > Input-Filters > IP-Filter,
Filter *filter-name* > Output-Filters > IP-Filter

See Also: Input-Filters, IP-Filter, Output-Filters, Protocol

TCP-Timeout

Description: Specifies a timeout period for TCP connection attempts that use the DNS-List-Attempt feature.

TCP-Timeout applies to all TCP connection attempts initiated from the MAX TNT, including Telnet, Rlogin, TCP-Clear, and the TCP portion of DNS queries. It applies to established TCP connections as well as to initial attempts to connect.

When a user in a client-software terminal-server session enters a hostname, DNS returns a list of IP addresses for the host. If the first addresses prove unreachable, and the attempts to reach them do not time out quickly enough, the client software times out before finding a good address. The TCP-Timeout setting enables the administrator to adjust the TCP retry timer so that each unsuccessful connection attempt terminates quickly, allowing more rapid progress through the list to a good address if one is present. (Some client software times out in less than 170 seconds.)

Usage: Specify an integer indicating the number of seconds for a TCP timeout. Valid values range from 0 to 200 seconds. At the default value of 0 (zero), the system attempts a fixed number of retries at escalating intervals, adding up to about 170 seconds total. (Other limits in the system terminate TCP retries after about 170 seconds, even if the value is set to a higher number.) If you set TCP-Timeout to a nonzero value, the value is the number of seconds TCP retries persist. After the specified number of seconds, the retries stop and the connection is considered lost.

The optimal setting for TCP-Timeout must be determined by experience, and depends on the characteristics of the TCP destination hosts. For example, if the destinations are all on a LAN under the same administrative control as the MAX TNT and are lightly loaded, then a short timeout (such as a few seconds) might be reasonable, because a host that does not respond within that interval is probably down. Conversely, if the environment includes servers with longer network latency times (such as those connected across the WAN), if the load is high in the network or the router, or if the characteristics of the remote hosts are not well known, a longer timeout is appropriate. Values of 30 to 60 seconds are common in UNIX TCP implementations.

Example: `set tcp-timeout=30`

Location: IP-Global

See Also: DNS-List-Attempt, DNS-List-Size

Telco-Options

Description: A subprofile that enables you to set telephone-company options for a connection.

Usage: With a Connection profile as the working profile, list the Telco-Options subprofile. For example:

```
admin> list telco-options
[in CONNECTION/tim:telco-options]
answer-originate=ans-and-orig
call-type=nailed-mode-off
nailed-groups=1
ft1-caller=no
force-56kbps=no
data-service=56k-restricted
call-by-call=0
billing-number=" "
transit-number=" "
dialout-allowed=no
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: Connection *station*

See Also: Answer-Originate, Billing-Number, Call-By-Call, Call-Type, Data-Service, Dialout-Allowed, Force-56Kbps, FT1-Caller, Nailed-Groups, Transit-Number

Telnet

Description: Enables or disables the Telnet command from the terminal-server interface.

Usage: Specify Yes or No. The default is No.

- Yes specifies that operators can invoke Telnet sessions from the terminal-server interface.
- No disables the use of Telnet in the terminal server.

Example: `set telnet=yes`

Dependencies: If terminal services are disabled, Telnet does not apply.

Location: Terminal-Server > Terminal-Mode-Configuration > Telnet-Options

See Also: Ping, PPP, Rlogin, SLIP, TCP, Telnet-Options, Terminal-Mode-Configuration, Traceroute

Telnet-Host-Auth

Description: Determines whether immediate Telnet sessions require local authentication or authentication only by the Telnet host.

Usage: Specify Yes or No. The default is No.

- Yes specifies that the session requires authentication only by the Telnet host.
- No specifies that the session must be locally authenticated before undergoing authentication by the Telnet host.

Example: `set telnet-host-auth=yes`

Dependencies: If terminal services are disabled, Telnet-Host-Auth does not apply.

Location: Terminal-Server > Immediate-Mode-Options

See Also: Immediate-Mode-Options, Telnet

Telnet-Mode

Description: Specifies the default Telnet mode.

Usage: Specify one of the following values:

- ASCII (the default) specifies standard 7-bit mode. In 7-bit mode, bit 8 is set to 0 (zero).
- Binary specifies that the MAX TNT attempts to negotiate the Telnet 8-bit binary option with the server at the remote end. You can run X -Modem and other 8-bit file transfer protocols in this mode.
- Transparent specifies that you can send and receive binary files without having to be in Binary mode. You can run the same file transfer protocols that Binary mode makes available.

Example: `set telnet-mode=ascii`

Dependencies: Consider the following:

- In 8-bit binary mode, the Telnet escape sequence does not operate. The Telnet session can close only if one end of the connection quits the session. If you are a local user not connected through a digital modem, the remote-end user must quit.
- A user can override the Binary setting on the Telnet command line.
- If terminal services are disabled, Telnet-Mode does not apply.
- Not all devices support the Binary mode option. Some devices partially follow the Telnet RFC, but do not enforce the Telnet restriction of using only 7-bit ASCII. They accept 8-bit data and, after doing the appropriate processing, forward all data received. If you specify Transparent for these devices, you can escape the IAC character and add a null after every CR to cause the devices to work.

Location: Terminal-Server > Terminal-Mode-Configuration > Telnet-Options

See Also: Telnet, Telnet-Options, Terminal-Mode-Configuration

Telnet-Options

Description: A nested subprofile that contains terminal-server configuration options for interactive users.

Usage: With Terminal-Server as the working profile, list the Terminal-Mode-Configuration subprofile's Telnet-Options subprofile. For example:

```
admin> list terminal terminal-mode-configuration telnet
[ in TERMINAL-SERVER:terminal-mode-configuration:telnet-options ]
telnet=no
telnet-mode=ascii
auto-telnet=no
local-echo=no
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: Terminal-Server

See Also: Auto-Telnet, Local-Echo, Telnet, Telnet-Mode

Telnet-Password

Description: Specifies the password users must enter to access the MAX TNT unit via Telnet. If you specify a password, a user is allowed three tries of 60 seconds each to enter the correct password.

Usage: Specify a password of up to 20 characters. The default is null. If you accept the default, the MAX TNT does not prompt a user for a password.

Example: `set telnet-password=Ascend`

Location: IP-Global

See Also: Auto-Telnet, Telnet, Telnet-Host-Auth

Temporary-Route

Description: Specifies that the MAX TNT adds the route to the routing table only when the link is up. Temporary-Route is especially useful for nailed-up IP-routing connections.

Usage: Specify Yes or No. The default is No.

- Yes excludes a route from the routing table when its connection is down.
- No includes the route in the routing table even if its connection is down.

Example: `set temporary-route=no`

Location: Connection *station* > IP-Options

See Also: IP-Options, IP-Routing-Enabled, Private-Route, RIP

Terminal-Mode-Configuration

Description: A subprofile containing terminal-server configuration options for interactive users.

Usage: With Terminal-Server as the working profile, list the Terminal-Mode-Configuration subprofile. For example:

```
admin> list terminal
[ in TERMINAL-SERVER:terminal-mode-configuration ]
silent-mode=no
clear-screen=yes
system-password=" "
banner="** Ascend Terminal Server **"
login-prompt="Login: "
password-prompt="Password: "
third-login-prompt=" "
third-prompt-sequence=last
prompt="ascend% "
terminal-type=vt100
clear-call=no
buffer-chars=yes
ping=no
traceroute=no
tcp=no
telnet-options={ no ascii no no }
ip-add-msg="IP address is "
prompt-format=no
login-timeout=300
rlogin-options={ no 1023 128 }
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: Terminal-Server

See Also: Banner, Buffer-Chars, Clear-Call, Clear-Screen, IP-Add-Msg, Login-Prompt, Password-Prompt, Ping, Prompt, Prompt-Format, Rlogin-Options, Silent-Mode, System-Password, TCP, Telnet-Options, Terminal-Type, Third-Login-Prompt, Traceroute

Terminal-Server

Description: A profile that enables you to configure terminal-server features.

Usage: Use the Read and List commands to make Terminal-Server the working profile and list its contents. For example:

```
admin> read term
TERMINAL-SERVER read

admin> list
[in TERMINAL-SERVER]
enabled=no
security-mode=none
modem-configuration={ will-v42 33600-max-baud +
terminal-mode-configuration={ no yes "" +
immediate-mode-options={ none no "" 0 }
menu-mode-options={ no no no "" 0.0.0.0 "" 0.0.0.0 "" 0.0.0.0 +
ppp-mode-configuration={ no 5 no session-ppp }
slip-mode-configuration={ no no }
dialout-configuration={ no no 5000 }
```

You can then use the Set command to modify the settings in the profile. To close the profile and save your changes:

```
admin> write
TERMINAL-SERVER written
```

See Also: Dialout-Configuration, Enabled, Immediate-Mode-Options, Menu-Mode-Options, Modem-Configuration, PPP-Mode-Configuration, Security-Mode, SLIP-Mode-Configuration, Terminal-Mode-Configuration,

Terminal-Type

Description: Specifies the default terminal type for Telnet and Rlogin sessions.

Usage: Specify a terminal type. You can enter up to 15 characters. The default is vt100.

Example: `set terminal-type=vt100`

Dependencies: If terminal services are disabled, Terminal-Type does not apply.

Location: Terminal-Server > Terminal-Mode-Configuration

See Also: Terminal-Mode-Configuration

Term-Rate

Description: Specifies the bit rate of a MAX TNT serial port. When you modify the bit rate of a serial port, you might also need to change the data-rate setting of the terminal accessing that port.

Usage: Specify one of the following values:

57600
38400
19200
9600 (the default)
4800
2400

Example: `set term-rate=9600`

Location: Serial {shelf-*N* slot-*N* *N*}

See Also: Auto-Logout, Flow-Control, Physical-Address, User-Profile

Text-*N* (*N*=1–4)

Description: Specifies text that the MAX TNT displays in the terminal-server menu for the Telnet host specified by Host-*N*.

Usage: Specify a text string describing the corresponding Telnet host. The default is null.

Example: `set text-1=database-server`

Dependencies: When terminal services are disabled, Text-*N* does not apply. In addition, Text-*N* is ignored if Remote-Configuration is set to Yes.

Location: Terminal-Server > Menu-Mode-Options

See Also: Menu-Mode-Options, Remote-Configuration

Third-Login-Prompt

Description: Specifies an optional third prompt for a terminal-server login. When a user logs into the terminal server, he or she supplies a user name and password. The Third-Login-Prompt setting enables the MAX TNT to get additional information from the user. The MAX TNT does not use the information, but passes it to the RADIUS server. The user can enter up to 80 characters.

Usage: Specify up to 20 characters. The default is null, which specifies that no third prompt appears.

Example: `set third-login-prompt=ID Number>>`

If Third-Prompt-Sequence=First, the terminal server displays the third prompt before the login and password prompts:

```
ID Number>>
Login:
Password:
```

If Third-Prompt-Sequence=Last, the terminal server displays the third prompt after the login and password prompts:

```
Login:
Password:
ID Number>>
```

Dependencies: Consider the following:

- If authentication does not occur through the RADIUS server, the terminal server does not display the Third-Login-Prompt.
- If terminal services are disabled, or if Auth-Type is set to a value other than RADIUS, Third-Login-Prompt does not apply.

Location: Terminal-Server > Terminal-Mode-Configuration

See Also: Auth-Type, Login-Prompt, Password-Prompt, Prompt, Prompt-Format, Terminal-Mode-Configuration, Third-Prompt-Sequence

Third-Party

Description: Enables or disables OSPF third-party routing for a static route. When Third-Party=Yes, the Gateway-Address value is the third-party router for the route.

Usage: Specify Yes or No. The default is No.

- Yes enables third-party routing for the OSPF router.
- No disables third-party routing for the OSPF router.

Example: `set third-party=yes`

Location: IP-Route *name*

See Also: Gateway-Address

Third-Prompt-Sequence

Description: Specifies whether the Third-Login-Prompt should appear before or after the Login-Prompt and Password-Prompt in the login sequence.

Usage: Specify First or Last. The default is Last.

Example: `set third-prompt-sequence=last`

Location: Terminal-Server > Terminal-Mode-Configuration

See Also: Login-Prompt, Password-Prompt, Prompt, Prompt-Format, Terminal-Mode-Configuration, Third-Login-Prompt

Ticks

Description: Specifies the distance to the destination network, in IBM PC clock ticks (one-eighteenth of a second). The Ticks setting is for round-trip timer calculation and for determining the nearest server of a given type.

Usage: Enter an integer. The default is 12.

Example: `set ticks=6`

Location: IPX-Route *name*

See Also: Active-Route, Dest-Network, Hops, Name, Profile-Name, Server-Node, Server-Socket, Server-Type

Time

Description: A subprofile that specifies the current hour, minute, and second.

Usage: With Timedate as the working profile, list the Time subprofile. For example:

```
admin> list time
[in TIMEOUT/time]
hour=12
minute=37
second=33
```

You can then use the Set command to modify the settings in the subprofile.

```
admin> set hour=16
```

As an alternative, you can simply use the Set command:

```
admin> set time hour=16
```

Dependencies: You can also use the Date command to set the current hour, minute, and second.

Location: Timedate

See Also: Date

Timedate

Description: A profile that shows the current system time and date.

Usage: Use the Read and List commands to make Timedate the working profile and list its contents. For example:

```
admin> read time
TIMEDATE read

admin> list
[in TIMEDATE]
time={ 12 37 33 }
date={ Friday October 18 1996 }
```

You can then use the Set command to modify the settings in the profile. To close the profile and save your changes:

```
admin> write  
TIMEDATE written
```

See Also: Date, Time

TNT-ADSL-Enabled

Description: Indicates whether ADSL cards are enabled and modem cards disabled.

Usage: The TNT-ADSL-Enabled setting is read only. Yes indicates that ADSL cards are enabled and modem cards disabled. No indicates that ADSL cards are disabled.

Example: `tnt-adsl-enabled=yes`

Location: Base

See Also: TNT-IDSL-Enabled, TNT-SDSL-Enabled

TNT-IDSL-Enabled

Description: Indicates whether ADSL and IDSL cards are enabled, and modem cards disabled.

Usage: The TNT-IDSL-Enabled setting is read only. Yes indicates that ADSL and IDSL cards are enabled, and modem cards disabled. No indicates that both ADSL and IDSL cards are disabled.

Example: `tnt-idsl-enabled=yes`

Dependencies: Base

See Also: TNT-ADSL-Enabled, TNT-SDSL-Enabled

TNT-SDSL-Enabled

Description: Indicates whether ADSL and SDSL cards are enabled, and modem cards disabled.

Usage: The TNT-SDSL-Enabled setting is read only. Yes indicates that ADSL and SDSL cards are enabled, and modem cards disabled. No indicates that both ADSL and SDSL cards are disabled.

Example: `tnt-sdsl-enabled=yes`

Dependencies: Base

See Also: TNT-ADSL-Enabled, TNT-IDSL-Enabled

Toggle-Screen

Description: Specifies whether an interactive user can switch between terminal-server menu mode and command mode.

Usage: Specify Yes or No. The default is Yes.

- Yes specifies that terminal-server users can switch between command mode and menu mode.
- No specifies that users have access only to the screen that you configure to come up when a user logs in.

Example: `set toggle-screen=no`

Dependencies: If terminal services are disabled, Toggle-Screen does not apply.

Location: Terminal-Server > Menu-Mode-Options

See Also: Menu-Mode-Options, Start-With-Menus

T-Online

Note: This setting is for a customer-specific application outside of the United States. It is not intended for general use.

Description: Specifies whether the MAX TNT routes calls to a T-Online server. PRI-to-PRI switching for T-Online provides a network side implementation of NET-5 to support switching calls from the Deutsche Telekom public network to a T-Online server. If T-Online is enabled, the MAX TNT compares the phone number and subaddress number it obtains from the call Setup and Info messages to the Dirdo information stored in RADIUS. It switches the inbound call to the T-Online server if it finds any of the following matches in RADIUS:

- The phone number and subaddress of the incoming call match a phone number and subaddress entry in RADIUS.
- The phone number matches a phone number entry in RADIUS and there is no subaddress.
- The subaddress matches a subaddress entry in RADIUS and there is no phone number.
- There is no incoming call phone number or subaddress.

The MAX TNT begins collecting the subaddress information, and for each call Setup message from the switch that does *not* include "Sending Complete Information Element," it starts the T302 timer (the Setup Ack timer). The MAX TNT stops the timer when it receives a message that includes "Sending Complete Information Element." The MAX TNT assumes there are no more subaddress digits to collect when the T302 timer stops or expires.

Usage: Specify Yes or No. The default is No.

- Yes specifies that calls are switched from the public network to T-Online on the basis of a user-defined match.
- No specifies that T-Online switching is disabled.

Example: `set t-online=yes`

Location: System

See Also: T302-Timer, T-Online-Most-Avail-Chan, T-Online-Offset, T-Online-Type

T-Online-Most-Avail-Chan

Note: This setting is for a customer-specific application outside of the United States. It is not intended for general use.

Description: Specifies which link to choose for redirecting a call to a T-Online server.

Usage: Specify Yes or No. The default is No.

- Yes specifies that the MAX TNT chooses the link with the most available channels.
- No specifies that the MAX TNT chooses the link according to a round-robin method.

Example: `set t-online-most-avail-chan=yes`

Dependencies: Consider the following:

- T-Online-Most-Avail-Chan does not apply if T-Online=No.
- Trunk group 8 is reserved for DTPT calls when T-Online=Yes.

Location: System

See Also: T302-Timer, T-Online, T-Online-Offset, T-Online-Type

T-Online-Offset

Note: This setting is for a customer-specific application outside of the United States. It is not intended for general use.

Description: Specifies the offset to the TE line number.

The offset you specify is used to form the TE-NT pair of E1 PRI lines. PRI-to-PRI switching requires two E1 PRI lines. A call is received on one line (the TE line, which communicates with the carrier switch) and internally switched to another (the NT line, which communicates with the ZGR server). The MAX TNT determines which line to use for the NT line by applying the offset to the TE line number.

Usage: Specify an integer from 1 to 4. For example, if T-Online-Offset is set to 1 and the MAX TNT receives a call on E1 PRI line 5, the NT line is line 6.

Example: `set t-online-offset=1`

Dependencies: If T-Online=No, T-Online-Offset does not apply.

Location: System

See Also: T302-Timer, T-Online, T-Online-Most-Avail-Chan, T-Online-Type

T-Online-Type

Note: This setting is for a customer-specific application outside of the United States. It is not intended for general use.

Description: Specifies the E1 PRI line's function for T-Online PRI-to-PRI switching.

Usage: Specify one of the following values:

- None (the default) specifies that no PRI-to-PRI switching takes place.
- TE specifies that the line communicates with the carrier switch.
- NT specifies that the line communicates with the ZGR server.

Example: `set t-online-type=TE`

Dependencies: Consider the following:

- If T-Online=No, T-Online-Type does not apply.
- One TE-configured line can switch calls to one or more NT-configured lines.

Location: E1 {shelf-*N* slot-*N* *N*} > Line-Interface

See Also: T302-Timer, T-Online, T-Online-Most-Avail-Chan, T-Online-Offset

Top-Status

Description: Specifies the default content of the upper-right portion of the status window.

Usage: Specify one of the following values:

- General-Info (the default) specifies that the MAX TNT displays general information and statistics for the system.
- Log-Window specifies that the MAX TNT displays saved system-event log entries.
- Line-Status specifies that the MAX TNT displays the status of system telephony interfaces.

Example: `set top-status=general-info`

Location: User *name*

See Also: User

TOS-Filter

Description: Specifies the name of a Filter profile that defines a Type-of-Service (TOS) filter.

Usage: Specify the name of a defined profile. The default is null.

Example: `set tos-filter=my-tos-filter`

Location: Connection *station* > IP-Options

See Also: TOS-Filter (subprofile), TOS-Options

TOS-Filter (subprofile)

Description: A subprofile containing a TOS filter specification. A Filter profile contains several levels of subprofiles. A TOS-Filter subprofile is in an Input-Filters *N* or Output-Filters *N* subprofile.

Usage: With a Filter profile as the working profile, list an TOS-Filter subprofile. For example:

```
admin> list input 1 tos-filter
[in FILTER/"":input-filters[1]:tos-filter]
protocol=0
source-address-mask=0.0.0.0
source-address=0.0.0.0
dest-address-mask=0.0.0.0
dest-address=0.0.0.0
Src-Port-Cmp=none
source-port=0
Dst-Port-Cmp=none
dest-port=0
precedence=000
type-of-service=normal
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: Filter *filter-name* > Input-Filters > Input-Filters *N*,
Filter *filter-name* > Output-Filters > Output-Filters *N*

See Also: Dest-Address, Dest-Address-Mask, Dest-Port, Dst-Port-Cmp, Input-Filters *N*, Output-Filters *N*, Precedence, Protocol, Source-Address, Source-Address-Mask, Source-Port, Src-Port-Cmp, Type-of-Service

TOS-Options

Description: A subprofile that enables you to configure Type-of-Service (TOS) settings.

Usage: With a Connection profile as the working profile, list the TOS-Options subprofile. For example:

```
admin> list ip-options tos-options
[in CONNECTION/"":ip-options:tos-options]
active=no
precedence=000
type-of-service=normal
apply-to=input
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: Connection *station* > IP-Options

See Also: Active, Apply-To, Precedence, Type-of-Service

Total-Count

Description: Indicates the total number of a particular class of devices present in the system.

Usage: The Total-Count setting is read only.

Example: `total-count=10`

Location: Device-Summary

See Also: Device-Class, Disabled-Count, Operational-Count

Traceroute

Description: Enables or disables the use of the Traceroute command in the terminal-server interface.

Usage: Specify Yes or No. The default is No.

- Yes specifies that terminal-server users can use the Traceroute command.
- No disables the Traceroute command.

Example: `set traceroute=yes`

Dependencies: If terminal services are disabled, Traceroute does not apply.

Location: Terminal-Server > Terminal-Mode-Configuration

See Also: Ping, PPP, Rlogin, SLIP, TCP, Telnet, Telnet-Options, Terminal-Mode-Configuration

Trailing-Digits

Description: Specifies the number of digits required to follow the prefix number for the MAX TNT to consider the called number complete.

Callers can indicate Sending Complete by a method such as dialing the pound-sign (#). If a caller does not indicate Sending Complete and the MAX TNT cannot determine whether the called number was complete, the MAX TNT waits until the T302 timer expires, even if the caller has dialed all the required digits. The Trailing-Digits setting enables the MAX TNT to reset the timer when the specified number of digits has been received.

Usage: Specify a value from 1 to 6. The default value is 2.

Example: `set trailing-digits=1`

Dependencies: If Overlap-Receiving=No, the PRI-Prefix-Number, Trailing-Digits, and T302-Timer settings do not apply.

Location: T1 {shelf-*N* slot-*N* *N*} > Line-Interface, E1 {shelf-*N* slot-*N* *N*} > Line-Interface

See Also: Overlap-Receiving, PRI-Prefix-Number , T302-Timer

Transit-Delay

Description: Specifies the estimated number of seconds it takes to transmit a Link State Update (LSU) packet over the interface. Before transmission, Link State Advertisements (LSAs) contained in the LSU packet have their ages incremented by the amount you specify.

Usage: Specify a number greater than 0 (zero). The value you specify should take into account transmission and propagation delays. The default is 1.

Example: `set transit-delay=5`

Location: IP-Interface { {shelf-*N* slot-*N* *N*} *N*} > OSPF,
Connection *station* > IP-Options > OSPF-Options

See Also: IP-Options, OSPF, OSPF-Options, Retransmit-Interval

Transit-Number

Description: Specifies an Interexchange Carrier (IEC) for long-distance PRI calls.

Usage: Specify one of the following dialing prefixes:

288 (AT&T)
222 (MCI)
333 (Sprint)

The default is null. If you accept the default, the MAX TNT uses any available IEC for long-distance calls.

Example: `set transit-number=222`

Dependencies: If a nailed-up Frame-Relay datalink connection is in use, Transit-Number does not apply.

Location: Connection *station* > Telco-Options, Frame-Relay *fr-name*

See Also: Telco-Options

Transmit-Power

Description: Indicates the transmission power level in decibels.

Usage: The Transmit-Power setting is read only.

Location: ADSL-CAP-Stat {shelf-*N* slot-*N* *N*} > Physical-Statistic

See Also: Line-Quality, Line-Up-Timer, RS-Corrected-Errors, RS-Errors, RX-Attenuation, RX-Signal-Present, Self-Test

Trap

Description: A profile containing settings that determine how the MAX TNT traps events.

A trap is a mechanism in SNMP for reporting system change in real time. To report system change, the MAX TNT sends a traps-PDU (Protocol Data Unit) to the SNMP manager. (For the most up-to-date information about events, see the Ascend Enterprise MIB.)

Usage: Use the Read and List commands to make Trap the working profile and list its contents. For example:

```
admin> read trap host-231
TRAP/host-231 read

admin> list
[ in TRAP/host-231 ]
host-name*=host-231
community-name=Ascend
host-address=10.2.3.4/24
alarm-enabled=yes
security-enabled=yes
port-enabled=no
slot-enabled=yes
coldstart-enabled=yes
warmstart-enabled=yes
linkdown-enabled=yes
linkup-enabled=yes
ascend-enabled=yes
console-enabled=yes
use-exceeded-enabled=yes
password-enabled=yes
fr-linkup-enabled=yes
fr-linkdown-enabled=yes
event-overwrite-enabled=yes
radius-change-enabled=yes
mcast-monitor-enabled=yes
lan-modem-enabled=yes
dir-do-enabled=yes
slot-profile-change-enabled=yes
power-supply-enabled=yes
multishelf-enabled=yes
authentication-enabled=yes
```

You can then use the Set command to modify the settings in the profile. To close the profile and save your changes:

```
admin> write
TRAP/host-231 written
```

See Also: Alarm-Enabled, Ascend-Enabled, Authentication-Enabled, Coldstart-Enabled, Community-Name, Console-Enabled, Dirdo-Enabled, Event-Overwrite-Enabled, FR-LinkDown-Enabled, FR-LinkUp-Enabled, Host-Address, Host-Name, LAN-Modem-Enabled, LinkDown-Enabled, LinkUp-Enabled, Mcast-Monitor-Enabled, Multishelf-Enabled, Password-Enabled, Port-Enabled, Power-Supply-Enabled, RADIUS-Change-Enabled, Security-Enabled, Slot-Enabled, Slot-Profile-Change-Enabled, Use-Exceeded-Enabled, Warmstart-Enabled

Trunk-Group

Description: Specifies a trunk group number.

- In a T1, E1, or SWAN profile, Trunk-Group assigns a channel to a trunk group.
- In a Call-Route profile, Trunk-Group indicates “route calls received on this trunk group of channels to me (the address in the index field).”

Usage: Specify a trunk group number from 2 to 9. In a T1 or E1 profile, the default is 9. In a Call-Route profile, the default is 0 (zero), which matches any trunk group number.

Example: `set trunk-group=4`

Dependencies: Use-Trunk-Groups must be set to Yes for Trunk-Group to have an effect.

Location: Call-Route { { {shelf-*N* slot-*N* *N*} *N*} *N*},
E1 {shelf-*N* slot-*N* *N*} > Line-Interface > Channel-Config *N*,
SWAN {shelf-*N* slot-*N* *N*} > Line-Config,
T1 {shelf-*N* slot-*N* *N*} > Line-Interface > Channel-Config *N*

See Also: Call-Route, Channel-Config *N*, Line-Config, Use-Trunk-Groups

TS-Idle-Mode

Description: Specifies when the MAX TNT is to reset the terminal-server idle-session timer.

Usage: Specify one of the following values:

- No-Idle (the default) disables the idle timer.
- Input-Only-Idle specifies that the MAX TNT resets the timer when an input character is received.
- Input-Output-Idle specifies that the MAX TNT resets the timer when either input or output characters are processed.

Example: `set ts-idle-mode=input-only-idle`

Location: Answer-Defaults > Session-Info, Connection *station* > Session-Options

See Also: Session-Info, Session-Options, TS-Idle-Timer

TS-Idle-Timer

Description: Specifies the number of seconds a terminal-server session can remain idle before being terminated.

Usage: Specify a number from 0 to 65535. The default is 120.

Example: `set ts-idle-timer=360`

Dependencies: The TS-Idle-Timer setting has no effect if TS-Idle-Mode=No-Idle.

Location: Answer-Defaults > Session-Info, Connection *station* > Session-Options

See Also: Session-Info, Session-Options, TS-Idle-Mode

Tunneling-Protocol

Description: Specifies the protocol to use when creating a tunnel for this profile.

Usage: Specify one of the following values:

- ATMP-Protocol specifies Ascend Tunnel Management Protocol (ATMP).
- L2TP-Protocol specifies Layer 2 Tunneling Protocol (L2TP). You must choose this setting in order to pass traffic to an L2TP Network Server (LNS).
- PPTP-Protocol specifies Point-to-Point Tunneling Protocol (PPTP). You must choose this setting in order to pass traffic to a PPTP Network Server (PNS).
- IPINIP specifies that IP packets are encapsulated in IP.

Example: `set tunneling-protocol=l2tp-protocol`

Location: Connection *station* > Tunnel-Options

See Also: Home-Network-Name, Max-Tunnels, Password, Primary-Tunnel-Server, Profile-Type, Secondary-Tunnel-Server, UDP-Port

Tunnel-Options

Description: A subprofile that enables you to configure Ascend Tunnel Management Protocol (ATMP) settings.

Usage: With a Connection profile as the working profile, list the Tunnel-Options subprofile. For example:

```
admin> list tunnel-options
[in CONNECTION/tim:tunnel-options]
profile-type=disabled
tunneling-protocol=atmp-protocol
max-tunnels=0
atmp-ha-rip=rip-off
primary-tunnel-server=" "
secondary-tunnel-server=" "
udp-port=5150
password=" "
home-network-name=" "
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: Connection *station*

See Also: ATMP-HA-RIP, Home-Network-Name, Max-Tunnels, Password, Primary-Tunnel-Server, Profile-Type, Secondary-Tunnel-Server, Tunneling-Protocol, UDP-Port

Tunnel-Server

Description: A profile that enables you to configure settings for an L2TP tunnel to a specific endpoint.

Usage: Use the Read and List commands to make Tunnel-Server the working profile and list its contents. For example:

```
admin> read tunnel-server berkeley
TUNNEL-SERVER/Berkeley read
admin> list
[ in TUNNEL-SERVER:Berkeley]
server-endpoint*=Berkeley
enabled=yes
shared-secret=" "
```

You can then use the Set command to modify the settings in the profile. To close the profile and save your changes:

```
admin> write
TUNNEL-SERVER/Berkeley written
```

See Also: Enabled, Server-Endpoint, Shared-Secret

TX-Data-Rate-Limit

Description: Specifies the maximum data rate (in k-bits per second) to be transmitted across the connection. You can use this setting to limit bandwidth for a connection according to the rate charged for the account.

Usage: Specify a number from 0 to 64000. The default is 0 (zero), which disables the data-rate limit feature. If the value you specify is larger than the actual bandwidth provided by the line, the connection behaves as though the data rate limit were disabled, except that additional computations are performed unnecessarily.

Example: `set tx-data-rate-limit=32000`

Dependencies: The system activates configurable transmit data-rate limits only for connections that use CAP-RADSL, SDSL, and unchannelized DS3 cards. If you specify a value for a connection that does not use these cards, the system ignores the settings.

Location: Connection > Session-Options

See Also: RX-Data-Rate-Limit

Type

Description: In a Filter profile, specifies whether the current filter is a generic filter, an IP filter, or a route filter:

- A generic filter focuses on certain bytes or bits in a packet, and compares the contents of that location with a value defined in the filter. To use generic filters effectively, you need to know the contents of certain bytes in the packets you wish to filter.
- An IP filter focuses on known fields in IP packets (source or destination address, or protocol, for example).
- A route filter can forward or drop packets on the basis of the specified route.

In an Error profile, indicates the type of error that occurred.

Usage: In a Filter profile, specify one of the following values:

- Generic-Filter (the default) specifies a generic filter.
- IP-Filter specifies an IP filter.
- IPX-Filter specifies an IPX filter.
- Route-Filter specifies a route filter.
- TOS-Filter specifies a Type-of-Service (TOS) filter.

In an Error profile, the Type setting is read only.

Example: `set type=generic-filter`

Location: Error, Filter *filter-name* > Input-Filters, Filter *filter-name* > Output-Filters

See Also: Index, Input-Filters, IP-Address, IS-Post, Loadname, Output-Filters, Shelf, Slot, Stack-Trace, User-Profile, Version

Type-Filter

Description: Specifies whether the IPX SAP filter will explicitly include the service in the SAP table or exclude it.

Usage: Specify one of the following values:

- Exclude (the default) specifies that the filter excludes the service from the SAP table.
- Include specifies that the filter includes the service in the SAP table. Choose this setting to include a specific service when previous input or output filters have excluded a general type of service.

Example: `set type-filter=include`

Location: IPX-SAP-Filter > Input-IPX-SAP-Filters,
IPX-SAP-Filter > Output-IPX-SAP-Filters

See Also: Server-Name, Server-Type, Valid-Filter

Type-of-Service

Description: Specifies the type of service for the data stream.

Usage: The three most significant bits of the Type-of-Service (TOS) byte are priority bits used to set precedence for priority queuing. The next four bits of the TOS byte are used to choose a link based on the type of service. When TOS is enabled, you can set one of the following values in the packet:

- Normal specifies normal service (the default).
- Cost minimizes monetary cost.
- Reliability maximizes reliability.
- Throughput maximizes throughput.
- Latency minimizes delay.

Example: `set type-of-service=cost`

Dependencies: For the Type-of-Service setting to apply, you must set Active=Yes in the TOS-Options subprofile or Type=TOS-Filter in the Input-Filters or Output-Filters subprofile.

Location: Connection *station* > IP-Options > TOS-Options,
Filter *filter-name* > Input-Filters > TOS-Filter,
Filter *filter-name* > Output-Filters > TOS-Filter

See Also: Active, Apply-To, Precedence

U

UDP-Cksum

Description: Enables or disables the use of UDP checksums on the interface. If you enable UDP checksums, the MAX TNT generates a checksum whenever it sends out a UDP packet. It sends out UDP packets for queries and responses related to the following protocols and facilities:

ATMP
DNS
ECHOSERV
RADIUS
RIP
SYSLOG
TACACS
TFTP

Usage: Specify Yes or No. The default is Yes.

- Yes generates UDP checksums for queries and responses for protocols that use UDP.
- No disables UDP checksums.

Example: `set udp-cksum=yes`

Dependencies: You might want to enable UDP-Cksum if data integrity is of the highest concern for your environment, and having redundant checks is important. This setting is also appropriate if your UDP-based servers are located on the remote side of a WAN link that is prone to errors.

Location: IP-Global

See Also: Protocol

UDP-Port

Description: In an ATMP profile, specifies the User Datagram Protocol (UDP) port that the MAX TNT uses locally to manage the Ascend Tunnel Management Protocol (ATMP) tunnel. In a Connection profile, sets the default UDP port to use when communicating with a Home Agent.

Usage: Specify a UDP port number. Both ends of the tunnel must agree on the number. The default is 5150.

Example: `set udp-port=5100`

Dependencies: In a Connection profile, you can override the value of UDP-Port by specifying a UDP port in the Primary-Tunnel-Server or Secondary-Tunnel-Server setting. If you change the UDP-Port setting, the new value does not take effect until you reset the system.

Location: ATMP, Connection *station* > Tunnel-Options

See Also: Agent-Mode, Agent-Type, Home-Network-Name, Max-Tunnels, Password, Primary-Tunnel-Server, Profile-Type, Retry-Limit, Retry-Timeout, Secondary-Tunnel-Server

UDS3

Description: Specifies the action to take when the code image for an unchannelized DS3 card is present in a Tar file.

Usage: Specify one of the following settings:

- Auto (the default) causes the system to load images for cards that are installed in the MAX TNT, and to skip images for cards that are not installed.
- Load causes the system to load the image, even if there is no card of that type installed.
- Skip causes the system to skip the image, even if there is a card of that type installed.

Dependencies: A card is considered present in the system if a Slot-Type profile exists for that card type. The system creates a Slot-Type profile when it first detects the presence of a card, and does not delete the profile unless the administrator uses the Slot -r command to permanently remove a card that is no longer installed in the system, or clears NVRAM. To ensure that the system does not load unnecessary images, use Slot -r to remove Slot-Type profiles for cards that are no longer installed in the system.

Location: Load-Select

See Also: 8E1, 8T1, AMDM, CAPADSL, DMTADSL, DS3-ATM, Enet, Enet2, HDLC, HDLC2, IDSL, MDM56K, MDM-V34, SDSL, SDSL70D, SDSL70V, SWAN, T3, UE1, Unknown-Cards, UT1

UE1

Description: Specifies the action to take when the code image for an unchannelized E1 card is present in a Tar file.

Usage: Specify one of the following settings:

- Auto (the default) causes the system to load images for cards that are installed in the MAX TNT, and to skip images for cards that are not installed.
- Load causes the system to load the image, even if there is no card of that type installed.
- Skip causes the system to skip the image, even if there is a card of that type installed.

Dependencies: A card is considered present in the system if a Slot-Type profile exists for that card type. The system creates a Slot-Type profile when it first detects the presence of a card, and does not delete the profile unless the administrator uses the Slot -r command to permanently remove a card that is no longer installed in the system, or clears NVRAM. To ensure that the system does not load unnecessary images, use Slot -r to remove Slot-Type profiles for cards that are no longer installed in the system.

Location: Load-Select

See Also: 8E1, 8T1, AMDM, CAPADSL, DMTADSL, DS3-ATM, Enet, Enet2, HDLC, HDLC2, IDSL, MDM56K, MDM-V34, SDSL, SDSL70D, SDSL70V, SWAN, T3, UDS3, Unknown-Cards, UT1

Unit-Type

Description: Indicates the operating mode of the RADSL or SDSL card.

Usage: The Unit-Type setting is read only. It can have one of the following values:

- COE—Central Office Equipment
- CPE—Customer Premises Equipment

Example: `unit-type=coe`

Location: ADSL-CAP-Stat {shelf-*N* slot-*N* *N*} > Physical-Status
SDSL-Stat {shelf-*N* slot-*N* *N*} > Physical-Status

See Also: Dev-Line-State, Hardware-Ver, Major-Firmware-Ver, Minor-Firmware-Ver, Physical-Address

Unknown-Cards

Description: Specifies the action to take when the code image for newly supported cards is present in a Tar file.

Usage: Specify one of the following settings:

- Auto (the default) causes the system to load images for cards that are installed in the MAX TNT, and to skip images for cards that are not installed.
- Load causes the system to load the image, even if there is no card of that type installed.
- Skip causes the system to skip the image, even if there is a card of that type installed.

Dependencies: A card is considered present in the system if a Slot-Type profile exists for that card type. The system creates a Slot-Type profile when it first detects the presence of a card, and does not delete the profile unless the administrator uses the Slot -r command to permanently remove a card that is no longer installed in the system, or clears NVRAM. To ensure that the system does not load unnecessary images, use Slot -r to remove Slot-Type profiles for cards that are no longer installed in the system.

Location: Load-Select

See Also: 8E1, 8T1, AMDM, CAPADSL, DMTADSL, DS3-ATM, Enet, Enet2, HDLC, HDLC2, IDSL, MDM56K, MDM-V34, SDSL, SDSL70D, SDSL70V, SWAN, T3, UDS3, UE1, UT1

Up-Down-Cntr

Description: Indicates the number of times the link has gone from an up state to a down state since the card was last reset.

Usage: The Up-Down-Cntr setting is read only.

Example: `up-down-cntr=0`

Location: ADSL-CAP-Stat {shelf-*N* slot-*N* *N*} > Physical-Statistic
SDSL-Stat {shelf-*N* slot-*N* *N*} > Physical-Statistic

See Also: Far-End-dB-Attenuation, HDLC-RX-CRC-Error-Cnt, Line-Quality, Line-Up-Timer, RS-Corrected-Errors, RS-Errors, RX-Attenuation, RX-Signal-Present, Self-Test, Transmit-Power

Up-Status

Description: Indicates the status of a device.

Usage: The Up-Status setting is read only. It can have one of the following values:

- Idle-Up-Status indicates that the device is not currently in use.
- Reserved-Up-Status indicates that the device is not currently in use and should not be used until all idle devices of the same type are in use.
- Assigned-Up-Status indicates that the device is in use.

Example: `up-status=idle-up-status`

Location: Device-State { {shelf-*N* slot-*N* *N*} *N*}

See Also: Device-Address, Device-State, Reqd-State

Up-Stream-Constellation

Description: Indicates the operational upstream constellation. A constellation is the number of points within the digital spectrum.

Usage: The Up-Stream-Constellation setting is read only. A value of 0 (zero) indicates that the upstream constellation is unknown. A value of 1 (one) indicates automatic.

Example: `up-stream-constellation=0`

Location: ADSL-CAP-Stat {shelf-*N* slot-*N* *N*} > Physical-Status

See Also: Up-Stream-Rate

Up-Stream-Margin

Description: Specifies the minimum requirement in dB for upstream transmission on the line.

Usage: Specify a value from 0 to 25. The default is 3. The higher the value, the less noise and interference on the line.

Example: `set up-stream-margin=10`

Dependencies: If you change the value of Up-Stream-Margin, the line retrains with the new value immediately after you write the profile. If the line cannot train to the specified margin or higher, the session does not come up.

Location: ADSL-DMT {shelf-*N* slot-*N* *N*} > Line Config

See Also: Down-Stream-Margin

Up-Stream-Rate

Description: Indicates the upstream data rate for the RADSL or SDSL interface.

Usage: The Up-Stream-Rate setting is read only. A value of 0 (zero) indicates that the data rate is unknown.

Example: `up-stream-rate=0`

Dependencies: RADSL and SDSL ensure maximum throughput for the particular condition of the line. The better the line quality, the higher the data rate.

Location: ADSL-CAP-Stat {shelf-*N* slot-*N* *N*} > Physical-Status
SDSL-Stat {shelf-*N* slot-*N* *N*} > Physical-Status

See Also: Up-Stream-Constellation

Use-Answer-For-All-Defaults

Usage: Indicates whether values in the Answer-Defaults profile should override values in the default Internet profile when the MAX TNT uses RADIUS or TACACS to validate an incoming call.

Usage: Specify Yes or No. The default is Yes.

- Yes instructs the MAX TNT to use the Answer-Defaults profile for defaults. When you specify Yes, the MAX TNT falls back to the values specified in the Answer-Defaults profile for options that are not specified in a given external authentication profile.
- No specifies that the MAX TNT uses the default Internet profile for defaults. When you specify No, the MAX TNT uses defaults for options not specified in a given external authentication profile.

Example: `set use-answer-for-all-defaults=no`

Location: Answer-Defaults

See Also: Profiles-Required

Use-Exceeded-Enabled

Description: Specifies whether the system generates a trap when a specific port has exceeded the number of DS0 minutes allocated to it, or the system DS0 usage has been exceeded.

Usage: Specify Yes or No. The default is Yes.

- Yes specifies that the system generates a trap when a specific port has exceeded the number of DS0 minutes allocated to it, or the system DS0 usage has been exceeded.
- No specifies that the system does not generate a trap when a specific port has exceeded the number of DS0 minutes allocated to it, or the system DS0 usage has been exceeded.

Example: `set use-exceeded-enabled=no`

Location: Trap *host-name*

See Also: Port-Enabled

User

Description: A profile that defines a name, a password, privileges, and default displays for user login accounts.

Usage: Use the Read and List commands to make User the working profile and list its contents. For example:

```
admin> read user default
USER/default read

admin> list
[in USER/default]
name*=default
password=" "
active-enabled=yes
allow-termserv=no
allow-system=no
allow-diagnostic=no
allow-update=no
allow-password=no
allow-code=no
idle-logout=0
prompt="admin> "
default-status=no
top-status=general-info
bottom-status=log-window
left-status=connection-list
use-scroll-regions=yes
log-display-level=none
screen-length=24
status-length=18
```

You can then use the Set command to modify the settings in the profile. To close the profile and save your changes:

```
admin> write
USER/default written
```

See Also: Active-Enabled, Allow-Code, Allow-Diagnostic, Allow-Password, Allow-System, Allow-Termserve, Allow-Update, Bottom-Status, Default-Status, Idle-Logout, Left-Status, Log-Display-Level, Nailed-Up-Group, Password, Prompt, Screen-Length, Status-Length, Top-Status, Use-Scroll-Regions

User-Profile

Description: In the IP-Global profile, specifies the name of the default User profile associated with Telnet sessions. In a Serial profile, specifies the name of the default User profile associated with serial access to the MAX TNT command interface. In an Error profile, indicates the name of the user that reset the unit.

Usage: In the IP-Global or Serial profile, specify the name of a User profile. For the IP-Global profile, the default is null. For the Serial profile, the default is `admin`. In either profile, a null value specifies that the user must log in explicitly. In an Error profile, the User-Profile setting is read only.

Example: `set user-profile=default`

Location: Error, IP-Global, Serial {shelf-*N* slot-*N* *N*}

See Also: Index, IP-Address, IS-Post, Loadname, Shelf, Slot, Stack-Trace, Type, Version

Userstat-Format

Description: Enables you to customize the output of the Userstat command or a Finger query.

Usage: Specify a series of conversion strings. You can enter up to 72 characters. The maximum width of the output string depends on the width of the fields present in the session listing output. If you enter a character without a percent sign, it is printed as a literal character in the session-listing output. You can enter one or more of the following strings:

String	Field width	Output text	Meaning
%i	10	SessionID	Unique ID assigned to the session
%l	10	Line/Chan	Physical address (shelf.slot.line/chan)
%s	11	Slot:Item	Shelf:slot:item/logical-item of the host port
%r	11	Tx/Rx Rate	Transmit and receive rates
%d	3	Svc	A three-letter code showing the type of service
%a	15	Address	IP address
%u	14	Username	Connection profile name
%c	10	ConnTime	Amount of time connected, in hours:minutes:seconds
%t	10	IdleTime	Amount of time idle, in hours:minutes:seconds
%n	24	Dialed#	Number dialed if known

The default value of Userstat-Format causes the standard session-listing output format for both the Userstat command and Finger queries.

Example: An administrator customizes the session-listing output to include only the Username, Svc, and ConnTime information, and specifies an at-sign between the service and connection time for each session:

```
admin> read system
SYSTEM read
admin> set userstat-format=%u (%d) @ %c
admin> write
SYSTEM written
admin> userstat
Username      Svc      ConnTime
joeb          (PPP) @ 1:22:34
jimmyq        (PPP) @ 3:44:19
sallyg        (PPP) @ 5:12:56
<end user list> 3 active user(s)
```

Location: System

See Also: Finger, Userstat

Use-Scroll-Regions

Description: Specifies whether the VT100 scroll-region commands are used to reduce screen redraws when the status screen is displayed.

Usage: Specify Yes or No. The default is Yes.

- Yes specifies that the VT100 scroll-region commands are used to reduce screen redraws.
- No disables the VT100 scroll-region commands. If the status screen is not redrawing properly, try setting Use-Scroll-Regions to No.

Example: `set use-scroll-regions=yes`

Location: User *name*

See Also: Bottom-Status, Default-Status, Left-Status, Top-Status

Use-Trunk-Groups

Description: Enables or disables the use of trunk groups for all network lines. When trunk groups are enabled, channels must be assigned trunk group numbers.

Usage: Specify Yes or No. The default is No.

- Yes specifies that all channels must be assigned a trunk group number for outgoing calls.
- No disables trunk groups.

Example: `set use-trunk-groups=yes`

Dependencies: When Use-Trunk-Groups=Yes, the T1 or E1 channel configuration must specify Trunk-Group assignments.

Location: System

See Also: Call-Type, Channel-Config N, Dial-Number, Trunk-Group

UsrRad-Options

Description: A subprofile that defines connection-specific RADIUS accounting options.

Usage: With a Connection profile as the working profile, list the UsrRad-Options subprofile. For example:

```
admin> list usr
[ in CONNECTION/tim:usrRad-options ]
acct-type=global
acct-host=0.0.0.0
acct-port=1646
acct-key=" "
acct-timeout=1
acct-id-base=acct-base-10
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Dependencies: RADIUS accounting must be configured in the Rad-Acct-Client subprofile of the External-Auth profile.

Location: Connection *station*

See Also: Acct-Host, Acct-ID-Base, Acct-Key, Acct-Port, Acct-Timeout, Acct-Type, Rad-Acct-Client

UT1

Description: Specifies the action to take when the code image for an unchannelized T1 card is present in a Tar file.

Usage: Specify one of the following settings:

- Auto (the default) causes the system to load images for cards that are installed in the MAX TNT, and to skip images for cards that are not installed.
- Load causes the system to load the image, even if there is no card of that type installed.
- Skip causes the system to skip the image, even if there is a card of that type installed.

Dependencies: A card is considered present in the system if a Slot-Type profile exists for that card type. The system creates a Slot-Type profile when it first detects the presence of a card, and does not delete the profile unless the administrator uses the Slot -r command to permanently remove a card that is no longer installed in the system, or clears NVRAM. To ensure that the system does not load unnecessary images, use Slot -r to remove Slot-Type profiles for cards that are no longer installed in the system.

Location: Load-Select

See Also: 8E1, 8T1, AMDM, CAPADSL, DMTADSL, DS3-ATM, Enet, Enet2, HDLC, HDLC2, IDSL, MDM56K, MDM-V34, SDSL, SDSL70D, SDSL70V, SWAN, T3, UDS3, UE1, Unknown-Cards

V

V42/MNP

Description: Specifies how the digital modems negotiate LAPM/MNP error control with the analog modem at the other end of the connection.

Usage: Specify one of the following values:

- Will-V42 (the default) specifies that the modems request LAPM/MNP, but accept the call if it is not provided.
- Wont-V42 specifies that the modems do not use LAPM/MNP at all.
- Must-V42 specifies that the modems request LAPM/MNP, and drop the call if it is not provided.

Example: `set v42/mnp=will-v42`

Dependencies: If terminal services are disabled, V42/MNP does not apply.

Location: Terminal-Server > Modem-Configuration

See Also: Modem-Configuration

V120-Answer

Description: A subprofile containing default settings for V.120 calls.

Usage: With Answer-Defaults as the working profile, list the V120-Answer subprofile. For example:

```
admin> list v120-answer
[in ANSWER-DEFAULTS:v120-answer]
enabled=yes
frame-length=256
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: Answer-Defaults

See Also: Enabled, Frame-Length

Valid-Entry

Description: Enables or disables the current input or output filter.

Usage: Specify Yes or No. The default is No.

- Yes activates the filter and enables its configuration.
- No disables the filter, causing the MAX TNT to skip it when filtering the data stream.

Example: `set valid-entry=yes`

Location: Filter *filter-name* > Input-Filters, Filter *filter-name* > Output-Filters

See Also: Input-Filters, Output-Filters

Valid-Filter

Description: Enables or disables the IPX SAP input or output filter.

Usage: You can specify Yes or No. The default is No.

- Yes enables the IPX SAP filter.
- No disables the IPX SAP filter. If you specify No, the MAX TNT skips the filter when it applies the entire IPX SAP filter to SAP data.

Example: `set valid-filter=yes`

Location: IPX-SAP-Filter > Input-IPX-SAP-Filters,
IPX-SAP-Filter > Output-IPX-SAP-Filters

See Also: Server-Name, Server-Type, Type-Filter

Value

Description: Specifies a hexadecimal number to be compared to specific bits contained in packets after the generic filter's Offset, Len, and Mask calculations have been performed.

Usage: Specify a hexadecimal number representing up to 12 bytes.

Example: `set value=aaaa03000000080f3`

Location: Filter *filter-name* > Input-Filters > Gen-Filter,
Filter *filter-name* > Output-Filters > Gen-Filter

See Also: Gen-Filter, Input-Filters, Output-Filters

Version

Note: The MAX TNT does not support firewalls at this time.

Description: In the Firewall profile, specifies the firewall version. In an Error profile, specifies the software version that was running when an error occurred.

Usage: Only the Secure Access Manager should set the Version value in the Firewall profile. If you change its value in the Firewall profile, one of the following messages appears:

```
error: Base 64 decode failed
error: Firewall does not load properly (corrupted?)
```

In an Error profile, the Version setting is read only.

Location: Firewall *name*

See Also: Data, Index, IP-Address, IS-Post, Loadname, Shelf, Slot, Stack-Trace, Type, User-Profile

VJ-Header-Prediction

Description: Specifies whether Van Jacobson IP header prediction should be negotiated on incoming calls.

Usage: Specify Yes or No. The default is Yes.

- Yes enables VJ compression for TCP packets.
- No disables VJ compression for TCP packets.

Example: `set vj-header-prediction=no`

Location: Answer-Defaults > IP-Answer, Connection *station* > IP-Options

See Also: IP-Answer, IP-Options, IPX-Routing-Enabled

VRouter

Description: Specifies the name of a defined Virtual Router (VRouter).

- Specifying the VRouter name in a Connection profile groups the WAN interfaces with the VRouter.
- Specifying the VRouter name in an IP-Interface profile groups the LAN interfaces with the VRouter.
- Specifying the name in an IP-Route profile indicates the name of the VRouter that owns the static route. The route will be part of the VRouter's routing table.

Usage: Specify the name of a VRouter. The default is null, which specifies that the global VRouter is in use.

Example: `set vrouter=vrouter-2`

Location: Connection *station*, IP-Interface {shelf-*N* slot-*N* *N*}, IP-Route *name*

See Also: Inter-VRouter, VRouter (profile), VRouter-IP-Address

VRouter (profile)

Description: A profile that enables you to configure settings for a Virtual Router (VRouter).

Usage: Use the Read and List commands to make VRouter the working profile and list its contents. For example:

```
admin> read vrouter vrouter-1
VROUTER/vrouter-1 read

admin> list
[in VROUTER/vrouter-1]
name=vrouter1
vrouter-ip-address=0.0.0.0
pool-base-address=[ 0.0.0.0 0.0.0.0 0.0.0.0 0.0.0.0 0.0.0.0 +
assign-count=[ 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 +
pool-name=[ " " " " " " " " " " " " " " " " " " " " " " " " +
pool-summary=no
rip-policy=Poisson-Rvrs
summarize-rip-routes=no
rip-trigger=yes
```

You can then use the Set command to modify the settings in the profile. To close the profile and save your changes:

```
admin> write
VROUTER/vrouter-1 written
```

Dependencies: Deleting a VRouter profile deletes the Virtual Router. If you delete a VRouter with active connections, a reset is recommended. If a system reset is not possible, you should manually tear down the VRouter's active connections and then modify the local Connection, IP-Interface, and IP-Route profiles that point to the VRouter before deleting the VRouter profile.

See Also: Assign-Count, Name, Pool-Base-Address, Pool-Name, Pool-Summary, RIP-Policy, RIP-Trigger, Summarize-RIP-Routes, VRouter-IP-Address

VRouter-IP-Address

Description: Specifies the system address for the Virtual Router (VRouter).

Usage: Specify an IP address in dotted decimal notation. The default is 0.0.0.0.

Example: `set vrouter-ip-address=200.40.60.5`

Location: VRouter *name*

See Also: Assign-Count, Name, Pool-Base-Address, Pool-Name, Pool-Summary, RIP-Policy, RIP-Trigger, Summarize-RIP-Routes

W

Warmstart-Enabled

Description: Specifies whether the system generates a trap when the MAX TNT reinitializes itself so that neither the configuration of the SNMP manager nor of the system itself is altered.

Usage: Specify Yes or No. The default is Yes.

- Yes specifies that the system generates a trap when the MAX TNT reinitializes itself so that neither the configuration of the SNMP manager nor of the system itself is altered.
- No specifies that the system does not generate a trap when the MAX TNT reinitializes itself so that neither the configuration of the SNMP manager nor of the system itself is altered.

Example: `set warmstart-enabled=no`

Location: Trap *host-name*

See Also: Coldstart-Enabled

Write-Access-Hosts

Description: An array specifying up to five IP addresses of SNMP managers that have SNMP write permission. The MAX TNT responds to SNMP Set, Get, and Get-Next commands from only the SNMP managers you specify.

Usage: Each element in the array can specify an IP address. With SNMP as the working profile, use the List command to display the array elements. For example:

```
admin> list write-access
[in SNMP:write-access-hosts]
write-access-hosts[1]=0.0.0.0
write-access-hosts[2]=0.0.0.0
write-access-hosts[3]=0.0.0.0
write-access-hosts[4]=0.0.0.0
write-access-hosts[5]=0.0.0.0
```

You can then set a Write-Access-Hosts value by specifying its numeric index and entering an address:

```
admin> set 1 10.2.3.4/24
```

Or, you can set an array element without first listing the array:

```
admin> set write-access-hosts 1 10.2.3.4/24
```

or

```
admin> set write-access 2=10.5.6.7/29
```

Dependencies: For Write-Access-Hosts to restrict read-write access to the MAX TNT, you must set Enforce-Address-Security=Yes.

Location: SNMP

See Also: Enabled, Enforce-Address-Security, Read-Access-Hosts, Read-Community, Read-Write-Community

X

X75-Answer

Description: A subprofile containing default settings for X.75 calls.

Usage: With Answer-Defaults as the working profile, list the X.75-Answer subprofile. For example:

```
admin> list x75-answer
[ in ANSWER-DEFAULTS:x75-answer ]
enabled=yes
k-frames-outstanding=7
n2-retransmissions=10
t1-retran-timer=1000
frame-length=1024
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Location: Answer-Defaults

See Also: Frame-Length, K-Frames-Outstanding, N2-Retransmissions, T1-Retrans-Timer

X75-Options

Description: A subprofile that contains settings for X.75 calls.

Usage: With a Connection profile as the working profile, list the X75-Options subprofile. For example:

```
admin> list x75-options
[ in CONNECTION/tim:x75-options ]
k-frames-outstanding=7
n2-retransmissions=10
t1-retran-timer=1000
frame-length=1024
```

You can then use the Set command to modify the settings in the subprofile. To close the subprofile and return to a higher context in the working profile:

```
admin> list ..
```

Dependencies: X.75 calls must be enabled in the Answer-Defaults profile.

Location: Connection *station*

See Also: Frame-Length, K-Frames-Outstanding, N2-Retransmissions, T1-Retrans-Timer

Y

Yellow-Receive

Description: Specifies whether the local device has received a loss-of-frame (Yellow Alarm) indication. A Yellow Alarm indicates that a device on the line has detected framing errors in the signal.

Usage: The Yellow-Receive setting is read only. True specifies that the local device has received a Yellow Alarm indication. False specifies that the local device has not received a Yellow Alarm indication.

Location: T1-Stat {shelf-*N* slot-*N* *N*}

See Also: AIS-Receive

Ascend Progress and Disconnect Codes

3

Ascend progress codes	3-1
Ascend disconnect-cause codes	3-3

Ascend progress codes

Table 3-1 explains the Ascend progress codes.

Table 3-1. Ascend progress codes

Code	Explanation
0	No progress.
1	Not applicable.
2	The progress of the call is unknown.
10	The call is up.
30	The modem is up.
31	The modem is waiting for DCD.
32	The modem is waiting for result codes.
40	The terminal-server session has started up.
41	The MAX TNT is establishing the TCP connection.
42	The MAX TNT is establishing the immediate Telnet connection.
43	The MAX TNT has established a raw TCP session with the host. This code does not imply that the user has logged into the host. ⁷
44	The MAX TNT has established an immediate Telnet connection with the host. This code does not imply that the user has logged into the host.
45	The MAX TNT is establishing an Rlogin session.

Table 3-1. Ascend progress codes (continued)

Code	Explanation
46	The MAX TNT has established an Rlogin session with the host. This code does not imply that the user has logged into the host.
47	Terminal-server authentication has begun.
50	A modem dial-out session has begun.
60	The LAN session is up.
61	LCP negotiations are allowed.
62	CCP negotiations are allowed.
63	IPNCP negotiations are allowed.
65	LCP is in the Open state.
66	CCP is in the Open state.
67	IPNCP is in the Open state.
68	BNCP is in the Open state.
69	LCP is in the Initial state.
70	LCP is in the Starting state.
71	LCP is in the Closed state.
72	LCP is in the Stopped state.
73	LCP is in the Closing state.
74	LCP is in the Stopping state.
75	LCP is in the Request Sent state.
76	LCP is in the ACK Received state.
77	LCP is in the ACK Sent state.
80	IPXNCP is in the Open state.
81	IPX NCP is in an Open state.
82	BACP is being opened.
83	BACP is in an Open state.
84	CBCP is being opened.
85	CBCP is in an Open state.

Table 3-1. Ascend progress codes (continued)

Code	Explanation
90	The Ascend unit has accepted a V.110 call.
91	The V.110 call is in an Open state.
92	The V.110 call is in a carrier state.
93	The V.110 call is in a reset state.
94	The V.110 call is in a closed state.
100	The Ascend unit has determined that the call requires callback.
101	Authentication failed.
102	The remote authentication server timed out.
120	The Frame Relay link is inactive. Negotiations are in progress.
121	The Frame Relay link is active and has end-to-end connectivity.

Ascend disconnect-cause codes

Table 3-2 explains the Ascend disconnect-cause codes.

Table 3-2. Ascend disconnect-cause codes

Code	Description
1	This value is not applied to any call.
2	The disconnect occurred for an unknown reason.
3	The call was disconnected.
4	CLID authentication failed.
5	A RADIUS timeout occurred during authentication.
6	Authentication was successful. The Ascend unit is configured to call back the user.
7	The Pre-T310 Send Disc timer was triggered.
9	No modem is available to accept the call.
10	The modem never detected Data Carrier Detect (DCD).
11	The modem detected DCD, but the modem carrier was lost.
12	The Ascend unit failed to successfully detect modem result codes.

Ascend Progress and Disconnect Codes

Ascend disconnect-cause codes

Table 3-2. Ascend disconnect-cause codes (continued)

Code	Description
13	The Ascend unit failed to open a modem for an outgoing call.
14	The Ascend unit failed to open a modem for outgoing call while the ModemDiag diagnostic command was enabled.
20	The user exited normally from the terminal server.
21	The terminal server timed out waiting for user input.
22	A forced disconnect occurred when the user exited a Telnet session.
23	No IP address was available when the user entered the PPP or SLIP command.
24	A forced disconnect occurred when the user exited a raw TCP session.
25	The user exceeded the limit for login attempts.
26	The Ascend unit attempted to start a raw TCP session, but raw TCP is disabled.
27	Control-C characters were received during the login.
28	The terminal-server session cleared ungracefully.
29	The user closed a terminal-server virtual connection normally.
30	The terminal-server virtual connection cleared ungracefully.
31	The user exited from an Rlogin session.
32	The establishment of the Rlogin session failed because of bad options.
33	The Ascend unit lacks the resources to process a terminal-server request.
35	The MP+ session cleared because no null MP packets were received. An Ascend unit sends (and should receive) null MP packets throughout an MP+ session.
40	LCP timed out waiting for a response.
41	LCP negotiations failed, probably because the user is configured to send passwords by means of PAP, and the Ascend unit is configured to accept passwords by means of CHAP (or vice versa).
42	PAP authentication failed.
43	CHAP authentication failed.
44	Authentication failed from a remote server.

Table 3-2. Ascend disconnect-cause codes (continued)

Code	Description
45	The Ascend unit received a Terminate Request packet while LCP was in an open state.
46	The Ascend unit received a Close Request from an upper layer, indicating graceful LCP closure.
47	The Ascend unit cleared the call because no PPP Network Core Protocols (NCPs) were successfully negotiated. Typically, there is no agreement on the type of routing or bridging that is supported for the session.
48	An MP session was disconnected. The Ascend unit accepted an added channel, but cannot determine to which call to add the new channel.
49	The Ascend unit disconnected an MP call because no more channels could be added.
50	Telnet or raw TCP session tables are full.
51	The Ascend unit has exhausted Telnet or raw TCP resources.
52	For a Telnet or raw TCP session, the IP address is invalid.
53	The Ascend unit cannot resolve the host name for a Telnet or raw TCP session.
54	For a Telnet or raw TCP session, the Ascend unit received a bad or missing port number.
60	For a Telnet or raw TCP session, the host was reset.
61	For a Telnet or raw TCP session, the connection was refused.
62	For a Telnet or raw TCP session, the connection timed out.
63	For a Telnet or raw TCP session, the connection was closed by a foreign host.
64	For a Telnet or raw TCP session, the network was unreachable.
65	For a Telnet or raw TCP session, the host was unreachable.
66	For a Telnet or raw TCP session, the network admin was unreachable.
67	For a Telnet or raw TCP session, the host admin was unreachable.
68	For a Telnet or raw TCP session, the port was unreachable.
100	The session timed out.
101	The user name was invalid.

Ascend Progress and Disconnect Codes

Ascend disconnect-cause codes

Table 3-2. Ascend disconnect-cause codes (continued)

Code	Description
102	Callback is enabled.
115	The dial-in user is no longer active.
120	A requested protocol is disabled or unsupported.
150	A disconnect was requested by the RADIUS server.
151	The call was disconnected by the local administrator.
152	The call was disconnected by means of SNMP.
160	The unit exceeded the maximum number of V.110 retries.
170	A timeout occurred while the Ascend unit waited for the remote device to be authenticated.
180	The user disconnected the call.
181	The call was cleared by the system.
185	The signal was lost from remote end, probably because the remote end's modem was turned off.
190	The resource has been quiesced.
195	The maximum duration for the call has been reached.
201	The Ascend unit has low memory.
210	The modem card stopped working because it had calls outstanding.
220	The Ascend unit requires CBCP, but client does not support it.
230	The Ascend unit deleted the Virtual Router (VRouter).
240	The Ascend unit disconnected the call on the basis of LQM measurements.
241	The Ascend unit cleared a backup call.

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