NavisXtend Report Generator User's Guide

Ascend Communications, Inc.

Product Code: 80057
Revision 00
January 1998

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About This Guide

The *NavisXtend Report Generator User's Guide* is shipped with both the Report Generator and the Report Generator with Web Agent products. This guide describes how to set up, install, and use both Report Generator products. If you purchased the Report Generator without the Web Agent, skip over the sections in the guide that are related to Web Agent functions.

Because the Report Generator packages include Actuate applications and Actuate documentation, the *Report Generator User's Guide* should be used as the introductory tutorial for the product. Once you have installed Report Generator components and learned the basics of generating, viewing, and managing reports, refer to the Actuate documentation for a full description of the Actuate product.

What You Need to Know

As a reader of this guide, you should be familiar with the Ascend Bulk Statistics Collector and CascadeView. Since Report Generator components run on Windows 95, Windows NT, and Sun Solaris, this manual also assumes that you have a working knowledge of these platforms.

Audience

This guide is intended for various types of users: network administrators who are responsible for setting up and maintaining the Report Generator, managers who need to generate reports for capacity planning or diagnostic purposes, and end users who need to view reports to review network traffic.

How to Use This Guide

The *Report Generators User's Guide* describes the features supported in the Report Generator, Release 1.0. The manual is organized as follows:

Read	To Learn About
Chapter 1	The Report Generator product, hardware/software requirements, and an overview of the installation process.
Chapter 2	Installing server components—the Sybase Open Client and the Actuate Report Server—on the Report Server system.
Chapter 3	Installing client components—the Actuate clients and Report Generator executables—on the client system.
Chapter 4	Setting up the Web Agent.
Chapter 5	The basics of generating and viewing reports.
Chapter 6	Customizing the report request.
Chapter 7	Administering the Report Generator.
Appendix A	Worksheets for the Report Server and Web Agent installations.
Appendix B	Sample reports and descriptions of the fields in each report.
Appendix C	Uninstalling Report Generator components.

Before you begin the tasks described in this guide, read the Software Release Notice (SRN) that accompanies the software.

Conventions

This guide uses the following conventions to emphasize types of information, such as user input, screen prompts and output, and menu selections:

Convention	Indicates	Example
`Courier Bold`	User input on a separate line.	**`eject cdrom`**
`Courier Regular`	Output from a program.	`Please wait...`
[*bold italics*]	Variable parameters to enter.	**[*your IP address*]**
`<Key name>`	A keyboard entry.	`<Return>`
Boldface	User input in text.	Type **cd install** and...
Menu ⇒ Option	Select an option from the menu.	CascadeView⇒Logon
Italics	Book titles, UNIX filenames, new terms, and emphasized text.	*/usr/opt/sybase* *Network Management Station Installation Guide*
Boxes around text	Notes and warnings.	See examples below.

Notes provide helpful suggestions or reference to materials not contained in this manual.

Warnings caution the reader to proceed carefully in order to avoid equipment damage or personal harm.

Related Documents

This section lists the related Ascend and third-party documentation that may be useful to reference.

Ascend

- *Ascend Networking Services Technology Overview* (Product Code: 80001)
- *Network Management Station Installation Guide* (Product Code: 80014)
- *CascadeView/UX Network Configuration Guide* (Product Code: 80017)
- *Bulk Statistics Collector for B-STDX/STDX User's Guide* (Product Code: 80032)
- *Bulk Statistics Collector for CBX-500 User's Guide* (Product Code: 80047)

Third Party

- *Sybase Command Reference Manual*
- *Sybase System Administration Guide*
- Actuate document set: *Actuate Report Server Guide*, *Administering the Report Encyclopedia*, *Using Reports*, and *Actuate Web Agent Guide*

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- FAX your comments to 978-392-9768, attention Techpubs.
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Overview

The NavisXtend Report Generator extends the functionality of the NavisXtend Bulk Statistics Collector. The Report Generator enables Bulk Statistics users to produce tabular and graphical reports for the CBX 500, B-STDX 8000/9000, and STDX 6000 switches. The Report Generator retrieves data from the CascadeView and Bulk Statistics databases and correlates the data from both sources in each report.

Network managers, service providers, and sales personnel use these reports to analyze network traffic, view the performance of the switch, determine peak periods, and assess the general health of the network.

Based on the client/server model, the Report Generator includes a report server to store, manage, and create reports and client applications that allow users to generate and view the reports. The Report Generator supports multiple Actuate clients and, if the Web Agent is purchased, web browsers.

The Report Generator can be purchased alone or bundled with the Web Agent. Because this manual is shipped with both the Report Generator and the Report Generator with Web Agent, the manual uses the term "Report Generator" generically to refer to both products.

What the Report Generator Includes

The Report Generator consists of third-party products from Actuate and Sybase and the Ascend executables that customize these products for the Bulk Statistics Collector.

The Actuate product includes:

- The Actuate Report Server, which enables the client to generate, view, and manage reports.
- Three Actuate client applications, which provide different levels of functionality for users.
  - The Actuate Viewer allows users to view and print reports.
  - The Actuate End User Desktop includes Viewer functionality, plus the tools to generate and schedule reports.
  - The Actuate Administrator Desktop includes Viewer and End User Desktop functionality, plus the tools to manage accounts and set user-privileges.
- The Actuate Web Agent, which enables web browsers to access the Actuate Report Server. (Applicable if you purchased the Report Generator with Web Agent product.)

The Sybase product includes the Sybase Open Client. The Open Client enables the Actuate Report Server to communicate with the Bulk Statistics and CascadeView Sybase databases.

Ascend customizes the Actuate and Sybase products with these additional features:

- Procedures for setting up, installing, and managing the Report Generator.
- A customized script to install the Sybase Open Client and the Report Server.
- Executables that retrieve and correlate data from both the Bulk Statistics and CascadeView databases.
- Packaged report formats designed specifically for the Bulk Statistics data collected from CBX 500, B-STDX 8000/9000, and STDX 6000 switches.

Figure 1-1 illustrates the various products that make up the Report Generator.

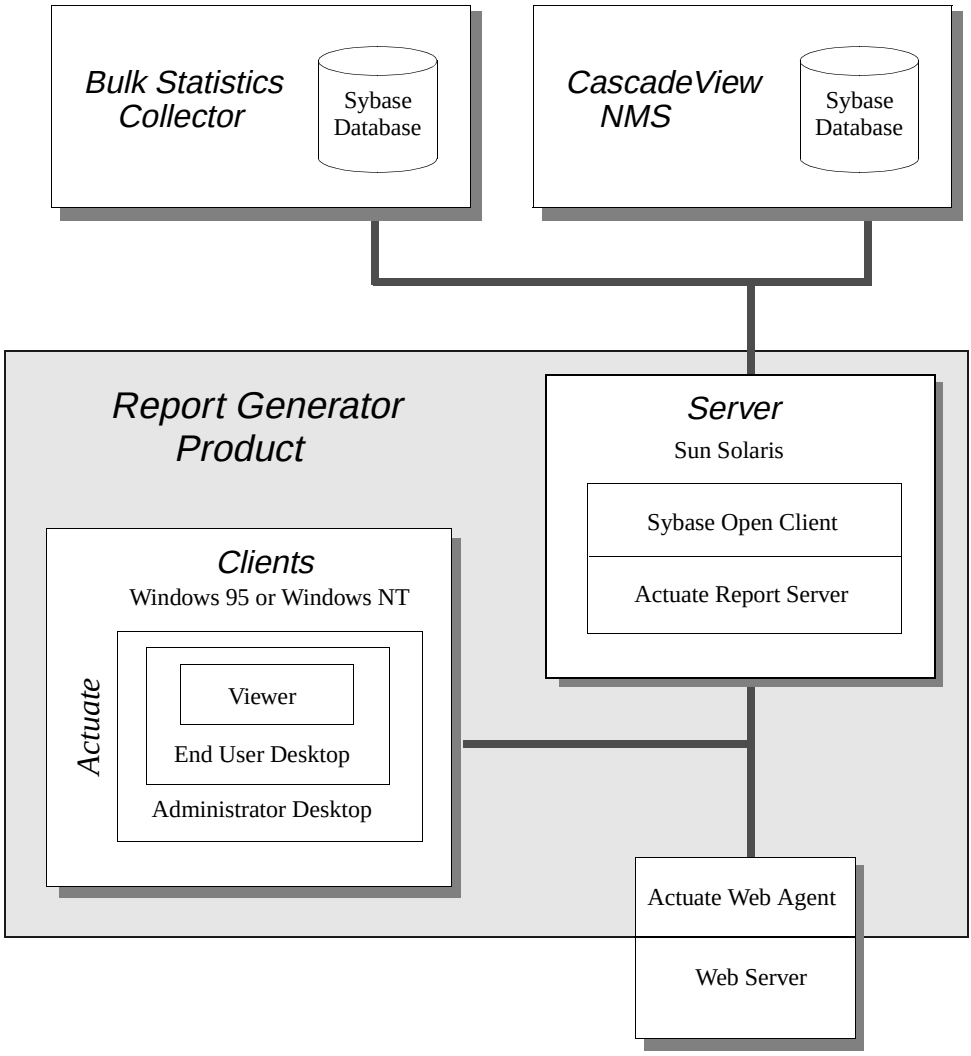


Figure 1-1. The Report Generator with Web Agent

The Report Generation Process

Report generation consists of two basic processes. Bulk Statistics Collectors and the CascadeView NMS collect source data from the switch. The Report Generator retrieves this data and generates the report. Notice that the Report Generator never communicates directly with the switch.

Collecting Report Data

This is how report data is collected:

- Bulk Statistics Collectors collect real-time, statistical data from the switches, then forward the data to the Bulk Statistics Sybase database. Multiple collectors can send data to multiple Sybase databases.
- CascadeView stores configuration data in the CascadeView Sybase database whenever CascadeView users configure or make changes to the switch network.

Generating the Report

This is how the report generation process works:

- When you run a Report executable from the Administrator Desktop, End User Desktop, or a browser, the client sends a report request to the Actuate Report Server.
- The Report Server uses the Sybase Open Client API to communicate with the CascadeView and Bulk Statistics databases.
- After the Report Server retrieves report data from the CascadeView and Bulk Statistics databases, it filters and correlates the information from both sources.
- The Report Server creates the report, using information from both databases, and saves the report in the specified directory.
- Users can now view and print standard reports via Actuate clients or HTML reports via web browsers.

Figure 1-2 illustrates the report generation process.

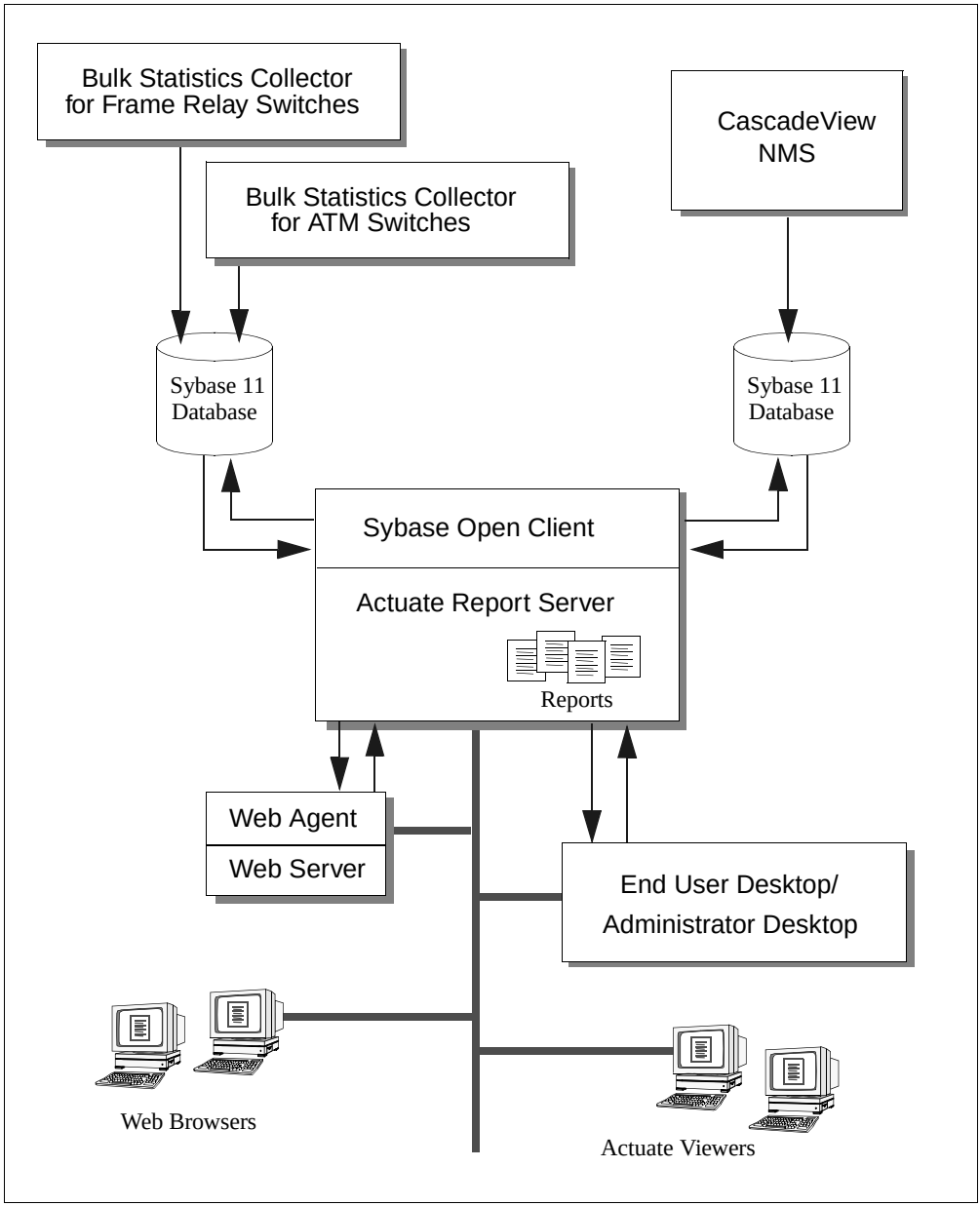


Figure 1-2. The Report Generation Process

The Types of Reports You Can Generate

The Report Generator is shipped with report executables designed for Ascend ATM, Frame Relay, and SMDS switches. The preformatted reports contain the specific data required by network operations groups and network subscribers. Although you cannot redesign your report formats, you can create reports in either a Detailed, Summary, or Exception format.

The Report Generator provides two types of reports for STDX 6000 switches, and four types of reports for B-STDX 8000/9000 and CBX 500 switches. Figure 1-3 illustrates the types of reports that you can create.

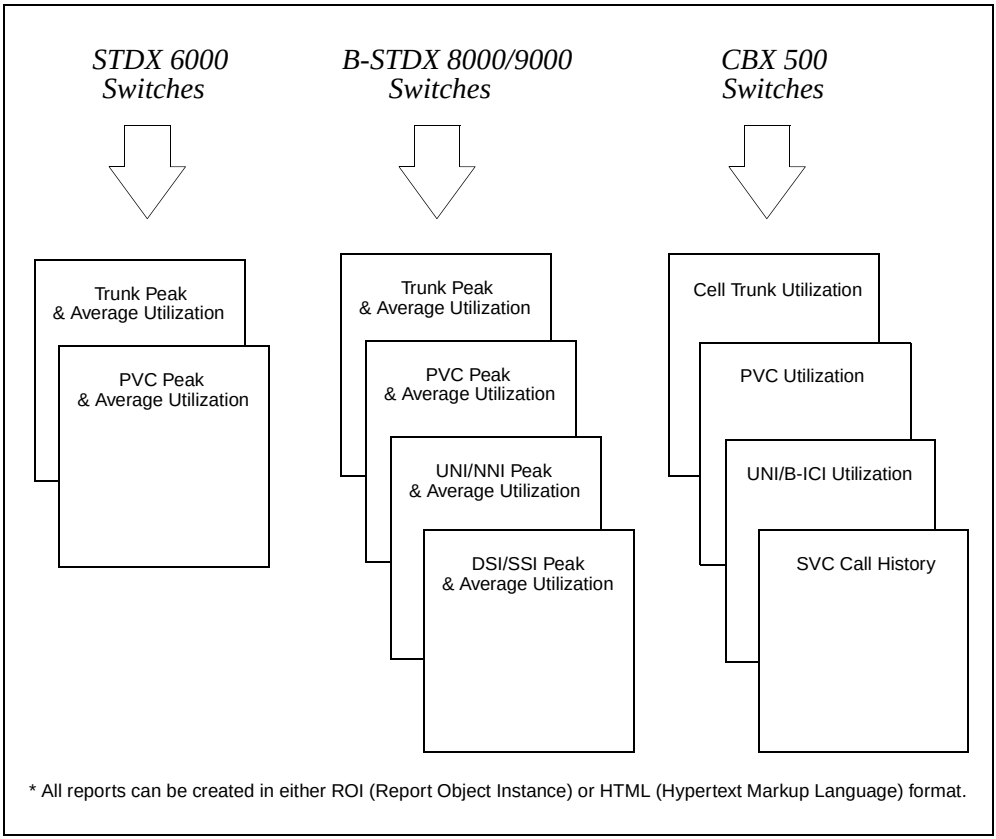


Figure 1-3. Types of Reports That You Can Generate

The following tables describe each type of report.

Table 1-1. Frame Relay Reports for STDX 6000 Switches

Type of report	Shows graphical and tabular representation of...
Trunk Peak and Average Utilization Report	Trunk utilization over time. Includes the name of the trunk and the names of the switches on which the trunk terminates. Formats: Detailed or Summary Default Filenames: FRtrkdet_6000, FRtrksumm_6000
PVC Peak and Average Utilization Report	Circuit utilization over time. Includes the name of the circuit, plus the names of the switches and LPorts on which the circuit terminates. Formats: Detailed or Summary Default Filenames: FRpvcdet_6000, FRpvcsumm_6000

If you have only STDX 6000 switches, you cannot create reports for Lports because Lport data is not available in the Bulk Statistics database. If you are using the Bulk Statistics Collector Version 2.5 or later with pre-4.2 switches, you can generate reports with only the STDX 6000 executables.

Table 1-2. Frame Relay Reports for B-STDX 8000/9000 Switches

Type of report	Shows graphical and tabular representation of...
Trunk Peak and Average Utilization Report	Trunk utilization over time. Includes the name of the trunk and the names of the switches on which the trunk terminates. Formats: Detailed, Summary, or Exception Default Filenames: FRtrkdet, FRtrksumm, FRtrkexc
PVC Peak and Average Utilization Report	Circuit utilization over time. Includes the name of the circuit, plus the names of the switches and Lports on which the circuit terminates. Formats: Detailed or Summary Default Filenames: FRpvcdet, FRpvcsumm
UNI/NNI Peak and Average Utilization Report	Frame Relay UNI/NNI utilization over time. Includes the name and type of the Lport. Formats: Detailed or Summary Default Filenames: FRlptdet, FRlptsumm

Table 1-3. SMDS Reports for B-STDX 8000/9000 Switches

Type of report	Shows graphical and tabular representation of...
DXI & SSI Peak and Average Utilization Report	SMDS DXI and SSI utilization over time. The report includes the name and type of the Lport. Formats: Detailed or Summary Default Filenames: SMDSlptdet, SMDSlptsumm

Table 1-4. ATM Reports for CBX 500 Switches

Type of report	Shows graphical and tabular representation of...
Cell Trunk Utilization Report	Trunk utilization over time. Includes the name of the trunk and the names of the switches on which the trunk terminates. Formats: Detailed, Summary, or Exception Default Filenames: ATMtrkdet, ATMtrksumm, ATMtrkexc
PVC Utilization Report	Circuit utilization over time. Includes the name of the circuit as well as traffic-shaping parameters. Formats: Detailed or Summary Default Filenames: ATMpvcdet, ATMpvcsumm
UNI/B-ICI Utilization Report	Utilization of ATM UNI/B-ICI ports over time. Formats: Detailed or Summary Default Filenames: ATMlptdet, ATMlptsumm
SVC Call History Report	SVC Call history on a UNI/B-ICI basis. The SVC Call History report includes the following reports: Point-to-Point (PTP), PTP Failure, Point-to-Multipoint (PTMP), and PTMP Failure reports. Formats: Detailed Default Filenames: ATMSVC

You can generate all reports in either ROI (Report Object Instance) or HTML (Hypertext Markup Language) format. You view ROI reports from the Actuate client and HTML reports from a web browser.

About Summary, Exception, and Detailed Reports

Report executables allow you to create three types of reports—summary, exception, and detailed. Each type of report provides unique information about the network. To maximize the effectiveness of the Report Generator tool, administrators should design a report schedule, using each type of report at the appropriate time.

Here are descriptions of each type of report and some general suggestions for when and how to use the report.

- **Summary Reports provide an overall snapshot of network performance.** Administrators should schedule summary reports on a daily basis, perhaps for morning distribution, to see if performance results are normal. If the summary report indicates a problem, the administrator can then generate a detailed report to analyze the problem.

  If necessary, administrators should periodically schedule weekly and monthly summary reports to view the long-term performance of logical ports and virtual circuits. Typically, administrators schedule these reports late at night because the execution may take more time than a daily report.

- **Exception Reports identify potential problems.** These reports include the parameter values that exceed thresholds defined in the report request. Exception reports are empty if there are no values that exceed the defined thresholds. If the exception report indicates a problem, the administrator should generate a detailed report to analyze the problem.

  In general, exception reports should be scheduled on a daily basis. Administrators can also schedule weekly and monthly exception reports to view long-term performance statistics.

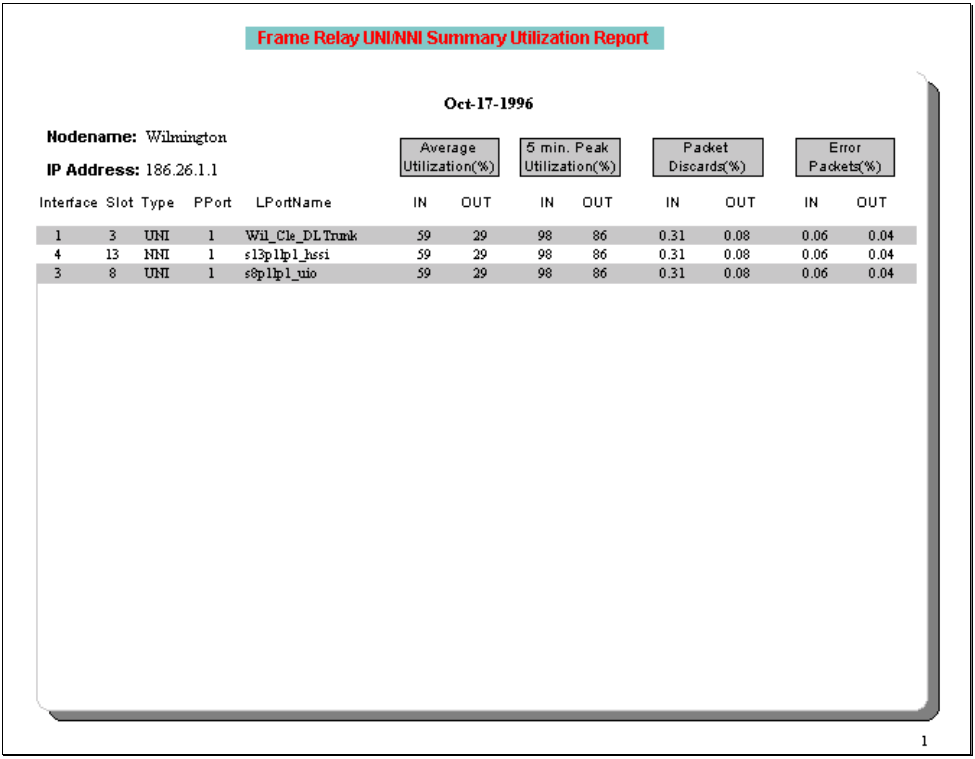
Exception reports are available for ATM and Frame Relay trunks only.

- **Detailed Reports provide a detailed view of individual network elements.** The typical detailed report includes 24 hours of data broken down into time intervals. You can specify a report period for a day or greater in the report request. The time interval, however, is determined by the collection interval used by the Bulk Statistics Collector.

Summary Reports

Summary reports are always in a tabular format and sometimes in a line graph format. Notice that the header information in the report is from the CascadeView Sybase database; the statistical information in the rest of the report is from the Bulk Statistics Sybase database. If the Bulk Statistics Collector has not collected data during the time period of the report, the Summary report is empty.

Figure 1-4 illustrates a Frame Relay UNI/NNI Summary Utilization Report.



Frame Relay UNI/NNI Summary Utilization Report

Oct-17-1996

Nodename: Wilmington

IP Address: 186.26.1.1

Interface	Slot	Type	PPort	LPortName	Average Utilization(%) IN	Average Utilization(%) OUT	5 min. Peak Utilization(%) IN	5 min. Peak Utilization(%) OUT	Packet Discards(%) IN	Packet Discards(%) OUT	Error Packets(%) IN	Error Packets(%) OUT
1	3	UNI	1	Wil_Cle_DL Trunk	59	29	98	86	0.31	0.08	0.06	0.04
4	13	NNI	1	s13p1lp1_hssi	59	29	98	86	0.31	0.08	0.06	0.04
3	8	UNI	1	s8p1lp1_uio	59	29	98	86	0.31	0.08	0.06	0.04

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Figure 1-4. Summary Utilization Report in Tabular Format

Exception Reports

Most exception reports appear in both a tabular and bar-graph format. When you view the various sections of these reports, you see the two different formats. Figure 1-5 illustrates the two sections of a Frame Relay Trunk Utilization Exception Report.

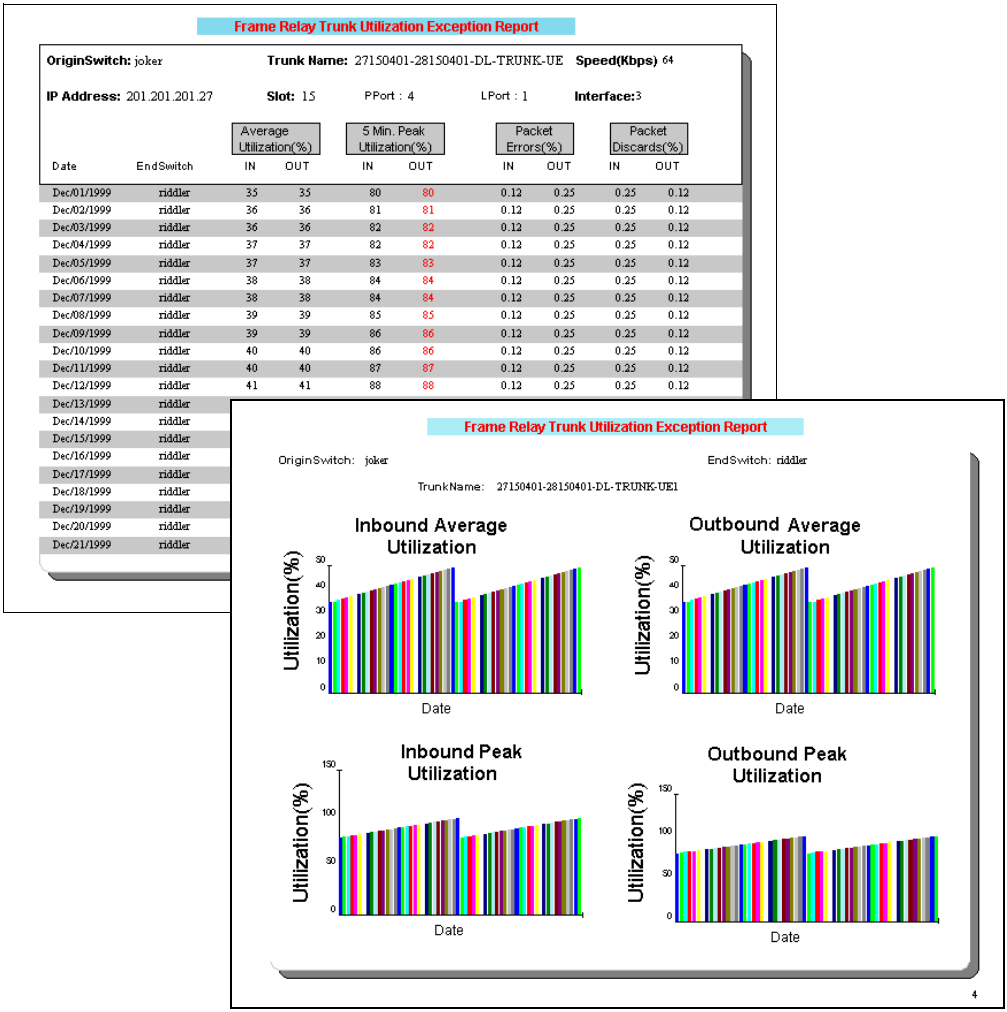
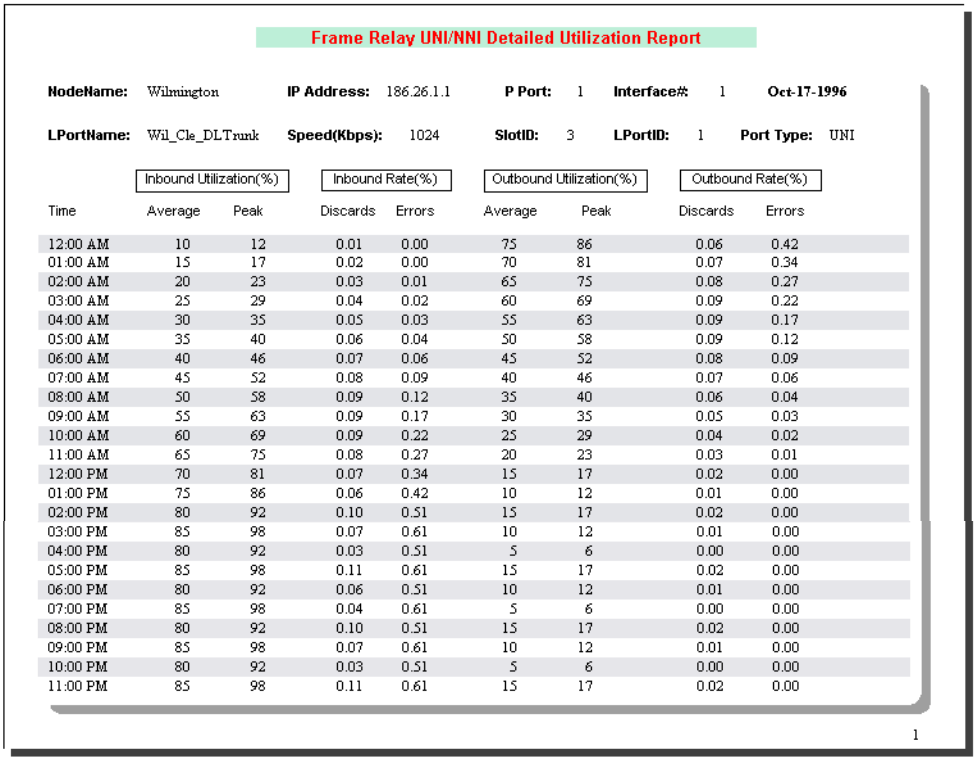


Figure 1-5. Tabular and Graphical Sections of an Exception Report

Detailed Reports

Most detailed reports appear in both a tabular and line-graph format. When you view the various sections of these reports, you see the two different formats.

Figure 1-6 and Figure 1-7 illustrate the tabular and graphical sections of a UNI/NNI Peak and Average Detailed Utilization Report.



Frame Relay UNI/NNI Detailed Utilization Report

NodeName: Wilmington **IP Address:** 186.26.1.1 **P Port:** 1 **Interface#:** 1 **Oct-17-1996**

LPortName: Wil_Cle_DLTrunk **Speed(Kbps):** 1024 **SlotID:** 3 **LPortID:** 1 **Port Type:** UNI

	Inbound Utilization(%)		Inbound Rate(%)		Outbound Utilization(%)		Outbound Rate(%)	
Time	Average	Peak	Discards	Errors	Average	Peak	Discards	Errors
12:00 AM	10	12	0.01	0.00	75	86	0.06	0.42
01:00 AM	15	17	0.02	0.00	70	81	0.07	0.34
02:00 AM	20	23	0.03	0.01	65	75	0.08	0.27
03:00 AM	25	29	0.04	0.02	60	69	0.09	0.22
04:00 AM	30	35	0.05	0.03	55	63	0.09	0.17
05:00 AM	35	40	0.06	0.04	50	58	0.09	0.12
06:00 AM	40	46	0.07	0.06	45	52	0.08	0.09
07:00 AM	45	52	0.08	0.09	40	46	0.07	0.06
08:00 AM	50	58	0.09	0.12	35	40	0.06	0.04
09:00 AM	55	63	0.09	0.17	30	35	0.05	0.03
10:00 AM	60	69	0.09	0.22	25	29	0.04	0.02
11:00 AM	65	75	0.08	0.27	20	23	0.03	0.01
12:00 PM	70	81	0.07	0.34	15	17	0.02	0.00
01:00 PM	75	86	0.06	0.42	10	12	0.01	0.00
02:00 PM	80	92	0.10	0.51	15	17	0.02	0.00
03:00 PM	85	98	0.07	0.61	10	12	0.01	0.00
04:00 PM	80	92	0.03	0.51	5	6	0.00	0.00
05:00 PM	85	98	0.11	0.61	15	17	0.02	0.00
06:00 PM	80	92	0.06	0.51	10	12	0.01	0.00
07:00 PM	85	98	0.04	0.61	5	6	0.00	0.00
08:00 PM	80	92	0.10	0.51	15	17	0.02	0.00
09:00 PM	85	98	0.07	0.61	10	12	0.01	0.00
10:00 PM	80	92	0.03	0.51	5	6	0.00	0.00
11:00 PM	85	98	0.11	0.61	15	17	0.02	0.00

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Figure 1-6. Tabular Section of a Detailed Utilization Report

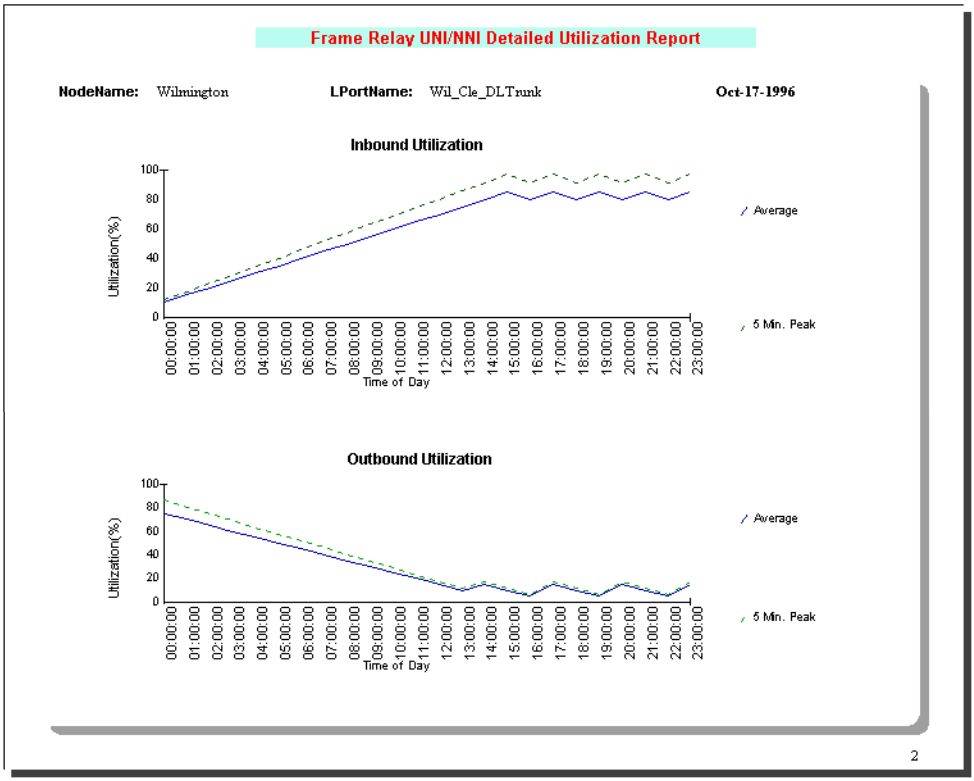


Figure 1-7. Graphical Section of a Detailed Utilization Report

The Source Data for Reports

Bulk Statistics Collectors translate and copy the data received from the switches into tables in the Bulk Statistics Sybase database. The Report Generator retrieves information for reports from the following tables in the Bulk Statistics Sybase database:

Table 1-5. Tables for STDX 6000 Frame Relay Statistics

Table Name	Description
TrkStat	STDX 6000 trunk hourly statistics
CktStat	STDX 6000 Frame Relay circuit average and peak statistics

Table 1-6. Tables for B-STDX 8000/9000 Frame Relay Statistics

Table Name	Description
TrunkStat	B-STDX 8000/9000 trunk average and peak statistics
FrCktStat	B-STDX 8000/9000 Frame Relay circuit average and peak statistics
FrLportStat	B-STDX 8000/9000 Frame Relay UNI and NNI average and peak statistics
SmdsLportStat	SMDS DXI and SSI average and peak statistics

Table 1-7. Tables for CBX 500 ATM Statistics

Table Name	Description
ATMCktStat	ATM permanent virtual circuit statistics
ATMTrkStat	ATM cell trunk statistics
ATMSvcStat	ATM Logical Port (UNI/B-ICI) SVC Call statistics
ATMPrtStat	ATM Logical Port (UNI/B-ICI) statistics

The Report Generator also retrieves configuration data from the CascadeView database. The Report Generator uses the following tables in the CascadeView database:

Table 1-8. CascadeView Database Tables

Table Name	Description
NetWideParam	Network-wide object
Switch	Unique switch name
Pport	Relationship between the Physical Port and the card on which it resides
Lport	Logical Port on the switch
DLCI	The Data Link Connection Identifier (DLCI) numbers related to the Logical Port
Trunk	Name of trunk connecting the two Logical Ports
CustomerInfo	Customer information
Circuit	Circuit related to the two DLCIs

About the Actuate Web Agent

The Actuate Web Agent is shipped only with the Report Generator with Web Agent product. The Web Agent enables your local web server to communicate with the Actuate Report Server. Once the Actuate Web Agent is installed on the web server, users can generate and view reports via the web. The Web Agent enables a standard browser to function much like the Actuate End User Desktop.

Once you install the Actuate Web Agent, you can perform the following Report Generator operations via the web, as long as you have the appropriate privileges:

- View folders and files in the Report Encyclopedia.
- Run ROI and HTML report executables and, therefore, create both ROI and HTML report documents.
- Check the status of report requests.
- View and print HTML report documents.
- Delete report requests.
- Delete report documents.

The Actuate Web Agent does not let you perform these tasks via the web:

- Create, delete, and manage user accounts.
- Create report folders or define permissions on folders.

After you connect to the Report Server with a web browser, you can generate either HTML or ROI report documents. The type of report generated depends on the report executable that you run. HTML executables generate HTML reports. ROI executables generate ROI reports.

Although you can generate both types of reports from your browser, you can view only HTML report documents from your browser.

The following diagram illustrates the differences between browsers and Actuate clients.

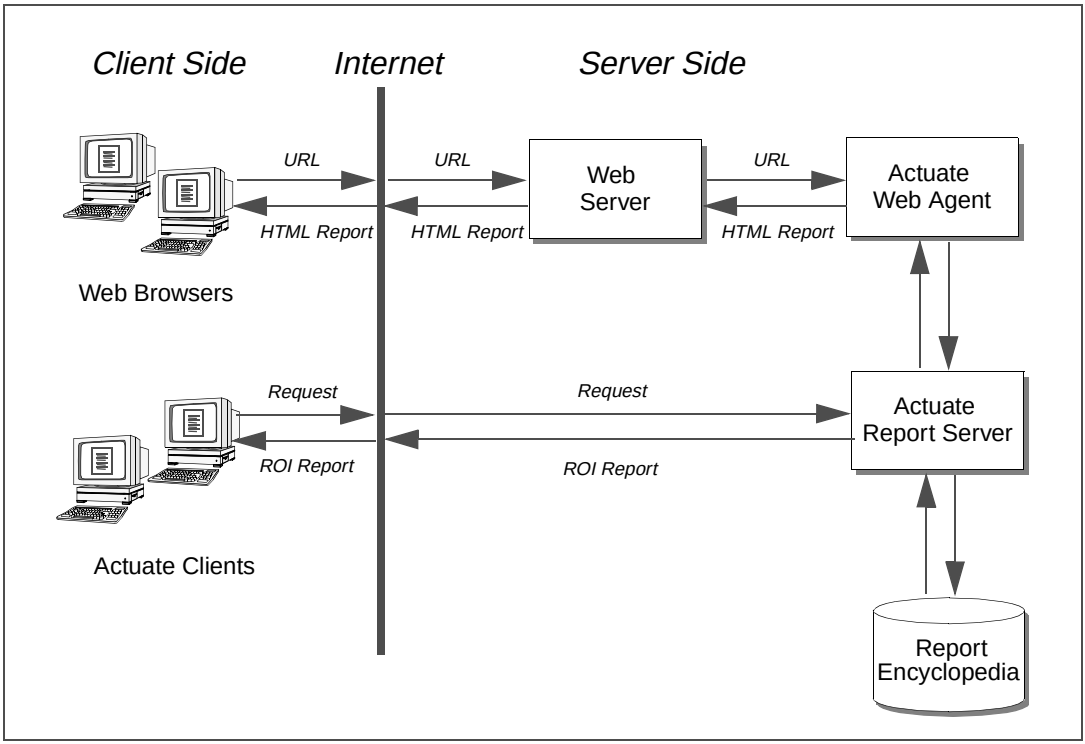


Figure 1-8. Actuate Client and Browser Architecture

Implementation Requirements

These are the basic requirements for setting up the Report Generator:

- Bulk Statistics Collectors must save data to a Sybase 11 database.
- The Bulk Statistics and the CascadeView databases can be on the same or separate data servers.
- The Sybase Open Client and the Actuate Report Server must reside on the same Sun Solaris system.
- The Actuate Web Agent must reside on the web server system. (Applicable only if you purchased the Report Generator with Web Agent product.)

Sample Implementations

You can set up Report Generator components in various ways, depending on the number of clients that will access the Report Server. If you require only base-level functionality, you can use a two-system configuration. If you require a fully distributed Report Generator environment, you need additional systems for Actuate clients and web browsers.

- Figure 1-9 illustrates a minimum configuration. The Actuate Report Server and the Sybase Open Client reside on the same system, as required. The Actuate Administrator Desktop resides on another system.
- Figure 1-10 illustrates a fully distributed configuration. This configuration includes a web server and additional systems for viewing Reports via web browsers, the Actuate End User Desktop, and Actuate Viewers.

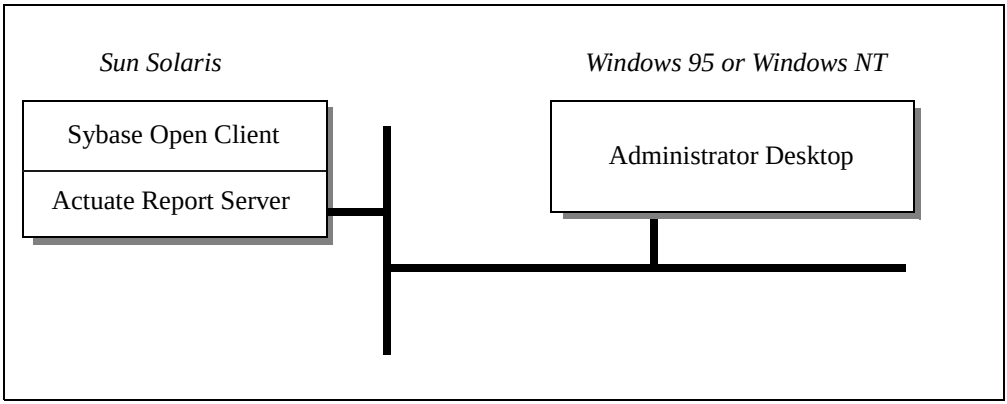


Figure 1-9. Minimum Configuration

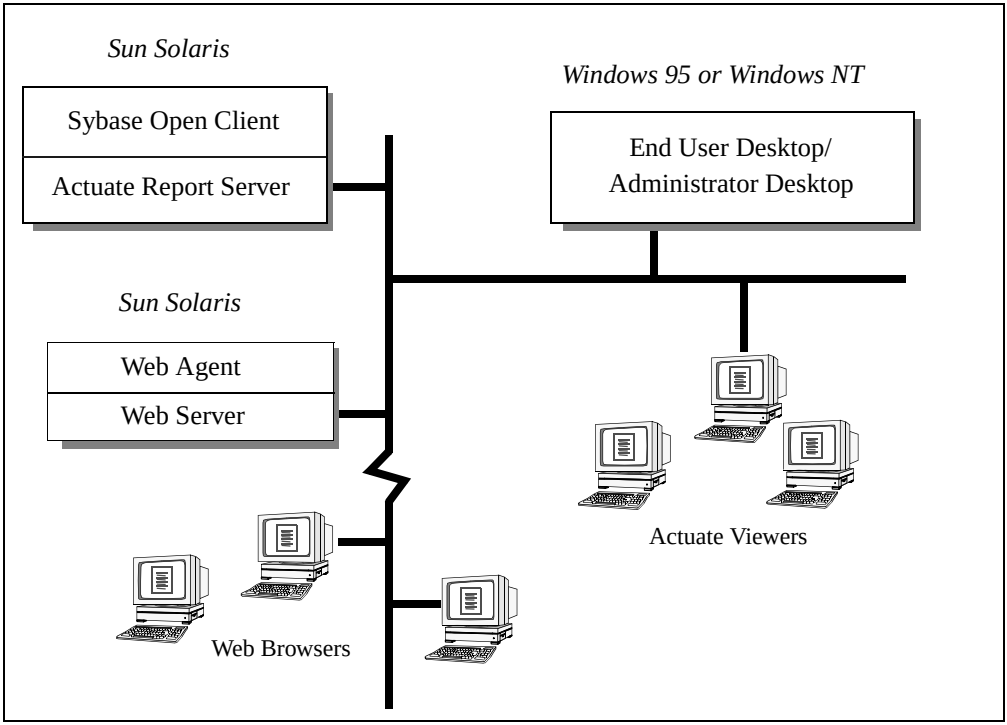


Figure 1-10. Fully Distributed Configuration

Hardware Requirements

Table 1-9 lists the recommended hardware requirements for Report Generator components.

Table 1-9. Hardware Requirements

Component	System	Hard Drive	RAM	CD-ROM
Report Server/ Open Client System	Sparc Ultra Enterprise 2 with 2 CPUs or greater	2.1GB	128MB (minimum) 256MB (recommended)	yes
Actuate Administrator Desktop	Windows 95 or Windows NT 4.0	540MB	16MB	yes
Actuate End User Desktop or Viewers	Windows 95 or Windows NT 4.0	540MB	16MB	yes
Actuate Web Agent/Web Server System	Sparc Ultra Enterprise 2	2.1GB	128MB	yes

You may use lower-end systems for the Report Server system. However, depending on the number of users and number of reports requested, performance may be affected. Actuate recommends that the Report Server system have 256MB RAM for better performance.

Windows 95 or Windows NT systems must have a 32-bit TCP/IP stack installed and the appropriate 32-bit drivers. Systems are generally shipped with these components.

Software Requirements

Table 1-10 lists the software requirements for Report Generator components.

Table 1-10. Report Generator Software Requirements

Component	Software
Report Server System	Solaris 2.5.1
	Sybase Open Client 10.0.3
	Actuate Report Server 3.0
Actuate Administrator Desktop System	Windows 95 or Windows NT 4.0 or later
	Administrator Desktop 3.0 or later
	Ascend Report Executables 1.0
Actuate End User Desktop and Viewer Systems	Windows 95 or Windows NT 4.0 or later
	End User Desktop/Viewer 3.0 or later
Web Server System (if you purchased the Report Generator with Web Agent product)	Solaris 2.5.1
	Netscape FastTrack or Enterprise server
	Actuate Web Agent 3.0

If you are going to generate HTML reports, your Report Server system should be an X server or have access to an X server. The Report Server uses X Windows resources to create HTML graphs.

At this release, the Report Generator supports only Netscape web servers running on Solaris 2.5.1 operating systems.

The Actuate Web Agent supports all standard browsers.

Storage Requirements

Table 1-11 lists the storage requirements for Report Generator software. Before you install the software, verify that you have available disk space for the applications.

Table 1-11. Storage Requirements

Report Generator Software	Disk Space Requirements for Installation and Storage
Sybase Open Client & Actuate Report Server	100-110MB
Actuate Administrator Desktop & Report Executables	30MB
Actuate End User Desktop	11MB
Actuate Viewer	5MB
Actuate Web Agent	16MB

Requirements for Other Components

The Report Generator works with Bulk Statistics Collectors and CascadeView. Table 1-12 lists the requirements for these components.

Table 1-12. Requirements for Other Components

Component	Software Version
CascadeView NMS	Version 2.3 or later
CascadeView Sybase SQL Server	Sybase 11 or later
Bulk Statistics Collector for STDX/B-STDX	Version 2.5 or later
Bulk Statistics Collector for CBX-500	Version 1.0 or later
Bulk Statistics Sybase SQL Server	Sybase 11 or later

Due to the current restrictions with the Bulk Statistics Collector for B-STDX and STDX switches, the Report Generator does not produce reports for B-STDX switches running switch software, version 4.0.X and 4.1.X. Refer to the Software Release Notice for information about the switch software that the Report Generator supports.

Installation Overview

This section outlines the Report Generator installation process and lists the software that you must install.

The Report Generator product is shipped with two CD-ROMs:

- CD-ROM #1 contains the Sybase Open Client, Actuate Report Server, online documentation, and the package-based script that installs all server components.
- CD-ROM #2 contains Report Generator executables, online documentation, and three Actuate Client applications—Administrator Desktop, End User Desktop, and the Viewer. If you purchased the Report Generator with Web Agent, CD-ROM #2 also includes the Actuate Web Agent.

Perform installation tasks in the following sequence:

1. Use CD-ROM #1 to install the Sybase Open Client and the Actuate Report Server on the Report Server system.
2. Use CD-ROM #2 to install the Actuate Administrator Desktop and Report Generator executables on the primary client system.
3. From your Administrator Desktop system, set up report directories on the Report Server. Then copy the reports that you plan to use to the Report Server system.
4. If necessary, use CD-ROM #2 to install the Actuate End User Desktop or Viewers on additional systems.
5. If you purchased the Report Generator with Web Agent product, use CD-ROM #2 to install the Actuate Web Agent on the web server system.

Figure 1-11 illustrates the installation process.

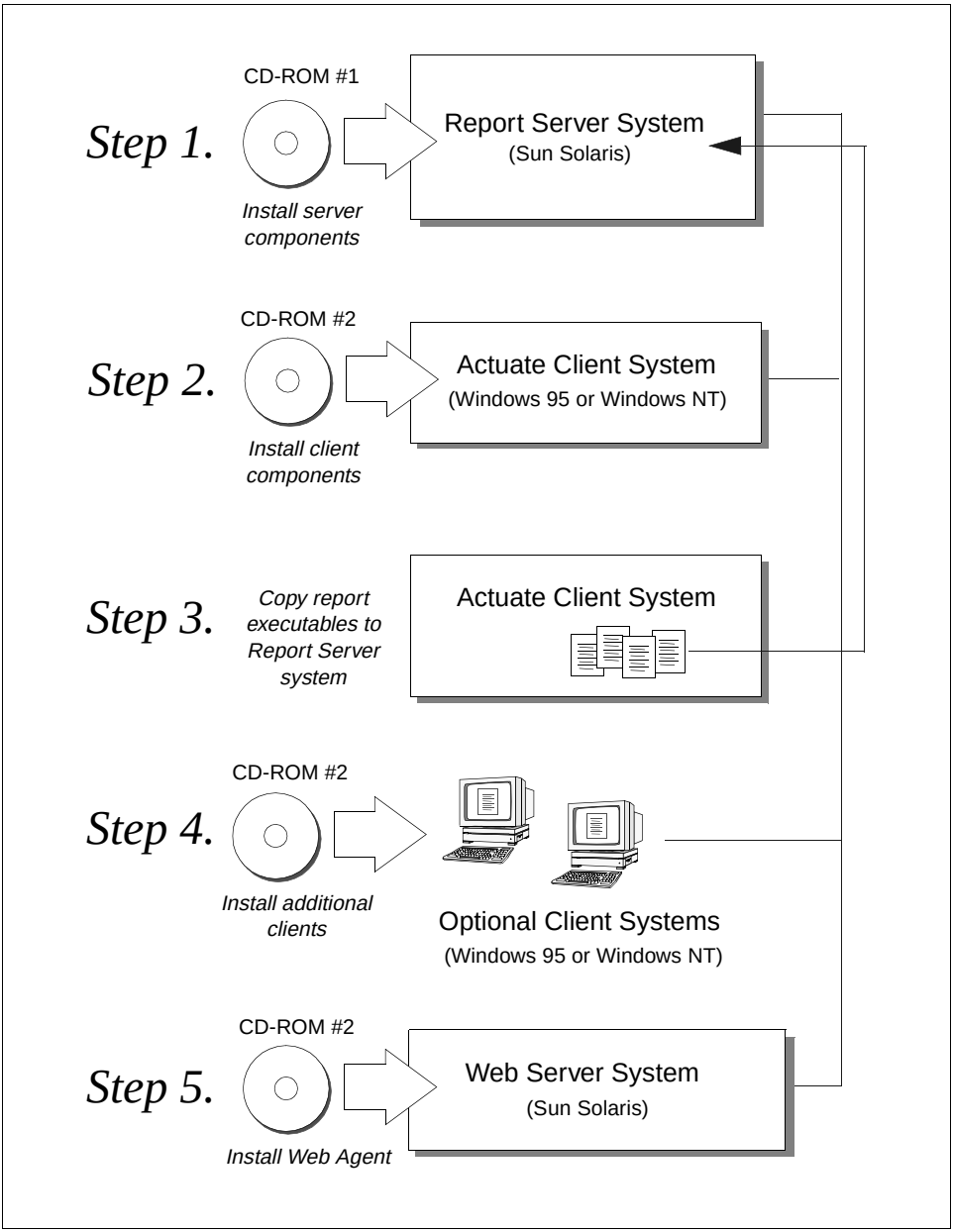


Figure 1-11. Installation Process Overview

2

Installing Report Server Components

This chapter provides instructions for installing Report Server components, the Sybase Open Client and the Actuate Report Server, on the Report Server system. The server installation uses the UNIX *pkgadd* command to launch the installation script and manage installation files.

This chapter shows you how to:

- Load the server media from CD-ROM #1.
- Start the installation script with the UNIX *pkgadd* utility.
- Install and configure Sybase Open Client and the Actuate Report Server.
- Verify that the Report Server is running.

This chapter assumes that you have reviewed:

- Report Generator implementation requirements (page 1-18).
- Report Generator installation overview (page 1-24).

Before You Begin

This section describes information that you should know before you begin the server installation.

X Server Requirements for HTML Reports

Review this section if you purchased the Report Generator with Web Agent product. Otherwise, continue to the next section.

The Report Server uses the X server to create HTML graphs. The Report Server can generate HTML graphs only if it has access to the X server and the X server is running. The procedures in this section show you how to determine the status of your X server and, if necessary, configure it for the Report Generator environment.

To verify that the X server is running:

1. Log on to the Report Server system. (If your X server is on another system, log on to that system.)
2. Enter the following command:

   `ps -aef | grep xinit`

   If the X server is running, you will see an entry similar to the following:

   ```
   root 220 216 13 Nov 12.console 0:00 /usr/openwin/bin/xinit
   ```

3. Choose one of the following:

   - If the X server is not running, start the system's windowing manager. This automatically starts the X server.
   - If the X server is *not* on the Report Server system, enter the following command on the X server system:

     `xhost [`*`Report Server system name`*`]`

   After installation, the Report Server system will be able to access the X server.

UNIX Software Package Tools

The *pkgadd* command installs Report Server/Open Client components and a UNIX package utility that manages the installation. During installation, the package utility keeps track of the files that are installed and the version number of these files. Once the package utility is installed, you can use UNIX package commands to list or remove Report Server/Open Client files or view the version number of these applications.

You should know these commands:

- To install applications from the CD-ROM, enter:

  pkgadd -d [*cdrom pathname*]

  For example:

  pkgadd -d /cdrom/cdrom0

- To remove the Report Server/Open Client files after or during installation, enter:

  pkgrm NAVISrpsv

- To view information such as version numbers and installation dates for the Report Server/Open Client and other packaged applications on the system, enter:

  pkginfo NAVISrpsv

*There are other package commands such as pkgask and pkgchk. To learn more about these commands, enter **man [command]** to bring up the man pages for that command.*

Summary of Installation Prompts

Before you begin the Report Server installation, complete the Report Server installation worksheets in Appendix A. The installation script asks for worksheet information when you are installing Sybase Open Client and the Report Server.

During the Sybase Open Client installation, the script prompts you for these parameter values:

- Sybase Open Client installation directory
- Actuate Report Server installation directory
- Hostname of your X server system (generally, the hostname of the Report Server system)

During the Sybase Open Client configuration section, the script prompts you for these parameter values:

- Name of CascadeView or Bulk Statistics data server (by default, CASCADE or CASCBSTAT)
- Name alias of data server
- TCP port number of the data server

If the Bulk Statistics and CascadeView databases are installed on the same data server, you enter the name, alias, and TCP port number of one data server. If you are using more than one data server, you enter information for all the data servers.

Appendix A describes how to locate the name and TCP port number of the CascadeView and Bulk Statistics data servers.

Loading the Report Server Media

To load the Open Client/Report Server media (CD-ROM #1):

1. Log on to the Report Server system.
2. Enter **su - root** to become root. At the Password prompts, enter the root password.
3. Insert the Report Server media (CD-ROM #1) into the CD-ROM drive.
4. When the LED on the CD-ROM stops blinking, enter the following command to move to your local CD-ROM directory:

   ```
   cd  [cd-rom pathname]
   ```

   For example, if your CD-ROM directory is */cdrom/cdrom0*, you would enter:

   ```
   cd  /cdrom/cdrom0
   ```

5. Enter **ls** to view the files that are on the CD-ROM.

   The system displays the following directories:

   - ***NAVISrpsv***, which contains the files that *pkgadd* uses to install the Sybase Open Client and the Actuate Report Server.
   - ***sybasecd***, which contains Sybase Open Client files.
   - ***actuate***, which contains Actuate Report Server files.
   - ***Docs***, which contains Ascend and Actuate documentation in PDF format.
   - ***Readers***, which contains Adobe Acrobat Readers.

You are now ready to begin the installation.

Installing Sybase Open Client

To install the Sybase Open Client:

1. Verify that you are root and that you are in the CD-ROM directory. The pound sign (#) prompt indicates that you are root. The *pwd* command displays your current directory.

2. Enter the following command to begin the installation:

   pkgadd -d [*cd-rom pathname*]

   The *pkgadd* menu appears, listing the application(s) that you can install. The menu is similar to the following:

```
The following packages are available:
   1 NAVISrpsv  Ascend Report Generator - Server Components
                (Sparc) 01.00.00.00

Select package(s) you wish to process (or 'all' to process
all packages). (default: all) [?,??,q]:
```

3. Enter the number that indexes NAVISrpsv (in the example above, **1**).

   The installation utility performs verification functions and then prompts:

```
What type of installation do you wish to perform?
[default=c] :
c. Complete Installation (Sybase Open Client & Actuate
   Report Server)
s. Report Server Only
e. Exit

Make your selection.
```

4. Enter **c** to perform a complete server installation.

   The script begins displaying the pathname prompts.

5. When you are prompted for the Sybase Open Client installation directory pathname, do one of the following:

   - Press Return to accept the default directory, */opt/rptgen*.
   - Enter another directory pathname.

6. When you are prompted for the Actuate Report Server installation directory pathname, do one of the following:

   - Press Return to accept the default directory, */opt/rptgen*.
   - Enter another directory pathname.

7. When you are prompted for the Valid X Server Name, enter the name in this format:

   [*hostname of X server system*]:0

   For example, if the X server is on your local system yodat, you would enter:

   yodat:0

   After you answer the prompts, the *pkgadd* utility performs various file management operations and then displays the following message:

   ```
   This package contains scripts which will be executed with
   super-user permission during the process of installing this
   package.

   Do you want to continue with the installation of <NAVISrpsv>
   [y,n,?] y
   ```

8. Since you are already root, enter **y** to continue.

The *pkgadd* utility executes various preinstallation scripts and then displays the following message:

```
******* OPEN CLIENT INSTALLATION *******
```

If you are running the installation script in a directory other than the CD-ROM directory, an error message appears at this point, instructing you to exit the script and run the installation from the CD-ROM directory.

The installation script lists the files as they are installed.

```
*******    LOADING FILES   *******

x ./bin/bcp, 381797 bytes, 746 tape blocks
x ./bin/defncopy, 334629 bytes, 654 tape blocks
x ./bin/isql, 354015 bytes, 692 tape blocks
x ./charsets/ascii_8/binary.srt, 410 bytes, 1 tape blocks
x ./charsets/ascii_8/charset.loc, 2381 bytes, 5 tape blocks
...
...
...
```

The Sybase Open Client installation takes a few minutes. When the installation is complete, the script displays the following message:

```
******* OPEN CLIENT INSTALLATION COMPLETED *******
```

The script continues automatically to the next task, Sybase Open Client configuration.

Configuring the Sybase Open Client

When the Sybase Open Client installation is complete, a message, similar to the following, appears:

```
        OPEN CLIENT CONFIGURATION STARTED

    The log file for this session is '/opt/sybase/init
    /logs/log0612.004'
```

Then the script displays the Sybinit menu. This menu enables you to provide information about the Bulk Statistics and CascadeView Sybase data servers.

To configure the Sybase Open Client:

1. In the Sybinit menu, enter **4** to select the option, Configure an Open Client/Server product. See Figure 2-1.

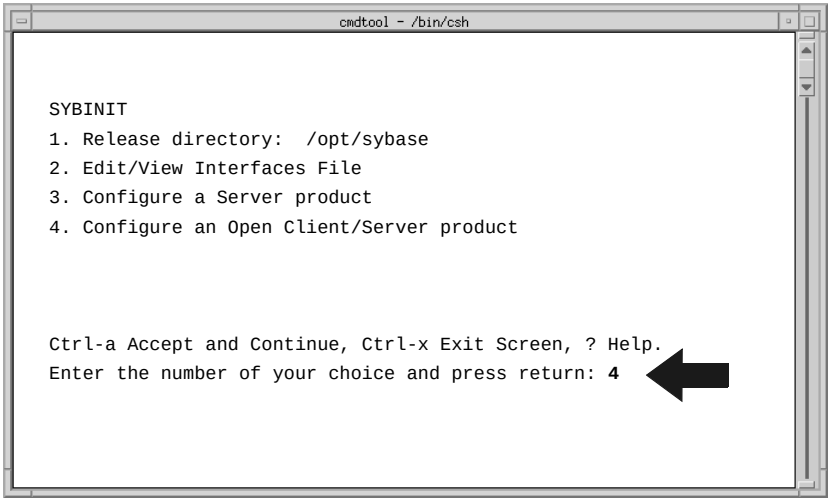


Figure 2-1. Sybinit Menu

After you enter 4, the Configure Connectivity Products menu appears. Only one item, the Open Client Library, appears in the Product list. See Figure 2-2.

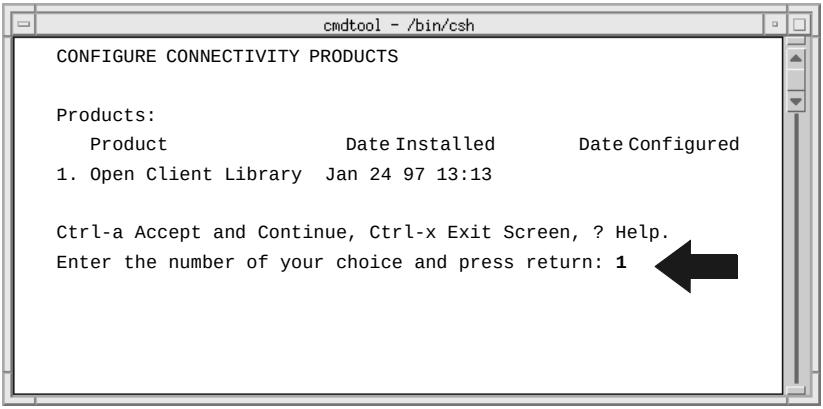


Figure 2-2. Configure Connectivity Menu

2. In the Configure Connectivity Products menu, enter **1** to select the Open Client Library option.

   The installation script initializes the Open Client Library

3. Press **Return** to continue at the two prompts that ask you to do so.

   The script displays the Configure Connectivity Products menu again. Notice that the menu now includes the current date and time in the Date Configured list.

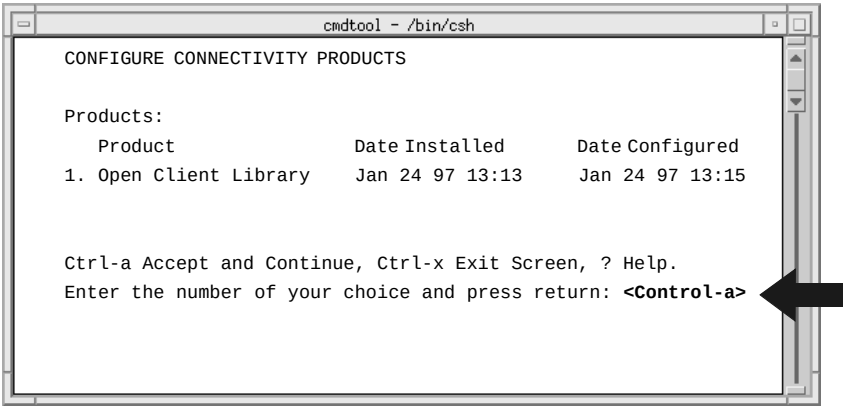


Figure 2-3. Configure Connectivity Menu with Updated Information

4. Press **Control-a** to accept the value and continue.

After you press Control-a, the script displays the Sybinit menu. See Figure 2-4.

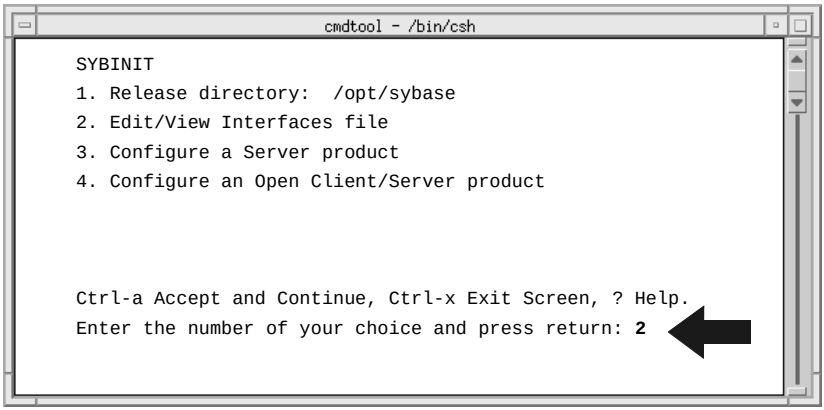


Figure 2-4. Sybinit Menu

5. In the Sybinit menu, enter **2** to select the option, Edit/View Interfaces file.

   The script displays the Interfaces File Top Screen menu.

   You are now ready to begin defining data server information for the Sybase Open Client *interfaces* file.

Defining Data Server Parameters for the interfaces File

Sybase Open Client uses the *interfaces* file to determine the names and TCP ports of the Bulk Statistics and CascadeView data servers. The following sections show you how to enter data server information in the *interfaces* file:

- "Defining a Data Server Name" on page 2-12.
- "Defining TCP Service Information for the Data Server" on page 2-14.

If your CascadeView and Bulk Statistics databases are located on two data servers, be sure to repeat both these sections for the second data server.

Defining a Data Server Name

The Interfaces File Top Screen menu allows you to enter and modify information in the Sybase Open Client *interfaces* file. If you enter incorrect information during the installation, you can return to this menu and correct the entry.

To define the CascadeView or Bulk Statistics data server name for the *interfaces* file:

1. In the Interfaces Top Screen menu, enter **1** to add a new entry.

   The Create New Interfaces File Entry menu appears. See Figure 2-5.

2. In the Create New Interfaces File Entry menu, enter **1**.

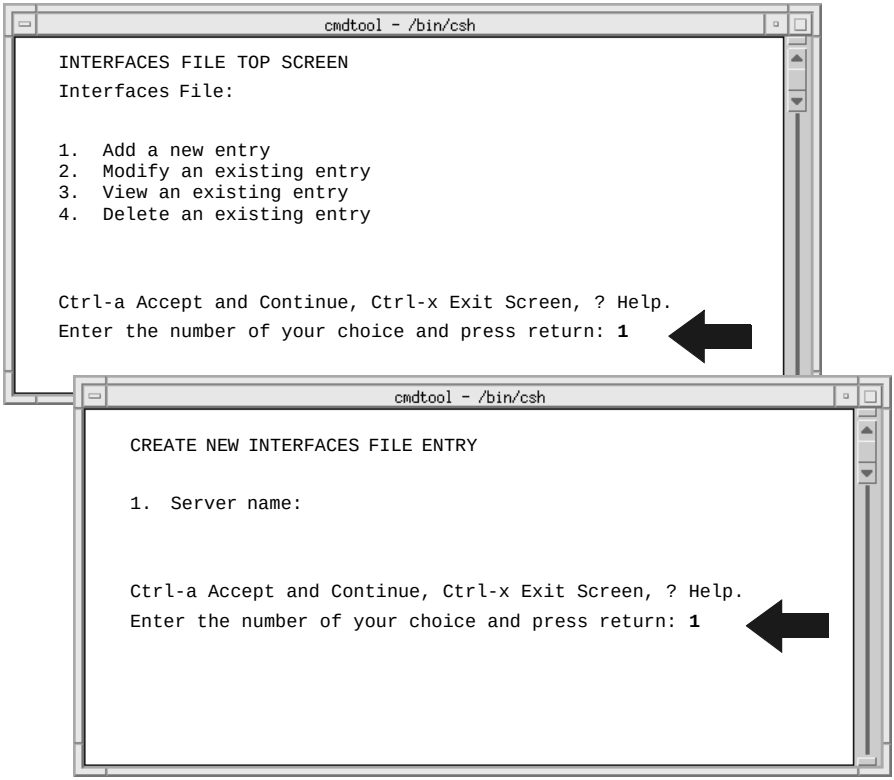


Figure 2-5. Interfaces File Top Screen and Create New Entry Menu

3. When prompted for the name of the server, enter the name of either the Bulk Statistics or CascadeView server (for example, CASCADE or CASCBSTAT).

4. After you enter the name, the script displays the Create New Interfaces menu again. It now includes the new server name.

5. Press **Control-a** to accept the value and continue.

Figure 2-6 illustrates Step 3 through Step 5.

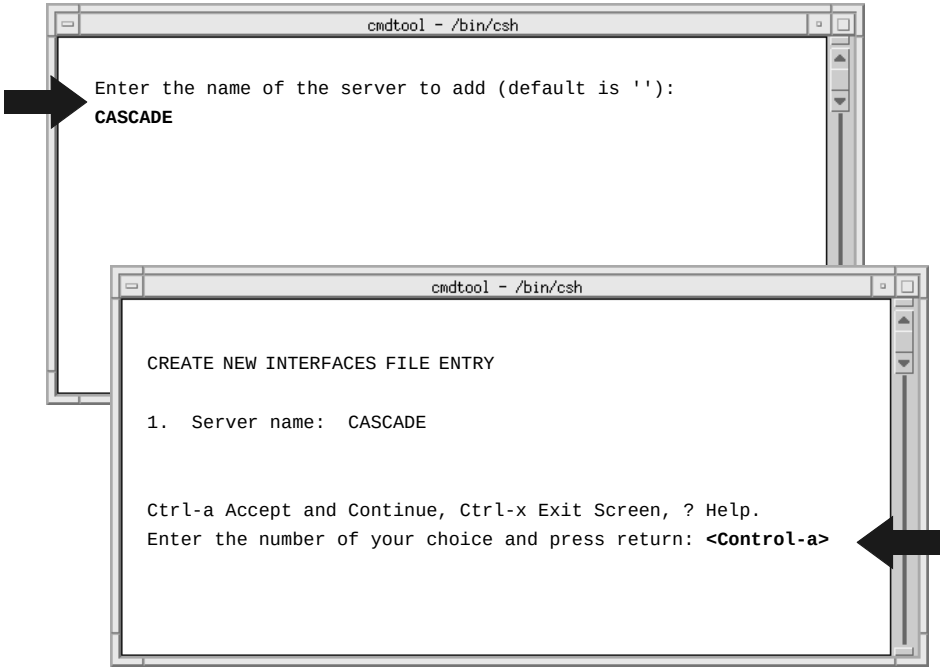


Figure 2-6. Server Name Prompts

Defining TCP Service Information for the Data Server

After you define the name of the data server, the script displays the Server Interfaces File Entry Screen. This menu enables you to define the TCP port number of the data server listed at the top of the menu (CASCADE, in the illustration below).

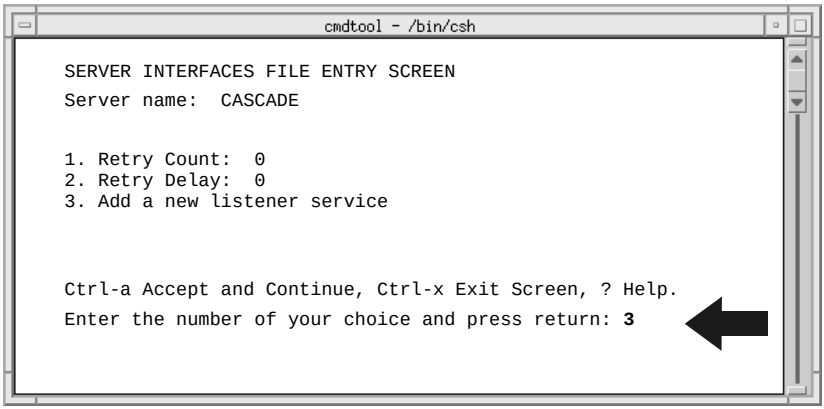


Figure 2-7. Server Interfaces Menu

1. In the Server Interfaces File Entry Screen menu, enter **3** to add a new listener service.

   The Edit TCP Service menu appears. See Figure 2-8.

Notice that the Edit TCP Service menu in Figure 2-8 lists, by default, the hostname of your local system in the Hostname/Address field. It is important that you change this default entry to the hostname of the CascadeView or Bulk Statistics data server system.

2. In the Edit TCP Service menu, enter **1** to define the correct hostname/address of the CascadeView or Bulk Statistics data server system.

3. At the prompt, enter the hostname or address of this data server entry.

   Figure 2-8 illustrates Steps 2 and 3.

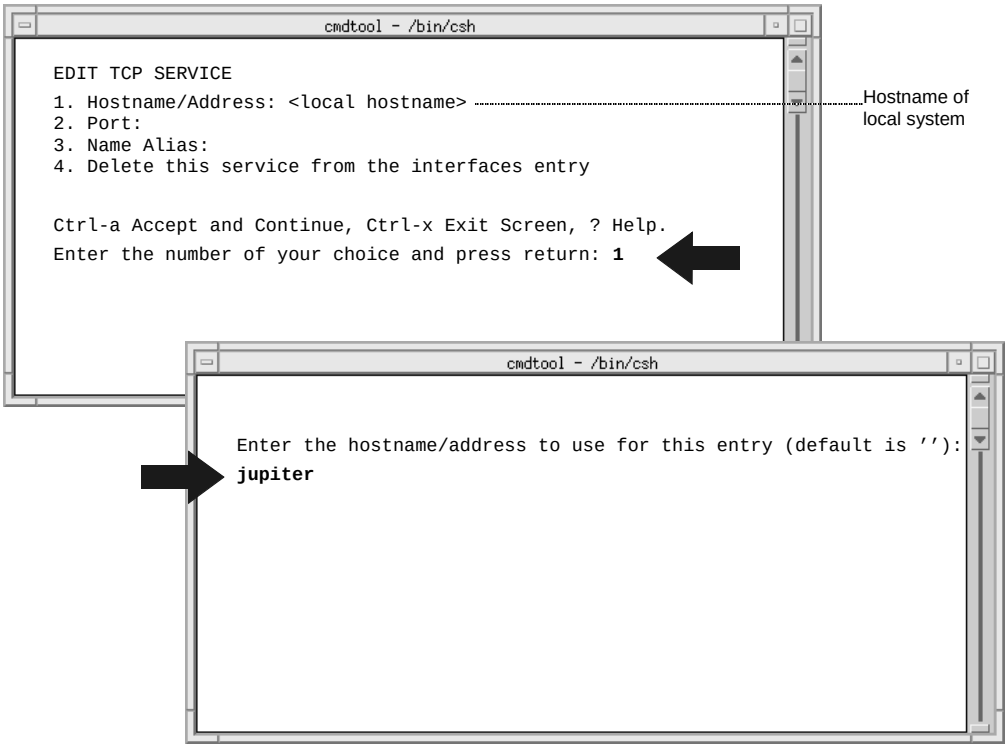


Figure 2-8. Defining the Hostname of the Data Server

If you receive an error message indicating that the hostname does not exist, check the /etc/hosts file on your Report Server system to make sure the hostname is listed there. If it is not listed, add the name to the file.

The script displays the Edit TCP Service menu with the correct hostname/address.

4. In the Edit TCP Service menu, enter **2** to define the port number.

5. At the prompt, enter the Sybase TCP port number for this data server.

Figure 2-9 illustrates Steps 4 and 5.

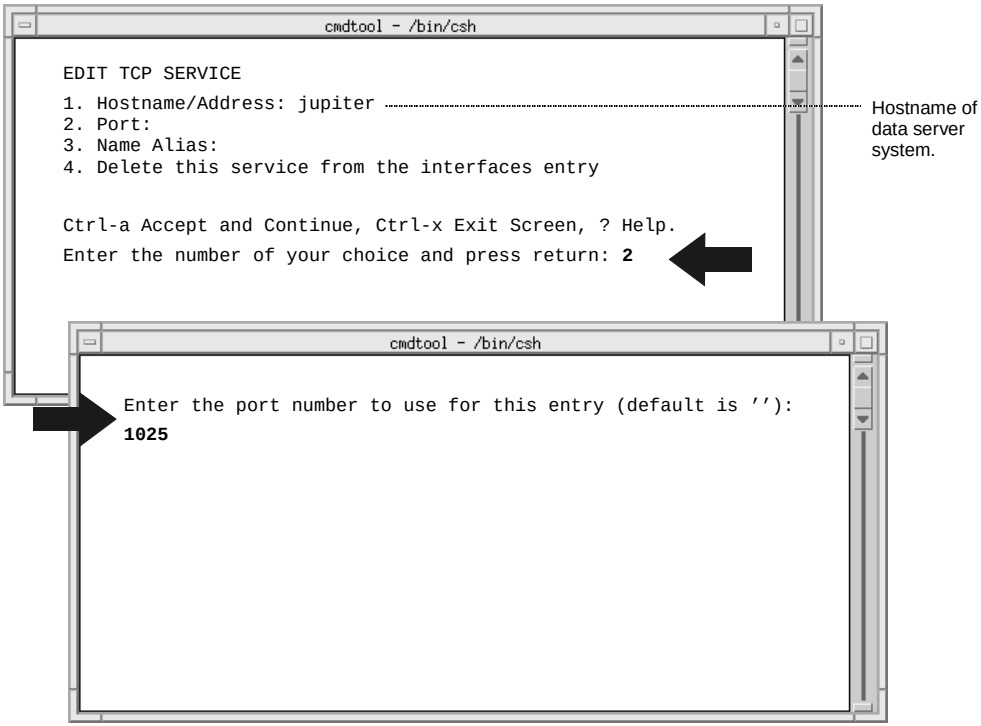


Figure 2-9. Defining the TCP Port Number of the Data Server

If you have a Sybase data server on your Report Server system, you will receive a message similar to the following: "Port 1025 is registered to Sybase. Either choose a different port address or make sure that this port is available before continuing." Sybase Open Client should use the TCP port number that is assigned to the Sybase data server to which you want to connect. If this port number is correct, press Return to continue and do not change your entry.

6. In the Edit TCP Service menu, enter **3** to define the name alias for the data server.

   A name alias is a descriptive name for the data server. For example, it could describe the location or function of the data server.

7. At the Name Alias prompt, enter a one-word, descriptive name for the data server.

   The script displays the Edit TCP Service menu with the new name alias.

8. Press **Control-a** to accept the value.

9. At the confirmation prompt, enter **y**.

   Figure 2-10 illustrates Steps 6 through 9.

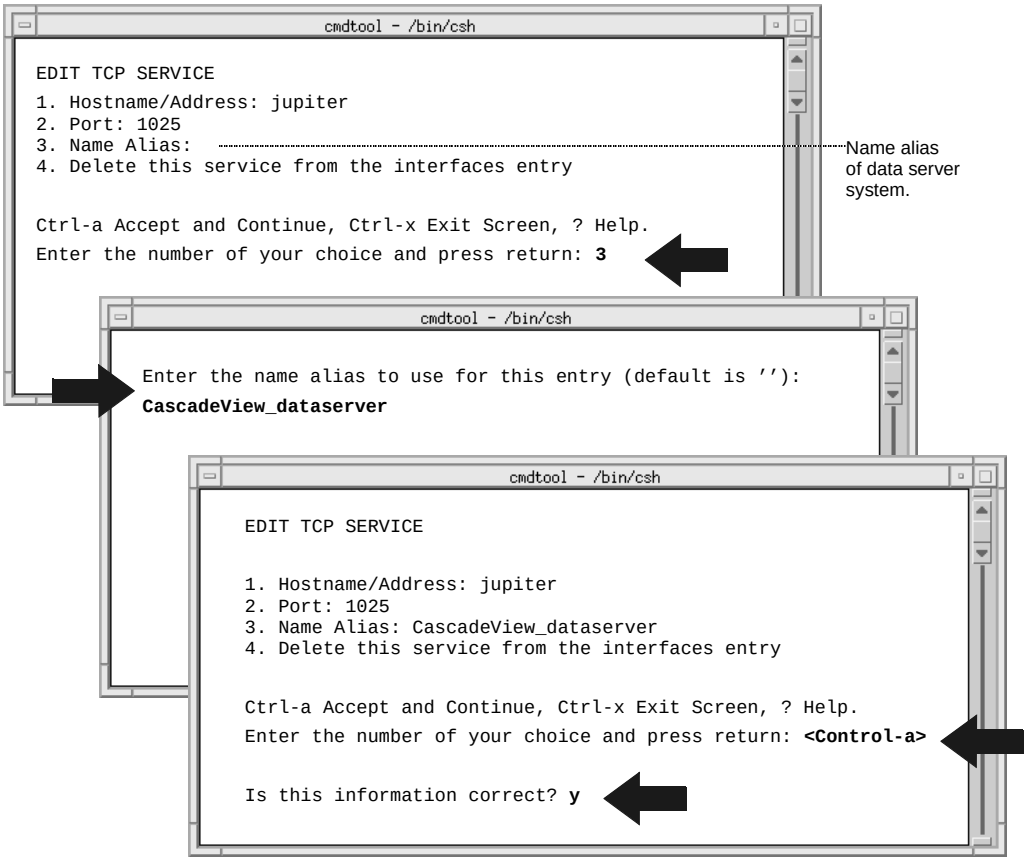


Figure 2-10. Defining a Name Alias for the Data Server

10. After you confirm the information, the script displays the Server Interfaces File menu again. The complete entry is listed as Option 4 in the menu. See Figure 2-11.

11. Press **Control-a** to accept the information.

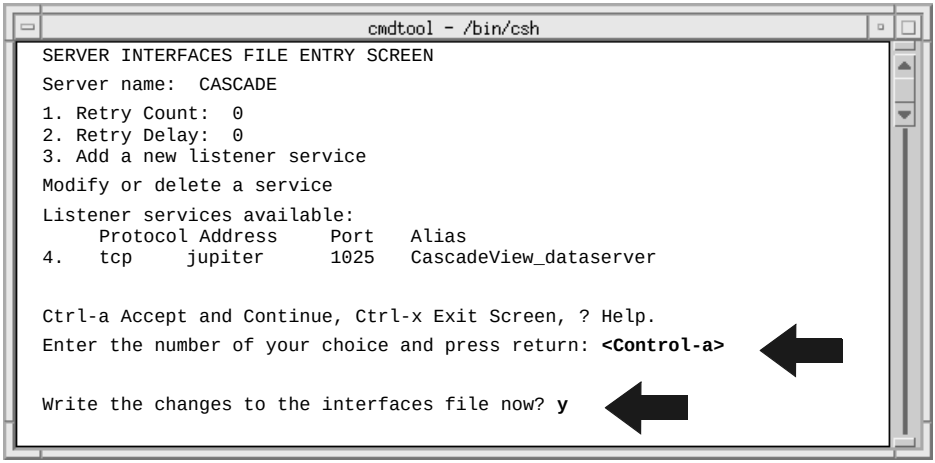


Figure 2-11. Complete Entry for the interfaces File

12. When you are prompted to write the information to the *interfaces* file, enter **y**.

    The system writes the information to the *interfaces* file and then displays the Interfaces File Top Screen.

13. Perform one of the following:

    - If you need to define a second data server, return to "Defining Data Server Parameters for the interfaces File" on page 2-11 and enter the name, alias, and TCP port number for the second data server.
    - If you do *not* need to define another data server, continue to the next section and exit from the Sybase Open Client section of the script.

Exiting from the Open Client Section of the Script

When you have defined the Bulk Statistics and CascadeView data servers, follow these steps to exit from the Open Client installation section of the script.

1. At the Interfaces File Top Screen, press **Control-x**.

   The Sybinit menu appears.

2. At the Sybinit menu, press **Control-x**.

   A message, similar to the following, appears:

```
Exiting.
The log file for this session is
'/opt/sybase/init/logs/log0627.001'.

******* OPEN CLIENT CONFIGURATION COMPLETED *******
```

You have now completed the Sybase Open Client section of the installation. The script continues automatically to the Actuate Report Server installation.

Installing the Actuate Report Server

When you exit from the Open Client section of the installation script, the script displays the following message:

```
******* REPORT SERVER INSTALLATION STARTED *******

Do you wish to continue? <y/n> [default=y] :
```

To install the Actuate Report Server:

1. Press Return to continue.

   The script displays the following message:

   ```
   *******      LOADING FILES      *******
   ```

   The script installs Report Server files but does not display them to your screen. The script also creates an installation log *reportsrv.out* in the following directory: *[installation directory]/rptgen/actuate/DATA*.

   When all Report Server files are installed, the script displays a message similar to the following:

   ```
   ***** ACTUATE REPORT SERVER INSTALLATION COMPLETED *****

   Installation of <NAVISrpsv> was successful.

   The following packages are available:
   1  NAVISrpsv   Ascend Report Generator -- Server Components
   (Sparc) 01.00.00.XX

   Select package(s) you wish to process (or ‘all’ to process
   all packages). (default: all) [?,??,q]: q
   ```

2. Enter **q** to exit from the *pkgadd* installation utility.

3. Eject the CD-ROM from the CD-ROM drive.

You have now installed all Report Server components. The Report Server should be up and running.

Continue to the next section to check Report Server processes.

Verifying That the Report Server Is Running

When you complete the installation, check to see if Report Server processes are running.

To view Report Server processes:

1. Enter the following command on the Report Server system:

   ```
   ps -aef | grep srvr
   ```

   The system displays server processes that are running on the system. These processes may include Report Server and other server processes.

   Figure 2-12 illustrates the Report Server processes that you should see.

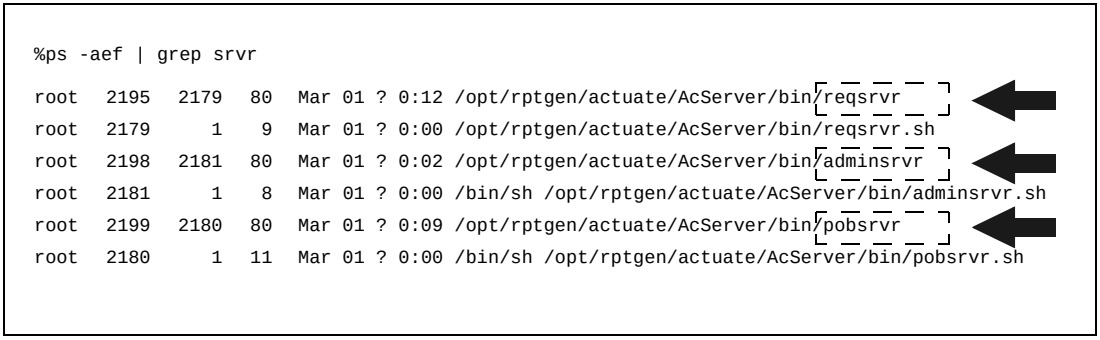


Figure 2-12. Report Server Processes

2. Locate these three Report Server processes:

   adminsrvr — the administrator server process

   reqsrvr — the request server process

   pobsrvr — the persistent object server process

   The Report Server is up and running if you see these three processes. Report Server processes ending with the suffix **.sh** are startup processes.

3

Installing Actuate Clients

This chapter provides instructions for installing and setting up Actuate clients. This chapter shows you how to:

- Use CD-ROM #2 to install the Administrator Desktop and report executables on the primary client system.
- Create report folders on the Report Server and copy report executables from the Administrator Desktop to the Report Server.
- Define the Administrator's account.
- Install the Actuate End User Desktop or Viewer on additional systems, if desired.

This chapter assumes that you have:

- Reviewed the Report Generator implementation requirements (Chapter 1).
- Installed Report Server components on the Report Server system (Chapter 2).

Before You Begin

This section describes information that you should know before you install Actuate clients.

How to Deploy Actuate Clients on Your Network

Before you begin installation procedures, decide which system should be the Administrator Desktop system (the primary client system). You must install the Administrator Desktop client before you install the other clients because it enables you to set up Report executables on the server and define user accounts.

As you can see in Figure 3-1, each Actuate client application provides different levels of functionality for users. Notice that the Viewer is a subset of the End User Desktop; the End User Desktop, in turn, is a subset of the Administrator Desktop.

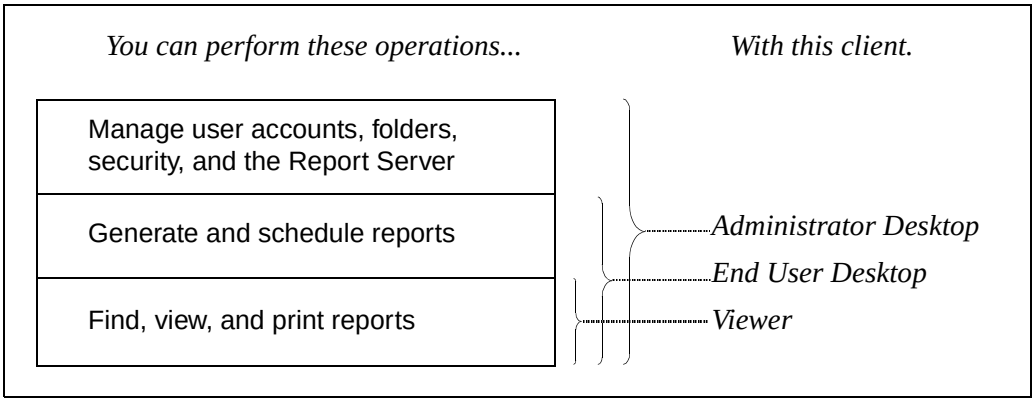


Figure 3-1. Functionality Provided by the Different Actuate Clients

Here are some general guidelines for setting up client applications on your network:

- Install the Administrator Desktop on the primary client system. Perform this task first; then configure the Report Server from the Administrator Desktop.
- Once the Administrator Desktop is installed and the Report Server is configured, install the End User Desktop.
- Then, if desired, install Viewers on additional client systems.

Verifying Client-Server Connectivity

If your client system is configured to access a domain name server, you should not have any connectivity problems. Nevertheless, you should verify that the client system can communicate with the Report Server system before you install the Actuate client.

To verify that the client can communicate with the server:

1. Log on to the Actuate client system.
2. Choose the Start button and select Programs => MS-DOS Prompt.
3. Enter the following command at the MS-DOS prompt:

   ```
   ping [hostname of Report Server system]
   ```

   For example, if you installed the Report Server on a system named **wisdom**, you would enter:

   ```
   ping wisdom
   ```

Do not enter the IP address of the Report Server system when you use the ping command. The client system identifies the server by name rather than IP address. Even if the ping command confirms the IP address, the client may not be able to connect to the Report Server.

4. Check the output of the ping command.
   - Your system is configured correctly if you see output similar to this:

     ```
     Pinging wisdom [172.148.13.28] with 32 bytes of data:

     Reply from 172.148.13.28: bytes 32 time=2ms TTL=63
     Reply from 172.148.13.28: bytes 32 time=2ms TTL=63
     Reply from 172.148.13.28: bytes 32 time=2ms TTL=63
     ```

   - Your system is *not* configured correctly if you see output similar to this:

     ```
     Bad IP address wisdom:
     ```

5. At the MS-DOS prompt, enter **exit** to close the MS-DOS window.
6. Continue as follows:
   - If your system is configured correctly, skip ahead to the section, "Installing the Actuate Client" on page 3-5.
   - If your system is not configured correctly, continue to the next section to define the server hostname in the *hosts* file.

Defining the Server Hostname in the hosts File

If your client system is not configured to access a domain name server, the name of the Report Server must be registered in the system *hosts* file. Because the *hosts* file maps domain names to IP addresses, the system refers to this file when the Actuate client attempts to connect to the Report Server.

To enter the hostname in the *hosts* file:

1. Use the Find command to locate the *hosts* file. If you cannot locate the *hosts* file, locate the *hosts.sam* file. (The system provides the *hosts.sam* file as a sample *hosts* file.) Generally these files reside in the *C:\WINDOWS* directory.
2. If the *hosts* file exists, make a backup copy before you edit the file.
3. Open the *hosts* or *hosts.sam* file with a text editor such as Notepad.
4. At the bottom of the file, enter the IP address and hostname of the Report Server system in this format:

   ```
   172.14.18.23      wisdom
   ```

5. If you edited the *hosts* file, use the Save command to save the file. If you edited the *hosts.sam* file, use the Save As command to save the file as *hosts*.
6. Close the file and reboot your system.

   The client system should be able to communicate with the Report Server system.

Installing the Actuate Client

After you have verified that the client system can connect to the Report Server system, you can install the Administrator Desktop. (Use these same procedures to install the other Actuate clients after you install the Administrator Desktop.)

To install the Actuate client:

1. Insert CD-ROM #2 in the CD-ROM drive of the client system.
2. Double-click the CD-ROM drive icon.

   The CD-ROM window appears.

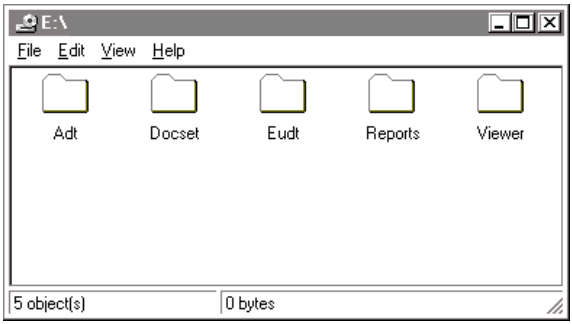


Figure 3-2. Report Generator Folders on CD_ROM #2

This window contains the following folders:

- Three Actuate client folders:
  - Adt = Administrator Desktop
  - Eudt = End User Desktop
  - Viewer = Viewer
- The Reports folder, which includes Report Generator executables.
- The Docset folder, which includes Ascend documentation in PDF format.
- If you purchased the Web Agent, the Web Agent folder. Notice that you install Web Agent files on the Web Server system, not the Actuate client system. For procedures, see Chapter 4, “Installing the Web Agent.”

3. Double-click the folder containing the application that you want to install (either Adt, Eudt, or Viewer). Be sure to install the Administrator Desktop client before the other clients.

   The client application window appears.

4. Double-click the *Setup.exe* file to install the client application. See Figure 3-3.

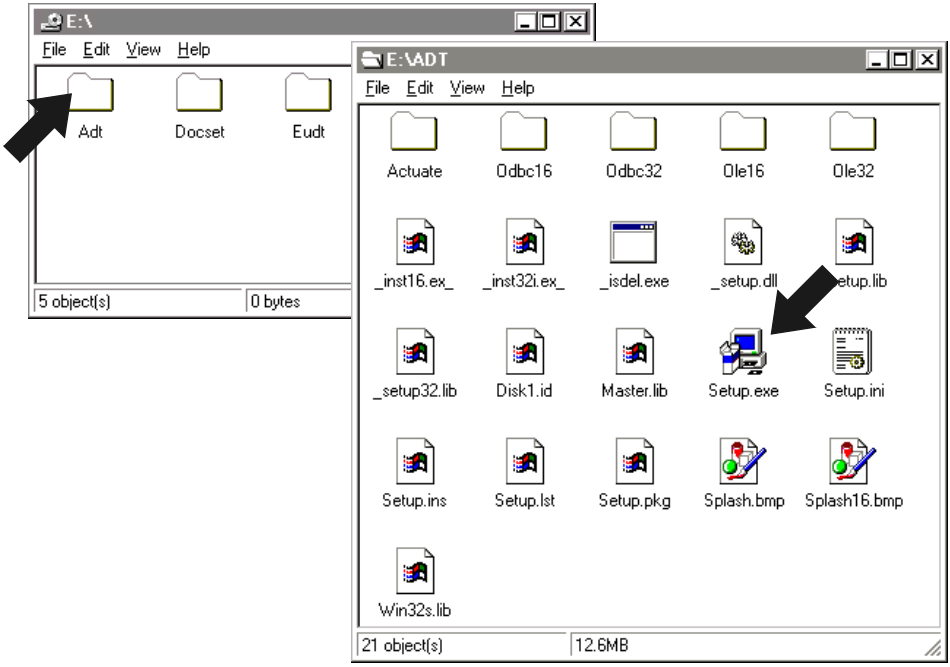


Figure 3-3. Installing the Administrator Desktop (Windows 95)

Setup.exe starts the InstallShield Wizard, which guides you through the installation. The first dialog box to appear is the Welcome dialog box.

5. After you read the information in the Welcome dialog box, choose Next to continue.

The Target Directory dialog box appears. This dialog box includes a default installation directory, *C:\Actuate\[client name]*. See Figure 3-4.

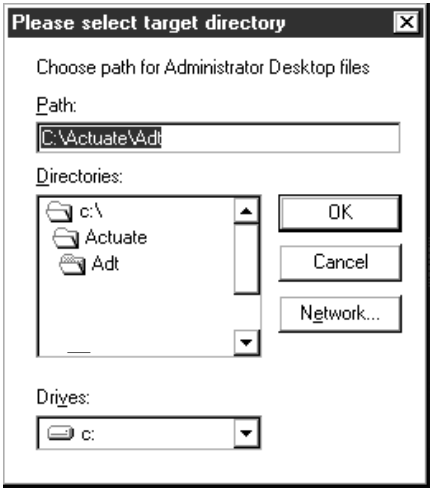


Figure 3-4. Target Directory Dialog Box

6. Specify the target installation directory by either typing the path in the Path field or selecting a directory in the Drives/Directories fields.

7. When you have specified the correct installation directory, choose OK.

   The program installs the Actuate client on your system.

When the installation is complete, the program closes the Installation dialog box and leaves an Actuate window open on your desktop. See Figure 3-5.

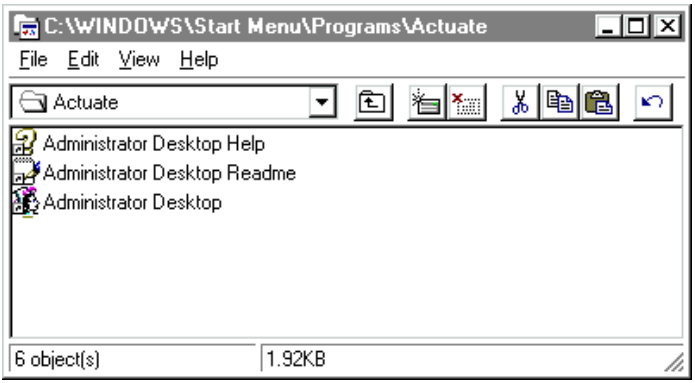


Figure 3-5. The Actuate Window

8. Check the Actuate window to see what folders you can open from the Windows Start Menu.

   You should see three folders—Desktop Help, Desktop Readme, and the Actuate client application (Administrator Desktop, in the illustration).

9. Reboot your system to activate the Actuate client's online Help.

Proceed to the next section to install Report executables on the Administrator Desktop system.

Installing Report Executables

Report executables generate and format Bulk Statistics reports. You must install these report executables on the Administrator Desktop system so they are configured correctly for the Actuate client. (You cannot install them directly on the Report Server.) After you install the Report executables on the Administrator system, you copy the reports that you want to use to the Report Server system.

To install Report executables on the Administrator Desktop system:

1. Return to the top-level CD-ROM directory.
2. Double-click the *Reports* folder.

   The Reports window appears. See Figure 3-6. Notice that the *Reports* folder includes *html* and *roi* folders in addition to a *Setup.exe* script and other files. The *roi* and *html* folders contain report executables. The *Setup.exe* script will install the executables from both folders.
3. Double-click the *Setup.exe* file in the Reports window to begin the installation.

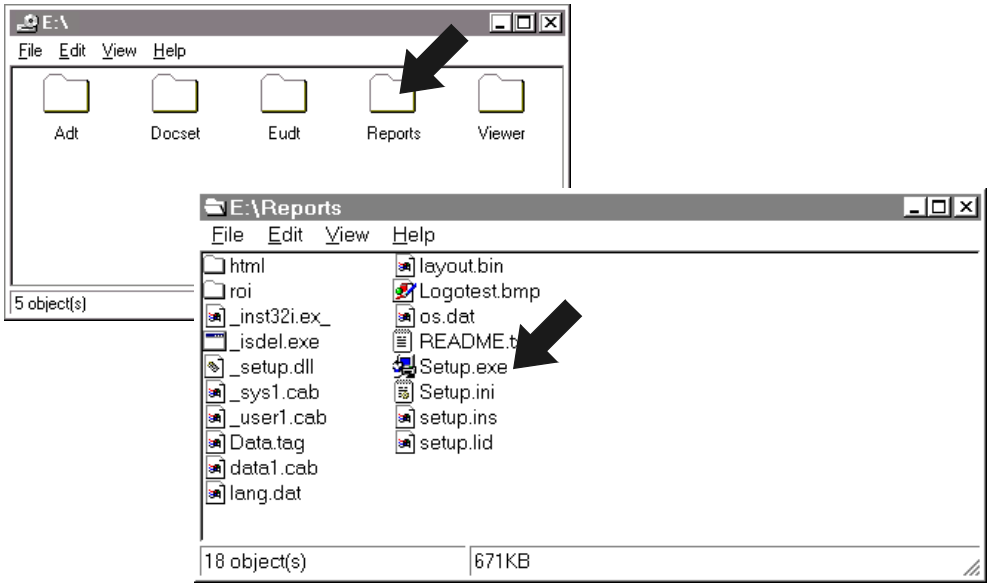


Figure 3-6. Installing Report Executables

Setup.exe starts the InstallShield Wizard, which guides you through the installation. The first dialog box to appear is the Welcome dialog box.

4. After you read the information in the Welcome dialog box, choose Next to continue.

   The Report Generator Software License dialog box appears.

5. After you read the Software License Agreement, choose Yes to continue.

   The User Information dialog box appears. See Figure 3-7.

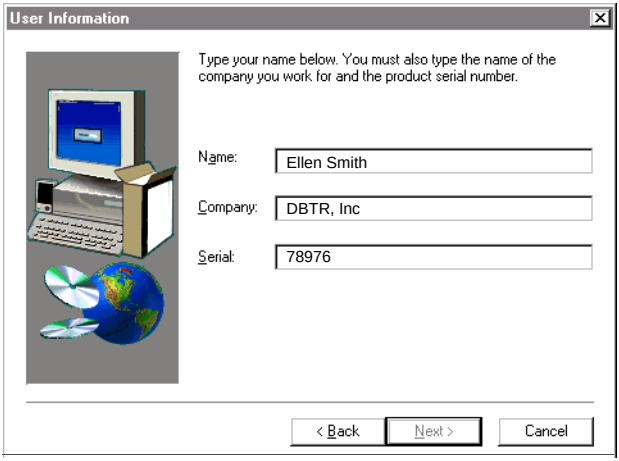


Figure 3-7. User Information Dialog Box

6. Provide the following information in the User Information dialog box:

   Name — Enter your user name if the system does not enter it.

   Company — Enter your company name if the system does not enter it.

   Serial — Enter the part number located on the cover of the CD-ROM.

7. When you are finished, choose Next to continue.

The Choose Destination Location dialog box appears. By default, the target installation directory is *C:\Report Generator Reports*. See Figure 3-8.

8. In the Choose Destination Location dialog box, specify the destination (installation) folder and choose Next.

   After the program copies Report Generator Reports to the directory that you specified, the Setup Complete dialog box appears. See Figure 3-8.

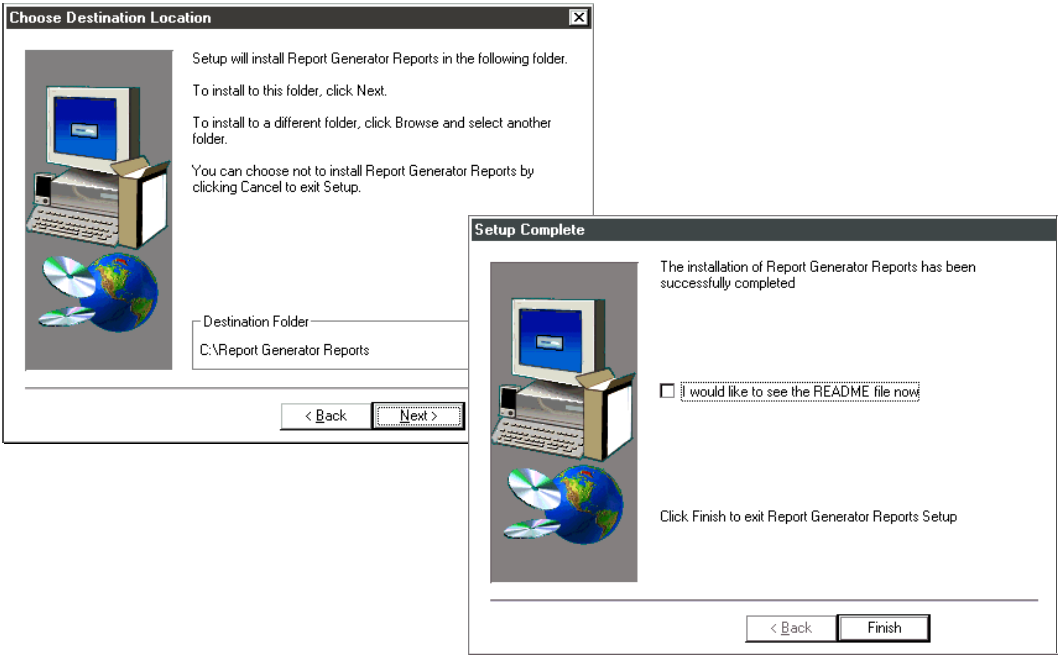


Figure 3-8. Choose Destination Location and Setup Complete Dialog Boxes

9. If you want to view the *README* file, check the appropriate box in the Setup Complete dialog box. Then choose Finish to complete the installation.

   The program completes the setup and closes the installation dialog box. If you checked the README file box, the *README* file is open for you to review.

   All the Report executables are now installed in the target installation directory.

10. Double-click the Reports installation folder (by default, *C:\Report Generator Reports*) to view the files that you installed on your client system.

    The Reports Generator Reports window contains the following folders and files:

    - The *roi* folder, which contains the ROI report executables.
    - If you purchased the Report Generator with Web Agent product, the *html* folder, which contains the HTML report executables.
    - The *README.txt* file, which includes the version number of the Report Generator executables.
    - The *Uninst.isu* program, which Windows InstallShield uses to uninstall report executables.

11. Double-click the *html* and *roi* folders to view report executables. See Figure 3-9 and Figure 3-10.

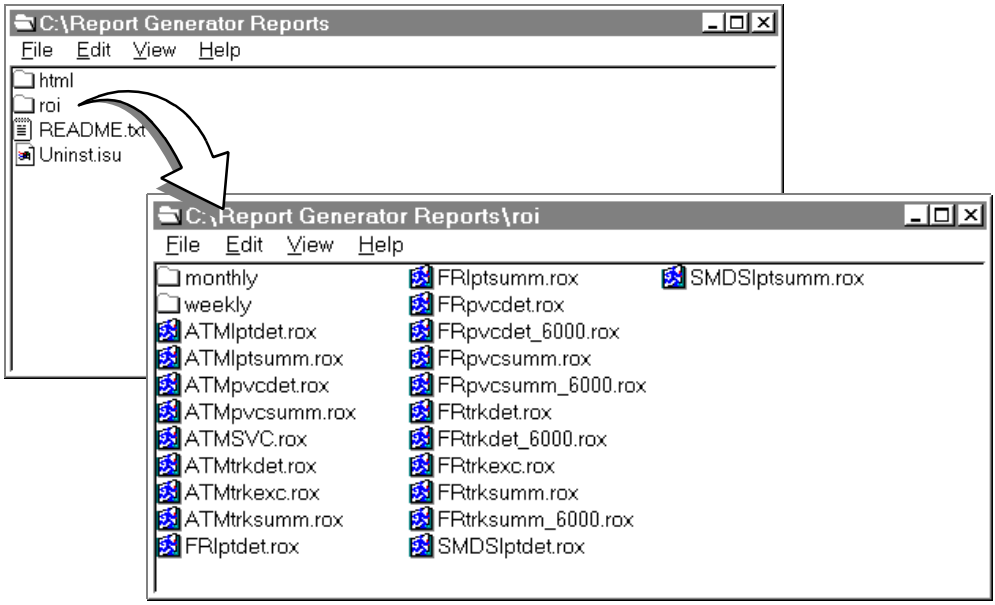


Figure 3-9. ROI Report Executables

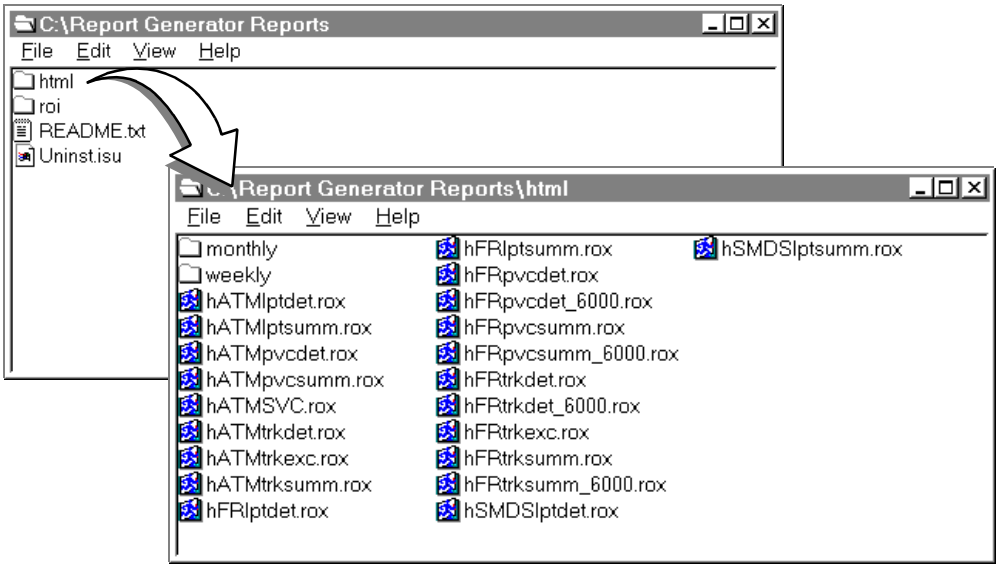


Figure 3-10. HTML Report Executables

When you view the report executable directories, notice these details:

- All report executables have a .rox suffix indicating that they are report object executables.
- HTML executables have an “h” prefix.
- ROI executables do not have an any prefix.
- Both the *html* and *roi* folders include the same set of executables.
- Both the *html* and *roi* folders contain *monthly* and *weekly* folders, which provide the same set of report executables as the *roi* or *html* folder. The only difference is that the report executables in the *monthly* and *weekly* folders are preconfigured for a monthly or weekly time period, respectively.

Continue to the next section to learn about naming conventions for report executables.

Naming Conventions for Report Generator Files

While you have the Report Generator Reports window open, take some time to understand how the names of report files are constructed.

Notice that the name of each report file consists of four basic parts, as illustrated in Figure 3-11. Each part of the file name provides information about the report.

- Part 1, in capital letters, indicates the service that is supported, either ATM, Frame Relay (FR), or SMDS.
- Part 2 indicates the switch component (lpt = LPort, pvc = PVC, SVC = SVC, trk = trunk).
- Part 3 indicates the report type (summ = summary, det = detailed, exc = exception).
- Part 4 indicates the type of file (.rox = report object executable, .roi = report object instance, .rov = report object parameter value, .row = report object for the web).

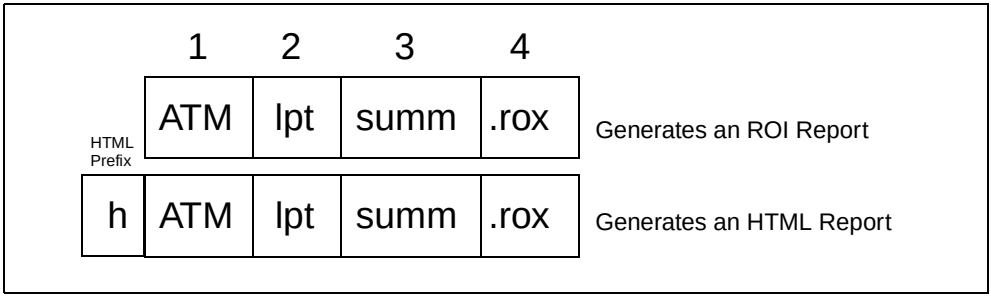


Figure 3-11. The Four Basic Parts of a Report Executable Name

In Figure 3-11, Parts 1 and 2 show you that the report executable is designed for an ATM LPort. Parts 3 and 4 show you that the file is a report executable that will generate a summary report. The executable with the HTML prefix generates the HTML version of the report.

Report executables for STDX 6000 have "_6000" appended to Part 3 of the filename so you can distinguish these reports from B-STDX 8000/9000 reports. Similarly, executables in the monthly and weekly folders have "_mth" or "_wk" appended to Part 3 of the filename.

Setting Up the Report Server

After you install the Administrator Desktop and the report executables on the Administrator Desktop system, you need to set up the Report Server. The Administrator Desktop is the only client application that allows you to do this.

In the next sections, you perform these operations from the Administrator Desktop:

- Connect to the Report Server.
- Create folders on the Report Server for the report executables.
- Copy report executables from the Administrator Desktop to the appropriate folders on the Report Server.
- Define a user account for the Administrator.

Connecting to the Report Server

To connect to the Report Server:

1. Open the Administrator Desktop by choosing the Start button and selecting Programs => Actuate => Administrator Desktop.

   The Administrator Desktop appears.

2. Select the Administrator button or the Administrator option in the File menu. (If you cannot identify a button, hold the cursor under the button until the label is displayed.)

   The Report Encyclopedia Login dialog box appears. See Figure 3-12.

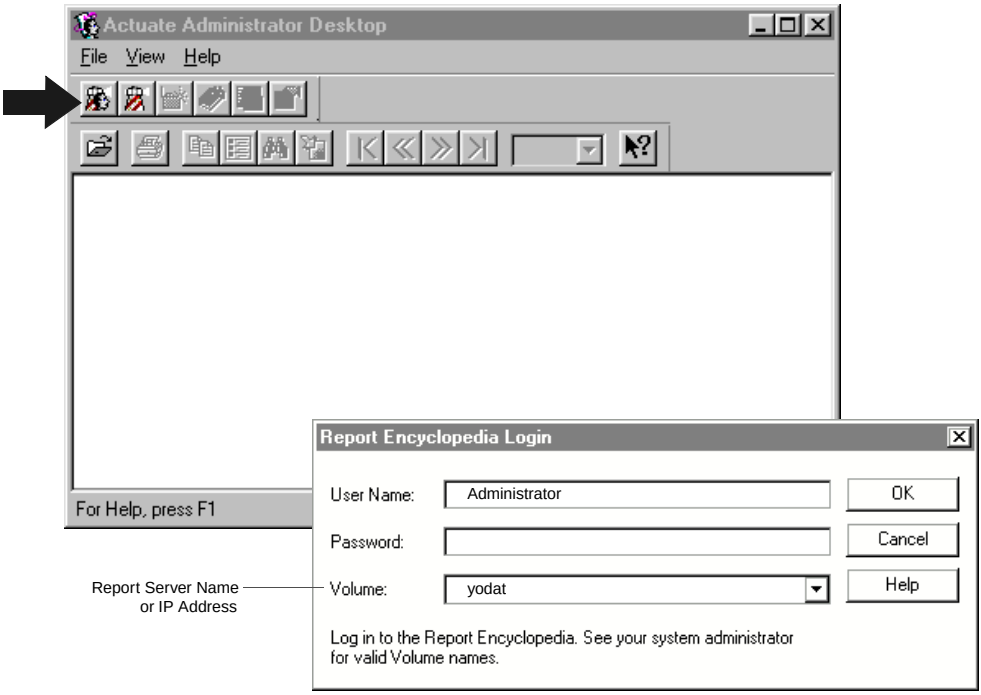


Figure 3-12. Administrator Desktop and Report Encyclopedia Login

3. Complete the fields in the Report Encyclopedia Login dialog box as follows:

   User Name — Enter **Administrator** since you have not yet defined any users.

   Password — Do *not* enter any password at this time.

   Volume — Enter the hostname or IP address of the Report Server system.

4. Choose OK to accept the entries.

   The Administrator Desktop connects to the Report Server and displays the Report Encyclopedia. See Figure 3-13.

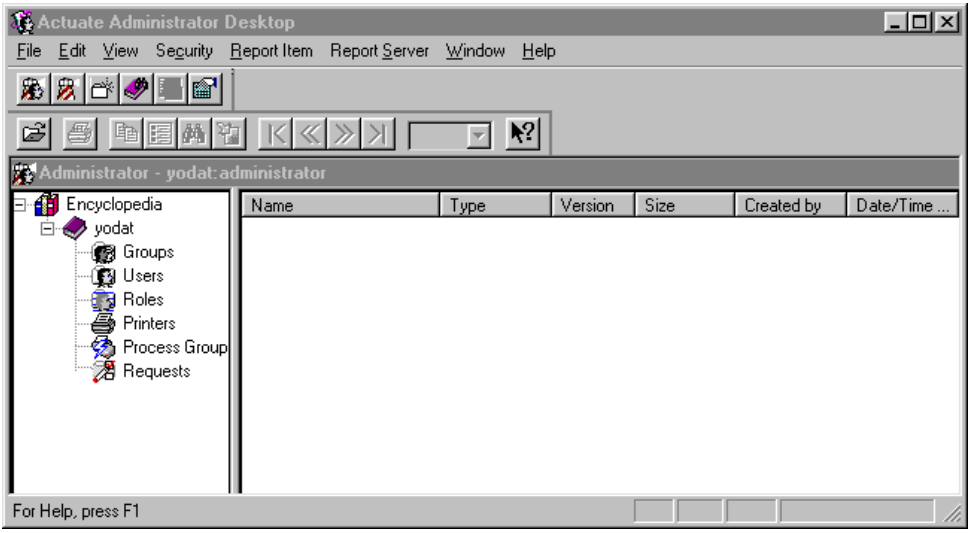


Figure 3-13. The Report Encyclopedia on the Report Server System

The Report Encyclopedia contains six basic folders that enable the administrator to manage Report Server operations. The six basic folders function like utilities. When you double-click one of these folders, a window appears in which you can view or configure information about that Report Server process.

These are the basic Report Encyclopedia folders and the information they provide:

Groups — Notification groups and the users in the group.

Users — Users and their roles.

Roles — Roles that can be assigned to users.

Printers — Available printers.

Process Group — Report Server processes.

Requests — The Requests folder contains three folders (Active, Completed, and Scheduled) that show you the status of all report requests.

Creating Folders for Report Executables

After you connect to the Report Server, you need to create folders for the Report executables. You can organize the folders in any way that you wish. For example, you could group the reports by type (ATM, Frame Relay, SMDS), or location of users (Denver, Boston, London), or type of users (Sales, Marketing).

To create folders for the report executables:

1. In the Administrator Desktop, open the destination folder. (When you first create folders, this is the top-level folder named after your Report Server.)
2. Select File => New Encyclopedia Item => Folder. See Figure 3-14.

   A new folder icon appears in left panel.
3. Type the new folder name next to the icon.

   The new folder is now listed in the Administrator Desktop window.
4. Repeat Steps 1 through 3 for each new folder.

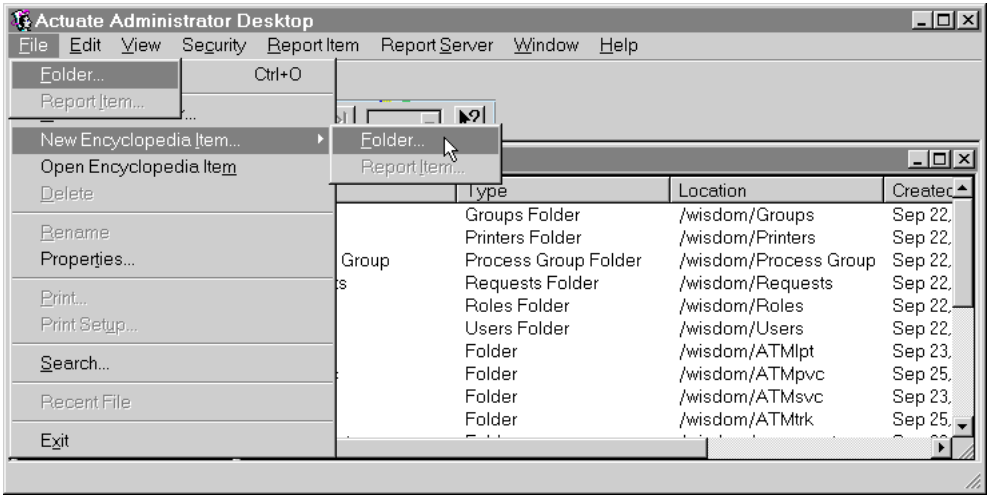


Figure 3-14. Creating a New Folder

Copying Report Executables to the Report Server

You are now ready to copy the Report executables from the Administrator Desktop system to the new folders on the Report Server.

To copy executables to the Report Server:

1. In the Report Encyclopedia, open the destination folder for the reports. (ATM is the destination folder in Figure 3-15.)
2. In Windows Explorer, open the Reports directory (by default, *C:\Report Generator Reports*).
3. Arrange both windows so you can see the report executables in Windows Explorer and the destination folder in the Report Encyclopedia.
4. Drag the report executables to the appropriate destination folder. If you want to copy multiple reports at a time, hold down the Control key when you select the entries.

   The cursor becomes an arrow with a file icon beneath it, indicating that you can now copy the file.
5. Repeat Steps 1 through 4 to copy the necessary report executables to the appropriate folders.

   Figure 3-15 illustrates the copy operation.

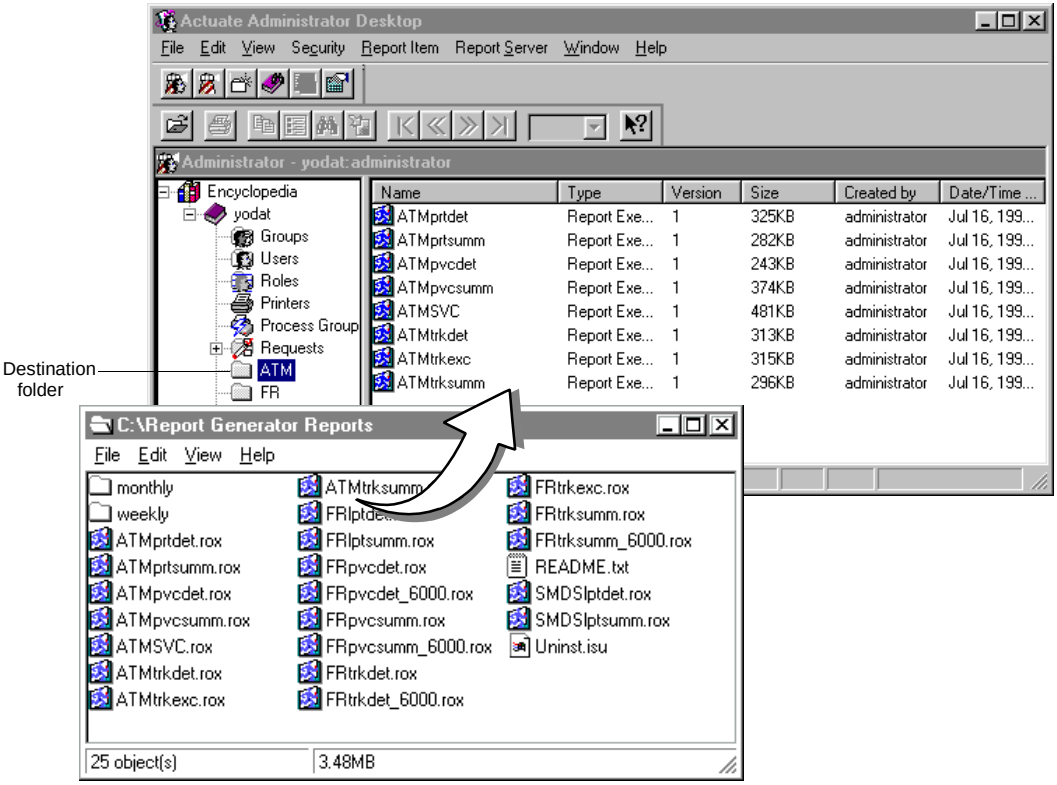


Figure 3-15. Copying ATM Report Executables to a Report Server Folder

The report executables are now on the server. You can move them to other folders or make multiple copies for multiple folders. If a report executable is accidentally deleted from the server, you can always copy a new executable from the Administrator Desktop system.

You are now ready to define the properties of the Administrator account. Proceed to the next section.

Defining the Properties of the Administrator Account

During the initial Desktop Administrator installation, the user installing the application can access the Report Server by entering the name **Administrator** without a password. This is necessary during the installation process. After setting up the Report Generator, you should define a password for the Administrator account to prevent unauthorized access to the Report Server.

The Administrator Desktop provides the Administrator account by default. Although you cannot delete or rename this user account, you can define the password and other properties of the account to secure the server.

To define the Administrator account:

1. In the Actuate Administrator Desktop, select the *Users* folder.

   The Administrator User Name is listed in the right panel.

2. Click the right mouse button on the Administrator icon to view the Context menu.

3. In the Context menu, select Properties.

   The Properties dialog box for the Administrator account appears. See Figure 3-16.

4. Complete the General page of the Properties dialog box as follows:

   User Name — Accept the default name **Administrator**.

   Password/Confirm Password — Enter the administrator's password.

   EMail Address — Enter the administrator's E-mail address.

   Notification Preference — Click on the appropriate box(es) in this field. (The Report Server can notify the Administrator about events by including a notice in the Completed Requests folder or by e-mail.)

5. Accept the defaults on the Privilege Template, Priority, and Roles pages.

6. Choose Apply to apply the information, then OK to close the dialog box.

   You have now defined the Administrator account.

Figure 3-16 illustrates the steps in this section.

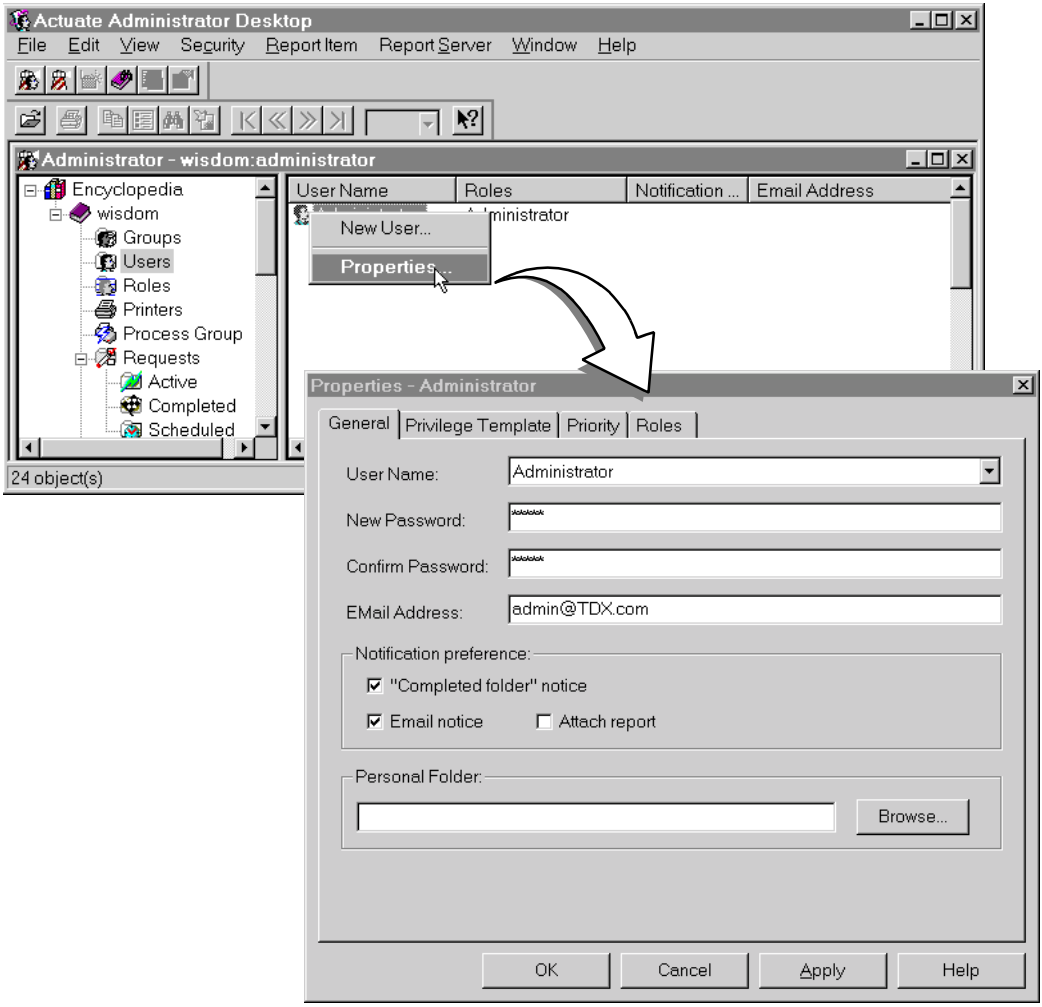


Figure 3-16. Defining the Administrator Account

The Report Generator is now completely installed. If you want to install the End User Desktop or Viewers on additional systems, just follow the instructions in the section, “Installing the Actuate Client” on page 3-5.

Users who access the Report Server from the End User Desktop or Viewers will see only the Report and Request folders, not the other utility folders that are available from the Administrator Desktop.

4

Installing the Web Agent

The Actuate Web Agent is shipped only with the Report Generator with Web Agent product. If you have not purchased the Report Generator with Web Agent product, skip over this chapter.

This chapter describes how to use CD-ROM #2 to install the Actuate Web Agent on an existing web server. The installation procedures assume that:

- The web server is installed and configured.
- Browsers are installed on client systems.

Only web administrators should perform the Actuate Web Agent installation. The instructions in this chapter assume that the user understands UNIX, web management, and the setup of the local web server.

This chapter does not provide instructions for installing the Netscape web server or browsers.

Before You Begin

Before beginning the Web Agent installation, you should complete the following preinstallation tasks:

- Review the installation worksheets.
- Configure the web server system for CGI.

Reviewing the Installation Worksheet

Fill out the Web Agent Installation Worksheet in Appendix A. You have to enter information from the worksheet during the installation.

You need to know the following information to shut down the Netscape Administration Server:

- URL of the Netscape Administration Server
- User name and password for the Netscape web server administrator

You need to enter the following parameter values during the Web Agent installation:

- Root password for the Netscape web server system
- Pathname of the Netscape web server directory
- Pathname of the Netscape web server instance directory
- Pathname of the cgi directory
- Web Agent document directory
- Pathname of the Web Agent installation directory
- Port number for the CGI script, *nph-actuate.cgi*

At this release, the Report Generator supports only the Netscape FastTrack or Enterprise Server on a Solaris system, 2.5.1 or later.

Configuring the Web Server System for CGI

To configure the Netscape web server to run CGI programs:

1. Make sure that the CGI File Type is activated and that the CGI directory exists and is specified in the web server. Refer to Netscape's documentation for instructions.

2. Follow these steps to verify that you can run a CGI program:

   a. Create a CGI test file in the CGI directory on your web server. The file should include these lines:

   ```
   #!/bin/sh
   echo "Content-type:text/html\n\n"
   echo "<html>Hello, World</html>"
   ```

   b. Enter the following command to give the Web Server read/execute privileges for this test file:

   chmod a+rx [*CGI test file*]

   c. Open a Netscape browser on a client system. Enter the following URL in the Address/Location field of your browser.

   http://[*hostname of web server*]/cgi-bin/[*CGI test file*]

   If you see the text "Hello, World" in your browser, you know that the web server supports CGI.

If you use a proxy server to communicate with the web server, specify the web server hostname in the Proxy Exceptions list of your browser. Refer to your browser's documentation for instructions.

Installing the Web Agent

To install the Web Agent on the web server system:

1. Log on the Netscape web server system and open the Netscape browser.
2. Enter the URL of the Netscape Administration Server in the Location field of the browser and press Return.
3. Log in to the Netscape Administration Server and stop the Netscape Web Server.
4. Insert CD-ROM #2 in the CD-ROM drive. (If you purchased the Report Generator with Web Agent product, CD-ROM #2 includes the Web Agent software.)
5. Move to the CD-ROM directory; enter:

   cd [*CD-ROM pathname*]/Webagent/solaris

6. To start the installation script, enter:

   wa_srvrinst.sh

7. Answer the installation prompts as they appear. Press Return to accept the appropriate default values.

   The script prompts you for the following parameter values:

   a. Pathname of Netscape Web Server installation directory
   (default: */usr/ns-home*)

   b. Netscape Web Server instance directory
   (default: */usr/ns-home/ https-*[*hostname of web server system*])

   c. Pathname of CGI script directory
   (default: */usr/ns-home/cgi-bin*)

   d. Pathname of Web Agent document directory
   (default: */usr/ns-home/docs*)

   e. Pathname of Web Agent installation directory
   (default: */usr/ns-home/plugins*)

f. Port number of CGI script *nph-actuate.cgi*
(default: 5050)

The *nph-actuate.cgi* script is provided with the Actuate Web Agent. It enables your browser to communicate with the Web Agent.

After you answer all the prompts, the installation script displays a message similar to the following:

```
The WebAgent installation script will use the following
settings:

Netscape Install Directory    = /usr/ns-home
Netscape Instance Directory   = /usr/ns-home/httpd-yodat
CGI Script Directory          = /usr/ns-home/cgi-bin
DOCS Directory                = /usr/ns-home/docs
Destination directory         = /usr/ns-home/plugins
Port Number                   = 5050

Are the above settings acceptable?
(Please type 'y' for yes,  'n' for no, 'q' to quit)
```

8. Enter **y** to accept the entries or **n** to revise entries.

If you enter **y**, the script performs the installation. When the operation is complete, the script displays the message:

```
WebAgent Installation Complete

Please be sure to load the obj.conf modifications made by
this script by stopping the Netscape Web Server and pressing
the APPLY button on the admin server startup page.
```

9. Perform the following steps to upload the modifications:

a. Log in to the Netscape Administration Server and click the Apply button on the Startup page.

b. Click the Load Configuration Files button to upload the modifications to the Netscape Web Server.

You are now ready to test the Web Agent installation. Continue to the next section.

Testing the Web Agent Installation

To test the Web Agent installation:

1. Restart the Netscape Web Server.
2. Open your browser and enter the URL for the Report Server in this format:

   http://[*web server system hostname*]/acweb/[*Report Server system hostname*]

   For example, if the name of your web server is Intranet and the hostname of your Report Server system is **wisdom**, you would enter:

   http://Intranet/acweb/wisdom

   (The acweb string tells the web server that the Web Agent handles this URL.)

   The Report Server Authentication dialog box appears.
3. Type your username and password in the Authentication dialog box and choose OK.

   If the Web Agent is installed correctly, the Browser displays the Report Encyclopedia.

If the Web Server informs you that configuration files need to be updated, select Apply and Load Configuration Files from the Netscape Administration Server control panel.

5

Generating and Viewing Reports

This chapter provides an introduction to basic Report Generator operations. The chapter describes how to generate and view reports with the Administrator Desktop, End User Desktop, or a web browser.

The chapter shows you how to:

- Connect to the Report Server. (Also applicable to the Actuate Viewer.)
- Generate a basic report request using default values.
- Verify the status of the report request.
- View the report document. (Also applicable to the Actuate Viewer.)
- Access online help.

When you complete the tasks in this chapter, continue to Chapter 6 to learn how to customize the report request. Then, for a full description of Actuate client functionality, refer to the Actuate guide, *Using Reports*.

Connecting to the Report Server

The first task you must perform is to connect to the Report Server. Procedures differ depending on whether you are using the Actuate client or a web browser. Choose the appropriate procedure in the following sections.

Actuate Client Procedures

To connect to the Report Server with an Actuate client:

1. Open the Actuate client application by choosing the Start button and selecting Programs => Actuate => [*Actuate Client*].

   The client application window appears.

2. Select the Navigator button or choose the Navigator option from the File menu. (To identify a button, hold the cursor under the button until the label is displayed.)

   After you click the Navigator button, the Report Encyclopedia Login dialog box appears.

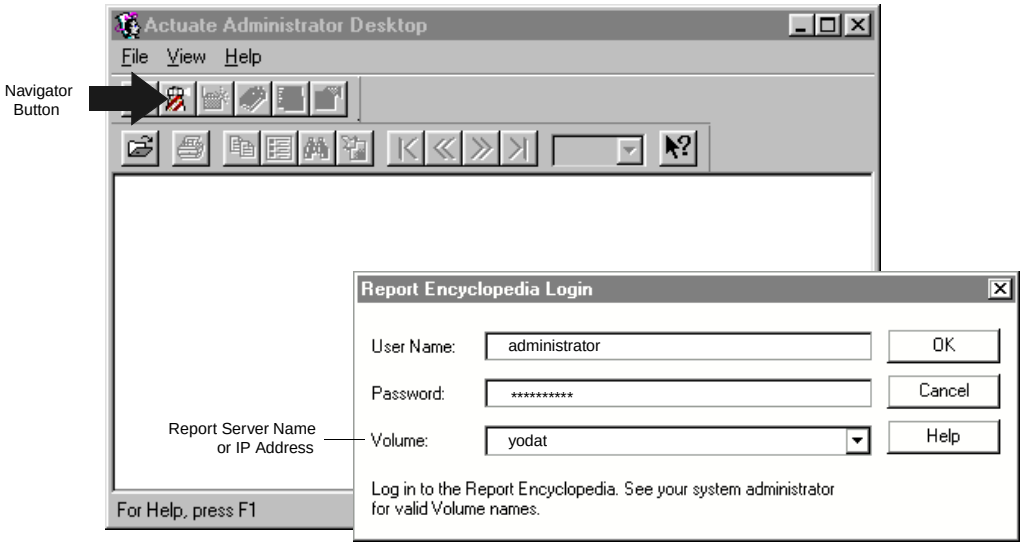


Figure 5-1. Report Encyclopedia Login Dialog Box

3. Enter the username and password that the Report Generator administrator assigned to you.
4. In the Volume field, enter the name or IP address of the Report Server system.
5. Choose OK.

   The Report Encyclopedia appears. See Figure 5-3.

Web Browser Procedures

To connect to the Report Server with a web browser:

1. Open your browser.
2. In the Location field, type the URL for the Report Server in this format: http://[*web server system hostname*]/acweb/[*Report Server system hostname*]. Then press Return.

   A Username/Password Required dialog box appears.

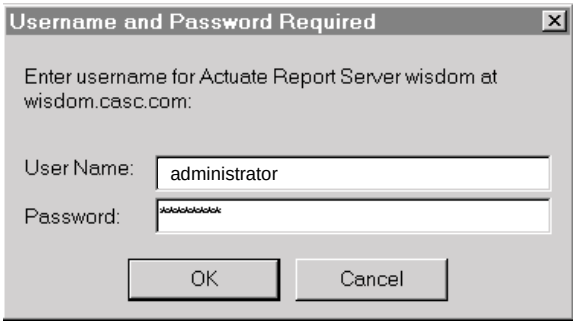


Figure 5-2. Username/Password Dialog Box

3. Enter the username and password that the Report Generator administrator assigned to you.
4. Press OK.

   The Report Encyclopedia appears. See Figure 5-4.

The Report Encyclopedia

After you connect to the Report Server, the first window that you see is the Report Encyclopedia. The appearance of the window and the information in the window differ slightly for each client.

All Actuate clients and browsers include the following folders:

- The folders that the administrator or other users created. These folders may contain executables and/or report documents.
- The Requests folder(s), which show you the status of report requests.
  - Actuate clients have a single Requests folder, which includes the Active, Completed, and Scheduled folders.
  - Web browsers display the Active and Scheduled folders at the top level and the Completed folder in the Channels folder.

Figure 5-3 illustrates the Report Encyclopedia for the Administrator Desktop. Compare it to Figure 5-4, which illustrates the same Report Encyclopedia as displayed by a Netscape web browser.

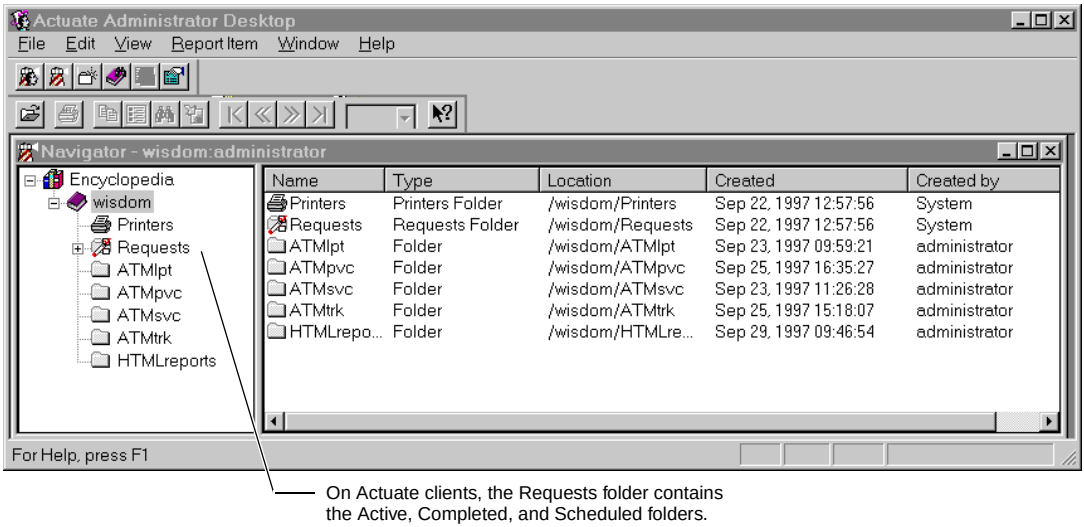


Figure 5-3. Report Encyclopedia for the Administrator Desktop

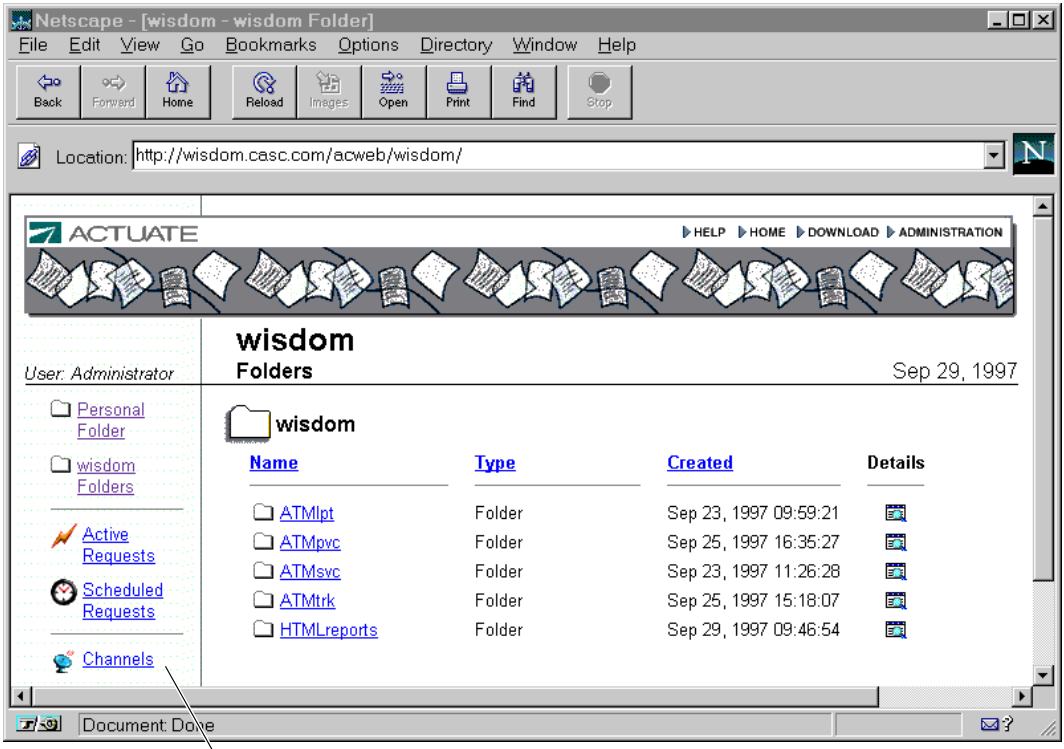


Figure 5-4. Report Encyclopedia for the Web Browser

When you access the Report Server via a web browser, you see two unique folders—Channels and Personal.

- The Channels page, by default, contains the Report Server's Completed folder, which displays completed report requests. The Channels page also allows you to subscribe to a channel so that the Report Server sends a notification to the channel when a specific report document has been completed.
- The Personal folder is the directory to which your channel requests are sent.

For information about channels, see "Defining Channels (Browsers Only)" in Chapter 6.

Generating a Basic Report Request

To generate a basic report request with the Administrator Desktop, End User Desktop, or a web browser:

1. Open the folder that contains the ROI or HTML report executable. (You can run both HTML and ROI executables from your client or browser.)

2. Double-click the report executable.

   (On Actuate clients, you can also click the right mouse button on the report executable to display the context menu and choose New Request.)

   The Requester dialog box appears.

3. Enter the desired parameter values in the Parameter page of the Requester dialog box. See Table 5-1 and Table 5-2 for descriptions of each parameter.

   Follow these guidelines when you enter parameters:

   - All required parameters have default values, which appear in a gray font. The report executable will use the default if you do not specify another value.
   - Click the [+] headings to view the parameters listed under the heading.
   - To restrict the scope of the Report Server query, define the optional [A] Ad Hoc parameters. Remember that multiple entries must be separated by commas.
   - To generate a report for the current date, use the default placeholder value (1/1/80) for the Start Date and End Date. If you accept the default for the Start Date, be sure to accept the default for the End Date and vice versa. Start dates begin at 12:00 AM on the specified date. End Dates end at 11:59 PM on the specified date.
   - To generate a monthly or weekly report, use the default placeholder value (1/1/80) for both the Start Date and End Date parameters. The Report Server will automatically generate a report for the period covering the 7 or 30 days prior to the current date. If you insert other dates in the Start Date and End Date fields, the report executable will use those dates even if the time period is not a week or a month.

- If the names of trunks, circuits, switches, or Lports include special characters (%, -, <, >, !), use the backslash escape character (\) before each special character. For example, to specify an Lport named A-B-C, enter A\-B\-C for the Requester LportName parameter value.

4. Choose OK to submit the report request.

   The client submits the request to the Report Server.

   Figure 5-5 illustrates the Parameter page of the Requester dialog box on the Actuate client.

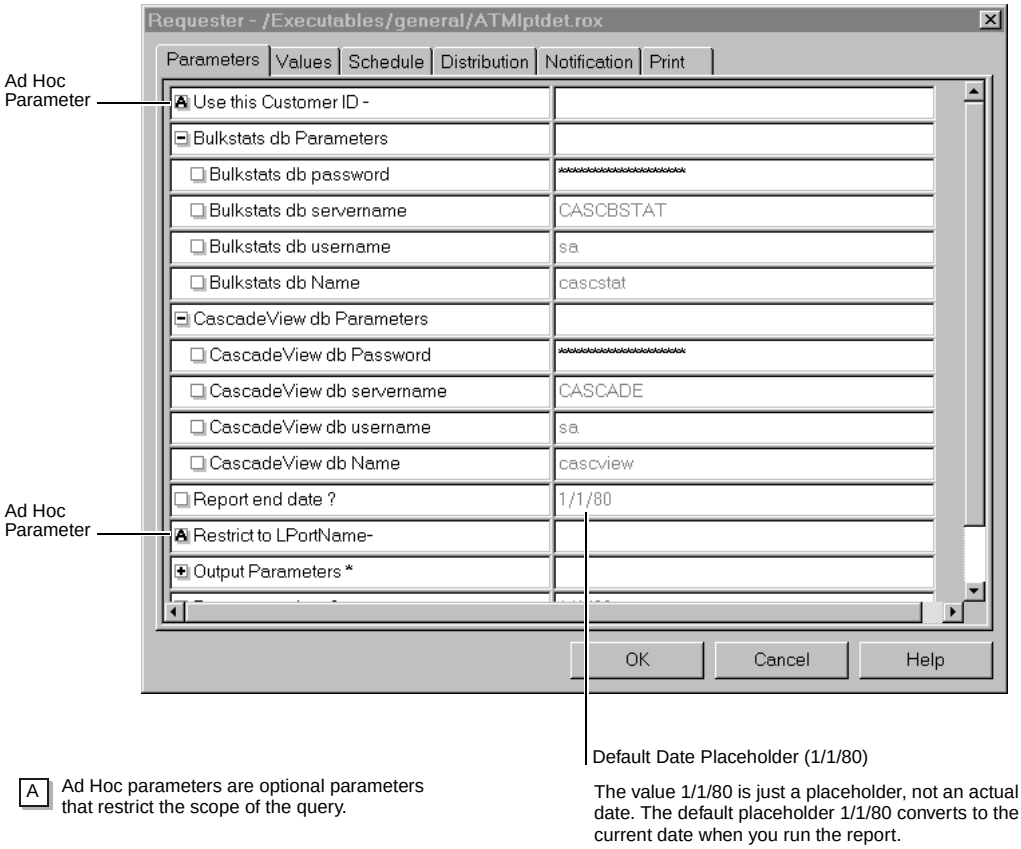


Figure 5-5. Parameter Page of the Requester

About Report Request Parameters

The following tables include report parameters that you may see in the Requester dialog box. Parameters differ with each type of report request.

Table 5-1. Required Parameters for All Reports

Parameters	Description
Bulkstats db Parameters	
Bulkstats db Password	Password for Bulkstats data server (default=superbase).
Bulkstats db ServerName	Bulkstats data server name (default=CASCBSTAT).
Bulkstats db UserName	Bulkstats database user name (default=sa).
Bulkstats db Name	Bulkstats database name (default=cascstat).
CascadeView db Parameters	
CascadeView db Password	Password for CascadeView db server (default=superbase).
CascadeView db ServerName	CascadeView database server name (default=CASCADE).
CascadeView db UserName	CascadeView database user name (default=sa).
CascadeView db Name	CascadeView database name (default=cascview).
Start & End Data Parameters	
Report Start Date (mm/dd/yy)	Start date of the report period (default placeholder=1/1/80). Start dates always begin at 12 AM on the specified date.
Report End Date (mm/dd/yy)	End date of the report period (default placeholder=1/1/80). End dates always end at 11:59 PM on the specified date. If you accept the default Start date and the default End date, the Report Server runs the report for the current date.
Output Parameters	
Bundle Rox in Roi	Bundle executable with the report (default=false).
Output File Name	Name of output file (default= [*executable name*].roi) You can enter an absolute pathname such as *Customers/England/ATMlptdet.roi* as long as the folder already exists.

Table 5-2. Ad Hoc (Optional) Report Parameters

Ad Hoc Parameters	Description
A Use this Customer ID	Restrict the report items to the customer ID(s). Customer IDs are defined in CascadeView.
A Restrict to Circuit	Restrict the report data to the specified circuit(s).
A Restrict to LPortName	Restrict the report data to the specified LPort(s).
A Restrict to Switch	Restrict the report data to the specified switch(es).
A Restrict to Origin Switch	Restrict the report data to the specified switch. The origin switch has the lower address of the two endpoints of the trunk or circuit.
A Restrict to Trunk	Restrict the report data to the specified trunk(s).

If you specify more than one value for an Ad Hoc parameter, separate each entry with a comma.

Table 5-3. Threshold Parameters for Exception Reports

Threshold Parameters	Description
Inbound Peak Error(%) Threshold	Inbound peak error threshold value which, if exceeded, would be considered an exception (default=9.9).
Inbound Peak(%) Threshold	Inbound peak utilization value which, if exceeded, would be considered an exception (default=50).
Inbound Peak Discard(%) Threshold	Inbound peak discard value which, if exceeded, would be considered an exception (default=9.9).
Outbound Peak(%) Threshold	Outbound peak utilization threshold which, if exceeded, would be considered an exception (default=50).

Verifying the Status of the Report Request

Report requests are processed much like a print request. The Report Server, like a printer, can generate only one report at a time. If the Report Server receives multiple requests, it assigns each request a place in the queue based on the time and priority level of the request. The Report Server executes each request sequentially according to the queue.

After you generate a report request, you need to check both the Active and Completed Requests folders to verify the status of the request. The Active Requests folder lists the requests that are in the queue. The Completed Requests folder lists the requests that have been executed.

To check the status of a report request:

1. Select the Active folder.

   (If the Active folder is not visible on the Actuate client, click the Requests folder so you can select the Active folder.)

   The right panel of the window displays the requests that are still in the Report Server queue. See Figure 5-6.

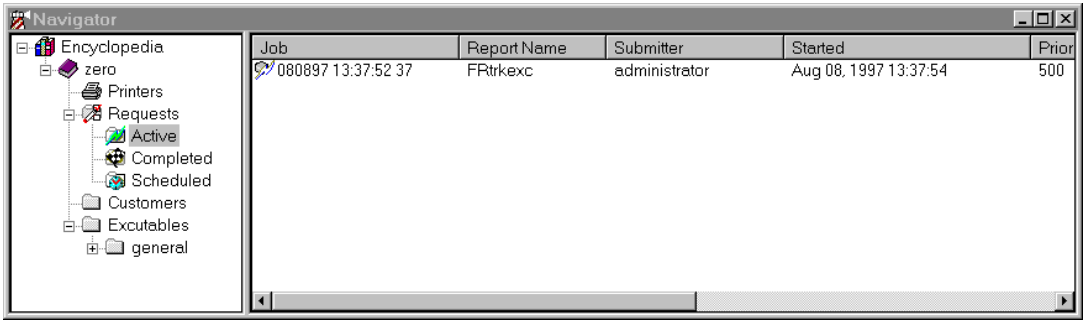


Figure 5-6. Active Requests Folder

2. If the Active folder is empty, select the Completed folder to see if the Report Server has already executed the request.

   (If you are using a web browser, remember that the Channels folder contains the Completed folder.)

   The right panel of the window displays a list of completed requests. See Figure 5-7.

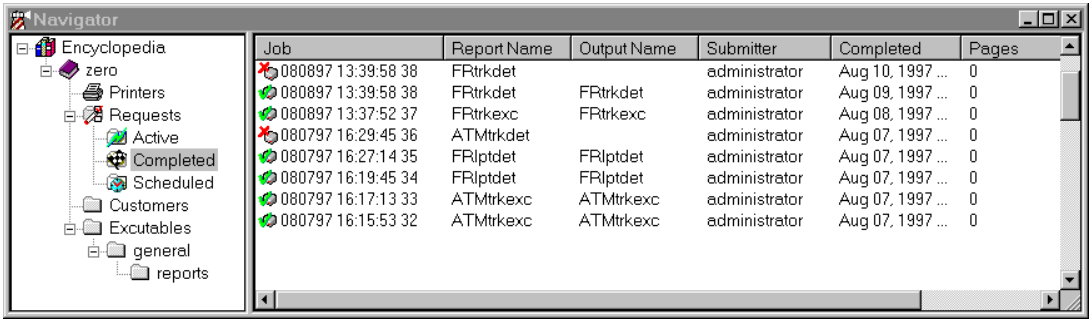


Figure 5-7. Completed Requests Folder

Notice the icon in front of your completed report request.

- A green check mark indicates that the report document was created successfully.
- A red X indicates that the Report Server could not create the report document. As a result, the Output Name field is empty.

3. Check the Status information for the report request.

   - On Actuate clients, right-click the request icon to bring up the Context menu and choose Properties. Then click on either the Status or General page.
   - On web browsers, click the Details icon next to the completed report request.

   Figure 5-8 and Figure 5-9 illustrate the Actuate client's Status pages for a successful and unsuccessful report request.

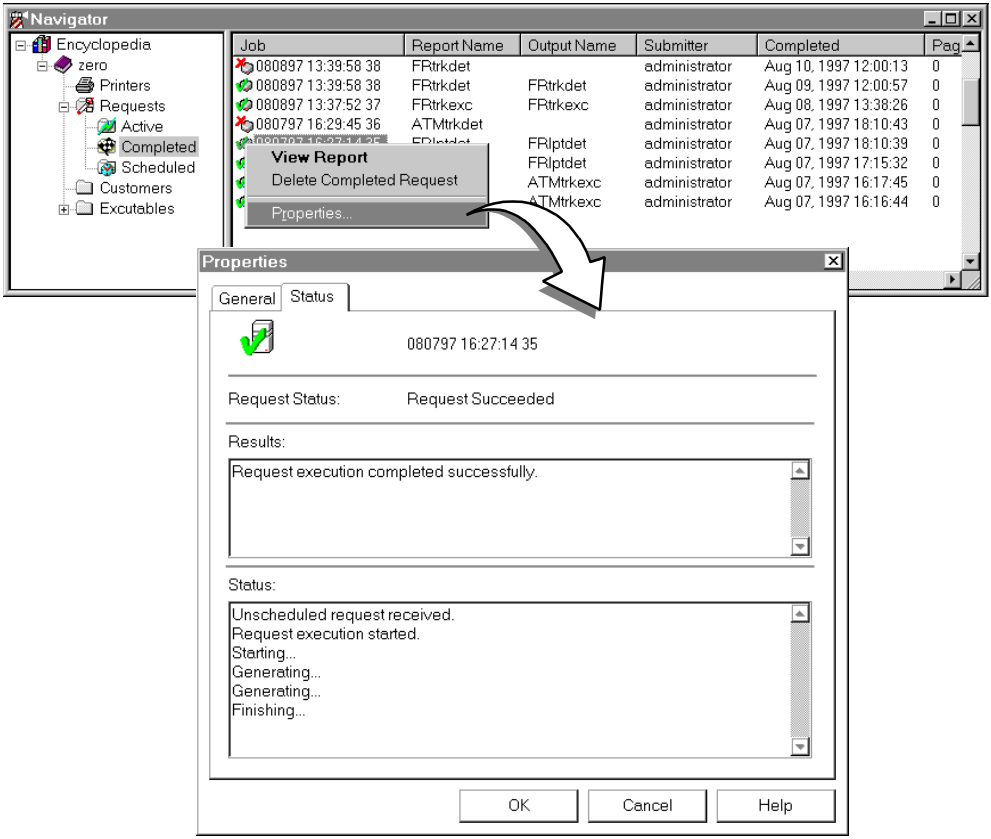
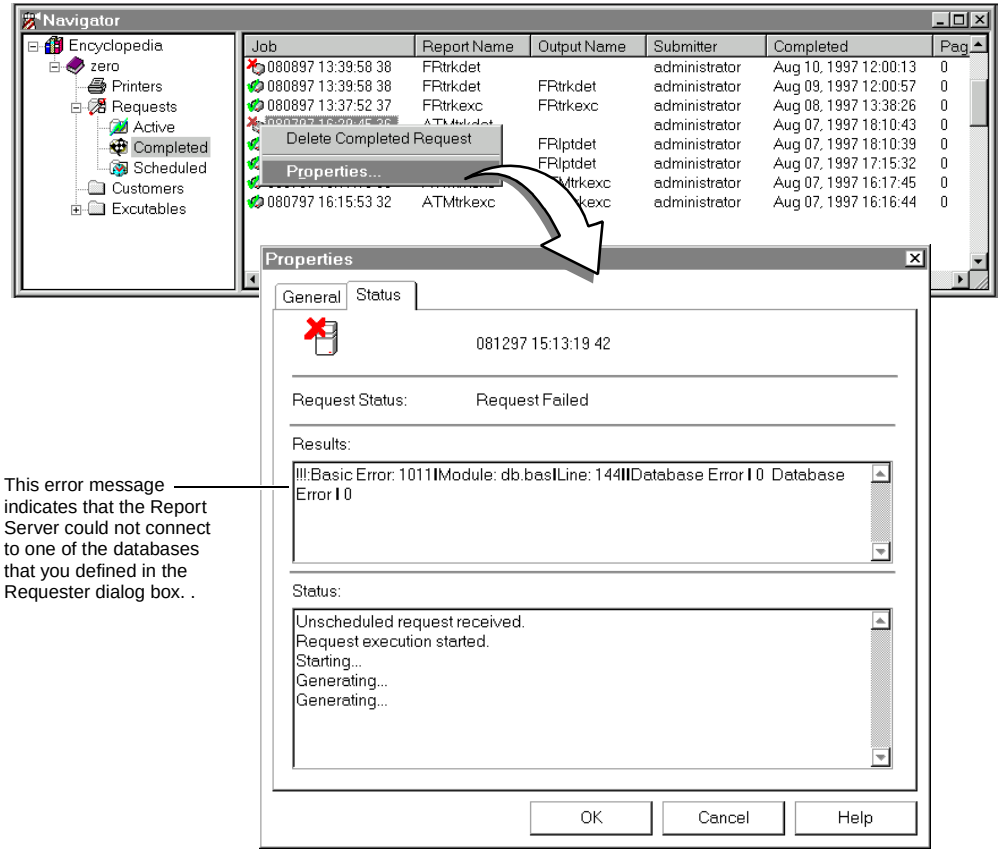


Figure 5-8. Status Page for a Successful Report Request



This error message indicates that the Report Server could not connect to one of the databases that you defined in the Requester dialog box. .

Figure 5-9. Status Page for a Failed Report Request

The Status page shows you the operations that were completed and provides error messages if the report could not be generated.

On web browsers, the Status and General pages are combined.

4. View general information about the report request.
   - On the Actuate client, select the General tab to bring up the General page.
   - On web browsers, scroll past the Status page.

   Figure 5-10 illustrates the General page for an Actuate client.

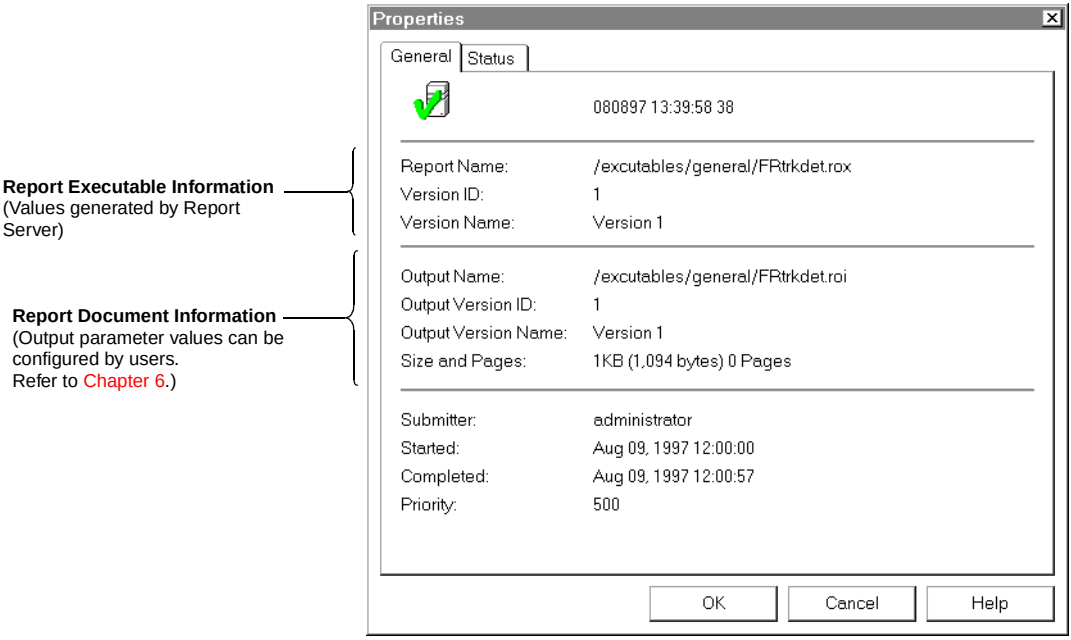


Figure 5-10. Sample General Page for a Report Request

5. After you review Status and General information, return to the Report Encyclopedia.
   - On Actuate clients, choose OK to close the Properties dialog box.
   - On web browsers, click the Back button to return to the Report Encyclopedia.

You are now ready to view the report. Continue to the next section.

Opening the Report Document

If the Completed folder lists the report request as successfully completed, you can view the report document with the appropriate viewer. Actuate clients can display standard ROI reports; browsers can display HTML reports.

To view a report document:

1. Open the directory containing the report document.

   Figure 5-11 illustrates a directory that contains report executables and report documents. You can distinguish between files by referring to the Type field.

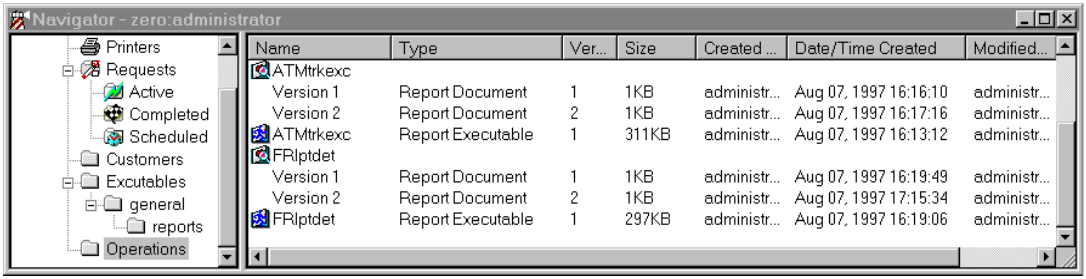


Figure 5-11. Report Executables and Report Documents

2. Open the report document in one of the following ways:

   - To open the most recent version of the report document:
     - For Actuate clients, double-click the icon of the report document or right-click the icon to bring up the Context menu and select View Report.
     - For web browsers, click the underlined report name.
   - To open a specific version of the report document:
     - For Actuate clients, double-click the version number listed under the document name or right-click the version number to bring up the Context menu and select View Report.
     - For web browsers, click the underlined version number.

   The report document appears.

Viewing the Report Document on an Actuate Client

Figure 5-12 illustrates a sample report document viewed from an Actuate client. You can use the scrollbars and toolbar buttons to move through the whole report document.

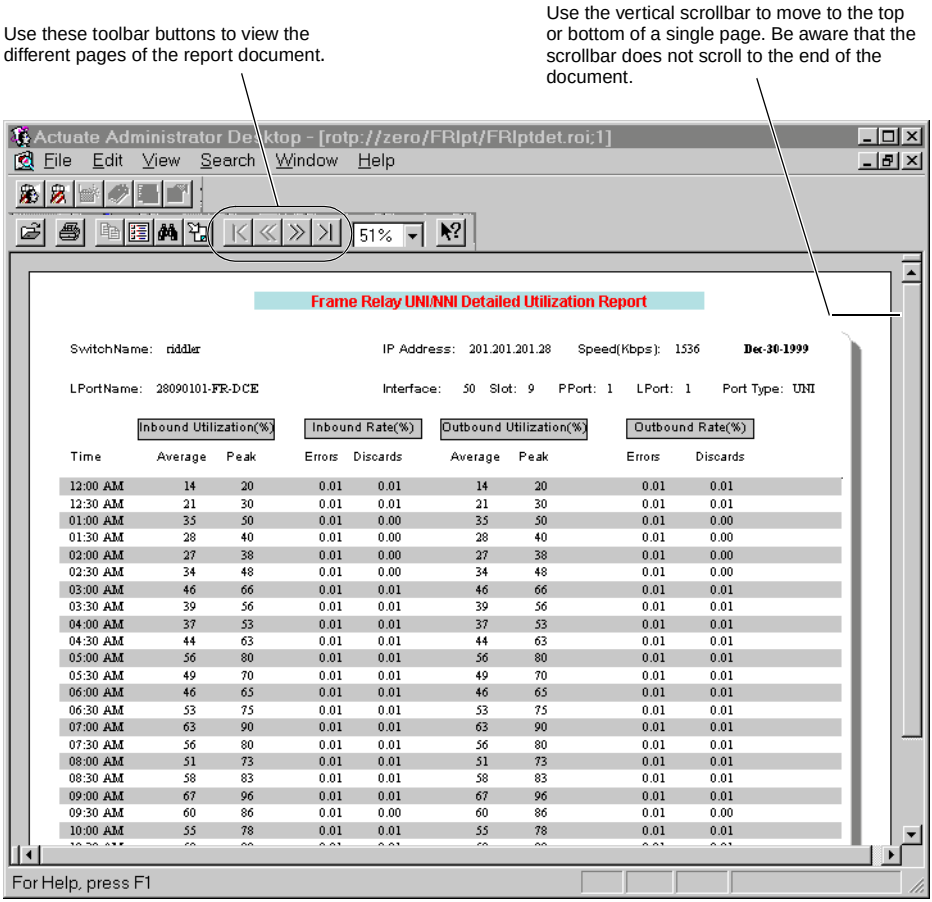
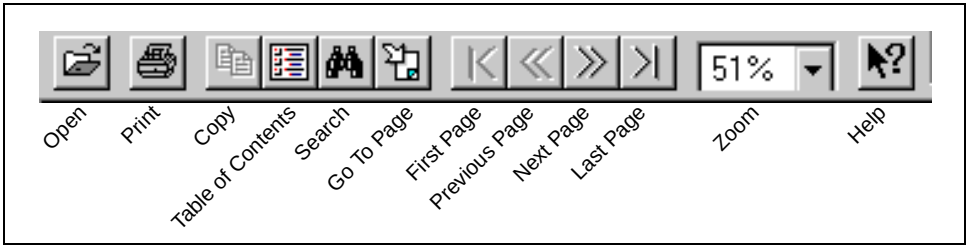


Figure 5-12. Sample ROI Report Document

Actuate Client Toolbar Buttons



The second row of toolbar buttons on the Actuate client provides various options for viewing the report document. If you do not know the function of a particular button, hold the cursor under the button until the yellow label appears.

Table 5-4 lists the operations that you can perform with the toolbar buttons.

Table 5-4. Actuate Client Toolbar Buttons

Button	Use this button to...
Open	Open another report document.
Print	Print the report document that is currently open.
Copy	This button is disabled (it appears grayed-out) when you are viewing report documents because you cannot copy an open report.
Table of Contents	View the Table of Contents for the report and move quickly to sections of the report.
Search	Search for report data.
Go To Page	Go to the page that you specify.
First Page	Go to the first page of the report document.
Previous Page	Go to the previous page.
Next Page	Go to the next page.
Last Page	Go to the last page of the report document.
Zoom	Scale the document from 25% to 200%.
Help	View a description of a specific field in the report.

Viewing a Report Document on a Web Browser

Figure 5-13 illustrates a sample report document viewed from a web browser. You can use the vertical scrollbar to move through the whole report document or click on a Table of Contents entry to move to a specific section of the report.

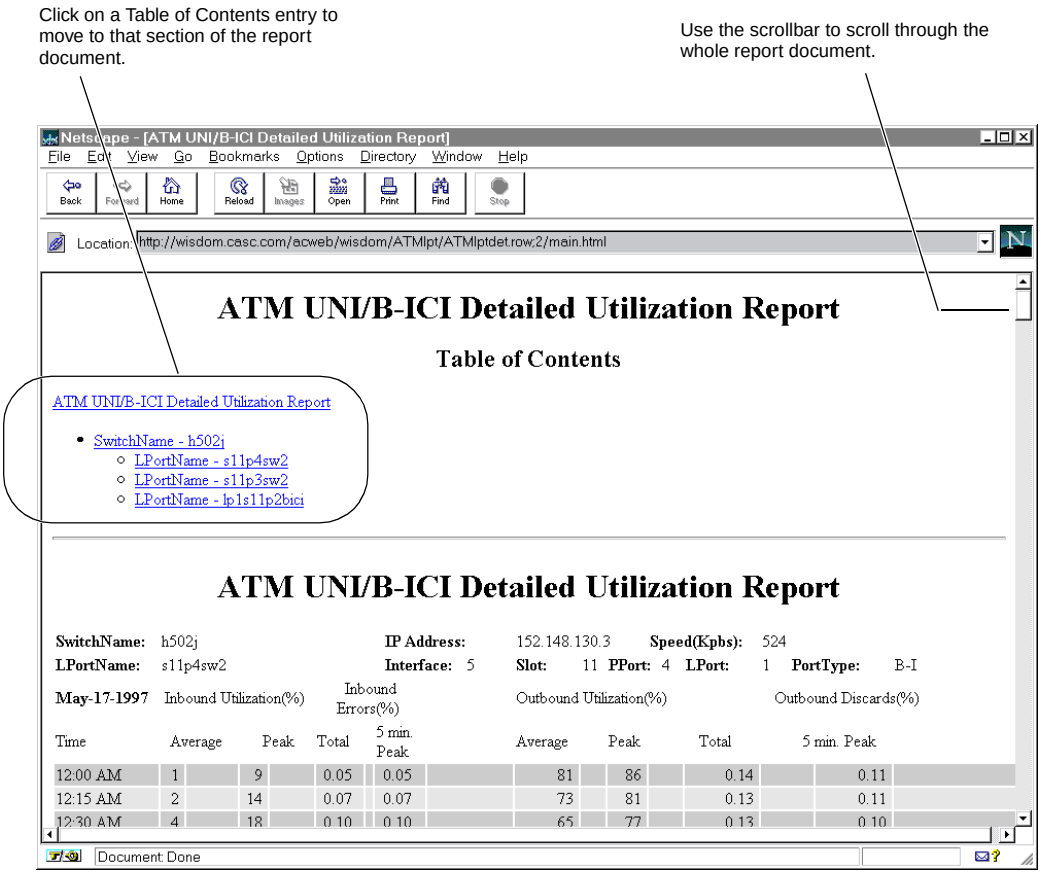
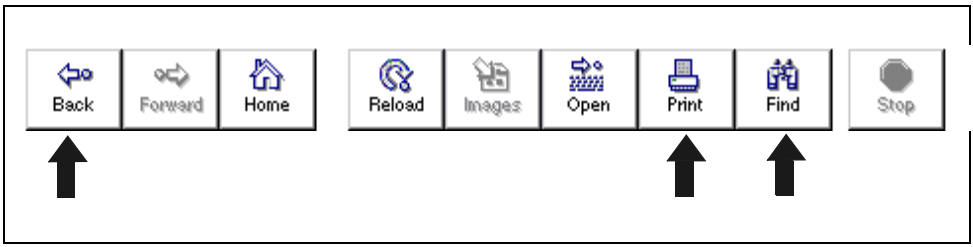


Figure 5-13. Sample HTML Report Document

Browser Toolbar Buttons



Standard browsers such as Netscape provide three toolbar buttons—Back, Print, and Find—for viewing a report document.

Table 5-5 lists the operations that you can perform with the buttons.

Table 5-5. Browser Buttons

Button	Use this button to...
Back	Return to the previous URL.
Print	Print the report document that is currently open.
Find	Search the report document for a specified parameter value.

Because of the nature of HTML, you cannot control the pagination of printed HTML report documents. Printed HTML reports do not have page numbers and sections of the report may be broken across pages. If you need printed reports for publication, generate a standard ROI report and then print the report from an Actuate client.

Searching for Report Items

Both Actuate clients and browsers provide options for searching a report document. Searchable objects include parameter values in the report header and in the report data.

Performing a Search on the Actuate Client

To search for a specific value in an ROI report document:

1. Open the report document and select the parameter value in the report document.

   A gray box appears around the parameter value.

2. Click the Search button or choose Search => Find.

   The Search dialog box appears. See Figure 5-14.

3. Choose Add Selection to add the report entry to the Search dialog box. Then choose Search.

   The Search option displays the entries it finds on the Results page.

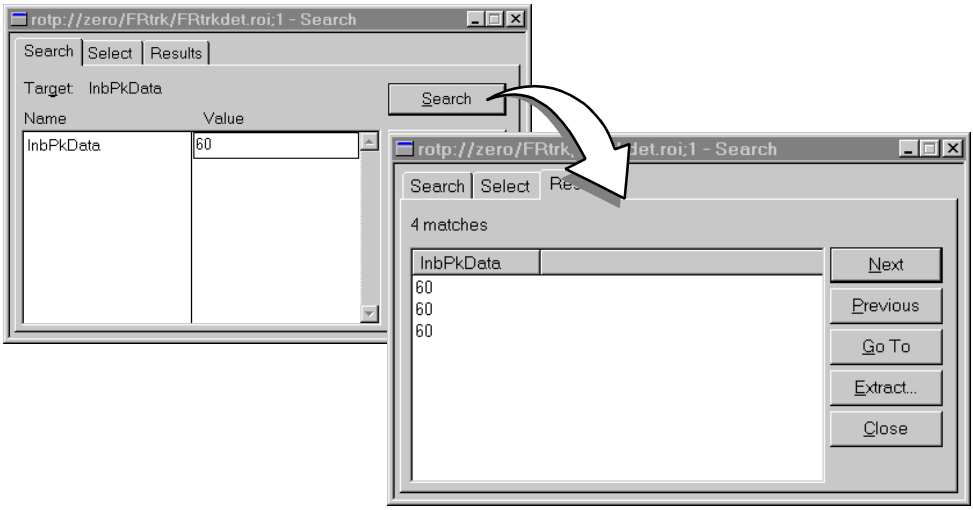


Figure 5-14. The Search and Result Pages in the Search Dialog Box

4. Double-click each entry on the Results page.

   The report document scrolls to the entry, which appears in a gray box.

> *For complete details about the Search option on the Actuate client, refer to Chapter 4 in the Actuate manual,* Using Reports*.*

Performing a Search on the Web Browser

To search for a specific value in an HTML report document:

1. Open the report document and click on the Find button.

   The Find dialog box appears.

2. Type the parameter value in the Find What field and, if desired, specify the Direction and the Match Case options, as illustrated in Figure 5-15.

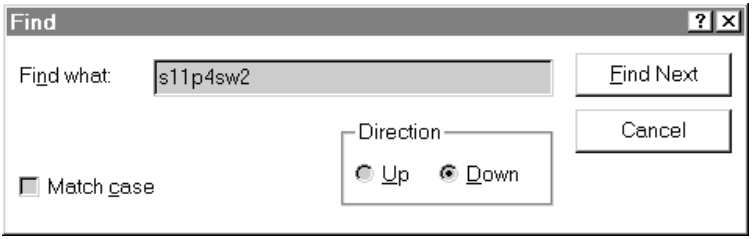


Figure 5-15. Find Dialog Box on the Browser

3. Click the Find Next button.

   The Find option searches the open report document. The report document scrolls to the location of the next matching entry, which appears in a highlighted box.

4. Continue clicking the Find Next button to view all matching entries.

Accessing Online Help

The Report Generator provides online information to help you learn about the Report Generator product. You can access online information from the following sources:

- Help menus, which are accessible from any Actuate client or browser window.
- A context-sensitive Help button, which you can use when viewing reports from the Actuate client.
- Ascend and Actuate documentation in Adobe Portable Document Format (PDF), which is located on both CD-ROM #1 and CD-ROM #2.

The Help Menu on Actuate Clients and Browsers

The Help menu on Actuate clients and browsers provides information about the tasks that you can perform from that particular client. On a browser, for example, the Contents option includes topics such as “Working with the Actuate Web Agent” and “Sending Directives to the Web Agent.” On the Administrator Desktop, the Contents option includes topics such as “Administering the Report Encyclopedia” and “Using Reports.”

Figure 5-16 illustrates the Help menu on the Actuate Administrator Desktop.

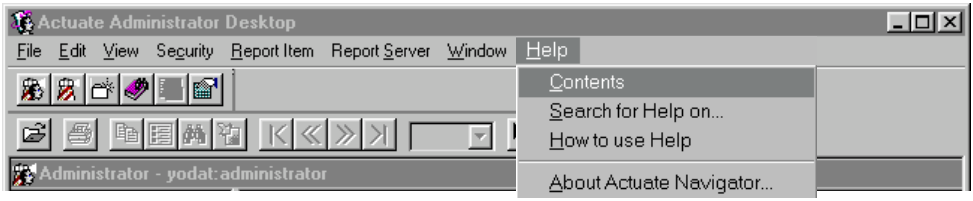


Figure 5-16. Help Menu Options on the Actuate Client

The Help Button (Actuate Clients Only)

In addition to the Help menu options, Actuate clients also provide a context-sensitive Help button which you can use when viewing reports. If you do not understand a specific field in a report document, use the Help button to display a label describing the field.

To use the Actuate Client Help button:

1. When the report document is open, press the Help button in the toolbar.

   The cursor becomes an arrow with a question mark (?).

2. Click the Help cursor on a field name that is displayed in bold font.

   A message box appears containing a short description of the field. See Figure 5-17.

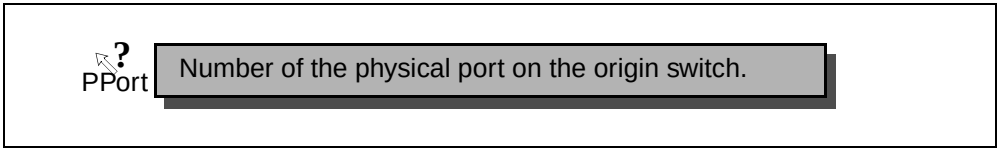


Figure 5-17. Help Cursor and Context Sensitive Help Message

CD-ROM Documentation

The Actuate document set and the *Report Generator User's Guide* are shipped on both CD-ROM #1 and CD-ROM #2. You can open these documents with the Adobe Acrobat Reader and use the hypertext links in the documents to locate information quickly.

About Empty Report Documents

There are times when a successfully generated report document will be empty. You should understand why this occurs.

When you create a report request, the Report Server retrieves the data from the Bulk Statistics and CascadeView databases. As long as the Report Server can connect to the databases and the request process works correctly, the report document is generated and the Completed Requests window displays a green check mark in front of the report request.

The Report Server will generate an empty report in these situations:

- If the Bulk Statistics Collector has not collected any data for the time period specified by the Start Date and End Date of the report request.
- If the report is an Exception report and there are no exceptions to include in the report document.

An empty report does not indicate a problem with the Report Server. It simply means that relevant data does not exist in the Bulk Statistics or CascadeView databases.

6

Customizing the Report Request

In Chapter 5, you learned how to generate the basic report document using the default values provided in the Requester. This chapter shows you how to customize the parameters in the report request for your unique networking environment. Chapter 6 assumes that you have completed the tasks in Chapter 5.

This chapter shows you how to:

- Specify a unique name and location for the report document.
- Schedule the time(s) when the report should be generated.
- Define report notification procedures.
- Save the customized values to a parameter values file for future use.
- Generate a report document from the parameter values file.

Overview

Both browsers and Actuate clients allow you to customize parameter values for the report request. This chapter focuses on Actuate client options because there are a few more options available on the Actuate client. Unless otherwise specified, procedures are the same for both the Actuate client and the browser.

The Requester Window on the Actuate Client

If you are using an Actuate client, you can customize report parameters on various pages of the Requester window. Notice in Figure 6-1 that the Requester contains six tabs. Each tab opens a page where you can define values for the report request.

The Requester on the Actuate client provides these pages:

Parameters — Allows you to define the parameter values for the report document (as described in Chapter 5).

Schedule — Allows you to schedule the time(s) when a report executable should be run.

Distribution — Allows you to specify a name for the report document and the folder to which it should be saved.

Notification — Allows you to choose the users and groups to be notified via e-mail when the report document is completed.

Print — Allows you to print the report document when the report is generated. (Actuate clients only.)

Values — Allows you to save the customized values in a parameter values (.ROV) file when you submit the report request. (Actuate clients only.)

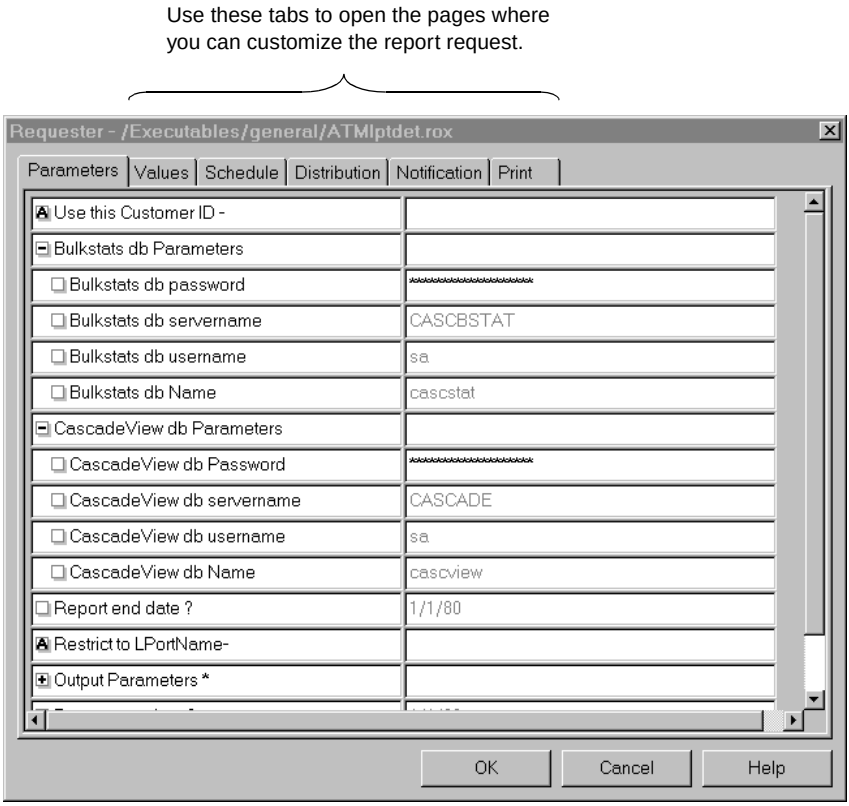


Figure 6-1. Requester Dialog Box on the Actuate Client

The Requester Page on a Browser

The Requester page on a browser contains most of the options that are provided by the Actuate client's Requester. The browser's Requester, however, looks slightly different because options are grouped by sections on a single page.

When you are using a browser, just scroll past the Parameters section of the Requester page to view the Schedule, Priority, Version, and Notification sections. Figure 6-2 illustrates the sections located at the bottom of the Requester page.

The Requester page provides these sections for defining options:

Parameters — Allows you to define the parameter values for the report document (as described in Chapter 5).

Schedule — Allows you to schedule the time(s) when a report executable should be run.

Priority — Allows you to define the priority status for this report request. If the queue contains more than one report request, the Report Server determines the order of the queue by evaluating the priority status and the submission time of each report request.

Version — Allows you to define a unique name and folder for the report document and the type of versioning that should be used. The Version section on the browser is similar to the Distribution page on the Actuate client.

Notification & Notify Channel — Allow you to specify the channel that should be notified when the report document is completed. Channels are unique to browsers. Whenever the Report Server generates a report for a particular channel, the report document icon appears on the channel page of users who have subscribed to this channel. The Channel option takes the place of e-mail notification on the Actuate client.

Scroll past the Parameters section to the bottom of the Requester page. Use these sections to customize the report request.

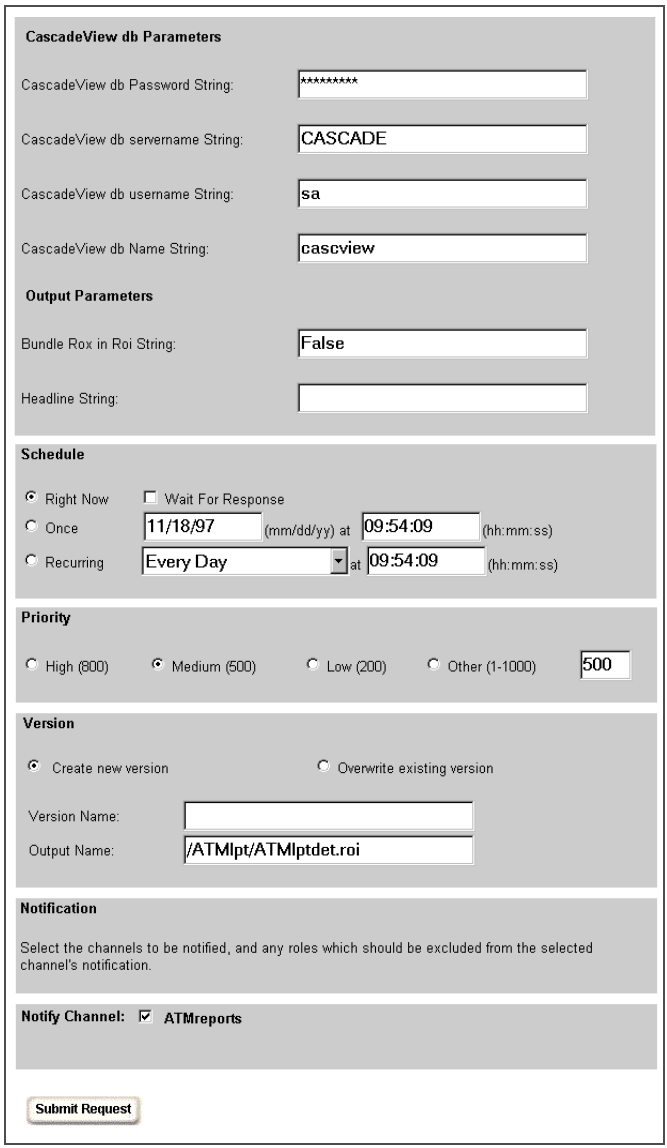


Figure 6-2. Requester Page on a Browser

Defining a Unique Name and Location for the Report

The Distribution page on the Actuate client and the Version section on a browser allow you to define the full pathname for the report document and the type of versioning to be used. If you are working on the Actuate client, you can also define the user-privileges that will be associated with the report document.

Before you begin customizing values, you should understand the default naming conventions used by the Report Server. By default, the Report Server:

- Gives the report document the same root name as the executable.
- Stores the report document in the same directory with the executable.
- Gives the report document a version number if a document with the same name already exists.

To define a unique name and location for the report:

1. Complete the Parameters Page as described in Chapter 5, but do not submit the report request.
2. Open the Distribution Page on the Actuate client or scroll to the Version section of the Requester page on the browser.
3. Enter the desired parameter values as follows:
   a. Specify the full pathname for the report in the Output Name field.
   b. Select the appropriate versioning button and, if desired, specify a unique version name in the Version Name field.
      - If you select the Create New Version button, report documents created from the same report request will be saved under the same name but with incrementing version numbers.
      - If you select the Replace Previous Results button, the new report document created from the same report request will overwrite the previous document.
   c. If you are working on the Actuate client, click the Privileges button and define the permissions for this report.

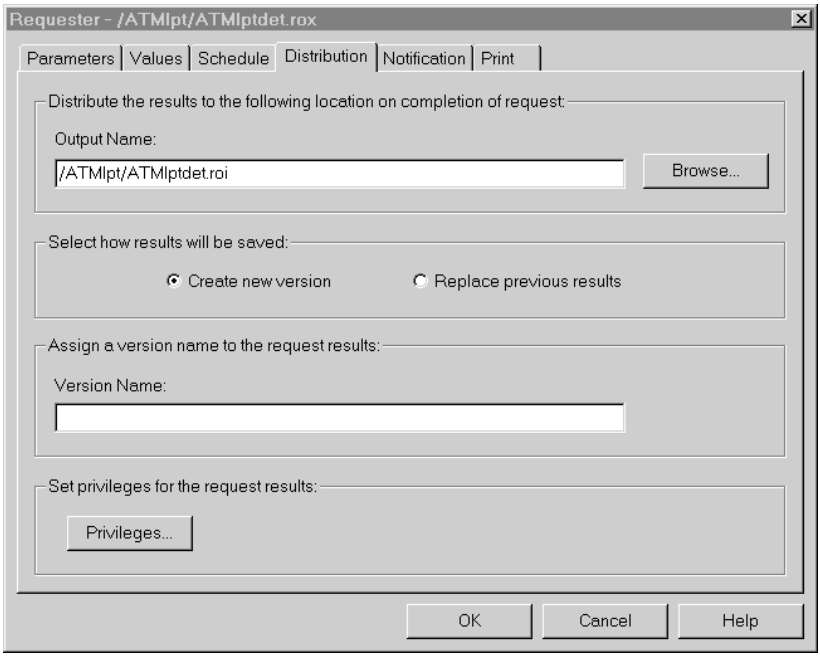


Figure 6-3. Distribution Page on the Actuate Client

4. Choose one of the following:

   - If you do *not* want to customize other values, submit the report request now.
     - On the Actuate client, choose OK.
     - On a browser, click the Submit Request button.
   - If you want to continue customizing values, proceed to the next section.
   - Actuate clients only — If you want to save the values you have defined for a subsequent report request, skip to the section "Saving Parameter Values (Actuate Clients Only)" on page 6-14

Requesting E-mail Notification (Actuate Clients Only)

By default, the Report Server does not send users e-mail notifications when a report request has been completed. You have to check the Completed folder to see if a report document has been generated. If you want the Report Server to send an e-mail notification to a user or a group of users, you can request e-mail notification on the Notification page of the Actuate client.

The important point to remember is that the Report Server retrieves a user's e-mail address from the list of properties for that user. You can view these properties by opening a user's Properties page. If the Properties page does not include an e-mail address, the Report Server cannot notify the user even if e-mail notification is requested on the Notification page.

To request e-mail notification:

1. Open the Notification page on the Actuate client. See Figure 6-4.

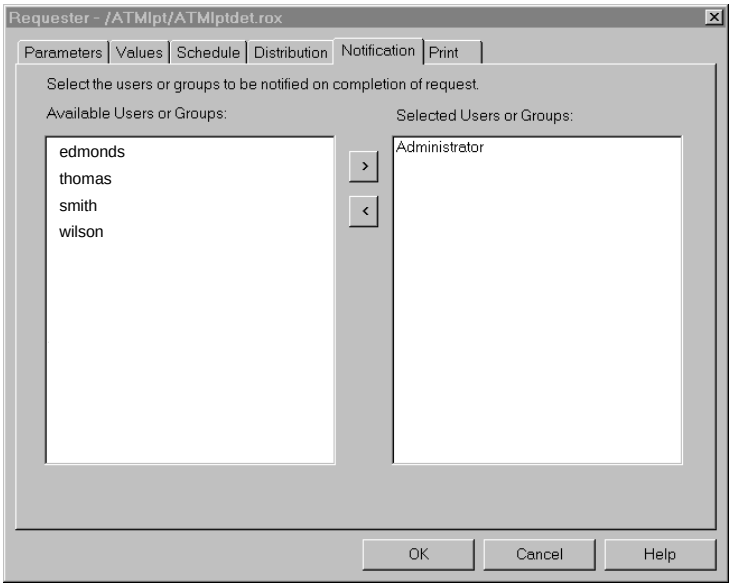


Figure 6-4. Notification Page on the Actuate Client

2. Select the users in the Available Users and Groups field. Then press the Right arrow to move the entries to the Selected Users and Groups field.

3. Choose one of the following to continue:

   - If you do *not* want to customize other values, submit the report request now by choosing OK in the Requester.
   - If you want to continue customizing values, proceed to the next section.
   - If you want to save the values you have defined for a subsequent report request, skip to the section "Saving Parameter Values (Actuate Clients Only)" on page 6-14.

If the specified user does not receive e-mail notification when the report is generated, make sure that the user's e-mail address is defined on the user's Property page. See "Creating New User Accounts" on page 7-2.

Defining Channels (Browsers Only)

Although, a browser does not provide e-mail notification, it does allow you to register for channel notification. When the Report Server completes a report request, it sends a notification to the channel that is specified on the Requester page. Channel subscribers can check the channel's web page to get a listing of completed reports and, if desired, click the report link and view the report document. If you leave the channel page open, you will see that channel information is updated at regular intervals. For more information, see Chapter 4 in the Actuate guide, *Using the Actuate Web Agent*.

To subscribe to channel notification:

1. In the Channel section of the Requester page, check the channel(s) that you want to subscribe to. If there are no channels displayed, the administrator has not yet created them.

2. Choose one of the following to continue:

   - If you do *not* want to customize other values, click the Submit Request button.
   - If you want to continue customizing values, proceed to the next section.

Specifying Print Options (Actuate Clients Only)

By default, the Report Server does not print the completed report document. However, if you are using the Actuate client, you can have the Report Server print the report when the document is created.

To specify print options:

1. Open the Print page in the Requester.
2. Select the Print the Results button. A checkmark should appear in the button.

   When you select this option, the rest of the page becomes enabled.
3. Press the pulldown button next to the Name field to view the available printers. Then select one.

   If there are no printers to select, the Report Server administrator has not yet defined them.
4. Define the Print Range.
5. Choose one of the following to continue:

   - If you do *not* want to customize other values, submit the report request now by choosing OK in the Requester.
   - If you want to continue customizing values, proceed to the next section.
   - If you want to save the values you have defined for a subsequent report request, skip to the section "Saving Parameter Values (Actuate Clients Only)" on page 6-14.

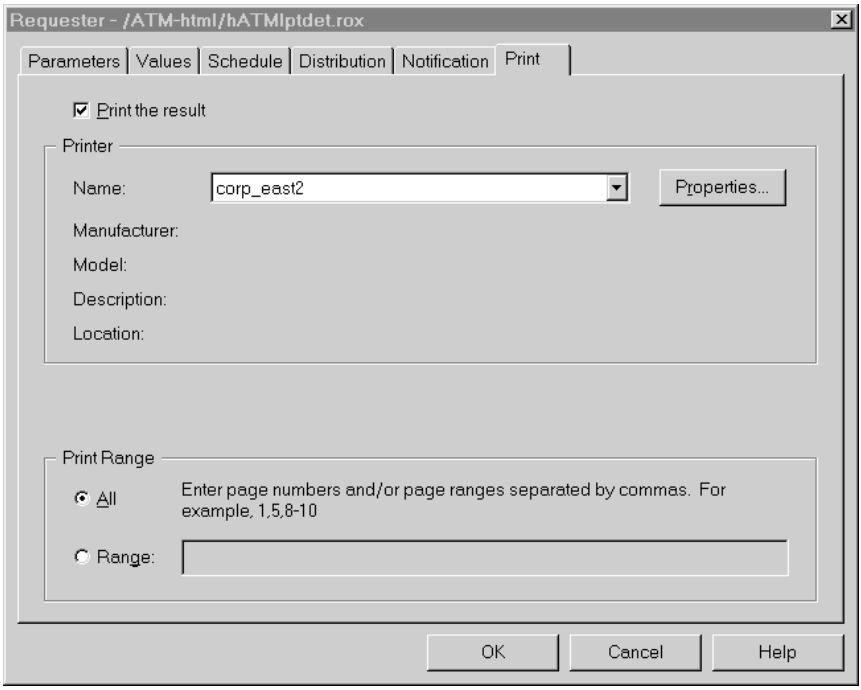


Figure 6-5. Print Page on the Actuate Client

Scheduling a Report

By default, the Report Server executes reports immediately. However, if you define a schedule on the Schedule page of the Actuate client or the Schedule section of the browser, the Report Server will execute the report at the time and frequency that you specify.

To define a report schedule:

1. Open the Schedule page on the Actuate client or scroll to the Schedule section on the browser.
2. Select the desired Frequency, either Right Now, Once, Recurring, or Schedule.

   Right Now — Executes the report immediately (the default setting).

   Once — Allows you to specify the date and time to run the executable once.

   Recurring — Allows you to run the report executable at regular intervals for a specified period (for example, on Monday mornings for a month).

   Schedule — Allows you to run the report executable at any specified time or interval.

   Figure 6-7 illustrates the various frequency options on an Actuate client.
3. Define the date, time, and priority of the report.
4. Choose one of the following to continue:

   - If you do *not* want to save these values for a subsequent report request, submit the report request.
     - On the Actuate client, choose OK.
     - On a browser, click the Submit Request button.
   - Actuate client only — If you want to save the values you have defined for a subsequent report request, skip to the section "Saving Parameter Values (Actuate Clients Only)" on page 6-14.

   For detailed instructions, refer the section "Scheduling the Time or Times to Run the Executable" in the Actuate guide, *Using Reports*.

Figure 6-6. Scheduler Pages on the Actuate Client

Saving Parameter Values (Actuate Clients Only)

If you need to submit the same report request on a regular basis, you can save the values from the report request to a parameter values file instead of redefining this request every time the report is needed. When you need to submit this report request again, use the parameter values file to submit the report request. You can also have the Scheduler submit the report request with the parameter values file.

The parameter values file is called a Report Object Values (.ROV) file. It contains the parameter values that you specify in the Requester and a dependency link to the executable from which you accessed the Requester. The Report Server creates the parameter values file when you submit the initial report request.

If you want to create a values file for an HTML report executable, create the values file on the Actuate client. Then use either an Actuate client or a browser to generate a report document from the values file.

To save the values defined in the Requester to a parameter values file:

1. Specify report parameters on the various pages of the Requester.
2. When you have defined all the necessary parameter values, select the Values tab to bring up the Values page.
3. Click the button next to the Create a Value Item option. A checkmark should appear in the button. See Figure 6-7.

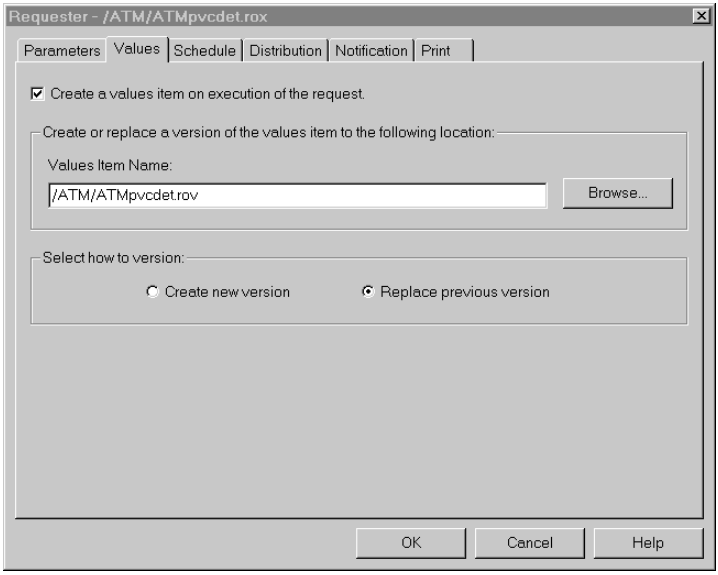


Figure 6-7. Values Page on the Actuate Client

4. Enter the pathname for the Values file and define the type of versioning you want.

   If you do not define the pathname and type of versioning, the Report Server gives the report document the same name as the executable and saves the report document in the same directory with the executable. If a previous version exists, the Report Server gives the report document a version number.

5. Choose OK to submit the report request.

   The Report Server generates the report request and saves the parameter values file to the specified directory. You can now use the parameter values file whenever you want to submit this report request.

   Continue to the next section to generate a report request with the parameter values file.

Generating a Report from a Values File

Even though you can only create a values files from the Actuate client, you can use both the Actuate client and the browser to generate a report document from that values file.

To generate a report from a parameter values file:

1. Open the appropriate folder and locate the values file. Refer to the Type field next to the filename to identify the values file.

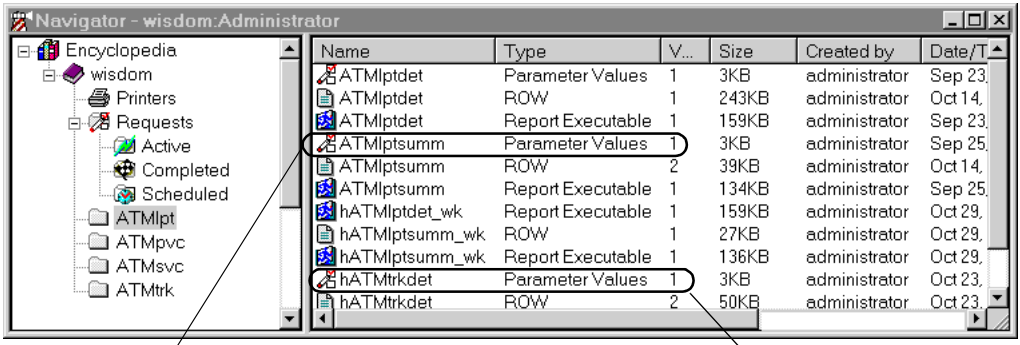


Figure 6-8. Parameter Values Files on the Actuate Client

These are the file types that you may see listed in the Type field:

Parameter Values — Indicates a values file. If the values file has a unique name, you should check the Properties dialog box to see what executable is linked to this values file.

Report Executable — Indicates a report executable. If the executable name has an “h” prefix, the executable generates an HTML report document.

ROW — Indicates a report document that can be viewed by browsers. ROW means “Report Object for the Web.” If you view the same document from a web browser, you will see “HTML Report” in the Type field.

Report Document — Indicates a report document that can be viewed by the Actuate client.

2. Actuate Client Only — Check the Properties of the values file before you submit the report request. (This information is not available via a browser.)

   a. Click the right mouse button on the filename to bring up the Context menu.

   b. Select Properties in the Context menu to open the Properties dialog box.

   c. Open the Dependency Page of the Properties dialog box.

      The Dependency Page lists the executable that is linked to the Parameters Values file.

   d. After you review the Dependency page, choose OK to close the Properties dialog box.

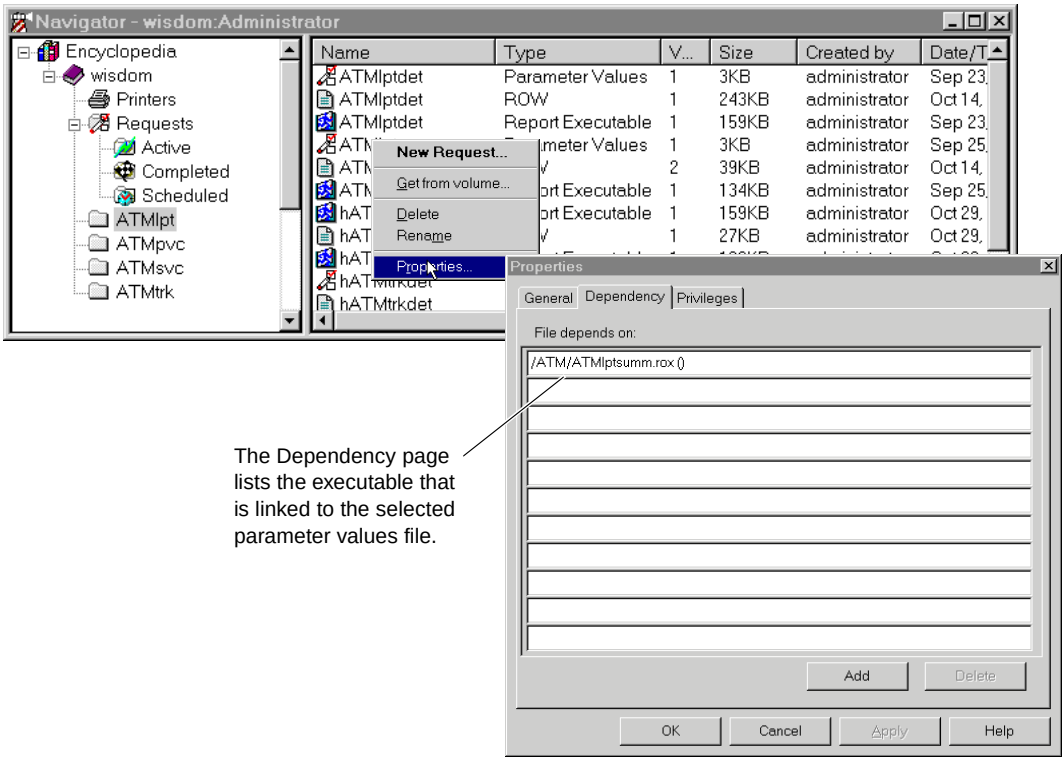


Figure 6-9. Dependency Page on the Actuate Client

3. Submit the report request as follows:

   From the Actuate client:

   a. Double-click the parameter values filename.

      The Requester appears. Each page contains the parameter values that you previously defined.

   b. Choose OK in the Requester to send the request to the Report Server.

   From a browser:

   a. Click the parameter values filename.

      The Requester page appears. Each section contains the parameter values that you previously defined.

   b. Click the Submit Request button to send the request to the Report Server.

   The Report Server generates the report using the executable that is linked to the values file and the values defined in the parameter values file.

7

Administrative Tasks

This chapter describes the tasks that the administrator must perform to manage the Report Generator environment. Some tasks can be performed from the Administrator Desktop client system. Others must be performed directly on the Report Server system.

These are the tasks that you perform from the Administrator Desktop client system:

- Creating new user accounts and editing these accounts
- Managing passwords
- Defining the permissions for folders
- Deleting old files

These are the UNIX tasks that you perform from the Report Server system:

- Verifying that the Report Server is running
- Manually starting and stopping the Report Server
- Backing up and restoring the Report Encyclopedia
- Reinstalling or upgrading the Report Server

Administrator Desktop Tasks

The administrative tasks in this section assume that you have administrator privileges and that you are working on the Administrator Desktop system. This section describes the following tasks:

- Creating new user accounts
- Managing passwords
- Editing user accounts
- Defining the permissions for folders
- Deleting old files

Creating New User Accounts

To create a new user account:

1. Open the Administrator Desktop, select the Administrator button to bring up the Login dialog box, and complete the information in the Login dialog box.

   The Report Encyclopedia appears.

2. Click the right mouse button on the Users icon to bring up the Context menu.

3. Select New User from the Context menu.

   The New User dialog box appears.

4. Complete the fields in the New User dialog box as follows:

   User Name — Enter the new user's name.

   Password — Enter a password.

Only users with administrator privileges can define and change passwords. If you do not have administrator privileges, you cannot create or change your own password. The administrator must do this for you. See the section, "Managing Passwords" on page 7-6.

Notification Preference — Click on the appropriate box(es) in this field.

By default, the Report Server inserts an entry in the Completed folder when a report request is completed. However, the Report Server can also send a notification to a user by e-mail if the e-mail address is specified in this dialog box and the e-mail notification is specified in the report request. For more information, see the section "Requesting E-mail Notification (Actuate Clients Only)" on page 6-8.

Roles — Click the radio button next to the appropriate role. Make sure an X appears in the radio button.

5. Choose OK to apply the information and close the dialog box.

   When you return to the Users folder, notice that it now includes the new user.

Figure 7-1 illustrates the procedures in this section.

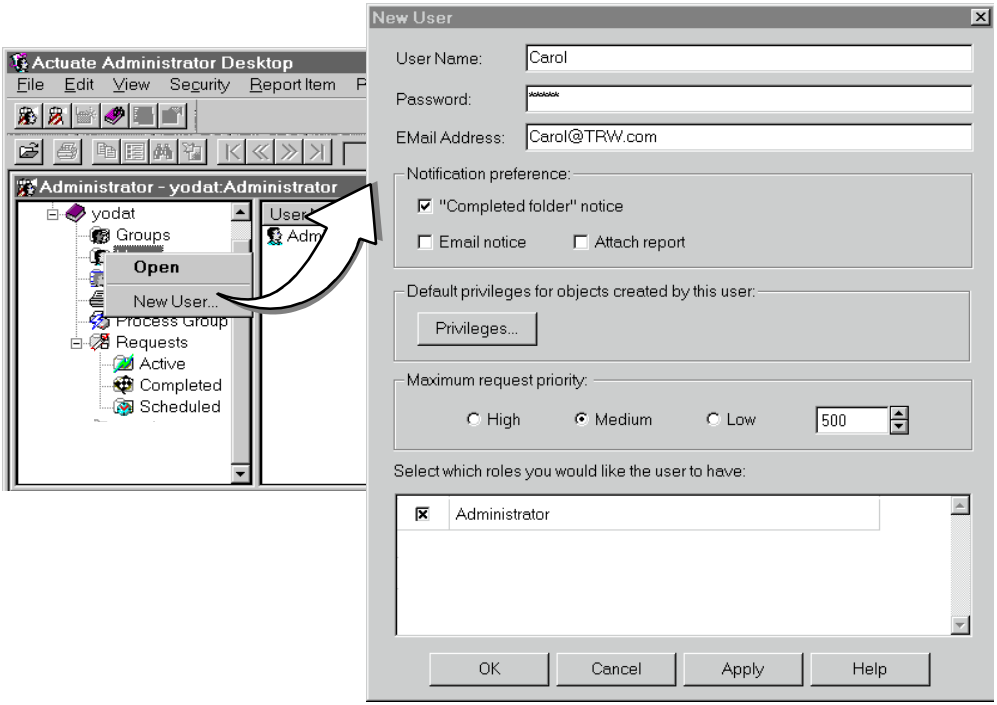


Figure 7-1. Context Menu and New User Dialog Box

Editing User Accounts

To edit an existing user account:

1. Double-click the User folder so that the list of users appears in the right panel of the Report Encyclopedia.
2. Click the right mouse button on the user account that you want to modify.

   The Context menu appears. It contains the options, New User, Rename, Delete, and Properties. See Figure 7-2.
3. To delete this account, click the Delete option in the Context menu.

   The system prompts you for confirmation. If you confirm the deletion, the Report Server deletes the account.
4. To rename the account, click the Rename option in the Context menu.

   The name appears highlighted in the Report Encyclopedia where you can edit it.
5. To edit other properties in the user account, click the Properties option in the Context menu.

   The Properties dialog box appears. See Figure 7-2.

   a. Edit the fields in the Properties dialog box. For details about the fields in the Properties dialog box, see the section “Creating New User Accounts” on page 7-2. For details about editing the user’s password, see the section “Managing Passwords” on page 7-6.

   b. Choose OK to apply the information and close the Properties dialog box.

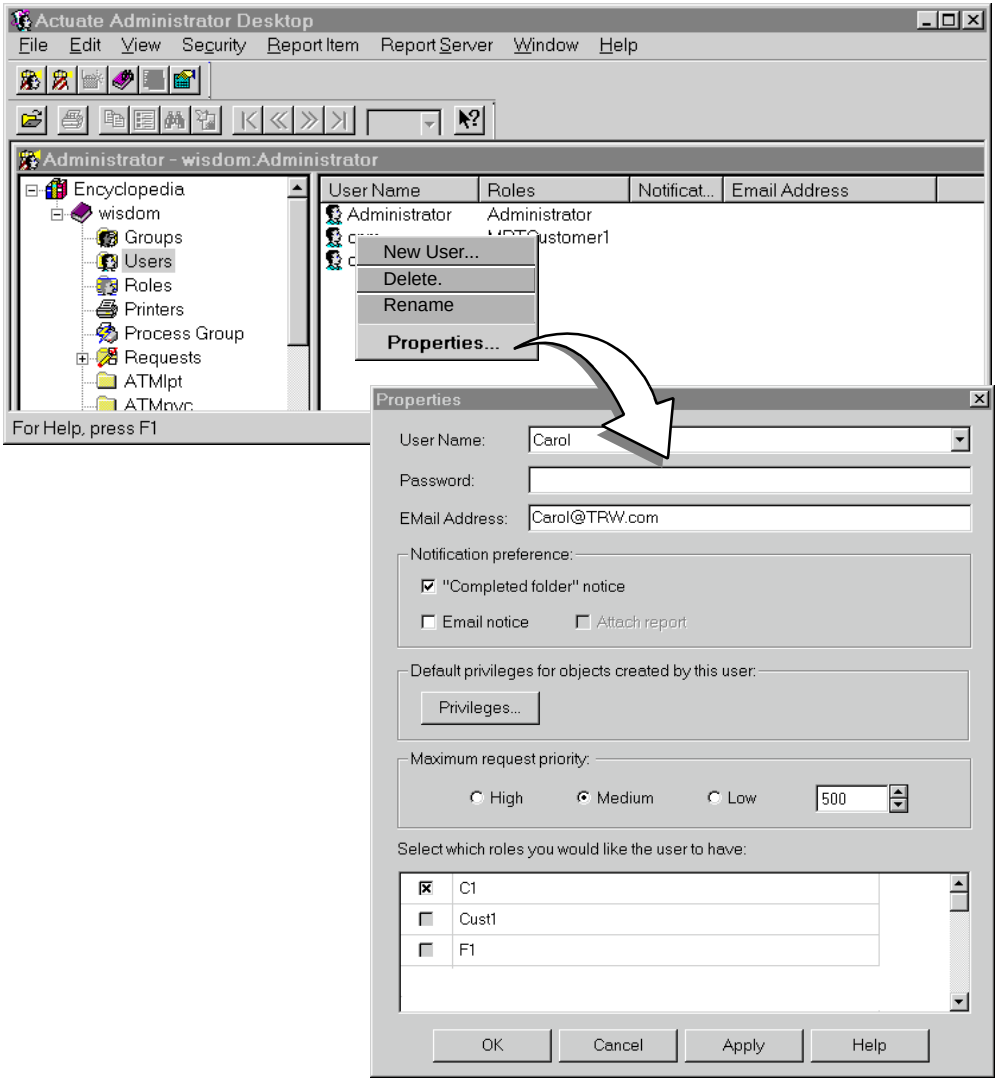


Figure 7-2. User Context Menu and Properties Dialog Box

Managing Passwords

Only users who have administrator privileges can create and change passwords. Initially, the administrator defines a user's password when the account is created. If users want to change passwords after the initial assignment and they do not have administrator privileges, the administrator must change the password for them.

To change a user's password:

1. Double-click the Users folder in the Report Encyclopedia.

   The list of users appears in the right panel of the Report Encyclopedia.

2. Right-click the user's name to bring up the Context menu. Then select Properties.

   The Properties dialog box appears. Notice that the password is not visible. The Password field will be empty even if a password is defined.

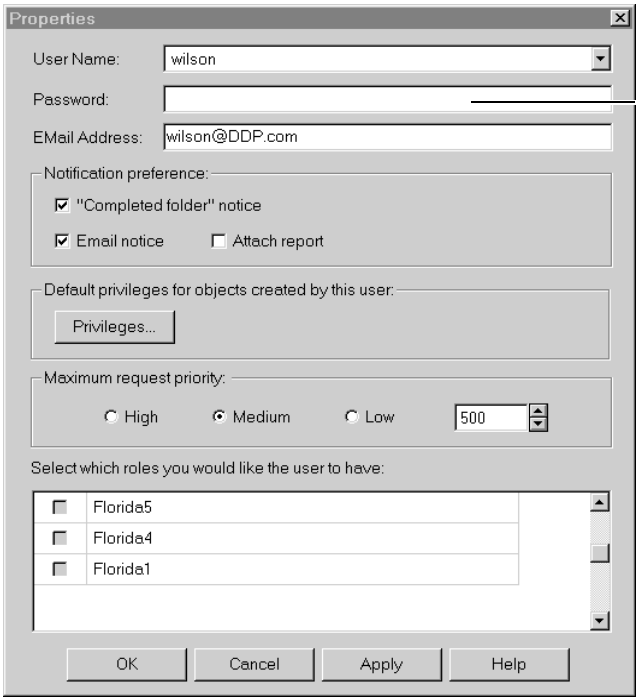


Figure 7-3. The Properties Dialog Box

3. Enter another password in the Password field.
4. Choose OK to apply the new password and close the dialog box.

   The Administrator Desktop sends the information to the Report Server. The new password takes effect when the user logs in to the Actuate client again.

Updating the Web Agent after Changing Passwords

If you have a Web Agent that also accesses the Report Server, perform these additional steps to flush old password information from the Web Agent connection cache.

1. Open a browser and log on to the Report Server as administrator.
2. Select the Administration option in the top, right menu bar of the Report Encyclopedia.
3. The Web Agent Administration window appears.
4. Click the Close Connections button.

The web browser displays the message, “The following command completed successfully: FlushConnections.”

You have now removed the old password information from the Web Agent. When the user logs in to the Report Server via a browser and enters his new password, the Web Agent makes a new connection to the Report Server and saves the connection to the Web Agent connection cache.

Removing Old Files

Because the Report Server does not automatically delete report requests or report documents, these files may accumulate on the server and take up needed disk space. The administrator should check the Report Encyclopedia regularly and delete old report requests and report documents. This is especially important if you are creating new versions of reports instead of overwriting existing reports.

This section shows you how to delete report requests from the completed folder and report documents from report folders.

Deleting Requests from the Completed Folder

To delete report requests from the Completed folder:

1. Open the Completed folder to bring up the list of completed requests. The most recent requests appear at the top of the list.
2. Scroll to the bottom of the list so that you can delete the oldest requests.
3. Press the right mouse button on the request icon to bring up the Context menu.
4. Choose Delete Completed Request from the Context menu. See Figure 7-4.

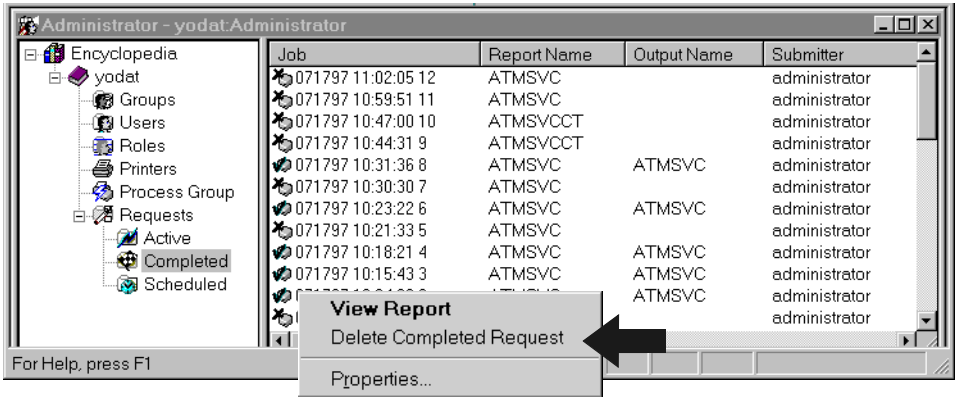


Figure 7-4. The Delete Completed Request Option in the Context Menu

The system displays a confirmation dialog box.

5. Choose Yes in the confirmation dialog box.

   When you delete a request in the Completed folder, you do not delete the report document. You simply delete the entry that was listed when the report server completed the report document.

6. Repeat Steps 3 through 5 for each entry that you want to delete.

Deleting Old Report Documents

To delete old report documents:

1. Open the folder that contains the report documents.
2. Press the right mouse button on the report document that you want to delete.

   The Context menu appears.

3. Choose Delete from the Context menu. See Figure 7-5.

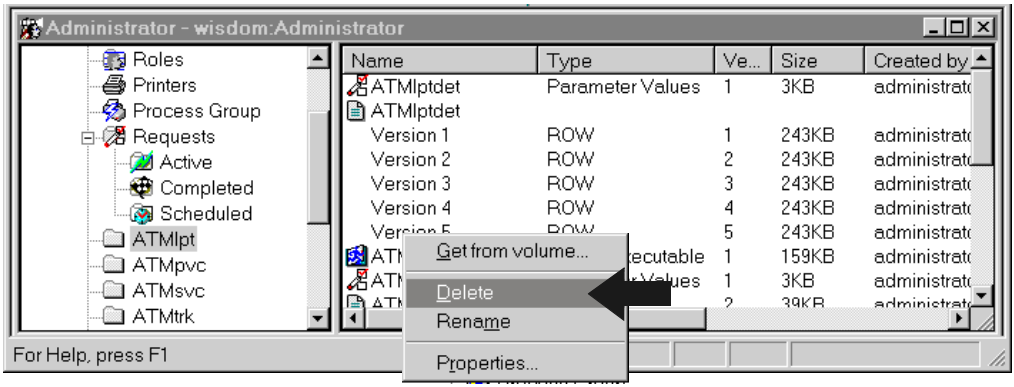


Figure 7-5. The Delete Option in the Context Menu

The system displays a confirmation dialog box.

4. Choose Yes in the confirmation dialog box.
5. Repeat Steps 1 through 4 for each report document that you want to delete.

Defining File Permissions

There are two basic ways that you maintain the security of the Report Generator environment—by defining the privileges of users and the access permissions on files and folders. This section shows you how to assign permissions to Report Encyclopedia folders and files.

To define file permissions:

1. Press the right mouse button on the file or folder.

   The Context menu appears.

2. Choose Properties from the Context menu.

3. In the Properties dialog box, select the Privileges tab to bring up the Privileges page.

4. Select the user or group and then specify the appropriate privileges.

   Refer to the section, “Assigning Privileges for Report Encyclopedia Folders and Files” in the Actuate guide *Using Reports* for a detailed description of the type of privileges you can grant.

5. Choose OK to save the permissions and close the dialog box.

   Figure 7-6 illustrates the steps in this section.

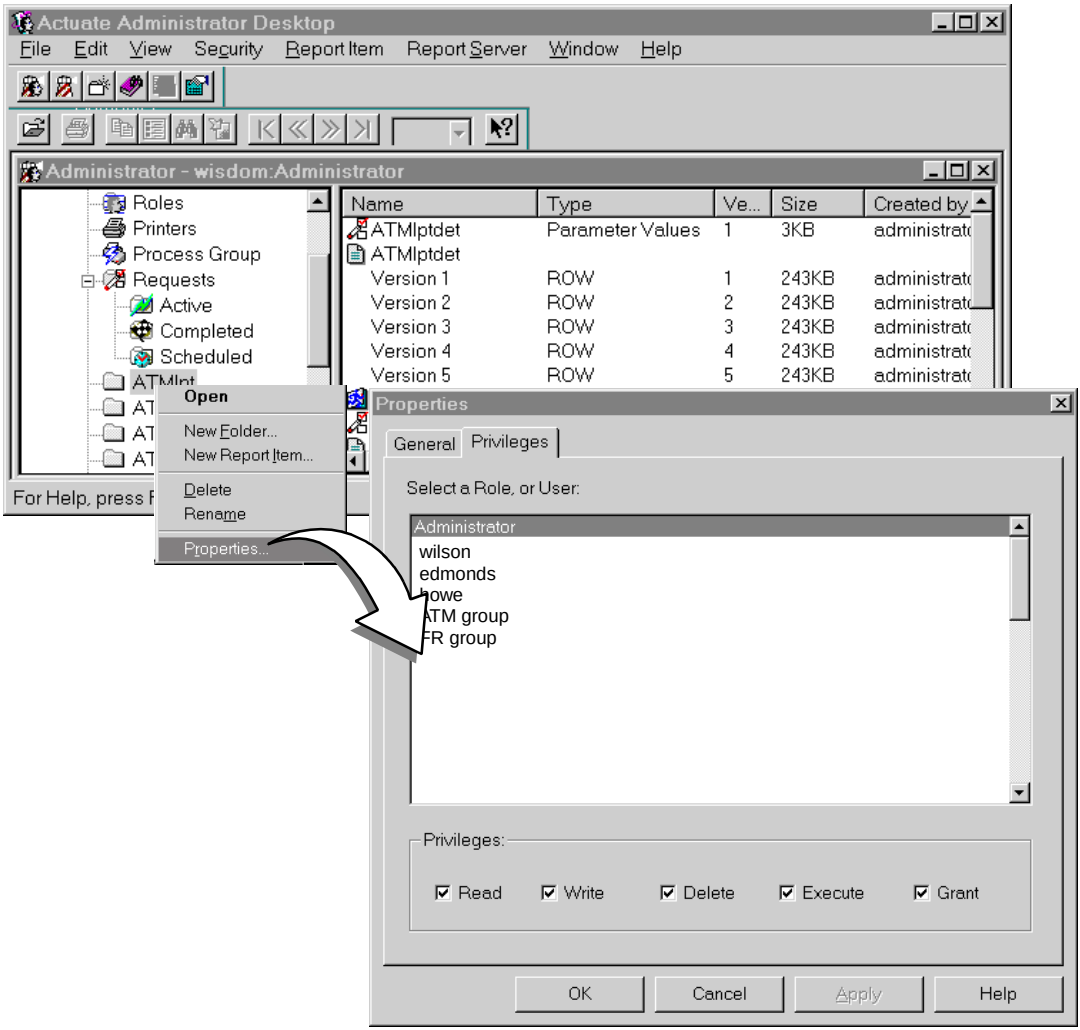


Figure 7-6. Privileges Page in the Properties Dialog Box

UNIX Tasks

The administrative tasks in this section must be performed on the UNIX Report Server system. This section describes these tasks:

- Verifying that the Report Server is running
- Manually starting and stopping the Report Server
- Backing up and restoring the Report Encyclopedia
- Reinstalling or upgrading the Report Server

Verifying That the Report Server Is Running

To verify that the Report Server is running:

1. Log on to the Report Server system.
2. Enter the following command:

   ```
   ps -aef | grep srvr
   ```

   The system displays all processes that include the letters “srvr.” If Report Server processes are running, you should see them listed along with other server processes. Be aware that some processes may not be Actuate Report Server processes.

   Figure 7-7 illustrates all the Actuate Report Server processes that you may see.

```
%ps -aef | grep srvr
root   2195   2179   80   Mar 01 ? 0:12 /opt/rptgen/actuate/AcServer/bin/reqsrvr
root   2179      1    9   Mar 01 ? 0:00 /opt/rptgen/actuate/AcServer/bin/reqsrvr.sh
root   2198   2181   80   Mar 01 ? 0:02 /opt/rptgen/actuate/AcServer/bin/adminsrvr
root   2181      1    8   Mar 01 ? 0:00 /bin/sh /opt/rptgen/actuate/AcServer/bin/adminsrvr.sh
root   2199   2180   80   Mar 01 ? 0:09 /opt/rptgen/actuate/AcServer/bin/pobsrvr
root   2180      1   11   Mar 01 ? 0:00 /bin/sh /opt/rptgen/actuate/AcServer/bin/pobsrvr.sh
root   2199   2180   80   Mar 01 ? 0:09 /opt/rptgen/actuate/AcServer/AcServer/operation/factsrvr
```

Figure 7-7. Actuate Report Server Processes

3. Make sure that the three Report Server processes, *reqsrvr*, *adminsrvr*, and *pobsrvr*, are running.

   It does not matter if the startup processes that end with the suffix .sh are running. The *factsrvr* process, which manages report generation and printer operations, probably will not be running. This process is started by the *reqsrvr* process.

4. If any one of the processes (*reqsrvr*, *adminsrvr*, or *pobsrvr*) is not running, manually start the Report Server. See page 7-14.

About Report Server Processes

Table 7-1 lists all the Actuate Report Server processes and describes each process.

Table 7-1. Report Server Processes

Server Process	Description
reqsrvr	Request Server — This process routes requests to other processes and manages all client requests.
reqsrvr.sh	Request Server startup process.
pobsrvr	Persistent Object Server — This process controls the mapping of report documents and manages the storage and retrieval of reports to and from the Report Encyclopedia.
pobsrvr.sh	Persistent Object Server startup process.
adminsrvr	Administration Server — This process manages user configuration such as accounts, roles, privileges. It also validates users.
adminsrvr.sh	Administration Server startup process.
factsrvr	Factory Server — This process creates the TCP connections to data servers and manages report generation.

Manually Starting the Report Server

Under normal circumstances you do not need to manually start the Report Server. Startup scripts automatically start the Report Server at the end of the Report Server installation and, from then on, whenever the system is rebooted. However, if you need to manually start server processes, use the procedures in this section.

To restart the Report Server:

1. Log on to the Report Server system and enter **su - root** to become root. At the password prompts, enter the root password.
2. Move to the directory where the startup script is located. Enter:

   cd [*Report Generator directory*]/actuate/AcServer/bin

   By default, the script is located in */opt/rptgen/actuate/AcServer/bin*.
3. Enter the following command to run the startup script:

   sh start_srvr.sh

Shutting Down Report Server Processes

Use these shutdown procedures before you upgrade your Report Server software or any time you need to stop Report Server processes.

To shut down the Report Server:

1. Log on to the Report Server system and enter **su - root** to become root. At the password prompts, enter the root password.
2. Move to the directory where the shutdown script is located. Enter:

   cd [*Report Generator directory*]/actuate/AcServer/bin

   By default, the script is located in */opt/rptgen/actuate/AcServer/bin*.
3. Enter the following command to run the shutdown script:

   sh shutdown_srvr.sh

Backing Up the Report Encyclopedia

One of the important tasks for the Report Generator administrator is to back up the Report Encyclopedia on a regular basis. As long as you perform regular backups, report executables and report documents are secure. If the Report Server system fails or the Report Encyclopedia becomes corrupted, you can always replace the Report Encyclopedia with the backup version.

You will also need to back up the Report Encyclopedia when you upgrade the Report Generator.

To back up the Report Encyclopedia:

1. Log on to the Report Server system and move to the *AcServer* directory.

   If you installed the Report Server in the default installation directory, you would enter:

   `cd /opt/rptgen/actuate/AcServer`

2. To stop all Report Server processes that are running, enter:

   `sh [`*`AcServer directory`*`]/bin/shutdown_srvr.sh`

   For example, if you installed the Report Server in the default installation directory, you would enter:

   `sh /opt/rptgen/actuate/AcServer/bin/shutdown_srvr.sh`

3. To compress Report Server files, enter:

   `tar cvf  rpt.tar ./object ./admin ./request`

   The *tar* command makes a copy of existing files and then compresses the copied files. Notice that the *tar* command does not change the original Report Encyclopedia files.

4. To move the compressed *rpt.tar* file to the backup director, enter:

   `mv rpt.tar [`*`backup directory`*`]`

   You have now backed up the Report Encyclopedia.

Restoring the Report Encyclopedia from Backups

You may need to restore the Report Encyclopedia from backups if the Report Server fails or after you upgrade or reinstall the Report Server.

To restore the Report Encyclopedia from backups:

1. Log on the Report Server system and move to the *AcServer* directory.

   For example, if you installed the Report Server in the default installation directory, you would enter:

   ```
   cd /opt/rptgen/actuate/AcServer
   ```

2. To stop all Report Server processes, enter:

   ```
   sh [AcServer directory]/bin/shutdown_srvr.sh
   ```

   If you installed the Report Server in the default installation directory, you would enter:

   ```
   sh /opt/rptgen/actuate/AcServer/bin/shutdown_srvr.sh
   ```

3. To copy the compressed *rpt.tar* file from the backup directory to your current directory, enter:

   ```
   cp [backup directory]/rpt.tar .
   ```

4. To extract Report Server files, enter:

   ```
   tar xvf  rpt.tar
   ```

   The report executables and report documents in the Report Encyclopedia are now available to Report Generator users.

Upgrading or Reinstalling the Actuate Report Server

This section describes how to upgrade or reinstall the Actuate Report Server component of the Report Generator product. Notice that when you reinstall or upgrade the Report Server, you do *not* install new report executables.

To upgrade or reinstall the Actuate Report Server:

1. Back up the Report Encyclopedia using the procedures in the section, "Backing Up the Report Encyclopedia" on page 7-15.

   Backing up the Report Encyclopedia protects report documents and report executables, which you may want to continue using.

2. Uninstall the old version of the Report Server using the procedures in the section, "Uninstalling Report Server Components" in Appendix B.

3. Install the new Report Server or reinstall the old version of the Report Server using the procedures in Chapter 2, "Installing Report Server Components."

   When you complete the Report Server installation, the Report Server is up and running.

4. Choose one of the following procedures to reinstall old report executables:

   - If you want to continue using your old report documents and report executables, restore the Report Encyclopedia from backups using the procedures in the section, "Restoring the Report Encyclopedia from Backups" on page 7-16.

     The old report documents and report executables will be available to you when you open the Report Encyclopedia.

   - If you want to reinstall only the old report executables, copy the executables from the Administrator Desktop system to the Report Server system using the procedures in Chapter 3, Installing Client Components.

     The old report executables will be available to you when you open the Report Encyclopedia.

See Also

When you complete this chapter, be sure to read the Actuate documentation provided with the Report Generator product.

Refer to the *Actuate Report Server Guide* for this information:

- Testing mail notification (Chapter 2)
- Using UNIX commands to clear queues from the Report Server (Chapter 2)

Refer to *Using Reports* for this information:

- Assigning privileges to files and folders (Chapter 2)
- Printing and distributing reports (Chapter 4)
- Using reports on the web (Chapter 6)
- About your personal channel and channel headlines (Chapter 6)

Refer to *Administering the Report Encyclopedia* for this information:

- Defining passwords (Chapter 2)
- Assigning roles to users and managing roles (Chapter 2 and Chapter 5)
- Setting up printers and managing print processes (Chapter 3)
- Creating notification groups (Chapter 5)
- Maintaining a secure environment (Chapter 5)

Refer to *Using the Actuate Web Agent* for this information:

- Administering ReportCast channels (Chapter 4)
- Creating, modifying, and deleting channels (Chapter 4)
- Subscribing to and unsubscribing from ReportCast channels (Chapter 5)
- Accessing and generating reports on the web (Chapter 5)

A

Installation Worksheets

The worksheets in this appendix list the parameter values that you need to specify when you install the Sybase Open Client, Actuate Report Server, and the Actuate Web Agent. Establish these values before you begin the installation process.

Report Server Installation Worksheet

Complete this form before you install Sybase Open Client and the Report Server on the Report Server system.

Sybase Open Client Installation

1. Sybase Open Client installation directory pathname:_____

   Suggested value: /opt/rptgen

   (Do not use /opt/sybase or the directory where Sybase SQL data server files are located.)

The installation script creates a directory called sybcl *in the installation directory that you specify. For example, if you specify* /opt/rptgen *as the installation directory, the script will install Sybase Open Client files in* /opt/rptgen/sybcl.

2. Report Server installation directory pathname: _____

   Suggested value: /opt/rptgen

The installation script creates a directory called actuate *in the installation directory that you specify. For example, if you specify* /opt/rptgen *as the installation directory, the script will install Sybase Report Server files in* /opt/rptgen/actuate.

3. Hostname of X server system used for the DISPLAY variable:_____

   Format: [hostname of X server system]:0

   (HTML graphing operations need to connect to an X server to use X windows resources. Generally, Solaris systems have the X server installed. If your Report Server system has the X server installed on it, enter the hostname of your Report Server system.)

Sybase Open Client Configuration

If your CascadeView and Bulk Statistics databases are on the same data server, enter information for parameters 4. through 6. only. If your CascadeView and Bulk Statistics databases are on two different data servers, enter information for parameters 4. through 9.

CascadeView Data Server or Single Data Server Information

4. Name of data server:_____

   Enter the name of CascadeView data server. Default value: CASCADE

5. Data server alias:_____

   Enter a one-word, descriptive name for the CascadeView data server. The installation script adds this information to a comment section of the interfaces file.

6. TCP port number of data server: _____

   Enter the TCP port number for the CascadeView data server. For example, 1025.

To find the names and TCP port numbers of the CascadeView or Bulk Statistics data server, see the section, "Locating TCP Port Numbers for Data Servers" on page A-4.

Bulk Statistics Data Server Information

7. Name of data server:_____

   Enter the name of the Bulk Statistics data server. Default value: CASCBSTAT.

8. Data server alias:_____

   Enter a one-word, descriptive name for the Bulk Statistics data server. The installation script adds this information to a comment section of the interfaces file.

9. TCP port number of data server: _____

   Enter the TCP port number for the Bulk Statistics data server. For example, 1025.

Locating TCP Port Numbers for Data Servers

TCP port numbers of Sybase data servers are defined in the *[sybase directory]/interfaces* file on the data server system. If you need to check the value of the TCP port number, open the *interfaces* file and locate the information there.

To view CascadeView or Bulk Statistics data server parameters:

1. Log on to the CascadeView or Bulk Statistics data server system.
2. Enter the following command:

   `more [sybase directory]/interfaces`

3. Press the space bar to move through the file until you locate the Services section of the data server (by default, either CASCADE or CASCBSTAT).
4. Make a note of the TCP number located in the comment line for *query tcp*. This line begins with a double pound sign (##). In Figure A-1, the TCP number for the data server CASCADE is 1025.

```
## CASCADE on cowboys
## Services:
##   query   tcp     (1025)
##   master  tcp     (1025)
##   console tcp     (1026)

CASCADE
     query tli tcp /dev/tcp \x000207d098941e130000000000000000
     master tli tcp /dev/tcp \x000207d098941e130000000000000000
     console tli tcp /dev/tcp \x000207d198941e130000000000000000
```

Figure A-1. TCP Number of the Data Server

Web Agent Installation Worksheet

Determine the following parameter values before you install the Actuate Web Agent on a web server system.

1. URL of the Netscape Administration Server:_____

   Standard form: http://[web server hostname]:[admin server port number]

2. User name of the Netscape Web Server administrator: _____

3. Pathname of Netscape Web Server directory: _____

   Default value: /usr/ns-home

4. Pathname of the Netscape Web Server instance directory: _____

   Default value: /usr/ns-home/https-[web server name]

5. Pathname of CGI directory: _____

   Default value: /usr/ns-home/cgi-bin

6. Pathname of Web Agent document directory: _____

   Default value: /usr/ns-home/docs

7. Pathname of Web Agent installation directory: _____

   Default value: /usr/ns-home/plugins

8. Port number to be used by the Web Agent to communicate with the CGI script *nph-actuate.cgi*: _____

   Default value: 5050

In this release, the Report Generator supports only the Netscape FastTrack or Enterprise Server on a system running Solaris 2.5.1 or later.

B

Uninstallation Procedures

This appendix describes how to uninstall the following Report Generator components:

- The Actuate Report Server and the Sybase Open Client on the Report Server system.
- The Actuate Administrator Desktop and the Report Generator executables on the primary client system.
- Actuate End User Desktops and Viewers on additional client systems.
- The Actuate Web Agent on the Web Server system.

You should uninstall components if you need to free up disk space, reconfigure systems, or upgrade the Report Generator.

Overview

If you are uninstalling more than one Report Generator component or performing a Report Generator upgrade, perform the uninstallation procedures in the order shown in Figure B-1. If you want to uninstall one component only, uninstall the single component.

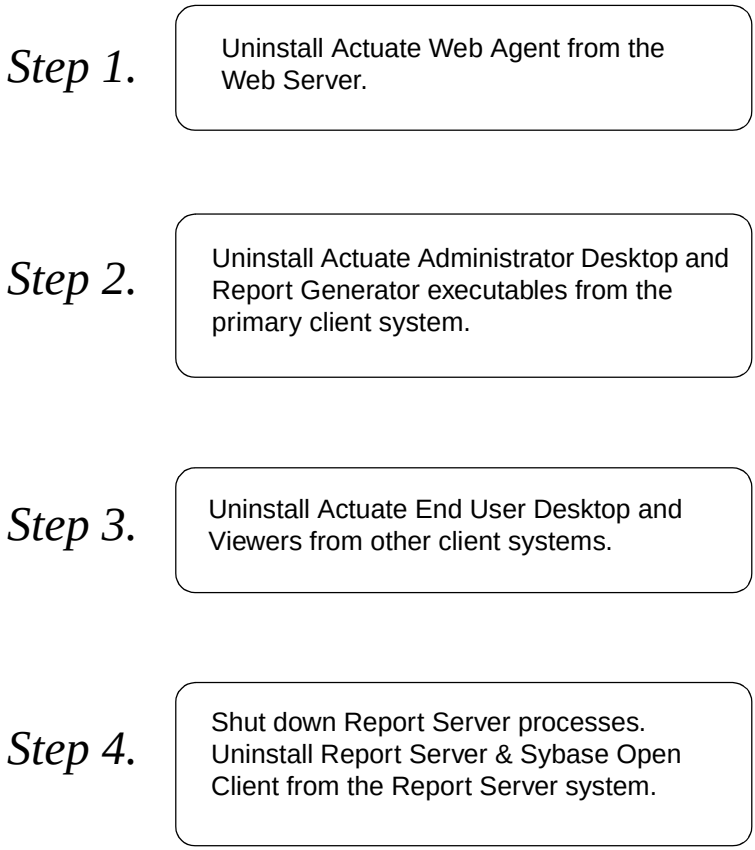


Figure B-1. Sequence for Uninstalling Components

Uninstalling the Actuate Web Agent

To remove the Web Agent for the Netscape FastTrack or Enterprise Server on a Solaris system:

1. Log on to the Netscape Web Server system.
2. Use the **cd** command to move to the Netscape FastTrack or Enterprise Server installation directory. By default, this directory is: */usr/ns-home/plugins*
3. Enter **ls** to view the files in this directory.

   You should see the following files in the Netscape Server directory:

   ```
   actuate        java
   ```

4. Enter the following command to delete the Actuate Web Agent:

   ```
   rm -rf actuate
   ```

Uninstalling the Administrator Desktop and Report Generator Executables

To uninstall the Actuate Administrator Desktop and the Report Generator executables from the primary client system:

1. Log on to the Administrator Desktop system.
2. Delete the Actuate Administrator Desktop as follows:
   a. Choose the Start button and select Settings => Control Panel.
   b. In the Control Panel, select Add/Remove Programs.

      The Add/Remove Programs dialog box appears.
   c. On the Install/Uninstall page, select Actuate Administrator Desktop.
   d. Choose the Add/Remove button.
   e. In the confirmation dialog box, choose Yes.

      The Windows Add/Remove program uninstalls the Administrator Desktop application.

      Notice that the program does not delete a few files in the Administrator Desktop directory or the Administrator Desktop directory itself.
   f. Delete the Administrator Desktop directory and any files that remain in it.

      For example, if you installed the Administrator Desktop in the default installation directory, you would delete the *Adt* directory and the files remaining in it.

3. Delete the Report Generator executables as follows:

   a. Choose the Start button and select Settings => Control Panel.

   b. In the Control Panel, select Add/Remove Programs.

      The Add/Remove Programs dialog box appears.

   c. On the Install/Uninstall page, select Report Generator Reports.

   d. Choose the Add/Remove button.

   e. In the confirmation dialog box, choose Yes.

      The Windows Add/Remove program uninstalls all Report Generator executables.

You have now uninstalled the Administrator Desktop and Report Generator executables from the system.

Uninstalling the End User Desktop or Viewers

To uninstall the Actuate End User Desktop or the Actuate Viewer from client systems:

1. Log on to the client system.
2. Choose the Start button and select Settings => Control Panel.
3. In the Control Panel, select Add/Remove Programs.

   The Add/Remove Programs dialog box appears.
4. On the Install/Uninstall page, select the Actuate End User Desktop or Actuate Viewer.
5. Choose the Add/Remove button.
6. In the confirmation dialog box, choose Yes.

   The Windows Add/Remove program uninstalls the Actuate client application.

   Notice that the program does not delete a few files in the Actuate client directory or the Actuate client directory itself.
7. Delete the Actuate client directory and any files that remain in it.

   For example, if you installed the Actuate client in the default installation directory, you would delete the *Eudt* or *Viewer* directory and the files remaining in them.

You have now uninstalled the Actuate client application.

Uninstalling Report Server Components

This section describes how to use the *pkgrm* utility to uninstall the Report Server and the Sybase Open Client from the Report Server system.

The uninstallation process deletes the executables and report documents located in the Report Encyclopedia. If you want to save executables or report documents, be sure to back up the Report Encyclopedia before you begin the uninstallation process. For instructions, see *"Backing Up the Report Encyclopedia" on page 7-15*.

To uninstall Report Server and Open Client files:

1. Log on to the Report Server system. Enter **su - root** to become root. At the password prompts, enter the root password.
2. Follow these steps to shut down all Report Server processes:
   a. Move to the directory that contains the shutdown script, *shutdown_srvr.sh*.

      For example, if you installed the Report Server in the default installation directory, you would enter:

      ```
      cd /opt/rptgen/actuate/AcServer/bin
      ```

   b. Enter the following command to shut down Report Server processes:

      ```
      sh shutdown_srvr.sh
      ```

   The shutdown script stops all Report Server processes that are running.

3. To uninstall the Report Server/Open Client, enter:

   pkgrm

   The package utility displays a message similar to the following:

```
The following package is currently installed:
   1 NAVISrpsv    Report Server/Open Client
      (sparc) 01.00.00.00

Do you want to remove this package?
```

4. Enter **y** to uninstall the Report Server/Open Client.

   The package utility displays the message:

```
## Removing installed package instance <NAVISrpsv>

This package contains scripts which will be executed with
super-user permission during the process of removing this
package.

Do you want to continue with the removal of <NAVISrpsv>
[y,n,?, q]
```

5. Enter **y** to continue.

   The utility performs various verification functions, executes a pre-removal script, and then displays the following confirmation message:

```
Are you sure you want to UNINSTALL the Report Server/Open
Client [y/n]?
```

6. Enter **y** to continue.

   The utility completes the uninstallation and displays this message:

```
Uninstall complete.
Removal of <NAVISrpsv> was successful.
```

You have now uninstalled all Report Server/Open Client files.

C

Sample Reports

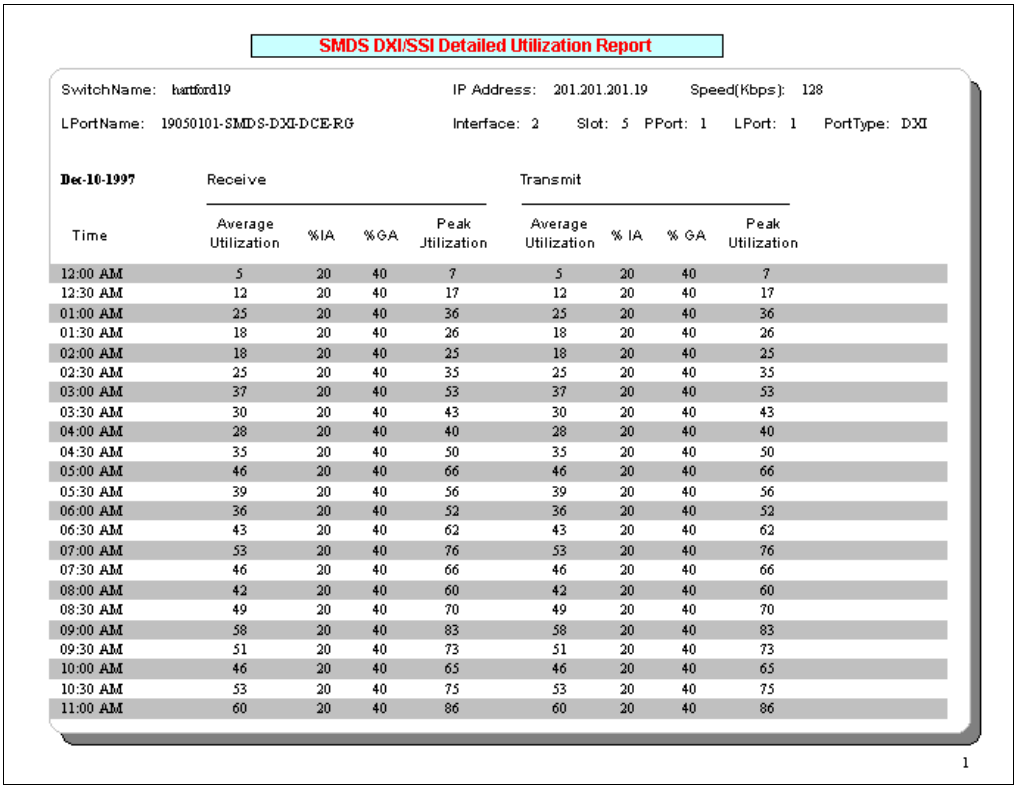
This appendix provides samples of the detailed reports that can be created with the Report Generator. The tables that follow the reports include descriptions of each field in the report.

This appendix includes the following sample reports:

- SMDS LPort Utilization Report
- ATM Cell Trunk Utilization Report
- ATM PVC Utilization Report
- ATM LPort Utilization Report
- ATM SVC Call History Report
- Frame Relay Trunk Utilization Report
- Frame Relay LPort Utilization Report
- Frame Relay PVC Utilization Report

SMDS (B-STDX)

SMDS LPort Utilization Report



SMDS DXI/SSI Detailed Utilization Report

SwitchName: hartford19 IP Address: 201.201.201.19 Speed(Kbps): 128

LPortName: 19050101-SMDS-DXI-DCE-RG Interface: 2 Slot: 5 PPort: 1 LPort: 1 PortType: DXI

Dec-10-1997

Time	Receive				Transmit			
	Average Utilization	%IA	%GA	Peak Jtilization	Average Utilization	% IA	% GA	Peak Utilization
12:00 AM	5	20	40	7	5	20	40	7
12:30 AM	12	20	40	17	12	20	40	17
01:00 AM	25	20	40	36	25	20	40	36
01:30 AM	18	20	40	26	18	20	40	26
02:00 AM	18	20	40	25	18	20	40	25
02:30 AM	25	20	40	35	25	20	40	35
03:00 AM	37	20	40	53	37	20	40	53
03:30 AM	30	20	40	43	30	20	40	43
04:00 AM	28	20	40	40	28	20	40	40
04:30 AM	35	20	40	50	35	20	40	50
05:00 AM	46	20	40	66	46	20	40	66
05:30 AM	39	20	40	56	39	20	40	56
06:00 AM	36	20	40	52	36	20	40	52
06:30 AM	43	20	40	62	43	20	40	62
07:00 AM	53	20	40	76	53	20	40	76
07:30 AM	46	20	40	66	46	20	40	66
08:00 AM	42	20	40	60	42	20	40	60
08:30 AM	49	20	40	70	49	20	40	70
09:00 AM	58	20	40	83	58	20	40	83
09:30 AM	51	20	40	73	51	20	40	73
10:00 AM	46	20	40	65	46	20	40	65
10:30 AM	53	20	40	75	53	20	40	75
11:00 AM	60	20	40	86	60	20	40	86

1

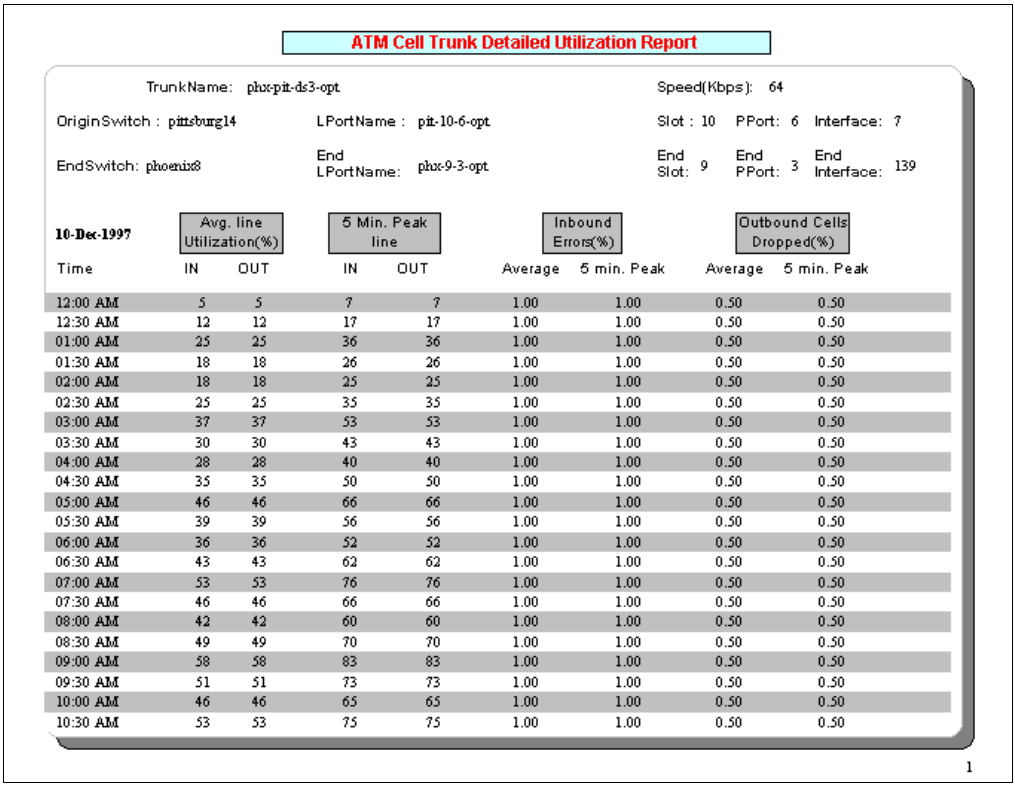
Figure C-1. Sample SMDS LPort Utilization Report (SMDSlptdet)

Table C-1. SMDS DXI/SSI Logical Port Utilization Report Fields

Field	Description
SwitchName	Name of switch on which the logical port is configured.
IP Address	IP address of the switch.
Speed(Kbps)	Interface's configured bandwidth in kilobits per second.
LPortName	Name of the logical port.
Interface	MIB interface number for this logical port.
Slot	Number of the I/O card's physical slot on the switch.
PPort	Number of the physical port on the switch.
LPort	Number of the logical port on the switch.
PortType	The type of SMDS logical port (for example, DXI or SSI).
Average Utilization	Average utilization for the report interval.
%IA	Percentage of frames within the reported interval that are individually addressed.
%GA	Percentage of frames within the reported interval that are group-addressed.
Peak Utilization	Peak utilization in the five-minute sampling period.

ATM (CBX 500)

ATM Cell Trunk Utilization Report



ATM Cell Trunk Detailed Utilization Report

TrunkName: phx-pit-ds3-opt — Speed(Kbps): 64

OriginSwitch : pittsburg14 — LPortName : pit-10-6-opt — Slot : 10 — PPort: 6 — Interface: 7

EndSwitch: phoenix8 — End LPortName: phx-9-3-opt — End Slot: 9 — End PPort: 3 — End Interface: 139

10-Dec-1997	Avg. line Utilization(%)		5 Min. Peak line		Inbound Errors(%)		Outbound Cells Dropped(%)	
Time	IN	OUT	IN	OUT	Average	5 min. Peak	Average	5 min. Peak
12:00 AM	5	5	7	7	1.00	1.00	0.50	0.50
12:30 AM	12	12	17	17	1.00	1.00	0.50	0.50
01:00 AM	25	25	36	36	1.00	1.00	0.50	0.50
01:30 AM	18	18	26	26	1.00	1.00	0.50	0.50
02:00 AM	18	18	25	25	1.00	1.00	0.50	0.50
02:30 AM	25	25	35	35	1.00	1.00	0.50	0.50
03:00 AM	37	37	53	53	1.00	1.00	0.50	0.50
03:30 AM	30	30	43	43	1.00	1.00	0.50	0.50
04:00 AM	28	28	40	40	1.00	1.00	0.50	0.50
04:30 AM	35	35	50	50	1.00	1.00	0.50	0.50
05:00 AM	46	46	66	66	1.00	1.00	0.50	0.50
05:30 AM	39	39	56	56	1.00	1.00	0.50	0.50
06:00 AM	36	36	52	52	1.00	1.00	0.50	0.50
06:30 AM	43	43	62	62	1.00	1.00	0.50	0.50
07:00 AM	53	53	76	76	1.00	1.00	0.50	0.50
07:30 AM	46	46	66	66	1.00	1.00	0.50	0.50
08:00 AM	42	42	60	60	1.00	1.00	0.50	0.50
08:30 AM	49	49	70	70	1.00	1.00	0.50	0.50
09:00 AM	58	58	83	83	1.00	1.00	0.50	0.50
09:30 AM	51	51	73	73	1.00	1.00	0.50	0.50
10:00 AM	46	46	65	65	1.00	1.00	0.50	0.50
10:30 AM	53	53	75	75	1.00	1.00	0.50	0.50

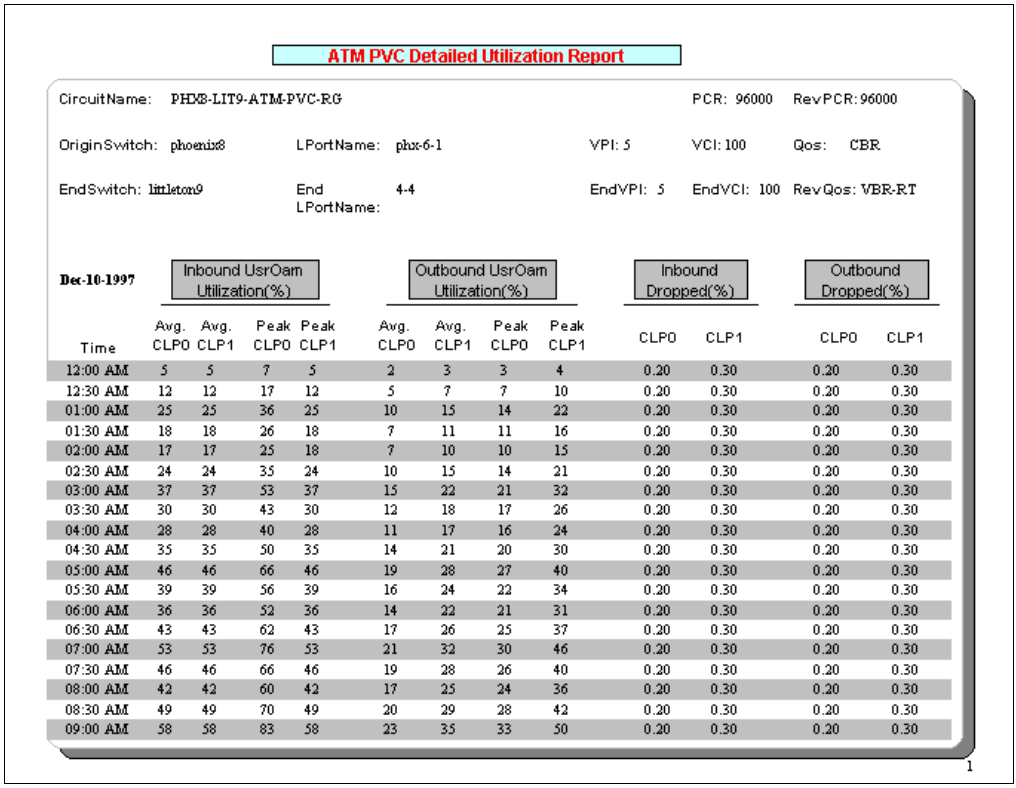
1

Figure C-2. Sample ATM Cell Trunk Utilization Report (ATMtrkdet)

Table C-2. ATM Cell Trunk Utilization Report Fields

Field	Description
TrunkName	Name of trunk.
Speed(Kbps)	Interface's configured bandwidth in kilobits per second.
OriginSwitch	Name of switch functioning as the origin endpoint of the trunk.
LPortName	Name of the logical port on the origin switch.
Slot	Number of the I/O card's physical slot on the origin switch.
PPort	Number of the physical port on the switch.
Interface	MIB interface number for this logical port.
EndSwitch	Name of the switch functioning as the endpoint of the trunk.
End LPortName	Number of the logical port on the origin switch.
End Slot	Number of the I/O card's physical slot on the origin switch.
End PPort	Number of the physical port on the switch.
End Interface	MIB interface number for this logical port.
Avg. Line Utilization	Average utilization for the report interval.
5 Min. Peak Line	Peak utilization for the five-minute sampling period.
Inbound Errors	Percentage of inbound cells that have errors.
Outbound Cells Dropped	Percentage of outbound cells that were dropped.

ATM PVC Utilization Report



ATM PVC Detailed Utilization Report

CircuitName: PHX8-LIT9-ATM-PVC-RG PCR: 96000 RevPCR: 96000

OriginSwitch: phoenix8 LPortName: phx-6-1 VPI: 5 VCI: 100 Qos: CBR

EndSwitch: littleton9 End LPortName: 4-4 EndVPI: 5 EndVCI: 100 RevQos: VBR-RT

Dec-10-1997

Time	Inbound UsrOam Utilization(%) Avg. CLP0	Avg. CLP1	Peak CLP0	Peak CLP1	Outbound UsrOam Utilization(%) Avg. CLP0	Avg. CLP1	Peak CLP0	Peak CLP1	Inbound Dropped(%) CLP0	CLP1	Outbound Dropped(%) CLP0	CLP1
12:00 AM	5	5	7	5	2	3	3	4	0.20	0.30	0.20	0.30
12:30 AM	12	12	17	12	5	7	7	10	0.20	0.30	0.20	0.30
01:00 AM	25	25	36	25	10	15	14	22	0.20	0.30	0.20	0.30
01:30 AM	18	18	26	18	7	11	11	16	0.20	0.30	0.20	0.30
02:00 AM	17	17	25	18	7	10	10	15	0.20	0.30	0.20	0.30
02:30 AM	24	24	35	24	10	15	14	21	0.20	0.30	0.20	0.30
03:00 AM	37	37	53	37	15	22	21	32	0.20	0.30	0.20	0.30
03:30 AM	30	30	43	30	12	18	17	26	0.20	0.30	0.20	0.30
04:00 AM	28	28	40	28	11	17	16	24	0.20	0.30	0.20	0.30
04:30 AM	35	35	50	35	14	21	20	30	0.20	0.30	0.20	0.30
05:00 AM	46	46	66	46	19	28	27	40	0.20	0.30	0.20	0.30
05:30 AM	39	39	56	39	16	24	22	34	0.20	0.30	0.20	0.30
06:00 AM	36	36	52	36	14	22	21	31	0.20	0.30	0.20	0.30
06:30 AM	43	43	62	43	17	26	25	37	0.20	0.30	0.20	0.30
07:00 AM	53	53	76	53	21	32	30	46	0.20	0.30	0.20	0.30
07:30 AM	46	46	66	46	19	28	26	40	0.20	0.30	0.20	0.30
08:00 AM	42	42	60	42	17	25	24	36	0.20	0.30	0.20	0.30
08:30 AM	49	49	70	49	20	29	28	42	0.20	0.30	0.20	0.30
09:00 AM	58	58	83	58	23	35	33	50	0.20	0.30	0.20	0.30

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Figure C-3. Sample ATM PVC Utilization Report (ATMpvcdet)

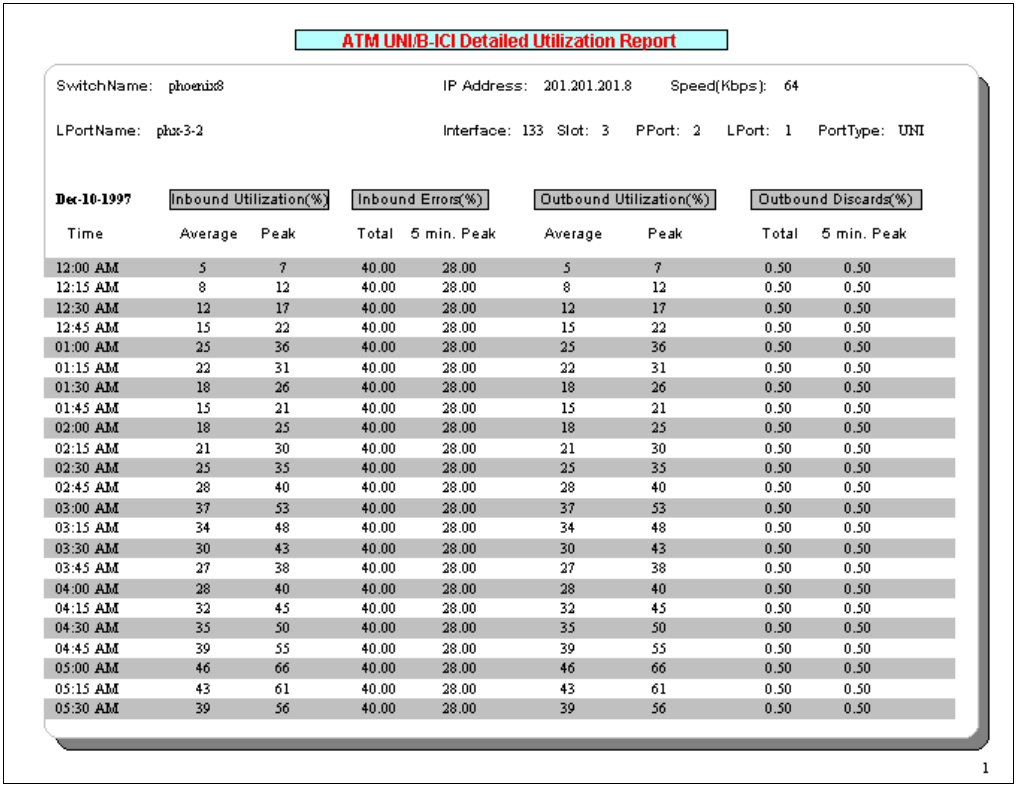
Table C-3. ATM PVC Utilization Report Fields

Field	Description
CircuitName	Name of circuit.
PCR	Peak cell rate in the ingress direction of the circuit.
RevPCR	Peak cell rate in the egress direction of the circuit.
OriginSwitch	Name of switch functioning as the origin endpoint of the circuit.
LPortName	Name of the logical port on the origin switch.

Table C-3. ATM PVC Utilization Report Fields (Continued)

Field	Description
VPI	Virtual path identifier that identifies this circuit at the endpoint on the origin switch.
VCI	Virtual circuit identifier that identifies this circuit at the endpoint on the origin switch.
Qos	Quality of Service for the ingress direction of the circuit.
EndSwitch	Name of switch functioning as the other endpoint of the circuit.
End LPortName	Name of the logical port on the end switch.
EndVPI	Virtual path identifier that identifies this circuit at the endpoint on the origin switch.
EndVCI	Virtual circuit identifier that identifies this circuit at the endpoint on the origin switch.
RevQos	Quality of service for the egress direction of the circuit.
Inbound UsrOam Utilization	Utilization of inbound circuit based on the sum of USR and OAM cell rates as a percentage of RevPCR.
Outbound UsrOam Utilization	Utilization of outbound circuit based on the sum of USR and OAM cell rates as a percentage of PCR.
Inbound Dropped	Percentage of inbound cells that were dropped.
Outbound Dropped	Percentage of outbound cells that were dropped.
Avg. CLP0	Average utilization when only CLP=0 cells are considered.
Avg. CLP1	Average utilization when only CLP=1 cells are considered.
Peak CLP0	Peak utilization within five-minute sampling periods when only CLP=0 cells are considered.
Peak CLP1	Peak Utilization within five-minute sampling periods when only CLP=1 cells are considered.
CLP0	Cells with cell loss priority 0 (CLP=0).
CLP1	Cells with cell loss priority 1 (CLP=1).

ATM LPort Utilization Report



ATM UNI/B-ICI Detailed Utilization Report

SwitchName: phoenix8 IP Address: 201.201.201.8 Speed(Kbps): 64

LPortName: phx-3-2 Interface: 133 Slot: 3 PPort: 2 LPort: 1 PortType: UNI

Dec-10-1997	Inbound Utilization(%)		Inbound Errors(%)		Outbound Utilization(%)		Outbound Discards(%)	
Time	Average	Peak	Total	5 min. Peak	Average	Peak	Total	5 min. Peak
12:00 AM	5	7	40.00	28.00	5	7	0.50	0.50
12:15 AM	8	12	40.00	28.00	8	12	0.50	0.50
12:30 AM	12	17	40.00	28.00	12	17	0.50	0.50
12:45 AM	15	22	40.00	28.00	15	22	0.50	0.50
01:00 AM	25	36	40.00	28.00	25	36	0.50	0.50
01:15 AM	22	31	40.00	28.00	22	31	0.50	0.50
01:30 AM	18	26	40.00	28.00	18	26	0.50	0.50
01:45 AM	15	21	40.00	28.00	15	21	0.50	0.50
02:00 AM	18	25	40.00	28.00	18	25	0.50	0.50
02:15 AM	21	30	40.00	28.00	21	30	0.50	0.50
02:30 AM	25	35	40.00	28.00	25	35	0.50	0.50
02:45 AM	28	40	40.00	28.00	28	40	0.50	0.50
03:00 AM	37	53	40.00	28.00	37	53	0.50	0.50
03:15 AM	34	48	40.00	28.00	34	48	0.50	0.50
03:30 AM	30	43	40.00	28.00	30	43	0.50	0.50
03:45 AM	27	38	40.00	28.00	27	38	0.50	0.50
04:00 AM	28	40	40.00	28.00	28	40	0.50	0.50
04:15 AM	32	45	40.00	28.00	32	45	0.50	0.50
04:30 AM	35	50	40.00	28.00	35	50	0.50	0.50
04:45 AM	39	55	40.00	28.00	39	55	0.50	0.50
05:00 AM	46	66	40.00	28.00	46	66	0.50	0.50
05:15 AM	43	61	40.00	28.00	43	61	0.50	0.50
05:30 AM	39	56	40.00	28.00	39	56	0.50	0.50

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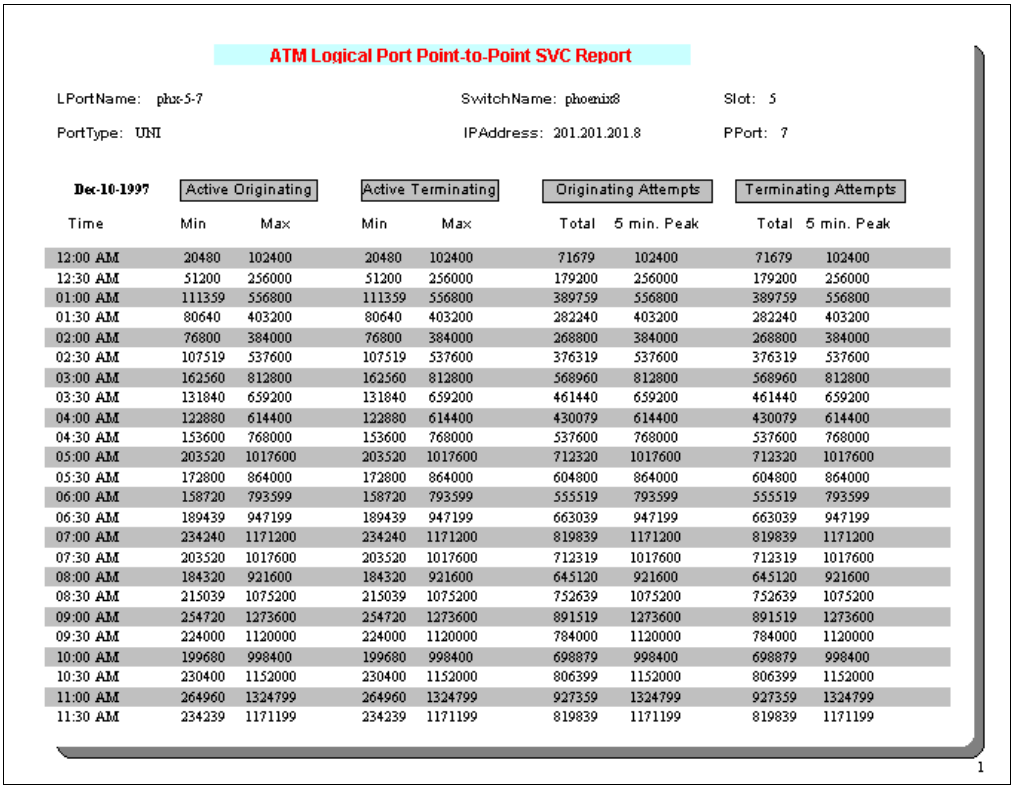
Figure C-4. Sample ATM LPort Utilization Report (ATMlptdet)

Table C-4. ATM LPort Utilization Report Fields

Field	Description
SwitchName	Name of the switch on which the logical port is configured.
IP Address	IP address of the switch.
Speed(Kbps)	Interface's configured bandwidth in kilobits per second.
LPortName	Name of the logical port.
Interface	MIB interface number for this logical port.
Slot	Number of the I/O card's physical slot on the switch.
PPort	Number of the physical port on the switch.
LPort	Number of the logical port.
PortType	Type of ATM logical port (for example, UNI or B-ICI).
Inbound Utilization	Logical port utilization in the inbound direction. See the formula for calculating Lport utilization on page C-19.
Inbound Errors	Percentage of inbound cells that have errors.
Outbound Utilization	Logical port utilization in the outbound direction. See the formula for calculating Lport utilization on page C-19.
Outbound Discards	Percentage of outbound cells that were discarded.

ATM SVC Call History Report



ATM Logical Port Point-to-Point SVC Report

LPortName: phx-5-7 SwitchName: phoenix8 Slot: 5

PortType: UNI IPAddress: 201.201.201.8 PPort: 7

Dec-10-1997	Active Originating		Active Terminating		Originating Attempts		Terminating Attempts	
Time	Min	Max	Min	Max	Total	5 min. Peak	Total	5 min. Peak
12:00 AM	20480	102400	20480	102400	71679	102400	71679	102400
12:30 AM	51200	256000	51200	256000	179200	256000	179200	256000
01:00 AM	111359	556800	111359	556800	389759	556800	389759	556800
01:30 AM	80640	403200	80640	403200	282240	403200	282240	403200
02:00 AM	76800	384000	76800	384000	268800	384000	268800	384000
02:30 AM	107519	537600	107519	537600	376319	537600	376319	537600
03:00 AM	162560	812800	162560	812800	568960	812800	568960	812800
03:30 AM	131840	659200	131840	659200	461440	659200	461440	659200
04:00 AM	122880	614400	122880	614400	430079	614400	430079	614400
04:30 AM	153600	768000	153600	768000	537600	768000	537600	768000
05:00 AM	203520	1017600	203520	1017600	712320	1017600	712320	1017600
05:30 AM	172800	864000	172800	864000	604800	864000	604800	864000
06:00 AM	158720	793599	158720	793599	555519	793599	555519	793599
06:30 AM	189439	947199	189439	947199	663039	947199	663039	947199
07:00 AM	234240	1171200	234240	1171200	819839	1171200	819839	1171200
07:30 AM	203520	1017600	203520	1017600	712319	1017600	712319	1017600
08:00 AM	184320	921600	184320	921600	645120	921600	645120	921600
08:30 AM	215039	1075200	215039	1075200	752639	1075200	752639	1075200
09:00 AM	254720	1273600	254720	1273600	891519	1273600	891519	1273600
09:30 AM	224000	1120000	224000	1120000	784000	1120000	784000	1120000
10:00 AM	199680	998400	199680	998400	698879	998400	698879	998400
10:30 AM	230400	1152000	230400	1152000	806399	1152000	806399	1152000
11:00 AM	264960	1324799	264960	1324799	927359	1324799	927359	1324799
11:30 AM	234239	1171199	234239	1171199	819839	1171199	819839	1171199

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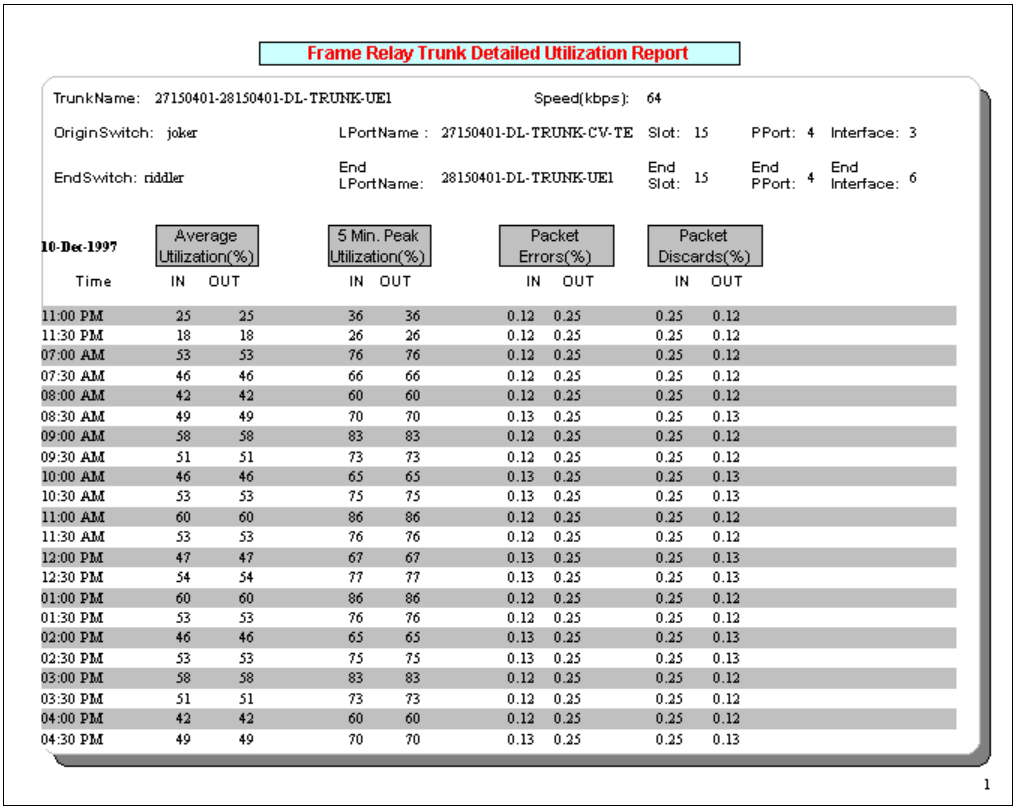
Figure C-5. Sample ATM SVC Call History Report (ATMSVC)

Table C-5. ATM SVC Call History Report Fields

Field	Description
LPortName	Name of the logical port.
SwitchName	Name of switch on which the logical port is configured.
Slot	Number of the I/O card's physical slot on the switch.
PortType	Type of ATM logical port (for example, UNI or B-ICI).
IPAddress	IP address of the switch.
PPort	Number of the physical port on the switch.
Active Originating	Number of simultaneous, active, Point-to-Point SVCs originating on this logical port.
Active Terminating	Number of simultaneous, active, Point-to-Point SVCs terminating on this logical port.
Originating Attempts	Number of SVC connection attempts originating on this port.
Terminating Attempts	Number of SVC connection attempts terminating on this port.
Min	Minimum number.
Max	Maximum number.
5 Min. Peak	Peak value for the five-minute sampling interval.
Total	Total count for the time interval.
Network Rejects	Number of SVC connection attempts originating on this port that were rejected but not by the remote user.
Origin	Originating on this port.
Originating Failures	Number of SVC connections originating on this port that failed after the connection became active.
Terminal	Terminating on this port.
Terminating Failures	Number of SVC connections that terminated on this port and failed after the connection became active.
User Rejects	Number of SVC connection attempts rejected by the user.

Frame Relay (STDX & B-STDX)

Frame Relay Trunk Utilization Report



Frame Relay Trunk Detailed Utilization Report

TrunkName: 27150401-28150401-DL-TRUNK-UE1 Speed(kbps): 64

OriginSwitch: joker LPortName : 27150401-DL-TRUNK-CV-TE Slot: 15 PPort: 4 Interface: 3

EndSwitch: riddler End LPortName: 28150401-DL-TRUNK-UE1 End Slot: 15 End PPort: 4 End Interface: 6

10-Dec-1997	Average Utilization(%)		5 Min. Peak Utilization(%)		Packet Errors(%)		Packet Discards(%)	
Time	IN	OUT	IN	OUT	IN	OUT	IN	OUT
11:00 PM	25	25	36	36	0.12	0.25	0.25	0.12
11:30 PM	18	18	26	26	0.12	0.25	0.25	0.12
07:00 AM	53	53	76	76	0.12	0.25	0.25	0.12
07:30 AM	46	46	66	66	0.12	0.25	0.25	0.12
08:00 AM	42	42	60	60	0.12	0.25	0.25	0.12
08:30 AM	49	49	70	70	0.13	0.25	0.25	0.13
09:00 AM	58	58	83	83	0.12	0.25	0.25	0.12
09:30 AM	51	51	73	73	0.12	0.25	0.25	0.12
10:00 AM	46	46	65	65	0.13	0.25	0.25	0.13
10:30 AM	53	53	75	75	0.13	0.25	0.25	0.13
11:00 AM	60	60	86	86	0.12	0.25	0.25	0.12
11:30 AM	53	53	76	76	0.12	0.25	0.25	0.12
12:00 PM	47	47	67	67	0.13	0.25	0.25	0.13
12:30 PM	54	54	77	77	0.13	0.25	0.25	0.13
01:00 PM	60	60	86	86	0.12	0.25	0.25	0.12
01:30 PM	53	53	76	76	0.12	0.25	0.25	0.12
02:00 PM	46	46	65	65	0.13	0.25	0.25	0.13
02:30 PM	53	53	75	75	0.13	0.25	0.25	0.13
03:00 PM	58	58	83	83	0.12	0.25	0.25	0.12
03:30 PM	51	51	73	73	0.12	0.25	0.25	0.12
04:00 PM	42	42	60	60	0.12	0.25	0.25	0.12
04:30 PM	49	49	70	70	0.13	0.25	0.25	0.13

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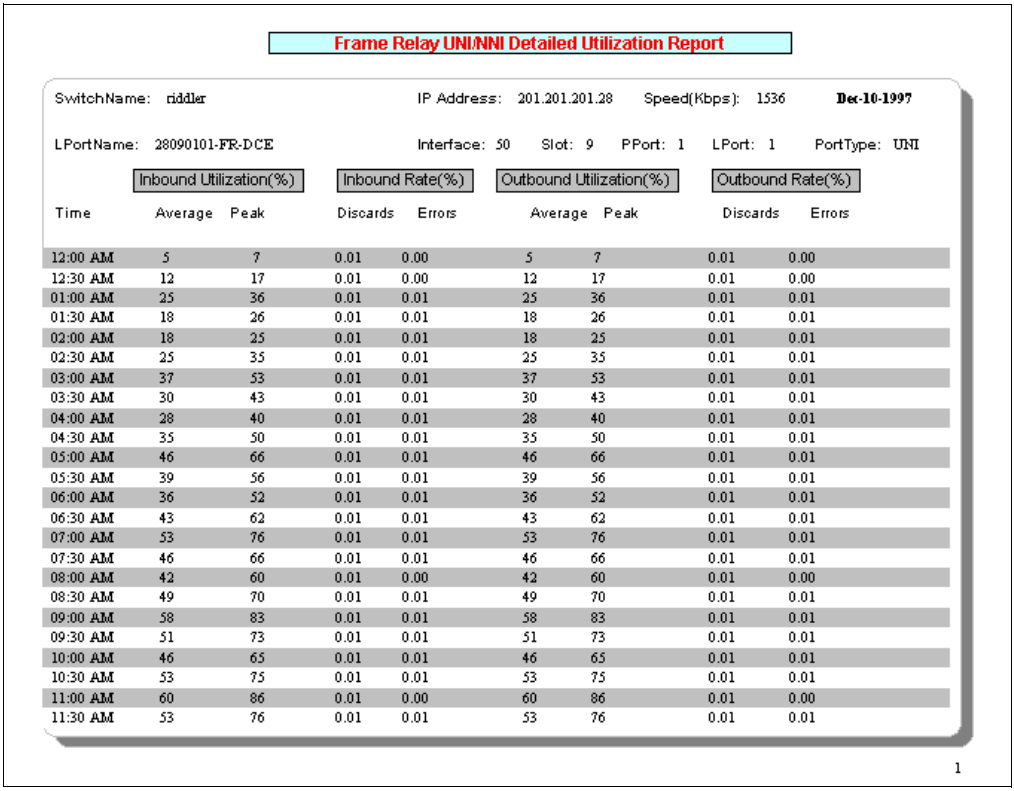
Figure C-6. Sample Frame Relay Trunk Utilization Report (FRtrkdet)

Table C-6. FR Trunk Utilization Report Fields

Field	Description
TrunkName	Name of trunk.
Speed(Kbps)	Interface's configured bandwidth in kilobits per second.
OriginSwitch	Switch that functions as the origin endpoint of the trunk.
LPortName	Name of the logical port on the origin switch.
Slot	Number of the I/O card's physical slot on the origin switch.
PPort	Number of the physical port on the origin switch.
Interface	MIB interface number for this logical port.
EndSwitch	Switch that functions as the endpoint of the trunk.
End LPortName	Name of the logical port on the end switch.
End Slot	Number of the I/O card's physical slot on the end switch.
End PPort	Number of the physical port on the end switch.
End Interface	MIB interface number for this logical port.
Average Utilization	Average utilization within the reported interval. See the formula for calculating trunk utilization on page C-19.
5 Min. Peak Utilization	Peak utilization for the five-minute sampling period. See the formula for calculating trunk utilization on page C-19.
Packet Errors	Percentage of packets identified as having errors.
Packet Discards	Percentage of packets that were discarded even though no errors were detected.

Frame Relay LPort Utilization Report



Frame Relay UNI/NNI Detailed Utilization Report

SwitchName: riddler IP Address: 201.201.201.28 Speed(Kbps): 1536 Dec-10-1997

LPortName: 28090101-FR-DCE Interface: 50 Slot: 9 PPort: 1 LPort: 1 PortType: UNI

	Inbound Utilization(%)		Inbound Rate(%)		Outbound Utilization(%)		Outbound Rate(%)	
Time	Average	Peak	Discards	Errors	Average	Peak	Discards	Errors
12:00 AM	5	7	0.01	0.00	5	7	0.01	0.00
12:30 AM	12	17	0.01	0.00	12	17	0.01	0.00
01:00 AM	25	36	0.01	0.01	25	36	0.01	0.01
01:30 AM	18	26	0.01	0.01	18	26	0.01	0.01
02:00 AM	18	25	0.01	0.01	18	25	0.01	0.01
02:30 AM	25	35	0.01	0.01	25	35	0.01	0.01
03:00 AM	37	53	0.01	0.01	37	53	0.01	0.01
03:30 AM	30	43	0.01	0.01	30	43	0.01	0.01
04:00 AM	28	40	0.01	0.01	28	40	0.01	0.01
04:30 AM	35	50	0.01	0.01	35	50	0.01	0.01
05:00 AM	46	66	0.01	0.01	46	66	0.01	0.01
05:30 AM	39	56	0.01	0.01	39	56	0.01	0.01
06:00 AM	36	52	0.01	0.01	36	52	0.01	0.01
06:30 AM	43	62	0.01	0.01	43	62	0.01	0.01
07:00 AM	53	76	0.01	0.01	53	76	0.01	0.01
07:30 AM	46	66	0.01	0.01	46	66	0.01	0.01
08:00 AM	42	60	0.01	0.00	42	60	0.01	0.00
08:30 AM	49	70	0.01	0.01	49	70	0.01	0.01
09:00 AM	58	83	0.01	0.01	58	83	0.01	0.01
09:30 AM	51	73	0.01	0.01	51	73	0.01	0.01
10:00 AM	46	65	0.01	0.01	46	65	0.01	0.01
10:30 AM	53	75	0.01	0.01	53	75	0.01	0.01
11:00 AM	60	86	0.01	0.00	60	86	0.01	0.00
11:30 AM	53	76	0.01	0.01	53	76	0.01	0.01

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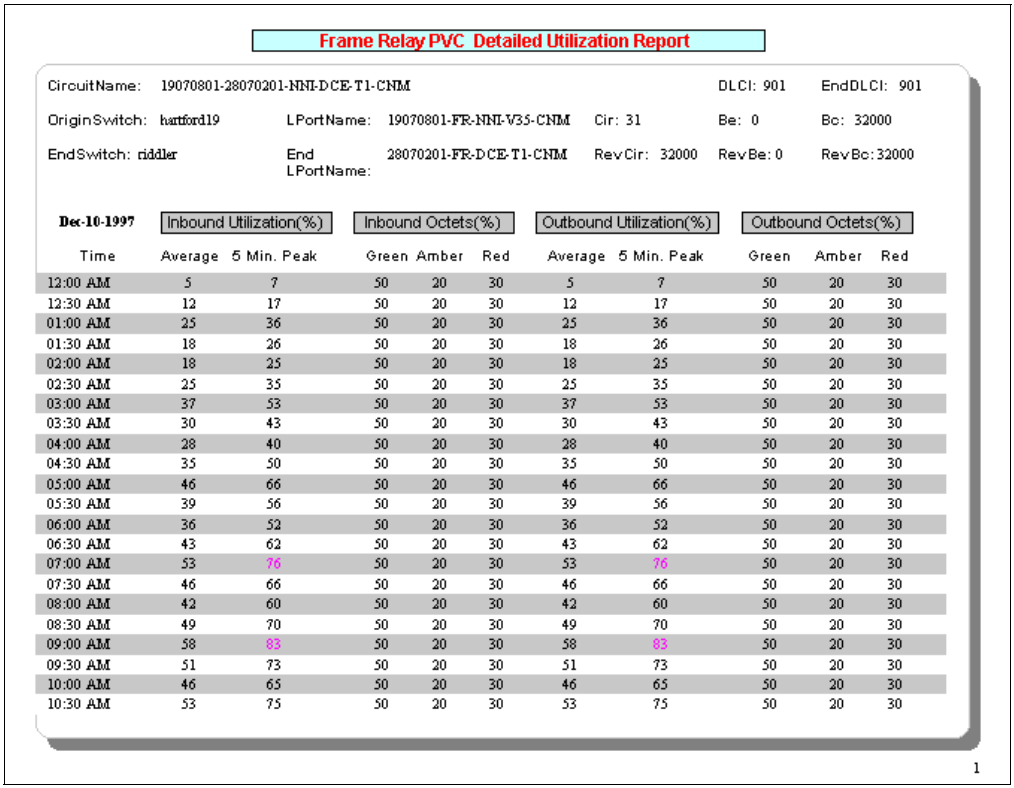
Figure C-7. Sample Frame Relay LPort Utilization Report (FRlptdet)

Table C-7. FR LPort Utilization Report Fields

Field	Description
SwitchName	Name of switch on which the logical port is configured.
IP Address	IP address of the switch.
Speed(Kbps)	Interface's configured bandwidth in kilobits per second.
LPortName	Name of the logical port.
Interface	MIB interface index for this logical port.
Slot	Number of the I/O card's physical slot on the switch.
PPort	Number of the physical port on the switch.
LPort	Number of the logical port.
PortType	Type of Frame Relay logical port (for example, UNI or NNI).
Inbound Utilization	Logical port utilization in the inbound direction. See the formula for calculating Lport utilization on page C-19.
Inbound Rate	The rate of errors and discards in the inbound direction.
Outbound Utilization	Logical port utilization in the outbound direction. See the formula for calculating Lport utilization on page C-19.
Outbound Rate	The rate of errors and discards in the outbound direction.
Average	Average logical port utilization over the report interval.
Peak	Peak logical port utilization within the five-minute sampling period.
Discards	Percentage of packets that were discarded even though no errors were detected.
Errors	Percentage of packets identified as having errors.

Frame Relay PVC Utilization Report



Frame Relay PVC Detailed Utilization Report

CircuitName: 19070801-28070201-NNI-DCE-T1-CNM DLCI: 901 EndDLCI: 901

OriginSwitch: hartford19 LPortName: 19070801-FR-NNI-V35-CNM Cir: 31 Be: 0 Bc: 32000

EndSwitch: riddler End LPortName: 28070201-FR-DCE-T1-CNM RevCir: 32000 RevBe: 0 RevBc: 32000

Dec-10-1997

	Inbound Utilization(%)		Inbound Octets(%)			Outbound Utilization(%)		Outbound Octets(%)		
Time	Average	5 Min. Peak	Green	Amber	Red	Average	5 Min. Peak	Green	Amber	Red
12:00 AM	5	7	50	20	30	5	7	50	20	30
12:30 AM	12	17	50	20	30	12	17	50	20	30
01:00 AM	25	36	50	20	30	25	36	50	20	30
01:30 AM	18	26	50	20	30	18	26	50	20	30
02:00 AM	18	25	50	20	30	18	25	50	20	30
02:30 AM	25	35	50	20	30	25	35	50	20	30
03:00 AM	37	53	50	20	30	37	53	50	20	30
03:30 AM	30	43	50	20	30	30	43	50	20	30
04:00 AM	28	40	50	20	30	28	40	50	20	30
04:30 AM	35	50	50	20	30	35	50	50	20	30
05:00 AM	46	66	50	20	30	46	66	50	20	30
05:30 AM	39	56	50	20	30	39	56	50	20	30
06:00 AM	36	52	50	20	30	36	52	50	20	30
06:30 AM	43	62	50	20	30	43	62	50	20	30
07:00 AM	53	76	50	20	30	53	76	50	20	30
07:30 AM	46	66	50	20	30	46	66	50	20	30
08:00 AM	42	60	50	20	30	42	60	50	20	30
08:30 AM	49	70	50	20	30	49	70	50	20	30
09:00 AM	58	83	50	20	30	58	83	50	20	30
09:30 AM	51	73	50	20	30	51	73	50	20	30
10:00 AM	46	65	50	20	30	46	65	50	20	30
10:30 AM	53	75	50	20	30	53	75	50	20	30

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Figure C-8. Sample Frame Relay PVC Utilization Report (FRpvcdet)

Table C-8. FR PVC Utilization Report Fields

Field	Description
CircuitName	Name of circuit.
DLCI	Data Link Circuit Identifier for this circuit.
EndDLCI	Data Link Circuit Identifier for this circuit as defined on the EndSwitch.
OriginSwitch	Switch that functions as the origin endpoint of the circuit.
LPortName	Name of logical port on the origin switch.
Cir	Committed information rate. The average number of user data (bits) that the network agrees to transfer over the circuit in one direction, measured over the measurement interval: T = Bc / Cir
Be	Excess burst size. The maximum amount of uncommitted data (bits) that the network will attempt to transfer over the circuit during the measurement interval.
Bc	Committed burst size. The maximum amount of data (bits) that the network agrees to transfer over the circuit under normal conditions, during the measurement interval.
EndSwitch	Name of switch at the other endpoint of the circuit.
End LPortName	Name of logical port on the EndSwitch.
RevCir	Committed information rate. The average number of user data (bits) that the network agrees to transfer over the circuit in the reverse direction, measured over the measurement interval: T = RevBc / RevCir
RevBe	Excess burst size. The maximum amount of uncommitted data (bits) that the network will attempt to transfer in the reverse direction of the circuit.
RevBc	Committed burst size. The maximum amount of data (bits) that the network agrees to transfer in the reverse direction of the circuit under normal conditions.
Inbound Utilization	Circuit utilization in the ingress direction of the circuit. See the formula for calculating PVC utilization on page C-19.
Inbound Octets(%)	Percentage of octets received.

Table C-8. FR PVC Utilization Report Fields (Continued)

Field	Description
Outbound Utilization	Circuit utilization in the egress direction of the circuit. See the formula for calculating PVC utilization on page C-19.
Outbound Octets(%)	Percentage of octets transmitted.
Average	Average utilization for the reported interval. See the formula for calculating PVC utilization on page C-19.
5 Min. Peak	Peak utilization for the five-minute sampling period. See the formula for calculating PVC utilization on page C-19.
Green	Percentage of octets that were not marked as either ODE (Optional Discard Eligible) or DE (Discard Eligible) within the reported time period.
Amber	Percentage of octets that were marked as DE (Discard Eligible) within the reported time period.
Red	Percentage of octets that were marked as ODE (Optional Discard Eligible) within the reported time period.

Formulas

Utilization Formula for FR Trunk and LPort Reports

$$\text{Utilization} = \frac{\text{Bits Transferred}}{T * \text{Speed}} * 100\ \%$$

where:

T = time interval in seconds

Speed = interface's configured bandwidth in bits per second

Inbound Utilization Formula for FR PVC Reports

$$\text{Inbound Utilization} = \frac{\text{Bits Transferred}}{T * (\text{Cir} + (\text{Be} * (\text{Cir/Bc}))} * 100\ \%$$

where:

T = time interval in seconds

Inbound Utilization Formula for ATM Trunk and LPort Reports

$$\text{Inbound Utilization} = \frac{\text{Cells} * 424}{T * \text{Speed}} * 100\ \%$$

where:

Cells = number of USER and OAM cells (CLP=0+1)

424 is the conversion of cells to bits assuming 53 bytes per cell and 8 bits per byte

T = time interval in seconds

Speed = interface's configured bandwidth in bits per second

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