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In-Site

Money for nothing; intranet for free

Kinko's retail chain makes money off its Internet-based corporate backbone

By Tim Greene
Ventura, Calif.

If there really is such a thing as a win/win scenario, Kinko's, Inc. may have stumbled upon it.

The photocopying retail chain built a network to offer Internet access to its customers and is using the same infrastructure to support a money-saving corporate intranet.

Kinko's last month started bundling Internet access with the hourly rental of PCs in its 850 retail stores; when you rent computer time, you get Internet access as well.

With the fees paid by customers, the Internet-access service is a money-making operation on its own, said Jim Winsayer, manager of research and development at Kinko's.

But through IP tunneling, Kinko's plans to use the same network to build a secure virtual private IP network to connect Kinko's stores with each other and headquarters.

Winsayer said sharing the access links saves Kinko's the expense of setting up a parallel network. He priced frame relay as an alternative, but found a fully-meshed frame network would cost as much as operating the usage-based Internet network 24 hours a day, which is not required.

The network set up

Each store connects to a local Internet point of presence via the 64K bit/sec channels of a dial-up ISDN line. When supporting intranet traffic, a router in the store establishes a secure, tunneled connection to headquarters, enabling users to access credit information, sales reports and lists of company policies and procedures.

If one store wants to contact another, unconnected store, headquarters dials up the remote router via an analog phone call and tells it to set up an Internet tunnel with headquarters.

Building the network was relatively

easy, Winsayer said. The company signed up with GTE Corp. for Internet access.

It then hired Lucent Technologies, Inc. to establish ISDN phone lines for each Kinko's store, instead of trying to deal with the phone companies itself.

"We knew that would be an unpleasant job, and Lucent had done this before," Winsayer said.

Kinko's could use nearly any available ISDN router to link customers to the Internet, but the intranet called for additional requirements.

The company wanted the router to be able to support dynamic IP address assignment — whereby an IP address is assigned to a user each time he logs in — because ISPs charge less for this service than for permanent IP addresses.

The router also had to be able to automatically assign IP addresses to devices on the LAN so they could share the single Internet connection and router IP address. And the router had to be able to protect valuable corporate information, Winsayer said.

Pipeline 130 routers from Ascend Communications, Inc., were chosen over boxes from Adtran, Inc., Cisco Systems, Inc. and Farallon Communications, Inc.

Only Ascend met all of Kinko's criteria, Winsayer said. Lucent provisioned the Pipeline 130s for deployment.

The routers support IP Layer Security (IPSec) protocols. The protocols define encryption, authentication and key management security standards for ensuring the privacy, integrity and authenticity of data over public IP networks.

In addition to IPSec, Kinko's will use Netscape Communication Corp.s Certificate Server digital certificates to authenticate remote users.

By year-end the intranet will become fully operational. At that point, Kinko's can phase out paper distribution of corporate policies and procedures, posting them on an internal Web page instead, Winsayer said.

Quick ISDN setup times also will allow each store do credit card checks over the Internet, through Kinko's headquarters and over a dedicated link to a credit card verification service.■