



Equipping the Teleworker

The trials and tribulations of the virtual information technology department

ROBERT THORNBURG, IT director at Naperville, Ill.-based Next Wave Logistics, runs a virtual help desk.

Every employee at the Web tool developer telecommutes, including Thornburg, who manages the company's servers and supports users from his home. The company's two dozen employees phone him, e-mail him or instant-message him whenever they need technical advice. And with Next Wave's employees, many of whom are software developers, that can happen in the middle of the night.

"Our developers are savvy with hardware and software, so most of the time they can troubleshoot their own machines," Thornburg says. "They run the challenging stuff by me. Because we're all in different locations, I can have five or six conversations via instant messenger." Employees rarely call late, but when they do, it's usually because they have just written a piece of software and are having problems deploying it on the company's servers.

Thornburg has equipped employees with notebook computers that include virtual private network (VPN) software,

antivirus software and personal firewalls. They use Digital Subscriber Line (DSL) or cable modems for high-speed Internet access and e-mail. Using remote connectivity tools, Thornburg can take control of and troubleshoot employees' notebooks and the company's servers.

At Clique Communications, telecommuters are similarly equipped, according to IT Manager Ernest Forsyth. They also use Clique's own video conferencing tools to communicate. To further boost productivity, Forsyth is currently installing new Internet protocol telephony software and equipment so that workers can place and answer calls via their computers.

The biggest IT headache in supporting telecommuters is a failed network connection: "Connection problems can be a troubleshooting nightmare," Forsyth says. The connection can drop for any of a number of reasons, from faulty VPN software to crashed company servers. The first step when telecommuters call with their lost connections is to ask them to reset their modems. Then Forsyth talks them through a series of steps, double-

checking the computer's settings and software configurations.

However, the culprit is often a failed DSL or cable connection that can last from a few minutes to half a day or longer. Forsyth recommends that IT managers have their own separate cable or DSL connection so they can mirror a telecommuter's setup and connect through the VPN. "I can duplicate their problem with a true outside connection," he explains.

Thornburg has included Wi-Fi on all employee notebook computers, so when broadband access goes down, telecommuters can visit coffee shops or other public places with wireless hotspots and continue to work.

What about support that requires a human presence? When computers need repair, Thornburg asks employees to bring the hardware into the company headquarters, where he can fix the problem. When he needs to upgrade or reconfigure servers, he drives to the company's data center, which is 25 miles away from his house in a co-location facility. For security, the data center includes firewalls and intrusion detection and prevention tools.

Forsyth prefers to buy notebook computers with warranties that require the PC manufacturers to make repairs, either by sending repairmen to homes or by having workers mail the PC back to the maker.

Although supporting teleworkers isn't always easy, it's much easier than it used to be, which is why the teleworking trend is growing.

"Years ago, telecommuting wasn't something you could do easily," he says. "Now, the laptop and DSL and cable modems have become staple items. The price of all that stuff is coming down, so it's helped with the concept of telecommuting among smaller companies." **[BT]**

ITtakeaway

- Include VPN software, antivirus software and personal firewalls on all remote computers.
- Use remote connectivity tools.
- Have your own cable modem or DSL connections so you can mirror your teleworkers' setup.
- Make sure all remote users' notebooks are Wi-Fi-enabled so they can use a public hotspot if their Internet connection goes down.