

Moving target

Empowering mobile workers may be the goal. But supporting them in the field is another matter.

Technology support has always been a moving target. Over the past decade, organisations – and their service partners – have refined the processes for diagnosing and fixing problems with PCs and laptops, for updating user software, and for ensuring the business is not exposed by any security threat or loss of data.

When the device is within the organisation's four walls, such support can absorb many hours of technical support time. But as workers spend a larger proportion of their time outside of the office, the task of supporting and maintaining the systems that enable mobile working become manifold. What is becoming clear is that, unless the unique challenges of mobile support are addressed head on, then the agile worker can actually be less productive than their counterpart in the office, be isolated from key interaction with the organisation, and even represent a threat to it when security issues are left unaddressed.

Distance is not the issue here. Support departments have long been able to deal with problems from afar by connecting to users' systems over a phone line and being able to view the systems in action. That allows the engineer to diagnose and fix most problems online, as well as apply software updates.

"If a user is running around with their own device, it can be impractical to just go out and fix it. And getting users to come into the business might not be the best – or most efficient – answer either," says Andy Greenwood, end user computing product architect for consulting and IT services company ITNet. "That clearly makes supporting a mobile worker a more demanding exercise than working on a local desktop system."

With the emergence of Internet-



centric software, that capability for dialling in remotely to devices has grown in sophistication, to the point where support staff rarely need to be physically in front of a machine to diagnose its problems. Provided the machine is not in such a poor state or so cut off from the outside world that there is no Internet connection available via dial-up, GPRS or broadband, technical helpdesks can take advantage of either built-in or previously installed tools to manage problems.

The Microsoft Windows XP operating system, for example, includes 'Remote Assistance', and Citrix and other vendors sell terminal service tools that enterprises can install onto a variety of portable and desktop devices. These provide remote desktop capabilities, so engineers can set up a connection to the device, see what its user sees, and even take control of the device in order to fix it.

According to Scott Kellock, systems consultant at IT services provider Phoenix, these sorts of tools will

become increasingly powerful. "If the problem is relatively straightforward, users can literally see how the engineer deals with it and fix it themselves if it reoccurs. As a result, such tools drive down support costs."

But when these remote tools cannot help solve the problem or the device is so disabled that it cannot access the Internet, it may be necessary to take more dramatic action – to reinstall the computer's operating system and applications software. Traditionally, this has been a job for an engineer armed with a set of installer CDs, although larger enterprises have often created standard 'builds' of enterprise software that install the most commonly used software and operating system in one go. However, Windows XP's roll-back technology and other vendors' system mirroring software are now being used to take advantage of the high capacity of many modern PCs to store a back-up image ready for rebuilding the system.

Mark O'Dell, head of technical

HANDS ON: WYETH PHARMACEUTICALS

Jon Mannering, technical support and operations manager at the UK operations of \$14 billion pharmaceuticals giant Wyeth, knows all about supporting mobile workers. As well as implementing bespoke mobile business applications, he has to provide support for users across four sites in the UK and for a sales force of 500.

"We have a helpdesk of just three people in-house for software support, but to provide mobile hardware support it soon became apparent that we needed the services of a dedicated provider," he explains. "The field force is using a sales management system that it updates on a daily basis. Because they are always on the road, we had

a problem servicing the laptops."

Mannering has now outsourced hardware issues to support company ServiceTec, which has placed on-site engineers at two of Wyeth's sites. They support the company's helpdesk and manage laptop repairs, with mobile workers able to drop off laptops at Securicor courier depots for dispatching to ServiceTec. The company promises to repair laptops within 24 hours, ready for collection at a Securicor depot.

With this in place, Mannering says his support problems have decreased dramatically, allowing the helpdesk to concentrate on the software and process-based issues that ensure the productivity of the mobile workforce.

support services at Connect Support Services, explains that, although it requires "a degree of nous", it is possible to have an image of the standard software environment and operating system installed on a laptop or home PC, and by booting up the 'dead' system from a floppy or CD, the device can rebuild itself from scratch from that store image.

MIRROR IMAGE

But, while such an approach may reactivate the applications and operating software, it typically loses all the active data from the hard drive. To provide a real solution to the problem, an ability to restore data back to the device is a prerequisite – something that has been actively pursued by organisations with a more advanced vision of worker mobility.

Phil Flavin, chief technology officer of solutions at BT, outlines how, at his company, each laptop is programmed to back up its data at regular intervals when the user is online or as they log out. The same system, but in reverse, allows the company to roll out software updates and patches to these occasionally connected users.

"When a homeworker gets set up, they get a standard PC connected to the Internet and use a preinstalled

virtual private network (VPN) client to access the BT intranet," illustrates Flavin. "Within 45 minutes, the system will have been updated with the relevant software."

But this can be taken a step further, says Paul Roche, general manager of ebusiness at BT. A remote worker with a serious hardware problem can hand the machine over to a courier as he or she takes delivery of a replacement, and restore their previous environment online. "An agile worker can just log on with the newly delivered machine and in 20 minutes their environment will be identical to the one he or she has just logged out from."

But by synchronising a user's data with a centrally stored copy, there are far greater advantages in support terms than just the ability to restore a PC to a former state. Above all, that centralisation frees the worker from being tied to any specific device.

"Users no longer have to worry about which device they're on, because all their work is held elsewhere," says Roche. "They just access their data and applications over the Internet from whichever device they're using. In fact, many users don't even need a laptop to do that when they can log in from any computer in a branch office or

partner's office, or even in an Internet cafe, and get access to your desktop. In that sense, laptops today have more capabilities than people need."

HANDHELD FACTORS

With data and applications held centrally and accessed over the network, it becomes increasingly possible to equip certain users with a PDA or even a smart mobile phone as their primary interaction device.

But the support characteristics for such smaller, less standard 'form factors' is only being defined, says ITNet's Greenwood. "PDAs are simply less easy to manage," he says.

For now, there are few if any remote desktop tools, so helpdesks have to talk users through problems 'blind'. The lack of consistency between devices adopted by mobile workers is certainly not making that any easier – or less costly – to support.

Most companies are slow to supply devices, says Greenwood, so people buy their own. But as PDAs have become an intrinsic tool for extended mobility, the organisation needs to offer support.

"That means you have five or more different device types to support. There are also far more applications involved – it is like the early days of Windows, when users were running a whole host of different programs that eventually succumbed to consolidation. The corporate answer to this is to mandate the kinds of devices people can use and to allow employees very little individual software customisation," Greenwood explains.

Those issues aside, the tools that enable the mobile workforce are maturing rapidly. As software, standards and client devices evolve, and as bandwidth becomes less of an issue for wireless and occasionally connected users, the task of supporting both the mobile and the fixed-location user will consolidate to become one and the same. **BB**

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