

Critical IT Solutions for the Remote Office

Delivering reliable, high-quality IT services to branch offices is challenging, but numerous practical solutions are available to help. By Bob Violino

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Introduction

Business-critical computing and efficient access to information is as important for workers at remote offices as it is for employees at the home office. Failure to deliver effective IT services at offsite locations can result in lost sales, dissatisfied customers, and reduced productivity. Yet delivering a high level of IT service to branch employees and getting remote workers exactly the information they need when they need it is a major challenge for many organizations.

This white paper will look at some of the obstacles and impediments to providing world-class IT services at remote offices. It will then describe readily-available solutions that address these challenges and help organizations keep their remote and branch offices as effective as possible.

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Challenges and Solutions of Remote Office Computing

Branch offices are an integral part of doing business for many organizations. By operating facilities in multiple locations, enterprises can reach broader markets, extend services more directly to customers, and gain greater flexibility in addressing market changes.

Businesses of all sizes, even the smallest companies, operate branch offices. Indeed, more than 40 percent of companies with 10 to 499 employees maintain branch offices, according to Framingham, Mass.-based research firm IDC.¹ Moreover, IDC research shows that the number of branch offices an organization maintains varies directly by company size. For example, businesses with 250 to 499 employees typically have about eight branch offices each, while those with 50 to 99 employees typically have four.²

Regardless of how many remote offices they have, though, organizations need to deliver the same level of IT service to branch workers as they do to headquarters-based employees. Many of those branch office employees work directly with customers and business partners. If systems, applications, and data aren't reliably available to them, the results can include lower productivity, decreased customer satisfaction, and lost sales.

However, providing excellent IT service to remote offices isn't easy, and it's especially difficult for organizations that run many, widely-dispersed facilities. The factors that make delivering remote IT service so challenging are both organizational and technological.

IT Support Challenges and Solutions

At many companies, IT personnel are stretched thin. That often results in a disproportionately low number of IT staff in remote offices. According to IDC, businesses with 50 to 999 employees have just two full-time IT people per remote site on average. Such small IT staffs can lead to poor IT services.³

Thanks to slow economic conditions, meanwhile, providing adequate staff and expertise to support branch sites is likely to remain a challenge. IDC predicts that worldwide IT spending will grow between 5.5 percent and 6.0 percent in 2008, down from 6.9 percent in 2007.⁴ That suggests many organizations will need to do more with less—including at their remote offices.

Two solutions can help businesses with branch offices overcome their remote office support challenges:

¹U.S. Remote Office/Branch Office Opportunity: Adoption of Advanced Communications Technology by Company Size. IDC study #33915, September 2005, by Chris Hazelton, Raymond Boggs

²Ibid.

³Servers and Storage in U.S. SMBs, 2007 Update. IDC study #207479, June 2007, by Justin Jaffe, Merle Sander, and Raymond Boggs

⁴Global Small and Medium-Sized Business 2008–2012 Forecast: SMB IT Spending by Category and Region. IDC study #210984, March 2008, by Raymond Boggs.

>> **PowerEdge servers feature the Dell Remote Access Card, which gives administrators complete and secure control of a server at a remote site from any location.**

• **Manage Systems Centrally:** By managing IT assets at branch offices remotely from headquarters, companies can avoid the cost of onsite IT staff and unnecessary travel. Using server hardware specifically designed for remote environments can make adopting this strategy easier. For example, the PowerEdge™ T605 server, from Round Rock, Texas-based Dell Inc., is designed to provide easy branch office management and control. The dual-socket server, which features AMD Opteron™ processors, includes capabilities enabling administrators at the home office to remotely log into a server at a branch office and perform required maintenance tasks just as if they were physically on site. In addition, PowerEdge servers feature the Dell Remote Access Card, which gives administrators complete and secure control of a server at a remote site from any location. As a result, technicians at the central office can power remote servers on and off or install software remotely.

• **Use Software as a Service:** Using software as a service (SaaS) applications, which are delivered and consumed over the Internet, in place of locally-installed software can also help ease remote IT management requirements. NetSuite® Inc., Microsoft® Corporation, and Salesforce.com® Inc. are among the many companies offering everything from email and file sharing to ERP and CRM software via SaaS. Typically billed on a recurring monthly basis, such solutions require no infrastructure on the customer's side beyond Web access. For companies with branch sites, SaaS provides a cost-effective way to deliver applications to remote users without having to physically install and maintain licensed software products on individual servers and desktops. That can reduce both hardware procurement costs and ongoing administrative expenses.

Technological Challenges and Solutions

Organizations also face a host of technology-related challenges when attempting to provide top-notch IT services and information access at remote sites:

Security: Given the volume of data shared over networks between home and remote offices, minimizing—if not eliminating—network intrusions and breaches is essential. In addition, businesses also need to ensure that remote office users have sophisticated antivirus and anti-spam software, and the most recent security patches. Otherwise they run the risk of leaving individual desktops—and potentially the entire remote office or enterprise—exposed to security threats.

Rolling out security software well-suited to remote office environments can help you protect branch sites more easily and effectively. For example, Symantec™ Endpoint Protection, from Cupertino, Calif.-based Symantec Corporation, provides antivirus, antispymware, desktop firewall, device control, and network intrusion prevention for notebooks, desktop devices, and servers. A major advantage of

the software is that its functions can be controlled via a single console, making it easier for organizations to manage security at remote offices.

Data storage and backup: IT administrators must ensure that data at remote offices is backed up frequently, particularly if the information is critical to the business. However, managing data storage and enforcing best practices for backup can be difficult if storage experts aren't located on site. Remote offices without onsite IT support often rely on non-technical end users to swap out backup tapes on a daily basis. But if those users don't follow procedures correctly, backups may be improperly or inconsistently executed.

Deploying storage-area network (SAN) technology based on the iSCSI interconnect standard can help organizations address their remote site storage needs. Unlike more venerable Fibre Channel-based SANs that require special cabling and skills, iSCSI SANs use familiar, existing network infrastructure. The latest iSCSI SANs, such as those in the Dell EqualLogic™ product line, combine intelligence and automation with fault tolerance to provide simplified administration, rapid deployment, enterprise performance, and easy scalability. By simplifying complex tasks and enabling fast and flexible storage provisioning, iSCSI SANs can reduce the costs of storage acquisition and operations for remote offices.

To safeguard branch office data efficiently and cost-effectively, deploy data protection software that combines onsite and offsite storage, such as Symantec™ Backup Exec™. In addition to offering local backup and recovery functionality, Backup Exec also allows you to store backup data offsite at Symantec Protection Network data centers, for maximum safety in the event of a catastrophic event such as a hurricane or earthquake.

The Backup Exec family also includes a product called Backup Exec™ System Recovery. When coupled with the Dell Remote Access Card, it enables organizations to capture images of branch office servers remotely and then reinstall them remotely in the event of a server crash. Those are tasks that could otherwise require onsite technical support.

Power usage: Reducing energy consumption and infrastructure operating costs at both headquarters and remote offices has become a major priority for many organizations. In addition, building managers and landlords sometimes give branch sites a fixed allotment of power to use. Offices that exceed their allotment can be subject to steep penalties. That gives organizations an additional incentive to hold down power usage at remote locations.

Client configuration and monitoring products such as Dell Client Manager (DCM)

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allow IT administrators to create power schemes for devices such as desktops and notebooks. For example, they can define a power scheme for notebooks when running on battery mode that shuts off the monitor after five minutes, turns off the hard drive after 10 minutes, and puts the computer into hibernate mode after 20 minutes. DCM also integrates with Symantec Backup Exec and Endpoint Protection, enabling companies to monitor and manage their hardware, security, and backups through a single console.

The AMD Opteron processors in Dell PowerEdge servers can further help organizations meet their remote site energy-consumption challenges. For example, an AMD technology called Dual Dynamic Power Management™ allows each processor to maximize power savings without compromising performance. Dual Dynamic Power Management can reduce idle processor power consumption while enabling per-processor power management in multi-socket systems.

Scalability: Remote offices often grow in tandem with their parent business. That means the technologies that companies use at both central and branch offices must be able to accommodate rising demand for remote information and processing capacity. For example, the Dell PowerEdge T605 supports up to four hot-plug 3.5" SAS or SATA hard disk drives. Since Dell makes custom-ordering a T605 simple, businesses can easily create a base configuration for remote offices featuring one or two disk drives, and then add more storage capacity over time as required. Businesses can scale up a T605's memory as needs escalate in much the same way.

Another performance-enhancing feature of the Dell PowerEdge T605 is its use of dual HyperTransport™ technology links to connect CPUs. This allows the T605 to keep up with the peaks and valleys of remote employees' application demands over the course of the day.

AMD Opteron processors can further help with scalability. AMD Opteron processors use Direct Connect Architecture, which leverages an integrated memory controller per CPU and high-speed HyperTransport links to connect with a server's I/O. As a result, systems equipped with AMD Opteron processors such as the Dell PowerEdge T605 are able to scale as a business grows.

System reliability: Businesses need to ensure that the systems they provide their remote offices are highly available. System failure, or performance degradation that renders systems effectively unavailable, can lead to significant loss of productivity.

Servers designed for remote office environments, such as the Dell PowerEdge T605, offer high-availability features to help keep remote offices up and running.

>> **Deploying robust management software with remote support functionality can help keep branch office systems up and running.**

For example, the PowerEdge T605 features up to four hard disk drives and redundant power supplies, to help prevent loss of data and uptime.

Network reliability: Failure to link remote and home office networks dependably jeopardizes branch worker access to critical business information and applications.

Deploying robust management software with remote support functionality can help keep branch office systems up and running. For example, Dell OpenManage Network Manager is a comprehensive network management application that can automate labor-intensive network management operations to help lower the total cost of ownership. It also delivers advanced network element discovery, remote configuration management, and system health monitoring to proactively alert network administrators to potential network problems.

Conclusion

Remote offices are a fact of life for many organizations today. Operating these facilities can be a major challenge from an IT standpoint. Moreover, based on current economic and technology spending trends, providing quality IT services and information access to remote sites will not get any easier any time soon. More than ever, then, organizations need technologies that can help them efficiently run remote offices with minimal onsite IT support. Now is the ideal time to explore technologies such as SaaS and servers such as those in Dell's PowerEdge line that help organizations manage branch office IT infrastructures remotely while providing effective security and scalability.