

Transforming the Branch Office

Enabling a consistent experience across the enterprise with an HP Converged Infrastructure

Solution brief

Customer challenge

The branch office plays an important role in an organization's ability to attract, service, and retain customers and increase revenue. Branch office employees, the "face of the corporation," can significantly impact customer satisfaction and loyalty; particularly if supported by safe, dependable, and fast access to the corporate knowledge base (people, resources, and information); and to the productivity-enhancing tools in which the organization has invested. In addition, with today's increasing security vulnerabilities, branch office networks must be protected by comprehensive security policies and enforcement to help ensure business continuity.

Despite the critical nature of the branch office, legacy infrastructures often impede customer service with slow, unreliable access to information and applications. Poor WAN performance can prompt employees to store data locally, preventing it from being backed up and putting the business and regulatory compliance at risk if a local device fails. The high cost of running a branch also prevents most organizations from maintaining a local IT staff so branch office employees must manage and troubleshoot systems, decreasing productivity and taking focus off the customer.

Many branch offices were built in isolation and may lack the interoperability needed to cost-effectively support business activities and growth. They are further shackled by a complex mixture of legacy network infrastructures that are expensive to expand and maintain. At a time when competitive requirements include the implementation of new services such as mobility and unified communications—as well as rapid access with enhanced security to applications and services—businesses struggle to efficiently scale, manage, and secure their networks. The trend to data center consolidation and remote employee access to hosted applications is forcing employees to compete for resources across the WAN and compelling organizations to rethink their strategic approach to the branch office.

Innovative HP Solutions

The shift away from an operations model in which dedicated application servers run in branch offices is occurring at a time when data center consolidation is also gaining momentum. Enterprises are embracing a centralized computing model that encompasses predictable application delivery, easy management, and comprehensive security. This new, application-centric model is needed across the entire extended enterprise to improve customer service, employee productivity, and business outcomes. The solution is best delivered by a Converged Infrastructure that brings together IT silos into pools of virtualized assets, shared by many applications and services. The network is the foundation of this Converged Infrastructure, the vehicle for interconnecting all enterprise systems and applications.

The HP Branch Office Solution extends the benefits of HP's Converged Infrastructure architecture to the branch, enabling branch office employees to enjoy the same fast and reliable access to data and applications as workers at the main office. This superior user experience includes use of data, voice, video and unified communications as well as collaboration tools.

Reduced complexity

With tighter resources, today's businesses can't afford the overhead of IT staff in the branch to cope with a complex legacy infrastructure that compounds availability, performance, management, and security challenges. The standards-based, integrated HP Branch Office Solution dramatically simplifies branch office deployments and centralizes management. It converges network connectivity and network applications within a single network platform, reducing the need to have multiple appliances in the branch. In addition, centralized, single-pane management streamlines operations, decreasing the need for multiple management stations and support of a variety of devices, configuration policies, and access rights. With similar design considerations, sophisticated, multi-layered security solutions and centralized security definition and enforcement policies deliver robust, enterprise-wide security.



Enhanced business agility

Legacy infrastructures can inhibit innovation and business growth. The rapid rollout of new applications and services to the branch is imperative to maintain a competitive advantage and retain customers. The HP Branch Office Solution is designed to scale as business demands change so that enterprises can quickly adapt to changing business requirements, dynamically scaling capacity and provisioning connections to deploy new services.

Proven solutions from an ecosystem of industry-leading technology partners complement HP-developed offerings to meet organizational business and budget goals. These solutions—including integrated WAN optimization, survivable branch communication and SIP based UC&C applications—contribute to a comprehensive, modular, end-to-end architecture, that helps enterprises enhance WAN performance and increase employee productivity as business-critical applications and communications are provided with increased efficiency.

Lowered costs

The HP Branch Office Solution was purpose-built to lower total cost of ownership. Open platforms enable use of advanced, industry-leading technologies that remove costly vendor lock-in, enable simplified and flexible deployment, and provide investment protection. They free enterprises to select products and solutions that are right for their business and budget. Performance- and productivity-boosting solutions such as WAN optimization further decrease operational costs, reducing the need for costly WAN bandwidth upgrades for domestic and international links. Capital and operating expenses such as training, expertise, power, and space requirements are reduced through the integration of functionality in one device. Enterprise-wide unified management and centralized policy administration eases the need for remote IT staffing, minimizing travel time and cost while providing enhanced efficiency and functionality. In addition, HP networking solutions are engineered to be energy efficient, consuming up to 50 percent less power than leading competitor systems—lowering an organization's carbon footprint, while providing unmatched performance.



Following are several examples of how the HP Branch Solution can help meet specific business needs.

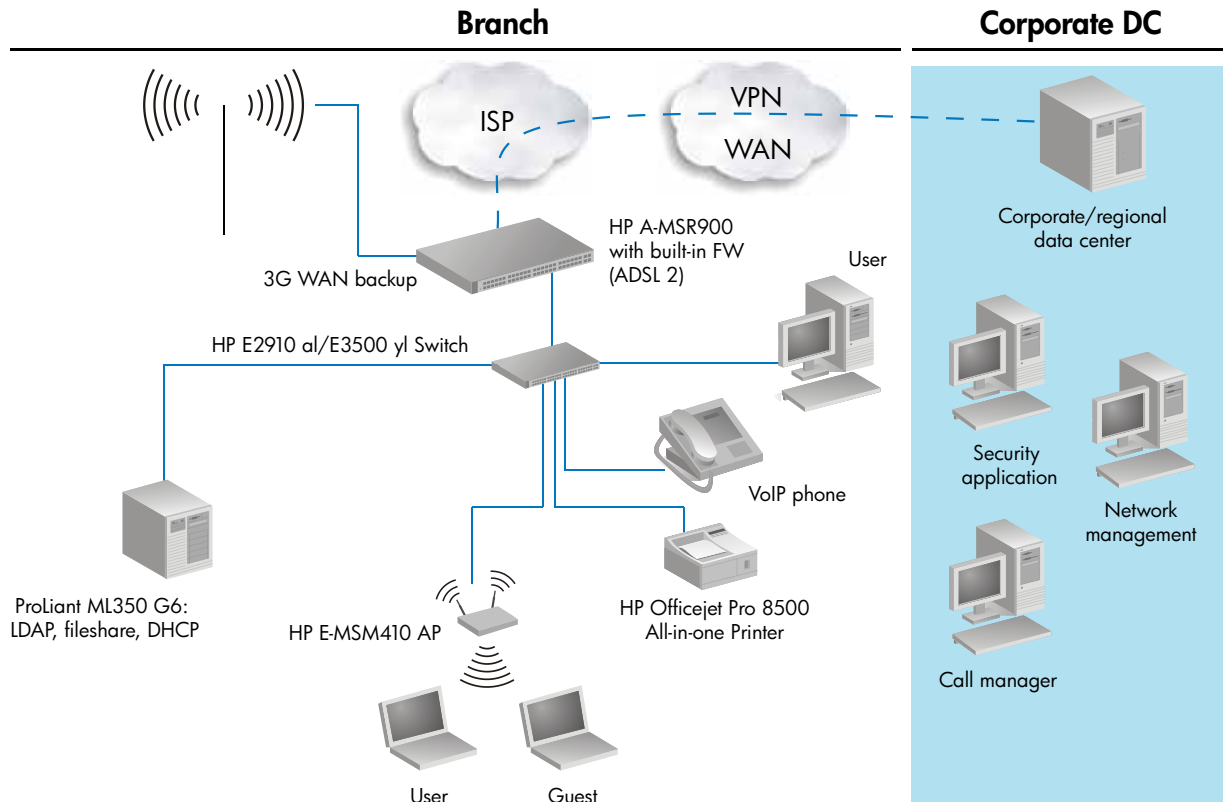
Scenario 1 (branch office with less than 20 employees)

Employees in a small branch office require email, file share, local printing and internet access, in addition to secure access to the corporate network. The branch has a firewall and a site-to-site VPN over a broadband connection for encrypted access to the headquarters network. Email is usually hosted in the corporate data center.

Challenges

Inefficient WAN speed is affecting productivity, slowing access to main office file shares, and creating intermittent login problems. Frequent local network issues and a lack of reliable backup are jeopardizing the security of important customer data. Unreliable printing is forcing frequent reboots to clear the queue. There is no IT staff on site.

Figure 1: Branch office with less than 20 employees



Solution benefits

- Improved LAN reliability and performance
- Remote management capabilities
- Dramatically improved file access times
- Faster logins with enhanced security
- File storage with regular backup
- Automatic offsite data replication for disaster recovery protection

Solution features

- WAN connectivity and 3G backup
- Branch WLAN
- Infrastructure server (DHCP, print, file services)
- Remote management
- Perimeter security
- Internet over WAN
- Storage with remote backup

Solution components

- HP A-MSR900 multi-service router with built-in firewall
- HP E2910-24G-POE+ al/E3500 yl switch
- HP E-MSM410 Access Point managed centrally from controller in corporate data center
- Intelligent Management Center for branch networking infrastructure management from the data center
- ProLiant ML350 G6 Branch Office Server
- HP OfficeJet Pro L7700 All-in-One Printer managed remotely with W2008 Print Management Console

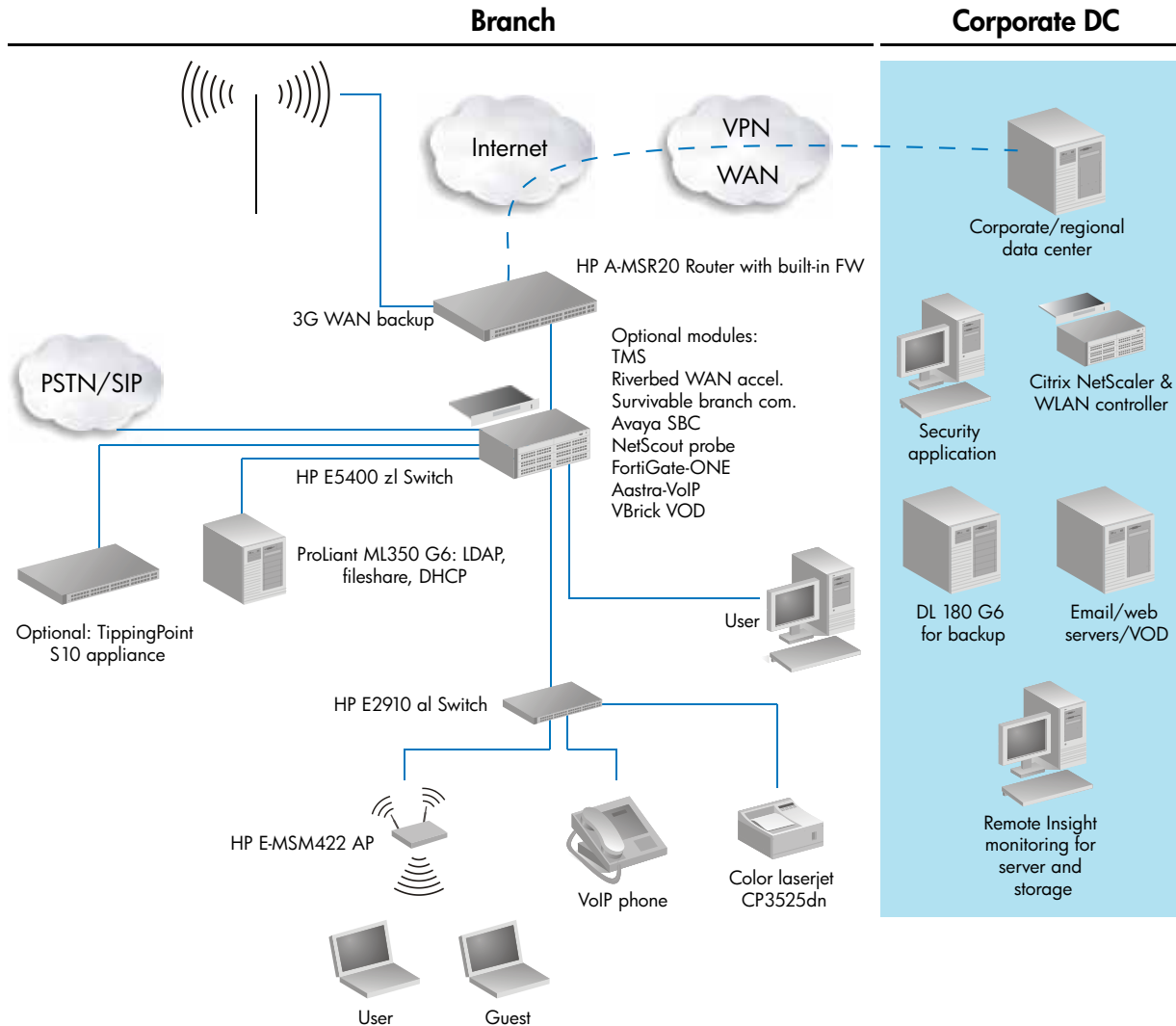
Scenario 2 (branch office with 20-50 employees)

A large corporation has multiple branches, several of which offer extended hours. There is a domain controller and file/print server at most branches and locally delivered business applications at some of the branches. Email is hosted in the corporate data center and made available over the WAN. WAN connectivity requires higher bandwidth with robust security. Some enterprises may have a VoIP communications rather than traditional PBX system for voice services.

Challenges

Due to the critical mass of employees, the branch office is experiencing slow application performance and poor reliability. Lack of reliable backup and time-consuming file restores are causing productivity issues. Storage growth is exceeding disk space and IT staff is spending too much time managing these and other issues. Additionally, plans are being developed to deploy VoIP and video in all branches.

Figure 2: Branch office with 20-50 employees



Solution benefits

- Dramatically improve application delivery with WAN acceleration
- Simplify management and service delivery with integrated solutions
- Enable off-site disaster protection with data snapshots replicated to main office
- Reduce cost of site visits and branch office backups
- Lower the number of physical IT assets and maintenance costs
- Reduce cost of voice services with integrated IP telephony solutions

Solution features

These are incremental to the features listed in solution 1:

- T1/E1 WAN connectivity
- WAN acceleration
- Integrated security
- Unified management
- Guest access
- Video distribution
- Survivable branch voice services

- UC&C
- Efficient storage with auto backup
- Virtual servers

Solution components

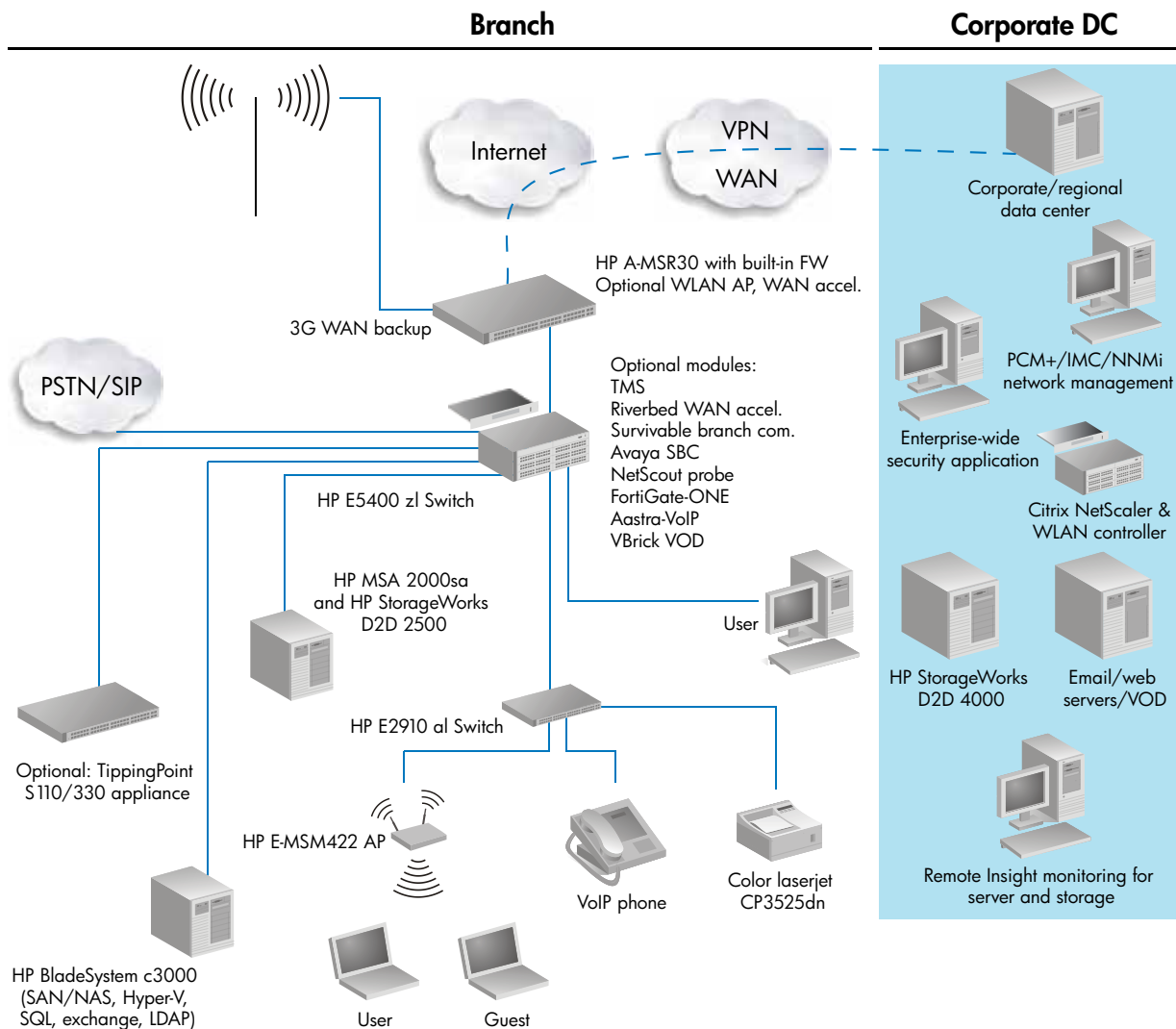
- HP A-MSR20 multi-service router with built-in firewall
- Modular, high-performing HP E5400 zl Switch
- HP AllianceONE Extended Services Module with Riverbed Steelhead RioS application
- HP Survivable Branch Communication Services zl Module with Microsoft LYNC Server 2010
- HP Services zl Module for Avaya Aura Session Border Controller

- powered by Acme Packet
- HP TippingPoint S10 Intrusion Prevention System
- HP Threat Management Services (TMS) zl Module
- Intelligent Management Center for branch networking infrastructure management from the data center
- HP E-MSM422 Access Point (802.11 a/b/g/n AP managed centrally from controller in corporate DC)
- HP ProLiant ML350 G6 Servers with Microsoft Hyper-V

Scenario 3 (branch office with 50-100 employees)

Each regional office has 6-10 servers providing secure local Internet access, as well as file, print, email, application, and networking services. Video must be downloaded from corporate headquarters and streamed to multiple locations in the branch every day. Each remote location is supported by its own IT staff with one or two variously skilled employees.

Figure 3: Branch office with 50-100 employees



Challenges

Several branch offices were acquired through recent mergers resulting in a fragmented network and inconsistent implementation of security policies and management. With multiple brands and models of servers, asset control and manageability have become critical issues and storage growth is exceeding disk space capacity.

Solution benefits

- Consistent and predictable performance with high availability for access to applications and services, enhanced productivity, and improved customer service
- Unified management and advanced security services that reduce administrative burdens and deliver more robust data protection
- Server consolidation with time, power, and cooling advantages that save space and reduce costs
- Dramatically simplified storage management to reduce the need for specialized IT expertise

Solution features

These are incremental to the features listed in solutions 1 and 2:

- High-performance modular WAN connectivity with advanced security
- Improved local internet security

- Efficient storage with deduplication
- Virtual server on BladeSystem
- D2D backup and recovery

Solution components

- HP A-MSR30 multi-service router with built-in firewall
- Modular, high-performing HP E5400 zl switch
- HP AllianceONE Extended Services Module with Riverbed Steelhead RioS application
- HP Survivable Branch Communication Services zl Module with Microsoft LYNC Server 2010
- HP Services zl Module for Avaya Aura Session Border Controller powered by Acme Packet
- HP Threat Management Services (TMS) zl Module
- TippingPoint S110/330 Intrusion Prevention System for in-depth protection
- Intelligent Management Center for branch networking infrastructure management from the data center
- HP BladeSystem e3000 at regional office with consolidated network-attached storage
- D2D 2500 deployed in branch offices
- D2D 4000 and MSL2024 Tape Library (for archive) deployed at main office
- HP Data Protector software



Industry-leading service and support

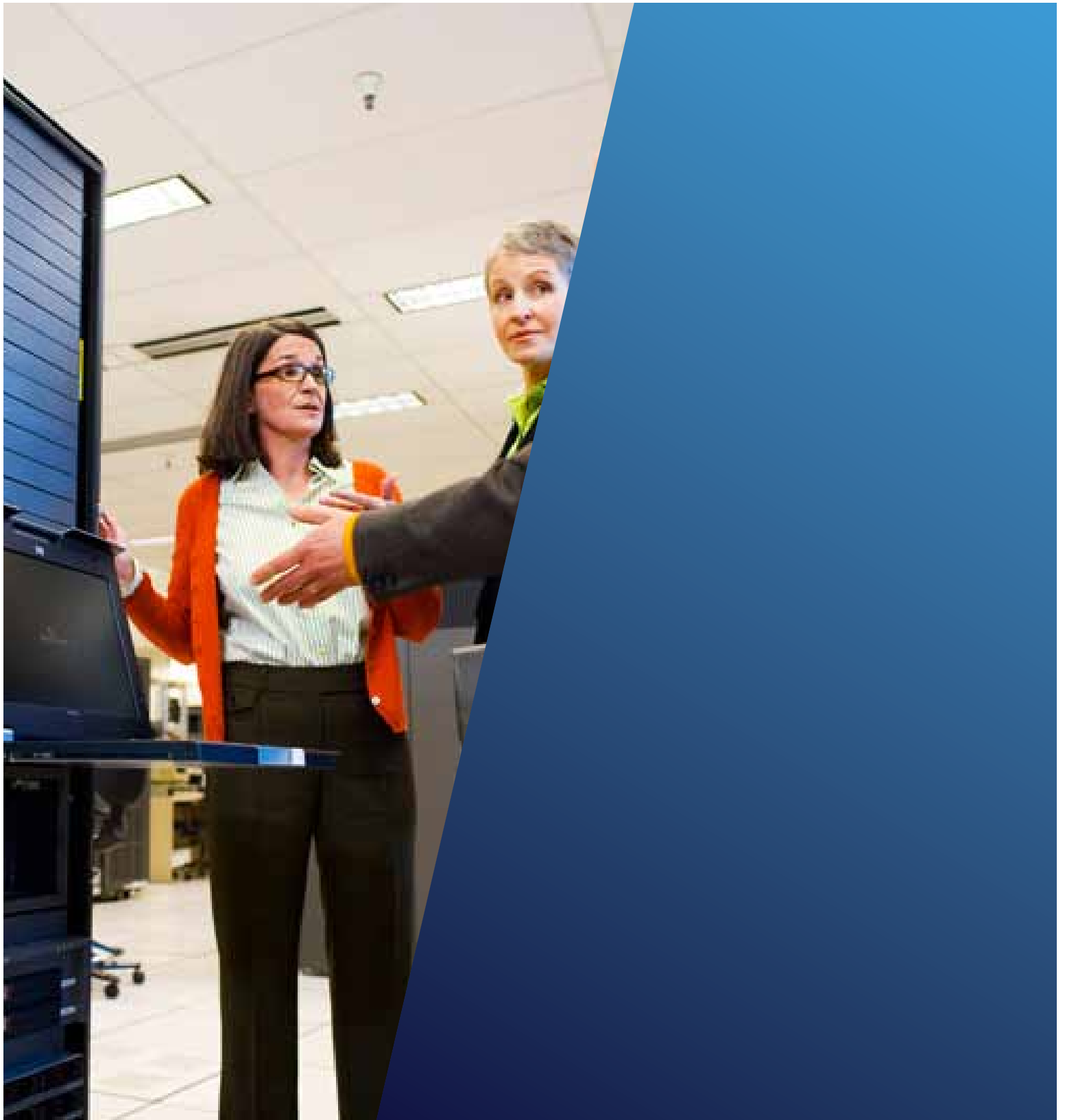
HP Consulting and Integration and Technical Services

HP Consulting, Integration, and Technical services organizations have the knowledge and expertise to consolidate solution components into a true branch office solution. Along with extensive experience in consulting, systems integration, architecture, project management, network design, and implementation, their services reflect an in-depth understanding of all components of a branch office solution—from the HP portfolio of servers, storage, archiving solutions, networking, PCs, and software, to the various products offered by partners of HP.

Customer commitment

Every day HP demonstrates its exceptional commitment to innovative, savvy product development, expert implementation, and responsive service—all of which are essential elements to running mission-critical branch offices. High-quality global sales, delivery, and support services are backed by a 30-year record of successful networking experience, as well as the talent and experience of certified professionals and networking partners around the world. Additionally, the company's R&D and engineering teams are available to work side-by-side with HP customers establishing a level of intimacy unmatched in the industry.

For more information about how HP networking solutions can reduce network complexity, enhance business agility, and reduce costs visit: www.hp.com/networking/solutions



Share with colleagues



Get connected

www.hp.com/go/getconnected

Get the insider view on tech trends, alerts, and HP solutions for better business outcomes

© Copyright 2010 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

