IDG
Custom Solutions Group

Strategy Guide
to **Converged Infrastructure** in the **Branch Office**

hp   **(intel)**

The branch office is often the face of an organization, the point where it touches the people it serves, be they customers or citizens. You probably know a teller or two in your local bank branch, for example. When you renew your driver's license, it's the people at your local motor vehicle administration office — and the service they provide — that you're likely to remember.

And yet, when it comes to technology, branches are sometimes neglected. Old, non-standard equipment and legacy infrastructures often impede customer service with slow, unreliable access to information and applications. Some branches may not even have on-site IT support, so local employees try to manage and troubleshoot systems. This can sap their productivity and take their focus away from the customer.

Meanwhile, many organizations are consolidating their branch locations. The tight economy may demand the closing of some branches. Or perhaps mergers and acquisitions have left the company with too many locations. This consolidation offers a golden opportunity to streamline and standardize technology and operations, enabling greater efficiency and improved service. Unless the consolidation is carefully planned and executed, however, it can backfire and instead create more complexity, more expense and less efficiency. This strategy guide will explain how, by using HP's Converged Infrastructure, you can upgrade technology, standardize equipment and improve IT practices, all of which can reduce IT costs, cut network downtime, increase productivity and improve customer service.

▐▌ THE CHALLENGE

Most branches are added in a less-than-organized fashion. Each branch may have different brands and models of hardware of varying age, a variety of non-standard applications and a networking infrastructure that is slow, inflexible and quite likely capacity constrained. The branch may have been built in isolation and lack the interoperability needed to connect reliably to the broader network. This chaotic situation is not only time-consuming and expensive to maintain, but it puts the organization at risk. And at a time when the ability to implement new services like mobility and unified communications is a key competitive requirement, the situation may be a significant disadvantage to an organization. What's more, the lack of cohesive and capable infrastructure could prevent branches from taking advantage of some of the biggest cost-saving trends of the decade: virtualization and cloud computing. Clearly, organizations need to rethink their strategic approach to the branch technology.

*"With the HP BladeSystem infrastructure and Insight Control, we have the cost savings on the IT side in terms of support, which further **reduces downtime and increases productivity for the whole team**."*

— Dave Fracchia, Vice President of Technology, Radical Entertainment

[Click here](#) to learn more about how Radical increased capacity and decreased build times.

"The unified communications model created opportunities to improve collaboration—by **bringing people together virtually to solve our clients' problems***."*

— Brad Vaughan, Senior VP and CIO, Black & Veatch

To learn how the company modernized aging communications, click here.

The Power of Convergence
(video)

HP's Converged Infrastructure is a a pre-configured and pre-tested solution that helps address these issues. It simplifies, integrates and automates storage, networking, servers, management software — even power and cooling. In particular, the HP branch office networking solution converges infrastructure and network applications to dramatically improve performance, simplify deployments, centralize management and reduce IT costs.

// MANAGE

Coordinating disparate IT resources across branches is a challenge. There is old, non-standard equipment, not to mention different levels of IT sophistication. At the same time, organizations are under constant pressure to do more with less.

HP's Converged Infrastructure solutions for Branch Offices helps maximize resources and reduce costs through a unified, standardized approach to technology and by using tools to automate processes and best practices. The solutions are more than just a suite of products, however. The key lies in standardized infrastructure, operations and processes: using the same applications, security software, management software and data backup for each location. That not only ensures greater efficiency for operations, but by developing templates based on industry best practices, you can easily and quickly deploy the same infrastructure to new locations as you grow.

A standardized approach also enables your organization to take advantage of technologies like virtualization and cloud-based software and services. Organizations are finding that by adopting a standardized approach as a platform for using thin clients and desktop virtualization, they can dramatically reduce their costs and the time spent managing and fixing technology.

HP's Converged Infrastructure incorporates tools that make remote support and management efficient and effective. HP Insight Control, for example, helps reduce server deployment time from four hours to just 20 minutes, a 12-fold decrease in deployment time. HP Insight Remote Support can bring diagnostic accuracy to nearly 100 percent and reduce the time it takes to resolve system problems by up to 20 percent

// PROTECT

The network is the foundation of the Converged Infrastructure. Slow or intermittent network performance reduces productivity, increases costs and impacts service. Organizations find themselves held back by a mix of legacy network infrastructures that are difficult to expand, lack interoperability and cost too much. They find it challenging or even impossible to scale their networks and so are unable to take advantage of the rapid advances in networking – fixed and mobile, wired and wireless. In addition, growth in data requirements often puts existing storage infrastructure as branches under stress. Network and storage limitations may prompt branch employees to store data locally, complicating backup and disaster recovery procedures and putting the organization and regulatory compliance at risk.

Converged Infrastructure can solve these problems. HP Networking Solutions, part of the Infrastructure, typically costs less than competitive offerings and can help you lower total cost of ownership by up to 66 percent. HP Virtual Connect interconnects for BladeSystem virtualize network and storage connections and can reduce sprawl at the network edge by up to 95%. The Virtual Connect Flex-10 Ethernet module enables you to allocate up to 4 connections per port — and provide iSCSI connectivity. The FlexFabric module will enable either FCoE or iSCSI connectivity — reducing the number of cables, switches, and adapters to buy.
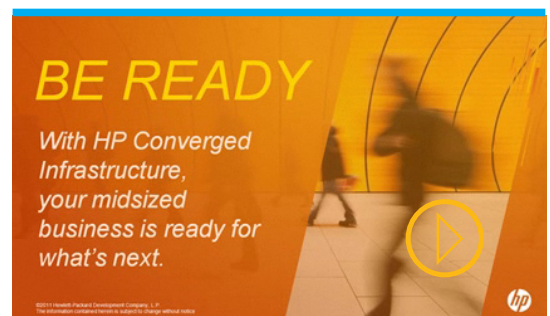
To learn more about research vault, click here.

*"Our backups went from taking four hours to just under one hour. With the HP 3PAR F400 Storage System, **we've completely eliminated performance issues**."*

— Jason Elizaitis, Chief Technology Officer, Samuel A. Ramirez & Co., Inc.

Learn how to design a high-performing storage environment with numerous business benefits. Click here.
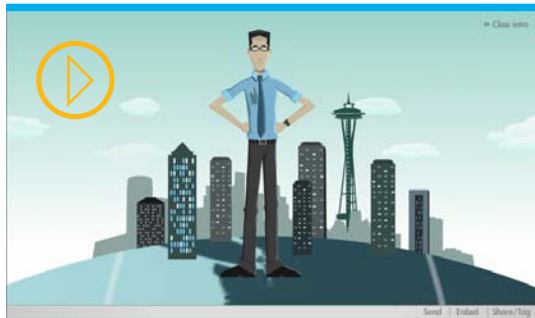
To learn more about Insight Control, watch this video

"HP Networking switches are faster than Cisco because they don't have as much overhead in their protocols," says Eric Legaspi, Director of IT at Radical Entertainment, a developer of online games. "They cost 50 percent of what we'd pay for Cisco. And they come with a lifetime warranty, where Cisco makes you buy protection from year-to-year."

Virtualization can help reduce equipment costs, centralize management and increase security. HP's recently announced HP FlexNetwork architecture, the industry's only unified architecture for the data center, campus and branch, can help you harness the power of media-rich content, virtualization, mobility and cloud computing. The HP FlexNetwork architecture, a core component of the HP Converged Infrastructure, converges network silos by ensuring protocols are implemented consistently across all networked devices throughout an enterprise. As a result, clients are able to simplify and speed service delivery across the branches and central office, driving increased agility and innovation. In particular, the FlexNetwork incorporates modular building blocks that share a common management layer, including one specifically for branches, called FlexBranch.

HP Converged Infrastructure includes technology that enables easy storage expansion, protects from unplanned downtime and ensures backup and rapid recovery in the event of a disaster. The solution incorporates two HP ProLiant DL180 G6 servers running Hyper-V with HP StorageWorks P4000 Virtual SAN appliance software. The ProLiant G6/G7 servers with Intel Xeon 5500/5600 series processors offer greater performance and use less power than previous generations, allowing more to get done with fewer servers and lower operating costs. The combination of these technologies transforms server disk drives and existing external storage systems into a virtual iSCSI SAN, thus ensuring high server availability and increasing storage capacity utilization. Also included is the HP StoreOnce D2D Backup System with deduplication software, which reduces capacity and network bandwidth required for remote data replication back to the main office.

HP also offers a comprehensive portfolio of Network Support Services to help you manage your network efficiently, mitigate risks and downtime, and increase the business value of the technology. And HP Financial Services will help you recover value from the assets you're retiring. Under its Asset Recovery program, HP Financial Services evaluates the market value of any unwanted equipment, remarkets the product and shares the proceeds with you. It disposes of equipment that has no remaining value in accordance with environmental regulations.

// GROW

With HP's Converged Infrastructure, you can start with HP BladeSystem which integrates server, storage, networking plus power management, and lets you grow and re-use your infrastructure from client to the cloud. By offering three different Converged Infrastructure reference solutions, HP enables you to tailor the solution to the size and needs of your organization.

The standardized hardware, software and infrastructure — including servers, storage, management and data protection software, networking infrastructure, PCs and printers — along with consistent IT practices across the network, allow you to consolidate branches or roll out new locations quickly, easily and efficiently. These infrastructure solutions not only speed deployments, they also streamline operations and significantly reduce costs. Most important, the Converged Infrastructure gives branch offices the same fast and reliable access to data and applications as staffers at the main office.

All these aspects of the HP Converged Infrastructure add up to deliver the value you need today by positioning you to manage, protect and grow your business. ■

// Suggested Reading

These additional resources include business white papers and previously published articles from IDG Enterprise.

Case Study: Radical Entertainment

Canadians are serious about their games. In fact, Canada claims one of the world's strongest technical infrastructures for gaming with 40 percent of all households owning video game consoles. Most citizens also have a personal computer with broadband for online gaming. What's more, CTV News labeled Canada the "new hotspot" for video game creators. That's why Radical Entertainment, based in Vancouver, BC, Canada, is happily playing, working, living, and breathing games. It's captured in their tag line: "play-work-live-breathe-games."

5 Tips on How to Optimize Your Infrastructure

This vendor-written tech primer has been edited by Network World to eliminate product promotion, but readers should note it will likely favor the submitter's approach.

While many enterprises have been able to creatively manage IT demand through the recession without much infrastructure change, exponential data growth is driving the need for infrastructure consolidation and optimization.

Simplify

Solutions that move your small and midsize business forward.

Policy-based Security and Access Control

In a university environment, there is no time for the network to go down. The students and faculty at SUNY Old Westbury, a university located on Long Island, New York, demand 24-7 access to the internet, both on and off campus. And, of course, it isn't enough to simply keep things running, they need to be protected, too.

For SUNY Old Westbury CIO Marc Seybold, that is a tall order. He is dealing with many different devices, with many different types of users. He also strives to allow students to have almost-constant use of bandwidth, both for study and after-hours recreation, while still ensuring faculty have the bandwidth they need during class time.

HP Networking's Haas Aims At Simplicity

Marius Haas, senior vice president and general manager of HP Networking, has had a good year. In 2010, Hewlett-Packard (HPQ) closed its acquisition of 3Com (COMS), dramatically expanding its networking portfolio and sales, and also continued to log progress with its own LAN products. In the company's fiscal fourth quarter, which ended Oct. 31, HP's networking revenue grew 227 percent with the former 3Com portfolio included. Even without the new offerings, sales grew 50 percent from a year earlier. This week, Haas took time to talk with IDG News Service about that growth and the company's vision for networking.

A Better Way to Connect Branch Offices and Control IT Costs

Adapted from *Improving the Way Branch Offices Compete, Connect, and Control Costs,* by Raymond Boggs, Jean S. Bozman, and Randy Perry, IDC #227476
Sponsored by HP

IN TODAY'S ECONOMY, companies with branch operations find that maintaining productive and smoothly running business operations in their branch offices is absolutely mission-critical. Branches are the places where the business meets the customers—places such as retail outlets, bank branches, sales and service operations, and local branches of nationwide pharmacies that fill patient prescriptions.

The branch delivers customer service and receives revenue on behalf of the entire corporation. That's why frequent updates from branch systems and rapid reports of local business issues need to be continuously available and supported by local computer systems.

No longer remote outposts of the business that merely reboot local servers and periodically back up files to tape, today's branches are local engines of commerce. They are connected to central headquarters—and to other branches—by high-speed network links. That improvement in bandwidth has made all the difference: That is why the servers, storage, software, and all of the networking links must be up and running, all the time, to maintain business momentum and local in-branch employee productivity. In many branches, the IT systems may not be up-to-date or easy to manage.

IT systems—servers, storage, networking, networked PCs, and printers—carry mission-critical applications and corporate data, but they must be affordable to acquire and easy to operate on a day-in, day-out basis to effectively support the business. Further, given the way branches must quickly adapt to changing business conditions, these IT systems must be resilient and flexible, because they may be redeployed to fit changing business conditions or provisioned with new software as needed.

Leading midsize companies are succeeding at both upgrading IT support and reducing IT costs for the branch. As discussed in the following pages, IDC research about small and medium-sized businesses (SMBs) and branch offices shows that well-targeted

technology upgrades, coupled with a rigorous program to standardize and improve IT practices at a company's remote locations and headquarters, can deliver substantial business value and could reduce total annual IT costs in the branches by more than 30 percent.

// HP's Solutions for Branch Offices

HP's ProLiant servers can play a role in this type of improvement. They have been widely deployed in branch offices both in the U.S. and in the rest of the world, and are now getting a technology refresh with the introduction of the G6 and G7 generations of ProLiant servers. Compared with earlier generations of ProLiant servers, these new G6 and G7 servers offer faster performance, enhanced management, improved energy efficiency, and new financial terms for acquiring the servers through purchase or lease. As such, these systems are optimized to support branch businesses, which are facing a period of economic challenges on a scale that has not been seen for many decades.

HP is delivering new Branch Office Solutions built on Converged Infrastructure (CI), aimed at delivering business benefits over the life of the technology. Converged Infrastructure brings the technology building blocks—servers, storage, and networking equipment—closer together, avoiding the need for onsite system integration that could result in one-off builds of branch office servers.

This is a full-spectrum approach to IT infrastructure solutions, making them easier to acquire, to deploy, and to maintain over the entire infrastructure life cycle. This approach is becoming more important as the economy remains uncertain, making it more difficult for branch offices to buy infrastructure solutions (e.g., servers, storage, PCs, networked printers, and other networking devices) needed to support growing business requirements. Mindful that acquisition of new technology solutions is challenging for midsize firms and the branch offices within those enterprises, HP is providing the following for its branch office solutions:

■ **"Recipes" for channel partners.** HP has highly customizable infrastructure solutions that combine server, storage, management and data protection software, networking, PCs, and printers. These reference solutions are provided to HP channel partners to speed deployment of consolidated branch offices. Because the components of these solutions are tested against many operational conditions, they are easier to support and maintain in the branch office site.

■ **Rightsizing of solutions.** HP has designed solutions for branch operations of different sizes: small (with fewer than 25 employees), midsize (with 25 to 50 employees), and regional (with up to 100 employees). Sizing is important because it provides the appropriate amount of data processing power, storage, and bandwidth capacity for the right number of users to optimize system response time to boost branch end users' productivity.

■ **Ease of use in management tools for system administrators.** IT staff costs must be contained—and the ratio of system administrators to servers and the ratio of administrators to other types of managed devices (e.g., storage, networked printers, and networking devices) must be improved, if possible. Recognizing that system management must be simplified and easy to learn for branch offices, HP is providing integrated software tools that can be used within the branch, at a channel partner site, or at an enterprise central site to manage branch servers remotely.

■ **Improved financial terms for branch offices.** Continuing economic uncertainty has made it more difficult to acquire or lease new technology. HP Financial Services provides financial terms, including zero-percent financing, and improved lease provisions to make it easier to acquire new technology—or to refresh server technology—compared with earlier generations of HP ProLiant servers.

■ **Improved network support for branches.** HP networking solutions improve networking links between branches and from branches to headquarters. Support for industry-standard links, including 10GbE and Fibre Channel, allows servers to send data to other servers and to local or remote storage devices. The networking solution for branches integrates accelerated, survivable branch communication (HP AllianceONE), security (HP A-Series Routers and HP TippingPoint), wireless, video distribution, and unified communications and collaboration (UC&C) applications. Unified management and centralized policy administration reduce the need for branch office IT staffing and support-related travel.

■ **More effective pooled storage for growing storage demands.** HP's storage solutions, such as StorageWorks P4000 Virtual SAN Appliance (VSA) software, can help branches deal more effectively with growing data demands by pooling storage resources and achieving better capacity utilization along with more effective storage management functions. For example, with VSA solutions, branches can transform server disk drives into a virtual iSCSI SAN.

// Conclusion

HP's introduction of the G6 and G7 series of HP ProLiant servers is bringing a new form of business value to branch office customers. Improvements in performance, price/performance, management, and energy efficiency of new generations of server technology (e.g., multicore processors, reduced power and cooling requirements) have the potential to change the financial evaluation of acquiring new servers. Consideration of OPEX savings, which have been rising in recent years, along with new financing options, can offset acquisition costs.

At a time of increasingly strict budgetary constraints, branch offices are seeing increased demand for processing, data storage and protection, and networking efficiency and security. Midsize firms, many of which are consolidating branches, are looking to align IT costs with business requirements and will be exploring new ways to acquire technology during the downturn. HP's new solutions for branch offices are designed to address that new economic reality. ■