Simplify business protection with the power of convergence.

HP Business Protection Solutions with virtualization technology

Solution brief



"Selective disaster recovery (DR) solutions, such as those included in the HP Business Protection Solution, and improved systems management, can reduce business risk for midsize organizations. The combined efficiencies and new technologies can reduce the labor of preparing for and recovering from a disaster—up to 90 percent reduction in IT staff time spent backing up an environment and up to 87 percent reduction in time spent recovering from an outage."¹

"Protecting Your Business: Addressing Business Risk with Effective Technology", IDC, January 2012



Businesses today, need a technology infrastructure that is highly available, runs on a secure network, and is protected against data loss and unauthorized access. A reliable and responsive infrastructure is critical to business efficiency and growth. A key enabling technology that is helping businesses drive up availability while lowering infrastructure costs is "virtualization".

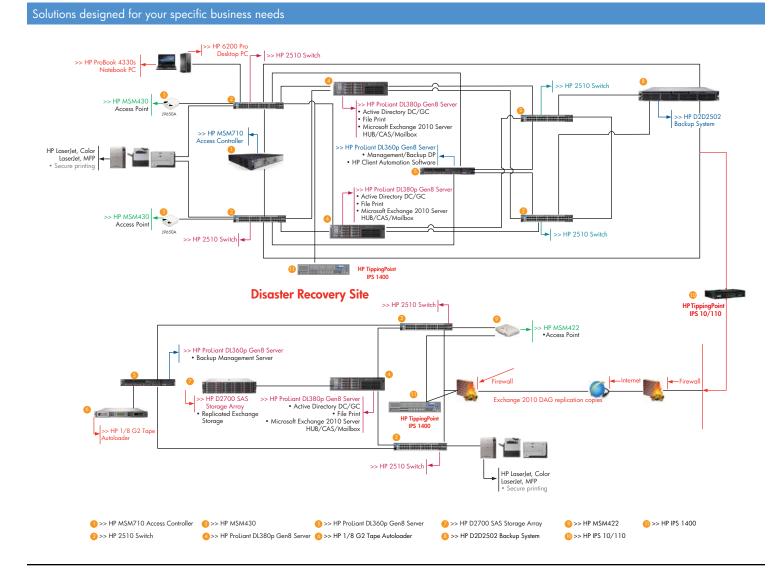
A secure infrastructure is also vital as a small chink in your technology armor can damage reputation, undermine business growth, and drastically affect customers, partners, and employees. Business Protection solutions built with virtualization technologies help midsize businesses mitigate lost productivity, damaged reputations, and downtime.

HP Business Protection Solution for midsize businesses is comprehensive as it consists of an infrastructure of servers, storage, networking, management software, PCs, and printers that help provide high availability, data protection and security, network security, and offsite disaster recovery.

By applying HP's deep experience in delivering virtualization solutions to the area of Business Protection, midsize businesses can benefit from solutions that have been designed and engineered to drive down costs and drive up availability.

HP Business Protection Solution helps customers get the most from their current investments with virtual infrastructure and jump start the realization of higher-level business protection benefits.





Scenario 1: A midsize business with up to 300 users

A midsize business with an IT infrastructure deployed at a single location has wireless and wired LAN connections, and operates on an externally-managed Internet connection. The business demands a reliable and highly available IT infrastructure, a secure network, data protection and security, and offsite disaster recovery.

Challenges that affect business

- Unreliable systems and applications: The infrastructure is largely legacy systems that are unreliable and run on a disparate mix of servers. The infrastructure management capability of the business is limited, and the network is a tangle of cables running under workstations, attached to several low-end hubs/switches that make it less secure, and are more vulnerable to risk. What's more, there is no disaster-recovery resiliency built into the IT infrastructure.
- **Potential disruptions**: The legacy systems and storage devices are not easily upgradable and are prone to frequent outage. Business can be disrupted for hours even if just one server fails. Inconsistent

PC Client software update management can also contribute to downtime and business disruption, leading to the low availability of the technology infrastructure.

- Keeping up with data protection: Data growth coupled with manual, error-prone backup and recovery processes put your organization's data and business at risk. What's more, maintaining more internal and online backups can be both time consuming and costly. They also contribute to bottlenecks and compromise reliability of the entire backup process.
- Lack of data security: Lack of data encryption increases security risks. Additionally, unauthorized access to PCs and printers poses a threat to business-critical data.
- Vulnerable network security: Legacy networks may not be equipped to handle new emerging threats, vulnerabilities in Web applications and compliance requirements.

Solutions that address your challenges

Server configurations

- Three HP ProLiant DL380p Gen8 servers
- One six-core Intel® E5 processor
- 16 GB RAM
- Four 146 GB SAS drives; six 300 GB SAS drives (Exchange, File Print, and guest OS)
- Eight 2 TB 7.2K RPM 3.5 inch SATA hard drives
- Redundant power supplies
- Microsoft® Windows® Server 2008 R2 Enterprise with Hyper-V (four licenses per server)
- Virtual machines for server provisioning/upgrading without downtime
- HP ProLiant DL360p Gen8 server with HP Systems Insight Manager for management and monitoring

Storage configuration

- HP D2700 SAS Storage Array
 - Maximum storage capacity 192 TB SATA or 60 TB SAS
 - Provides higher levels of redundancy and reliability
 - Can grow up to 100 drives; up to two SFF enclosures can be connected together from a single controller port
- 96 LFF drives (192 TB) or 149 SFF drives (74.5 TB) simplify capacity expansion for HP ProLiant servers
- Arrays come standard with 64 snaps and volume copy; an optional 512 snaps license is available for external storage without having to make the full move to SAN or NAS
- Snapshot and Volume Copy Software are included
- <u>HP Storage Mirroring v5.2</u> provides host-based replication and failover. Patented replication and failover technology continuously captures byte-level data changes, as they occur in your production environment, and replicates those changes to one or more servers in any location without geographic limitations

Network configuration

- HP 2510G Managed Switch for reliable Gigabit connectivity
- <u>HP MSM430 Wireless Access Point for easy wireless access</u>
- <u>HP MSM710 Access Controller</u> for guest access and wireless security
- <u>HP TippingPoint IPS \$10/110</u> for threat protection at the perimeter and interior of the business

Data Protection

- HP D2D2502i Backup Systems powered by HP StoreOnce deduplication software can:
 - Reduce storage costs and enable faster online data access by reducing your data storage capacity requirements
 - Easily integrate with your existing environment
 - Give you the ability to scale from 2 TB to 48 TB and realize backup at speeds up to 2.4 TB/hour
- <u>HP Data Protector Express Software</u> provides simple and reliable management of your backup system. Combined with disk storage, tape offers a storage solution with low TCO. Tape is also portable, making it ideal for secure offsite and offline backup, disaster recovery, data compliance, and long-term archiving.
- HP 1/8 G2 LTO-5 Ultrium 3000 SAS Tape Autoloader featuring hardware-based data encryption provides increased capacity and performance over previous generations

PC client security

 Prevent targeted theft, block unauthorized access to key company data, and enforce strong password policies with <u>HP ProtectTools</u> that offer a complete toolset to protect your key <u>business</u> data and assets. Automate key IT processes across the PC lifecycle with HP Client Automation Software, a comprehensive, proven client manageability solution that includes automated and continuous patch management to reduce risk exposure.

Secure printing

• <u>HP imaging and printing security</u> solutions help you prevent unauthorized users from accessing or tampering with data, information, or documents; and protect your clients, customers, business partners, and brand. You can select the right security level for your environment, needs, and budget; track and manage usage; and reduce waste.

Services

• With HP Technology Services, customers can count on certified HP Services professionals to help cut the cost and complexity of implementing and supporting hardware, software, and networking environments across the enterprise. This package maintains a high level of availability: single-point-of-accountability lifecycle support, rapid-response coverage, and availability of technical expertise and training in the latest technology to push service beyond just keeping system running.



Solution benefits

Reduce business disruptions with uninterrupted access to systems, critical business applications, and data with the following features:

- Virtualized servers designed and engineered to drive down cost and drive up availability
- Virtual servers can be easily provisioned without downtime
- Redundant components to help increase reliability
- A second server that provides load balancing and high availability
- HP Systems Insight Manager for proactive monitoring and management
- HP StoreOnce deduplication helps maximize and manage your storage capacity with ease
- Disk backup feature provides instant access to data for fast restores
- Improved management efficiency reduces chances of disruption
- Non-disruptive system upgrades for higher efficiency

Protect customer data, intellectual property, and other confidential information with

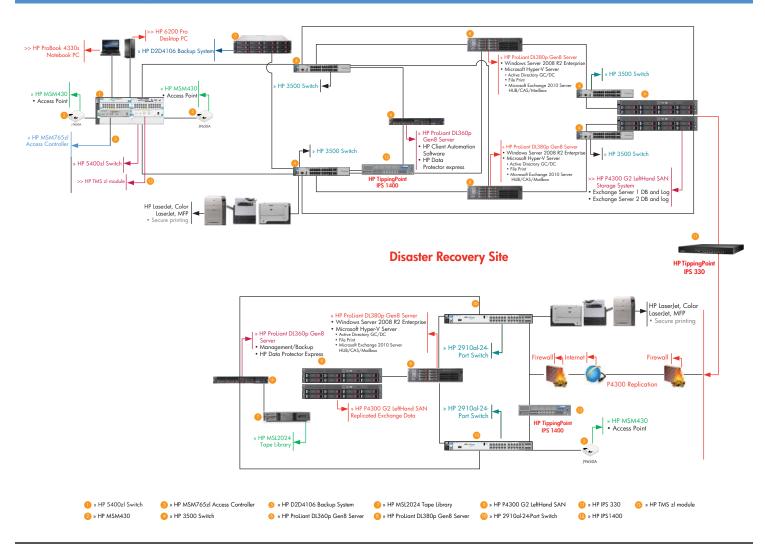
- Enhanced backup reliability with fully automated, high-performance solutions. These simplify day-to-day management of backup and disaster recovery requirements
- Built-in data encryption capabilities on LTO-5 drives
- Disaster recovery in addition to offsite backup tapes for secure archival
- Data Protector Express that provides simple and reliable protection, installation, and operation
- HP ProtectTools that prevent targeted theft by blocking unauthorized access to critical company data and help enforce strong password policies
- Secure printing solutions that encrypt all your business-critical data, and protect your documents and printers from unauthorized access and misuse

Prevent network breaches by using:

- Windows Server 2008 R2 IPSec and Network Access Protection (NAP)
- Application of global threat intelligence
- Blocking threats from attacking applications and operating systems
- Flexible deployment options for both network-embedded and standalone devices Endpoint management and access protections with NAC functionality within our IMC and PMC platforms, thereby placing users into quarantine when they don't meet organizations user-defined security policies.
- Protection for both wired and wireless networks with options for physical, virtual, and cloud environments



HP Standard Care package at office and at DR site



Scenario 2: A midsize business with up to 500 users

A medium midsize business with the primary IT infrastructure deployed at a single location and connected to users across multiple office buildings. The WAN operates at acceptable performance, with some security measures in place. The business demands server reliability, scalable storage solutions, a secure network, systematic data backup and security, and offsite disaster recovery.

Challenges that affect business

- Unreliable systems and applications: Legacy hardware and network infrastructure are prone to frequent outage. Most business lack the ability to manage servers and network appliances remotely. What's more, there is no disaster recovery resiliency built into the IT infrastructure.
- **Predictable data backup**: Data growth compromises the reliability of the entire backup and archival process, and forces you to expand your data protection infrastructure beyond a single location.
- Lack of data security: Backup media is not secure, leaving data vulnerable to misuse or corruption. Additionally, unauthorized access to PCs and printers pose a threat to business-critical data.
- Potential disruptions: Inconsistent PC Client software updates contribute to downtime and business disruption. The business lacks the ability to carry out server or storage upgrade and migration activities without downtime.
- Vulnerable network security: Legacy networks may not be equipped to handle new emerging threats, vulnerabilities in Web applications and compliance requirements.



Solutions that address your challenges

Consolidate and standardize on two HP ProLiant DL380p Gen8 virtual host servers

- Microsoft Windows Server 2008 R2 Enterprise with Hyper-V
 - Redundant virtual machines for:
 - » Active Directory GC/DC
 - » Microsoft Exchange 2010 Server
- » File Print
- Two six-core Intel® Xeon® processors
- 16 GB RAM
- Integrated Lights-Out (iLO 4) Advanced
- Load balancing and distributed high availability between both HP ProLiant DL380p Gen8 servers
- HP ProLiant DL360p Gen8 server with HP Insight Control Management software

HP P4300 LeftHand SAN Solution

- 7.2TB SAS or 16TB MDL SAS starting capacity
- Replication with transparent failover and failback
- Near continuous data availability for applications

Upgrade physical network with integrated wired/wireless solutions

- HP 3500 Series Gigabit Managed Switch for reliable connectivity
- HP 5400zl Core Switch infrastructure for scalable connectivity
- HP MSM430 Wireless Access Point for easy wireless access
- <u>HP MSM765 Access Controller</u> for guest access control and wireless security
- <u>HP TippingPoint IPS \$10/110</u> for threat protection at the perimeter and interior of the business

Disk-to-Disk-to-Tape

HP D2D4106i Backup System powered by HP StoreOnce deduplication software gives you new levels of scalability and performance.

- An end-to-end solution that seamlessly integrates into the enterprise environment and can be deployed from anywhere within the enterprise—from remote offices to the data center
- Scale from 2 TB to 48 TB and backup at speeds up to 2.4 TB/hour
- Add the <u>HP MSL2024</u> LTO-5 Ultrium 3000 SAS Tape Library with hardware-based data encryption for efficiency around concurrent backups or simultaneous backup and restores
- HP Data Protector Express Software with encryption key management protects business-critical data

PC client security

 Prevent targeted theft, block unauthorized access to key company data, and enforce strong password policies with <u>HP ProtectTools</u>, which offer a complete toolset to protect your key business data and assets. Automate key IT processes across the PC lifecycle with HP Client Automation Software, a comprehensive, proven client manageability solution that includes automated and continuous patch management to reduce risk exposure.

Secure printing

• <u>HP imaging and printing security</u> solutions help you prevent unauthorized users from accessing or tampering with data, information or documents; and protect your clients, customers, business partners, and brand. You can select the right security level for your environment, needs, and budget; track and manage usage; and reduce waste.

Services

• With HP Technology Services customers can count on certified HP Services professionals to help cut the cost and complexity of implementing and supporting hardware, software, and networking environments across the enterprise. This package maintains a high level of availability—single-point-of-accountability lifecycle support, rapid-response coverage, and availability of technical expertise and training in the latest technology to push service beyond just keeping system running.



Solution benefits

Reduce business disruptions with uninterrupted access to systems, critical business applications, and data:

- Virtualized servers help midsize business mitigate lost productivity, damaged reputation, and downtime
- Virtual servers can be easily provisioned without downtime
- Redundant components to help increase reliability
- A second server that provides load balancing and high availability
- HP Systems Insight Manager for proactive monitoring and management
- Resilient Offsite disaster recovery
- HP StoreOnce deduplication enhances storage capacity
- Disk backup for instant access to online data for fast restores
- Improved management efficiency that reduces chances of disruption
- Non-disruptive system upgrades

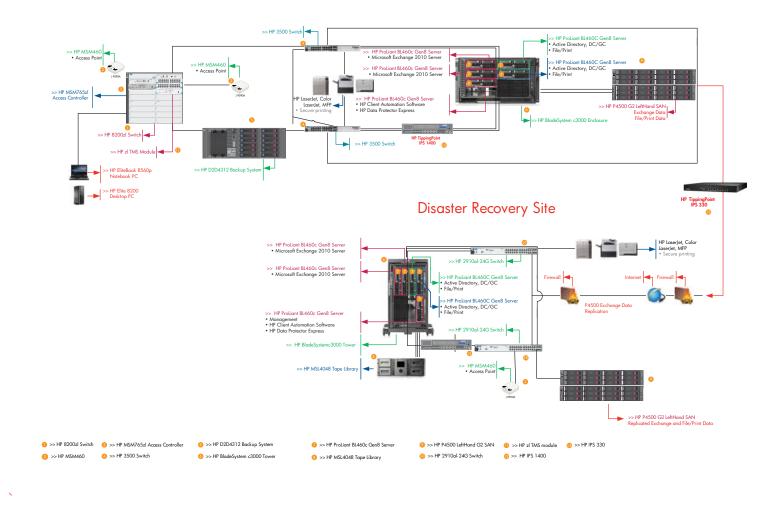
Protect customer data, intellectual property, and other confidential information. This can be done when you:

- Enhanced backup reliability with fully automated, high-performance solutions to simplify day-to-day management of backup and disaster recovery requirements
- Built-in data encryption capabilities on LTO-5 drives
- Data Protector Express for simple, reliable protection with fast, easy installation and operation
- HP ProtectTools to prevent targeted theft by blocking unauthorized access to critical company data and helping enforce strong password policies
- Secure printing solutions to encrypt all your business-critical data, and protect your documents and printers from unauthorized access and misuse

Prevent network breaches

- Flexible and robust network access control, unified across wired and wireless.
- Traffic segmentation and filtering with virtual LANs (VLANs), Access control lists based on user identity
- Guest wireless access without compromising security and manageability
- Windows server
- Intrusion detection and prevention system

HP Standard Care at Office and HP Optimized Care for DR site



Scenario 3: A midsize business with up to 1000 users

A large midsize business with the primary IT infrastructure deployed at a single location and connected to users across multiple, remote offices. The WAN performance is acceptable, with good security measures in place. The business demands high server reliability, superior wireless/wired network performance, network security, secure data backups, and offsite disaster recovery.

Challenges that affect business

- Unreliable systems and applications: The IT infrastructure includes varying generations of servers, with limited management capabilities. Servers often don't have the required redundancy components, which lead to low performance and availability. What's more, there is no offsite disaster recovery resiliency built into the IT infrastructure.
- **Potential disruptions**: The existing storage architecture cannot be easily expanded without having to rebuild it. Any updates or migration leads to downtime. Inconsistent PC Client software updates also contribute to downtime and business disruption.
- **Complex deduplication solutions**: While disk backup can help automate and enhance your backup processes for fast restores, implementing it can be complex, especially when you need to quickly and easily scale to meet your business requirements.
- Lack of data security: Data backups and archiving of critical business data without encryption is a security risk. Additionally, unauthorized access to PCs and printers poses a threat to business-critical data.
- **Vulnerable network security**: Company-wide security policies that are difficult to manage. Old, slow switch technology without a single, cohesive network management platform adds to the risk.

Solutions that address your challenges HP BladeSystem c3000

- Server blade systems have the ability to combine server, storage, network, power, and management capabilities into an integrated system. Server blade require less floor space, less power, and cost less to operate when compared to rack-mounted servers.
- These servers accommodate eight multi-core dual processors, half-height blades (HP ProLiant BL460 Gen8 servers), or four full-height blades in only 6U of storage space.
- These servers have a centralized administration with Onboard Administrator.
- Up to three I/O fabrics with multi-terabit backplane to support current and future I/O connections
- 6 Gb/s SAS connectivity provides a high-performance storage solution using an "HP Smart Array P721m controller and HP 6Gb SAS BL switches"
- <u>HP Storage Mirroring v5.2</u> provides host-based replication and failover. Patented replication and failover technology continuously captures byte-level data changes as they occur in your production environment and replicates those changes to one or more servers in any location without geographic limitations.

Storage configuration

HP P4500 LeftHand SAN Solution

- 14.4TB SAS or 60TB MDL SAS scalable capacity
- Replication with transparent failover and failback
- Continuous data availability for applications

Upgrade your physical network

- HP 3500-24 Intelligent Gigabit Managed Switch
- HP 8200 Switch infrastructure for flexible and reliable connectivity
- HP MSM460 Wireless Access Point for easy wireless access
- HP MSM765 Access Controller for centralized access management
- HP TippingPoint IPS 1400

Disk-based data backup and restore:

<u>HP D2D4312 Backup Systems powered by HP</u> StoreOnce deduplication software

- Serves as a single architecture for data deduplication across your organization
- Reduces storage capacity requirements
- Scales from 2 TB to 48 TB and backup at speeds up to 2.4 TB/hour
- HP MSL4048 LTO-5 Ultrium 3000 SAS Tape Library for tape backup that provides offsite disaster recovery, while helping you meet the requirements of various regulatory policies for long-term data retention
- <u>HP Data Protector software</u> can simplify backup and recovery operations for environments ranging from single server to larger, distributed infrastructures

PC client security

 Prevent targeted theft, block unauthorized access to key company data, and enforce strong password policies with <u>HP ProtectTools</u>, which offer a complete toolset to protect your key business data and assets. Automate key IT processes across the PC lifecycle with HP Client Automation Software, a comprehensive, proven client manageability solution that includes automated and continuous patch management to reduce risk exposure.

Secure printing

• <u>HP imaging and printing security</u> solutions help you prevent unauthorized users from accessing or tampering with data, information or documents; and protect your clients, customers, business partners, and brand. You can select the right security level for your environment, needs, and budget; track and manage usage; and reduce waste.

Services

 <u>HP Technology Service</u> with convenient lifecycle support packaged solutions and industry-leading expertise, offer customers more efficient product and solution deployments and help them realize proactive management practices plus rapid response coverage to ensure continuous availability of the server, storage, and network solutions systems that the business relies on every day.



Solution benefits

Reduce business disruptions with uninterrupted access to systems, critical business applications, and data

- High-density Blade server solution that offers consolidation right from the start
- A good fit for remote sites
- Fully redundant design with no single point of failure
- Provides both Local and remote hardware management
- Lowers cost per server
- Lowers power consumption
- Seamless integration of Ethernet, FC, InfiniBand, iSCSI, and SAS fabrics
- Accommodates a large assortment of server, storage, and blades
- A single BladeSystem enclosure can connect to both a P4500 G2 SAN and an MSA2000sa
- Scalable disk-based backup to address both data growth and rapid data restores
- Offsite disaster recovery
- Integrated wired and wireless network solution with centralized access management
- Improved management efficiency reduces chances of disruption
- Non-disruptive system upgrades

Protect customer data, intellectual property, and other confidential information

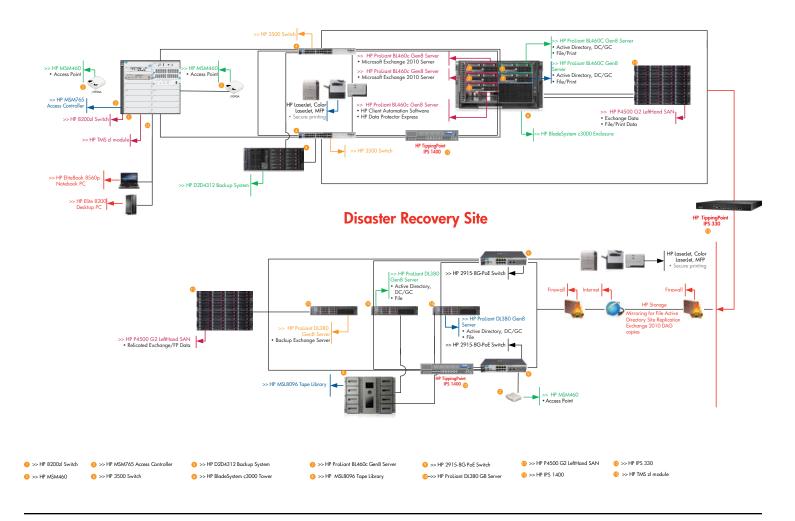
- Enhanced backup reliability with fully automated, high-performance solutions to simplify day-to-day management of backup and disaster recovery requirements
- Built-in data encryption capabilities on LTO-5 drives
- Data Protector software for comprehensive protection through a single interface
- HP ProtectTools to prevent targeted theft by blocking unauthorized access to critical company data and helping enforce strong password policies
- Secure printing solutions that encrypt all your business-critical data, and protect your documents and printers from unauthorized access and misuse

Prevent network breaches

- HP TippingPoint's Secure Virtualization Framework allows customers to apply the same level of security into their virtual environment that exists within their physical environment
- HP Networking Platform for centralized network security policies and access control
- Windows Server 2008 R2 IPSec and Network Access Protection (NAP)
- Guest wireless without compromising security and manageability
- Scalable and secure wireless access management



HP Optimized Care package at Office and DR site



Scenario 4: A midsize business with up to 2500 users

A large midsize business with the primary IT infrastructure deployed at a single location and connected to users across multiple, remote offices. The WAN performance is acceptable, with good security measures in place. The business demands high server reliability, superior wireless/wired network performance, network security, secure data backups, and offsite disaster recovery.

Challenges that affect business

- Unreliable systems and applications: The IT infrastructure includes varying generations of servers, with limited management capabilities. Servers often don't have the required redundancy components, which lead to low performance and availability. What's more, there is no offsite disaster recovery resiliency built into the IT infrastructure.
- **Potential disruptions**: The existing storage architecture cannot be easily expanded without having to rebuild it. Any updates or migration leads to downtime. Inconsistent PC Client software updates also contribute to downtime and business disruption.
- **IT Sprawl**: Dealing with sprawl associated with data explosion includes utilization of deduplication technology for your backup and restore requirements. However, first-generation solutions introduce complexity that increases with the need to scale.
- Lack of data security: Data backups and archiving of critical business data without encryption is a security risk. Additionally, unauthorized access to PCs and printers poses a threat to business-critical data.
- **Vulnerable network security**: Company-wide security policies that are difficult to manage. Old, slow switch technology without a single, cohesive network management platform adds to the risk.

Solutions that address your challenges HP BladeSystem c3000

- Server blade systems have the ability to combine server, storage, network, power, and management capabilities into an integrated system. Server blades require less floor space, less power, and cost less to operate when compared to rack-mount servers
- These servers accommodate eight multi-core dual processors, half-height blades (HP ProLiant BL460 Gen8 servers), or four full-height blades in only 6U of storage space
- Centralized administration with Onboard Administrator
- Up to three I/O fabrics with multi-terabit backplane to support current and future I/O connections
- 6 Gb/s SAS connectivity provides a high-performance storage solution using an HP Smart Array P721m controller and HP 6Gb SAS BL switches

HP ProLiant DL380p Gen8 server

- Up to two six-core or eight-core Intel Xeon processors
- Up to 768 GB of DDR3 Memory 24 DIMM slots
- Standard (8) small form factor (SFF) hot-plug drive bays to support SAS, SATA, and SSD drives
- Optional second drive cage for additional (8) SFF drive bays (total 16); eight large form factor SAS/SATA hard drive bay model is also available through CTO
- <u>HP Storage Mirroring v5.2</u> provides host-based replication and failover. Patented replication and failover technology continuously captures byte-level data changes as they occur in your production environment. It then replicates those changes to one or more servers in any location without geographic limitations.

Storage configuration

HP P4500 LeftHand SAN Solution

- 14.4TB SAS or 60TB MDL SAS starting capacity
- Replication with transparent failover and failback
- Continuous data availability for applications

Upgrade your physical network

- HP 3500-24 Intelligent Gigabit Managed Switch
- <u>HP 8200zl Core Switch infrastructure</u> for flexible and reliable connectivity
- HP MSM460 Wireless Access Point
- HP MSM765 Access Controller for centralized access management

HP P4500 G2 60TB MDL SAS Scalable Capacity SAN Solution

- Enhanced for database and email applications, as well as virtualized servers
- Pay-as-you-grow option
- Mitigate single points of failure across the SAN
- Data remains online during site failures
- Superior availability and disaster recovery
- Volume Shadow Copy Service (VSS) backups
- Remote copy
- Scalable performance
- Easy to manage SAN for virtualized environments
- Thin provisioning
- No disruptive upgrades

Comprehensive data protection

HP D2D4312 Backup Systems powered by HP StoreOnce deduplication is designed to serve as a single architecture for data deduplication across your organization.

- Scale from 2 TB to 48 TB and backup at speeds up to 2.4 TB/hour
- Up to 2x price/performance
- Get one duplication approach for unified management

Add data archival with trusted tape backup technology to provide offsite DR protection, while helping you meet the requirements of various regulatory policies for long-term data retention. <u>HP MSL8096</u> <u>LTO-5 Ultrium 3280 Fibre Channel Tape Library</u> gives you increased efficiencies with concurrent backups or simultaneous backup and restores.

HP Data Protector software enhances and streamlines application backup scheduling to meet service level agreements, while being able to comply with RPO and RTO.

PC client security

 Prevent targeted theft, block unauthorized access to key company data, and enforce strong password policies with <u>HP ProtectTools</u>, which offer a complete toolset to protect your key business data and assets. Automate key IT processes across the PC lifecycle with <u>HP Client Automation Software</u>, a comprehensive, proven client manageability solution that includes automated and continuous patch management to reduce risk exposure.

Secure printing

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Services

• <u>HP Technology Service</u>: With convenient lifecycle support, packaged solutions, and industry-leading expertise, we offer customers more efficient product and solution deployments and help them realize proactive management practices plus rapid response coverage to ensure continuous availability of the server, storage, and network solutions systems that the business relies on every day.

Solution benefits

Reduce business disruptions with uninterrupted access to systems, critical business applications, and data

- High-density server solution that offers consolidation right from the start
- A good fit for remote sites
- Fully redundant design with no single point of failure
- Provides both Local and remote hardware management
- Lowers cost per server
- Lowers power consumption
- Seamless integration of Ethernet, FC, InfiniBand, iSCSI, and SAS fabrics
- Accommodates a large assortment of server, storage, and blades
- A single BladeSystem enclosure can connect to both a P4500 G2 SAN and an MSA2000sa
- Scalable, disk-based backup for addressing both data growth and rapid restore for faster online data access
- Offsite disaster recovery

- Integrated wired and wireless network solution with centralized access management
- Improved management efficiency reduces chances of disruption
- Non-disruptive system upgrades

Protect customer data, intellectual property, and other confidential information

- Enhanced backup reliability with fully automated, high-performance solutions to simplify day-to-day management of backup and DR requirements
- Built-in data encryption capabilities on LTO-5 drives
- Data Protector software for comprehensive protection through a single interface
- HP ProtectTools to prevent targeted theft by blocking unauthorized access to critical company data and helping enforce strong password policies
- Secure printing solutions that encrypt all your business-critical data, and protect your documents and printers from unauthorized access and misuse

Prevent network breaches

- HP TippingPoint's Secure Virtualization Framework allows customers to apply the same level of security into their virtual environment that exists within their physical environment.
- HP Networking Platform for centralized network security policies and access control
- Windows Server 2008 R2 IPSec and Network Access Protection (NAP)
- Guest wireless without compromising security and manageability
- Scalable and secure wireless access management

The most comprehensive portfolio for business protection

Business protection solutions stretch across your entire IT infrastructure and includes your servers, storage, network, PCs, and printers. HP Business Protection Solutions for midsize businesses leverage our comprehensive product and services portfolio covering these key domains and effectively addressing your requirements for high availability, data protection and security, network security, and offsite disaster recovery.

HP ProLiant Gen8 servers—redefining experiences

When customers select HP ProLiant Gen8 products as the core of their infrastructure, they are choosing to run their business with confidence. HP ProLiant Gen8 server architecture is fully integrated and engineered to simplify deployment and ease system management. With HP shipping a server every 11 seconds, HP has been the market share leader for 16 years and HP ProLiant Gen8 servers deliver new levels of service and support with self-identification, continuous diagnostics, and intelligent, unified management.

HP Storage solutions are built on a common, modular infrastructure, which leverages our leadership in server, storage, software, and networking. This design integration gives you new levels of simplicity, integration, and automation. The convergence of these technologies enables you to accelerate new application deployments, improve efficiency through consolidation and virtualization, and enhance data availability.

Manage, protect, and grow your business efficiently with HP Converged Infrastructure

For a small or midsize business today, IT efficiency is critical. But, so is delivering more business value. Finding a balance between the two is difficult. You also have to consider the realities of data growth and complexity, business disruptions, communication breakdowns, increased competition, consolidation, and acquisitions.

With so much going on and resources so stretched, it's difficult to tackle challenges both efficiently and strategically. Regardless of the challenge, one imperative trumps them all: Do more with less.

What's more, it also echoes a revolution taking place in IT. Virtualization, cloud-based software and services, and the convergence of new and existing technologies are making it possible for us to get more done with fewer resources. Costly IT silos are being transformed into end-to-end infrastructures that integrate technical components, automate processes, and simplify technology from purchase to retirement.

At HP we call this a "Converged Infrastructure." And, it's all about delivering modular, standards-based technologies designed for convergence. The result is an infrastructure that simplifies, integrates, and automates it all—Storage, networking, servers, management software, even power and cooling. And, the efficiency gains allow you to shift the bulk of your IT budget from operations to business innovations.

The components of an HP Converged Infrastructure deliver the value you need today by allowing you to manage, protect, and grow your business through each pain point and milestone.

It's the future of IT—available today for your business. HP is a recognized leader of the IT convergence movement. With the world's largest technology portfolio, we have the building blocks and the resources to pull it all together to provide a Converged Infrastructure solution that meets your specific needs. From your first virtualized server to predefined solutions that target specific business milestones, we can help you achieve the benefits of convergence wherever you are on your infrastructure journey.

Manage

Your goal is to work smarter not harder. Maybe you need to streamline a process or reduce an expense. Or maybe you're thinking bigger, like increasing overall efficiency and cutting costs across the board. Whether your needs are big or small, HP has a solution designed to help you do more with less.

Protect

What keeps you up at night? Is it the safety of your customers' data? That new compliance rule? The possibility of major system failures? You've got enough on your mind and your plate. Let HP lighten your load with hardware, software, services, solutions, and support that help you keep your business running more smoothly and securely.

Grow

Growth isn't just about getting bigger, it's about getting better. From reaching new customers, to launching a product or service, to opening a new office—if you're ready to make your next move, HP is ready to help with cost-effective strategies and solutions designed to help you grow your opportunities and your revenue.

Free your network with HP Networking Solutions

Does your business use VoIP, wireless, or video? Or do you simply need to give customers, vendors, and employees safe easy access to the Internet and your network? Escape the tyranny of proprietary networks with the first place vendor in SMB networking hardware² and enhance business agility—with a Unified Communications and Collaboration-ready IT infrastructure.

HP Financial Services

HP Financial Services provides innovative financing and financial asset management programs to help customers cost-effectively acquire, manage, and ultimately retire their HP solutions.

HP Financial Services' Pre-Owned program provides HP equipment that is tested, and pre-configured to your specifications. All eligible HP Financial Services Certified Pre-Owned Technology is backed by a one year warranty delivered by HP Technology Services. HP Financial Services offers Converged Storage Financing, a utility-like structure that can help you prepare for change—even when that change is hard to predict. Converged Storage Financing enables you to acquire the capacity you need, as you need it, reducing the risk of out-growing capacity, or over-paying for gigabytes that are not yet needed.

For more information on these services, visit: www.hp.com/go/hpfinancialservices

HP Services

Your business needs to keep up with economic changes. In order to stay ahead, you need services and support that can scale in the same way your business does. HP Services can help you manage and evolve your branch office environment so that you can easily handle growth, decrease operational costs, and protect data, while being able to reduce risk. Whatever your needs, you can rely on HP and our Authorized Channel Partners to work with you for better results.

HP Installation Services: Provide initial installation of HP branded products—hardware and software, as well as HP-supported products from other vendors.

HP Support Services: Provide integrated hardware and software support services designed specifically for your technology. HP Services engineers deliver reactive onsite hardware support and over-the-phone software support around-the-clock.

Additionally, **HP Care Pack Services** provide a portfolio of packaged, affordable, proven services that are scaled to your needs. You get complete technology lifecycle support—and expert advice—at an affordable price.

For more information, visit: <u>www.hp.com/go/carepack</u> www.hp.com/hps/support

² 2010 Channel Champions: 10 Best Vendors for Technical Satisfaction <u>http://www.crn.</u> <u>com/it-channel/224600471;jsessionid=1MQ JKQKRDSDZPQE1GHOSKHWATMY32</u> JVN?pgno=4



Understand how you can shield your business from system downtime, network security breaches, and data losses, visit: www.hp.com/go/bizprotect.

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