

Deliver more efficiency and productivity with modernized data protection





Today's data centers must meet "always-on" business needs. New data protection solutions, combined with purpose-built hyper-converged systems, are making a big difference.

IT departments are increasingly adopting converged infrastructures for a wide variety of workloads in the data centers, remote offices, and virtualized environments. Converged systems offer significant improvements in deployment, scalability, management, and operating costs when measured against legacy infrastructure stacks, creating a groundswell of new installations.

More recently, hyper-converged solutions have taken it to the next level by combining hardware-level integration of different components—servers, storage, and networking, for instance—with centralized management tools and automated deployment. This move to hyper-convergence is gaining steam with IT organizations looking for extremely high scalability in a cost-efficient package in order to keep up with data-intensive demands in Tier-1 workloads. This is particularly true for enterprises that have embraced virtualization and software-defined storage.

Tier-1 workloads require high availability for business continuity, better performance for meeting SLA requirements, and efficient data protection solutions to support higher user productivity. As backup windows continue to shrink, recovery time and recovery point objectives (RTOs and RPOs) are becoming more unforgiving. Only an integrated solution can provide the necessary capabilities to meet these demands. The integration of primary storage and data protection software allows the solutions to work in concert to achieve increased efficiencies over traditional storage and backup solutions.

The need for more efficient IT environments is the "always-on" business model. Most companies are trying to support a higher number of real-time customer interactions, with more than 55 percent of organizations doing business across multiple time zones.¹

¹ **Five Considerations for Increasing the Availability of the Always-On Business,**
Enterprise Strategy Group, May 2014



Around-the-clock availability of IT and end-user applications is more pertinent now than ever before. With more than 50 percent of employers demanding higher productivity of employees during irregular work hours, almost any instance of downtime is unacceptable and carries a heavy financial, operational, and reputational burden.²

Add in the stark realities of compliance mandates, legal discovery, and disaster recovery, and it's clear that traditional approaches to protecting data and ensuring availability of applications and data need to be modernized. In fact, the emergence of an "availability gap" represents one of the biggest threats to organizations' performance and users' productivity. This availability gap—the delta between what organizations need in terms of fast, reliable, and secure access to applications, data, and services and what systems actually provide—must be identified and closed. Doing so also requires closer, continuous monitoring and reporting to ensure greater visibility into infrastructure behavior and to spot problems before they have an impact.

As a result, new innovative tools and integrated philosophies are being evaluated and implemented to encompass a broader array of data protection defenses that are more efficient, reliable, and flexible than legacy backup products. In fact, modernized approaches focus less on the actual backing up of data and put much more emphasis on the end goal: ensuring that applications and data are available when and where needed.

² **Five Considerations for Increasing the Availability of the Always-On Business,**
Enterprise Strategy Group, May 2014



By integrating primary storage and availability software, customers can ensure greater visibility into the status of their infrastructure and the availability of key resources. To help sort out the confusion, here are some of the most frequently asked questions and answers.

1. Why should I consider a software-defined storage solution for my infrastructure?

While the need to trim operating expenses is a driving force behind virtualization, cost-effectiveness and increased ROI are not the only benefits of software-defined storage. Converging storage services within your server infrastructure offers your business five value-adds: simplicity, scalability, availability, efficiency, and data recovery. Core to an IT administrator's storage needs is the demand for simplicity. Siloed storage can be transformed into a mixed, shared-storage architecture that you can manage centrally through a single pane of glass. Gain the flexibility to grow and scale storage on demand with resilient, converged storage, providing continuous availability across one or multiple sites for business continuity. A converged solution allows you to deploy applications quickly, with better performance, while using less of the data center's limited space, power, and cooling resources. And, in the event of hardware failures due to human error or even natural disasters, being able to quickly restore and recover data for mission-critical business activities provides valuable protection.

2. How does the increased adoption of infrastructure virtualization impact data protection?

While virtualization has provided many benefits to IT organizations, it also has important implications for data protection. The phenomenon known as "virtual sprawl" has put pressure on organizations to validate that backup and recovery activities have actually been executed fully. In fact, one study noted that validating both backup and recovery success were the two most important data protection challenges related to virtualization.³ This has become particularly important as Tier-1 workloads have increasingly been migrated to virtual infrastructures, along with the institution of more stringent service-level agreements to close that availability gap.

Additionally, virtualization may impact response times for troubleshooting and remediating problems, raising the bar for organizations to increase their visibility into system performance and application availability. Finally, another potential data protection challenge centers on the shift in IT skills away from deep specialization and toward a more generalist approach. This means that data protection, backup, and recovery in virtualized settings needs to rely less on manual intervention and more on software-based solutions and automation tied to well-defined policies.

³ **Five Questions For Every Modern Data Center**
Veeam (Conducted by Enterprise Strategy Group), 2014



3. What factors contribute to the “availability gap?”

The undeniable reality of global, 24x7 business operations means that organizations no longer have the luxury of taking down systems for prolonged periods of time for backup, maintenance, technology refresh, or patching. Systems, applications, data, and services must all be available around the clock, and typically on a moment’s notice, in order to meet the demands of everything from e-commerce to global supply chains.

Additionally, more and more workloads now are considered mission-critical, putting added pressure on organizations to ensure real-time availability, even with unforeseen demand spikes that ordinarily would sap system performance and impact access. Not only are service-level agreements becoming more stringent—often tied to issues such as corporate governance policies and regulatory compliance—but RTO/RPO windows are becoming tighter. There also are increased security breaches that can damage system performance or take those systems offline completely. As a result, the economic impact alone of availability interruptions can range from problematic to catastrophic. Add in the damage to an organization’s relationship with customers, the resultant brand damage caused by availability issues, legal exposure, and the loss of worker productivity, and it’s no wonder organizations are looking for better solutions.

4. Why do I need to modernize my backup systems that have been working fine so far?

Issues such as the availability gap and the fact that many organizations still rely on legacy, hardware-based backup solutions mean that there is greater risk than ever from shortcomings in backup systems and processes. “Backup was never an easy process, but data growth and the need for near-constant uptime have put a real strain on backup administrators,” according to SearchDataBackup.com. “As a result, some administrators are on the hunt for alternatives to traditional backup that offer better backup and restore performance.”⁶

The increased number, diversity, and frequency of challenges such as cybersecurity, compliance, IT consumerization, BYOD, virtualization, unstructured data growth, cloud services, and IT budget squeezes mean data backup solutions must provide tighter integration of backup software with newer, more efficient hardware options such as converged infrastructure. After all, it is important to keep in mind that backup—while always important in itself—is just one part of ensuring availability. Backup must be part of a comprehensive strategy for availability that includes archiving, recovery and restore under the full spectrum of business continuity.

⁶ “Improve Data Protection Through Zero Backup,” SearchDataBackup.com, September 2014



5. What features and capabilities should we look for in a modernized data protection solution to reduce RTOs and RPOs?

First and foremost, data protection solutions need to be designed to operate in virtualized settings. Server and storage virtualization are now facts of life in data centers, desktop virtualization is on the rise, and application virtualization—even for Tier-1 applications—is fast taking hold in the enterprise. This means that backup solutions must support a VM-centric architecture, such as vCenter console integration, instant restart of VMs from the backup storage pool and granular file recovery from VM backups.

Another key requirement is higher levels of fault tolerance and redundancy to eliminate availability challenges and to ensure fast recovery and restore of production system data. Today's systems must be able to extend data protection capabilities to a secondary physical backup site, or to a cloud-based service. The days of monolithic, single-site backup infrastructure are long gone. Other requirements should include interoperability with SAN-based snapshots, software-based replication, recovery in place, continuous data protection, and support for a range of cloud environments—public, private, and hybrid, both onsite and at remote locations.

6. How does the partnership of Veeam and Hewlett Packard Enterprise help deliver a modernized approach to data protection?

Today's demanding data protection requirements must be based on tight integration of backup software and hardware infrastructure. For years, Veeam has been a leading supplier of backup software, while HPE has been widely acknowledged as a top-tier storage infrastructure supplier for enterprises of nearly all sizes. They have long had a tight partnership to work in concert for enterprise backup solutions, and the latest iteration of their partnership focuses on hyper-converged data protection solutions. They have collaborated to build and deliver solutions designed specifically for virtualized environments, providing instant VM recovery for fast RTOs and RPOs. Their collective commitment to converged storage—linking primary, secondary, and backup in a tightly integrated architecture—makes them an ideal choice for organizations looking for modernized solutions to data protection that ensure high availability. Their combined technical talents are embodied in such features as easy and fast recovery from snapshots, tiered data protection, and data replication with WAN acceleration—all in formats that help to manage operational costs such as power, cooling, real estate and IT staff time. Veeam's partnership with HPE spans a wide range of HPE's market-leading infrastructure, including HPE 3PAR StoreServ, StoreVirtual arrays, and HPE Hyper Converged Systems.



Conclusion

Traditional approaches to backup may have performed well in the days before always-on business requirements, but new solutions clearly are necessary today. Backup is far more than simply ensuring that copies of production system data are preserved and made available to users; it's now an essential component in bridging the availability gap that has arisen due to more demanding workloads and the need for faster recovery and restore of data and services after outages or interruptions.

New hyper-converged solutions, based on virtualization-centric backup software and converged hardware platforms, represent an important breakthrough for organizations operating in an always-on mode of business. IT organizations faced with tighter budgets, overworked staff, and heightened user expectations for system availability increasingly are turning to hyper-converged backup solutions that transform data centers cost-efficiently and with a smaller management footprint.

Partnerships between leading backup software and infrastructure suppliers such as Veeam and Hewlett Packard Enterprise represent a powerful, synergistic approach to turning data protection and backup from series of disconnected, manual-based steps to an interconnected set of automated processes that promote availability and ensure secure, reliable access to important systems, applications, data and services.

For more information on how to modernize your data protection framework, go to: [**veeam.com/hp-veeam-availability-solution.html**](https://veeam.com/hp-veeam-availability-solution.html)

Learn more at
hpe.com/info/hc



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