

**Hewlett Packard
Enterprise**

Brochure



How hyper-convergence can help IT

The next wave of virtualization

What is hyper-convergence?

The next step in the evolution of IT architectures brings together all the goodness of converged infrastructure, virtualization, and software-defined storage technologies. Everything you need—including servers, storage, virtualization software, networking, and management—is fully integrated and packaged together into a single, yet highly available, appliance.

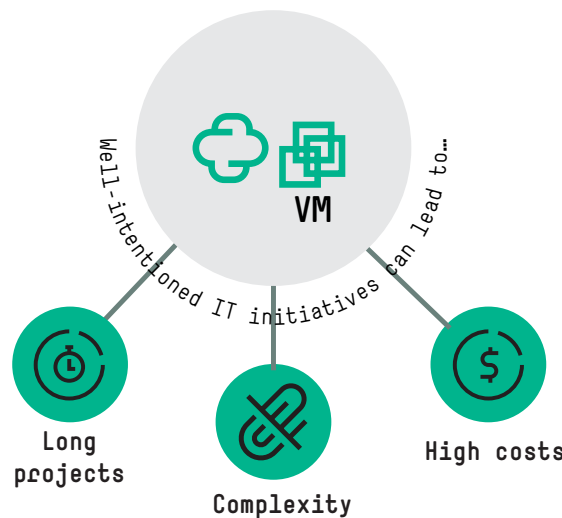
Business is asking IT to change

Around the world, IT professionals are coming to the realization that legacy architectures can't accommodate today's business demands—such as new cloud delivery models, dramatic data growth, and the need to roll out new services in a matter of days. In this new era, the status quo is no longer an option.

In response to these business requirements, many IT organizations have launched server virtualization and cloud computing projects to achieve improved service delivery and increased IT agility. However, for some organizations, ambitious virtualization, cloud, and infrastructure initiatives have led to lengthy projects, increased management complexity, and higher operational costs.

The old ways don't work anymore, but the new ways aren't necessarily easy. What's really needed is a new type of solution where everything just works together.

This is where hyper-convergence comes into play. It provides many of the benefits of a virtualized data center in a compact, cost-effective system that is easy to deploy, manage, and support.



¹ IDC, Abstract to "IDC MarketScape: Worldwide Hyperconverged Systems 2014 Vendor Assessment," December 2014.

“As businesses embark on a transformation to become data-driven entities, they will demand a data infrastructure that supports extreme scalability and flexible acquisition patterns and offers unprecedented economies of scale. Hyperconverged systems hold the promise and the potential to assist buyers along this data-driven journey.”

– Eric Sheppard, research director Storage Software, IDC¹

How hyper-convergence helps



Deployment is fast

With hyper-convergence, everything is preconfigured, pre-installed, ready to run in minutes at the press of a button, and designed to scale—with no need for a separate SAN.

With turnkey hyper-converged systems, anyone from IT generalists to experienced admins can quickly deploy complete IT environments, going from power-on to provisioning in as little as 15 minutes. And they can do it all without the assistance of outside system integrators.



Scalability is linear

Facing unpredictable growth? With hyper-converged systems, you're covered. The systems scale out in a linear manner. Just add another system and seamlessly add new nodes to a common cluster. The hyperconverged architecture integrates grid software that automatically discovers and adds new nodes to the cluster, delivering additional compute and storage resources with the addition of each new module.



Management is straightforward

Thanks to the integration of all components in a simple chassis with common management, there is no need for a team of specialists with expertise in virtualization, storage, servers, and networking.

Compared to systems that require a lot of discrete components, including an associated SAN with its own switches, the simplified nature of hyper-converged systems can help you reduce capital and operational expenses. Everything is now in one easily-managed, easily-serviceable, small-footprint box that helps you pack more computing and storage capacity into your valuable data center space. Even better, a single vendor can support the entire system—including both hardware and software.²

² With the HPE ConvergedSystem 200-HC, HPE provides system assurance and worldwide support for both HPE hardware and HPE and VMware software.

What could hyper-convergence do for you?

Business benefits

From a business perspective, the benefits of hyper-converged systems include reduced upfront capital and operational costs, thanks to fewer components than are required in conventional systems; a small footprint; simplified management; and efficient power and cooling.

Better still, you shouldn't need a host of IT specialists to keep a hyper-converged system up and running. An IT generalist will most often be able to bring it online and manage it on a day-to-day basis.

IT benefits

On the technology side, hyper-converged systems make day-to-day life easier for your IT professionals. They no longer have to manage disparate server, storage, and networking systems, each with its own management tools. The infrastructure includes built-in resiliency and is easy to set up, easy to learn, easy to service, and easy to scale. And just because the system is small doesn't mean it's not mighty. Four powerful servers, all-inclusive enterprise-class data services, and inherent data protection provide the same level of service as traditional IT solutions. Day to day management is simple with VMware vCenter—no need to learn a new console.

Benefits for all

Everybody—on both the business and IT sides—can benefit from the increased agility that comes with IT systems that can be brought online easily and scaled out in a linear manner to support the needs of a dynamic business. When new resources are needed, a hyper-converged system can be up and running in 15 minutes from power-on to provisioning your first VM.³

In a survey of 20 companies at different convergence maturity levels, IDC found:

“a marked correlation between higher levels of convergence and reduced IT costs per unit of workload, faster deployment, optimization of IT staff, and reduced downtime.”⁴

³ Based on internal testing in July 2015 of an HPE ConvergedSystem 200-HC StoreVirtual with OneView InstantOn version 1.0.1.

⁴ IDC White Paper, sponsored by HPE, “Measuring the Business Value of Converged Systems,” December 2014.



Hyper-converged use cases

To illustrate the potential of hyper-convergence, let's walk through a few common use cases.

- Remote locations
- Lines of business
- Midsize businesses

Remote locations

Businesses with remote locations benefit from standardized systems that are easy to deploy, manage, and scale, with the work handled by IT generalists. To keep pace with growing and sometimes unpredictable workloads, remote sites need systems that can scale quickly and seamlessly. And to maintain business continuity, they need systems that allow centralized backup, recovery, and replication of data, following standard configurations and corporate processes. Hyper-converged systems meet all of these needs.

Let's take the example of a company with development and test teams in office locations scattered around the world. A common solution that can be sourced worldwide allows the company to utilize the same processes for deploying, managing, and supporting its systems in remote locations. The company can also standardize its backup and recovery processes and leverage the existing resources in the corporate data center.

Developers in different locations also benefit from the capabilities of the hyper-converged system, since each team can have its own dedicated VM for projects. And as their projects grow, developers can quickly add infrastructure resources to maintain excellent response times. Better still, the simplicity of hyper-converged systems allows IT generalists to handle the day-to-day systems maintenance and management work in the remote locations. That helps the company reduce operating costs while meeting the full range of computing and storage needs at the remote sites.

Lines of business

In many large organizations, lines of business or intra-company departments need a simple way to handle application services without a lot of IT overhead and without reducing performance expectations.

Let's take a finance department that routinely deals with quarter-end report generation. As the data grows, the reports take longer and longer to process. This finance department also has new projects in the planning stage, including an advanced accounting system that could need to be rolled out within the quarter.

A hyper-converged system is a perfect solution to support new applications or services, as it can be easily ordered and set up quickly with pre-scripted configuration tools. The ability to quickly roll out a fully functioning IT environment could allow the company to deploy its new accounting system before the end of the quarter, generate reports in a timely manner, and avoid the end-of-quarter chaos of the past.



Midsize businesses

Now let's take the case of a midsize business that needs to expand its server and storage capacity and wants to avoid taking on a lengthy, costly IT project. A hyper-converged system is essentially a turnkey data center in a box that can be easily procured and deployed in a matter of minutes.

Or consider the case of a hospital that wants to provide its clinical staff members with access to applications and data in a secure manner, whether they are on a hospital floor or working from a remote location. The hospital can deploy hyper-converged systems to run a virtual desktop infrastructure (VDI) environment. The VDI solution gives the hospital staff access to applications and data that reside on a centralized system, allowing the hospital to meet the access and performance requirements of clinical staff in an efficient manner while maintaining patient confidentiality.

As the volume of stored data grows over time, the hospital can easily expand its VDI environment by adding additional hyper-converged systems or extend out to other VSA-based storage in the data center, which seamlessly expand a common pool of resources in a virtualized, software-defined environment. The hospital also benefits from the small footprint of the systems, which makes it easier to scale out infrastructure in a space-constrained data center.



Hyper-converged from HPE

Hewlett Packard Enterprise hyper-converged systems deliver the benefits of built-in high availability, automated storage tiering, a flexible software license strategy, and are validated on trusted technology from HPE and technology partners like VMware. HPE hyper-converged appliances are ready to create the first VM in 15 minutes and can be used for any project where simplicity is key. It's a virtualized data center in a box!

HPE Hyper Converged 250

This all-HPE solution combines all required hardware and software with robust data services from best-in-class StoreVirtual storage and powerful ProLiant servers. Get enterprise class features typically offered by storage arrays, like 99.999 percent availability, thin provisioning, replication, and hypervisor integration—without the complexity. A fully virtualized infrastructure is up and running quickly with our HPE OneView InstantOn tool for startup and expansion activities and HPE's OneView for vCenter provides a single console for day-to-day management. You may purchase new VMware licenses from HPE or use your own Enterprise License Agreement. Easily scale-out online in a linear fashion as your business needs grow. Data protection and disaster recovery are built into the system—no additional software required. Automated tiering of data storage provides quicker access to data when needed.

Get the details:

[HPE Hyper Converged 250—Product Brief](#)

[HPE Hyper Converged 250—ChalkTalk](#)

Get there today with HPE and VMware

Hyper-convergence—it's the next step in the evolution of IT architectures. With a comprehensive portfolio of products and services for converged infrastructure and software-defined storage, and close partnership with VMware, HPE is uniquely positioned to help you capitalize on the power and potential of hyper-convergence.

You can't meet today's business needs with yesterday's IT architectures. Your business can benefit from a converged infrastructure that is virtualized and software-defined.



Team with the leaders

- HPE and VMware have a 15-year partnership delivering virtualization innovation.
- HPE is the #1 vendor for virtualization based on VMware.
- HPE StoreVirtual VSA has led the pack in software-defined storage for more than eight years.
- HPE is the #1 vendor in worldwide server shipments (as of Q3 2014).⁵
- HPE globally supports both hardware and software.

Learn more at
hpe.com/info/hc

⁵ IDC Worldwide Quarterly Server Tracker for 3Q14, December 2014.



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