

Empowering HPE R&D community to deliver better products faster

Pre-built HPE ConvergedSystem 700 goes from crate-to-connect in seven hours

Objective

Help the R&D community speed time-to-market by creating a private cloud to deliver Infrastructure-as-a-Service, leveraging a virtualized shared infrastructure environment

Approach

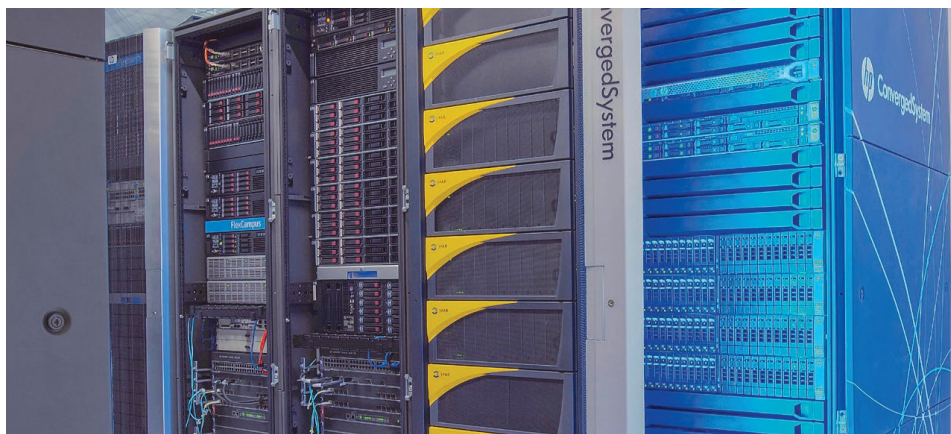
Implement pre-built HPE ConvergedSystem 700 with HPE Helion CloudSystem to offer shared, virtualized environment to R&D community

IT Matters

- Slashes provisioning time for a new system from a day and a half to 30 minutes
- HPE pre-configures optimized system to provide reliable performance, reducing risk
- HPE OneView provides single management platform and frees up IT resources
- Saves management and provisioning time with HPE OneView
- HPE OneView provides single pane of visibility for servers, storage, and network

Business Matters

- HPE ConvergedSystem 700 delivers faster time-to-value
- Reduces implementation time from over a month to hours
- Minimizes data center complexity
- HPE Helion CloudSystem, built on ConvergedSystem 700, enables IT to provide cloud services with agility
- HPE Helion CloudSystem significantly reduces operational costs through shared Infrastructure-as-a-Service



To support the Research and Development (R&D) requirements in planning for the HPE separation, HPE installed an HPE Helion CloudSystem built on ConvergedSystem 700, a pre-configured solution for virtualization and powered by HPE OneView, to develop a Dedicated Private Cloud (DPC) solution. The DPC will provide cloud Infrastructure-as-a-Service to the R&D community to centralize infrastructure resources and reduce costs.

Advancing cutting-edge R&D

Need for enterprise agility

Hewlett Packard Enterprise has dedicated years of research and development toward designing and building the world's leading portfolio of infrastructure and software solutions. These solutions above all, embrace the increasing need for enterprise agility and responsiveness to change.

HPE employs 300,000 people throughout the world and provides the technical prowess needed to run the giants of global enterprise. HPE is currently engineering a split into two corporate entities, and agility is number one on its list of requirements. As the company divides, HPE wants to ensure it doesn't miss a beat in advancing its cutting-edge R&D initiatives and designs, and is taking advantage of its own technology to jumpstart a new, shared-services offering for global R&D projects.

“Hewlett Packard Enterprise has reignited our innovation engine with breakthrough offerings for the global business market, and with the separation, HPE will continue to accelerate innovation throughout our R&D community. Utilizing HPE Helion CloudSystem built on HPE ConvergedSystem 700 allows us to implement and deliver Infrastructure-as-a-Service offerings faster and more efficiently than ever before enabling our product engineers to focus on innovation while meeting critical delivery milestones for our WW customers and partners.”

— Mark Linesch, VP of Strategy and Operation office of the EG CTO

In support of the HPE separation (which will build upon HPE’s leading position in servers, storage, networking, converged systems, services, software, and the HPE Helion cloud platform), the HPE team recently implemented a private cloud to jumpstart shared R&D services. The new DPC will serve two purposes. The first is to supply additional transitional infrastructure to facilitate the split.

The second, once the transition is complete, is to enhance productivity for the new HPE R&D community by making shared R&D infrastructure readily and economically available for new and ongoing projects. Speed and added cloud functionality were two of the main requirements needed to meet the tight timeframe. The answer was the HPE ConvergedSystem 700, which is a pre-configured solution for virtualization and powered by HPE OneView.

“We had a fully scalable DPC built on ConvergedSystem 700 consisting of HPE ProLiant servers, the latest HPE 3PAR StoreServ Storage, HPE Helion CloudSystem software and HPE networking, set up and running, literally from crate-to-connect, in under seven hours,” attests Deshraj Singh, strategist in HPE R&D IT.

“HPE Factory Express pre-built the system, tested it, and delivered it ready to plug-in. I’m estimating it would have taken two IT staff about six weeks to get this whole system up and running.”

Delivering dedicated private cloud Infrastructure-as-a-Service

The team wanted to offer the benefits of a DPC as Infrastructure-as-a-Service (IaaS) to the HPE R&D community to facilitate quick start-up projects and speed time-to-market. The HPE ConvergedSystem 700 for on-demand IT delivers a best-in-class virtualized infrastructure, with integrated virtualization and HPE OneView management software, hardware, services, and support. It’s also cloud-ready. The addition of HPE Helion CloudSystem software provides one of the most open cloud solutions on the market, as it supports multi-hypervisor, multi-OS, and heterogeneous infrastructure environments. The HPE ConvergedSystem 700 allows both virtual and physical provisioning since HPE Virtual Connect is included with the system.



“The virtualized R&D private-cloud will allow for greater customization and flexibility to serve this specific and unique group. These functions can’t be fulfilled by a standard IT environment,” explains Andy Martin, Lead EGSL Engineering Program manager. “Since the ConvergedSystem 700 comes cloud-enabled and ready to go, we’ve been able to focus our time on adding new services and building an invaluable R&D environment, rather than on a lengthy and complicated implementation.”

Before implementing this solution as a private cloud shared-service, provisioning of development space was a very manual process and usually involved separate systems, redundant costs, and wasn’t coordinated.

Offering the ConvergedSystem 700 as a shared cloud environment eliminates local optimization, provides speedy provisioning of virtual environments, and creates an ideal R&D platform to kick-start new ideas and technologies.

Passing the growth test

The HPE IT team needed to select a solution that could pass rigorous requirements, and a highly scalable solution was foremost on the list of necessities.

The HPE ConvergedSystem 700 solution that was implemented is the starter configuration with 4-compute-blades and 36 disks in the storage array. It can expand to a fully-loaded enclosure with 16 HPE ProLiant BL460c Gen9 server blades powered by Intel® Xeon® E5-2600 processors and a full storage array with 144 drives.

The ability to scale, however, and the practical ease of scaling, are two entirely different matters, according to Andy Milewski, Lead EGSL Engineering Program manager, HPE.

After the initial deployment, the team added another enclosure using HPE OneView, and raised the system potential from 500 Virtual Machines (VM) to 800. Using HPE OneView, implementation was more productive than previous manual methods.

“HPE OneView lets our team manage and monitor resources through a single management screen, whether it be server, storage, or network,” he emphasizes. “We’ve recently added another enclosure using HPE OneView and it took about 30 minutes. HPE OneView automatically discovered dependencies, and accomplishes in only 30 minutes what used to take us a day and half manually. System Management with HPE OneView represents a huge savings in time and accuracy, not to mention eradicating “do-overs,” which boosts overall confidence and productivity.”

Case study

HPE OneView

Industry

Computer Software/
Services, Discrete
Hi-tech Manufacturing

Customer at a glance

Hardware

- HPE ConvergedSystem 700 (consisting of pre-built servers, storage, networking and integrated management)
- HPE ProLiant BL460c Gen9 Server Blade (4)
- HPE BladeSystem c7000 Enclosure
- HPE Virtual Connect FlexFabric-20/40 F8 Module for c-Class BladeSystem
- HPE 3PAR StoreServ 7400c Storage (4 node)
- SN600B San Switches
- 5900AT-48X6-4QSFP
- 5900AF-48G-4XG-2QSFP

Software

- HPE OneView 1.2
- Helion CloudSystem Enterprise 8.1.3
- HPE Intelligent Management Center (IMC)
- Microsoft® Windows® 7, 2008R2, 2012R2
- Red Hat® Enterprise Linux® 6.5, 6.6
- CentOS 6.6
- Ubuntu 12.04, 14.04

HPE services

- HPE Factory Express
- On-site installation and start-up service

One usually doesn't think of HPE OneView software as a source of happiness, but it turns out, it is.

"After the staff at our main site connected the cables to our newly delivered HPE ConvergedSystem 700 powered by HPE OneView, I was able to provision the whole system remotely from a few hours away, where I normally work," says Martin. "No traffic, no overtime, and better yet, home and happy on time. Who knew HPE OneView was a stress reducing program too?"

HPE better together

The HPE IT team is familiar with using the term "better together" to explain to HPE customers the philosophy and design goal of HPE in creating a highly integrated portfolio of solutions. This was one time they got to experience it from the point of view of a customer.

"There was good synergy between all the HPE departments involved," says Singh. "In seven hours we uncrated, moved into the data center and connected the system consisting of servers, storage, network, and software, managed from one application. It doesn't get much 'better together' than that."

Learn more at
hpe.com/info/cs700



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