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Enterprise

Brochure

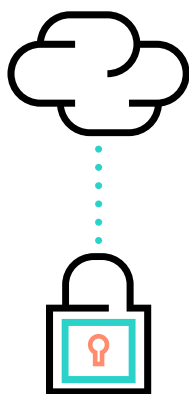
# HPE SimpliVity with Composable Fabric for true hyperconvergence

Simplify the VM experience from data center to edge





To be successful and harness the opportunities that come with an “everything computes” world, enterprises must address a new generation of applications and data that span across multiple platforms and technologies. Because most IT environments are very complex, companies are searching for simpler infrastructure solutions that are agile, automated, scalable, and simple. Whether your applications and data reside in the data center, private or public clouds, at the edge of your network, or a combination of the above, you need the flexibility to operate seamlessly across all environments. A hyperconverged solution provides that flexibility and simplicity by converging compute, storage, networking, and advanced data services for virtualized workloads into one simple to manage, software-defined platform. Introducing HPE SimpliVity.



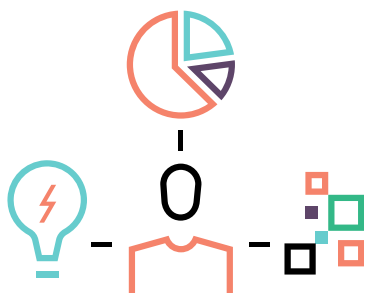
### **Power-up your enterprise private cloud**

HPE SimpliVity with Composable Fabric assimilates data center services, including compute, storage, network switching, hypervisor, backup, replication, cloud gateway, caching, WAN optimization, real-time deduplication, and more—in a single building block. Clustering multiple units forms a shared resource pool and delivers high availability and efficient scaling of performance and capacity. It is specifically designed to bring cloud agility, scalability, and simplicity to the enterprise data center.

The solution delivers a comprehensive, fully integrated, and hyperconverged offering that includes software-defined compute, storage, and networking. It also provides the added benefits of VM-centric management and mobility, built-in data protection, and advanced data services, including always-on, inline deduplication and compression of user data, at inception.





**HPE SimpliVity with Composable Fabric**

HPE SimpliVity delivers a true hyperconverged solution that includes not only software-defined compute and storage but also integrated Composable Fabric.

Its benefits include:

- Centralized management from VMware vSphere® improves visibility and simplifies troubleshooting
- Automated network management for compute and storage lifecycle events
- Customized network performance for HPE SimpliVity storage and federation workloads via network path isolation
- Simplified scale in lockstep with your needs, without added costs or complexity

**True hyperconvergence**

Enterprises are introducing hyperconverged infrastructure (HCI) to accelerate the pace of innovation, reduce TCO, and streamline operations. By consolidating compute and storage resources onto a common infrastructure, IT organizations can contain equipment sprawl and reduce administrative complexity. However, many organizations fail to consider HCI data center networking implications and requirements, treating the network as a discrete technology silo, managed by a separate team using distinct administrative tools and practices. Networking infrastructure is typically deployed as well as provisioned independently of compute and storage infrastructure, consuming time and resources.

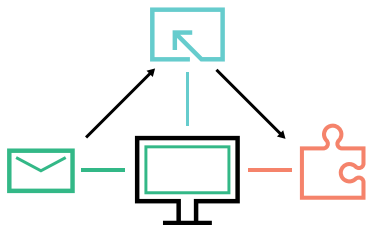
Legacy data center networking solutions and disjointed administrative practices can hinder IT service agility and impair large-scale HCI adoption. It can take days or even weeks to get the networking infrastructure running to support new applications. In short, the network has become a barrier to innovation. To take full advantage of all the benefits of true hyperconvergence, enterprises must take a fresh look at the data center network.

Modern scale-out applications, virtualized infrastructure, and agile development methodologies require a programmable and adaptable network that can handle the on-demand services, dynamic workloads, and diverse traffic flows of the contemporary data center. By treating the network as an integral component of a hyperconverged system—with unified administration and automated provisioning—IT organizations can bring cloud agility, scalability, and simplicity to the enterprise data center.

HPE SimpliVity with Composable Fabric helps IT professionals to easily commission the underlying data center networking fabric for an HPE SimpliVity deployment by leveraging Composable Fabric infrastructure. The integrated solution is managed in a holistic manner and as a cohesive system with a common administrative interface.



Through its tight integration at the software API level, HPE SimpliVity with Composable Fabric becomes aware of its hyperconverged environment and automates many routine network configuration and management tasks. For example, HPE SimpliVity with Composable Fabric automatically discovers hyperconverged nodes, virtual controllers, and VMware® hypervisor guest VMs, and can dynamically provision the network fabric in response to real-time compute and storage events, such as the addition of a new node. The highly adaptable data center network fabric in HPE SimpliVity with Composable Fabric delivers high performance and service quality for diverse applications and workloads while making better use of network capacity.



## Simplicity from the start

HPE SimpliVity with Composable Fabric delivers operational simplicity from the start. Tight networking integration streamlines infrastructure deployment, which accelerates time-to-value and automation reduces the risk of manual error. At first power up, HPE SimpliVity with Composable Fabric automatically installs and configures the networking software needed to interconnect the clustered compute and storage environment, creating a cohesive, fully functional enterprise-cloud solution—all managed via **VMware vSphere**.

Once initialized, the system enables smooth lifecycle management of the infrastructure, automating many routine operational tasks. From a single console, operators can easily view physical and virtual components, as well as add, move, and extend physical and virtual resources.

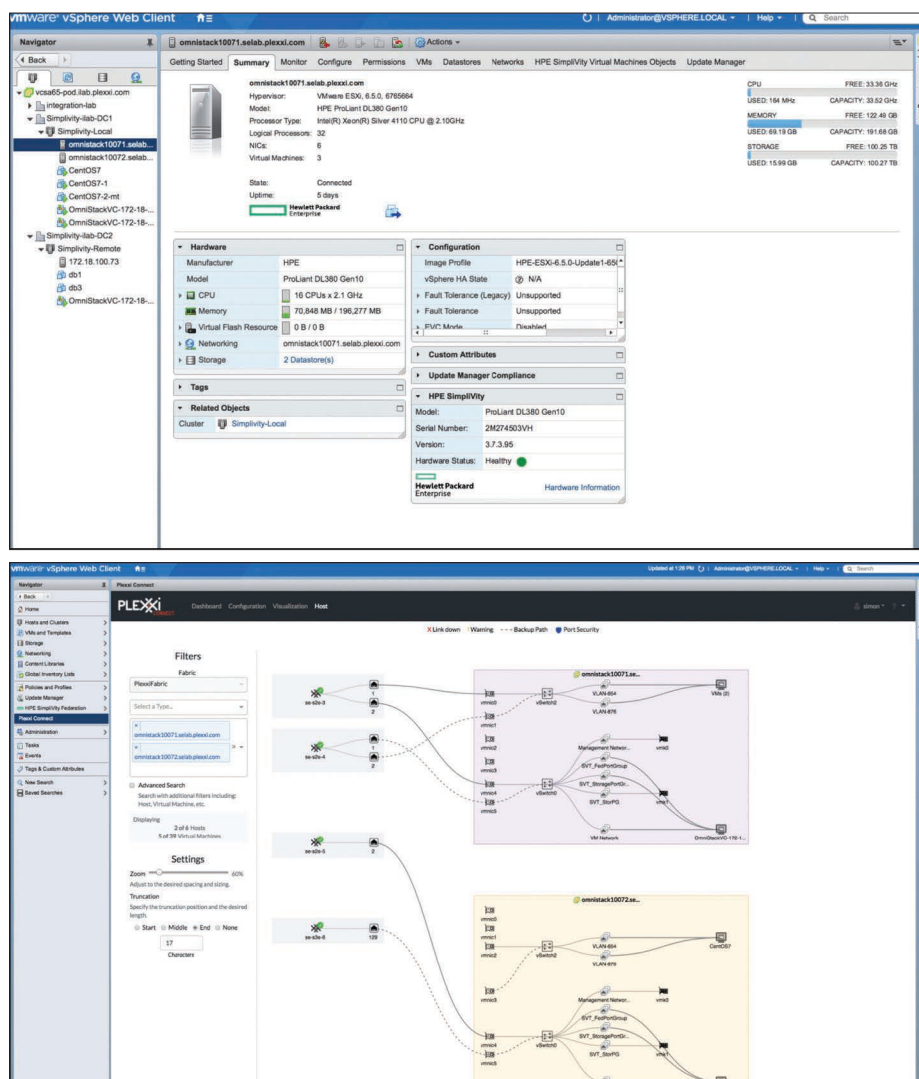


Figure 1. VMware vSphere® Web Client console with end-to-end host view



## Single console unifies control and streamlines operations

HPE SimpliVity with Composable Fabric enables seamless connectivity, control, and visualization of the network from the native VMware vSphere administrative interface. Administrators can easily manage the entire HPE SimpliVity with Composable Fabric solution, including the network directly from VMware vSphere. The integrated solution improves end-to-end configuration visibility and improves end-user satisfaction, as well as IT staff productivity by helping eliminate multiple management interfaces and manually intensive, error-prone configuration and troubleshooting tasks. Operators can easily correlate issues to quickly isolate and resolve problems. And DevOps teams can instantly provision IT services to streamline application lifecycle management.

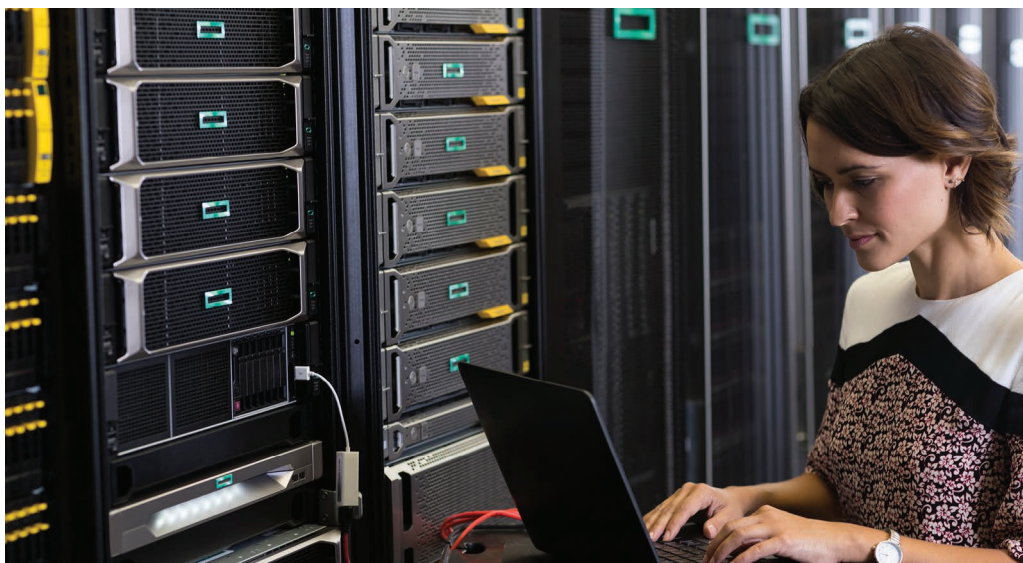
## Your cloud needs a modern network

Legacy data center networks designed to support traditional client-server applications and “north-south” traffic can’t handle the dynamic “east-west” traffic flows that dominate the contemporary data center. Modern scale-out applications, virtualized infrastructure, and on-demand services require a modern, application-aware network that can support today’s diverse workloads and dynamic traffic flows. The modern data center requires a more intelligent and adaptable network that understands application requirements, as well as automatically reprovisions network capacity in response to real-time conditions. HPE SimpliVity with Composable Fabric is designed from the ground up to provide the stringent agility and programmability requirements of the modern data center.

HPE SimpliVity with Composable Fabric helps eliminate the inefficiencies and guesswork traditionally associated with deploying and provisioning data center networks. Under software control and tightly integrated into the VMware vSphere management framework, HPE SimpliVity with Composable Fabric delivers a dynamic network fabric that automatically adjusts bandwidth to satisfy specific workload needs and changes in the infrastructure.





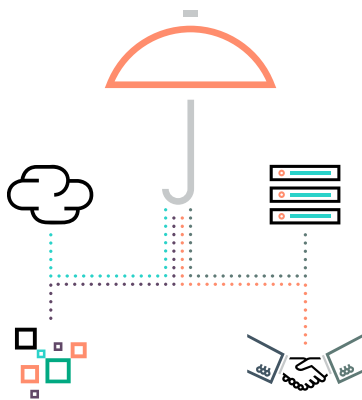


## Pool and provision resources for optimum flexibility and scale

Most incumbent data center networks are based on inefficient leaf-spine topologies composed of physical top-of-rack (ToR) switches and physical aggregation switches. These two-tier network designs are inherently inflexible. IT planners are forced to limit the placement and interaction of compute and storage resources based on arbitrary rack boundaries imposed by the network architecture. The integrated network stack in HPE SimpliVity with Composable Fabric supports a flat network topology, in which ToR switches are directly connected using a virtual spine layer. This approach dispenses with the need for physical aggregation switches and helps eliminate artificial workload restrictions based on rack boundaries.

The software-defined approach of HPE SimpliVity with Composable Fabric lets IT teams create universal compute, storage, and networking resource pools that span the data center. Administrators can add compute, storage, and network components to any rack at any time. HPE SimpliVity with Composable Fabric automatically provisions the appropriate resources required to satisfy real-time application requirements and workload demands. This “pool-and-provision” approach makes it simple to grow a cluster, add new clusters, and extend clusters across data centers and cloud infrastructures.





## Deploy and grow with ease

The scale-out design of HPE SimpliVity with Composable Fabric gives you the confidence to deploy today. You can easily and non-disruptively grow your cluster in the future on your terms—you don't have to overbuild up front or rip-and-replace assets later. HPE SimpliVity with Composable Fabric helps you to start small and grow incrementally without affecting your day-to-day operations.

HPE SimpliVity with Composable Fabric delivers unmatched flexibility to scale compute, storage, and network capacity independently, according to your application and infrastructure needs. It delivers unhindered flexibility unmatched by any other HCI solution in the market.

The HPE SimpliVity with Composable Fabric starter configuration is composed of:

- 2 ToR switches (for redundancy)
- HPE SimpliVity with Composable Fabric
  - Choice of HPE SimpliVity 380 nodes (3 nodes minimum) or HPE SimpliVity 2600 (3 nodes minimum)
  - HPE SimpliVity with Composable Fabric management plug-in for VMware vCenter®
  - HPE Composable Fabric switch network operating system
  - HPE Composable Fabric Manager
  - HPE SimpliVity with Composable Fabric integration engine
  - VMware vSphere integration pack



## HPE Pointnext

The HPE SimpliVity with Composable Fabric is fully supported by **HPE Pointnext** to deliver a smooth enterprise cloud experience. The solution stack is completely software-based and is built on an award-winning hyperconverged infrastructure technology,<sup>1</sup> delivering a full infrastructure to power any application, at any scale.

Learn more at  
**[hpe.com/info/simplivity](https://hpe.com/info/simplivity)**

<sup>1</sup> CRN 2017 Product of the Year for HCI award in December 2017

Gartner Magic Quadrant for Hyperconverged Systems Leader, February 2018

Forrester Wave Hyperconverged Infrastructure Report Leader, August 2016



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