

Overview

HP ConvergedSystem 200-HC StoreVirtual System

For customers who are looking for a simple, agile and highly available virtualization appliance, the HP ConvergedSystem 200-HC StoreVirtual family eliminates complex solution stacks by combining powerful HP servers and mature data services from HP Storage into one building block for environments running on VMware vSphere. HP ConvergedSystem 200-HC StoreVirtual Systems provide a turnkey hyper-converged, virtualization solution for medium sized businesses and enterprises. Designed from the ground up for the software-defined data center, the CS 200-HC StoreVirtual enables a straightforward formulaic deployment of IT, regardless of whether used as a primary virtualization platform or as a dedicated resource pool for specific applications, such as desktop virtualization. Unlike other hyper-converged systems on the market, the CS 200-HC StoreVirtual is customized and ready for virtualized workloads within 15 minutes after start-up.

All hardware and software components are pre-installed and pre-integrated by HP, and quick customization using the HP OneView InstantOn software enables faster time to value that is unique to the HP ConvergedSystem 200-HC StoreVirtual family. After the initial installation, IT administrators manage their VMware vSphere environment with the familiar VMware vCenter user interface and HP OneView for vCenter management integration.

HP StoreVirtual technology that is built into the CS 200-HC StoreVirtual matches the high-availability features of VMware vSphere from a storage perspective for enterprise-level availability for applications and services. HP ConvergedSystem 200-HC StoreVirtual provides superior high-availability beyond the appliance, rack and even data center. The storage components are vSphere Metro Storage Cluster (vMSC) certified; making the CS 200-HC StoreVirtual the first and only vMSC-certified hyper-converged virtualization appliance.

What's New

- New hyper-converged platform: HP ConvergedSystem 200-HC StoreVirtual
 - Compact form-factor that combines compute and storage in 2U
 - Powerful computing platform based on Intel processors
 - Familiar VMware vSphere management with VMware vCenter & HP OneView for vCenter
 - Enterprise data services powered by HP StoreVirtual technology
 - Adaptive Optimization accelerates workloads using a Flash-based storage tier (on CS 242-HC StoreVirtual)
 - 10GbE networking for application and storage performance
 - Superior availability across nodes, appliances, racks and data centers
 - First and only vSphere Metro Storage Cluster (vMSC) certified hyper-converged virtualization platform.
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At a glance - HP ConvergedSystem 200-HC StoreVirtual System

- Two single SKU hyper-converged computing solutions in 2U form-factor
- Easy to install and use for medium sized businesses and in the enterprise
 - 15 minute guided setup with HP OneView InstantOn
 - Day to day management with VMware vCenter and HP OneView for vCenter
- Pre-installed virtualization platform powered by VMware vSphere and HP StoreVirtual technology
- Order VMware vSphere licenses with the HP ConvergedSystem 200-HC StoreVirtual, or use licenses from valid VMware Enterprise License Agreements
- Scale up to eight ConvergedSystem 200-HC StoreVirtual Systems in one management zone

Overview

- Intel® Xeon® E5-2600v2 family processors
- Superior high-availability and disaster recovery capabilities, powered by VMware vSphere and HP StoreVirtual Built-in HP StoreVirtual technology
 - Adaptive Optimization for workload acceleration using Intel Solid State Drives (only on ConvergedSystem 242-HC StoreVirtual)
 - Network RAID 0, 5, 6, 10, 10+1, and 10+2
 - Integrated Thin Provisioning
 - Virtual machine- and application-consistent snapshots
 - Multi-Site HA/DR Solution (Synchronous Replication across several locations)
 - Remote Copy (Asynchronous Replication with Bandwidth Throttling)
 - Storage federation with HP Storage products
- Hardware Availability features
 - Hot-pluggable HDD and SSD
 - Redundant power supplies
 - Integrated storage controller with flash-backed cache
 - Hyper-redundant clustered storage
- HP ProLiant Integrated Lights-Out 4 Remote Management
- HP Insight Remote Support delivers 24x7 secure remote support¹

	ConvergedSystem 240-HC StoreVirtual	ConvergedSystem 242-HC StoreVirtual
Scalability	1-8 appliances per management zone ²	
Rack Footprint	2U per appliance	
Number of nodes per appliance	4 compute/storage nodes	
Number of drives per appliance	24 drives	
Raw Capacity per appliance	28.8TB using (24) 1.2TB 10k SAS drives	22.4TB using (16) 1.2TB 10k SAS drives (8) 400GB SSD Mainstream Endurance
Usable HA capacity³	11.6TB	7.6TB
CPUs	64 cores @ 2.0GHz	80 cores @ 2.8GHz
Memory	512GB DDR3 Memory	1TB DDR3 Memory
Storage Controller Cache	4x 2GB FBWC	
Network Ports (10GbE)	8x SFP+ ports ⁴	
Network Ports (1GbE)	8x RJ-45 (1000BASE-T) ⁵	
iLO ports	4x RJ-45 (100BASE-T)	
Language	English (US)	
Power supplies	2x 1500W Platinum Plus Power Supplies (High-line AC only, 240V)	
Hardware Warranty, 9x5 NBD	3 years parts-only warranty	
Software Support, 9x5	1 year software support	

¹ Configured for embedded Remote Support only (iLO 4) in Insight Remote Support; requires an external server to monitor the system.

² HP OneView InstantOn automates the expansion of one management zone to up to 4 appliances; additional 4 appliances can be integrated manually.

³ Network RAID 10 protected volumes; HP recommends Network RAID 10 for production volumes. Up to 500GB capacity is pre-allocated for system management.

⁴ SFP+ transceivers or DAC options to be purchased separately for flexibility

Overview

⁵ One 1GbE port will be required for initial installation of the appliance; 1GbE ports are not intended for use. Customers are advised against changing the configuration of the pre-configured virtual switches. 1GbE connectivity cannot be used instead of 10GbE.

NOTE: The CS 200-HC models require 10GbE connectivity and IPv6 capable network switching infrastructure. 1GbE connectivity cannot replace the 10GbE connectivity and is not intended for use. Customers are advised against changing the configuration of the virtual switches. HP recommends HP Networking 5700 and 5900CP series switches for best results.

Features and Benefits

Unmatched ease of use for server virtualization

- **Storage Clustering simplifies scalability**
Storage Clustering allows a customer to consolidate multiple storage nodes into pools of storage. All available capacity and performance is aggregated and available to every volume in the cluster. As storage needs increase the CS 200-HC StoreVirtual can scale performance and capacity on-line.
- **Network RAID delivers new levels of data availability**
Network RAID stripes and protects multiple copies of data across a cluster of storage nodes, eliminating any single point of failure in the CS 200-HC StoreVirtual array. Applications have continuous data availability in the event of a disk, controller, storage node, power, network, or site failure. Choose the right Network RAID level for each volume in the cluster based on capacity and performance needs.
- **Thin Provisioning reduces costs by increasing storage efficiency**
Thin Provisioning allocates space only as data is actually written without requiring pre-allocation of storage. This raises the overall utilization and efficiency of the CS 200-HC StoreVirtual, reduces costs and ultimately increases the ROI.
- **Application Integrated Snapshots**
Snapshots create thinly provisioned, instant point-in-time copies of data on a per-volume basis. Administrators access snapshots to recover individual files from the volume, or rollback an entire volume. Built-in application integration provides automated quiescing for virtual machines on VMware vSphere: using VMtools, consistency can be extended from VM-consistent to application-consistent snapshots for VMs with Microsoft Windows.
- **Remote Copy reduces costs for disaster recovery**
Remote Copy replicates snapshots between CS 200-HC StoreVirtual arrays at primary/remote locations. Copies are thinly provisioned with no space reservation required. Remote Copy enables centralized backup and disaster recovery on a per-volume basis and leverages application integrated snapshots for faster recovery. Remote Copy makes the CS 200-HC StoreVirtual the perfect fit for regional data centers.
- **Adaptive Optimization provides SSD performance without SSD cost (available on CS 242-HC only)**
With new auto-tiering technologies for CS-242-HC StoreVirtual, comes opportunities to optimize the cost and performance of clusters. By utilizing Adaptive Optimization technology to migrate data between storage tiers within individual storage systems, the CS 242-HC StoreVirtual provides a unique method for balancing performance versus capacity within a storage pool and lowering overall cost.
- **Adding more storage resources as needed**
Any StoreVirtual product can be added to the management zone of a ConvergedSystem 200-HC StoreVirtual. This allows for more flexibility when additional storage capacity, or storage with different performance characteristics is needed. Adding another storage pool is easy with the StoreVirtual's Centralized Management Console and HP OneView for vCenter Storage Portal. HP recommends StoreVirtual VSA Software or StoreVirtual 4335 Storage for additional storage.

Superior disaster recovery and flexibility

- **Integrated replication for disaster recovery**
The CS 200-HC StoreVirtual includes integrated replication at no additional cost that simplifies management with simple failover and failback. Additionally, the CS200-HC StoreVirtual includes the Site Recovery Adapter that integrates Remote Copy with VMware Site Recovery Manager.
- **Change configurations without incurring downtime**
Administrators can add capacity, increase performance, grow and migrate volumes between CS 200-HC StoreVirtual clusters on the fly with no application downtime.

Scalable Performance

- **Purchase only what you need today**

Features and Benefits

Avoid up-front cost and the potential performance constraints. Purchase only what's needed today, then grow the performance, capacity, and redundancy of your CS 200-HC StoreVirtual system online as storage requirements evolve. Buying storage only when needed simplifies planning and relieves budget pressures.

- **Scale performance and capacity simultaneously**

Each time a storage node is added to the CS 200-HC StoreVirtual management group, the capacity, performance, and redundancy of the entire storage solution increases.

- **Avoid disruptive upgrades**

Add resources to the CS 200-HC StoreVirtual cluster non-disruptively as capacity and performance requirements increase. Applications remain online during maintenance events (adding nodes, updating software or firmware) for best in class availability.

Easy to manage virtualized environment

- **Easy installation within 15 minutes with HP OneView InstantOn**

Customize the CS 200-HC to make it fit your environment with just a few mouse clicks: Setup host names, IP address and networking configuration using the easy-to-use HP OneView InstantOn software.

- **Easy day-to-day management with with HP OneView for vCenter**

With HP OneView for vCenter, VMware administrators stay within the familiar vCenter interface. Provision new VMs and storage resources in the same interface that you use every day.

- **Centralized Management Console to manage the full range of StoreVirtual features**

Multiple data centers and sites can be managed from an all-inclusive "single pane-of-glass." All of the CS 200-HC StoreVirtual system features are managed from the Centralized Management Console (CMC) for simple, easy-to-manage storage components in the CS 200-HC StoreVirtual.

- **Business continuity with integrated HA and DR**

Every CS 200-HC StoreVirtual system includes integrated synchronous and asynchronous replication at no additional cost. This reduces costs and simplifies management of high availability/fault tolerant and disaster recovery storage solutions.

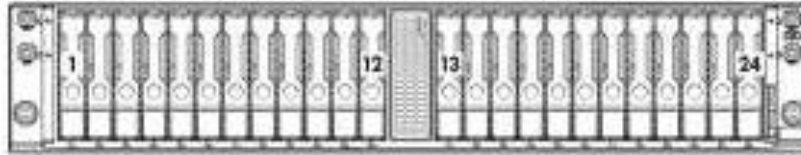
- **StoreVirtual technology provides industry leading VMware integration**

vStorage / VAAI array offload integration and data path optimizations, vMSC certification and Site Recovery Manager integration provide the best integration of hyper-converged platform with virtualized workloads.

Family Information

Models

HP ConvergedSystem 200-HC StoreVirtual System family



HP ConvergedSystem 240-HC StoreVirtual System

K2Q48A

System Hardware:

- (8) Intel E5-2640v2 Processors (2.0GHz, 8-core, 20MB cache)
- (32) 16GB Dual Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-11 Low Voltage Memory Kit
- (24) Hard drives, 1.2TB, 6GB SAS, 10,000 RPM
- (4) 2GB Flash-backed on HP Smart Array P430 Controller, 6GB SAS
- (8) 10GbE ports (primary network connectivity, network must be IPv6 capable)
- (8) 1GbE port (1 port used during the installation, not intended for use)
- (4) iLO4 management ports
- (4) HP iLO4 Advanced Pack Management
- HP Smart Array Advanced Pack 2.0
- (2) 1500W Common Slot Plus Hot Plug Power Supply (High-line AC only, 240V)
- Rail kit

What's in the Box:

- (1) HP ConvergedSystem 240-HC StoreVirtual System
- Rail kit, StoreVirtual licenses, EULA and supporting documentation

NOTE: VMware license must be purchased as part of the same order as HP ConvergedSystem 200-HC StoreVirtual unless provided by the customer through an existing VMware Enterprise License Agreement (ELA) or VMware vCloud Air Network Program. HP supports vSphere Enterprise, vSphere Enterprise Plus and Horizon on the CS 200-HC StoreVirtual.

Purchasing VMware licenses from HP allows HP to be the single point of contact for the entire solution inclusive of the virtualization software.

HP ConvergedSystem 242-HC StoreVirtual System

K2Q49A

System Hardware:

- (8) Intel E5-2680v2 Processors (2.8GHz, 10-core, 20MB cache)
- (64) 16GB Dual Rank x4 PC3L-12800R (DDR3-1600)

Family Information

- Registered CAS-11 Low Voltage Memory Kit
- (16) Hard drives, 1.2TB, 6GB SAS, 10,000 RPM
- (8) Solid state disks, 400GB, 6GB SATA
- (4) 2GB Flash-backed on HP Smart Array P430 Controller, 6GB SAS
- (8) 10GbE ports (primary network connectivity, network must be IPv6 capable)
- (8) 1GbE port (1 port used during the installation, not intended for use)
- (4) iLO4 management ports
- (4) HP iLO4 Advanced Pack Management
- HP Smart Array Advanced Pack 2.0
- (2) 1500W Common Slot Plus Hot Plug Power Supply (High-line AC only, 240V)
- Rail kit

What's in the Box:

- (1) HP ConvergedSystem 242-HC StoreVirtual System
- Rail kit, StoreVirtual licenses, EULA and supporting documentation

NOTE: VMware license must be purchased as part of the same order as HP ConvergedSystem 200-HC StoreVirtual, or may come out an existing VMware Enterprise License Agreement (ELA) or VMware vCloud Air Network Program. HP supports vSphere Enterprise, vSphere Enterprise Plus and Horizon on the CS 200-HC StoreVirtual.

Purchasing VMware licenses from HP allows HP to be the single point of contact for the entire solution inclusive of the virtualization software.

HP ConvergedSystem 200-HC StoreVirtual System Product Information

Overview	<ul style="list-style-type: none"> • Hyper-Converged virtualization platform • Perfect blend of HP Server, VMware vSphere and HP StoreVirtual technology • Configuration and ready for VM provisioning in 15 minutes
Interconnects	<ul style="list-style-type: none"> • 8x 10GbE SFP+ ports (SFP+ transceivers or DAC sold separately) 10GbE networking is the primary connectivity on the CS 200-HC StoreVirtual platform. The network switches used must be IPv6 capable. • 8x 1GbE ports, optional network connectivity, one 1GbE port required during installation With the exception of one 1GbE port (used during the initial customization of the appliance), all 1GbE ports covered by plugs for simpler installation and are not intended for use. Customer are advised against changing the configuration of the pre-configured virtual switches.
Software	<ul style="list-style-type: none"> • All software pre-installed • Virtualization software: VMware vSphere 5.5

Family Information

	<ul style="list-style-type: none">• Management software: VMware vCenter 5.5 with HP OneView for vCenter• Management VM: Microsoft Windows Server 2012
Licenses	<ul style="list-style-type: none">• Licenses for VMware vSphere and VMware vCenter must be purchased for the CS 200-HC StoreVirtual products• Purchasing VMware licenses from HP allows HP to be the single point of contact for the entire solution inclusive of the virtualization software.• License for Microsoft Windows Server 2012 on Management VM is included <p>NOTE: VMware license must be purchased as part of the same order as HP ConvergedSystem 200-HC StoreVirtual unless provided by the customer through an existing VMware Enterprise License Agreement (ELA) or VMware vCloud Air Network Program (formerly VSPP). HP supports vSphere Enterprise, vSphere Enterprise Plus and Horizon on the CS 200-HC StoreVirtual. (For more information on HP offerings around VMware licenses, please visit http://www8.hp.com/h20195/v2/getDocument.aspx?docname=c04155395)</p>
Management	<ul style="list-style-type: none">• Initial setup: HP OneView InstantOn• Day-to-day management: VMware vCenter with HP OneView for vCenter Server• HP ProLiant Integrated Lights-Out 4 Remote Management Baseboard Management Controller IPMI 2.0

Software

Backup Options

HP StoreOnce Backup System

Backup for hyper-converged environments

When combining HP ConvergedSystem 200-HC StoreVirtual with HP StoreOnce Backup systems users can create an affordable end-to-end solution from virtualization platform to data protection, from remote office to data center, that is both easy to implement and easy to maintain. From entry-level solutions for a remote or branch office, to enterprise solutions that scale across multiple sites and data centers, HP StoreOnce provides disk-based backup with a single, unified deduplication engine for the optimal balance of affordability, manageability, scalability, and reliability to handle the data protection needs of your virtualized infrastructure.

HP StoreOnce Backup

The HP StoreOnce Backup family with StoreOnce deduplication provides consolidated, automated backup and DR operations that span enterprise data centers, regional, and remote or branch offices. With StoreOnce Backup you can:

- Meet shrinking backup windows - with a broad range of price/performance points spanning from 1TB/hour to 100 TB/hour. Optimize dedupe performance with HP StoreOnce Catalyst, enabling Federated Deduplication across the StoreOnce Backup range.
- Simplify data protection for even the most complex environments - with our single StoreOnce deduplication technology managing the movement of data between remote offices and enterprise data centers has never been easier.
- Enhance the manageability of DR and Remote Office backup operations - automate backup and DR processes and use a single pane of glass to manage the data movement between HP StoreOnce appliances in remote offices and enterprise data centers using your current backup application.
- Be confident in your data protection - HP StoreOnce Backup systems have been specifically designed with backup in mind.

For more information on HP StoreOnce Backup Systems, please go to:

<http://www.hp.com/go/storeonce>

Service and Support, HP Care Pack, and Warranty Information

Service and Support

Technology Services for increased uptime, productivity and ROI

Trust HP technology experts for every level of service and support. Our integrated portfolio of services for help customers reduce costs, optimize data, streamline management, and improve backup and recovery. Capitalizing on HP ConvergedSystems' capabilities requires a service partner who understands your increasingly complex environment. Team with the people who know HP infrastructure hardware and software best—the experienced professionals at HP Services.

HP support recommendations are designed to help you enhance technology operations and lower risk—and make it easier for you to seek the right balance between affordability and service-level commitments. Depending on your individual support needs, choose from the choices outlined below.

NOTE: Each of these support levels include hardware and software reactive support and are available with DMR (defective media retention).

NOTE: Support for VMware is available from HP, providing a single point of contact across the entire solution. However, if VMware support is not purchased from HP, then customer will need to manage multiple support contracts.

NOTE: HP Insight Remote Support is required for Proactive Care. Continuously monitoring your environment, HP Insight Remote Support alerts you and provides up to 66% faster problem resolution and up to 95% first time fix rate.

HP Proactive Care Advanced

HP Proactive Care Advanced builds on HP Proactive Care, providing additional benefits such as the assignment of a dedicated, local account support manager (ASM) for collaboration and best practices and critical event management that provides 24x7 fast response and IT service restoration with incident follow-up to prevent a repeat. All of this is designed to give you an incredibly personalized, high-touch support experience that keeps your system fully available and running at peak performance.

HP Proactive Care

HP Proactive Care begins with providing all of the benefits of proactive monitoring and reporting along with rapid reactive care to put in place the fundamentals needed for stability and availability of the environment. Customers can customize their reactive support level by selecting either 6-hour call-to-repair or 24x7 with 4-hour onsite response.

HP Proactive Care Personalized Support Option

Adding the HP Personalized Support Option for HP Proactive Care is highly recommended. The HP Personalized Support option builds on the benefits of HP Proactive Care service by providing an assigned Account Support Manager who knows the environment and delivers support planning, regular reviews, and technical and operational advice specific to each environment. A one-time purchase covers the entire HP Proactive Care environment, and additional Personalized Support Days can be added to provide the appropriate service experience for the system or across the entire environment.

HP Foundation Care Call-to-Repair Service—Offers 24x7 service, including on HP holidays, with a six-hour call-to-repair time, where our commitment is to have the hardware operational within six hours

Service and Support, HP Care Pack, and Warranty Information

after your call is opened. Software support is 24x7 with a 2-hour response time.

HP Foundation Care 24x7 Service—Offers 24x7 service, including on HP holidays, with a four-hour on-site response time for hardware and a two-hour response time for software.

HP Foundation Care Next Business Day Service—Offers a next-business-day on-site response with coverage available nine hours per day between 8:00 a.m. and 5:00 p.m. local time, on business days Monday through Friday, excluding on HP holidays. Software support is provided with a two-hour response time.

HP Proactive Select

Addresses on-going operational and staffing needs of Converged Systems environments. The customers can buy HP Proactive Select credits upfront, and choose from around 100 services to consume the required level of expertise and resources throughout a year. A vast array of services—health checks, optimization, performance, and security—help customers address their skills and staffing requirements with flexibility.

For more information

<http://www.hp.com/services>

To learn more on HP Services, please contact your HP sales representative or HP Authorized Channel Partner. HP Care Pack Services are sold by HP and HP Authorized Service Partners:

- Services for customers purchasing from HP or an enterprise reseller are quoted using HP order configuration tools.
- Customers purchasing from a commercial reseller can find HP Care Pack Services at www.hp.com/go/lookuptool

HP Services Awards

HP Services continues to be recognized for service and support excellence by customers, partners, industry organizations and publications around the world. Recent honors and award reflect our services team's dedications, technical expertise, professionalism and uncompromising commitment to customer satisfaction. For a list of all our awards, please visit:

<http://h20219.www2.hp.com/services/cache/433028-0-0-225-121.htm>

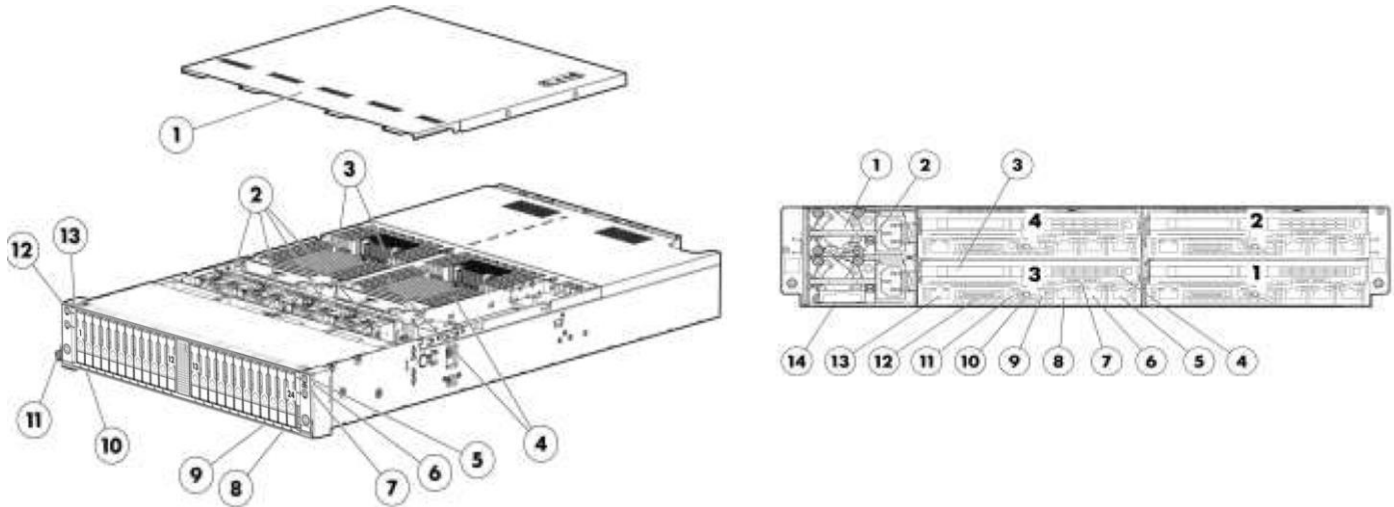
Additional Services Information

For more information about HP Care Pack Services, please visit: <http://www.hp.com/hps/storage>

If you have specific questions, contact your local HP representative. Contact information for a representative in your area can be found at "Contact HP" <http://www.hp.com>

Configuration Information

HP ConvergedSystem 200-HC StoreVirtual System



Front View:

1. Quick removal access panel
2. System Fans
3. Processor
4. DIMM Slots
5. Health LED for node 4
6. UID LED button
7. Power button/LED for node 4
8. Power button/LED for node 3
9. Health LED for node 3
10. Health LED for node 1
11. Power button/LED for node 1
12. Power button/LED for node 2
13. Health LED for node 2

Rear View with 4 compute/storage nodes:

1. Power supply 2
2. Power supply 1
3. Built-in RAID controller
4. Network card with two 10GbE SFP+ ports
5. NIC 2 port (1GbE)
6. NIC 1 port (1GbE)
7. Node serial number pull tab (not for warranty)
8. iLO Management port
9. Unit ID LED
10. Server health
11. Power LED
12. SUV connector (Serial/USB 2.0/Video)
13. Serial connector (RJ-45)
14. RCM module

HP ConvergedSystem 200-HC StoreVirtual System family

Model Description

HP ConvergedSystem 240-HC StoreVirtual System
 HP ConvergedSystem 242-HC StoreVirtual System

Part Number

K2Q48A
 K2Q49A

NOTE: VMware vSphere and VMware vCenter licenses must be purchased with HP ConvergedSystem 200-HC StoreVirtual System products; HP ordering systems will automatically add 8x BD715A (vSphere Enterprise Plus 1P 3yr Service and Subscription) and 1x BD723A (VMware vCenter). These SKUs may be replaced with other licenses covering 8 CPUs. Licenses may only be removed if the end-customer has an active and valid Enterprise

Configuration Information

License Agreement with VMware, or is vCloud Air Network partner. HP supports vSphere Enterprise, vSphere Enterprise Plus and Horizon on the CS 200-HC StoreVirtual.

NOTE: IPv6-capable 10GbE networking infrastructure is required. Network cables must be purchased separately for fiber and copper environments. Please refer to the Related Options section in <http://www8.hp.com/h20195/v2/GetDocument.aspx?docname=c04111435>

Configuration Information

Power Options

Description

Two 6' Highline (IEC-IEC) power cord ships standard. The system requires two 240V power sources.

NOTE: HP ConvergedSystem 200-HC StoreVirtual System is primarily connected to PDU's in data center racks so they ship standard with only a PDU power cord (416151-B21).

Please see the UPS and PDU cable matrix's on the Power Protection page under Power Cords that lists cable descriptions, requirements, and specifications for UPS and PDU units at the new HP Power Cord Link @ HP.com. Use the following new link: <http://www.hp.com/products/powercords>

Technical Specifications

	ConvergedSystem 240-HC StoreVirtual	ConvergedSystem 242-HC StoreVirtual	
Dimensions (with bezel)	2U		
	8.74 x 44.81 x 82 cm (3.44 x 17.64 x 32.28 in)		
Weight	35.52kg (78.31 lbs)		
Power/Cooling	Redundant Hot-Plug Common Slot Power Supplies		
	High-line AC only, 240 Volts		
220V/50Hz	2174 BTU/hr		
	648 W, 3.0 A rms, 657 VAC, (37 A inrush current)		
Environmental	System Inlet Temperature	Operating	10° to 30°C (50° to 86°F) at sea level with an altitude derating of 1.0°C per every 304.8 m (1.8°F per every 1000 ft) above sea level to a maximum of 3048 m (10,000 ft), no direct sustained sunlight. Maximum rate of change is 10°C/hr (18°F/hr). The upper limit may be limited by the type and number of options installed. System performance may be reduced if operating with a fan fault or above 30°C (86°F).
		Non-operating	-40° to 60°C (-40° to 140°F). Maximum rate of change is 20°C/hr (36°F/hr).
	Relative Humidity (non-condensing)	Operating	10% to 90% relative humidity (Rh), 28°C (82.4°F) maximum wet bulb temperature, non-condensing.
		Non-operating	5% to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing.
	Altitude	Operating	3048 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
		Non-operating	9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
Regulatory	FCC Rating: Class A Normative Standards: CISPR 22; EN55022; EN55024; FCC CFR 47, Pt 15; ICES-003; CNS13438; GB9254; K22;K24; EN 61000-3-2; EN 61000-3-3; EN 60950-1; IEC 60950-1		

Technical Specifications

Additional information online

StoreVirtual home page <http://www.hp.com/go/ConvergedSystem>

Environment-friendly Products and Approach

End-of-life Management and Recycling

Hewlett-Packard offers end-of-life HP product return, trade-in, and recycling programs in many geographic areas. For trade-in information, please go to: <http://www.hp.com/go/green>. To recycle your product, please go to: <http://www.hp.com/go/green> or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner. The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at: <http://www.hp.com/go/green>. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment.

Summary of Changes

Date	Version History	Action	Description of Change:
21-Aug-2015	From Version 3 to 4	Changed	Changes made to the Overview and Family Information Sections.
20-Feb-2015	From Version 2 to 3	Changed	Changed the 1GbE ports are not intended for use New: VMware Horizon can be used on the system New: Add more capacity by adding another StoreVirtual system to an installation Added: Usable capacity in specification overview
09-Jan-2015	From Version 1 to 2	Changed	Updated solution summary Corrections on power requirements and specifications

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