

Overview

HP ConvergedSystem 200-HC EVO:RAIL

For customers who are looking for a simple, agile and highly available virtualization appliances, the HP ConvergedSystem 200-HC EVO:RAIL eliminates complex solution stacks by combining powerful HP servers VMware vSphere and VMware EVO:RAIL software components. The HP ConvergedSystem 200-HC EVO:RAIL provides a turnkey hyper-converged, virtualization solution for medium sized businesses and enterprises. Designed from the ground up for the software-defined data center, the HP ConvergedSystem 200-HC EVO:RAIL enables a straightforward automated 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 the HP ConvergedSystem 200-HC EVO:RAIL can be quickly customized and ready for virtualized workloads within 15 minutes.

All hardware and software components are pre-installed and pre-integrated by HP, and quick customization using the VMware EVO:RAIL software enables faster time to value for the HP ConvergedSystem 200-HC EVO:RAIL. After the initial installation, IT administrators manage their VMware vSphere environment with new VMware EVO:RAIL software and the familiar VMware vCenter user interface

HP EVO:RAIL technology built into the HP ConvergedSystem 200-HC EVO:RAIL incorporates the high-availability features of VMware vSphere with VMware Virtual SAN for enterprise-level availability of applications and services.

- **NOTE:** The Support Life available for HP ConvergedSystem 200-HC EVO:RAIL will be a maximum of 5 years after the purchase date of the solution.

What's New

- New hyper-converged platform: HP ConvergedSystem 200-HC EVO:RAIL
- Compact form-factor that combines compute and storage in 2U rack space
- Powerful computing platform based on Intel processors
- Familiar VMware vSphere management with VMware vCenter
- Virtualized workload performance is optimized using a Flash-based storage tier
- 10GbE networking for application and storage performance
- Superior availability across nodes, appliances, racks and data centers
- New VMware EVO:RAIL software that simplifies installation and ongoing cluster maintenance

At a glance - HP ConvergedSystem 200-HC EVO:RAIL

- 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 set up using VMware EVO:RAIL software
 - Day to day management with VMware vCenter and VMware EVO:RAIL software
- Pre-installed virtualization platform powered by VMware vSphere and HP EVO:RAIL technology
- All VMware licenses are included with the HP ConvergedSystem 200-HC EVO:RAIL
- Scale up to four HP ConvergedSystem 200-HC EVO:RAIL Systems into one management zone
- Intel® Xeon® E5-2600v2 family processors
- Superior high-availability and disaster recovery capabilities, powered by VMware vSphere and HP EVO:RAIL

Overview

- Built-in HP EVO:RAIL technology
 - Optimization for workload acceleration using Solid State Drives
 - Integrated Thin Provisioning
 - Virtual machine clone
- Hardware Availability features
 - Hot-pluggable HDD and SSD
 - Redundant power supplies
- HP ProLiant Integrated Lights-Out 4 Remote Management
- HP Insight Remote Support delivers 24x7 secure remote support

	HP ConvergedSystem 200-HC EVO:RAIL RJ45	HP ConvergedSystem 200-HC EVO:RAIL SFP+
Scalability	1-4 appliances per management zone	
Rack Footprint	2U per appliance	
Number of nodes per appliance	4 compute/storage nodes	
Number of drives per appliance	20 drives	
Raw Capacity per appliance	12x1.2TB 10k SAS drives 4x300GB 10k SAS drives 4x400GB SSD Mainstream Endurance	
CPUs	48 cores @ 2.1GHz	
Memory	4x192GB DDR3 Memory	
Storage Controller	H220 pass through HBA	
Network Ports (10GbE)	8x RJ45 ports	8x SFP+ ports ¹
iLO ports	4x RJ-45 (100BASE-T)	
Language	English (US)	
Hardware Warranty	1 year Next Business Day onsite	

¹SFP+ transceivers or DAC options to be purchased separately for flexibility

Features and Benefits

Unmatched ease of use for server virtualization

- **VMware Clustering simplifies scalability**
VMware clustering allows a customer to easily scale-out the computer, networking and storage resources by simply powering up a new appliance to join an existing EVO:RAIL cluster. HP ConvergedSystem 200-HC EVO:RAIL can scale performance and capacity seamlessly with no additional configuration.
- **VMware Virtual SAN delivers simple and high performance software-defined storage for vSphere**
Virtual SAN architecture creates a flash-optimized highly resilient shared storage distributed among multiple compute nodes. The distributed shared datastore eliminates any single point of failure in the HP Converged System 200-HC EVO:RAIL's aggregated storage system. Virtual SAN allows for the elastic non-disruptive scaling of storage capacity by simply adding a new appliance to the existing EVO:RAIL environment.

Thin provisioning and replication

- **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 HP ConvergedSystem 200-HC EVO:RAIL, reduces costs and ultimately increases the ROI. By default Virtual SAN does thin provisioning but can be overridden by storage policy.

Superior data protection, replication and flexibility

- **Data Backup and Protection**
Virtual SAN leverages vSphere snapshots, vSphere clones, VMware vSphere® Data Protection™, and vSphere Replication for data protection, backup, rapid cloning, and disaster-recovery (DR) purposes of HP ConvergedSystem 200-HC EVO:RAIL systems.
- **Integrated replication for High Availability**
The HP ConvergedSystem 200-HC EVO:RAIL includes integrated vSphere replication at no additional cost that simplifies management.
- **Change configurations without incurring downtime**
Administrators can add capacity, increase performance, grow and migrate virtual machines between HP ConvergedSystem 200 -HC EVO:RAIL clusters on the fly with no application downtime.

Scalable Performance

- **Purchase only what you need today**
Avoid up-front cost and the potential performance constraints. Purchase only what's needed today, then grow the performance, capacity, and redundancy of your HP ConvergedSystem 200-HC EVO:RAIL system online as requirements evolve by adding one appliance at a time up to a maximum of four appliances.
- **Scale performance and capacity simultaneously**
Each time an appliance with four nodes and 20 disks is added to the HP ConvergedSystem 200-HC EVO:RAIL cluster, the capacity, performance, and redundancy of the entire solution increases.
- **Avoid disruptive upgrades**
Add resources to the HP ConvergedSystem 200-HC EVO:RAIL 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.

Features and Benefits

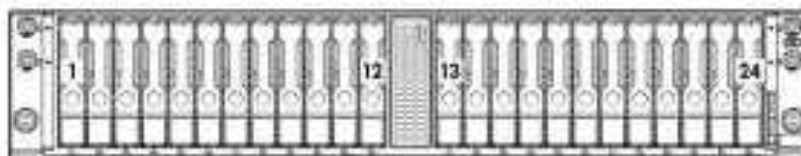
Easy to manage virtualized environment

- **Easy installation within 15 minutes with VMware EVO:RAIL software**
Customize the HP ConvergedSystem 200-HC to make it fit your environment with just a few mouse clicks and custom entries: Setup host names, IP address, networking configuration, and passwords using the EVO:RAIL installation tool.
- **Business continuity** Every HP ConvergedSystem 200-HC EVO:RAIL system includes integrated VMware vSphere replication at no additional cost. This reduces costs and simplifies management of high availability/fault tolerance.

Software

Models

HP ConvergedSystem 200-HC EVO:RAIL



HP ConvergedSystem 200-HC EVO:RAIL RJ45

L3W30A

System Hardware and Software:

- (8) Intel E5-2620v2 Processors (2.1GHz, 6-core)
- 768GB PC3L-12800R (DDR3-1600) Registered CAS-11 Memory
- (12) Hard drives, 1.2TB, 6G SAS, 10k RPM
- (4) Hard drives, 300GB, 6G SAS 10k RPM
- (4) Solid state disks, 400GB, 12G SAS ME
- (4) HP H220 host bus adapters
- (8) 10GbE ports RJ45
- (8) 1GbE port (Not to be used))
- (4) iLO4 management ports
- HP iLO4 Advanced Pack Management
- (2) 1200W Common Slot Plus Hot Plug Power Supply
- Rail kit

HP ConvergedSystem 200-HC EVO:RAIL SFP+

L3W31A

System Hardware and Software:

- (8) Intel E5-2680v2 Processors (2.8GHz, 6-core)
- 768GB PC3L-12800R (DDR3-1600) Registered CAS-11 Memory
- (12) Hard drives, 1.2TB, 6G SAS, 10kRPM
- (4) Hard drives, 300GB, 6G SAS 10k RPM
- (4) Solid state disks, 400GB, 12G SAS ME
- (4) HP H220 host bus adapters
- (8) 10GbE ports SFP+
- (8) 1GbE port (Not to be used)
- (4) iLO4 management ports
- HP iLO4 Advanced Pack Management
- (2) 1200W Common Slot Plus Hot Plug Power Supply
- Rail kit

Software

HP ConvergedSystem 200-HC EVO:RAIL Product Information

Overview	<ul style="list-style-type: none"> • Hyper-Converged virtualization platform • Perfect blend of HP Server, VMware vSphere and VMware EVO:RAIL technology • Configuration and ready for VM provisioning in 15 minutes
Interconnects	<ul style="list-style-type: none"> • Either 8x 10GbE SFP+, transceivers or DAC sold separately • Or 8x 10GbE RJ45 • 4 ports for iLO
Software	<ul style="list-style-type: none"> • VMware EVO:RAIL Deployment, Configuration, and Management • VMware vSphere Enterprise Plus, including ESXi for compute • VMware Virtual SAN for storage • VMware vCenter Server • VMware vCenter Log Insight • HP iLO Advanced
Licenses	<ul style="list-style-type: none"> • Licenses for above VMware described above
Management	<ul style="list-style-type: none"> • Initial setup: VMware EVO:RAIL software • Day-to-day management: VMware vCenter, EVO:RAIL software vRealize Log Insight • HP ProLiant Integrated Lights-Out 4 Remote Management Baseboard Management Controller IPMI 2.0

Backup Options

HP StoreOnce Backup System

Backup for hyper-converged environments

When combining HP ConvergedSystem 200-HC EVO:RAIL 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

Software

- 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: 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: Only 3 year Care Pack durations are available to match the subscription duration of the VMware EVO:RAIL subscription that is part of the appliance. Support beyond year 3 is available only at renewal at the end of year 3.

NOTE: Support for VMware is available from HP, providing a single point of contact across the entire solution

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. It also provides 24x7 fast response and IT service restoration with incident follow-up to prevent a repeat. All of this is designed to give you a 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 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 Services provided include

Service and Support, HP Care Pack, and Warranty Information

health checks, optimization, performance, and security all help customers address their skills and staffing requirements with flexibility.

For more information

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>

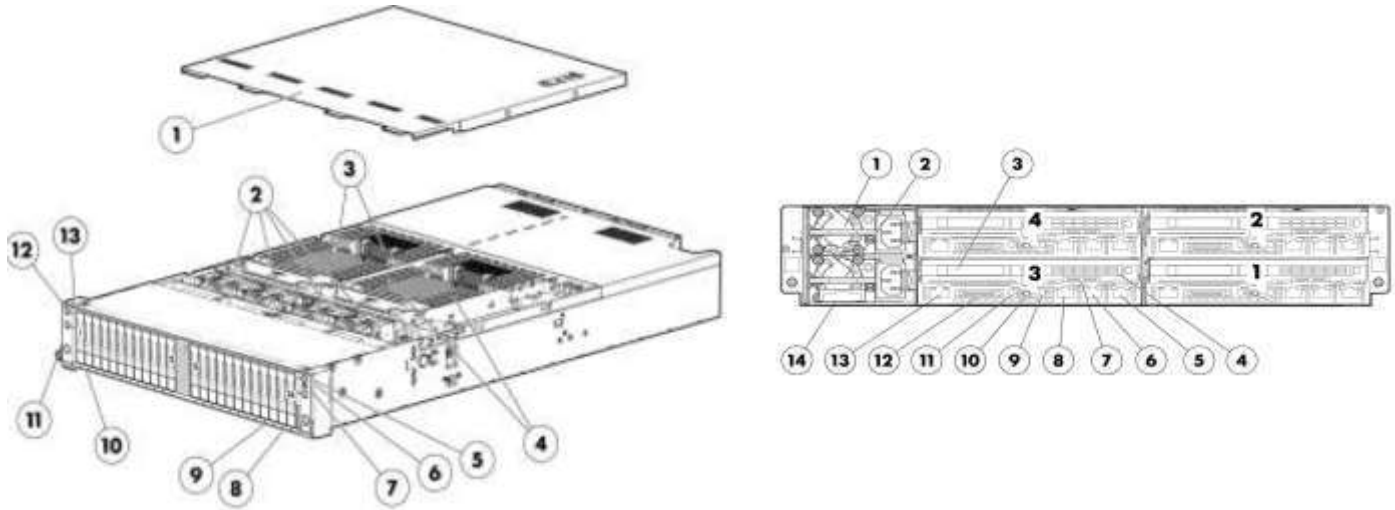
Additional Services Information

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 EVO:RAIL



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. Pass Through SAS controller
4. Network card with two 10GbE SFP+ or RJ45 ports
5. NIC 2 port (1GbE) (Disabled)
6. NIC 1 port (1GbE) (Disabled)
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 EVO:RAIL

Model Description

- HP ConvergedSystem 200-HC EVO:RAIL RJ
- HP ConvergedSystem 200-HC EVO:RAIL SFP+

Part Number

- L3W30A
- L3W31A

NOTE: 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.

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

If a user wishes to power HP ConvergedSystem 200-HC EVO:RAIL using an 110V receptacle (NEMA-15), the NEMA power cord (AF556A) must be ordered separately. If customers require a power cord, they can check the power cord matrix for the appropriate cord.

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: www.hp.com/products/powercords

Technical Specifications

	HP ConvergedSystem 200-HC EVO:RAIL RJ45	HP ConvergedSystem 200-HC EVO:RAIL SFP+	
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		
	Auto-switching universal 115/220 Volts		
115V/60Hz	2218 BTU/hr		
	651 W, 5.7 A rms, 657 VAC, (19 A inrush current)		
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

EVO:RAIL home page 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:
06-Mar-2015	From Version 1 to 2	Changed	Modified power from 1500w to 1200w; update memory; took out 60 day license

© Copyright 2015 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice. Microsoft and Windows NT are US registered trademarks of Microsoft Corporation. Intel is a US registered trademark of Intel Corporation. Unix is a registered trademark of The Open Group. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.