Dell Red Hat Cloud Solutions Bill of Materials Guide - Version 2.0

Contents

Trademarks

Notes, Cautions, and Warnings

A **Note** indicates important information that helps you make better use of your system.

A **Caution** indicates potential damage to hardware or loss of data if instructions are not followed.

A **Warning** indicates a potential for property damage, personal injury, or death.

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Overview

This guide provides Bill of Material information necessary to purchase the proper hardware to deploy the Dell Red Hat Cloud Solutions with Red Hat Enterprise Linux™ OpenStack.

This hardware includes Dell R620, R720, and R720xd servers with Dell PowerEdge H710 disk controllers; and Dell Force10 S4810 and S55 network switches.

Please consult with your Dell sales representative to ensure proper preparation and submission of your hardware and software orders.

Pilot Bundle Bill of Materials - PowerEdge R620

Table 1: Bill of Materials - PowerEdge R620 Nodes

SKU	Description
210-ABVQ	PowerEdge R620, Intel Xeon E-26XX v2 Processors
591-BBBQ	PowerEdge R620 Motherboard, TPM
317-8730	Chassis with up to 4 Hard Drives and 3 PCIe Slots
331-4822	Cable for Mini PERC Cards in Chassis with up to 4 Hard Drives
331-4761	PowerEdge R620 Shipping - 4/8 Drive Chassis
317-8585	Intel Xeon E5-2665 2.40GHz, 20M Cache, 8.0GT/s QPI, Turbo,8C, 115W, Max Mem 1600MHz
317-8688	DIMM Blanks for Systems with2 Processors
331-4762	Heat Sink for PowerEdge R620(2)
317-8460	Intel Xeon E5-2665 2.40GHz, 20M Cache, 8.0GT/s QPI, Turbo,8C, 115W
331-4424	1600 MHz RDIMMS
331-4428	Performance Optimized
319-1812	16GB RDIMM, 1600MT/s, Low Volt, Dual Rank, x4 Data Width(Qty 8)
331-4234	RAID 1+RAID 1 for H710P/H710/H310 (2 + 2 HDDs)
342-3531	PERC H710P Integrated RAID Controller, 1GB NV Cache
342-5514	1.2TB 10K RPM SAS 6Gbps 2.5in Hot-plug Hard Drive(4)
421-5339	iDRAC7 Enterprise
430-4447	Intel Ethernet I350 QP 1Gb Network Daughter Card
430-4446	Intel X520 DP 10Gb DA/SFP+ Server Adapter, Low Profile(Qty 2)
332-0333	Dual, Hot-plug, Redundant Power Supply (1+1), 750W, Titanium, 200-240VAC
330-3151	Power Cord, C13 to C14, PDU Style, 12 Amps, 2 meter, (Qty 2)
330-5116	Power Saving Dell Active Power Controller
331-4766	331-4766 ReadyRails Sliding Rails Without Cable Management Arm

SKU	Description
313-0869	No Bezel
318-1392	No Internal Optical Drive
331-4513	Electronic System Documentation and OpenManage DVD Kit
421-4727	Red Hat Enterprise Linux NonFactory Install, x64,Reqs Subscription Selection
421-6929	Red Hat Enterprise Linux for HPC, 1-2 Socket, 3yr Subscription and Licensing
421-5737	Red Hat Enterprise Linux 6.4Media Only X86_64, No Subscription, Factory Install
939-4668	Dell Hardware Limited Warranty Plus On Site Service Extended Year
989-3439	Dell ProSupport. For tech support, visit *http://www.dell.com/learn/us/en/19/services/support-services-prosupport-for-enterprise* or call 1-800-945-3355
936-9493	ProSupport: Next Business Day Onsite Service After ProblemDiagnosis, 2 Year Extended
989-5221	ProSupport: Next Business Day Onsite Service After ProblemDiagnosis, Initial Year
936-9503	ProSupport: 7x24 HW / SW Tech Support and Assistance, 3 Year
936-1787	Dell Hardware Limited Warranty Plus On Site Service Initial Year
900-9997	On-Site Installation Declined
973-2426	Declined Remote Consulting Service
926-2979	Proactive Maintenance Service Declined

Pilot Bundle Bill of Materials PowerEdge - R720xd Storage Node

Table 2: Bill of Materials - PowerEdge R720xd Storage Nodes

SKU	Description
91-BBBP	PowerEdge R720 Motherboard, TPM
210-ABMY	PowerEdge R720xd, Intel XeonE-26XX Processors
342-3567	Chassis with up to 12, 3.5" Hard Drives
331-4437	PowerEdge R720 Shipping
338-BDBD	Intel Xeon E5-2650v2 2.6GHz,20M Cache, 8.0GT/s QPI, Turbo, HT, 8C, 95W, Max Mem 1866MHz
317-8688	DIMM Blanks for Systems with2 Processors
331-4508	Heat Sink for PowerEdge R720and R720xd (Qty 2)
338-BDBS	Intel Xeon E5-2650v2 2.6GHz,20M Cache, 8.0GT/s QPI, Turbo, HT, 8C, 95W, Max Mem 1866MHz,2nd Proc
331-4424	1600 MHz RDIMMS
331-4428	Performance Optimized
319-1812	16GB RDIMM, 1600MT/s, Low Volt, Dual Rank, x4 Data Width (Qty 8)
331-4590	RAID 6 for H710P/H710 (4-24 HDDs)
342-3529	PERC H710 Integrated RAID Controller, 512MB NV Cache
342-1865	2TB 7.2K RPM SATA 3Gbps 3.5in Hot-plug Hard Drive (Qty 12)
421-5339	iDRAC7 Enterprise
430-4447	Intel Ethernet I350 QP 1Gb Network Daughter Card
430-4445	Intel X520 DP 10Gb DA/SFP+ Server Adapter (Qty 2)
331-4605	Dual, Hot-plug, Redundant Power Supply (1+1), 750W
330-3151	Power Cord, C13 to C14, PDU Style, 12 Amps, 2 meter, (Qty2)
330-5116	Power Saving Dell Active Power Controller
331-4434	ReadyRails Sliding Rails Without Cable Management Arm
318-1375	Bezel

SKU	Description
331-5914	Electronic System Documentation and OpenManage DVD Kit forR720 and R720xd
420-6320	No Operating System
421-5736	No Media Required
331-3765	UEFI BIOS Setting
989-2701	ProSupport: Next Business Day Onsite Service After ProblemDiagnosis, Initial Year
989-3439	Dell ProSupport. For tech support, visit *http://www.dell.com/learn/us/en/19/services/support-services-prosupport-for-enterprise* or call 1-800-945-3355
939-3398	Dell Hardware Limited Warranty Plus On Site Service Extended Year
936-7263	ProSupport: 7x24 HW / SW Tech Support and Assistance, 3 Year
936-0967	Dell Hardware Limited Warranty Plus On Site Service Initial Year
936-7243	ProSupport: Next Business Day Onsite Service After ProblemDiagnosis, 2 Year Extended
900-9997	On-Site Installation Declined
926-2979	Proactive Maintenance Service Declined

Bill of Materials - Networking Force10 S4810 and S55

Table 3: Bill of Materials - Networking Force10 S4810 and S55

SKU	Description
Force10 S4810	
225-2479	Force10, S4810P, 1RU, 48 x 10GbE SFP+, 4 x 40GbE QSFP+, 1 x AC PSU, 2 x FM, PSU to IO Panels (Reverse) (Qty 2)
331-9233	No Returns Allowed on Dell Networking Switches (Qty 2)
331-6279	Force10, User Documentation for S4810, DAO/ BCC (Qty 2)
935-0143	ProSupport: 7x24 HW / SW Tech Support and Assistance, 3 Years (Qty 2)
989-3439	Dell ProSupport. For tech support, visit *http:// www.dell.com/learn/us/en/19/services/support-services-prosupport-for-enterprise* or call 1-800-945-3355 (Qty 2)
996-2670	Dell Hardware Limited Warranty Initial Year (Qty 2)
996-2760	Dell Hardware Limited Warranty Extended Year(s) (Qty 2)
936-9034	ProSupport: Next Business Day Onsite Service After ProblemDiagnosis, 2 Year Extended
935-0103	SW Support,Force10 Software ,3 Years (Qty 2)
936-9014	ProSupport: Next Business Day Onsite Service After ProblemDiagnosis, Initial Year (Qty 2)
900-9997	On-Site Installation Declined (Qty 2)
973-2426	Declined Remote Consulting Service (Qty 2)
331-5105	Force10, S4810P, AC Power Supply, PSU to IO Panels (Reverse) (Qty 2)
470-AAFE	Dell Networking, Cable, QSFP+ to QSFP+, 40GbE Passive Copper Direct Attach Cable, 1 Meter (Qty 2)
470-AAGP	Dell Networking, Cable, SFP+to SFP+, 10GbE, Copper TwinaxDirect Attach Cable, 3 Meter (Qty 48)
450-AASX	Power Cord, 250V, 12A, 2 Meters, C13/C14 (Qty 4)
332-0139	Force10 Customer not deploying this switch in iSCSI or FCOE environment. (Qty 2)
331-5393	Force10, Rear Rack Mounting Bracket, 4 Post, S4810 (Qty 2)

SKU	Description
Force10 S55	
225-2504	Force10, S55, 1RU, 44 x 10/100/1000 BASE-T, 4 x 1GbE SFP, 1 x AC PSU, 2 x FM, PSU to IO Panels (Reverse)
331-5392	Force10, Adapter, Card, 10 GbE, 2 Port, SFP+, S55
331-5244	Force10, S55, AC Power Supply, PSU to IO Panels (Reverse)
450-AASX	Power Cord, 250V, 12A, 2 Meters, C13/C14 (Qty 2)
331-5252	Force10, Rear Rack Mounting Bracket, 4 Post, S55
331-6271	Force10, User Documentation for S55/S60, DAO/BCC
995-0622	ProSupport: 7x24 HW / SW Tech Support and Assistance, 3 Years
936-8714	ProSupport: Next Business Day Onsite Service After ProblemDiagnosis, Initial Year
936-8734	ProSupport: Next Business Day Onsite Service After ProblemDiagnosis, 2 Year Extended
995-9649	SW Support,Force10 Software ,5 Years
989-3439	Dell ProSupport. For tech support, visit *http://support.dell.com/ProSupport* or call 1-800-945-3355
935-1367	Dell Hardware Limited Warranty Initial Year
938-7578	Dell Hardware Limited Warranty Extended Year(s)
996-0540	Force10, 5 Year Return To Depot Service, Base Warranty
923-2669	Remote Implementation of a Layer 2 Ethernet Switch
973-2426	Declined Remote Consulting Service
331-9233	No Returns Allowed on Dell Networking Switches

Server Racks and Power

Table 1 and Table 2 above do not include racks or power distribution units, as they are generally site specific. The physical dimensions and power requirements need to be reviewed. The R720 and R720xd both require rear cable management and power distribution.

Networking Equipment

Table 3 includes switches that have specific air flow options.

There are both I/O to PSU SKU numbers and PSU to I/O side options available for reverse air flow. Redundant FANs (other than the minimum supplied with chassis) should also be same direction as the base switch. The airflow cannot be reversed in the field at this time

Note: The networking SKUs lists show the AC power supplies only. All switch models are available in DC as well.

Table 3 includes the necessary cables for the connections between the switches for uplinks and interconnects.

The BOMs include the cables required for connecting the individual servers into the cluster, since the exact cables required depend on the final chosen rack layout, and choice of cable is often based on customer preference. The following tables summarize the cable counts required, including BMC connections:

Table 4: Network Cables Required – Pilot Bundle and 10GbE Configurations

Description	1GbE Cables Required	10GbE Cables Required
All Nodes	2 x number of nodes	4 x number of nodes

References

Additional information can be obtained at *http://www.dell.com/openstack* or by e-mailing *openstack@dell.com*.

If you need additional services or implementation help, please contact your Dell sales representative.

To Learn More

For more information on the Dell Red Hat Cloud Solutions with Red Hat Enterprise Linux™ OpenStack Platform visit *http://www.dell.com/openstack*.