



Dell EMC + VMware Cloud Infrastructure Platform for NFV

VMware vCloud NFV 1.5 – VMware vSAN Bill of Materials

Service Provider Solutions Group
April 2017

Revisions

Date	Description
October 2016	Initial release
April 2017	Updated for release 1.5

Copyright © 2017 Dell Inc. or its subsidiaries. All Rights Reserved.

Except as stated below, no part of this document may be reproduced, distributed or transmitted in any form or by any means, without express permission of Dell.

You may distribute this document within your company or organization only, without alteration of its contents.

THIS DOCUMENT IS PROVIDED "AS-IS", AND WITHOUT ANY WARRANTY, EXPRESS OR IMPLIED. IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE SPECIFICALLY DISCLAIMED. PRODUCT WARRANTIES APPLICABLE TO THE DELL PRODUCTS DESCRIBED IN THIS DOCUMENT MAY BE FOUND AT: <http://www.dell.com/learn/us/en/vn/terms-of-sale-commercial-and-public-sector-warranties>

Performance of network reference architectures discussed in this document may vary with differing deployment conditions, network loads, and the like. Third party products may be included in reference architectures for the convenience of the reader. Inclusion of such third party products does not necessarily constitute Dell's recommendation of those products. Please consult your Dell representative for additional information.

Trademarks used in this text: Dell™, the Dell logo, Dell Boomi™, PowerEdge™, PowerVault™, PowerConnect™, OpenManage™, EqualLogic™, Compellent™, KACE™, FlexAddress™, Force10™ and Vostro™ are trademarks of Dell Inc. EMC VNX®, and EMC Unisphere® are registered trademarks of Dell. Other Dell trademarks may be used in this document. VMware®, Virtual SMP®, VMware vMotion®, VMware vCenter®, VMware vSphere®, VMware Capacity Planner™, VMware ESX®, VMware ESXi™, VMware® Integrated OpenStack, VMware NSX®, VMware NSX® Edge™, VMware NSX® for vSphere®, VMware NSX® Manager™, VMware Power CLI, VMware Site Recovery Manager™, VMware Tools™, VMware vCenter Server®, VMware vCenter Server® Appliance™, VMware vCloud Director®, VMware vCloud®, VMware vCloud® NFV™, VMware vRealize®, VMware vRealize® Log Insight™, VMware vRealize® Operations Insight™, VMware vRealize® Operations Manager™, VMware vRealize® Operations Management Pack™, VMware vRealize® Operations™, VMware vRealize® Orchestrator™, VMware vRealize® Suite Advanced, VMware vSphere® Data Protection™, VMware vSphere® Distributed Resource Scheduler™, VMware vSphere® Distributed Switch™, VMware vSphere® High Availability, VMware vSphere® PowerCLI™, VMware vSphere® Replication™, VMware vSphere® vMotion® and VMware vSphere® Web Client are registered trademarks or trademarks of VMware, Inc. in the United States or other countries. Intel®, Pentium®, Xeon®, Core® and Celeron® are registered trademarks of Intel Corporation in the U.S. and other countries. AMD® is a registered trademark and AMD Opteron™, AMD Phenom™ and AMD Sempron™ are trademarks of Advanced Micro Devices, Inc. Microsoft®, Windows®, Windows Server®, Internet Explorer®, MS-DOS®, Windows Vista® and Active Directory® are either trademarks or registered trademarks of Microsoft Corporation in the United States and/or other countries. Red Hat® and Red Hat® Enterprise Linux® are registered trademarks of Red Hat, Inc. in the United States and/or other countries. Broadcom® and NetXtreme® are registered trademarks of QLogic is a registered trademark of QLogic Corporation. Other trademarks and trade names may be used in this document to refer to either the entities claiming the marks and/or names or their products and are the property of their respective owners. Dell disclaims proprietary interest in the marks and names of others.

Table of contents

Revisions	2
Overview	4
1 Bill of Material for Dell EMC Networking	5
2 Bill of Material for Dell EMC PowerEdge R630 Servers	6
References	9

Overview

This guide provides Bill of Material information necessary to purchase the proper hardware to deploy the Dell EMC VMware vCloud NFV.

The hardware consists of:

- Three Dell EMC Networking: 1xS4048-ON and 2xS6010-ON
- Twelve Dell EMC PowerEdge R630 servers

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

1 Bill of Material for Dell EMC Networking

	Dell Networking S6010-ON	2
SKU NUMBER	DESCRIPTION	QUANTITY
634-BHCU	SW,L3,S6010-ON	2
450-AASX	250V,12A,2MTR,C13/C14	4
343-BBEP	Doc Kit, S6010-ON	2
808-8123	HW WRTY,NW S6010-ON	2
808-8209	PS NBD OS,NW S6010-ON,1YR	2
808-8232	PS NBD OS,NW S6010-ON,2YR EXT	2
808-8233	PS TECH SPT,NW S6010-ON,3YR	2
975-3461	HW WRTY,INFO,EXT	2
989-3439	INFO,PS TECH SPT CONTACT,ENTERPRISE	2
997-6306	Info 3rd Party O/S Warranted by Vendor	2
805-2402	PD Dell N/W Switch S6XXX,EDT	2
805-2404	PD Dell N/W Switch S6XXX,RIS	2
332-1286	US Order	2
210-AGMR	S6010-ON,IO/PSU,OS9	2
470-ABOF	MOD,CBL,MTP-4xLC,OM4,Breaklout,1M	4
470-ABOG	MOD,CBL,MTP-4xLC,OM4,Breaklout,3M	8
470-ABOK	MOD,CBL,MTP-MTP,OM4,Crossover,1M	2
407-BBBY	Dell QSFP+ SR Optic, 40GbE	12

Table 1 Bill of Materials – Dell EMC Networking S6010-ON

	Dell Networking S4048T-ON	1
SKU NUMBER	DESCRIPTION	QUANTITY
634-BCXM	SW,Layer 3 DNOS 9, S4048-ON	1
450-AASX	250V,12A,2MTR,C13/C14	2
343-BBEM	Doc Kit, S4048T-ON	1
808-6848	HW WRTY+SVC,NW S4048t-ON	1
808-6934	PS NBD OS,NW S4048t-ON,1YR	1
808-6957	PS NBD OS,NW S4048t-ON,2YR EXT	1
808-6958	PS TECH SPT,NW S4048t-ON,3YR	1
975-3461	HW WRTY,INFO,EXT	1
989-3439	INFO,PS TECH SPT CONTACT,ENTERPRISE	1
997-6306	Info 3rd Party O/S Warranted by Vendor	1
804-2145	PD N/W Switch S4XXX EDT	1
804-2146	PD Dell N/W Switch S4XXX RIS	1
973-2426	INFO Declined Remote Consulting Service	1
332-1286	US Order	1
210-AHMOV	S4048T-ON,PSU-IO,OS9	1

Table 2 Bill of Materials – Dell EMC Networking S4048T-ON

2 Bill of Material for Dell EMC PowerEdge R630 Servers

	ITEM DESCRIPTION	QUANTITY
	PowerEdge R630 - Edge Cluster	4
OPTION	OPTION DESCRIPTION	QUANTITY
R630X	PowerEdge R630 Server	1
NTPM	No Trusted Platform Module	1
83P	Chassis with up to 8, 2.5" Hard Drives, 3 PCIe Slots	1
D8SH	PowerEdge R630 Shipping- 8 Drive Chassis	1
HS1202	2 CPU up to 120W	1
2400MT	2400MT/s RDIMMs	1
PEOPT	Performance Optimized	1
H7301G	PERC H730 RAID Controller, 1GB NV Cache	1
OI8EN	iDRAC8, Enterprise with OpenManage Essentials, Server ConfigMgmt	1
DVDRW	DVD+/-RW, SATA, Internal	1
8BZ	Bezel 8 Drive Chassis	1
RRCMA	ReadyRails™ Sliding Rails With Cable Management Arm	1
HPBIOS	Performance BIOS Setting	1
750R	Dual, Hot-plug, Redundant Power Supply (1+1), 750W	1
125V10	NEMA 5-15P to C13 Wall Plug, 125 Volt, 15 AMP, 10 Feet (3m), Power Cord, North America	2
DOC	Electronic System Documentation and OpenManage DVD Kit	1
NOOS	No Operating System	1
NOMED	No Media Required	1
USNONE	US No Canada Ship Charge	1
NOINSTL	No Installation	1
NORCS	Declined Remote Consulting Service	1
URH	Unconfigured RAID for H330/H730/H730P (1-24 HDDs or SSDs)	1
X520LS	Intel X520 DP 10Gb DA/SFP+ Server Adapter, Low Profile, with SR Optics	1
216GSD	Internal Dual SD Module with 2x 16GB SD Cards	1
VMWXI	VMware ESXi 6.0 U2 Embedded Image on Flash Media with Customer Providing Their Own vSAN Licenses	1
VSE3US	vSphere Enterprise Plus 1CPU Lic, 3Y Subscription w/Dwngrd Rights	2
X520SR	Intel X520 DP 10Gb SR/SFP+, + I350 DP 1Gb Ethernet, Network Daughter Card, with SR Optics	1
PSP3Y4H	ProSupport Plus: 3 Year Mission Critical 4Hr On-site Service	1
H1TSHR	1TB 7.2K RPM Near-Line SAS 12Gbps 2.5in Hot-plug Hard Drive	7
ES2654	Intel® Xeon® E5-2650 v4 2.2GHz, 30M Cache, 9.60GT/s QPI, Turbo, HT, 12C/24T (105W) Max Mem 2400MHz	1
ES105W	Intel® Xeon® E5-2650 v4 2.2GHz, 30M Cache, 9.60GT/s QPI, Turbo, HT, 12C/24T (105W) Max Mem 2400MHz	1
16GBMM	16GB RDIMM, 2400MT/s, Dual Rank, x8 Data Width	16
80GCM3	800GB Solid State Drive SAS Mix Use MLC 12Gbps 2.5in Hot-plug Drive, PX04SM	1

Table 3 Bill of Materials – Edge Cluster Dell EMC PowerEdge R630

	ITEM DESCRIPTION	QUANTITY
	PowerEdge R630 - Resource Cluster	4
OPTION	OPTION DESCRIPTION	QUANTITY
R630X	PowerEdge R630 Server	1
2400MT	2400MT/s RDIMMs	1
PEOPT	Performance Optimized	1
H7301G	PERC H730 RAID Controller, 1GB NV Cache	1
OI8EN	iDRAC8, Enterprise with OpenManage Essentials, Server ConfigMgmt	1
RRCMA	ReadyRails™ Sliding Rails With Cable Management Arm	1
HPBIOS	Performance BIOS Setting	1
750R	Dual, Hot-plug, Redundant Power Supply (1+1), 750W	1
125V10	NEMA 5-15P to C13 Wall Plug, 125 Volt, 15 AMP, 10 Feet (3m), Power Cord, North America	2
DOC	Electronic System Documentation and OpenManage DVD Kit	1
NOOS	No Operating System	1
NOMED	No Media Required	1
USNONE	US No Canada Ship Charge	1
NOINSTL	No Installation	1
NORCS	Declined Remote Consulting Service	1
URH	Unconfigured RAID for H330/H730/H730P (1-24 HDDs or SSDs)	1
X520LS	Intel X520 DP 10Gb DA/SFP+ Server Adapter, Low Profile, with SR Optics	1
216GSD	Internal Dual SD Module with 2x 16GB SD Cards	1
VMWXI	VMware ESXi 6.0 U2 Embedded Image on Flash Media with Customer Providing Their Own vSAN Licenses	1
VSE3US	vSphere Enterprise Plus 1CPU Lic, 3Y Subscription w/Dwngrd Rights	2
X520SR	Intel X520 DP 10Gb SR/SFP+, + I350 DP 1Gb Ethernet, Network Daughter Card, with SR Optics	1
PSP3Y4H	ProSupport Plus: 3 Year Mission Critical 4Hr On-site Service	1
TPM20	Trusted Platform Module 2.0 FIPs, Common Criteria	1
ES2698	Intel® Xeon® E5-2698 v4 2.2GHz, 50M Cache, 9.60GT/s QPI, Turbo, HT, 20C/40T (135W) Max Mem 2400MHz	1
HS1602	2 CPU up to 160W	1
ES2698	Intel® Xeon® E5-2698 v4 2.2GHz, 50M Cache, 9.60GT/s QPI, Turbo, HT, 20C/40T (135W) Max Mem 2400MHz	1
32GBMM	32GB RDIMM, 2400MT/s, Dual Rank, x4 Data Width	16
80GCM3M	800GB Solid State Drive SAS Mix Use MLC 12Gbps 2.5in Hot-plug Drive, PX04SM	1
103P	Chassis with up to 10, 2.5" Hard Drives, 3 PCIe Slots	1
D10SH	PowerEdge R630 Shipping - 10/24 Drive Chassis	1
NODVD1	No Internal Optical Drive for 10 or 24 HDD Chassis	1
1024QS	Quick Sync Bezel 10/24 Drive Chassis	1
12TB1K	1.2TB 10K RPM SAS 12Gbps 2.5in Hot-plug Hard Drive	8

Table 4 Bill of Materials – Resource Cluster Dell EMC PowerEdge R630

	ITEM DESCRIPTION	QUANTITY
	PowerEdge R630 - Management Cluster	4
OPTION	OPTION DESCRIPTION	QUANTITY
R630X	PowerEdge R630 Server	1
83P	Chassis with up to 8, 2.5" Hard Drives, 3 PCIe Slots	1
D8SH	PowerEdge R630 Shipping- 8 Drive Chassis	1
HS1202	2 CPU up to 120W	1
2400MT	2400MT/s RDIMMs	1
PEOPT	Performance Optimized	1
H7301G	PERC H730 RAID Controller, 1GB NV Cache	1
OI8EN	iDRAC8, Enterprise with OpenManage Essentials, Server ConfigMgmt	1
DVDRW	DVD+/-RW, SATA, Internal	1
8BZ	Bezel 8 Drive Chassis	1
RRCMA	ReadyRails™ Sliding Rails With Cable Management Arm	1
HPBIOS	Performance BIOS Setting	1
750R	Dual, Hot-plug, Redundant Power Supply (1+1), 750W	1
125V10	NEMA 5-15P to C13 Wall Plug, 125 Volt, 15 AMP, 10 Feet (3m), Power Cord, North America	2
DOC	Electronic System Documentation and OpenManage DVD Kit	1
NOOS	No Operating System	1
NOMED	No Media Required	1
USNONE	US No Canada Ship Charge	1
NOINSTL	No Installation	1
NORCS	Declined Remote Consulting Service	1
26404	Intel® Xeon® E5-2640 v4 2.4GHz, 25M Cache, 8.0GT/s QPI, Turbo, HT, 10C/20T (90W) Max Mem 2133MHz	1
E5264V	Intel® Xeon® E5-2640 v4 2.4GHz, 25M Cache, 8.0GT/s QPI, Turbo, HT, 10C/20T (90W) Max Mem 2133MHz	1
16GBMM	16GB RDIMM, 2400MT/s, Dual Rank, x8 Data Width	8
URH	Unconfigured RAID for H330/H730/H730P (1-24 HDDs or SSDs)	1
216GSD	Internal Dual SD Module with 2x 16GB SD Cards	1
VMWXI	VMware ESXi 6.0 U2 Embedded Image on Flash Media with Customer Providing Their Own vSAN Licenses	1
VSE3US	vSphere Enterprise Plus 1CPU Lic, 3Y Subscription w/Dwngrd Rights	2
X520SR	Intel X520 DP 10Gb SR/SFP+, + I350 DP 1Gb Ethernet, Network Daughter Card, with SR Optics	1
PSP3Y4H	ProSupport Plus: 3 Year Mission Critical 4Hr On-site Service	1
H1TSHR	1TB 7.2K RPM Near-Line SAS 12Gbps 2.5in Hot-plug Hard Drive	7
TPM20	Trusted Platform Module 2.0 FIPs, Common Criteria	1
80GCM3M	800GB Solid State Drive SAS Mix Use MLC 12Gbps 2.5in Hot-plug Drive, PX04SM	1
X520LS	Intel X520 DP 10Gb DA/SFP+ Server Adapter, Low Profile, with SR Optics	1

Table 5 Bill of Materials – Management Cluster Dell EMC PowerEdge R630

References

Additional information can be obtained at <http://www.dell.com/nfv> or by e-mailing nfv@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 EMC + VMware Cloud Infrastructure Platform NFV solution visit <http://www.dell.com/nfv>.