

Dell XC730-16G Web-Scale Hyperconverged Appliance Support Matrix



Notes, cautions, and warnings

 **NOTE:** A NOTE indicates important information that helps you make better use of your computer.

 **CAUTION:** A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

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

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Introduction

This document provides information about the supported software, firmware, and hardware versions and technical specifications for the Dell XC730-16G Web-Scale Hyperconverged Appliance.

 **NOTE:** This Support Matrix contains the latest compatibility and interoperability information. If you observe inconsistencies between this information and other documentation or references, this document supersedes all other documentation.

Supported hardware, firmware, and software

This chapter provides information about supported software, firmware, and hardware versions for the Dell XC730-16G Web-Scale Hyperconverged Appliance.

Supported components

This section provides information about components supported by your hardware.


 **NOTE:** In this document, Haswell v3 and Broadwell v4 refers to Intel CPU version of your system.

Table 1. Supported v3 Haswell components

Component	Version
CPUs	E5-2660 v3
	E5-2680 v3
	E5-2695 v3
GPUs	NVIDIA GRID K1
	NVIDIA GRID K2
	NVIDIA Tesla M60
BIOS	1.3.6
iDRAC8	2.15.10.10 or later

Table 2. Supported v4 Broadwell components

Component	Version
CPUs	E52603 v4
	E52608L v4
	E52609 v4
	E52618L v4
	E52620 v4
	E52623 v4
	E52628L v4
	E52630L v4

Component	Version
	E52630 v4
	E52637 v4
	E52640 v4
	E52643 v4
	E52648L v4
	E52650L v4
	E52650 v4
	E52658 v4
	E52660 v4
	E52667 v4
	E52680 v4
	E52683 v4
	E52690 v4
	E52695 v4
	E52698 v4
	E52603 v4
BIOS	1.7.12 or later
iDRAC Support	2.30.30.30 or later

Supported physical disk drives

This section provides information about physical disk drives supported by your hardware.

Table 3. : Supported physical disk drive models

Form Factor	Capacity	Type	Vendor
2.5"	1 TB	NL- SAS HDD	Dell Supported
2.5"	2 TB	NL- SAS HDD	Dell Supported
2.5"	1 TB	SED SAS HDD	Dell Supported


Form Factor	Capacity	Type	Vendor
2.5"	1.2 TB	SED SAS HDD	Dell Supported
2.5"	200 GB	SATA SSD	Intel® Solid-State Drive Data Center S3700 Series: 200, 400, 800GB
2.5"	400 GB	SATA SSD	Intel® Solid-State Drive Data Center S3710 Series: 200, 400, 800GB
2.5"	800 GB	SATA SSD	Intel® Solid-State Drive Data Center S3610 Series: 800GB, 1.6TB
2.5"	400 GB	SED SAS SSD	HGST
2.5"	800 GB	SED SAS SSD	HGST
2.5"	1600 GB	SED SAS SSD	HGST

Supported HBA

This section provides information about Host Bus Adapters (HBAs) supported by your hardware.

Table 4. : Supported Host Bus Adapters (HBAs)


Name	Form Factor/Slot	Minimum firmware version
H730	mini or integrated slot	25.3.0-0016
HBA330	mini or integrated slot	9.17.20.07

 **NOTE:** This version is supported on NOS 4.1.3.x

Supported networking

This section provides information about networking supported by your hardware.

Intel branded Network Daughter Cards (NDC) and Network Interface Cards (NIC) specify the use of only Intel branded SFP+ optical modules for use with optical cables. When ordering a system with optics, the appropriate Intel branded SFP+ optical modules are included with your order. If you already have SFP+ optical modules, ensure they are the Intel branded modules before inserting into the NDC or NIC. Twinax cables are also the supported network cables for Intel NDC and NIC.

 **CAUTION:** Using any brand of SFP+ module other than Intel during deployment disables the 10 GbE ports. Call Dell Support to recover port functionality.

 **WARNING:** Hot-plugging an unsupported SFP+ module causes ESXi host to fail with purple diagnostic screen. Call Dell Support to recover from this situation.

Table 5. Supported Network Daughter Cards (NDCs)

Name	Firmware Version	Supported Cables
Intel X520 Dual 1 G + Dual 10 G SFP+	16.0.24	<ul style="list-style-type: none"> Intel branded SFP+ modules only (10 GbE) Twinax Cable (10 GbE) Standard Category 6 Ethernet (1 GbE)
Intel X540 Dual 1 G + Dual 10 G Base	16.0.24	Standard Category 6 Ethernet (up to 10 GbE)

Table 6. Supported NICs (optional)

Name	Form Factor/Slot	Firmware Version	Supported Cables
Intel X520 Dual 10 G SFP+	Low profile/any slot	16.0.24	<ul style="list-style-type: none"> Intel branded SFP+ modules only (10 GbE) Twinax Cable (10 GbE)
Intel X540 Dual 10 G BaseT	Low profile/any slot	16.0.24	Standard Category 6 Ethernet (up to 10 GbE)

Supported hardware management solutions

This section provides information about hardware management solutions that are supported by your hardware.

Table 7. Supported hardware management solutions

Name	Minimum firmware version
Dell OpenManage Essentials	2.0
Dell Nautilus Firmware Update Utility	A13

Supported management software

This section provides information about components supported by your hardware.

Table 8. Supported management software

Name	Minimum version
Nutanix Operating System (NOS)	<ul style="list-style-type: none"> 4.1.1.1 (Haswell) 4.5.1.2 (Broadwell)

Supported hypervisor OS

This section provides information about the hypervisor Operating Systems (OS) supported by your hardware.

Table 9. Supported hypervisor Operating Systems

Name	Minimum version
VMware	<ul style="list-style-type: none">• ESXi 5.5, update 2 (Haswell)• ESXi 6.0 (Haswell)• ESXi 5.5, update 3 (Broadwell)• ESXi 6.0, update 1 (Broadwell)
Windows Server	<ul style="list-style-type: none">• Windows Server 2012 R2 Standard Edition• Windows Server 2012 R2 Datacenter Edition

Technical specifications

This chapter provides technical specifications for Dell XC730-16G Web-Scale Hyperconverged Appliance.

Processor specifications

This section provides processor specifications required for your hardware.

Table 10. Processor specifications

Processor	
Processor Type	Two Intel Xeon processor E5-2600 v3 or v4 product family


Expansion bus specifications

This section provides expansion bus specifications for storage, including bus type, expansion cards, and expansion slots.

Table 11. Expansion bus specifications

Expansion Bus	Specification
Bus Type	PCI Express Generation 3
Expansion Cards	For a list of supported expansion cards, refer to the <i>Owner's Manual</i> at Dell.com/xcseriesmanuals .



Expansion slots using riser card

Riser 1	<ul style="list-style-type: none"> (Slot 1) One low-profile, low profile x8 link (Slot 2) One low-profile, low profile x8 link (Slot 3) One low-profile, low profile x8 link
Riser 2	<ul style="list-style-type: none"> (Slot 4) One full-height, full-length x16 link <p> NOTE: To use slots 1 through 4, both the processors must be installed.</p> <ul style="list-style-type: none"> (Slot 5) One full-height, full-length x8 link
Riser 3	(Slot 6) One full-height, full-length x16 link

Power specifications

This section provides power specifications for your hardware, including wattage, heat dissipation, and voltage.

Table 12. Power specifications

Types	Specifications
AC power supply (per power supply unit (PSU))	
Wattage	1100 W
Heat dissipation	4100 BTU/hr maximum (1100 W PSU)
 NOTE: Heat dissipation is calculated on the basis of power rating of power supply unit (PSU).	
Voltage	100–240 V AC, auto ranging, 50/60 Hz
 NOTE: This system is also designed to be connected to IT power systems with a phase to phase voltage not exceeding 230 V.	

Memory specifications

This section provides memory specifications for your hardware, including architecture, memory module sockets, and memory module capacities.

Table 13. Memory

Memory	Specification
Architecture	<ul style="list-style-type: none">• 1866, 2133, and 2400 MT/s DIMMs• Support for Advanced ECC or memory-optimized operation
Memory module sockets	Twenty-four 288-pin
Memory module capacities	
RDIMM	16 GB or 32 GB
LRDIMM	64 GB
Minimum RAM	64 GB with a dual processor
Maximum RAM	Up to 1.5 TB with a dual processor

Hard drive specifications

This section provides hard drive specifications for your hardware.

Table 14. Drives specifications

Hard Drives	Specification
Sixteen-hard-drive systems	Up to sixteen 2.5 inch, internal, hot-swappable drives in hard-drive slots 0–15.

Connector specifications

This section provides connectors specifications for your hardware, including rear, front, and internal connectors.

Table 15. Connectors specifications

Types	Specification
Back	
NIC	Four 1 Gbps, two 1 Gbps plus two 10 Gbps, or four 10 Gbps
Serial	9-pin, DTE, 16550-compatible
USB	Two 4-pin, USB 3.0-compliant
Video	15-pin VGA
Front	
USB	<ul style="list-style-type: none">• One 4-pin, USB 2.0-compliant• One USB management port or iDRAC Direct
Video	15-pin VGA
Internal	
USB	One 4-pin, USB 3.0-compliant
Internal Dual SD Module (IDSDM)	One flash memory card slots with one internal SD card.

Video specifications

This section provides video specifications for storage, including type, and memory.

Table 16. Video specifications

Video	Specification
Video Type	Matrox G200eR2
Video memory	16 MB

Physical specifications

This section provides physical specifications for storage, including height, width, and depth.

Table 17. Physical

Video	Specification
Height	8.73 cm (3.44 inch)
Width	48.2 cm (18.98 inch)
Depth	75.58 cm (29.75 inch)
Maximum configuration weight	31.4 kg (69.23 lb) (2.5 inch hard drive systems)
Empty weight	20.8 kg (45.86 lb) (2.5 inch hard drive systems)

Environmental specifications

This section provides environmental specifications for storage, including temperature, relative humidity, maximum vibrations, particulate contamination, gaseous contamination, and expanded operating temperature.









 **NOTE:** For additional information about environmental measurements for specific system configurations, see Dell.com/environmental_datasheets.

Table 18. Environmental

Type	Specification
Temperature	
Storage	-40°C to 65°C (-40°F to 149°F)
Continuous operation (for altitude less than 950 m or 3117 ft)	10°C to 35°C (50°F to 95°F) with no direct sunlight on the equipment.
Maximum temperature gradient (operating and storage)	20°C/h (36°F/h)
Relative humidity	

Type	Specification
Storage	5% to 95% RH with 33°C (91°F) maximum dew point. Atmosphere must be non-condensing at all times.
Operating	10% to 80% Relative Humidity with 29°C (84.2°F) maximum dew point.
Maximum vibration	
Operating	0.26 Grms at 5 Hz to 350 Hz (all operation orientations).
Storage	1.87 Grms at 10 Hz to 500 Hz for 15 min (all six sides tested).
Maximum shock	
Operating	Six consecutively run shock pulses in the positive and negative x, y, and z axes of 40 G for up to 2.3 ms.
Storage	Six consecutively run shock pulses in the positive and negative x, y, and z axes (one pulse on each side of the system) of 71 G for up to 2 ms.
Maximum altitude	
Operating	3,048 m (10,000 ft)
Storage	12,000 m (39,370 ft)
Operating altitude de-rating	
Up to 35°C (95°F)	Maximum temperature is reduced by 1°C/300 m (1°F/547 ft) above 950 m (3,117 ft).
35°C to 40°C (95°F to 104°F)	Maximum temperature is reduced by 1°C/175 m (1°F/319 ft) above 950 m (3,117 ft).
Particulate contamination	
 NOTE: This section defines the limits to help avoid IT equipment damage and/or failure from particulates and gaseous contamination. If it is determined that levels of particulates or gaseous pollution are beyond the limits specified below and are the reason for the damage and/or failures to your equipment, it may be necessary for you to re-mediate the environmental conditions that are causing the damage and/or failures. Remediation of environmental conditions is the responsibility of the customer.	
Air filtration	Data center air filtration as defined by ISO Class 8 per ISO 14644-1 with a 95% upper confidence limit.

Type	Specification
Conductive dust	<p> NOTE:</p> <ul style="list-style-type: none"> • Applies to data center environments only. Air filtration requirements do not apply to IT equipment designed to be used outside a data center, in environments such as an office or factory floor. • Air entering the data center must have MERV11 or MERV13 filtration. <p>Air must be free of conductive dust, zinc whiskers, or other conductive particles.</p>
Corrosive dust	<p> NOTE: Applies to data center and non-data center environments.</p> <ul style="list-style-type: none"> • Air must be free of corrosive dust. • Residual dust present in the air must have a deliquescent point less than 60% relative humidity. <p> NOTE: Applies to data center and non-data center environments.</p>
Gaseous contamination	
<p> NOTE: Maximum corrosive contaminant levels measured at $\leq 50\%$ relative humidity.</p>	
Copper coupon corrosion rate	<300 Å/month per Class G1 as defined by ANSI/ISA71.04-1985.
Silver coupon corrosion rate	<200 Å/month as defined by AHSRAE TC9.9.
Expanded operating temperature	
<p> NOTE: When operating in the expanded temperature range, ambient temperature warnings may be reported on the LCD and in the System Event Log.</p>	
Continuous operation	<ul style="list-style-type: none"> • 5°C to 40°C at 5% to 85% RH with 29°C dew point. <p> NOTE: Outside the standard operating temperature (10°C to 35°C), the system can operate continuously down to 5°C or as high as 40°C.</p> <ul style="list-style-type: none"> • For temperatures between 35°C and 40°C, de-rate maximum allowable temperature by 1°C per 175 m above 950 m (1°F per 319 ft).
< 1% of annual operating hours	-5°C to 45°C at 5% to 90% RH with 29°C dew point.

Documentation matrix


The documentation matrix provides information about the documents you use to configure and deploy the Dell web-scale converged appliance solution.

 **WARNING:** See the safety and regulatory information that shipped with your system. Warranty information may be included with this document or as a separate document.

Make sure that you read through any media that ships with your system that provides documentation and tools for configuring and managing your system, including those pertaining to the OS, system management software, system updates, and system components that you purchased with your system.

 **NOTE:** URLs such as **Dell.com/support** or **Dell.com/support/home**, are not active, because you must type the URL from your location to access your specific language.

For the full name of an abbreviation or acronym used in this document, see the Glossary at **Dell.com/support/home**.

 **NOTE:** Always check for updates on **Dell.com/support/home** and read through the updates first, because they often supersede information in other documents.

 **NOTE:** While upgrading your system, Dell recommends that you download and install the latest BIOS, driver, and systems management firmware on your system from **Dell.com/support/home**.

Dell documentation

Dell documentation is either included with your shipment or available at the Dell website at **Dell.com/xcseriesmanuals**.

Dell documentation for:

- Dell iDRAC is available at **Dell.com/idracmanuals**.
- Dell OpenManage Essentials is available at **Dell.com/openmanagemanuals**.

To access Dell documentation:

1. On the Dell Support page, scroll down to **General Support**, and then click **Servers, Storage & Networking**.
2. Click **Engineered Solutions** and select the documentation you require.

Table 19. Dell reference documentation for the Dell XC630 Web-scale Converged Appliance

To learn about...	Refer to...
Setup instructions of your Dell XC630, including the technical specifications	<i>Getting Started Guide</i>
Hardware details of your Dell XC630	<i>Owner's Manual</i>
How to install your Dell XC630 in a rack	<i>Dell Rack Install Guide</i>
How to deploy and set up this solution	<i>Solutions Guide</i>
Setting up and using Dell iDRAC8	<i>Dell iDRAC8 Quick Start Guide</i>
Using OpenManage Essentials to monitor, perform updates, view hardware, and view inventory on your system	<i>Dell OpenManage Essentials User's Guide</i>

Nutanix documentation

Nutanix documentation has different document titles depending on the Nutanix solution software you are using. The table here shows you the document title equivalence between the two operating systems for the Nutanix documents used with the XC Series solution.

Table 20. NOS 4.1 Nutanix reference documentation for Dell XC Series

To learn about.....	Nutanix Operating System 4.1 document name	Acropolis base (NOS) 4.5 document name
Comprehensive instructions and references for the Nutanix UI, including overview information.	Web Console Guide	Prism Web Console Guide
Set up instructions for your solution.	Setup Guide	Field Installation Guide
Set up instructions for environments with special requirements and restrictions.	Advanced Setup Guide	Acropolis Advanced Setup Guide
Managing Nutanix Acropolis AHV hosts that run Nutanix solution software.	Acropolis Virtualization Administration Guide	Acropolis Hypervisor Administration Guide
Comprehensive references for Controller Virtual Machine (CVM) utilities, nCLI commands, and Nutanix PowerShell cmdlet.	Command Reference	Acropolis Command Reference
Instructions and reference for administering the Nutanix solution software outside the Nutanix Prism UI (such as cluster	NOS Advanced Administration Guide	Acropolis Advanced Administration Guide

To learn about.....	Nutanix Operating System 4.1 document name	Acropolis base (NOS) 4.5 document name
start/stop, manual upgrade, changing passwords, reconfiguring IP addresses, and troubleshooting tools).		
Managing VMware ESXi hosts that run Nutanix solution software, including VMware vCenter requirements.	vSphere Administration Guide	vSphere Administration Guide for Acropolis
Managing Hyper-V hosts that run the Nutanix solution software, including domain requirements.	Hyper-V Administration Guide	Hyper-V Administration for Acropolis
Comprehensive references for the Nutanix REST API.	API Reference	Acropolis API Reference
Software instructions for hardware components that are not functioning.	Hardware Replacement Documentation	Hardware Replacement Documentation

How to locate Nutanix documentation

You can view Nutanix document based on the privileges you are provided. There are two types of user:

- **Privileged User:** Is a user who has been provided login credentials and can view complete set of Nutanix documents from <https://portal.nutanix.com/#/page/docs>.
- **Guest User:** Is a user without login credentials and can view only limited set of Nutanix documents from <https://portal.nutanix.com/#login>

You must select appropriate software type, release version, and document category type to view relevant Nutanix document.

Table 21. NOS 4.1 Nutanix documentation for Dell XC Series

Document name	Software type	Release	All or Platform
Documentation available for Guest user			
Acropolis Virtualization Administration Guide	NOS	4.1	All
API Reference	NOS	4.1	All
Command Reference	NOS	4.1	All
Hyper-V Administration Guide	NOS	4.1	All
Setup Guide	NOS	4.1	All
vSphere Administration Guide	NOS	4.1	All

Document name	Software type	Release	All or Platform
Web Console Guide	NOS	4.1	All
Documentation available for Privileged user			
Advanced Setup Guide	NOS	4.1	All
Hardware Replacement Documentation	NOS	4.1	XC series
Acropolis Virtualization Administration Guide	NOS	4.1	All
API Reference	NOS	4.1	All
Command Reference	NOS	4.1	All
Hyper-V Administration Guide	NOS	4.1	All
Setup Guide	NOS	4.1	All
vSphere Administration Guide	NOS	4.1	All
Web Console Guide	NOS	4.1	All
NOS Advanced Administration Guide	NOS	4.1	All

Table 22. Acropolis base (NOS) 4.5 Nutanix documentation for Dell XC Series

Document	Software type	Release	All or Platform
Documentation available for Guest user			
Acropolis API Reference	Acropolis base (NOS)	4.5	All
Acropolis Hypervisor Administration Guide	AHV	4.5	All
Hyper-V Administration for Acropolis	Acropolis base (NOS)	4.5	All
vSphere Administration Guide for Acropolis	Acropolis base (NOS)	4.5	All
Documentation available for Privileged user			
Acropolis Advanced Administration Guide	Acropolis base (NOS)	4.5	All
Acropolis Advanced Setup Guide	Acropolis base (NOS)	4.5	All
Acropolis Command Reference	Acropolis base (NOS)	4.5	All
Field Installation Guide	Foundation	4.5	All
Hardware Replacement Documentation	Platform	4.5	XC series
Acropolis API Reference	Acropolis base (NOS)	4.5	All

Document	Software type	Release	All or Platform
Acropolis Hypervisor Administration Guide	AHV	4.5	All
Hyper-V Administration for Acropolis	Acropolis base (NOS)	4.5	All
vSphere Administration Guide for Acropolis	Acropolis base (NOS)	4.5	All
Prism Web Console Guide	Prism	4.5	All

Getting help

Contacting Dell

Dell provides several online and telephone-based support and service options. If you do not have an active internet connection, you can find contact information on your purchase invoice, packing slip, bill, or Dell product catalog. Availability varies by country and product, and some services may not be available in your area. To contact Dell for sales, technical assistance, or customer-service issues:

1. Go to **Dell.com/support**.
2. Select your country from the drop-down menu on the bottom right corner of the page.
3. For customized support:
 - a. Enter your system Service Tag in the **Enter your Service Tag** field.
 - b. Click **Submit**.The support page that lists the various support categories is displayed.
4. For general support:
 - a. Select your product category.
 - b. Select your product segment.
 - c. Select your product.The support page that lists the various support categories is displayed.
5. For contact details of Dell Global Technical Support:
 - a. Click [Global Technical Support](#).
 - b. The **Technical Support** page is displayed with details to call, chat, or e-mail the Dell Global Technical Support team.

Quick Resource Locator

Use the Quick Resource Locator (QRL) to get immediate access to system information and how-to videos. This can be done by visiting **Dell.com/QRL** or by using your smartphone or tablet and a model specific Quick Resource (QR) code located on your Dell system. To try out the QR code, scan the following image.



Figure 1. Quick Resource Locator