

Dell EMC PowerEdge XE7100 XE7440 and XE7420

Technical Guide

Notes, cautions, and warnings

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

 **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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System overview

Topics:

- [Dell EMC PowerEdge XE7100 system overview](#)
- [Dell EMC PowerEdge XE7440 system overview](#)
- [Dell EMC PowerEdge XE7420 system overview](#)

Dell EMC PowerEdge XE7100 system overview

The PowerEdge XE7100 is a 5U ultra dense storage chassis that are targeted at object storage, intelligent video analytics, media streaming workloads. This solution includes:

- 5U chassis with support for 100 x 3.5-inch hard drives
- Single or dual node offerings based off the C6420 motherboard
 - Single node will increase platform flexibility by growing to a full width solution with additional PCIe options and additional power. It is capable of housing new unique options such as:
 - FE1 (Wrigley) board for increased flash storage tiering
 - Single Nvidia Full length GPU or up to four Nvidia 75 W cards for Intelligent video analytics workloads
 - Both single/dual node offerings will support up to two NVMe (7MM) drives for caching/journaling/logging along with two SATA hot plug drives for boot
- Targeted to fit into a Dell standard 1070MM rack

The PowerEdge XE7100 chassis is the follow on for the DSS 7000 solution that fills an existing Dell EMC portfolio space that is driven by storage workloads that are optimized for the lowest cost per GB for workloads such as open source (Ceph) and Market relevant Object solution stacks (IBM Object Storage) and scalability. Also XE7100 will be targeted to fit into the big data workload space as an HDFS file tier.

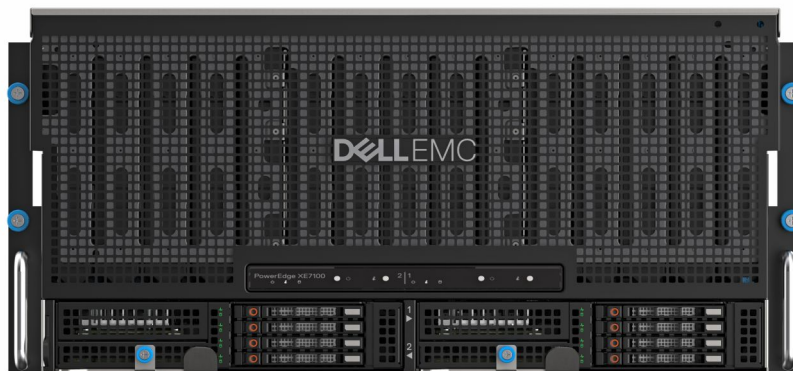


Figure 1. PowerEdge XE7100



Figure 2. Expander module in XE7100

The PowerEdge XE7100 chassis is available in two versions:

- PowerEdge XE7100 chassis with two XE7420 sleds:

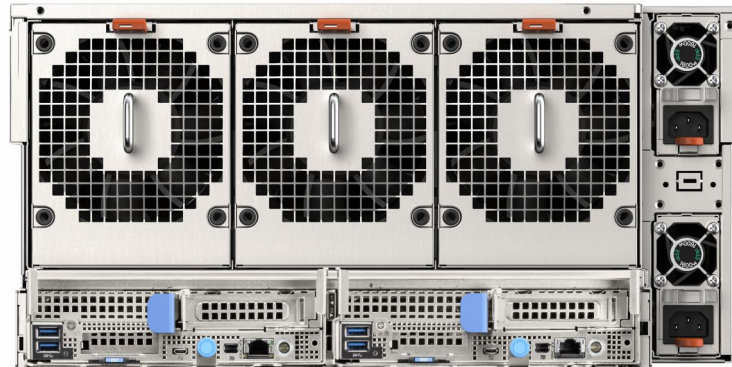


Figure 3. PowerEdge XE chassis with XE7420 sleds

- PowerEdge XE7100 chassis with XE7440 sled:

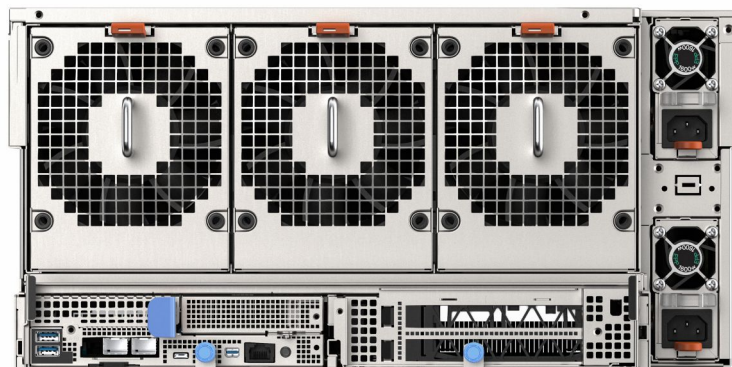


Figure 4. PowerEdge XE chassis with XE7440 sled

Dell EMC PowerEdge XE7440 system overview

The PowerEdge XE7100 is the 5U chassis that supports one PowerEdge XE7440 sled.

The PowerEdge XE7440 is a 1U sled supports up to two 2nd Gen Intel® Xeon® Scalable Processors up to 26 cores per processor. The sled also supports 16 memory modules, PCIe and Open Compute Project (OCP) adapters for expansion and connectivity.

The PowerEdge XE7440 sled comes with FWFH. Full width solution is capable of housing new unique options such as:

- 1x FH PCIe slot to support FE1 (Wrigley) board for increased flash tiering, or one full length GPU (V100S super), or 1x T4 GPU for intelligent video analytics workload in FWFH

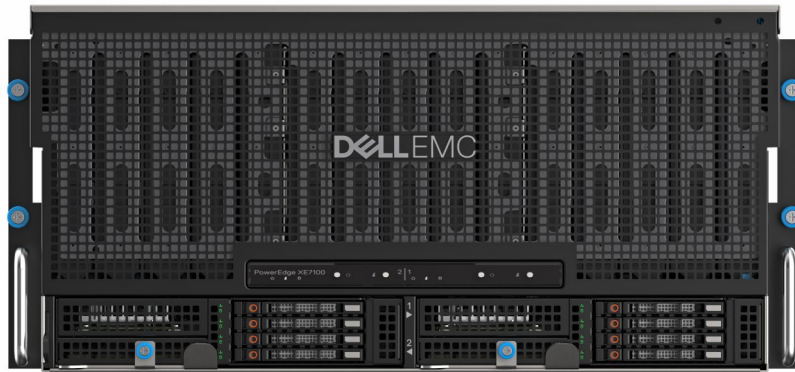


Figure 5. Front view of FWFH with chassis

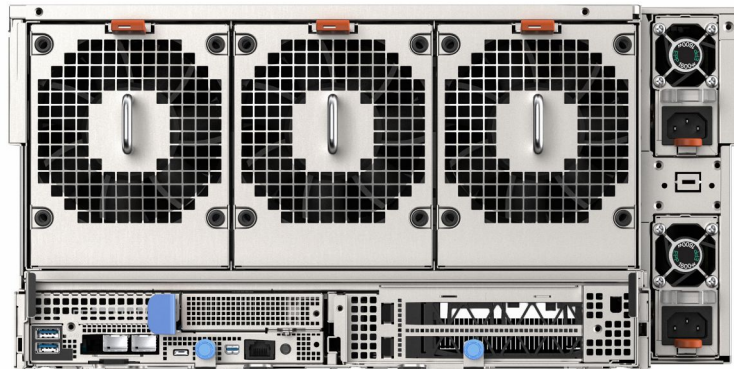


Figure 6. Rear view of FWFH with chassis

Target market

The PowerEdge XE7440 is engineered for the object storage and designed for targeted market that has unique needs and use-cases like manufacturing, retail, healthcare, telecommunication, finance and education.

The PowerEdge XE servers, by design, are intended for very specific target markets or market conditions. These target markets define the feature-sets and the scope of availability, support or validation. This means that the features, support, or availability of PowerEdge XE servers will vary from standard PowerEdge servers.

Product positioning

The PowerEdge XE7440 is the ultimate compute performance server in a dense 1U, 1 node with dual-socket, package for intelligent video analytics and media streaming workload.

Boost deep learning and interface with 2x2nd Gen Intel® Xeon® Scalable Processors per node.

Dell EMC PowerEdge XE7420 system overview

The PowerEdge XE7100 is the 5U chassis that supports two PowerEdge XE7420 sled.

The PowerEdge XE7420 is a 1U half width sled.

The sled supports up to two 2ndGen Intel® Xeon® Scalable Processors up to 26 cores per processor. The sled also supports 16 memory modules, PCIe and Open Compute Project (OCP) adapters for expansion and connectivity. The sled is designed for balanced compute to storage ratio.

The PowerEdgeXE7100 sled capable of housing new unique options such as:

- 1 x LP PCIe slot
- Mini PERC card for internal drives connected to expander module.

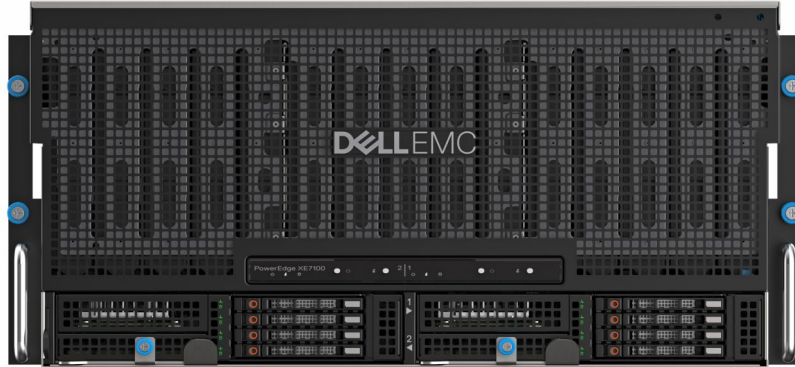


Figure 7. Front view of two half width XE7420 sleds with XE7100 chassis

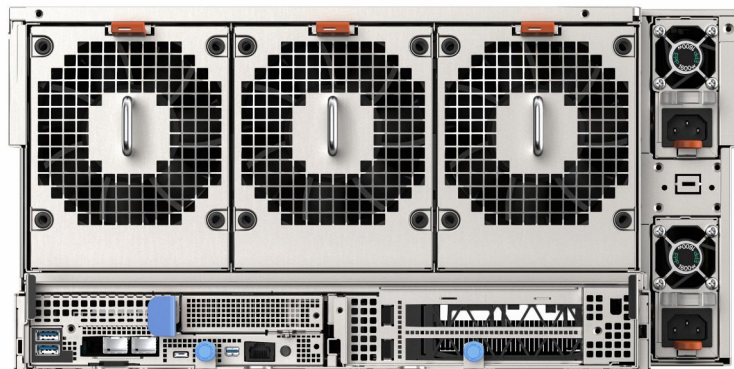


Figure 8. Rear view of XE7420 sled with XE7100 chassis

System features

Topics:

- Product comparison between the PowerEdge XE7100 and DSS 7000
- Product comparison between the PowerEdge XE7420 and DSS 7500

Product comparison between the PowerEdge XE7100 and DSS 7000

Table 1. Feature Comparison

Feature	XE7100	Dss 7000
Drive Bays	<ul style="list-style-type: none"> • Up to 100 x 3.5-inch hot-swappable hard drives SAS/SATA • 8 x 7 mm hot-swappable SATA SSD (4 supported for NVMe SSD) in expander module 	<ul style="list-style-type: none"> • Up to 45x 3.5-inch hot-swappable SAS HDD, SATA HDD, or SATA SSD • Up to 6 hot-swappable SAS SSD • Up to two 2.5-inch hot-swappable SATA HDD or SATA SSD per server sled.
Form factor	5U	4U
Supported server sled	PowerEdge XE7420 and XE7440	PowerEdge DSS 7500
Rack rails	Sliding rails	Static rails only
Dimension	482 mm (18.97-inches) x 871.5 mm (34.31inches) x 219.25 (8.63 inches)	448.0 mm (17.64 inch) x 1098.4 mm (43.24 inch) x 173.8 mm (6.84 inch)
Weight	<ul style="list-style-type: none"> • Chassis weight without sled 132.26 Kg (291.58 lb) • Chassis weight with half-width sled (XE7420)137.12 Kg (302.29 lb) • Chassis weight with full- width fullheight sled (XE7440) 140.93 Kg (310.69 lb) • Chassis weight with full- width lowprofile sled (XE7440) 142.81 Kg (341.84 lb) 	<ul style="list-style-type: none"> • Maximum 129.6 kg (285.72 lb) • Empty chassis: 57.1 kg (125.88 lb)
Supported USB peripherals on the sled	<ul style="list-style-type: none"> • USB key (bootable) • Keyboard (only one USB keyboard) • Mouse (only one USB mouse) 	<ul style="list-style-type: none"> • USB key (bootable) • Keyboard (only one USB keyboard) • Mouse (only one USB mouse)
Orientation	Support 2 x 1U nodes and 2 x 1U expander modules in 5U chassis.	Support 2 x 1U nodes in 4U chassis.

Product comparison between the PowerEdge XE7420 and DSS 7500

Table 2. Feature comparison

Feature	XE7420	DSS 7500
Processors	2 x 2 nd Gen Intel® Xeon® Scalable Processors (support for up to 2 x 125 W processors).	2 x Intel® Xeon® EP E5-2600 v3 and v4 product families
Front Side Bus	Intel Ultra-Path Interconnect (UPI, 11.2 GT/s)	Intel Ultra-Path Interconnect (UPI, 11.2 GT/s)
Memory	DDR4: Up to 16 DIMMS RDIMM - 8 GB, 16 GB, 32 GB, 64 GB, 128GB	DDR4: Up to 16 DIMMS RDIMM - 8 GB, 16 GB, 32 GB, 64 GB
Storage	<ul style="list-style-type: none"> 4 x 2.5-inch drives (HDD, NVMe) 50 x 3.5-inch drives (SSD, NVMe) 	<ul style="list-style-type: none"> 2 x two 2.5-inch hot-swappable SATA HDD or SATA SSD 45 x 3.5-inch hot-swappable SAS HDD, SATA HDD, or SATA SSD or Up to 6 hot-swappable SAS SSD
Storage Controller	HBA355i H745	PMC 8805 or LSI 9361-8i or LSI 9311
Power Supply Units	2 x 2400W PSUs	2 x 1100 W (Platinum) AC (100–240 V, 50/60 Hz, 6.5 A-12 A)
NDC/LOM	2 x OCP Mezzanine ports 1 x Gigabit Ethernet port	4 x RJ-45 10/100/1000 Mbps ports.
Max PCIe slots	1 x PCIe Gen3 x8 OCP mezzanine card slot 1 x PCIe Gen3 x16 Riser slot 1 x PCIe Gen3 x16/ M.2 slot 1 x PCIe Gen3 x8 Mini PERC	1 x PCIe Gen3 X8 half-height, half-length x8 link for processor 2. 1 x PCIe Gen3 x16 full-height, half-length x16 link for processor 1 1 x PCIe Gen3 x8 full-height, half-length x8 link for processor 1 1 x PCIe Gen3 x8 half-height, half-length x8 link for processor 1
Accelerators or GPUs	NA	NA
System Mgmt	iDRAC9 Express with Lifecycle controller, Enterprise enabled	iDRAC8 Express with Lifecycle controller, Enterprise enabled
Ports	1 x 1 GbE LOM 2 x USB 3.0 2 x OCP Mezzanine ports iDRAC direct Micro AB-USB 1 x Mini DP port	2 x 1 GbE LOM VGA 2 x USB 3.0 1 x USB2.0 iDRAC direct USB Serial port Dedicated iDRAC network port
Dimensions	Height: 1U	Height: 2U

Chassis views and features

The PowerEdgeXE7100 is an ultradense 5U enclosure that supports up to two independent two-socket (2S) sleds and 100 x 3.5-inch drives. The PowerEdge XE7100 enclosure supports the following:

- Up to two server sleds and up to two expander modules
- Six rear accessible system fans
- Two 2400 W redundant power supply units
- Up to 16x DDR4 RDIMM/LRDIMM with maximum capacity up to 2048 GB per sled
- Up to 100 x 3.5-inch SAS or SATA drives
- Up to 8 x 7 mm SATA SSD (4 supported for NVMe SSD)

Topics:

- [Front view of the System](#)
- [Front view of the control panel](#)
- [Rear view of the system](#)
- [Rear view of the PowerEdge XE7440 sled](#)
- [Rear view of the PowerEdge XE7420 sled](#)
- [Locating the Service Tag of your system](#)

Front view of the System

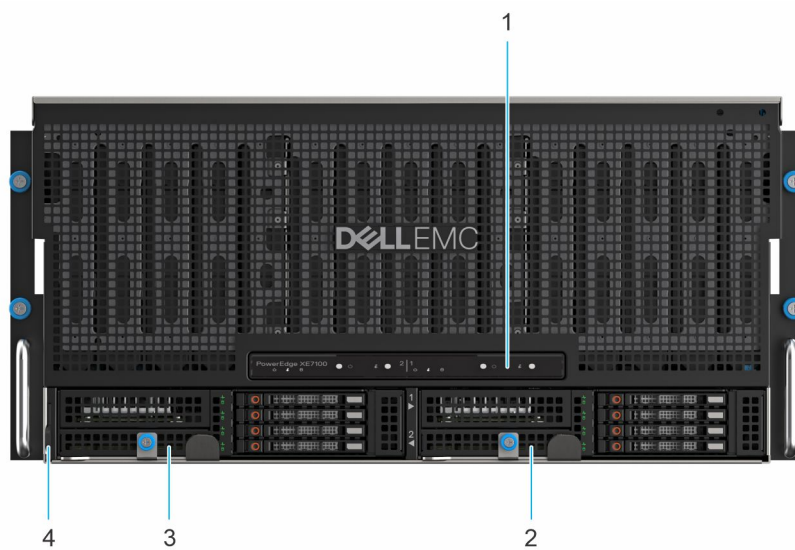


Figure 9. Front view of XE7100

- | | |
|----------------------|----------------------|
| 1. Control panel | 2. Expander module 1 |
| 3. Expander module 2 | 4. Service tag |

Front view of the control panel

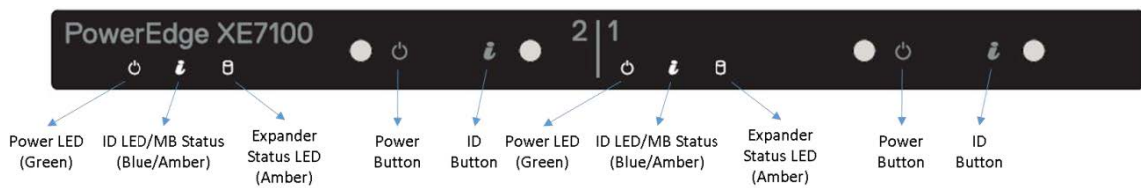


Figure 10. Front view of the control panel

Rear view of the system

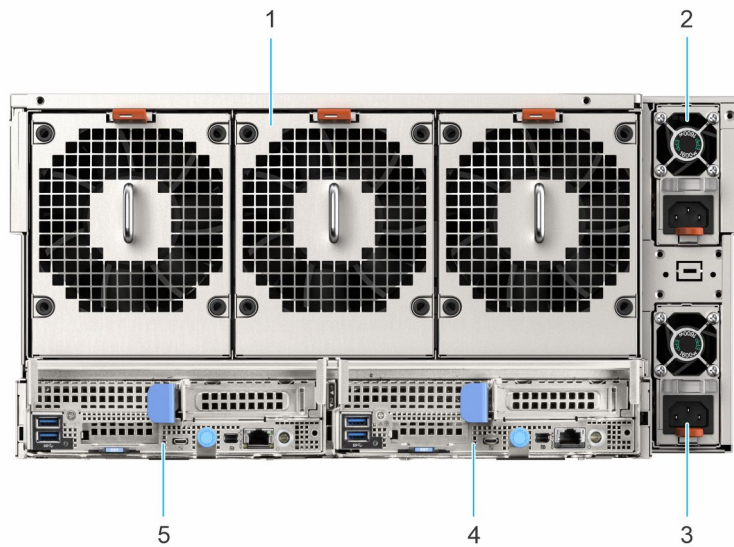


Figure 11. Rear view of the XE7100 system with HW sleds

- 1. Cooling fan
- 2. Power supply unit 1
- 3. Power supply unit 2
- 4. Half-width sled 2
- 5. Half-width sled 1

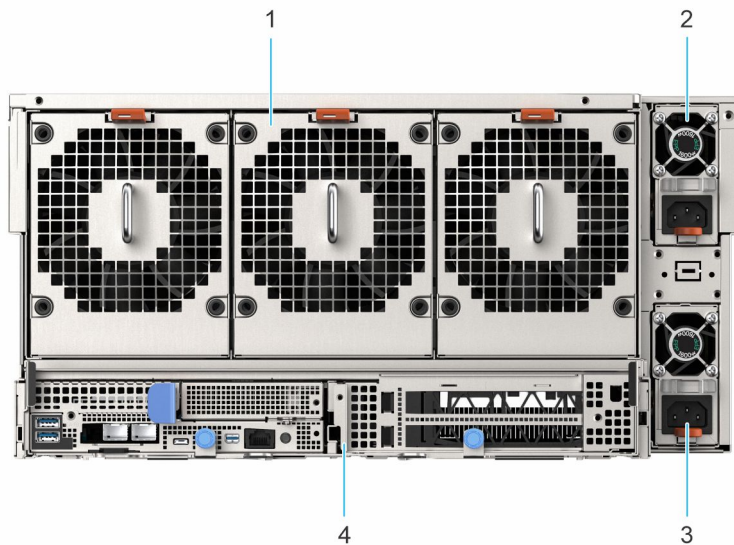


Figure 12. Rear view of the system with FW sled

1. Cooling fan
2. Power supply unit 1
3. Power supply unit 2
4. Full-width sled

Rear view of the PowerEdge XE7440 sled

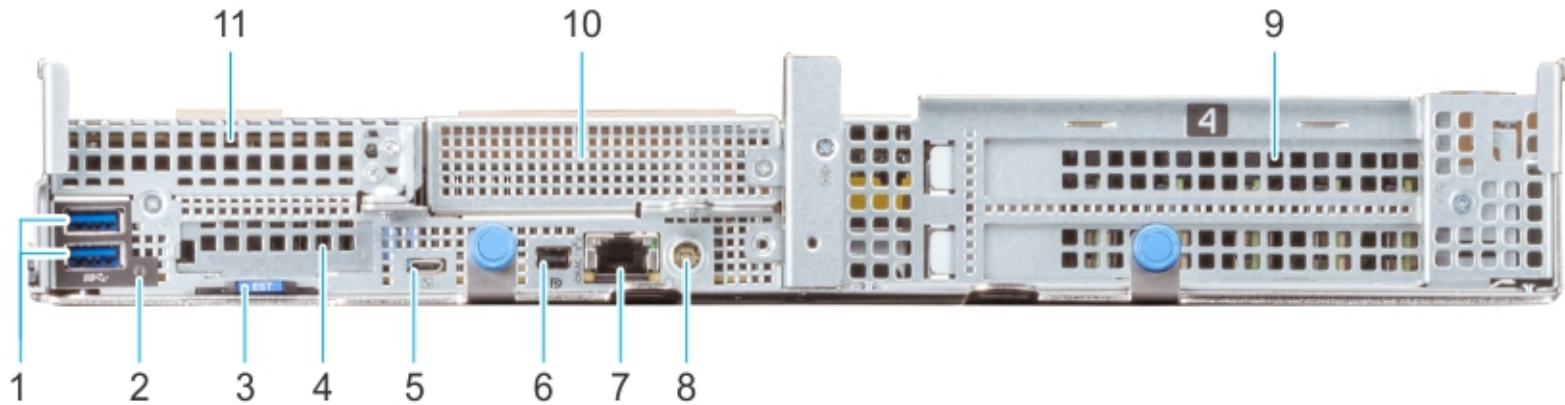


Figure 13. Rear view of FWFH sled

Table 3. Back panel features






Item	Indicator, button, or connector	Icon	Description
1	USB 3.0 port (2)		The USB ports are 9-pin and 3.0-compliant. These ports enable you to connect USB devices to the system.
2	System id indicator		The System Identification (ID) LED is available on the back of the system. Press the system ID button on the front of the enclosure to identify a system in a rack.
3	EST pull out tab	N/A	This tab has the unique Express Service Code, Service Tag, and MAC address labels.
4	OCP or OPA card slot	N/A	Enables you to connect Open Compute Project (OCP) or Omni-Path Architecture (OPA) expansion cards.
5	iDRAC Direct micro USB port		Enables you to connect a portable device to the sled.
6	Mini display port		Enables you to connect a display device to the system.
7	iDRAC or NIC port		Enables you to remotely access iDRAC. For more information, see the <i>Integrated Dell Remote</i>

Table 3. Back panel features (continued)

Item	Indicator, button, or connector	Icon	Description
			<i>Access Controller User's Guide</i> at www.dell.com/idracmanuals
8	Rear power button	N/A	Enables you to power on the sled while accessing it from the rear.
9	DW PCIe card	N/A	Enables you to connect FE1 card, or GPGPU card, or NIC card.
10	Low Profile PCIe card slot	N/A	Enables you to connect FH riser card.
11	Mezzanine card slot	N/A	Enables you to connect mezzanine expansion cards.

Rear view of the PowerEdge XE7420 sled

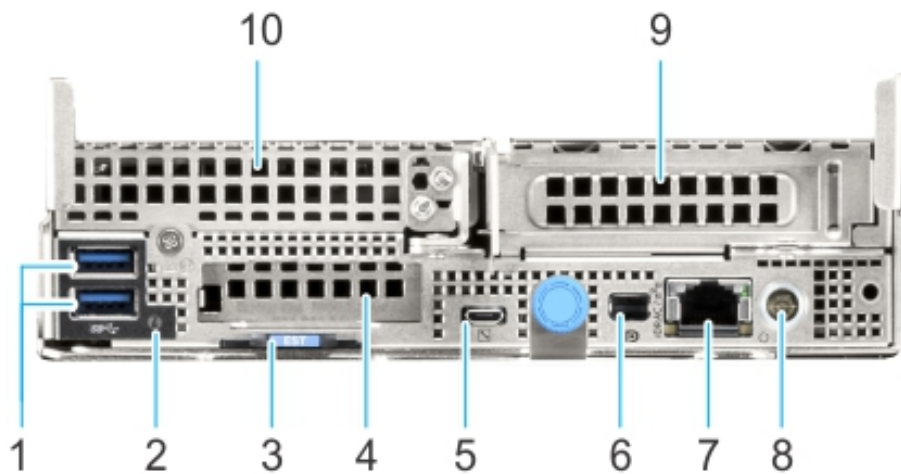


Figure 14. Rear view of the system

Table 4. Rear view of the system






Item	Ports, panels and slots	Icon	Description
1	USB 3.0 port (2)		The USB ports are 9-pin and 3.0-compliant. These ports enable you to connect USB devices to the system.
2	System id indicator		The System Identification(ID) LED is available on the back of the system. Press the system ID button on the front of the enclosure to identify a system in a rack.

Table 4. Rear view of the system (continued)

Item	Ports, panels and slots	Icon	Description
3	EST pull out tab	N/A	This tab has the unique Express Service Code, Service Tag, and MAC address labels.
4	OCP or OPA card slot	N/A	Enables you to connect Open Compute Project (OCP) or Omni-Path Architecture (OPA) expansion cards.
5	iDRAC Direct micro USB port		Enables you to connect a portable device to the sled.
6	Mini display port		Enables you to remotely access iDRAC. For more information, see the <i>Integrated Dell Remote Access Controller User's Guide</i> at www.dell.com/idracmanuals
7	iDRAC or NIC port		Enables you to remotely access iDRAC. For more information, see the <i>Integrated Dell Remote Access Controller User's Guide</i> at www.dell.com/idracmanuals
8	Rear power button		Enables you to power on the sled while accessing it from the rear.
9	Low Profile PCIe card slot		Enables you to connect FH riser card. section.
10	Mezzanine card slot		Enables you to connect mezzanine expansion cards.

Locating the Service Tag of your system

Your system is identified by a unique Express Service Code and Service Tag number. The Express Service Code and Service Tag are found on the front of the enclosure by pulling out the EST tag. This information is used by Dell to route support calls to the appropriate personnel.

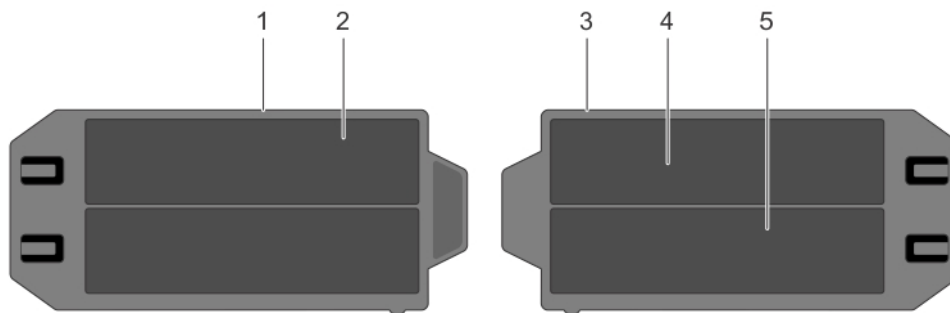


Figure 15. Locating the Service Tag of your system

1. information tag (top view)

2. Express Service Tag label

3. information tag (bottom view)
5. iDRAC MAC address information label

4. network MAC address information label

Processor

Topics:

- [Processor features](#)
- [Supported processors](#)

Processor features

The Intel® Xeon® Processor Scalable Family is the most advanced compute core featuring a core micro architecture optimized to accelerate a wide range of compute workloads.

The XE7100 supports Silver and Gold 2nd Gen Intel® Xeon® Scalable Processors (125W TDP max) from the Purley Platform Refresh second generation Intel® Xeon® scalable processors family.

Supported processors

Table 5. Supported processors for the PowerEdge XE7100

Model	Core	Frequency (GHz)	Vendor
Xeon SP Silver 4208 - CLX LCC 4208 8C 2.1GHz 11MB 85W DDR4 2400	8C	2.1	Intel
Xeon SP Silver 4210 - CLX LCC 4210 10C 2.2GHz 13.75MB 85W DDR4 2400	10C	2.2	Intel
Xeon SP Silver 4214 - CLX HCC 4214 12C 2.2GHz 16.5MB 85W DDR4 2400	12C	2.2	Intel
Xeon SP Silver 4216 - CLX HCC 4216 16C 2.1GHz 22MB 100W DDR4 2400	16C	2.1	Intel
Xeon SP GOLD 5220 - CLX HCC 5220 18C 2.2GHz 24.75MB 125W DDR4 2666	18C	2.2	Intel

Memory

The XE7100 supports up to 16 DIMMs, with up to 1,024 GB of memory. The XE7420 supports registered (RDIMMs).

Load reduced DIMMs (LRDIMMs) which use a buffer to reduce memory loading and provide greater density, allowing for the maximum platform memory capacity will be offered post-RTS.

Unbuffered DIMMs (UDIMMs) are not supported.

Topics:

- [Supported memory](#)
- [Memory speed](#)

Supported memory

The table below lists the memory technologies supported by the XE7100.

Table 6. Memory configuration

Capacity and Type	Speed
16GB DDR4 DIMM	2933MHz
32GB DDR4 DIMM	2933MHz
64GB DDR4 DIMM	2933MHz
8GB DDR4 RDIMM	3200MHz
16GB DDR4 DIMM	3200MHz
32GB DDR4 DIMM	3200MHz
64GB DDR4 DIMM	3200MHz

Memory speed

The table below lists the memory configuration and performance details for the XE7100, based on the quantity and type of DIMMs per memory channel.

Table 7. DIMM Performance Details

DIMM type	DIMM ranking	Capacity	DIMM rated voltage, speed		
				1 DPC	2 DPC
RDIMM	1R/ 2R	8G, 16G, 32GB	DDR4 (1.2V), 2667	D: 2667	D: 2667
LRDIM	4R/ 8R	64G, 128G	DDR4 (1.2V), 2667	D: 2667	D: 2667

Storage

Topics:

- [Supported drives](#)
- [Storage controller specifications](#)

Supported drives

NOTE: For the latest list of drives available on XE7100, see Dell.com and your sales tools for the most current supported drives.

The following table list the internal HDD drives supported with XE7100.

Table 8. Supported HDD Drives

Capacity and Type	FF	Type
12TB SATA	3.5"	SATA
16TB SATA	3.5"	SATA
16TB NL SAS	3.5"	NL SAS

The following table shows the supported SSD drives:

Table 9. Supported SSD drives

Drive	Capacity	FF	Type
RI SATA SSD 480GB	480G	2.5" RI 7mm	SATA
RI SATA SSD 960GB	960G	2.5" RI 7mm	SATA
RI SATA SSD 1920GB	1920G	2.5" RI 7mm	SATA
RI SATA SSD 3840GB	3840G	2.5" RI 7mm	SATA
MU SATA SSD 960GB	960G	2.5" MU 7mm	SATA
MU SATA SSD 1920GB	1920G	2.5" MU 7mm	SATA
MU SAS SSD 800GB	800G	2.5" MU 15mm	SAS
MU SAS SSD 1600GB	1600G	2.5" MU 15mm	SAS

The following table list the supported hard drives:

Table 10. Boot Drives

Drive	Capacity	FF	Type
Intel S4610 MU boot drive	480G	2.5" 7MM carrier	SATA
Intel S4610 MU boot drive	960G	2.5" 7MM carrier	SATA
Intel S4510 RI boot drive	480G	2.5" 7MM carrier	SATA
Intel S4510 RI boot drive	960G	2.5" 7MM carrier	SATA

Storage controller specifications

The XE7100 architecture supports data controller and boot controller.

Table 11. Supported Controllers

Controller	FF	Type
PERC H745 Adapter (For Storage)	Adapter	PERC (For Storage)
PERC H730P Mini Mono (For Boot)	Mezz	mini PERC (For Boot)

Networking and PCIe

The XE7100 supports a large variety of PCIe cards.

The following NICs are currently supported with XE7100:

PCIe slots

NOTE: Config 1 refers to XE7420 and Config 2 refers to XE7440.

Table 12. Supported PCIe cards

Description	FF	Type	Speed	Vendor	Config Supported
(BCM) 57414 Dual Port 25Gbe SFP28	Adapter	PCIe	25Gbe	Broadcom	Config 1 and 2
(Intel) X550 Dual Port 10Gbe Base T	Adapter	PCIe	10Gbe	Intel	Config 1
(Intel) XXV710 Dual Port 25Gbe Base T	Adapter	PCIe	25Gbe	Intel	Config 1
(Intel) X710 Dual Port 10Gbe Base T	Adapter	PCIe	10Gbe	Intel	Config 1
(Mellanox) Connect X5 dual port QSFP	Adapter	PCIe	100Gbe	Mellanox	Config 1
(Mellanox) ConnectX-4 Lx Dual Port 25 GbE DA/SFP	Adapter	PCIe	25Gbe	Mellanox	Config 1

NOTE: Support for (Mellanox) Connect X6 dual port QSFP will be next release.

Table 13. Supported OCP cards

Description	FF	Type	Speed	Vendor	Config Supported
(BCM) 57414 Dual Port 25Gbe SFP28	OCP2.0	Mezz	25Gbe	Broadcom	Config 1 and 2
(BCM) 57416 Dual Port 10Gbe Base T	OCP2.0	Mezz	10Gbe	Foxconn (Chip: BCM)	Config 1 and 2
(Intel) X710 Dual Port 10Gbe Base T	OCP2.0	Mezz	10Gbe	Intel	Config 1 and 2

The following PCIe add-on options is supported XE7100 at RTS.

Table 14. Supported PCIe Add-on Options

Description	Capacity	FF	Type	Config Supported
Wrigley FE1 add-in-card, supports upto 20 M.2s			PCIe	Config 2
M.2 - 12pcs / 16pcs / 20pcs	960G	FF: 2280	M.2	Config 2
	1.92TB	FF: 22110	M.2	Config 2

Power Thermal and Acoustics

Topics:

- Power
- Acoustics
- Thermal

Power

PowerEdge servers maximize performance per watt through a combination of power and cooling energy efficient technologies and tools. Additionally, PowerEdge servers share an extensive collection of sensors that automatically track thermal activity, which helps regulate temperature thereby reducing server noise and power consumption.

The following tables shows the power supply specifications and power efficiency.

Table 15. 2400W PSU Specifications

Attribute	Value
80 Plus	Platinum
Power Factor Correction	Active
FCC Classification	Class A
Max Output Current	196.72A (180-264Vac) 114.75A (90-140Vac)
Input Voltage Range	90-264V AC, 47-63Hz
Iin 100 - 240VAC for rating on safety label	16.0 Amps
Initial Inrush Current	35 Amps (peak)
Secondary Inrush Current	45 Amps (peak)

Acoustics

The following tables summarizes the configuration and acoustical performance of the XE7100. Each configuration has been tested according to Dell EMC acoustical standards for rack-mounted servers.

Table 16. Acoustical Performance of XE7100

Configuration	XE7420	XE7440
CPU	Xeon SP GOLD 5220 - CLX 8C 2.2GHz 125W	Intel® Xeon® Gold
CPU Quantity per	4	2
Memory Type	Samsung 64GB DDR4 RDIMM 3200MHz	Samsung_64GB DDR4 RDIMM 3200MHz
DIMM Quantity per	32	16
HDD Type	16TB NL SAS SEAGATE EVANS, HD, 12Gbps SAS, 3.5	16TB NL SAS SEAGATE EVANS, HD, 12Gbps SAS, 3.5

Table 16. Acoustical Performance of XE7100 (continued)

Configuration	XE7420	XE7440
HDD Quantity per host chassis	100	100
Wrigley_M.2 Type	NA	Mircon 7300 pro 1.92TB
Wrigley_M.2 Quantity	NA	20
PSU Type	Artesyn, PWR SPLY,2400W	Artesyn, PWR SPLY,2400W
PSU Quantity per host chassis	2	2
PCI 1	OCP2.0, (BCM) 57416 Dual Port 10Gbe Base T	OCP2.0, (BCM) 57416 Dual Port 10Gbe Base T OCP2.0, (BCM) 57416 Dual Port 10Gbe Base T
PCI 2	NA	NA
NIC	(Mellanox) Connect X5 dual port QSFP	NA

Table 17. Acoustical Performance: Idle/ Operating at 25 °C Ambient

Configuration	Typical	Typical
LwA-UL	Idle	8.5
	Operating	8.8
LpA (dBA)	Idle	68.4
	Operating	72.9

Table 18. Acoustical Performance: Idle/ Operating at 25 °C Ambient

Configuration	Typical	Typical
LwA-UL (Bels)	Idle	8.5
	Operating	8.8
LpA (dBA)	Idle	68.4
	Operating	72.9

Table 19. Acoustical Performance: Idle @ 28 °C Ambient

Configuration	Typical	Typical
LwA-UL (Bels)	9.2	9.4
LpA (dBA)	76.3	79.7

Table 20. Acoustical Performance: Max. Loading @ 35 °C Ambient

Configuration	Typical	Typical
LwA-UL (Bels)	9.6	9.6
LpA (dBA)	81.6	80.8

Thermal

Table 21. Thermal Limitations of Supported Processors

Configuration	XE7420	XE7440_FWFH
CPU Type	DPN of CPU Heat Sink	Sled Fan

Table 21. Thermal Limitations of Supported Processors (continued)

Configuration					XE7420	XE7440_FWFH
					HDD Fan	HDD Fan
CPU TDP	125W	intel Xeon SP Gold 5220	CPU1	CPU 2	Amb 35C	Amb 35C
	100W	intel Xeon SP Silver 4216	CPU1	CPU 2	Amb 35C	Amb 35C
	85W	intel Xeon SP Silver 4214	CPU1	CPU 2	Amb 35C	Amb 35C
		intel Xeon SP Silver 4210				
intel Xeon SP Silver 4208						


Table 22. Thermal Limitations of Supported Accelerators

Configuration					XE7420
GPU Type					
	CPU Type		DPN of CPU Heat Sink		Sled Fan
					HDD Fan
CPU TDP	125W	intel Xeon SP Gold 5220	CPU1	CPU 2	Not Supported
	100W	intel Xeon SP Silver 4216	CPU1	CPU 2	Not Supported
	85W	intel Xeon SP Silver 4214	CPU1	CPU 2	Not Supported
		intel Xeon SP Silver 4210			
intel Xeon SP Silver 4208					

Supported operating systems

The following lists the supported operating systems for the PowerEdge XE7100:

- CentOS 7.6
- RHEL 8.1
- SLES 15 SP1
- Ubuntu 18.04.3
- Windows 2019
- VMware ESXi 6.7 U3

 **NOTE:** The XE7100 does not support factory installed operating systems.

Dell EMC OpenManage systems management

Dell EMC OpenManage Portfolio

Simplifying hardware management through ease of use and automation

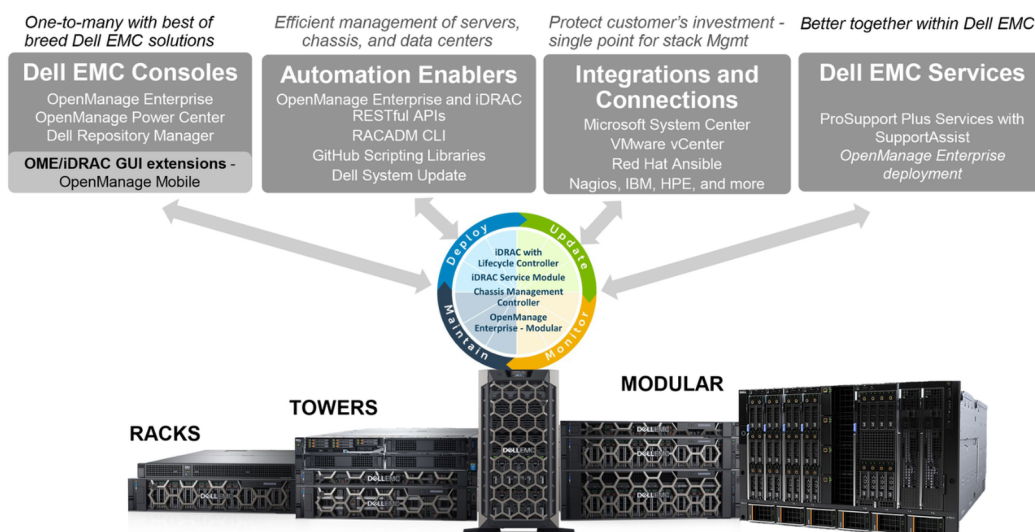


Figure 16. Dell EMC OpenManage Portfolio

Dell EMC delivers management solutions that help IT Administrators effectively deploy, update, monitor, and manage IT assets. OpenManage solutions and tools enable you to quickly respond to problems by helping them to manage Dell EMC servers effectively and efficiently; in physical, virtual, local, and remote environments, operating in-band, and out-of-band (agent-free). The OpenManage portfolio includes innovative embedded management tools such as the integrated Dell Remote Access Controller (iDRAC), Chassis Management Controller and Consoles like OpenManage Enterprise, OpenManage Power Manager plug in, and tools like Repository Manager.

Dell EMC has developed comprehensive systems management solutions based on open standards and has integrated with management consoles that can perform advanced management of Dell hardware. Dell EMC has connected or integrated the advanced management capabilities of Dell hardware into offerings from the industry's top systems management vendors and frameworks such as Ansible, thus making Dell EMC platforms easy to deploy, update, monitor, and manage.

The key tools for managing Dell EMC PowerEdge servers are iDRAC and the one-to-many OpenManage Enterprise console. OpenManage Enterprise helps the system administrators in complete lifecycle management of multiple generations of PowerEdge servers. Other tools such as Repository Manager, which enables simple yet comprehensive change management.

OpenManage tools integrate with systems management framework from other vendors such as VMware, Microsoft, Ansible, and ServiceNow. This enables you to use the skills of the IT staff to efficiently manage Dell EMC PowerEdge servers.

Topics:

- [Dell EMC OpenManage](#)
- [Channel Firmware Systems Management](#)

Dell EMC OpenManage

Whether your IT environment consists of a few servers or a few thousand servers, Dell EMC OpenManage Enterprise provides comprehensive management features for evolving IT environments. OpenManage is based on open standards, and provides

both agent-based and agent-free server life-cycle management functionality for Dell EMC PowerEdge servers. OpenManage solutions help you automate and streamline essential hardware management tasks.

Start with a firm foundation for efficient hardware management using OpenManage tools, utilities, and management consoles. OpenManage systems management solutions consist of a combination of embedded management features and software products that help you automate and simplify the entire server life cycle: deploy, update, monitor, and maintain. OpenManage solutions are innovatively designed for simplicity and ease of use to help you reduce complexity, save time, achieve efficiency, control costs, and empower productivity. OpenManage centers on efficient management of server life cycle.

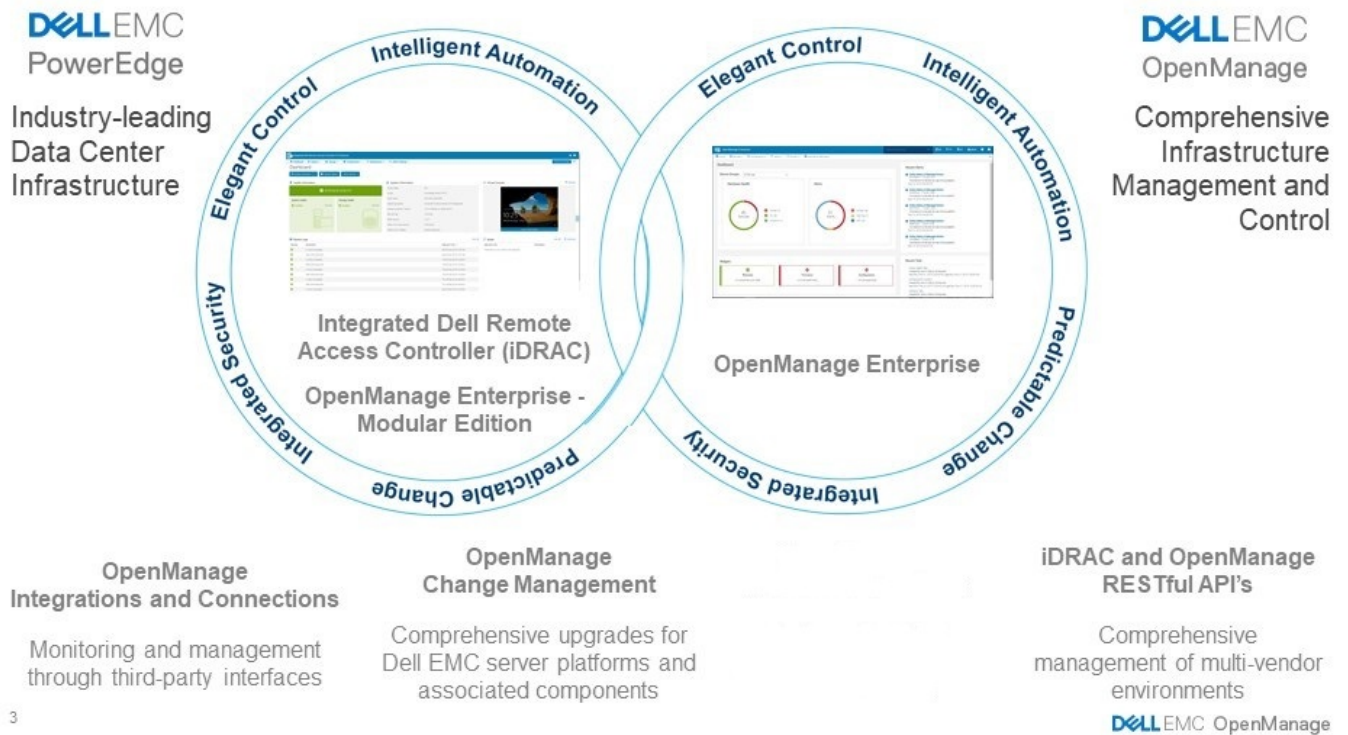


Figure 17. Server lifecycle management operations

Channel Firmware Systems Management

See systems management support matrix below for each channel firmware commodity.

Table 23. Channel Commodity Systems Management Support

Product	M.2 NVMe, Micron (960G/ 1.92TB), PCIE Storage Option, with 12,16, or 20 slots per card
Enterprise License	Not Supported
Data Center License	Not Supported
iDRAC Service Module	Not Supported
DUPs & Catalogs	Supported
Dell System Update (DSU)	Supported
Dell Repository Manager (DRM)	Supported
Server Update Utility (SUU)	Supported
Bootable ISO	Not Supported
Lifecycle Controller Driver Pack	Not Supported
OpenManage Server Administrator	Not Supported

Table 23. Channel Commodity Systems Management Support (continued)

Product	M.2 NVMe, Micron (960G/ 1.92TB), PCIE Storage Option, with 12,16, or 20 slots per card
OpenManage Enterprise	Not Supported
Power Manager Plug-In	Not Supported
Integrations	
VMware (OMIVV)	Not Supported
Microsoft	Not Supported
Secure Enterprise Key Manager (SED support)	Not Supported
CloudLink	Not Supported
SupportAssist for Enterprise	Supported
ServiceNow	Not Supported
Ansible Enablement	Not Supported
Quicksync2	Not Supported
Third Party Connectors (Nagios, Tivoli, CA, etc).	Not Supported

Appendix A. Additional specifications

Topics:

- Dimensions of the PowerEdgeXE7100
- Chassis Weight
- Video specifications
- Environmental specifications

Dimensions of the PowerEdgeXE7100

Chassis Weight

Table 24. Chassis weight of the Dell EMC PowerEdge XE7100 enclosure with PowerEdge XE7440 and XE7420 sleds

System	Maximum weight (with all sleds and drives)
Chassis weight without sled	132.26 Kg (291.58 lb)
Chassis weight with half-width sled (XE7420)	137.12 Kg (302.29 lb)
Chassis weight with full- width full-height sled (XE7440)	140.93 Kg (310.69 lb)
Chassis weight with full- width low-profile sled (XE7440)	142.81 Kg (341.84 lb)

Video specifications

The PowerEdge XE7100 system supports integrated Matrox G200eR2 graphics controller with 16 MB of video frame buffer.

Table 25. Supported front video resolution options

Resolution	Refresh rate (Hz)
1600 x 900 (HD+)	60
1366 x 768 (HD)	60
1680 x 1050 (WSXGA+)	60
1280 x 1024 (SXGA)	60
1440 x 900 (WXGA+)	60
1920 x 1080 (FHD)	60
1280 x 800 (WXGA)	60

Environmental specifications

The sections below contains information about the environmental specifications of the system.

NOTE: For additional information about environmental certifications, please refer to the Product Environmental Datasheet located with the Manuals & Documents on www.dell.com/poweredge/manuals

Standard operating temperature specifications

NOTE: All components including the DIMMs, communication cards, M.2 SATA, and PERC cards can be supported with sufficient thermal margin if the ambient temperature is equal to or below to the maximum continuous operating temperature listed in these tables except for the Mellanox DP LP card and Intel Rush Creek card.

Table 26. Standard operating temperature specifications

Standard operating temperature	Specifications
Temperature ranges (for altitude less than 900 m or 2953 ft)	10°C–35°C (50°F–95°F) with no direct sunlight on the equipment.

Expanded operating temperature specifications

NOTE: When operating in the expanded temperature range, system performance may be impacted.

NOTE: When operating in the expanded temperature range, ambient temperature warnings may be reported in the System Event Log.

Operating temperature derating specifications

Table 27. Operating temperature

Operating temperature derating	Specifications
≤ 35°C (95°F)	Maximum temperature is reduced by 1°C/300 m (1.8°F/984 ft) above 900 meters (2953 ft).
35°C–40°C (95°F–104°F)	Maximum temperature is reduced by 1°C/175 m (1.8°F/574 ft) above 900 meters (2953 ft).
40°C–45°C (104°F–113°F)	Maximum temperature is reduced by 1°C/125 m (1.8°F/410 ft) above 900 meters (2953 ft).

Relative humidity specifications

Table 28. Relative humidity specifications

Relative humidity	Specifications
Storage	5% to 95% RH with 27°C (80.6°F) maximum dew point. Atmosphere must be noncondensing always.
Operating	<ul style="list-style-type: none"> < 35°C (95°F): 8% RH with -12°C minimum dew point to 80% RH with 21°C (69.8°F) maximum dew point. 35°C–40°C (95°F–104°F): 8% RH with -12°C minimum dew point to 85% RH with 24°C (75.2°F) maximum dew point. 40°C–45°C (104°F–113°F): 8% RH with -12°C minimum dew point to 90% RH with 24°C (75.2°F) maximum dew point

Temperature specifications

Table 29. Temperature specifications

Temperature	Specifications
Storage	-40°C–65°C (-40°F to 149°F)
Continuous operation (for altitude less than 950 m or 3117 ft)	10°C–35°C (50°F to 95°F) with no direct sunlight on the equipment.
Expanded operating temperature	For information about expanded operating temperature, see Expanded Operating Temperature section.
Maximum temperature gradient (operating and storage)	20°C/h (68°F/h)

NOTE: Some configurations require a lower ambient temperature for more information, see the [Standard operating temperature specifications](#).

Particulate and gaseous contamination specifications

Table 30. Particulate contamination specifications

Particulate contamination	Specifications
Air filtration	Data center air filtration as defined by ISO Class 8 per ISO 14644-1 with a 95% upper confidence limit.
NOTE: This condition applies only to data center environments. 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.	
NOTE: Air entering the data center must have MERV11 or MERV13 filtration.	
Conductive dust	Air must be free of conductive dust, zinc whiskers, or other conductive particles.
NOTE: This condition applies to data center and non-data center environments.	
Corrosive dust	Air must be free of corrosive dust.
Residual dust present in the air must have a deliquescent point less than 60% relative humidity.	
NOTE: This condition applies to data center and non-data center environments.	

Table 31. Gaseous contamination specifications

Gaseous contamination	Specifications
Copper coupon corrosion rate	<300 Å/month per Class G1 as defined by ANSI/ISA71.04-2013
Silver coupon corrosion rate	<200 Å/month per Class G1 as defined by ANSI/ISA71.04-2013
NOTE: Maximum corrosive contaminant levels measured at ≤50% relative humidity.	

Maximum vibration specifications

Table 32. Maximum vibration specifications

Maximum vibration	Specifications
Operating	0.26 Grms at 5 Hz to 350 Hz (all operation orientations).

Table 32. Maximum vibration specifications (continued)

Maximum vibration	Specifications
Storage	1.88 Grms at 10 Hz to 500 Hz for 15 min (all six sides tested).

Maximum shock specifications

Table 33. Maximum shock specifications

Maximum shock	Specifications
Operating	24 executed shock pulses 6 G in the positive and negative x, y, z axis for up to 11 ms (four pulses on each side of the system).
Storage	6 consecutively executed shock pulses of 71 G in the positive and negative x, y, z axes for up to 2 ms (one pulse on each side of the system).

Maximum altitude specifications

Table 34. Maximum altitude specifications

Maximum altitude	Specifications
Operating	3048 m (10,000 ft)
Storage	12,000 m (39,370 ft)

Appendix B. Standards compliance

The system conforms to the following industry standards.

Table 35. Industry standard documents

Standard	URL for information and specifications
ACPI Advance Configuration and Power Interface Specification, v2.0c	https://uefi.org/specsandtesttools
Ethernet IEEE 802.3-2005	https://standards.ieee.org/
HDG Hardware Design Guide Version 3.0 for Microsoft Windows Server	microsoft.com/whdc/system/platform/pcdesign/desguide/serverdg.msp
IPMI Intelligent Platform Management Interface, v2.0	intel.com/design/servers/ipmi
DDR4 Memory DDR4 SDRAM Specification	jedec.org/standards-documents/docs/jesd79-4.pdf
PCI Express PCI Express Base Specification Rev. 2.0 and 3.0	pcisig.com/specifications/pciexpress
PMBus Power System Management Protocol Specification, v1.2	http://pmbus.org/Assets/PDFS/Public/PMBus_Specification_Part_I_Rev_1-1_20070205.pdf
SAS Serial Attached SCSI, v1.1	http://www.t10.org/
SATA Serial ATA Rev. 2.6; SATA II, SATA 1.0a Extensions, Rev. 1.2	sata-io.org
SMBIOS System Management BIOS Reference Specification, v2.7	dmtf.org/standards/smbios
TPM Trusted Platform Module Specification, v1.2 and v2.0	trustedcomputinggroup.org
UEFI Unified Extensible Firmware Interface Specification, v2.1	uefi.org/specifications
USB Universal Serial Bus Specification, Rev. 2.0	usb.org/developers/docs

Appendix C Additional resources

Table 36. Additional resources

Resource	Description of contents	Location
Installation and Service Manual	This manual, available in PDF format, provides the following information: <ul style="list-style-type: none"> • Chassis features • System Setup program • System messages • System codes and indicators • System BIOS • Remove and replace procedures • Troubleshooting • Diagnostics • Jumpers and connectors 	Dell.com/Support/Manuals
Getting Started Guide	This guide ships with the system, and is also available in PDF format. This guide provides the following information: <ul style="list-style-type: none"> • Initial setup steps • Key system features • Technical specifications 	Dell.com/Support/Manuals
Rack Installation Instructions	This document ships with the rack kits, and provides instructions for installing a server in a rack.	Dell.com/Support/Manuals
Information Update	This document ships with the system, is also available in PDF format online, and provides information on system updates.	Dell.com/Support/Manuals
System Information Label	The system information label documents the system board layout and system jumper settings. Text is minimized due to space limitations and translation considerations. The label size is standardized across platforms.	Inside the system chassis cover
Quick Resource Locator (QRL)	This code on the chassis can be scanned by a phone application to access additional information and resources for the server, including videos, reference materials, service tag information, and Dell EMC contact information.	Inside the system chassis cover
Energy Smart Solution Advisor (ESSA)	The Dell EMC online ESSA enables easier and more meaningful estimates to help you determine the most efficient configuration possible. Use ESSA to calculate the power consumption of your hardware, power infrastructure, and storage.	Dell.com/calc

Dell Technologies Services

Dell Technologies Services include a wide, customizable range of service choices to simplify the assessment, design, implementation, management and maintenance of IT environments and to help you transition from platform to platform. Depending on your current business requirements and the level of service right for you, we provide factory, on-site, remote, modular, and specialized services that fit your needs and budget. We'll help with a little or a lot—your choice—and provide access to our global resources.

For more information, see DellEMC.com/Services.

Topics:

- [Deployment Services](#)
- [Dell Technologies Consulting Services](#)
- [Dell EMC Managed Services](#)
- [Dell Technologies Education Services](#)


Deployment Services

Dell EMC ProDeploy Enterprise Suite

ProDeploy Enterprise Suite gets your server out of the box and into optimized production—fast. Our elite deployment engineers with broad and deep experience utilizing best-in-class processes along with our established global scale can help you around the clock and around the globe. From simple to the most complex server installations and software integration, we take the guess work and risk out of deploying your new server technology.

		Basic Deployment	ProDeploy	ProDeploy Plus
Pre-deployment	Single point of contact for project management	-	●	In-region
	Site readiness review	-	●	●
	Implementation planning	-	●	●
	SAM engagement for ProSupport Plus entitled devices	-	-	●
Deployment	Deployment service hours	Business hours	24x7	24x7
	Remote guidance for hardware installation or Onsite hardware installation and packaging material removal	Onsite	Remote or Onsite	Onsite
	Install and configure system software	-	Remote	Onsite
	Install support software and connect with Dell Technologies	-	●	●
	Project documentation with knowledge transfer	-	●	●
Post-deployment	Deployment verification	-	●	●
	Configuration data transfer to Dell EMC technical support	-	●	●
	30-days of post-deployment configuration assistance	-	-	●
	Training credits for Dell EMC Education Services	-	-	●

Figure 18. ProDeploy Enterprise Suite capabilities

 **NOTE:** Hardware installation not applicable on selected software products.

Dell EMC ProDeploy Plus

From beginning to end, ProDeploy Plus provides the skill and scale needed to successfully execute demanding deployments in today's complex IT environments. Certified Dell EMC experts start with extensive environmental assessments and detailed

migration planning and recommendations. Software installation includes set up of most versions of Dell EMC SupportAssist and OpenManage system management utilities. Post-deployment configuration assistance, testing, and product orientation services are also available.

Dell EMC ProDeploy

ProDeploy provides full service installation and configuration of both server hardware and system software by certified deployment engineers including set up of leading operating systems and hypervisors as well as most versions of Dell EMC SupportAssist and OpenManage system management utilities. To prepare for the deployment, we conduct a site readiness review and implementation planning exercise. System testing, validation, and full project documentation with knowledge transfer complete the process.

Dell EMC ProDeploy for HPC

HPC deployments require specialists that understand that cutting edge is yesterday's news. Dell EMC deploys the world 's fastest systems and understands the nuances that make them perform. ProDeploy for HPC provides:

- Global team of dedicated HPC specialists
- Proven track record, thousands of successful HPC deployments
- Design validation, benchmarking, and product orientation

ProDeploy for HPC

Get more out of your cluster starting Day One

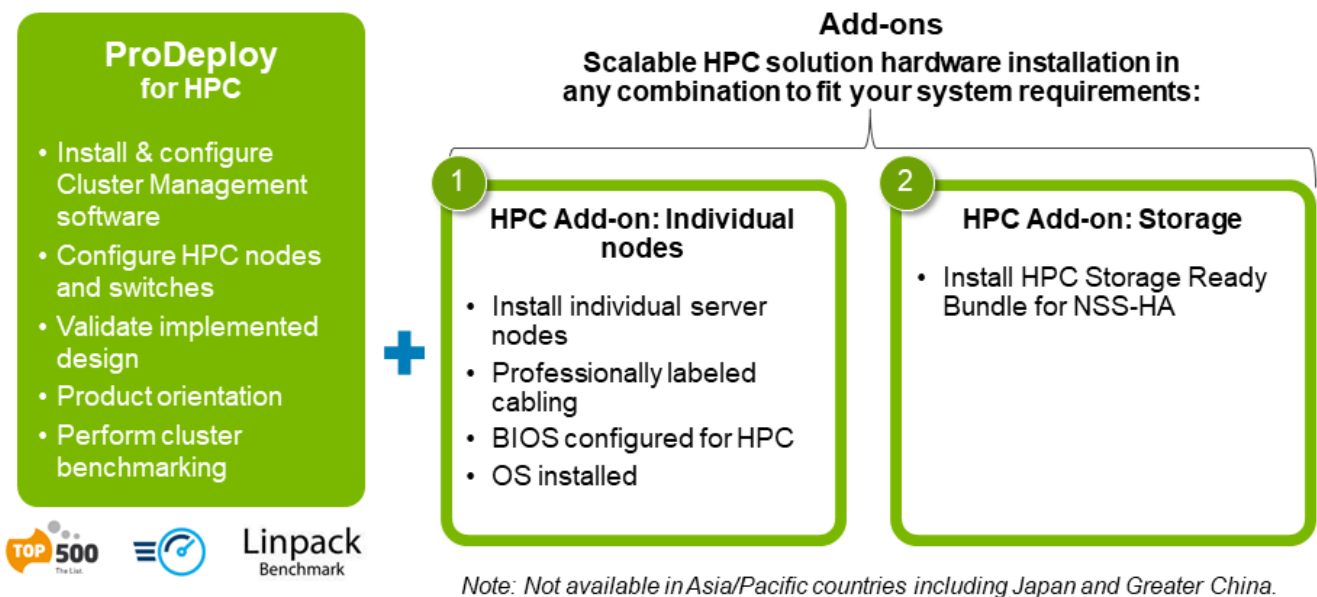


Figure 19. Dell EMC ProDeploy for HPC

Dell EMC Basic Deployment

Basic Deployment delivers worry-free professional installation by experienced technicians who know Dell EMC servers inside and out.

Dell EMC Server Configuration Services

With Dell EMC Rack Integration and other Dell EMC PowerEdge Server Configuration Services, you save time by receiving your systems racked, cabled, tested, and ready to integrate into the data center. Dell EMC staff pre-configure RAID, BIOS and iDRAC settings, install system images, and even install third-party hardware and software.

For more information, see [Server Configuration Services](#).

Dell EMC Residency Services

Residency Services helps customers transition to new capabilities quickly with the assistance of on-site or remote Dell EMC experts whose priorities and time you control. Residency experts can provide post implementation management and knowledge transfer related to a new technology acquisition or day-to-day operational management of the IT infrastructure.

Dell EMC Data Migration Service

Protect your business and data with our single point of contact to manage your data migration project. Your project manager will work with our experienced team of experts to create a plan using industry-leading tools and proven processes based on global best practices to migrate your existing files and data so your business system get up and running quickly and smoothly.

Support Services

ProSupport Enterprise Suite

With the ProSupport Enterprise Suite, we can help you keep your operation running smoothly, so you can focus on running your business. We will help you maintain peak performance and availability of your most essential workloads. ProSupport Enterprise Suite is a suite of support services that enable you to build the solution that is right for your organization. Choose support models based on how you use technology and where you want to allocate resources. From the desktop to the data center, address everyday IT challenges, such as unplanned downtime, mission-critical needs, data and asset protection, support planning, resource allocation, software application management and more. Optimize your IT resources by choosing the right support model.



Figure 20. ProSupport Enterprise Suite

Dell EMC ProSupport Plus for Enterprise

When you purchase your PowerEdge server, we recommend ProSupport Plus, our proactive and preventative support service for your business-critical systems. ProSupport Plus provides you with all the benefits of ProSupport, plus the following:

- An assigned Services Account Manager who knows your business and your environment
- Immediate advanced troubleshooting from an engineer who understands your PowerEdge server
- Personalized, preventive recommendations based on analysis of support trends and best practices from across the Dell Technologies infrastructure solutions customer base to reduce support issues and improve performance
- Predictive analysis for issue prevention and optimization enabled by SupportAssist
- Proactive monitoring, issue detection, notification, and automated case creation for accelerated issue resolution enabled by SupportAssist
- On-demand reporting and analytics-based recommendations enabled by SupportAssist and TechDirect

Dell EMC ProSupport for Enterprise

Our ProSupport service offers highly trained experts around the clock and around the globe to address your IT needs. We help minimize disruptions and maximize availability of PowerEdge server workloads with:

- 24x7 support through phone, chat and online
- Predictive, automated tools and innovative technology
- A central point of accountability for all hardware and software issues
- Collaborative 3rd party support
- Hypervisor, operating system and application support
- Consistent experience regardless of where you are located or what language you speak
- Optional onsite parts and labor response options including next business day or four-hour mission critical

NOTE: Subject to service offer country availability.

Enterprise Support Services Feature Comparison

	Basic	ProSupport	ProSupport Plus
Remote technical support	9x5	24x7	24x7
Covered products	Hardware	Hardware Software	Hardware Software
Onsite hardware support	Next business day	Next business day or 4hr mission critical	Next business day or 4 hr mission critical
3 rd party collaborative assistance		●	●
Automated issue detection & proactive case creation		●	●
Self-service case initiation and management		●	●
Access to software updates		●	●
Priority access to specialized support experts			●
3 rd party software support			●
Assigned Services Account Manager			●
Personalized assessments and recommendations			●
Semiannual systems maintenance			●

Availability and terms of Dell Technologies services vary by region and by product. For more information, please view our Service Descriptions available on Dell.com

Figure 21. Dell EMC Enterprise Support model

Dell EMC ProSupport One for Data Center

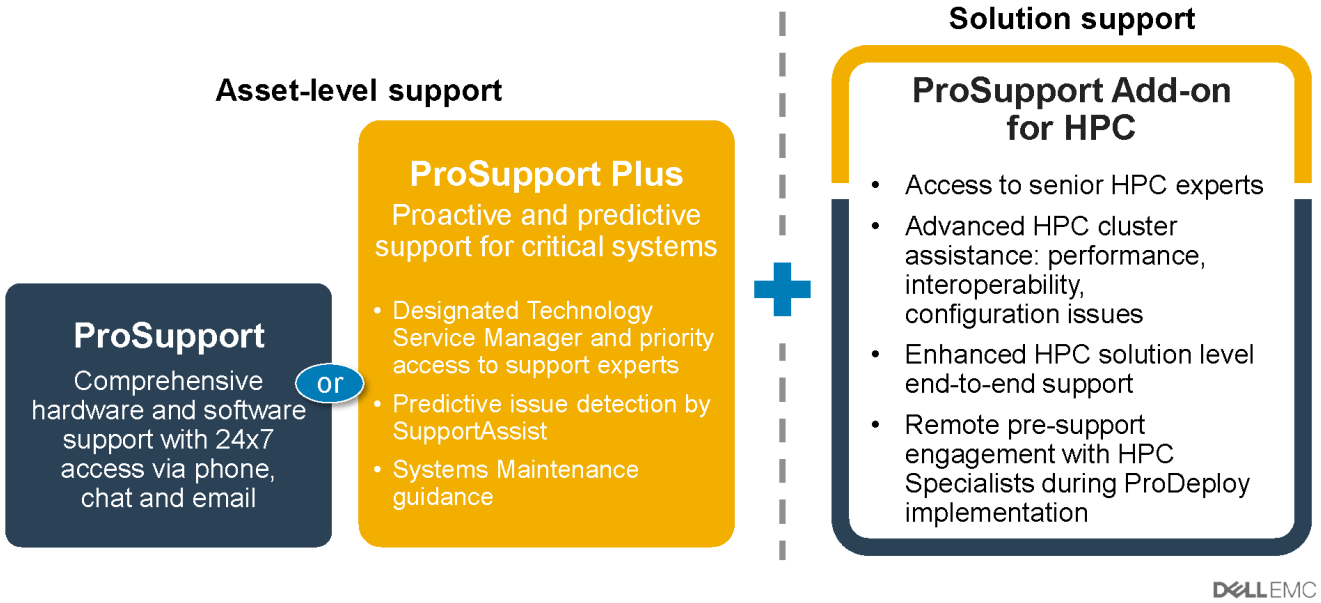
ProSupport One for Data Center offers flexible site-wide support for large and distributed data centers with more than 1,000 assets. This offering is built on standard ProSupport components that leverage our global scale but are tailored to your company's needs. While not for everyone, this service option offers a truly unique solution for Dell Technologies largest customers with the most complex environments.

- Team of assigned Services Account Managers with remote, on-site options
- Assigned ProSupport One technical and field engineers who are trained on your environment and configurations
- On-demand reporting and analytics-based recommendations enabled by SupportAssist and TechDirect
- Flexible on-site support and parts options that fit your operational model
- A tailored support plan and training for your operations staff

Dell EMC ProSupport for HPC

ProSupport Add-on for HPC

Delivering a true end-to-end support experience across your HPC environment



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DELL EMC

Figure 22. Dell EMC ProSupport for HPC

Support Technologies

Powering your support experience with predictive, data-driven technologies.

Dell EMC SupportAssist

The best time to solve a problem is before it happens. The automated proactive and predictive technology SupportAssist helps reduce steps and time to resolution, often detecting issues before they become a crisis. Benefits include:

- Value—SupportAssist is available to all customers at no additional charge
- Improve productivity—replace manual, high-effort routines with automated support
- Accelerate time to resolution—receive issue alerts, automatic case creation, and proactive contact from Dell EMC experts
- Gain insight and control—optimize enterprise devices with on-demand ProSupport Plus reporting in TechDirect, and get predictive issue detection before the problem starts

NOTE: SupportAssist is included with all support plans, but features vary based on service level agreement.

	Basic Hardware Warranty	ProSupport	ProSupport Plus
Automated issue detection and system state information collection	•	•	•
Proactive, automated case creation and notification		•	•
Predictive issue detection for failure prevention			•
Recommendation reporting available on-demand in TechDirect			•

Figure 23. SupportAssist model

Get started at Dell.com/SupportAssist

Dell EMC TechDirect

Boost IT team productivity when supporting Dell EMC systems. With over 1.4 million self-dispatches processed each year, TechDirect has proven its effectiveness as a support tool. You can:

- Self-dispatch replacement parts
- Request technical support
- Integrate APIs into your help desk

Or, access all your Dell EMC certification and authorization requirements. Train your staff on Dell EMC products, as TechDirect allows you to:

- Download study guides
- Schedule certification and authorization exams
- View transcripts of completed courses and exams

Register at [techdirect.dell](https://techdirect.dell.com).

Dell Technologies Consulting Services

Our expert consultants help you transform faster, and quickly achieve business outcomes for the high value workloads Dell EMC PowerEdge systems can handle.

From strategy to full-scale implementation, Dell Technologies Consulting can help you determine how to execute your IT, workforce, or application transformation.

We use prescriptive approaches and proven methodologies combined with Dell Technologies' portfolio and partner ecosystem to help you achieve real business outcomes. From multi-cloud, applications, DevOps, and infrastructure transformations, to business resiliency, data center modernization, analytics, workforce collaboration, and user experiences—we're here to help.

Dell EMC Remote Consulting Services

When you are in the final stages of your PowerEdge server implementation, you can rely on Dell EMC Remote Consulting Services and our certified technical experts to help you optimize your configuration with best practices for your software, virtualization, server, storage, networking, and systems management.

Dell EMC Managed Services

Reduce the cost, complexity, and risk of managing IT. Focus your resources on digital innovation and transformation while our experts help optimize your IT operations and investment with managed services backed by guaranteed service levels.

Dell Technologies Education Services

Build the IT skills required to influence the transformational outcomes of the business. Enable talent and empower teams with the right skills to lead and execute transformational strategy that drives competitive advantage. Leverage the training and certification required for real transformation.

Dell Technologies Education Services offers PowerEdge server training and certifications designed to help you achieve more from your hardware investment. The curriculum delivers the information and the practical, hands-on skills that you and your team need to confidently install, configure, manage, and troubleshoot your Dell EMC servers. To learn more or register for a class today, see LearnDell.com/Server.

Dell Technologies On Demand

Dell Technologies On Demand is the industry's broadest end-to-end portfolio of consumption-based and as-a-Service solutions that deliver IT with the agility of cloud and the control, performance and security of on-premises infrastructure.

The following is offered to you with DTOD:

- **Freedom of choice** in the way technology is consumed and how IT spending is budgeted.
- **Ultimate flexibility** in the way solutions can be built and how workloads can be optimized to meet exact specifications.
- And lastly, peace of mind knowing that our innovative end-to-end portfolio is trusted by so many organizations to deliver **predictable outcomes**.

Topics:

- [Flex On Demand \(FOD\)](#)
- [Flex On Demand for PowerEdge Servers](#)

Flex On Demand (FOD)

- Flex On Demand is part of the **Pay-as-You-Use** consumption model provided by Dell Technologies on Demand, offered within and across our entire ISG portfolio, including servers, storage, data protection, CI and HCI, and more.
- With Flex On Demand, the technology is metered - at a component level - based on how much a specific technology is used.
- You are able to choose their committed or baseline capacity and pay for it at an agreed upon rate each month. When capacity requirements increase above the baseline capacity level, buffer capacity is activated and payments adjust accordingly based on the average amount of capacity used in a given month.

Flex On Demand for PowerEdge Servers

Flex On Demand gives customers unprecedented levels of flexibility in how they consume our technology, allowing them to elastically scale up or down to meet their needs.

When it comes to utilization, CPU utilization is measured at the server level for all processors in the server and is reported through iDRAC (integrated Dell Remote Access Controller). The committed level of utilization equals a fixed number of activated hours per month for all servers in the Flex on Demand by Server Model on a schedule and is billed as a single amount each month. Elastic or buffer CPU utilization is billed on an hourly basis for all servers. This allows customers to scale elastically up and down within the buffer, as needed, with payments that rise and fall with usage.

Some of the benefits provided by Flex On Demand are:

- Consistent and predictable unit rates for life of term.
- Pay for additional use at the same monthly rate.
- Customized single monthly rate for hardware, software, services and maintenance.
- Billing based on measured usage of core commitment plus actual buffer usage, if applicable.

Dell EMC PowerEdge servers and Flex On Demand combine the industry's best-selling servers with innovative consumption-based payment programs. It allows:

- **Improve Economics** - Pay for server resources based on actual hourly usage and avoid the costs of over-provisioning so you can achieve public cloud economics in the data center.
- **Increase Flexibility** - Respond quickly to new service requests, workload fluctuations and changes driven by the business to improve IT flexibility.
- **Embrace Choice** - Choose the infrastructure that's configured to your requirements and payment schedule that works for you.