DELL EMC XC SERIES OF HYPER-CONVERGED INFRASTRUCTURE APPLIANCES

The Dell EMC™ XC Series of hyper-converged appliances integrates our 14th generation PowerEdge server platform and Nutanix software to provide enterprise-class, infrastructure solutions for virtualized environments. Backed by Dell EMC's Global Service and Support organization, these 1U, 2U and 3U appliances consolidate compute and storage into a single platform enabling application and virtualization teams to quickly and simply deploy new workloads. This solution enables data center capacity and performance to be easily expanded — one node at a time — delivering linear and predictable scale-out expansion with pay-as-you-grow flexibility.

XC Series Appliances incorporate many of the advanced software technologies that power leading cloud infrastructures and include key features such as:

- Hyper-converged – Seamlessly integrates server and storage resources in a self-healing system
- Hypervisor choice - your choice of factory-installed hypervisor
- Scale-out – Increase performance and/or capacity one node at a time, even across multiple generations
- Automation and analytics – Extensive automation and rich system-wide monitoring

Designed to simplify IT

XC Series Appliances simplify the deployment of virtual machines in any environment. The Nutanix Acropolis Operating System runs in a Controller VM (CVM) on each node, aggregating storage resources (hard disk drives and flash storage) across all nodes. This pooled storage is made available to all hosts through a fault-tolerant architecture. With an unrivaled ability to run VMs out of the box, XC Series Appliances deliver an easy, modular approach to building modern data centers.

Ideal for virtualized workloads

XC Series Appliances are excellent solutions for all enterprise workloads and applications running in virtual environments. Preconfigured appliance options with flexible ratios of compute and storage including all flash configurations, coupled with support for Microsoft® Hyper-V®, Nutanix AHV and VMware® ESXi™, make them ideal for running different workloads on the same platform in your data center. They can be easily deployed into any data center in less than 30 minutes and can support multiple virtualized, business-critical workloads including VDI, private cloud, database, OLTP and data warehouse as well as virtualized big data deployments.

Intuitive and powerful management interface

The Nutanix Prism Central management framework provides a highly intuitive, easy-to-use graphical user interface (GUI). All information is organized and presented through elegant touch points to facilitate easy consumption of operational data. Prism provides the ability to define and manage a complete hyper-converged infrastructure from nearly any device and includes REST APIs for integration with third-party cloud management systems. It also gives administrators a bird's eye view of resources across multiple clusters running different hypervisors and enables them to manage individual clusters using the GUI or a Windows PowerShell command-line interface.

Adding value to Nutanix software

Dell EMC has over 10 years of experience integrating hardware and software for appliances built with PowerEdge servers. That experience enabled us to develop technologies that simplify and streamline common workflows performed throughout the appliance's lifecycle. It starts with factory installation of the software stack and hypervisor of choice and pre-configuration of system settings to maximize performance of the Nutanix software. Other examples include software modules that deliver fast and seamless deployment, rapid factory restore and bare metal recovery, rich in-band hardware monitoring and management capabilities, and components developed specifically for HCI to simplify workflow orchestration across a cluster.

XC Series also incorporates optimizations for Microsoft Windows 2016 Hyper-V plus Azure including one-click hypervisor updates. The XC Series Azure Log Analytics Solution provides integration of XC Series into customer's OMS-based data center automation tools, enabling insights such as trend analysis and behavioral anomaly detection.

Configurations and features	XC640-4/ XC640-4i	XC640-10	XC740xd-12	XC740xd-24[1]	XC740xd-12C XC740xd-12R	XC940-24	XC6420-6[2]
Form factor	1U, 1 node	1U, 1 node	2U, 1 node			3U, 1 node	2U, up to 4 nodes
Workload	Remote/ branch office, non mission-critical XC640-4: 3-node cluster deployment XC640-4i: 1- or 2-node deployment	Compute and performance-intensive VDI, test and development, enterprise cloud, server virtualization	Storage-heavy Microsoft Exchange, SharePoint, data warehouse, big data	Performance-intensive SQL and Oracle OLTP, VDI with GPU	XC740xd-12C: Storage capacity node for any cluster, does not run VMs or VDI XC740xc-12R: Single node replication target (not clustered)	Memory and performance-intensive Microsoft SQL and Oracle OLTP	Rack Dense VDI, service providers, enterprise cloud
Dell EMC PowerEdge server platform	R640		R740xd			R940	C6420
Hypervisor boot	Boot Optimized Storage Solution - 2x120GB M.2 RAID 1 Mirror, low profile PCIe						
Hypervisor options	Microsoft® Windows Server™ 2016 (except XC640-4i) with Hyper-V or Windows Server® 2012 R2 with Hyper-V, Nutanix AHV, VMware® ESXi™ 6.5 and 6.0				Nutanix AHV only	Microsoft® Windows Server™ 2016 with Hyper-V, Nutanix AHV, VMware® ESXi™ 6.5 and 6.0	Microsoft Windows Server 2016 with Hyper-V, Nutanix AHV, VMware ESXi 6.0 and 6.5
License options	Nutanix Starter, Pro and Ultimate License						
Software maintenance	Nutanix 1 -5-year Software Maintenance/Assurance						
Support	1 -5-year coterminous ProSupport (4 hr and NBD) or ProSupport Plus comprehensive XC Series support with Nutanix assist						
Intel® Xeon® processors	XC640-4 (dual): Platinum 8180, 8180M, 8176, 8176M, 8170, 8170M, 8168 , 8164, 8160, 8153, 6154, 6142, 6140M; Gold 6152, 6150, 6148, 6140, 6138, 6136, 6134, 6132, 6130, 6128, 6126, 5120, 5118, 5115; Silver 4116, 4114, 4110, 4108 XC640-4i (single only): Gold 5118, Silver 4114, 4108	Dual only Platinum 8180, 8180M, 8176, 8176M, 8170, 8170M, 8168, 8164, 8160, 8153, 6154, 6142, 6140M; Gold 6152, 6150, 6148, 6140, 6138, 6136, 6134, 6132, 6130, 6128, 6126, 5120, 5118, 5115; Silver 4116, 4114, 4110, 4108	Dual only Platinum 8180, 8180M, 8176, 8176M, 8170, 8170M, 8168, 8164, 8160, 8153, 6154, 6142, 6140M; Gold 6152, 6150, 6148, 6140, 6138, 6136, 6134, 6132, 6130, 6128, 6126, 5120, 5118, 5115; Silver 4116, 4114, 4110, 4108	Dual only Platinum 8180, 8180M, 8176, 8176M, 8170, 8170M, 8168, 8164, 8160, 8153, 6154, 6142, 6140M; Gold 6152, 6150, 6148, 6140, 6138, 6136, 6134, 6132, 6130, 6128, 6126, 5120, 5118, 5115; Silver 4116, 4114, 4110, 4108	XC740xd-12C, dual only: Silver 4108; Bronze 3106, XC740xd-12R, dual only: Silver 4114, 4108	Quad only: Platinum 8180, 8180M, 8176, 8176M, 8170, 8170M, 8168, 8164, 8160, 8153, 6154; Gold 6152, 6150, 6148, 6142, 6140, 6140M, 6138, 6136, 6134, 6132, 6130, 6128, 6126, 5120, 5118, 5115	Dual only C35/ F95: 5120, 5118, 5115, 4116, 4114, 4110, 4108 C30/F86: 8180, 8180M 8170, 8170M, 8168, 8164, 8160, 6154, 8153, 6152, 6150, 6148, 6142, 6140, 6140M, 6138, 6136, 6134, 6132, 6130, 6128, 6126

[1] Can be optionally configured with 1 or 2 NVIDIA Tesla M10 GPUs, or with 1, 2, or 3 NVIDIA Tesla M60 or P40 GPUs. Not compatible with NVMe SSDs
[2] Specifications are per node

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Configurations and features	XC640-4/ XC640-4i	XC640-10	XC740xd-12	XC740xd-24[1]	XC740xd-12C XC740xd-12R	XC940-24	XC6420-6[2]
Data storage controller	Dell EMC SAS HBA330 mini card		Dell EMC SAS HBA330 low profile				Dell EMC SAS HBA330 mini card
Drive type	4 x 3.5" drives	10 x 2.5" drives	12 x 3.5" drives	24 x 2.5" drives	12 x 3.5" drives	24 x 2.5" drives	6 x 2.5" drives[2]
SSD capacities	SAS/SATA SSDs: 400GB, 480GB, 800GB, 960GB, 1.6TB, 1.9TB, 3,8TB. min/max 2 for hybrid configurations. All flash SAS/SATA configurations available	SAS/SATA SSDs: 400GB, 480GB, 800GB, 960GB, 1.6TB, 1.9TB, 3,8TB. Min 2, max 4 for hybrid configurations. All flash SAS/SATA and SSD+ NVMe configurations available, NVMe SSDs: 800GB, 1.6TB, 3.2TB	SAS/SATA SSDs: 400GB, 480GB, 800GB, 960GB, 1.6TB, 1.9TB, 3,8TB. Min 2, max 4 for hybrid configurations. All flash SAS/SATA configurations available	SAS/SATA SSDs: 400GB, 480GB, 800GB, 960GB, 1.6TB, 1.9TB, 3,8TB. Min 4, max 8 for hybrid configurations. All flash SAS/SATA and SSD+ NVMe configurations available, max 80TB per node. NVMe SSDs: 800GB, 1.6TB, 3.2TB	SAS/SATA SSDs: 400GB, 480GB, 800GB, 960GB, 1.6TB, 1.9TB, 3,8TB. Min 2, max 4 for hybrid configurations. All flash SAS/SATA configurations available max 80TB per node	SAS/SATA SSDs: 400GB, 480GB, 800GB, 960GB, 1.6TB, 1.9TB, 3,8TB. Min 4, max 8 for hybrid configurations. All flash SAS/SATA and SSD+ NVMe configurations available, max 80TB per node. NVMe SSDs: 800GB, 1.6TB, 3.2TB	SAS/SATA SSDs: 400GB, 480GB, 800GB, 960GB, 1.6TB, 1.9TB, 3,8TB. min/max 2 for hybrid configurations. All flash SAS/SATA available,
HDD capacities (max 80TB total per node)	2X 2TB, 4TB, 8TB or 10TB (10TB for XC640-4 only)	1.2TB, 1.8TB, 2.4TB 12Gb SAS	2TB, 4TB, 8TB or 10TB 12Gb SAS with a maximum of 80TB total capacity per node	1.2TB, 1.8TB, 2.4TB 12Gb SAS; minimum of 4 and max 20	2TB, 4TB, 8TB or 10TB, 12Gb SAS with a maximum of 80TB total capacity per node	1.2TB, 1.8TB, 2.4TB 12Gb SAS; minimum of 4 and max 20	1.2TB, 1.8TB, 2.4TB 12Gb SAS, min/max 4
Self-encrypting drives (SED)	SSD: 1.9TB HDD: 4TB, 8TB	SSD: 1.9TB HDD: 1.2TB, 2.4TB	SSD: 1.9TB HDD: 4TB, 8TB	SSD: 1.9TB HDD: 1.2TB, 2.4TB	SSD: 1.9TB HDD: 4TB, 8TB	SSD: 1.9TB HDD: 1.2TB, 2.4TB	SSD: 1.9TB HDD: 1.2TB, 2.4TB
DIMMs	4 - 24 16GB and 32GB RDIMMS or 64GB or 128GB LRDIMMS (XC640-4) and 4 - 12 16GB and 32GB RDIMMS (XC640-4i)	8–24 x 16GB and 32GB RDIMMs or 64GB or 128GB LRDIMMs, installed in pairs			4 - 24 x 16GB and 32GB RDIMMs. installed in pairs	24-48 x 32GB RDIMMs or 64GB or 128GB LRDIMMs installed in pairs	8–16 per node x 16GB or 32GB RDIMMs or 64GB or 128GB LRDIMMs, installed in pairs
Memory configs	64GB - 3TB (XC640-4) and 64GB - 384GB (XC640-4i)	128GB - 3TB (XC640-10, XC740xd-12)	128GB - 3TB (XC640-10, XC740xd-12)	64GB - 3TB (XC740-24)	64GB - 768GB	768GB - 6TB	128GB - 2TB
Networking options	Network daughter cards: Intel X550 4x10GbE-T, Intel X550 2x10GbE-T & i350 2x1GbE-T, Intel X710 2x10GbE SFP+ & i350 2x1GbE-T, Intel i350 4x1GbE-T (XC640-4i only). Mellanox Connect X4 LX 2x25GbE SFP28 (Except XC640-4i, XC740xd-12R, only compatible with Mellanox CX4 LX) Optional Network Interface Cards (Max 2 for XC640 models, max 4 for XC-740xd models and max 8 for XC940-24): Intel i350 2x1G-T, Intel i350 4x1G-T (except XC740xd-24, XC740xd-12 and XC740xd-12C), Intel X550 2x10G-T, Intel X710 2x10G SFP+, Mellanox Connect X4 LX 2x25G SFP28 (except XC640-4i and XC740xd-12R) Note: 1) Foundation imaging requires 1x 10GbE interface except for XC640-4i 2) Network interface cards are for management and non-CVM traffic only and cannot be used for Foundation imaging.						Network Interface Cards, 1 max: Intel X550 2x10G-T, Intel X710 2x10G SFP+

[1] Can be optionally configured with 1 or 2 NVIDIA Tesla M10 GPUs, or with 1, 2 or 3 NVIDIA Tesla M60 or P40 GPUs. Not compatible with NVMe SSDs
[2] Specifications are per node

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Supported hypervisor operating systems and AOS (Acropolis operating system)	VMware ESXi 6.0 (Update 3)	VMware ESXi 6.5d, U1, U2	Microsoft Windows Server 2012 R2 Standard Edition, Datacenter Edition	Microsoft Windows Server 2016	Nutanix AHV	AOS 5.1.3 or later
XC640-4, XC-640-4i	X	X	X (except XC640-4i)	X (except XC640-4i)	X	X
XC640-10	X	X	X	X	X	X
XC740xd-12	X	X	X	X	X	X
XC740xd-24	X	X	X	X	X	X
XC740xd-12C XC740xd-12R					X	X
XC940-24	X	X		X	X	X
XC6420-6	X	X		X	X	X

Dell EMC XC Series support and deployment services

Dell EMC's trusted ProDeploy and ProSupport offerings encompass the full lifecycle experience for XC Series customers. ProDeploy provides full service installation and configuration of both hardware and system software by Dell EMC certified deployment engineers. The ProSupport teams for XC Series are specially trained to address the needs of HCI customers. Automated proactive and predictive tools and technologies help avoid issues and get faster resolution. ProSupport experts are always accessible 24x7x365 by phone, email, chat and social media across 124 countries and 55 languages served by more than 1,000 parts distribution centers.

End-to-end technology solutions

Reduce IT complexity, lower costs and eliminate inefficiencies by making IT and business solutions work harder for you. You can count on Dell EMC for end-to-end solutions to maximize your performance and uptime. A proven leader in Servers, Storage and Networking, Dell EMC Solutions and Services deliver innovation at any scale. And if you're looking to preserve cash or increase operational efficiency, Dell Financial Services™ has a wide range of options to make technology acquisition easy and affordable. Contact your Dell EMC Sales Representative for more information.

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