



Converged IT tailored today for a future fit.

More than unifying servers, storage and networking, a converged solution should be designed with your business challenges in mind. Tailored for your workloads, Dell has one of the most complete converged portfolios—from integrated infrastructure and reference architectures to purpose-built appliances and hyper-converged solutions—ready to tackle your toughest challenges.

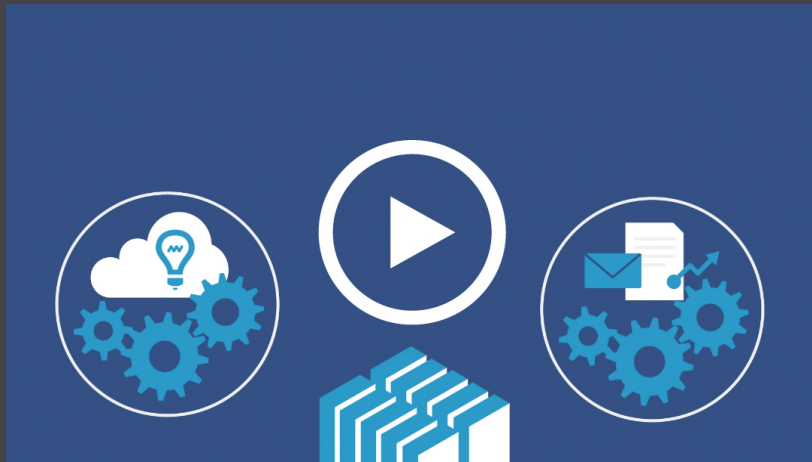
Choose your challenge:

- 1 Simplifying complex architectures >
- 2 Accelerating applications affordably >
- 3 Delivering IT services faster >
- 4 Bringing big office IT to the small office >
- 5 Setting a software-defined strategy >

The challenge: Simplifying complex architectures

The solution PowerEdge FX: Workload-defined infrastructure, converged

Precisely tailor, quickly deploy and easily manage your infrastructure with the most processing power per rack of any other platform.



See more architecture simplification solutions:

[XC Series](#)

[VRTX](#)

Typical workloads



Virtualization +



| Hosting



| SDDC



Define a path to software-defined
Move storage closer to compute to accelerate applications and redefine density.

Precisely tailor workload performance
A modular approach lets you tailor resources to meet specific requirements.

More workloads, less space
Get an entire data center in a single 2U chassis, efficiently integrating shared power, cooling and management.

Up to
50%

more available server-side storage than HP¹

Get up to
3x

the Oracle performance at up to **40% lower cost** vs. HP ProLiant.²

Support up to
72%

more vSAN virtual desktops in **10x less space** vs. Cisco.³

The challenge: Accelerating applications affordably

The solution PowerEdge m1000e: Converged Blade Data Center

Cutting-edge app performance and efficiency

“We continue to rapidly scale our platform ... I see the Dell Converged Blade Data Center as a great way to support that expansion.”

Phil Dalbeck

Infrastructure Architect,
Skyscanner

Learn about more application acceleration solutions:

FX

XC Series

EVO:RAIL

VRTX

Typical workloads



Oracle



SQL



SAP



Streamline management

Manage multiple enclosures and blades from a single console.

Reduce power and cooling

Energy Smart thermal design efficiently cools the chassis and enables better performance in a lower power envelope.

Accelerate applications

Fully modular 10U blade enclosure features up to 8 full-height, 16 half-height or 32 quarter height PowerEdge blade servers, storage, networking and management.

World's most

power-efficient

blade server¹

220%

increase in servers
per U vs. previous
generation

Complex architectures

App acceleration

Deliver faster

ROBO

Software-defined

Why Dell

The challenge: Delivering IT services faster

The solution Dell Engineered Solutions for EVO:RAIL From virtual to value in minutes

Deploy virtual machines and desktops in minutes.

Solution Brief
Dell Engineered Solutions for VMware EVO:RAIL
Hyper-converged appliance optimizes infrastructure and application delivery

At-A-Glance
Dell Engineered Solutions for VMware EVO:RAIL benefits

- Achieve faster time-to-value
- Deploy VMs in just 15 minutes from power-on
- Adopt a simplified appliance-based solution with a streamlined software-defined management experience
- Provide elasticity to your environment
- Rapidly expand capacity with auto-grow in new environments
- Gain better scaling and performance to meet growing user and business needs
- Benefit from ease-of-use
- Provide streamlined user interfaces for ease of configuration
- Operate with a single pane-of-glass management experience
- Use OpenShift-like integrations with existing VMware management tooling

Accelerate time to value
The Dell Engineered Solutions for VMware EVO:RAIL deliver a turnkey user experience for virtual infrastructure, virtual desktop infrastructure (VDI), private cloud and general purpose workloads. The Dell Engineered Solutions for VMware EVO:RAIL combine Dell 2U/4 node servers and virtual infrastructure management software from VMware into a software-defined appliance, helping customers achieve faster time-to-value, provide elasticity to their environment, and create greater ease-of-use for their infrastructure and application workload delivery.

Dell's 2U/4 node server - Powerful, streamlined, efficient
The Dell Engineered Solutions for VMware EVO:RAIL is an integrated hyper-converged appliance that is ordered as a single bundle and comes pre-installed with all required software components to get you up and running quickly. The appliance has 4 independent server nodes housed in a single 2U chassis, allowing you to manage up to four compute nodes, and offers 320 GB of physical memory per node, 15.1TB of total storage (500GB SSD and SAS) and 10GbE network.

Designed with your needs in mind
The Dell 2U/4 node server is designed to deliver the highest possible performance in a single, software package. This hardware-software war offers a mix of performance and efficiency that makes it an exceptional data center building block for VMware environments.

Equipment bundle available for VMware EVO:RAIL
Dell 2U/4 node server with 16GB memory, 15.1TB storage, 10GbE network, and 10GbE network

VMware EVO:RAIL Software Bundle
VMware EVO:RAIL Software Bundle
VMware EVO:RAIL Software Bundle
VMware EVO:RAIL Software Bundle
VMware EVO:RAIL Software Bundle

View solutions brief >

Typical workloads



Deliver IT services faster

Plug and play solution includes a Dell 2U/4 node server platform and VMware virtualization software.



Optimize virtualized workloads

Pre-validated configuration integrates into existing environments without disruption, while maximizing performance and flexibility.

Scale rapidly

Add additional appliances in minutes, investing only when you need.

"The Dell Engineered Solutions for VMware EVO:RAIL offer ease-of-use, simplicity of deployment, and pay-as-you-go scalability that is ideal for our virtual desktop infrastructure (VDI) initiatives."

John Krull

Information Technology Officer, Oakland Unified School District

Deploy VMs in just

15 mins

from power on with Dell Engineered Solutions for VMware EVO:RAIL.

Support up to

250

Horizon View desktops per appliance.¹

Run up to

100

VMs per VMware EVO:RAIL appliance.²

Links to other rapid time to value solutions:

XC Series

VRTX

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Why Dell

The challenge:

Bringing big office IT to the small office

The solution

PowerEdge VRTX: Data center performance at your desk side

Simplicity, efficiency and versatility for ROBO and small office IT with PowerEdge VRTX

"We can effectively control hardware growth and cut TCO by 20 percent with the Dell PowerEdge VRTX."

Fang Rui

Professor, Chengdu University of Information Technology

Links to other application anywhere solutions:

EVO:RAIL

Typical workloads



Exchange



CRM



ERP

Right-size for your office

Up to four blade server nodes, 48TB of internal storage and a built-in network connection

Manage across the enterprise

Consistent management features between VRTX and your data center



Redefine office IT

Office power profile and desktide acoustics help VRTX fit in anywhere.

Realize faster time to value

An integrated, pre-tested and certified solution while reducing CapEx and OpEx

Up to

26%

lower 5-year TCO vs. a legacy hardware environment¹

Up to

122%

better performance per Watt vs. HP C3000²

Deploy

78.5%

faster vs. a legacy hardware solution.³

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The challenge: Setting a software-defined strategy

The solution

Dell XC Series: Designed for the software-defined data center

Hyper-converged, highly scalable compute and storage solutions for software-defined workloads



Dell XC Series of Web-scale Hyper-converged Appliances

The Dell™ XC Series of web-scale hyper-converged appliances integrates Dell's proven iDRAC server platform and Nutanix web-scale software to provide enterprise-class, hyper-converged appliances for virtualized environments. Backed by Dell's Global Service and Support organization, these 1U and 2U 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 web-scale and cloud infrastructures such as Google, Facebook, and Amazon™ – but are engineered for all enterprises, regardless of size. Its key attributes include:

- Hyper-converged – Seamlessly integrates server and storage resources in a self-healing system.
- Software defined – Delivers all services through software using proven Dell hardware.
- Distributed – All data, meta data and operations are distributed across the entire cluster.
- Scale-out – Increases performance linearly by adding capacity one node at a time.
- Automation and analytics – Extensive automation and no-systems-admin monitoring.

Designed to simplify IT

XC Series appliances simplify the deployment of virtual machines in an environment. The Nutanix vCenter File System (vCFS) runs in a Controller VM (CVM) on each node, aggregating direct-attached storage resources (hard disk drives and flash storage) across all nodes. This pooled storage is made available to all hosts through a

be easily integrated into any data center in less than 30 minutes and can support multiple virtualized, business-critical workloads including VDI, private cloud, database, CRM and data warehouse as well as virtualized legacy applications, IT and storage administrators no longer have to manage LUNs, volumes or RAID groups. Instead, they can manage their virtual environments at a VM level using policies based on the needs of each workload.

Intuitive and powerful management interface

The Nutanix Prism 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 many any device and includes REST APIs for integration with third-party cloud management systems.

Prism Central gives administrators a birds-eye view of resources across multiple clusters by managing different supervisors and enables them to manage individual clusters using the GUI or a Windows PowerShell command-line interface. The GUI streamlines configuration and management of replication, OS and compression options, which are needed to control on-premise

[View XC spec sheet >](#)

“The Dell XC Series will enable us to support 5,000 full-time students plus staff with an easily scalable infrastructure for virtual desktops.”

Daryl Allenby

Director of IT infrastructure and operations,
Northern Alberta Institute of Technology

Typical workloads



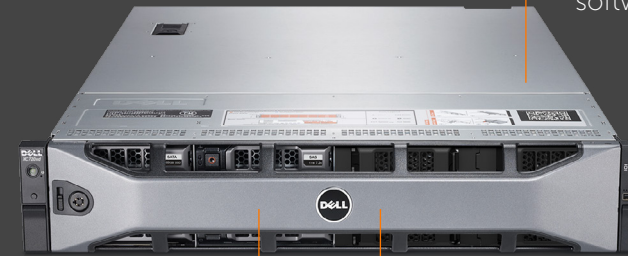
VDI



Private cloud



Big data



Web-scale at your scale

PowerEdge compute, enterprise-class storage, integrated networking and Nutanix web-scale software in a 1 or 2U appliance

Pay-as-you-grow

Modular expansion lets you scale capacity and performance as needed—without overprovisioning.

Deploy and manage faster

Preconfigured solution reduces rollout time while a single interface for storage and server management streamlines operations.

Up to

27%

lower cost over three years than traditional VDI solutions¹

Up to

6x

faster time to value compared to traditional VDI solutions¹

Start your software-defined data center in less than

30 mins.

Links to other software-defined solutions:

[PowerEdge FX](#)

[EVO:RAIL](#)

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More than unified, IT converged.



Dell offers one of the few converged solutions that deliver a single, virtualized layer of compute and storage. This compute-optimized approach fast tracks your software-defined data center.

Get IT together at Dell.com/convergedsolutions

With Dell Converged Solutions, you can:

Lower costs as you run more workloads in less space with the modular, flexible PowerEdge FX Architecture.

Roll out IT services faster with application-specific reference architectures and purpose-built appliances.

Streamline operations as you manage traditional and new IT as one with a highly intuitive user interface and template-driven orchestration.



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Sources

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¹Based on October 2014 Dell internal analysis of the x86 server market of maximum aggregate SPECint CPU processing power supported in a standard EIA server rack.

²Based on "Oracle RAC performance: Dell PowerEdge FX2 with Fluid Cache for SAN vs. competing cache solution", a January 2015 Principled Technologies report commissioned by Dell comparing a Dell PowerEdge FX2 and HP ProLiant DL380p. Actual performance will vary based on configuration, usage and manufacturing variability. Pricing claim based on internal analysis using U.S. list pricing taken from dell.com and hp.com in October 2014.

³Based on "VDI Performance comparison: Dell PowerEdge FX2 and FC430 servers with VMware Virtual SAN" a December 2014 Principled Technologies report commissioned by Dell.

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¹Based on Dell analysis of the PowerEdge M600 (10th Generation), The PowerEdge M610 (11th Generation) and The PowerEdge M620 (12th) Generation, which all hold the highest SPEC_{power} scores for their given life cycles. See www.spec.org.

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¹Horizon View virtual desktop profile: 2vCPU, 2GB vMEM, 32GB vDisk lined clones. Actual capacity will vary with desktop size and workload.

²General purpose server VM profile: 2vCPU, 4GB vMEM, 60GB vDisk, with redundancy. Actual capacity will vary with VM size and workload.

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¹Based on a June 2013 Principled Technologies report commissioned by Dell, "Comparing Performance and Cost: Dell PowerEdge VRTX vs. a Legacy Hardware Environment." TCO calculated in U.S. dollars. For more information see, http://www.principledtechnologies.com/Dell/VRTX_performance_TCO_0713.pdf

²Results based on testing by the Dell Solutions Performance Analysis Lab May 2013 comparing the performance of the Dell PowerEdge VRTX with four M620 server nodes to the HP ProLiant C3000 with four ProLiant BL460c blades in a Microsoft Hyper-V environment using Benchmark Factory to measure performance. Actual performance will vary based on configuration, usage and manufacturing variability. Software and workloads used in performance tests may have been optimized for performance only on Intel microprocessors. Performance tests are measured using specific computer systems, components, software, operations and functions. Any change to any of those factors may cause the results to vary. You should consult other information and performance tests to assist you in fully evaluating your contemplated purchases, including the performance of that product when combined with other products.

³"Dell PowerEdge VRTX and M-Series Compute Nodes," a May 2013 Principled Technologies Report sponsored by Dell http://www.principledtechnologies.com/Dell/PowerEdge_VRTX_configuration_0513.pdf

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¹"Dell and Nutanix Introduce a Converged VDI Application Appliance," David Floyer, November 17, 2014. See: http://wikibon.org/wiki/v/Dell_and_Nutanix_Introduce_a_Converged_VDI_Application_Appliance.