DELL EMC

Dell EMC ScaleIO Ready Nodes

Software-defined storage building blocks that are reliable, quick and easy to deploy

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Automated Management Services

ScaleIO Ready Nodes come with Automated Management Services (AMS) for monitoring, automated provisioning and lifecycle management. For customers deploying hyper-converged ScaleIO Ready Nodes with VMware® ESX, ScaleIO's Automated Management Services can automatically discover the hardware and configure the network. It also enables administrators to create VMware entities such as compute clusters, virtual machines, data stores and application networks – all from a single management console.

AMS helps simplify the lifecycle management of ScaleIO Ready Nodes by selecting the compatible hardware components, then identifying and applying the required Operating System patches and firmware upgrades. The end-to-end monitoring and management of these ESX ScaleIO Ready Nodes means data centers can experience greater operational efficiency, while reducing risks and administration overhead associated with manual configuration tasks.

All the benefits of ScaleIO

Enterprise-grade, no-compromise resilience

Quick and easy to deploy

A solution built for modern storage demands

Enterprises are producing, ingesting and storing more data than ever before. While traditional storage area networks (SANs) offer high performance and availability, they may not provide the massive scalability, linear performance gains or resiliency that enterprise workloads require.

Enter Dell EMC's ScaleIO software — converging storage and compute resources into a single-layer architecture, aggregating capacity and performance with Automated Management Services, and capable of scaling from three to thousands of nodes. But how do you keep deployments simple, repeatable and consistent, whatever the scale? The wrong server configuration, incorrect settings or firmware incompatibility can result in failures or data loss. The hardware matters.

You're investing in ScaleIO software, so invest in hardware pre-configured to support it

Dell EMC's ScaleIO software delivers scale-out block storage, simplifying storage life cycle management and empowering IT organizations to operate with ruthless efficiency. It can be deployed as storage-only or used to converge storage and compute resources into a single-layer architecture, aggregating capacity and performance, and capable of scaling from three to thousands of nodes.

Dell EMC ScaleIO Ready Nodes combine Dell EMC PowerEdge servers and ScaleIO software to create a reliable, quick and easy-to-deploy building block for software-defined storage (SDS).

All the benefits of ScaleIO

Now you can take full advantage of the massive scalability of ScaleIO on a next generation, rack-optimized, Dell EMC PowerEdge server designed to reduce the time spent planning and deploying new architectures. Dell EMC ScaleIO Ready Nodes are the perfect building blocks to achieve unprecedented scale, elasticity and performance, with unmatched flexibility to grow and adapt to ever-changing business needs.
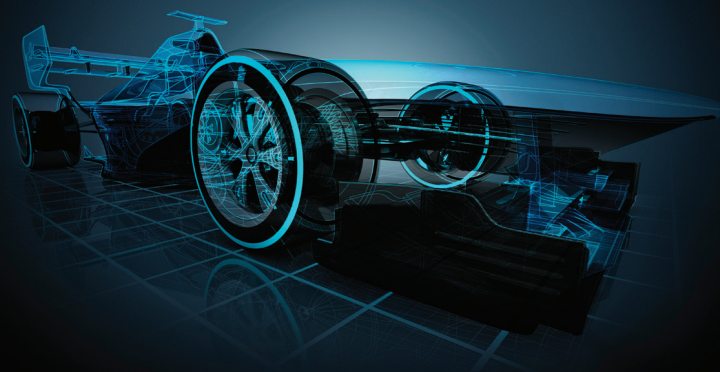
Enterprise-grade, no-compromise resilience

Dell EMC ScaleIO Ready Nodes are tested and validated, so whether you are deploying hyper-converged compute and storage or software-defined storage, you can depend on this optimized building block to provide the resiliency and availability your business demands.

Quick and easy to deploy

Before you get a ScaleIO Ready Node, Dell EMC has not only configured it for firmware and software compatibility, but also for your ScaleIO cluster environment. Because it's delivered with the configuration steps completed and tested, it's easy to order and a snap to deploy.

All this, in a solution that's fully supported by a single vendor — Dell EMC — for streamlined, collaborative support from the first call.

ScaleIO Awarded Inaugural Editor's Choice Award[1]

"We've never seen any high-availability (HA) shared storage perform as fast as ScaleIO has in our lab. ScaleIO has shattered records in every situation so far, pushing our testing infrastructure to its limits."[2]

—StorageReview Enterprise Lab

Are you facing any of these challenges?

It's tricky to optimize servers for ScaleIO.
Dell EMC ScaleIO Ready Nodes take the guesswork out of building a hyper-converged or storage-only software-defined server SAN. These pre-configured building blocks are specifically designed to simplify deployment and ease scaling projects. Plus, they're based on Dell EMC PowerEdge servers featuring the latest Intel® processors, which deliver higher core counts for I/O intensive applications, reducing bottlenecks and further improving performance.

We need to guard against failures or data loss.
ScaleIO provides enterprise-grade, no-compromise resilience by running the storage software directly on the application servers. Designed for extensive fault tolerance and availability, ScaleIO handles all types of failures, including failures of media, connectivity and nodes, software interruptions and more. Dell EMC PowerEdge R640 and R740xd servers are a perfect complement to ScaleIO, with automated management and high-availability features, such as redundant power-supply units (PSUs); hot-pluggable and hot-swappable PSUs, hard disk drives (HDDs) and fans; and a dual SD card option for fail-safe hypervisors.

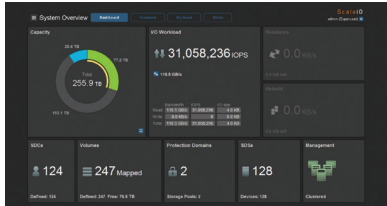**It takes too long to plan and deploy a software-defined storage architecture.**
Reducing the time IT organizations spend planning and deploying a new architecture, Dell EMC ScaleIO Ready Nodes are the perfect building blocks to achieve unprecedented scale, elasticity and performance with unmatched flexibility to grow and adapt to ever-changing business needs. Now, you can meet your business objectives while greatly simplifying the process of procuring, deploying and managing a server SAN.

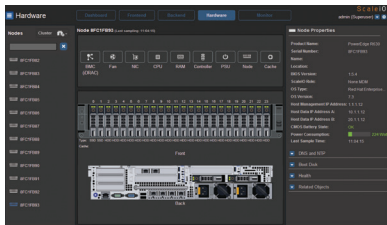[1] TechNewSources, "Dell EMC ScaleIO Awarded StorageReview's Inaugural Editor's Choice Award," March 2017.

[2] StorageReview Enterprise Lab, "EMC VxRack Node Powered by ScaleIO Review," February 2016.
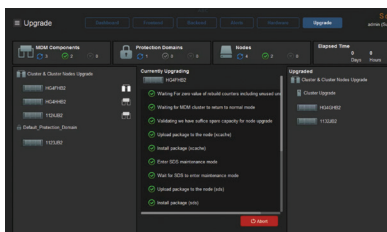
Dell EMC does all the work to provide you with an easy deployment experience that gets you up and running faster at a lower cost. And because they are known good configurations, Dell EMC is able to give you streamlined, collaborative support from the first call.

ScaleIO dashboard

ScaleIO hardware tab

ScaleIO upgrade

Dell EMC ScaleIO Ready Nodes

Two form factors can be configured to fit your business needs, delivering massive scalability with linear performance gains and enterprise-grade, no-compromise resilience in a building block that's quick and easy to deploy.

Configurations are based on Dell EMC PowerEdge R640 and R740xd servers, which can be optimized for capacity or performance with a variety of CPU, memory and storage options, including all-flash and hybrid storage.

Dell EMC ScaleIO Ready Nodes arrive pre-configured, tuned and optimized for ScaleIO — with the configuration already completed and tested. This includes checking that all components follow Dell EMC approved manufacturers' lists (AMLs) for firmware, BIOS versions, hardware compatibility list (HCL) lookup and driver downloads, optional VMware® ESXi™ install, driver installs and cluster connections.

	Automated Management Server
	Runs Automated Management Services
CPU	Intel® Xeon® Gold 6126, 12 cores
Memory	48GB – 128GB, without NVDIMM
BOSS	BOSS controller card with 2x 120GB M.2 SATA drives creates single RAID1
Storage	**Controllers** SAS: HBA330 **Drive capacities (max 2 drives)** 2 x Intel 3520, 120GB
Network	Intel X710 dual port 10Gb SFP+ dual port 1GbE, Rack Select Network Daughter Card (onboard NIC)

	Dell EMC PowerEdge R740xd Server		Dell EMC PowerEdge R640 Server		
	2U High-capacity form factor		1U High-density form factor		
	Hyper-converged node	Storage-only node	Hyper-converged node	Storage-only node	Compute-only node
CPU	Intel Xeon Scalable Processors, up to 26 cores				
Memory	**NVDIMM** 224GB — 736GB	**NVDIMM** 224GB — 384GB (2 CPU)	**NVDIMM** 224GB — 736GB	**NVDIMM** 224GB — 384GB (2 CPU)	**NVDIMM** 224GB — 736GB
	Without-NVDIMM 192GB — 3TB	**Without-NVDIMM** 48GB — 128GB (1 CPU) 96GB — 128GB (2 CPU)	**Without-NVDIMM** 192GB — 3TB	**Without-NVDIMM** 48GB — 128GB (1 CPU) 96GB — 128GB (2 CPU)	**Without-NVDIMM** 192GB — 3TB
GPU	NVIDIA® Tesla® M10, M60				
BOSS	BOSS controller card with 2x 120GB M.2 SATA drives creates single RAID1				
Storage	**Controllers** RAID: PERC H730p SAS: HBA330 (All SSD) **Drive capacities (max 32 drives)** SAS SSD 2.5" — 800GB, 960GB, 1.6TB, 1.92TB, 3.84TB SATA SSD 2.5" — 1.6TB, 1.92TB, 3.84TB SAS HDD 2.5" 10K RPM — 1.2TB NVMe 2.5" SSD — 800GB, 1.6TB, 3.2TB, 6.4TB		**Controllers** RAID: PERC H730p SAS: HBA330 (All SSD) **Drive capacities (max 10 drives)** SAS SSD 2.5" — 800GB, 960GB, 1.6TB, 1.92TB, 3.84TB SATA SSD 2.5" — 1.6TB, 1.92TB, 3.84TB SAS HDD 2.5" 10K RPM — 1.2TB NVMe 2.5" SSD — 800GB, 1.6TB, 3.2TB, 6.4TB		**Controllers** RAID: PERC H330 **Drive capacities (max 2 drives)** 2 x Intel 3520, 120GB
Network	**1-2 CPU, 0-2 GPU configuration** 1 onboard rNDC + 2 PCIe 2 x 10GbE + 2 x 1GbE + 4 x 10/25GbE **2 CPU, 3 GPU configuration** 1 onboard rNDC only 2 x 10/25GbE Supported NICs: Intel X550, Mellanox® ConnectX®-4		**1 CPU configuration** 1 onboard rNDC + 1 PCIe 4 x 10/25GbE **2 CPU configuration** 1 onboard rNDC + 2 PCIe 2 x 10GbE + 2 x 1GbE + 4 x 10/25GbE Supported NICs: Intel X550, Mellanox ConnectX-4		**1 CPU configuration** 1 on board rNDC + 1 PCIe 4 x 10/25GbE **2 CPU configuration** 1 onboard rNDC + 2 PCIe 2 x 10GbE + 2 x 1GbE + 4 x 10/25GbE Supported NICSs: Mellanox ConnectX-4

Benefits of Dell EMC ScaleIO Ready Nodes[10]

89%
four-year ROI

10
months to payback

40%
lower four-year cost of operations

83%
faster storage deployments

70%
reduced storage management costs

189% more
orders per minute than HPE[11]

Why Dell EMC?

The combination of Dell and EMC brings together two industry-leading companies with strong reputations for value and innovation. Dell EMC holds leadership positions in some of the biggest and largest growth categories in the IT infrastructure business, and that means you can confidently source all your IT needs from one provider — Dell EMC.

- #1 hyper-converged systems[3]
- #1 in external enterprise storage[4]
- #1 in server unit shipments, market share, and growth[5]
- #1 cloud IT infrastructure[6]
- #1 cloud systems management software (VMware)[7]
- #1 in data protection[8]
- #1 in software-defined storage[9]

Services and financing

Dell EMC Professional Services
Solutions customized for your needs
Leverage on-site integration or application implementation with Dell EMC Professional Services.

Deployment assistance when you need it
You can trust Dell EMC to deploy the racked configuration in your data center, including network cabling, operating system, firmware and hypervisor with Dell ProDeploy. Read more about Dell EMC Services for ScaleIO.

Support is always on for you
Enjoy unlimited access to 24x7 chat, email and phone support services with how-to assistance and disaster recovery from Dell ProSupport.

Dell Financial Services
- Full-service leasing and financing solutions are located throughout the US, Canada and Europe.
- Dell Financial Services can finance the total technology solution.
- Efficient electronic quoting and online contracts offer the best customer experience.

Learn more about Dell Financial Services.

[3] IDC WW Quarterly Converged Systems Tracker, December 2017, Vendor Revenue — CY17Q3.

[4] IDC WW Quarterly Enterprise Storage Systems Tracker, November 2017, Vendor Revenue — CY17Q3.

[5] IDC WW Quarterly Server Tracker, November 2017, Vendor Revenue — CY17Q3.

[6] IDC WW Quarterly Cloud IT Infrastructure Tracker, October 2017, Vendor Revenue — CY172Q.

[7] IDC WW Cloud Systems Management Software Market Shares, 2016, July 2017.

[8] Direct2DellEMC blog, "Dell EMC Named a Leader in the 2017 Gartner Magic Quadrant for Data Center Backup and Recovery Solutions," August 2017.

[9] SDx Central article, "Top 3 Software-Defined Storage Vendors Include VMware and IBM," July 2017.

[10] Forrester Total Economic Impact™ Study, "The Total Economic Impact™ of Dell EMC ScaleIO," October 2017.

[11] Principled Technologies, Dell EMC ScaleIO Ready Node solution infographic, "Support more database users while minimizing datacenter sprawl," September 2017.

Learn more:

Read the Reference Architecture for VDI workloads.

Get the scalable storage you need to support the business

Don't wait to find out more about this building block for software-defined storage and hyper-converged infrastructure that can achieve massive scaling with linear performance gains and enterprise-grade resilience — all in a reliable solution that's quick and easy to deploy. Contact your Dell EMC sales representative, or visit the Dell EMC ScaleIO Ready Nodes web page to learn more.

Call +1 (866) 442-6790 for pricing & more information

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