

DELL EMC SCALEIO READY NODE

Powerful Hardware and Unbelievable Software

ScaleIO Ready Node



ESSENTIALS

- Pre-validated, tested and optimized server nodes to provide the best performance possible
- Single vendor for the purchasing and support of your server SAN software and hardware
- All-Flash configurations provide highest levels of performance and cost efficiency
- Software-defined, scale-out, server SAN designed with enterprise-grade resiliency to deliver block storage

BENEFITS

Compelling Economics:

- More efficient compared to traditional SAN infrastructures

Massive Scalability:

- Scale-out your data center on-demand and to web scale

Supreme Elasticity:

- Increase or decrease resources “on the fly” with no downtime

Extreme Performance:

- Performance that scales linearly 10M+ IOPS with sub-millisecond latency

Unparalleled Flexibility:

- OS/hypervisor agnostic and choice of server node configurations, so you can deploy the right solution for your business

TODAY’S STORAGE CHALLENGES

Today’s IT infrastructures are siloed, inflexible and rigid. Application servers are connected via Fibre Channel and HBAs to dedicated storage arrays. Storage architectures that have dedicated workloads, SANs and complex networks cannot always provide the scale, elasticity and flexibility needed to meet the demands of today’s high performing applications, let alone the business as a whole. IT organizations are looking to move away from these complex and siloed environments which are plagued by inefficient planning, high costs and longer time-to-market. They are looking to modernize their data centers with software-defined storage.

DELL EMC SCALEIO READY NODE

Modernizing the data center starts with removing your dependency on traditional SAN hardware and instead, transforming your infrastructure with Software-defined Storage. By utilizing purpose built storage software, combined with industry leading x86 hardware, you can design an infrastructure that delivers the agility and flexibility needed to respond and scale as business demands dictate.

Dell EMC ScaleIO® Ready Node brings together next generation, rack-optimized, Dell PowerEdge servers with ScaleIO, the most agile, scalable and performant Software-Defined Storage (SDS) solution for block storage. It fits within your existing infrastructure and is the perfect choice for organizations looking for ways to reduce the time needed to plan and deploy a new architecture. Having the software and hardware from a single vendor, delivering single support, greatly simplifies the process of procuring and deploying a server SAN. You can quickly deploy a fully architected software-defined block storage solution. Also the ability to select from different deployment models and configurations, including All-Flash, provides you with the flexibility to select the solution that best meets your business objectives.

STORAGE-ONLY, HYPER-CONVERGED OR BOTH – YOUR CHOICE

ScaleIO Ready Node is designed to address today’s block storage challenges. It offers you the ability to redesign your storage environment using a storage-only, hyper-converged or mixed approach. If your immediate goal is to reduce costs and maximize scale and performance, without impacting your current staff and operations, you can begin with a storage-only software defined server SAN model. Leave your applications running the way they are today, on independent servers, and simply transform the way you handle your block storage.

You can also choose to run your applications on the same servers as your storage, bringing compute and storage together within the architecture. You have the flexibility to

“When running the application on the same hardware as the storage resources, ScaleIO software has no negative hit to the workload itself. This is an impressive feat in and of itself, considering other HCI platforms almost always sap a large percentage of CPU resources to manage background processes (some as high as 30%).”

StorageReview
Enterprise Lab -

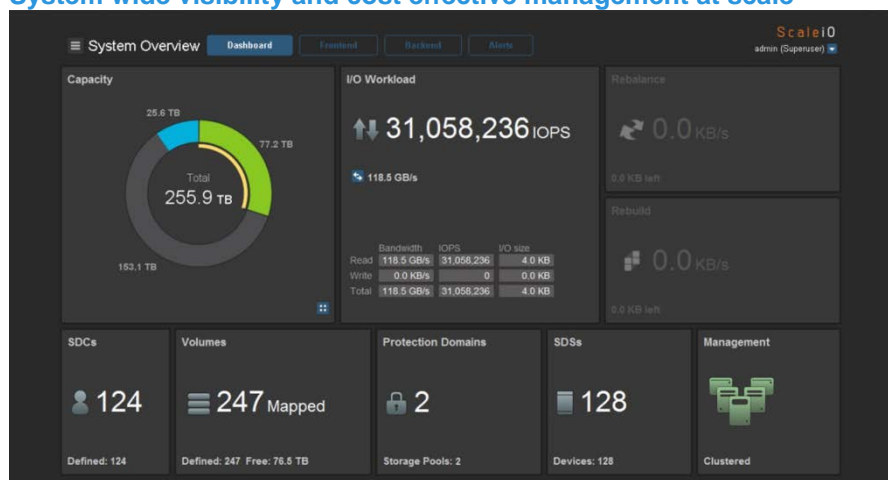
“EMC VxRack Node powered by ScaleIO: SQL Server Performance Review (HCI)”, July 2016

scale your storage and compute separately to meet workload and application demands. These hyper-converged deployments offer the best TCO savings, while allowing you to modernize your data center with greater efficiency

THE SOFTWARE – SOFTWARE-DEFINED WITH DELL EMC SCALEIO

Dell EMC ScaleIO is software that creates a server-based SAN from local server storage to deliver flexible and scalable performance and capacity on demand. ScaleIO combines DAS storage resources to create a virtual pool of block storage with varying performance tiers. Its design enables you to scale from 3 nodes to over a thousand nodes. ScaleIO also uses significantly lower CPU and memory resources. This makes it a far more efficient solution for hyper-converged deployments, as it reduces the need to add more hardware resources to the cluster; enabling you to better manage your CAPEX. In addition, it provides enterprise-grade data protection, multi-tenant capabilities, and add-on enterprise features such as QoS, thin provisioning, and snapshots. ScaleIO delivers the scalability, elasticity, flexibility and performance needed to meet the demands for whatever comes next.

System wide visibility and cost effective management at scale



THE HARDWARE –OPTIMIZED FOR SCALEIO

ScaleIO Ready Node combines ScaleIO software with Dell PowerEdge servers. These industry leading server configurations have been tuned and optimized for ScaleIO so you attain the highest levels of performance possible. These next generation servers include the latest Intel processors, which deliver higher core counts for I/O intensive applications, reducing bottlenecks and further improving performance. The ability to achieve unprecedented scale, elasticity and performance is simplified using this pre-validated, configured and fully supported solution. ScaleIO Ready Node comes with a single support model for both the hardware and software, providing you with world class support from a single vendor.

THE CONFIGURATIONS – DESIGNED TO SUPPORT YOUR BLOCK STORAGE WORKLOADS

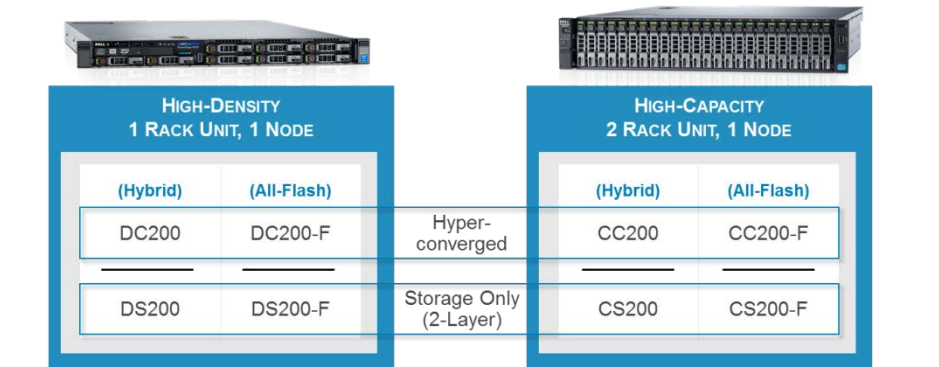
ScaleIO Ready Node provides different server node configurations that are designed to be optimized for capacity or performance, including All-Flash and Hybrid options. You can start building your infrastructure with one node type, and add to or modify the system as needs change. The flexible deployment models of ScaleIO Ready Node make it possible to also mix configurations to create multiple All-Flash and Hybrid storage pools, all in a single cluster.

The 2 rack unit 1 node (2U1N) chassis configurations consist of capacity server nodes. These are purposely designed to help IT organizations redesign their storage infrastructure using standard server hardware and remove their dependency on traditional SAN hardware. The CC200 chassis helps organizations deploy a hyper-converged architecture. These chassis bring together compute and storage to support VMware ESX, Linux, Windows Server (including Hyper-V) and OpenStack deployments.

The 1U1N node configurations are designed to help you maximize your data center footprint, while also providing smaller fault domains. These 1 rack unit configurations are highly dense, providing you with another way to start your SDS deployment small but still enabling you to grow and scale out as your needs change. What's more is you can still select from hybrid or All-Flash options, never having to sacrifice performance for space.

ScaleIO Ready Node Configuration Options

Optimizing for Ultra Density, Maximum Capacity and Highest Performance



BRING ALL-FLASH CLOSER TO APPLICATIONS

The ScaleIO Ready Node All-Flash configurations meet the demands of mission-critical enterprise workloads, delivering high levels of performance, capacity and cost efficiency. The unique SDS scale-out and highly parallelized architecture of ScaleIO, unleashes the full power of all-flash. All of the SSD drives within the ScaleIO Ready Node work in parallel to serve all reads and writes, eliminating any and all bottlenecks. The ability to take full advantage of the aggregate performance of all SSDs in a single node makes it possible for performance to scale linearly as you add more nodes. For applications that require ultra-high performance, the All-Flash configurations are ready to meet the needs of these enterprise applications, delivering instant access with extreme response.

MAKE THE MOST ACTIVELY USED DATA ACCESSIBLE FASTER

When All-Flash is more than you need, ScaleIO Ready Node also offers configurations that take full advantage of SSD low response time by integrating with server-side caching software, SanDisk DAS Cache, for a high performance SSD caching layer. This caching software solution enables customers to fully exploit the benefits of high performance solid state drives as cache for frequently accessed data accelerating data accesses from data on direct-attached, disk-based storage.

The different configurations available not only provide you with the flexibility to adopt a software-defined architecture which best meets your needs a storage-only or hyper-converged architecture but also makes capacity planning easier. You no longer need

ScaleIO Ready Node means:

- No more data migrations
- No more forklift upgrades
- No more expensive Fibre Channel connectivity
- No more “Islands of SANs”
- No more paying for more storage than you need
- Easier tech refreshes and upgrades

to purchase more CPU or storage today because of what you may need 3- 5 years down the line. You can now adopt a “pay as you grow” approach to capacity planning because ScaleIO Ready Node makes it possible to add and/or remove server nodes and capacity, without interrupting your business, as your infrastructure changes and demands require.

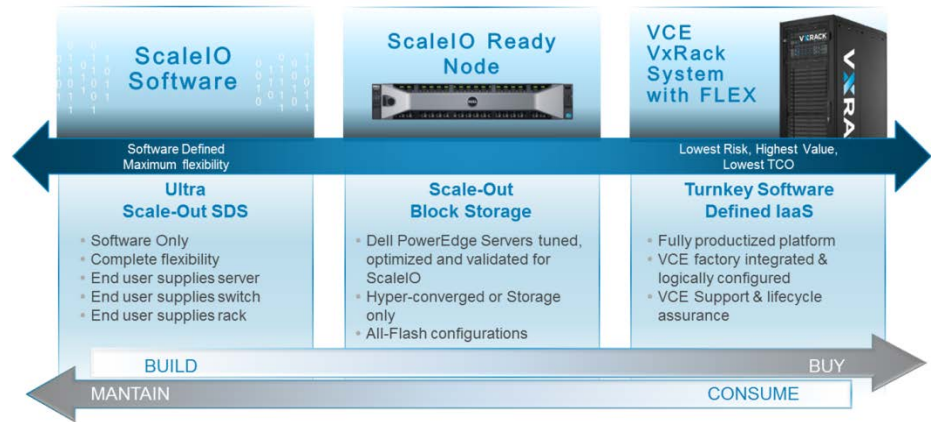
INTEGRATING INTO YOUR INFRASTRUCTURE

ScaleIO software has delivered upon the promise of software-defined, scale out, block storage on standard hardware providing extreme performance, massive scale and superior elasticity. Now you have 3 different ways to consume ScaleIO.

- ScaleIO software empowers you to turn your x86 servers into a SDS infrastructure.
- ScaleIO Ready Nodes combines ScaleIO software with optimized Dell PowerEdge servers, greatly simplifying the process of procuring and deploying a server SAN. You can have confidence in knowing that the solution is fully supported, pre-validated, tested and configured to provide the best performance possible.
- VCE™ VxRack™ System with FLEX integrates compute, software-defined storage, networking, and virtualization. It then utilizes ScaleIO software, and VCE Vision™ Intelligent Operations software, to create a turnkey, hyper-converged infrastructure (HCI) solution that is fully supported and sustained.

ScaleIO Consumption Options

Three Ways to Consume



ScaleIO Ready Node provides you with the flexibility to utilize your own datacenter and/or networking infrastructure to quickly implement a server SAN architecture. It provides the same powerful node configurations as the VxRack FLEX but can be ordered as single server nodes if a fully engineered system is not needed. This enables you to integrate your own racks and network switches with the fully supported and tested server/software combination for a highly flexible, scalable and elastic software-defined-storage solution. Simply choose the ScaleIO Ready Node configuration right for you and reduce the time needed to implement a software-defined architecture, getting to the benefits faster.

These 3 consumption models make it possible for you to transform your infrastructure and move towards a modern data center architecture based upon your needs and pace.

SCALEIO READY NODE: THE NEXT EVOLUTION OF IT

We are in the middle of the next evolution of IT – the age of Software-Defined Storage and Server SAN. ScaleIO Ready Node delivers a powerful, flexible and agile server SAN solution that supports specific workload demands while also helping to reduce risk and maximize TCO. The time has come for:

- **Compelling Economics:** Attain as much as 50% more efficiency (power/cooling/space) when compared to traditional SAN infrastructures and bring the power of All-Flash to SDS deployments without sacrificing cost efficiency.
- **Extreme Performance:** Experience performance that scales linearly. Tested against multiple traditional SAN vendor models, customers can achieve as much as 8x better IOPS performance. All-Flash configurations that greater performance with lower latency.
- **Supreme Elasticity:** Storage and compute resources can be increased or decreased in small or large increments whenever the need arises “on the fly” with no downtime. Add only what you need when you need it.
- **Massive Scalability:** Achieve web scale from the core data center by while truly eliminating silos of infrastructure from the data center. Clusters can scale from as little as 3 nodes and as much as to 1000+ nodes across multiple racks.
- **Unparalleled Flexibility:** Choose the OS/hypervisor running on each server node. Select the configurations which best support and be empowered to build the solution that best fits your application and business needs.

CONTACT US

To learn more, contact your local representative or authorized reseller.



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