Build Your Hybrid Cloud with a Truly Flexible Foundation

Modernize your infrastructure simply with Dell EMC vSAN Ready Nodes built on PowerEdge servers.

Change is all around us, occurring faster than ever before. Technology innovations continue to proliferate. Business needs evolve. And keeping up is hard. It’s why many enterprises have turned to a hybrid cloud model — and why 90% of IT admins report increased value and effectiveness from hybrid cloud initiatives.¹

While the process of simplifying IT is imperative, it’s also important to recognize that every business is different. Your workloads are unique. Similarly, your infrastructure must flexibly align with your specific business objectives and needs.

At Dell Technologies, we understand this. And with VMware, we are focused on helping you achieve your goals easily and on your terms. Dell EMC vSAN Ready Nodes, built on PowerEdge servers, are essential building blocks to achieving your hybrid cloud and provide a solid step in that direction.

Dell EMC PowerEdge servers and VMware — leaders in HCI
Pairing the world’s #1 server² with the global leader in virtualization and hyperconverged infrastructure (HCI) software,³ Dell EMC PowerEdge and VMware offer essentially unrivaled hardware and software HCI solutions.

VMware® vSAN™ is the industry’s leading software for HCI, empowering HCI customers to securely run traditional and modern apps in the hybrid cloud. vSAN 7 Update 3 enhancements enable a developer-ready infrastructure, provide platform enhancements that boost security and improve on existing features to simplify operations.

Dell EMC PowerEdge servers are designed for the modern, evolving data center, providing the highest performance for a diverse set of workloads. Available in rack, tower and modular form factors, PowerEdge servers deliver scalable business architecture, intelligent automation and built-in security.

Dell EMC VxRail HCI, with deep VMware software integration, offers a fully curated, turnkey HCI experience for simple, consistent operations across core, edge and cloud.

² IDC, WW Quarterly x86 Server Tracker, 2Q2021, Vendor Revenue & Shipments, September 9, 2021.
Enterprise storage virtualization native to vSphere

As a core building block of the software-defined data center (SDDC), VMware vSAN powers leading HCI solutions with a high-performance architecture native to VMware vSphere®. vSAN is a radically simple software-defined storage (SDS) solution that delivers flash-optimized, scalable and secure shared storage for virtualized workloads, which can lower your total cost of ownership (TCO) by up to 50% compared to traditional storage.4

Simplify with Dell EMC vSAN Ready Nodes.

Dell EMC vSAN Ready Nodes are like HCI building blocks for vSAN. They are flexible, engineering-tested, engineering-validated, and jointly certified Dell EMC PowerEdge servers configured for vSAN, which reduce deployment risks, improve storage efficiency, and quickly and easily scale as needed.

Five reasons to choose Dell EMC vSAN Ready Nodes

Dell EMC vSAN Ready Nodes take the guesswork out of deploying HCI environments, enabling faster setup, fewer update steps and reduced maintenance. But that’s not all. Here are five additional reasons to choose Dell EMC vSAN Ready Nodes:

1 | Flexibility to design your hybrid cloud with a broad variety of PowerEdge servers and configurations

Every workload is unique, and you want your underlying hardware and software to be as unique as your workloads. We’ve designed Dell EMC vSAN Ready Nodes to be flexible and customizable, offering a variety of PowerEdge servers and configurations to choose from.

The Dell EMC vSAN Ready Nodes portfolio is one of the broadest in the industry with more than 250 vSAN Ready Node configurations, powered by the latest Intel® and AMD® processors. Simply choose the best form factor in support of your desired IT and business outcomes. Offerings range from 1U/2U rack servers to modular solutions including PowerEdge MX, based on our kinetic infrastructure, which was built specifically for the SDDC.5

2 | Identity modules

Twelve Dell EMC vSAN Ready Nodes feature identity modules. These uniquely identify the PowerEdge server as a vSAN Ready Node upon boot-up, which helps streamline deployment and updates.

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4 VMware, VMware vSAN datasheet, February 2021.
5 Based on VMware vSAN Compatibility Guide: December 1, 2020 for Dell EMC vSAN hardware.

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Complete hypervisor and firmware updates in fewer than 4 minutes with OMIVV and vLCM.6

3 | Automation and consistency across hardware and software lifecycle management
Simplify management tasks with OpenManage Integration for VMware vCenter (OMIVV) and vSphere Lifecycle Manager (vLCM). OMIVV is the Dell EMC PowerEdge server administration tool that manages directly within your VMware vCenter® Server environment. OMIVV provides:

- Physical and virtual views in one place
- Firmware updates managed from within vCenter
- Expedited server deployment

vLCM is the next-generation solution for vSphere 7 and vSAN 7 lifecycle operations for software and firmware. Dell EMC vSAN Ready Node customers can engage in lifecycle management based on a desired state model that you define and manage at your own pace.

Using vLCM and OMIVV together, you can perform complete hypervisor and firmware updates on an eight-node PowerEdge cluster in fewer than four minutes versus the 3.5 hours it takes manually.6

4 | Robust services
Dell EMC ProSupport offers a single contact — just one phone call — for both hardware and software support with more than 1,800 VMware-certified Dell EMC support professionals to serve you. Dell EMC ProDeploy Plus7 is the market’s most complete deployment offering, enabling up to 66% faster deployment of PowerEdge servers.8

5 | Future-proof technology
Having infrastructure that can scale up, scale down or scale out — or even be repurposed later as a general server — is important. You want your infrastructure to foster future growth, not limit it.

Update your hardware and software with Dell EMC vSAN Ready Nodes and vSAN 7 to unlock your best hybrid cloud with a flexible infrastructure that results in better performance, faster deployment, simplified manageability and, ultimately, better business outcomes.

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6 Principled Technologies report commissioned by Dell Technologies, New VMware vSphere 7.0 features reduced the time and complexity of routine update and hardware compliance tasks, August 2020.

7 Dell EMC ProDeploy is not currently available with VMware Cloud Foundation™.

8 Principled Technologies report commissioned by Dell Technologies, Bring new systems to production readiness faster and with less effort from in-house administrators, February 2018.
Dell EMC vSAN Ready Nodes Portfolio

All-flash, all-NVMe™ and hybrid configurations — Intel-based vSAN Ready Nodes

With one of the broadest Dell EMC vSAN Ready Node portfolios in the industry, you can choose the best form factor in support of your desired IT and business outcomes.

<table>
<thead>
<tr>
<th>PowerEdge server</th>
<th>R740xd</th>
<th>T340</th>
<th>R740</th>
<th>R750</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profiles</td>
<td>All flash</td>
<td>All NVMe™</td>
<td>Hybrid</td>
<td>All flash</td>
</tr>
<tr>
<td>CPU</td>
<td>2x Intel® Xeon® Gold 6226</td>
<td>NA</td>
<td>NA</td>
<td>1x Intel Xeon E-2288G</td>
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<tr>
<td>Memory</td>
<td>8x 32GB DIMMs</td>
<td>12x 32GB DIMMs</td>
<td>12x 32GB DIMMs</td>
<td>4x 16GB DDR-4</td>
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<tr>
<td>Cache</td>
<td>2x 400GB SSD SAS</td>
<td>2x 375GB NVMe</td>
<td>2x 400GB SSD SAS</td>
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<td>Capacity</td>
<td>10x 3.84TB SSD SAS</td>
<td>10x 1TB NVMe</td>
<td>10x 1.8TB 10K RPM SAS</td>
<td>2x 2.4TB 10K RPM SAS</td>
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<tr>
<td>Controller</td>
<td>HBA 330</td>
<td>HBA 330</td>
<td>HBA 330</td>
<td>HBA 355</td>
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<td>Network</td>
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<td>100G ethernet</td>
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<tr>
<td>Boot device</td>
<td>BOSS Controller Card with 2 M.2 Sticks 120G (RAID 1)</td>
<td>BOSS Controller Card with 2 M.2 Sticks 120G (RAID 1)</td>
<td>BOSS Controller Card with 2 M.2 Sticks 120G (RAID 1)</td>
<td>BOSS Controller Card with 2 M.2 Sticks 120G (RAID 1)</td>
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<table>
<thead>
<tr>
<th>PowerEdge server</th>
<th>R640</th>
<th>R650</th>
<th>MX740c</th>
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<tbody>
<tr>
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<td>All NVMe™</td>
<td>Hybrid</td>
</tr>
<tr>
<td>CPU</td>
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<td>2x Intel Xeon Gold 6226</td>
<td>2x Intel Xeon Gold 5218</td>
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<td>Memory</td>
<td>8x 32GB DIMMs</td>
<td>4x 32GB DIMMs</td>
<td>12x 32GB DIMMs</td>
</tr>
<tr>
<td>Cache</td>
<td>2x 400GB SSD SAS</td>
<td>1x 375GB NVMe</td>
<td>2x 400GB SSD SAS</td>
</tr>
<tr>
<td>Capacity</td>
<td>8x 1.92TB SSD SAS</td>
<td>4x 1TB NVMe</td>
<td>8x 1.92TB 10K RPM SAS</td>
</tr>
<tr>
<td>Controller</td>
<td>HBA 330</td>
<td>HBA 355</td>
<td>HBA 330 MX/MMZ</td>
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<tr>
<td>Network</td>
<td>10G ethernet</td>
<td>100G ethernet</td>
<td>10G ethernet</td>
</tr>
<tr>
<td>Boot device</td>
<td>BOSS Controller Card with 2 M.2 Sticks 120G (RAID 1)</td>
<td>BOSS Controller Card + with 2 M.2 Sticks 240G (RAID 1)</td>
<td>BOSS Controller Card with 2 M.2 Sticks 120G (RAID 1)</td>
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### PowerEdge server

<table>
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<th>Profiles</th>
<th>MX750c</th>
<th>R840</th>
<th>R440</th>
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</thead>
<tbody>
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<td>CPU</td>
<td>NA</td>
<td>2x Intel Xeon Platinum 8358</td>
<td>4x Intel Xeon Platinum 8280</td>
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<tr>
<td>Memory</td>
<td>NA</td>
<td>16x 32GB DIMMs</td>
<td>12x 32GB DIMMs</td>
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<td>Cache</td>
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<td>4x 800GB SSD SAS, 12Gbps</td>
<td>2x 800GB SSD SAS</td>
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<tr>
<td>Capacity</td>
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<td>21x 1.92TB SSD SAS</td>
<td>21x 1.2TB 10K RPM SAS</td>
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<td>Controller</td>
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<td>HBA 330</td>
<td>HBA 330</td>
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<td>10G ethernet</td>
</tr>
<tr>
<td>Boot device</td>
<td>BOSS Controller Card with 2 M.2 Sticks 120G (RAID 1)</td>
<td>BOSS Controller Card with 2 M.2 Sticks 120G (RAID 1)</td>
<td>BOSS Controller Card with 2 M.2 Sticks 120G (RAID 1)</td>
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### PowerEdge server

<table>
<thead>
<tr>
<th>Profiles</th>
<th>C6420</th>
<th>XR2</th>
<th>XE2420</th>
</tr>
</thead>
<tbody>
<tr>
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<td>2x Intel Xeon Gold 5218</td>
<td>2x Intel Xeon Gold 6252N</td>
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<tr>
<td>Memory</td>
<td>4x 32GB DIMMs</td>
<td>12x 16GB RDIMMs</td>
<td>12x 32GB DIMMs</td>
</tr>
<tr>
<td>Cache</td>
<td>1x 400GB SSD SAS</td>
<td>1x 900GB SSD SATA, 6Gbps</td>
<td>1x 800GB SSD SAS, 12Gbps</td>
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<tr>
<td>Capacity</td>
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<td>4x 1.8TB 10K RPM SAS</td>
<td>4x 1.92TB SSD SATA, 6Gbps</td>
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<tr>
<td>Controller</td>
<td>HBA 330 SAS</td>
<td>HBA 330/330+ SATA</td>
<td>HBA 330/330+ SATA</td>
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<tr>
<td>Network</td>
<td>10G ethernet</td>
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<td>10G ethernet</td>
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<tr>
<td>Boot device</td>
<td>BOSS Controller Card with 2 M.2 Sticks 120G (RAID 1)</td>
<td>BOSS controller card * with 2 M.2 Sticks 120G (No RAID), FH or Internal SD Module with 2x 16GB SD Card</td>
<td>BOSS controller card * with 2 M.2 Sticks 120G (No RAID), FH or Internal SD Module with 2x 16GB SD Card</td>
</tr>
</tbody>
</table>

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* All-flash configs are based on AF-6/AF-4 configs listed on VCG.
* All NVMe configs are based on AF-6 configs listed on VCG.
* Hybrid configs are based on HY-6 configs listed on VCG.
All-flash and hybrid configurations — AMD-based vSAN Ready Nodes
Dell EMC vSAN Ready Nodes powered by AMD processors enable flexible and jointly certified building blocks with five server options powered by AMD processors, including two vSAN Ready Node chassis family offerings with identity modules.

Did you know?
The Dell EMC PowerEdge R6525 Server with AMD EPYC 7742 processors achieves 81% higher world-record VMmark® 3.1 with vSAN score for four-node, two-socket systems.12

Note: Read this article to learn more about allowable changes in a VMware vSAN ReadyNode™ configuration.

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12 Based on Dell Technologies analysis of the published VMmark 3.1 benchmark data on vmware.com as of September 4, 2020.
A strategic partnership that serves your interests
With more than 20 years of collaboration, Dell Technologies and VMware is a partnership you can trust. Power your business well into the future with an infrastructure that adapts to your needs. Dell Technologies and VMware have your best interests in mind with integrated technology solutions, including Dell EMC vSAN Ready Nodes, that help you solve real challenges while evolving and growing your business seamlessly.

Learn more
Discover other PowerEdge and VMware solutions.
Explore our VMware Compatibility Guide.

Learn more about Dell EMC vSAN Ready Nodes solutions.
Contact your Dell Technologies or channel sales representative.
View more resources for Dell EMC PowerEdge servers.
Join the conversation with #PowerEdge.