

DELL EMC VXRAIL™



Designed for VMware, with VMware, to enhance VMware

Dell EMC VxRail™, the jointly engineered hyperconverged infrastructure from Dell EMC and VMware, is the easiest and fastest way to extend a VMware environment. Powered by VMware vSAN™ and managed through the VMware vCenter interface, the VxRail provides existing VMware customers a consistent operating experience. As the foundation for Dell Technologies Cloud, VxRail is the first hyperconverged system fully integrated with VMware Cloud Foundation SDDC Manager delivering one, complete, automated platform.

VxRail is a distributed system consisting of common modular building blocks powered by the best in class VxRail HCI System Software that allows customers to start small and grow, scaling capacity and performance easily and non-disruptively from 3 to 64 nodes in a cluster. For edge deployments, users can start a two-node cluster or a three-node cluster if they desire future node expandability. Single-node scaling and storage capacity expansion provide a simple, predictable, cost effective “pay-as-you-grow” approach for future growth as needed.

VxRail HCI System Software ensures workloads are always up and running with intelligent lifecycle management (LCM) that automates non-disruptive upgrades, patches, node additions or retirement to ensure the VxRail infrastructure is in a continuously validated state. Coupled with detailed health reporting using infrastructure machine learning from VxRail Analytics Consulting Engine (ACE), it has never been easier to keep infrastructure smoothly running.

Built on PowerEdge servers, the bedrock of the data center, and the new 2nd Generation Intel® Xeon® Scalable Processors, VxRail is designed for today’s mission-critical workloads in mind, and also delivers multiple compute, memory, storage, network and graphics options to cover a wide variety of applications and workloads. VxRail continuously delivers new technologies such as Intel Optane, NVMe drives, 25 and 100 Gb/s connectivity, NVIDIA T4 GPU’s, and high memory option CPUs.

VxRail comes stacked with mission-critical data services at no additional charge. Data protection technology such as a starter set of licenses for Dell EMC RecoverPoint for VMs is included, with the option of adding Data Protection Suite for VMware and Data Domain Virtual Edition (DD VE) for larger environments that require more comprehensive data protection.

VxRail is also backed by Dell EMC’s world-class support with a single point of contact for both hardware and software, and includes Dell EMC SRS for call-home and proactive two-way remote connection for remote monitoring, diagnosis, and repair to ensure maximum availability.

The VxRail portfolio includes:

- E Series** – Go Everywhere 1U/1Node with an all NVMe option and T4 GPUs for a wide range of use cases including artificial intelligence and machine learning
- P Series** – Performance intensive 2U/1Node platform with an all NVMe option, configurable with 1,2 or 4 sockets optimized for intensive workloads such as databases
- V Series** – VDI-optimized 2U/1Node platform with GPU hardware for graphics-intensive desktops and workloads
- S Series** – Storage dense 2U/1Node platform for demanding applications such as virtualized Microsoft SharePoint, Microsoft Exchange, big data, analytics and video surveillance
- G Series** – Compute dense 2U/4Node platforms for general purpose workloads

	G Series	E Series	V Series	P Series	S Series
Compute, storage and memory (per node)					
Chassis	2U4N	1U1N	2U1N	2U1N	2U1N
Intel™ Xeon™ Scalable Gen 1 and Gen 2 Processors including high memory options					
CPU sockets	Single or dual	Single or dual	Dual	Single, dual, or quad	Single or dual
CPU cores	4–56	4–56	8–56	4–112	4–56
CPU frequency	1.9 GHz–3.8 GHz	1.9 GHz–3.8 GHz	2.1 GHz–3.8 GHz	1.9 GHz–3.8 GHz	1.9 GHz–3.8 GHz
RAM*	64 GB–2048 TB	64 GB–3072 GB	192 GB–3072 GB	64 GB–6144 GB	64 GB–3072 GB
Cache SSD**	400 GB–1600 GB SAS, 375 GB Intel Optane NVMe, 1600 GB NVMe	400 GB–1600 GB SAS 375 GB Intel Optane NVMe, 1600 GB NVMe	400 GB–1600 GB SAS	400 GB–1600 GB SAS 375 GB Intel Optane NVMe, 1600 GB NVMe	400 GB–1600 GB SAS
Hybrid storage	1.2 TB–12 TB SAS	1.2 TB–19.2 TB SAS	1.2 TB–48 TB SAS	1.2 TB–48 TB SAS	4 TB–96 TB SAS
All flash storage	1.92 TB–38.4 TB SAS <i>or</i> 1.92 TB–19.2 TB SATA	1.92 TB–61.44 TB SAS <i>or</i> 1.92 TB–30.7 TB SATA	1.92 TB–153.6 TB SAS <i>or</i> 1.92 TB–76.8 TB SATA	1.92 TB–153.6 TB SAS <i>or</i> 1.92 TB–76.8 TB SATA	Hybrid only
Drive bays	6x 2.5"	10x 2.5"	24x 2.5"	24x 2.5"	12x 3.5" <i>plus</i> 2x 2.5"
Max disk groups	1	2	4	4	2
Boot/OS solution	1x 240GB SATA M.2 "BOSS"	2x 240GB SATA M.2 RAID 1 "BOSS"	2x 240GB SATA M.2 RAID 1 "BOSS"	2x 240GB SATA M.2 RAID 1 "BOSS"	2x 240GB SATA M.2 RAID 1 "BOSS"
Max PCIe GPUs	n/a	1x-2x NVIDIA Tesla T4	1x-6x NVIDIA Tesla T4 <i>or</i> 1x-3x Quadro RTX8000 <i>or</i> 1x-3x Quadro RTX6000 <i>or</i> 1x-3x NVIDIA Tesla V100s <i>or</i> 1x-2x NVIDIA Tesla M10	n/a	n/a

*To achieve maximum memory performance, all RAM slots should be occupied

**1600 GB cache SSD is only in hybrid configurations or via NVMe cache

***Adding GPUs reduces total RAM and additional network connectivity

	G Series	E Series	V Series	P Series	S Series
Clustering and scaling					
Max nodes* (per cluster)	64	64	64	64	64
Min nodes (per cluster)	3	3 2 (Fixed deployment, with Direct Connect or Top of Rack networking)	3 2 (Fixed deployment, with Direct Connect or Top of Rack networking)	3 2 (Fixed deployment, with Direct Connect or Top of Rack networking)	3 2 (Fixed deployment, with Direct Connect or Top of Rack networking)
Scaling increment (in nodes)	1	1	1	1	1

*8 nodes maximum per cluster in 1 GbE models

	G Series	E Series	V Series	P Series	S Series
Networking (per node)					
Appliance connectivity*	2x25 GbE SFP28 <i>or</i> 2x10 GbE SFP+	2x25 GbE SFP28 <i>or</i> 4x10 GbE RJ45 <i>or</i> 4x10 GbE SFP+ <i>or</i> 4x1 GbE RJ45**	2x25 GbE SFP28 <i>or</i> 4x10 GbE RJ45 <i>or</i> 4x10 GbE SFP+	2x25 GbE SFP28 <i>or</i> 2x10, 4x10 GbE RJ45 <i>or</i> 4x10 GbE SFP+ <i>or</i> 4x1 GbE RJ45* <i>or</i>	2x25 GbE SFP28 <i>or</i> 4x10 GbE RJ45 <i>or</i> 4x10 GbE SFP+ <i>or</i> 4x1 GbE RJ45*
Management port	1x1 GbE iDRAC9 Enterprise RJ45	1x1 GbE iDRAC9 Enterprise RJ45	1x1 GbE iDRAC9 Enterprise RJ45	1x1GbE iDRAC9 Enterprise RJ45	1x1 GbE iDRAC9 Enterprise RJ45
Optional connectivity (max additional ports)	2x100GbE SFP28 <i>or</i> Up to 4x10 GbE RJ45 <i>or</i> Up to 2x10 GbE SFP+ <i>or</i> 2x25 GbE SFP28	2x100GbE SFP28 <i>or</i> Up to 8x10 GbE RJ45 <i>or</i> Up to 4x10 GbE SFP+ <i>or</i> Up to 4x25 GbE SFP28 <i>or</i> Up to 4x 16Gb FC	2x100GbE SFP28 <i>or</i> Up to 12x10 GbE RJ45 <i>or</i> Up to 12x10 GbE SFP+ <i>or</i> Up to 6x25 GbE SFP28 <i>or</i> Up to 6x 16Gb FC	2x100GbE SFP28 <i>or</i> Up to 12x10 GbE RJ45 <i>or</i> Up to 12x10 GbE SFP+ <i>or</i> Up to 6x25 GbE SFP28 <i>or</i> Up to 6x 16Gb FC	2x100GbE SFP28 <i>or</i> Up to 12x10 GbE RJ45 <i>or</i> Up to 12x10 GbE SFP+ <i>or</i> Up to 6x25 GbE SFP28 <i>or</i> Up to 6x 16Gb FC

*Appliance connectivity must match for all nodes within a cluster (all 1 GbE or all 10 GbE or all 25 GbE or all 100 GbE)

**1 GbE connectivity limited to single socket CPU and hybrid storage only

	G Series	E Series	V Series	P Series	S Series
Power and dimensions					
High-efficiency dual redundant PSU*	2000W 220V – 240V AC 2400W 220V – 240V AC	1100W 100V – 240V AC 1100W -48V DC 1600W 200V – 240V AC	2000W 200V – 240V AC	1100W 100V – 240V AC 1100W -48V DC 1600W 200V – 240V AC 1600W 200V – 240V AC 2400W 200V – 240V AC	1100W 100V – 240V AC 1100W - 48V DC
Redundant cooling fans	4	8	6	4 or 6	6
Physical dimensions	86.8mm/3.42in H 448.0mm/17.64in W 790mm/31.10in D 41.46kg/91.40lb	42.8mm/1.68in H 434.0mm/17.09in W 733.82mm/29.61in D 21.9kg/48.28lb	86.8mm/3.42in H 434mm/17.09in W 678.8mm/26.72in D 28.1kg/61.95lb	86.8mm/3.42in H 434mm/17.09in W 678.8mm/26.72in D 28.1kg/61.95lb	86.8mm/3.42in H 434mm/17.09in W 678.8mm/26.72in D 33.1kg/72.91lb

*PSUs must be sized correctly to prevent thermal throttling under certain workloads

	G Series	E Series	V Series	P Series	S Series
Environmental and certifications					
Ambient operating temperature	10°C-30°C 50°F-86°F	10°C-30°C 50°F-86°F	10°C-30°C 50°F-86°F	10°C-30°C 50°F-86°F	10°C-25°C 50°F-77°F
Storage temperature range	-40°C to +65°C -40°F to +149°F	-40°C to +65°C -40°F to +149°F	-40°C to +65°C -40°F to +149°F	-40°C to +65°C -40°F to +149°F	-40°C to +65°C -40°F to +149°F
Operating relative humidity	10% to 80% (non-condensing)	10% to 80% (non-condensing)	10% to 80% (non-condensing)	10% to 80% (non-condensing)	10% to 80% (non-condensing)
Operating attitude with no deratings	3048m approx. 10,000 ft	3048m approx. 10,000 ft	3048m approx. 10,000 ft	3048m approx. 10,000 ft	3048m approx. 10,000 ft
Heat dissipation	9000 BTU/h/chassis	4100 BTU/h	7500 BTU/h	6000 BTU/h	4416 BTU/h

STATEMENT OF COMPLIANCE

Dell EMC Information Technology Equipment is compliant with all currently applicable regulatory requirements for Electromagnetic Compatibility, Product Safety, and Environmental Regulations where placed on market.

Detailed regulatory information and verification of compliance is available at the Dell Regulatory Compliance website. http://dell.com/regulatory_compliance



[Learn more](#) about Dell EMC VxRail Appliances



Contact a Dell EMC Expert

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