

DELL EMC VXRACK™ SYSTEM WITH SDDC POWERED BY VMWARE CLOUD FOUNDATION

SPECIFICATION SHEET



Dell EMC VxRack™ SDDC

Dell EMC VxRack SDDC provides the easiest and fastest way to stand up a complete VMware based software defined data center (SDDC) environment at rack scale. This turnkey hyper-converged system is fully integrated complete with hardware and software and built using the industry leading Dell EMC PowerEdge server platform. Powered by the latest VMware Cloud Foundation software, VxRack SDDC reduces the cost of acquiring and operating VMware Cloud Foundation deployments, while at the same time introducing the performance, flexibility, and automation required to make IT departments more agile.

VxRack SDDC is a hyper-converged rack-scale system intended for enterprise scale deployments of virtual infrastructure, infrastructure as a service, and virtual desktops infrastructure (VDI). Each system is based on a standardized architecture that combines qualified customizable hardware (x86 nodes, top of rack, and rack interconnect switching) with pre-loaded integrated VMware software components in a complete and validated solution. VxRack SDDC provides capabilities that far exceed simple hyper-converged appliances by addressing compute and storage needs as well as requirements for networking (physical and virtual), cloud operations, and system management automation.

VMware Cloud Foundation is the core software suite of VxRack SDDC. VMware and Dell EMC have combined the industry's market leading VMware SDDC software into a seamlessly integrated solution. The VMware Cloud Foundation SDDC Manager, a new management and orchestration software, delivers a radically simple user experience by automating day 0 to day 2 system operations and lifecycle management. VMware Cloud Foundation is fully integrated into the VxRack SDDC and includes:

- VMware vSphere
- VMware NSX
- VMware vSAN
- VMware SDDC Manager

VxRack SDDC options are available for expanded use cases and can include VMware vRealize Suite and VMware Horizon for VDI providing additional VxRack SDDC operations and monitoring for cloud and IaaS operations.

VxRack SDDC makes the transition to a software-defined data center a simple solution by removing complexities such as designing, integrating, and supporting a build-it-yourself solution. VxRack SDDC integrates full support for networking—both physical and virtual. Physical networking consists of a rack interconnect topology with top of rack (ToR) and management switches. The VMware SDDC Manager includes support for configuring, controlling, and managing the physical network elements and the software defined networking through VMware NSX.

SINGLE POINT OF MANAGEMENT FOR THE ENTIRE SYSTEM

The VMware Cloud Foundation SDDC Manager is a new, innovative systems management and orchestration solution from VMware designed to deliver a radically simplified user experience. The SDDC Manager provides a single point of management for the system. It automates critical operations across physical and virtual infrastructure including initial system bring-up, configuration of servers and switches, auto-discovery of new physical capacity, resource provisioning, reporting and notifications, and life cycle management of software components. The SDDC Manager serves as the primary interface for administrator’s system management and provides an integrated view of both the physical and virtual infrastructure. It complements well-known VMware management tools such as vCenter Server and vRealize Operations that continue to be available for advanced administration tasks and integration with third-party software tools.

Each physical rack is completely pre-integrated and contains physical network switches. These control network traffic, redundancy, and management for out-of-band connectivity. With scale-out across multiple racks, east-west traffic is fully self-contained. Connectivity between racks uses two inter-rack connect switches.



Table 1. BASE SYSTEM CONFIGURATION FOR VXRACK SDDC

COMPONENTS	CONFIGURATION
COMPUTE	Computer nodes based on Dell EMC PowerEdge R630 Servers
STORAGE	Choice of All Flash or All Hybrid direct attached storage (DAS)
NETWORKING	Integrated Top-of-Rack (ToR): 2x-Cisco Nexus 93180YC switch Integrated network management: Dell Networking S3048-ON switch Integrated rack interconnect (Rack 2 only): 2x-Cisco Nexus 9332PQ switch
SERVER VIRTUALIZATION	VMware vSphere, VMware vCenter Server
STORAGE VIRTUALIZATION	VMware vSAN
NETWORK VIRTUALIZATION	VMware NSX
MANAGEMENT INFRASTRUCTURE	VMware SDDC Manager
ENVIRONMENTAL	Intelligent Physical Infrastructure consisting of Cabinet 2.0—fully welded and dynamically load-rated Smart Power Deliver Units (PDU)

Table 2. VXRACK SDDC ENCLOSURES SPECIFICS (ALL FLASH)

BASE PLATFORM	PowerEdge R630
FORM FACTOR	1U1N
CPU	5 th generation Intel™ Xeon™ E5-2600 Family
CORES PER CPU	6 - 22
MEMORY GB	768 GB – 1536 GB
TOTAL RAW CAPACITY (TB)	15 TB – 30 TB
CAPACITY STORAGE DEVICE	1.92 TB SSD 1WPD 2.5" or 3.84 TB SSD 1WPD 2.5"
NETWORK	Dual 10 GbE SFP+
NIC	Intel Ethernet X520 DP 10Gb DA/SFP/+ I350 DP
STORAGE CONTROLLER	PERC HBA 330 mini Integrated RAID Controller
CACHE SSD	Dual 800 GB 10WPD 2.5"
BOOT DEVICE	64 GB SLC SATADOM
TPM	Optional: TPM 1.2 pre-installed or no TPM
POWER SUPPLY	Dual 750W PSU 100-240VAC

Table 3. VXRACK SDDC ENCLOSURES SPECIFICS (HYBRID)

BASE PLATFORM	PowerEdge R630
FORM FACTOR	1U1N
CPU	Dual E5-2680v4 2.4 Ghz
CORES PER CPU	14
MEMORY GB	384 GB – 768 GB
TOTAL RAW CAPACITY (TB)	10 TB – 16 TB
CAPACITY STORAGE DEVICE	1.2 TB HDD 10K 2.5" or 1.9 TB HDD 10K 2.5"
NETWORK	Dual 10 GbE SFP+
NIC	Intel Ethernet X520 DP 10Gb DA/SFP/+ I350 DP
STORAGE CONTROLLER	PERC HBA 330 mini Integrated RAID Controller
CACHE SSD	Dual 800 GB 10WPD 2.5"
BOOT DEVICE	64 GB SLC SATADOM
TPM	TPM 1.2 pre-installed or no TPM
POWER SUPPLY	Dual 750W PSU 100-240VAC

CONTACT US

To learn more about how the VxRack™ SDDC can help solve your business and IT challenges, [contact](#) your local representative—or visit us at the [EMC Store](#).

FOR MORE INFORMATION

Dell EMC VxRack: www.dellemc.com/vxrack

VMware Cloud Foundation: <https://www.vmware.com/products/cloud-foundation.html>

Dell EMC Converged Infrastructure: <http://www.dellemc.com/converged-infrastructure/benefits.htm>