DELLEMC

VxRack System 1000 Series

Modular hyper-converged infrastructure system that delivers extreme scalability and flexibility

- Start small and grow to data center scale in flexible discrete increments.

- Add compute and storage linearly or independently to scale to hundreds or thousands of nodes.

- Easy to manage and provision new resources.

- Software-defined architecture provides workload flexibility.

- VxRack System 1000 series and Dell EMC pre-engineering, manufacturing, life cycle assurance, and support greatly simplify data center operations.

DELL EMC VXRACK SYSTEM 1000 SERIES

Hyper-Converged Infrastructure at scale

Converged infrastructure brings together the disparate infrastructure elements that power IT, including servers, data storage devices, networking functions, virtualization, management software, orchestration, and applications. The purpose: To simplify IT by breaking down the silos in the data center, reversing the status quo of static and inflexible pools of resources. Converged infrastructure solutions are proven to significantly speed deployments, make infrastructure more agile, and simplify IT operations—all of which is critical to successfully deliver IT as a service.

In contrast to traditional converged infrastructure solutions, hyper-converged infrastructure (HCI) is a software-defined architecture with integrated compute, networking, software-defined storage, and virtualization. It enables compute, storage, and networking functions to be decoupled from the underlying infrastructure and run on a common set of physical resources that are based on industry-standard x86 components. Using hyper-converged infrastructure, customers can start with a small deployment, and then flexibly scale out to support dynamic workloads and evolving business needs.

The VxRack System 1000 series is a hyper-converged platform that complements Dell EMC converged infrastructure systems. These self-contained units of servers and networking are well suited for use cases that require a highly scalable infrastructure. The system can incorporate multiple software-defined storage and networking technologies, a choice of hypervisors, and can support bare-metal workloads. The flexible, modular design of VxRack Systems meets the scalability, performance, and efficiency requirements of modern data centers, enabling IT organizations to deploy a wide range of both traditional business applications and cloud-native applications.

KEY FEATURES AND BENEFITS

The VxRack System is the only hyper-converged system that satisfies the scalability and management requirements of today's data centers. IT organizations that are moving toward a software-defined architecture can utilize the VxRack 1000 for a diverse set of use cases, especially in situations where application growth is unpredictable. This includes, but is not limited to, Infrastructure as a Service (IaaS) at scale, Platform as a Service (PaaS), non-mission critical mixed workloads, agile test and development environments, centralized Virtual Desktop Infrastructure (VDI) deployments, hybrid cloud solutions, and cloud native services (OpenStack).

- **Agility.** Integrated compute, network, and storage in a modular system, not discrete hyper-converged units.

- **Unparalleled Performance.** Experience performance that scales linearly as you expand.

- **Scale as you Grow.** Start with a minimal number of nodes and rapidly scale to hundreds or thousands of nodes as needed, eliminating the need to over-provision resources up front.

- **Flexible Configurations.** Add compute enclosures with various CPU, memory, and storage options to meet specific application or workload requirements.

- **Unified Management.** Simplified operations and management through integrated provisioning, configuration, and a unique management toolset from Dell EMC.

- **Data Protection.** Options to integrate Dell EMC Avamar, Dell EMC Data Domain, Dell EMC RecoverPoint for Virtual Machines.

- **Same Dell EMC Experience.** VxRack 1000 is engineered, manufactured, managed, supported, and sustained as one by Dell EMC. Dell EMC Release Certification Matrix (RCM) validation and VCE™ Support for all system components help mitigate risk.

MULTIPLE SOFTWARE OPTIONS

The VxRack System 1000 can be manufactured and configured with two different software options:

VxRack System with FLEX

- Leverages Dell EMC ScaleIO to virtualize the server's direct-attached storage into a shared network-based storage pool that is similar to SAN storage.

- Creates a flexible foundation for delivering IaaS at scale that can support a wide range of use cases (separately or in combination).

- Makes it easy to deliver massive performance at extreme scale—1000+ nodes—by distributing data across all available storage resources.

- Capable of supporting bare metal/multiple hypervisors.

VxRack System with SDDC

- Leverages VMware Cloud Foundation to deliver a foundation for VMware private cloud that is easy to deploy and operate.

- Start small and scale incrementally to hundreds of nodes.

- Simplified deployment, configuration, and ongoing operations management with the SDDC Manager, resulting in greater simplicity and faster time-to-value.

- Enhanced network and security capabilities with VMware NSX™ network virtualization.

DELL POWEREDGE SERVERS

Business applications and workloads vary greatly, and Dell EMC strongly believes that one size does not fit all when it comes to hyper-converged infrastructure. With an unmatched hyper-converged infrastructure portfolio, Dell EMC enables IT organizations to accelerate their modernization initiatives by making it easy to deploy infrastructure platforms on which they can build and run both traditional and cloud-native applications.

Integrating industry leading Dell PowerEdge servers with Dell EMC's HCI offerings is another example of the power of the combined companies. Dell EMC's ability to deliver the entire hyper-converged infrastructure stack (from software through servers to storage) provides even more customer value, enabling faster innovation while leveraging Dell's world-class supply chain to drive down costs. IT organizations can now partner with a single vendor for end-to-end technology solutions that will modernize their data center.

The VxRack System 1000 built on PowerEdge servers provides better all-flash economics and addresses new customer use cases for both traditional and cloud-native workloads running in mixed environments.

For the VxRack System, two new PowerEdge based options are available (1U/1N based on PowerEdge R630; 2U/1N based on PowerEdge R730xd), both of which can be configured with all-flash, storage only, or hybrid. Dell PowerEdge servers provide

- Better all-flash economics: New Dell PowerEdge based nodes for VxRack System with latest Intel processors offer 2.5X more usable flash capacity for a similar price versus previous generation nodes.

- Application acceleration: Full integration with SanDisk DAS Cache accelerates the speed of storage input-output (I/O) operations and reduces latency, resulting in improved performance of I/O-intensive applications such as Microsoft SQL OLTP applications.

SIMPLIFIED MANAGEMENT EXPERIENCE

Dell EMC Vision Intelligent Operations

Dell EMC Vision Intelligent Operations is management software for the VxRack 1000 that gives you the agility to meet your business's dynamically changing workload demands, drives effective utilization of system resources to maximize return on investment, and simplifies operations to reduce OPEX.

Dell EMC Vision software provides system administrators with a single user interface to efficiently deploy, monitor, sustain, and support VxRack Systems resources.

- **Deploy.** Enables logical partitioning of resources for specific users, reallocation of resources for new users and expansion of capacity for existing users, and installation of server virtualization (base operating system/hypervisor) and virtual storage-area software to scale out the system with new compute and storage nodes.

- **Monitor.** Tracks the health of all system compute, storage, and network components, including key performance indicators, so you can proactively assure workload availability, manage performance, and plan capacity.

- **Sustain.** Provides Release Certification Matrix (RCM) compliance reports to identify drift from desired firmware and software release levels and facilitate system updates with new releases to optimize system performance and fix bugs.

- **Support.** Accelerates problem resolution by aggregating log and configuration data for Dell EMC Customer Support and provides knowledge base, 24/7 Dell EMC support contact and process information.

- **Single Pool of Resources.** Dell EMC Vision Intelligent Operations provides a dashboard for managing all Dell EMC Systems as a single pool of resources. Dell EMC Vision software also delivers VxRack System health and performance monitoring, RCM (firmware/software), and compliance information to ensure a consistent view of the VxRack System across their respective dashboards.

DELL EMC EXPERIENCE

Dell EMC is a leading innovator of intelligent converged infrastructure systems. Customers rely on Dell EMC VxBlock Systems, Vblock Systems, and VxRack Systems for the fastest deployment of data center infrastructure. Dell EMC Systems are engineered to deliver the highest performance, operational simplicity, and scalability for the lowest TCO. Every system is a true converged infrastructure—each is engineered, manufactured, managed, supported, and sustained as ONE product.

- Dell EMC Systems are standardized architectures based on best-in-breed technologies.

- Dell EMC manufacturing completes integration, testing, and validation of every VxRack System. This ensures that it is delivered within 60 days and is operational within hours of arrival.

- Every VxRack System includes Dell EMC Vision software, to enable standardized, more efficient, continuous processes for system provisioning, health management, and life cycle management.

Every VxRack System is sustained by a Release Certification Matrix (RCM), a documented set of firmware and software releases for all VxRack System components, pre-tested and certified for interoperability, and regularly delivered to customers to simplify upgrades and keep systems stabilized and optimized.

ABOUT DELL EMC

Dell EMC is the world market leader in converged infrastructure and converged solutions. Through VCE Converged Infrastructure and Solutions, Dell EMC accelerates the adoption of converged infrastructure and cloud-based computing models that reduce IT costs while improving time to market. Dell EMC delivers the industry's only fully integrated and virtualized cloud infrastructure systems, allowing customers to focus on business innovation instead of integrating, validating, and managing IT infrastructure. VCE solutions are available through an extensive partner network.
For more information, go to dellemc.com/ci.

To learn more, contact your local representative or authorized reseller

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