

## Vault Vx 1000 Series

### Hyper-converged Infrastructure at Scale

The Vault Vx 1000 Series is a hyper-converged platform that complements converged infrastructure systems. These self-contained units of servers and networking are well suited for use cases that require a highly scalable infrastructure. The Vault Vx 1000 can incorporate alternate software-defined storage technologies, a choice of hypervisors, and bare-metal workloads. It has a flexible, modular design that meets the scalability, performance, and efficiency requirements of modern data centers.

Perfect for NFV (network function virtualization), the Vault Vx 1000 offers full support VMware and other leading virtualization platforms, providing the perfect foundation for SDN and the network of the future.

Vault Vx 1000 Series systems are offered with AC and DC power options, and with optional NEBS, ETSI, and MIL-STD-810 F/G compliance for telco, military, and other rugged deployments, providing network operators with a consistent storage product across their entire infrastructure.

#### Key Features and Benefits

Vault Vx 1000 Series use cases include, but are not limited to, Infrastructure as a Service (IaaS) at scale, non-mission critical mixed workloads, agile test and development environments, centralized Virtual Desktop Infrastructure (VDI) deployments, and hybrid cloud solutions.

**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.

**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.

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



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.

#### Product Highlights

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.
- Support virtualization-based hypervisors and non-virtualized operating systems for bare-metal workloads.
- Vault Vx 1000 Series pre-engineering, manufacturing, life cycle assurance, and support greatly simplifies data center operations.
- AC and DC power options
- Optional NEBS, ETSI, and MIL-STD-810 F/G compliance
- Perfect for NFV and SDN

## Multiple Options

The Vault Vx 1000 is available and can be manufactured and configured with two different software options. A stand-alone node is also available for another flexible deployment option into existing environments:

### Vault Vx 1000 FLEX

- Leverages EMC ScaleIO to virtualize the server's direct-attached storage into a shared network-based storage pool that is similar to SAN storage
- Delivers a turnkey, fully architected hyper-converged software defined storage solution
- 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 achieve extreme scale—independently scale compute and storage to 1000+ nodes
- Capable of supporting multiple hypervisors

### Vault Vx 1000 SDDC

- Leverages VMware EVO SDDC to deliver a turnkey, fully optimized private cloud that is easy to deploy and operate
- Ideal for general purpose IaaS and VDI, supporting up to 1,000 virtual machines (VMs) or 2,000 virtual desktops per physical rack
- Start small and scale incrementally to hundreds of nodes
- Simplified deployment, configuration, and ongoing operations management with the EVO SDDC Manager, resulting in greater simplicity and faster time-to-value
- Enhanced network and security capabilities with VMware NSX™ network virtualization

### Vault Vx Node

- Offers the same powerful node configurations as the Vault Vx FLEX but ordered as stand-alone, single server nodes to integrate into existing infrastructure
- Bundles x86 servers and EMC ScaleIO software, to quickly deploy a software-defined scale out architecture
- Integrates with existing datacenter and/or networking infrastructures to support "pay-as-you-grow" strategies
- Scales from 3 – 1000+ nodes within a single cluster
- Delivers software-defined block storage with extreme performance, massive scale and superior elasticity

## Simplified Management Experience

VxRack™ Manager is provisioning and management software for the Vault Vx 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.

VxRack™ Manager provides system administrators with a single user interface to efficiently deploy, monitor, sustain, and support Vault Vx 1000 system physical and virtual 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.
- **Single Pool of Resources** - VxRack™ Manager is integrated with VCE Vision™ Intelligent Operations, which provides a dashboard for managing all Vault Vx 1000 systems as a single pool of resources. VCE Vision™ software also delivers system health and performance monitoring, RCM (firmware/software), and compliance information to ensure a consistent view of the Vault Vx 1000 systems across their respective dashboards

## CAPACITY COMPUTE CONFIGURATIONS – CS100, CC100

<b>Chassis</b>	2U1N = 1 node within a 2U enclosure
<b>Processor</b>	Intel® Xeon® E5-2600 v3 product family
<b>Maximum Node Count within Node Cluster</b>	1024 nodes per cluster

<b>Dimensions</b>	
<b>Width</b>	17.60 in / 44.70 cm / 2U
<b>Height</b>	3.44 in / 8.75 cm
<b>Depth</b>	29.33 in / 74.50 cm
<b>Maximum Weight</b>	54.94 lbs / 24.94 kg

<b>Environmental</b>	
<b>Operating Temperature</b>	5°C - 55°C
<b>Relative Humidity</b>	5% - 90% RH
<b>Altitude</b>	Up to 3960m (13,000ft)
<b>Acoustic Level</b>	7.0 – 7.5 dbA

<b>Drives</b>	
<b>Number of drives</b>	24 drives per node
<b>SSDs</b>	400GB or 800GB eMLC SAS
<b>HDDs</b>	1.2TB 10k RPM SAS

<b>Power</b>	
<b>AC Input Voltage</b>	100 – 240 V AC
<b>DC Input Voltage</b>	-40V DC to -72V DC
<b>Maximum Heatload</b>	1,810 BTU / hr
<b>Maximum Power</b>	531 VA
<b>Frequency:</b>	60 Hz (North America), 50 – 60 Hz (International)

## PERFORMANCE COMPUTE CONFIGURATIONS – PC100, PF100

<b>Chassis</b>	2U4N = 4 nodes within a 2U enclosure
<b>Processor</b>	Intel® Xeon® E5-2600 v3 product family
<b>Maximum Node Count within Node Cluster</b>	1024 nodes per cluster

<b>Dimensions</b>	
<b>Width</b>	17.48 in / 44.40 cm / 2U
<b>Height</b>	3.44 in / 8.74 cm
<b>Depth</b>	31.10 in / 79.00 cm
<b>Maximum Weight</b>	91.31 lbs / 41.42 kg

<b>Environmental</b>	
<b>Operating Temperature</b>	5°C - 55°C
<b>Relative Humidity</b>	5% - 90% RH
<b>Altitude</b>	Up to 3960m (13,000ft)

<b>Drives</b>	
<b>Number of drives</b>	6 drives per node 24 per chassis
<b>SSDs</b>	400GB or 800GB eMLC SAS
<b>HDDs</b>	1.2TB 10k RPM SAS

<b>Power</b>	
<b>AC Input Voltage</b>	200 – 240 V AC power
<b>DC Input Voltage</b>	-40V DC to -72V DC
<b>Maximum Heatload</b>	4,262 BTU / hr
<b>Maximum Power</b>	1,250 VA
<b>Frequency:</b>	60 Hz (North America), 50 – 60 Hz (International)

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