

VMware EVO:RAIL

Hyper-Converged Infrastructure Appliance

AT A GLANCE

VMware EVO:RAIL™ combines compute, networking, and storage resources into a hyper-converged infrastructure appliance to create a simple, easy to deploy, all-in-one solution offered by Qualified EVO:RAIL Partners.

USE CASES

- Private Cloud Infrastructure
- Remote/Branch Office Locations
- Limited IT Staff
- R&D and Test Environments
- Virtual Desktop Solution
- Geographic Data Locality



EVO:RAIL Software Bundle

- EVO:RAIL rapid deployment, configuration and management engine
- Compute, network and storage virtualization enabled with vSphere and Virtual SAN



2U 4-node hardware platform optimized for EVO:RAIL

- Four independent nodes for compute, network and storage
- Each node has dual processors and 192GB memory
- Total of 16TB of SSD and HDD storage via Virtual SAN
- Phone and in-field hardware and software Support & Services (SnS)

Introducing EVO:RAIL

Simplicity Transformed

EVO:RAIL enables power-on to Virtual Machine creation in minutes, radically easy VM deployment, easy non-disruptive patch and upgrades, simplified management...you get the idea.

Software-Defined Building Block

EVO:RAIL is a scalable Software-Defined Data Center (SDDC) building block that delivers compute, networking, storage, and management to empower private and hybrid cloud, end-user computing, test/dev, and branch office environments.

Trusted Foundation

Building on the proven technology of VMware vSphere®, vCenter Server™, and VMware Virtual SAN™, EVO:RAIL delivers the first hyper-converged infrastructure appliance 100 percent powered by VMware software.

Highly Resilient by Design

Resilient appliance design starting with four independent hosts and a distributed Virtual SAN datastore ensures zero application downtime during planned maintenance or during disk, network, or host failures.

Infrastructure at the Speed of Innovation

Meet accelerating business demands by simplifying infrastructure design with predictable sizing and scaling, by streamlining purchase and deployment with a single appliance SKU, and by reducing CapEx and OpEx.

Freedom of Choice

EVO:RAIL is delivered as a complete appliance solution with hardware, software, and support through Qualified EVO:RAIL Partners; customers choose their preferred brand.

Key Benefits

Customers can reduce operating costs with efficiency and ease: Time-To-Value (TTV) to first VM in minutes, zero-downtime updates of all VMware software, automatic scale-out, global settings, and VM lifecycle management.

VMware, with qualified partners, delivers the EVO:RAIL hyper-converged infrastructure appliance via a new business model. Customers have choices for hardware and support provided by Qualified EVO:RAIL Partners. EVO:RAIL is ordered via a single SKU and backed by a single point of contact for hardware and software support.

For more information visit the VMware EVO:RAIL web page at: <http://www.vmware.com/products/evorail>.

The EVO:RAIL Engine

With EVO:RAIL, customers experience a radically new, end-to-end user experience that drives simplicity. Deployment, configuration, and management are enabled through a new, intuitive HTML5-based user interface.

EVO:RAIL streamlines initial configuration with simple input for IP addresses, VLANs, hostnames, and passwords. Then EVO:RAIL creates the new ESXi™ hosts, implements data services, and configures vCenter Server. Within minutes EVO:RAIL is configured and ready to create VMs!

Users create VMs with only a few clicks to select the guest OS, VM size, VLAN, and security options. EVO:RAIL simplifies virtual machine sizing by offering single-click small, medium, and large configurations, as well as single-click security policies.

EVO:RAIL provides a dashboard to view VMs. Compute and storage management is revolutionized with health monitors for CPU, memory, storage, and VM usage for entire clusters, individual appliances, and individual nodes. EVO:RAIL streamlines log collection, licensing, and offers language choice for globalization.

With a minimum of four independent ESXi hosts in an EVO:RAIL cluster, patching and upgrading are non-disruptive and require zero downtime.

EVO:RAIL is optimized for the new VMware user as well as for experienced administrators. Minimal IT experience is required to deploy, configure, and manage EVO:RAIL, allowing it to be used where there is limited or no IT staff on-site. As EVO:RAIL utilizes VMware's core products, administrators can apply existing VMware knowledge, best practices, and processes.

Automatic Scale-Out

EVO:RAIL radically simplifies scale-out. Increasing compute, networking, and storage resources is as easy as powering up a new appliance to join an existing EVO:RAIL cluster. EVO:RAIL automatically discovers the new appliance and then distributes the configuration to seamlessly add new appliances with only a password and a few mouse clicks.

EVO:RAIL can scale out to four appliances—for a total of 16 ESXi hosts and one Virtual SAN datastore, backed by a single vCenter Server and EVO:RAIL instance.

Software Bundle

The EVO:RAIL software bundle is fully loaded onto the Qualified EVO:RAIL Partner's hardware. It is comprised of:

- EVO:RAIL Deployment, Configuration, and Management
- vSphere Enterprise Plus, including ESXi for compute
- VMware Virtual SAN for storage
- vCenter Server
- vCenter Log Insight™

Fault Tolerance and Reliability

The EVO:RAIL appliance has four independent nodes with dedicated compute, network, and storage resources:

- Four ESXi hosts in a single appliance enables resiliency for hardware failures or maintenance
- Two fully redundant power supplies
- Two redundant 10GbE NIC ports per node for all communication
- ESXi boot device, HDDs and SSDs are all enterprise-grade
- Fault-tolerant Virtual SAN datastore

Compute and Storage

EVO:RAIL is sized to run approximately 100 average-sized, general-purpose, data center VMs. There are no restrictions on application type. EVO:RAIL supports any application that a customer would run on vSphere.

EVO:RAIL creates a single Virtual SAN datastore from all local HDDs on each ESXi host in an EVO:RAIL cluster. Virtual SAN read caching and write buffering uses SSD capacity. Total storage capacity is 14.4 TB raw HDD and 1.6 TB SSD for read/write cache per EVO:RAIL appliance.

	PER APPLIANCE	4 APPLIANCES SCALED-OUT
Server VMs	~ 100	~ 400
VMware Horizon® View VMs	~ 250	~ 1000
Virtual SAN datastore	13.1 TB	52.4 TB

General-purpose Server VM profile: 2 vCPU, 4GB vMEM, 60GB vDisk, with redundancy. Actual capacity varies by VM size and workload.

Horizon View virtual desktop profile: 2vCPU, 2GB vMEM, 32GB vDisk linked clones. Actual capacity varies by desktop size and workload.

Virtual SAN datastore: Usable space will vary, based on fault tolerance settings.

Networking

Each node in EVO:RAIL has two 10GbE network ports (either SFP+ or RJ45). Each port must be connected to a 10GbE top-of-rack switch that has IPv4 and IPv6 multicast enabled.

Remote / lights out management is available on each node through a 1GbE IPMI port that can connect to a management network.

EVO:RAIL supports four types of traffic: Management, vSphere vMotion®, Virtual SAN, and Virtual Machine. Traffic isolation on separate VLANs is recommended for vSphere vMotion, Virtual SAN, and VMs.

