

# Software-Defined, Hyper-Converged VDI Solutions Brief

## The Virtual Desktop Opportunity

Virtual desktop infrastructure (VDI) can yield security, manageability, and productivity benefits. In fact it's estimated that with VDI, help desk costs can be reduced by up to 66%, and IT labor costs by as much as 74%. That's in addition to the security benefits achieved through the centralization of intellectual property. To realize these benefits, it's important that VDI be architected and implemented properly. Historically, one of the architectural (and cost) challenges of correct implementation has been storage. This challenge was further compounded due to the separation of compute from the storage environment. Externally shared data storage systems supply applications with capacity, performance, and data protection, but their limited automation and inability to adapt in real time to dynamic changes can cause problems with VDI.

### Converged and Hyper-Converged Systems to the Rescue

IT departments have tried to resolve the problems caused by this separation by seeking out appliances that combine servers and storage. But when a converged appliance reaches capacity, companies have to buy additional units, which ends up creating separate storage elements. To solve storage challenges in a scalable way, organizations need hyper-convergence: unified appliances containing compute, storage, and networking resources that leverage storage across an enterprise in one or more software-defined pools. When built with file-sharing services, these pools can be of any size, located across any number of resources, providing complete scalability and flexibility for the organization.

### Better Together: VMware Horizon with View on EVO: RAIL with NexentaConnect

VMware enables easy-to-implement VDI with VMware Horizon® with View, which delivers virtualized and remote desktops and applications through a single platform and supports end users with access to all their desktop and online resources through one unified workspace. Now Horizon runs on VMware EVO: RAIL™, a hyper-converged infrastructure appliance that combines VMware compute, networking, and storage resources into a simple, easy-to-deploy, all-in-one solution offered by VMware partners.

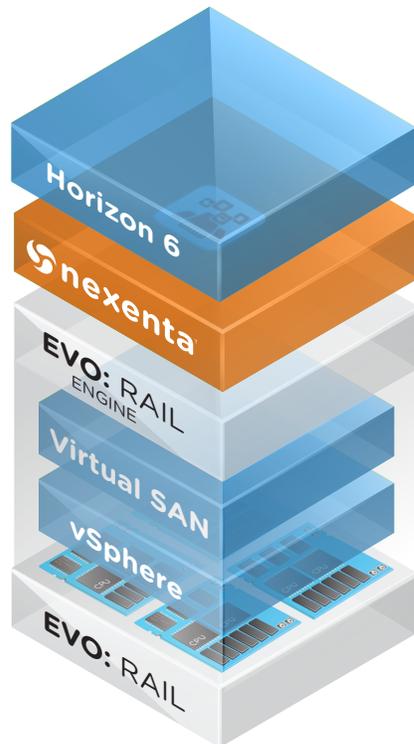
Both Horizon and EVO: RAIL leverage VMware Virtual SAN™ (VSAN) technology, which automates storage provisioning and leverages direct attached storage resources to drive down storage costs for desktop workloads. NexentaConnect for VMware Virtual SAN and

## Combined Key Benefits

- 300% capacity improvement with compression
- 80% improved storage capacity for linked clones
- 23% improved storage capacity utilization for full clones
- Hyper-converged system for VDI based on VMware EVO: RAIL that is easy to deploy and simple to manage and scale
- Complete solution for VDI based on market-leading VMware Horizon 6
- Integrated scale-out file services with NexentaConnect for user data and profiles with no additional hardware required



NexentaConnect for VMware Horizon complement these VMware solutions by providing file services that make it easy to share files across storage pools and users, for maximum seamless scalability.



## About VMware Horizon

Horizon 6 allows IT to centrally manage virtual, physical, and BYO Windows images to streamline management, reduce costs, and maintain compliance. With Horizon 6, virtualized or remoted desktops and applications can be delivered through a single platform to end users. These desktop and application services—including RDSH-hosted apps, VMware ThinApp® packaged apps, SaaS apps, and even virtualized apps from Citrix—can all be accessed from one unified workspace to provide end users with all of the resources they want, at the speed they expect, with the efficiency business demands.

Deliver virtual or remoted desktops and applications through a single platform to streamline management, easily entitle end users, and quickly deliver Windows desktops and applications to end users across devices and locations. Horizon 6 now supports a single platform for delivering hosted Windows applications and shared desktop sessions from Windows Server instances using Microsoft Remote Desktop Services (RDS), virtual desktops, and VMware App Volumes™ containerized applications.

## About EVO: RAIL

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 VMware qualified partners. EVO: RAIL provides several key benefits:

**Simplicity Transformed** – EVO: RAIL enables power-on to VM creation in minutes, radically easy VM deployment, one-click, non-disruptive patches and upgrades, simplified management, and more.

**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 and dev, and branch office environments.

**Trusted Foundation** – Building on the proven technology of VMware vSphere®, VMware vCenter Server™, and VMware Virtual SAN, EVO: RAIL delivers the first hyper-converged infrastructure appliance 100% 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 leading systems vendors; customers choose their preferred brand.

## About NexentaConnect

NexentaConnect is a complete suite of software solutions to combine software-defined storage with cloud, enterprise, and desktop deployments. The suite provides acceleration, automation, and analytics that can only be delivered when storage is integrated with the entire solution stack. NexentaConnect for VMware Virtual SAN provides file services for VMware Virtual SAN environments, adding NFS and SMB access on top of existing Virtual SAN to complete the software hyper-convergence model. NexentaConnect for Virtual SAN features complete vCenter-integrated, wizard-driven automation and powerful I/O acceleration for file storage options.

Deeply integrated into the VMware fabric, NexentaConnect solutions support scale-out functions including full NFS file services, lowering overall cost of storage by 10–15% at a minimum through management and infrastructure simplification with no performance or scale compromises. Some of the key metrics seen by users deploying NexentaConnect in an EVO: RAIL with Horizon with View are:

- 23% improved storage capacity utilization for full clones
- 80% improved storage capacity for linked clones
- Over 300% capacity improvement with compression
- Up to 66% physical space savings – No need to add another 4U NAS (6U total compared to 2U)
- No extra power, cooling, or capital purchase needed
- Fully hyper-converged VDI with file services included

## Deploying VMware Horizon with View on EVO: RAIL with NexentaConnect

This deployment includes the configuration and installation of the VMware Virtual SAN architecture along with the vCenter Web Client. To add the needed file services to the EVO: RAIL solution, or any Virtual SAN deployment, you simply install the NexentaConnect Web Client Plugin and corresponding .ovf file. File services are now available with the total deployment in less than 30 minutes. The final piece of the puzzle is to configure and deploy the View Connection Server and needed components. Again, based on simplicity, the View Connection Server is deployed as a single Windows server within the EVO: RAIL environment, residing on the Virtual SAN. Following the well-known Windows installer process, the only steps left are deploying the desktops. Desktop deployment then utilizes the Virtual SAN storage profiles for image storage and the NexentaConnect–provided SMB shares for user profiles and data. Full integration with Active Directory allows for self-service profile and data restores from within the Windows management consoles.

For more information about this state-of-the-art, hyper-converged solution to the challenges of VDI, visit the Nexenta Web site at <http://www.nexenta.com/products/nexentaconnect/> or the VMware Web site at <http://www.vmware.com/products/horizon-view/> and <http://www.vmware.com/products/evorail>.

The goal of hyper-converged solutions is to provide simplicity alongside performance. Deployment of the VDI solution based on EVO: RAIL and NexentaConnect is no exception. Beginning with the initial user configuration of the Marvin interface to configure networking and user parameters, EVO: RAIL can be deployed in under 15 minutes.

