Expert Reference Series of White Papers

VMware Horizon 6 Overview

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Introduction

VMware Horizon 6 was announced in April and began shipping in June while most of the world was preoccupied with the World Cup. The latest update to Horizon includes several major enhancements:

- Cloud Pod Architecture
- Application Catalog
- Remote Desktop Session (RDS) support
- Virtual SAN (VSAN)
- Automation
- vCenter Operations for View 6
- Horizon Mirage update
- VMware Safe Passage Program

The new release brings a more unified suite delivering more integration with infrastructure and cloud products and more simplicity for all devices. Along with the numerous updates across the Horizon suite, VMware has transitioned to a more traditional product licensing hierarchy.

This white paper will cover the new licensing model and an overview of the new features associated with VMware Horizon 6.

Licensing Overview

As with any major VMware release, the Horizon licensing scheme has been updated to include the new Horizon 6 features and functionality.

Horizon 6 has three license editions available:

- **Horizon View Standard Edition**: Unchanged from the previous model, includes high-performance VMware Horizon View desktops and ThinApp packaged applications.

- **Horizon Advanced Edition**: Same as the Standard Edition, plus it includes VSAN (reducing storage costs), Horizon Workspace (supporting software as a service [SAAS] applications), Remote Desktop Services (RDS) support, Office 365, as well as Horizon Mirage.

- **Horizon Enterprise Edition**: Includes aforementioned features plus the addition of vCenter Operations (vCOPs) for Horizon View, cloud automation (vCAC) integration, and the vCenter Orchestrator (vCO) plug-in.

The Horizon View Standard Edition is licensed per concurrent connection. A concurrent connection is defined as a "powered on desktop virtual machine receiving a connection" in the VMware end-user license agreement (EULA). The Horizon Advanced and Horizon Advanced Editions can be licensed by concurrent connection or by a named user. All editions are available for purchase in quantities of 10 or 100 licenses.

See http://www.vmware.com/products/horizon-view/compare for more information on Horizon licensing.

New Features

This section of the white paper will provide an overview of the most anticipated new feature or changes in Horizon 6. It is not meant to be an all-inclusive list of the changes and features introduced in the new release.

Cloud Pod Architecture

One of the more intriguing features of the Horizon 6 suite is the Cloud Pod Architecture. With this feature, it is possible to link together multiple View pods in order to provide a single larger desktop brokering and management environment. An administrator manages each pod independently like a traditional View implementation. A View pod is a unit of organization determined by Horizon View's scalability limits and consists of several objects:

- A set of View Connection Servers
- A database server (either Microsoft SQL or Oracle)
- Shared storage
- The vSphere and network infrastructure required for hosting desktop virtual machines

Using Cloud Pod Architecture, multiple pods can be joined together to form what is called a pod federation. This pod federation is able to span multiple datacenters and sites—simplifying the administration required to manage a large View environment. This architecture allows up to 20,000 desktops to be created to include up to four pods, two sites, and 20 View Connection Servers.

At this moment, there is no support for remote Windows applications hosted on Microsoft Remote Desktop Services (RDS) hosts nor is there support for the HTML access feature.

Application Catalog

VMware has enhanced its application catalog, now called Horizon Unified Workspace—renamed from just Horizon Workspace. End users are now able to access all desktops and applications using the single unified workspace interface. This supports a single sign-on (SSO) experience, delivering virtual applications hosted locally on datacenter devices, Office 365, web applications, software as a service (SAAS) applications, Citrix XenApp published applications, and RDS hosted applications. Because of the Microsoft RDS support and the Horizon 6 Unified Workspace front-end, administrators can use VMware to publish applications to Windows, Android, Mac, and iOS endpoints without using ThinApp. This type of flexibility is very attractive to many customers.

VMware Horizon Unified Workspace, or VMware Horizon Workspace 2.0 (the latest version), does not use the Horizon Files feature any longer. This functionality has been relocated to the newly acquired AirWatch Secure Content Locker. The data-va files from VMware Horizon Workspace 1.x can be exported to any Enterprise File Synchronization and Sharing (EFSS) system, such as the previously mentioned AirWatch product. See http://kb.vmware.com/kb/2080325 for more information.

Remote Desktop Services (RDS) Support

RDS, formally known as Terminal Services, is a Windows Server role that enables users to access virtual machine-based desktops, session-based desktops, or even datacenter applications. RDS desktops and RDS-hosted applications can be used with Horizon 6. However, this is only available with Windows Server 2008 or 2012.

To use RDS:

1. First, install the Horizon View agent on the Microsoft RDS server.
2. Create a desktop pool and choosing the RDS server from the list of options for the pool type.

There has always been support for Terminal Server within Horizon View. Since the change from Terminal Server to RDS, VMware has worked closely with Microsoft to build a protocol provider for RDS. Another wonderful benefit is that this facet provides a seamless way for Mac users to run remote Windows applications. The applications will be managed using Horizon Workspace and the desktops using Horizon View. Administrators that are already accustomed to using to managing RDS host-based applications or desktop remote solutions will already feel comfortable using the feature.

Virtual SAN (VSAN)

VMware announced Virtual SAN (VSAN) as a part of the vSphere 5.5 release in 2013 and has included it as a part of the Horizon 6 Advanced and Enterprise Editions.

For those unfamiliar with VSAN, it is a software-defined storage solution but it is unlike other products that are currently available; it is built directly into the hypervisor. VSAN is very simple to configure and manage, and is also flexible—you can add more disks to the ESXi hosts or add more ESXi hosts to the VSAN configure to scale. Virtual SAN combines solid-state drives (SSDs) and hard disk drives (HDDs). SSDs are used for read caching and write buffering whereas the HDDs are used for data storage. Another benefit is that there is policy-based management on a per-virtual-machine basis. Horizon 6 automatically deploys a set of virtual machine storage policies to vCenter for use with virtual desktops. These policies can be applied granularly at the virtual disk level.

This convergence of storage and computing resources allows more granular control of availability and performance than anything I have worked with before. By providing full integration with VSAN, VMware aims to place a smaller burden on enterprise storage infrastructures in order to make way for more cost-effective virtual desktop infrastructure (VDI) deployments.

vCenter Orchestrator (vCO) Plug-in and vCenter Automation Center (vCAC) Extensibility

The vCenter Orchestrator (vCO) plug-in for Horizon allows interaction between Horizon 6 and vCenter Orchestrator. There is a set of standard workflows that enable self-service requesting and approval, automation, and scalable administration; custom workflows may also be created.

vCenter Orchestrator powers the Horizon vCO plug-in. vCenter Orchestrator is an automation platform for development and processes that is used to manage the vCenter Server infrastructure and now Horizon (with View) objects and pools. The new plug-in provides automation between the Horizon products that the workflows interact with and the environment in which the workflows are executed. The vCO workflows can be used natively with vCenter Orchestrator, using the vSphere Web Client and even through the vCloud Automation Center (vCAC).

The interoperability between the Horizon Suite, vSphere, and vCloud products is getting better with every release. vCAC provides a self-service portal that is highly customizable, allowing customers to access the cloud-provisioning services where users can request services from a catalog. All the technical processes are automated and seamless to the users.

vCenter Operations for View

Another great example of the extensibility provided by Horizon 6 is vCenter Operations for View. Customers are now able to manage desktop and server environments with a single vCOPs deployment. The Horizon metrics are now represented as dashboards rather than having to set up a separate custom deployment like before. Administrators are able to change the number of widgets and metrics types that appear on the dashboard, as well as create custom dashboards.

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There is more visibility for guest operating systems, application processes, and the resources consumed so that the administrator can troubleshoot and manage the performance of desktop guest operating systems in a more intelligent manner. vCOPs for View observes the entire infrastructure stack, ultimately building a correlation between the end-user experience and the observed performance metrics. It begins establishing dynamic thresholds for resource consumption after two weeks of running in the environment.

Furthering the integration between vCOPs and the Horizon Suite makes monitoring the environments easier and more accurate than ever before.

Horizon Mirage

Horizon Mirage is also being upgraded to version 5.0 as a part of the Horizon 6 announcement. One major update is that there is full support, which includes migration support, image management, and disaster-recovery support for Windows 8.1. Also announced was cross-migration support—meaning that there is x32 and x64 compatibility, where the reference can be 32-bit and the target is 64-bit. The Mirage Gateway, introduced with version 4.4, is also being updated as a part of the new release. Mirage Gateway assists with the simplification of managing endpoints for users distributed across the wide area network (WAN). The new version requires fewer back-end resources to support the clients due to performance tuning and scaling of the Mirage Gateway product.

The View Transfer Server, and thus the Local Mode feature, is no longer a part of the Horizon 6 architecture. The "offline virtual desktop" functionality is, however, not completely off the table. Local Mode was replaced by the combination of using Horizon Mirage with a "type 2" hypervisor, such as VMware Workstation, VMware Player, or VMware Fusion.

VMware Safe Passage Program

In July, VMware announced a new program known as Safe Passage. This is initiative makes it easier for organizations to migrate their existing virtual desktop infrastructures, mobile device management (MDM), and application-delivery solutions to AirWatch by VMware and VMware Horizon. The initiative aims to persuade more companies to switch to Horizon 6 without having to endure major data-migration issues or significant cost.

The migration tools and services to ease the transition include:

- Horizon 6 Upgrade Kit
- Citrix XenApp to Horizon 6 Migration Service
- Citrix XenApp to Horizon 6 Migration Tool

As a bonus to the tool set, new users will also receive three years of support and subscription service for around the same cost as three years of their current solution and support program. VMware is also working with customers with MDM to migrate to AirWatch by VMware for their enterprise mobility management (EMM) solution—and provides a similar migration (as listed above) for moving to the new platform.

For more information on the program, see http://www.vmware.com/safepassage.

Conclusion

With Horizon 6, VMware looks to be delivering on the promise that end-user computing (EUC) is one of its three strategic areas of focus. This release is quite the complementary solution for VMware's existing portfolio. Horizon 6 gives users a more complete and extensive way to modify and manage their virtual desktop infrastructures while still lowering the total cost of ownership. The further integration of AirWatch into the Horizon Suite is something to look forward to for future releases. As for now, Horizon 6 is definitely a step in the right direction. Upgrade today!

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About the Author

Rebecca Fitzhugh is a VMware Certified Instructor and consultant whose primary focus is on VMware virtual infrastructure products as well as the vCloud and Horizon suites. Prior to becoming an instructor and consultant, she served five years in the United States Marine Corps where she assisted in the build-out and administration of multiple enterprise networks residing on virtual infrastructure. Packt Publishing recently published her book, *vSphere Virtual Machine Management*.