

VMware Horizon

Q. What is VMware Horizon?

A. VMware Horizon® is a family of desktop and application virtualization solutions designed to deliver Windows and online services from any cloud. With Horizon, VMware extends the power of virtualization—from data centers to devices—to deliver desktops and applications with great user experience, closed-loop manageability, and hybrid-cloud flexibility.

VMware Horizon is available for purchase through VMware Horizon 6 for virtual desktops and applications run from your datacenter, VMware Horizon® Air™ for virtual desktops and applications served up as a cloud-hosted service from outside of your data center and Horizon Flex for containerized virtual desktops run locally.

VMware Horizon 6

Q. What is Horizon 6?

A. Horizon 6 allows IT to deliver virtual or remoted desktops and applications through a single platform to end users. These desktop and application services—including RDS hosted apps, packaged apps with VMware ThinApp®, 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. Horizon 6 is available in three editions:

- **Horizon View Standard** – Simple, powerful VDI with great user experience
- **Horizon Advanced** – Cost-effective delivery of desktops and applications through a unified workspace
- **Horizon Enterprise** – Desktops and applications delivered with cloud automation and management

Q. What features are introduced with Horizon 6?

A. With over 100 new features, Horizon 6 allows organizations to extend the power of desktop and application virtualization to support workplace mobility while driving greater levels of operational efficiency at lower costs.

New feature highlights include:

Desktops and Applications Delivered Through a Single Platform

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 ThinApp packaged applications.

Unified Workspace with Great User Experience

With Horizon 6, IT can deliver desktops and applications to end users through a unified workspace with Blast Performance to enable consistently great experiences across devices, locations, media, and connections.

Applications that can be delivered and accessed through the unified workspace include:

- XenApp 5.0 and later
- Microsoft RDS-hosted apps and desktops for Windows Server 2008 and later
- SaaS applications
- ThinApp 5.0 and later
- DaaS desktops and applications
- End users can also use single-sign on (SSO) from their Unified Workspace Web app portal to sign in to AirWatch Web Secure Content Locker and to enroll their devices if they are also using AirWatch MDM.

Blast Performance includes

- Blast Adaptive UX – Optimized access across the WAN and LAN through an HTML browser or our purpose-built desktop protocol, PCoIP.
- Blast Multimedia – High-performance multimedia streaming for rich user experience.
- Blast 3D – Rich virtualized graphics delivering workstation-class performance.
- Blast Live Communications – Fully optimized unified communications and real-time audio-video (RTAV) support. Horizon 6 now includes support for Microsoft Lync with Windows 8.
- Blast Unity Touch – Intuitive and contextual user experience across devices, making it easy to run Windows on mobile.
- Blast Local Access – Access to local devices, USB, and device peripherals.
- Horizon Clients with Blast – Unified client for consistently great experience across devices and locations.

Closed-Loop Management and Automation

Horizon 6 ensures that IT can consolidate control, automate delivery, and protect user compute resources.

Horizon 6 now includes support for:

Real-time Application Delivery and Management

- Instantly provision applications at scale.
- Dynamically attach applications to users, groups or devices, even when users are logged onto their desktop.
- Provision, deliver, update, and retire applications in real time.

Policy and Image Management

- Support for desktop and application provisioning and entitlement through View.
- Support for Mirage unified image management for streamlined management across virtual datacenters of physical and full clone virtual machines.
- A cloud pod architecture that allows IT to easily move and locate View pods across datacenters and sites.

Analytics and Automation

- Cloud analytics with VMware vRealize™ Operations for Horizon® provides comprehensive visibility across a desktop environment, allowing IT to optimize the health and performance of desktop and application services.

Orchestration and Self-Service

- vCenter provides a centralized platform to manage your desktop workloads.
- A plug in to VMware vRealize™ Orchestrator™ to allow IT organizations leverage VMware vRealize™ Automation™ for automated desktop and application provisioning.

Optimized for the Software-Defined Data Center

- Horizon 6 extends the power of virtualization with virtual compute, virtual storage, and virtual networking and security to drive down costs, enhance the user experience, and deliver greater business agility.
- Horizon 6 with VMware Virtual SAN™ automates storage provisioning and leverages direct-attached storage resources to drive down storage costs for desktop workloads.

Q. What is included in the three Horizon 6 editions?

A. Horizon 6 View Standard, Horizon 6 Advanced, and Horizon 6 Enterprise are bundled with the following components and capabilities:

FEATURE	HORIZON VIEW STANDARD	HORIZON ADVANCED	HORIZON ENTERPRISE
MANAGEMENT			
Image Management			
Image management for physical desktops (VMware Mirage™ + VMware Fusion® Professional)		•	•
Applications			
Unified workspace - XA, RDSH, SaaS, ThinApp		•	•
Hosted applications (RDSH)		•	•
Real-time application delivery (App Volumes)			•
Packaged applications (ThinApp)	•	•	•
Cloud Automation			
Cloud automation and self-service (Orchestrator + desktop plug-in)			•
Cloud Analytics and Operations Management			
Operations dashboard - Health monitoring and performance analytics (vCenter Operations Manager for View)			•
Capacity management - Planning and optimization (vCenter Operations Manager for View)			•
INFRASTRUCTURE			
Storage			
Virtual storage (Virtual SAN)		•	•
Desktop Infrastructure			
Image management for physical desktops (VMware Mirage™ + VMware Fusion® Professional)		•	•
Virtual desktop infrastructure (Horizon View)	•	•	•
Cloud infrastructure (VMware vSphere® Desktop and vCenter Desktop)	•	•	•

Table 1. Horizon 6 Features by Edition

Q. What happened to Horizon View (formerly VMware View)?

- A. VMware Horizon® View™ is still available as a standalone offering in Horizon View Standard Edition on a per concurrent connection basis at the same price as the former Horizon View Premier bundle. If you are looking for a simple and powerful desktop virtualization solution with a great user experience, consider Horizon View Standard Edition. To leverage the best of Horizon View and extend these benefits beyond VDI to provide end users with one place to securely access all their desktops and applications, purchase Horizon Advanced Edition. If you want to deliver desktops and applications with the benefit of cloud management, automation, and orchestration, choose Horizon Enterprise Edition.

Q. Is Horizon Enterprise Edition equivalent to the View Enterprise Edition?

- A. No. Horizon Enterprise Edition is the most comprehensive solution in the Horizon portfolio. View Enterprise Edition reached its end of availability in 2013. Customers with VMware View Enterprise with current support and subscription (SnS) continue to receive support. These customers can also upgrade to any new Horizon edition.

Q. What is the difference between Horizon Enterprise and VMware Horizon Suite?

- A. Horizon Enterprise has all the features and functionality included in VMware Horizon Suite, with the exception of support for file sharing. However, Horizon Enterprise includes features not bundled with Horizon Suite, such as support for hosted RDS applications and desktops, App Volumes for just-in-time application delivery, Virtual SAN and a cloud orchestration plug-in.

Q. What is the unified workspace?

- A. The unified workspace is a storefront for end users to securely access their desktops, applications, and online services. It supports access to applications and desktops running Microsoft Windows Remote Desktop Services, XenApp 5.0 and later, ThinApp, SaaS, and virtual desktops with Horizon View. The unified workspace also provides IT with a central point of control on the back end to manage reporting, policy access, and delivery. The unified workspace is supported in Horizon Advanced and Horizon Enterprise editions.

Q. What is real-time application delivery?

- A. Real-time application delivery allows IT to deliver applications and data to any number of virtual machines in seconds. Applications are stored in shared VMDK read-only virtual disks that instantly attach to VMs by users, groups, or devices. These applications perform like natively installed applications for end users providing a seamless desktop experience. App Volumes is supported in Horizon Enterprise editions.

Q. What is Blast Performance?

- A. Blast Performance is a comprehensive set of technologies available with Horizon 6 that are designed to ensure that end users have a consistently great experience across devices, locations, media, and connections. Blast Performance extends across the following:

- **Blast Adaptive UX** – Optimized access across the WAN and LAN through an HTML browser or our purpose-built desktop protocol, PCoIP.
- **Blast Multimedia** – High-performance multimedia streaming for rich user experience.
- **Blast 3D** – Rich virtualized graphics delivering workstation-class performance.
- **Blast Live Communications** – Fully optimized unified communications and real-time audio-video (RTAV) support. Horizon 6 now includes support for Microsoft Lync with Windows 8.
- **Blast Unity Touch** – Intuitive and contextual user experience across devices making it easy to run Windows on mobile.
- **Blast Local Access** – Access to local devices, USB, and device peripherals.
- **Horizon Clients with Blast** – Unified client for consistently great experience across devices and locations.

Q. You mentioned support for 3D above, does Horizon support NVIDIA vGPU today?

- A. VMware Horizon supports NVIDIA GRID vGPU with vSphere today to deliver secure, immersive 3D graphics from the cloud, that can be easily accessed across devices and locations, more affordably than ever before.

Q. What is closed-loop management and automation?

- A. Closed-loop management and automation encompasses a core set of management and automation capabilities that customers can take advantage of with Horizon. These capabilities consolidate, control, orchestrate, and protect user compute resources and leverage VMware App Volumes, VMware Mirage™, Fusion® Professional, vCenter Operations Manager for View, vCenter, and an Orchestrator plug-in for vCenter Orchestrator™ and vCloud Automation Center.

Q. What is image management for physical machines?

- A. Image management for physical and virtual machines leverages Mirage to ensure that IT can easily deploy images to end users across all physical endpoints. This capability is included in Horizon Advanced and Enterprise editions.

Q. What is VMware App Volumes?

A. VMware App Volumes supports real-time application delivery to virtualized desktop environments. With Horizon 6 and App Volumes, IT can build a real-time application delivery system that ensures all applications are centrally managed. Applications are delivered to virtual desktops through VMDK virtual disks, without modifying the VM or applications themselves and can be scaled out to virtual desktops with superior performance, at lower costs and without compromising end-user experience.

Q. What is cloud analytics and operations management?

A. VMware vRealize Operations for Horizon provides cloud analytics and operations management for virtual desktop and application environments, allowing IT to optimize the health, availability, performance, and efficiency of desktop and application services. vRealize Operations for Horizon is included in the Horizon Enterprise Edition.

Q. What is cloud orchestration?

A. Cloud orchestration with Orchestrator allows IT to plug in to vCloud Automation Center for the automated provisioning of desktops and charge-back/ show-back capabilities to ensure better transparency around desktop and infrastructure usage. This capability is available in Horizon Enterprise Edition.

Q. What is cloud pod architecture?

A. The cloud pod architecture allows customers to dynamically move and locate Horizon View pods across multiple data centers for efficient management of end users across distributed locations. This feature is available with all Horizon editions.

Q. What is VMware Virtual SAN?

A. VMware Virtual SAN, a new software-defined storage tier, pools compute and direct-attached storage resources and clusters server disks and flash to create resilient shared storage. Virtual SAN provides customers with a low-cost storage alternative that eliminates the need to overprovision storage to ensure that end users have enough IOPS per desktop. Customers can additionally simplify storage provisioning by managing this through Horizon. Virtual SAN is included with Horizon Advanced and Enterprise editions.

Q. How do I buy VMware Horizon 6?

A. VMware Horizon 6 is available through the VMware Store and authorized VMware resellers and desktop competency partners. For more information, visit <http://www.vmware.com/go/horizon>.

Q. What happens if I am using an earlier version of Horizon (e.g., VMware Horizon View)?

A. All customers with a valid VMware SnS contract are eligible to receive a complimentary upgrade to Horizon View Standard Edition. If you do not have a current SnS contract and want to reinstate your contract, contact VMware Support or visit <http://www.vmware.com/support/questions.html>.

Horizon 6 Licensing**Q. How is Horizon 6 licensed?**

- A. The Horizon Advanced and Horizon Enterprise editions are available in two license models
- **Per named user (NU)** – For virtual environments with staff that require dedicated access to a virtual machine throughout the day.
 - **Perpetual per concurrent connection (CCU)** – For virtual environments with a high number of users who share machines throughout the day, such as students and shift workers. A concurrent connection is defined as a powered-on VM and connected virtual desktop session. Here organizations own the licenses.

Note: Horizon View Standard is only available on a concurrent connection basis.

In both NU and CCU metrics, the components of the bundle cannot be split between users. This applies to both named and concurrent connection instances. Although it has individual components, they should be thought of as a single product. In this manner—even if an end user in a concurrent connection scenario is only connected to View—the other associated components of the bundle (e.g. Workspace and Mirage) are also considered to be attached to that user and not available to be entitled to other users.

Example:

Organization A has 100 concurrent connection licenses of Horizon Enterprise. User A connects to their virtual desktop and consumes 1 concurrent connection. However User A is not using Mirage. Does this free up Mirage for another user—given that user A is not active on Mirage? The answer is no. Even if User A is not connected to all of the components in the bundle—once he/she connects to any one of the components in the bundle—the others by default become attached to that user for as long as they are connected to their session.

When to use Named User (NU) and when to use Concurrent Connection User (CCU)

If the primary use case is around Horizon with View and the customer has end users accessing their desktops in shifts (e.g. 200 in the morning and 200 in the evening—but never all 400 at the same time)—AND the customer does not foresee needing more than 200 instances of Mirage or Workspace at any given time—then the customer should buy 200 CCU of Horizon.

If the primary use case is around Horizon with View and the customer does not have shift workers (e.g. all 400 employees are always connected at the same time) then the customer should buy NU. In this instance, the customer would also have access to 400 seats of Mirage and Workspace portal to entitle to these same 400 employees.

If the primary use case is around Horizon with View and the customer has 200 shift workers in the morning and 200 in the evening, and the customer has 50 other non-shift workers that need Mirage, then the customer should buy 200 per CCU licenses of Horizon and an additional 50 seats of Mirage stand alone.

Concurrent connection and Mirage/Workspace Portal/ Fusion Pro

While Horizon Advanced and Enterprise are available on a per concurrent connection basis—the Mirage and Workspace Portal components in the bundle can only be consumed on a named user (Mirage, Workspace Portal) or device (Mirage, Fusion Pro) basis. As such if a customer has 400 workers and 200 of these workers come in during the day and 200 at night—and if the customer want to give all of these workers access to View and Mirage—then the customer has two choices. They can buy 200 CCU of Horizon Advanced and a 200 pack of VMware Mirage or they can buy 400 CCU of Mirage. Clearly the first option is much more cost effective for most customers. However regardless of the choice—the customer will need 400 seats of Mirage to cover for the 400 employees even if only 200 are ever connected at any given time. The same rules apply to Workspace Portal.

Q. How do I get a Horizon client for my devices and how much does it cost?

- A. Horizon clients for different devices are included as part of the Horizon solution at no additional cost and are available in the product download portal.
- Horizon View Client for iOS is available from the Apple iTunes store.
 - Horizon Client for Android is available from the Google Play store.

Q. Which VMware vSphere edition does the VMware Horizon 100-pack contain? How many licenses are included?

- A. All Horizon editions include VMware vSphere® Desktop, which has the same functionality and features as vSphere Enterprise Plus Edition. vSphere Desktop is licensed on a per concurrent connection basis, so you can deploy as many hosts as needed to support the number of concurrent connections for which you are licensed.

Q. What if I have a third-party or homegrown connection broker but want to deploy my desktops on VMware infrastructure?

- A. You can purchase vSphere Desktop on a per powered-on desktop virtual machine basis.

Q. Can I mix vSphere hosts with licenses from the Horizon 6 and vSphere hosts that are licensed via vSphere a la carte?

- A. A mixed environment is not recommended because during disaster recovery, server workloads might live-migrate via VMware vSphere vMotion® to a vSphere host running the Horizon license, which would violate the EULA. Customers are advised to keep their environments separated or purchase a la carte vSphere, vCenter, and Horizon licenses to entitle the deployment of a mixed environment.

Q. Are Add-ons still available?

- A. Yes, customers with excess vSphere licenses can buy Horizon View Standard Add-ons. However, no Add-on SKU is available for Horizon Advanced or Horizon Enterprise. Customers using View Add-ons who want to leverage the functionality of Horizon Advanced or Enterprise must upgrade to these editions.

Q. Can I run other server workloads on the vSphere component that is included in Horizon View?

- A. The Horizon vSphere and vCenter components are restricted to desktop deployments. A desktop virtual machine is defined as a virtual machine running the following operating systems: Windows 95/98, Windows 2000 Professional, Windows XP Professional, Windows Vista Ultimate, Windows Vista Business, Windows Vista Enterprise, Windows 7, Windows 8, Windows 8.1, or Windows Server 2008/2012. Components that make up the virtualized desktop infrastructure include VMware View® Manager™, VMware vCenter Server™ (or another connection broker), and any desktop management, performance monitoring, and automation tools used solely for hosted desktop virtual machines.

Q. Can I run Horizon View Standard Edition and Horizon View Standard Add-ons in the same environment?

A. Horizon includes all the components for end-to-end desktop deployments and is licensed on a concurrent connection basis. Horizon View Standard Add-on SKUs only include the desktop components included in View Manager. Horizon Add-ons require an a la carte vSphere license to support the concurrent connections purchased. You cannot deploy Horizon Add-ons on the vSphere edition included in Horizon, because add-ons are restricted to the number of concurrent connections purchased. It is recommended that customers choose a licensing path of bundles or add-ons to simplify license management.

Q. Can I run Horizon Add-ons on any edition of vSphere?

A. Customers running Horizon Add-on SKUs can run these workloads with any edition of vSphere, except vSphere Desktop included with the Horizon Standard, Advanced, and Enterprise editions. Customers are required to ensure that they have enough hosts to support the number of desktop workloads running at any given time. Customers purchasing Horizon Standard, Advanced, or Enterprise receive vSphere Desktop and should not require additional vSphere licenses.

Q. How can I tell if I have a vSphere Desktop license, and how is it licensed?

A. The vSphere license included with Horizon is designated for use with client and server OS desktop and application workloads only and appears in the license portal as "vSphere Desktop" for tracking and auditing purposes. vSphere Desktop is licensed for the total number of Horizon named users or concurrent connections you have purchased.

Q. How is Virtual SAN for Desktop licensed in Horizon 6?

A. Virtual SAN is a feature of the Horizon Advanced and Horizon Enterprise editions. Virtual SAN is licensed for up to the total number of Horizon named users or concurrent connections that you have purchased.

Q. How is VMware Mirage licensed in Horizon 6?

A. Mirage is a feature of the Horizon Advanced and Horizon Enterprise editions. Mirage is licensed for up to the total number of Horizon named users or concurrent connections that you have purchased. Mirage however cannot be used on a concurrent connection basis. If you purchase 200 licenses (regardless of whether these are named user or concurrent) you will only be able to deploy the Mirage licenses on a per named user basis-as once they are deployed they remain active and connected at all times.

Q. If I have Mirage, is there an upgrade path to Horizon FLEX?

A. Horizon FLEX is a different product which supports centralized management of BYO and disconnected Mac Book and Windows laptop users with advanced policy settings, while ensuring that end users can enjoy local compute resources. There is no upgrade path from Mirage to Horizon FLEX.

Q. How is ThinApp licensed in Horizon 6?

A. VMware ThinApp is licensed per named user, device, or concurrent connection when purchased as part of Horizon 6. You can deploy ThinApp client licenses included in Horizon 6 to physical or virtual machines. As a result, you can use ThinApp licenses purchased separately or as part of Horizon interchangeably.

Q. Which products can be purchased standalone?

A. You can purchase Mirage, ThinApp, VMware Workspace™, App Volumes, vRealize Operations for Horizon, vSphere for Desktop and Virtual SAN as standalone products.

Q. If I am a Horizon Suite customer, can I upgrade to Horizon Enterprise?

A. Horizon Enterprise Edition is priced the same as Horizon Suite. Horizon Suite customers looking to expand can upgrade to take advantage of hosted applications and the vCenter Operations plug-in.

Q. If I am a Mirage or Workspace customer, can I upgrade to Horizon Advanced or Enterprise?

A. Yes, you can upgrade to Horizon Advanced or Enterprise.

Q. Can I upgrade from ThinApp to a Horizon 6 edition?

A. Yes, you can upgrade in a two-step process to either the Thin Client Suite or Horizon Add-ons and then to Horizon View Standard Edition.

Q. If I have perpetual licenses is there currently a migration path to take these licenses and convert them to subscription or term-based licenses?

A. This is not something that is currently supported at this time.

Horizon Support

Q. What kind of technical support is available for VMware Horizon?

- A. VMware requires Basic (12x5) and Production (24x7) support for all components included in the Horizon editions, including vSphere, vCenter, and View Manager. In addition, customers can purchase Business Critical Support to complement Production Support. VMware Business Critical Support offers access to a dedicated account team who will build and maintain a profile of your Horizon installation and provide regular account reviews. The VMware Professional Services organization is also available for Horizon consultations or to deploy Horizon in your organization.

For more information, visit <http://www.vmware.com/support/horizon>.

Q. Do I need to buy a VMware support contract for the Horizon 6 offerings?

- A. To ensure that you realize the benefits of Horizon quickly, a minimum of one year of Basic VMware SnS is required with the purchase of any Horizon edition. You can upgrade to Production Support and then elect to add Business Critical Support. Multiyear discounted offerings for all VMware support levels are also available.

Q. Where can I get more information on Desktop EOA and lifecycle management?

- A. For more information around VMware Enterprise Desktop EOA and support policies; please visit: <https://www.vmware.com/support/policies/enterprise-desktop/faqs.html>.

Horizon DaaS

Q. What is Horizon Air Desktops and Apps?

- A. VMware Horizon Air Desktops and Apps (formerly Horizon DaaS) is a VMware managed offering that enables organizations to rapidly deploy desktops and applications as an easily managed, integrated cloud service to any device, anywhere at an affordable price. Horizon Air allows end users to securely access their virtual desktops from any device or browser, and IT to easily manage their deployment using existing skills and tools. Backed by the trusted foundation of VMware vSphere, Horizon Air delivers the reliability, security and performance that IT expects, with VMware business-essential support. For more information on Horizon Air Desktops and Apps, please visit <http://vmware.com/go/daas>.

Horizon FLEX

Q. What is Horizon FLEX?

- A. Horizon FLEX is a complimentary solution to the Horizon portfolio with the key feature being that the data is stored locally allowing end-users to work offline or on the road. It is a bundled offering that includes a FLEX policy server, FLEX clients (Fusion Pro for Macs and Player Pro for PCs) and Image Management capabilities. Common use cases for Horizon FLEX include bring your own (BYO) PCs, disconnected workers where VDI is not a viable option, temporary workers or contractors, development and training environments and regional offices.

