

VMware Horizon FLEX

Q. What is Horizon FLEX?

A. VMware Horizon® FLEX™ provides the flexibility IT needs to serve end users, while maintaining security and compliance with centrally managed, containerized desktops. With Horizon FLEX, you can finally deliver a reliable Windows experience to BYO users, Mac users, contractors and road warriors – whether offline or online.

Q. What are the key benefits of Horizon FLEX?

A. Key benefits of Horizon FLEX include:

- **Embrace BYO and Macs:** Easily deliver local virtual desktops to Mac and PC users with incredible flexibility.
- **Work from anywhere, even when disconnected:** Get access to a rich desktop experience through our industry-leading clients, ensuring productivity even when on the road or disconnected from the network.
- **Simplify desktop management with desktop containers:** Easily entitle, control and secure Windows virtual desktops from a central web console.
- **Easily manage, backup or patch virtual desktops:** Manage, backup or patch Windows virtual desktops using the Mirage for Horizon FLEX layering technology or continue to use your own Windows image management tools.
- **Reduce costs:** Minimize the training needs of your workforce with our streamlined user-experience. Deploying virtual desktops is significantly less expensive than shipping laptops to onboard your new employees or contractors.

Q. How does Horizon FLEX work?

A. With Horizon FLEX, IT administrators can provide Windows virtual desktops to end users in a self-service manner. Use of the containerized desktops is governed by policies that are defined centrally and can be updated dynamically.

IT administrators entitle users to the desktops they need based on their roles and groups as defined in Active Directory.

End-users can receive containerized desktops in one of three ways:

- Download on-demand over the corporate network. Users simply enter their credentials in the Horizon FLEX clients and see a list of virtual desktops available to them.
- Via courier on a USB key or portable hard-drive
- IT helpdesk provides the desktop to their PC or Mac via a desk-side visit

Once the virtual desktop is downloaded or copied to the end users' computer, they will have access to a full desktop environment with access to corporate applications. The virtual desktop policies sync regularly with the Horizon FLEX server and will allow IT admins to remain in control.

Q. Who is Horizon FLEX for?

A. Horizon FLEX is ideal for organizations dealing with BYO users, Mac users, contractors, road warriors or regional offices:

- **Bring Your Own PC (BYOPC)** – Supports employees using their own computer for work, or for those users who want to use a Mac even though a PC is “standard issue.”
- **Temporary or contract workers** – Enables temporary or contract workers access to the applications and data they need, whilst protecting corporate data, especially if the user has their own computer.
- **Road warriors** – Supports employees who are not always connected to the corporate network, for example, road-warrior sales reps, or consultants or employees working from home.
- **Regional offices** – Supports regional offices that need to exchange confidential information with the home office using a standard set of corporate applications.
- **Development and training** – Supports development, testing, and training efforts that require an isolated environment that is hardware- and OS-agnostic.

Q. How do I buy Horizon FLEX?

A. You can purchase Horizon FLEX directly from VMware or from your preferred reseller. It is also available for direct sale on www.vmware.com. Please contact VMware sales to learn more.

Q. Where is Horizon FLEX available?

A. Horizon FLEX will be available worldwide.

Q. Can I upgrade to Horizon FLEX?

A. Yes, you can upgrade to Horizon FLEX from VMware Fusion® 6 Professional, Fusion 7 Pro, Fusion 8 Pro, Player 7 Pro™, Player 6 Plus, Workstation 12 Player, Workstation 12 Pro, Workstation 11 or Workstation 10.

Q. Can I use Horizon FLEX if I don't have VMware Horizon View or vSphere?

A. Yes, Horizon View (or Advanced / Enterprise) and VMware vSphere® are not required to use Horizon FLEX.

Q. How is this different from Horizon View or Horizon Air?

A. VMware Horizon 6 and Horizon Air™ run in your data center while Horizon FLEX runs locally on your end users' computers. Horizon FLEX complements Horizon View™ and Horizon Air setups by giving employees access to a Windows virtual desktop that they can use when offline or disconnected from the network. Users demanding Macs, contractors bringing their own laptops and employees on the road that want to be productive while offline would be better served with Horizon FLEX.

Q. Can my users be productive even when disconnected from the network?

A. Yes. Because Horizon FLEX virtual machines are stored locally on the users' Macs or PCs, they can be productive even when disconnected from the network.

Q. Does Horizon FLEX require a network connection?

A. Horizon FLEX clients can run offline for a set period of time, governed by policy. The clients do not need a network connection to run but will periodically check-in with the central server to sync policies and renew the usage lease. Communication between the client and the central server uses the HTTPS protocol.

Q. Can I use Horizon FLEX on Macs?

A. Yes, Horizon FLEX comes with clients that run on both Macs and Windows PCs.

Q. What is Mirage for Horizon FLEX?

A. VMware Mirage™ for Horizon FLEX allows you to easily manage, backup or patch Windows virtual desktops.

Q. Do I need to use Mirage for Horizon FLEX instead of my existing image management tools?

A. No, you can simply use the Horizon FLEX policy server to deploy and manage your virtual machines and continue to use your existing image management tools.

Q. Does this work with other management tools like SCCM?

A. Horizon FLEX comes with Mirage to easily manage, backup or patch the Windows virtual desktops. If you would prefer using your own image management tools such as SCCM or Altiris, Horizon FLEX is compatible with these too.

Q. How does Horizon FLEX compare to the Local Mode feature in View?

A. Horizon FLEX has some key differences when compared to View Local Mode:

- Desktops do not need to be checked-out and checked-back in as they reside locally on the laptop – resulting in better usability.

- When used with Mirage for Horizon FLEX, user documents and data sync back to the Mirage management server.
- Horizon FLEX does not require the full VMware vSphere, VMware View technology stack to provide desktops to end users.
- Horizon FLEX is suitable for use with Windows and Mac end-points.
- The Local Mode feature was part of View 5 and is no longer supported in Horizon View (Advanced or Enterprise)

Q. How does Horizon FLEX compare to VMware ACE?

- A. Horizon FLEX has some key differences when compared with the VMware ACE™ technology:
- Horizon FLEX uses modern protocols to provide superior compatibility and lower TCO
 - Horizon FLEX has been designed from the ground up to work with Macs and PCs, whether corporate owned or employee owned.
 - Horizon FLEX is able to manage the contents of the Windows virtual desktop using the Mirage for Horizon FLEX functionality.

Q. Is this a Type 1 or Type 2 hypervisor solution?

A. Horizon FLEX clients are type-2 hypervisors that run on top of a host - Mac OS or Windows - operating system.

Q. Does Horizon FLEX support Linux operating systems?

A. Horizon FLEX supports Linux operating systems within a virtual machine (e.g. for field service technicians). The Horizon FLEX clients are supported on Mac OS X and Windows PCs and laptops.

Q. What policies are supported in Horizon FLEX?

A. The full list of FLEX policies varies depending upon the client hypervisor. Using a combination of fixed image and dynamic server policy an administrator can specify over 70 distinct control points.

Processor

- Specify VM memory allocation
- Specify number of processors assigned to VM
- Specify number of cores per processor assigned to VM
- Specify the type of virtualization engine used
 - Automatic, binary, VT-x, AMD-V, VT-x/EPT, AMD-V/RVI
- Enable / disable acceleration for binary translation
- Virtualize CPU performance counters
- Specify process priorities
- Disable memory page trimming

Storage

- Map virtual disk to local volume
- Add virtual hard disk
 - IDE, SCSI, SATA (independent, persistent, non-persistent)
 - New, existing, physical
- Add virtual CD/DVD
 - ISO, physical (SATA, SCSI, IDE, legacy emulation)
- Add floppy drive
 - Image, physical
- Connect CD/DVD at power-on
- Share local folders with VM
- Map local folders as network drive
- Share local folders as read only

Network

- Connect network at power-on
- Create bridge directly to physical network
- Initially set by admin, user can edit
- Share host IP address
- Create private network to host
- Create custom virtual network
- Attach to specific LAN segment
- Custom throttle incoming network traffic
- Emulate incoming pipe size
 - Modem (28.8Kbps, 56Kbps)
 - ISDN (64Kbps, 128Kbps)
 - Leased line (192Kbps, 1.544Mbps, 45Mbps)
 - Cable (4Mbps, 10Mbps, 100Mbps)
- Enable VNC access

Hardware

- Turn USB support on or off
 - Except for keyboard and mouse
- Specify USB supported level
 - 1.0, 2.0, 3.0
- Automatically connect new USB devices
- Add specific USB controller
- Share Bluetooth devices with VM
- Connect soundcard on power-on
- Specify host sound card to use
- Connect printer at power on
- Auto-map host printers to VM
- Add specific printer
- Hardware accelerate 3D graphics

- Use host settings for monitor
 - Initially set by admin, user can edit
- Specify number of monitors to use
 - To a maximum of 10
- Specify screen resolution
- Use Retina Mode (mac only)
- Specify graphics card memory allocated to VM
- Use enhanced virtual keyboard
- Share battery info with VM
- Synchronize guest time with host
- Specify hardware compatibility level
- Add parallel port
 - Physical, file
- Add serial port
 - Physical, file, pipe
- Add generic SCSI device

User Experience

- Go full screen on power on
 - Initially set by admin, user can edit
- Close application after powering off VM
- Enable drag & drop between host and VM
- Enable shared clipboard (cut & paste)
- Show borders in Unity mode
- Show badges in Unity mode
- Add custom colored borders in Unity mode
- Enable direct access to applications
- Auto-update embedded VMware Tools
 - Manual, auto, global

Recovery & Protection

- Revert to snapshot on power-off
- Auto-create snapshot on power-off
- Auto-create snapshots
 - Daily, hourly, every 30 mins
- Specify number of snapshot generations to keep
- Force local encryption password reset
- Specify VM expiration date
- Display custom message for expired VM's
- Display custom message for soon expiring VM's
- Specify policy server contact frequency
- Specify policy server contact grace period
- Remote kill of local VM

Q. What are the main components of Horizon FLEX?

- A. There are 5 major components that make up a complete Horizon FLEX deployment.
- Horizon FLEX Policy Server
Windows based server that provisions desktop images, sets policies, and entitles users to Horizon FLEX Virtual Machines.
 - Horizon FLEX Client
Type 2 hypervisor that executes the Horizon FLEX Virtual Machine(s) on a local computer. VMware Fusion Pro 7.1 or higher on OS X. VMware Player Pro 7.1 or higher for Windows.
 - VMware Mirage
Optional server for managing the Horizon FLEX Virtual Machine images. Also used for disaster recovery. Horizon FLEX Virtual Machine(s)
 - Customer created guest operating systems for use with the Horizon FLEX Clients.
 - Your file server
A place where you host your Horizon FLEX Virtual Machine(s) for local download. Can be your server or a public service such as AWS.

Q. What are the tested Host Operating Systems for Horizon FLEX?

- A. VMware has verified the following host operating systems as compatible with the Horizon FLEX Clients:
- Windows 10, Windows 8.x, Windows 7, Windows Server 2012, Windows Server 2012 R2
 - Mac OS X 10.9, Mac OS X 10.10
- Additional operating systems as supported by Fusion Pro and Workstation Player may be used but have not been tested at this time.

Q. What are the tested Guest Operating Systems for Horizon FLEX

- A. VMware has verified the following guest operating systems as compatible with the Horizon FLEX Clients:
- Windows XP, Windows 7 (all versions, including 32-bit and 64-bit), Windows 8 (all versions), Windows 10
 - Ubuntu 14.04
 - Mac OS X 10.9, Mac OS X 10.10
- Additional operating systems as supported by Fusion Pro and Workstation Player may be used but have not been tested at this time.

Q. What are the server requirements for Horizon FLEX?

- A. Horizon FLEX has a main server and an optional VMware Mirage Server.
- Horizon FLEX Server
Minimum CPU: 1 Quad-Core Processor or 2 vCPUs
2.26GHz Intel core speed or equivalent
Minimum 512MB /Recommended 4GB
Disk: 10GB+ /Recommended 40GB+
Windows 2008 R2, Windows 2012 and above
.NET 3.5 SP1 and above
IIS 7.0+ with IIS Management Compatibility and ASP.Net
 - VMware Mirage Server (optional)
Minimum 4 vCPU, Recommended 8 vCPU
Minimum 8GB RAM, Recommended 16GB
146GB Free Disk Space
Windows 2008 R2, Windows 2012 and above
.NET 3.5 SP1 and above
IIS 7.0+ with IIS Management Compatibility and ASP.Net

Q. What are the new features added in Horizon FLEX 1.1

- A. The following features were added to Horizon FLEX 1.1 that shipped in March 2015
- Active Directory organizational unit sync
 - RVM Setup Service usability improvements
 - Pause/Resume virtual machine download
 - Unrestricted modification of virtual machine memory and processor settings
 - Mass deployment with VMware Fusion
 - Windows Server 2012 R2 guest operating system support

Q. What are the new features added in Horizon FLEX 1.5

- A. The following features were added to Horizon FLEX 1.5 that shipped in June 2015
- The ability to remotely wipe a VM from a host machine
 - Granular control over USB devices
 - Policy control over a common file system between the host and client
 - More lenient user controls over RAM and CPU allocation
 - Greater integration with Active Directory for encryption / decryption
 - Limit to single instance of virtual image

Q. What are the new features added in Horizon FLEX 1.6

A. The following features were added to Horizon FLEX 1.6 that shipped in September 2015

- Microsoft Windows 10 support
- Microsoft DirectX 10 support for guests
- Added USB 3.0 support to Windows 7 virtual machines (with the latest Intel USB driver)
- Support adding an incremental number to the Active Directory machine name
- Support virtual machine URL entitlement
- Support for recognizing Horizon 6 Advanced & Enterprise license keys

