



# Release Notes for VMware Horizon 7 version 7.3.2

Released 20 November 2017

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## What's New in This Release

VMware Horizon 7 version 7.3.2 provides the following new features and enhancements. This information is grouped by installable component.

- [Horizon Connection Server](#)
- [Horizon Agent for Linux](#)
- [Horizon Agent](#)
- [Horizon GPO Bundle](#)
- [Horizon Client](#)

For information about the issues that are resolved in this release, see [Resolved Issues](#).

## Horizon Connection Server

- **Horizon Help Desk Tool**
  - View application and process names and resource use within a virtual or published desktop to identify which applications and process are using up machine resources.
  - View event log information about the user's activities.
  - View updated metrics such as Horizon Client version and the Blast protocol.
  - View additional session metrics such as the VM information, CPU, or memory usage.
  - You can assign predefined administrator roles to Horizon Help Desk Tool administrators to delegate the troubleshooting tasks between administrator users. You can also create custom roles and add privileges based on the predefined

administrator roles.

- You can verify the product license key for Horizon Help Desk Tool and apply a valid license.

- **Monitoring**

- If the event database shuts down, Horizon Administrator maintains an audit trail of the events that occur before and after the event database shutdown.

- **Instant Clones**

- You can create dedicated instant-clone desktop pools.
- Windows Server operating systems are supported for instant clones in this release. For an updated list of supported Windows Server operating systems, see the VMware Knowledge Base (KB) article [2150295](#).
- You can copy, paste, or enter the path for the AD tree in the AD container field when you create an instant-clone desktop pool.
- If there are no internal VMs in all four internal folders created in vSphere Web Client, these folders are unprotected and you can delete these folders.
- You can use the enhanced instant-clone maintenance utility `lcUnprotect.cmd` to unprotect or delete template, replica, or parent VMs or folders from vSphere hosts.
- Instant clones are compatible with Storage DRS (sDRS). Therefore, instant clones can reside in a datastore that is part of an sDRS cluster.

- **Cloud Pod Architecture**

- The total session limit is increased to 140,000.
- The site limit is increased to 7.
- You can configure Windows Start menu shortcuts for global entitlements. When an entitled user connects to a Connection Server instance in the pod federation, Horizon Client for Windows places these shortcuts in the Start menu on the user's Windows client device.

- **Published Desktops and Application Pools**

- You can restrict access to entitled desktop pools, application pools, global entitlements, and global application entitlements from certain client computers.
- You can configure Windows start menu shortcuts for entitled desktop and application pools. When an entitled user connects to a Connection Server instance, Horizon Client for Windows places these shortcuts in the Start menu on the user's Windows client device.

- **Virtual Desktops and Desktop Pools**

- Blast Extreme provides network continuity during momentary network loss on Windows clients.
- Performance counters displayed using PerfMon on Windows agents for Blast session, imaging, audio, CDR, USB, and virtual printing provide an accurate representation of the current state of the system that also updates at a constant rate.

- **Customer Experience Improvement Program**

- Details regarding the data collected through CEIP and the purposes for which it is used by VMware are set forth at the [Trust Assurance Center](#).

- **Security**

- With the USB over Session Enhancement SDK feature, you do not need to open TCP port 32111 for USB traffic in a DMZ-based security server deployment. This feature is supported for both virtual desktops and published desktops on RDS hosts.

- **Database Support**

- The Always On Availability Groups feature for Microsoft SQL Server 2014 is supported in this release of Horizon 7.

# Horizon Agent for Linux

Horizon Agent for Linux desktops now support the following features:

- **UDP based Blast Extreme connectivity**

User Datagram Protocol (UDP) is enabled by default in both the client and the agent. Note that Transmission Control Protocol (TCP) connectivity will have a better performance than UDP on the Local Area Network (LAN). UDP will have better performance than TCP over Wide Area Network (WAN). If you are on a LAN, disable the UDP feature to switch to using TCP to get better connectivity performance.

- **KDE support**

K Desktop Environment (KDE) support is now also available on CentOS 7, RHEL 7, Ubuntu 14.04, Ubuntu 16.04, and SLED 11 SP4 platforms.

- **MATE support**

MATE desktop environment is supported on Ubuntu 14.04 and 16.04 virtual machines.

- **Hardware H.264 Encoder**

The hardware H.264 encoder is now available and used when the vGPU is configured with the NVIDIA graphics card that has the NVIDIA driver 384 series or later installed on it.

- **Additional platforms support**

RHEL 7.4 x64 and CentOS 7.4 x64 are now supported.

## Horizon Agent

- **HTML5 Multimedia Redirection**

With HTML5 Multimedia Redirection, if an end user uses the Chrome browser, HTML5 multimedia content is sent from the remote desktop to the client system, reducing the load on the ESXi host. The client system plays the multimedia content and the user has a better audio and video experience. You can install the HTML5 Multimedia Redirection feature by selecting the HTML5 Multimedia Redirection custom setup option in the Horizon Agent installer. You can also install the feature silently from the command line by specifying the HTML5MMR option, for example: `VMware-viewagent-x86_64-7.3.2-XXXXXXX.exe /s /v"/qn`

`VDM_VC_MANAGED_AGENT=1`

`ADDLOCAL=Core,SVIAgent,RTAV,ClientDriveRedirection,ThinPrint,VmwVaudio,HTML5MMR"`

- **SHA-256 support**

Horizon Agent has been updated to support the SHA-256 cryptographic hash algorithm. SHA-256 is also supported in Horizon Client 4.6 and Horizon 7 version 7.2 and later.

- **Improved USB redirection with User Environment Manager**

- The default User Environment Manager timeout value has been increased. This change ensures that the USB redirection smart policy takes effect even when the login process takes a long time. With Horizon Client 4.6, the User Environment Manager timeout value is configured only on the agent and is sent from the agent to the client.
- You can now bypass User Environment Manager control of USB redirection by setting a registry key on the agent machine. This change ensures that smart card SSO works on Teradici zero clients. For more information, see VMware Knowledge Base (KB) article 2151440 [Smart card SSO fails when you use User Environment Manager with a zero client](#).

## Horizon GPO Bundle

- **VMware Horizon Printer Redirection ADMX template file**  
This new ADMX template file (vdm\_agent\_printing.admx) contains policy settings for filtering redirected printers.
- **"Enable VMware HTML5 Multimedia Redirection" group policy setting**  
Use this new VMware View Agent Configuration ADMX template file (vdm\_agent.admx) group policy setting to enable the HTML5 Multimedia redirection feature.
- **"Enable URL list for VMware HTML5 Multimedia Redirection" group policy setting**  
Use this new VMware View Agent Configuration ADMX template file (vdm\_agent.admx) group policy setting to specify which websites redirect HTML5 multimedia content.
- **"Enforces Wallpaper Setting from GPO" group policy setting**  
Use this new Persona Management ADMX template file (ViewPM.admx) group policy setting to apply the wallpaper specified in the AD group policy setting.

## Horizon Client

For information about new features in Horizon Client 4.6, including HTML Access, see the [Horizon Clients Documentation](#) page.

## Before You Begin

- **Important note about installing VMware View Composer**  
If you plan to install or upgrade to View Composer 7.2 or later, you must upgrade the Microsoft .NET framework to version 4.6.1. Otherwise, the installation will fail.
- **Important note about installing VMware Tools**  
If you plan to install a version of VMware Tools downloaded from VMware Product Downloads, rather than the default version provided with vSphere, make sure that the VMware Tools version is supported. To determine which VMware Tools versions are supported, go to the [VMware Product Interoperability Matrix](#), select the solution **VMware Horizon View** and the version, then select **VMware Tools (downloadable only)**.
- If you want to install View Composer silently, see the VMware Knowledge Base (KB) article 2148204, [Microsoft Windows Installer Command-Line Options for Horizon Composer](#).
- This Horizon 7 release includes new configuration requirements that differ from some earlier releases. See the *View Upgrades* document for upgrade instructions.
- If you intend to upgrade a pre-6.2 installation of Horizon 7, and the Connection Server, security server, or View Composer server uses the self-signed certificate that was installed by default, you must remove the existing self-signed certificate before you perform the upgrade. Connections might not work if the existing self-signed certificates remain in place. During an upgrade, the installer does not replace any existing certificate. Removing the old self-signed certificate ensures that a new certificate is installed. The self-signed certificate in this release has a longer RSA key (2048 bits instead of 1024) and a stronger signature (SHA-256 with RSA instead of SHA-1 with RSA) than in pre-6.2 releases. Note that self-signed certificates are insecure and should be replaced by CA-signed certificates as soon as possible, and that SHA-1 certificates are no longer considered secure and should be replaced by SHA-2 certificates.  
Do not remove CA-signed certificates that were installed for production use, as recommended by VMware. CA-signed certificates will continue to work after you upgrade to this release.
- To take advantage of Horizon 7 features such as Virtual SAN 6.1, GRID vGPU, and Virtual

Volumes, install vSphere 6.0 and subsequent patch releases.

- When you upgrade to this release, upgrade all Connection Server instances in a pod before you begin upgrading Horizon Agent, as described in the *View Upgrades* document.
- After you have performed a fresh install or upgraded all Connection Server instances to Horizon 7 version 7.2 or later, you cannot downgrade the Connection Server instances to a version earlier than Horizon 7 version 7.2 because the keys used to protect LDAP data have changed. To keep the possibility of downgrading Connection Server instances while planning an upgrade to Horizon 7 version 7.2 or later, you must perform an LDAP backup before starting the upgrade. If you need to downgrade the Connection Server instances, you must downgrade all Connection Server instances and then apply the LDAP backup to the last Connection Server that is downgraded.
- The product build number for Horizon Agent in this release does not appear under the "Version" column in the "Add/Remove Programs" panel. To get the product build number, click "VMware Horizon Agent" and view the comments section in the panel below.
- The download page in this release includes a Horizon View HTML Access Direct-Connection file that provides web server static content for supporting HTML Access with View Agent Direct-Connection (VADC). For information about setting up HTML Access for VADC, see [Setting Up HTML Access](#) in the *View Agent Direct-Connection Plug-in Administration* document.
- Selecting the Scanner Redirection setup option with Horizon Agent installation can significantly affect the host consolidation ratio. To ensure the optimal host consolidation, make sure that the Scanner Redirection setup option is only selected for those users who need it. (By default, the Scanner Redirection option is not selected when you install Horizon Agent.) For users who need the Scanner Redirection feature, configure a separate desktop pool and select the setup option only in that pool.
- Horizon 7 uses only TLSv1.1 and TLSv1.2. In FIPS mode, it uses only TLSv1.2. You might not be able to connect to vSphere unless you apply vSphere patches. For information about re-enabling TLSv1.0, see [Enable TLSv1 on vCenter Connections from Connection Server](#) and [Enable TLSv1 on vCenter and ESXi Connections from View Composer](#) in the *View Upgrade* document.
- FIPS mode is not supported on releases earlier than 6.2. If you enable FIPS mode in Windows and upgrade Horizon Composer or Horizon Agent from a release earlier than Horizon View 6.2 to Horizon 7 version 7.2 or later, the FIPS mode option is not shown. You must do a fresh install instead to install Horizon 7 version 7.2 or later in FIPS mode.
- Linux desktops use port 22443 for the VMware Blast display protocol.
- Starting with Horizon 7 version 7.2, it is possible that the ordering of cipher suites can be enforced by Connection Server. For more information, see the *View Security* document.
- Starting with Horizon 7 version 7.2, Connection Server must be able to communicate on port 32111 with other Connection Servers in the same pod. If this traffic is blocked during installation or upgrade, installation will not succeed.
- Starting with Horizon 7 version 7.3.2, TLS handshakes on port 443 must complete within 10 seconds, or within 100 seconds if smart card authentication is enabled. In previous releases of Horizon 7, TLS handshakes on port 443 were allowed 100 seconds to complete in all situations. You can adjust the time for TLS handshakes on port 443 by setting the configuration property `handshakeLifetime`. Optionally, the client that is responsible for an over-running TLS handshake can be automatically added to a blacklist. New connections from blacklisted clients are delayed for a configurable period before being processed so that connections from other clients take priority. You can enable this feature by setting the configuration property `secureHandshakeDelay`. For more information about setting configuration



properties, see the *View Security* document.

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## Internationalization

The Horizon Administrator user interface, Horizon Administrator online help, and Horizon 7 product documentation are available in Japanese, French, German, Spanish, simplified Chinese, traditional Chinese, and Korean. For the documentation, see the [Documentation Center for VMware Horizon 7](#).

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## Compatibility Notes

- For the supported guest operating systems for Horizon Agent on single-user machines and RDS hosts, see VMware Knowledge Base (KB) article 2150295, [Supported Windows Versions for Remote Desktop Systems for Horizon Agent](#).
- If you use Horizon 7 servers with a version of View Agent older than 6.2, you will need to enable TLSv1.0 for PCoIP connections. View Agent versions that are older than 6.2 support the security protocol TLSv1.0 only for PCoIP. Horizon 7 servers, including connection servers and security servers, have TLSv1.0 disabled by default. You can enable TLSv1.0 for PCoIP connections on these servers by following the instructions in VMware Knowledge Base (KB) article 2130798, [Configure security protocols for PCoIP for Horizon 6 version 6.2 and later, and Horizon Client 3.5 and later](#).
- For the supported Linux guest operating systems for Horizon Agent, see [System Requirements for Horizon 7 for Linux](#) in the *Setting Up Horizon 7 for Linux Desktops* document.
- For the supported operating systems for Connection Server, security server, and View Composer, see [System Requirements for Server Components](#) in the *View Installation* document.
- Horizon 7 functionality is enhanced by an updated set of Horizon Clients provided with this release. For example, Horizon Client 4.0 or later is required for VMware Blast Extreme connections. See the [VMware Horizon Clients Documentation](#) page for information about supported Horizon Clients.
- The instant clones feature requires vSphere 6.0 Update 1 or later.
- Windows 7 and Windows 10 are supported for instant clones, but not Windows 8 or Windows 8.1.
- See the [VMware Product Interoperability Matrix](#) for information about the compatibility of Horizon 7 with current and previous versions of vSphere.
- For the supported Active Directory Domain Services (AD DS) domain functional levels, see [Preparing Active Directory](#) in the *View Installation* document.
- For more system requirements, such as the supported browsers for Horizon Administrator, see the *View Installation* document.
- RC4, SSLv3, and TLSv1.0 are disabled by default in Horizon 7 components, in accordance with RFC 7465, "Prohibiting RC4 Cipher Suites," RFC 7568, "Deprecating Secure Sockets Layer Version 3.0," PCI-DSS 3.1, "Payment Card Industry (PCI) Data Security Standard", and SP800-52r1, "Guidelines for the Selection, Configuration, and Use of Transport Layer

Security (TLS) Implementations." If you need to re-enable RC4, SSLv3, or TLSv1.0 on a Connection Server, security server, View Composer, or Horizon Agent machine, see [Older Protocols and Ciphers Disabled in View](#) in the *View Security* document.

- If a PCoIP Secure Gateway (PSG) has been deployed for PCoIP connections, zero client firmware must be version 4.0 or later.
- When using Client Drive Redirection (CDR), deploy Horizon Client 3.5 or later and View Agent 6.2 or later to ensure that CDR data is sent over an encrypted virtual channel from an external client device to the PCoIP security server and from the security server to the remote desktop. If you deploy earlier versions of Horizon Client or Horizon Agent, external connections to the PCoIP security server are encrypted, but within the corporate network, the data is sent from the security server to the remote desktop without encryption. You can disable CDR by configuring a Microsoft Remote Desktop Services group policy setting in Active Directory. For details, see [Managing Access to Client Drive Redirection](#) in the *Configuring Remote Desktop Features in Horizon 7* document.
- The USB Redirection setup option in the Horizon Agent installer is deselected by default. You must select this option to install the USB redirection feature. For guidance on using USB redirection securely, see [Deploying USB Devices in a Secure View Environment](#) in the *View Security* document.
- The Global Policy, Multimedia redirection (MMR), defaults to **Deny**. To use MMR, you must open Horizon Administrator, edit Global Policies, and explicitly set this value to **Allow**. To control access to MMR, you can enable or disable the Multimedia redirection (MMR) policy globally or for an individual pool or user. Multimedia Redirection (MMR) data is sent across the network without application-based encryption and might contain sensitive data, depending on the content being redirected. To ensure that this data cannot be monitored on the network, use MMR only on a secure network.
- Before you set the level of Transparent Page Sharing (TPS) in Horizon Administrator, VMware recommends that the security implications be understood. For guidance, see the VMware Knowledge Base (KB) article 2080735, [Security considerations and disallowing inter-Virtual Machine Transparent Page Sharing](#).
- To use View Storage Accelerator in a vSphere 5.5 or later environment, a desktop virtual machine must be 512GB or smaller. View Storage Accelerator is disabled on virtual machines that are larger than 512GB. Virtual machine size is defined by the total VMDK capacity. For example, one VMDK file might be 512GB or a set of VMDK files might total 512GB. This requirement also applies to virtual machines that were created in an earlier vSphere release and upgraded to vSphere 5.5.
- Horizon 7 does not support vSphere Flash Read Cache (formerly known as vFlash).
- In Horizon (with View) version 6.0 and later releases, the View PowerCLI cmdlets Get-TerminalServer, Add-TerminalServerPool, and Update-TerminalServerPool have been deprecated.
- Screen DMA is disabled by default in virtual machines that are created in vSphere 6.0 and later. View requires screen DMA to be enabled. If screen DMA is disabled, users see a black screen when they connect to the remote desktop. When Horizon 7 provisions a desktop pool, it automatically enables screen DMA for all vCenter Server-managed virtual machines in the pool. However, if Horizon Agent is installed in a virtual machine in unmanaged mode (VDM\_VC\_MANAGED\_AGENT=0), screen DMA is not enabled. For information about manually enabling screen DMA, see VMware Knowledge Base (KB) article 2144475, [Manually enabling screen DMA in a virtual machine](#)
- vGPU enabled instant clone desktop pools are supported for vSphere 2016 and later.
- Microsoft Windows Server requires a dynamic range of ports to be open between all

Connection Servers in the Horizon 7 environment. These ports are required by Microsoft Windows for the normal operation of Remote Procedure Call (RPC) and Active Directory replication. For more information about the dynamic range of ports, see the Microsoft Windows Server documentation.

- In Horizon 7 version 7.2 or later, the viewDBChk tool will not have access to vCenter or View Composer credentials and will prompt for this information when needed.
- The forwarding rules for HTTP requests received by Connection Server instances and security servers have changed at this release. If you have defined custom frontMapping entries in locked.properties, you should remove them before upgrading. If you wish to disallow administrator connections to certain Connection Server instances, then instead of defining custom frontMapping entries, add this entry to locked.properties:

```
frontServiceWhitelist = tunnel|ajp:broker|ajp:portal|ajp:misc|moved:*|file:docroot
```

On security servers, this entry is applied automatically and does not need to be set in locked.properties.

## Supported Windows 10 Operating Systems

For an updated list of supported Windows 10 operating systems, see VMware Knowledge Base (KB) article 2149393, [Supported Versions of Windows 10 on Horizon View](#).

For more information on upgrade requirements for Windows 10 operating systems, see VMware Knowledge Base (KB) article 2148176, [Upgrade Requirements for Windows 10 Operating Systems](#) here.

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## Prior Releases of Horizon 7

Features that were introduced in prior releases are described in the release notes for each release, along with existing known issues.

## Resolved Issues

- Enabling remote profile loading took longer than the default value of 15 seconds and failed to initialize Client Drive Redirection (CDR). This issue has been fixed. When you launch a VDI session and log in, the Share Folders option on the client toolbar and network drive for CDR are available. All redirected drives are accessible.
- If the Persona Management log file is rotated before the user logs off then the file is not uploaded to the network share even though the "Upload log to network share" group policy is enabled.
- Horizon Agent and Horizon Connection Server have updated 7-Zip to version 16.04 to resolve security issue CVE-2016-7804.
- When there are two NICs installed on the VM on which Connection Server is installed, Horizon 7 version 7.2 events are not written to the Microsoft SQL database.



- The mouse pointer stays as sand watch for an application session that uses the PCoIP protocol.
- You cannot use nested Active Directory OUs that contain the same name in Horizon 7.
- The access groups creation limit has increased from 100 to 200.
- A desktop pool configured with Horizon Persona Management does not apply the wallpaper specified in a GPO setting to desktops.
- The upgrade process fails when you upgrade a replica server from 7.2 to 7.3 when CEIP is disabled.
- Automated pool provisioning fails to provision new VMs after an upgrade to 7.3, if vCenter Server uses a CA-signed certificate.
- Automated pool provisioning can halt while using VSAN 6.6.1. Use ESXi 6.5 Express Patch 4 to resolve this issue.
- Instant-clone operations fail with Horizon 7 version 7.3.1 or version 7.3 while connecting to vCenter Server in some situations. This failure can have significant consequences in production and is now handled gracefully in Horizon 7 version 7.3.2.
- After an upgrade to Horizon 7 version 7.2, the VM name reuse functionality with naming pattern configuration does not work, which causes provisioning issues.
- When launching RDSH desktops with PCoIP, PSG becomes unresponsive after a number of iterations, causing desktop connections to fail. Horizon Administrator reports the event with the following message: **Unable to launch from Pool [Pool Name] for user [User Name]: There were no machines available that reported protocol [Protocol Name] as ready.**

## Known Issues

The known issues are grouped as follows.

- [Horizon Persona Management](#)
- [View Composer](#)
- [Horizon Connection Server](#)
- [Horizon Agent for Linux](#)
- [Horizon Agent](#)
- [Horizon GPO Bundle](#)
- [Horizon Client](#)

### Horizon Persona Management

- Horizon Persona Management might not correctly replicate a user persona to the central repository if the desktop virtual machine is extremely low on disk space.
- With Persona Management, you can use group policy settings to redirect user profile folders to a network share. When a folder is redirected, all data is stored directly on the network share during the user session. Windows folder redirection has a check box called

Grant user exclusive rights to folder-name, which gives the specified user exclusive rights to the redirected folder. As a security measure, this check box is selected by default. When this check box is selected, administrators do not have access to the redirected folder. If an administrator attempts to force change the access rights for a user's redirected folder, Persona Management no longer works for that user.

**Workaround:** See VMware Knowledge Base (KB) article 2058932, [Granting domain administrators access to redirected folders for View Persona Management](#).

- Persona Management is not supported on session-based desktop pools that run on RDS hosts.

**Workaround:** Install Persona Management in automated or manual desktop pools that run on single-user machines.

- After every login, Persona Management takes a long time to replicate the first user persona on a guest operating system that uses the "v6" version of the user profile.
- On a Windows 8 desktop, if you enable the View Persona Management setting, Remove local persona at logoff, and a user creates a PDF file, logs off of the desktop, and logs back in again, the user cannot open the offline PDF file. The Windows 8 Reader cannot download the offline PDF content.

**Workaround:** Manually download the file by right-clicking the file and selecting **Properties** or selecting **Open with... Adobe Reader**.

- When you log in to a Windows 10 LTSB machine using a persona profile and try to access redirected folders from Quick Access, such as Downloads or My Documents, you get this error:

C:\Users\vduser7\Downloads is unavailable. Microsoft doesn't provide the API to add folder or file to Quick Access.

**Workaround:** None

## View Composer

- When Horizon Administrator provisions a linked-clone pool with thousands of desktops, a few machines (one or two per thousand) might fail with a "Customization timed out" error. If automatic recovery is enabled (the recommended setting for production environments), machines in error are automatically recreated and provisioned. No workaround is required.

**Workaround:** If automatic recovery is disabled, manually delete the machines in error in Horizon Administrator. Horizon Administrator will provision new machines as part of normal pool management.

- When deleting a large desktop pool, a number of folders containing a.hlog file and an empty sub folder named.sdd.sf might remain undeleted.

**Workaround:** Manually delete the folders that are left behind after a deletion operation. For instructions, see the Solution in VMware Knowledge Base (KB) article 2108928, [Rebalance operation leaves VM folders in previous data stores](#).

- If you upgrade a virtual machine with an IDE controller from Windows XP to Windows 7, take a snapshot of the virtual machine, and create a linked-clone pool, the linked clone cannot be customized, and pool creation fails.

**Workaround:** Add a SCSI controller and a disk to the virtual machine. Next, launch VMware Tools and install a VMware SCSI controller driver on the virtual machine. Next, take a snapshot and create the linked-clone pool.

- When you provision linked-clone desktops that are customized by Sysprep, some desktops

might fail to customize.

**Workaround:** Refresh the desktops. If a small number of desktops still fail to customize, refresh them again.

- Do not change the log on account for the VMware View Composer Guest Agent Server service in a parent virtual machine. By default, this is the Local System account. If you change this account, the linked clones created from the parent do not start.
- Desktop pool provisioning fails with the error message `Polling progress failure: Unable to connect to View Composer server<https://machine-name:18443>.java.net.ConnectException: Connection refused: connect.`

**Workaround:** Restart the VMware vCenter Server service and then reprovision the desktop pool.

- When you run View Composer installer on Windows Server 2016 with the latest Windows update from command line, you get a Microsoft .NET 4.6 framework error. This issue occurs because the CLI installer is not able to recognize latest version of Microsoft .NET 4.7.

**Workaround:** Use the View Composer installer user interface to run the installer.

- If a linked-clone pool consists of vSphere 5.5 virtual machines, a View Composer rebalance operation can fail with a `FileAlreadyExists` error. This problem occurs only when the desktop pool uses different data stores for the OS disk and the user data disk and the data store selection for the user data disk changes before the View Composer rebalance operation takes place.

**Workaround:** Detach the persistent disk from the linked clone desktop that has the `FileAlreadyExists` error. Later, you can attach the archived disk to a new virtual machine and recreate the linked-clone desktop or attach it to an existing linked-clone desktop as a secondary disk. You can prevent this problem from occurring by either keeping the OS disk and user data disk on the same data store or by not changing the data store selections before a View Composer rebalance operation.

- Provisioning View Composer linked clones fails on some Virtual Volumes storage arrays. The following message is displayed: "Error creating disk Error creating VVol Object. This may be due to insufficient available space on the datastore or the datastore's inability to support the selected provisioning type." View Composer creates a small internal disk in thick-provisioned format, although all other linked clone disks use thin provisioning. This issue occurs if the 3rd-party Virtual Volumes storage array does not support thick-provisioned disks by default.

**Workaround:** Enable thick provisioning on the storage array to allow Virtual Volumes to create thick-provisioned disks.

- When you attach or recreate a View Composer persistent disk stored on a Virtual SAN data store, the virtual disk's storage policy in vCenter Server is shown as "Out of date." The original storage profile is not preserved.

**Workaround:** In vSphere Web Client, reapply the storage policy to the virtual disks.

- When a space reclamation operation is run for Windows 8.x linked clone virtual machines, the size of the system disposable disk and user persistent disk might increase to its maximum capacity. This space increase only happens the first time space reclamation is done. For the OS disk, space reclamation works as expected and reclaims the unused space. This issue does not affect View Composer desktops that do not use system disposable disks or user persistent disks.

**Workaround:** When you configure View Composer desktops on Windows 8 or 8.1 virtual machines and enable space reclamation, do not configure system disposable disks or user persistent disks.

- Creating or recomposing desktop pools fails after you upgrade the parent virtual machine from build 1511 to build 1607 of the Windows 10 operating system. Build 1607 is the Windows 10 Anniversary Update operating system.

**Workaround:**

- Option 1. Perform a fresh installation of Windows 10 Build 1607 on the parent virtual machine.
- Option 2. Do not select "Redirect disposable files" in the desktop pool creation wizard.
- After a recompose, refresh, or rebalance operation with a persistent disk, Windows 10 desktops might fail to start, or become untiled from the Start menu. Windows applications can include applications such as Windows Store, native applications, Edge Browser, and Cortana Search. This issue affects multiple version of Windows 10 intermittently, depending on applications used. This problem affects the following desktop types:
  - Linked-clone dedicated desktops with a persistent disk where the persistent disk is used to store app settings.
  - Linked-clone floating desktops with Persona Management enabled that use a persistent disk as a local disk and the Persona Management setting **Roam Local Settings Folders** enabled.
  - This issue is not seen with floating or dedicated linked-clone desktop pools where the user profile is redirected to network share with or without Persona Management enabled. If Persona Management is enabled, the user profile is set to roam with VMware Persona GPO settings.
  - This issue is not seen when persistent disk and/or Persona Management are used to persist only My Documents and Exchange 365 .pst/ost files.
- Virtual SAN data stores are only accessible from hosts that belong to the Virtual SAN cluster, and not from hosts that belong to a different cluster. Therefore, rebalance of pools from one Virtual SAN data store to another Virtual SAN data store in a different cluster is not supported.
- In an environment where a large virtual desktop pool (for example, 2,000 desktops) is created on Virtual Volumes data stores that reside on a NetApp storage system running ON TAP 8.2.x or earlier, a recompose operation may fail for a small number of desktops with the error message "The VVol target encountered a vendor specific error."

**Workaround:** Upgrade the NetApp storage system to ONTAP 8.3 or later.

- Provisioning of virtual machines based on View Composer desktop pools or instant clone desktop pools configured to use NVIDIA GRID vGPU fails with the following error: The amount of graphics resource available in the parent resource pool is insufficient for the operation.

**Workaround:** Use a single vGPU profile for all virtual desktops configured for 3D rendering in a cluster.

If multiple vGPU profiles are required, design the multiple cluster topologies such that each cluster only has virtual machines with the same profile.

To resolve the error messages in Horizon 7, you must delete the failed desktop pool.

Decide which vGPU profile you want to use for each cluster, then delete the pool that does not have the correct vGPU profile from the cluster, and create the pool for that vGPU profile again in the correct cluster.

- When recomposing Windows 8.1 desktops, the Sysprep customization can fail with a Customization operation timed out error message. This problem is caused by a Windows 8.1 scheduled maintenance task that recovers disk space by removing unused features.

**Workaround:** Use the following command to disable the maintenance task immediately

after completing Setup: Schtasks.exe/change /disable /tn"\Microsoft\Windows\AppxDeploymentClient\Pre-staged appcleanup"

- The rebalance operation from a vSAN datastore to a non-vSAN datastore with VMFS6 file system fails in the vSAN cluster.

**Workaround:** None.

- Connection to View Composer fails when you run the following command: viewdbchk.cmd –findMachine

**Workaround:** Import the self-signed certificate for View Composer into Connection Server's keystore or use a custom CA certificate.

## Horizon Connection Server

- If you upgrade to vSphere 5.5 or a later release, verify that the domain administrator account that you use as the vCenter Server user was explicitly assigned permissions to log in to vCenter Server by a vCenter Server local user.
- During provisioning of an instant-clone desktop pool, if there is not enough space available on the data stores, the error message that is displayed in Horizon Administrator is "Cloning of VM <VM name> has failed -VC\_FAULT\_FATAL: Failed to extend swap file from 0 KB to 2097152 KB." This message does not clearly indicate the root cause of the problem.

**Workaround:** Not required.

- In Horizon Administrator, if you go to **Catalog > Desktop Pools**, double-click an instant-clone desktop pool, go to the **Inventory** tab and click **Machines (Instant Clone Details)**, the window displays details of the instant clones. However, the OS Disk data store column displays no information.

**Workaround:** None

- In a large scale environment, some of the desktops in an instant-clone desktop pool might go into the Invalid IP state.

**Workaround:** In Horizon Administrator, go to **Pool Inventory**, select the desktops in the **Invalid IP** state and click **Recover**.

- When you restart a virtual machine for which an end user session exists in a desktop pool from vCenter Server, the virtual machine restarts but the status of the virtual machine might appear in the "Already Used" state in Horizon Administrator.

This problem can occur for the following pool types:

- Instant-clone desktop pools.
- Linked-clone floating desktop pools with "Delete on log Off" enabled.
- Linked-clone floating desktop pools with "Refresh on log Off" enabled.
- Full-clone floating desktop pools with "Delete on log Off" enabled.

**Workaround:** Use Horizon Administrator or Horizon Client to restart the virtual machine in the desktop pool. If the virtual machine is already in the "Already Used" state, remove the virtual machine. This action automatically creates a new virtual machine based on the pool provisioning settings.

- Instant-clone desktop pool creation fails when the OU or sub-OU name contains the special character "ß".

**Workaround:** Remove "ß" in the OU or sub-OU name when you create instant clones.

- If you provision instant clones on local datastores, the corresponding hosts cannot be put into maintenance mode. This occurs because the internal VMs and the instant clones are stored on local datastores so they cannot be migrated.



**Workaround:** Delete the instant-clone desktop pool. This will delete the related VMs and enable the corresponding hosts to enter maintenance mode.

- ESXi host remediation that uses VUM fails if the instant-clone Parent VM is present on the host in a powered-on state

**Workaround:** For more information, see the VMware Knowledge Base (KB) article 2144808, [Entering and exiting maintenance mode for an ESXi host that has Horizon instant clones](#).

- For this release, Windows Universal apps are not supported as hosted remote applications. For example, Universal apps do not appear in the list of apps provided by a Windows Server 2016 RDS farm. Universal apps, such as the Edge browser or the Calculator included with Windows 10 or a Windows Server 2016 RDS host, are built on the Universal Windows Platform (UWP). Universal apps require Windows Explorer to be run. In addition, manually launching Universal apps through the Command Prompt will show an error message.
- If you deploy an automated farm from a Windows Server 2012 parent virtual machine that has the RDS role enabled, Sysprep customization will fail on the deployed linked-clone virtual machines. This 3rd-party issue does not occur on other Windows Server versions that have the RDS role enabled.

**Workaround:** On the Windows Server 2012 parent virtual machine, apply the Microsoft hotfix available at <https://support.microsoft.com/en-us/kb/3020396>.

- For True SSO, the connectivity status between the Connection Server instance and the enrollment server is displayed only on the System Health Status dashboard for the connection server that you are using to access Horizon Administrator. For example, if you are using <https://server1.example.com/admin> for Horizon Administrator, the connectivity status to the enrollment server is collected only for the [server1.example.com](https://server1.example.com) connection server. You might see one or both of the following messages:

- The primary enrollment server cannot be contacted to manage sessions on this connection server.
- The secondary enrollment server cannot be contacted to manage sessions on this connection server.

It is mandatory to configure one enrollment server as primary. Configuring a secondary enrollment server is optional. If you have only one enrollment server, you will see only the first message (on error). If you have both a primary and a secondary enrollment server and both have connectivity issues, you will see both messages.

- When you set up True SSO in an environment with CAs and SubCAs with different templates setup on each of them, you are allowed to configure True SSO with a combination of template from a CA or SubCA with another CA or SubCA. As a result, the dashboard might display the status of True SSO as green. However, it fails when you try to use True SSO.
- When using Horizon Administrator from a Firefox browser, if you enter Korean characters in a text field using the Korean Input Method Editor (IME), the Korean characters are not displayed correctly. This issue occurs only with Firefox. This is a 3rd-party issue.  
**Workaround:** Use a different browser. If you still want to use Firefox, input Korean characters one by one.
- If you change the Blast Secure Gateway (absg.log) log level on a Connection Server instance from Info to Debug, the log level remains Info. (You change the log level by opening the **Set View Connection Server Log Levels** on a Connection Server instance, changing the absg log level, and restarting the VMware View Blast Secure Gateway service.) Changing the log

level from Debug to Info works properly.

**Workaround:** None.

- On rare occasions, the system health status of Event Database maybe displayed as red on the Horizon Administrator dashboard, with the error message "Cannot drop the view 'VE\_user\_events',because it does not exist or you do not have permission." This condition does not indicate a real error and will resolve itself after a short period.

**Workaround:** None.

- When you use F5 or the Refresh button to refresh Horizon Help Desk Tool, sometimes the Horizon Help Desk Tool icon disappears and you get a STRING\_ID issue on the Web page.

**Workaround:** Logout and login to Horizon Help Desk Tool.

- When you click the Help Desk icon from Horizon Administrator, single sign-on to Horizon Help Desk Tool fails. This can occur because your UPN does not exist in Active Directory.

**Workaround:** Use your user name and password to login to Horizon Help Desk Tool.

- In Horizon Help Desk Tool, the pod name does not appear if the session is a local session or a session running in the local pod.

**Workaround:** Set up the Cloud Pod Architecture environment to view pod names in Horizon Help Desk Tool.

- Login fails if you use a case insensitive user name to login to Horizon Help Desk Tool.

**Workaround:** Login to Horizon Help Desk Tool with a case sensitive user name.

- The Workspace ONE mode setting does not get reflected in the replica server from Workspace ONE.

**Workaround:** Configure the Workspace ONE mode in Connection Server.

- If NVIDIA drivers are installed on a virtual machine that you use as a parent or template to deploy a desktop pool, and the machines are deployed on non-NVIDIA GRID hardware on the ESXi hosts,users might not be able to start desktop sessions correctly.This issue might occur if the virtual machine was used previously in an NVIDIA GRID vGPU deployment.

**Workaround:** Remove the NVIDIA drivers from the virtual machine before you take a snapshot or make a template and deploy the desktop pool.

- When you create full-clone desktop pools, sometimes wrong templates are displayed and valid templates are hidden due to a cache issue.

**Workaround:** Restart Connection Server.

- When you use the vdmutil command to create a URL content redirection setting, you must name the setting url-filtering. If the setting name is noturl-filtering, there will be no redirection. For example:

```
vdmutil --createUrlSetting --urlSettingName url-filtering --urlScheme http --entitledApplication iexplore2012
--agentURLPattern "http://google.*" --urlRedirectionScopeLOCAL --authAs johndoe --authDomain mydomain --
authPasswordsecret
```

- VMware does not recommend creating more than one URL content redirection setting in this release.
- For virtual machines that have hardware version 8, the maximum allowed video RAM is 128MB. For virtual machines that have hardware version 9 and later, the maximum allowed video RAM is 512MB. If you configure a value from Horizon Administrator that exceeds the video RAM limit for a virtual machine's hardware version, errors appear in the vSphere

Client Recent Tasks pane and the configuration operation keeps repeating. This problem occurs only if you configure the video memory value through Horizon Administrator (Pool Settings page) and not through vSphere Client.

**Workaround:** Either upgrade the hardware version of the virtual machines in vSphere Client, or use Horizon Administrator to set the proper value for video memory based on the current virtual machine hardware version.

- When you try to add a SAML authenticator in Horizon Administrator, the **Add** button is disabled on the Manage SAML Authenticators page.

**Workaround:** Log in to Horizon Administrator as a user who has the Administrators or Local Administrators role.

- The ViewDbChk utility can display an "Archiving persistent disks..." message while removing machines from an automated linked-clone pool with floating assignment or an automated farm.

**Workaround:** None.

- Cloud Pod Architecture configuration changes made by another Horizon administrator while you are logged in to Horizon Administrator are not visible in your current Horizon Administrator session.

**Workaround:** Log out of Horizon Administrator and log in again to see the changes.

- In a Cloud Pod Architecture environment, pre-launched application sessions from global application entitlements are not shown in **Inventory > Search Sessions** in Horizon Administrator.

**Workaround:** Log in to the Horizon Administrator user interface for a Connection Server instance in the hosting pod and select **Monitoring > Events** to view pre-launched session information.

- When different major Horizon versions are installed on the pods in a Cloud Pod Architecture environment, users cannot launch remote desktops and applications on a later version pod when connected to an earlier version pod. For example, if pod A is running Horizon 6 version 6.x and pod B is running Horizon 7 version 7.x, users cannot launch desktops and applications on pod B when they connect through pod A.

**Workaround:** Install the same Horizon version on all pods in the pod federation. When planning a Cloud Pod Architecture upgrade from 6.x to 7.x, make sure that all pods are upgraded at the same time.

- Users that are assigned to 20 to 50 Cloud Pod Architecture global application entitlements have a 20 to 30 second delay while being authenticated to Horizon 7 when connecting through any version of Horizon Client.

**Note:** In Horizon 7 version 7.2, this connection time is slightly improved.

**Workaround:** None.

- When using Internet Explorer 10 or 11 on a Windows 8 or later computer, if you set the browser locale to Traditional Chinese, and you log in to Horizon Administrator, the navigation panel might be displayed in Simplified Chinese.

**Workaround:** Use an alternate browser to log in to Horizon Administrator.

- When provisioning 64- or 32-bit Windows 8 desktops in a vSphere 5.1 environment, the Sysprep customization can fail. The desktops end up in an ERROR state with a Customization timed out error message. This issue occurs when anti-virus software is installed in the parent virtual machine or template. The issue applies to full clone and linked clone desktops. It does not apply to linked clone desktops customized with QuickPrep.

**Workaround:** Uninstall the anti-virus software on the parent virtual machine or template and recreate the pool.

- For Intel vDGA, only the Haswell and Broadwell series of Intel integrated GPUs are supported. Broadwell integrated GPUs are supported only on vSphere 6 Update 1b and later. Haswell integrated GPUs are supported on vSphere 5.5 and later. The GPU must be enabled in the BIOS before it can be recognized by ESXi. For more information, see the documentation for your specific ESXi host. Intel recommends leaving the graphics memory settings in the BIOS set to their default values. If you choose to change the settings, keep the aperture setting at its default (256M).
- View Storage Accelerator might take tens of minutes to generate or regenerate the digest files for large virtual disks (for example, a 100 GB virtual disk). As a result, the desktop might be inaccessible for longer than expected.

**Workaround:** Use the blackout period to control when digest regeneration operations are allowed. Also, use the digest regeneration interval to reduce the frequency of these operations. Alternatively, disable View Storage Accelerator in desktop pools that contain very large virtual machines.

- After you upgrade to vSphere 5.5, a heap size error can occur if you use space-efficient virtual disks and you have more than 200 linked-clone virtual machines per ESXi host. For example: Error:Heap seSparse could not be grown by 12288 bytes for allocation of 12288 bytes

**Workaround:** Reduce the number of linked-clone virtual machines that use space-efficient virtual disks to less than 200 per ESXi host.

- In a hybrid vSAN environment, about three percent of the virtual machines might not use View Storage Accelerator. These machines will take few seconds longer to start up.

**Workaround:** Delete and recreate the virtual machines that failed to use View Storage Accelerator.

- In this release, View Storage Accelerator is not supported on Virtual Volume datastores.

**Workaround:** None

- An instant-clone desktop pool configured to use NVIDIA GRID vGPU fails to launch instant-clone virtual desktops or instant-clone virtual desktops with black screen and never recovers with the PCoIP or Blast display protocol using non h264 hardware encode. Non h264 hardware encode is uncommon for Blast. An example of non h264 hardware encode is any NVIDIA GPU profile that limits frame buffer to 512MB and has Windows 10 as the remote desktop operating version.

**Workaround:** Use the VMware Blast display protocol with h264 hardware encode to launch the instant-clone virtual desktops in the desktop pool configured with NVIDIA GRID vGPU.

- For vCenter Server 6.0 U3 or later, including vCenter Server 6.5, internal parent VMs migrate to another host during failure. This migration causes an issue because unnecessary parent VMs reside on the destination host.

**Workaround:** Manually remove these parent VMs. For more information, see the *Setting Up Virtual Desktops in Horizon 7* document.

- To reduce the possibility of memory exhaustion, vGPU profiles with 512 MB or less of frame buffer support only one virtual display head on a Windows 10 guest operating system.

The following vGPU profiles have 512 Mbytes or less of frame buffer:

- Tesla M6-0B, M6-0Q
- Tesla M10-0B, M10-0Q
- Tesla M60-0B, M60-0Q

- GRID K100, K120Q
- GRID K200, K220Q

**Workaround:** Use a profile that supports more than one virtual display head and has at least one GB of frame buffer.

- Published desktops and application pools fail to launch if they have the client restriction feature enabled and are entitled to a domain that is configured with a one-way AD trust.

**Workaround:** None

- After an upgrade, the option to add a farm is grayed out if you have a role with the "Manage Farms and Desktops and Application Pools" (object-specific privilege).

**Workaround:** Edit the role or create the role again with the "Manage Farms and Desktops and Application Pools" privilege, which also adds the "Manage Global Configuration and Policies" privilege.

- After an upgrade, the bookmarks do not appear in Workspace ONE.

**Workaround:** Add the bookmarks from the catalog in Workspace ONE again.

## Horizon Agent for Linux

This section describes issues that might occur with Horizon Agent for Linux or when you configure a Linux desktop.

- When you configure a Linux virtual desktop for multi-monitor support with a maximum 2560x1600 screen resolution, the submenu dialog boxes do not open.
- If you configure two monitors with different resolutions, and the resolution of the primary screen is lower than that of the secondary screen, you might not be able to move the mouse or drag application windows to certain areas of the screen.

**Workaround:** Make sure that the primary monitor's resolution is at least as large as the secondary monitor's.

- Configuring four monitors at 2560x1600 resolution on RHEL 6.6 or CentOS 6.6 virtual machines in vSphere 6.0 is not supported.

**Workaround:** Use 2048x1536 resolution or deploy this configuration in vSphere 5.5.

- If you configure two or more monitors at 2560x1600 resolution on RHEL 6.6 virtual machines in a vDGA environment, desktop performance is poor. For example, application windows do not move smoothly. This issue occurs when RHEL Desktop Effects are enabled.

**Workaround:** Disable Desktop Effects by going to **System > Preference > Desktop Effects** and selecting **Standard**.

- The Linux agent's keyboard layout and locale do not synchronize with the client if the Keyboard Input Method System is set to fcitx.

**Workaround:** Set the Keyboard Input Method System to iBus.

- Single Sign On (SSO) does not work well on a RHEL/CentOS 7.2 desktop when you add a domain using System Security Services Daemon (SSSD).

**Workaround:** After you add a domain using SSSD, modify the `/etc/pam.d/password-auth` file using the information in the VMware Knowledge Base article 2150330 [SSO configuration changes required when using SSSD to join AD on RHEL/CentOS 7.2 Desktops](#).

- The following issues occur with the Horizon Agent for Linux installer when FIPS mode is



selected:

- If the FIPS mode is selected during an interactive installation process, there are some instances when the warning dialog about the FIPS validation status is not displayed and the administrator is unable to confirm whether to proceed with the installation. This occurs when the EULA confirmation is bypassed.
- If the FIPS mode is specified to be installed on a platform other than RHEL, the FIPS mode installation fails silently. The feature does not get installed and no error message is displayed.

**Workaround:** None known.

- The single sign-on (SSO) feature does not work when you try to connect to a remote desktop that has Horizon for Linux installed with the FIPS feature enabled.

**Workaround:** Manually log in to your Active Directory (AD) user account.

## Horizon Agent

- The USB HUB device driver might not be installed properly when you install Horizon Agent on a desktop in a manual desktop pool. This issue can occur if, during the Horizon Agent installation, you restart the system before the USB HUB device driver is fully installed.  
**Workaround:** When you install Horizon Agent and you are prompted to restart the system, check the system tray to see if the USB HUB device driver software is still being installed. Wait until the device driver software is completely installed (typically about 30 seconds) before you restart the system. If you use a command-line script to install Horizon Agent silently, make sure to wait or sleep the script for long enough to allow the driver installation to complete before you restart the system. If you encounter this issue after Horizon Agent is installed, or you could not delay the system restart during a silent installation, update the USB HUB device driver by taking these steps:
  1. In the Device Manager, under **Other Devices**, right-click **VMware View Virtual USB Hub**.
  2. Click **Update Driver Software > Browse my computer for driver software**
  3. Go to C:\ProgramFiles\VMware\VMware View\Agent\bin\drivers and click **Next** to let Windows install the driver.
- To upgrade a desktop from Windows 8 to Windows 8.1, you must uninstall Horizon Agent, upgrade the operating system from Windows 8 to Windows 8.1, and then reinstall Horizon Agent. Alternatively, you can perform a fresh installation of Windows 8.1 and then install Horizon Agent.
- When you run the Horizon Agent installer on a Windows 8 virtual machine, the Windows desktop appears black when the video driver is being installed. The Windows desktop might appear black for several minutes before the installation completes successfully.  
**Workaround:** Apply the Windows 8.0 May 2013 roll-up before you install Horizon Agent. See [Microsoft KB article 2836988](#).
- When you run any Horizon 7 installer on a Windows 8.1 or Windows Server 2012/2012 R2 virtual machine (deployed as an RDS host or VDI desktop), the installer can take an unusual amount of time to finish. This problem occurs if the virtual machine's domain controller, or another domain controller in its hierarchy, is unresponsive or unreachable.  
**Workaround:** Verify that the domain controllers have the latest patches, enough free disk space, and can communicate with each other.

- When you uninstall Horizon Agent from an RDS host, an error dialog can be displayed, which prevents the uninstall operation from being completed. The dialog states that the uninstall operation failed to stop an RDS video driver. This issue can occur when disconnected desktop sessions are still running on the RDS host.  
**Workaround:** Reboot the RDS host to complete the uninstallation of Horizon Agent. As a best practice, ensure that all RDS sessions are logged off before you uninstall Horizon Agent.
- In FIPS mode, Horizon Agent fails to pair with Connection Server and the pool status is not available when Horizon Agent is installed to a drive other than the C drive.  
**Workaround:** When operating in the FIPS mode, install Horizon Agent on the C drive.
- A warning message about applications in use appears when you uninstall Horizon Agent on Windows Server 2016.  
**Workaround:** Click "Ignore" in the dialog box that appears when you use Windows Add or Remove Programs to uninstall Horizon Agent. If you uninstall Horizon Agent from the command line, use the command `msiexec /x /qn {GUID of Agent}` instead of the command `msiexec /x {GUID of Agent}`.
- When you uninstall the Horizon Agent, the mouse speed becomes slow and jerky. Uninstalling Horizon Agent also uninstalls the vmkbd.sys driver.  
**Workaround:** Repair VMware Tools on the Horizon Agent virtual machine.
- When upgrading from Horizon Agent 7.1 to Horizon Agent 7.2 on a Windows 7 guest operating system, a "Files in Use" dialog appears. The dialog states that the VMware Horizon Agent application is using files that need to be updated by the setup.  
**Workaround:** Click "Ignore" to proceed with the upgrade.
- Horizon Agent cannot install the virtual printing feature on RDS hosts that are physical machines. Virtual printing is supported on RDS desktops when Horizon Agent is installed on RDS hosts that are virtual machines.  
  
**Workaround:** Configure RDS hosts on virtual machines and install Horizon Agent.
- The virtual printing feature is supported only when you install it from Horizon Agent. It is not supported if you install it with VMware Tools.
- If vDGA is enabled on a Windows 7 virtual machine that is configured to use NVIDIA driver version 347.25, the desktop session can be disconnected. This issue does not occur on Windows 8.1 or on other NVIDIA driver versions.  
**Workaround:** Do not use NVIDIA driver version 347.25.
- Selecting the Scanner Redirection setup option with Horizon Agent installation can significantly affect the host consolidation ratio. By default, the Scanner Redirection option is not selected when you install Horizon Agent.  
**Workaround:** Make sure that the Scanner Redirection setup option is not selected for most users. For users who need the Scanner Redirection feature, configure a separate desktop pool and select the setup option only in that pool.
- When you uninstall Horizon Agent with the Scanner Redirection feature installed, the uninstall process requires you to close any running applications.  
**Workaround:** None. You must close the listed applications before you continue to uninstall Horizon Agent.
- Client drive redirection does not work with Horizon Agent installed on a 32-bit Windows 10 operating system.

**Workaround:** None. This is a Microsoft Windows Server issue.

- Windows 10 32-bit Horizon Agent installation throws "the arguments are invalid" exception and the installation continues after you click OK. This error occurs because the print spooler service is disabled.

**Workaround:** Enable the print spooler service for the installation to work as expected.

- If you install Horizon Agent on a Windows 10 or Windows Server 2016 operating system, and the scaling is not set to 100%, you cannot drag and drop applications from the primary monitor in a multi-monitor setup to another monitor. This issue can occur because of incorrect cursor input.

**Workaround:** Set the Horizon Agent DPI setting to 100% scaling.

- When you set a timeout value for HKLM\Software\VMware, Inc.\VMware VDM\Agent\USB\UemTimeouts, it fails to take effect.

**Workaround:** Reboot the Agent VM.

## Horizon GPO Bundle

- Computer-based global policy objects (GPOs) that require a reboot to take effect are not applied on instant clones.

**Workaround:** See the VMware Knowledge Base (KB) article, [2150495](#).

- Setting the size of the retry port range to 0 when configuring the "Configure the TCP port to which PCoIP Server binds and listens" or "Configure the UDP port to which PCoIP Server binds and listens" group policy causes a connection failure when users log in to the desktop with the PCoIP display protocol. Horizon Client returns the error message The Display protocol for this desktop is currently not available. Please contact your system administrator. The help text for the group policies incorrectly states that the port range is 0 through 10.

**Note:** On RDS hosts, the default base TCP and UDP port is 4173. When PCoIP is used with RDS hosts, a separate PCoIP port is used for each user connection. The default port range that is set by the Remote Desktop Service is large enough to accommodate the expected maximum of concurrent user connections.

**Workaround:**

- **PCoIP on single-user machines:** Set the retry port range to a value between 1 and 10. (The correct port range is 1 through 10.)
  - **PCoIP on RDS hosts:** As a best practice, do not use these policy settings to change the default port range on RDS hosts, or change the TCP or UDP port value from the default of 4173. Do not set the TCP or UDP port value to 4172. Resetting this value to 4172 will adversely affect PCoIP performance in RDS sessions.
- For Windows 2008 R2 SP1 desktop pools hosted on an RDS host, the language sync setting (from client to guest) is turned on by default and cannot be turned off. Therefore, disabling the group policy "Turn on PCoIP user default input language synchronization" for Horizon Agent has no effect. The remote desktop language always synchronizes with the language used on the client system.

**Workaround:** None.

- A GSSAPI\_ERROR message appears when you initially login with username and password and try to recursively unlock using smart card authentication to login to a local machine that has the group policy setting "Unlock remote sessions when the client machine is unlocked" enabled, and then Log In As Current User from Horizon Client.

**Workaround:** Disable Log In As Current User from Horizon Client and manually unlock the

virtual desktop using the username and password.

- The "Bandwidth limit" group policy setting does not take effect. The value you enter in the setting is ignored, and the existing bandwidth is used for serial port redirection. The bandwidth consumption depends on the number of concurrently used serial port devices and the baud rate used by each device.

**Workaround:** None.

- In a nested mode configuration where the first-level desktop (the machine where Horizon Client and Horizon Agent are installed) is a virtual desktop and the second-level desktop is a published desktop, the "Specify a filter in redirecting client printers" group policy setting does not affect the second-level desktop if you configure it in the first-level virtual desktop.

**Workaround:** If you want to filter printers for the second-level desktop, configure the "Specify a filter in redirecting client printers" group policy in the second-level desktop.

## Horizon Client

This section describes problems that end users might encounter when using Horizon Client or HTML Access to connect to remote desktops and applications. For problems that occur only in a specific Horizon Client platform, see the Horizon Client release notes on the [Horizon Clients Documentation page](#).

- If you use Horizon Client 3.5.x or earlier for Linux, Mac OS X, or Windows with USB auto-connection enabled, and you connect to a remote desktop for which USB redirection has been disabled with Smart Policies, USB devices attached to the client system disappear from the client system.

**Workaround:** Upgrade to Horizon Client 4.0 or later, or implement one of the workarounds described in VMware Knowledge Base (KB) article 2144334, [USB devices on your local system disappear when you connect to a remote desktop with Horizon Client 3.5.x or earlier](#).

- When multiple connections are made consecutively to a single RDS host, a few users (for example, one or two of 120 users) might not be able to start or restart RDS desktop sessions.

**Workaround:** Increase the number of vCPUs and the RAM size on the RDS host.

- The first connection to an RDS desktop or application fails if it has been more than 120 days since the RDS role was configured on the RDS host, and no previous connection was made. This issue also occurs with RDP.

**Workaround:** Wait a few seconds and connect to the RDS desktop or application again.

- Persistent settings for location-based printers are not supported if the settings are saved in the printer driver's private space and not in the DEVMODE extended part of the printer driver, as recommended by Microsoft.

**Workaround:** Use printers that have the user preference settings saved in the DEVMODE part of the printer driver.

- In a desktop session running on a Windows Server 2008 R2 SP1 RDS host, you cannot play back an H.264 video file, or playback AAC audio with a video file, in Windows Media Player. This is a known third-party issue.

**Workaround:** Go to the [Microsoft KB article 2483177](#) and download the Desktop Experience Decoder Update for Windows Server 2008 R2 package.

- When you play a YouTube video in a Chrome browser in a desktop session running on a Windows Server 2012 R2 RDS host, the video display can be corrupted. For example,

black boxes might pop up in the browser window. This issue does not occur on any other browser or on Windows Server 2008 R2 SP1 RDS hosts.

**Workaround:** In your Chrome browser, select **Chrome > Settings > Show advanced settings > System**, and deselect **Use hardware acceleration when available**.

- If you play a video in a desktop running on a Windows 2008 R2 SP1 physical RDS host, and you move the video display from the main monitor to another monitor, the video stops playing or the visual frames stop updating (although the audio might continue to play). This issue does not occur on a virtual machine RDS host or in a single monitor configuration, and it only occurs on Windows Server 2008 R2 SP1.

**Workaround:** Play videos on the main monitor only, or configure your RDS desktop pool on a virtual machine RDS host.

- If you launch a remote application that becomes unresponsive and then launch another application, the second application's icon is not added to the task bar on the client device.

**Workaround:** Wait for the first application to become responsive. (For example, an application might be unresponsive while large files are being loaded.) If the first application continues to be unresponsive, terminate the application process on the RDS virtual machine.

- The application Lync 2013 that does not have the February, 2013 update and is hosted on an RDS host running Windows Server 2012 R2 will crash shortly after launch with the error message "Microsoft Lync has stopped working." This is a known issue with Lync 2013.

**Workaround:** Apply the February, 2013 update of Lync. The update is available at [Microsoft KB article 2812461](#).

- For RDS host farms that are created with VMware Blast display protocol support, enabling the UDP network protocol for VMware Blast sessions reduces Blast Secure Gateway scale and sessions might fall back to the TCP network protocol.

**Workaround:** Do not enable the UDP network protocol for VMware Blast sessions on RDS hosts.

- Customized application icons with the .ico file extension do not appear on the Shortcut and Start Menu on a Windows desktop.

**Workaround:** Use the .png file extension when you save the customized application icon.

- Customized application icons with the .ico file extension do not display correctly in Horizon Client on an Android device.

**Workaround:** Do not use the .ico file extension when you save the customized application icon.

- The profile data is missing for multiple user sessions on RDS hosts. This issue occurs when the sessions are in the disconnected state but the task manager on the RDS host still shows these sessions.

**Workaround:** Delete the sessions from the RDS host or log the user off from the published desktop or application.

- When you log in to Workspace ONE, the pre-launch application session is not triggered. Pre-launch sessions are triggered only when there is a successful login to Connection Server from Horizon Client.

**Workaround:** Manually start an application or desktop from Workspace ONE to trigger the applications enabled for pre-launch to be started.

- Horizon Client cannot connect to a Connection Server instance if the server name or fully qualified domain name (FQDN) for the Connection Server instance contains non-ASCII



characters.

**Workaround:** None.

- On remote desktops that connect using PCoIP and are configured with multiple monitors, if a user plays a slide show in Microsoft PowerPoint 2010 or 2007, specifies a resolution, and plays the slides on the second monitor, part of each slide appears on each monitor.

**Workaround:** On the client system, resize the screen resolution on the second monitor to the desired resolution. Return to the remote desktop and start the slide show on the second monitor.

- On remote desktops that connect using PCoIP, if users play slides in Microsoft PowerPoint 2010 or 2007 and specify a resolution, the slides are played at that chosen resolution and are not scaled to the current resolution.

**Workaround:** Choose "Use current resolution" as the playback resolution.

- When you play videos in Windows Media Player on a desktop, PCoIP disconnections might occur under certain circumstances.

**Workaround:** On the remote desktop, open the Windows registry and navigate to the HKLM\Software\Wow6432Node\Policies\Teradici\PCoIP\pcoip\_admin\_defaults registry key for 64-bit Windows or the HKLM\Software\Policies\Teradici\PCoIP\pcoip\_admin\_defaults registry key for 32-bit Windows. Add the pcoip.enable\_tera2800DWORD registry value and set the value to 1.

- Copying and pasting an image from a remote desktop to the client system, or from the client system to a remote desktop, can fail because the clipboard memory size is not large enough to accommodate the image, even though the configured clipboard memory size is greater than or the same as the size of the image on disk. This problem occurs because the image size on disk is less than the image size in clipboard memory. For example, the size of the image in the clipboard memory can be two to three times size of the image on disk.

**Workaround:** Increase the clipboard memory size until it can accommodate the image.

- Using the VMware Blast display protocol and with Blast Secure Gateway (BSG) disabled, Horizon Client sometimes cannot recover from a brief (about 1 minute) network outage and the connection to the desktop is disconnected. This issue does not occur when BSG is enabled.

**Workaround:** Reconnect the session.

- After a brief network outage and the VMware Blast session between Horizon Client and a remote desktop has recovered or has been reconnected, certain features might stop working, such as:
  - Smart card
  - Client Drive Redirection (CDR) and File Association
  - Multimedia Redirection (MMR)
  - Lync/Skype for Business

**Workaround:** Disconnect and reconnect the session.

- Sometimes, when using Lync VDI to make a video call, the local image is not displayed.

**Workaround:** Update Microsoft Lync VDI to the latest version.

- If a user connects to an F5 server to access a remote desktop, and the F5 server is configured to use an RSA server, the user must input an RSA username and passcode. If the RSA user's PIN is not set, Horizon Client might fail to submit the passcode for the user. This problem is an F5 limitation.

**Workaround:** Users must contact their RSA administrator to set their PINs before using their PINs in an F5 and RSA setup.

- Data transfer is slow when copying and pasting text and images between Horizon Client and a remote desktop.

**Workaround:** Reduce the effective clipboard size so that less data is transferred at one time.

- The first time a user connects to a remote desktop or application on a Workspace ONE mode-enabled server, Horizon Client caches the Workspace ONE hostname on the client. From then on, Horizon Client always redirects to the Workspace ONE portal for that server. If the Workspace ONE server goes down, or if the Workspace ONE mode is changed or disabled, Horizon Client cannot connect to the server again because it always redirects to the Workspace ONE portal.

**Workaround:** Remove the Connection Server instance from server selector in Horizon Client, or use HTML Access to connect to the remote desktop or application.

- Skype for Business VDI optimized solution is not compatible for inter-operatibility with Lync 2010 clients.
- The RDS host stores only one set of application data for the first application launch of a session. Any subsequent application launch data is lost.

**Workaround:** Log off the session and launch another application to store that data.

- Desktops fail to start when you use HTML Access from Internet Explorer or Microsoft Edge Web browsers to connect to Connection Server, security server, or replica server on a Windows 10 client operating system. This issue affects desktops with Windows 10 N, Windows 10 KN, Windows 7 N and Windows 7 KN guest operating systems.

**Workaround:** Use Firefox or Google Chrome Web browsers for HTML Access.

- Sometimes after a call ends, you might see a message:  
Skype for Business has stopped working.

**Workaround:** Apply Skype for Business updates. See <https://support.microsoft.com/en-us/help/3158521/lync--skype-for-business--or-outlook-2016-or-2013-crash> for details.

- Changing the ringer volume level in audio settings of Skype for Business (in optimized mode) does not change the ringing volume when receiving a call in Windows, Mac, and Linux Horizon Clients.

**Workaround:** When you receive a call, manually change the volume of the output device or speaker connected to the Horizon Client to change the output volume.

- If you switch browser tabs while playing a redirected video in Internet Explorer, part of the video window continues to be displayed behind or next to the browser window. This issue only occurs on Windows 7 desktops.

**Workaround:** Use Windows 8.1 desktops. Alternatively, do not switch to another tab while a redirected video is playing.

- An action script error occurs when you play a YouTube Flash video on a remote desktop that has Flash MMR enabled.

**Workaround:**

- Option 1. Open the script support for the YouTube Web site and add appMode=1 with the URL of the YouTube site to the Url WhiteList.
- Option 2. Open Internet Explorer > Tools > Internet Options > General. Under "Browsing history" click the "Settings" button. In the next window, click the "View files" button. Delete all files from the INet Cache folder.

- When you play a flash video in a Windows 10 agent, Flash Redirection does not work.
- For Intel vDGA, multiple-monitor support is limited to no more than 3 monitors. The Intel driver supports only up to 3 monitors with a resolution of up to 3840 X 2160. If you try to connect with 4 monitors, the connection shows 3 black screens with just one screen working.
- When 4K monitors are configured on machines where 3D Rendering and vSGA are enabled, moving, resizing, or toggling the Windows Media Player window to full screen mode can be very slow. This issue does not occur with 2D, software 3D Rendering, or monitors with 2560x1440 resolution.

**Workaround:** None

- On Windows 8/8.1 desktops, 3D screen savers operate even when the 3D Renderer setting is disabled, and the screen savers do not render correctly. This issue does not occur on Windows 7 desktops.

**Workaround:** Make sure your end users do not use 3D screen savers, or enable the 3D Renderer setting for the desktop pool.

- With NVIDIA M60 GPU and driver version 361.89 or 361.94, users might see a blur red screen when they first connect to the Windows desktop, or when they right click on the desktop and then select **NVIDIA Control Panel > System Information**.

**Workaround:** Changing the resolution of the display or changing to full-screen mode fixes the problem and you can revert to the original resolution or screen mode. The problem disappears after the first time it occurs. Also, the problem does not occur with NVIDIA driver 361.51.

- A published desktop launches with a black screen after you install Horizon Agent with the 3D RDSH custom option on a Windows Server 2016 RDS host.

**Workaround:** To use the 3D RDSH feature, use a Windows Server 2012 RDS host.

- Using a smart card to log in to an RDS desktop takes longer than with a virtual, single-user desktop. This issue is less acute on Windows clients than other clients.

**Workaround:** None.

- On Windows 7 client machines, Horizon Client exits when the smart card removal policy is triggered.
- If a VDI desktop is in a remote location and experiencing high network latency, then a recursive unlock using smart card authentication might not work.

**Workaround:** Unlock the desktop manually.

- If you change the default HTTPS port, 443, on a Connection Server instance or security server, and users try to start their desktops from the Horizon User Portal, the desktops fail to launch. This issue occurs when users attempt to access their desktops via Horizon Workspace with either Horizon Client or HTML Access.

**Workaround:** Keep the default HTTPS port 443.

- When you add a SAML Authenticator in Horizon Administrator, an "Invalid certificate detected" window might be displayed, even when the Metadata URL points to a trusted certificate in the Trusted Root Certificate Authorities folder in the Windows certificate store. This issue can occur when an existing SAML Authenticator with a self-signed certificate was using the same Metadata URL when the trusted certificate was added to the Windows certificate store.

**Workaround:**

1. Remove any trusted certificates for the Metadata URL from the Trusted Root Certificate Authorities folder in the Windows certificate store.

2. Remove the SAML Authenticator with the self-signed certificate.
  3. Add the trusted certificate for the Metadata URL to the Trusted Root Certificate Authorities folder in the Windows certificate store.
  4. Add the SAML Authenticator again.
- You cannot connect to a Windows Server 2008 R2 SP1 desktop, or you encounter a black screen the first time that you use Horizon Client, even though the desktop that you are connecting to is in the Available state.  
**Workaround:** Shut down and power on the Windows Server 2008 R2 SP1 virtual machine. When the desktop is in the Available state, try to connect again. Resetting or restarting the virtual machine does not solve this problem. You must shut down the virtual machine first and then power it back on.
  - On some occasions, when you reconnect to a Windows 8.x desktop session, you might not see the desktop display immediately. A black screen might be displayed for up to 20 seconds.  
**Workaround:** None
  - Adobe Flash optimization settings that use high quality and aggressive throttling are not fully enabled when end users use Internet Explorer 10 or Internet Explorer 11 on Windows 8 or Windows 8.1 desktops.  
**Workaround:** None.
  - If a user of a Windows 8 remote desktop logs in using Kerberos authentication, and the desktop is locked, the user account for unlocking the desktop that Windows 8 shows the user by default is the related Windows Active Directory account, not the original account from the Kerberos domain. The user does not see the account he or she logged in with. This is a Windows 8 issue, not directly a Horizon 7 issue. This issue could, but does not usually, occur in Windows 7.  
**Workaround:** The user must unlock the desktop by selecting "Other user." Windows then shows the correct Kerberos domain and the user can log in using the Kerberos identity.
  - Windows Media Player is not active and cannot be made visible when the Windows 10 remote desktop display is resized to one monitor and Windows Media Player is open on another monitor. This problem occurs regardless of whether the video is playing or not and whether MMR is enabled or not.  
**Workaround:** Close and reopen Windows Media Player or resize the remote desktop to multi-monitor display.
  - Microsoft Windows Fax and Scan does not work with Scanner Redirection on Windows 10 desktops.  
**Workaround:** Use another scan application on Windows 10 desktops or change to another desktop platform.
  - Sometimes the scanner settings do not take effect on WIA scanners. For example, if you select gray scale mode and select a partial area of the original image, the scanner might use color and scan the whole image.  
**Workaround:** Use a TWAIN scanner.
  - In some environments, if you switch to a different WIA scanner, the images might continue to be scanned from the original scanner.  
**Workaround:** Log off the remote desktop session. Launch a new desktop session and perform the scan using the selected scanner.
  - When you use the Ambir Image Scan Pro 490i to perform a scan on a remote desktop or application, the dialog box always displays "Scanning..." and does not complete.

**Workaround:** Perform a scan on the client. The client scan calibrates the scanner. After the calibrate operation is finished, run the scan within the remote desktop or application.

- When you use the TOPAZ signature pad for multiple remote desktop sessions on Windows Server 2012 remote desktops, you might get only one device for a session that is redirected successfully. This problem can occur because the TOPAZ signature pads have the same serial number.

**Workaround:** Use TOPAZ signature pad devices with different serial numbers. You can use the serial number modifier software provided by the TOPAZ manufacturer to modify the serial numbers.

- Unicode keyboard input does not work correctly with HTML Access in Horizon 7 for Linux Desktops.
- When you connect to a Linux desktop, some keyboard inputs do not work. For example, if you are using a non-English IME on both the client device and the remote desktop, some non-English keys are not displayed correctly.

**Workaround:** Set the English IME on the client device and set the non-English IME on the remote desktop.