Citrix Virtual Delivery Agent

Windows 10 Technology Preview - Administrator's Guide

July 2015
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About the Citrix VDA Windows 10 technology preview release

This technology preview is a pre-release version of the Virtual Delivery Agent (VDA) compatible with the Windows 10 Enterprise (Insider Preview) desktop operating system. This VDA preview release is available to Citrix Partners and Customers with current Software Assurance and Software Maintenance entitlements (SA/SWM).

The VDA has been primarily tested on desktops running Windows 10 Enterprise (Insider Preview) Evaluation Copy. In this document, all references to “Windows 10” or “Windows 10 Technical Preview” refer to Windows 10 Enterprise (Insider Preview) Evaluation Copy.

Citrix has tested Builds 10074 and 10130 and understand that customers may have deployed other or later build variants. This technology preview is not supported by Citrix or Microsoft and is not recommended for use in a production environment. Upgrades to or from the Citrix Virtual Delivery Agent technology preview are not supported.

The VDA technology preview can be deployed using:

- Single, unprovisioned, non-production virtual desktops (VDI).
- Non-production physical desktops using Remote PC Access.

In addition, Citrix has also included the following new features:

- Support for the Universal Print Server on Windows Server 2012 R2.
- New enhancements and features to the HDX technology stack.
Prerequisites and system requirements for the technology preview

**Important:** Do not upgrade to or from this technology preview. The technology preview is for new installations in non-production environments only.

- Windows 10 Enterprise (Insider Preview) Evaluation Copy on desktops where you want to install the VDA for Windows Desktop OS.
- XenDesktop Virtual Desktop Agent from this technology preview. With this technology preview, Citrix is delivering the VDA using a standalone isolated installer. For more details on the standalone installer, see the XenApp and XenDesktop Production Documentation article, Install VDAs using the standalone package.
  
  **Note:** This technology preview is targeted at Windows 10. It is possible to install on other non-Windows 10 and Server 2012 R2 platforms; however the focus for the VDA testing for the technology preview was Windows 10.
- .Net 4.5.1 for the desktop VDA and Windows 10 includes .Net 4.6 – this .Net requirement is then skipped by the installer. Other pre-requisites are installed by the VDA (Microsoft Visual C++ 2008/2013 Runtimes (32-bit and 64-bit)).
- License file for the technology preview program. This is a ready-to-use license file. Use a separate License Server in a non-production environment.
- See the System Requirements section of the XenApp 7.6 and XenDesktop 7.6 product documentation for a full list of current requirements.

Limitations of the technology preview

- Personal vDisk and, Profile Management and App-V components are incompatible in combination with Windows 10 and this technical preview. Machine Creation Services (MCS) had minimal testing with Windows 10, and no issues discovered at time of publication.
- Citrix Profile management is temporarily disabled for Windows 10. For more information on Citrix Profile management, see User profiles in the XenApp and XenDesktop documentation.
- This technology preview does not support the use of Microsoft Edge. We recommend you use Internet Explorer on machines with VDAs.
- The 3D Pro VDA and GPU hardware acceleration via the standard VDA are not supported on Windows 10.
- Drive encryption technology or Secure Boot is not supported.

Sharing feedback

Installing the Virtual Delivery Agent (VDA) for Windows 10

To install the VDA for Windows Desktop OS on machines running Windows 10 Technical Preview for either single, unmanaged virtual machines, or Remote PC Access:

1. Download the VDA package `VDAWorkstationSetup.exe`.
2. Disable User Account Control (UAC), then right-click the downloaded package and choose Run as administrator.
3. Select Enable Remote PC Access, and click Next.

4. Select the standard VDA option. 3D Pro is not supported with Windows 10.

5. In the Core Components step, click Next.
6. In the Delivery Controller step, click Do it manually and type in a non-production Controller address.
7. Click **Add**, then **Next**.
8. In the Features step, make sure that Optimize performance and Personal vDisk (PvD) are not selected. Optimize performance and PvD are not supported in this technology preview.

9. Click **Next**.
10. Review the Firewall step, and click **Next**.
11. Review the Summary step, and click **Install**.

During the installation, accept the device driver prompts which are displayed.
12. When the installation has finished, restart the machine.
13. Add the machine to a new catalog and delivery group and assign the desktop to a user.
   - For Remote PC Access deployments, add the desktop to a Remote PC Access Catalog, the user to the delivery group, and then log on locally once on the physical PC to auto-assign the desktop.

While the installation for the VDAServerSetup.exe is similar, if you use the VDA for Windows Server OS installation as part of this technology preview, it now automatically deploys Microsoft Visual C++ 2013 runtime (32-bit and 64-bit), as well as 2008 and 2010 runtimes (32-bit and 64-bit). Microsoft Visual C++ 2005 is no longer deployed. These pre-requisites will initiate a server restart, with the VDA installation continuing after the restart. For more details on the standalone installer, see the XenApp and XenDesktop Production Documentation article, Install VDAs using the standalone package.
### Summary of additional new and enhanced features

The following table and descriptions give an overview of additional new features available in this technical preview:

<table>
<thead>
<tr>
<th>Feature</th>
<th>Server VDA</th>
<th>Workstation VDA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Windows Server 2012 / 2012 R2</td>
<td>Windows 10</td>
</tr>
<tr>
<td>Windows 10 experience (non-3D)*</td>
<td>N/A</td>
<td>✓</td>
</tr>
<tr>
<td>UpServer component</td>
<td>✓</td>
<td>N/A</td>
</tr>
<tr>
<td>UpClient component</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Signature devices*</td>
<td>✓</td>
<td>N/A</td>
</tr>
<tr>
<td>Drawing tablets**</td>
<td>N/A</td>
<td>✓</td>
</tr>
<tr>
<td>Video fallback prevention policy</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Smart card virtual channel improvements</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

*Signature devices work across XenApp and XenDesktop and do not require a driver to be used as a signature device. Wacom has additional software than can be installed to customize the device further. See [http://www.wacom.com/](http://www.wacom.com/).

** Drawing tablets – Certain drawing input devices may present as an HID device on PCI/ACPI buses and are not supported. These devices should be attached on a USB host controller on the client to be redirected inside a XenDesktop session.

- **Support for the Universal Print Server on Windows Server 2012 R2.** The installation files for the Citrix Universal Print Server (UPS) supplied with this technology preview include support for UPS on Windows Server 2012 R2 and Windows Server 2012.

- **Support for signature devices and drawing tablets.** Administrators can set a policy to enable devices for client-side polling and set optimization modes as part of that policy. This means that users can work effectively in wide area networks with devices such as Wacom signature pads and tablets within XenApp and XenDesktop sessions. For more information, see [Support for signature devices and drawing tablets](#) in this document.

- **Video fallback prevention policy.** Enables administrators to have more control over server-side and client-side fetching and rendering of multimedia content. For example, if a user’s device cannot play a video locally, a new setting allows the administrator to control whether the video is automatically rendered on the server, or prevented and a message displayed to the user. For more information, see [Video fallback prevention policy](#) in this document.

- **Smart card virtual channel improvements.** Includes support for smart card reader plug-and-play, virtual smart cards (Microsoft Windows Trusted Platform Module-based virtual smart cards), and performance improvements. For more information on deploying smart cards, see [Smart cards](#) in the XenApp and XenDesktop documentation, and [Virtual Smart Card Overview](#) in the Microsoft Windows TechCenter.
Managing new features through HDX Policies

You can download the technology preview installation files from https://www.citrix.com/downloads/xendesktop/betas-and-tech-previews.html.

**Important**: Do not use the VDA installer from the XenApp and XenDesktop 7.x full-product ISO to install this new VDA.

To try out the additional new features delivered with this technology preview, the installation files also include:

- Group policy package – includes the Group Policy MSI containing new and updated policy settings for new features.
- Citrix Universal Print Server.

**Installing the Group Policy package**

The following installation procedures are required only if you want to try out the additional features, such as support for signature pads and drawing devices, which use additional policy settings.

Before installing the Group Policy MSI and connecting to the new VDA for the first time to try out the additional features, check that you have:

- Installed in a XenApp and XenDesktop 7.6 Controller.
- Created a new machine catalog and delivery group on this non-production Delivery Controller.
- Connected to this non-production Delivery Controller with StoreFront.
- Used the supplied evaluation license so that a production license is not used for this technology preview.

See the full XenApp and XenDesktop documentation for more information on these steps.

To install the Group Policy MSI:

1. In Studio, check that you have an isolated controller and have created a site and close Studio.
2. Run Regedit, and open HKLM\Software\Microsoft\Windows\CurrentVersion\Uninstall
3. Search for “Citrix Group Policy”. For example:
   
   HKLM\Software\Microsoft\Windows\CurrentVersion\Uninstall\{90C256F6-DDB6-465D-9E99-BC324454CDE0}\DisplayName [REG_SZ]="Citrix Group Policy Management 2.4.0.0"

   **Caution**: Editing the registry incorrectly can cause serious problems that may require you to reinstall your operating system. Citrix cannot guarantee that problems resulting from the incorrect use of Registry Editor can be solved. Use Registry Editor at your own risk. Be sure to back up the registry before you edit it.

4. Set SystemComponent=0
5. Go to Add/Remove Programs and now uninstall Citrix Group Policy Management (version: 2.4.0.0)
6. Install the new Group Policy MSI, CitrixGroupPolicyManagement_x64.msi.
7. Launch Studio or GPMC and the new policies should now appear.

There is also a known issue in Studio, which displays the Machine Operating System as “Unknown” for Windows 10.
Managing support for signature devices and drawing tablets

When a user plugs in a USB input device, the host checks if the device is allowed by the USB policy settings. If the device is allowed, the host then checks the **Client USB device optimization rules** for the device. If no rule is specified, then the device is handled as Interactive mode (02). See descriptions below for available modes.

Support for the optimization of the Wacom STU signature pads and tablets series of products has been preconfigured in the installation of XenApp and XenDesktop policies for this technology preview.

**Note**: For the use of Wacom signature pads and tablets, we recommend that you disable the screen saver. Steps on how to do this are at the end of this section.

Adding and modifying Client USB device optimization rules

The Client USB device optimization rules can be applied to devices to disable optimization, or to change the optimization mode.

Policy rules take the format of **tag=value expressions** separated by whitespace. The following tags are supported:

<table>
<thead>
<tr>
<th>Tag</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mode</td>
<td>The optimization mode is supported for input devices for class=03. Supported modes are:</td>
</tr>
<tr>
<td></td>
<td>No optimization – value <strong>01</strong>.</td>
</tr>
<tr>
<td></td>
<td>Interactive mode – value <strong>02</strong>. Recommended for devices such as pen tablets and 3D Pro mice.</td>
</tr>
<tr>
<td></td>
<td>Capture mode – value <strong>04</strong>. Preferred for devices such as signature pads.</td>
</tr>
<tr>
<td>VID</td>
<td>Vendor ID from the device descriptor</td>
</tr>
<tr>
<td>PID</td>
<td>Product ID from the device descriptor</td>
</tr>
<tr>
<td>REL</td>
<td>Release ID from the device descriptor</td>
</tr>
<tr>
<td>Class</td>
<td>Class from either the device descriptor or an interface descriptor</td>
</tr>
<tr>
<td>SubClass</td>
<td>Subclass from either the device descriptor or an interface descriptor</td>
</tr>
<tr>
<td>Prot</td>
<td>Protocol from either the device descriptor or an interface descriptor</td>
</tr>
</tbody>
</table>
Examples

Mode=00000004 VID=1230 PID=1230 class=03 #Input device operating in capture mode
Mode=00000002 VID=1230 PID=1230 class=03 #Input device operating in interactive mode (default)
Mode=00000001 VID=1230 PID=1230 class=03 #Input device operating without any optimization
Mode=00000100 VID=1230 PID=1230 # Device setup optimization disabled (default)
Mode=00000200 VID=1230 PID=1230 # Device setup optimization enabled

Disabling the optimization mode using a registry setting

The optimization mode can be disabled system-wide by a registry flag:

HKLM\System\CurrentControlSet\Services\icausb\Parameters

\DisableInputOptimization DWORD – set value to 1

A system restart is required for this registry change to take effect.

Disabling the screen saver for Wacom signature pad devices

For the use of Wacom signature pads and tablets, we recommend that you disable the screen saver as follows:

1. Install the Wacom-STU-Driver after redirecting the device.
2. Install Wacom-STU-Display msi to gain access to the signature pad control panel.
3. Go to Control Panel > Wacom STU Display > STU430 or STU530, and select the tab for your model.
4. Click Change, then select Yes when the UAC security window pops up.
5. Select Disable slideshow, then Apply.

Note: Once the setting is set for one signature pad model, it is applied to all models.

More information

These links provide more information related to USB policy rules and devices. They have not been updated with the new features in the technology preview.

- XenApp 7.6 and 7.6 XenDesktop product documentation: USB devices policy settings
- Knowledge base articles:
  - How to create USB Policy Rules
  - XenApp/XenDesktop USB Citrix Tested Device List
Managing Video fallback prevention policy

Video load management policy setting

Administrators can use the Video load management policy setting to specify the methods that will be attempted to deliver streamed content to users.

<table>
<thead>
<tr>
<th>Policy setting value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Configured</td>
<td>Default value, behavior same as the option &quot;Server Fetched - Server Rendered&quot;.</td>
</tr>
<tr>
<td>Server Fetched - Server Rendered</td>
<td>Allow Client Side Fetching to RAVE to Server Side fallbacks.</td>
</tr>
<tr>
<td>Server Fetched - Client Rendered</td>
<td>Allow Client Side Fetching to RAVE fallback, however block RAVE to Server Side Rendering fallback.</td>
</tr>
<tr>
<td>Client Fetched - Client Rendered</td>
<td>Block Client Side Fetching to RAVE to Server Side Rendering fallbacks.</td>
</tr>
</tbody>
</table>

Policy Category: ICA\Multimedia

When the content does not play, the error message “Company has blocked video because of lack of resources” displays in the player window.

Flash server load management policy setting

Specify the Flash Server Load Management Policy to use this policy setting:

<table>
<thead>
<tr>
<th>Policy setting value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Configured</td>
<td>This is the default value and will result in no change in the current behavior of the system.</td>
</tr>
<tr>
<td>Only small content</td>
<td>Only intelligent fallback content will be rendered on the server; other Flash content will be replaced with an error *.swf.</td>
</tr>
<tr>
<td>Only small content with a supported client</td>
<td>Only intelligent fallback content will be rendered on the server if the client is currently using Flash Redirection; other content will be replaced with an error *.swf.</td>
</tr>
<tr>
<td>No server side content</td>
<td>All content on the server will be replaced with an error *.swf.</td>
</tr>
</tbody>
</table>

Policy Category: ICA\Adobe Flash Delivery\Flash Redirection

Note: To use this policy setting you should specify an error *.swf file. This error *.swf will replace any content that you do not want to be rendered on the VDA.
Related HDX Settings: Flash default behavior [Enabled], Flash server load management error *.swf
Related Client Receiver Setting: Flash > Don’t Optimize content

**Flash server load management error *.swf**

<table>
<thead>
<tr>
<th>Policy setting value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example:</td>
<td>A URL to a *.swf file that will be used to replace Flash instances when the server load management policies are in use.</td>
</tr>
<tr>
<td><a href="http://domainName.tld/sample/path/error.swf">http://domainName.tld/sample/path/error.swf</a></td>
<td></td>
</tr>
</tbody>
</table>

**Policy Category**

- ICA\Adobe Flash Delivery\Flash Redirection

Related Settings: Flash server load management

### Installing Citrix Universal Print Server (UPS)

The UPS package contains updated versions of the standalone UPS client and server components.

The UPServer component, which you install on print servers, is now supported on Windows Server 2012 R2 and Windows Server 2012. Testing for this technology preview has been targeted at Windows Server 2012 R2.

The following are prerequisites for installing the new UPServer component on the print server:

- 32-bit Visual Studio 2013 runtime
- 64-bit Visual Studio 2013 runtime
- Latest CDF.msi, cdf_x64.msi
- UPServer msi, UpsServer_x64.msi

The UPClient component, which you install on XenApp and XenDesktop hosts that provision session network printers, is compatible with Windows 10 desktops and is part of the VDA installation.

**Note:** The UPClient component in this technology preview does not support XenApp 6.5 platforms.

To install the Citrix Universal Print Server:

1. Download the installation package.
2. Install the UPServer component by extracting and then launching the component’s MSI, UpsServer_x64.msi
3. A restart is required after installing the UPServer component.

For more information on the Citrix Universal Print Server, see [Printing](#) in the XenApp and XenDesktop product documentation.
Known issues

- On log off or shut down, an Application Error occurs with explorer.exe – this is a known Windows 10 issue on Windows Technical Preview builds earlier than 10138. Users will see a “Cannot start desktop…” error message. On the console of the desktop, the following error message is displayed:

- It is not possible to log on using the "Other user" logon option on a Windows 10 VDA when there is no user currently logged on. This means that only the last logged on user can log on to the machine. [#566137]

  The current workaround is to set
  [HKLM\SOFTWARE\Microsoft\Windows\CurrentVersion\Policies\System\HideFastUserSwitching] to 0.

  **Note:** Do not use the Direct Fast User Switching ("Switch Account") feature in an ICA session.

- An error, "CtxTouchWindow: CtxMtHost.exe", is displayed intermittently when a user tries to sign out of a VDA session on Windows 10. When the user clicks "Ok" on the error message, the session signs out. [#569018]

- Occasionally when a user tries to access a desktop, the desktop viewer opens, then closes after 1-2 seconds. In Studio, the session appears to be brokered with the username "-". The user is then unable to connect to that desktop until it is restarted by an administrator. [#563906]

- Launching a 2012 R2 Remote Desktop Services VDA intermittently displays a black screen. [#571628]

- On a Windows 10 VDA, the printer creation for client and session printers fails after session roaming. To work around this issue, log off and back on to the session to recreate the printers. [#566641]

- Launching a 2012 R2 Remote Desktop Services VDA intermittently displays a black screen. [#571628]

- Connecting to a VDA from Receiver for Chrome or Receiver for HTML5 may fail. [also #571628]

- Resizing a session window sometimes causes issues with the graphics display within the session window. To work around this issue, resize the session window or disconnect and reconnect. [#574452]

- Receiver may fail to connect to a virtual application or desktop. This has been observed with deployments involving a "double hop" or passthrough authentication (such as those with smart cards and 64-bit Windows 7 endpoints). There is no workaround for this issue. [#565381]

- When using Receiver for Mac with multiple monitors on a Windows 10 VDA, there is an issue with scrolling and mouse movement. To work around this issue, disable the Use All Displays in Full Screen option in Receiver for Mac. [#572252]
• When launching a XenApp session, the application may fail to start if a registry was not present prior to the installation. This can occur if installing into a clean image on Microsoft Hyper-V, VMware ESX, or physical systems.

To work around this issue, set the registry key [HKLM\System\CurrentControlSet\Control\Citrix], and change "Read Control" permission to "Read" for "Everyone". Apply to this key and all subkeys.

• When viewing server-side rendered content, screen artifacts, for example, brief, multi-colored blocks, may appear within the content. This can also be reproduced in Remote Desktop Protocol (RDP).
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