



HP True Graphics

Administrator Guide for HP Thin Clients

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1 Getting started

HP True Graphics offloads rich multimedia content to the thin client's GPU, delivering high-frame-rate images and boosting efficiency.

Server-side requirements

See the following table for a list of supported server-side products of the independent software vendor (ISV) you are using for your virtual desktop infrastructure (VDI).

ISV	Supported products
Citrix®	XenApp®/XenDesktop® 7.0 or newer IMPORTANT: The Citrix server must support sending session data in H.264 format (a Citrix technology known as SuperCodec). H.264 is enabled by default and is processed using the DeepCompressionV2 encoder, a CPU-based compression algorithm.
VMware®	VMware Horizon™ 6.0 and newer VMware Horizon View™ 5.2 and 5.3 VMware View® 5.1

Client-side requirements

See the following table for a list of supported thin client operating systems and supported client-side software from the ISV you are using for your VDI.

Supported operating systems	Supported Citrix clients	Supported VMware clients
Windows 10 IoT Enterprise Windows Embedded 8.1 Industry Pro Windows Embedded 8 Standard Windows Embedded Standard 7	Citrix Receiver 4.4 and newer IMPORTANT: Remote applications must be run in windowed (non-seamless) mode to benefit from HP True Graphics.	VMware Horizon Client 4.0 and newer (using the Blast protocol)
HP ThinPro 5.0 and newer	Citrix Receiver 13.1.1 and newer NOTE: A version of Citrix Receiver that supports HP True Graphics is preinstalled starting with HP ThinPro 5.2 and is available as an add-on for HP ThinPro 5.0 and 5.1.	VMware Horizon Client 4.0 and newer (using the Blast protocol)

2 Client-side configuration (Windows)

To enable HP True Graphics on a Windows-based HP thin client:

1. Copy **receiver.adml** from **<Program Files folder>\Citrix\ICA Client\Configuration** to **C:\Windows\PolicyDefinitions\<locale-specific folder>**.



NOTE: The Program Files folder where Citrix Receiver is installed is named **Program Files** in 32-bit versions of Windows and **Program Files (x86)** in 64-bit versions of Windows.

The name of the locale-specific folder depends on the Windows locale setting. For example, for English (United States), the folder name is en-US.

2. Copy **receiver.admx** from **<Program Files folder>\Citrix\ICA Client\Configuration** to **C:\Windows\PolicyDefinitions**.
3. Open the Local Group Policy Editor.



TIP: Run `gpedit.msc` using the **Run** function in the Start menu.

4. In the left pane, select **Computer Configuration ► Administrative Templates ► Citrix Components ► Citrix Receiver ► User experience**.
5. In the right pane, double-click **Hardware Acceleration for graphics**.
6. Select the **Enabled** option, and then select **OK**.

To verify that the policy is applied, start a Citrix ICA session, and then use Registry Editor to locate the following registry key:

HKEY_CURRENT_USER\Software\Citrix\ICA Client\CEIP\Data\GfxRender\<session ID>

The value for **Graphics_GfxRender_Decoder** and **Graphics_GfxRender_Renderer** should be **2**. If the value is **1**, CPU-based decoding is being used instead of GPU-based decoding.

3 Client-side configuration (HP ThinPro)



NOTE: The information in this chapter applies to Citrix only. For VMware, simply use the Blast protocol to enable HP True Graphics.

For more information about locating the options discussed in this chapter, see the *Administrator Guide* for your version of HP ThinPro.

Compression settings

To enable HP True Graphics on HP ThinPro:

- ▲ Select the **Enable H264 Compression** general setting for Citrix connections.



NOTE: Some screen data, such as text, might be sent using methods other than H.264. In general, it is best to keep this feature enabled, but for troubleshooting or specific use cases, the following registry keys can be set to **0** to disable this feature:

- **root/ConnectionType/xen/general/enableTextTracking**
- **root/ConnectionType/xen/general/enableSmallFrames**

Window settings

To force remote applications to run in windowed mode:

- ▲ Set the **TWI Mode** general setting for Citrix connections to **Force Seamless Off**.

Monitor layout and hardware limitations

Consider the following limitations on monitor layout:

- Most configurations with a maximum of two monitors that have a 1920 × 1200 resolution are supported.
- HP t420 Thin Client: Due to its default BIOS configuration, this model uses HP True Graphics for one monitor only, by default. See [Enabling HP True Graphics for multiple monitors on the HP t420 on page 4](#) for more information.
- HP t630 Thin Client: This model supports a maximum of two monitors at 1920 × 1200 or one monitor at 3840 × 2160.
- HP t730 Thin Client: This model supports a maximum of three monitors at 1920 × 1200.
- Rotated monitors might not display correctly.
- If you are using HP True Graphics with two monitors and trying to play a video using HDX MediaStream, the video will fail because H.264 supports only two hardware decode sessions, which are being consumed by the monitors.



NOTE: HDX MediaStream is also trying to leverage local hardware decoding of H.264, which causes the issue.

Enabling HP True Graphics for multiple monitors on the HP t420

To enable HP True Graphics for multiple monitors on the HP t420:

1. Restart the thin client and press **F10** to access the BIOS.
2. Select **Advanced ► Integrated Graphics**.
3. Set **Integrated Graphics** to **Force**.
4. Set **UMA Frame Buffer Size** to **512 MB**.

After these steps are performed, the amount of memory available for graphics is expanded, and HP True Graphics can be used for two monitors.



TIP: These settings can also be configured via HPDM or via the BIOS tools included with HP ThinPro.

4 Tips & best practices

Consider the following when using HP True Graphics:

- After connecting to a remote desktop, you can use Citrix HDX Monitor to determine which encoder is being used for the session by examining the **Component_Encoder** value under the **Graphics - Thinwire Advanced** section. If the value reads **DeepCompressionV2Encoder** or **DeepCompressionEncoder**, then the server is properly sending the data in a format that is accelerated by HP True Graphics.



NOTE: If legacy graphics are being forced via a server policy, such as CompatibilityEncoder or LegacyEncoder, the server is compressing graphics in a method that is compatible with older versions of Citrix clients, and HP True Graphics will not provide enhanced performance.

- HP True Graphics might provide some benefits to older versions of XenDesktop if using HDX 3D Pro. Benefits are not provided if HDX 3D Pro is used with the visual quality set to **Always Lossless**, because then the graphical information is not sent to the thin client in H.264 format.