

# Citrix Receiver for Windows 4.10

Nov 27, 2017

This pdf file includes the Citrix Receiver for Windows 4.10 documentation. You can save a local copy of this file and use it offline. Use the built-in Search and Bookmark features to find what you need.

Citrix Receiver for Windows is an easy-to-install software that provides access to your applications and desktops using XenApp and XenDesktop from a remote client device. Citrix Receiver for Windows provides access from your desktop, Start menu, Receiver user interface, or web browsers.

You can use Citrix Receiver for Windows on domain and non-domain joined PCs, tablets, and thin clients. Using Citrix StoreFront in conjunction with Citrix Receiver for Windows allows your organization to provide you with self-service access to your applications and desktops - all with a common user interface, regardless of the endpoint device hardware, operating system (32-bit and 64-bit editions), or form factor.

This is the documentation set for Citrix Receiver for Windows 4.10 - the most recent Current Release of Citrix Receiver.

For information about the Long Term Service Release (LTSR) of Citrix Receiver for Windows, see [Citrix Receiver for Windows 4.9 LTSR](#).

For information about the differences between LTSR and Current Releases, see [Lifecycle Milestones for Citrix Receiver](#).

For information about earlier Citrix Receiver for Windows releases, see the following sections:

[Citrix Receiver for Windows 4.8](#)

[Citrix Receiver for Windows 4.7](#)

[Citrix Receiver for Windows 4.6](#)

[Citrix Receiver for Windows 4.5](#)

[Citrix Receiver for Windows 4.4 \(LTSR\)](#)

[ICA Settings Reference](#)

# What's new

Nov 27, 2017

## What's new in 4.10

### Introducing Citrix Receiver for Windows Store edition

With this release, Citrix is introducing a Store edition of Receiver for Windows. You can download Citrix Receiver for Windows (Store) Version 4.10 from the [Microsoft Store](#). Citrix Receiver for Windows (Store) supports many of the familiar features of the traditional version of Citrix Receiver for Windows, but not all. For a list of supported, unsupported, and partially supported features, see [Feature Matrix](#).

For more information about Citrix Receiver for Windows (Store), see [Citrix Receiver for Windows \(Store\)](#) product documentation.

### Expanded tablet mode in Windows 10 using Windows Continuum

Windows Continuum is a Windows 10 feature that adapts to the way the client device is used. Citrix Receiver for Windows Version 4.10 now supports Windows Continuum, including dynamic change of modes.

For touch-enabled devices, the Windows 10 VDA starts in tablet mode when there is no keyboard or mouse attached. It starts in desktop mode when either a keyboard or a mouse or both are attached. Detaching or attaching the keyboard on any client device or the screen on a 2-in-1 device like a Surface Pro toggles between tablet and desktop modes. For more information, see [Tablet mode for touchscreen devices](#) in XenApp and XenDesktop documentation.

The Windows 10 VDA detects the presence of a keyboard or a mouse on a touch-enabled client device when you connect or reconnect to a session. It also detects when you attach or detach a keyboard or mouse during the session. This feature is enabled by default on the VDA. To disable the feature, modify the **Tablet mode toggle** policy using Citrix Studio.

Tablet mode offers a user interface that is better suited to touchscreens:

- Slightly larger buttons.
- The Start screen and all apps you start open in a full screen.
- The taskbar contains a Back button.
- Icons are removed from the taskbar.

Desktop mode offers the traditional user interface where you interact in the same manner as using a PC with a keyboard and mouse.

Note: Web Receivers do not support Windows Continuum features.

For more information, see [XenServer 7.2 Release Notes](#).

### Improved protocol driver error messages

With this release, the protocol driver error messages that appear during a connection and SSL-related error messages are improved to include details with appropriate error codes. You can use the error codes to get additional information on the error by running `net helpmsg <error code>` in the command prompt or refer to the [Microsoft System Error codes](#).

In earlier releases, protocol driver errors were undefined and covered a wide range potential errors. This made it difficult to understand the messages and troubleshoot the errors.

## Improved DPI support

Starting with this release, Citrix Receiver for Windows provides improved support for handling high DPI monitors in a session. You can now use multiple monitors with different DPI settings.

Using this feature, you can scale the sessions to the monitor DPI settings or use the native session's resolution. High DPI support is available in both application and desktop session.

You can scale the display to the required resolution based on the monitor DPI settings. Seamless applications are scaled as per the monitor DPI settings.

In case of multiple monitors with different DPIs, the seamless application snaps to the most appropriate monitor when moved. This is to avoid graphical conflicts that might occur when applications are running between differently scaled monitors.

By default, DPI scaling is set to enabled. You can configure this feature using the Group Policy Object template and Advanced Preferences dialog.

For information about configuring DPI scaling, see [Configure DPI scaling](#).

## Support for H.265 video encoder mode

Starting with this release, Citrix Receiver for Windows supports the use of the H.265 video codec for hardware acceleration of remote graphics and videos. To benefit from this feature, it must be supported and enabled on both the VDA and Citrix Receiver for Windows. If the GPU on the endpoint does not support H.265 decoding using the DXVA interface, the H265 Decoding for graphics policy settings is ignored and the session falls back to using the H.264 video codec.

### Prerequisites

1. VDA 7.16 and later.
2. Enable the **Optimize for 3D graphics workload** policy on the VDA.
3. Enable the **Use hardware encoding for video codec** policy on the VDA.

Note: H.265 encoding is supported only on the NVIDIA GPU.

In Citrix Receiver for Windows, this feature is set to **Disabled** by default.

For information about configuring H.265 video encoding, see [Configuring Citrix Receiver for Windows to use H.265 video encoding](#).

## Enhancement to adaptive transport

In earlier releases, when HDXoverUDP is set to **Preferred**, data transport over EDT is used when possible, with fallback to TCP.

Starting with this release and with session reliability enabled, EDT and TCP are attempted in parallel during the initial connection, session reliability reconnection, and auto client reconnect. This enhancement reduces connection time when EDT is preferred but the required underlying UDP transport is unavailable and TCP needs to be used.

By default, after fallback to TCP, adaptive transport continues to seek EDT every 5 minutes.

## Configure NetScaler Gateway using the command line interface

Starting with this release, you can configure the NetScaler Gateway store URL using the command line interface.

For more information, see [Examples of a command line installation](#).

## Option to hide the Advanced Preferences sheet and its contents

Starting with this release, you can customize the availability and the contents of the **Advanced Preferences** sheet that is present in the right-click menu of the Citrix Receiver icon in the notification area. Doing so ensures that users can apply only administrator-specified settings on their systems. Specifically, can:

- Hide the Advanced Preferences sheet altogether
- Hide the following, specific settings from the sheet:
  - Data Collection
  - Connection Center
  - Configuration Checker
  - Local Keyboard Layout Setting
  - DPI Settings
  - Support Info
  - Settings Option

For more information about how to hide the **Advanced Preferences** sheet and the contents that are present in the Advanced Preferences dialog, see [Hiding the Advanced Preferences sheet](#).

## Improved Self-Service plug-in performance

With this release, the Self-Service plug-in launch is improved. The application continues to run in the background even after you close the window.

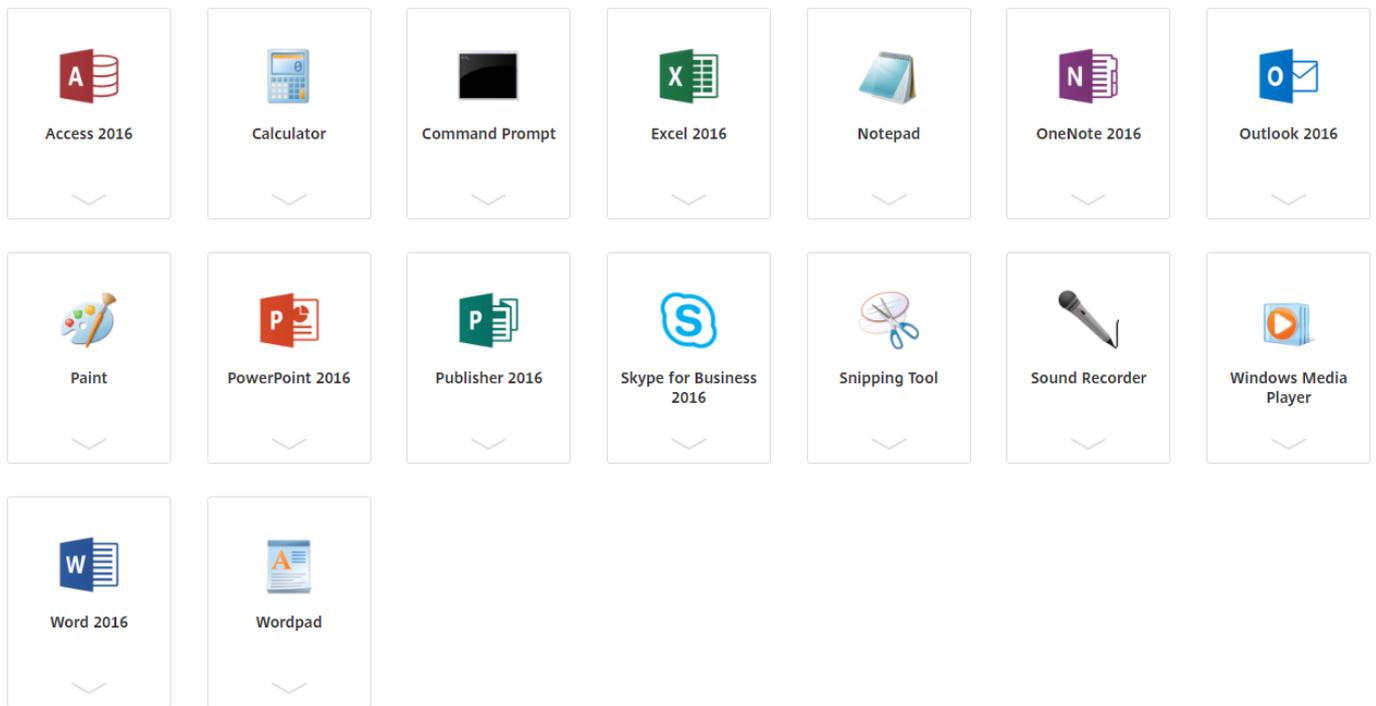
## Support for Workspace configuration

Citrix Receiver for Windows now supports configuring workspaces for subscribers, who might be using one or more services available from Citrix Cloud.

A workspace is part of a digital workspace solution that enables IT to securely deliver access to apps from any device. This screenshot is an example of what the workspace experience looks like to your subscribers. This interface is evolving and may look different to what your subscribers are working with today. For example, it might say "StoreFront" at the top of the page instead of "Workspace".

## Apps

All (16)



Citrix Receiver for Windows and Receiver for web currently supports Azure Active Directory authentication. For more information about Workspace configuration, see [Workspace configuration](#) in Citrix Cloud.

# Fixed issues

Nov 27, 2017

## Citrix Receiver for Windows 4.10

Compared to: Citrix Receiver for Windows 4.9

### Client Device Issues

- Devices such as a keyboard, mouse, or a monitor connected to a docking station or a USB hub cannot be used. The issue occurs when the user session is in full-screen mode or if the session window is in focus and if you connect the docking station or the hub to a client machine after starting the user session. [#LC8295]

### Content Redirection

- File type association might not work when you log on to Citrix Receiver for Windows using a roaming profile. [#LC8042]

### HDX RealTime

- When multiple webcams of the same model are installed on the VDA, only the latest webcam might be recognized by the session and mapped. With the fix, multiple webcams that are the same model can be used in any video conference application inside a session.

#### Note:

- With Fix #LC5008 installed, you might not be able to switch webcams from the "Preferences" tab.
- To enable this fix, you must install both a server and a client hotfix that contains Fix #LC5008. [#LC5008]

### Session/Connection

- When attempting to launch Microsoft Internet Explorer as a different user than the currently logged in user using the "Run As" command and with the Redirect.exe process running on the system, the browser might launch but content does not load for about 20-30 seconds. [#LC5227]
- Attempts to launch a session might fail with the following error message:

"The ICA file contains an invalid unsigned parameter."

Before you upgrade or replace the new ADMX file, set the ICA file signing related policy "Enable ICA File Signing" to "Not configured."

**Note:** Fix #LC5338 works with StoreFront 3.0.4000, StoreFront 3.9 and later versions. [#LC5338]

- Attempts to launch a desktop using Mozilla Firefox might fail. The issue occurs when the desktop viewer fails to delete a previously created ICA file from the temporary directory of Internet Explorer. This results in an "Access denied" error that prevents the copying of the ICA file when you launch a new session. [#LC7883]
- When you launch an application from the Start menu or the desktop shortcut, the application might launch but the following error message appears:

"Cannot find this file, Please verify that the correct path and file name are given." [#LC8253]

- With Citrix Receiver for Windows 4.8 installed, certain features of an employee web portal might not function properly. However, when the Citrix ICA Client ActiveX control is disabled within Microsoft Internet Explorer, the website functions properly. [#LC8428]
- When certain third-party applications attempt to send a large number of characters to a session with HDX seamless apps enabled, only a few characters might be sent to the application instead of sending all the characters. [#LC8560]
- After you install Citrix Receiver for Windows using the silent command and configure the Store using GPO or a command line, a credential window might appear after some time. [#LC8608]

### System Exceptions

- Citrix Receiver for Windows might exit unexpectedly with the following error message:  
"Citrix HDX Engine has stopped working" [#LC8040]
- Citrix Receiver for Windows 4.8 might experience a fatal exception, displaying a blue screen. The issue occurs when you restart the system using certain multifunction keyboard models and plug and unplug the keyboard multiple times from the system. [#LC8182]
- After removing the headphones from a user device while an audio file is playing, the session might become unresponsive until you disconnect and reconnect the session. [#LC8243]
- When you use the keyboard shortcut "Alt+Enter" in a published seamless application, the wfica32.exe process might exit unexpectedly. [#LC8317]
- In a double-hop scenario, the wfica32.exe process might exit unexpectedly when you switch a session between clients. [#LC8354]

### User Experience

- The mouse pointer continues to display as an hourglass after performing a zoom operation by using the mouse scroll wheel. [#LC7721]
- When launching a session in seamless mode while using Epic Hyperspace, the application might not allow other applications that are running locally on an endpoint to appear in the foreground. The Epic Hyperspace application might retain the foreground focus until the application is minimized. [#LC7906]
- The Citrix Receiver for Windows application window might pop up randomly, taking focus on the endpoint when the "Auto Refresh" policy is configured through the registry setting. [#LC8176]
- When you record sound with audio quality set to high, the quality of the sound recording might be poor. [#LC8241]
- When you restore a seamless window from full-screen to its original size in a multi-monitor environment and then drag it back across monitors in order to view the entire application, the window might be clipped incorrectly. As a result, only a partial window is visible. The issue occurs with seamless windows that are wider than the monitor and thus partially off-screen. [#LC8325]
- When you configure shortcut options in the Store web.config file, published application shortcuts might disappear from

the Start menu and desktop.

**Note:** This fix provides a complete fix for Fix #LC7577. [#LC8391]

- When you connect to a published desktop, blank areas might appear on the desktop that change when resizing the window. This error occurs when using legacy graphics mode. [#LC8518]

**Note:** This version of Citrix Receiver for Windows also includes all fixes included in Versions [4.9](#), [4.8](#), [4.7](#), [4.6](#), [4.5](#), [4.4](#), [4.3](#), [4.2](#), [4.1](#), and [4.0](#).

# Known Issues

Nov 27, 2017

## Known issues in Citrix Receiver for Windows 4.10

Citrix Receiver for Windows 4.10 contains all known issues that were present in Version [4.5](#), [4.6](#), [4.7](#), [4.8](#), and [4.9](#), plus the following, additional known issues:

- In a multi-monitor setup with each monitor set to different DPI, when you enable the relative mouse in a session, the mouse movement is not steady. As a workaround, set the DPI scaling only to 100% on both the monitors when using the relative mouse functionality. [#RFWIN-7187]
- When you switch from tablet mode to desktop mode on a Windows 10 device, the desktop viewer turns unresponsive. [#RFWIN-7306]
- Before using Citrix Receiver for Windows Version 4.10: Consider whether your organization uses the HDX RealTime Optimization Pack for Skype for Business or similar, third-party multimedia optimization applications that overlay the video locally on the device running on Windows. Examples of such applications include Cisco Virtualization Experience Media Edition for Jabber, Avaya VDI Communicator for One-X softphones, and others. The Citrix Receiver SDK, used by these applications, is not updated for this release and does not support DPI scaling on Windows 10 high DPI devices. [#RFWIN-7313]
- In an IPv6 setup, connections to the NetScaler Gateway might fail. [#RFWIN-7316]
- When DPI scaling is enabled and the monitor has a DPI greater than 100%, the images might be blurry. This is a result of scaling and is to be expected. [#RFWIN-7319]
- In a session running in a multi-monitor setup with DPI scaling enabled, when you set the **Preference > Display** to either **Scale to fit** or **Actual size**, an offset behavior has been observed with the mouse when you resize the session to windowed mode. [#RFWIN-7329]
- When you enable Framehawk on the VDA and DPI scaling on the client, and the DPI is not set to 100%, a gray border and offset mouse behavior is observed in the session. [#RFWIN-7365]

# Third party notices

Nov 27, 2017

Citrix Receiver for Windows might include third party software licensed under the terms defined in the following document:

 [Citrix Receiver for Windows Third Party Notices](#)

# System requirements and compatibility

Nov 27, 2017

## Requirements

- This version of Citrix Receiver for Windows requires a minimum of 500MB free disk space and 1GB RAM.
- .NET Framework minimum requirements
  - NET 3.5 Service Pack 1 is required by the Self-Service plug-in, which allows users to subscribe to and launch desktops and applications from the Receiver user interface or from a command line. For more information, see [Configure and install Receiver for Windows using command-line parameters](#).
  - The .NET 2.0 Service Pack 1 and Microsoft Visual C++ 2008 Service Pack 1 Redistributable Package are required.

## Compatibility matrix

Citrix Receiver for Windows is compatible with the following Windows operating systems and web browsers. It is also compatible with all currently supported versions of XenApp, XenDesktop, and NetScaler Gateway as listed in the [Citrix Product Lifecycle Matrix](#).

### Note

The NetScaler Gateway End Point Analysis Plug-in (EPA) does not support native Citrix Receiver for Windows.

## Operating system

Windows 10 32-bit and 64-bit editions \*

Windows 8.1, 32-bit and 64-bit editions (including Embedded edition)

Windows 7, 32-bit and 64-bit editions (including Embedded edition)

Windows Thin PC

Windows Server 2016

Windows Server 2012 R2, Standard and Datacenter editions

Windows Server 2012, Standard and Datacenter editions

Windows Server 2008 R2, 64-bit edition

Windows 10 Redstone 3

\* Supports Windows 10 Anniversary Update and Creators Update.

## Browser

Internet Explorer

Latest Google Chrome (requires StoreFront)

Latest Mozilla Firefox

Microsoft Edge

# Supportability matrix

Operating systems supported on touch-enabled devices	Operating systems supported on VDAs
Windows 10	Windows 10
Windows 8	Windows 8
Windows 7	Windows 7
	Windows 2012 R2
	Windows Server 2016

# Connections, Certificates and Authentication

Nov 27, 2017

## Connections

1. HTTP store
2. HTTPS store
3. NetScaler Gateway 10.5 and later
4. Web Interface 5.4

Citrix Receiver for Windows can be connected to the VDA or an ICA session can be established on windows domain-joined machines, managed devices (local and remote with or without VPN) and non-domain joined machines.

## Certificates

1. Private (self-signed)
2. Root
3. Wildcard
4. Intermediate

### Private (self-signed) certificates

If a private certificate is installed on the remote gateway, the root certificate of the organization's certificate authority must be installed on the user device to successfully access Citrix resources using Citrix Receiver for Windows.

### Note

If the remote gateway's certificate cannot be verified upon connection (because the root certificate is not included in the local Keystore.), an untrusted certificate warning appears. If a user chooses to continue through the warning, a list of apps is displayed but the apps cannot be launched.

### Installing root certificates

For domain-joined computers, you can use Group Policy Object administrative template to distribute and trust CA certificates.

For non-domain joined computers, the organization can create a custom install package to distribute and install the CA certificate. Contact your system administrator for assistance.

### Wildcard certificates

Wildcard certificates are used on a server within the same domain.

Citrix Receiver for Windows supports wildcard certificates; however, they must be used in accordance with your organization's security policy. In practice, an alternative to wildcard certificates is a certificate containing the list of server

names with the Subject Alternative Name (SAN) extension is considered. These certificates are issued by both private and public certificate authorities.

## Intermediate certificates

If your certificate chain includes an intermediate certificate, the intermediate certificate must be appended to the NetScaler Gateway server certificate. For information, see [Configuring Intermediate Certificates](#).

# Authentication

## Authentication to StoreFront

	Receiver for Web using browsers	StoreFront Services site (native)	StoreFront XenApp Services site (native)	NetScaler to Receiver for Web (browser)	NetScaler to StoreFront Services site (native)
Anonymous	Yes	Yes			
Domain	Yes	Yes	Yes	Yes*	Yes*
Domain pass-through	Yes	Yes	Yes		
Security token				Yes*	Yes*
Two-factor (domain with security token)				Yes*	Yes*
SMS				Yes*	Yes*
Smart card	Yes	Yes		Yes	Yes
User certificate				Yes (NetScaler plug-in)	Yes (NetScaler plug-in)

\* With or without the NetScaler plug-in installed on the device.

## Note

Citrix Receiver for Windows supports two-factor authentication (domain plus security token) using NetScaler Gateway to the StoreFront native service.

## Authentication to Web Interface

Citrix Receiver for Windows supports the following authentication methods (Web Interface uses the term **Explicit** for domain and security token authentication):

	Web Interface (browsers)	Web Interface XenApp Services site	NetScaler to Web Interface (browser)	NetScaler to Web Interface XenApp Services site
Anonymous	Yes			
Domain	Yes	Yes	Yes*	
Domain pass-through	Yes	Yes		
Security token			Yes*	
Two-factor (domain with security token)			Yes*	
SMS			Yes*	
Smart card	Yes	Yes		
User certificate			Yes (NetScaler plug-in)	

\* Available only in deployments that include NetScaler Gateway, with or without the associated plug-in installed on the device.

For information about authentication, see [Configuring Authentication and Authorization](#) in the NetScaler Gateway documentation and [Manage](#) topics in the StoreFront documentation.

For information about authentication methods supported by Web Interface, see Web Interface documentation.

# Install

Nov 27, 2017

You can install the CitrixReceiver.exe installation package in one of the following methods:

- By a user from Citrix.com or your own download site
  - A first-time user who obtains Citrix Receiver for Windows from Citrix.com or your own download site can set up an account by entering an email address instead of a server URL. Citrix Receiver for Windows determines the NetScaler Gateway or StoreFront server associated with the email address and prompts the user to log on and continue the installation. This feature is referred to as "Email-based account discovery."  
Note: A first-time user is one who does not have Citrix Receiver for Windows installed on the device.
  - Email-based account discovery for a first-time user does not apply if Citrix Receiver for Windows is downloaded from a location other than Citrix.com (such as a Receiver for Web site).
  - If your site requires configuration of Citrix Receiver for Windows, use an alternate deployment method.
- Automatically from [Receiver for Web](#) or from a [Web Interface logon screen](#).
  - A first-time user can set up an account by entering a server URL or downloading a provisioning (CR) file.
- Using an Electronic Software Distribution (ESD) tool
  - A first-time user must enter a server URL or open a provisioning file to set up an account.

Citrix Receiver for Windows does not require administrator rights to install unless you are using pass-through authentication.

## HDX RealTime Media Engine (RTME)

A single installer now combines the latest Citrix Receiver for Windows with the HDX RTME installer. When installing Citrix Receiver by using the executable file (.exe), the HDX RTME is installed as well.

If you have installed the HDX RealTime Media Engine, when you uninstall and then reinstall Citrix Receiver for Windows, ensure that you use the same mode that you used to install the HDX RTME.

### Note

Installing the latest version of Citrix Receiver with integrated RTME support requires administrative privileges on the host machine.

Consider the following HDX RTME issues when installing or upgrading Citrix Receiver for Windows:

- The latest version of Citrix ReceiverPlusRTME contains HDX RTME; no further installation is required to install RTME.
- Upgrading from a previous Citrix Receiver for Windows version to the latest bundled version (Citrix Receiver with RTME) is supported. Previously installed versions of RTME are overwritten with the latest version; upgrading from the same Citrix Receiver for Windows version to the latest bundled version (for example, Receiver 4.7 to the bundled Receiver 4.7 plus RTME) is not supported.
- If you have an earlier version of RTME, installing the latest Citrix Receiver for Windows version automatically updates the RTME on the client device.
- If a more recent version of RTME is present, the installer retains the latest version.

### Important

The HDX RealTime Connector on your XenApp/XenDesktop servers must be at least version 2.0.0.417 for compatibility with the new RTME package; that is, you cannot use RTME 2.0 with the 1.8 RTME Connector.

## Manual Upgrade to Citrix Receiver for Windows

For deployments with StoreFront:

- Best practice for BYOD (Bring Your Own Device) users is to configure the latest versions of NetScaler Gateway and StoreFront as described in the documentation for those products on the [Product Documentation site](#). Attach the provisioning file created by StoreFront to an email and inform users how to upgrade and to open the provisioning file after installing Citrix Receiver for Windows.
- As an alternative to providing a provisioning file, inform users to enter the NetScaler Gateway URL. Or, if you configured email-based account discovery as described in the StoreFront documentation, inform users to enter their email address.
- Another method is to configure a Citrix Receiver for Web site as described in the StoreFront documentation and complete the configuration described in [Deploy Citrix Receiver for Windows from Citrix Receiver for Web](#). Inform users how to upgrade Citrix Receiver for Windows, access the Citrix Receiver for Web site, and download the provisioning file from Citrix Receiver for Web (click the user name and click Activate).

For deployments with Web Interface

- Upgrade your Web Interface site with Citrix Receiver for Windows and complete the configuration described in [Deploy Citrix Receiver for Windows from a Web Interface logon screen](#). Let your users know how to upgrade Citrix Receiver for Windows. You can, for example, create a download site where users can obtain the renamed Citrix Receiver installer.

## Considerations when upgrading

For more information about considerations before upgrading Citrix Receiver for Windows, see the Knowledge Center article [CTX135933](#).

## Installation with administrator and non-administrator privileges

The following differences exist between installations of Citrix Receiver for Windows performed by an administrator and those performed by a (non-administrator) user.

	Administrator	User
Installation folder	C:\Program Files (x86)\Citrix\ICA Client	%USERPROFILE%\AppData\Local\Citrix\ICA Client
Installation type	Per-system installation	Per-user installation

## Note

If a user-installed instance of Citrix Receiver for Windows exists on the system and an administrator installs Citrix Receiver for Windows on the same system, there will be a conflict. Citrix recommends that you uninstall all user-installed instances of Citrix Receiver for Windows before installing Citrix Receiver for Windows as an administrator.



# Install and uninstall Citrix Receiver for Windows manually

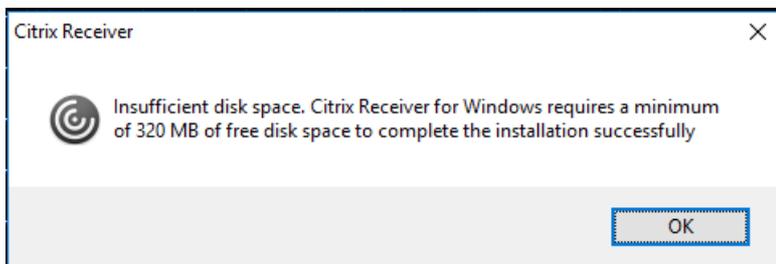
Nov 27, 2017

You can install Citrix Receiver for Windows from the installation media, a network share, Windows Explorer, or a command line by manually running the CitrixReceiver.exe installer package. For command line installation parameters and space requirements, see [Configure and install Receiver for Windows using command-line parameters](#).

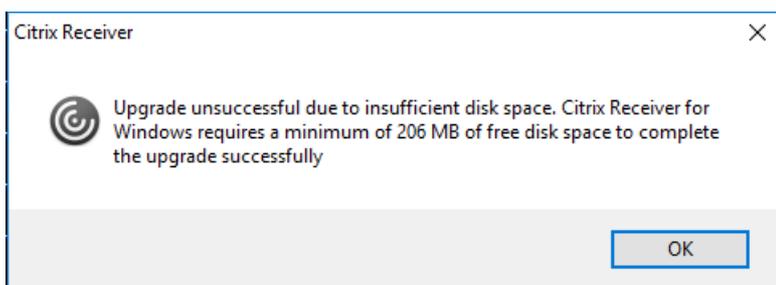
## Validating free disk space

Citrix Receiver for Windows performs a check to verify whether there is enough available disk space to complete the installation. The verification is performed both during a fresh installation and an upgrade.

During a fresh installation, the installation ends when there is insufficient disk space and the following dialog appears.



When you are upgrading Citrix Receiver for Windows, the installation ends when there is insufficient disk space and the following dialog appears.



The following table provides details on the minimum required disk space to install Citrix Receiver for Windows.

Installation type	Required disk space
Fresh installation	320 MB
Upgrade of Citrix Receiver	206 MB

## Note

- The installer performs the check on the disk space only after extracting the installation package.
- When the system is low on disk space during silent installation, the dialog does not appear but the error message is recorded in the **CTXInstall\_TrolleyExpress-\*.log**.

# Uninstalling Citrix Receiver for Windows

You can uninstall Citrix Receiver for Windows with the Windows Programs and Features utility (Add/Remove Programs).

## To uninstall Citrix Receiver for Windows

You can also uninstall Citrix Receiver for Windows from a command line by typing the following command:

```
CitrixReceiver.exe /uninstall
```

After uninstalling Citrix Receiver for Windows, the custom Citrix Receiver for Windows registry keys created by receiver.adm/receiver.adml or receiver.admx remain in the Software\Policies\Citrix\ICA Client directory under HKEY\_LOCAL\_MACHINE and HKEY\_LOCAL\_USER.

If you reinstall Citrix Receiver for Windows, these policies might be enforced, possibly causing unexpected behavior. To remove the customizations, delete them manually.

# Configure and install using command-line parameters

Nov 27, 2017

Customize Citrix Receiver for Windows installer by specifying command line options. The installer package self-extracts to the user's temp directory before launching the setup program. The space requirement includes program files, user data, and temp directories after launching several applications.

For more information space requirements, see [System requirements](#).

To install Citrix Receiver for Windows from a command prompt, use the syntax:

## CitrixReceiver.exe [Options]

### Auto-update

<b>Option</b>	/AutoUpdateCheck = auto/manual/disabled
<b>Description</b>	Indicates that Citrix Receiver for Windows detects when an update is available. <ul style="list-style-type: none"><li>• Auto – You are notified when an update is available (default).</li><li>• Manual – You are not notified when updates are available. Check for updates manually.</li><li>• Disabled – Disable auto-update</li></ul>
<b>Sample usage</b>	CitrixReceiver.exe /AutoUpdateCheck = auto CitrixReceiver.exe /AutoUpdateCheck = manual CitrixReceiver.exe /AutoUpdateCheck = disabled

<b>Option</b>	/AutoUpdateStream= LTSR/Current
<b>Description</b>	Indicates the release of Citrix Receiver for Windows. <ul style="list-style-type: none"><li>• LTSR – indicates that the release is a Long Term Service Release</li><li>• Current – indicates that the release is the latest version of Citrix Receiver for Windows</li></ul>
<b>Sample usage</b>	CitrixReceiver.exe /AutoUpdateStream= LTSR CitrixReceiver.exe /AutoUpdateStream= Current

<b>Option</b>	/DeferUpdateCount
<b>Description</b>	Indicates the number of times the <b>Remind me later</b> option is displayed. Indicates that you can defer the update to set count. <ul style="list-style-type: none"><li>• -1 – indicates that you can defer the notifications any number of times (default value=-1).</li></ul>

	<ul style="list-style-type: none"> <li>• 0 – indicates that the <b>Remind me later</b> option is not displayed.</li> <li>• Any other number – indicates that the <b>Remind me later</b> option is displayed in that count. For example, if you set the value to 10, the <b>Remind me later</b> option is displayed 10 times.</li> </ul>
<b>Sample usage</b>	<pre>CitrixReceiver.exe /DeferUpdateCount=-1</pre> <pre>CitrixReceiver.exe /DeferUpdateCount=-0</pre> <pre>CitrixReceiver.exe /DeferUpdateCount= &lt;any other number&gt;</pre>

<b>Option</b>	/AURolloutPriority
<b>Description</b>	<p>Indicates the period when you can stage the rollout.</p> <ul style="list-style-type: none"> <li>• Fast – Update rollout happens at the beginning of the delivery period.</li> <li>• Medium – Update rollout happens at the mid-delivery period.</li> <li>• Slow – Update rollout happens at the end of the delivery period.</li> </ul>
<b>Sample usage</b>	<pre>CitrixReceiver.exe /AURolloutPriority=Fast</pre> <pre>CitrixReceiver.exe /AURolloutPriority=Medium</pre> <pre>CitrixReceiver.exe /AURolloutPriority=Slow</pre>

## Enable bidirectional content redirection

### Note

By default, Citrix Receiver for Windows does not install the bidirectional content redirection components if they are already installed on the server. If you are using XenDesktop as a client machine, you must install Citrix Receiver for Windows by using the /FORCE\_LAA switch to install the bidirectional content redirection components. The feature, however, must be configured both on the server and the client.

<b>Option</b>	ALLOW_BIDIRCONTENTREDIRECTION=1
<b>Description</b>	Indicates that the bidirectional content redirection between client to host and host to the client is <b>Enabled</b> .
<b>Sample usage</b>	<pre>CitrixReceiver.exe /ALLOW_BIDIRCONTENTREDIRECTION=1</pre>

## Hide Settings Option

<b>Option</b>	/DisableSetting
---------------	-----------------

<b>Description</b>	Suppresses Settings Option to be displayed in the Advanced Preferences dialog.
<b>Sample usage</b>	CitrixReceiver.exe /DisableSetting=3

If you want both Application Display and Reconnect Options to be displayed in the Settings Option.. Enter CitrixReceiver.exe /DisableSetting=0

If you want Settings Option to be hidden in the Advanced Preferences dialog Enter CitrixReceiver.exe /DisableSetting=3

If you want Settings Option to display only Application Display Enter CitrixReceiver.exe /DisableSetting=2

If you want Settings Option to display only Reconnect Options Enter CitrixReceiver.exe /DisableSetting=1

#### Enable Local App Access

<b>Option</b>	FORCE_LAA=1
<b>Description</b>	By default, Citrix Receiver for Windows does not install the client side Local App Access components if the components are already installed on the server. To force the client side Local App Access components on the Citrix Receiver, use FORCE_LAA command line switch. Administrator-level privileges are required to perform these steps. For more information on Local App Access, see <a href="#">Local App Access</a> in XenApp and XenDesktop documentation.
<b>Sample usage</b>	CitrixReceiver.exe /FORCE_LAA =1

#### Display usage information

<b>Option</b>	/? or /help
<b>Description</b>	Indicates usage information
<b>Sample usage</b>	CitrixReceiver.exe /? CitrixReceiver.exe /help

## Suppress reboot during UI installation

<b>Option</b>	/noreboot
<b>Description</b>	Suppresses reboot during UI installations. This option is not necessary for silent installs. If you suppress reboot prompts, the USB devices that are in suspended state when Citrix Receiver for Windows installs is not recognized by Citrix Receiver for Windows until after the user device is restarted.
<b>Sample usage</b>	CitrixReceiver.exe /noreboot

## Silent installation

<b>Option</b>	/silent
<b>Description</b>	Disables the error and progress dialogs to run a completely silent installation.
<b>Sample usage</b>	CitrixReceiver.exe /silent

## Enable single sign on authentication

<b>Option</b>	/includeSSON
<b>Description</b>	<p>Indicates that the Citrix Receiver for Windows will be installed with the single sign-on component.</p> <p>The related option, ENABLE_SSON, is enabled when /includeSSON is on the command line. If you use ADDLOCAL= to specify features and you want to install the single sign on, you must also specify the value SSON.</p> <p>To enable pass-through authentication for a user device, you must install Citrix Receiver for Windows with local administrator rights from a command line that has the option /includeSSON. For more information, see <a href="#">How to Manually Install and Configure Citrix Receiver for Pass-Through Authentication</a>.</p> <p>Note: Smart card, Kerberos and Local user name and password policies are inter-dependent. The order of configuration is important. We recommend to first disable unwanted policies, and then enable the policies you require. Carefully validate the result.</p>
<b>Sample usage</b>	CitrixReceiver.exe /includeSSON

## Enable single sign on when /includeSSON is specified

<b>Option</b>	ENABLE_SSON={Yes   No}
	Enable Single sign-on when /includeSSON is specified. The default value is Yes. This property is required

<b>Description</b>	for smart card Single sign-on. Note that users must log off and log in to their devices after an installation with Single sign-on authentication enabled. Requires administrator rights.
<b>Sample usage</b>	CitrixReceiver.exe ENABLE_SSON=Yes

#### Always-on tracing

<b>Option</b>	/EnableTracing={true   false}
<b>Description</b>	By default, this feature is set to true. Use this property to explicitly enable or disable the always-on tracing feature. Always-on tracing helps collect critical logs around connection time. These logs can prove useful when troubleshooting intermittent connectivity issues. The Always-on tracing policy overrides this setting.
<b>Sample usage</b>	CitrixReceiver.exe /EnableTracing=true

#### Using the Citrix Customer Experience Improvement Program (CEIP)

<b>Option</b>	EnableCEIP={true   false}
<b>Description</b>	When you enable participation in the Citrix Customer Experience Improvement Program (CEIP), anonymous statistics and usage information are sent to Citrix to help Citrix improve the quality and performance of its products.
<b>Sample usage</b>	CitrixReceiver.exe EnableCEIP=true

#### Specify the installation directory

<b>Option</b>	INSTALLDIR=<Installation Directory>
<b>Description</b>	Specifies the installation path, where Installation Directory is the location where most of the Citrix Receiver software will be installed. The default value is C:\Program Files\Citrix\Receiver. The following Receiver components are installed in the C:\Program Files\Citrix path: <ul style="list-style-type: none"> <li>• Authentication Manager</li> <li>• Citrix Receiver</li> <li>• Self-Service plug-in.</li> </ul> <p>If you use this option and specify an Installation directory, you must install RIInstaller.msi in the installation directory\Receiver directory and the other .msi files in the installation directory.</p>
<b>Sample</b>	

<b>usage</b>	CitrixReceiver.exe INSTALDIR=c:\Citrix\Test
--------------	---

### Identify a user device

<b>Option</b>	CLIENT_NAME=<ClientName>
<b>Description</b>	Specifies the client name, where ClientName is the name used to identify the user device to the server. The default value is %COMPUTERNAME%
<b>Sample usage</b>	CitrixReceiver.exe CLIENT_NAME=%COMPUTERNAME%.

### Dynamic client name

<b>Option</b>	ENABLE_CLIENT_NAME=Yes   No
<b>Description</b>	The dynamic client name feature allows the client name to be the same as the computer name. When users change their computer name, the client name changes to match. Defaults to Yes. To disable dynamic client name support, set this property to No and specify a value for the CLIENT_NAME property.
<b>Sample usage</b>	CitrixReceiver.exe ENABLE_DYNAMIC_CLIENT_NAME =Yes

### Install specified components

<b>Option</b>	ADDLOCAL=<feature... ,>
<b>Description</b>	<p>Installs one or more of the specified components. When specifying multiple parameters, separate each parameter with a comma and without spaces. The names are case sensitive. If you do not specify this parameter, all components are installed by default.</p> <p>Citrix recommends that you use the ADDLOCAL Sample Usage given below. If the Sample Usage is not used as described, it might possibly cause unexpected behavior.</p> <p>Components include:</p> <ul style="list-style-type: none"> <li>• ReceiverInside – Installs the Citrix Receiver experience (required component for Receiver operation).</li> <li>• ICA_Client – Installs the standard Citrix Receiver (required component for Receiver operation).</li> <li>• WebHelper – Installs the WebHelper component. This component retrieves the ICA file from Storefront and passes it to the HDX Engine. In addition, it verifies environment parameters and shares them with Storefront (similar to ICO client detection).</li> <li>• [Optional] SSON – Installs single sign on. Requires administrator rights.</li> <li>• AM – Installs the Authentication Manager.</li> <li>• SELFSERVICE – Installs the Self-Service Plug-in. The AM value must be specified on the command line and .NET 3.5 Service Pack 1 must be installed on the user device. The Self-Service Plug-in is not available for Windows Thin PC devices, which do not support .NET 3.5.</li> </ul>

	<ul style="list-style-type: none"> <li>• For information on scripting the Self-Service Plug-in (SSP), and a list of parameters available in Receiver for Windows 4.2 and later, see Knowledge Center article <a href="#">CTX200337</a></li> <li>• The Self-Service Plug-in allows users to access virtual desktops and applications from the Receiver window or from a command line, as described later in this section in To launch a virtual desktop or application from a command line.</li> <li>• USB – Installs USB support. Requires administrator rights.</li> <li>• DesktopViewer – Installs the Desktop Viewer.</li> <li>• Flash – Installs HDX media stream for Flash.</li> <li>• Vd3d – Enables the Windows Aero experience (for operating systems that support it).</li> </ul>
Sample usage	CitrixReceiver.exe ADDLOCAL=ReceiverInside,ICA_Client,AM,SELFSERVICE,DesktopViewer,Flash,Vd3d,usb,WebHelper

### Configure Citrix Receiver for Windows to manually add Stores

<b>Option</b>	ALLOWADDSTORE={N   S   A}
<b>Description</b>	<p>Specifies whether users can add and remove stores not configured through Merchandising Server deliveries; users can enable or disable stores configured through Merchandising Server deliveries, but they cannot remove these stores or change the names or the URLs.) Defaults to S. Options include:</p> <ul style="list-style-type: none"> <li>• N – Never allow users to add or remove their own store.</li> <li>• S – Allow users to add or remove secure stores only (configured with HTTPS).</li> <li>• A – Allow users to add or remove both secure stores (HTTPS) and non-secure stores (HTTP). Not applicable if Citrix Receiver is installed per user.</li> </ul> <p>You can also control this feature by updating the registry key HKLM\Software\Wow6432Node\Citrix\Dazzle\AllowAddStore.</p> <p>Note: Only secure (HTTPS) stores are allowed by default and are recommended for production environments. For test environments, you can use HTTP store connections through the following configuration:</p> <ol style="list-style-type: none"> <li>1. Set HKLM\Software\Wow6432Node\Citrix\Dazzle\AllowAddStore to A to allow users to add non-secure stores.</li> <li>2. Set HKLM\Software\Wow6432Node\Citrix\Dazzle\AllowSavePwd to A to allow users to save their passwords for non-secure stores.</li> <li>3. To enable the addition of a store that is configured in StoreFront with a TransportType of HTTP, add to HKLM\Software\Wow6432Node\Citrix\AuthManager the value ConnectionSecurityMode (REG_SZ type) and set it to Any.</li> <li>4. Exit and restart Citrix Receiver.</li> </ol>
<b>Sample usage</b>	CitrixReceiver.exe ALLOWADDSTORE=N

### Save credentials for stores locally using PNAgent protocol

<b>Option</b>	ALLOWSAVEPWD={N   S   A}
<b>Description</b>	<p>Specifies whether users can add and remove stores not configured through Merchandising Server deliveries; users can enable or disable stores configured through Merchandising Server deliveries, but they cannot remove these stores or change the names or the URLs.) Defaults to S. Options include:</p> <ul style="list-style-type: none"> <li>• N – Never allow users to save their passwords.</li> <li>• S – Allow users to save passwords for secure stores only (configured with HTTPS).</li> <li>• A – Allow users to save passwords for both secure stores (HTTPS) and non-secure stores (HTTP).</li> </ul> <p>You can also control this feature by updating the registry key HKLM\Software\[Wow6432Node]\Citrix\Dazzle\AllowSavePwd.</p> <p>Note: The following registry key must be added manually if AllowSavePwd does not work:</p> <ul style="list-style-type: none"> <li>• Key for 32bit OS client: HKLM\Software\Citrix\AuthManager</li> <li>• Key for 64bit OS client: HKLM\Software\wow6432node\Citrix\AuthManager</li> <li>• Type: REG_SZ</li> <li>• Value: never - never allow users to save their passwords. secureonly - allow users to save passwords for secure stores only (configured with HTTPS). always - allow users to save passwords for both secure stores (HTTPS) and non-secure stores (HTTP).</li> </ul>
<b>Sample usage</b>	CitrixReceiver.exe ALLOWSAVEPWD=N

### Select certificate

<b>Option</b>	AM_CERTIFICATESELECTIONMODE={Prompt   SmartCardDefault   LatestExpiry}
<b>Description</b>	<p>Use this option to select a certificate. The default value is Prompt, which prompts the user to choose a certificate from a list. Change this property to choose the default certificate (per the smart card provider) or the certificate with the latest expiry date. If there are no valid logon certificates, the user is notified, and given the option to use an alternate logon method if available.</p> <p>You can also control this feature by updating the registry key HKCU or HKLM\Software\[Wow6432Node]\Citrix\AuthManager:CertificateSelectionMode={ Prompt   SmartCardDefault   LatestExpiry }. Values defined in HKCU take precedence over values in HKLM to best assist the user in selecting a certificate.</p>
<b>Sample usage</b>	CitrixReceiver.exe AM_CERTIFICATESELECTIONMODE=Prompt

### Use CSP components to manage Smart Card PIN entry

<b>Option</b>	AM_SMARTCARDPINENTRY=CSP
---------------	--------------------------

<b>Description</b>	Use CSP components to manage Smart Card PIN entry. By default, the PIN prompts presented to users are provided by Citrix Receiver rather than the smart card Cryptographic Service Provider (CSP). Receiver prompts users to enter a PIN when required and then passes the PIN to the smart card CSP. Specify this property to use the CSP components to manage the PIN entry, including the prompt for a PIN.
<b>Sample usage</b>	CitrixReceiver.exe AM_SMARTCARDPINENTRY=CSP

### Using Kerberos

<b>Option</b>	ENABLE_KERBEROS={Yes   No}
<b>Description</b>	The default value is No. Specifies whether the HDX engine should use Kerberos authentication and applies only when single sign-on (pass-through) authentication is enabled. For more information, see <a href="#">Configure domain pass-through authentication with Kerberos</a> .
<b>Sample usage</b>	CitrixReceiver.exe ENABLE_KERBEROS=No

### Displaying legacy FTA icons

<b>Option</b>	LEGACYFTAICONS={False   True}
<b>Description</b>	Use this option to display Legacy FTA icons. The default value is False. Specifies whether or not application icons are displayed for documents that have file type associations with subscribed applications. When the argument is set to false, Windows generates icons for documents that do not have a specific icon assigned to them. The icons generated by Windows consist of a generic document icon overlaid with a smaller version of the application icon. Citrix recommends enabling this option if you plan to deliver Microsoft Office applications to users running Windows 7.
<b>Sample usage</b>	CitrixReceiver.exe LEGACYFTAICONS=False

### Enabling pre-launch

<b>Option</b>	ENABLEPRELAUNCH={False   True}
<b>Description</b>	The default value is False. For information about session pre-launch, see <a href="#">Reduce application launch time</a> .
<b>Sample usage</b>	CitrixReceiver.exe ENABLEPRELAUNCH=False

## Specifying the directory for Start Menu shortcuts

<b>Option</b>	STARTMENUDIR={Directory Name}
<b>Description</b>	<p>By default, applications appear under Start &gt; All Programs. You can specify the relative path under the programs folder to contain the shortcuts to subscribed applications. For example, to place shortcuts under Start &gt; All Programs &gt; Receiver, specify STARTMENUDIR=\Receiver\. Users can change the folder name or move the folder at any time.</p> <p>You can also control this feature through a registry key: Create the entry REG_SZ for StartMenuDir and give it the value "\RelativePath". Location:</p> <p>HKLM\Software\[Wow6432Node\Citrix\Dazzle</p> <p>HKCU\Software\Citrix\Dazzle</p> <p>For applications published through XenApp with a Client applications folder (also referred to as a Program Neighborhood folder) specified, you can specify that the client applications folder is to be appended to the shortcuts path as follows: Create the entry REG_SZ for UseCategoryAsStartMenuPath and give it the value "true". Use the same registry locations as noted above.</p> <p>Note: Windows 8/8.1 does not allow the creation of nested folders within the Start Menu. Applications will be displayed individually or under the root folder but not within Category sub folders defined with XenApp.</p> <p>Examples</p> <ul style="list-style-type: none"> <li>• If client application folder is \office, UseCategoryAsStartMenuPath is true, and no StartMenuDir is specified, shortcuts are placed under Start &gt; All Programs &gt; Office.</li> <li>• If Client applications folder is \Office, UseCategoryAsStartMenuPath is true, and StartMenuDir is \Receiver, shortcuts are placed under Start &gt; All Programs &gt; Receiver &gt; Office.</li> </ul> <p>Changes made to these settings have no impact on shortcuts that are already created. To move shortcuts, you must uninstall and re-install the applications.</p>
<b>Sample usage</b>	CitrixReceiver.exe STARTMENUDIR=\Office

## Specifying the Store Name

<b>Option</b>	STOREx="storename;http[s]://servername.domain/IISLocation/discovery;[On   Off]; [storedescription]" [STOREy="..."]
	<p>Use this option to specify the Store name. Specifies up to 10 stores to use with Citrix Receiver. Values:</p> <ul style="list-style-type: none"> <li>• x and y – Integers 0 through 9.</li> <li>• storename – Defaults to store. This must match the name configured on the StoreFront Server.</li> <li>• servername.domain – The fully qualified domain name of the server hosting the store.</li> </ul>

<b>Description</b>	<ul style="list-style-type: none"> <li>• IISLocation – the path to the store within IIS. The store URL must match the URL in StoreFront provisioning files. The store URLs are of the form “/Citrix/store/discovery”. To obtain the URL, export a provisioning file from StoreFront, open it in notepad and copy the URL from the &lt;Address&gt; element.</li> <li>• On   Off – The optional Off configuration setting enables you to deliver disabled stores, giving users the choice of whether or not they access them. When the store status is not specified, the default setting is On.</li> <li>• storedescription – An optional description of the store, such as HR App Store.</li> </ul> <p>Note: In this release, it is important to include “/discovery” in the store URL for successful pass-through authentication.</p>
<b>Sample usage</b>	CitrixReceiver.exe STORE0="Store;https://test.xx.com/Citrix/Store/Discovery"

### Enabling URL Redirection on user devices

<b>Option</b>	ALLOW_CLIENTHOSTEDAPPSURL=1
<b>Description</b>	Enables the URL redirection feature on user devices. Requires administrator rights. Requires that Citrix Receiver is installed for All Users. For information about URL redirection, see <a href="#">Local App Access</a> and its sub-topics in the XenDesktop 7 documentation.
<b>Sample usage</b>	CitrixReceiver.exe ALLOW_CLIENTHOSTEDAPPSURL=1

### Enabling self-service mode

<b>Option</b>	SELSERVICEMODE={False   True}
<b>Description</b>	The default value is True. When the administrator sets the SelfServiceMode flag to false, the user no longer has access to the self-service Citrix Receiver user interface. Instead, they can access subscribed apps from the Start menu and via desktop shortcuts - known as "shortcut-only mode".
<b>Sample usage</b>	CitrixReceiver.exe SELSERVICEMODE=False

### Specifying the directory for Desktop Shortcuts

<b>Option</b>	DESKTOPDIR=<Directory Name>
<b>Description</b>	Brings all shortcuts into a single folder. CategoryPath is supported for desktop shortcuts. Note: When using the DESKTOPDIR option, set the PutShortcutsOnDesktop key to True.

<b>Sample usage</b>	CitrixReceiver.exe DESKTOPDIR=\Office
---------------------	---------------------------------------

## Upgrading from an unsupported Citrix Receiver version

<b>Option</b>	/rcu
<b>Description</b>	Allows you to upgrade from an unsupported version to the latest version of Citrix Receiver.
<b>Sample usage</b>	CitrixReceiver.exe /rcu

## Troubleshooting the installation

If there is a problem with the installation, search in the user's %TEMP%/CTXReceiverInstallLogs directory for the logs with the prefix CtxInstall- or TrolleyExpress- . For example:

CtxInstall-ICAWebWrapper-20141114-134516.log

TrolleyExpress-20090807-123456.log

Examples of a command line installation

### To specify the NetScaler Gateway store URL:

```
CitrixReceiver.exe STORE0="Store;https://testserver.com#test/Citrix/Store/Discovery;<On/Off>;StoreName"
```

**Note:** The NetScaler Gateway store URL must be the first entry in the list of configured store URLs.

### To install all components silently and specify two application stores:

```
CitrixReceiver.exe /silent STORE0="AppStore;https://testserver.net/Citrix/MyStore/discovery;on;HR App Store"
STORE1="BackUpAppStore;https://testserver.net/Citrix/MyBackupStore/discovery;on;Backup HR App Store"
```

### To specify single sign-on (pass-through authentication) and add a store that points to a [XenApp Services URL](#):

```
CitrixReceiver.exe /INCLUDESSON /STORE0="PNAgent;https://testserver.net/Citrix/PNAgent/config.xml;on;My PNAgent Site"
```

To launch a virtual desktop or application from a command line

Citrix Receiver for Windows creates a stub application for each subscribed desktop or application. You can use a stub application to launch a virtual desktop or application from the command line. Stub applications are located in %appdata%\Citrix\SelfService. The file name for a stub application is the Display Name of the application, with the spaces removed. For example, the stub application file name for Internet Explorer is InternetExplorer.exe.

# Deploy using Active Directory and sample startup scripts

Nov 27, 2017

You can use Active Directory Group Policy scripts to pre-deploy Citrix Receiver for Windows on systems based on your Active Directory organizational structure. Citrix recommends using the scripts rather than extracting the .msi files because the scripts allow for a single point for installation, upgrade, and uninstall; they consolidate the Citrix entries in Programs and Features, and make it easier to detect the version of Citrix Receiver that is deployed. Use the Scripts setting in the Group Policy Management Console (GPMC) under Computer Configuration or User Configuration. For general information about startup scripts, see Microsoft documentation.

Citrix includes sample per-computer startup scripts to install and uninstall CitrixReceiver.exe. The scripts are located on the Citrix Receiver for Windows [Download](#) page.

- CheckAndDeployReceiverPerMachineStartupScript.bat
- CheckAndRemoveReceiverPerMachineStartupScript.bat

When the scripts are executed during Startup or Shutdown of an Active Directory Group Policy, custom configuration files might be created in the Default User profile of a system. If not removed, these configuration files can prevent some users from accessing the Receiver logs directory. The Citrix sample scripts include functionality to properly remove these configuration files.

## To use the startup scripts to deploy Receiver with Active Directory

1. Create the Organizational Unit (OU) for each script.
2. Create a Group Policy Object (GPO) for the newly created OU.

## Modify sample scripts

Modify the scripts by editing these parameters in the header section of each file:

- **Current Version of package.** The specified version number is validated and if it is not present the deployment proceeds. For example, set `DesiredVersion= 3.3.0.XXXX` to exactly match the version specified. If you specify a partial version, for example, `3.3.0`, it matches any version with that prefix (`3.3.0.1111`, `3.3.0.7777`, and so forth).
- **Package Location/Deployment directory.** This specifies the network share containing the packages and is not authenticated by the script. The shared folder must have Read permission for EVERYONE.
- **Script Logging Directory.** This specifies the network share where the install logs are copied and is not authenticated by the script. The shared folder must have Read and Write permissions for EVERYONE.
- **Package Installer Command Line Options.** These command line options are passed to the installer. For the command line syntax, see [Configure and install Receiver for Windows using command-line parameters](#).

## To add the per-computer startup scripts

1. Open the Group Policy Management Console.
2. Select Computer Configuration > Policies > Windows Settings > Scripts (Startup/Shutdown).
3. In the right-hand pane of the Group Policy Management Console, select Startup.
4. In the Properties menu, click Show Files, copy the appropriate script to the folder displayed, and then close the window.
5. In the Properties menu, click Add and use Browse to find and add the newly created script.

## To deploy Citrix Receiver for Windows per-computer

1. Move the user devices designated to receive this deployment to the OU you created.
2. Reboot the user device and log on as any user.
3. Verify that Program and Features (Add or Remove Programs in previous OS versions) contains the newly installed package.

## To remove Citrix Receiver for Windows per-computer

1. Move the user devices designated for the removal to the OU you created.
2. Reboot the user device and log on as any user.
3. Verify that Program and Features (Add or Remove Programs in previous OS versions) removed the previously installed package.

## Use the per-user sample startup scripts

Citrix recommends using per-computer startup scripts. However, for situations where you require Citrix Receiver for Windows per-user deployments, two Citrix Receiver for Windows per-user scripts are included on the XenDesktop and XenApp media in the Citrix Receiver for Windows and Plug-ins\Windows\Receiver\Startup\_Logon\_Scripts folder.

- CheckAndDeployReceiverPerUserLogonScript.bat
- CheckAndRemoveReceiverPerUserLogonScript.bat

## To set up the per-user startup scripts

1. Open the Group Policy Management Console.
2. Select User Configuration > Policies > Windows Settings > Scripts.
3. In the right-hand pane of the Group Policy Management Console, select Logon
4. In the Logon Properties menu, click Show Files, copy the appropriate script to the folder displayed, and then close the window.
5. In the Logon Properties menu, click Add and use Browse to find and add the newly created script.

## To deploy Citrix Receiver for Windows per-user

1. Move the users designated to receive this deployment to the OU you created.
2. Reboot the user device and log on as the specified user.
3. Verify that Program and Features (Add or Remove Programs in previous OS versions) contains the newly installed package.

## To remove Citrix Receiver for Windows per-user

1. Move the users designated for the removal to the OU you created.
2. Reboot the user device and log on as the specified user.
3. Verify that Program and Features (Add or Remove Programs in previous OS versions) removed the previously installed package.

# Deploy Citrix Receiver for Windows from Receiver for Web

Nov 27, 2017

You can deploy Citrix Receiver for Windows from Citrix Receiver for Web to ensure that you have installed the Receiver before connecting to an application from a browser. Citrix Receiver for Web site enable you to access StoreFront stores through a web page. If the Citrix Receiver for Web site detects that a user does not have a compatible version of Citrix Receiver for Windows, you are prompted to download and install Citrix Receiver for Windows.

For more information, see [Citrix Receiver for Web sites](#) in the StoreFront documentation.

Email-based account discovery is not supported when Citrix Receiver for Windows is deployed from Citrix Receiver for Web. If email-based account discovery is configured and a first-time user installs Citrix Receiver for Windows from Citrix.com, Citrix Receiver for Windows prompts the user for an email or server address. Entering an email address results in the error message "Your email cannot be used to add an account."

Use the following configuration to prompt for the server address only.

1. Download CitrixReceiver.exe to your local computer.
2. Rename CitrixReceiver.exe to CitrixReceiverWeb.exe.
3. Deploy the renamed executable using your regular deployment method. If you use StoreFront, refer to [Configure Receiver for Web sites using the configuration files](#) in the StoreFront documentation.

# Deploy Citrix Receiver for Windows from a Web Interface logon screen

Nov 27, 2017

This feature is available only for XenDesktop and XenApp releases that support Web Interface.

You can deploy Citrix Receiver for Windows from a web page to ensure that users have it installed before they try to use the Web Interface. The Web Interface provides a client detection and deployment process that detects which Citrix clients can be deployed within the user's environment and then guides them through the deployment procedure.

You can configure the client detection and deployment process to run automatically when users access a XenApp website. If the Web Interface detects that a user does not have compatible version of Citrix Receiver for Windows, the user is prompted to download and install Citrix Receiver for Windows.

Email-based account discovery does not apply when Citrix Receiver for Windows is deployed from Web Interface. If email-based account discovery is configured and a first-time user installs Citrix Receiver for Windows from Citrix.com, Citrix Receiver for Windows prompts the user for an email or server address. Entering an email address results in the error message "Your email cannot be used to add an account." Use the following configuration to prompt for the server address only.

1. Download CitrixReceiver.exe to your local computer.
2. Rename CitrixReceiver.exe to CitrixReceiverWeb.exe.
3. Specify the changed filename in the ClientIcaWin32 parameter in the configuration files for your XenApp websites.  
To use the client detection and deployment process, the Citrix Receiver for Windows installation files must be available on the Web Interface server. By default, the Web Interface assumes that the file names of the Citrix Receiver for Windows installation files are the same as the files supplied on the XenApp or XenDesktop installation media.
4. Add the sites from which the CitrixReceiverWeb.exe file is downloaded to the Trusted Sites zone.
5. Deploy the renamed executable using your regular deployment method.

# Deploy using System Center Configuration Manager 2012 R2

Nov 27, 2017

You can use Microsoft System Center Configuration Manager (SCCM) to deploy Citrix Receiver for Windows.

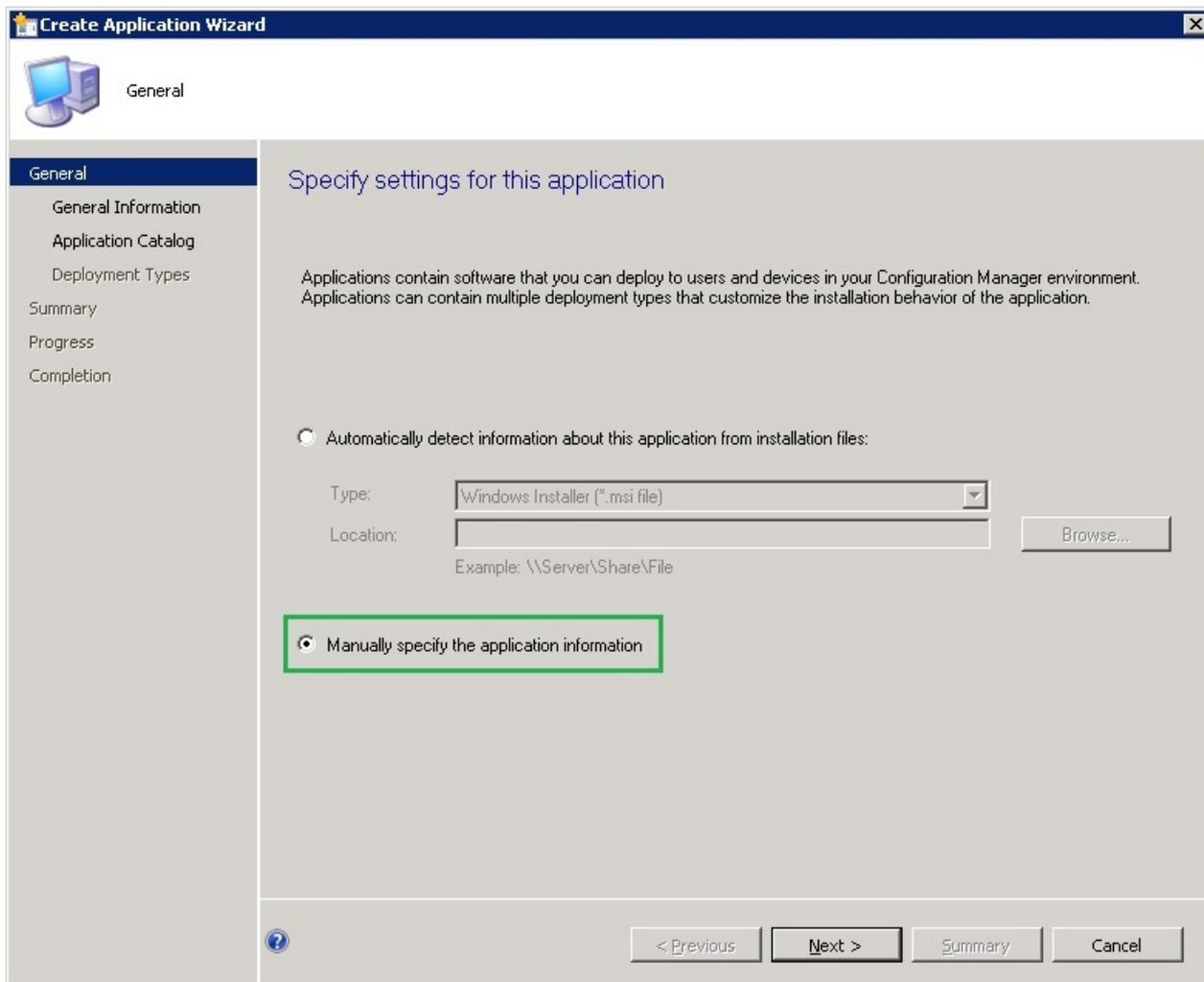
Note: Only Citrix Receiver for Windows Version 4.5 and later supports SCCM deployment.

There are four parts to completing the deployment of Citrix Receiver for Windows using SCCM:

1. [Adding Citrix Receiver for Windows to the SCCM deployment](#)
2. [Adding distribution points](#)
3. [Deploying the Receiver software to the software center](#)
4. [Creating Device Collections](#)

## Adding Citrix Receiver for Windows to the SCCM deployment

1. Copy the downloaded Citrix Receiver to a folder on the Configuration Manager server and launch the Configuration Manager console.
2. Select **Software Library > Application Management**. Right-click **Application** and click **Create Application**. The Create Application wizard appears.



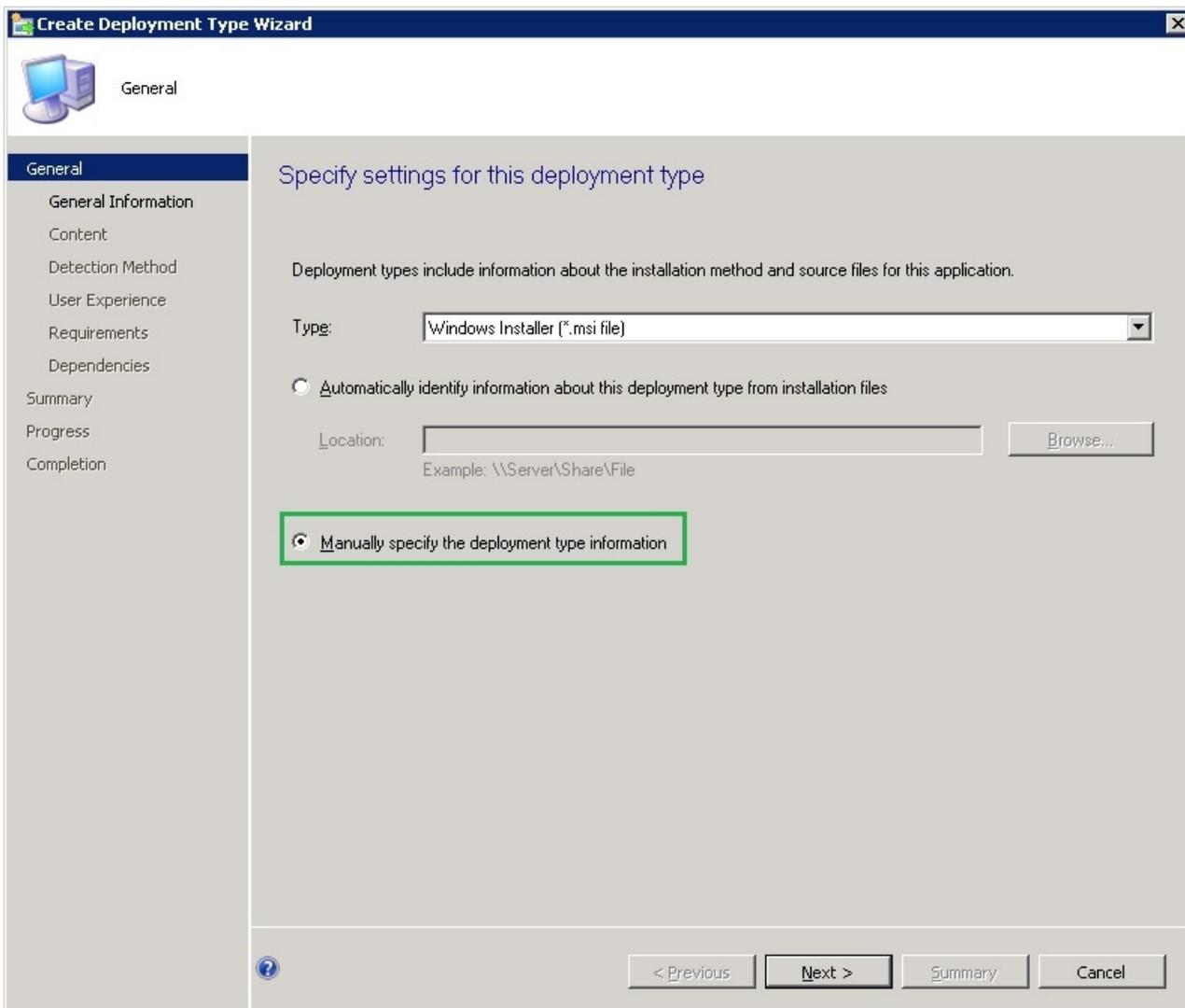
3. In the **General** pane, select **Manually specify the application information** and click **Next**.

4. In the **General Information** pane, specify information about the application such as Name, Manufacturer, Software version, and so on.

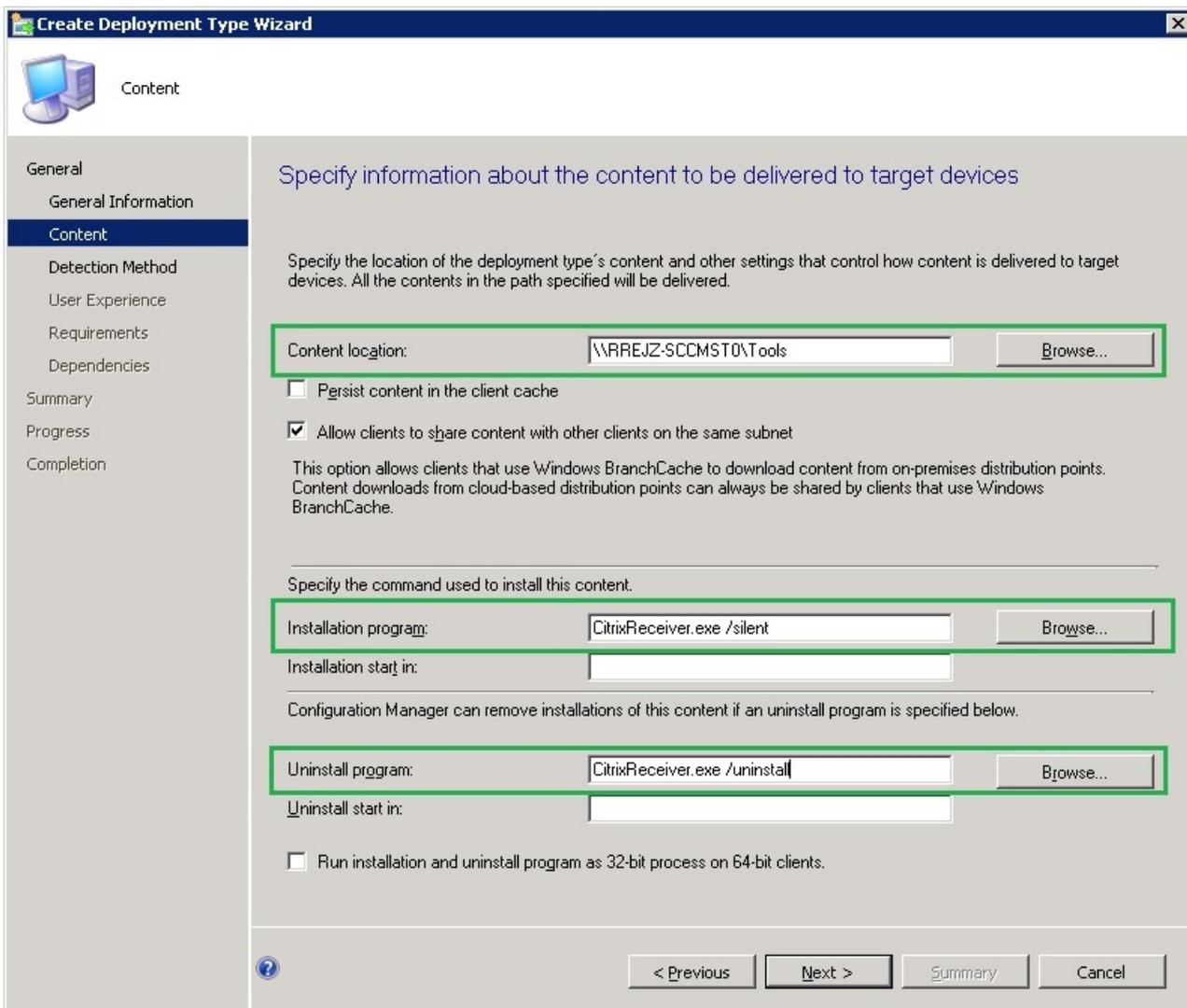
5. In the Application Catalog wizard, specify additional information such as Language, Application name, User category and so on and click **Next**.

Note: Users can see the information you specify here.

6. In the **Deployment Type** pane, click **Add** to configure the deployment type for Citrix Receiver setup. The Create Deployment Type wizard appears.



- In the **General** pane: Set the deployment type to Windows Installer (\*.msi file), select **Manually specify the deployment type information** and click **Next**.
- In the **General Information** pane: Specify deployment type details (For example: Receiver Deployment) and click **Next**.
- In the **Content** pane:
  1. Provide the path where the Citrix Receiver setup file is present. For example: Tools on SCCM server.
  2. Specify **Installation program** as one of the following:
    - CitrixReceiver.exe /silent for default silent installation.
    - CitrixReceiver.exe /silent /includeSSON to enable domain pass-through.
    - CitrixReceiver.exe /silent SELFSEVICEMODE=false to install receiver in Non-Self Service Mode.
  3. Specify **Uninstall program** as CitrixReceiver.exe /uninstall (to enable uninstallation through SCCM).



- In the **Detection Method** pane: Select **Configure rules to detect the presence of this deployment type** and click **Add Clause**.

The Detection Rule dialog appears.

**Detection Rule**

Create a rule that indicates the presence of this application.

Setting Type:

Specify the file or folder to detect this application.

Type:

Path:

File or folder name:

This file or folder is associated with a 32-bit application on 64-bit systems.

The file system setting must exist on the target system to indicate presence of this application

The file system setting must satisfy the following rule to indicate the presence of this application

Property:

Operator:

Value:

- Set **Setting Type** to File System.
- Under **Specify the file or folder to detect the application**, set the following:
  - **Type** – From the drop-down menu, select File.
  - **Path** – %ProgramFiles (x86)%\Citrix\ICA Client\Receiver
  - **File or folder name** – Receiver.exe
- **Property** – From the drop-down menu, select **Version**
- **Operator** – From the drop-down menu, select **Greater than or equal to**
- **Value** – Type **4.3.0.65534**

Note: This rule combination applies to Citrix Receiver for Windows upgrades as well.

- In the **User Experience** pane, set:

- **Installation behavior** - Install for system
  - **Logon requirement** - Whether or not a user is logged on
  - **Installation program visibility** - Normal.
- Click Next.

Note: Do not specify any requirements and dependencies for this deployment type.

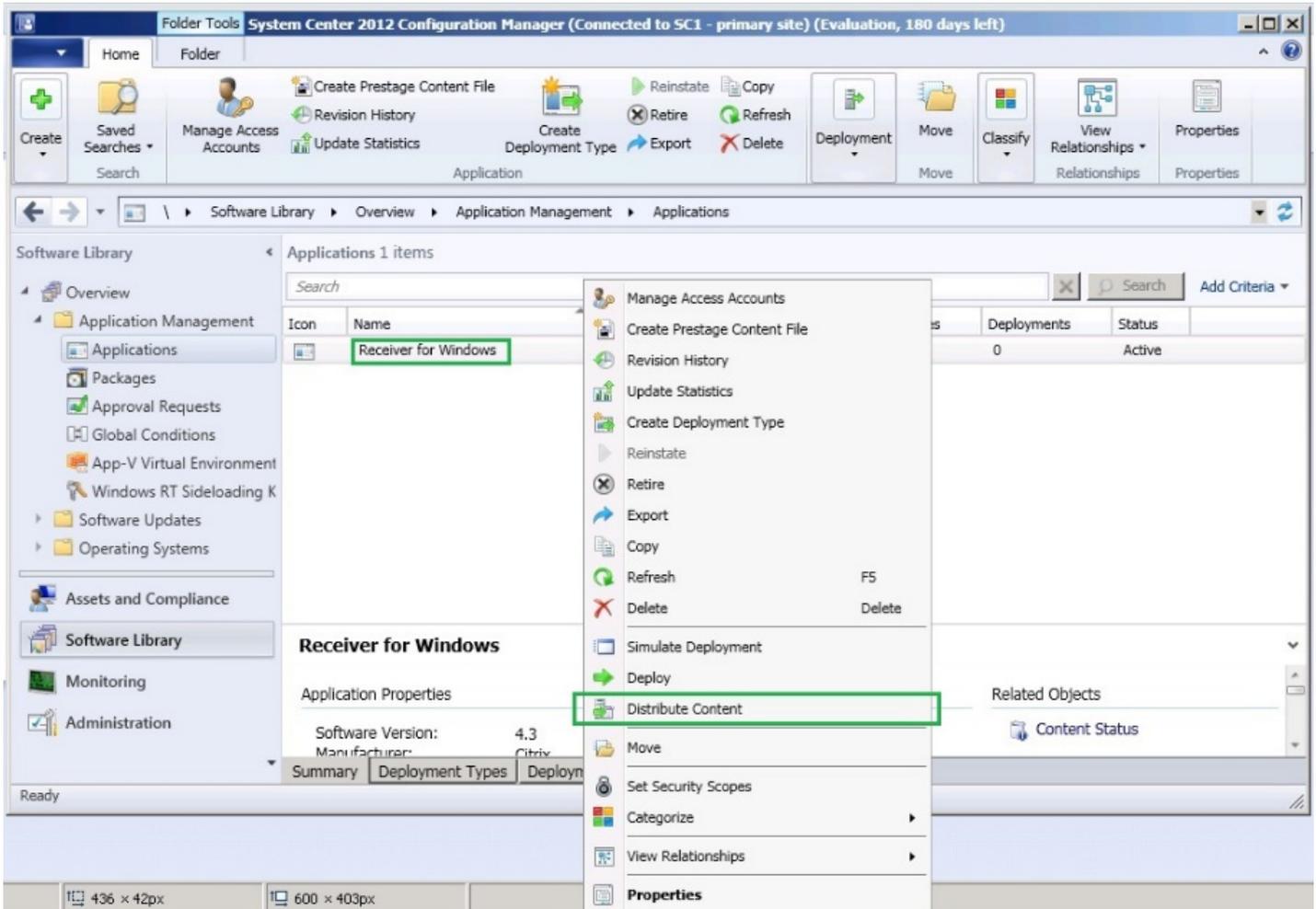
7. In the **Summary pane**, verify the settings for this deployment type. Click **Next**.

A success message appears.

8. In the **Completion pane**, a new deployment type (Receiver Deployment) is listed under the Deployment types. Click **Next** and click **Close**.

## Add distribution points

1. Right-click Receiver for Windows in the Configuration Manager console and select **Distribute Content**.  
The Distribute Content wizard appears.



2. In the Content Distribution pane, click **Add > Distribution Points**.

The Add Distribution Points dialog appears.

3. Browse to the SCCM server where the content is available and click **OK**.

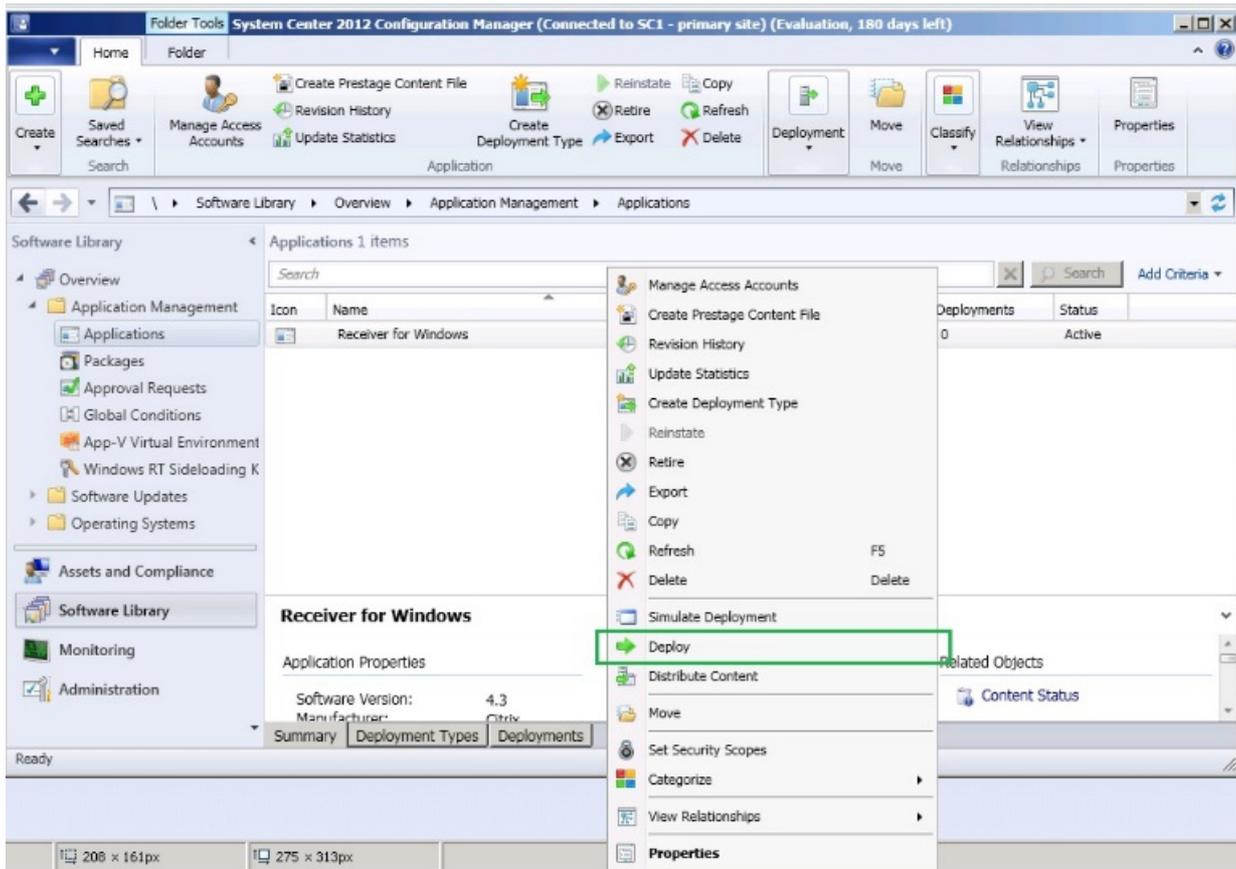
In the Completion pane, a success message appears

4. Click **Close**

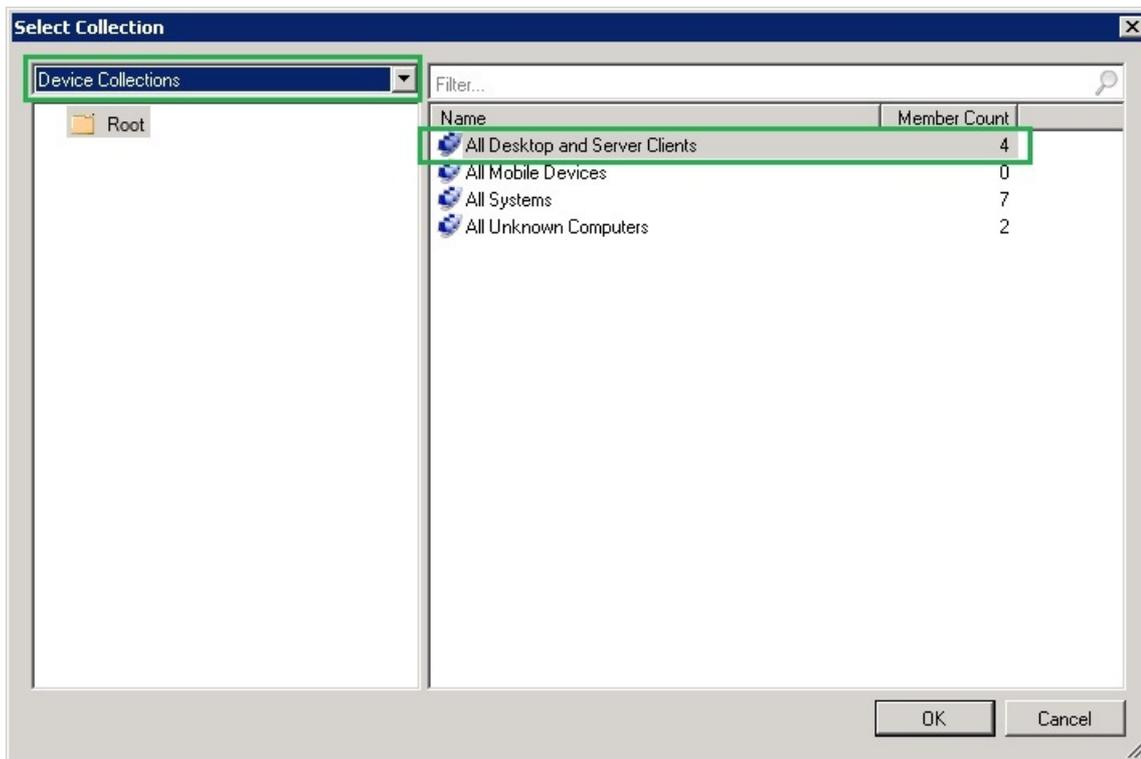
## Deploy the Receiver software to the software center

1. Right-click Receiver for Windows in the Configuration Manager console select **Deploy**.

The Deploy Software wizard appears.



2. Select **Browse** against Collection (can be Device Collection or User Collection) where the application is to be deployed and click **Next**.



3. In the **Deployment Settings** pane, set **Action** to Install and **Purpose** to Required (enables unattended installation). Click **Next**.

4. In the **Scheduling** pane, specify the schedule to deploy the software on target devices.

5. In the **User Experience** pane, set the **User notifications** behavior; select **Commit changes at deadline or during a maintenance window (requires restart)** and click **Next** to complete the Deploy Software wizard.

In the Completion pane, a success message appears.

Reboot the target endpoint devices (required only to start installation immediately).

On endpoint devices, Citrix Receiver for Windows is visible in the Software Center under **Available Software**. Installation is triggered automatically based on the schedule you configure. Alternatively, you can also schedule or install on demand. The installation status is displayed in the Software Center after the installation starts.

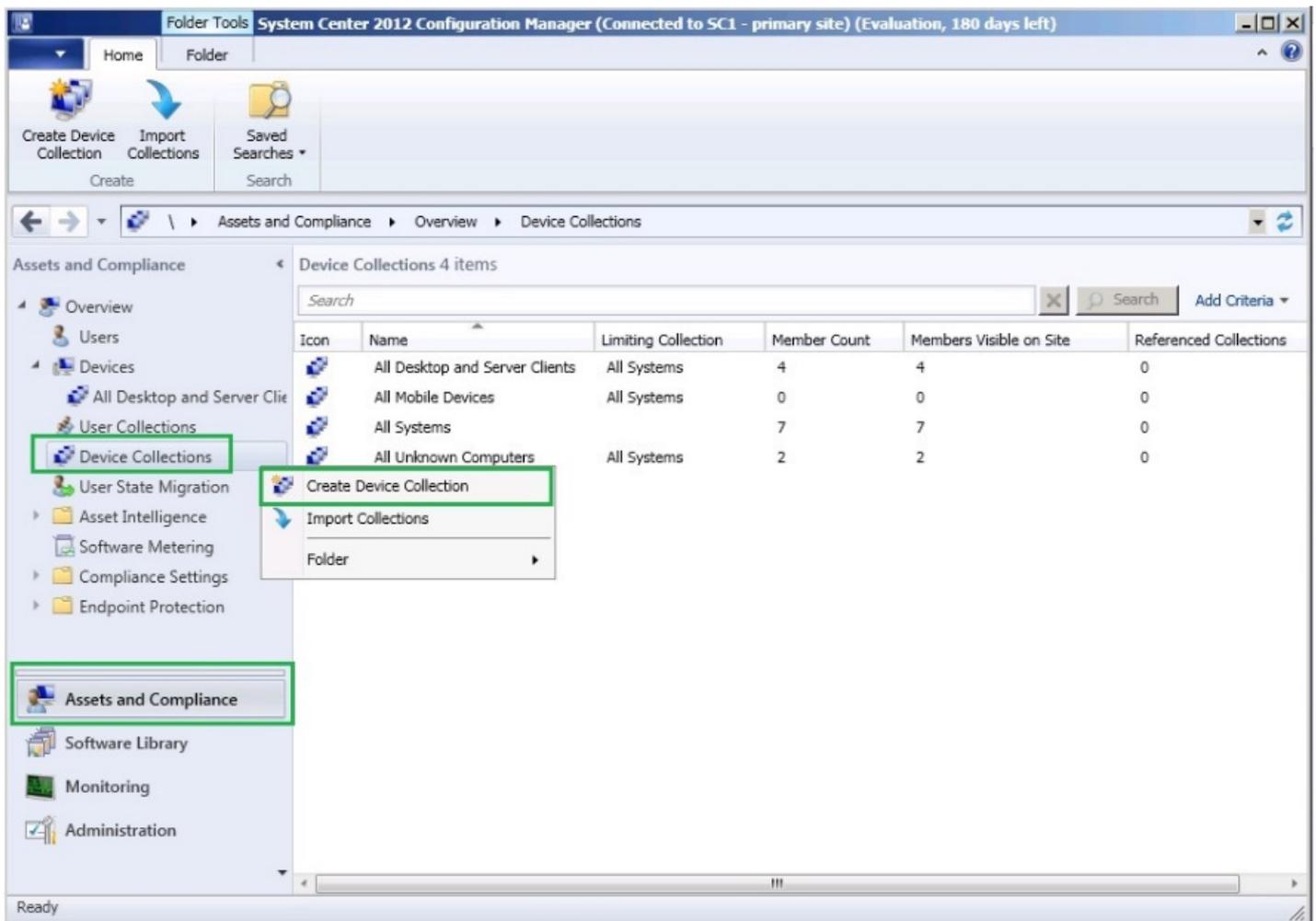
The screenshot shows the 'Software Center' window with the 'Installation Status' tab selected. The interface includes a navigation bar with 'Available Software', 'Installation Status', 'Installed Software', and 'Options'. Below the navigation bar, there is a 'SHOW' dropdown menu set to 'All' and a search box labeled 'SEARCH'. A link below the search box reads 'Find additional applications from the Application Catalog'. A table lists installed applications with columns for NAME, TYPE, PUBLISHER, AVAILABLE..., and STATUS. The first entry is 'Receiver for Windows', categorized as an 'Application' published by 'Citrix', with an availability date of '8/5/2015' and a status of 'Installed'. Below the table, a detailed view for 'Receiver for Windows' is shown, including an 'OVERVIEW' section with fields for Status (Installed), Version (4.3), Date published (Not specified), Help document (None), and Date Modified (8/5/2015). A 'REQUIREMENTS' section lists Restart required (Might be required), Download size (186 MB), Estimated time (10 minutes), and Total components (1). An 'UNINSTALL' button is located at the bottom right of the detailed view.

NAME	TYPE	PUBLISHER	AVAILABLE...	STATUS
Receiver for Windows	Application	Citrix	8/5/2015	Installed

OVERVIEW		REQUIREMENTS		DESCRIPTION
Status:	Installed	Restart required:	Might be required	
Version:	4.3	Download size:	186 MB	
Date published:	Not specified	Estimated time:	10 minutes	
Help document:	None	Total components:	1	
Date Modified:	8/5/2015			

## Creating device collections

1. Launch the Configuration Manager console, click **Assets and Compliance > Overview > Devices**.



2. Right-click **Device Collections** and select **Create Device Collection**.

The Create Device Collection wizard appears.

3. In the General pane, type the **Name** for the device and click **Browse** for Limiting collection. This determines the scope of devices, which can be one the default Device Collections created by SCCM. Click **Next**.

4. In the Membership Rules pane, click **Add Rule** for filtering the devices. The Create Direct Membership Rule wizard appears.

- In the Search for Resources pane, select the **Attribute name** based on the devices you want to filter and provide the Value for Attribute name to select the devices.

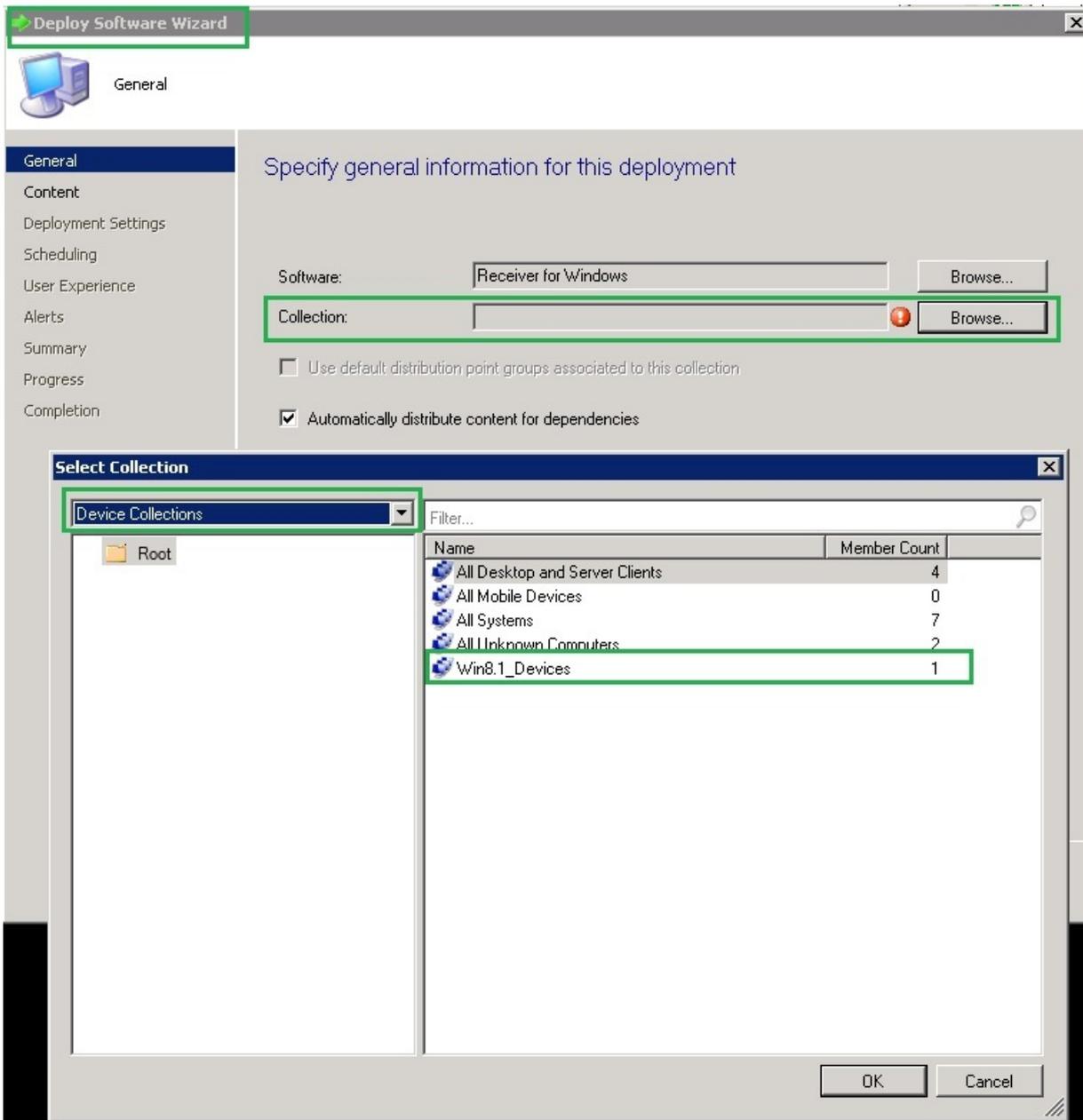
5. Click **Next**. In the Select Resources pane, select the devices that are required to be part of device collection. In the Completion pane a success message appears.

6. Click **Close**.

7. In the Membership rules pane, a new rule is listed under Click Next.

8. In the Completion pane, a success message appears. Click **Close** to complete the Create Device Collection wizard.

The new device collection is listed in **Device Collections**. The new device collection is a part of Device Collections while browsing in Deploy Software wizard.



## Note

When you set the **MSIRESTARTMANAGERCONTROL** attribute to **False**, deploying Citrix Receiver for Windows using SCCM might not be successful.

As per our analysis, Citrix Receiver for Windows is NOT the cause of this failure. Also, retrying might yield successful deployment.

# Configure

Nov 27, 2017

When using Citrix Receiver for Windows software, the following configuration steps allow users to access their hosted applications and desktops:

- [Configure your application delivery](#) and [Configure your XenDesktop environment](#). Ensure your XenApp environment is configured correctly. Understand your options and provide meaningful application descriptions for your users.
- [Configure self-service mode](#) by adding a StoreFront account to Citrix Receiver for Windows. This mode allows your users to subscribe to applications from the Citrix Receiver for Windows user interface.
- [Configure with the Group Policy Object administrative template](#)
- [Provide users with account information](#). Provide users with the information they need to set up access to accounts hosting their virtual desktops and applications. In some environments, users must manually set up access to those accounts.

If you have users who connect from outside the internal network (for example, users who connect from the Internet or from remote locations), configure authentication through NetScaler Gateway. For more information, see [Authentication and Authorization](#) in NetScaler Gateway documentation.

# Configuring application delivery

Nov 27, 2017

When delivering applications with XenDesktop or XenApp, consider the following options to enhance the user experience:

- **Web Access Mode** - Without any configuration, Citrix Receiver for Windows provides browser-based access to applications and desktops. You can open a browser to a Receiver for Web or Web Interface site to select and use the applications you want. In this mode, no shortcuts are placed on the user's desktop.
- **Self Service Mode** - By adding a StoreFront account to Citrix Receiver for Windows or configuring Citrix Receiver for Windows to point to a StoreFront site, you can configure *self-service mode*, which allows you to subscribe to applications from the Citrix Receiver for Windows user interface. This enhanced user experience is similar to that of a mobile app store. In a self-service mode, you can configure mandatory, auto-provisioned and featured app keyword settings as required.

Note: By default, Citrix Receiver for Windows allows you to select the applications to display in the Start menu.

- **App shortcut-only mode** - As a Citrix Receiver for Windows administrator, you can configure Citrix Receiver for Windows to automatically place application and desktop shortcuts directly in the Start menu or on the desktop in a similar way that Citrix Receiver for Windows Enterprise places them. The new *shortcut only* mode allows you to find all the published apps within the familiar Windows navigation schema where you would expect to find them.

For information on delivering applications using XenApp and XenDesktop 7, see [Create a Delivery Group application](#).

**Note:** Include meaningful descriptions for applications in a Delivery Group. Descriptions are visible to Citrix Receiver for Windows users when using Web access or self-service mode.

## Configuring NetScaler Gateway Store

Citrix recommends using the Group Policy Object administrative template to configure rules for network routing, proxy servers, trusted server configuration, user routing, remote user devices, and user experience.

You can use the receiver.admx / receiver.adml template files with domain policies and local computer policies. For domain policies, import the template file using the Group Policy Management console. This is especially useful for applying Citrix Receiver for Windows settings to a number of different user devices throughout the enterprise. To affect a single user device, import the template file using the local Group Policy Editor on the device.

### To add or specify a NetScaler Gateway using Group Policy Object administrative template:

1. Open the Citrix Receiver Group Policy Object administrative template by running gpedit.msc.
2. Under the Computer Configuration node, go to **Administrative Templates > Classic Administrative Templates (ADM) > Citrix Components > Citrix Receiver > StoreFront**.
3. Select NetScaler Gateway URL/StoreFront Accounts List.
4. Edit the settings.

- **Store name** – Indicates the displayed store name
- **Store URL** – Indicates the URL of the store
- **#Store name** – Indicates the name of the store behind NetScaler Gateway
- **Store enabled state** – Indicates the state of the store, On/Off
- **Store Description** – Provides description of the store

5. Add or specify the NetScaler URL. Enter the name of the URL, delimited by a semi-colon:

**Example:** HRStore;https://dtls.blrwinrx.com#Store name;On; Store for HR staff

Where #Store name is the name of store behind NetScaler Gateway; dtls.blrwinrx.com is the NetScaler URL

When Citrix Receiver for Windows is launched after adding the Netscaler Gateway using GPO, the following message appears in the notification area.



### Limitations

1. NetScaler URL should be listed as first followed by StoreFront URL(s).
2. Multiple NetScaler URLs are not supported.
3. Any change in NetScaler URL requires the Citrix Receiver for Windows to be reset for the changes to take effect.
4. NetScaler Gateway URL configured using this method does not support PNA Services site behind NetScaler Gateway.

## Configure self-service mode

By simply adding a StoreFront account to Citrix Receiver or configuring Citrix Receiver to point to a StoreFront site, you can configure *self-service mode*, which allows users to subscribe to applications from the Receiver user interface. This enhanced user experience is similar to that of a mobile app store.

Note: By default, Citrix Receiver for Windows allows users to select the applications they want to display in their Start menu.

In self-service mode, you can configure mandatory, auto-provisioned and featured app keyword settings as needed.

Append keywords to the descriptions you provide for delivery group applications:

- To make an individual app mandatory, so that it cannot be removed from Citrix Receiver for Windows, append the string KEYWORDS:Mandatory to the application description. There is no Remove option for users to unsubscribe to mandatory apps.
- To automatically subscribe all users of a store to an application, append the string KEYWORDS:Auto to the description. When users log on to the store, the application is automatically provisioned without users needing to manually subscribe to the application.
- To advertise applications to users or to make commonly used applications easier to find by listing them in the Citrix Receiver Featured list, append the string KEYWORDS:Featured to the application description.

Customize the app shortcut location using the Group Policy Object template

## Note

You should make changes to group policy before configuring a store. If at any time you want to customize the group policies, reset Citrix Receiver, configure the group policy, and then reconfigure the store.

1. Open the Local Group Policy Editor by running the command `gpedit.msc`.
2. Select the Administrative Templates folder.
3. From the Action menu, choose Add/Remove Templates.
4. Select Add, browse to the Receiver Configuration folder and then select `receiver.admx` (or `receiver.adml`)
5. Select Open to add the template and then Close to return to the Group Policy Editor.
6. In the Group Policy Editor, go to Administrative Templates > Classic Administrative Templates (ADM) > Citrix Components > Citrix Receiver > Self Service.
7. Select Manage SelfServiceMode to enable or disable the self-service Receiver user interface.
8. Choose Manage App Shortcut to enable or disable:

- Shortcuts on Desktop
- Shortcuts in Start menu
- Desktop Directory
- Start menu Directory
- Category path for Shortcuts
- Remove apps on logoff
- Remove apps on exit

9. Choose Allow users to Add/Remove account to give users privileges to add or remove more than one account.

### Using StoreFront account settings to customize app shortcut locations

You can set up shortcuts in the Start menu and on the desktop from the StoreFront site. The following settings can be added in the `web.config` file in `C:\inetpub\wwwroot\Citrix\Roaming` in the `<annotatedServices>` section:

- To put shortcuts on the desktop, use `PutShortcutsOnDesktop`. Settings: "true" or "false" (default is false).
- To put shortcuts in the Start menu, use `PutShortcutsInStartMenu`. Settings: "true" or "false" (default is true).
- To use the category path in the Start menu, use `UseCategoryAsStartMenuPath`. Settings: "true" or "false" (default is true).

**NOTE:** Windows 8/8.1 does not allow the creation of nested folders within the Start Menu. Applications will be displayed individually or under the root folder but not within Category sub folders defined with XenApp.

- To set a single directory for all shortcuts in the Start menu, use `StartMenuDir`. Setting: String value, being the name of the folder into which shortcuts are written.
- To reinstall modified apps, use `AutoReinstallModifiedApps`. Settings: "true" or "false" (default is true).
- To show a single directory for all shortcuts on the desktop, use `DesktopDir`. Setting: String value, being the name of the folder into which shortcuts are written.
- To not create an entry on the clients 'add/remove programs', use `DontCreateAddRemoveEntry`. Settings: "true" or "false" (default is false).
- To remove shortcuts and Receiver icon for an application that was previously available from the Store but now is not available, use `SilentlyUninstallRemovedResources`. Settings: "true" or "false" (default is false).

In the `web.config` file, the changes should be added in the XML section for the account. Find this section by locating the

opening tab:

```
<account id=... name="Store"
```

The section ends with the `</account>` tag.

Before the end of the account section, in the first properties section:

```
<properties> <clear /> </properties>
```

Properties can be added into this section after the `<clear />` tag, one per line, giving the name and value. For example:

```
<property name="PutShortcutsOnDesktop" value="True" />
```

**Note:** Property elements added before the `<clear />` tag may invalidate them. Removing the `<clear />` tag when adding a property name and value is optional.

An extended example for this section is:

```
<properties> <property name="PutShortcutsOnDesktop" value="True" /> <property name="DesktopDir" value="Citrix Applications" />
```

## Important

In multiple server deployments, use only one server at a time to make changes to the configuration of the server group. Ensure that the Citrix StoreFront management console is not running on any of the other servers in the deployment. Once complete, [propagate your configuration changes to the server group](#), so that the other servers in the deployment are updated.

## Using per app settings in XenApp and XenDesktop 7.x to customize app shortcut locations

Citrix Receiver can be configured to automatically place application and desktop shortcuts directly in the Start Menu or on the desktop. This functionality was similar to previously released versions of Citrix Receiver, however, release 4.2.100 introduced the ability to control app shortcut placement using XenApp per app settings. This functionality is useful in environments with a handful of applications that need to be displayed in consistent locations.

If you want to set the location of shortcuts so every user finds them in the same place use XenApp per App Settings:

If you want per-app settings to determine where applications are placed independently of whether in self-service mode or Start Menu mode..

configure Receiver with **PutShortcutsInStartMenu=false** and enable per app settings.  
Note: This setting applies to the Web interface site only.

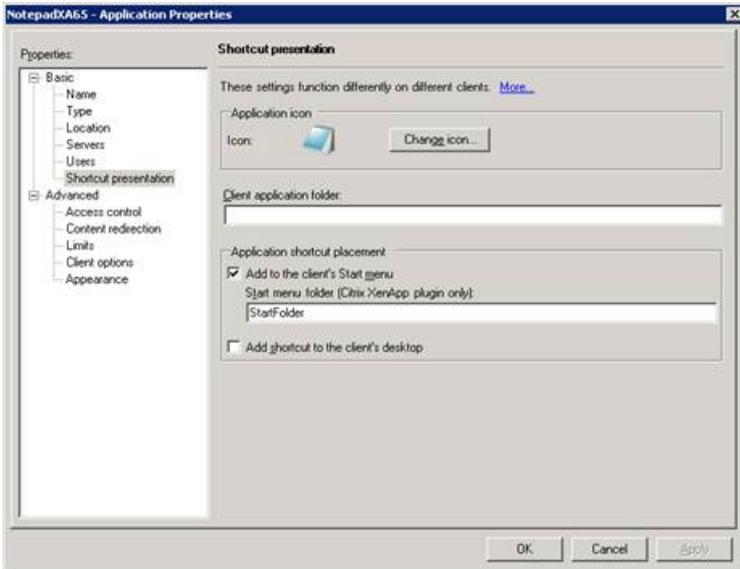
Note: The **PutShortcutsInStartMenu=false** setting applies to both XenApp 6.5 and XenDesktop 7.x.

### Configure per app settings in XenApp 6.5

To configure a per app publishing shortcut in XenApp 6.5:

1. In the XenApp Application Properties screen, expand Basic properties.
2. Select the Shortcut presentation option.

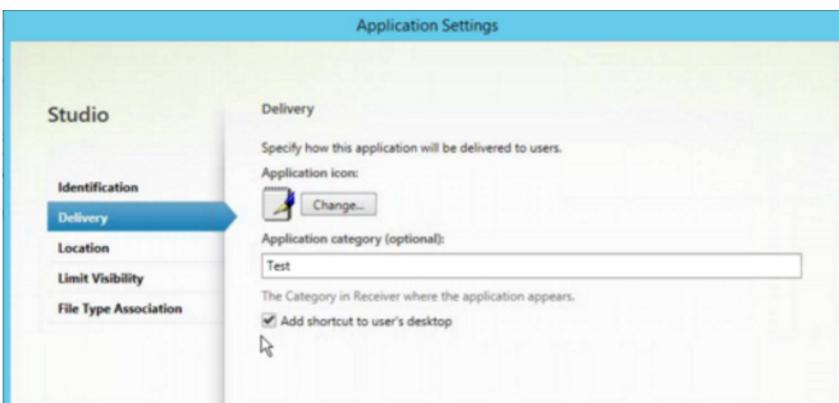
3. In the Application shortcut placement portion of the Shortcut presentation screen, select the Add to the client's Start menu check box. After selecting the check box, enter the name of the folder where you want to place the shortcut. If you do not specify a folder name, XenApp places the shortcut in the Start Menu without placing it in a folder.
4. Select the Add shortcut to the client's desktop to include the shortcut on a client machine's desktop.
5. Click Apply.
6. Click OK.



## Using per app settings in XenApp 7.6 to customize app shortcut locations

To configure a per app publishing shortcut in XenApp 7.6:

1. In Citrix Studio, locate the Application Settings screen.
2. In the Application Settings screen, select Delivery. Using this screen, you can specify how applications are delivered to users.
3. Select the appropriate icon for the application. Click Change to browse to the location of the desired icon.
4. In the Application category field, optionally specify the category in Receiver where the application appears. For example, if you are adding shortcuts to Microsoft Office applications, enter Microsoft Office.
5. Select the Add shortcut to user's desktop checkbox.
6. Click OK.



## Reducing enumeration delays or digitally signing application stubs

If users experience delays in app enumeration at each logon, or if there is a need to digitally sign application stubs, Receiver provides functionality to copy the .EXE stubs from a network share.

This functionality involves a number of steps:

1. Create the application stubs on the client machine.
2. Copy the application stubs to a common location accessible from a network share.
3. If necessary, prepare a white list (or, sign the stubs with an Enterprise certificate).
4. Add a registry key to enable Receiver to create the stubs by copying them from the network share.

If RemoveappsOnLogoff and RemoveAppsonExit are enabled, and users are experiencing delays in app enumeration at every logon, use the following workaround to reduce the delays:

1. Use regedit to add HKCU\Software\Citrix\Dazzle /v ReuseStubs /t REG\_SZ /d "true".
2. Use regedit to add HKLM\Software\Citrix\Dazzle /v ReuseStubs /t REG\_SZ /d "true". HKCU has preference over HKLM.

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.

Enable a machine to use pre-created stub executables that are stored on a network share:

1. On a client machine, create stub executables for all of the apps. To accomplish this, add all the applications to the machine using Receiver; Receiver generates the executables.
2. Harvest the stub executables from %APPDATA%\Citrix\SelfService. You only need the .exe files.
3. Copy the executables to a network share.
4. For each client machine that will be locked down, set the following registry keys:
  1. Reg add HKLM\Software\Citrix\Dazzle /v CommonStubDirectory /t REG\_SZ /d "\\ShareOne\ReceiverStubs"
  2. Reg add HKLM\Software\Citrix\Dazzle /v CopyStubsFromCommonStubDirectory /t REG\_SZ /d "true". It's also possible to configure these settings on HKCU if you prefer. HKCU has preference over HKLM.
  4. Exit and restart Receiver to test the settings.

## Example use cases

This topic provides use cases for app shortcuts.

### Allowing users to choose what they want in the Start Menu (Self-Service)

If you have dozens (or even hundreds) of apps, it's best to allow users to select which applications they want to favorite and add to the Start Menu:

If you want the user to choose the applications they want in their Start Menu..	configure Citrix Receiver in self-service mode. In this mode you also configure <i>auto-provisioned</i> and <i>mandatory</i> app keyword settings as needed.
If you want the user to choose the applications they want in their Start Menu but also want specific app shortcuts on the desktop..	configure Citrix Receiver without any options and then use per app settings for the few apps that you want on the desktop. Use <i>auto provisioned</i> and <i>mandatory</i> apps as needed.

### No app shortcuts in the Start Menu

If a user has a family computer, you might not need or want app shortcuts at all. In such scenarios, the simplest approach is browser access; install Citrix Receiver without any configuration and browse to Citrix Receiver for Web and Web interface. You can also configure Citrix Receiver for self-service access without putting shortcuts anywhere.

If you want to prevent Citrix Receiver from putting application shortcuts in the Start Menu automatically..	configure Citrix Receiver with PutShortcutsInStartMenu=False. Citrix Receiver will not put apps in the Start Menu even in self-service mode unless you put them there using per app settings.
---	---

### All app shortcuts in the Start Menu or on the Desktop

If the user has only a few apps, you can put them all in the Start Menu or all on the desktop, or in a folder on the desktop.

If you want Citrix Receiver to put all application shortcuts in the start menu automatically..	configure Citrix Receiver with SelfServiceMode =False. All available apps will appear in the Start Menu.
If you want all application shortcuts to put on desktop..	configure Citrix Receiver with PutShortcutsOnDesktop = true. All available apps will appear in the desktop.
If you want all shortcuts to be put on the desktop in a folder...	configure Citrix Receiver with DesktopDir=Name of the desktop folder where you want applications.

### Per app settings in XenApp 6.5 or 7.x

If you want to set the location of shortcuts so every user finds them in the same place use XenApp per App Settings:

If you want per-app settings to determine where applications are placed independently of whether in self-service mode or Start Menu mode..	configure Citrix Receiver with <b>PutShortcutsInStartMenu=false</b> and enable per app settings. Note: This setting applies to the Web Interface site only.
--	--

### Apps in category folders or in specific folders

If you want applications displayed in specific folders use the following options:

If you want the application shortcuts Citrix Receiver places in the start menu to be shown in their associated category (folder)..	configure Citrix Receiver with UseCategoryAsStartMenuPath=True. Note: Windows 8/8.1 does not allow the creation of nested folders within the Start Menu. Applications will be displayed individually or under the root folder but not within Category sub folders defined with XenApp.
If you want the applications that Citrix Receiver puts in the Start menu to be in a specific folder..	configure Citrix Receiver with StartMenuDir=the name of the Start Menu folder name.

### Remove apps on logoff or exit

If you don't want users to see apps if another user is going to share the end point, you can ensure that apps are removed when the user logs off and exits

If you want Citrix Receiver to remove all apps on logoff..	configure Citrix Receiver with RemoveAppsOnLogoff=True.
If you want Citrix Receiver to remove apps on exit..	configure Citrix Receiver with RemoveAppsOnExit=True.

## Configuring local app access applications

When configuring local app access applications:

- To specify that a locally installed application should be used instead of an application available in Citrix Receiver, append the string `KEYWORDS:prefer="pattern"`. This feature is referred to as Local App Access.

Before installing an application on a user's computer, Citrix Receiver searches for the specified patterns to determine if the application is installed locally. If it is, Citrix Receiver subscribes the application and does not create a shortcut. When the user starts the application from the Citrix Receiver window, Citrix Receiver starts the locally installed (preferred) application.

If a user uninstalls a preferred application outside of Citrix Receiver, the application is unsubscribed during the next Citrix Receiver refresh. If a user uninstalls a preferred application from the Citrix Receiver window, Citrix Receiver unsubscribes the application but does not uninstall it.

Note: The keyword `prefer` is applied when Citrix Receiver subscribes an application. Adding the keyword after the application is subscribed has no effect.

You can specify the `prefer` keyword multiple times for an application. Only one match is needed to apply the keyword to an application. The following patterns can be used in any combination:

- • To specify that a locally installed application should be used instead of an application available in Citrix Receiver, append the string `KEYWORDS:prefer="pattern"`. This feature is referred to as Local App Access. Before installing an application on a user's computer, Citrix Receiver searches for the specified patterns to determine if the application is installed locally. If it is, Citrix Receiver subscribes the application and does not create a shortcut. When the user starts the application from the Citrix Receiver window, Citrix Receiver starts the locally installed (preferred) application.

If a user uninstalls a preferred application outside of Citrix Receiver, the application is unsubscribed during the next Citrix Receiver refresh. If a user uninstalls a preferred application from the Citrix Receiver window, Citrix Receiver unsubscribes the application but does not uninstall it.

Note: The keyword `prefer` is applied when Citrix Receiver subscribes an application. Adding the keyword after the application is subscribed has no effect.

You can specify the `prefer` keyword multiple times for an application. Only one match is needed to apply the keyword to an application. The following patterns can be used in any combination:

- `prefer="ApplicationName"`  
The application name pattern matches any application with the specified application name in the shortcut file name. The application name can be a word or a phrase. Quotation marks are required for phrases. Matching is not allowed on partial words or file paths and is case-insensitive. The application name matching pattern is useful for overrides performed manually by an administrator.

<b>KEYWORDS:prefer=</b>	<b>Shortcut under Programs</b>	<b>Matches?</b>

KEYWORDS:prefer=	Shortcut under Programs	Matches?
"Microsoft Word"	\Microsoft Office\Microsoft Word 2010	Yes
Console	\McAfee\VirusScan Console	Yes
Virus	\McAfee\VirusScan Console	No
McAfee	\McAfee\VirusScan Console	No

- prefer="\\Folder1\Folder2\...\ApplicationName"

The absolute path pattern matches the entire shortcut file path plus the entire application name under the Start menu. The Programs folder is a sub folder of the Start menu directory, so you must include it in the absolute path to target an application in that folder. Quotation marks are required if the path contains spaces. The matching is case-sensitive. The absolute path matching pattern is useful for overrides implemented programmatically in XenDesktop.

KEYWORDS:prefer=	Shortcut under Programs	Matches?
"\\Programs\Microsoft Office\Microsoft Word 2010"	\Programs\Microsoft Office\Microsoft Word 2010	Yes
"\\Microsoft Office\"	\Programs\Microsoft Office\Microsoft Word 2010	No
"\\Microsoft Word 2010"	\Programs\Microsoft Office\Microsoft Word 2010	No
"\\Programs\Microsoft Word 2010"	\Programs\Microsoft Word 2010	Yes

- prefer="\Folder1\Folder2\...\ApplicationName"

The relative path pattern matches the relative shortcut file path under the Start menu. The relative path provided must contain the application name and can optionally include the folders where the shortcut resides. Matching is successful if the shortcut file path ends with the relative path provided. Quotation marks are required if the path contains spaces. The matching is case-sensitive. The relative path matching pattern is useful for overrides implemented programmatically.

KEYWORDS:prefer=	Shortcut under Programs	Matches?
"\Microsoft Office\Microsoft Word 2010"	\Microsoft Office\Microsoft Word 2010	Yes
"\Microsoft Office\"	\Microsoft Office\Microsoft Word 2010	No
"\Microsoft Word 2010"	\Microsoft Office\Microsoft Word 2010	Yes

<b>KEYWORDS:prefer=</b> "\Microsoft Word"	<b>Shortcut under Programs</b> \Microsoft Word 2010	<b>Matches?</b> No
--	--	-----------------------

For information about other keywords, see "Additional recommendations" in [Optimize the user experience](#) in the StoreFront documentation.

# Configuring Citrix Receiver Updates

Nov 27, 2017

When you configure Citrix Receiver Updates from Citrix Receiver for Windows, follow the methods below in the order of priority:

1. Group Policy Object administrative template
2. Command line interface
3. Advanced Preferences (per-user)

## Note

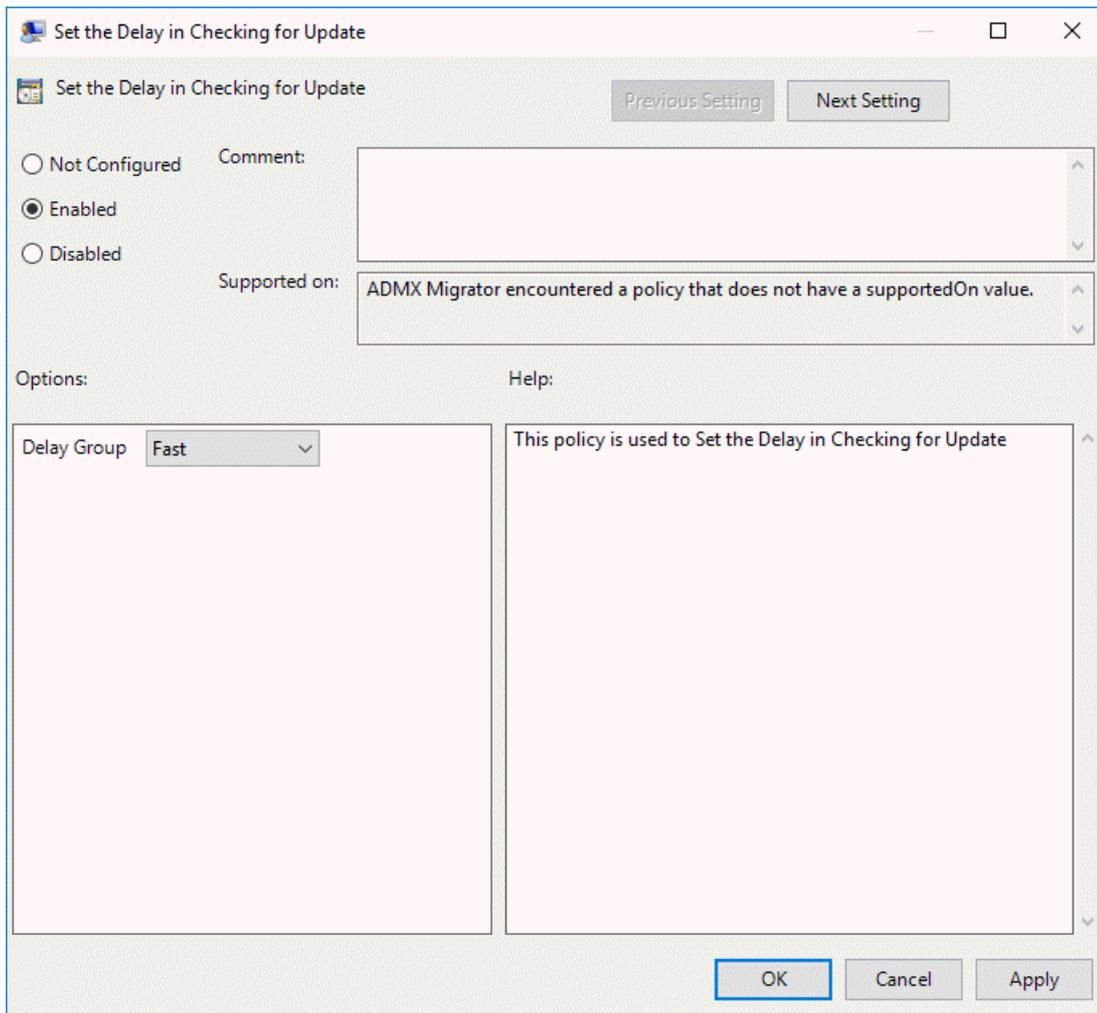
When you upgrade Citrix Receiver for Windows using Citrix Receiver Updates, the log in window does not appear.

### Limitations:

1. If you have configured an SSL intercepting outbound proxy, you must add an exception to the Receiver auto-update Signature service (<https://citrixupdates.cloud.com>) and the download location (<https://downloadplugins.citrix.com>).
2. Your system must have access to the internet.
3. Receiver for Web users cannot download the StoreFront policy automatically.
4. By default, Citrix Receiver Updates is disabled on the VDA. This includes RDS multi-user server machines, VDI and RemotePC machines.
5. Citrix Receiver Updates is disabled on machines where Desktop Lock is installed.

## Configuring using the Group Policy Object administrative template

1. Open the Citrix Receiver Group Policy Object administrative template by running gpedit.msc.
2. Under the Computer Configuration node, go to **Administrative Templates > Citrix Components > Citrix Receiver > AutoUpdate**.
3. Select the **Set the Delay in Checking for Update** policy. This policy allows you to stage the rollout for a period.

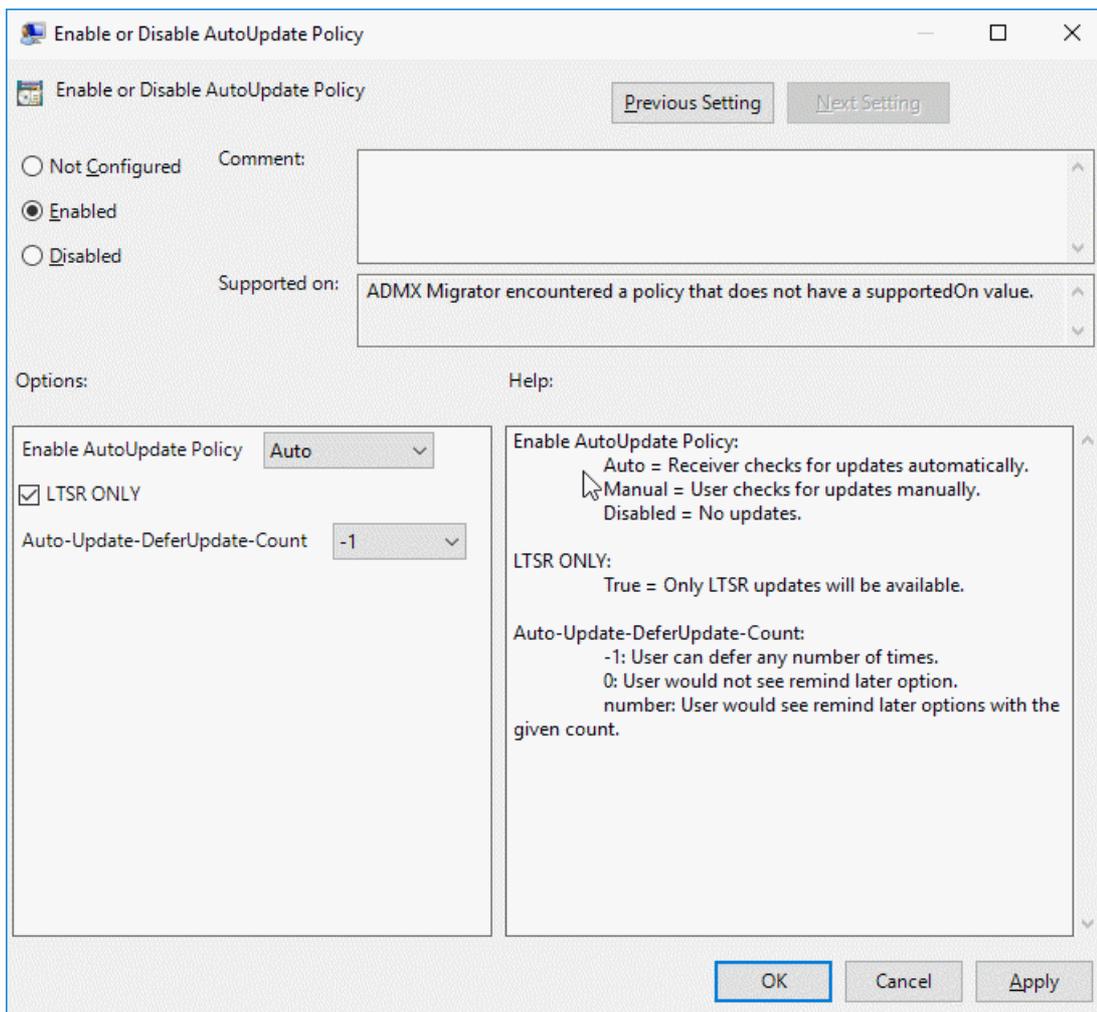


4. Select **Enabled**, and from the **Delay Group** drop-down, select one of the following options:

- **Fast** – Update rollout happens at the beginning of the delivery period.
- **Medium** – Update rollout happens at the mid-delivery period.
- **Slow** – Update rollout happens at the end of the delivery period.

5. Click **Apply** and **OK** to save the Policy.

6. In the AutoUpdate Templates section, select the **Enable or Disable AutoUpdate** policy.



## Note

When you select **Disabled**, you are not notified of the available updates. This also hides the **Auto Update** option from the **Advanced Preferences** sheet.

7. Select **Enabled** and set the values as required:

- From the **Enable AutoUpdate Policy** drop-down, select one of the following options:
  - **Auto** – You are notified when an update is available (default).
  - **Manual** – You are not notified when updates are available. Check for updates manually.
- Select **LTSR ONLY** to get updates for LTSR only.
- From the **auto-update-DeferUpdate-Count** drop-down, select a value between **-1** and **30**, where
  - **-1** – indicates that you can defer the notifications any number of times (default value=-1).
  - **0** – indicates that the **Remind me later** option is not displayed.
  - Any other number – indicates that the **Remind me later** option is displayed in that count. For example, if you set the value to 10, the **Remind me later** option is displayed 10 times.

8. Click **Apply** and **OK** to save the policy.

# Configuring using the command line interface

While installing Citrix Receiver for Windows:

To configure Citrix Receiver Updates settings as an administrator using command-line settings during Citrix Receiver installation:

- **/AutoUpdateCheck** = auto/manual/disabled
- **/AutoUpdateStream**= LTSR/Current. Where, LTSR refers to Long Term Service Release and Current refers to the current release.
- **/DeferUpdateCount**= any value between -1 and 30
- **/AURolloutPriority**= auto/fast/medium/slow

For example: *CitrixReceiver.exe / AutoUpdateCheck=auto /AutoUpdateStream= Current /DeferUpdateCount=-1 / AURolloutPriority= fast*

- To configure Citrix Receiver Updates settings as a user using command-line settings during Citrix Receiver installation
  - **/AutoUpdateCheck**=auto/manual

For example: *CitrixReceiver.exe / AutoUpdateCheck=auto*

Editing Citrix Receiver Updates settings using the Group Policy Object administrative template overrides the settings applied during Citrix Receiver for Windows installation for all users.

After Citrix Receiver for Windows installation:

Citrix Receiver Updates can be configured after installing Citrix Receiver for Windows.

To use the command line:

Open Windows Command Prompt and change the directory to where **CitrixReceiverUpdater.exe** is located. Typically, CitrixReceiverUpdater.exe is located at *CitrixReceiverInstallLocation\Citrix\Ica Client\Receiver*.

You can also set the Citrix Receiver Updates command-line policy using this binary.

For example: Administrators can use all the four options:

- *CitrixReceiverUpdater.exe / AutoUpdateCheck=auto /AutoUpdateStream= Current/DeferUpdateCount=-1 / AURolloutPriority= fast*

# Configuring using the graphical user interface

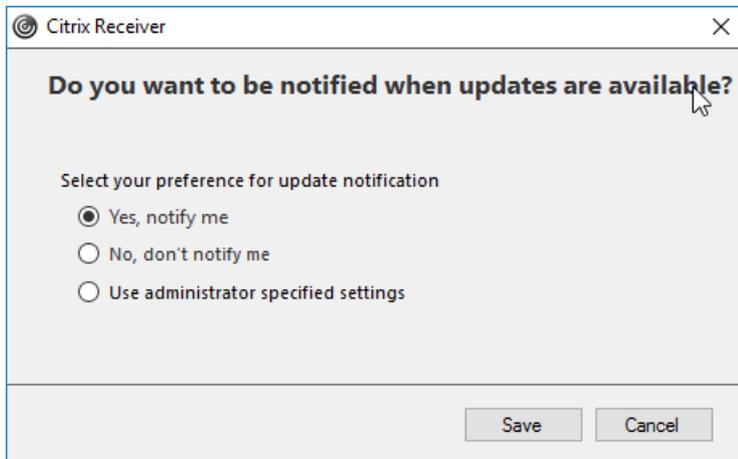
## Note

You can hide all or part of the Advanced Preferences sheet available from the Citrix Receiver icon in the notification area. For more information, see [Hiding the Advanced Preferences sheet](#).

An individual user can override the Citrix Receiver Updates setting using the **Advanced Preferences** dialog. This is a per-user configuration and the settings apply only to the current user.

1. Right-click Citrix Receiver for Windows from the notification area.
2. Select **Advanced Preferences** and click **Auto Update**.

The Citrix Receiver Updates dialog appears.



3. Select one of the following options:
  - Yes, notify me
  - No, don't notify me
  - Use administrator specified settings
4. Click **Save**.

## Configuring Citrix Receiver Updates using StoreFront

1. Use a text editor to open the web.config file, which is typically located in the C:\inetpub\wwwroot\Citrix\Roaming directory.
2. Locate the user account element in the file (Store is the account name of your deployment)

For example: <account id=... name="Store">

Before the </account> tag, navigate to the properties of that user account:

```
<properties>  
  
  <clear />  
</properties>
```

3. Add the auto-update tag after <clear /> tag.

A sample web.config file looks as follows:

COPY

```
<accounts>
```

```
<clear />
```

```
<account id="d1197d2c-ac82-4f13-9346-2ee14d4b0202" name="F84Store"
```

```
description="" published="true" updaterType="Citrix" remoteAccessType="None">
```

```
<annotatedServices>
```

```
<clear />
```

```
<annotatedServiceRecord serviceRef="1__Citrix_F84Store">
```

```
<metadata>
```

```
<plugins>
```

```
<clear />
```

```
</plugins>
```

```
<trustSettings>
```

```
<clear />
```

```
</trustSettings>
```

```
<properties>
```

```
<property name="Auto-Update-Check" value="auto" />
```

```
<property name="Auto-Update-DeferUpdate-Count" value="1" />
```

```
<property name="Auto-Update-LTSR-Only" value="FALSE" />
```

```
<property name="Auto-Update-Rollout-Priority" value="fast" />
```

```
</properties>
```

```
</metadata>
```

```
</annotatedServiceRecord>
```

```
</annotatedServices>
```

```
<metadata>
```

```
<plugins>
```

```
<clear />
```

```
</plugins>
```

```
<trustSettings>
```

```
<clear />
```

```
</trustSettings>

<properties>

<clear />

</properties>

</metadata>

</account>
```

## auto-update-Check

This indicates that Citrix Receiver for Windows detects when an update is available.

### Valid values:

- Auto – You are notified when an update is available (default).
- Manual – You are not notified when updates are available. Check for updates manually.
- Disabled – The Citrix Receiver Updates is hidden and you will not be notified when an update is available.

## auto-update-LTSR-Only

This indicates that Citrix Receiver for Windows must accept updates only for LTSR.

### Valid values:

- True – Citrix Receiver Updates checks only for LTSR updates of Citrix Receiver for Windows
- False – Citrix Receiver Updates checks for non-LTSR updates of Citrix Receiver for Windows as well.

## auto-update-DeferUpdate-Count

This indicates the number of counts you can defer the notifications. The **Remind me later** option is displayed in the count of the set value.

### Valid values:

- -1 – indicates that you can defer the notifications any number of times (default value=-1).
- 0 – indicates that the Remind me later option is not displayed.
- Any other number – indicates that the Remind me later option is displayed in that count. For example, if you set the value to 10, the Remind me later option is displayed 10 times.

### **auto-update-Rollout-Priority**

This indicates the period that you can set for the rollout.

#### **Valid values:**

- Fast – Update rollout happens at the beginning of the delivery period.
- Medium – Update rollout happens at the mid-delivery period.
- Slow – Update rollout happens at the end of the delivery period.

# Configuring features and functionality

Nov 27, 2017

After the Citrix Receiver for Windows is installed, the following configuration steps allow users to access their hosted applications and desktops:

- Adaptive transport - Adaptive transport optimizes data transport by applying a new Citrix protocol called Enlightened Data Transport (EDT) in preference to TCP whenever possible. For more information about configuring adaptive transport, see [Configuring adaptive transport](#).
- Auto-update - Auto-update provides automatic updates for Citrix Receiver for Windows and for the HDX RealTime Optimization Pack without the need to download updates manually. For more information about configuring auto-update, see [Configuring auto-update](#).
- Bidirectional content redirection - The bidirectional content redirection allows you to enable or disable client to host and host to client URL redirection. For more information on configuring bidirectional content redirection, see [Configuring bidirectional content redirection](#).
- Bloomberg keyboards - Specialist USB devices (for example, Bloomberg keyboards and 3-D mice) can be configured to use USB support. For information on configuring Bloomberg keyboards, see [Configure Bloomberg keyboards](#).
- Composite USB Device - A composite USB device has the ability to perform more than one function. This is accomplished by exposing each of those functions using different interfaces. For more information on configuring composite USB device, see [Configuring composite USB device](#).
- USB support - USB support enables users to interact with a wide range of USB devices when connected to a virtual desktop. For more information on configuring USB support, see [Configuring USB support](#).

# Configuring adaptive transport

Nov 27, 2017

## Requirements

- XenApp and XenDesktop 7.12 and later (required to enable the feature using Citrix Studio).
- StoreFront 3.8.
- IPv4 VDAs only. IPv6 and mixed IPv6 and IPv4 configurations are not supported.
- Add firewall rules to allow inbound traffic on UDP ports 1494 and 2598 of the VDA.

## Note

TCP ports 1494 and 2598 are also required and opened automatically when you install the VDA. However, UDP ports 1494 and 2598 are not automatically opened. You must enable them.

Adaptive transport must be configured on the VDA by applying the policy before it is available for communication between the VDA and Citrix Receiver.

By default, the adaptive transport is allowed in Citrix Receiver for Windows. However, also by default, the client attempts to use adaptive transport only if the VDA is configured to **Preferred** in the Citrix Studio policy and if the setting has been applied on the VDA.

You can enable adaptive transport using the **HDX Adaptive Transport policy** setting. Set the new policy to **Preferred** to use adaptive transport when possible, with fallback to TCP.

To disable adaptive transport on a specific client, set the EDT options appropriately using the Citrix Receiver Group Policy Object administrative template.

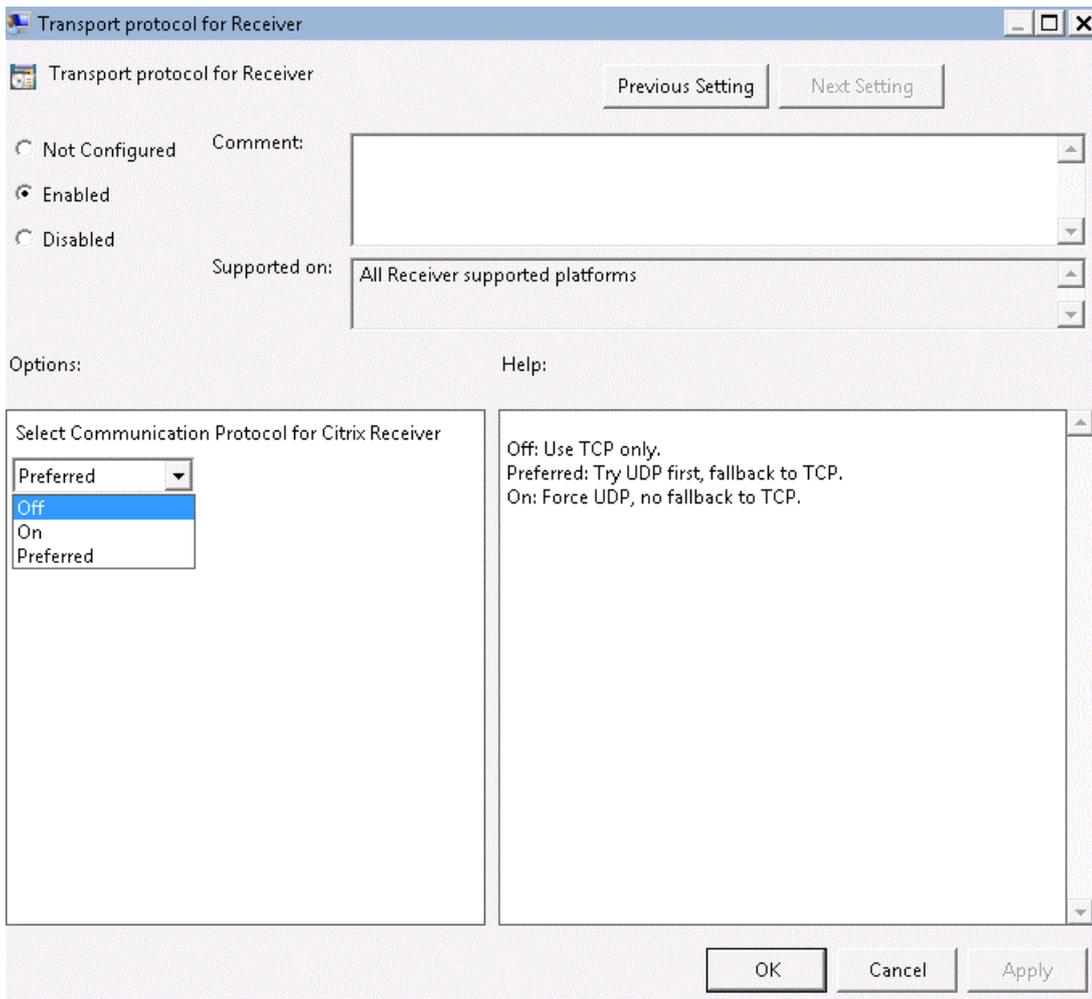
## To configure adaptive transport using the Citrix Receiver Group Policy Object administrative template (optional)

The following are optional configuration steps to customize your environment. For example, you may choose to disable the feature for a particular client for security reasons.

## Note

By default, adaptive transport is disabled (Off) and TCP is always used.

1. Open the Citrix Receiver Group Policy Object administrative template by running gpedit.msc.
2. Under the Computer Configuration node, go to **Administrative Templates > Citrix Receiver > Network routing**.



3. Set the **Transport protocol for Receiver** policy to **Enabled**.

4. Select **Communication Protocol for Citrix Receiver** as required.

- **Off**: Indicates that TCP is used for data transfer.
- **Preferred**: Indicates that the Citrix Receiver tries to connect to the server using UDP at first and then switches to TCP as a fallback.
- **On**: Indicates that the Citrix Receiver connects to the server using UDP only. There is no fallback to TCP with this option.

5. Click **Apply** and **OK**.

6. From a command line, run the `gpupdate /force` command.

Additionally, for the adaptive transport configuration to take effect, the user is required to add the Citrix Receiver Windows template files to the Policy Definitions folder. For more information on adding `admx/adml` template files to the local GPO, see [Configuring Citrix Receiver for Windows with the Group Policy Object template](#).

To confirm that the policy setting has taken effect:

Navigate to `HKEY_LOCAL_MACHINE\SOFTWARE\Policies\Citrix\ICA Client\Engine\Lockdown Profiles\All Regions\Lockdown\Network\UDT` and verify that the key **HDXOverUDP** is included.

# Configuring Citrix Receiver Updates

Nov 27, 2017

When you configure Citrix Receiver Updates from Citrix Receiver for Windows, follow the methods below in the order of priority:

1. Group Policy Object administrative template
2. Command line interface
3. Advanced Preferences (per-user)

## Note

You can hide all or part of the Advanced Preferences sheet available from the Citrix Receiver icon in the notification area. For more information, see [Hiding the Advanced Preferences sheet](#).

## Note

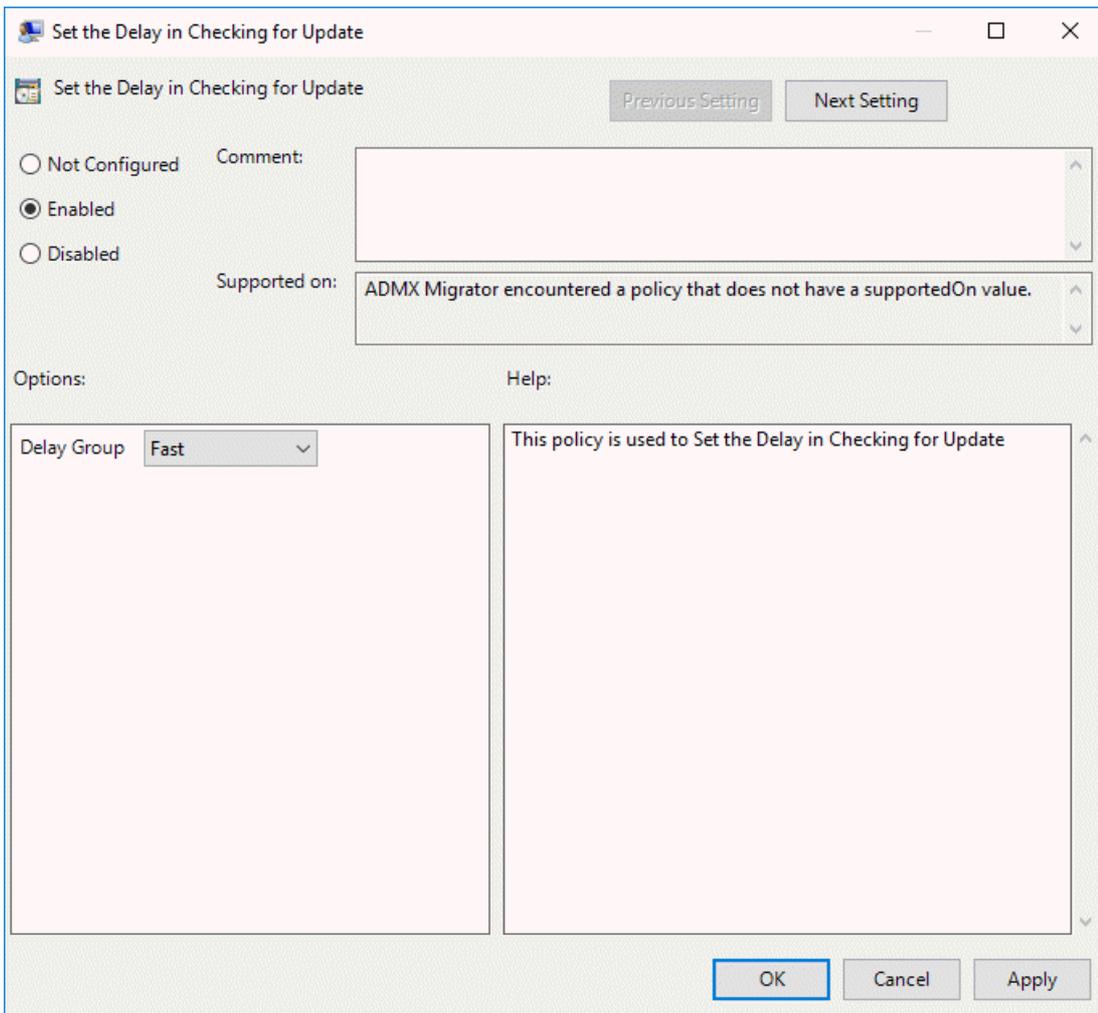
When you upgrade Citrix Receiver for Windows using Citrix Receiver Updates, the log in window does not appear.

### Limitations:

1. If you have configured an SSL intercepting outbound proxy, you must add an exception to the Receiver auto-update Signature service (<https://citrixupdates.cloud.com>) and the download location (<https://downloadplugins.citrix.com>).
2. Your system must have access to the internet.
3. Receiver for Web users cannot download the StoreFront policy automatically.
4. By default, Citrix Receiver Updates is disabled on the VDA. This includes RDS multi-user server machines, VDI and RemotePC machines.
5. Citrix Receiver Updates is disabled on machines where Desktop Lock is installed.

## Configuring using the Group Policy Object administrative template

1. Open the Citrix Receiver Group Policy Object administrative template by running gpedit.msc.
2. Under the Computer Configuration node, go to **Administrative Templates > Citrix Components > Citrix Receiver > AutoUpdate**.
3. Select the **Set the Delay in Checking for Update** policy. This policy allows you to stage the rollout for a period.

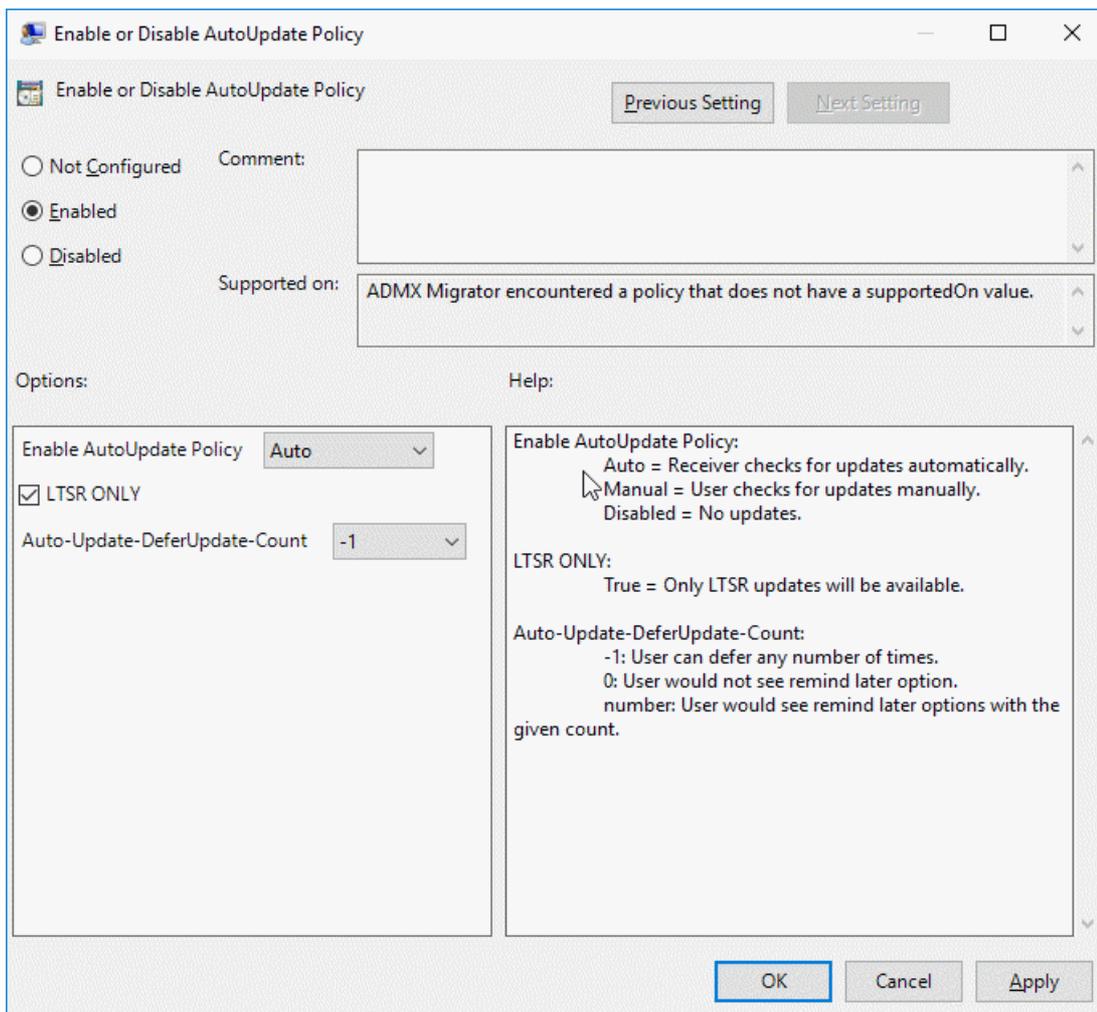


4. Select **Enabled**, and from the **Delay Group** drop-down, select one of the following options:

- **Fast** – Update rollout happens at the beginning of the delivery period.
- **Medium** – Update rollout happens at the mid-delivery period.
- **Slow** – Update rollout happens at the end of the delivery period.

5. Click **Apply** and **OK** to save the Policy.

6. In the AutoUpdate Templates section, select the **Enable or Disable AutoUpdate** policy.



## Note

When you select **Disabled**, you are not notified of the available updates. This also hides the **Auto Update** option from the **Advanced Preferences** sheet.

7. Select **Enabled** and set the values as required:

- From the **Enable AutoUpdate Policy** drop-down, select one of the following options:
  - **Auto** – You are notified when an update is available (default).
  - **Manual** – You are not notified when updates are available. Check for updates manually.
- Select **LTSR ONLY** to get updates for LTSR only.
- From the **auto-update-DeferUpdate-Count** drop-down, select a value between **-1** and **30**, where
  - **-1** – indicates that you can defer the notifications any number of times (default value=-1).
  - **0** – indicates that the **Remind me later** option is not displayed.
  - Any other number – indicates that the **Remind me later** option is displayed in that count. For example, if you set the value to 10, the **Remind me later** option is displayed 10 times.

8. Click **Apply** and **OK** to save the policy.

# Configuring using the command line interface

While installing Citrix Receiver for Windows:

To configure Citrix Receiver Updates settings as an administrator using command-line settings during Citrix Receiver installation:

- **/AutoUpdateCheck** = auto/manual/disabled
- **/AutoUpdateStream**= LTSR/Current. Where, LTSR refers to Long Term Service Release and Current refers to the current release.
- **/DeferUpdateCount**= any value between -1 and 30
- **/AURolloutPriority**= auto/fast/medium/slow

For example: *CitrixReceiver.exe / AutoUpdateCheck=auto /AutoUpdateStream= Current /DeferUpdateCount=-1 / AURolloutPriority= fast*

- To configure Citrix Receiver Updates settings as a user using command-line settings during Citrix Receiver installation
  - **/AutoUpdateCheck**=auto/manual

For example: *CitrixReceiver.exe / AutoUpdateCheck=auto*

Editing Citrix Receiver Updates settings using the Group Policy Object administrative template overrides the settings applied during Citrix Receiver for Windows installation for all users.

After Citrix Receiver for Windows installation:

Citrix Receiver Updates can be configured after installing Citrix Receiver for Windows.

To use the command line:

Open Windows Command Prompt and change the directory to where **CitrixReceiverUpdater.exe** is located. Typically, CitrixReceiverUpdater.exe is located at *CitrixReceiverInstallLocation\Citrix\Ica Client\Receiver*.

You can also set the Citrix Receiver Updates command-line policy using this binary.

For example: Administrators can use all the four options:

- *CitrixReceiverUpdater.exe / AutoUpdateCheck=auto /AutoUpdateStream= Current/DeferUpdateCount=-1 / AURolloutPriority= fast*

# Configuring using the graphical user interface

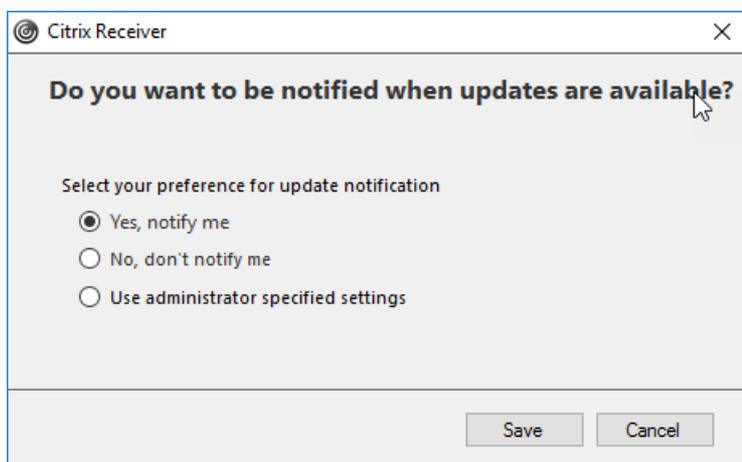
## Note

You can hide all or part of the Advanced Preferences sheet available from the Citrix Receiver icon in the notification area. For more information, see [Hiding the Advanced Preferences sheet](#).

An individual user can override the Citrix Receiver Updates setting using the **Advanced Preferences** dialog. This is a per-user configuration and the settings apply only to the current user.

1. Right-click Citrix Receiver for Windows from the notification area.
2. Select **Advanced Preferences** and click **Auto Update**.

The Citrix Receiver Updates dialog appears.



3. Select one of the following options:
  - Yes, notify me
  - No, don't notify me
  - Use administrator specified settings
4. Click **Save**.

## Configuring Citrix Receiver Updates using StoreFront

1. Use a text editor to open the web.config file, which is typically located in the C:\inetpub\wwwroot\Citrix\Roaming directory.
2. Locate the user account element in the file (Store is the account name of your deployment)

For example: <account id=... name="Store">

Before the </account> tag, navigate to the properties of that user account:

```
<properties>  
  
  <clear />  
</properties>
```

3. Add the auto-update tag after <clear /> tag.

A sample web.config file looks as follows:

COPY

```
<accounts>
```

```
<clear />
```

```
<account id="d1197d2c-ac82-4f13-9346-2ee14d4b0202" name="F84Store"
```

```
description="" published="true" updaterType="Citrix" remoteAccessType="None">
```

```
<annotatedServices>
```

```
<clear />
```

```
<annotatedServiceRecord serviceRef="1__Citrix_F84Store">
```

```
<metadata>
```

```
<plugins>
```

```
<clear />
```

```
</plugins>
```

```
<trustSettings>
```

```
<clear />
```

```
</trustSettings>
```

```
<properties>
```

```
<property name="Auto-Update-Check" value="auto" />
```

```
<property name="Auto-Update-DeferUpdate-Count" value="1" />
```

```
<property name="Auto-Update-LTSR-Only" value="FALSE" />
```

```
<property name="Auto-Update-Rollout-Priority" value="fast" />
```

```
</properties>
```

```
</metadata>
```

```
</annotatedServiceRecord>
```

```
</annotatedServices>
```

```
<metadata>
```

```
<plugins>
```

```
<clear />
```

```
</plugins>
```

```
<trustSettings>
```

```
<clear />
```

```
</trustSettings>

<properties>

<clear />

</properties>

</metadata>

</account>
```

## auto-update-Check

This indicates that Citrix Receiver for Windows detects when an update is available.

### Valid values:

- Auto – You are notified when an update is available (default).
- Manual – You are not notified when updates are available. Check for updates manually.
- Disabled – The Citrix Receiver Updates is hidden and you will not be notified when an update is available.

## auto-update-LTSR-Only

This indicates that Citrix Receiver for Windows must accept updates only for LTSR.

### Valid values:

- True – Citrix Receiver Updates checks only for LTSR updates of Citrix Receiver for Windows
- False – Citrix Receiver Updates checks for non-LTSR updates of Citrix Receiver for Windows as well.

## auto-update-DeferUpdate-Count

This indicates the number of counts you can defer the notifications. The **Remind me later** option is displayed in the count of the set value.

### Valid values:

- -1 – indicates that you can defer the notifications any number of times (default value=-1).
- 0 – indicates that the Remind me later option is not displayed.
- Any other number – indicates that the Remind me later option is displayed in that count. For example, if you set the value to 10, the Remind me later option is displayed 10 times.

### **auto-update-Rollout-Priority**

This indicates the period that you can set for the rollout.

#### **Valid values:**

- Fast – Update rollout happens at the beginning of the delivery period.
- Medium – Update rollout happens at the mid-delivery period.
- Slow – Update rollout happens at the end of the delivery period.

# Configuring bidirectional content redirection

Nov 27, 2017

You can enable bidirectional content redirection by using one of the following:

1. Group Policy Object administrative template
2. Registry

## Note

- Bidirectional content redirection does not work on session where **Local App Access** is enabled.
- Bidirectional content redirection must be enabled both on the server and the client. When it is disabled either on the server or the client, the functionality is disabled.

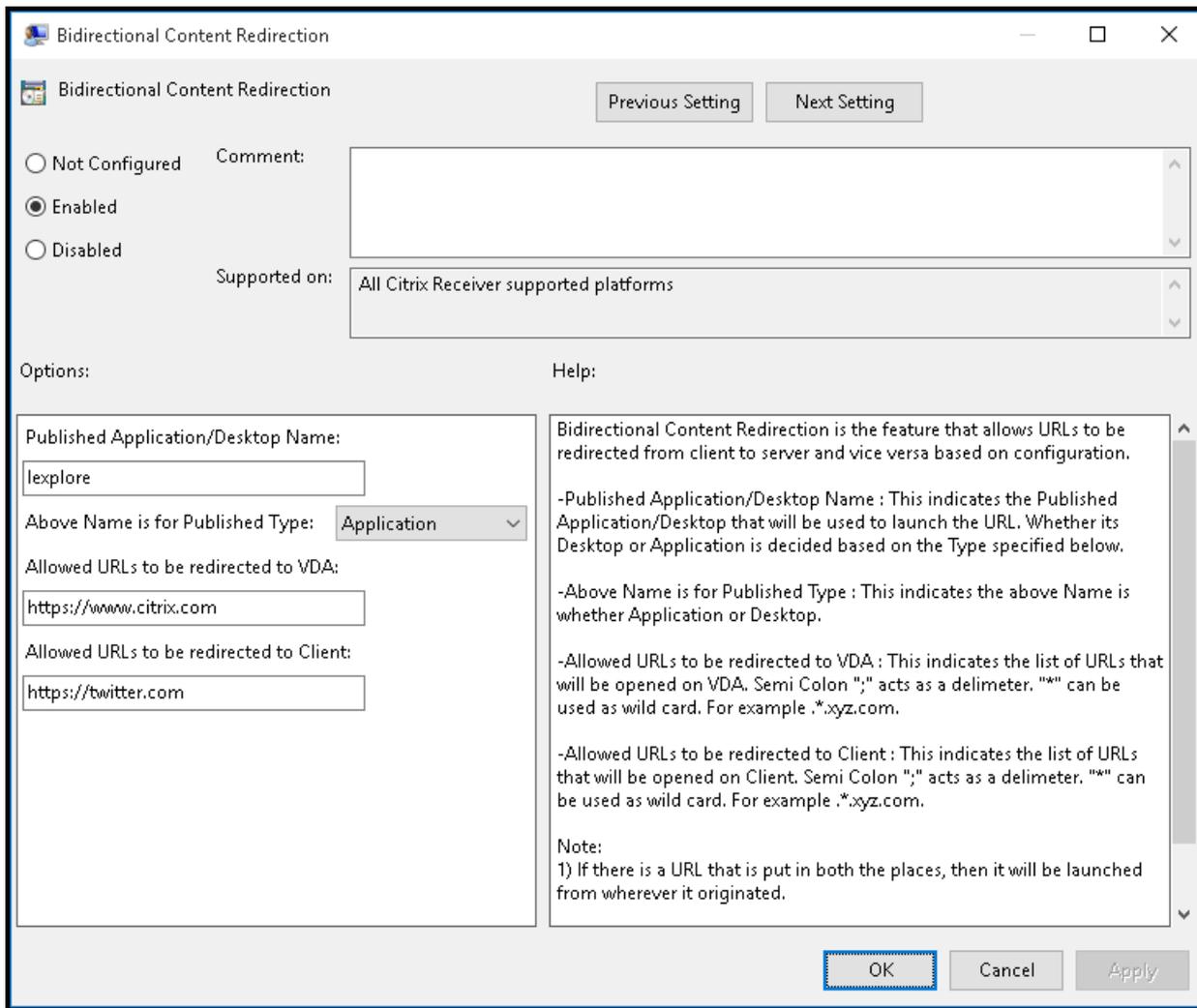
## To enable bidirectional content redirection using the Group Policy Object administrative template

Use Group Policy Object administrative template configuration for a first-time installation of Citrix Receiver for Windows.

1. As an administrator, open the Citrix Receiver Group Policy Object administrative template by running `gpedit.msc`.
  - If you are applying the policy on a single computer, launch it from the Start menu.
  - If you are applying the policy on a domain, launch it by using the Group Policy Management console.
2. Under the User Configuration node, go to **Administrative Templates > Classic Administrative Templates (ADM) > Citrix Components > Citrix Receiver > User experience**.
3. Select the **Bidirectional Content Redirection** policy.
4. Edit the settings.

## Note

When you include URLs, you can specify a single URL or a semi-colon delimited list of URLs. You can use an asterisk (\*) as a wildcard.



5. Click **Apply** and **OK**.

6. From a command line, run the `gpupdate /force` command.

### To enable bidirectional content redirection using the registry

To enable bidirectional content redirection, run the `redirector.exe /RegIE` command from the Citrix Receiver for Windows installation folder (C:\Program Files (x86)\Citrix\ICA Client).

### Limitations

- No fallback mechanism is present if redirection fails due to session launch issues.

## Important

- Ensure that redirection rules do not result in a looping configuration. A looping configuration, for example results if VDA rules are set so that a URL, `https://www.my_company.com`, is configured to be redirected to the client, and the same URL is configured to be redirected to the VDA.
- URL redirection supports only explicit URLs (those appearing in the address bar of the browser or found using the in-browser navigation, depending on the browser).
- If two applications with same display name are configured to use multiple StoreFront accounts, the display name in the primary

StoreFront account is used for launching the application or a desktop session.

- New browser window opens only when URL is redirected to the client. When URL is redirected to VDA, if the browser is already open, then the redirected URL opens in the new tab.
- Embedded links in files like documents, emails, pdfs is supported.

# Configuring Bloomberg keyboards

Nov 27, 2017

Citrix Receiver for Windows supports the use of Bloomberg Keyboard in a XenApp and XenDesktop session. The required components are installed with the plug-in. You can enable the Bloomberg keyboard feature during Citrix Receiver for Windows installation or by using the registry

Multiple sessions to Bloomberg keyboards are not recommended. The keyboard only operates correctly in single-session environments.

## To enable or disable Bloomberg keyboard support

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.

1. Locate the following key in the registry:

HKEY\_LOCAL\_MACHINE\SOFTWARE\Citrix\ICA Client\GenericUSB

2. Do one of the following:

- To turn on this feature, for the entry with Type DWORD and Name EnableBloombergHID, set Value to 1.
- To turn off this feature, set the Value to 0.

For more information on configuring Bloomberg Keyboard, see Knowledge Center article [CTX122615](#).

If users have multiple Desktop Viewer windows, by default the desktops that are not active are dimmed. If users need to view multiple desktops simultaneously, this can make the information on them unreadable. You can disable the default behavior and prevent the Desktop Viewer window from dimming by editing the Registry.

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.

1. On the user device, create a REG\_DWORD entry called DisableDimming in one of the following keys, depending on whether you want to prevent dimming for the current user of the device or the device itself. An entry already exists if the Desktop Viewer has been used on the device:

- HKEY\_CURRENT\_USER\Software\Citrix\XenDesktop\DesktopViewer
- HKEY\_LOCAL\_MACHINE\Software\Citrix\XenDesktop\DesktopViewer

Optionally, instead of controlling dimming with the above user or device settings, you can define a local policy by creating the same REG\_WORD entry in one of the following keys:

- HKEY\_CURRENT\_USER\Software\Policies\Citrix\XenDesktop\DesktopViewer
- HKEY\_LOCAL\_MACHINE\Software\Policies\Citrix\XenDesktop\DesktopViewer

The use of these keys is optional because XenDesktop administrators, rather than plug-in administrators or users, typically control policy settings using Group Policy. So, before using these keys, check whether your XenDesktop administrator has set a policy for this feature.

2. Set the entry to any non-zero value such as 1 or true.

If no entries are specified or the entry is set to 0, the Desktop Viewer window is dimmed. If multiple entries are specified, the following precedence is used. The first entry that is located in this list, and its value, determine whether the window is dimmed:

1. HKEY\_CURRENT\_USER\Software\Policies\Citrix\...
2. HKEY\_LOCAL\_MACHINE\Software\Policies\Citrix\...
3. HKEY\_CURRENT\_USER\Software\Citrix\...
4. HKEY\_LOCAL\_MACHINE\Software\Citrix\...

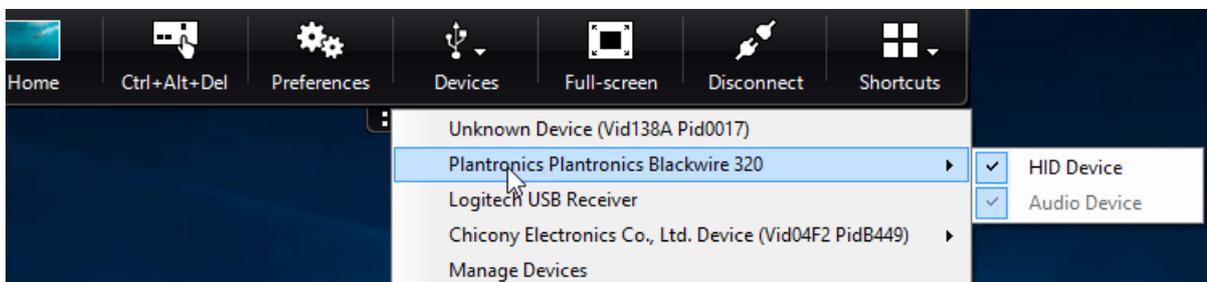
# Configuring composite USB device redirection

Nov 27, 2017

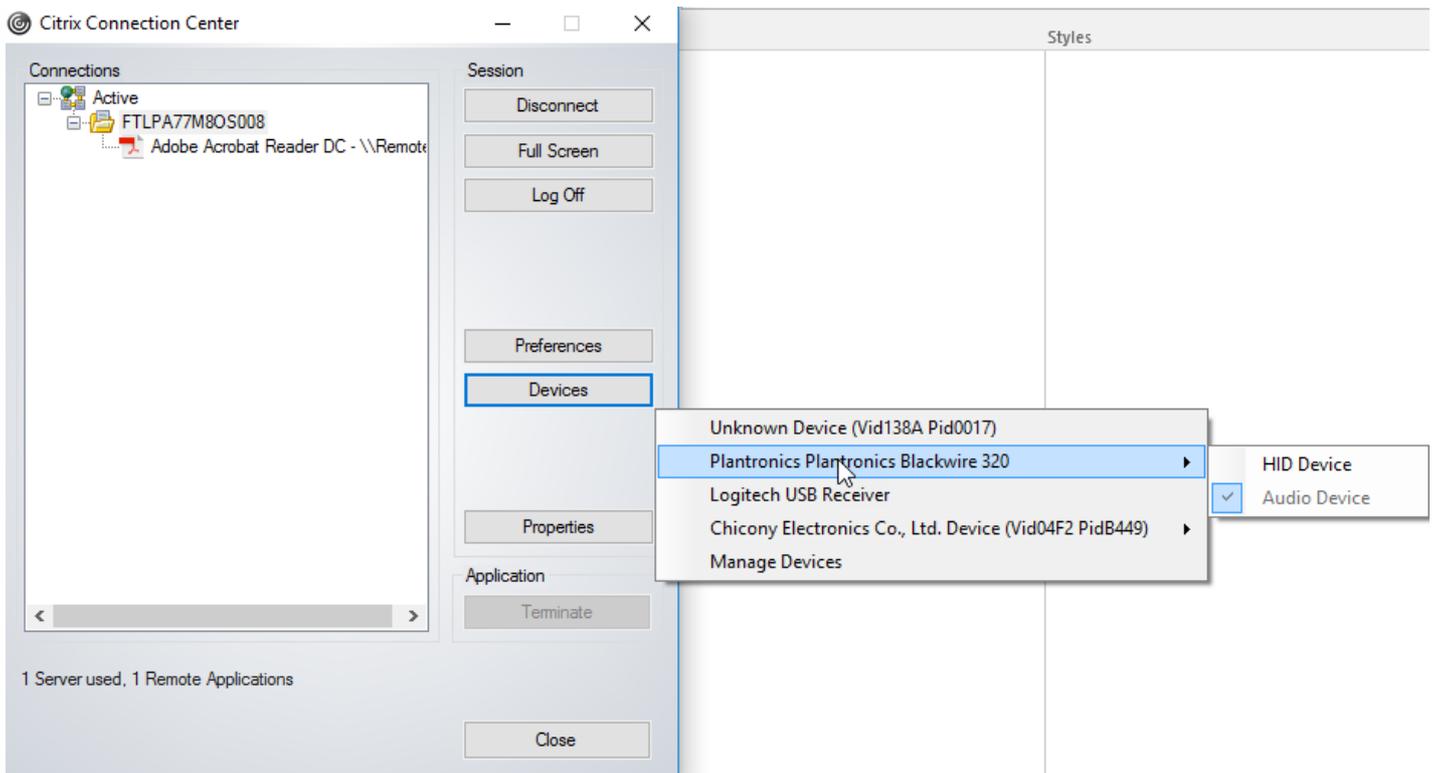
1. As an administrator, open the Citrix Receiver Group Policy Object administrative template by running **gpedit.msc**.
  1. If you are applying the policy on a single computer, launch the Citrix Receiver Group Policy Object administrative template from the Start menu.
  2. If you are applying the policy on a domain, launch the Citrix Receiver Group Policy Object administrative template by using the Group Policy Management console.
2. Under the User Configuration node, go to **Administrative Templates > Citrix Components > Citrix Receiver > Remoting client devices > Generic USB Remoting**.
3. Select the **Split Devices** policy.
4. Select **Enabled**.
5. Click **Apply**.
6. Click **OK** to save the policy.

1. As an administrator, open the Citrix Receiver Group Policy Object administrative template by running **gpedit.msc**.
  1. If you are applying the policy on a single computer, launch the Citrix Receiver Group Policy Object administrative template from the Start menu.
  2. If you are applying the policy on a domain, launch the Citrix Receiver Group Policy Object administrative template by using the Group Policy management console.
2. Under the User Configuration node, go to **Administrative Templates > Citrix Components > Citrix Receiver > Remoting client devices > Generic USB Remoting**.
3. Select **USB Device Rules** policy.
4. Select **Enabled**.
5. In the **USB Device Rules** text box, add the USB device that you want to allow or deny.  
For example, *ALLOW: vid=047F pid= C039 split=01 intf=00,03 //Allowed 00 and 03 interface, restrict others.*
6. Click **Apply** and **OK**.

In a desktop session, split USB devices are displayed in the Desktop Viewer under **Devices**. Additionally, you can view split USB devices from **Preferences > Devices**.



In an application session, split USB devices are displayed in the **Connection Center**.



The table below provides details on the behavior scenarios when a USB interface is allowed or denied.

To allow an interface:

Split	Interface	Action
TRUE	Valid number 0 -n	Allow specified interface
TRUE	Invalid number	Allow all interfaces
FALSE	Any value	Allow Generic USB of parent device
Not specified	Any value	Allow Generic USB of parent device

For example, SplitDevices- *true* indicates that all devices split.

To deny an interface:

Split	Interface	Action
TRUE	Valid number 0 - n	Deny specified interface
TRUE	Invalid number	Deny all interfaces
FALSE	Any value	Deny Generic USB of parent device
Not specified	Any value	Deny Generic USB of parent device

For example, SplitDevices- *false* indicates that devices are not split with specified interface number.

Example: My\_< *plantronics*> headset

### Interface number

- Audio Interface Class -0
- HID Interface Class-3

Sample rules used for My\_< *plantronics*> headset:

- ALLOW: vid=047F pid= C039 split=01 intf=00,03 //Allowed 00 and 03 interface, restrict others
- DENY: vid=047F pid= C039 split=01 intf=00,03 // deny 00 and 03

### Limitations:

1. Citrix recommends that you do not split interfaces for a webcam. As a workaround, redirect the device as a single device using Generic USB redirection. For a better performance, use the optimized virtual channel.

# Configuring USB support

Nov 27, 2017

USB support enables you to interact with a wide range of USB devices when connected to a virtual desktop. You can plug USB devices into their computers and the devices are remote to their virtual desktop. USB devices available for remoting include flash drives, smartphones, PDAs, printers, scanners, MP3 players, security devices, and tablets. Desktop Viewer users can control whether USB devices are available on the virtual desktop using a preference in the toolbar.

Isochronous features in USB devices, such as webcams, microphones, speakers, and headsets are supported in typical low latency/high-speed LAN environments. This allows these devices to interact with packages, such as Microsoft Office Communicator and Skype.

The following types of device are supported directly in a XenApp and XenDesktop session, and so does not use USB support:

- Keyboards
- Mice
- Smart cards

Note: Specialist USB devices (for example, Bloomberg keyboards and 3-D mice) can be configured to use USB support. For information on configuring Bloomberg keyboards, see [Configure Bloomberg keyboards](#). For information on configuring policy rules for other specialist USB devices, see Knowledge Center article [CTX122615](#)

By default, certain types of USB devices are not supported for remoting through XenDesktop and XenApp. For example, a user may have a network interface card attached to the system board by internal USB. Remoting this device would not be appropriate. The following types of USB device are not supported by default for use in a XenDesktop session:

- Bluetooth dongles
- Integrated network interface cards
- USB hubs
- USB graphics adapters

USB devices connected to a hub can be remote, but the hub itself cannot be remote.

The following types of USB device are not supported by default for use in a XenApp session:

- Bluetooth dongles
- Integrated network interface cards
- USB hubs
- USB graphics adapters
- Audio devices
- Mass storage devices

For instructions on modifying the range of USB devices that are available to users, see [Update the list of USB devices available for remoting](#).

For instructions on automatically redirecting specific USB devices, see Knowledge Center article [CTX123015](#).

## How USB support works

When a user plugs in a USB device, it is checked against the USB policy, and, if allowed, remoted to the virtual desktop. If the device is denied by the default policy, it is available only to the local desktop.

When a user plugs in a USB device, a notification appears to inform the user about a new device. The user can decide which USB devices are remoted to the virtual desktop by selecting devices from the list each time they connect. Alternatively, the user can configure USB support so that all USB devices plugged in both before and/or during a session are automatically remoted to the virtual desktop that is in focus.

For mass storage devices only, in addition to USB support, remote access is available through client drive mapping, which you configure through the Citrix Receiver policy Remoting client devices > Client drive mapping. When this policy is applied, the drives on the user device are automatically mapped to drive letters on the virtual desktop when users log on. The drives are displayed as shared folders with mapped drive letters.

The main differences between the two types of remoting policy are:

Feature	Client drive mapping	USB support
Enabled by default	Yes	No
Read-only access configurable	Yes	No
Safe to remove device during a session	No	Yes, if the user clicks Safely Remove Hardware in the notification area

If both Generic USB and the Client drive mapping policies are enabled and a mass storage device is inserted before a session starts, it will be redirected using client drive mapping first, before being considered for redirection through USB support. If it is inserted after a session has started, it will be considered for redirection using USB support before client drive mapping.

Different classes of USB device are allowed by the default USB policy rules.

Although they are on this list, some classes are only available for remoting in XenDesktop and XenApp sessions after additional configuration. These are noted below.

- **Audio (Class 01).** Includes audio input devices (microphones), audio output devices, and MIDI controllers. Modern audio devices generally use isochronous transfers, which is supported by XenDesktop 4 or later. Audio (Class01) is not applicable to XenApp because these devices are not available for remoting in XenApp using USB support.  
Note: Some specialty devices (for example, VOIP phones) require additional configuration. For more information, see Knowledge Center article [CTX123015](#).
- **Physical Interface Devices (Class 05).** These devices are similar to Human Interface Devices (HIDs), but generally provide "real-time" input or feedback and include force feedback joysticks, motion platforms, and force feedback exoskeletons.
- **Still Imaging (Class 06).** Includes digital cameras and scanners. Digital cameras often support the still imaging class which uses the Picture Transfer Protocol (PTP) or Media Transfer Protocol (MTP) to transfer images to a computer or

other peripheral. Cameras may also appear as mass storage devices and it may be possible to configure a camera to use either class, through setup menus provided by the camera itself.

Note: If a camera appears as a mass storage device, client drive mapping is used and USB support is not required.

- **Printers (Class 07).** In general most printers are included in this class, although some use vendor-specific protocols (class ff). Multi-function printers may have an internal hub or be composite devices. In both cases the printing element generally uses the Printers class and the scanning or fax element uses another class; for example, Still Imaging. Printers normally work appropriately without USB support.

Note: This class of device (in particular printers with scanning functions) requires additional configuration. For instructions on this, see Knowledge Center article [CTX123015](#).

- **Mass Storage (Class 08).** The most common mass storage devices are USB flash drives; others include USB-attached hard drives, CD/DVD drives, and SD/MMC card readers. There are a wide variety of devices with internal storage that also present a mass storage interface; these include media players, digital cameras, and mobile phones. Mass Storage (Class 08) is not applicable to XenApp because these devices are not available for remoting in XenApp using USB support.

Known subclasses include:

- 01 Limited flash devices
- 02 Typically CD/DVD devices (ATAPI/MMC-2)
- 03 Typically tape devices (QIC-157)
- 04 Typically floppy disk drives (UFI)
- 05 Typically floppy disk drives (SFF-8070i)
- 06 Most mass storage devices use this variant of SCSI

Mass storage devices can often be accessed through client drive mapping, and so USB support is not required.

Important: Some viruses are known to propagate actively using all types of mass storage. Carefully consider whether or not there is a business need to permit the use of mass storage devices, either through client drive mapping or USB support.

- **Content Security (Class 0d).** Content security devices enforce content protection, typically for licensing or digital rights management. This class includes dongles.
- **Video (Class 0e).** The video class covers devices that are used to manipulate video or video-related material, such as webcams, digital camcorders, analog video converters, some television tuners, and some digital cameras that support video streaming.

Note: Most video streaming devices use isochronous transfers, which is supported by XenDesktop 4 or later. Some video devices (for example webcams with motion detection) require additional configuration. For instructions on this, see Knowledge Center article [CTX123015](#).

- **Personal Healthcare (Class 0f).** These devices include personal healthcare devices such as blood pressure sensors, heart rate monitors, pedometers, pill monitors, and spirometers.
- **Application and Vendor Specific (Classes fe and ff).** Many devices use vendor specific protocols or protocols not standardized by the USB consortium, and these usually appear as vendor-specific (class ff).

The following different classes of USB device are denied by the default USB policy rules.

- Communications and CDC Control (Classes 02 and 0a). The default USB policy does not allow these devices, because one of the devices may be providing the connection to the virtual desktop itself.

- Human Interface Devices (Class 03). Includes a wide variety of both input and output devices. Typical Human Interface Devices (HIDs) are keyboards, mice, pointing devices, graphic tablets, sensors, game controllers, buttons, and control functions.

Subclass 01 is known as the "boot interface" class and is used for keyboards and mice.

The default USB policy does not allow USB keyboards (class 03, subclass 01, protocol 1), or USB mice (class 03, subclass 01, protocol 2). This is because most keyboards and mice are handled appropriately without USB support and it is normally necessary to use these devices locally as well remotely when connecting to a virtual desktop.

- USB Hubs (Class 09). USB hubs allow extra devices to be connected to the local computer. It is not necessary to access these devices remotely.
- Smart Card (Class 0b). Smart card readers include contactless and contact smart card readers, and also USB tokens with an embedded smart card-equivalent chip.

Smart card readers are accessed using smart card remoting and do not require USB support.

- Wireless Controller (Class e0). Some of these devices may be providing critical network access, or connecting critical peripherals, such as Bluetooth keyboards or mice.  
The default USB policy does not allow these devices. However, there may be particular devices to which it is appropriate to provide access using USB support.

- **Miscellaneous network devices (Class ef, subclass 04)**. Some of these devices may be providing critical network access. The default USB policy does not allow these devices. However, there may be particular devices to which it is appropriate to provide access using USB support.

You can update the range of USB devices available for remoting to desktops by editing the Citrix Receiver for Windows template file. This allows you to make changes to the Citrix Receiver for Windows using Group Policy. The file is located in the following installed folder:

```
<root drive>:\Program Files\Citrix\ICA Client\Configuration\en
```

Alternatively, you can edit the registry on each user device, adding the following registry key:

```
HKEY_LOCAL_MACHINE\SOFTWARE\Policies\Citrix\ICA Client\GenericUSB Type=String Name="DeviceRules" Value=
```

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.

The product default rules are stored in:

```
HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\ICA Client\GenericUSB Type=MultiSz Name="DeviceRules" Value=
```

Do not edit the product default rules.

For details of the rules and their syntax, see the Knowledge Center article [CTX119722](#).

## Configuring USB audio per user

Citrix recommends using the Group Policy Object receiver.admx/receiver.adml template file to configure rules for network routing, proxy servers, trusted server configuration, user routing, remote user devices, and the user experience. You can use the receiver.admx template file with domain policies and local computer policies. For domain policies, import the template file using the Group Policy Management Console. This is especially useful for applying Citrix Receiver for Windows settings to a number of different user devices throughout the enterprise. To affect a single user device, import the template file using the local Group Policy Editor on the device.

**Note:** This feature is available only on XenApp server.

#### To configure USB audio devices per user

1. As an administrator, open the Group Policy Editor by either running gpedit.msc locally from the Start menu when applying policies to a single computer, or by using the Group Policy Management Console when applying domain policies.  
**Note:** If you already imported the receiver template into the Group Policy Editor, you can leave out steps 2 to 5.
2. In the left pane of the Group Policy Editor, select the Administrative Templates folder.
3. From the **Action** menu, choose **Add/Remove Templates**.
4. Choose **Add** and browse to the Configuration folder for Receiver (for 32-bit machines, usually C:\Program Files\Citrix\ICA Client\Configuration, for 64-bit machines usually C:\Program Files (x86)\Citrix\ICA Client\Configuration) and select receiver.admx.
5. Select **Open** to add the template and then **Close** to return to the Group Policy Editor.
6. Under the Computer Configuration node, go to **Administrative Templates > Classic Administrative Templates (ADM) > Citrix Components > Citrix Receiver > User experience**, and select **Audio through Generic USB Redirection**.
7. Edit the settings.
8. Click **Apply** and **OK**.
9. Open cmd prompt in administrator mode.
10. Run the below command  
gpupdate /force

**Note:** Any change in the policy requires the XenApp server to be restarted for the changes to take effect.

# Hiding the Advanced Preferences sheet

Nov 27, 2017

You can hide the Advanced Preferences sheet by using the Citrix Receiver Group Policy Object administrative template:

1. Open the Citrix Receiver Group Policy Object administrative template by running gpedit.msc.
2. Under the **Computer Configuration** node, go to **Administrative Templates > Citrix Receiver > Self Service > Advanced Preferences Options**.
3. Select the **Disable Advance Preferences** policy.
4. Select **Enabled** to hide the Advanced Preferences option from the right-click menu of the Citrix Receiver icon in the notification area.

Note: By default, the **Not Configured** option is selected.

You can hide specific user-configurable settings from the Advanced Preferences sheet by using the Citrix Receiver Group Policy Object administrative template: To do this:

1. Open the Citrix Receiver Group Policy Object administrative template by running gpedit.msc.
2. Under the **Computer Configuration** node, go to **Administrative Templates > Citrix Receiver > Self Service > Advanced Preferences Options**.
3. Select the policy for the setting that you want to hide.

You can hide the following specific settings from the Advanced Preferences sheet:

- Configuration Checker
- Connection Center
- DPI Settings
- Data Collection
- Delete Saved Passwords
- Local Keyboard Layout Setting
- Settings Option
- Support Info

The table below lists the options that you can select and the effect of each:

Options	Action
Not Configured	Displays the setting
Enabled	Hides the setting
Disabled	Displays the setting

You can hide the **Reset Receiver** option from the Advanced Preferences sheet only using the Registry editor.

1. Launch the registry editor
2. Navigate to **HKEY\_LOCAL\_MACHINE\SOFTWARE\Citrix\Dazzle**
3. Create a new String Value key **EnableFactoryReset** and set it to any of the following options:
  1. True - Displays the Reset Receiver option in the Advanced Preferences sheet
  2. False - Hides the Reset Receiver option in the Advanced Preferences sheet

Note: The policy path for the Auto Update option is different from that of the other options present in the Advanced Preferences sheet.

1. Open the Citrix Receiver Group Policy Object administrative template by running gpedit.msc.
2. Under the **Computer Configuration** node, go to **Administrative Templates > Citrix Receiver > AutoUpdate**.
3. Select the **Enable or Disable AutoUpdate** policy.
4. Select **Disabled** to hide the Auto-update settings from the Advanced Preferences sheet.

# Configuring the Group Policy Object administrative template

Nov 27, 2017

Citrix recommends using the Windows Group Policy Object Editor to configure Citrix Receiver for Windows. Citrix Receiver for Windows includes administrative template files (receiver.adm or receiver.admx\receiver.adml -depending on the Operating System) in the installation directory.

## Note

- Starting with Citrix Receiver for Windows Version 4.6, the installation directory includes CitrixBase.admx and CitrixBase.adml files. Citrix recommends that you use the CitrixBase.admx and CitrixBase.adml files to ensure that the options are correctly organized and displayed within the Group Policy Object Editor.
- The .adm file is for use with Windows XP Embedded platforms only. The .adm/.adml files are for use with Windows Vista/Windows Server 2008 and all later versions of Windows.
- If Citrix Receiver for Windows is installed with VDA, admx/adml files are found in the Citrix Receiver for Windows installation directory. For example: <installation directory>\Online Plugin\Configuration.
- If Citrix Receiver for Windows is installed without VDA, the admx/adml files are typically found in the C:\Program Files\Citrix\ICA Client\Configuration directory.

See the table below for information on Citrix Receiver for Windows templates files and their respective location.

Note: Citrix recommends that you use the GPO template files provided with latest Citrix Receiver for Windows.

File Type	File Location
receiver.adm	<Installation Directory>\ICA Client\Configuration
receiver.admx	<Installation Directory>\ICA Client\Configuration
receiver.adml	<Installation Directory>\ICA Client\Configuration\[MUIculture]
CitrixBase.admx	<Installation Directory>\ICA Client\Configuration
CitrixBase.adml	<Installation Directory>\ICA Client\Configuration\[MUIculture]

## Note

- If the CitrixBase.admx\adml is not added to the local GPO, the **Enable ICA File Signing** policy might be lost.
- When upgrading Citrix Receiver for Windows, you must add the latest template files to local GPO as explained in the procedure below. While importing the latest files, previous settings are retained.

## To add the receiver.adm template file to the local GPO (Windows XP Embedded Operating system only)

**Note:** You can use .adm template files to configure Local GPO and/or Domain-Based GPO.

1. Open the Citrix Receiver Group Policy Object administrative template by running gpedit.msc.
2. In the left pane of the Group Policy Editor, select the **Administrative Templates** folder.
3. From the Action menu, choose **Add/Remove Templates**.
4. Select Add and browse to the template file location <Installation Directory>\ICA Client\Configuration\receiver.adm.
5. Select Open to add the template and then Close to return to the Group Policy Editor.

Citrix Receiver for window template file will be available on local GPO in path **Administrative Templates > Classic Administrative Templates (ADM) > Citrix Components > Citrix Receiver**.

After the .adm template files are added to the local GPO, the following message is displayed:

"The following entry in the [strings] section is too long and has been truncated:

Click **OK** to ignore the message.

## To add the receiver.admx/adml template files to the local GPO (later versions of Windows Operating System)

**NOTE:** You can use admx/adml template files to configure Local GPO and/or Domain-Based GPO. Refer Microsoft MSDN article on managing ADMX files [here](#).

1. After installing Citrix Receiver for Windows, copy the template files.

### admx:

From : <Installation Directory>\ICA Client\Configuration\receiver.admx

To : %systemroot%\policyDefinitions

From : <Installation Directory>\ICA Client\Configuration\CitrixBase.admx

To : %systemroot%\policyDefinitions

### adml:

From: <Installation Directory>\ICA Client\Configuration\[MUIculture]receiver.adml

To: %systemroot%\policyDefinitions\[MUIculture]

From : <Installation Directory>\ICA Client\Configuration\[MUIculture]\CitrixBase.adml

To : %systemroot%\policyDefinitions\[MUIculture]

## Note

Citrix Receiver for Window template files are available on local GPO in Administrative Templates > Citrix Components > Citrix Receiver folder only when the user adds the CitrixBase.admx/CitrixBase.adml to the \ policyDefinitions folder.

# Configuring StoreFront

Nov 27, 2017

Citrix StoreFront authenticates a connection to XenDesktop, XenApp, and VDI-in-a-Box, enumerating and aggregating available desktops and applications into stores that you can access using Citrix Receiver for Windows.

In addition to the configuration summarized in this section, you must also configure NetScaler Gateway to enable users to connect from outside the internal network (for example, users who connect from the Internet or from remote locations).

## Tip

When you select the option to show all stores, you might see the old StoreFront UI.

1. Install and configure StoreFront as described in the [StoreFront](#) documentation. Citrix Receiver for Windows requires an HTTPS connection. If the StoreFront server is configured for HTTP, a registry key must be set on the user device as described in [Configure and install Receiver for Windows using command-line parameters](#) under the ALLOWADDSTORE property description.

Note: For administrators who need more control, Citrix provides a template you can use to create a download site for Citrix Receiver for Windows.

Workspace control lets applications follow users as they move between devices. This enables, for example, clinicians in hospitals to move from workstation to workstation without having to restart their applications on each device. For Citrix Receiver for Windows, you manage workspace control on client devices by modifying the registry. This can also be done for domain-joined client devices using Group Policy.

**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 the Registry Editor at your own risk. Be sure to back up the registry before you edit it.

Create WSCReconnectModeUser and modify the existing registry key WSCReconnectMode in the Master Desktop Image or in XenApp server hosting. The published desktop can change the behavior of the Citrix Receiver for Windows.

WSCReconnectMode key settings for Citrix Receiver for Windows:

- 0 = do not reconnect to any existing sessions
- 1 = reconnect on application launch
- 2 = reconnect on application refresh
- 3 = reconnect on application launch or refresh
- 4 = reconnect when Receiver interface opens
- 8 = reconnect on Windows log on
- 11 = combination of both 3 and 8

### Disable workspace control for Citrix Receiver for Windows

To disable workspace control for Citrix Receiver for Windows, create the following key:

HKEY\_CURRENT\_USER\SOFTWARE\Wow6432Node\Citrix\Dazzle (64-bit)

HKEY\_CURRENT\_USER\SOFTWARE\Citrix\Dazzle for (32-bit)

Name: **WSCReconnectModeUser**

Type: REG\_SZ

Value data: 0

Modify the following key from the default value of 3 to zero

HKEY\_CURRENT\_USER\SOFTWARE\Wow6432Node\Citrix\Dazzle (64-bit)

HKEY\_CURRENT\_USER\SOFTWARE\Citrix\Dazzle (32-bit)

Name: **WSCReconnectMode**

Type: REG\_SZ

Value data: 0

**Note:** Alternatively, you can set the REG\_SZ value WSCReconnectAll to false if you do not want to create a new key.

### Changing the status indicator timeout

You can change the amount of time the status indicator displays when a user is launching a session. To alter the time out period, create a REG\_DWORD value SI\_INACTIVE\_MS in HKLM\SOFTWARE\Citrix\ICA\_CLIENT\Engine\ . The REG\_DWORD value can be set to 4 if you want the status indicator to disappear sooner.

## Warning

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.

Start menu integration and desktop shortcut only mode lets you bring published application shortcuts into the Windows Start menu and onto the desktop. Users do not have to subscribe to applications from the Citrix Receiver user interface. Start menu integration and desktop shortcut management provides a seamless desktop experience for groups of users, who need access to a core set of applications in a consistent way.

As a Citrix Receiver administrator, you use a command-line install flags, GPOs, account services, or registry settings to disable the usual "self-service" Citrix Receiver interface and replace it with a pre-configured Start menu. The flag is called SelfServiceMode and is set to true by default. When the administrator sets the SelfServiceMode flag to false, the user no longer has access to the self-service Citrix Receiver user interface. Instead, they can access subscribed apps from the Start menu and via desktop shortcuts - referred to here as a shortcut-only mode.

Users and administrators can use a number of registry settings to customize the way shortcuts are set up.

## Working with shortcuts

- Users cannot remove apps. All apps are mandatory when working with the SelfServiceMode flag set to false (shortcut-only mode). If the user removes a shortcut icon from the desktop, the icon comes back when the user selects Refresh from the Citrix Receiver for Windows system tray icon.
- Users can configure only one store. The Account and Preferences options are not available. This is to prevent the user from configuring additional stores. The administrator can give a user special privileges to add more than one account using the Group Policy Object template, or by manually adding a registry key ( HideEditStoresDialog) on the client machine. When the administrator gives a user this privilege, the user has a Preferences option in the system tray icon, where they can add and remove accounts.
- Users cannot remove apps via the Windows Control Panel.
- You can add desktop shortcuts via a customizable registry setting. Desktop shortcuts are not added by default. After you make any changes to the registry settings, Citrix Receiver for Windows must be restarted.

- Shortcuts are created in the Start menu with a category path as the default, UseCategoryAsStartMenuPath.

**Note:** Windows 8/8.1 does not allow the creation of nested folders within the Start Menu. Applications will be displayed individually or under the root folder but not within Category sub folders defined with XenApp.

- You can add a flag [/DESKTOPDIR="Dir\_name"] during installation to bring all shortcuts into a single folder. CategoryPath is supported for desktop shortcuts.
- Auto Re-install Modified Apps is a feature which can be enabled via the registry key AutoReInstallModifiedApps. When AutoReInstallModifiedApps is enabled, any changes to attributes of published apps and desktops on the server are reflected on the client machine. When AutoReInstallModifiedApps is disabled, apps and desktop attributes are not updated and shortcuts are not restored on refresh if deleted on the client. By default, this AutoReInstallModifiedApps is enabled. See Using registry keys to customize app shortcut locations.

## Note

By default, registry keys use String format

You can use registry key settings to customize shortcuts. You can set the registry keys at the following locations. Where they apply, they are acted on in the order of preference listed.

**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.

**Note:** You should make changes to registry keys before configuring a store. If at any time you or a user wants to customize the registry keys, you or the user must reset Receiver, configure the registry keys, and then reconfigure the store.

Registry keys for 32-bit machines

Registry name	Default value	Locations in order of preference
RemoveAppsOnLogoff	False	HKLM\SOFTWARE\Policies\Citrix\Dazzle HKLM\SOFTWARE\Citrix\Dazzle HKCU\Software\Citrix\Dazzle HKCU\Software\Citrix\Receiver\SR\Store\" + primaryStoreID + \Properties
RemoveAppsOnExit	False	HKLM\SOFTWARE\Policies\Citrix\Dazzle HKLM\SOFTWARE\Citrix\Dazzle HKCU\Software\Citrix\Dazzle HKCU\Software\Citrix\Receiver\SR\Store\" + primaryStoreID + \Properties
PutShortcutsOnDesktop	False	HKCU\Software\Citrix\Receiver\SR\Store\" + StoreID

		+\Properties HKCU\Software\Citrix\Receiver\SR\Store\" + primaryStoreID + \Properties HKCU\Software\Citrix\Dazzle HKLM\SOFTWARE\Policies\Citrix\Dazzle HKLM \SOFTWARE\Citrix\Dazzle
PutShortcutsInStartMenu	True	HKCU\Software\Citrix\Receiver\SR\Store\+StoreID+\Properties HKCU\Software\Citrix\Receiver\SR\Store\" + primaryStoreID + \Properties HKCU\Software\Citrix\Dazzle HKLM\SOFTWARE\Policies\Citrix\Dazzle HKLM\SOFTWARE\Citrix\Dazzle
SelfServiceMode	True	HKLM\SOFTWARE\Policies\Citrix\Dazzle HKLM\SOFTWARE\Citrix\Dazzle
UseCategoryAsStartMenuPath	True	HKCU\Software\Citrix\Receiver\SR\Store\+StoreID +\Properties HKCU\Software\Citrix\Receiver\SR\Store\" + primaryStoreID + \Properties HKCU\Software\Citrix\Dazzle HKLM\SOFTWARE\Policies\Citrix\Dazzle HKLM \SOFTWARE\Citrix\Dazzle
StartMenuDir	"" (empty)	HKCU\Software\Citrix\Receiver\SR\Store\+StoreID +\Properties HKCU\Software\Citrix\Receiver\SR\Store\" + primaryStoreID + \Properties HKCU\Software\Citrix\Dazzle HKLM\SOFTWARE\Policies\Citrix\Dazzle HKLM \SOFTWARE\Citrix\Dazzle
DesktopDir	"" (empty)	HKCU\Software\Citrix\Receiver\SR\Store\+StoreID +\Properties HKCU\Software\Citrix\Receiver\SR\Store\" + primaryStoreID + \Properties HKCU\Software\Citrix\Dazzle

		HKLM\SOFTWARE\Policies\Citrix\Dazzle HKLM\SOFTWARE\Citrix\Dazzle
AutoReinstallModifiedApps	True	HKCU\Software\Citrix\Receiver\SR\Store\+StoreID +\Properties HKCU\Software\Citrix\Receiver\SR\Store\" + primaryStoreID + \Properties HKCU\Software\Citrix\Dazzle HKLM\SOFTWARE\Policies\Citrix\Dazzle HKLM\SOFTWARE\Citrix\Dazzle
HideEditStoresDialog	True inSelfServiceMode, and False inNonSelfServiceMode	HKLM\SOFTWARE\Policies\Citrix\Dazzle HKLM\SOFTWARE\Citrix\Dazzle HKCU\Software\Citrix\Dazzle HKCU\Software\Citrix\Receiver\SR\Store\" + primaryStoreID + \Properties
WSCSupported	True	HKCU\Software\Citrix\Dazzle HKCU\Software\Citrix\Receiver\SR\Store\" + primaryStoreID + \Properties HKLM\SOFTWARE\Policies\Citrix\Dazzle HKLM\SOFTWARE\Citrix\Dazzle
WSCReconnectAll	True	HKCU\Software\Citrix\Dazzle HKCU\Software\Citrix\Receiver\SR\Store\" + primaryStoreID + \Properties HKLM\SOFTWARE\Policies\Citrix\Dazzle HKLM\SOFTWARE\Citrix\Dazzle
WSCReconnectMode	3	HKCU\Software\Citrix\Dazzle HKCU\Software\Citrix\Receiver\SR\Store\" + primaryStoreID + \Properties HKLM\SOFTWARE\Policies\Citrix\Dazzle HKLM\SOFTWARE\Citrix\Dazzle
WSCReconnectModeUser	Registry is not created during installation.	HKCU\Software\Citrix\Dazzle

		HKCU\Software\Citrix\Receiver\SR\Store\" + primaryStoreID+\Properties HKLM\SOFTWARE\Policies\Citrix\Dazzle HKLM\SOFTWARE\Citrix\Dazzle
--	--	--

Registry keys for 64-bit machines

Registry name	Default value	Locations in order of preference
RemoveAppsOnLogoff	False	HKLM\SOFTWARE\Wow6432Node\Policies\Citrix\Dazzle HKLM\SOFTWARE\Wow6432Node\Citrix\Dazzle HKCU\Software\Citrix\Dazzle HKCU\Software\Citrix\Receiver\SR\Store\" + primaryStoreID + \Properties
RemoveAppsOnExit	False	HKLM\SOFTWARE\Wow6432Node\Policies\Citrix\Dazzle HKLM\SOFTWARE\Wow6432Node\Citrix\Dazzle HKCU\Software\Citrix\Dazzle HKCU\Software\Citrix\Receiver\SR\Store\" + primaryStoreID + \Properties
PutShortcutsOnDesktop	False	HKCU\Software\Citrix\Receiver\SR\Store\+StoreID + \Properties HKCU\Software\Citrix\Receiver\SR\Store\" + primaryStoreID + \Properties HKCU\Software\Citrix\Dazzle HKLM\SOFTWARE\Wow6432Node\Policies\Citrix\Dazzle HKLM \SOFTWARE\Wow6432Node\Citrix\Dazzle
PutShortcutsInStartMenu	True	HKCU\Software\Citrix\Receiver\SR\Store\+StoreID+\Properties HKCU\Software\Citrix\Receiver\SR\Store\" + primaryStoreID + \Properties HKCU\Software\Citrix\Dazzle HKLM\SOFTWARE\Wow6432Node\Policies\Citrix\Dazzle HKLM\SOFTWARE\Wow6432Node\Citrix\Dazzle
SelfServiceMode	True	HKLM\SOFTWARE\Wow6432Node\Policies\Citrix\Dazzle HKLM\SOFTWARE\Wow6432Node\Citrix\Dazzle

UseCategoryAsStartMenuPath	True	<p>HKCU\Software\Citrix\Receiver\SR\Store\+StoreID +\Properties</p> <p>HKCU\Software\Citrix\Receiver\SR\Store\" + primaryStoreID + \Properties</p> <p>HKCU\Software\Citrix\Dazzle</p> <p>HKLM\SOFTWARE\Wow6432Node\Policies\Citrix\Dazzle</p> <p>HKLM \SOFTWARE\Wow6432Node\Citrix\Dazzle</p>
StartMenuDir	"" (empty)	<p>HKCU\Software\Citrix\Receiver\SR\Store\+StoreID +\Properties</p> <p>HKCU\Software\Citrix\Receiver\SR\Store\" + primaryStoreID + \Properties</p> <p>HKCU\Software\Citrix\Dazzle</p> <p>HKLM\SOFTWARE\Wow6432Node\Policies\Citrix\Dazzle</p> <p>HKLM \SOFTWARE\Wow6432Node\Citrix\Dazzle</p>
DesktopDir	"" (empty)	<p>HKCU\Software\Citrix\Receiver\SR\Store\+StoreID +\Properties</p> <p>HKCU\Software\Citrix\Receiver\SR\Store\" + primaryStoreID + \Properties</p> <p>HKCU\Software\Citrix\Dazzle</p> <p>HKLM\SOFTWARE\Wow6432Node\Policies\Citrix\Dazzle</p> <p>HKLM\SOFTWARE\Wow6432Node\Citrix\Dazzle</p>
AutoReinstallModifiedApps	True	<p>HKCU\Software\Citrix\Receiver\SR\Store\+StoreID +\Properties</p> <p>HKCU\Software\Citrix\Receiver\SR\Store\" + primaryStoreID + \Properties</p> <p>HKCU\Software\Citrix\Dazzle</p> <p>HKLM\SOFTWARE\Wow6432Node\Policies\Citrix\Dazzle</p> <p>HKLM\SOFTWARE\Wow6432Node\Citrix\Dazzle</p>
HideEditStoresDialog	True inSelfServiceMode, and False inNonSelfServiceMode	<p>HKLM\SOFTWARE\Wow6432Node\Policies\Citrix\Dazzle</p> <p>HKLM\SOFTWARE\Wow6432Node\Citrix\Dazzle</p> <p>HKCU\Software\Citrix\Dazzle</p> <p>HKCU\Software\Citrix\Receiver\SR\Store\" + primaryStoreID + \Properties</p>

WSSupported	True	HKCU\Software\Citrix\Dazzle  HKCU\Software\Citrix\Receiver\SR\Store\" + primaryStoreID + \Properties  HKLM\SOFTWARE\Wow6432Node\Policies\Citrix\Dazzle  HKLM\SOFTWARE\Wow6432Node\Citrix\Dazzle
WSCReconnectAll	True	HKCU\Software\Citrix\Dazzle  HKCU\Software\Citrix\Receiver\SR\Store\" + primaryStoreID + \Properties  HKLM\SOFTWARE\Wow6432Node\Policies\Citrix\Dazzle  HKLM\SOFTWARE\Wow6432Node\Citrix\Dazzle
WSCReconnectMode	3	HKCU\Software\Citrix\Dazzle  HKCU\Software\Citrix\Receiver\SR\Store\" + primaryStoreID + \Properties  HKLM\SOFTWARE\Wow6432Node\Policies\Citrix\Dazzle  HKLM\SOFTWARE\Wow6432Node\Citrix\Dazzle
WSCReconnectModeUser	Registry is not created during installation.	HKCU\Software\Citrix\Dazzle  HKCU\Software\Citrix\Receiver\SR\Store\" + primaryStoreID + \Properties  HKLM\SOFTWARE\Wow6432Node\Policies\Citrix\Dazzle  HKLM\SOFTWARE\Wow6432Node\Citrix\Dazzle

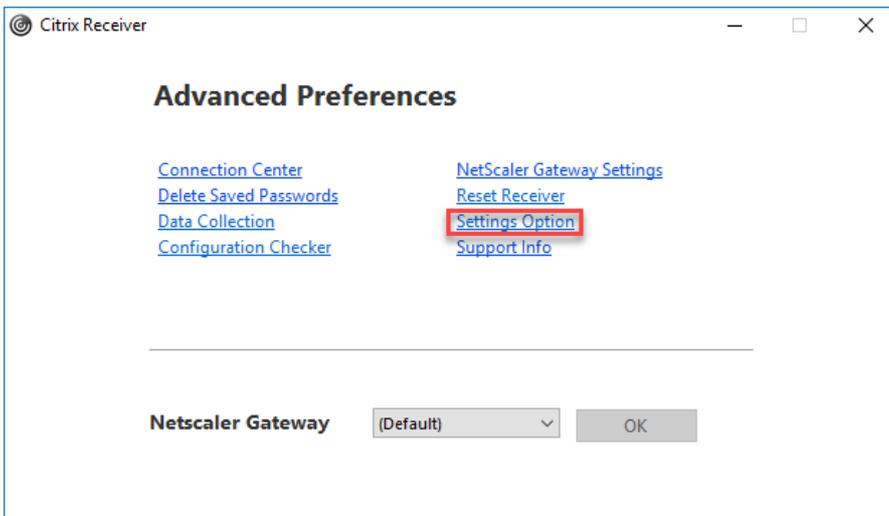
## Note

Shortcuts can be set only for the subscribed applications and desktops.

## Note

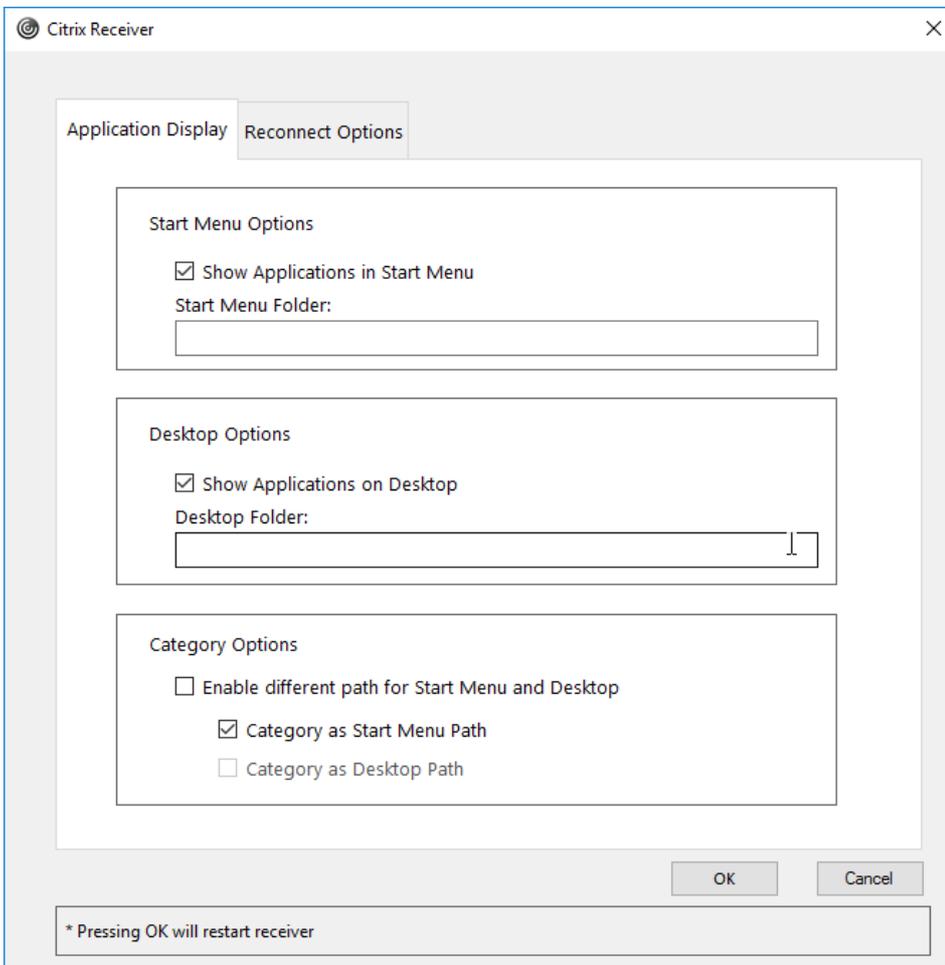
You can hide all or part of the Advanced Preferences sheet available from the Citrix Receiver icon in the notification area. For more information, see [Hiding the Advanced Preferences sheet](#).

1. Logon to Citrix Receiver for Windows
2. Right click on the Citrix Receiver for Windows icon in the notification area and click **Advanced Preferences**.  
The Advanced Preferences window appears.



3. Click **Settings Option**

**Note:** By default, Show Applications in Start Menu option is selected.



4. Specify the folder name. This moves all the subscribed apps to the specified folder in the Start menu. Applications can be added both to a new or existing folder in the Start menu.

On enabling this feature, both existing and newly added applications get added to the specified folder.

5. Select the checkbox **Show Applications on Desktop** under **Desktop Options** pane.

6. Specify the folder name. This moves all the subscribed apps to the specified folder on your local desktop.

7. Select the checkbox **Enable different path for Start Menu and Desktop** under **Category Options**.

This creates the shortcuts and category folder for applications as defined in the application properties server. For ex, IT Apps, Finance Apps

**Note:** By default, Category as Start Menu Path option is selected.

a. Select **Category as Start Menu Path** to display the subscribed apps and their category folder as defined in the application properties server in the Windows Start menu.

b. Select **Category as Desktop Path** to display the subscribed apps and their category folder as defined in the application properties server on your local desktop.

5. Click OK.

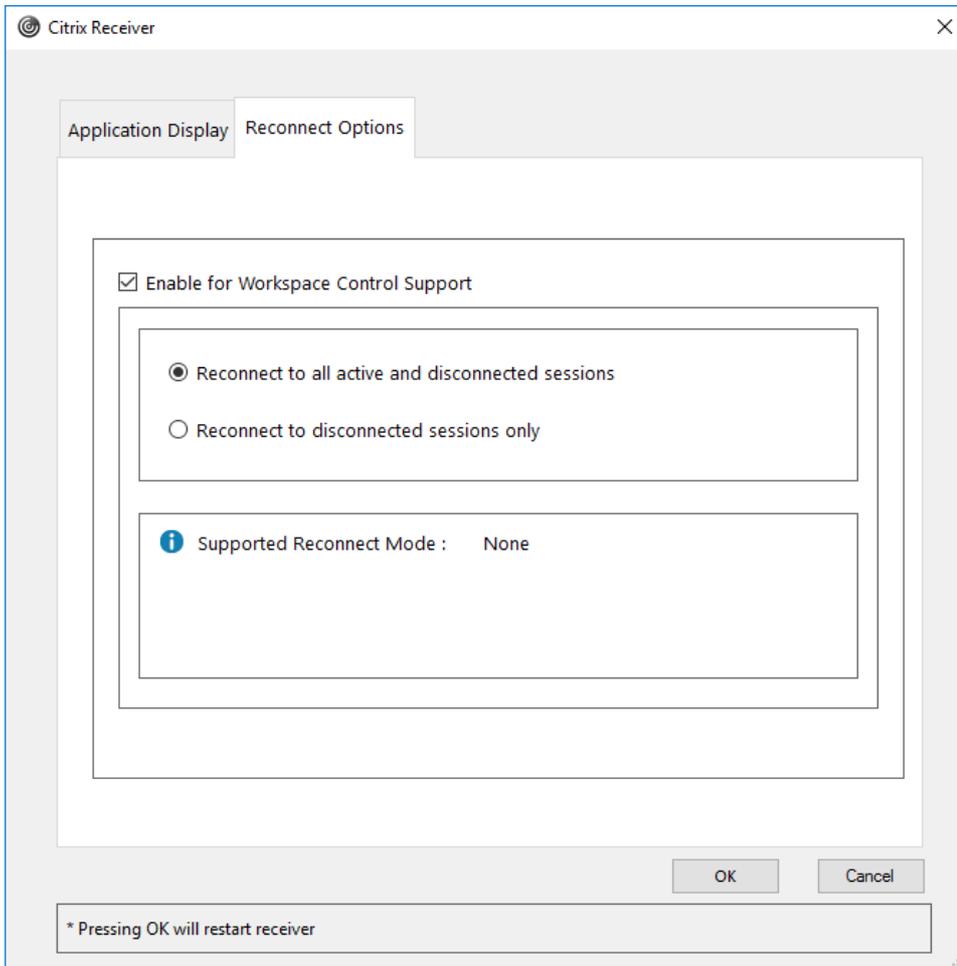
## Note

You can hide all or part of the Advanced Preferences sheet available from the Citrix Receiver icon in the notification area. For more information, see [Hiding the Advanced Preferences sheet](#).

After logging on to the server, users can reconnect to all of their desktops or applications at any time. By default, Reconnect Options opens desktops or applications that are disconnected, plus any that are currently running on another client device. You can configure Reconnect Options to reconnect only those desktops or applications that the user disconnected from previously.

1. Logon to Citrix Receiver for Windows

2. Right-click on the Citrix Receiver for Windows icon in the system tray and click **Advanced Preferences**.  
The Advanced Preferences window appears.
3. Click **Settings Option**
4. Click **Reconnect Options**



5. Select **Enable for Workspace Control Support** to allow the users to reconnect to all of their desktops or applications at any time.
  - a. Select **Reconnect to all active and disconnected sessions** to allow users to reconnect to both the active and disconnected sessions.
  - b. Select **Reconnect to disconnected sessions only** to allow users to reconnect only to the disconnected sessions.

Note: **Supported Reconnect Mode** takes the value as set in the GPO. Users can modify this option by navigating to **Administrative Templates > Citrix Components > Citrix Receiver > SelfService>Control when Receiver attempts to reconnect to existing sessions**.

To modify this option via registry, see Knowledge Center article [CTX136339](https://docs.citrix.com/en-us/knowledge-center/CTX136339).

6. Click **OK**.

# Providing users with account information

Nov 27, 2017

Provide users with the account information they need to access virtual desktops and applications. You can provide this information by:

- Configuring email-based account discovery
- Providing users with a provisioning file
- Providing users with account information to enter manually

## Important

Citrix recommends you to restart Citrix Receiver for Windows after the installation. This is to ensure that users can add accounts and that Citrix Receiver for Windows can discover USB devices that were in a suspended state during installation.

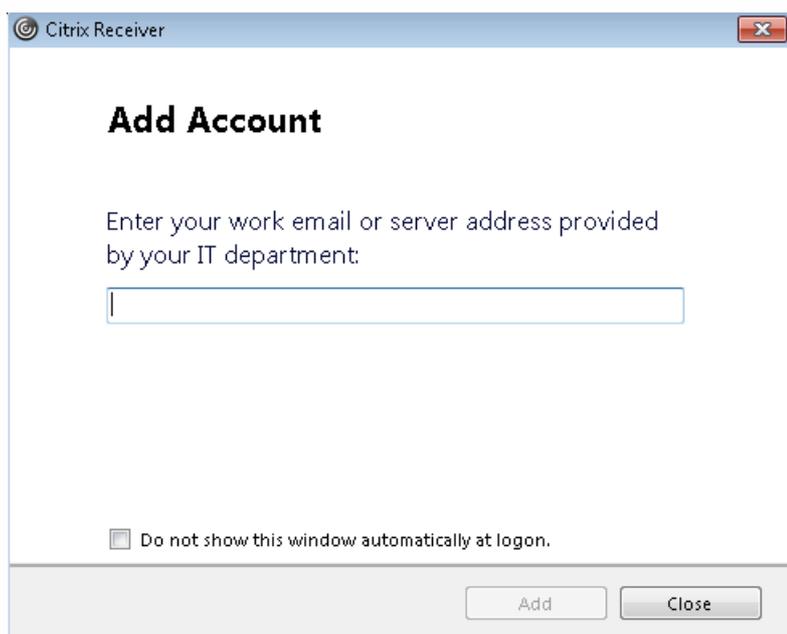
A dialog appears indicating a successful installation, followed by the **Add Account** dialog. For a first time user, the **Add Account** dialog requires you to enter an email or server address to setup an account.

Add Account dialog is displayed when the store is not configured. Users can use this window to set up a Citrix Receiver account by entering email address or a server URL.

Citrix Receiver for Windows determines the NetScaler Gateway, StoreFront server, or AppController virtual appliance associated with the email address and then prompts the user to log on for enumeration.

Add account dialog can be suppressed in the following ways:

### 1. At system logon



Select **Do not show this window automatically at logon** to prevent the Add Account window to pop-up on subsequent logon.

This setting is specific to per user and resets during Citrix Receiver for Windows Reset action.

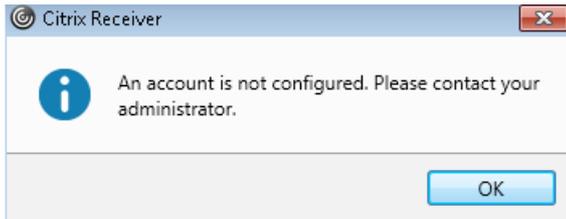
## 2. Command line Installation

Install Citrix Receiver for Windows as an administrator using Command Line Interface with the following switch.

**CitrixReceiver.exe /ALLOWADDSTORE=N**

This is a per machine setting; hence the behavior shall be applicable for all users.

The following message is displayed when Store is not configured.



Additionally, Add Account dialog can be suppressed in the following ways.

**NOTE:** Citrix recommends users to suppress the Add Account dialog either using System logon or Command Line Interface methods.

- **Renaming Citrix execution file:**

Rename the **CitrixReceiver.exe** to **CitrixReceiverWeb.exe** to alter the behavior of Add Account dialog. By renaming the file, Add Account dialog is not displayed from the Start menu.

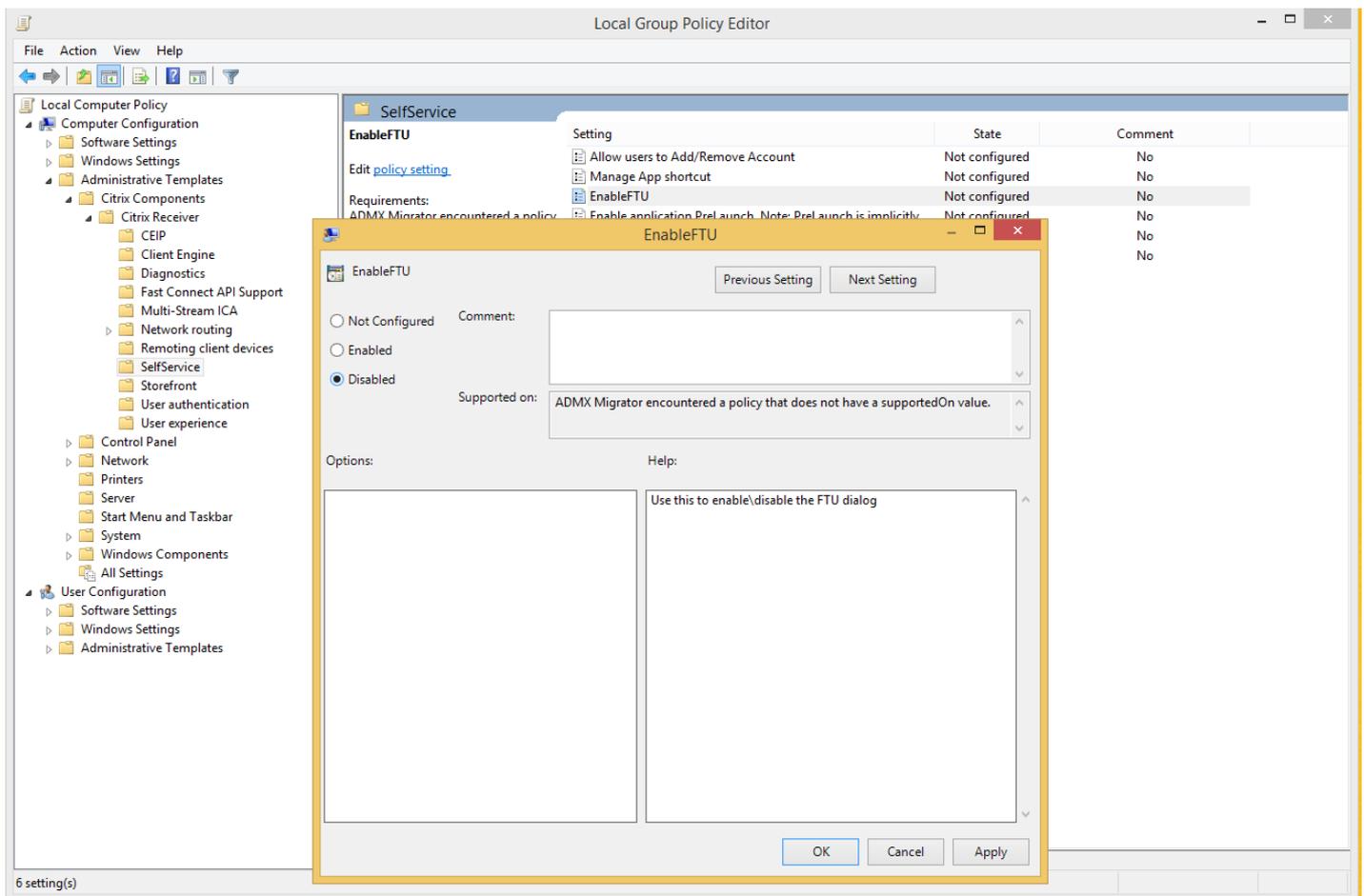
See [Deploy Receiver for Windows from Receiver for Web](#) for more information related to Citrix Receiver for Web

- **Group Policy Object:**

To hide Add Account button from the Citrix Receiver for Windows installation wizard, disable **EnableFTUpolicy** under Self-Service node in Local Group Policy editor as shown below.

This is per machine setting, hence the behavior shall be applicable for all users.

To load template file, see [Configure Receiver with the Group Policy Object template](#).



When you configure Citrix Receiver for Windows for email-based account discovery, users enter their email address rather than a server URL during initial Citrix Receiver for Windows installation and configuration. Citrix Receiver for Windows determines the NetScaler Gateway or StoreFront Server associated with the email address based on Domain Name System (DNS) Service (SRV) records and then prompts the user to log on to access virtual desktops and applications.

## Note

Email-based account discovery is not supported for deployments with Web Interface.

To configure your DNS server to support email-based discovery, see [Configure email-based account discovery](#) in the StoreFront documentation.

To configure NetScaler Gateway, see [Connecting to StoreFront by using email-based discovery](#) in the NetScaler Gateway documentation.

StoreFront provides provisioning files that users can open to connect to stores.

You can use StoreFront to create provisioning files containing connection details for accounts. Make these files available to

your users to enable them to configure Citrix Receiver for Windows automatically. After installing Citrix Receiver for Windows, users simply open the file to configure Citrix Receiver for Windows. If you configure Citrix Receiver for Web sites, users can also obtain Citrix Receiver for Windows provisioning files from those sites.

- For more information, see [To export store provisioning files for users](#) in the StoreFront documentation.

To enable users to set up accounts manually, be sure to distribute the information they need to connect to their virtual desktops and applications.

- For connections to a StoreFront store, provide the URL for that server. For example: `https://servername.company.com`  
For web interface deployments, provide the URL for the XenApp Services site.
- For connections through NetScaler Gateway, first determine whether user should see all configured stores or just the store that has remote access enabled for a particular NetScaler Gateway.
  - To present all configured stores: Provide users with the NetScaler Gateway fully-qualified domain name.
  - To limit access to a particular store: Provide users with the NetScaler Gateway fully-qualified domain name and the store name in the form:

**NetScalerGatewayFQDN?MyStoreName**

For example, if a store named "SalesApps" has remote access enabled for server1.com and a store named "HRApps" has remote access enabled for server2.com, a user must enter `server1.com?SalesApps` to access SalesApps or enter `server2.com?HRApps` to access HRApps. This feature requires that a first-time user create an account by entering a URL and is not available for email-based discovery.

When a user enters the details for a new account, Citrix Receiver for Windows attempts to verify the connection. If successful, Citrix Receiver for Windows prompts the user to log on to the account.

To manage accounts, a Citrix Receiver user opens the Citrix Receiver for Windows home page, clicks , and then clicks **Accounts**.

## Warning

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

If you have more than one store account, you can configure Citrix Receiver for Windows to automatically connect to all accounts when establishing a session. To automatically view all accounts when opening Citrix Receiver for Windows:

**For 32-bit systems, create the key "CurrentAccount":**

Location: `HKLM\Software\Citrix\Dazzle`

KeyName: `CurrentAccount`

Value: `AllAccount`

Type: REG\_SZ

For 64-bit systems, create the key "CurrentAccount":

Location: HKLM\Software\Wow6432Node\Citrix\Dazzle

KeyName: CurrentAccount

Value: AllAccount

Type: REG\_SZ

# Optimize the environment

Nov 27, 2017

You can optimize the environment.

- Reduce application launch time
- Facilitate the connection of devices to published resources
- Support DNS name resolution
- Use proxy servers with XenDesktop connections
- Enable access to anonymous applications
- Check Single Sign-on configuration

# Reducing application launch time

Nov 27, 2017

Use the session pre-launch feature to reduce application launch time during normal or high traffic periods, thus providing users with a better experience. The pre-launch feature allows a pre-launch session to be created when a user logs on to Citrix Receiver for Windows, or at a scheduled time if the user is already logged on.

This pre-launch session reduces the launch time of the first application. When a user adds a new account connection to Citrix Receiver for Windows, session pre-launch does not take effect until the next session. The default application `ctxprelaunch.exe` is running in the session, but it is not visible to the user.

Session pre-launch is supported for StoreFront deployments as of the StoreFront 2.0 release. For Web Interface deployments, be sure to use the Web Interface Save Password option to avoid logon prompts. Session pre-launch is not supported for XenDesktop 7 deployments.

Session pre-launch is disabled by default. To enable session pre-launch, specify the `ENABLEPRELAUNCH=true` parameter on the Receiver command line or set the `EnablePreLaunch` registry key to true. The default setting, null, means that pre-launch is disabled.

Note: If the client machine has been configured to support Domain Passthrough (SSON) authentication, then prelaunch is automatically enabled. If you want to use Domain Passthrough (SSON) without prelaunch, then set the `EnablePreLaunch` registry key value to false.

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.

The registry locations are:

`HKEY_LOCAL_MACHINE\Software\[Wow6432Node\Citrix\Dazzle`

`HKEY_CURRENT_USER\Software\Citrix\Dazzle`

There are two types of pre-launch:

- **Just-in-time pre-launch.** Pre-Launch starts immediately after the user's credentials are authenticated whether or not it is a high-traffic period. Typically used for normal traffic periods. A user can trigger just-in-time pre-launch by restarting Citrix Receiver for Windows.
- **Scheduled pre-launch.** Pre-launch starts at a scheduled time. Scheduled pre-launch starts only when the user device is already running and authenticated. If those two conditions are not met when the scheduled pre-launch time arrives, a session does not launch. To spread network and server load, the session launches within a window of when it is scheduled. For example, if the scheduled pre-launch is scheduled for 1:45 p.m., the session actually launches between 1:15 p.m. and 1:45 p.m. Typically used for high-traffic periods.

Configuring pre-launch on a XenApp server consists of creating, modifying, or deleting pre-launch applications, as well as updating user policy settings that control the pre-launch application. See "To pre-launch applications to user devices" in the XenApp documentation for information about configuring session pre-launch on the XenApp server.

Customizing the pre-launch feature using the `receiver.admx` file is not supported. However, you can change the pre-launch configuration by modifying registry values during or after Citrix Receiver for Windows installation. There are three HKLM values and two HKCU values:

- The HKLM values are written during client installation.
- The HKCU values enable you to provide different users on the same machine with different settings. Users can change the HKCU values without administrative permission. You can provide your users with scripts to accomplish this.

For Windows 7 and 8, 64-bit: HKEY\_LOCAL\_MACHINE\SOFTWARE\Wow6432Node\Citrix\ICA Client\Prelaunch

For all other supported 32-bit Windows operating systems: HKEY\_LOCAL\_MACHINE\SOFTWARE\Citrix\ICA Client\Prelaunch

Name: UserOverride

Values:

0 - Use the HKEY\_LOCAL\_MACHINE values even if HKEY\_CURRENT\_USER values are also present.

1 - Use HKEY\_CURRENT\_USER values if they exist; otherwise, use the HKEY\_LOCAL\_MACHINE values.

Name: State

Values:

0 - Disable pre-launch.

1 - Enable just-in-time pre-launch. (Pre-Launch starts after the user's credentials are authenticated.)

2 - Enable scheduled pre-launch. (Pre-launch starts at the time configured for Schedule.)

Name: Schedule

Value:

The time (24 hour format) and days of week for scheduled pre-launch entered in the following format:

HH:MM | M:T:W:TH:F:S:SU where HH and MM are hours and minutes. M:T:W:TH:F:S:SU are the days of the week. For example, to enable scheduled pre-launch on Monday, Wednesday, and Friday at 1:45 p.m., set Schedule as Schedule=13:45 | 1:0:1:0:1:0:0 . The session actually launches between 1:15 p.m. and 1:45 p.m.

HKEY\_CURRENT\_USER\SOFTWARE\Citrix\ICA Client\Prelaunch

The State and Schedule keys have the same values as for HKEY\_LOCAL\_MACHINE.

# Mapping client devices

Nov 27, 2017

Citrix Receiver for Windows supports device mapping on user devices so they are available from within a session. Users can:

- Transparently access local drives, printers, and COM ports
- Cut and paste between the session and the local Windows clipboard
- Hear audio (system sounds and .wav files) played from the session

During logon, Citrix Receiver for Windows informs the server of the available client drives, COM ports, and LPT ports. By default, client drives are mapped to server drive letters and server print queues are created for client printers so they appear to be directly connected to the session. These mappings are available only for the current user during the current session. They are deleted when the user logs off and recreated the next time the user logs on.

You can use the redirection policy settings to map user devices not automatically mapped at logon. For more information, see the XenDesktop or XenApp documentation.

You can configure user device mapping including options for drives, printers, and ports, using the Windows Server Manager tool. For more information about the available options, see your Remote Desktop Services documentation.

Client folder redirection changes the way client-side files are accessible on the host-side session. When you enable only client drive mapping on the server, client-side full volumes are automatically mapped to the sessions as Universal Naming Convention (UNC) links. When you enable client folder redirection on the server and the user configures it on the user device, the portion of the local volume specified by the user is redirected.

Only the user-specified folders appear as UNC links inside sessions instead of the complete file system on the user device. If you disable UNC links through the registry, client folders appear as mapped drives inside the session. For more information, including how to configure client folder redirection for user devices, see the XenDesktop 7 documentation.

Client drive mapping allows drive letters on the host-side to be redirected to drives that exist on the user device. For example, drive H in a Citrix user session can be mapped to drive C of the user device running Citrix Receiver for Windows.

Client drive mapping is built into the standard Citrix device redirection facilities transparently. To File Manager, Windows Explorer, and your applications, these mappings appear like any other network mappings.

The server hosting virtual desktops and applications can be configured during installation to map client drives automatically to a given set of drive letters. The default installation maps drive letters assigned to client drives starting with V and works backward, assigning a drive letter to each fixed drive and CD-ROM drive. (Floppy drives are assigned their existing drive letters.) This method yields the following drive mappings in a session:

Client drive letter	Is accessed by the server as:
A	A

Client drive letter	Is accessed by the server as:
C	V
D	U

The server can be configured so that the server drive letters do not conflict with the client drive letters; in this case the server drive letters are changed to higher drive letters. For example, changing server drives C to M and D to N allows client devices to access their C and D drives directly. This method yields the following drive mappings in a session:

Client drive letter	Is accessed by the server as:
A	A
B	B
C	C
D	D

The drive letter used to replace the server drive C is defined during Setup. All other fixed drive and CD-ROM drive letters are replaced with sequential drive letters (for example; C > M, D > N, E > O). These drive letters must not conflict with any existing network drive mappings. If a network drive is mapped to the same drive letter as a server drive letter, the network drive mapping is not valid.

When a user device connects to a server, client mappings are reestablished unless automatic client device mapping is disabled. Client drive mapping is enabled by default. To change the settings, use the Remote Desktop Services (Terminal Services) Configuration tool. You can also use policies to give you more control over how client device mapping is applied. For more information about policies, see the XenDesktop or XenApp documentation in Citrix Product Documentation.

Updated: 2015-01-27

HDX Plug and Play USB device redirection enables dynamic redirection of media devices, including cameras, scanners, media players, and point of sale (POS) devices to the server. You or the user can restrict redirection of all or some of the devices. Edit policies on the server or apply group policies on the user device to configure the redirection settings. For more information, see [USB and client drive considerations](#) in the XenApp and XenDesktop documentation.

**Important:** If you prohibit Plug and Play USB device redirection in a server policy, the user cannot override that policy setting. A user can set permissions in Citrix Receiver for Windows to always allow or reject device redirection or to be prompted each time a device is connected. The setting affects only devices plugged in after the user changes the setting.

Client COM port mapping allows devices attached to the COM ports of the user device to be used during sessions. These

mappings can be used like any other network mappings.

You can map client COM ports at the command prompt. You can also control client COM port mapping from the Remote Desktop (Terminal Services) Configuration tool or using policies. For information about policies, see the XenDesktop or XenApp documentation.

Important: COM port mapping is not TAPI-compatible.

1. For XenDesktop 7 deployments, enable the Client COM port redirection policy setting.
2. Log on to Citrix Receiver for Windows.
3. At a command prompt, type:

```
net use comx: \\client\comz:
```

where x is the number of the COM port on the server (ports 1 through 9 are available for mapping) and z is the number of the client COM port you want to map.

4. To confirm the operation, type:

```
net use
```

at a command prompt. The list that appears contains mapped drives, LPT ports, and mapped COM ports.

To use this COM port in a virtual desktop or application, install your user device to the mapped name. For example, if you map COM1 on the client to COM5 on the server, install your COM port device on COM5 during the session. Use this mapped COM port as you would a COM port on the user device.

# Supporting DNS name resolution

Nov 27, 2017

You can configure Citrix Receiver for Windows that use the Citrix XML Service to request a Domain Name Service (DNS) name for a server instead of an IP address.

**Important:** Unless your DNS environment is configured specifically to use this feature, Citrix recommends that you do not enable DNS name resolution in the server farm.

Citrix Receiver for Windows connecting to published applications through the Web Interface also use the Citrix XML Service. For Citrix Receiver for Windows connecting through the Web Interface, the Web server resolves the DNS name on behalf of the Citrix Receiver for Windows.

DNS name resolution is disabled by default in the server farm and enabled by default on the Citrix Receiver for Windows . When DNS name resolution is disabled in the farm, any Citrix Receiver for Windows request for a DNS name returns an IP address. There is no need to disable DNS name resolution on Citrix Receiver for Windows.

If your server deployment uses DNS name resolution and you experience issues with specific user devices, you can disable DNS name resolution for those devices.

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

1. Add a string registry key `xmlAddressResolutionType` to `HKEY_LOCAL_MACHINE\Software\Wow6432Node\Citrix\ICA Client\Engine\Lockdown Profiles\All Regions\Lockdown\Application Browsing`.
2. Set the value to `IPv4-Port`.
3. Repeat for each user of the user devices.

# Using proxy servers with XenDesktop

Nov 27, 2017

If you do not use proxy servers in your environment, correct the Internet Explorer proxy settings on any user devices running Internet Explorer 7.0 on Windows XP. By default, this configuration automatically detects proxy settings. If proxy servers are not used, users will experience unnecessary delays during the detection process. For instructions on changing the proxy settings, consult your Internet Explorer documentation. Alternatively, you can change proxy settings using the Web Interface. For more information, consult the [Web Interface documentation](#).

# Using Configuration Checker to validate Single Sign-on configuration

Nov 27, 2017

## Note

You can hide all or part of the Advanced Preferences sheet available from the Citrix Receiver icon in the notification area. For more information, see [Hiding the Advanced Preferences sheet](#).

Starting with Release 4.5 of Citrix Receiver for Windows, Configuration Checker helps users to run a test to ensure Single Sign-on is configured properly. The test runs on different checkpoints of the Single Sign-on configuration and displays the configuration results.

1. Logon to Citrix Receiver for Windows.
2. Right-click Citrix Receiver for Windows in the notification area and select **Advanced Preferences**.

The Advanced Preferences window appears.

### Advanced Preferences

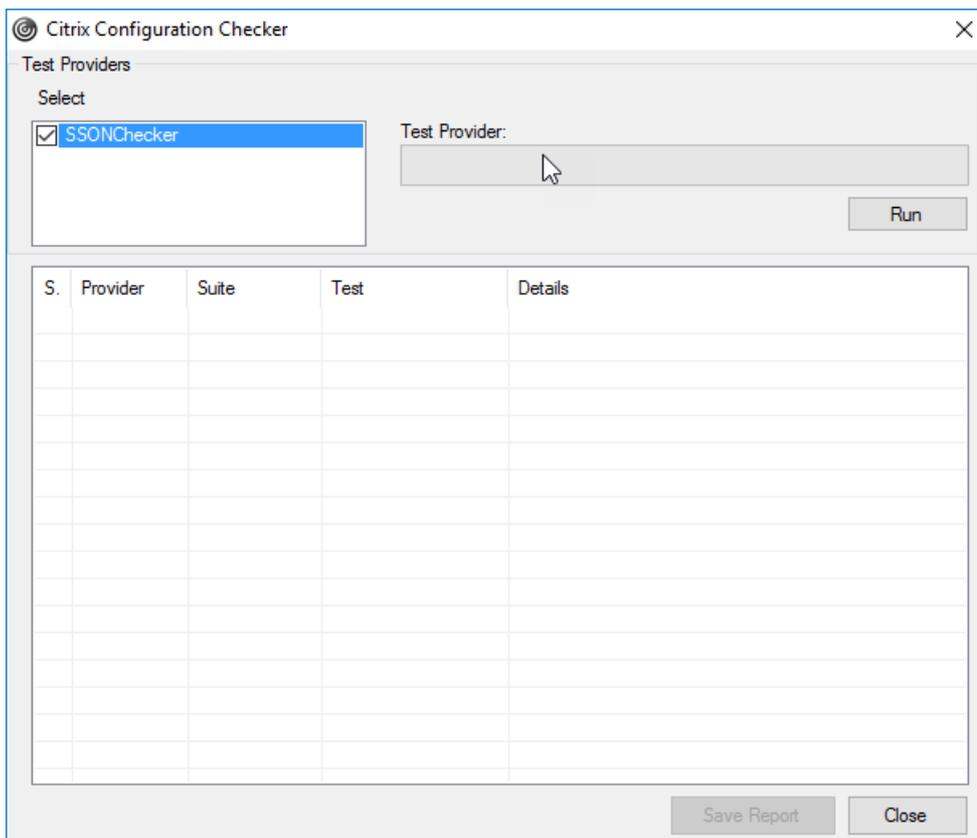
<a href="#">Connection Center</a>	<a href="#">NetScaler Gateway Settings</a>
<a href="#">Delete Saved Passwords</a>	<a href="#">Reset Receiver</a>
<a href="#">Data Collection</a>	<a href="#">Settings Option</a>
<a href="#">Configuration Checker</a>	<a href="#">Support Info</a>

---

**Netscaler Gateway** (Default)

3. Select **Configuration Checker**.

The Citrix Configuration Checker window appears.



4. Select **SSONChecker** from the **Select** pane.

5. Click **Run**.

A progress bar appears, displaying the status of the test.

The Configuration Checker window has the following columns:

1. **Status**: Displays the result of a test on a specific check point.

- A green check mark indicates that the specific checkpoint is configured properly.
- A blue I indicates information about the checkpoint.
- A Red X indicates that the specific checkpoint is not configured properly.

2. **Provider**: Displays the name of the module on which the test is run. In this case, Single Sign-on.

3. **Suite**: Indicates the category of the test. For example, Installation.

4. **Test**: Indicates the name of the specific test that is run.

5. **Details**: Provides additional information about the test, irrespective of pass or fail.

The user gets more information about each checkpoint and the corresponding results.

The following tests are performed:

1. Installed with Single Sign-on
2. Logon credential capture
3. Network Provider registration

The test result against Network Provider registration displays a green check mark only when “Citrix Single Sign-on” is set to be first in the list of Network Providers. If Citrix Single Sign-on appears anywhere else in the list, the test result against Network Provider registration appears with a blue I and additional information.

4. Single Sign-on process is running
5. Group Policy

By default, this policy is configured on the client.

#### 6. Internet Settings for Security Zones

Ensure that you add the Store/XenApp Service URL to the list of Security Zones in the Internet Options.

If the Security Zones is configured via Group policy, any change in the policy requires the Advanced Preference window to be reopened for the changes to take effect and to display the correct status of the test.

#### 7. Authentication method for Web Interface/StoreFront.

**Note:** If the user is accessing Receiver for Web, the test results are not applicable.

If Citrix Receiver for Windows is configured with multiple stores, the authentication method test runs on all configured stores.

**Note:** The test results can be saved as reports and the default format for the report is .txt.

#### Limitations

Configuration Checker does not include the checkpoint for the configuration of Trust requests sent to the XML service on XenApp/XenDesktop servers.

# Improve the user experience

Nov 27, 2017

You can improve your user experience with the following features:

## Configuring Citrix Receiver for Windows to use H.265 video encoding

1. Open the Citrix Receiver Group Policy Object administrative template by running gpedit.msc.
2. Under the **Computer Configuration** node, go to **Administrative Templates > Citrix Receiver > User Experience**.
3. Select the **H265 Decoding for graphics** policy.
4. Select **Enabled**.
5. Click **Apply** and **OK**.

### Note

If the **Hardware acceleration for Graphics** policy is disabled in the Citrix Receiver Group Policy Object administrative template, the **H265 Decoding for graphics** policy settings is ignored and the feature does not work.

## Configure DPI scaling

You can configure DPI scaling using the following options:

1. Group Policy Object administrative template (per-machine configuration)
2. Advanced Preferences (per-user configuration)

1. Open the Citrix Receiver Group Policy Object administrative template by running gpedit.msc.
2. Under the Computer Configuration node, go to **Administrative Templates > Citrix Components > Citrix Receiver > DPI**
3. Select **Enable DPI** policy
4. Change the settings as required.
5. Click **Apply** and **OK**.
6. From a command line, run the `gpupdate /force` command.

### Note

You can hide all or part of the Advanced Preferences sheet available from the Citrix Receiver icon in the notification area. For more

information, see [Hiding the Advanced Preferences sheet](#).

1. Right-click Citrix Receiver for Windows from the notification area.
2. Select **Advanced Preferences** and click **DPI settings**.  
The DPI settings dialog appears.
3. Change the settings as required.
4. Click **Save**.

Restart the Citrix Receiver for Windows session for the changes to take effect.

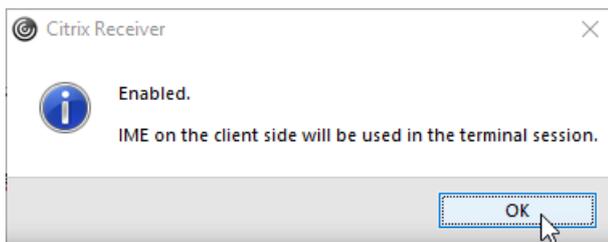
### Limitation

- Even with this feature enabled, a slight blur has been observed in the desktop viewer.

## Configure generic client Input Method Editors (IME)

### Configuring generic client IME using the command line interface

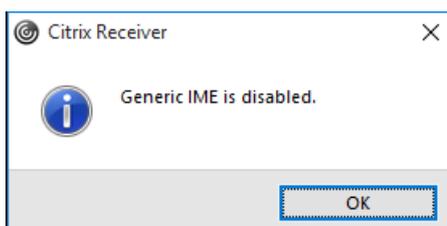
To enable generic client IME, run the `wfica32.exe /localime:on` command from the Citrix Receiver for Windows installation folder (C:\Program Files (x86)\Citrix\ICA Client).



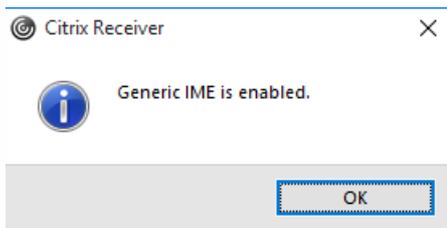
### Note

You can use the command line switch `wfica32.exe /localime:on` to enable both generic client IME and keyboard layout synchronization.

To disable generic client IME, run the `wfica32.exe /localgenericime:off` command from the Citrix Receiver for Windows installation folder (C:\Program Files (x86)\Citrix\ICA Client). This command does not affect keyboard layout synchronization settings.



If you have disabled generic client IME using the command line interface, you can enable the feature again by running the `wfica32.exe /localgenericime:on` command.



## Toggle

Citrix Receiver for Windows supports toggle functionality for this feature. You can run the `wfica32.exe /localgenericime:on` command to enable or disable the feature. However, the keyboard layout synchronization settings take precedence over the toggle switch. If keyboard layout synchronization is set to **Off**, toggling does not enable generic client IME.

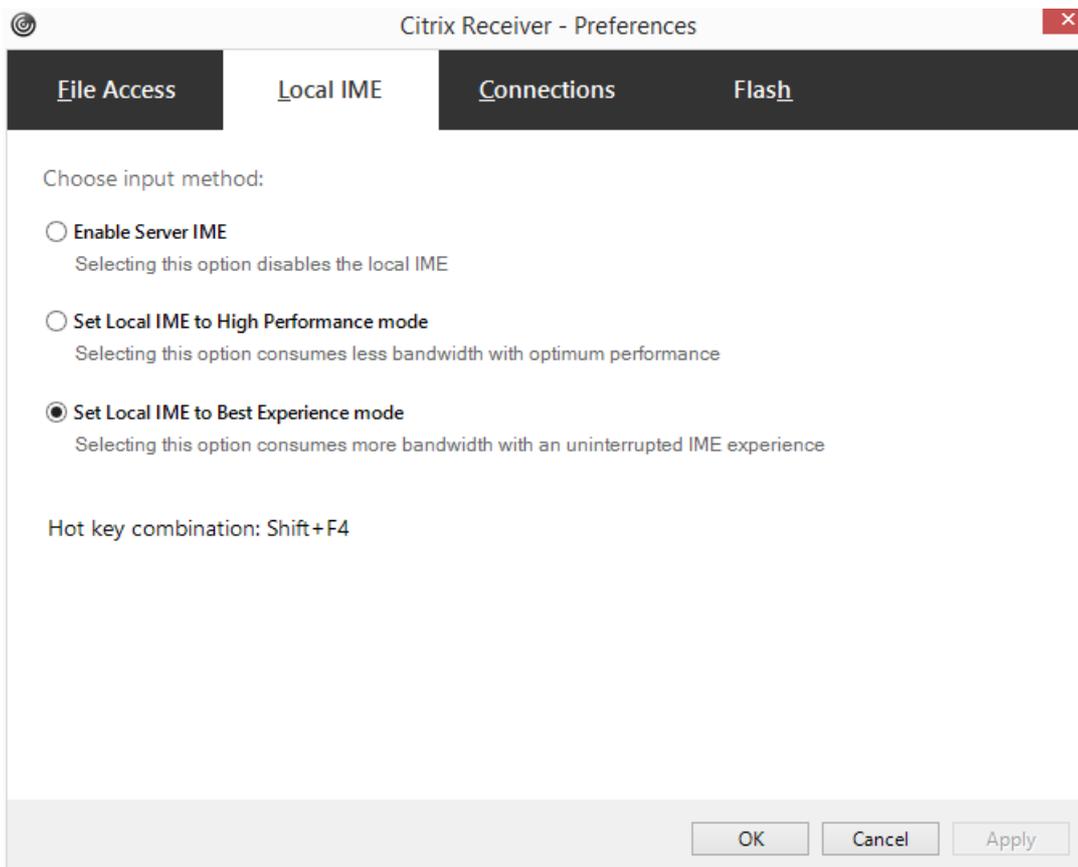
## Configuring generic client IME using the graphical user interface

Generic client IME requires VDA Version 7.13 or later.

Generic client IME feature can be enabled by enabling keyboard layout synchronization. For more information, see [Keyboard layout synchronization](#).

Citrix Receiver for Windows allows you to configure different options to use generic client IME. You can select from one of these options based on your requirements and usage.

1. In an active application session, right-click the Citrix Receiver icon in the notification area and select **Connection Center**.
2. Select **Preferences** and click **Local IME**.



The options below are available to support different IME modes:

1. **Enable Server IME** – select this option to disable local IME. This option means that only the languages set on the server can be used.
2. **Set Local IME to High Performance mode** –select this option to use local IME with limited bandwidth. This option restricts the candidate window functionality.
3. **Set Local IME to Best Experience mode** – select this option to use local IME with best user experience. This option consumes high bandwidth. By default, this option is selected when generic client IME is enabled.

The change in settings is applied only in the current session.

When generic client IME is enabled, you can use the **Shift+F4** hotkeys to select different IME modes. The different options for IME modes appear in the top-right corner of the session.

By default, the hotkey for generic client IME is disabled.

In the registry editor, navigate to HKEY\_LOCAL\_MACHINE\SOFTWARE Wow6432Node\Citrix\ICA Client\Engine\Lockdown Profiles\All Regions\Lockdown\Client Engine\Hot Keys.

Select **AllowHotKey** and change the default value to 1.



## Note

Hotkey functionality is supported in both desktop and application sessions.

### Limitations

- Generic client IME does not support UWP (Universal Windows Platform) apps such as Search UI, and the Edge browser of the Windows 10 operating system. As a workaround, use the server IME instead.
- Generic client IME is not supported on Internet Explorer Version 11 in Protected Mode. As a workaround, you can disable Protected Mode by using **Internet Options**. To do this, click **Security** and clear **Enable Protected Mode**.

## Keyboard layout

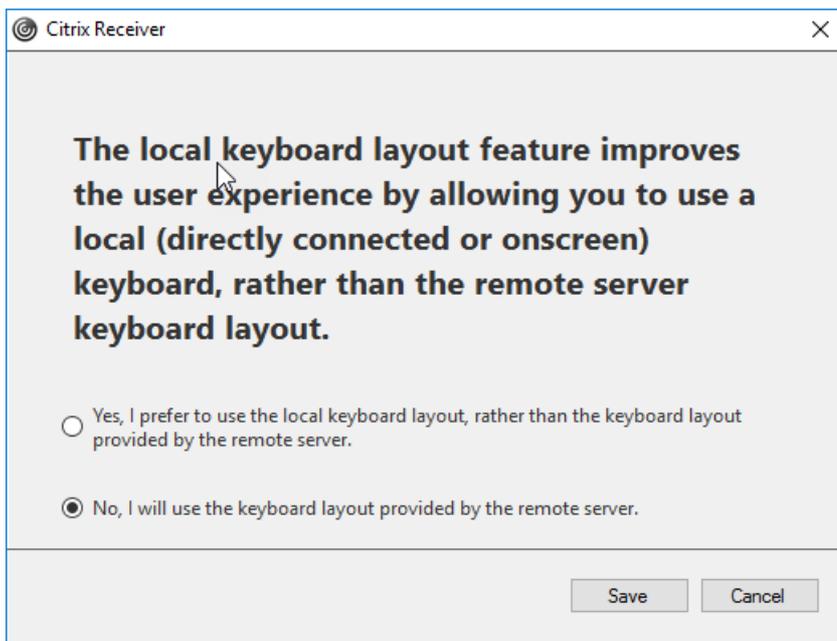
### Note

You can hide all or part of the Advanced Preferences sheet available from the Citrix Receiver icon in the notification area. For more information, see [Hiding the Advanced Preferences sheet](#).

Keyboard layout synchronization enables users to switch among preferred keyboard layouts on the client device. This feature is disabled by default.

To enable keyboard layout synchronization:

1. From the Citrix Receiver for Windows notification area icon, select **Advanced Preferences > Local keyboard layout setting > Yes**.



2. Click **Save**.

You can disable the feature by selecting **No**.

You can also enable and disable keyboard layout synchronization through the command line by running **wfica32:exe /localime:on** or **wfica32:exe /localime:off** from the Citrix Receiver for Windows installation folder (C:\program files (x86)\Citrix\ICA Client).

**Note:** Using the local keyboard layout option activates the Client IME (Input Method Editor). If users working in Japanese, Chinese or Korean prefer to use the Server IME, they must disable the local keyboard layout option by selecting **No**, or running **wfica32:exe /localime:off**. The session will revert to the keyboard layout provided by the remote server when they connect to the next session.

Sometimes, switching the client keyboard layout does not take effect in an active session. To resolve this issue, log off from Citrix Receiver for Windows and login again.

#### Limitations:

- Remote applications which run with elevated privilege (for example, right click an application icon > Run as administrator) can't be synchronized with the client keyboard layout. To work around this issue, manually change the keyboard layout on the server side (VDA) or disable UAC.
- If the user changes the keyboard layout on the client to a layout which is not supported on the server, then the keyboard layout synchronization feature will be disabled for security reasons - an unrecognized keyboard layout is treated as a potential security threat. To restore the keyboard layout synchronization feature, the user should log off and back on to the session.
- When RDP is deployed as an application and the user is working within an RDP session, it is not possible to change the keyboard layout using Alt + Shift shortcuts. To work around this, the user can use the language bar in the RDP session to switch the keyboard layout.
- This feature is disabled in Windows Server 2016 due to a third-party issue which may introduce performance risk. The feature can be enabled with a registry setting on the VDA: in HKLM\Software\Citrix\ICA\Icalme, add a new key called DisableKeyboardSync and set the value to 0.

## Warning

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.

# Relative Mouse

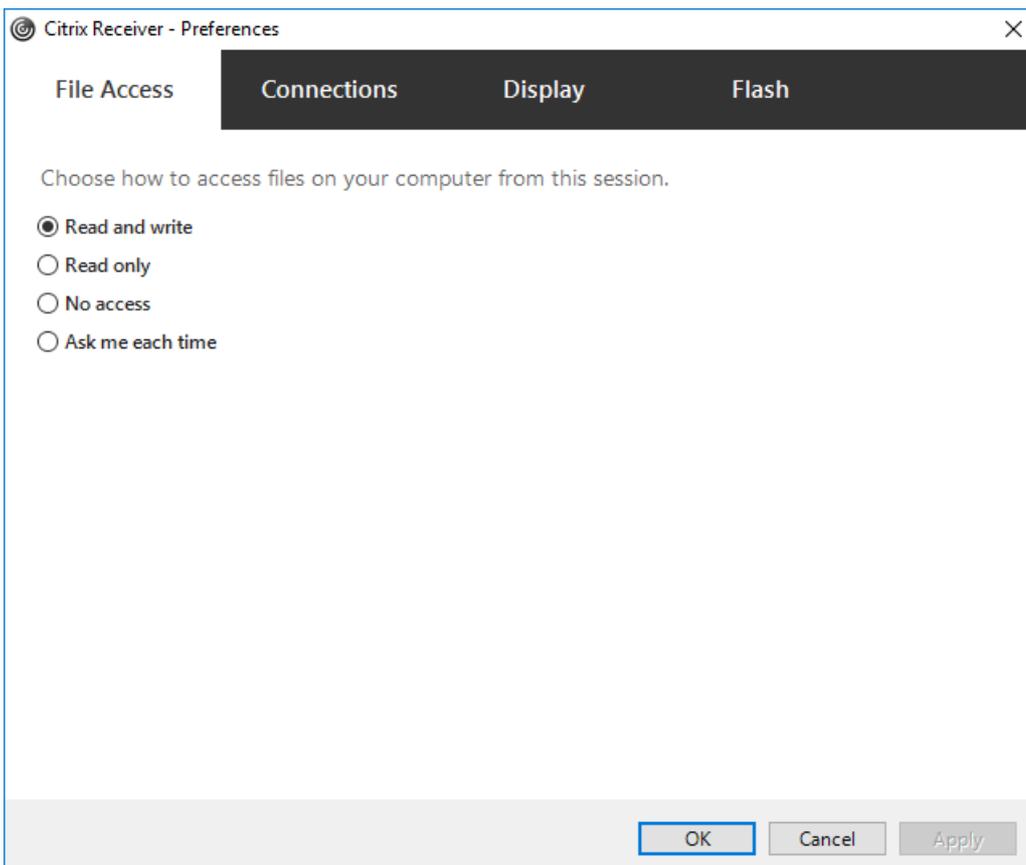
Relative Mouse support provides an option to interpret the mouse position in a relative rather than an absolute manner. This capability is required for applications that demand relative mouse input rather than absolute.

**Note:** This feature can be applied in a published desktop session only.

### To enable Relative Mouse support

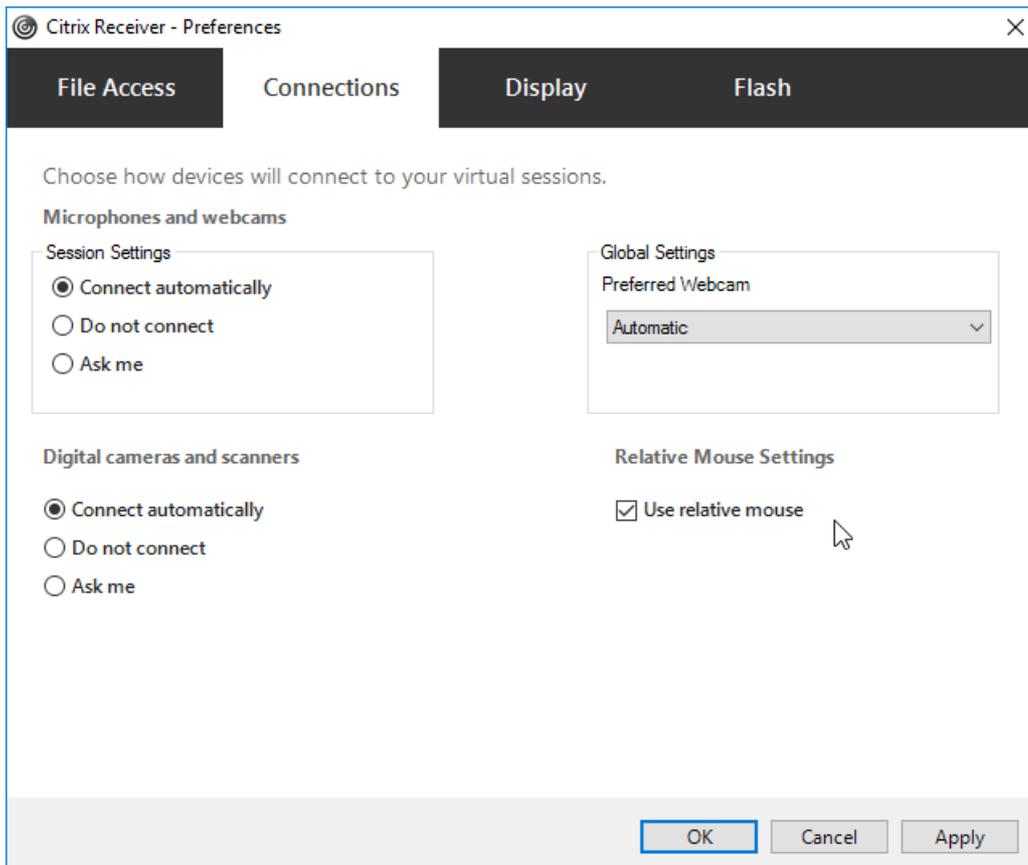
1. Logon to Citrix Receiver for Windows
2. Launch a published desktop session
3. From the Desktop Viewer toolbar, select **Preferences**.

The Citrix Receiver - Preferences window appears.



4. Select Connections.

5. Under Relative Mouse settings, enable **Use relative mouse**.



6. Click **Apply** and **OK**.

**NOTE:** This is a per session feature. It does not persist after reconnecting to a disconnected session. Users must re-enable the feature every time they connect or reconnect to the published desktop.

## Hardware decoding

When using Citrix Receiver for Windows (with HDX engine 14.4), the GPU can be used for H.264 decoding wherever it is available at the client. The API layer used for GPU decoding is [DXVA](#) (DirectX Video Acceleration).

For more information, see [Improved User Experience: Hardware Decoding for Citrix Windows Receiver](#).

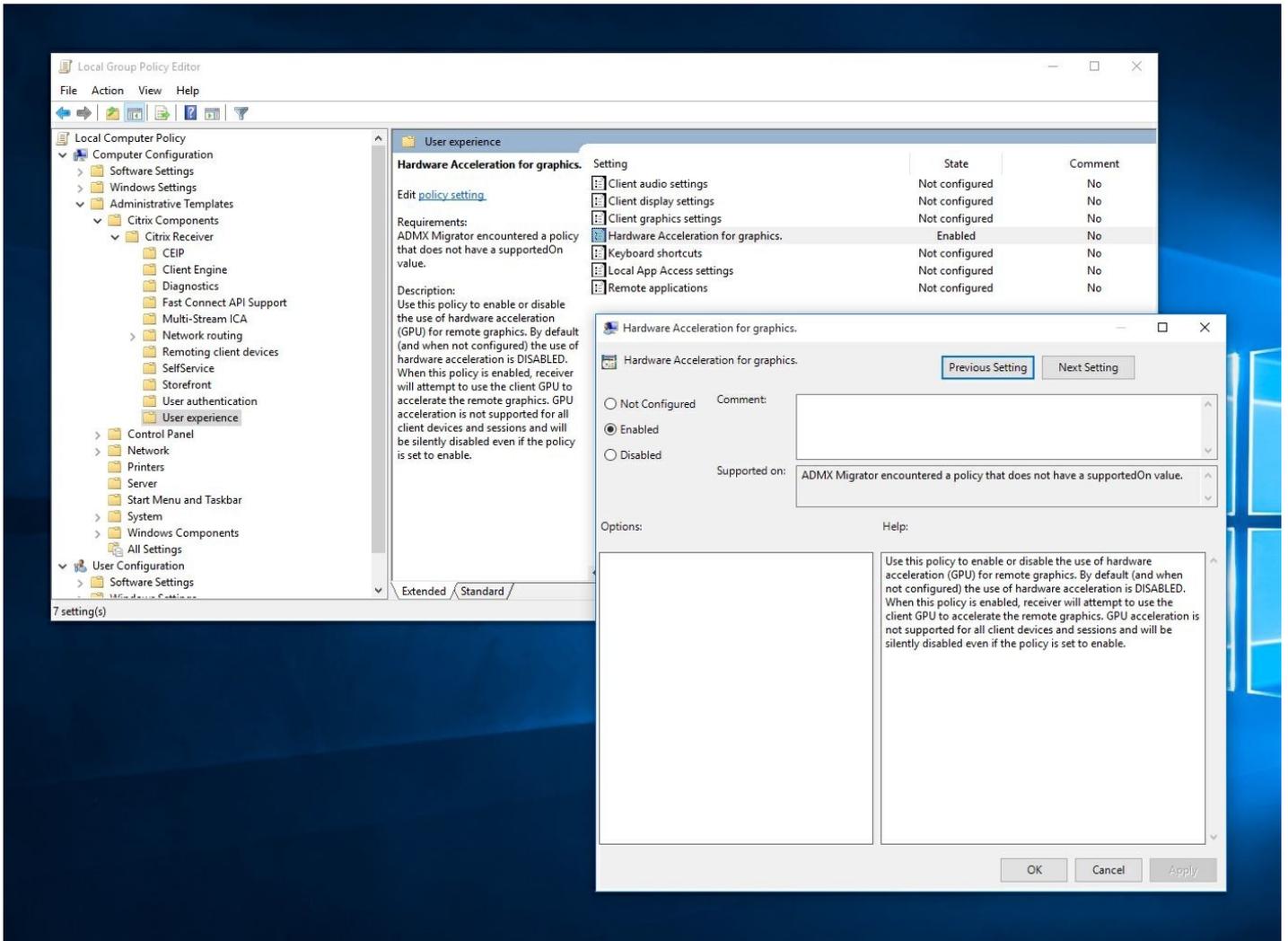
### Note

This feature is not enabled by default for embedded GPUs.

To enable hardware decoding using Citrix Receiver Group Policy Object administrative template:

1. Open the Citrix Receiver Group Policy Object administrative template by running `gpedit.msc`.
2. Under the **Computer Configuration** node, go to **Administrative Templates > Citrix Receiver > User Experience**.

3. Select **Hardware Acceleration for graphics**.
4. Select **Enabled** and click **Apply** and **OK**.



To validate if the policy was applied and hardware acceleration is being used for an active ICA session, look for the following registry entries:

Registry Path: HKCU\Software\Citrix\ICA Client\CEIP\Data\GfxRender\<<session ID>

## Tip

The value for **Graphics\_GfxRender\_Decoder** and **Graphics\_GfxRender\_Renderer** should be 2. If the value is 1, that means CPU based decoding is being used.

When using the hardware decoding feature, consider the following limitations:

- If the client has two GPU's and if one of the monitors is active on the 2nd GPU, CPU decoding will be used.
- When connecting to a XenApp 7.x server running on Windows Server 2008 R2, Citrix recommends that you do not to use hardware decoding on the user's Windows device. If enabled, issues like slow performance while highlighting text and

flickering issues will be seen.

Citrix Receiver for Windows supports multiple client-side microphone input. Locally installed microphones can be used for:

- Real-time activities, such as softphone calls and Web conferences.
- Hosted recording applications, such as dictation programs.
- Video and audio recordings.

Citrix Receiver for Windows users can select whether to use microphones attached to their device by changing a Connection Center setting. XenDesktop users can also use the XenDesktop Viewer Preferences to disable their microphones and webcams.

You can use up to eight monitors with Citrix Receiver for Windows.

Each monitor in a multiple monitor configuration has its own resolution designed by its manufacturer. Monitors can have different resolutions and orientations during sessions.

Sessions can span multiple monitors in two ways:

- Full screen mode, with multiple monitors shown inside the session; applications snap to monitors as they would locally.  
**XenDesktop:** To display the Desktop Viewer window across any rectangular subset of monitors, resize the window across any part of those monitors and click **Maximize**.
- Windowed mode, with one single monitor image for the session; applications do not snap to individual monitors.

**XenDesktop:** When any desktop in the same assignment (formerly "desktop group") is launched subsequently, the window setting is preserved and the desktop is displayed across the same monitors. Multiple virtual desktops can be displayed on one device provided the monitor arrangement is rectangular. If the primary monitor on the device is used by the XenDesktop session, it becomes the primary monitor in the session. Otherwise, the numerically lowest monitor in the session becomes the primary monitor.

To enable multi-monitor support, ensure the following:

- The user device is configured to support multiple monitors.
- The user device operating system must be able to detect each of the monitors. On Windows platforms, to verify that this detection occurs, on the user device, view the Settings tab in the Display Settings dialog box and confirm that each monitor appears separately.
- After your monitors are detected:
  - **XenDesktop:** Configure the graphics memory limit using the Citrix Machine Policy setting Display memory limit.
  - **XenApp:** Depending on the version of the XenApp server you have installed:
    - Configure the graphics memory limit using the Citrix Computer Policy setting Display memory limit.
    - From the Citrix management console for the XenApp server, select the farm and in the task pane, select Modify Server Properties > Modify all properties > Server Default > HDX Broadcast > Display (or Modify Server Properties > Modify all properties > Server Default > ICA > Display) and set the Maximum memory to use for each session's graphics.

Ensure the setting is large enough (in kilobytes) to provide sufficient graphic memory. If this setting is not high enough, the published resource is restricted to the subset of the monitors that fits within the size specified.

For information about calculating the session's graphic memory requirements for XenApp and XenDesktop, see Knowledge Center article [CTX115637](#).

If the Universal printing optimization defaults policy setting Allow non-administrators to modify these settings is enabled, users can override the Image Compression and Image and Font Caching options specified in that policy setting.

To override the printer settings on the user device

1. From the Print menu available from an application on the user device, choose Properties.
2. On the Client Settings tab, click Advanced Optimizations and make changes to the Image Compression and Image and Font Caching options.

To enable touch-enabled access to virtual applications and desktops from Windows tablets, Citrix Receiver for Windows automatically displays the on-screen keyboard when you activate a text entry field, and when the device is in tent or tablet mode.

On some devices and in some circumstances, Citrix Receiver for Windows cannot accurately detect the mode of the device, and the on-screen keyboard may appear when you do not want it to.

To suppress the on-screen keyboard from appearing when using a convertible device, create a REG\_DWORD value DisableKeyboardPopup in HKEY\_CURRENT\_USER\SOFTWARE\Citrix\ICA Client\Engine\Configuration\Advanced\Modules\MobileReceiver and set the value to 1.

**Note:** On a x64 machine, create the value in HKEY\_LOCAL\_MACHINE\SOFTWARE Wow6432Node\Citrix\ICA Client\Engine\Configuration\Advanced\Modules\MobileReceiver.

The keys can be set to 3 different modes as given below:

- **Automatic:** AlwaysKeyboardPopup = 0; DisableKeyboardPopup = 0
- **Always popup** (on-screen keyboard): AlwaysKeyboardPopup = 1; DisableKeyboardPopup = 0
- **Never popup** (on-screen keyboard): AlwaysKeyboardPopup = 0; DisableKeyboardPopup = 1

You can configure combinations of keys that Receiver interprets as having special functionality. When the keyboard shortcuts policy is enabled, you can specify Citrix Hotkey mappings, behavior of Windows hotkeys, and keyboard layout for sessions.

1. As an administrator, open the Group Policy Editor by either running gpedit.msc locally from the Start menu when applying policies to a single computer or by using the Group Policy Management Console when applying domain policies.

**Note:** If you already imported the Citrix Receiver for Windows template into the Group Policy Editor, you can omit Steps 2 to 5.

2. In the left pane of the Group Policy Editor, select the Administrative Templates folder.
3. From the Action menu, choose Add/Remove Templates.
4. Choose Add and browse to the Receiver Configuration folder (usually C:\Program Files\Citrix\ICA Client\Configuration) and select the Citrix Receiver for Windows template file.

**Note:** Depending on the version of the Windows Operating System, select the Citrix Receiver for Windows template file

(receiver.adm or receiver.admx/receiver.adm).

5. Select Open to add the template and then Close to return to the Group Policy Editor.
6. In the Group Policy Editor, go to Administrative Templates > Classic Administrative Templates (ADM) > Citrix Components > Citrix Receiver > User Experience > Keyboard shortcuts.
7. From the Action menu, choose Properties, select Enabled, and choose the desired options.

Citrix Receiver for Windows supports 32-bit high color icons and automatically selects the color depth for applications visible in the Citrix Connection Center dialog box, the Start menu, and task bar to provide for seamless applications.

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.

To set a preferred depth, you can add a string registry key named TWIDesiredIconColor to HKEY\_LOCAL\_MACHINE\SOFTWARE\Wow6432Node\Citrix\ICA Client\Engine\Lockdown Profiles\All Regions\Preferences and set it to the desired value. The possible color depths for icons are 4, 8, 16, 24, and 32 bits-per-pixel. The user can select a lower color depth for icons if the network connection is slow.

Different enterprises have different corporate needs. Your requirements for the way users access virtual desktops may vary from user to user and may vary as your corporate needs evolve. The user experience of connecting to virtual desktops and the extent of user involvement in configuring the connections depend on how you set up Citrix Receiver for Windows.

Use the **Desktop Viewer** when users need to interact with their virtual desktop. The user's virtual desktop can be a published virtual desktop, or a shared or dedicated desktop. In this access scenario, the Desktop Viewer toolbar functionality allows the user to open a virtual desktop in a window and pan and scale that desktop inside their local desktop. Users can set preferences and work with more than one desktop using multiple XenDesktop connections on the same user device.

Note: Your users must use Citrix Receiver for Windows to change the screen resolution on their virtual desktops. They cannot change Screen Resolution using Windows Control Panel.

In Desktop Viewer sessions, Windows logo key+L is directed to the local computer.

Ctrl+Alt+Delete is directed to the local computer.

Key presses that activate StickyKeys, FilterKeys, and ToggleKeys (Microsoft accessibility features) are normally directed to the local computer.

As an accessibility feature of the Desktop Viewer, pressing Ctrl+Alt+Break displays the Desktop Viewer toolbar buttons in a pop-up window.

Ctrl+Esc is sent to the remote, virtual desktop.

Note: By default, if the Desktop Viewer is maximized, Alt+Tab switches focus between windows inside the session. If the Desktop Viewer is displayed in a window, Alt+Tab switches focus between windows outside the session.

Hotkey sequences are key combinations designed by Citrix. For example, the Ctrl+F1 sequence reproduces Ctrl+Alt+Delete, and Shift+F2 switches applications between full-screen and windowed mode. You cannot use hotkey sequences with virtual desktops displayed in the Desktop Viewer (that is, with XenDesktop sessions), but you can use them with published

applications (that is, with XenApp sessions).

From within a desktop session, users cannot connect to the same virtual desktop. Attempting to do so will disconnect the existing desktop session. Therefore, Citrix recommends:

- Administrators should not configure the clients on a desktop to point to a site that publishes the same desktop
- Users should not browse to a site that hosts the same desktop if the site is configured to automatically reconnect users to existing sessions
- Users should not browse to a site that hosts the same desktop and try to launch it

Be aware that a user who logs on locally to a computer that is acting as a virtual desktop blocks connections to that desktop.

If your users connect to virtual applications (published with XenApp) from within a virtual desktop and your organization has a separate XenApp administrator, Citrix recommends working with them to define device mapping such that desktop devices are mapped consistently within desktop and application sessions. Because local drives are displayed as network drives in desktop sessions, the XenApp administrator needs to change the drive mapping policy to include network drives.

You can change the amount of time the status indicator displays when a user is launching a session. To alter the time out period, create a REG\_DWORD value SI\_INACTIVE\_MS in HKEY\_LOCAL\_MACHINE\SOFTWARE\Citrix\ICA\_CLIENT\Engine\. The REG\_DWORD value can be set to 4 if you want the status indicator to disappear sooner.

**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.**

## Customer Experience Improvement Program (CEIP)

### Note

You can hide all or part of the Advanced Preferences sheet available from the Citrix Receiver icon in the notification area. For more information, see [Hiding the Advanced Preferences sheet](#).

The Citrix Customer Experience Improvement Program (CEIP) gathers anonymous configuration and usage data from Receiver for Mac and automatically sends the data to Citrix. This data helps Citrix improve the quality, reliability, and performance of Receiver.

No user identifiable information is collected from the customer environment with CEIP.

TIP: You can change whether you participate in CEIP using the Receiver interface. You have 7 days to disable CEIP after installation.

To disable CEIP, or to forego participation:

1. Right-click the Citrix Receiver icon from the notification area
2. Select **Advanced Preferences**.  
The Advanced Preferences window appears.
3. Select **Data Collection**.
4. Select **No, Thanks** to disable CEIP or to forego participation.
5. Click Save.

# Secure connections

Nov 27, 2017

To maximize the security of your environment, the connections between Citrix Receiver for Windows and the resources you publish must be secured. You can configure various types of authentication for your Citrix Receiver for Windows software, including smart card authentication, certificate revocation list checking, and Kerberos pass-through authentication.

Windows NT Challenge/Response (NTLM) authentication is supported by default on Windows computers.

# Configure domain pass-through authentication

Nov 27, 2017

For information on configuring domain pass-through authentication, see Knowledge Center article [CTX133982](#).

There are two ways to enable domain pass-through (SSON) when installing Citrix Receiver for Windows:

- using the command line installation
- using the graphical user interface

## Enable domain pass-through using the command line interface

To enable domain pass-through (SSON) using the command line interface:

1. Install Citrix Receiver 4.x with the **/includeSSON** switch.
  - Install one or more StoreFront stores (you can complete this step at a later stage); installing StoreFront stores is not a prerequisite for setting up domain pass-through authentication.
  - Verify that pass-through authentication is enabled by starting Citrix Receiver, then confirm that the `ssonsvr.exe` process is running in Task Manager after rebooting the end point where Citrix Receiver is installed.

### Note

For information on the syntax for adding one or more StoreFront stores, see [Configure and install Receiver for Windows using command-line parameters](#).

## Enable domain pass-through using the graphical user interface

To enable domain pass-through using the graphical user interface:

1. Locate the Citrix Receiver for Windows installation file (`CitrixReceiver.exe`).
2. Double click **CitrixReceiver.exe** to launch the installer.
3. In the Enable Single Sign-on installation wizard, select the Enable single sign-on checkbox to install Citrix Receiver for Windows with the SSON feature enabled; this is equivalent to installing Citrix Receiver for Windows using the command line switch **/includeSSON**.

The image below illustrates how to enable Single Sign-on:



## Note

The Enable Single Sign-on installation wizard is available only for fresh installation on a domain joined machine.

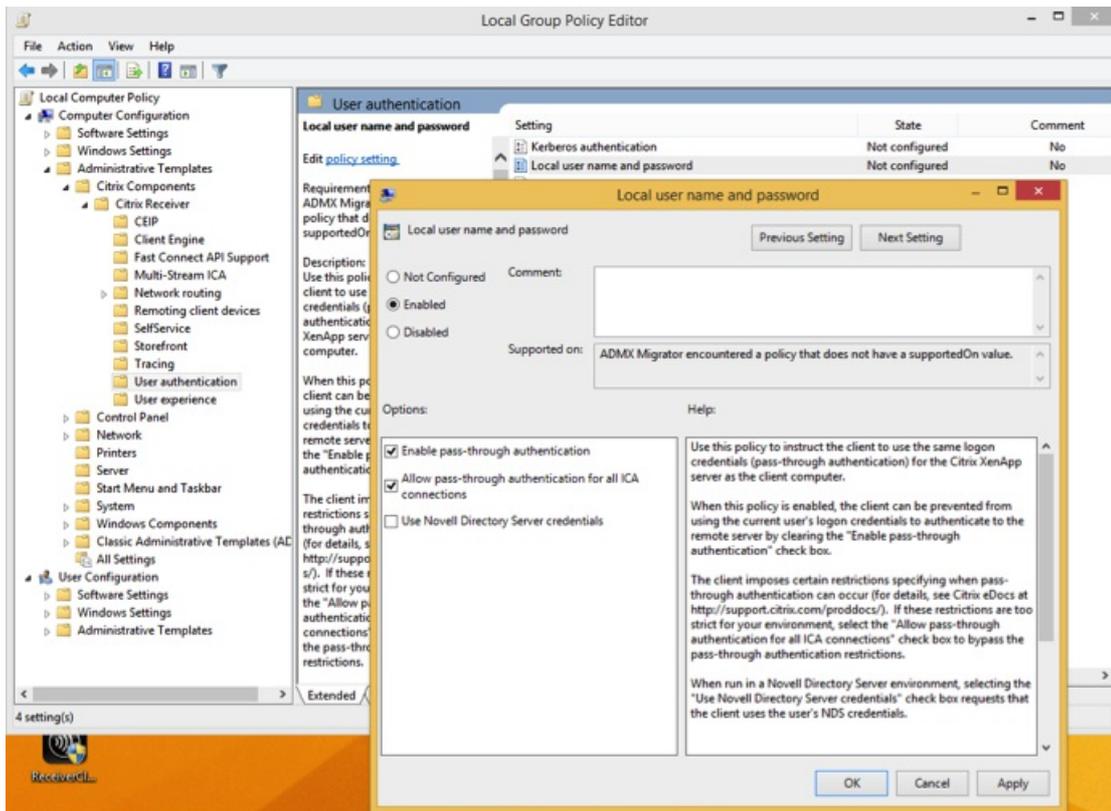
Verify that pass-through authentication is enabled by restarting Citrix Receiver for Windows, and then confirm that the `ssonsvr.exe` process is running in Task Manager after rebooting the endpoint on which Citrix Receiver for Windows is installed.

Use the information in this section to configure group policy settings for SSON authentication.

## Note

The default value of the GPO policy setting related to SSON is **Enable pass-through authentication**.

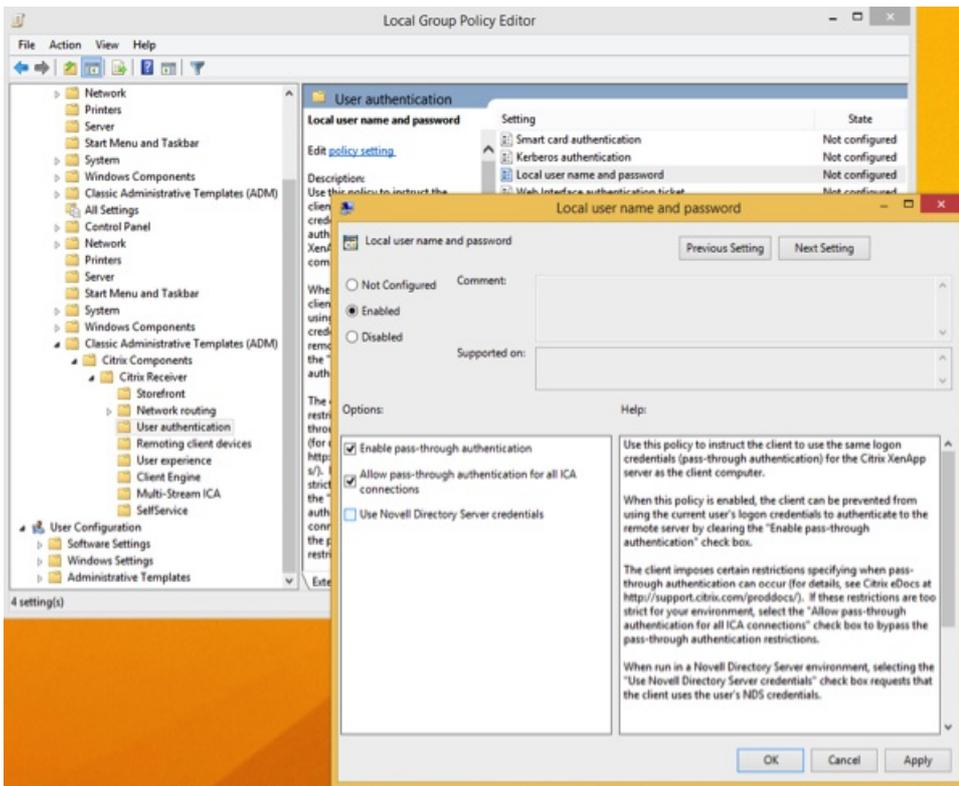
1. Open `gpedit.msc`, right-click **Computer Configuration > Administrative Templates - > Citrix Component-> Citrix Receiver->User Authentication**.
2. Enable the following local computer GPO settings (on the user's local machine and/or on the VDA desktop golden image):
  - Choose the local user name and password.
  - Select **Enabled**.
  - Select **Enable pass-through authentication**.
3. Reboot the endpoint (on which Citrix Receiver for Windows is installed) or the VDA desktop golden image.



## Using an ADM file for SSON group policy

Use the following procedure to configure group policy settings using an ADM file:

1. Open the local group policy editor by selecting **Computer Configuration > Right-click Administrative Templates > Choose Add/Remove Templates**.
2. Click **Add** to add a ADM template.
3. After successfully adding the receiver.adm template, expand **Computer Configuration > Administrative Templates > Classic Administrative Templates (ADM) > Citrix Components > Citrix Receiver > User authentication**.



4. Open Internet Explorer on the local machine and/or on the VDA desktop golden image.

5. In **Internet Settings > Security > Trusted Sites**, add the StoreFront server(s) fully qualified domain name (FQDN), without the store path, to the list. For example, <https://storefront.example.com>.

## Note

You can also add the StoreFront server to the Trusted Sites using a Microsoft GPO. The GPO is called **Site to Zone Assignment List**; you can find this list in **Computer Configuration > Administrative Templates > Windows Components > Internet Explorer > Internet Control Panel > Security Page**.

6. Log off, and log back on to the Citrix Receiver endpoint.

When Citrix Receiver opens, if the current user is logged on to the domain, the user's credentials are passed through to StoreFront, along with enumerated apps and desktops within Citrix Receiver, including the user's Start menu settings. When the user clicks an icon, Citrix Receiver passes through the user's domain credentials to the Delivery Controller and the app (or desktop) opens.

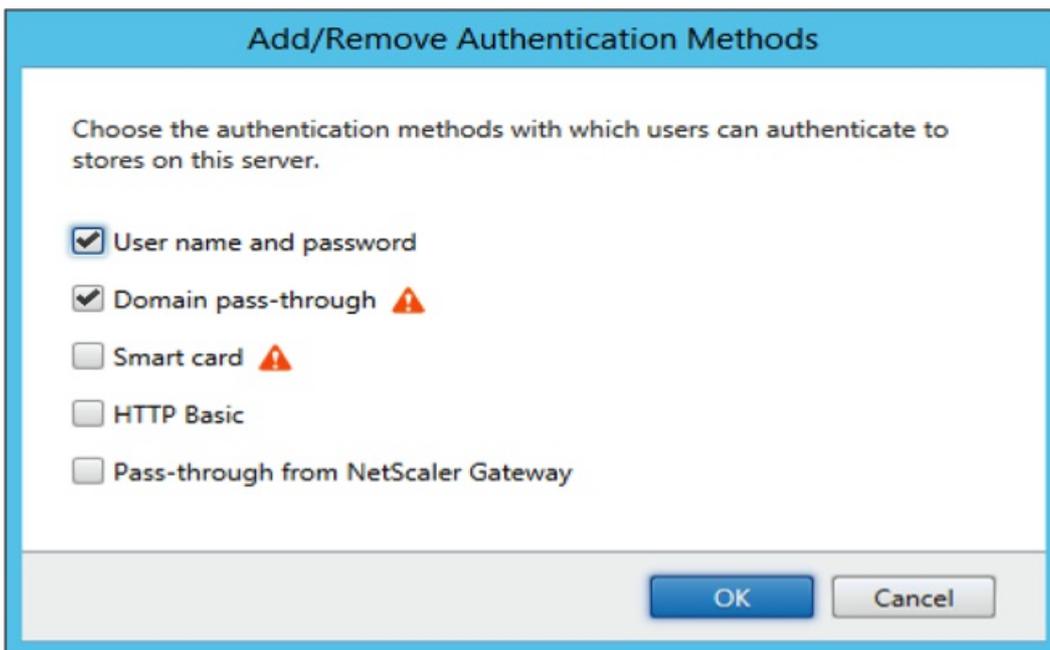
Use the following procedure to configure SSON on StoreFront and Web Interface:

1. Log onto the Delivery Controller(s) as an administrator.
2. Open Windows PowerShell (with administrative privileges). Using PowerShell, you can issue commands to enable the Delivery Controller to trust XML requests sent from StoreFront.

3. If not already loaded, load the Citrix cmdlets by typing `Add-PSSnapin Citrix*`, and press **Enter**.
4. Press **Enter**.
5. Type `Add-PSSnapin citrix.broker.admin.v2`, and press **Enter**.
6. Type `Set-BrokerSite -TrustRequestsSentToTheXmlServicePort $True`, and press **Enter**.
7. Close PowerShell.

## StoreFront configuration

To configure SSON on StoreFront and Web Interface, open Citrix Studio on the StoreFront Server and select **Authentication->Add /Remove Methods**. Select **Domain pass-through**.



## Web Interface configuration

To configure SSON on the Web Interface, select **Citrix Web Interface Management > XenApp Services Sites > Authentication Methods** and enable **Pass-through**.



# Configure domain pass-through authentication with Kerberos

Nov 27, 2017

This topic applies only to connections between Citrix Receiver for Windows and StoreFront, XenDesktop, or XenApp.

Citrix Receiver for Windows supports Kerberos for domain pass-through authentication for deployments that use smart cards. Kerberos is one of the authentication methods included in Integrated Windows Authentication (IWA).

When Kerberos authentication is enabled, Kerberos authenticates without passwords for Citrix Receiver for Windows, thus preventing Trojan horse-style attacks on the user device to gain access to passwords. Users can log on to the user device with any authentication method; for example, a biometric authenticator such as a fingerprint reader, and still access published resources without further authentication.

Citrix Receiver for Windows handles pass-through authentication with Kerberos as follows when Citrix Receiver for Windows, StoreFront, XenDesktop and XenApp are configured for smart card authentication and a user logs on with a smart card:

1. The Citrix Receiver for Windows Single Sign-on service captures the smart card PIN.
2. Citrix Receiver for Windows uses IWA (Kerberos) to authenticate the user to StoreFront. StoreFront then provides Citrix Receiver for Windows with information about available virtual desktops and apps.  
Note: You do not have to use Kerberos authentication for this step. Enabling Kerberos on Citrix Receiver for Windows is only needed to avoid an extra PIN prompt. If you do not use Kerberos authentication, Citrix Receiver for Windows authenticates to StoreFront using the smart card credentials.
3. The HDX engine (previously referred to as the ICA client) passes the smart card PIN to XenDesktop or XenApp to log the user on to the Windows session. XenDesktop or XenApp then deliver the requested resources.

To use Kerberos authentication with Citrix Receiver for Windows, make sure your Kerberos configuration conforms to the following.

- Kerberos works only between Citrix Receiver for Windows and servers that belong to the same or to trusted Windows Server domains. Servers must also be trusted for delegation, an option you configure through the Active Directory Users and Computers management tool.
- Kerberos must be enabled on the domain and in XenDesktop and XenApp. For enhanced security and to ensure that Kerberos is used, disable on the domain any non-Kerberos IWA options.
- Kerberos logon is not available for Remote Desktop Services connections configured to use Basic authentication, to always use specified logon information, or to always prompt for a password.

The remainder of this topic describes how to configure domain pass-through authentication for the most common scenarios. If you are migrating to StoreFront from Web Interface and previously used a customized authentication solution, contact your Citrix Support representative for more information.

## Warning

Some of the configurations described in this topic include registry edits. Using Registry Editor incorrectly can cause serious problems that can require you to reinstall the operating system. Citrix cannot guarantee that problems resulting from incorrect use of Registry Editor can be solved. Use Registry Editor at your own risk. Make sure you back up the registry before you edit it.

If you are not familiar with smart card deployments in a XenDesktop environment, we recommend that you review the smart card information in the [Secure your deployment](#) section in the XenDesktop documentation before continuing.

When you install Citrix Receiver for Windows, include the following command-line option:

- /includeSSON

This option installs the single sign-on component on the domain-joined computer, enabling Citrix Receiver for Windows to authenticate to StoreFront using IWA (Kerberos). The single sign-on component stores the smart card PIN, which is then used by the HDX engine when it remotes the smart card hardware and credentials to XenDesktop. XenDesktop automatically selects a certificate from the smart card and obtains the PIN from the HDX engine.

A related option, ENABLE\_SSON, is enabled by default and should remain enabled.

If a security policy prevents enabling single sign-on on a device, configure Citrix Receiver for Windows through the following policy:

Administrative Templates > Classic Administrative Templates (ADM) > Citrix Components > Citrix Receiver > User authentication > Local user name and password

**Note:** In this scenario you want to allow the HDX engine to use smart card authentication and not Kerberos, so do not use the option ENABLE\_KERBEROS=Yes, which would force the HDX engine to use Kerberos.

To apply the settings, restart Citrix Receiver for Windows on the user device.

To configure StoreFront:

- In the default.ica file located on the StoreFront server, set DisableCtrlAltDel to false.  
**Note:** This step is not required if all client machines are running Citrix Receiver for Windows 4.2 or above.
- When you configure the authentication service on the StoreFront server, select the Domain pass-through check box. That setting enables Integrated Windows Authentication. You do not need to select the Smart card check box unless you also have non domain joined clients connecting to Storefront with smart cards.

For more information about using smart cards with StoreFront, refer to [Configure the authentication service](#) in the StoreFront documentation.

The FastConnect API uses the HTTP Basic Authentication method, which is frequently confused with authentication methods associated with domain pass-through, Kerberos, and IWA. Citrix recommends that you disable IWA on StoreFront and in ICA group policy.

# Configure smart card authentication

Nov 27, 2017

Citrix Receiver for Windows supports the following smart card authentication features. For information about XenDesktop and StoreFront configuration, refer to the documentation for those components. This topic describes Citrix Receiver for Windows configuration for smart cards.

- **Pass-through authentication (single sign-on)** – Pass-through authentication captures smart card credentials when users log on to Citrix Receiver for Windows. Citrix Receiver for Windows uses the captured credentials as follows:
  - Users of domain-joined devices who log on to Citrix Receiver for Windows with smart card credentials can start virtual desktops and applications without needing to re-authenticate.
  - Users of non-domain-joined devices who log on to Citrix Receiver for Windows with smart card credentials must enter their credentials again to start a virtual desktop or application.Pass-through authentication requires StoreFront and Citrix Receiver for Windows configuration.
- **Bimodal authentication** – Bimodal authentication offers users a choice between using a smart card and entering their user name and password. This feature is useful if the smart card cannot be used (for example, the user has left it at home or the logon certificate has expired). Dedicated stores must be set up per site to allow this, using the `DisableCtrlAltDel` method set to `False` to allow smart cards. Bimodal authentication requires StoreFront configuration. If NetScaler Gateway is present in the solution, is also requires configuration. Bimodal authentication also now gives the StoreFront administrator the opportunity to offer the end user both user name and password and smart card authentication to the same store by selecting them in the StoreFront Console. See [StoreFront](#) documentation.
- **Multiple certificates** – Multiple certificates can be available for a single smart card and if multiple smart cards are in use. When a user inserts a smart card into a card reader, the certificates are available to all applications running on the user device, including Citrix Receiver for Windows. To change how certificates are selected, configure Citrix Receiver for Windows.
- **Client certificate authentication** – Client certificate authentication requires NetScaler Gateway and StoreFront configuration.
  - For access to StoreFront resources through NetScaler Gateway, users might have to re-authenticate after removing a smart card.
  - When the NetScaler Gateway SSL configuration is set to mandatory client certificate authentication, operation is more secure. However mandatory client certificate authentication is not compatible with bimodal authentication.
- **Double hop sessions** – If a double-hop is required, a further connection is established between Receiver and the user's virtual desktop. Deployments supporting double hops are described in the XenDesktop documentation.
- **Smart card-enabled applications** – Smart card-enabled applications, such as Microsoft Outlook and Microsoft Office, allow users to digitally sign or encrypt documents available in virtual desktop or application sessions.

## Prerequisites

This topic assumes familiarity with the smart card topics in the XenDesktop and StoreFront documentation.

## Limitations

- Certificates must be stored on a smart card, not the user device.
- Citrix Receiver for Windows does not save the user certificate choice, but can store the PIN when configured. The PIN is only cached in non-paged memory for the duration of the user session and is not stored to disk at any point.

- Citrix Receiver for Windows does not reconnect sessions when a smart card is inserted.
- When configured for smart card authentication, Citrix Receiver for Windows does not support virtual private network (VPN) single-sign on or session pre-launch. To use VPN tunnels with smart card authentication, users must install the NetScaler Gateway Plug-in and log on through a web page, using their smart cards and PINs to authenticate at each step. Pass-through authentication to StoreFront with the NetScaler Gateway Plug-in is not available for smart card users.
- Citrix Receiver for Windows Updater communications with citrix.com and the Merchandising Server is not compatible with smart card authentication on NetScaler Gateway.

## Warning

Some of the configuration described in this topic include registry edits. Using Registry Editor incorrectly can cause serious problems that can require you to reinstall the operating system. Citrix cannot guarantee that problems resulting from incorrect use of Registry Editor can be solved. Use Registry Editor at your own risk. Make sure you back up the registry before you edit it.

To configure Citrix Receiver for Windows, include the following command-line option when you install it:

- `ENABLE_SSON=Yes`  
Single sign-on is another term for pass-through authentication. Enabling this setting prevents Citrix Receiver for Windows from displaying a second prompt for a PIN.

Alternatively, you can perform the configuration through these policy and registry changes:

- Administrative Templates > Classic Administrative Templates (ADM) > Citrix Components > Citrix Receiver > User authentication > Local user name and password
- Set `SSONCheckEnabled` to false in either of the following registry keys if the single sign-on component is not installed. The key prevents the Citrix Receiver for Windows authentication manager from checking for the single sign-on component, thus allowing Citrix Receiver for Windows to authenticate to StoreFront.  
`HKEY_CURRENT_USER\Software\Citrix\AuthManager\protocols\integratedwindows\  
HKEY_LOCAL_MACHINE\Software\Citrix\AuthManager\protocols\integratedwindows\`

Alternatively, it is possible to enable smart card authentication to Storefront instead of Kerberos. To enable smart card authentication to StoreFront instead of Kerberos, install Citrix Receiver for Windows with the command line options below. This requires administrator privileges. The machine does not need to be joined to a domain.

- `/includeSSON` installs single sign-on (pass-through) authentication. Enables credential caching and the use of pass-through domain-based authentication.
- If the user is logging on to the endpoint with a different method to smart card for Receiver authentication (for example, user name and password), the command line is:  
`/includeSSON LOGON_CREDENTIAL_CAPTURE_ENABLE=No`  
This prevents the credentials being captured at log on time and allows Citrix Receiver for Windows to store the PIN when logging on to Citrix Receiver for Windows.
- Go to Policy > Administrative Templates > Classic Administrative Templates (ADM) > Citrix Components > Citrix Receiver > User Authentication > Local user name and password.

Enable pass-through authentication. Depending on the configuration and security settings, you may need to select the Allow pass-through authentication for all ICA option for pass-through authentication to work.

To configure StoreFront:

- When you configure the authentication service, select the Smart card check box.

For more information about using smart cards with StoreFront, see [Configure the authentication service](#) in the StoreFront documentation.

1. Import the certificate authority root certificate into the device's keystore.
2. Install your vendor's cryptographic middleware.
3. Install and configure Citrix Receiver for Windows.

By default, if multiple certificates are valid, Citrix Receiver for Windows prompts the user to choose a certificate from the list. Alternatively, you can configure Citrix Receiver for Windows to use the default certificate (per the smart card provider) or the certificate with the latest expiry date. If there are no valid logon certificates, the user is notified, and given the option to use an alternate logon method if available.

A valid certificate must have all of these characteristics:

- The current time of the clock on the local computer is within the certificate validity period.
- The Subject public key must use the RSA algorithm and have a key length of 1024, 2048, or 4096 bits.
- Key Usage must contain Digital Signature.
- Subject Alternative Name must contain the User Principal Name (UPN).
- Enhanced Key Usage must contain Smart Card Logon and Client Authentication, or All Key Usages.
- One of the Certificate Authorities on the certificate's issuer chain must match one of the permitted Distinguished Names (DN) sent by the server in the TLS handshake.

Change how certificates are selected by using either of the following methods:

- On the Citrix Receiver for Windows command line, specify the option `AM_CERTIFICATESELECTIONMODE={ Prompt | SmartCardDefault | LatestExpiry }`.  
Prompt is the default. For SmartCardDefault or LatestExpiry, if multiple certificates meet the criteria, Citrix Receiver for Windows prompts the user to choose a certificate.
- Add the following key value to the registry key `HKCU or HKLM\Software\[Wow6432Node\Citrix\AuthManager`:  
`CertificateSelectionMode={ Prompt | SmartCardDefault | LatestExpiry }`.  
Values defined in HKCU take precedence over values in HKLM to best assist the user in selecting a certificate.

By default, the PIN prompts presented to users are provided by Citrix Receiver for Windows rather than the smart card Cryptographic Service Provider (CSP). Citrix Receiver for Windows prompts users to enter a PIN when required and then passes the PIN to the smart card CSP. If your site or smart card has more stringent security requirements, such as to disallow caching the PIN per-process or per-session, you can configure Citrix Receiver for Windows to instead use the CSP components to manage the PIN entry, including the prompt for a PIN.

Change how PIN entry is handled by using either of the following methods:

- On the Citrix Receiver for Windows command line, specify the option `AM_SMARTCARDPINENTRY=CSP`.
- Add the following key value to the registry key `HKLM\Software\[Wow6432Node\Citrix\AuthManager:SmartCardPINEntry=CSP`.

# Enable certificate revocation list checking for improved security

Nov 27, 2017

When you enable certificate revocation list (CRL) checking, Citrix Receiver for Windows checks to see if the server's certificate is revoked. Forcing Citrix Receiver for Windows to check this helps improve the cryptographic authentication of the server and the overall security of the TLS connection between a user device and a server.

You can enable several levels of CRL checking. For example, you can configure Citrix Receiver for Windows to check only its local certificate list or to check the local and network certificate lists. In addition, you can configure certificate checking to allow users to log on only if all CRLs are verified.

If you are making this change on a local computer, exit Citrix Receiver for Windows. Make sure all Citrix Receiver for Windows components, including the **Connection Center**, are closed.

For information on configuring TLS, see [Configure and enable TLS](#).

# Secure communications

Nov 27, 2017

To secure the communication between XenDesktop Sites or XenApp server farms and Citrix Receiver for Windows, you can integrate your Citrix Receiver for Windows connections using security technologies such as the following:

- Citrix NetScaler Gateway. For information, refer to topics in this section as well as the NetScaler Gateway, and StoreFront documentation.  
Note: Citrix recommends using NetScaler Gateway to secure communications between StoreFront servers and user devices.
- A firewall. Network firewalls can allow or block packets based on the destination address and port. If you are using Citrix Receiver for Windows through a network firewall that maps the server's internal network IP address to an external Internet address (that is, network address translation, or NAT), configure the external address.
- Trusted server configuration.
- For XenApp or Web Interface deployments only; not applicable to XenDesktop 7: A SOCKS proxy server or secure proxy server (also known as security proxy server, HTTPS proxy server). You can use proxy servers to limit access to and from your network and to handle connections between Receiver and servers. Receiver supports SOCKS and secure proxy protocols.
- For XenApp or Web Interface deployments only; not applicable to XenDesktop 7, XenDesktop 7.1, XenDesktop 7.5, or XenApp 7.5: SSL Relay solutions with Transport Layer Security (TLS) protocols.
- For XenApp 7.6 and XenDesktop 7.6, you can enable an SSL connection directly between users and VDAs.

Citrix Receiver for Windows is compatible with and functions in environments where the Microsoft Specialized Security - Limited Functionality (SSLF) desktop security templates are used. These templates are supported on various Windows platforms. Refer to the Windows security guides available at <http://technet.microsoft.com> for more information about the templates and related settings.

# Configure and enable TLS

Nov 27, 2017

This topic applies to XenApp and XenDesktop Version 7.6 and later.

To use TLS encryption for all Citrix Receiver for Windows communications, configure the user device, Citrix Receiver for Windows, and, if using Web Interface, the server running the Web Interface. For information about securing StoreFront communications, see [Secure](#) section in the StoreFront documentation. For information about securing Web Interface, see [Secure](#) section in the Web Interface documentation.

## Pre-requisites:

User devices must meet the requirements specified in the [System requirements](#).

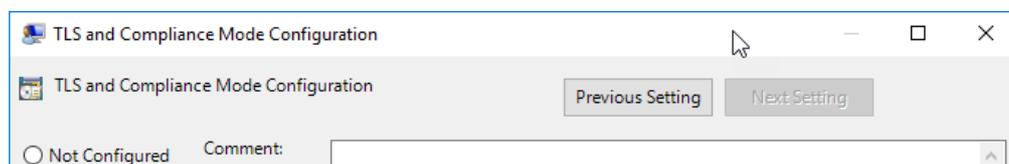
Use this policy to configure the TLS options that ensure the Citrix Receiver for Windows securely identifies the server that it is connecting to, and encrypts all communication with the server.

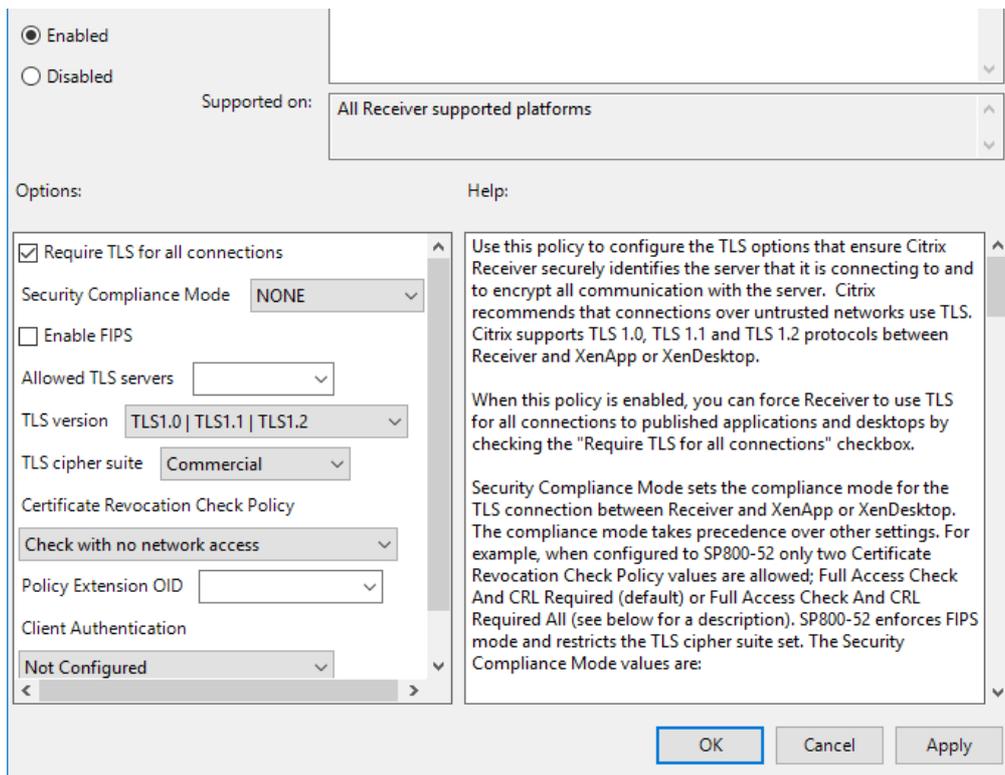
You can use the options below to:

- Enforce use of TLS. Citrix recommends that all connections over untrusted networks, including the Internet, use TLS.
- Enforce use of FIPS (Federal Information Processing Standards) Approved cryptography and help comply with the recommendations in NIST SP 800-52. These options are disabled by default.
- Enforce use of a specific version of TLS, and specific TLS cipher suites, Citrix supports TLS 1.0, TLS 1.1 and TLS 1.2 protocols between Citrix Receiver for Windows, and XenApp or XenDesktop.
- Connect only to specific servers.
- Check for revocation of the server certificate.
- Check for a specific server certificate issuance policy.
- Select a particular client certificate, if the server is configured to request one.

## To configure TLS support using Group Policy Object administrative template

1. As an administrator, open the Citrix Receiver Group Policy Object administrative template by running `gpedit.msc`.
  - To apply the policy on a single computer, launch the Citrix Receiver Group Policy Object administrative template from the Start menu.
  - To apply the policy on a domain, launch the Citrix Receiver Group Policy Object administrative template using the Group Policy Management Console.
2. Under the Computer Configuration node, go to **Administrative Templates > Citrix Receiver > Network routing**, and select the **TLS and Compliance Mode Configuration** policy.





3. Select **Enabled** to enable secure connections and to encrypt communication on the server. Set the following options:

Note: Citrix recommends TLS for secure connections.

1. Select **Require TLS for all connections** to force Citrix Receiver for Windows to use TLS for all connections to published applications and desktops.
2. From the **Security Compliance Mode** drop-down, select the appropriate option:
  1. None - No compliance mode is enforced.
  2. SP800-52 – Select SP800-52 for compliance with NIST SP 800-52. Select this option only if the servers or gateway complies with NIST SP 800-52 recommendations.

Note: If you select SP800-52, FIPS Approved cryptography is automatically used, even if **Enable FIPS** is not selected. You must also enable the Windows security option, **System Cryptography: Use FIPS-compliant algorithms for encryption, hashing, and signing**. Otherwise, Citrix Receiver for Windows might fail to connect to published applications and desktops.

If you select SP800-52, you must select either the **Certificate Revocation Check Policy** setting with **Full Access Check**, or **Full access check and CRL required**.

If you select SP800-52, Citrix Receiver for Windows verifies that the server certificate complies with the recommendations in NIST SP 800-52. If the server certificate does not comply, Citrix Receiver for Windows might fail to connect.

3. **Enable FIPS** – Select this option to enforce the use of FIPS approved cryptography. You must also enable the Windows security option from the operating system group policy, **System Cryptography: Use FIPS-compliant algorithms for encryption, hashing, and signing**. Otherwise, Citrix Receiver for Windows might fail to connect to published applications and desktops.
4. From the **Allowed TLS servers** drop-down, select the port number. You can ensure that Citrix Receiver connects only to a specified server by a comma-separated list. You can specify wildcards and port numbers. For example, \*.citrix.com4433 allows connections to any server whose common name ends with .citrix.com on port 4433. The issuer of the certificate asserts the accuracy of the information in a security certificate. If Citrix Receiver does not recognize

and trust the issuer, the connection is rejected.

5. From the **TLS version** drop-down, select any of the following options:

- > **TLS 1.0, TLS 1.1, or TLS 1.2** - This is the default setting. This option is recommended only if there is a business requirement for TLS 1.0 for compatibility.
- > **TLS 1.1 or TLS 1.2** – Use this option to ensure that the ICA connections use either TLS 1.1 or TLS 1.2
- > **TLS 1.2** - This option is recommended if TLS 1.2 is a business requirement.

6. **TLS cipher suite** - To enforce the use of specific TLS cipher suites, select either Government (GOV), Commercial (COM), or All (ALL). In certain cases of NetScaler Gateway configurations, you might need to select COM. Citrix Receiver for Windows supports RSA keys of 1024, 2048, and 3072-bit lengths. Root certificates with RSA keys of 4096-bit length are also supported.

Note: Citrix does not recommend using RSA keys of 1024-bit length

See the table below that lists all the supported cipher suites.

> **Any:** When "Any" is set, the policy is not configured and any of the following cipher suites are allowed:

- TLS\_RSA\_WITH\_RC4\_128\_MD5
- TLS\_RSA\_WITH\_RC4\_128\_SHA
- TLS\_RSA\_WITH\_3DES\_EDE\_CBC\_SHA
- TLS\_RSA\_WITH\_AES\_128\_CBC\_SHA
- TLS\_RSA\_WITH\_AES\_256\_CBC\_SHA
- TLS\_RSA\_WITH\_AES\_128\_GCM\_SHA256
- TLS\_RSA\_WITH\_AES\_256\_GCM\_SHA384

> **Commercial:** When "Commercial" is set, only the following cipher suites are allowed:

- TLS\_RSA\_WITH\_RC4\_128\_MD5
- TLS\_RSA\_WITH\_RC4\_128\_SHA
- TLS\_RSA\_WITH\_AES\_128\_CBC\_SHA
- TLS\_RSA\_WITH\_AES\_128\_GCM\_SHA256

> **Government:** When "Government" is set, only the following cipher suites are allowed:

- TLS\_RSA\_WITH\_AES\_256\_CBC\_SHA
- TLS\_RSA\_WITH\_3DES\_EDE\_CBC\_SHA
- TLS\_RSA\_WITH\_AES\_128\_GCM\_SHA256
- TLS\_RSA\_WITH\_AES\_256\_GCM\_SHA384

7. From the **Certificate Revocation Check Policy** drop-down, select any of the following:

- > **Check with No Network Access** - Certificate Revocation list check is performed. Only local certificate revocation list stores are used. All distribution points are ignored. Finding the Certificate Revocation List is not

mandatory to verify the server certificate that is presented by the target SSL Relay/Secure Gateway server.

> **Full Access Check** - Certificate Revocation List check is performed. Local Certificate Revocation List stores and all distribution points are used. If revocation information for a certificate is found, the connection is rejected. Finding a Certificate Revocation List is not critical for verification of the server certificate presented by the target server.

> **Full Access Check and CRL Required** - Certificate Revocation List check is performed, excluding the root CA. Local Certificate Revocation List stores and all distribution points are used. If revocation information for a certificate is found, the connection is rejected. Finding all required Certificate Revocation Lists is critical for verification.

> **Full Access Check and CRL Required All** - Certificate Revocation List check is performed, including the root CA. Local Certificate Revocation List stores and all distribution points are used. If revocation information for a certificate is found, the connection is rejected. Finding all required Certificate Revocation Lists is critical for verification.

> **No Check** - No Certificate Revocation List check is performed.

8. Using the **Policy Extension OID**, you can limit Citrix Receiver for Windows to connect only to servers with a specific certificate issuance policy. When you select **Policy Extension OID**, Citrix Receiver for Windows accepts only server certificates containing that Policy Extension OID.

9. From the **Client Authentication** drop-down, select any of the following:

> **Disabled** - Client Authentication is disabled.

> **Display certificate selector** - Always prompt the user to select a certificate.

> **Select automatically if possible** - Prompt the user only if there a choice of the certificate to identify.

> **Not configured** - Indicates that client authentication is not configured.

> **Use specified certificate** - Use the client certificate as set in the Client Certificate option.

10. Use the **Client Certificate** setting to specify the identifying certificate's thumbprint to avoid prompting the user unnecessarily.

4. Click **Apply** and **OK** to save the policy.

The following table lists the cipher suites in each set:

TLS cipher suite	GOV	COM	ALL	GOV	COM	ALL	GOV	COM	ALL
Enable FIPS	Off	Off	Off	On	On	On	On	On	On
Security Compliance Mode SP800-52	Off	Off	Off	Off	Off	Off	On	On	On
TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384	X		X	X		X			
TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA384	X		X	X		X			
TLS_RSA_WITH_AES_256_GCM_SHA384	X		X	X		X	X		X

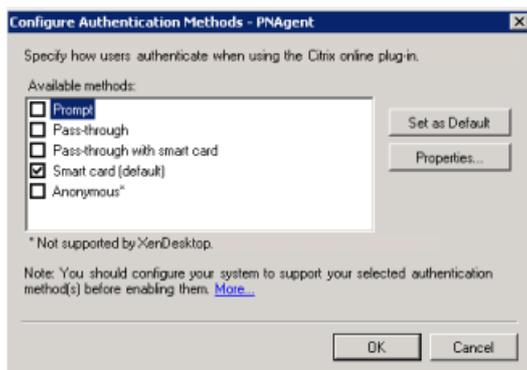
TLS_RSA_WITH_AES_128_GCM_SHA256	X	X	X	X	X	X	X	X	X
TLS_RSA_WITH_AES_256_CBC_SHA256	X		X	X		X			
TLS_RSA_WITH_AES_256_CBC_SHA	X		X	X		X	X		X
TLS_RSA_WITH_AES_128_CBC_SHA		X	X		X	X		X	X
TLS_RSA_WITH_RC4_128_SHA		X	X						
TLS_RSA_WITH_RC4_128_MD5		X	X						
TLS_RSA_WITH_3DES_EDE_CBC_SHA	X		X	X		X	X		X

# Configure smart card authentication for Web Interface 5.4

Nov 27, 2017

If Citrix Receiver for Windows is installed with a SSON component, pass-through authentication is enabled by default even if the PIN pass-through for smart card is not enabled on the XenApp PNAgent site; the pass-through setting for authentication methods will no longer be effective. The screen below illustrates how to enable smart card as the authentication method when Citrix Receiver for Windows is properly configured with SSON.

See [How to Manually install and configure Citrix Receiver for Pass-through Authentication](#) for more information.



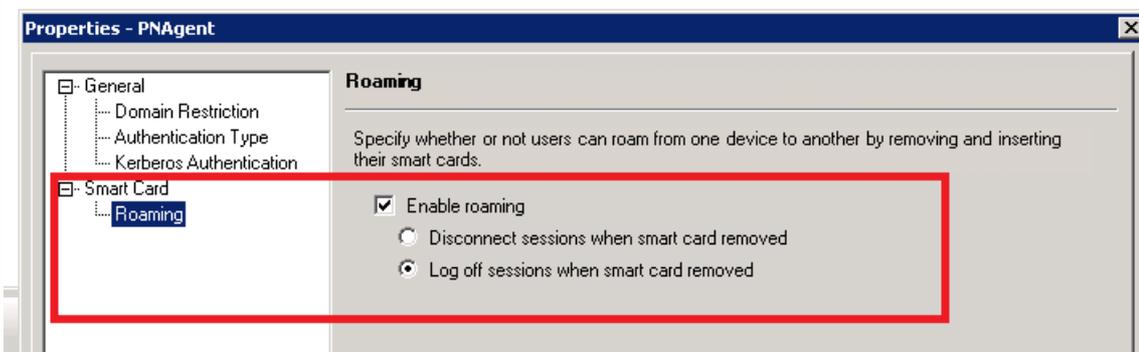
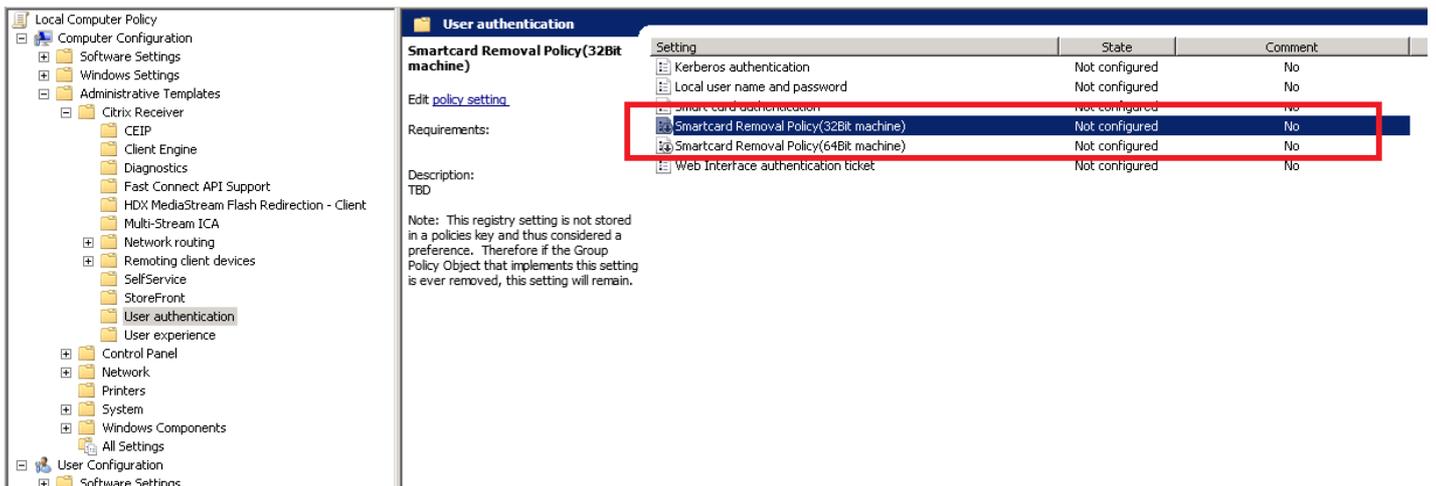
Use the smart card removal policy to control the behavior for smart card removal when a user authenticates to the Citrix Web Interface 5.4 PNAgent site.

When this policy is enabled, the user is logged off from the XenApp session if the smart card is removed from the client device. However, the user is still logged into Citrix Receiver for Windows.

For this policy to take effect, the smart card removal policy must be set in Web Interface XenApp Services site. The settings can be found on Web Interface 5.4, **XenApp Services Site > Pass-through with smart card > Enable Roaming > Logoff the sessions when smart card removed.**

When the smart card removal policy is disabled, the user's XenApp session is disconnected if the smart card is removed from the client device; smart card removal on the Web Interface XenApp Services site does not have any effect.

**Note:** There are separate policies for 32bit and 64bit clients. For 32bit devices, the policy name is **Smartcard Removal Policy (32Bit machine)** and for 64bit devices, the policy name is **Smartcard Removal Policy (64Bit machine)**.



## Smart card support and removal changes

Consider the following when connecting to a XenApp 6.5 PNAgent site:

- Beginning with Citrix Receiver for Windows 4.5, smart card login is supported for PNAgent site logins.
- The smart card removal policy has changed on the PNAgent Site:  
A XenApp session is logged off when the smart card is removed – if the PNAgent site is configured with smart card as the authentication method, the corresponding policy has to be configured on Receiver for Windows to enforce the XenApp session for logoff. Enable roaming for smart card authentication on the XenApp PNAgent site and enable the smart card removal policy, which logs off XenApp from the Receiver session; the user is still logged into the Receiver session.

### Known issue

When a user logs in to the PNAgent site using smart card authentication, the username is displayed as **Logged On**.

# Connect with Secure Gateway

Nov 27, 2017

This topic applies only to deployments using the Web Interface.

You can use the Secure Gateway in either Normal mode or Relay mode to provide a secure channel for communication between Citrix Receiver for Windows and the server. No Citrix Receiver for Windows configuration is required if you are using the Secure Gateway in Normal mode and users are connecting through the Web Interface.

Citrix Receiver for Windows uses settings that are configured remotely on the server running the Web Interface to connect to servers running the Secure Gateway. See the topics for the Web Interface for information about configuring proxy server settings for Citrix Receiver for Windows.

For more information about configuring proxy server settings, see Web Interface documentation.

If the Secure Gateway Proxy is installed on a server in the secure network, you can use the Secure Gateway Proxy in Relay mode.

If you are using Relay mode, the Secure Gateway server functions as a proxy and you must configure Citrix Receiver for Windows to use:

- The fully qualified domain name (FQDN) of the Secure Gateway server.
- The port number of the Secure Gateway server. Note that Relay mode is not supported by Secure Gateway Version 2.0.

The FQDN must list, in sequence, the following three components:

- Host name
- Intermediate domain
- Top-level domain

For example: `my_computer.my_company.com` is an FQDN, because it lists, in sequence, a host name (`my_computer`), an intermediate domain (`my_company`), and a top-level domain (`com`). The combination of intermediate and top-level domain (`my_company.com`) is generally referred to as the domain name.

# Connect through a firewall

Nov 27, 2017

Network firewalls can allow or block packets based on the destination address and port. If you are using a firewall in your deployment, Citrix Receiver for Windows must be able to communicate through the firewall with both the Web server and Citrix server.

Source	Type	Port	Details
Citrix Receiver	TCP	80/443	Communication with StoreFront
ICA/HDX	TCP	1494	Access to applications and virtual desktops
ICA/HDX with Session Reliability	TCP	2598	Access to applications and virtual desktops
ICA/HDX over SSL	TCP	443	Access to applications and virtual desktops
ICA/HDX from HTML5 Receiver	TCP	8008	Access to applications and virtual desktops
ICA/HDX Audio over UDP	TCP	16500-16509	Port range for ICA/HDX audio
IMA	TCP	2512	Independent Management Architecture (IMA)
Management Console	TCP	2513	Citrix Management Consoles and *WCF services Note: For FMA based platforms 7.5 and later, port 2513 is NOT used.
Application/Desktop Request	TCP	80/8080/443	XML Service
STA	TCP	80/8080/443	Secure Ticketing Authority (embedded into XML Service)

## Note

\* In XenApp 6.5 port 2513 is used by XenApp Command Remoting Services through WCF.

If the firewall is configured for Network Address Translation (NAT), you can use the Web Interface to define mappings from internal addresses to external addresses and ports. For example, if your XenApp or XenDesktop server is not configured with an alternate address, you can configure the Web Interface to provide an alternate address to Receiver. Citrix Receiver for Windows then connects to the server using the external address and port number. For more information, see the [Web Interface](#) documentation.

# Connect through a proxy server

Nov 27, 2017

Proxy servers are used to limit access to and from your network, and to handle connections between Citrix Receiver for Windows and servers. Citrix Receiver for Windows supports SOCKS and secure proxy protocols.

When communicating with the server farm, Receiver uses proxy server settings that are configured remotely on the server running Receiver for Web or the Web Interface. For information about proxy server configuration, refer to StoreFront or Web Interface documentation.

In communicating with the Web server, Receiver uses the proxy server settings that are configured through the Internet settings of the default Web browser on the user device. You must configure the Internet settings of the default Web browser on the user device accordingly.

Configure the proxy settings using the registry editor to enforce Citrix Receiver for Windows to honor or discard the proxy server during connections.

## Warning

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.

1. Navigate to HKLM\Software\Citrix\AuthManager\
2. Set the **ProxyEnabled**(REG\_SZ) .
  1. True – indicates that Citrix Receiver for Windows honors the proxy server during connections.
  2. False- indicates that Citrix Receiver for Windows discards the proxy server during connections.
3. Close the registry editor.
4. Restart the Citrix Receiver for Windows session for the changes to take effect.

# Enforce trust relationship

Nov 27, 2017

Trusted server configuration identifies and enforces trust relations in Citrix Receiver for Windows connections.

When you enable Trusted server feature, Citrix Receiver for Windows specifies the requirements and decides if the connection to the server can be trusted or not. For example, a Citrix Receiver for Windows connecting to a certain address (such as [https://\\*.citrix.com](https://*.citrix.com)) with a specific connection type (such as TLS) is directed to a trusted zone on the server

When you enable this feature, connected server resides in the Windows Trusted Sites zone. For instructions about adding servers to the Windows Trusted Sites zone, see the Internet Explorer online help.

To enable trusted server configuration using Group Policy Object administrative template

## Pre-requisite:

Exit from the Citrix Receiver for Windows components including the Connection Center.

1. As an administrator, open the Citrix Receiver Group Policy Object administrative template by running `gpedit.msc`.
  1. To apply the policy on a single computer, launch the Citrix Receiver Group Policy Object administrative template from the Start menu.
  2. To apply the policy on a domain, launch the Citrix Receiver Group Policy Object administrative template using the Group Policy Management Console.
2. Under the Computer Configuration node, go to Administrative Templates > Classic Administrative Templates (ADM) > Citrix Components > Citrix Receiver > Network Routing > Configure trusted server configuration.
3. Select **Enabled** to force Citrix Receiver for Windows to perform region identification.
4. Select **Enforce trusted server configuration**. This forces the client to perform the identification using a trusted server.
5. From the **Windows internet zone** drop-down, select the client server address. This setting is applicable only to Windows Trusted Site zone.
6. In the **Address** field, set the client server address for trusted site zone other than Windows. You can use a comma-separated list.
7. Click OK and Apply.

# Elevation level and wfcrun32.exe

Nov 27, 2017

When User Access Control (UAC) is enabled on devices running Windows 10, Windows 8, Windows 7, only processes at the same elevation/integrity level as wfcrun32.exe can launch virtual applications.

## Example 1:

When wfcrun32.exe is running as a normal user (un-elevated), other processes such as Receiver must be running as a normal user to launch applications through wfcrun32.exe.

## Example 2:

When wfcrun32.exe is running in elevated mode, other processes such as Receiver, Connection Center, and third party applications using the ICA Client Object that are running in non-elevated mode cannot communicate with wfcrun32.exe.

# ICA file signing to protect against application or desktop launches from untrusted servers

Nov 27, 2017

This topic applies only to deployments with Web Interface using Administrative Templates.

The ICA File Signing feature helps protect users from unauthorized application or desktop launches. Citrix Receiver for Windows verifies that a trusted source generated the application or desktop launch based on administrative policy and protects against launches from untrusted servers. You can configure this Citrix Receiver for Windows security policy for application or desktop launch signature verification using Group Policy Objects, StoreFront, or Citrix Merchandising Server. ICA file signing is not enabled by default. For information about enabling ICA file signing for StoreFront, refer to the StoreFront documentation.

For Web Interface deployments, the Web Interface enables and configures application or desktop launches to include a signature during the launch process using the Citrix ICA File Signing Service. The service can sign ICA files using a certificate from the computer's personal certificate store.

The Citrix Merchandising Server with Citrix Receiver for Windows enables and configures launch signature verification using the Citrix Merchandising Server Administrator Console > Deliveries wizard to add trusted certificate thumbprints.

To use Group Policy Objects to enable and configure application or desktop launch signature verification, follow this procedure:

1. As an administrator, open the Group Policy Editor by either running `gpedit.msc` locally from the Start menu when applying policies to a single computer or by using the Group Policy Management Console when applying domain policies.  
Note: If you already imported the `ica-file-signing.adm` template into the Group Policy Editor, you can omit Steps 2 to 5.
2. In the left pane of the Group Policy Editor, select the Administrative Templates folder.
3. From the Action menu, choose Add/Remove Templates.
4. Choose Add and browse to the Citrix Receiver for Windows configuration folder (usually `C:\Program Files\Citrix\ICA Client\Configuration`) and select `ica-file-signing.adm`.
5. Select Open to add the template and then Close to return to the Group Policy Editor.
6. In the Group Policy Editor, go to Administrative Templates > Classic Administrative Templates (ADM) > Citrix Components > Citrix Receiver and navigate to Enable ICA File Signing.
7. If you choose Enabled, you can add signing certificate thumbprints to the white list of trusted certificate thumbprints or remove signing certificate thumbprints from the white list by clicking Show and using the Show Contents screen. You can copy and paste the signing certificate thumbprints from the signing certificate properties. Use the Policy drop-down menu to select Only allow signed launches (more secure) or Prompt user on unsigned launches (less secure).

Option	Description
<b>Only allow signed launches (more secure)</b>	Allows only properly signed application or desktop launches from a trusted server. The user sees a Security Warning message in Citrix Receiver for Windows if an application or desktop launch has an invalid signature. The user cannot continue and the unauthorized launch is blocked.
<b>Prompt user on unsigned</b>	Prompts the user every time an unsigned or invalidly signed application or desktop attempts to launch. The user can either continue the application launch or abort the launch (default).

launches (less Option secure)	Description
-------------------------------------	-------------

When selecting a digital signature certificate, Citrix recommends you choose from this prioritized list:

1. Buy a code-signing certificate or SSL signing certificate from a public Certificate Authority (CA).
2. If your enterprise has a private CA, create a code-signing certificate or SSL signing certificate using the private CA.
3. Use an existing SSL certificate, such as the Web Interface server certificate.
4. Create a new root CA certificate and distribute it to user devices using GPO or manual installation.

# Citrix Receiver for Windows Desktop Lock

Nov 27, 2017

You can use the Citrix Receiver for Windows Desktop Lock when you do not need to interact with the local desktop. You can still use the Desktop Viewer (if enabled), however it has only the required set of options on the toolbar: Ctrl+Alt+Del, Preferences, Devices, and Disconnect.

Citrix Receiver for Windows Desktop Lock works on domain-joined machines, which are SSON-enabled (Single Sign-On) and store configured; it can also be used on non-domain joined machines without SSON enabled. It does not support PNA sites. Previous versions of Desktop Lock are not supported when you upgrade to Citrix Receiver for Windows 4.2 or later.

You must install Citrix Receiver for Windows with the /includeSSON flag. You must configure the store and Single Sign-on, either using the adm/admx file or cmdline option. For more information, see [Install and configure Citrix Receiver using the command line](#).

Then, install the Citrix Receiver for Windows Desktop Lock as an administrator using the CitrixReceiverDesktopLock.MSI available in the [Citrix Downloads](#) page.

## System requirements for Citrix Receiver Desktop Lock

- Microsoft Visual C++ 2005 Service Pack 1 Redistributable Package. For more information, see the [Microsoft Download](#) page.
- Supported on Windows 7 (including Embedded Edition), Windows 7 Thin PC, Windows 8, and Windows 8.1 and Windows 10 (Anniversary update included).
- Connects to StoreFront through native protocols only.
- Domain-joined and non-domain joined end points.
- User devices must be connected to a local area network (LAN) or wide area network (WAN).

## Local App Access

### Important

Enabling Local App Access may permit local desktop access unless a full lock down has been applied with the Group Policy Object template or a similar policy. See [Configure Local App Access and URL redirection](#) in XenApp and XenDesktop for more information.

## Working with Citrix Receiver for Windows Desktop Lock

- You can use Citrix Receiver for Windows Desktop Lock with the following Citrix Receiver for Windows features:
  - 3Dpro, Flash, USB, HDX Insight, Microsoft Lync 2013 plug-in, and local app access
  - Domain, two-factor, or smart card authentication only
- Disconnecting the Citrix Receiver for Windows Desktop Lock session logs out the end device.
- Flash redirection is disabled on Windows 8 and later versions. Flash redirection is enabled on Windows 7.
- The Desktop Viewer is optimized for Citrix Receiver for Windows Desktop Lock with no Home, Restore, Maximize, and Display properties.
- Ctrl+Alt+Del is available on the Viewer toolbar.
- Most windows shortcut keys are passed to the remote session, with the exception of Windows+L. For details, see

[Passing Windows shortcut keys to the remote session.](#)

- Ctrl+F1 triggers Ctrl+Alt+Del when you disable the connection or Desktop Viewer for desktop connections.

This procedure installs Citrix Receiver for Windows so that virtual desktops appear using Citrix Receiver for Windows Desktop Lock. For deployments that use smart cards, see [To configure smart cards for use with devices running Receiver Desktop Lock](#).

1. Log on using a local administrator account.
2. At a command prompt, run the following command (located in the Citrix Receiver and Plug-ins > Windows > Citrix Receiver for Windows folder on the installation media).

For example:

```
CitrixReceiver.exe  
/includeSSON
```

```
STORE0="DesktopStore;https://my.storefront.server/Citrix/MyStore/discovery;on;Desktop Store"
```

For command details, see the Citrix Receiver for Windows install documentation at [Configure and install Receiver for Windows using command-line parameters](#).

3. In the same folder on the installation media, double-click CitrixReceiverDesktopLock.MSI . The Desktop Lock wizard opens. Follow the prompts.
4. When the installation completes, restart the user device. If you have permission to access a desktop and you log on as a domain user, the device appears using Receiver Desktop Lock.

To allow administration of the user device after installation, the account used to install CitrixReceiverDesktopLock.msi is excluded from the replacement shell. If that account is later deleted, you will not be able to log on and administer the device.

To run a **silent install** of Receiver Desktop Lock, use the following command line: `msiexec /i CitrixReceiverDesktopLock.msi /qn`

Grant access to only one virtual desktop running Citrix Receiver for Windows Desktop Lock per user.

Using Active Directory policies, prevent users from hibernating virtual desktops.

Use the same administrator account to configure Citrix Receiver for Windows Desktop Lock as you did to install it.

- Ensure that the receiver.admx (or receiver.adml) and receiver\_usb.admx (.adml) files are loaded into Group Policy (where the policies appear in Computer Configuration or User Configuration > Administrative Templates > Classic Administrative Templates (ADMX) > Citrix Components). The .admx files are located in %Program Files%\Citrix\ICA Client\Configuration\.
- USB preferences - When a user plugs in a USB device, that device is automatically remoted to the virtual desktop; no user interaction is required. The virtual desktop is responsible for controlling the USB device and displaying it in the user interface.
  - Enable the USB policy rule.
  - In Citrix Receiver > Remoting client devices > Generic USB Remoting, enable and configure the Existing USB Devices and New USB Devices policies.
- Drive mapping - In Citrix Receiver > Remoting client devices, enable and configure the Client drive mapping policy.
- Microphone - In Citrix Receiver > Remoting client devices, enable and configure the Client microphone policy.

1. Configure StoreFront.
  1. Configure the XML Service to use DNS Address Resolution for Kerberos support.
  2. Configure StoreFront sites for HTTPS access, create a server certificate signed by your domain certificate authority, and add HTTPS binding to the default website.
  3. Ensure pass-through with smart card is enabled (enabled by default).
  4. Enable Kerberos.
  5. Enable Kerberos and Pass-through with smart card.
  6. Enable Anonymous access on the IIS Default Web Site and use Integrated Windows Authentication.
  7. Ensure the IIS Default Web Site does not require SSL and ignores client certificates.
2. Use the Group Policy Management Console to configure Local Computer Policies on the user device.
  1. Import the Receiver.admx template from %Program Files%\Citrix\ICA Client\Configuration\.
  2. Expand Administrative Templates > Classic Administrative Templates (ADMX) > Citrix Components > Citrix Receiver > User authentication.
  3. Enable Smart card authentication.
  4. Enable Local user name and password.
3. Configure the user device before installing Citrix Receiver for Windows Desktop Lock.
  1. Add the URL for the Delivery Controller to the Windows Internet Explorer Trusted Sites list.
  2. Add the URL for the first Delivery Group to the Internet Explorer Trusted Sites list in the form desktop://delivery-group-name.
  3. Enable Internet Explorer to use automatic logon for Trusted Sites.

When Citrix Receiver for Windows Desktop Lock is installed on the user device, a consistent smart card removal policy is enforced. For example, if the Windows smart card removal policy is set to Force logoff for the desktop, the user must log off from the user device as well, regardless of the Windows smart card removal policy set on it. This ensures that the user device is not left in an inconsistent state. This applies only to user devices with the Citrix Receiver for Windows Desktop Lock.

Be sure to remove both of the components listed below.

1. Log on with the same local administrator account that was used to install and configure Citrix Receiver for Windows Desktop Lock.
2. From the Windows feature for removing or changing programs:
  - Remove Citrix Receiver for Windows Desktop Lock.
  - Remove Citrix Receiver for Windows.

Most windows shortcut keys are passed to the remote session. This section highlights some of the common ones.

### Windows

- Win+D - Minimize all windows on the desktop.
- Alt+Tab - Change active window.
- Ctrl+Alt+Delete - via Ctrl+F1 and the Desktop Viewer toolbar.
- Alt+Shift+Tab
- Windows+Tab
- Windows+Shift+Tab
- Windows+All Character keys

## Windows 8

- Win+C - Open charms.
- Win+Q - Search charm.
- Win+H - Share charm.
- Win+K - Devices charm.
- Win+I - Settings charm.
- Win+Q - Search apps.
- Win+W - Search settings.
- Win+F - Search files.

## Windows 8 apps

- Win+Z - Get to app options.
- Win+. - Snap app to the left.
- Win+Shift+. - Snap app to the right.
- Ctrl+Tab - Cycle through app history.
- Alt+F4 - Close an app.

## Desktop

- Win+D - Open desktop.
- Win+, - Peek at desktop.
- Win+B - Back to desktop.

## Other

- Win+U - Open Ease of Access Center.
- Ctrl+Esc - Start screen.
- Win+Enter - Open Windows Narrator.
- Win+X - Open system utility settings menu.
- Win+PrintScrn - Take a screen shot and save to pictures.
- Win+Tab - Open switch list.
- Win+T - Preview open windows in taskbar.

# SDK and API

Nov 27, 2017

Common Connection Manager (CCM) SDK provides set of native APIs that enables you to interact and perform basic operations programmatically. This SDK does not require a separate download because it is a part of the Citrix Receiver for Windows installation package.

Note: Some of APIs that are related to launch require the ICA file to initiate the launch process to XenApp or XenDesktop sessions.

The CCM SDK capabilities include:

- Session launch
  - Allows launching applications and desktops using the generated ICA file.
- Session disconnect
  - Similar to the disconnect operation using the Connection Center of Receiver. The disconnect can be for all the sessions or to a specific user.
- Session logoff
  - Similar to the logoff operation using the Connection Center of Receiver. the logoff can be for all the sessions or to a specific user.
- Session information
  - Provides different methods to get connection-related information of the sessions launched. This includes desktop session, application session and reverse seamless application session

For more information about the SDK documentation, see [Programmers guide to Citrix CCM SDK](#).

The Citrix Virtual Channel software development kit (SDK) supports writing server-side applications and client-side drivers for additional virtual channels using the ICA protocol. The server-side virtual channel applications are on XenApp or XenDesktop servers. This version of the SDK supports writing new virtual channels for Receiver for Windows. If you want to write virtual drivers for other client platforms, contact Citrix Technical support.

The Virtual Channel SDK provides:

- The Citrix Virtual Driver Application Programming Interface (VDAPI) is used with the virtual channel functions in the Citrix Server API SDK (WFAPI SDK) to create new virtual channels. The virtual channel support provided by VDAPI makes it easy to write your own virtual channels.
- The Windows Monitoring API, which enhances the visual experience and support for third-party applications integrated with ICA.
- Working source code for virtual channel sample programs to demonstrate programming techniques.
- The Virtual Channel SDK requires the WFAPI SDK to write the server side of the virtual channel.

For more information about the SDK documentation, see [Citrix Virtual Channel SDK for Citrix Receiver for Windows](#).

The Fast Connect 3 Credential Insertion API provides an interface that supplies user credentials to the Single Sign-on

(SSON) feature. This feature is available from Citrix Receiver for Windows Version 4.2 and later. Using this API, Citrix partners can provide authentication and SSO products that use StoreFront or the Web Interface to log users on to virtual applications or desktops and then disconnect users from those sessions.

For more information about the Fast Connect API documentation, see [Fast Connect 3 Credential Insertion API for Citrix Receiver for Windows](#).