



XenApp and XenDesktop 7.6 Long Term Service Release (LTSR)

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What's new

October 13, 2020

The Long Term Service Release (LTSR) program for XenApp and XenDesktop 7.6 provides stability and long-term support for the XenApp/XenDesktop 7.6 release.

The latest update to LTSR is [Cumulative Update 9 \(CU9\)](#). Citrix recommends that you update the LTSR components of your deployment to CU9.

If you are new to the LTSR program and did not deploy the original XenApp/XenDesktop 7.6 LTSR release, there is no need for you to install it now. Instead, Citrix recommends that you bypass the 7.6 LTSR release and begin right with CU9. Documentation of the entire 7.6 LTSR release is available [here](#)

In addition, Citrix also recommends specific versions of Citrix Receiver and other components. While not required for LTSR compliance, upgrading to the current versions of those components ensures further ease of maintenance and the availability of the latest fixes in your deployment.

Downloads

[7.6 LTSR CU9 \(XenApp\)](#)

[7.6 LTSR CU9 \(XenDesktop\)](#)

Documentation

[7.6 LTSR Cumulative Update 9](#)

[7.6 LTSR Cumulative Update 8](#)

[7.6 LTSR Cumulative Update 7](#)

[7.6 LTSR Cumulative Update 6](#)

[7.6 LTSR Cumulative Update 5](#)

[7.6 LTSR Cumulative Update 4](#)

[7.6 LTSR Cumulative Update 3](#)

[7.6 LTSR Cumulative Update 2](#)

[7.6 LTSR Cumulative Update 1](#)

[7.6 LTSR](#)

Helpful links

- [Citrix Supportability Pack](#)

The Supportability Pack is a collection of popular tools written by Citrix engineers to help diagnose and troubleshoot XenDesktop/XenApp products. The tools are cataloged by features and components to make it easier to find and use. Early versions of the Pack serves as a launch pad for efforts ...

- [Citrix LTSR Assistant](#)

LTSR Assistant scans components of XenApp and XenDesktop 7.6 to determine if they are Long Term Service Release (LTSR) compliant. The components to be scanned can reside on virtual or ...

- [LTSR Frequently Asked Questions\(FAQs\)](#)

Citrix Windows App Delivery team has been releasing innovations and feature enhancements for the XenApp and XenDesktop product lines at a rapid pace, with the 2015 year bringing about new product releases on a quarterly basis. This rapid pace of innovation enhances the use cases for XenApp and ...

- [XenApp and XenDesktop servicing options](#)

Flexible service options enable predictable support. Citrix delivers new features and functionality for XenApp and XenDesktop frequently to keep your business competitive, streamline IT operations, enhance data security, and ensure your employees have access to their business resources from anywhere. ...

- [Product Lifecycle dates](#)

Refer to this table for product lifecycle dates. The Product Matrix table below provides information for Citrix products whose product lifecycle is governed by [lifecycle phases](#). Product [lifecycle milestones](#) include Notice of Status Change (NSC), End of Sales (EOS), End of Maintenance (EOM) and End of Life (EOL). ...

- [LTSR Program for Receiver for Windows](#)

For each major version (e.g., v3.0) of a Citrix Receiver for Windows, Mac, Linux, HTML5, Java, or WinCE, customers will receive a minimum lifecycle of four years. The lifecycle consists of a Mainstream Maintenance Phase for at least the first three years followed by an Extended Maintenance Phase for ...

Cumulative Update 9 (CU9)

November 19, 2020

Release date: November 2020

Cumulative Update 9 (CU9) is the latest Cumulative Update to the XenApp and XenDesktop 7.6 Long Term Service Release (LTSR).

[Issues fixed since XenApp and XenDesktop 7.6 LTSR CU8](#)

[Known issues in this release](#)

Downloads

[Download LTSR CU9 \(XenApp\)](#)

[Download LTSR CU9 \(XenDesktop\)](#)

Important:

The Citrix License Administration Console reached end of life and end of support in License Server 11.16.3.0 Build 30000. Use the [Citrix Licensing Manager](#).

New deployments

How do I deploy CU9 from scratch?

You can set up a brand-new XenApp or XenDesktop environment based on CU9 - using the CU9 metainstaller. Before you do that, we recommend that you familiarize yourself with the product:

Peruse the [XenApp and XenDesktop 7.6 Long Term Service Release](#) documentation and pay close attention to the [Technical Overview](#), [New Deployments](#), and [Security](#) sections before you start planning your deployment. Make sure your setup meets the [system requirements](#) for all components. Follow [New Deployments](#) for deployment instructions.

Note:

Provisioning Services and Session Recording are available as separate downloads and installers.

Existing deployments

What do I update?

CU9 provides updates to baseline components of 7.6 LTSR. Remember: Citrix recommends that you update all LTSR components of your deployment to CU9. For example: If Citrix Provisioning is part of your LTSR deployment, update the Citrix Provisioning components to CU9. If Citrix Provisioning is not part of your deployment, you do not need to install or update it.

Since the 7.6 LTSR release, we have added a metainstaller that lets you update the existing components of your LTSR environment from a unified interface. Following the [Upgrade instructions](#), use the metainstaller to update the LTSR components of your deployment.

Note:

The following information is specific to the CU9 release. For the equivalent information for the [LTSR base release](#), [CU1](#), [CU2](#), [CU3](#), [CU4](#), [CU5](#), [CU6](#), [CU7](#), or [CU8](#), see the respective documentation.

LTSR Baseline Components	Version	Notes
VDA for Desktop OS	7.6.9000	Special rules apply for Windows 10. See CU9 compatible components and platforms
VDA for Server OS	7.6.9000	
Delivery Controller	7.6.9000	
Citrix Studio	7.6.9000	
Citrix Director	7.6.9000	
Group Policy Management Experience	2.5.9000	
Session Recording	7.6.8000	Platinum Edition only
StoreFront	3.0.9000	
StoreFront Service	7.6.9000	
Provisioning Services	7.6.10	Special rules apply for Windows 10. See CU9 compatible components and platforms
Universal Print Server	7.6.8000	Only Windows 2008 R2 SP1, Windows 2012, Windows 2012 R2 supported

LTSR CU9 compatible components

The following components - at the versions given below - are compatible with LTSR environments. They are not eligible for the LTSR benefits (extended lifecycle and fix-only cumulative updates). Citrix might ask you to upgrade to a newer version of these components within your 7.6 LTSR environments.

Note about Windows 10:

Windows 10 does not get the full set of 7.6 LTSR benefits. For deployments that include Windows 10 machines, Citrix recommends that you use the latest 7.15 LTSR version of the VDA for Desktop OS and of Provisioning Services.

For more information, see [Adding Windows 10 Compatibility to XenApp and XenDesktop 7.6 LTSR](#) and the [XenApp and XenDesktop Servicing Options \(LTSR\) FAQ](#).

LTSR CU9 Compatible Components and Platforms	Version
Profile Management	7.15.4000
AppDNA	7.14
License Server	11.16.6.0 Build 32000
HDX RealTime Optimization Pack	2.4.3000
Windows 10	VDA and Provisioning Services: Latest 7.15 LTSR CU

Compatible versions of Citrix Workspace app and Citrix Receiver

All currently supported versions of Citrix Workspace app are compatible with the XenApp and XenDesktop 7.6 LTSR. For information about the lifecycle of Citrix Workspace app, see [Lifecycle Milestones for Citrix Workspace app & Citrix Receiver](#).

For your convenience, consider subscribing to the [Citrix Workspace app RSS feed](#) to receive a notification when a new version of Citrix Workspace app becomes available.

For Citrix Receiver for Windows, Citrix has announced a special LTSR program. More information on that program is available on the [Lifecycle Milestones for Citrix Receiver](#) page.

LTSR notable exclusions

The following features, components, and platforms are not eligible for LTSR lifecycle milestones and benefits. Specifically, cumulative updates and extended lifecycle benefits are excluded. Updates to excluded features and components are available through regular current releases.

Excluded Features	
Local App Access	Framehawk

Excluded Components

Linux VDA

Personal vDisk

Excluded Windows Platforms *

Windows 2008 32-bit (for Universal Print Server)

*Citrix reserves the right to update platform support based on third party vendors' lifecycle milestones.

Install and upgrade analytics

When you use the full-product installer to deploy or upgrade XenApp or XenDesktop components, anonymous information about the installation process is gathered and stored on the machine where you are installing/upgrading the component. This data is used to help Citrix improve its customers' installation experiences. For more information, see <http://more.citrix.com/XD-INSTALLER>.

XenApp 6.5 migration

The XenApp 6.5 migration process helps you more efficiently and quickly transition from a XenApp 6.5 farm to a Site running XenApp 7.6 (or a later supported release). This is helpful in deployments that contain large numbers of applications and Citrix group policies, lowering the risk of inadvertently introducing errors when manually moving applications and Citrix group policies to the new XenApp Site.

After you install the XenApp 7.6 core components and create a Site, the migration process follows this sequence:

- Run the XenApp 7.6 installer on each XenApp 6.5 worker, which automatically upgrades it to a new Virtual Delivery Agent for Windows Server OS for use in the new Site.
- Run PowerShell export cmdlets on a XenApp 6.5 controller, which exports application and Citrix policy settings to XML files.
- Edit the XML files, if desired, to refine what you want to import to the new Site. By tailoring the files, you can import policy and application settings into your XenApp 7.6 Site in stages: some now and others later.
- Run PowerShell import cmdlets on the new XenApp 7.6 Controller, which import settings from the XML files to the new XenApp Site.
- Reconfigure the new Site as needed, and then test it.

For more information, see [Migrate XenApp 6.x](#).

Fixed issues

November 6, 2020

XenApp/XenDesktop 7.6 LTSR Cumulative Update 9 contains all fixes that were included in XenApp and XenDesktop 7.6 LTSR, [Cumulative Update 1](#), [Cumulative Update 2](#), [Cumulative Update 3](#), [Cumulative Update 4](#), [Cumulative Update 5](#), [Cumulative Update 6](#), [Cumulative Update 7](#), [Cumulative Update 8](#), plus the following new fixes:

StoreFront

- This release contains a fix which addresses a security vulnerability. For more information, see Knowledge Center article [CTX277455](#). [LCM-7272]

VDA for Desktop OS

Session/Connection

- When you attempt to shadow a user session for remote assistance through Citrix Director, the session might disconnect. You cannot reconnect to the session unless you close or end the shadowing operation from Director. The issue occurs with VDA Version 7.6.8000. [CVADHELP-13654]

System Exceptions

- USB redirection can cause VDAs to experience a fatal exception, displaying a blue screen with bug check code SYSTEM_THREAD_EXCEPTION_NOT_HANDLED (7e). Also, global lock for USB redirection might not be released, thus blocking other redirections. [CVADHELP-9237]

VDA for Server OS

System Exceptions

- USB redirection can cause VDAs to experience a fatal exception, displaying a blue screen with bug check code SYSTEM_THREAD_EXCEPTION_NOT_HANDLED (7e). Also, global lock for USB redirection might not be released, thus blocking other redirections. [CVADHELP-9237]
- Servers might experience a fatal exception on icardd.dll, displaying a blue screen with bug check code 0x0000003B. [CVADHELP-13208]

- Servers might experience a fatal exception on icardd.dll, displaying a blue screen with bug check code 0x0000003B. [CVADHELP-13330]

Cumulative Update 8 (CU8)

October 3, 2020

Release date: August 2019

Cumulative Update 8 (CU8) is the latest Cumulative Update to the XenApp and XenDesktop 7.6 Long Term Service Release (LTSR).

[Issues fixed since XenApp and XenDesktop 7.6 LTSR CU7](#)

[Known issues in this release](#)

Downloads

[Download LTSR CU8 \(XenApp\)](#)

[Download LTSR CU8 \(XenDesktop\)](#)

New deployments

How do I deploy CU8 from scratch?

You can set up a brand-new XenApp or XenDesktop environment based on CU8 - using the CU8 metainstaller. Before you do that, we recommend that you familiarize yourself with the product:

Peruse the [XenApp and XenDesktop 7.6 Long Term Service Release](#) documentation and pay close attention to the [Technical Overview](#), [New Deployments](#), and [Security](#) sections before you start planning your deployment. Make sure your setup meets the [system requirements](#) for all components. Follow [New Deployments](#) for deployment instructions.

Note:

Provisioning Services and Session Recording are available as separate downloads and installers.

Existing deployments

What do I update?

CU8 provides updates to five [baseline components](#) of 7.6 LTSR. Remember: Citrix recommends that you update all LTSR components of your deployment to CU8. For example: If Provisioning Services is

part of your LTSR deployment, update the Provisioning Services components to CU8. If Provisioning Services is not part of your deployment, you do not need to install or update it.

Since the 7.6 LTSR release, we have added a metainstaller that lets you update the existing components of your LTSR environment from a unified interface. Following the [Upgrade instructions](#), use the metainstaller to update the LTSR components of your deployment.

Note:

The following information is specific to the CU8 release. For the equivalent information for the [LTSR base release](#), [CU1](#), [CU2](#), [CU3](#), [CU4](#), [CU5](#), [CU6](#), or [CU7](#), see the respective documentation.

LTSR Baseline Components	Version	Notes
VDA for Desktop OS	7.6.8000	Special rules apply for Windows 10. See CU8 compatible components and platforms
VDA for Server OS	7.6.8000	
Delivery Controller	7.6.8000	
Citrix Studio	7.6.8000	
Citrix Director	7.6.8000	
Group Policy Management Experience	2.5.8000	
Session Recording	7.6.8000	Platinum Edition only
StoreFront	3.0.8000	
StoreFront Service	7.6.8000	
Provisioning Services	7.6.9	Special rules apply for Windows 10. See CU8 compatible components and platforms
Universal Print Server	7.6.8000	Only Windows 2008 R2 SP1, Windows 2012, Windows 2012 R2 supported

LTSR CU8 compatible components

The following components - at the versions given below - are compatible with LTSR environments. They are not eligible for the LTSR benefits (extended lifecycle and fix-only cumulative updates). Citrix might ask you to upgrade to a newer version of these components within your 7.6 LTSR environments.

Note about Windows 10:

Windows 10 does not get the full set of 7.6 LTSR benefits. For deployments that include Windows 10 machines, Citrix recommends that you use the latest 7.15 LTSR version of the VDA for Desktop OS and of Provisioning Services.

For more information, see [Adding Windows 10 Compatibility to XenApp and XenDesktop 7.6 LTSR](#) and the [XenApp and XenDesktop Servicing Options \(LTSR\) FAQ](#).

LTSR CU8 Compatible Components and Platforms	Version
Profile Management	7.15.4000
AppDNA	7.14
License Server	11.15.0.0 Build 27000
HDX RealTime Optimization Pack	2.4.3000
Windows 10	VDA and Provisioning Services: Latest 7.15 LTSR CU

LTSR supports the following versions of Citrix Workspace app and all later versions:

LTSR compatible versions of Citrix Workspace app	Version
Citrix Workspace app for Android	1907.5
Citrix Workspace app for Chrome	1908
Citrix Workspace app for HTML5	1908
Citrix Workspace app for iOS	1908
Citrix Workspace app for Mac	1906
Citrix Workspace app for Linux	1906
Citrix Workspace app for Windows	1907
Citrix Workspace app for Windows (Store)	1907

LTSR also supports the following versions of Citrix Receiver and all later versions:

LTSR compatible versions of Citrix Receiver	Version
Citrix Receiver for Chrome	2.6.9
Citrix Receiver for HTML5	2.6.9
Citrix Receiver for Mac	12.9.1
Citrix Receiver for Linux	13.10
Citrix Receiver for Windows	4.9.7000

LTSR notable exclusions

The following features, components, and platforms are not eligible for LTSR lifecycle milestones and benefits. Specifically, cumulative updates and extended lifecycle benefits are excluded. Updates to excluded features and components will be available through regular current releases.

Excluded Features

Local App Access	Framehawk
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Excluded Components

Linux VDA	Personal vDisk
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Excluded Windows Platforms *

Windows 2008 32-bit (for Universal Print Server)
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*Citrix reserves the right to update platform support based on third party vendors' lifecycle milestones.

Install and upgrade analytics

When you use the full-product installer to deploy or upgrade XenApp or XenDesktop components, anonymous information about the installation process is gathered and stored on the machine where you are installing/upgrading the component. This data is used to help Citrix improve its customers'

installation experiences. For more information, see <http://more.citrix.com/XD-INSTALLER>.

XenApp 6.5 migration

The XenApp 6.5 migration process helps you more efficiently and quickly transition from a XenApp 6.5 farm to a Site running XenApp 7.6 (or a later supported release). This is helpful in deployments that contain large numbers of applications and Citrix group policies, lowering the risk of inadvertently introducing errors when manually moving applications and Citrix group policies to the new XenApp Site.

After you install the XenApp 7.6 core components and create a Site, the migration process follows this sequence:

- Run the XenApp 7.6 installer on each XenApp 6.5 worker, which automatically upgrades it to a new Virtual Delivery Agent for Windows Server OS for use in the new Site.
- Run PowerShell export cmdlets on a XenApp 6.5 controller, which exports application and Citrix policy settings to XML files.
- Edit the XML files, if desired, to refine what you want to import to the new Site. By tailoring the files, you can import policy and application settings into your XenApp 7.6 Site in stages: some now and others later.
- Run PowerShell import cmdlets on the new XenApp 7.6 Controller, which import settings from the XML files to the new XenApp Site.
- Reconfigure the new Site as needed, and then test it.

For more information, see [Migrate XenApp 6.x](#).

Fixed issues

December 31, 2019

XenApp/XenDesktop 7.6 LTSR Cumulative Update 8 contains all fixes that were included in XenApp and XenDesktop 7.6 LTSR, [Cumulative Update 1](#), [Cumulative Update 2](#), [Cumulative Update 3](#), [Cumulative Update 4](#), [Cumulative Update 5](#), [Cumulative Update 6](#), [Cumulative Update 7](#), plus the following, new fixes:

Controller 7.6.8000

- This fix addresses an issue in an underlying component. [LD1808]

Provisioning Services 7.6.9

Console Issues

- Attempts to access the farm from the console might fail. The issue occurs when the user is a member of the provisioning administrative group in a domain that is different from the user's domain. [LD1371]

StoreFront 3.0.8000

- This fix addresses a security vulnerability. For more information, see Knowledge Center article [CTX251988](#). [LD1361]
- When you attempt to reconnect to a previously disconnected session by clicking the same icon, the session might not reconnect. This issue occurs when multiple desktops that have identical names are published to the end user. [LD1367]

Universal Print Server 7.6.8000

Server

- Due to an access violation, the Universal Print Server (UPServer.exe) might exit unexpectedly and generate Event ID 7031. [LC7821]

VDA for Desktop OS 7.6.8000

Printing

- With the **Direct connections to print servers** policy disabled, the printer device settings might not be retained or are not passed from client to a session. This issue occurs on Version 7.6 of the VDA. [LD1295]

System Exceptions

- VDAs might experience a fatal exception on picadm.sys and display a blue screen with bug check code 0x22. [LC9082]

User Interface

- When you maximize a published applications, the applications might overlap the top section of the taskbar. [LD1825]

VDA for Server OS 7.6.8000

Printing

- With the **Direct connections to print servers** policy disabled, the printer device settings might not be retained or are not passed from client to a session. This issue occurs on Version 7.6 of the VDA. [LD1295]

Session/Connection

- Seamless applications launch in fixed size mode. The issue occurs when the network connection is interrupted and then restored while session reliability is disabled. [LD0733]

System Exceptions

- VDAs might experience a fatal exception on picadm.sys and display a blue screen with bug check code 0x22. [LC9082]

User Interface

- When you maximize a published applications, the applications might overlap the top section of the taskbar. [LD1825]

Cumulative Update 7 (CU7)

October 3, 2020

Release date: February 2019

Cumulative Update 7 (CU7) is the latest Cumulative Update to the XenApp and XenDesktop 7.6 Long Term Service Release (LTSR). It provides updates to five [baseline components](#) of the original 7.6 LTSR.

[Issues fixed since XenApp and XenDesktop 7.6 LTSR CU6](#)

[Known issues in this release](#)

Downloads

[Download LTSR CU7 \(XenApp\)](#)

[Download LTSR CU7 \(XenDesktop\)](#)

New deployments

How do I deploy CU7 from scratch?

You can set up a brand-new XenApp or XenDesktop environment based on CU7 - using the CU7 metainstaller. Before you do that, we recommend that you familiarize yourself with the product:

Peruse the [XenApp and XenDesktop 7.6 Long Term Service Release](#) documentation and pay close attention to the [Technical Overview](#), [New Deployments](#), and [Security](#) sections before you start planning your deployment. Make sure your setup meets the [system requirements](#) for all components. Follow [New Deployments](#) for deployment instructions.

Note:

Provisioning Services and Session Recording are available as separate downloads and installers.

Existing deployments

What do I update?

CU7 provides updates to five [baseline components](#) of 7.6 LTSR. Remember: Citrix recommends that you update all LTSR components of your deployment to CU7. For example: If Provisioning Services is part of your LTSR deployment, update the Provisioning Services components to CU7. If Provisioning Services is not part of your deployment, you do not need to install or update it.

Since the 7.6 LTSR release, we have added a metainstaller that lets you update the existing components of your LTSR environment from a unified interface. Following the [Upgrade instructions](#), use the metainstaller to update the LTSR components of your deployment.

Note:

The following information is specific to the CU7 release. For the equivalent information for the [LTSR base release](#), [CU1](#), [CU2](#), [CU3](#), [CU4](#), [CU5](#), or [CU6](#), see the respective documentation.

LTSR Baseline Components	Version	Notes
VDA for Desktop OS	7.6.7000	Special rules apply for Windows 10. See CU7 compatible components and platforms
VDA for Server OS	7.6.7000	
Delivery Controller	7.6.7000	
Citrix Studio	7.6.7000	
Citrix Director	7.6.7000	

LTSR Baseline Components	Version	Notes
Group Policy Management Experience	2.5.7000	
Session Recording	7.6.7000	Platinum Edition only
StoreFront	3.0.7000.1	
StoreFront Service	7.6.7000	
Provisioning Services	7.6.8	Special rules apply for Windows 10. See CU7 compatible components and platforms
Universal Print Server	7.6.7000	Only Windows 2008 R2 SP1, Windows 2012, Windows 2012 R2 supported

LTSR CU7 compatible components

The following components - at the versions given below - are compatible with LTSR environments. They are not eligible for the LTSR benefits (extended lifecycle and fix-only cumulative updates). Citrix might ask you to upgrade to a newer version of these components within your 7.6 LTSR environments.

Note about Windows 10:

Windows 10 does not get the full set of 7.6 LTSR benefits. For deployments that include Windows 10 machines, Citrix recommends that you use the latest 7.15 LTSR version of the VDA for Desktop OS and of Provisioning Services.

For more information, see [Adding Windows 10 Compatibility to XenApp and XenDesktop 7.6 LTSR](#) and the [XenApp and XenDesktop Servicing Options \(LTSR\) FAQ](#).

LTSR CU7 Compatible Components and Platforms	Version
Profile Management	7.15.3000
AppDNA	7.14
License Server	11.15.0.0 Build 26000
HDX RealTime Optimization Pack	2.4.2000
Windows 10	VDA and Provisioning Services: Latest 7.15 LTSR CU

LTSR supports the following versions of Citrix Workspace app and all later versions:

LTSR compatible versions of Citrix Workspace app	Version
Citrix Workspace app for Android	1902
Citrix Workspace app for Chrome	1901
Citrix Workspace app for HTML5	1901
Citrix Workspace app for iOS	1901
Citrix Workspace app for Mac	1901
Citrix Workspace app for Linux	1810
Citrix Workspace app for Windows	1812
Citrix Workspace app for Windows (Store)	1812

LTSR also supports the following versions of Citrix Receiver and all later versions:

LTSR compatible versions of Citrix Receiver	Version
Citrix Receiver for Chrome	2.6.9
Citrix Receiver for HTML5	2.6.9
Citrix Receiver for Mac	12.9.1
Citrix Receiver for Linux	13.10
Citrix Receiver for Windows	4.9.5000

LTSR notable exclusions

The following features, components, and platforms are not eligible for LTSR lifecycle milestones and benefits. Specifically, cumulative updates and extended lifecycle benefits are excluded. Updates to excluded features and components will be available through regular current releases.

Excluded Features	
Local App Access	Framehawk

Excluded Components

Linux VDA

Personal vDisk

Excluded Windows Platforms *

Windows 2008 32-bit (for Universal Print Server)

*Citrix reserves the right to update platform support based on third party vendors' lifecycle milestones.

Install and upgrade analytics

When you use the full-product installer to deploy or upgrade XenApp or XenDesktop components, anonymous information about the installation process is gathered and stored on the machine where you are installing/upgrading the component. This data is used to help Citrix improve its customers' installation experiences. For more information, see <http://more.citrix.com/XD-INSTALLER>.

XenApp 6.5 migration

The XenApp 6.5 migration process helps you more efficiently and quickly transition from a XenApp 6.5 farm to a Site running XenApp 7.6 (or a later supported release). This is helpful in deployments that contain large numbers of applications and Citrix group policies, lowering the risk of inadvertently introducing errors when manually moving applications and Citrix group policies to the new XenApp Site.

After you install the XenApp 7.6 core components and create a Site, the migration process follows this sequence:

- Run the XenApp 7.6 installer on each XenApp 6.5 worker, which automatically upgrades it to a new Virtual Delivery Agent for Windows Server OS for use in the new Site.
- Run PowerShell export cmdlets on a XenApp 6.5 controller, which exports application and Citrix policy settings to XML files.
- Edit the XML files, if desired, to refine what you want to import to the new Site. By tailoring the files, you can import policy and application settings into your XenApp 7.6 Site in stages: some now and others later.
- Run PowerShell import cmdlets on the new XenApp 7.6 Controller, which import settings from the XML files to the new XenApp Site.
- Reconfigure the new Site as needed, and then test it.

For more information, see [Migrate XenApp 6.x](#).

Fixed issues

March 21, 2019

XenApp/XenDesktop 7.6 LTSR Cumulative Update 7 contains all fixes that were included in XenApp and XenDesktop 7.6 LTSR, [Cumulative Update 1](#), [Cumulative Update 2](#), [Cumulative Update 3](#), [Cumulative Update 4](#), [Cumulative Update 5](#), [Cumulative Update 6](#), plus the following, new fixes:

Controller 7.6.7000

- After you choose a month for the **Trends** view graph duration, only seven days of historical data is shown. [LC9908]

Provisioning Services 7.6.8

Console Issues

- The Provisioning Services XIP library for VMware ESXi does not support TLS v1.2. [LC9629]

Server Issues

- When an additional virtual hard disk (VHD) footer is assigned to a merged VHD, the file size of the merged base might increase. [LC9837]

StoreFront 3.0.7000.1

- When using the Safari 12 and later browsers, client detection might fail on Citrix Receiver for Web because the Netscape Plugin Application Programming Interface (NPAPI) support was removed. For more information, see the Knowledge Center article [CTX238286](#). [LD0863]

VDA for Desktop OS 7.6.7000

Keyboard

- When you use the Chinese keyboard layout in a user session, the Input Method Editor (IME) automatically changes to the Wubi Chinese character input method. The issue occurs when the default IME is not set to **Wubi**. [LD0429]

Session/Connection

- When processing a credit card transactions through a user device, the application and the user device can become unresponsive, or only a subset of data might be received. [LD0152]
- Attempts to start an application from a random server might fail. This error message appears:
Unable to launch your application. Cannot connect to the Citrix XenApp Server. The Citrix SSL Server you selected is not accepting connections.
The issue occurs when the server stops accepting connections on an SSL-enabled VDA. [LD0239]
- When anonymous users access a member of a Citrix Delivery Group, an incorrect logon interface might appear with the message **Connection Restored** after the Common Gateway Protocol (CGP) times out. The correct message reads, **Could Not Reconnect**. [LD0363]
- This fix addresses a memory leak issue that occurs when the **Auto connect client drives** policy is disabled. [LD0370]

System Exceptions

- VDAs might experience a fatal exception on wdica.sys and display a blue screen with bug check code 0x3b (SYSTEM_SERVICE_EXCEPTION). [LD0089]
- VDAs might experience a fatal exception on picadm.sys and display a blue screen with bug check code 0x22. [LD0119]

User Interface

- Attempts to copy and paste the HTML formatted content to or from a session might fail in a published instance of Internet Explorer. [LD0395]

VDA for Server OS 7.6.7000

Keyboard

- When you use the Chinese keyboard layout in a user session, the Input Method Editor (IME) automatically changes to the Wubi Chinese character input method. The issue occurs when the default IME is not set to **Wubi**. [LD0429]

Session/Connection

- When processing a credit card transactions through a user device, the application and the user device can become unresponsive, or only a subset of data might be received. [LD0152]

- Attempts to start an application from a random server might fail. This error message appears:
Unable to launch your application. Cannot connect to the Citrix XenApp Server. The Citrix SSL Server you selected is not accepting connections.
The issue occurs when the server stops accepting connections on an SSL-enabled VDA. [LD0239]
- When anonymous users access a member of a Citrix Delivery Group, an incorrect logon interface might appear with the message **Connection Restored** after the Common Gateway Protocol (CGP) times out. The correct message reads, **Could Not Reconnect**. [LD0363]
- This fix addresses a memory leak issue that occurs when the **Auto connect client drives** policy is disabled. [LD0370]

System Exceptions

- VDAs might experience a fatal exception on wdica.sys and display a blue screen with bug check code 0x3b (SYSTEM_SERVICE_EXCEPTION). [LD0089]
- VDAs might experience a fatal exception on picadm.sys and display a blue screen with bug check code 0x22. [LD0119]

User Interface

- Attempts to copy and paste the HTML formatted content to or from a session might fail in a published instance of Internet Explorer. [LD0395]

Cumulative Update 6 (CU6)

October 3, 2020

Release date: August 2018

Cumulative Update 6 (CU6) is the latest Cumulative Update to the XenApp and XenDesktop 7.6 Long Term Service Release (LTSR). It provides updates to seven [baseline components](#) of the original 7.6 LTSR.

[Issues fixed since XenApp and XenDesktop 7.6 LTSR CU5](#)

[Known issues in this release](#)

Downloads

[Download LTSR CU6 \(XenApp\)](#)

[Download LTSR CU6 \(XenDesktop\)](#)

New deployments

How do I deploy CU6 from scratch?

You can set up a brand-new XenApp or XenDesktop environment based on CU6 - using the CU6 metainstaller. Before you do that, we recommend that you familiarize yourself with the product:

Peruse the [XenApp and XenDesktop 7.6 Long Term Service Release](#) documentation and pay close attention to the [Technical Overview](#), [New Deployments](#), and [Security](#) sections before you start planning your deployment. Make sure your setup meets the [system requirements](#) for all components. Follow [New Deployments](#) for deployment instructions.

Note:

Provisioning Services and Session Recording are available as separate downloads and installers.

Existing deployments

What do I update?

CU6 provides updates to seven [baseline components](#) of 7.6 LTSR. Remember: Citrix recommends that you update all LTSR components of your deployment to CU6. For example: If Provisioning Services is part of your LTSR deployment, update the Provisioning Services component to CU6. If Provisioning Services is not part of your deployment, you do not need to install or update it.

Since the 7.6 LTSR release, we have added a metainstaller that lets you update the existing components of your LTSR environment from a unified interface. Following the [Upgrade instructions](#), use the metainstaller to update the LTSR components of your deployment.

Note:

The following information is specific to the CU6 release. For the equivalent information for the [LTSR base release](#), [CU1](#), [CU2](#), [CU3](#), [CU4](#), or [CU5](#), see the respective documentation.

LTSR Baseline Components	Version	Notes
VDA for Desktop OS	7.6.6000	Special rules apply for Windows 10. See CU6 compatible components and platforms
VDA for Server OS	7.6.6000	
Delivery Controller	7.6.6000	
Citrix Studio	7.6.6000	
Citrix Director	7.6.6000	

LTSR Baseline Components	Version	Notes
Group Policy Management Experience	2.5.6000	
StoreFront	3.0.6000.1	
Provisioning Services	7.6.7	Special rules apply for Windows 10. See CU6 compatible components and platforms
Universal Print Server	7.6.6000	Only Windows 2008 R2 SP1, Windows 2012, Windows 2012 R2 supported
Session Recording	7.6.6000	Platinum Edition only

LTSR CU6 compatible components

The following components - at the versions given below - are recommended for use in 7.6 LTSR CU6 environments. They are not eligible for the LTSR benefits (extended lifecycle and fix-only cumulative updates). Citrix might ask you to upgrade to a newer version of these components within your 7.6 LTSR environments.

Note about Windows 10:

Windows 10 does not get the full set of 7.6 LTSR benefits. For deployments that include Windows 10 machines, Citrix recommends that you use the latest 7.15 LTSR version of the VDA for Desktop OS and of Provisioning Services.

For more information, see [Adding Windows 10 Compatibility to XenApp and XenDesktop 7.6 LTSR](#) and the [XenApp and XenDesktop Servicing Options \(LTSR\) FAQ](#).

LTSR CU6 Compatible Components and Platforms	Version
Profile Management	7.15.2001
AppDNA	7.14
License Server	11.15.0.0 Build 24100
HDX RealTime Optimization Pack	2.4.1000
Windows 10	VDA and Provisioning Services: Latest 7.15 LTSR CU

LTSR supports the following versions of Citrix Workspace app and all later versions:

LTSR compatible versions of Citrix Workspace app	Version
Citrix Workspace app for Android	1808
Citrix Workspace app for Chrome	1808
Citrix Workspace app for HTML5	1808
Citrix Workspace app for iOS	1808
Citrix Workspace app for Mac	1808
Citrix Workspace app for Linux	1808
Citrix Workspace app for Windows	1808

LTSR also supports the following versions of Citrix Receiver and all later versions:

LTSR compatible versions of Citrix Receiver	Version
Citrix Receiver for Android	3.13.2
Citrix Receiver for Chrome	2.6.9
Citrix Receiver for HTML5	2.6.9
Citrix Receiver for iOS	7.5.6
Citrix Receiver for Mac	12.9.1
Citrix Receiver for Linux	13.10
Citrix Receiver for Universal Windows Platform	1.0.5
Citrix Receiver for Windows	4.9.3000

LTSR notable exclusions

The following features, components, and platforms are not eligible for LTSR lifecycle milestones and benefits. Specifically, cumulative updates and extended lifecycle benefits are excluded. Updates to excluded features and components will be available through regular current releases.

Excluded Features	
Local App Access	Framehawk

Excluded Components

Linux VDA

Personal vDisk

Excluded Windows Platforms *

Windows 2008 32-bit (for Universal Print Server)

*Citrix reserves the right to update platform support based on third party vendors' lifecycle milestones.

Install and upgrade analytics

When you use the full-product installer to deploy or upgrade XenApp or XenDesktop components, anonymous information about the installation process is gathered and stored on the machine where you are installing/upgrading the component. This data is used to help Citrix improve its customers' installation experiences. For more information, see <http://more.citrix.com/XD-INSTALLER>.

XenApp 6.5 migration

The XenApp 6.5 migration process helps you more efficiently and quickly transition from a XenApp 6.5 farm to a Site running XenApp 7.6 (or a later supported release). This is helpful in deployments that contain large numbers of applications and Citrix group policies, lowering the risk of inadvertently introducing errors when manually moving applications and Citrix group policies to the new XenApp Site.

After you install the XenApp 7.6 core components and create a Site, the migration process follows this sequence:

- Run the XenApp 7.6 installer on each XenApp 6.5 worker, which automatically upgrades it to a new Virtual Delivery Agent for Windows Server OS for use in the new Site.
- Run PowerShell export cmdlets on a XenApp 6.5 controller, which exports application and Citrix policy settings to XML files.
- Edit the XML files, if desired, to refine what you want to import to the new Site. By tailoring the files, you can import policy and application settings into your XenApp 7.6 Site in stages: some now and others later.
- Run PowerShell import cmdlets on the new XenApp 7.6 Controller, which import settings from the XML files to the new XenApp Site.
- Reconfigure the new Site as needed, and then test it.

For more information, see [Migrate XenApp 6.x](#).

Fixed issues

March 27, 2019

XenApp/XenDesktop 7.6 LTSR Cumulative Update 6 contains all fixes that were included in XenApp and XenDesktop 7.6 LTSR, [Cumulative Update 1](#), [Cumulative Update 2](#), [Cumulative Update 3](#), [Cumulative Update 4](#), and [Cumulative Update 5](#), plus the following, new fixes:

Citrix Director 7.6.6000

- Attempts to search for users when assigning them to machines might fail. The selected user is shown as null. [LC8395]

Citrix Studio 7.6.6000

- When upgrading a site using the XenApp license edition, the license edition might change from XenApp to XenDesktop unexpectedly. [LC6981]

Controller 7.6.6000

- When upgrading a site using the XenApp license edition, the license edition might change from XenApp to XenDesktop unexpectedly. [LC6981]
- The license features might be lost when the SQL server that is configured for **Always On availability** is restarted. [LC8449]
- Image deployment might fail on XenDesktop 7.6. The issue occurs when the refresh commands that are sent from the Delivery Controller to Hyper-V causes an overload resulting in a timeout. [LC8639]
- When you attempt to create or update a machine catalog with virtual machines that use the upgraded or imported distributed port group, the following error message might appear: **Exception...Current node not found...type = 'network'** [LC8657]
- When you upgrade a single Delivery Controller in a multiple Delivery Controller environment, the site test report might contain a mismatched database version. [LD0073]

Provisioning Services 7.6.7

Console Issues

- When you log on to the Provisioning Services Console using a different domain account, you might not be able to access the farm. This error message appears:

“The domain/user does not have access to the Farm.” [LC8150]

- The Provisioning Services Console and Configuration wizard might be slow when running in a complex Active Directory environment. As a result, the Provisioning Services Console times out. By using this enhancement, instead of searching for all groups in all domains, you can search in preferred domains. You can then stop the search if you find the correct group. The following registry can be set to use different search options:

HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\ProvisioningServices

Name: DomainSelectOption

Type: DWORD

Value: Set the following values (in decimal) for different search approach

0 = Approach-0 (default) Search in user domain and PVS Admin groups' domains (and other whitelisted domains if configured).

1 = Approach-1. Search with Approach-0, followed by other trusted domains of the user's domain.

2 = Obsolete

3 = Search with Approach-0, the groups found are further enumerated over the parent domains. Used for a special Active Directory environment.

4 = Search with Approach-1, the groups found are further enumerated over the parent domains. Used for a special Active Directory environment.

5 = Approach-2. “One-step” search using “User” attribute in user domain and PVS Admin groups' domains (and other whitelisted domains if configured). Used for a special Active Directory environment.

6 = Search with Approach-2, followed by other trusted domains of the user's domain. [LC9065]

- The default Active Directory search option might not be able to find the Provisioning Services administrator membership for certain users in a special Active Directory environment. This issue is related to how the group membership is associated through groups over the parent and child domains. [LC9800]

Server Issues

- When you log on to the Provisioning Services Console using a different domain account, you might not be able to access the farm. This error message appears:

“The domain/user does not have access to the Farm.” [LC8150]

- The Provisioning Services Console and Configuration wizard might be slow when running in a complex Active Directory environment. As a result, the Provisioning Services Console times out. By using this enhancement, instead of searching for all groups in all domains, you can search in preferred domains. You can then stop the search if you find the correct group. The following registry can be set to use different search options:

HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\ProvisioningServices

Name: DomainSelectOption

Type: DWORD

Value: Set the following values (in decimal) for different search approach

0 = Approach-0 (default) Search in user domain and PVS Admin groups' domains (and other whitelisted domains if configured).

1 = Approach-1. Search with Approach-0, followed by other trusted domains of the user's domain.

2 = Obsolete

3 = Search with Approach-0, the groups found are further enumerated over the parent domains. Used for a special Active Directory environment.

4 = Search with Approach-1, the groups found are further enumerated over the parent domains. Used for a special Active Directory environment.

5 = Approach-2. "One-step" search using "User" attribute in user domain and PVS Admin groups' domains (and other whitelisted domains if configured). Used for a special Active Directory environment.

6 = Search with Approach-2, followed by other trusted domains of the user's domain. [LC9065]

- When you merge two or more vDisks at the same time, the MgmtDaemon.exe process might exit unexpectedly. [LC9123]
- The default Active Directory search option might not be able to find the Provisioning Services administrator membership for certain users in a special Active Directory environment. This issue is related to how the group membership is associated through groups over the parent and child domains. [LC9800]

Target Device Issues

- Target devices might become unresponsive. [LC8897]

StoreFront 3.0.6000.1

- Authentication failure might occur on the StoreFront servers. The issue occurs because of TCP dynamic port exhaustion. [LC8795]
- On the non-English version of the Microsoft Windows operating system, the **DetectReceiver** string might fail to appear on the button on the StoreFront webpage. [LC9713]

VDA for Desktop OS 7.6.6000

Keyboard

- When you start an application on an Android device and you are in the text field, the keyboard might not appear automatically. Also, you must always touch the keyboard button for opening or closing. [LC8936]

Session/Connection

- Disabling Citrix Hooks might fail to take effect when several executables are added to **Excluded-ImageNames** under the registry key **HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\CtxHook**. [LC8614]
- Inconsistent mouse movement might occur in a multi-monitor environment using H configuration. You start a Microsoft Skype for Business session and start sharing the screen with the other user. The Citrix graphic driver receives an incorrect mouse location from the operating system.

To enable the fix, set the following registry key:

HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\ICA

Name: DisableAppendMouse

Value: DWORD

Type: 00000001

However, when you use the HDX session after setting the registry key, certain features that programmatically set the mouse pointer location might not work as expected. The features are:

- Mouse Snap To feature.
 - The capability to synchronize mouse location between users with GotoMeeting screen sharing.
 - The capability to synchronize mouse location between users with Skype for Business screen sharing. [LC8976]
- When you attempt to access a mapped client drive in a session and you don't respond to a Citrix Workspace Security Warning dialog box, the other user's session might become unresponsive. [LC9070]
 - The Citrix Audio Service might exit unexpectedly and then restart again. When you reconnect to the same session from the second end point (thin client), the new devices are not mapped correctly to the session. [LC9381]

System Exceptions

- Servers might experience a fatal exception, displaying a blue screen, on picadm.sys with bugcheck code 0x22. [LC6177]

- This fix addresses a memory issue with the wdica.sys file that can cause servers to exit unexpectedly. [LC7666]
- Servers might experience a fatal exception on picadm.sys and display a blue screen with bug check code 0x22 (FILE_SYSTEM). [LC7726]
- Servers might experience a fatal exception on vdtw30.dll and display a blue screen with stop code SYSTEM_SERVICE_EXCEPTION (3b). [LC8087]
- VDAs might experience a fatal exception on picadm.sys and display a blue screen with bugcheck code 0x22. [LC8749]
- The VDA for Server OS might experience a fatal exception on picadm.sys and display a blue screen with bugcheck code 0x00000050. [LC8753]
- Servers might experience a fatal exception on picadm.sys and display a blue screen with bug check code 0x000000D1(DRIVER_IRQL_NOT_LESS_OR_EQUAL). [LC8830]
- The VDA for Server OS might experience a fatal exception on wdica.sys and display a blue screen. [LC9695]

VDA for Server OS 7.6.6000

Keyboard

- When you start an application on an Android device and you are in the text field, the keyboard might not appear automatically. Also, you must always touch the keyboard button for opening or closing. [LC8936]

Server/Site Administration

- The following error message might appear for child domain users while launching an application through Web Interface or StoreFront:
“You have not been granted access to this published application.” [LC7566]

Session/Connection

- Disabling Citrix Hooks might fail to take effect when several executables are added to **Excluded-ImageNames** under the registry key **HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\CtxHook**. [LC8614]
- A spurious XenApp session might be created on a VDA for Server OS when a Remote Desktop session disconnects and reconnects. [LC8706]

- After upgrading to XenApp 7.6 Long Term Service Release (LTSR) Cumulative Update 4, there might be a five-second delay when you log on to a published application. [LC8894]
- Inconsistent mouse movement might occur in a multi-monitor environment using H configuration. You start a Microsoft Skype for Business session and start sharing the screen with the other user. The Citrix graphic driver receives an incorrect mouse location from the operating system.

To enable the fix, set the following registry key:

HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\ICA

Name: DisableAppendMouse

Value: DWORD

Type: 00000001

However, when you use the HDX session after setting the registry key, certain features that programmatically set the mouse pointer location might not work as expected. The features are:

- Mouse Snap To feature.
 - The capability to synchronize mouse location between users with GotoMeeting screen sharing.
 - The capability to synchronize mouse location between users with Skype for Business screen sharing. [LC8976]
- When you attempt to access a mapped client drive in a session and you don't respond to a Citrix Workspace Security Warning dialog box, the other user's session might become unresponsive. [LC9070]
 - The Citrix Audio Service might exit unexpectedly and then restart again. When you reconnect to the same session from the second end point (thin client), the new devices are not mapped correctly to the session. [LC9381]

System Exceptions

- Servers might experience a fatal exception, displaying a blue screen, on picadm.sys with bugcheck code 0x22. [LC6177]
- This fix addresses a memory issue with the wdica.sys file that can cause servers to exit unexpectedly. [LC7666]
- The Service Host (svchost.exe) process might experience an access violation and exit unexpectedly. The issue occurs because of the faulting module, icaendpoint.dll. [LC7694]
- Servers might experience a fatal exception on picadm.sys and display a blue screen with bug check code 0x22 (FILE_SYSTEM). [LC7726]
- Servers might experience a fatal exception on vdtw30.dll and display a blue screen with stop code SYSTEM_SERVICE_EXCEPTION (3b). [LC8087]

- VDAs might experience a fatal exception on picadm.sys and display a blue screen with bugcheck code 0x22. [LC8749]
- The VDA for Server OS might experience a fatal exception on picadm.sys and display a blue screen with bugcheck code 0x00000050. [LC8753]
- Servers might experience a fatal exception on picadm.sys and display a blue screen with bug check code 0x000000D1(DRIVER_IRQL_NOT_LESS_OR_EQUAL). [LC8830]
- The VDA for Server OS might experience a fatal exception on wdica.sys and display a blue screen. [LC9695]

User Experience

- On the VDA for Server OS, the mouse cursor might disappear from the session. This issue occurs when the cursor changes to the **Text Select** cursor and the background color is the same as the color of the **Text Select** cursor. The default background color in Microsoft Windows for editable areas is white, while the default **Text Select** cursor color is also white. As a result, the cursor might no longer be visible. [LC8807]
- When you adjust the screen resolution display to **Medium** or **Larger**, two mouse pointers might appear that create a blurry pointer experience. The issue occurs when the cursor is rendered on the VDA side, instead of Citrix Workspace side. [LC9373]

Cumulative Update 5 (CU5)

August 27, 2019

Release date: February 2018

Cumulative Update 5 (CU5) is the latest Cumulative Update to the XenApp and XenDesktop 7.6 Long Term Service Release (LTSR). CU5 provides updates to ten [baseline components](#) of the original 7.6 LTSR.

[Issues fixed since XenApp and XenDesktop 7.6 LTSR CU4](#)

[Known issues in this release](#)

Downloads

[Download LTSR CU5 \(XenApp\)](#)

[Download LTSR CU5 \(XenDesktop\)](#)

New deployments

How do I deploy CU5 from scratch

You can set up a brand-new XenApp or XenDesktop environment based on CU5 - using the CU5 metainstaller. Before you do that, we recommend that you familiarize yourself with the product:

Peruse the [XenApp and XenDesktop 7.6 Long Term Service Release](#) documentation and pay close attention to the [Technical Overview](#), [New Deployments](#), and [Security](#) sections before you start planning your deployment. Make sure your setup meets the [system requirements](#) for all components. Follow [New Deployments](#) for deployment instructions.

* Note: Provisioning Services and Session Recording are available as separate downloads and installers.

Existing deployments

What do I update

CU5 provides updates to ten [baseline components](#) of 7.6 LTSR. Remember: Citrix recommends that you update all LTSR components of your deployment to CU5. For example: If Provisioning Services is part of your LTSR deployment, update the Provisioning Services component to CU5. If Provisioning Services is not part of your deployment, you do not need to install or update it.

Since the 7.6 LTSR release, we have added a metainstaller that lets you update the existing components of your LTSR environment from a unified interface. Following the [Upgrade instructions](#), use the metainstaller to update the LTSR components of your deployment.

Note:

The following information is specific to the CU5 release. For the equivalent information for the [LTSR base release](#), [CU1](#), [CU2](#), [CU3](#), or [CU4](#), see the respective documentation.

LTSR Baseline Components	Version	Notes
VDA for Desktop OS	7.6.5000	Special rules apply for Windows 10. See CU5 compatible components and platforms .
VDA for Server OS	7.6.5000	
Delivery Controller	7.6.5000	
Citrix Studio	7.6.5000	
Citrix Director	7.6.5000	

LTSR Baseline Components	Version	Notes
Group Policy Management Experience	2.5.5000	
StoreFront	3.0.5000.1	
Provisioning Services	7.6.6	Special rules apply for Windows 10. See CU5 compatible components and platforms .
Universal Print Server	7.6.5000	Only Windows 2008 R2 SP1, Windows 2012, Windows 2012 R2 supported
Session Recording	7.6.5000	Platinum Edition only

LTSR CU5 compatible components

The following components are recommended for use in 7.6 LTSR CU5 environments. These components are not eligible for the LTSR benefits (extended lifecycle and fix-only cumulative updates). Citrix might ask you to upgrade to a newer version of these components within your 7.6 LTSR environments.

Note about Windows 10:

Windows 10 does not get the full set of 7.6 LTSR benefits. For deployments that include Windows 10 machines, Citrix recommends that you use the latest 7.15 LTSR version of the VDA for Desktop OS and of Provisioning Services.

For more information, see [Adding Windows 10 Compatibility to XenApp and XenDesktop 7.6 LTSR](#) and the [XenApp and XenDesktop Servicing Options \(LTSR\) FAQ](#).

LTSR CU5 Compatible Components and Platforms	Version
Profile Management	7.15.1000
AppDNA	7.14
License Server	11.14.0.1 Build 22103
HDX RealTime Optimization Pack	2.4
Windows 10	VDA and Provisioning Services: Latest 7.15 LTSR CU

Compatible versions of Citrix Receiver

For ease of maintenance, and to ensure optimal performance, Citrix recommends that you upgrade to the latest version of Citrix Receiver any time it becomes available. The latest versions are available for download at <https://www.citrix.com/downloads/citrix-receiver.html>. For your convenience, consider subscribing to the [Citrix Receiver RSS feed](#) to receive a notification when a new version of Citrix Receiver becomes available.

Note that Citrix Receiver is not eligible for the XenApp and XenDesktop LTSR benefits (extended lifecycle and fix-only cumulative updates). Citrix may ask you to upgrade to a newer version of Citrix Receiver within your 7.6 LTSR environments. In the case of Citrix Receiver for Windows, Citrix has announced a special LTSR program. More information on that program is available on the [Lifecycle Milestones for Citrix Receiver](#) page.

Specifically, LTSR supports the following versions of Citrix Receiver and all later versions:

LTSR Compatible Versions of Citrix Receiver	Version
Citrix Receiver for Android	3.13.2
Citrix Receiver for Chrome	2.6.2
Citrix Receiver for HTML5	2.6.2
Citrix Receiver for iOS	7.5
Citrix Receiver for Mac	12.8.1
Citrix Receiver for Linux	13.8
Citrix Receiver for Universal Windows Platform	1.0.5
Citrix Receiver for Windows	4.9

LTSR notable exclusions

The following features, components, and platforms are not eligible for LTSR lifecycle milestones and benefits. Specifically, cumulative updates and extended lifecycle benefits are excluded. Updates to excluded features and components will be available through regular current releases.

Excluded Features: Local App Access, Framehawk

Excluded Components: Linux VDA, Personal vDisk

Excluded Windows Platforms*: Windows 2008 32-bit (for Universal Print Server)

* Citrix reserves the right to update platform support based on third party vendors' lifecycle milestones.

Install and upgrade analytics

When you use the full-product installer to deploy or upgrade XenApp or XenDesktop components, anonymous information about the installation process is gathered and stored on the machine where you are installing/upgrading the component. This data is used to help Citrix improve its customers' installation experiences. For more information, see <http://more.citrix.com/XD-INSTALLER>.

XenApp 6.5 migration

The XenApp 6.5 migration process helps you more efficiently and quickly transition from a XenApp 6.5 farm to a Site running XenApp 7.6 (or a later supported release). This is helpful in deployments that contain large numbers of applications and Citrix group policies, lowering the risk of inadvertently introducing errors when manually moving applications and Citrix group policies to the new XenApp Site.

After you install the XenApp 7.6 core components and create a Site, the migration process follows this sequence:

- Run the XenApp 7.6 installer on each XenApp 6.5 worker, which automatically upgrades it to a new Virtual Delivery Agent for Windows Server OS for use in the new Site.
- Run PowerShell export cmdlets on a XenApp 6.5 controller, which exports application and Citrix policy settings to XML files.
- Edit the XML files, if desired, to refine what you want to import to the new Site. By tailoring the files, you can import policy and application settings into your XenApp 7.6 Site in stages: some now and others later.
- Run PowerShell import cmdlets on the new XenApp 7.6 Controller, which import settings from the XML files to the new XenApp Site.
- Reconfigure the new Site as needed, and then test it.

For more information, see [Migrate XenApp 6.x](#).

Fixed issues

March 27, 2019

XenApp/XenDesktop 7.6 LTSR Cumulative Update 5 contains all fixes that were included in XenApp and XenDesktop 7.6 LTSR, [Cumulative Update 1](#), [Cumulative Update 2](#), [Cumulative Update 3](#), and [Cumulative Update 4](#), plus the following, new fixes:

Citrix Director

- An exception might occur when you, as a custom administrator, cannot retrieve the Remote PC setting from the machine catalog. The issue occurs when you have permission to manage the machine catalog, but the scope does not contain the particular catalog. [LC8170]

Citrix Policy

- Group Policy Objects that contain both Citrix and Microsoft settings might not be enforced. This issue occurs when the extension unit in the list contains more than two GUIDs. [LC7533]
- When you open a second instance of Group Policy Editor (gpedit.msc), the Citrix Policies node does not open and the following error message might appear:
“Unhandled exception in managed code snap-in.” [LC7600]
- When files in the local policies cache folder (%ProgramData%/CitrixCseCache) are set to “Read-only,” the policy settings might not be applied successfully. [LC8750]

Citrix Studio

- Attempts to add machines to a Delivery Group by using the “NETBIOS” name for user association might fail. Instead, the domain name might appear. The issue occurs when the NETBIOS name uses the wrong URL. [LC7830]

Controller

- Attempts to add machines to a Delivery Group by using the “NETBIOS” name for user association might fail. Instead, the domain name might appear. The issue occurs when the NETBIOS name uses the wrong URL. [LC7830]
- The symptoms of this issue might vary and the following effects can be observed:
 - PowerShell queries might time out in large (5000+ VDA) sites.
 - A Citrix Studio search request might be slow or time out due to the size of a site.
 - Event ID 1201 “Connection to the database has been lost – Exception Timeout expired” might be logged on the Delivery Controller when the query runs for a long time. [LC7833]
- The **AllowRestart** policy for sessions on Server OS does not allow you to log off from the disconnected sessions. When you restart a disconnected session, the session is reconnected to the previous session instead of starting a new one. [LC8090]
- The connection between the Delivery Controller and the SQL Server might be lost intermittently due to a deadlock in the SQL database. [LC8477]

- In a large XenApp and XenDesktop environment, the stored procedure for Monitor database grooming does not work correctly if the size of the Monitor database is large. [LC8770]

Installer

- When the read and write permissions (only traverse permissions) are restricted on the parent folder of the folder that contains the installation media, attempts to install VDA software from the shared folder might fail. The following error message appears:

“A non-recoverable error occurred during a database lookup.” [LC6520]

Provisioning Services

Console Issues

- The XenDesktop Setup wizard might fail after creating a template virtual machine. [LC8018]

Server Issues

- When the Boot Device Manager (BDM) is configured for the DHCP Discover, Offer, Request and Acknowledge (DORA) process, the process might not complete. The issue occurs when the DHCP relay sends the “OFFER” packet as a UNICAST packet. [LC8130]
- The same disk identifier is erroneously assigned to the vDisk residing in different stores when the existing vDisk was added using the “MCLI Add DiskLocator” command. [LC8281]

Target Issues

- Target devices might become unresponsive. [LC7911]

Session Recording (Agent)

- When user1 launches a session that is delivered by VDA1 that is being recorded and does not close the notification message in session1, the notification message does not appear in session2 that is delivered by VDA1. This can happen when the session is launched by user2 until user1 manually closes the notification message in session1. [LC8132]

StoreFront

- After upgrading StoreFront, attempts to log on to one of the servers can cause the server to not display the users’ application subscription data. The issue occurs because of the Microsoft peer

mesh limitation due to which one of the peers might not detect itself online until the first mesh operation is attempted. [LC1454]

- With the **Auto launch desktop** setting enabled, the **Multiple launch prevention** option might not work. As a result, subsequent requests to launch the same instance of the desktop fail. [LC7430]
- After upgrading StoreFront 2.6 installed on a non-default drive, users' application subscription data might not be retained. [LC8046]
- When you attempt to view the details of a desktop, details of an already viewed desktop might appear. [LC8062]
- With socket pooling enabled and the Site database connectivity inconsistent, the sockets in StoreFront might get exhausted when you continuously log on and log off. [LC8514]

VDA for Desktop OS

HDX MediaStream Flash Redirection

- Attempts to save Microsoft Office files such as Microsoft Excel spreadsheets that are running in a session with HDX seamless apps enabled can cause the files to exit unexpectedly. [LC8572]

Printing

- Attempts to launch a published application might fail when the application is waiting for a mutex object in Citrix Print Manager service (cpsvc.exe). [LC6829]
- After you save printer properties by selecting Preferences in a published application, the settings might not be restored when you log off and then log back on to the session. The issue occurs on network printers that are redirected from the user device. [LC7770]

Server/Site Administration

- Changes you make to **Advanced System Settings** under **Visual Effects** apply to the current VDA for Desktop OS session but might not be retained for subsequent sessions. To make such changes persistent, set the following registry key:

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Citrix

Name: EnableVisualEffect

Type: DWORD

Value: 1 [LC8049]

Session/Connection

- When you launch certain third-party applications that are used for video conferencing with flexible resolution, the application might exit unexpectedly. [LC6994]
- When you establish a Skype for Business video call, a blue window border might appear after intersecting with the window of a third party application. [LC7773]
- A session running on a VDA for Desktop OS might become unresponsive when using legacy graphics mode. When the issue occurs, you might not be able to update anything on the Desktop Viewer, but the Desktop Viewer is not in an unresponsive state. Also, after 30-60 minutes, the previously unresponsive session recovers. [LC7777]
- With local app access enabled, using the interactive logon disclaimer policy might result in a black or gray screen. [LC7798]
- When performing an insert operation between two Microsoft Excel 2010 worksheets running on a Version 7.9 VDA, the Excel window might become unresponsive. [LC7912]
- In certain scenarios, seamless applications might not appear in seamless mode or certain features might not work. [LC8030]
- After you maximize and restore a published application multiple times, the mouse cursor might appear incorrectly and the application cannot be expanded vertically and horizontally. Also, the application does not cover the entire screen and a black border appears. [LC8988]

Smart Cards

- When you log on to a session using a smart card, the session might become unresponsive until you disconnect and reconnect the session. [LC8036]
- The Citrix Smart Card Service might exit unexpectedly on a VDA. [LC8386]

System Exceptions

- The wfshell.exe process might exit unexpectedly, pointing to the taskbar grouping module.[LC6968]
- On systems with Hotfix Rollup Pack 7 installed, servers might experience a fatal exception, displaying a blue screen, on picadm.sys with bugcheck code 0x00000050 (PAGE_FAULT_IN_NONPAGED_AREA). [LC6985]
- Servers might experience a fatal exception, displaying a blue screen, on picadm.sys with bugcheck code 0x22. [LC7574]
- Servers might experience a fatal exception, displaying a blue screen, on vdtw30.dll with stop code 0xc0000006. [LC7608]

- VDAs might experience a fatal exception, displaying a blue screen, on tdica.sys with a bugcheck code. [LC7632]
- VDAs might experience a fatal exception, displaying a blue screen with bugcheck code 0x7E. The issue occurs when you leave the VDA session idle for some time. [LC8045]

User Experience

- Windows Media Player might display Microsoft AVI (.avi) files format as vertically flipped. [LC8308]
- The screen might not refresh with the logon prompt after you attempt to log on to a session that was locked previously. [LC8774]

VDA for Server OS

HDX MediaStream Flash Redirection

- Attempts to save Microsoft Office files such as Microsoft Excel spreadsheets that are running in a session with HDX seamless apps enabled can cause the files to exit unexpectedly. [LC8572]

Printing

- Attempts to launch a published application might fail when the application is waiting for a mutex object in Citrix Print Manager service (cpsvc.exe). [LC6829]
- After you save printer properties by selecting Preferences in a published application, the settings might not be restored when you log off and then log back on to the session. The issue occurs on network printers that are redirected from the user device. [LC7770]

Server/Site Administration

- Changes you make to **Advanced System Settings** under **Visual Effects** apply to the current VDA for Desktop OS session but might not be retained for subsequent sessions. To make such changes persistent, set the following registry key:

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Citrix

Name: EnableVisualEffect

Type: DWORD

Value: 1 [LC8049]

Session/Connection

- Attempts to reconnect to a session can fail intermittently and cause the VDAs for Server OS to go into “Initializing” status. The issue occurs when the VDA is registered again with a Delivery Controller. [LC6647]
- When you click “Cancel” on the progress bar of a session launch, wrong session information can remain on the Delivery Controller. As a result, the actual session is not created on the VDA and you might not be able to launch a new session. [LC6779]
- After undocking a laptop, session sharing might fail. The issue occurs when the VDA reregisters with the Delivery Controller while an-out-of-order notification is triggered during auto client reconnect. [LC7450]
- The microphone might be redirected intermittently in the user session even after setting the **Client microphone redirection** policy value to **Prohibited**.

This fix addresses the issue. However, if you continue to observe the issue, apply the following registry key on the device with the microphone:

- HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Terminal Server\WinStations\ica-tcp\AudioConfig
Name: MaxPolicyAge
Type: DWORD
Value: Maximum time (in seconds) allowed between the last policy evaluation and the time of endpoint activation. Default is 30 seconds.
 - HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Terminal Server\WinStations\ica-tcp\AudioConfig
Name: PolicyTimeout
Type: DWORD
Value: Maximum time (in milliseconds) that the system waits for policies after determining that the policies are not up to date. Default is 4,000 milliseconds. When the timeout occurs, the system reads the policies and continues with initialization. Setting this value to (0) bypasses the Active Directory policies check and processes policies immediately. [LC7495]
- When you establish a Skype for Business video call, a blue window border might appear after intersecting with the window of a third party application. [LC7773]
 - A session running on a VDA for Desktop OS might become unresponsive when using legacy graphics mode. When the issue occurs, you might not be able to update anything on the Desktop Viewer, but the Desktop Viewer is not in an unresponsive state. Also, after 30-60 minutes, the previously unresponsive session recovers. [LC7777]
 - A spurious XenApp session might be displayed in Citrix Studio when a Remote Desktop session

takes over a console session on a VDA for Server OS. [LC7826]

- When performing an insert operation between two Microsoft Excel 2010 worksheets running on a Version 7.9 VDA, the Excel window might become unresponsive. [LC7912]
- In certain scenarios, seamless applications might not appear in seamless mode or certain features might not work. [LC8030]
- Servers might become unresponsive on RPM.dll and the following error message appears:
“Event ID 1009, picadm: Timeout waiting for response message from client” [LC8339]
- After you maximize and restore a published application multiple times, the mouse cursor might appear incorrectly and the application cannot be expanded vertically and horizontally. Also, the application does not cover the entire screen and a black border appears. [LC8988]

Smart Cards

- When you log on to a session using a smart card, the session might become unresponsive until you disconnect and reconnect the session. [LC8036]
- The Citrix Smart Card Service might exit unexpectedly on a VDA. [LC8386]

System Exceptions

- The wfshell.exe process might exit unexpectedly, pointing to the taskbar grouping module. [LC6968]
- On systems with Hotfix Rollup Pack 7 installed, servers might experience a fatal exception, displaying a blue screen, on picadm.sys with bugcheck code 0x00000050 (PAGE_FAULT_IN_NONPAGED_AREA). [LC6985]
- Servers might experience a fatal exception, displaying a blue screen, on picadm.sys with bugcheck code 0x22. [LC7574]
- Servers might experience a fatal exception, displaying a blue screen, on vdtw30.dll with stop code 0xc0000006. [LC7608]
- VDAs might experience a fatal exception, displaying a blue screen, on tdica.sys with a bugcheck code. [LC7632]
- The Service Host (svchost.exe) process might experience an access violation and exit unexpectedly. The issue occurs because of the faulting module, icaendpoint.dll. [LC7900]
- Servers might experience a fatal exception, displaying a blue screen, on icardd.dll with bugcheck code 0x0000003B. [LC8492]
- Servers might experience a fatal exception, displaying a blue screen, on icardd.dll with bugcheck code 0x0000003B. [LC8732]

User Experience

- Windows Media Player might display Microsoft AVI (.avi) files format as vertically flipped. [LC8308]

User Interface

- The logoff screen might not appear when you attempt to log off from a Microsoft Windows Server 2008 R2 desktop session. You might be able to log off from the session, but the session appears as though it is disconnected unexpectedly. [LC8016]

Virtual Desktop Components - Other

- App-V applications located outside Virtual File System (VFS) servers or on the network drive might not work correctly when using Connection Groups. [LC6837]

Cumulative Update 4 (CU4)

August 27, 2019

Release date: June 2017

Cumulative Update 4 (CU4) is the latest Cumulative Update to the XenApp and XenDesktop 7.6 Long Term Service Release (LTSR). CU4 provides updates to 10 [baseline components](#) of the original 7.6 LTSR.

[Issues fixed since XenApp and XenDesktop 7.6 LTSR CU3](#)

[Known issues in this release](#)

Downloads

[Download LTSR CU4 \(XenApp\)](#)

[Download LTSR CU4 \(XenDesktop\)](#)

New deployments

How do I deploy CU4 from scratch?

You can set up a brand-new XenApp or XenDesktop environment based on CU4 - using the CU4 metainstaller. Before you do that, we recommend that you familiarize yourself with the product:

Peruse the [XenApp and XenDesktop 7.6 Long Term Service Release](#) documentation and pay close attention to the [Technical Overview](#), [New Deployments](#), and [Security](#) sections before you start planning your deployment. Make sure your setup meets the [system requirements](#) for all components. Follow [New Deployments](#) for deployment instructions.

* Note: Provisioning Services and Session Recording are available as separate downloads and installers.

Existing deployments

What do I update?

CU4 provides updates to 10 [baseline components](#) of 7.6 LTSR. Remember: Citrix recommends that you update all LTSR components of your deployment to CU4. For example: If Provisioning Services is part of your LTSR deployment, update the Provisioning Services component to CU4. If Provisioning Services is not part of your deployment, you do not need to install or update it.

Since the 7.6 LTSR release, we have added a metainstaller that lets you update the existing components of your LTSR environment from a unified interface. Following the [Upgrade instructions](#), use the metainstaller to update the LTSR components of your deployment.

Note:

The following information is specific to the CU4 release. For the equivalent information for the [LTSR base release](#), [CU1](#), [CU2](#), or [CU3](#), see the respective documentation.

LTSR Baseline Components	Version	Notes
VDA for Desktop OS	7.6.4000	Special rules apply for Windows 10. See CU4 compatible components and platforms
VDA for Server OS	7.6.4000	
Delivery Controller	7.6.4000	
Citrix Studio	7.6.4000	
Citrix Director	7.6.4000	
Group Policy Management Experience	2.5.4000	
StoreFront	3.0.4000	

LTSR Baseline Components	Version	Notes
Provisioning Services	7.6.5	Special rules apply for Windows 10. See CU4 compatible components and platforms
Universal Print Server	7.6.4000	Only Windows 2008 R2 SP1, Windows 2012, Windows 2012 R2 supported
Session Recording	7.6.4000	Platinum Edition only

LTSR CU4 compatible components

The following components are recommended for use in 7.6 LTSR CU4 environments. These components are not eligible for the LTSR benefits (extended lifecycle and fix-only cumulative updates). Citrix might ask you to upgrade to a newer version of these components within your 7.6 LTSR environments.

Note about Windows 10:

Regular support for Windows 10 is available through the Current Release path. Windows 10 does not get the full set of 7.6 LTSR benefits. For deployments that include Windows 10 machines, Citrix recommends that you use the Current Release Version 7.9 or later of the [VDA for Desktop OS](#) and of [Provisioning Services](#).

For more information, see [Adding Windows 10 Compatibility to XenApp and XenDesktop 7.6 LTSR](#) and the [XenApp and XenDesktop Servicing Options \(LTSR\) FAQ](#).

LTSR CU4 Compatible Components and Platforms	Version
Profile Management	5.8
AppDNA	7.14
License Server	11.14.0 Build 20101
HDX RealTime Optimization Pack	2.2.100
Windows 10	VDA: Version 7.9 or later; Provisioning Services: Version 7.9 or later

Compatible versions of Citrix Receiver

For ease of maintenance, and to ensure optimal performance, Citrix recommends that you upgrade to the latest version of Citrix Receiver any time it becomes available. The latest versions are available for download at <https://www.citrix.com/downloads/citrix-receiver.html>. For your convenience, consider subscribing to the [Citrix Receiver RSS feed](#) to receive a notification when a new version of Citrix Receiver becomes available.

Note that Citrix Receiver is not eligible for the XenApp and XenDesktop LTSR benefits (extended lifecycle and fix-only cumulative updates). Citrix may ask you to upgrade to a newer version of Citrix Receiver within your 7.6 LSTR environments. In the case of Citrix Receiver for Windows, Citrix has announced a special LTSR program. More information on that program is available on the [Lifecycle Milestones for Citrix Receiver](#) page.

Specifically, LTSR supports the following versions of Citrix Receiver and all later versions:

LTSR Compatible Versions of Citrix Receiver	Version
Citrix Receiver for Windows	4.4 or later
Citrix Receiver for Linux	13.5 or later
Citrix Receiver for Mac	12.5 or later
Citrix Receiver for Chrome	2.4 or later
Citrix Receiver for HTML5	2.4 or later
Citrix Receiver for iOS	7.2 or later
Citrix Receiver for Android	3.11.1 or later

LTSR notable exclusions

The following features, components, and platforms are not eligible for LTSR lifecycle milestones and benefits. Specifically, cumulative updates and extended lifecycle benefits are excluded. Updates to excluded features and components will be available through regular current releases.

Excluded Features: Local App Access, Framehawk

Excluded Components: Linux VDA, Personal vDisk

Excluded Windows Platforms*: Windows 2008 32-bit (for Universal Print Server)

* Citrix reserves the right to update platform support based on third party vendors' lifecycle milestones.

Install and upgrade analytics

When you use the full-product installer to deploy or upgrade XenApp or XenDesktop components, anonymous information about the installation process is gathered and stored on the machine where you are installing/upgrading the component. This data is used to help Citrix improve its customers' installation experiences. For more information, see <http://more.citrix.com/XD-INSTALLER>.

XenApp 6.5 migration

The XenApp 6.5 migration process helps you more efficiently and quickly transition from a XenApp 6.5 farm to a Site running XenApp 7.6 (or a later supported release). This is helpful in deployments that contain large numbers of applications and Citrix group policies, lowering the risk of inadvertently introducing errors when manually moving applications and Citrix group policies to the new XenApp Site.

After you install the XenApp 7.6 core components and create a Site, the migration process follows this sequence:

- Run the XenApp 7.6 installer on each XenApp 6.5 worker, which automatically upgrades it to a new Virtual Delivery Agent for Windows Server OS for use in the new Site.
- Run PowerShell export cmdlets on a XenApp 6.5 controller, which exports application and Citrix policy settings to XML files.
- Edit the XML files, if desired, to refine what you want to import to the new Site. By tailoring the files, you can import policy and application settings into your XenApp 7.6 Site in stages: some now and others later.
- Run PowerShell import cmdlets on the new XenApp 7.6 Controller, which import settings from the XML files to the new XenApp Site.
- Reconfigure the new Site as needed, and then test it.

For more information, see [Migrate XenApp 6.x](#).

Fixed issues

March 21, 2019

XenApp/XenDesktop 7.6 LTSR Cumulative Update 4 contains all fixes that were included in XenApp and XenDesktop 7.6 LTSR, [Cumulative Update 1](#), [Cumulative Update 2](#), and [Cumulative Update 3](#), plus the following, new fixes:

Citrix Director

- Attempts to reset the Citrix user profile using Citrix Director might fail, resulting in the following error message:

“The reset process could not be initiated.”

The issue occurs when Citrix Director sends only the user name instead of sending the user name along with the domain name. As a result, the Citrix Broker Service fails to locate the user in the DDC domain.

[LC6681]

Citrix Studio

- Microsoft Management Console might become unresponsive when adding machines to the Catalog.

[LC5334]

- Attempts to publish an App-V package that contains certain third-party applications with multiple file type associations might fail, resulting in the following error message:

“Cannot validate argument on parameter ‘ExtensionName’. The character length of the 28 argument is too long. Shorten the character length of the argument so it is fewer than or equal to “16” characters, and then try the command again.”

The issue occurs when you attempt to add the App-V package to Citrix Studio.

[LC6507]

- With the access policy “IncludedClientIPFilterEnabled” set to enabled, the following error message might appear when you click “Edit Delivery Group” in Citrix Studio:

“The Users configuration has been manually modified and cannot be changed by Studio.”

[LC6620]

- When you attempt to add virtual machines to a Citrix Provisioning Services catalog in Citrix Studio, the following error message might appear:

“The machine “*virtual machine name*” is already in a Machine Catalog.”

[LC6944]

Controller

- The Configuration Logging Service might consume high memory, causing the Delivery Controller to become unresponsive.

[LC6480]

- Attempts to delete virtual machines that are created by Machine Creation Services can cause Citrix Studio to become unresponsive.

[LC6581]

- With the access policy “IncludedClientIPFilterEnabled” set to enabled, the following error message might appear when you click “Edit Delivery Group” in Citrix Studio:

“The Users configuration has been manually modified and cannot be changed by Studio.”

[LC6620]

- After successfully removing a machine from the MCS catalog, the following failed task notice appears on the Logging tab of Citrix Studio:

“Locking pool catalog_name”

[LC6653]

- The Machine Catalogs node in Citrix Studio can take several minutes to display its contents after selecting it.

[LC6756]

- When you attempt to add virtual machines to a Citrix Provisioning Services catalog in Citrix Studio, the following error message might appear:

“The machine “*virtual machine name*” is already in a Machine Catalog.”

[LC6944]

- Attempts to add machines to an existing Machine Creation Services catalog might not follow the round robin method for multiple storages that can be selected to accept the new machines.

[LC7456]

HDX MediaStream Flash Redirection

- Flash content might not redirect correctly on the client after configuration of the compatibility list policy.

[LC6892]

- Flash content on Qumu.com does not load and the website becomes dynamically blacklisted, and the following error message appears: “The client’s Flash Player was unable to fetch Flash content directly from the client device. The browser page will be refreshed and server-side Flash rendering will be used if available.”

[LC6934]

- With compatibility view enabled in Microsoft Internet Explorer, certain third-party websites with Flash content might not work.

[LC7513]

Provisioning Services

Server

- Attempts to configure Provisioning Server using the Provisioning Services Configuration wizard by selecting the “Join existing farm” option might fail while using the default instance of SQL server.

[LC6579]

Target Device

- Provisioning Services target devices might experience a fatal exception, displaying a blue screen.

[LC6604]

- Attempts to restart or shut down target devices from the Provisioning Services Console might fail.

[LC6814]

- Provisioning Services target devices might experience a fatal exception, displaying a blue screen with stop code 0x000000f.

[LC6990]

- This fix addresses a memory leak issue in Provisioning Services target devices.

[LC7409]

Session Recording

Administration

- You might receive an Installation failed error in the following two cases. You can ignore the message, but to avoid receiving the message, restart the machine before reinstalling the Session Recording components. [544579]
 - Uninstalled the Session Recording components, and then reinstalled them without restarting the machine.

- Installation failed and rollback happened, and then you tried to reinstall the Session Recording components without restarting the machine.

[LC6979]

StoreFront

- 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]

- Users cannot log on to StoreFront when a cached domain controller is offline, even when another domain controller is available.

[LC6358]

- The icon color for Citrix Receiver for Windows does not change after modifying the StoreFront theme.

[LC6435]

- Users are unable to see apps and desktops after logging on when one XML broker does not work correctly, even when there are many working XML brokers. The following error message appears.

“There are no apps or desktops available to you at this time.”

[LC6928]

- Attempts to propagate changes to a server group by selecting “Propagate Changes” on the StoreFront console might fail and the following error message appears:

“Propagation failed on one or more servers.”

[LC7428]

- This fix addresses an issue with Firefox. For more information, see Knowledge Center article [CTX221551](#).

[LC7473]

Universal Print Server

Client

- The print spooler service might become unresponsive and, as a result, Universal Printing does not work. The issue occurs when a timeout is reached while waiting for a transaction response from the spooler service.

[LC5209]

VDA for Desktop OS

HDX 3D Pro

- When using the HDX 3D Pro agent on the VDA, two rows of pixels might be missing when starting a new desktop session.

[LC6409]

Printing

- Printer redirection might fail intermittently.

[LC5320]

Security Issues

- This fix updates an internal VDA component.

[LC6904]

Session/Connection

- When you log on to a VDA where a user profile does not exist, a black screen might appear after the Windows Welcome screen is displayed for a period of time before the logon completes.

[LC2397]

- When you attempt to send video in a Cisco WebEx meeting by using a webcam through Citrix Receiver for Mac, the Cisco WebEx meeting might exit unexpectedly.

[LC5518]

- When reading a file from a mapped client drive, the old, cached file length might be returned if the file length was changed outside of the client session. Additionally, null characters are inserted for any deleted characters.

To enable the fix, set the following registry value to “0”:

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\services\picadm\Parameters

Name: CacheTimeout

Type: REG_DWORD

Value: Default value is 60 seconds. If CacheTimeOut is set to “0,” the file length is reloaded immediately and if not it is loaded after the defined timeout.

[LC6314]

- With local app access enabled, using the interactive logon disclaimer policy might result in a black or gray screen lasting for 45 seconds.

[LC6518]

- The server idle timer does not reset for iOS devices with the multi-touch feature enabled.

[LC6743]

- End User Experience Monitoring stops collecting metrics when the number of virtual channels exceeds 32.

Note: With this fix, the limit that is set for virtual channels is removed.

[LC6768]

- With “Application Lingering” configured for the Delivery Group, published applications occasionally fail to appear when you reconnect to a session.

[LC7405]

- The window positions might not be retained when you reconnect to a published desktop session and are using multiple monitors.

[LC7644]

Smart Cards

- Occasionally, removing a smart card reader might not trigger the user session to get locked, even though smart card removal is configured to lock the user session.

[LC7411]

System Exceptions

- VDAs might experience a fatal exception, displaying a blue screen, on tdica.sys with bugcheck code 0x7E.

[LC6553]

- VDAs might experience a fatal exception, displaying a blue screen, on vd3dk.sys with bugcheck code 0X00000050.

[LC6833]

- VDAs can experience a fatal exception on wdica.sys, displaying a blue screen.

[LC6883]

- VDAs might experience a fatal exception, displaying a blue screen, on picadm.sys with bugcheck code 0x7F while shutting down a session.

[LC7545]

- The Service Host (svchost.exe) process might experience an access violation and exit unexpectedly. The issue occurs because of the faulting module, scardhook64.dll.

[LC7580]

User Experience

- This fix provides improved support for sounds that play for a short period of time when using high quality audio.

Note:

- This fix does not take effect in sessions running on Windows Server 2008 R2.
- For this fix to work, you must use Citrix Receiver 4.4 for Windows Long Term Service Release (LTSR) CU5 or later versions and the VDA version of XenApp and XenDesktop 7.6 LTSR CU4 or later.

[LC5842]

- The USB device instance path might have additional characters at the end of the path name when the device is redirected on Version 7.6.300 of the VDA. To change this behavior, add the Product ID (PID) or Vendor ID (VID) to the following registry key:

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\icausb\Parameters

Name: DeviceInstanceIDOption

Type: REG_DWORD

Value: 0 (default value), 1, 2.

- If “DeviceInstanceIDOption” is configured to “0” (0 being the default value), devices whose VID/PID pairs are configured to “UsingSerialNumberDevices” use the serial number as the instance ID. Other devices use “serial_number+Bus_number+port_number” as the instance ID.
- If “DeviceInstanceIDOption” is configured to “1,” devices whose VID/PID pairs are configured to “UsingSerialNumberDevices” use “serial_number+Bus_number+port_number” as the instance ID. Other devices use the serial number as the instance ID.

- If “DeviceInstanceIDOption” is configured to “2,” all devices use the serial number as the instance ID.
- All other values are invalid and treated as “0.”

[LC6212]

- Sessions might become unresponsive when playing videos in a web browser.

[LC6259]

- In a multi-monitor environment, define the external monitor as the “Main Display” of Windows and position it to the right of the secondary laptop or tablet monitor in the display settings of the Control Panel. When you start a published application that appears on the external monitor and move this application to the tablet monitor or a laptop that is attached to the external monitor, opening or closing the lid of the tablet or a laptop can cause the published application to become black.

To enable the fix, you must set the following registry key value on the VDA:

HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\Ica\Thinwire

Name: EnableDrvTw2NotifyMonitorOrigin

Type: REG_DWORD

Value: 1 (to enable) and 0 (to disable; 0 is the default value). By default, the registry value is missing.

[LC7760]

User Interface

- When using the Connection Center to log off from a seamless session with unsaved data, a black window appears with the following message:

“Programs still need to close” - with the two options - “Force Logoff” or “Cancel.” The “Cancel” option does not work.

After installing this fix, the Cancel option works as designed.

[LC6075]

- URL shortcut icons might be displayed as blank when using a touch-optimized desktop.

[LC6663]

Miscellaneous

- Attempts to reconnect to a disconnected desktop session might fail.

[LC6677]

- The SHAppBarMessage API with the “ABM_GETSTATE” message might not return the correct value when executed in a seamless session.

[LC7579]

VDA for Server OS

Printing

- Printer redirection might fail intermittently.

[LC5320]

Session/Connection

- When you log on to a VDA where a user profile does not exist, a black screen might appear after the Windows Welcome screen is displayed for a period of time before the logon completes.

[LC2397]

- When you attempt to send video in a Cisco WebEx meeting by using a webcam through Citrix Receiver for Mac, the Cisco WebEx meeting might exit unexpectedly.

[LC5518]

- The VDA for Server OS might become unresponsive at the “Welcome” screen for about two minutes during the logon process. The issue occurs when you configure the last interactive logon information through Active Directory Group Policy Object (GPO).

[LC5709]

- An additional published application window might open when reconnecting to a session.

[LC5786]

- The VDA for Server OS can become unresponsive. As a result, user sessions might fail to log off.

[LC6117]

- When reading a file from a mapped client drive, the old, cached file length might be returned if the file length was changed outside of the client session. Additionally, null characters are inserted for any deleted characters.

To enable the fix, set the following registry value to “0”:

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\services\picadm\Parameters

Name: CacheTimeout

Type: REG_DWORD

Value: Default value is 60 seconds. If CacheTimeout is set to “0,” the file length is reloaded immediately and if not it is loaded after the defined timeout.

[LC6314]

- Microsoft Internet Explorer 11 might not use the virtual IP loopback address assigned to that session.

[LC6622]

- The server idle timer does not reset for iOS devices with the multi-touch feature enabled.

[LC6743]

- End User Experience Monitoring stops collecting metrics when the number of virtual channels exceeds 32.

Note: With this fix, the limit that is set for virtual channels is removed.

[LC6768]

- Active sessions might be disconnected on the XenApp servers when the Delivery Controller loses connectivity. The issue occurs when VDAs fails to track the status of sessions that move from “pre-launch” to “active” status correctly. As a result, when the Delivery Controller is restarted, it attempts to clear the resources from the VDAs, and sessions in the pre-launch status are disconnected or logged off while the applications are being actively used.

[LC6819]

- When you launch a session in windowed mode in a published desktop and span the desktop through six monitors or more, the taskbar or the screen might become gray.

[LC6862]

- After setting Google Chrome as the default browser, Microsoft Internet Explorer might continue to be the default browser when you click URLs within applications.

[LC6948]

- With the Electrolysis (e10s) feature enabled, the 64-bit version of Mozilla Firefox might exit unexpectedly. For more information, see Knowledge Center article [CTX224067](#).

[LC6982]

- With “Application Lingering” configured for the Delivery Group, published applications occasionally fail to appear when you reconnect to a session.

[LC7405]

System Exceptions

- Certain third-party applications might fail to start in an RDP session.
[LC4141]
- The service host process (Svchost.exe) that hosts Terminal Services might exit unexpectedly. The issue occurs because of the faulting module, RPM.dll.
[LC6277]
- VDAs might experience a fatal exception, displaying a blue screen, on tdica.sys with bugcheck code 0x7E.
[LC6553]
- VDAs can experience a fatal exception on wdica.sys, displaying a blue screen.
[LC6883]
- VDAs might experience a fatal exception, displaying a blue screen, on picadm.sys with bugcheck code 0x7F while shutting down a session.
[LC7545]
- The Service Host (svchost.exe) process might experience an access violation and exit unexpectedly. The issue occurs because of the faulting module, scardhook64.dll.
[LC7580]

User Experience

- This fix provides improved support for sounds that play for a short period of time when using high quality audio.

Note:

- This fix does not take effect in sessions running on Windows Server 2008 R2.
- For this fix to work, you must use Citrix Receiver 4.4 for Windows Long Term Service Release (LTSR) CU5 or later versions and the VDA version of XenApp and XenDesktop 7.6 LTSR CU4 or later.

[LC5842]

- The USB device instance path might have additional characters at the end of the path name when the device is redirected on Version 7.6.300 of the VDA. To change this behavior, add the Product ID (PID) or Vendor ID (VID) to the following registry key:

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\icausb\Parameters
Name: DeviceInstanceIDOption

Type: REG_DWORD

Value: 0 (default value), 1, 2.

- If “DeviceInstanceIDOption” is configured to “0” (0 being the default value), devices whose VID/PID pairs are configured to “UsingSerialNumberDevices” use the serial number as the instance ID. Other devices use “serial_number+Bus_number+port_number” as the instance ID.
- If “DeviceInstanceIDOption” is configured to “1,” devices whose VID/PID pairs are configured to “UsingSerialNumberDevices” use “serial_number+Bus_number+port_number” as the instance ID. Other devices use the serial number as the instance ID.
- If “DeviceInstanceIDOption” is configured to “2,” all devices use the serial number as the instance ID.
- All other values are invalid and treated as “0.”

[LC6212]

- Sessions might become unresponsive when playing videos in a web browser.

[LC6259]

- In a multi-monitor environment, define the external monitor as the “Main Display” of Windows and position it to the right of the secondary laptop or tablet monitor in the display settings of the Control Panel. When you start a published application that appears on the external monitor and move this application to the tablet monitor or a laptop that is attached to the external monitor, opening or closing the lid of the tablet or a laptop can cause the published application to become black.

To enable the fix, you must set the following registry key value on the VDA:

HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\Ica\Thinwire

Name: EnableDrvTw2NotifyMonitorOrigin

Type: REG_DWORD

Value: 1 (to enable) and 0 (to disable; 0 is the default value). By default, the registry value is missing.

[LC7760]

User Interface

- When using the Connection Center to log off from a seamless session with unsaved data, a black window appears with the following message:

“Programs still need to close” - with the two options - “Force Logoff” or “Cancel.” The “Cancel” option does not work.

After installing this fix, the Cancel option works as designed.

[LC6075]

- URL shortcut icons might be displayed as blank when using a touch-optimized desktop.

[LC6663]

Miscellaneous

- The SHAppBarMessage API with the “ABM_GETSTATE” message might not return the correct value when executed in a seamless session.

[LC7579]

Cumulative Update 3 (CU3)

August 27, 2019

Release date: January 2017

Cumulative Update 3 (CU3) provides updates to 10 [baseline components](#) of the original 7.6 LTSR.

[Issues fixed since XenApp and XenDesktop 7.6 LTSR CU2](#)

[Known issues in this release](#)

[Deprecation and removals](#)

[Citrix Product Subscription Advantage Eligibility Dates](#)

Downloads

[Download LTSR CU3 \(XenApp\)](#)

[Download LTSR CU3 \(XenDesktop\)](#)

New deployments

How do I deploy CU3 from scratch?

You can set up a brand-new XenApp or XenDesktop environment based on CU3 - using the CU3 metainstaller. Before you do that, we recommend that you familiarize yourself with the product:

Peruse the [XenApp and XenDesktop 7.6 Long Term Service Release](#) documentation and pay close attention to the [Technical Overview](#), [New Deployments](#), and [Security](#) sections before you start planning your deployment. Make sure your setup meets the [system requirements](#) for all components. Follow [New Deployments](#) for deployment instructions.

* Note: Provisioning Services and Session Recording are available as separate downloads and installers.

Existing deployments

What do I update?

CU3 provides updates to 10 [baseline components](#) of 7.6 LTSR. Remember: Citrix recommends that you update all LTSR components of your deployment to CU3. For example: If Provisioning Services is part of your LTSR deployment, update the Provisioning Services component to CU3. If Provisioning Services is not part of your deployment, you do not need to install or update it.

Since the 7.6 LTSR release, we have added a metainstaller that lets you update the existing components of your LTSR environment from a unified interface. Following the [Upgrade instructions](#), use the metainstaller to update the LTSR components of your deployment.

Note:

The following information is specific to the CU3 release. For the equivalent information for the [LTSR base release, CU1](#), or [CU2](#), see the respective documentation.

LTSR Baseline Components	Version	Notes
VDA for Desktop OS	7.6.3000	Special rules apply for Windows 10. See CU3 compatible components and platforms
VDA for Server OS	7.6.3000	
Delivery Controller	7.6.3000	
Citrix Studio	7.6.3000	
Citrix Director	7.6.3000	
Group Policy Management Experience	2.5.3000	
StoreFront	3.0.3000	
Provisioning Services	7.6.4	Special rules apply for Windows 10. See CU3 compatible components and platforms

LTSR Baseline Components	Version	Notes
Universal Print Server	7.6.3000	Only Windows 2008 R2 SP1, Windows 2012, Windows 2012 R2 supported
Session Recording	7.6.3000	Platinum Edition only

LTSR CU3 compatible components

The following components are recommended for use in 7.6 LTSR CU3 environments. These components are not eligible for the LTSR benefits (extended lifecycle and fix-only cumulative updates). Citrix might ask you to upgrade to a newer version of these components within your 7.6 LTSR environments.

Note about Windows 10:

Regular support for Windows 10 is available through the Current Release path. Windows 10 does not get the full set of 7.6 LTSR benefits. For deployments that include Windows 10 machines, Citrix recommends that you use the Current Release Version 7.9 or later of the [VDA for Desktop OS](#) and of [Provisioning Services](#).

For more information, see [Adding Windows 10 Compatibility to XenApp and XenDesktop 7.6 LTSR](#) and the [XenApp and XenDesktop Servicing Options \(LTSR\) FAQ](#).

LTSR CU3 Compatible Components and Platforms		
Component	Version	
Profile Management	5.6	
AppDNA	7.12	
License Server	11.14.0 Build 18001	
HDX RealTime Optimization Pack	2.2	
Windows 10		VDA: Version 7.9 or later; Provisioning Services: Version 7.9 or later

Compatible versions of Citrix Receiver

For ease of maintenance, and to ensure optimal performance, Citrix recommends that you upgrade to the latest version of Citrix Receiver any time it becomes available. The latest versions are available

for download at <https://www.citrix.com/downloads/citrix-receiver.html>. For your convenience, consider subscribing to the [Citrix Receiver RSS feed](#) to receive a notification when a new version of Citrix Receiver becomes available.

Note that Citrix Receiver is not eligible for the XenApp and XenDesktop LTSR benefits (extended lifecycle and fix-only cumulative updates). Citrix may ask you to upgrade to a newer version of Citrix Receiver within your 7.6 LSTR environments. In the case of Citrix Receiver for Windows, Citrix has announced a special LTSR program. More information on that program is available on the [Lifecycle Milestones for Citrix Receiver](#) page.

Specifically, LTSR supports the following versions of Citrix Receiver and all later versions:

LTSR Compatible Versions of Citrix Receiver	Version
Citrix Receiver for Windows	4.4 or later
Citrix Receiver for Linux	13.4 or later
Citrix Receiver for Mac	12.4 or later
Citrix Receiver for Chrome	2.2 or later
Citrix Receiver for HTML5	2.2 or later
Citrix Receiver for iOS	7.1.2 or later
Citrix Receiver for Android	3.9.3 or later

LTSR notable exclusions

The following features, components, and platforms are not eligible for LTSR lifecycle milestones and benefits. Specifically, cumulative updates and extended lifecycle benefits are excluded. Updates to excluded features and components will be available through regular current releases.

Excluded Features: Local App Access, Framehawk

Excluded Components: Linux VDA, Personal vDisk

Excluded Windows Platforms*: Windows 2008 32-bit (for Universal Print Server)

* Citrix reserves the right to update platform support based on third party vendors' lifecycle milestones.

Install and upgrade analytics

When you use the full-product installer to deploy or upgrade XenApp or XenDesktop components, anonymous information about the installation process is gathered and stored on the machine where

you are installing/upgrading the component. This data is used to help Citrix improve its customers' installation experiences. For more information, see <http://more.citrix.com/XD-INSTALLER>.

XenApp 6.5 migration

The XenApp 6.5 migration process helps you more efficiently and quickly transition from a XenApp 6.5 farm to a Site running XenApp 7.6 (or a later supported release). This is helpful in deployments that contain large numbers of applications and Citrix group policies, lowering the risk of inadvertently introducing errors when manually moving applications and Citrix group policies to the new XenApp Site.

After you install the XenApp 7.6 core components and create a Site, the migration process follows this sequence:

- Run the XenApp 7.6 installer on each XenApp 6.5 worker, which automatically upgrades it to a new Virtual Delivery Agent for Windows Server OS for use in the new Site.
- Run PowerShell export cmdlets on a XenApp 6.5 controller, which exports application and Citrix policy settings to XML files.
- Edit the XML files, if desired, to refine what you want to import to the new Site. By tailoring the files, you can import policy and application settings into your XenApp 7.6 Site in stages: some now and others later.
- Run PowerShell import cmdlets on the new XenApp 7.6 Controller, which import settings from the XML files to the new XenApp Site.
- Reconfigure the new Site as needed, and then test it.

For more information, see [Migrate XenApp 6.x](#).

Fixed issues

March 29, 2019

XenApp/XenDesktop 7.6 LTSR Cumulative Update 3 contains all fixes that were included in XenApp and XenDesktop 7.6 LTSR, [Cumulative Update 1](#), [Cumulative Update 2](#), plus the following, new fixes:

Citrix Director

- User name searches in Citrix Director might return a list of users listed in Citrix Director unrelated to the search.

[LC5415]

- When using Firefox 41 or later, user names are displayed with a percent-encoded space (i.e. User%20Name).

[LC6240]

Citrix Studio

- If a user logs onto a physical Remote PC console within 30 seconds after booting up, the “Current User” becomes a dash within Citrix Studio and the user cannot connect to the Remote PC ICA session.

[LC5408]

- The XenDesktop console consumes high amounts of CPU when searching for users.

[LC5691]

Controller

- When attempting to create network resources that contain a pipe symbol (“|”), connections to the hypervisor might fail with the following error message:

“Cannot connect to server”

[LC4933]

- If there is any failure in storage repository when copying over to a Machine Creation Services virtual machine, the copy displays as successful despite the copy failing.

[LC5430]

- Machine Creation Services does not recognize the “Allow migration to a Virtual Machine Host with a different processor version” setting during set up.

[LC5885]

- VDAs might get stuck in initializing state after the DDCs are rebooted.

[LC6264]

- Monitor data grooming always starts at 0:00 UTC. With this fix, monitor data grooming starts at 0:00 in local time.

[LC6275]

- When a high number of anonymous users attempt to launch apps/VDAs concurrently, the broker service loses connectivity with the database server.

[LC6320]

- When you set the working directory for a published application, the setting might not be reflected in the published application that is launched in Connection Leasing mode.

[LC6397]

- The SQL database connectivity might time out on the Controller when the load is high. Extreme blocking is observed on the SQL server and the Site might become inaccessible.

[LC6616]

Provisioning Services

Console

- When using a virtual machine to provision virtual machines from a template using a SCVMM cluster, the wizard fails to create the virtual machines after clicking Finish.

[LC5871]

- The XenDesktop Setup Wizard might not perform a full permission check, causing errors in permissions.

[LC6190]

Server

- PVS servers occasionally appear with the status “Server Unreachable” in the Replication Status window.

[LC5683]

- When using a virtual machine to provision virtual machines from a template using a SCVMM cluster, the wizard fails to create the virtual machines after clicking Finish.

[LC5871]

- When the target device’s boot.iso code receives an ARP request that has been sent with a broadcast destination, the target device’s boot.iso code sends an invalid ARP reply.

[LC6099]

- The XenDesktop Setup Wizard might not perform a full permission check, causing errors in permissions.

[LC6190]

- Soapserver might consume more than 13GB of RAM during usage.

[LC6199]

Target Device

- This fix addresses a security vulnerability. For more information, see Knowledge Center article [CTX219580](#).

[LC6200, LC6201, LC6202, LC6203, LC6204]

- The bnistack error “[MioWorkerThread] I/O Stream Socket UNAVAILABLE - not counting retry,” event ID 85, floods the event viewer while the connection to the PVS server is lost.

[LC6449]

Session Recording (Player)

- When you try to play back a recording made with a version of Citrix Receiver that is newer than the version of Session Recording, a message appears, indicating that the file cannot be played back. With this fix, even files recorded with a newer version of Citrix Receiver can be played back.

[LC6503]

StoreFront

- StoreFront does not recognize the correct client IP address even though the proxy server sends the “x-forwarded-for” header in the request.

[LC5797]

- When using a Microsoft browser, there might be a latency delay when entering a search term in the browser.

[LC6324]

- After installing StoreFront 3.0.1000 or 3.0.2000, the management console fails to start and the following error message appears: “The Management console is unavailable because of a root certificate missing, go to verisign and download the certificate - Verisign class primary CA - G5.” For more information, see Knowledge Center article [CTX218815](#).

[LC6471]

- Upgrading StoreFront to version 3.0.2000 from version 2.5 fails with Error 1603. For more information, see Knowledge Center article [CTX220411](#).

[LC6816]

Universal Print Server

- Attempts to print from Microsoft Internet Explorer might fail with the following error message when using the Citrix Universal Print Driver:

“There was an internal error and Internet Explorer is unable to print this document.”

[LC4472]

VDA for Desktop OS

Printing

- The Citrix Printer Manager Service (Cpsvc.exe) might exit unexpectedly with an access violation error.

[LC4665]

- The XenApp session printers might not be mapped correctly. For example, create two printers on a print server with identical names and add one additional character at the end of any one of the printer name. If you create a session printer policy with these two printers and log on to a VDA, only one printer might be mapped.

[LC6385]

Seamless Windows

- With Excelhook enabled, minimizing and then restoring an Excel workbook can cause the Excel window to lose focus.

[LC6637]

Server/Site Administration

- The link to \Device\MUP on VDA for Desktop OS for 32-bit systems might be missing. As a result, the anti-virus software working as a mini driver might not scan the files on the mapped drive.

[LC6041]

Session/Connection

Attempts to append data to files on a mapped client drive might fail when the files are opened by users with write-only permissions. The issue occurs when running the PowerShell command “get-process out-file -filepath “\\client\c\$\temp\proclist.txt” -Append” for the second time.

- [LC3895]
- If another process holds the same lock as picadm.sys, users cannot log off from the session and the session remains in a disconnected state.
[LC4415]
- When transitioning from a user to console session on a remote PC, certain connection properties might not get updated.
[LC5139]
- Client Drive Mapping returns corrupted file path information when an application attempts to enumerate files.
[LC5163]
- When sessions connected through the Cisco WAAS Gateway attempt to transfer files of large size due to buffer overflow on the VDA side, the VDA might exit unexpectedly.
[LC5371]
- If the Client USB device redirection rules policy contains more than 1,000 characters, all USB drives are redirected, even if there is a deny rule for the device.
[LC5457]
- Attempts to open a file might fail when there is an open handle that is overwritten. As a result, the file gets locked by the process.
[LC5657]
- When switching between full-screen and windowed mode in published seamless applications, the applications might become unresponsive if any one of the applications is in the unresponsive state.
[LC5774]
- If you power off or force a remote PC to restart while in a user session, all audio drivers might be disabled when the restart completes.
[LC6009]

- With the Citrix policy “Auto Client Reconnect” set to “Prohibited,” attempts to launch VM Hosted Apps might fail.

[LC6103]

- After upgrading to XenApp and XenDesktop 7.6 Long Term Service Release, copy and paste functionality might not work.

[LC6114]

- When you attempt to download a file by using Citrix Receiver for HTML5, the download window might not be correctly focused. As a result, you cannot select the file that is to be downloaded. As a workaround, minimize the main application window to view the download window from Citrix Receiver for HTML5.

[LC6167]

- This enhancement enables the Citrix Device Redirector service to write event logs related to USB rules and activities.

[LC6243]

- If you power off or force a remote PC to restart while in a user session, all audio drivers might be disabled when the restart completes.

[LC6322]

Smart Cards

- In a configuration where Citrix Receiver for iOS is used to launch desktop sessions to a remote PC, when you log on to StoreFront using an explicit username and password and then attempt to log on locally with a smart card to the physical remote PC, the logon attempt might fail in one of the following two ways:
 - Microsoft Windows recognizes that there is a smart card logon option, but the “Insert a smart card” prompt does not disappear even though the smart card is properly inserted.
 - Microsoft Windows does not list a smart card logon option, even though the smart card reader is attached and the smart card is properly inserted.

[LC5997]

System Exceptions

- XenApp servers can experience a fatal exception, displaying a blue screen with stop check code 0x0000000A.

[LC5917]

- VDAs can experience a fatal exception on wdica.sys, displaying a blue screen.

[LC5938]

- Citrix Audio Service (CtxAudioService.exe) might exit unexpectedly.

[LC6323]

User Experience

- When attempting to record video using OneNote, webcam redirection fails, causing recording to fail.

[LC5205]

User Interface

- If you remove the Microsoft PinYin Input Method Editor (IME) from the server IME language bar in a user session and then log off, the Pinyin IME still appears in the server IME language bar.

[LC6517]

VDA for Server OS

Printing

- The Citrix Printer Manager Service (Cpsvc.exe) might exit unexpectedly with an access violation error.

[LC4665]

- The XenApp session printers might not be mapped correctly. For example, create two printers on a print server with identical names and add one additional character at the end of any one of the printer name. If you create a session printer policy with these two printers and log on to a VDA, only one printer might be mapped.

[LC6385]

Seamless Windows

- With Excelhook enabled, minimizing and then restoring an Excel workbook can cause the Excel window to lose focus.

[LC6637]

Session/Connection

- This fix addresses the improper handling of command line parameters from within published desktops as in the following example:

If you run `"C:\\Program Files (x86)\\Citrix\\system32\\iexplore.exe"-noframemerging http://www.google.com`, Internet Explorer misinterprets the parameter and resolves the URL as `http://-noframemerging%20http://www.google.com`.

[LC3660]

Attempts to append data to files on a mapped client drive might fail when the files are opened by users with write-only permissions. The issue occurs when running the PowerShell command "get-process	out-file -filepath "\\client\c\$\temp\proclist.txt" -Append" for the second time.
--	---

- [LC3895]
- In XenApp 7.6.300, users with limited visibility to apps in a multi-forest environment might not be able to launch apps.

[LC4374]

- If another process holds the same lock as picadm.sys, users cannot log off from the session and the session remains in a disconnected state.

[LC4415]

- Client Drive Mapping returns corrupted file path information when an application attempts to enumerate files.

[LC5163]

- Attempts to reconnect to a session can fail intermittently and cause the VDAs for Server OS to go into "Initializing" status.

[LC5250]

- COM port mapping can intermittently fail upon reconnection when the group policy calculation is disabled in the registry.

[LC5274]

- When sessions connected through the Cisco WAAS Gateway attempt to transfer files of large size due to buffer overflow on the VDA side, the VDA might exit unexpectedly.

[LC5371]

- If the Client USB device redirection rules policy contains more than 1,000 characters, all USB drives are redirected, even if there is a deny rule for the device.

[LC5457]

- The VDAs for Server OS might display the VDA's status as "initializing" rather than "registered." During that time, no new sessions are brokered for that VDA.

[LC5621]

- Attempts to open a file might fail when there is an open handle that is overwritten. As a result, the file gets locked by the process.

[LC5657]

- When switching between full-screen and windowed mode in published seamless applications, the applications might become unresponsive if any one of the applications is in the unresponsive state.

[LC5774]

- After upgrading to Hotfix Rollup Pack 7, copy and paste functionality might not work.

[LC6114]

- When you attempt to download a file by using Citrix Receiver for HTML5, the download window might not be correctly focused. As a result, you cannot select the file that is to be downloaded. As a workaround, minimize the main application window to view the download window from Citrix Receiver for HTML5.

[LC6167]

- This enhancement enables the Citrix Device Redirector service to write event logs related to USB rules and activities.

[LC6243]

- The following warning message might appear in the system event log when launching XenApp 7.6 Long Term Service Release Cumulative Update 2 VDA for Server OS or the previous versions:

"An attempt to connect to the SemsService has failed with error code 0x2."

[LC6311]

- After upgrading to XenApp 7.6 Long Term Service Release Cumulative Update 1 or Cumulative Update 2, the "/appvve" switch for App-V application might not take effect.

[LC6398]

System Exceptions

- The Service Host (svchost.exe) process that is registered with Terminal Services might exit unexpectedly on RPM.dll while accessing an invalid address location.

[LC5696]

- XenApp servers can experience a fatal exception, displaying a blue screen with stop check code 0x0000000A.

[LC5917]

- VDAs can experience a fatal exception on wdica.sys, displaying a blue screen.

[LC5938]

- The Service Host (svchost.exe) process that is registered with Terminal Services might exit unexpectedly on RPM.dll.

[LC6461]

User Experience

- When attempting to record video using OneNote, webcam redirection fails, causing recording to fail.

[LC5205]

User Interface

- If you remove the Microsoft PinYin Input Method Editor (IME) from the server IME language bar in a user session and then log off, the Pinyin IME still appears in the server IME language bar.

[LC6517]

Virtual Desktop Components - Other

- Provisioned machines can lose their AD trust and VDAs fail to register. The issue occurs after you update Microsoft Windows 8 (and later versions) machine catalogs created through Machine Creation Services by using a master image or virtual machine that is different from the one used for creation of the catalog.

[LC3874]

- Machine Creation Services (MCS) created machines do not honor machine account password GPOs, causing passwords on the MCS machines to not reset.

[LC4440]

- The Activity Manager in Director might fail to show certain applications that are running for some users.

[LC6235]

Cumulative Update 2 (CU2)

August 27, 2019

Release date: September 30, 2016

Cumulative Update 2 (CU2) provides updates to 10 [baseline components](#) of the original 7.6 LTSR.

[Issues fixed since XenApp and XenDesktop 7.6 LTSR CU1](#)

[Known issues in this release](#)

[Deprecation and removals](#)

[Citrix Product Subscription Advantage Eligibility Dates](#)

Downloads

[Download LTSR CU2 \(XenApp\)](#)

[Download LTSR CU2 \(XenDesktop\)](#)

New deployments

How do I deploy CU2 from scratch?

You can set up a brand-new XenApp or XenDesktop environment based on CU2 - using the CU2 metainstaller. Before you do that, we recommend that you familiarize yourself with the product:

Peruse the [XenApp and XenDesktop 7.6 Long Term Service Release](#) documentation and pay close attention to the [Technical Overview](#), [New Deployments](#), and [Security](#) sections before you start planning your deployment. Make sure your setup meets the [system requirements](#) for all components. Follow [New Deployments](#) for deployment instructions.

* Note: Provisioning Services and Session Recording are available as separate downloads and installers.

Existing deployments

What do I update?

CU2 provides updates to 10 [baseline components](#) of 7.6 LTSR. Remember: Citrix recommends that you update all LTSR components of your deployment to CU2. For example: If Provisioning Services is part of your LTSR deployment, update the Provisioning Services component to CU2. If Provisioning Services is not part of your deployment, you do not need to install or update it.

Since the 7.6 LTSR release, we have added a metainstaller that lets you update the existing components of your LTSR environment from a unified interface. Following the [Upgrade instructions](#), use the metainstaller to update the LTSR components of your deployment.

Note:

The following information is specific to the CU2 release. For the equivalent information for the [LTSR base release](#) or [CU1](#), see the respective documentation.

LTSR Baseline Components	Version	Notes
VDA for Desktop OS	7.6.2000	Special rules apply for Windows 10. See CU2 compatible components and platforms .
VDA for Server OS	7.6.2000	
Delivery Controller	7.6.2000	
Citrix Studio	7.6.2000	
Citrix Director	7.6.2000	
Group Policy Management Experience	2.5.2000	
StoreFront	3.0.2000	
Provisioning Services	7.6.3	Special rules apply for Windows 10. See CU2 compatible components and platforms .
Universal Print Server	7.6.2000	Only Windows 2008 R2 SP1, Windows 2012, Windows 2012 R2 supported
Session Recording	7.6.1000	Platinum Edition only

CU2 compatible components

The following components are recommended for use in 7.6 LTSR CU2 environments. These components are not eligible for the LTSR benefits (extended lifecycle and fix-only cumulative updates). Citrix may ask you to upgrade to a newer version of these components within your 7.6 LTSR environments.

Note about Windows 10:

Regular support for Windows 10 is available through the Current Release path. Windows 10 does not get the full set of 7.6 LTSR benefits. For deployments that include Windows 10 machines, Citrix recommends that you use the Current Release Version 7.9 or later of the [VDA for Desktop OS](#) and of [Provisioning Services](#).

For more information, see [Adding Windows 10 Compatibility to XenApp and XenDesktop 7.6 LTSR](#) and the [XenApp and XenDesktop Servicing Options \(LTSR\) FAQ](#).

LTSR CU2 Compatible Components and Platforms	Version
Profile Management	5.5
AppDNA	7.6.5
License Server	11.14.0 Build 17005
HDX RealTime Optimization Pack	2.1.1
Windows 10	VDA: Version 7.9 or later; Provisioning Services: Version 7.9 or later

Compatible versions of Citrix Receiver

For ease of maintenance, and to ensure optimal performance, Citrix recommends that you upgrade to the latest version of Citrix Receiver any time it becomes available. The latest versions are available for download at <https://www.citrix.com/downloads/citrix-receiver.html>. For your convenience, consider subscribing to the [Citrix Receiver RSS feed](#) to receive a notification when a new version of Citrix Receiver becomes available.

Note that Citrix Receiver is not eligible for the XenApp and XenDesktop LTSR benefits (extended lifecycle and fix-only cumulative updates). Citrix may ask you to upgrade to a newer version of Citrix Receiver within your 7.6 LSTR environments. In the case of Citrix Receiver for Windows, Citrix has announced a special LTSR program. More information on that program is available on the [Lifecycle Milestones for Citrix Receiver](#) page.

Specifically, LTSR supports the following versions of Citrix Receiver and all later versions:

LTSR Compatible Versions of Citrix Receiver	Version
Citrix Receiver for Windows	4.4 or later
Citrix Receiver for Linux	13.4 or later
Citrix Receiver for Mac	12.3 or later
Citrix Receiver for Chrome	2.1 or later
Receiver for HTML5	2.1 or later
Citrix Receiver for iOS	7.1.1 or later
Citrix Receiver for Android	3.9 or later

LTSR notable exclusions

The following features, components, and platforms are not eligible for LTSR lifecycle milestones and benefits. Specifically, cumulative updates and extended lifecycle benefits are excluded. Updates to excluded features and components will be available through regular current releases.

Excluded Features: Local App Access, Framehawk

Excluded Components: Linux VDA, Personal vDisk

Excluded Windows Platforms*: Windows 2008 32-bit (for Universal Print Server)

* Citrix reserves the right to update platform support based on third party vendors' lifecycle milestones.

XenApp 6.5 migration

The XenApp 6.5 migration process helps you more efficiently and quickly transition from a XenApp 6.5 farm to a Site running XenApp 7.6 (or a later supported release). This is helpful in deployments that contain large numbers of applications and Citrix group policies, lowering the risk of inadvertently introducing errors when manually moving applications and Citrix group policies to the new XenApp Site.

After you install the XenApp 7.6 core components and create a Site, the migration process follows this sequence:

- Run the XenApp 7.6 installer on each XenApp 6.5 worker, which automatically upgrades it to a new Virtual Delivery Agent for Windows Server OS for use in the new Site.
- Run PowerShell export cmdlets on a XenApp 6.5 controller, which exports application and Citrix policy settings to XML files.

- Edit the XML files, if desired, to refine what you want to import to the new Site. By tailoring the files, you can import policy and application settings into your XenApp 7.6 Site in stages: some now and others later.
- Run PowerShell import cmdlets on the new XenApp 7.6 Controller, which import settings from the XML files to the new XenApp Site.
- Reconfigure the new Site as needed, and then test it.

For more information, see [Migrate XenApp 6.x](#).

Support for Citrix Connector 7.5

Citrix Connector 7.5 provides a bridge between Microsoft System Center Configuration Manager and XenApp or XenDesktop, enabling you to extend the use of Configuration Manager to your Citrix environments. Citrix Connector 7.5 support now includes the Platinum editions of XenApp 7.6 and XenDesktop 7.6.

For information, see [Citrix Connector 7.5 for System Center Configuration Manager 2012](#).

Fixed issues

March 21, 2019

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 the Registry Editor can be solved. Use the Registry Editor at your own risk. Be sure to back up the registry before you edit it.

XenApp/XenDesktop 7.6 LTSR Cumulative Update 2 contains all fixes that were included in XenApp and XenDesktop 7.6 LTSR and [Cumulative Update 1](#), plus the following, new fixes:

Citrix Director

- When a user session is viewed in the HDX panel of Citrix Director, a priority warning might incorrectly appear for the audio virtual channel.

[LC5564]

Citrix Policy

- The w3wp.exe process can consume 100% of the CPU.

[LC4355]

- Citrix Studio might allow policy filter editing for read-only administrators.

[LC4801]

- Citrix group policies stored in Active Directory are removed from the machine on the next GPO refresh or when you run GPOupdate /Force. This issue occurs on VDA versions 7.6.300 and later.

[LC5204]

- The following error message appears when opening the Citrix Studio and selecting the policy node:

“Changes made to policies outside of this console, such as in PowerShell or management tools from previous versions, resulted in a discrepancy between policies. The assigned objects of policy <policy name> must match. Object Delivery Group has assignments <assignment name> in the “user” component and <assignment name> in the “computer” component.”

[LC5510]

Citrix Studio

- Citrix Studio does not receive logging entries while in the logging node when trying to retrieve large amounts of data.

[LC5292]

- Citrix Studio might show an incorrect message or prompt for a Site upgrade when a FlexCast Management Architecture service has been stopped or is unavailable.

[LC5319]

Controller

- When a large number of sessions are launched in a short time, Director might take a long time to show session information.

[LC1617]

- When using VMware ESXi 5.x or 6.0 to create MCS machines, occasionally the machine deployments are consolidated and cloned as a thick provisioned disk.

[LC4655]

- When the VDA is in maintenance mode, the Get-BrokerSession cmdlet might return the maintenance mode state of the Delivery Group instead of the individual machine.

[LC4840]

- Citrix Studio occasionally launches with the following error message: “Could not connect to broker service.”

[LC4854]

- This fix addresses an issue that prevents Machine Creation Services provisioning from working in Amazon Web Services when the Controller is isolated from Amazon’s public API endpoints by way of a web proxy.

[LC5109]

- Citrix Studio might show an incorrect message or prompt for a Site upgrade when a FlexCast Management Architecture service has been stopped or is unavailable.

[LC5319]

HDX MediaStream Flash Redirection

- With HDX MediaStream Flash Redirection enabled, Microsoft Internet Explorer might close unexpectedly when it runs pseudoserverinproc2.dll.

To enable the fix, create the following registry key:

- *On Windows 32-bit systems:*

HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\HdxMediaStreamForFlash\Server\PseudoServer

Name: AllowCOMObjectTrack

Type: DWORD

Value: 0

- *On Windows 64-bit systems:*

HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Citrix\HdxMediaStreamForFlash\Server\PseudoS

Name: AllowCOMObjectTrack

Type: DWORD

Value: 0

[LC1885]

- With HDX MediaStream Windows Media Redirection enabled, certain third party players might exit unexpectedly while rendering files on a VDA that is running on Windows 10.

[LC5110]

Licensing

- Site Setup in Citrix Studio might fail to proceed when choosing “Use an existing license.” As a workaround, restart the Citrix Web Services for Licensing service on the license server to complete its configuration.

[630814]

Provisioning Services

Console

- When expanding Sites, the PVS console occasionally times out.

[LC4737]

- The XenDesktop Setup wizard does not use the template boot properties when creating targets. To enable the fix, create the following registry key:

HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\ProvisioningServices

Name: UseTemplateBootOrder

Type: REG_DWORD

Data: 1

[LC5237]

Server

- The number of target devices on the Provisioning Services Console might show less than the actual value after the database connection is lost and recovered.

[LC4275]

- Boot Device Manager target devices fail to acquire an IP address whereas PXE target devices acquire them successfully. This happens because the DHCP Discover request sent by the Boot Device Manager set the “Seconds Elapsed” value to 0. The request is then dropped by IP Helper. The “Seconds Elapsed” value is now set to 4 to avoid this problem.

[LC4369]

- If you change the MTU size to less than 1,500 byte, the bootstrap file fails to download and target devices fail to start using the Boot Device Manager (BDM). This enhancement allows you to lower the MTU size to less than 1,500 byte by setting the following registry key. The enhancement is disabled by default:

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\services\PVSTSB\Parameters

Name: AllowMTUAdjust

Type: DWORD

Value: 1

[LC4531]

- When expanding Sites, the PVS console occasionally times out.

[LC4737]

- When attempting to import a new vDisk version of a VHDX file, the import fails and an error message appears that says the Manifest file is invalid.

[LC4985]

- The Provisioning Server logs might show incorrect IP addresses for target devices.

[LC5323]

- The following database access error might appear in the event viewer of the Provisioning Server:
“DBAccess error: <Couldn’t add record – same fields as an existing record><-31749>.”

The issue occurs when multiple Provisioning Servers call a specific stored procedure simultaneously, causing conflicts between the calls to the stored procedure. As a result, an attempt to insert a record with the same key value twice might occur.

[LC5364]

- Attempts to restart provisioned targets might fail intermittently because of a database timeout error. The following error message might appear:

“Timeout expired. The timeout period elapsed prior to completion of the operation or the server is not responding.”

[LC5511]

- The BNPXE Server that enables the target devices to start from the network binds to the IP address 127.0.0.1. This prevents target devices from booting. This issue can happen when BNPXE enumerates the network interfaces, but the operating system has not discovered all the interfaces yet and only returns 127.0.0.1.

[LC5916]

- Attempts to start target devices might fail when using HP Moonshot systems.

[LC6024]

Target Device

- When creating a personal vDisk, a “Personal vDisk cannot start” error dialog appears after the machine is booted and a formatted disk cannot be used due to an “unknown format” error.

[LC5935]

StoreFront

- When using Windows Server 2008 R2, the Citrix StoreFront MMC might exit unexpectedly if you try to “Set Unified Experience as Default” in the Stores menu.

[LC3614]

- This fix addresses issues with syncing changed subscription items from remote groups to local and back.

[LC4690]

- Setting the “Session Timeout” of Citrix Receiver for Web to more than 24 days causes a Session Timeout warning to appear immediately after logon.

[LC4787]

- The Desktop Appliance Site does not launch the assigned desktop if the store is using Resources Aggregation.

[LC4838]

- With StoreFront 3.0.1, Workspace Control might not work when using Aggregation.

[LC5042]

- When using PowerShell script commands, the AllFailedBypassDuration setting is occasionally not applied.

[LC5500]

- If the “IncludedClientIPFilter” or “ExcludedClientIPFilter” options are enabled by the “Set-BrokerAccessPolicyRule” command, you might not be able to view resources such as shared resources, published desktops, or published applications on StoreFront.

[LC6058]

Universal Print Server

Client

- The NextGen application occasionally fails when trying to print to the Universal Print Server.

[LC4246]

Server

- The Citrix XTE Server service (XTE.exe) can exit unexpectedly.

[LC0759]

VDA for Desktop OS

Desktop Studio

- A logged off RDP session might appear as “Disconnected” in Citrix Studio and becomes unavailable for reconnection.

[LC5427]

HDX 3D Pro

- The context menu might not display correctly on the desktop when the window is maximized.

[LC5263]

HDX MediaStream Windows Media Redirection

- With HDX MediaStream Windows Media Redirection enabled, certain third party players might exit unexpectedly while rendering files on a VDA that is running on Windows 10.

[LC5110]

Installing, Uninstalling, Upgrading

- Attempts to reconnect to a session from an endpoint with a different resolution can cause the VDA to exit unexpectedly and might result in a black or white window.

[LC4606]

Keyboard

- When upgrading from Version 5.4.400 to Version 7.6.300, the ICA Service\System32 directory is missing, and keyboard/mouse inputs fail to register in Mac clients.

[LC4681]

Printing

- When a default printer is not set, all mapped printers might fail in sessions.
[LC4354]
- With legacy printer names enabled, autocreated printers might not be available for use in a published application when multiple sessions are established on a single server for the same user.
[LC4517]
- The “Auto-create client printers” policy might fail to set default printers correctly in a published application and Microsoft XPS Document Writer is set as the default printer.
[LC4696]
- Excel spreadsheets generated by SAP fail to print on printers redirected using the Universal Print Driver EMF driver.
[LC4853]
- After a user logs off and logs back on, printers connected to the session might not be accessible.
[LC5188]
- The Print Preview on Client option within Citrix Universal Print Driver displays to the local endpoint.
[LC5404]

Session/Connection

- When resizing a reconnected session with a Citrix policy in place to prohibit session wallpaper and a Microsoft group policy in place that specified a wallpaper, the Citrix policy is not honored.
[LC0115]
- Information remains visible on the screen after the VDA goes into screen saver or power save mode, until the user provides input (mouse or keyboard) which updates the session with a blank screen. This occurs when screen savers and the power-save option in sessions are enabled by the DWORD value HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\Graphics\SetDisplayRequiredMode = 0.
[LC1650]
- On systems with Hotfix ICAWS760WX86022 installed, attempts to reconnect to a user session might fail when you restart the Citrix ICA Service.
[LC3714]

- With this enhancement, an entry is written to the Windows Event log when a USB device is redirected in a session.

[LC3996]

- When you log on to a web interface that is configured for single sign-on using UPN credentials, the session window might appear for a while and then exit unexpectedly.

[LC4035]

- Using published instances of Microsoft Internet Explorer, attempts to download a file from a website and saving it to a mapped client drive (“Save as...”) can fail.

[LC4300]

- Audio files might fail to play in a VDA session when connected through Citrix Receiver for Mac or a Chromebook.

[LC4596]

- After a network interruption between a VDA and Citrix Receiver, you cannot play back an .avi file on Windows Media Player.

[LC4670]

- When switching sessions between windowed and full-screen mode with legacy graphics mode enabled, the application windows running on the VDA might not retain the maximized state.

[LC4693]

- After upgrading a VDA from version 5.6.300, VDAs can become unresponsive.

[LC4851]

- Time zone redirection might not work in user sessions running on iOS devices.

[LC4869]

- After using the Remote Desktop Protocol, the ICA session might display a grey screen when re-connecting to the VM. This issue only occurs on VDAs installed with /NOCITRIXWDDM.

[LC4970]

- A USB device might fail to work after it is redirected to Version 7.6.300 of the VDA. The issue occurs when the instance ID of the device is different from the serial number.

To enable this fix, add the Product ID or Vendor ID pairs to the following registry key:

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\icausb\Parameters

Name: UsingSerialNumberDevices

Type: REG_MULTI_SZ

Value: **<Note:** Next to the comments string, add the vid=xxxx and pid=xxxx pairs. (The syntax for the value is an ordered list of case insensitive rules where “#” is a line comment and each rule is an ordered vid and pid pair. For example, vid=#-number and pid=#-number. The maximum hex value for a vid/pid is FFFF. If the length of a vid/pid hex value is less than 4, pair the number with zeroes (0). For example, if the vid is 12 and pid is 13; the vid/pid pairs should be vid=0012, pid=0013. Each rule has a fixed length: 17, no spaces at the beginning or the end of the rule. Examples: #vid=FFFF, #pid=FFFF #vid=0012, #pid=0013.)>

[LC5035]

- The svchost.exe process can consume 100% of the CPU.

[LC5041]

- With Excelhook enabled and after applying hotfix ICATS760WX64028, the Excel window does not minimize when clicking the Excel icon in the taskbar.

[LC5060]

- The svchost.exe process might fail intermittently on SCardHook64.dll when a user is logging on or off and Certificate Propagation is active.

[LC5083]

- This fix addresses an issue that breaks client-side fetching for DirectShow based applications, preventing videos from rendering.

[LC5098]

- The operating system experiences an error on picadd.sys and a blue screen appears with bugcheck code 0xd5.

[LC5134]

- An external USB DVD drive that is mapped into a session as a mapped client drive can cause slow session performance.

[LC5231]

- COM port mapping can intermittently fail.

[LC5235]

- The following counters in the performance monitor might display inconsistently.

- \ICA Session\Input Session Bandwidth

- \ICA Session\Output Session Bandwidth

The issue occurs only when the count value is high.

[LC5262]

- The operating system experiences an error on picadd.sys and a blue screen appears with bugcheck code 0x3b.
[LC5299]
- The VDA might become unresponsive at the “Welcome” screen due to a deadlock on picadm.sys.
[LC5326]
- Attempts to save a published Microsoft Excel spreadsheet to a Chromebook device might fail. The issue occurs because the file extension is not present.
[LC6001]

Smart Cards

- The Sign-in option does not appear on Version 7.6.300 and later VDAs running on Windows 10 Build 10586 and later. As a result, smart card logons are not possible.
[LC4778]
- When you allow your ICA session to be disconnected through an idle session timer and then log on to the Remote PC from the console, smart card logons no longer work. At times, the option to see the smart card tile is missing, or the card is not detected.
[LC5187]
- XenDesktop smart card sessions might randomly disconnect.
[LC5265]
- Attempts to log on by using certain smart cards might result in the following error message:
“No valid certificates were found on this smart card.
Please try another smart card or contact your administrator.”
[LC5456]

System Exceptions

- With Adobe Shockwave plugin installed on a machine catalog that is attached to a PVD, Microsoft Internet Explorer might exit unexpectedly in a user session.
[LC4027]
- The operating system experiences an error on picadm.sys and a blue screen appears with bugcheck code 0x50.
[LC4529]

- The operating system experiences an error on picadm.sys and a blue screen appears.
[LC4567]
- A non-handled exception copying from USB devices might cause the operating system to experience an error and a blue screen appears.
[LC4782]
- A published application process might exit unexpectedly with an exception “c000041d” on MobileDesktopHook64.dll.
[LC4821]
- When you log on to a VDA running on Windows Server 2008 R2 through a remote desktop and launch certain third-party applications, the applications might exit unexpectedly.
[LC5891]

User Experience

- When you switch from a touch-optimized published desktop to a regular published desktop, the Start button:
 - Does not highlight when you hover over it
 - Brings up the local desktop instead of the published desktop
[LC3466]
- Certain .wmv files might not play at the correct aspect ratio.
[LC4695]
- Customized functions for a 3Dconnexion SpaceMouse might not work in a VDA session. To enable this fix, set a REG_DWORD in the registry:

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\services\picakbf

Name: Enable3DConnexionMouse
Type: REG_DWORD
Data: 1

[LC4797]
- Connecting to audio recording/dictation software during an ICA session might cause the software to exit unexpectedly.

[LC5407]

User Interface

- After publishing seamless applications, the generic Citrix Receiver icon may appear instead of the published app icon in the taskbar.

[LC4757]

VDA for Server OS

HDX MediaStream Windows Media Redirection

- With HDX MediaStream Windows Media Redirection enabled, certain third party players might exit unexpectedly while rendering files on a VDA that is running on Windows 10.

[LC5110]

Keyboard

- When upgrading from Version 5.4.400 to Version 7.6.300, the ICA Service\System32 directory is missing, and keyboard/mouse inputs fail to register in Mac clients.

[LC4681]

- The Bloomberg keyboard is unable to be mapped within the VDA session even though it is allowed in the policy.

[LC5360]

Printing

- When a default printer is not set, all mapped printers might fail in sessions.

[LC4354]

- With legacy printer names enabled, autocreated printers might not be available for use in a published application when multiple sessions are established on a single server for the same user.

[LC4517]

- The “Auto-create client printers” policy might fail to set default printers correctly in a published application and Microsoft XPS Document Writer is set as the default printer.

[LC4696]

- Excel spreadsheets generated by SAP fail to print on printers redirected using the Universal Print Driver EMF driver.

[LC4853]

- After a user logs off and logs back on, printers connected to the session might not be accessible.
[LC5188]
- The Print Preview on Client option within Citrix Universal Print Driver displays to the local end point.
[LC5404]

Server/Site Administration

- The changes made or values added to the registry key “HKEY_CURRENT_USER\Software\Microsoft\Internet Explorer\Main” created by the WfShell.exe process might not be preserved during logoff.
[LC4648]

Session/Connection

- When resizing a reconnected session with a Citrix policy in place to prohibit session wallpaper and a Microsoft group policy in place that specified a wallpaper, the Citrix policy is not honored.
[LC0115]
- When exiting a 64bit ThinAPP packaged application, the application can experience an unexpected exception on sfrhook64.dll.

To prevent this, create following server-side registry key to resolve the issue:

HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\CtxHook\Applnit_Dlls\SfrHook

Name: SkipUnloadonProcessExit

Type: DWORD

Data: Any Value

[LC3484]

- On systems with Hotfix ICAWS760WX86022 installed, attempts to reconnect to a user session might fail when you restart the Citrix ICA Service.
[LC3714]
- With this enhancement, an entry is written to the Windows Event log when a USB device is redirected in a session.
[LC3996]
- Using published instances of Microsoft Internet Explorer, attempts to download a file from a website and saving it to a mapped client drive (“Save as...”) can fail.
[LC4300]

- In sessions on systems with Fix #LC1155 installed, an image display area inside a custom application is not resized properly if you resize the window manually.

[LC4319]

- Audio files might fail to play in a VDA session when connected through Citrix Receiver for Mac or a Chromebook.

[LC4596]

- After a network interruption between a VDA and Citrix Receiver, you cannot play back an .avi file on Windows Media Player.

[LC4670]

- Time zone redirection might not work in user sessions running on iOS devices.

[LC4869]

- After using the Remote Desktop Protocol, the ICA session might display a grey screen when re-connecting to the VM. This issue only occurs on VDAs installed with /NOCITRIXWDDM.

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- A USB device might fail to work after it is redirected to Version 7.6.300 of the VDA. The issue occurs when the instance ID of the device is different from the serial number.

To enable this fix, add the Product ID or Vendor ID pairs to the following registry key:

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\icausb\Parameters

Name: UsingSerialNumberDevices

Type: REG_MULTI_SZ

Value: **<Note:** Next to the comments string, add the vid=xxxx and pid=xxxx pairs. (The syntax for the value is an ordered list of case insensitive rules where “#” is a line comment and each rule is an ordered vid and pid pair. For example, vid=#-number and pid=#-number. The maximum hex value for a vid/pid is FFFF. If the length of a vid/pid hex value is less than 4, pair the number with zeroes (0). For example, if the vid is 12 and pid is 13; the vid/pid pairs should be vid=0012, pid=0013. Each rule has a fixed length: 17, no spaces at the beginning or the end of the rule. Examples: #vid=FFFF, #pid=FFFF #vid=0012, #pid=0013.)>

[LC5035]

- The svchost.exe process can consume 100% of the CPU.

[LC5041]

- With Excelhook enabled and after applying hotfix ICATS760WX64028, the Excel window does not minimize when clicking the Excel icon in the taskbar.

[LC5060]

- The svchost.exe process might fail intermittently on SCardHook64.dll when a user is logging on or off and Certificate Propagation is active.

[LC5083]

- This fix addresses an issue that breaks client-side fetching for DirectShow based applications, preventing videos from rendering.

[LC5098]

- Sessions might not disconnect, resulting in random VDA re-registrations.

[LC5122]

- The operating system experiences an error on picadd.sys and a blue screen appears with bugcheck code 0xd5.

[LC5134]

- An external USB DVD drive that is mapped into a session as a mapped client drive can cause slow session performance.

[LC5231]

- COM port mapping can intermittently fail.

[LC5235]

- The following counters in the performance monitor might display inconsistently.

- \ICA Session\Input Session Bandwidth
- \ICA Session\Output Session Bandwidth

The issue occurs only when the count value is high.

[LC5262]

- The operating system experiences an error on picadd.sys and a blue screen appears with bugcheck code 0x3b.

[LC5299]

- The VDA might become unresponsive at the “Welcome” screen due to a deadlock on picadm.sys.

[LC5326]

- With Special Folder Redirection enabled, published applications might fail to launch and the following error message appears:

“The Citrix server is unable to process your request to start this published application.”

[LC5593]

- After upgrading a VDA from Version 7.6.300 to Version 7.6 LTSR Cumulative Update 1, launching of applications might be slow or can fail.

[LC5661]

- Attempts to save a published Microsoft Excel spreadsheet to a Chromebook device might fail. The issue occurs because the file extension is not present.

[LC6001]

Smart Cards

- The Sign-in option does not appear on Version 7.6.300 and later VDAs running on Windows 10 Build 10586 and later. As a result, smart card logons are not possible.

[LC4778]

- XenDesktop smart card sessions might randomly disconnect.

[LC5265]

- Attempts to log on by using certain smart cards might result in the following error message:

“No valid certificates were found on this smart card.
Please try another smart card or contact your administrator.”

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System Exceptions

- The operating system experiences an error on picadm.sys and a blue screen appears with bugcheck code 0x50.

[LC4529]

- The operating system experiences an error on picadm.sys and a blue screen appears.

[LC4567]

- A non-handled exception copying from USB devices might cause the operating system to experience an error and a blue screen appears.

[LC4782]

- A published application process might exit unexpectedly with an exception “c000041d” on MobileDesktopHook64.dll.

[LC4821]

- When you log on to a VDA running on Windows Server 2008 R2 through a remote desktop and launch certain third-party applications, the applications might exit unexpectedly.

[LC5891]

User Experience

- When you switch from a touch-optimized published desktop to a regular published desktop, the Start button:
 - Does not highlight when you hover over it
 - Brings up the local desktop instead of the published desktop

[LC3466]

- Certain .wmv files might not play at the correct aspect ratio.

[LC4695]

- Connecting to audio recording/dictation software during an ICA session might cause the software to exit unexpectedly.

[LC5407]

User Interface

- After publishing seamless applications, the generic Citrix Receiver icon may appear instead of the published app icon in the taskbar.

[LC4757]

Cumulative Update 1 (CU1)

August 22, 2019

Release date: May 26, 2016

XenApp and XenDesktop 7.6 LTSR Cumulative Update 1 (CU1):

- fixes roughly 200 issues reported since 7.6 LTSR, for a total of over 330 issues since the release of XenApp and XenDesktop 7.6
- comes with a metainstaller that allows you to install most components from a single, unified interface

Note: Provisioning Services and Session Recording are available as separate downloads and installers

[Issues fixed since XenApp and XenDesktop 7.6 LTSR](#)

[Issues fixed since XenApp and XenDesktop 7.6](#)

[Known issues in this release](#)

[Deprecation and removals](#)

[Citrix Product Subscription Advantage Eligibility Dates](#)

New deployments

How do I deploy CU1 from scratch?

You can set up a brand-new XenApp/XenDesktop environment based on CU1 - using the CU1 metainstaller. Before you do that, we recommend that you familiarize yourself with the product:

Peruse the [XenApp and XenDesktop 7.6 Long Term Service Release](#) section and pay close attention to the [Technical Overview](#), [New Deployments](#), and [Security](#) sections before you start planning your deployment. Make sure your setup meets the [system requirements](#) for all components. Follow [New Deployments](#) for deployment instructions.

Existing deployments

What do I update?

CU1 provides updates to 10 [baseline components](#) of 7.6 LTSR. Remember: Citrix recommends that you update all LTSR components of your deployment to CU1. For example: If Provisioning Services is part of your LTSR deployment, update the Provisioning Services component to CU1. If Provisioning Services is not part of your deployment, you do not need to install or update it.

Since the 7.6 LTSR release, we have added a metainstaller that lets you update the existing components of your LTSR environment from a unified interface. Following the [Upgrade instructions](#), use the metainstaller to update the LTSR components of your deployment.

Note:

The following information is specific to the CU1 release. For the equivalent information for the [LTSR base release](#) or [CU2](#), see the respective documentation.

LTSR Baseline Components	Version	Notes
VDA for Desktop OS	7.6.1000	Special rules apply for Windows 10. See CU1 compatible components and platforms .

LTSR Baseline Components	Version	Notes
VDA for Server OS	7.6.1000	
Delivery Controller	7.6.1000	
Citrix Studio	7.6.1000	
Citrix Director	7.6.1000	
Group Policy Management Experience	2.5.1000	
StoreFront	3.0.1000	
Provisioning Services	7.6.2	Special rules apply for Windows 10. See CU1 compatible components and platforms .
Universal Print Server	7.6.1000	Only Windows 2008 R2 SP1, Windows 2012, Windows 2012 R2 supported
Session Recording	7.6.1000	Platinum Edition only

CU1 compatible components

The following components are recommended for use in 7.6 LTSR CU1 environments. These components are not eligible for the LTSR benefits (extended lifecycle and fix-only cumulative updates). Citrix may ask you to upgrade to a newer version of these components within your 7.6 LTSR environments.

Note about Windows 10:

Regular support for Windows 10 is available through the Current Release path. Windows 10 does not get the full set of 7.6 LTSR benefits. For deployments that include Windows 10 machines, Citrix recommends that you use Version 7.9 of the VDA for Desktop OS and of Provisioning Services.

For more information, see [Adding Windows 10 Compatibility to XenApp and XenDesktop 7.6 LTSR](#) and the [XenApp and XenDesktop Servicing Options \(LTSR\) FAQ](#).

LTSR CU1 Compatible Components and Platforms	Version
Profile Management	5.4
AppDNA	7.6.5
License Server	11.13.1

LTSR CU1 Compatible Components and Platforms	Version
HDX RealTime Optimization Pack	2.0
Windows 10	VDA: Version 7.9; Provisioning Services: Version 7.9

Compatible versions of Citrix Receiver

For ease of maintenance, and to ensure optimal performance, Citrix recommends that you upgrade to the latest version of Citrix Receiver any time it becomes available. The latest versions are available for download at <https://www.citrix.com/downloads/citrix-receiver.html>. For your convenience, consider subscribing to the [Citrix Receiver RSS feed](#) to receive a notification when a new version of Citrix Receiver becomes available.

Note that Citrix Receiver is not eligible for the XenApp and XenDesktop LTSR benefits (extended lifecycle and fix-only cumulative updates). Citrix may ask you to upgrade to a newer version of Citrix Receiver within your 7.6 LSTR environments. In the case of Citrix Receiver for Windows, Citrix has announced a special LTSR program. More information on that program is available on the [Lifecycle Milestones for Citrix Receiver](#) page.

Specifically, LTSR supports the following versions of Citrix Receiver and all later versions:

LTSR Compatible Versions of Citrix Receiver	Version
Citrix Receiver for Windows	4.4 or later
Citrix Receiver for Linux	13.2.1 or later
Citrix Receiver for Mac	12.1 or later
Citrix Receiver for Chrome	1.8 or later
Citrix Receiver for HTML5	1.8 or later
Citrix Receiver for iOS	6.1.1 or later
Citrix Receiver for Android	3.8 or later

LTSR notable exclusions

The following features, components, and platforms are not eligible for LTSR lifecycle milestones and benefits. Specifically, cumulative updates and extended lifecycle benefits are excluded. Updates to excluded features and components will be available through regular current releases.

Excluded Features: Local App Access, Framehawk

Excluded Components: Linux VDA, Personal vDisk

Excluded Windows Platforms*: Windows 2008 32-bit (for Universal Print Server)

* Citrix reserves the right to update platform support based on third party vendors' lifecycle milestones.

XenApp 6.5 migration

The XenApp 6.5 migration process helps you more efficiently and quickly transition from a XenApp 6.5 farm to a Site running XenApp 7.6 (or a later supported release). This is helpful in deployments that contain large numbers of applications and Citrix group policies, lowering the risk of inadvertently introducing errors when manually moving applications and Citrix group policies to the new XenApp Site.

After you install the XenApp 7.6 core components and create a Site, the migration process follows this sequence:

- Run the XenApp 7.6 installer on each XenApp 6.5 worker, which automatically upgrades it to a new Virtual Delivery Agent for Windows Server OS for use in the new Site.
- Run PowerShell export cmdlets on a XenApp 6.5 controller, which exports application and Citrix policy settings to XML files.
- Edit the XML files, if desired, to refine what you want to import to the new Site. By tailoring the files, you can import policy and application settings into your XenApp 7.6 Site in stages: some now and others later.
- Run PowerShell import cmdlets on the new XenApp 7.6 Controller, which import settings from the XML files to the new XenApp Site.
- Reconfigure the new Site as needed, and then test it.

For more information, see [Migrate XenApp 6.x](#).

Support for Citrix Connector 7.5

Citrix Connector 7.5 provides a bridge between Microsoft System Center Configuration Manager and XenApp or XenDesktop, enabling you to extend the use of Configuration Manager to your Citrix environments. Citrix Connector 7.5 support now includes the Platinum editions of XenApp 7.6 and XenDesktop 7.6.

For information, see [Citrix Connector 7.5 for System Center Configuration Manager 2012](#).

Issues fixed since XenApp and XenDesktop 7.6 LTSR

June 28, 2019

XenApp/XenDesktop 7.6 LTSR Cumulative Update 1 addresses the following issues reported since the release of XenApp and XenDesktop 7.6 LTSR.

For a list of all issues fixed since the release of XenApp and XenDesktop 7.6, see [Issues fixed since XenApp and XenDesktop 7.6](#).

Citrix Director

- User name searches in Director can experience random delays of up to two minutes.
[LC1250]
- When attempting to export a large amount of data in PDF format, the server's CPU and memory consumptions can approach 100% and the following error message appears:

“Action failed. Data source unresponsive or reported an error. View server event logs for further information.”

This fix introduces a configurable limit for the PDF export and as a result, at least a portion of the report can be obtained.

After installing this fix, you must configure the web.config file in the wwwroot\Director folder as follows:

Add the following line to “appSettings” section:

```
<add key="UI.ExportPdfDrilldownLimit" value="100"/>
```

The limit depends on the capability of the server, such as the memory size where the value specifies the count of rows in the PDF report.

[LC4108]

- Attempts to export reports in any file format might fail with the following error message:
“Action failed. Unexpected server error. View server event logs for further information.”

[LC4281]

- If a XenApp server has two IP addresses and the DNS server cannot resolve the first IP address, attempts to log on to Citrix Director by an administrator might fail with the following error message:

“The system is currently unavailable. Please try again later or contact your administrator.”

[LC4411]

- When attempting to export a large amount of data in CSV format, a timeout can occur and the export might fail with the following error message:

“Action failed. Data source unresponsive or reported an error. View Director server event logs for further information.”

This fix lets you configure the timeout value for exporting data.

After installing the fix, you must configure the web.config file in the wwwroot\Director folder as follows:

Add the following line to “appSettings” section:

<add key=”Connector.DataServiceContext.Timeout” value=”3600” /> where the value specifies the timeout in seconds.

[LC4467]

- Selecting a user to display that user’s session details can result in the user name that appears in the top left corner to show as “NULL.”

[LC4589]

- If the NetBios domain name contains an ampersand (&), shadowing from the Citrix Director console might fail. This issue occurs because the ampersand character is a reserved character in XML and can cause the parsing for the current logon to fail.

[LC4633]

Citrix Policy

- The Microsoft Management Console (MMC) fails if the “Console Root” is not selected in the navigation pane when closing Desktop Studio.

[LC1314]

- The Citrix Policy Engine might cause the server to become unresponsive. When this occurs, Citrix Receiver and RDP connection requests fail.

[LC1817]

- With this enhancement, modeling reports created by the Citrix Group Policy Modeling wizard appear in Citrix Studio’s middle pane.

[LC2189]

- When adding or creating a Citrix Administrator in Citrix Studio with a user or group that contains an underscore in the name, such as get\dl_lab_group, the first underscore does not appear in the details of the list of administrators. The name appears as dllab_group.

[LC2284]

- When running the Group Policy Modeling wizard on the policies node of AppCenter as a domain user, applied user and computer policies might not be visible.

[LC3284]

- Citrix Director administrators might not be able to view Citrix policies in session details.

[LC3941]

- Attempts to add multiple session printers to a group of user devices under the “Printer assignments” window fails to expand and display the scrollbar. As a result, attempts to add multiple session printers to a group of user devices can fail.

[LC4658]

Citrix Studio

- This fix addresses a security vulnerability. For more information, see Knowledge Center article [CTX213045](#).

Note: To enable this fix, you must update both Citrix Studio and the Controller components with 7.6 LTSR Cumulative Update 1.

[LC0559]

- This fix addresses an issue that prevents members from being added to a Delivery Group if they belong to a domain other than the one where Citrix Studio is located.

[LC0955]

- Applications that use App-V integration might not use the correct working directory.

[LC1623]

- Attempts to start App-V applications through Citrix Receiver may fail after upgrading to App-V 5.0 Service Pack 3.

[LC1762]

- When running a query in Citrix Studio that was saved with an “Is Empty” operator, that operator is replaced by the default operator.

[LC1940]

- When you consolidate XenApp and XenDesktop licenses that have the same Subscription Advantage expiry dates into a single license file, some XenApp licenses might be missing from the license information visible in Studio.

Note: To enable this fix, you must update both Citrix Studio and the Controller components with 7.6 LTSR Cumulative Update 1.

[LC2350]

- This fix addresses a memory leak in Citrix Studio that occurs while running App-V app discovery.

[LC2559]

- When using the Machine Creation Service to catalog VDAs for Server OS, unavailability of personal vDisk storage can incorrectly set the “CleanOnBoot” property of the catalog to “False.” As a result, the catalog might fail to update.

[LC2959]

- When two applications have the same ApplicationID, refreshing App-V applications can cause Citrix Studio to set the App-V package name incorrectly.

Note: To enable this fix, you must update both Citrix Studio and the Controller components with 7.6 LTSR Cumulative Update 1.

[LC2969]

- Citrix Studio might become unresponsive while closing PowerShell resources.

[LC3612]

- Creating multiple applications in multiple folders under Delivery Groups in Citrix Studio might result in a large folder structure. The first time you open Citrix Studio and click folders or applications, the folders or applications might be dragged instead of being selected. This moves the selected object and causes the folder or application structure to change.

[LC3705]

- The Add-XDController cmdlet does not assign full custom database connection strings to the Controller.

Note: To enable this fix, you must update both Citrix Studio and the Controller components with 7.6 LTSR Cumulative Update 1.

[LC3860]

- Attempts to open Citrix Studio by users that are not members of the Database administrators user group can result in permission errors on the SQL Server.

Note: To enable this fix, you must update both Citrix Studio and the Controller components with 7.6 LTSR Cumulative Update 1.

[LC4127]

- Attempts to provision additional resources to a multi-tenant offering in App Orchestration 2.6 can fail if the offering already contains two or more tenants.

Note: To enable this fix, you must update both Citrix Studio and the Controller components with 7.6 LTSR Cumulative Update 1.

[LC4170]

- When multiple Citrix Studio sessions are open, policy changes made in one session can be lost and overwritten by those made in another.

Note: To enable this fix, you must update both Citrix Studio and the Controller components with 7.6 LTSR Cumulative Update 1.

[LC4487]

Controller

- This fix addresses a security vulnerability. For more information, see Knowledge Center article [CTX213045](#).

Note: To enable this fix, you must update both Citrix Studio and the Controller components with 7.6 LTSR Cumulative Update 1.

[LC0559]

- When two or more instances of event ID 3012 record in the event log, event IDs 3020 and 3021 also appear in the log and the messages are incorrect. With this fix, if two or more instances of event ID 3012 record, then event IDs 3010 and 3011 correctly appear in the log.

[LC1425]

- The error messages for event IDs 1110 and 1111 are incorrect in the event log. With this fix, the following correct messages appear in the event log:
 - EventID:1110: To avoid excessive event logging, the service is temporarily suppressing related messages (event IDs 1100-1109, 1112-1116).
 - EventID:1111: The service is no longer suppressing related messages (event IDs 1100-1109, 1112-1116).

[LC1485]

- If the NetBios domain name contains an ampersand (&), attempts to start Citrix Studio fail with the error “You are not authorized to perform this operation” with the code XDDS:72182E6B.

[LC1646]

- In some Active Directory organizational units (OUs), if the OU name contains a special character, the core services for XenDesktop (such as AD Identity Service or Broker Service) might not be able to bind to the OU. This can cause the CPU usage to be higher than normal. Additionally, Citrix Studio might become inaccessible as the services might close unexpectedly.

[LC1979]

- When using filtering by keywords for published applications, the workspace control might not work.

[LC2025]

- When you consolidate XenApp and XenDesktop licenses that have the same Subscription Advantage expiry dates into a single license file, some XenApp licenses might be missing from the license information visible in Studio.

Note: To enable this fix, you must update both Citrix Studio and the Controller components with 7.6 LTSR Cumulative Update 1.

[LC2350]

- A published application name that contains a trailing space can result in several issues. These issues occur when generating browser names from the published name of the application that has truncated names containing a trailing space.

[LC2897]

- When two applications have the same ApplicationID, refreshing App-V applications can cause Citrix Studio to set the App-V package name incorrectly.

Note: To enable this fix, you must update both Citrix Studio and the Controller components with 7.6 LTSR Cumulative Update 1.

[LC2969]

- When executing Set-BrokerDBConnection and related commands, the associated configuration logging entries in Citrix Studio list the corresponding “Main Task” with a status of “In Progress,” and the status is not updated when the task completes.

[LC3479]

- After performing an upgrade to XenDesktop 7.6 using the local system account (typically used by Electronic Software Distribution such as SCCM), the Analytics Service fails to start.

[LC3493]

- Performing a scheduled restart of a VDA for Server OS that is connected to a VMware Vsphere Hypervisor can cause the server to shut down and remain in a powered off state.

- To enable the fix, set the following registry key:

HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\DesktopServer\RebootSchedule

Name: ShutdownTimeoutRecovery

Type: DWORD

Value: 1

- To disable the fix, set the following registry key:

HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\DesktopServer\RebootSchedule

Name: ShutdownTimeoutRecovery

Type: DWORD

Value: 0

After setting the value, you must restart the Broker Service.

[LC3807]

- The Add-XDController cmdlet does not assign full custom database connection strings to the Controller.

Note: To enable this fix, you must update both Citrix Studio and the Controller components with 7.6 LTSR Cumulative Update 1.

[LC3860]

- Attempts to open Citrix Studio by users that are not members of the Database administrators user group can result in permission errors on the SQL Server.

Note: To enable this fix, you must update both Citrix Studio and the Controller components with 7.6 LTSR Cumulative Update 1.

[LC4127]

- Attempts to provision additional resources to a multi-tenant offering in App Orchestration 2.6 can fail if the offering already contains two or more tenants.

Note: To enable this fix, you must update both Citrix Studio and the Controller components with 7.6 LTSR Cumulative Update 1.

[LC4170]

- When the setting “SupportMultipleForest” is enabled on the Controller to allow NTLM authentication, the Linux VDA might fail to complete the registration process as its Service Principal Name (SPN) might not be set in the EndpointReference of the Windows Communication Foundation (WCF).

[LC4235]

- If you create virtual machines (VMs) that are hosted on a VMware hypervisor, initial attempts to update or delete those VMs from Citrix Studio can fail with an “Error ID XDDS:B125B84A,” but subsequent attempts succeed.

[LC4436]

- When multiple Citrix Studio sessions are open, policy changes made in one session can be lost and overwritten by those made in another.

Note: To enable this fix, you must update both Citrix Studio and the Controller components with 7.6 LTSR Cumulative Update 1.

[LC4487]

- When running the PowerShell command “Get-LogSummary” for a date range that encompasses a switch to or from daylight saving time, the following error message appears:

“An item with the same key has already been added.”

The issue occurs when daylight saving time introduces ambiguous local dates or times. As a result, duplicate entries are created in the HashMap and an exception occurs.

This fix introduces a message to inform users to split the time span to account separately for the point in time when daylight saving time begins or ends.

[LC4612]

- Attempts to update machine catalogs in Amazon Web Services (AWS) environments can fail intermittently. To enable the fix, you must run the command, “Set-ProvServiceConfigurationData -Name ImageManagementPrep_DoImagePreparation -Value \$false” for the image preparation phase to be skipped during the machine catalog update.

[LC4709]

- Controllers occasionally lose connectivity with the database when there is a high number of apps and VDA processes running. When that happens, VDAs remain in the initialization state and applications are unavailable.

[LC4848]

- When there are too many hypervisor alerts, the SQL database server’s CPU usage can reach 100%.

[LC5277]

- Under high utilization conditions (more than 5,000 users launching numerous apps on numerous VDAs for Server OS concurrently), the SQL database server’s CPU usage can reach 100%, which causes outages and apps are unable to launch.

[LC5315]

HDX MediaStream Flash Redirection

- If HDX MediaStream Flash Redirection is enabled, opening and closing multiple tabs in Internet Explorer with Flash content can cause Internet Explorer to exit unexpectedly.

[LC0375]

- With HDX MediaStream for Flash enabled, opening and closing multiple tabs in Internet Explorer can cause Internet Explorer to close unexpectedly.

[LC1141]

- When browsing websites with HDX MediaStream Flash Redirection enabled, the Flash redirection feature fails if the registry value of HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows NT\CurrentVersion\Windows\AppInit_DLLs is set to just “mfaphook.dll” or “mfaphook64.dll” instead of the full path to “mfaphook.dll” or “mfaphook64.dll.”

[LC4388]

Installer

- If you install version 7.6.300 of the VDA from the command line, the /noreboot switch - depending on its location in the string of switches - is not being honored. As a result, the VDA restarts after the installation completes.

[LC4046]

- When installing a VDA, certain registry keys for performance might be installed even if you disable the “Optimize Performance” option during installation.

[LC4330]

Licensing

- Citrix Studio displays the licensing models in Spanish for license servers set to a French system locale.

[LC3450]

Provisioning Services

Console

- After installing Provisioning Services Console version 7.1.3, many .NET applications fail on Windows Server 2008 R2 and on Windows 7.

[LC1838]

- The XenDesktop Setup Wizard might fail to create machine when the VMware ESX host is in Maintenance Mode.

[LC3401]

- The XenDesktop Setup Wizard might fail to honor the “Superseded” flag on the Personal vDisk storage of the hosting unit.

[LC3573]

- When the Streamed VM Setup Wizard is running, enumerating templates on the VMware ESX cluster that contain many hosts and data stores can take a long time to complete.

[LC3674]

- When mounting and unmounting vDisks, the SOAP service might become unresponsive and the Provisioning Services Console might fail to start.

[LC3723]

- The following error message can appear while creating machines using the Streamed VM Setup Wizard:

“Object reference not set to an instance of an object.”

[LC3811]

- When a help desk administrator creates new virtual machines (VMs) from a standalone Provisioning Services Console through the XenDesktop Setup wizard, attempts to start a target device from a BDM partition can fail and cause an incorrect IP address for the logon server to appear.

[LC3911]

- Installing the Provisioning Services Console sets the following registry key to “1.” This can cause other .NET applications to try to use the wrong version of the Framework and possibly fail:

HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\.NETFramework

Name: OnlyUseLatestCLR

Type: REG_DWORD

Data: 1

[LC4197]

- Attempts to create virtual machines (VMs) by using the XenDesktop Setup wizard or the Streamed VM Setup wizard might fail in a Microsoft System Center Virtual Machine Manager (SCVMM) environment. With this fix, the fully qualified domain name (FQDN) of the host is used in the commands instead of short name.

[LC4230]

- The XenDesktop Setup wizard might fail to create Provisioning Services target devices in System Center Virtual Machine Manager (SCVMM) 2012 environments.

[LC4256]

- Attempts to connect to VMware Vsphere Hypervisor 5.1 by using the Streamed VM Setup wizard or the XenDesktop Setup wizard fail if User1 and User2 are configured to use different ports.

To use a different port to connect to the VMware ESX server, you must create the following registry key:

HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\ProvisioningServices\PlatformEsx

Name: Port

Type: DWORD

Value: <port_number>

[LC4283]

- SSL connections between the XenDesktop Setup wizard and XenServer fail.

[LC4377]

- This is an enhancement to facilitate NIC teaming with the latest Mellanox NICs and firmware used in HP Moonshot systems.

[LC4646]

- If the template created in System Center Virtual Machine Manager (SCVMM) has NICs on two different networks - for example, NIC1 on network xxx and NIC2 on network yyy - the XenDesktop Setup wizard default behavior is to change both NICs to the network of the host record (network zzz). For the NIC2 network to remain unchanged, after installing this fix, set the following registry key:

HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\ProvisioningServices\PlatformScvmm

Name: RequireMatchingNetworks

Type: REG_DWORD

Value: 1

[LC4650]

- Pressing “Ctrl+C” without any items selected, the Provisioning Services Console might exit unexpectedly with the following error message:

“MMC has detected an error in a snap-in and will unload it.”

Additionally, the issue can occur if the “Ctrl+C” key combination is automatically injected by certain third-party software.

[LC4909]

Server

- When using a BDM partition, target devices running on VMware do no attempt to log on to all servers in the list if the top-most server is unreachable.

[LC3805]

- Attempts to mount a vDisk on a Provisioning Server fail unless the server has logical access to the vDisk.

[LC3835]

- When a help desk administrator creates new virtual machines (VMs) from a standalone Provisioning Services Console through the XenDesktop Setup wizard, attempts to start a target device from a BDM partition can fail and cause an incorrect IP address for the logon server to appear.

[LC3911]

- When exporting a vDisk by running the PowerShell command “Mcli-Run ExportDisk -p DiskLocatorName=”DISK_NAME”, StoreName=”STORE_NAME”, SiteName=”SITE_NAME,”” a manifest file with multiple entries for each version of the vDisk might be created. The issue occurs when a vDisk with the same name is present in multiple Sites. The number of duplicate entries per version corresponds to the number of sites that have the vDisk.

[LC4225]

- Machine creation fails with the XenDesktop Setup wizard in SCVMM environments if there is a trailing backslash (\) at the end of the VM storage path.

[LC4418]

- This is an enhancement to facilitate NIC teaming with the latest Mellanox NICs and firmware used in HP Moonshot systems.

[LC4646]

- If the template created in System Center Virtual Machine Manager (SCVMM) has NICs on two different networks - for example, NIC1 on network xxx and NIC2 on network yyy - the XenDesktop Setup wizard default behavior is to change both NICs to the network of the host record (network zzz). For the NIC2 network to remain unchanged, after installing this fix, set the following registry key:

HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\ProvisioningServices\PlatformScvmm

Name: RequireMatchingNetworks

Type: REG_DWORD

Value: 1

[LC4650]

Target Device

- Provisioning Services Target device installation on systems with ESX VMXNET3 Nics requires Microsoft hotfix <https://support.microsoft.com/en-us/kb/2550978> or a superseding hotfix to be installed. With this fix, rather than requiring KB2550978 explicitly, a warning message appears, advising administrators to make sure KB2550978 or a superseding hotfix is installed.

[LC3016]

- The PVS Device Service (BNDevice.exe) might not start successfully when the service logon account is set to “Local System,” which is the default value.

[LC3209]

- The logging level of some critical error logs that are related to Active Directory password change might not be set correctly and as a result, the logs are not sent to the server for Citrix Diagnostic Facility tracing.

[LC3803]

- Automatic vDisk Updates do not run inventory updates on PvD enabled vDisks.

[LC3997]

- ESX target devices utilizing a VMXnet3 network driver can experience a fatal exception, displaying a blue screen when using jumbo frames (frames with more than 1500 bytes of payload per frame).

[LC4238]

- Provisioned target devices have a 96 hour license grace period after which they shut down if no valid licenses are available. With this enhancement, the licensing grace period for target devices is extended to 30 days (720 hours).

[LC4645]

Session Recording

Agent

- With “Allow third party applications to record custom data on this VDA machine” enabled in the Session Recording Agent properties, the Session Recording Agent Service running on a Japanese language Windows operating system might fail to start and client sessions cannot be recorded.

[LC3861]

Player

- Recordings of Microsoft Paint sessions do not play back correctly in the Session Recording Player.

[LC4389]

- An error occurs when you play back a session that was recorded on a multiple-monitor user device.

[LC4391]

StoreFront

- This fix addresses inconsistencies in the Japanese translation of the term “Classic” in the Management Console user interface.

[LC3607]

- When you click to launch a second or subsequent application, one or more instances of the first application you started can launch. The issue occurs when using a version of Receiver other than Citrix Receiver for Web when multiple-site aggregation is configured. An additional instance of the first application launches from each aggregated Site.

[LC4278]

- Customizations for published desktops you make in the default.ica file might not be honored. For example, you might not be able to see the connection bar inside certain desktops even if you set “ConnectionBar=1.”

[LC4688]

- In certain scenarios, StoreFront generates enumeration responses that contain duplicate resources. This can cause Receiver for Web to report a failure and the apps might fail to appear. The issue occurs with one or more of the following conditions:
 - A farm is referenced by more than one UserFarmMapping in a multi-Site configuration.
 - The user belongs to Active Directory Groups wherein multiple UserFarmMapping are applied.
 - The EquivalentFarmSets that contain farms have no aggregation group, or there is a Delivery Group with multiple assignments for the user.

[LC4863]

Universal Print Server

Client

- Attempts to manage ports or printers on the remote print server from the Microsoft Print Management console on a VDA for Server OS might fail with the following error message: “Failed to complete the operation. This operation is not supported.” Also, when navigating to the Ports tab, ports might not be listed.

Additionally, when you right-click any printer and select “Open Printer Queue,” the following error message might appear:

“Windows can’t find the printer. Make sure the network is working and you’ve entered the name of the printer and print server correctly.”

To address this issue, delete the following registry key “HKEY_LOCAL_MACHINE\System\CurrentControlSet\Printer” from the registry of the VDA and restart the Print Spooler Service. The ports are enumerated correctly in the Microsoft Print Management Console and you can configure the ports and printers.

[LC3740]

Server

- Batch printing using the Microsoft GDI Print API can fail to where the last page does not print, and the following error message appears:

“Dispatch::CDriverTripSummary::PrintReport, Error Occured While Printing....Check Printer”

[LC3920]

- This fix introduces support for Citrix UPS Print Driver Certification Tool for Universal Print Server 7.6.300. For more information, see Knowledge Center article [CTX142119](#).

[LC4265]

VDA for Desktop OS

Content Redirection

- With content redirection enabled for Mailto links, Mailto links that contain commas fail to launch and the following error message appears:

“Could not perform this operation because the default mail client is not properly installed.”

The issue does not occur in console or Remote Desktop sessions.

[LC3701]

HDX 3D Pro

- In HDX 3D Pro dual-monitor configurations, locking Windows on one monitor can fail to blank the screen on the second monitor. The issue occurs after disconnecting from a dual-monitor client session, then reconnecting from a single monitor client, then disconnecting from the session, then reconnecting from the dual-monitor client.

[LC3934]

- The mouse pointer might not assume the proper shape when the mouse is positioned at the edge of a Microsoft Notepad application window.

To enable this fix, you must set the following registry key:

- *On 32-bit Windows:*

HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\HDX3D

Name: EnableUnknownCursorHandling

Type: REG_DWORD

Value: 1

- *On 64-bit Windows:*

HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Citrix\HDX3D

Name: EnableUnknownCursorHandling

Type: REG_DWORD

Value:

[LC4160]

- Attempts to resize the session screen resolution can fail intermittently, leaving the DesktopViewer window grayed out.

[LC4261]

- With HDX 3D Pro enabled, customized mouse pointers in 3D graphics rendering applications might appear incorrectly.

[LC4713]

HDX MediaStream Flash Redirection

- If HDX MediaStream Flash Redirection is enabled, opening and closing multiple tabs in Internet Explorer with Flash content can cause Internet Explorer to exit unexpectedly.

[LC0375]

- With HDX Mediastream for Flash enabled, opening and closing multiple tabs in Internet Explorer can cause Internet Explorer to close unexpectedly.

[LC1141]

- When browsing websites with HDX MediaStream Flash Redirection enabled, the Flash redirection feature fails if the registry value of HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows NT\CurrentVersion\Windows\AppInit_DLLs is set to just “mfaphook.dll” or “mfaphook64.dll” instead of the full path to “mfaphook.dll” or “mfaphook64.dll.”

[LC4388]

HDX MediaStream Windows Media Redirection

- In Receiver sessions, seeking forward in Windows Media Player while playing .MOD, ac3, and mpeg files might cause the video to play without audio.

[LC2768]

- If you play an .avi file with Windows Media Player within an ICA session (or published desktop session) and then start playing another .avi file without stopping the first one, the video frames might not be properly directed to the user device. As a result, the CPU usage of the mmvd-host.exe process can be higher than normal and the video might not render properly on the user device.

[LC4260]

Installing, Uninstalling, Upgrading

After installing one or more of the following Microsoft Security Updates, attempts to log on to a XenDesktop VDA 7.6.300 or 7.7 running either version of Windows 10 fail. For more information, see Knowledge Center article [CTX205398](#).

Windows 10 RTM (LTSB)

Security Updates:

Release Date:

[KB3124266](#)

January- 2016

[KB3135174](#)

February- 2016

[KB3140745](#)

March- 2016

[KB3147461](#)

April- 2016

[KB3156387](#)

May- 2016

Windows 10 Version 1511 (Current Business Branch):

[KB3124263](#)

January- 2016

[KB3124262](#)

January- 2016

[KB3135173](#)

February- 2016

[KB3140768](#)

March- 2016

[KB3147458](#)

April- 2016

[KB3156421](#)

May- 2016

Windows 10 Version 1511:

(Updated Feb 2016)

Cumulative image inclusive of all updates up to February 2016

March- 2016

Note: If you have installed any of the Microsoft Security Updates above:

If you have installed any of the Microsoft Security Updates above on a Windows 10 RTM (Build 10240) VDA or on a Windows 10 Version 1511 (Build 10586.36) VDA and want to apply this update, do the following:

1. Reboot and log in to the Windows 10 VDA using Safe Mode.
2. Uninstall the Microsoft Security Updates above and reboot.
3. Install this update and reboot.
4. Install any applicable Microsoft Security Updates.

For new deployments of the 7.6.300 VDA on Windows 10 (RTM / Version 1511 / Version 1511 (Updated Feb 2016)), do the following:

1. Prepare a Windows 10 (RTM / Version 1511 / Version 1511 (Updated Feb 2016)) image.
Caution: Installing the VDA and rebooting in the next step can place the machine into an **unrecoverable** state. It is essential not to reboot after installing the VDA.
2. Install the 7.6.300 VDA and choose **NOT** to reboot.
3. Install this update and reboot.

[From DesktopVDACoreWX86_7_6_305, DesktopVDACoreWX64_7_6_305][LC4604]

Keyboard

- If you are in a Citrix GoToMeeting running inside a VDA session and are made presenter, your mouse pointer might start to flicker. This occurs when the “Legacy graphics mode” policy setting is disabled for the session.

[LC3033]

Logon/Authentication

- If the Windows Remote Desktop Session Host Configuration policy setting “Always prompt for password upon connection” is enabled, when users log on to VDA 7.x by using the ICA protocol, users receive a prompt to enter their credentials again.

To enable this fix, set the following registry key:

HKEY_LOCAL_MACHINE\Software\Citrix\Portica

Name: AutoLogon

Type: DWORD

Data: 0x00000001 (value must be between 1 and 2147483647)

Note: The Citrix Display Drive can be marked for deletion if there are multiple attempts to run the MSP file. This causes the installation of the hotfix to fail. In addition, the display resolution of the VDA might not work. To allow this to work, restart the VDA and then install the hotfix again.

[From DesktopVDACoreWX86_7_6_301, DesktopVDACoreWX64_7_6_301][LC1180]

- After installing Microsoft Hotfix KB3124266 (for Windows 10) or KB3124263 (for Windows 10 Version 1511), attempts to log on to a XenDesktop VDA 7.6.300 or 7.7 running on Windows 10 might fail. For more information see, Knowledge Center article [CTX205398](#).

Note: If you have already installed KB3124266 or KB3124263 and want to apply this update, do the following:

1. Reboot and log in to the Windows 10 machine using Safe Mode and uninstall KB3124266 or KB3124263
2. Reboot the Windows 10 machine and install this update.
3. Reinstall KB3124266 or KB3124263.

[From DesktopVDACoreWX86_7_6_304, DesktopVDACoreWX64_7_6_304][LC4540]

Printing

- The Citrix Print Spooler Service might exit unexpectedly.

[From DesktopVDACoreWX86_7_6_307, DesktopVDACoreWX64_7_6_307][LC4180]

Seamless Windows

- Seamless applications can become unresponsive and their icon in the Windows taskbar reverts to the generic Citrix Receiver icon.

[LC3783]

- When you close a seamless published application, the focus goes to another published application rather than honoring windows in the typical [Windows Z-order](#).

[LC4009]

Server/Site Administration

- When an administrator attempts to access a virtual machine from Hyper-V console, while there is a disconnected but active session, a black screen appears. The issue occurs in deployments that use XPDM drivers.

[LC3536]

- A VDA might stop accepting connections. After enabling the “Legacy graphics mode” policy, the VDA starts accepting connections again.

[LC3749]

- When launching VM hosted apps, the Windows logon screen might appear before the app is fully launched. This fix introduces a 15-second grace period before the Welcome screen appears. It also provides support for the following registry key that allows you to customize the duration of the grace period.

Note: During the grace period, there is no obvious indication to users that the app is launching. Configuring too high a grace period can delay application launches and cause users to inadvertently launch apps multiple times.

To change the duration of the grace period, set the following registry key:

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Citrix\wfshell\TWI

Name: LogonUIHideTimeout

Type: DWORD

Value: Any value greater than zero in milliseconds (for example, 20000 milliseconds for 20 seconds)

[LC3828]

- Attempts to use the attrib command to change file attributes of files on mapped client drives might fail.

[LC3958]

- The Output Session Bandwidth Performance Monitoring counter might report inconsistent values upon recording for a long period of time.

[LC4151]

- If you are logging on to a Version 7.6.300 VDA with explicit credentials (username/password) and User Account Control (UAC) enabled, and then attempt to authenticate to an application running in the session using a smart card, the following error message might appear:

“An authentication error has occurred. No credentials are available in the security package.”

[LC4486]

Session/Connection

- When multiple webcams or video capturing devices are installed on an endpoint, only one of the devices is mapped into the client session. Additionally, the device is mapped as Citrix HDX Web Camera, leaving no obvious clue as to which of the devices is mapped.

[LC1919]

- In sessions for which you enable Local App Access, the screensaver fails to get activated.

[LC3182]

- The Citrix policy “View window contents while dragging” does not work correctly.

[LC3552]

- Disconnected sessions might remain open on a physical machine even after the time specified under “Disconnect session timer interval” has passed.

To enable the fix, set the following registry keys:

HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\Portica

Name: ForceDisableRemotePC

Type: DWORD

Value: Any value greater than zero

[LC3650]

- If an endpoint loses network connectivity for several minutes, reconnection attempts can fail until the VDA is restarted.

[From DesktopVDACoreWX86_7_6_301, DesktopVDACoreWX64_7_6_301][LC3700]

- When logging on to a VDA after it is in an idle state for an extended period of time, the credentials might not be passed through automatically to the logon screen upon reconnection and a prompt to enter the password appears on the logon screen.

[From DesktopVDACoreWX86_7_6_309, DesktopVDACoreWX64_7_6_309][LC3720]

- The WFICA32.exe process might keep a file locked even after the file was closed by the associated published application. As a result, the file cannot be edited for a while.

[LC3724]

- Certain third-party published applications might fail to start on XenApp servers. As a result, the wfshell.exe process might close unexpectedly. When this error occurs, no indication that the session is starting or error messages appear on the user device.

[LC3766]

- After undocking the Thomson Reuters Eikon toolbar in a multiple monitor session, the space occupied by the toolbar is not reclaimed by the session.

In monitor configurations where the primary monitor is not located in the top left corner of the array, you must also install Fix #LC1599, which is included in Receiver for Windows 4.4 and later.

[LC3773]

- When the App-V configuration setting “EnablePublishingRefreshUI” is enabled on the session host and “Session Lingering” is enabled as well, attempts to close an application on an iOS device can result in a black window that stays on the device screen.

[LC3800]

- With the Citrix Windows XP Display Driver Model (XPDM) display driver enabled, the mouse shadow setting is always enabled even though it is disabled in the Control Panel.

[From DesktopVDACoreWX86_7_6_302, DesktopVDACoreWX64_7_6_302][LC3806]

- With Excelhook enabled, minimizing and then restoring an Excel workbook can cause the Excel window to lose focus.

[LC3873]

- The “Restrict session clipboard write” and “Restrict client clipboard write” policies do not work properly for sessions using Citrix Receiver for Android. As a result, users can copy and paste content between the session and the user device regardless of the configuration of those two policies.

[LC3894]

- When you attempt to reconnect to a disconnected session, a Windows lock screen appears with a set of keys but without an option to enter your password. When you click “Other credentials,” a second credentials icon appears that allows you to enter the password and unlock the session.

[From DesktopVDACoreWX86_7_6_306, DesktopVDACoreWX64_7_6_306][LC4053]

- If you power off or force a remote PC to restart while in an ICA session, all audio drivers might be disabled when the remote PC restart completes.

[LC4071]

- If you add a file to a user device folder while the associated published application is running and then try to open the file from within the application, the file might not appear in the application’s Open File Dialog - even after clicking the refresh button.

[LC4073]

- The VDA might become unresponsive at the “Welcome” screen due to a deadlock on picadm.sys.

[From DesktopVDACoreWX86_7_6_308, DesktopVDACoreWX64_7_6_308][LC4195]

- With Generic USB Redirection enabled, each time a generic redirected USB device is physically disconnected and reconnected within a session, it is treated as a new device. As a result, each time you reconnect such a USB device, an additional GUID is created for it.

[From DesktopVDACoreWX86_7_6_303, DesktopVDACoreWX86_7_6_303][LC4259]

- TLS connections between Citrix Receiver for Chrome and VDAs fail if all three of the following conditions are met:

- Fix #LC2179 (Hotfix ICAWS760WX64032 or its replacement) is installed on the VDA
- The connection is configured to use SSL
- The Citrix Gateway Protocol (CGP) is disabled

[LC4405]

- After installing Hotfix ICAWS760WX64032 and enabling SSL, attempts to reconnect to a VDA might fail intermittently. The issue occurs if the Citrix ICA Service exits unexpectedly or becomes unresponsive as a result of an SSL Listener failure.

[LC4438]

- Sessions running on Version 7.6.300 of the VDA for Desktop OS with RES Workspace Manager installed can become unresponsive when roaming sessions between user devices.

[LC4570]

Smart Cards

- In Microsoft Internet Explorer, the user interface for smart card logons to certain websites can be intermittently unavailable.

[LC3988]

System Exceptions

- On logon or changing display resolution, the Ctxgfx.exe process may enter a deadlock causing the Session to hang.

[LC2410]

- The operating system experiences an error on picadm.sys and a blue screen appears with stop code 0x20.

[LC3473]

- The operating system experiences an error on picadm.sys and a blue screen appears with stop code 0x00000050.

[LC3921]

- The operating system experiences an error on ctxad.sys and a blue screen appears with bugcheck code 0xD1.

[LC4007]

- After upgrading a VDA for Desktop or Server OS to Version 7.6.300, the Citrix Print Manager Service (CpSvc.exe) can exit unexpectedly upon logoff.

[From DesktopVDACoreWX86_7_6_307, DesktopVDACoreWX64_7_6_307][LC4102]

- The operating system experiences an error on picadm.sys and a blue screen appears with stop code 0x000000C1.
[LC4334]
- When you repeatedly play an .avi file on Windows Media Player, the memory consumption of the wfica32.exe process might continue to increase until the process exits unexpectedly.
[LC4335]
- VDAs can experience a fatal exception on picadd.sys, displaying a blue screen, upon logoff from a Citrix Receiver session.
[LC4360]
- VDAs can experience a fatal exception with bugcheck code 0x00000044 on ctxdvc.sys and a blue screen appears.
[LC4505]
- If the registry key HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\ICA\Thinwire\DisableOssForProcesses is defined, attempts to restart the VDA and launch a published desktop can result in a blue screen.
[LC4597]

VDA for Server OS

Content Redirection

- Server to client content redirection fails for VDAs other than those running on Windows Server 2008 R2. As a result, when you click a URL in a VDA session, the link opens in a browser running in the session rather than in a local browser.
[LC2221]
- With content redirection enabled for Mailto links, Mailto links that contain commas fail to launch and the following error message appears:
“Could not perform this operation because the default mail client is not properly installed.”
The issue does not occur in console or Remote Desktop sessions.
[LC3701]

HDX MediaStream Windows Media Redirection

- In Receiver sessions, seeking forward in Windows Media Player while playing .MOD, ac3, and mpeg files might cause the video to play without audio.
[LC2768]

- If you play an .avi file with Windows Media Player within an ICA session (or published desktop session) and then start playing another .avi file without stopping the first one, the video frames might not be properly directed to the user device. As a result, the CPU usage of the mmvd-host.exe process can be higher than normal and the video might not render properly on the user device.

[LC4260]

Keyboard

- If you are in a Citrix GoToMeeting running inside a VDA session and are made presenter, your mouse pointer might start to flicker. This occurs when the “Legacy graphics mode” policy setting is disabled for the session.

[LC3033]

Printing

- The Citrix Print Spooler Service might exit unexpectedly.

[From ServerVDACoreWX64_7_6_304][LC4180]

Seamless Windows

- Seamless applications can become unresponsive and their icon in the Windows taskbar reverts to the generic Citrix Receiver icon.

[LC3783]

- When you close a seamless published application, the focus goes to another published application rather than honoring windows in the typical [Windows Z-order](#).

[LC4009]

Server/Site Administration

- When launching VM hosted apps, the Windows logon screen might appear before the app is fully launched. This fix introduces a 15-second grace period before the Welcome screen appears. It also provides support for the following registry key that allows you to customize the duration of the grace period.

Note: During the grace period, there is no obvious indication to users that the app is launching. Configuring too high a grace period can delay application launches and cause users to inadvertently launch apps multiple times.

To change the duration of the grace period, set the following registry key:

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Citrix\wfshell\TWI

Name: LogonUIHideTimeout

Type: DWORD

Value: Any value greater than zero in milliseconds (for example, 20000 milliseconds for 20 seconds)

[LC3828]

- Attempts to use the attrib command to change file attributes of files on mapped client drives might fail.

[LC3958]

- Multiple, concurrent attempts to establish a Remote Desktop (RDP) connection to a VDA from separate user devices can cause the VDA to unregister.

[LC4014]

- The Output Session Bandwidth Performance Monitoring counter might report inconsistent values upon recording for a long period of time.

[LC4151]

- When a VDA for Server OS is unregistered or the Citrix Desktop Service is disabled, even domain administrators cannot log on to that VDA through a Remote Desktop (RDP) connection. While that behavior is as designed for non-administrator roles, administrators are expected to be able to log on.

[LC4290]

- If you are logging on to a Version 7.6.300 VDA with explicit credentials (username/password) and User Account Control (UAC) enabled, and then attempt to authenticate to an application running in the session using a smart card, the following error message might appear:

“An authentication error has occurred. No credentials are available in the security package.”

[LC4486]

- Live scrolling (the synced state of page scrolling and scrollbar motion) does not work in Excel spreadsheets. Version 7.6.300 of the VDA introduced Fix #LC2965, intended to address the issue. However, Fix #LC2965 does not fully resolve the issue in all cases. This Fix, #LC4579, ensures that the issue is corrected even on systems where Fix #LC2965 does not work.

From the description of #LC2965:

Live scrolling (the synced state of page scrolling and scrollbar motion) does not work in Excel spreadsheets. The issue occurs because the key and value in registry location

HKEY_CURRENT_USER\Control Panel\Desktop\UserPreferencesMask on the VDA are overwritten by the wfshell.exe process each time a user logs on to the VDA. To prevent this, create the following registry key on the VDA and set the value to 1:

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Citrix

Name: EnableVisualEffect

Type: REG_DWORD

Value: 1

[LC4579]

- After installing Hotfix ICATS760WX64022 (or its replacements), any new custom registry configuration under the registry key HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\Graphics\ might not be retained when you restart the system.

[LC4931]

Session/Connection

- The Source Network Address displays an incorrect IP address for remote user devices in the server's Windows Security Log with EVENT ID 4624.

[LC1352]

- With the Client audio redirection or Windows Media Redirection policies disabled, the Volume control (Speaker) icon in the notification area of a published desktop session can display an incorrect audio state.

[LC2538]

- In Citrix Receiver for Android published desktop sessions, attempts to open a Microsoft Outlook calendar invitation can fail with the following error message:

“Cannot open item”

The issue occurs with calendar invitation created by other users; invitations created by the same user are not affected.

[LC2828]

- In certain scenarios, the Client Printer Redirection and Citrix Group Policies' Access Control filters might fail to work while logging on or reconnecting to a disconnected session.

[LC3083]

- In sessions for which you enable Local App Access, the screensaver fails to get activated.

[LC3182]

- The WFICA32.exe process might keep a file locked even after the file was closed by the associated published application. As a result, the file cannot be edited for a while.

[LC3724]

- Certain third-party published applications might fail to start on XenApp servers. As a result, the wfshell.exe process might close unexpectedly. When this error occurs, no indication that the session is starting or error messages appear on the user device.

[LC3766]

- After undocking the Thomson Reuters Eikon toolbar in a multiple monitor session, the space occupied by the toolbar is not reclaimed by the session.

In monitor configurations where the primary monitor is not located in the top left corner of the array, you must also install Fix #LC1599, which is included in Receiver for Windows 4.4 and later.

[LC3773]

- When the App-V configuration setting “EnablePublishingRefreshUI” is enabled on the session host and “Session Lingering” is enabled as well, attempts to close an application on an iOS device can result in a black window that stays on the device screen.

[LC3800]

- The Service Host (svchost.exe) process that is registered with Terminal Services (TermService) might close unexpectedly on RPM.dll while connecting to a server through an RDP session.

[LC3808]

- With Excelhook enabled, minimizing and then restoring an Excel workbook can cause the Excel window to lose focus.

[LC3873]

- Even with the Client audio redirection policy enabled, audio (.wav) files can fail to play. The issue occurs in sessions where the session ID is reused and the Client audio redirection policy was disabled for the previous session.

[LC3882]

- The “Restrict session clipboard write” and “Restrict client clipboard write” policies do not work properly for sessions using Citrix Receiver for Android. As a result, users can copy and paste content between the session and the user device regardless of the configuration of those two policies.

[LC3894]

- When a connection to a Windows Server 2008 R2 VDA fails due to a license error, the error message “You cannot access this session because no licenses are available” fails to appear.

[LC4026]

- If you add a file to a user device folder while the associated published application is running and then try to open the file from within the application, the file might not appear in the application's Open File Dialog - even after clicking the refresh button.

[LC4073]

- After logging off of a newly installed Feature Pack 3 VDA for Server OS (7.6.300), Citrix Studio might display that VDA's status as "initializing" rather than "registered." During that time, no new sessions will be brokered for that VDA.

[LC4188]

- The VDA might become unresponsive at the "Welcome" screen due to a deadlock on picadm.sys.

[From ServerVDACoreWX64_7_6_305][LC4195]

- With Generic USB Redirection enabled, each time a generic redirected USB device is physically disconnected and reconnected within a session, it is treated as a new device. As a result, each time you reconnect such a USB device, an additional GUID is created for it.

[From ServerVDACoreWX64_7_6_303][LC4259]

- COM port mapping can intermittently fail.

[LC4267]

- With Application Prelaunch enabled, a black window might appear temporarily on the user device. The issue can occur when you start Citrix Receiver without launching an application.

[LC4280]

- The Citrix policy "View window contents while dragging" does not work correctly on published desktops. When you log on to a VDA, windows content is displayed correctly. However, after you reconnect to a disconnected session, the windows content is no longer displayed.

[LC4301]

- TLS connections between Citrix Receiver for Chrome and VDAs fail if all three of the following conditions are met:

- Fix #LC2179 (Hotfix ICATS760WX64032 or its replacement) is installed on the VDA
- The connection is configured to use SSL
- The Citrix Gateway Protocol (CGP) is disabled

[LC4405]

- When launching an application in a VDA 7.6.300 session, progress bar with the following message might appear for several minutes before the application launches: "Please wait for Local Session Manager." In the meantime, the application appears to be unresponsive even though it is launching correctly.

[LC4406]

- Certain applications in a user session might default to an incorrect input method. You can correct that behavior by clearing the “Let me set a different input method for each app window” check box in various Control Panels. However, the setting revert to the incorrect defaults when you reconnect to the session.

To keep the settings from reverting, set the following registry key:

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Citrix

Name: ClientDataOption

Type: DWORD

Data: 2 (you can change the input method setting)

[LC4416]

- When connecting through the NetScaler Gateway, the SmartAccess Control filters might not be applied correctly.

[From ServerVDACoreWX64_7_6_307][LC4503]

- The presence of non-ASCII characters in a published application path prevents the application from launching.

[LC4595]

- With the “Auto Client Reconnect” policy enabled, attempts to reconnect to a session can fail intermittently and cause the VDA to reregister. The following warning message appears:

“Event 1048, Citrix Desktop Service (Warning)

The Citrix Desktop Service is re-registering with the DDC: “NotificationManager:NotificationServiceThread: WCF failure or rejection by broker (<DDC: DDC NAME>)”

[LC4767]

Smart Cards

- In Microsoft Internet Explorer, the user interface for smart card logons to certain websites can be intermittently unavailable.

[LC3988]

System Exceptions

- The operating system experiences an error on picadm.sys and a blue screen appears with stop code 0x20.

[LC3473]

- The operating system experiences an error on picadm.sys and a blue screen appears with stop code 0x00000050.
[LC3921]
- After upgrading a VDA for Desktop or Server OS to Version 7.6.300, the Citrix Print Manager Service (CpSvc.exe) can exit unexpectedly upon logoff.
[From ServerVDACoreWX64_7_6_304][LC4102]
- The Service Host (svchost.exe) process that is registered with Terminal Services (TermService) might exit unexpectedly.
[LC4150]
- The operating system experiences an error on picadm.sys and a blue screen appears with stop code 0x000000C1.
[LC4334]
- When you repeatedly play an .avi file on Windows Media Player, the memory consumption of the wfica32.exe process might continue to increase until the process exits unexpectedly.
[LC4335]
- VDAs can experience a fatal exception on picadd.sys, displaying a blue screen, upon logoff from a Citrix Receiver session.
[LC4360]
- VDAs can experience a fatal exception with bugcheck code 0x00000044 on ctxdvc.sys and a blue screen appears.
[LC4505]
- If the registry key HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\ICA\Thinwire\DisableOssForProcesses is defined, attempts to restart the VDA and launch a published desktop can result in a blue screen.
[LC4597]

User Experience

- When attempting to move a Microsoft Excel window within a seamless, dual-monitor session, the window might experience a delay while redrawing in the new location.
[LC4441]

Virtual Desktop Components - Other

- Attempts to start App-V applications through Citrix Receiver may fail after upgrading to App-V 5.0 Service Pack 3.
[LC1762]
- The following error message might be incorrectly logged in the application log each time the Citrix Monitor Service starts even though the service is working correctly:
“Error querying the Broker via GetBrokerObjects to obtain ‘Controller Machine Details’”
[LC2239]
- Attempts to register a VDA set to a Turkish system locale can fail and produce a 1048 error.
[LC2704]
- If the Site data store is unavailable, reconnection attempts can fail even if the Controller is in leased connection mode.
[From BrokerAgentWX86_7_6_301, BrokerAgentWX64_7_6_301][LC4077]
- For users with non-persistent profiles, published App-V applications can take an excessive amount of time to launch on machines with PowerShell 3.0 or later installed.
[LC4147]
- When attempting to end a process running in a user session from Citrix Director, the following error message can appear:
“Action failed. Data source unresponsive or reported an error. View server event logs for further information.”
[LC4384]
- Applications that use App-V integration might fail to launch if the configured working directory does not exist.
[LC4839]

Long Term Service Release (LTSR)

August 28, 2019

Release date: January 11, 2016

Install and upgrade LTSR components

In order to be in compliance with XenApp and XenDesktop 7.6 Long Term Service Release (LTSR), you must upgrade the components of XenApp and XenDesktop 7.6 that are part of LTSR and part of your deployment to their LTSR versions. For example: If Provisioning Services is part of your deployment, you must upgrade the Provisioning Services component to its LTSR version. If Provisioning Services is not part of your deployment, you do not need to install or upgrade it.

Upgrading to the LTSR versions is mandatory for your deployment to qualify for the benefits under the LTSR terms.

In addition, Citrix also recommends specific versions of Citrix Receiver and other components. While not required for LTSR compliance, upgrading to the current versions of those components ensures further ease of maintenance and the availability of the latest fixes in your deployment.

Helpful links:

- [Download LTSR \(XenApp\)](#)
- [Download LTSR \(XenDesktop\)](#)
- [XenApp and XenDesktop Servicing Options](#)
- [LTSR Frequently Asked Questions \(FAQs\)](#)
- [Product Lifecycle Dates](#)
- [LTSR Program for Receiver for Windows](#)

LTSR baseline components and mandatory versions

Note

The following information is specific to the LTSR base release. For the equivalent information for [CU1](#) or [CU2](#), see the respective documentation.

While it is not necessary for LTSR compliance to have each of the following components in your deployment, you must upgrade each component you do have in your deployment to the version indicated below.

LTSR Baseline Components	Version	Notes
VDA for Desktop OS	7.6.300	Special rules apply for Windows 10. See Compatible components and platforms
VDA for Server OS	7.6.300	
Delivery Controller	7.6 Update 3	

LTSR Baseline Components	Version	Notes
Citrix Studio	7.6 Update 3	
Citrix Director	7.6.300	
Group Policy Management Experience	7.6.300 (2.5)	
StoreFront	3.0.1	
Provisioning Services	7.6 Update 1	Special rules apply for Windows 10. See Compatible components and platforms
Universal Print Server	7.6.300	Only Windows 2008 R2 SP1, Windows 2012, Windows 2012 R2 supported
Session Recording	7.6.100	Platinum Edition only

Compatible components and platforms

The following components are recommended for use in 7.6 LTSR environments. These components are not eligible for the LTSR benefits (extended lifecycle and fix-only cumulative updates). Citrix may ask you to upgrade to a newer version of these components within your 7.6 LTSR environments.

Note about Windows 10: Regular support for Windows 10 is available through the Current Release path. Windows 10 does not get the full set of 7.6 LTSR benefits. For deployments that include Windows 10 machines, Citrix recommends that you use Version 7.9 of the VDA for Desktop OS and of Provisioning Services.

For more information, see [Adding Windows 10 Compatibility to XenApp and XenDesktop 7.6 LTSR](#) and the [XenApp and XenDesktop Servicing Options \(LTSR\) FAQ](#).

LTSR Compatible Components and Platforms	Version
Profile Management	5.4
AppDNA	7.6.5
License Server	11.12.1
HDX RealTime Optimization Pack	2.0
Windows 10	VDA: Version 7.9; Provisioning Services: Version 7.9

Compatible versions of Citrix Receiver

For ease of maintenance, and to ensure optimal performance, Citrix recommends that you upgrade to the latest version of Citrix Receiver any time it becomes available. The latest versions are available for download at <https://www.citrix.com/downloads/citrix-receiver.html>. For your convenience, consider subscribing to the [Citrix Receiver RSS feed](#) to receive a notification when a new version of Citrix Receiver becomes available.

Note that Citrix Receiver is not eligible for the XenApp and XenDesktop LTSR benefits (extended lifecycle and fix-only cumulative updates). Citrix may ask you to upgrade to a newer version of Citrix Receiver within your 7.6 LTSR environments. In the case of Citrix Receiver for Windows, Citrix has announced a special LTSR program. More information on that program is available on the [Lifecycle Milestones for Citrix Receiver](#) page.

Specifically, LTSR supports the following versions of Citrix Receiver and all later versions:

LTSR Compatible Versions of Citrix Receiver	Version
Citrix Receiver for Windows	4.4 or later
Citrix Receiver for Linux	13.2.1 or later
Citrix Receiver for Mac	12.1 or later
Citrix Receiver for Chrome	1.8 or later
Citrix Receiver for HTML5	1.8 or later
Citrix Receiver for iOS	6.1.1 or later
Citrix Receiver for Android	3.8 or later

Notable exclusions

The following features, components, and platforms are not eligible for LTSR lifecycle milestones and benefits. Specifically, cumulative updates and extended lifecycle benefits are excluded. Updates to excluded features and components will be available through regular current releases.

Excluded Features: Local App Access, Framehawk

Excluded Components: Linux VDA, Personal vDisk

Excluded Windows Platforms*: Windows 2008 32-bit (for Universal Print Server)

* Citrix reserves the right to update platform support based on third party vendors' lifecycle milestones.

Upgrading to XenApp and XenDesktop 7.6 LTSR

You can upgrade to LTSR directly from XenApp and XenDesktop 7.6, and from any of the three 7.6 Feature Packs.

Download locations:

- [Download LTSR \(XenApp\)](#)
- [Download LTSR \(XenDesktop\)](#)

The good news: The LTSR versions of many components have been available for a while, mainly as part of Feature Pack 3. That means if you have upgraded your deployment to Feature Pack 3, many components are already LTSR compliant. In those cases, no further action is required on your part. Look for This version was first released in the sections of the various components below to find out whether you need to upgrade beyond Feature Pack 3.

A word of caution before you upgrade the Controller: Upgrading to the LTSR version of the Controller will modify one or more of the DbSchemas of your Site data store. These modifications are permanent and irreversible - you cannot revert those modifications automatically. So before you upgrade the Controller, be sure to read and understand the section on upgrading to the LTSR version of the Controller.

Virtual Delivery Agent (VDA) for Desktop OS 7.6.300

LTSR Version: VDA for Desktop OS 7.6.300

This version was first released: September 30, 2015 as part of Feature Pack 3 (VDAWorkstation-Setup_7.6.300.exe)

[System requirements](#)

[Fixed Issues](#)

Installing/Upgrading

Download and run VDAWorkstationSetup_7.6.300.exe on the machine where you want install the VDA. Use either the graphical interface or the command line.

For more information, see [Install VDAs using the standalone package](#).

Virtual Delivery Agent (VDA) for Server OS 7.6.300

LTSR Version: VDA for Server OS 7.6.300

This version was first released: September 30, 2015 as part of Feature Pack 3 (VDAServer-Setup_7.6.300.exe)

System requirements

Fixed Issues

Installing/Upgrading

Download and run VDAServerSetup_7.6.300.exe on the machine where you want install the VDA. Use either the graphical interface or the command line.

The VDA for Windows Server OS installation automatically deploys Microsoft Visual C++ 2013 runtime (32-bit and 64-bit), as well as 2008 and 2010 runtimes (32-bit and 64-bit). Microsoft Visual C++ 2005 is no longer deployed. These pre-requisites will initiate a server restart, with the VDA installation continuing after the restart.

For more information, see [Install VDAs using the standalone package](#).

Delivery Controller 7.6.3 (Controller Hotfixes Update 3)

LTSR version: Delivery Controller 7.6.3

This version was first released: November 12, 2015 as Delivery Controller 7.6.3 (Controller Hotfixes Update 3)

System requirements

Fixed issues (32-bit)

Fixed issues (64-bit)

Installing/Upgrading

If your Controller is at Version 7.6.3:

Version 7.6.3 (Controller Hotfixes Update 3) of the Controller is the LTSR version. If you have previously upgraded to Version 7.6.3, your Controller is LTSR compliant, you do not need to upgrade it, and you can skip to the Citrix Studio section. Important: Make sure that all components of Version 7.6.3 are installed; otherwise, your Controller might be left in an unstable state.

If your Controller is at Version 7.6, 7.6.1, or 7.6.2:

To be LTSR compliant, you need to upgrade your Controller to the LTSR version. To do this, download the LTSR version to your Controller and follow the upgrade instructions below.

Caution: Downgrades, also known as rollbacks, from individual Controller components are not supported and might leave your systems in an unstable state. The Controller components do not patch the existing installations - each fully replaces the original component with a new installation. As a result, uninstalling a component removes the entire component from the Controller. If the need arises to revert to an earlier version of the Controller, you must uninstall each component and then reinstall the earlier versions of each. Reverting to an earlier version of a component might result in the loss of settings you configure while this upgrade is installed.

Important: All components of the LTSR Version must be installed; otherwise, your Controller might be left in an unstable state.

If you are upgrading from the base (RTM) version of the 7.6 Controller, install all components of the LTSR Controller.

If you are upgrading from Delivery Controller 7.6.1 (Controller Hotfixes Update 1) or Delivery Controller 7.6.2 (Controller Hotfixes Update 2), install only the components that are new in the LTSR version compared to the earlier release you already installed. There is no need to install the individual components in a specific order.

- To upgrade successfully, servers must not have registry modification restrictions in place.
- For supplemental information about installing XenDesktop/XenApp 7.x Controller updates, see [CTX201988](#).

Upgrading from Delivery Controller 7.6.2 (Controller Hotfixes Update 2)

Caution. By design, the Broker Service (BrokerSvc760WX64003.msi) component modifies the Broker DbSchema of your Site data store. These modifications are permanent and irreversible. Should you decide, for any reason, to uninstall the Broker Service component at a later time, these modifications do not revert automatically. As a matter of precaution, Citrix recommends strongly that you back up your Site data store before installing the Broker Service component. Doing so allows you to manually restore your Site data store to the backed up version. Even so, any changes you make to your Site data store between backing up and restoring it are lost. For information about backing up and restoring data stores, see [CTX135207](#).

The DbSchema update succeeds only if at least one Site is created. If you have not yet created a Site, create at least one Site before installing this update. Otherwise, the install fails to update the existing DbSchema and you will need to rebuild your XenDesktop.

Note: After the upgrade to this release, a prompt appears for the License Server compatibility check in Citrix Studio that makes sure that your License Server is the required version. If you are using the License Server released with XenDesktop 7.6 or from a more recent version, you do not need to upgrade the License Server. Click Continue to proceed with the DBSchema upgrade.

1. Make sure to verify that you are upgrading from a 7.6.2 Controller. Otherwise, see [Upgrading from Delivery Controller 7.6.1 or 7.6 below](#).
2. Make sure that at least one Site exists.
3. Back up your Site data store.
4. Copy the release package to a shared folder on the network.
5. Save the component msi file(s) on the Delivery Controller you want to update.
6. Run the .msi files.
7. Restart the Delivery Controller even if not prompted to do so.

8. To upgrade to the latest DbSchema installed by this release, go to the Citrix Studio Dashboard and click Upgrade.

Upgrading from Delivery Controller 7.6.1 or 7.6

Note. This section does not apply if you are upgrading from Version 7.6.2 of the Controller.

Caution. By design, both the Broker Service (BrokerSvc760WX64003.msi) and the Host Service (Host-Svc760WX64003.msi) components modify the Broker and the Host DbSchemas, respectively, of your Site data store. These modifications are permanent and irreversible. Should you decide, for any reason, to uninstall the Broker Service or the Host Service component at a later time, these modifications do not revert automatically. As a matter of precaution, Citrix recommends strongly that you back up your Site data store before installing the Broker Service and the Host Service component. Doing so allows you to manually restore your Site data store to the backed up version. Even so, any changes you make to your Site data store between backing up and restoring it are lost. For information about backing up and restoring your data stores, see [CTX135207](#).

The DbSchema update succeeds only if at least one Site is created. If you have not yet created a Site, create at least one Site before installing this update. Otherwise, the install fails to update the existing DbSchema and you will need to rebuild your XenDesktop.

Note. After the upgrade to this release, a prompt appears for the License Server compatibility check in Citrix Studio that makes sure that your License Server is the required version. If you are using the License Server released with XenDesktop 7.6 or from a more recent version, you do not need to upgrade the License Server. Click Continue to proceed with the DBschema upgrade.

1. Make sure that at least one Site exists.
2. Back up your Site data store.
3. Copy the release package to a shared folder on the network.
4. Save the component msi file(s) on the Delivery Controller you want to update.
5. Run the .msi files.
6. Restart the Delivery Controller even if not prompted to do so.
7. To upgrade to the latest DbSchema installed by this release, go to the Citrix Studio Dashboard and click Upgrade.

Uninstalling Delivery Controller component(s) and reverting to earlier levels of the component(s) and the Site data store

1. Uninstall the component(s) from ARP/Programs and Features.
2. Restore the data store(s) as described in [CTX135207](#).
3. Install the desired level of the component(s) (base or later release).
4. Restart the Controller even if not prompted to do so.

Citrix Studio 7.6 Update 3

LTSR Version: Citrix Studio 7.6 Update 3

This version was first released: October 29, 2015 as Hotfix DStudio760WX64003; Hotfix DStudio760WX86003

[System requirements](#)

Fixed Issues

- [64-bit](#)
- [32-bit](#)

Known Issues

If Citrix Studio is open during an upgrade, if you select the setting “Close the applications and attempt to restart them” on the Files in Use page of the installation wizard of this hotfix, the following message might appear:

“Setup was unable to automatically close all requested applications. Please ensure that the applications holding files in use are closed before continuing with the installation.”

If the message appears, you can safely close the message and click OK to continue with the installation.

Installing/Upgrading

Download the LTSR version of Citrix Studio and follow the installation instructions provided in [CTX201572](#).

Citrix Director 7.6.300

LTSR version: Director 7.6.300

This version was first released: September 30 as part of Feature Pack 3 (Director_7.6.300.zip)

[System requirements](#)

Check that you have selected all the required features in IIS. For the full list, see [CTX142260](#). Install the Citrix Group Policy Management component if you haven't already done so.

[Fixed issues](#)

Installing/Upgrading

Download the LTSR version of Citrix Director to the server running Director and follow the instructions at [Director](#).

Group Policy Management 7.6.300 (2.5)

LTSR version: Group Policy Management 7.6.300

This version was first released: September 30 as part of Feature Pack 3 (CitrixGroupPolicyManagement_7.6.300.zip)

System requirements:

Computers running Windows 7, Windows 8, Windows 8.1, Server 2008 R2, Server 2012, or Server 2012 R2

The new and enhanced HDX technologies features in the VDA are managed using the updated Group Policy Management package. Note: Once installed, this component shows as Version 2.5.0.0 in Programs & Features.

Installing/Upgrading

Citrix Group Policy Management needs to be installed on the system where Director is installed for enabling policies to be displayed on the User Details View. Download and install the LTSR version of Citrix Group Policy Management (Citrix Policy) on the server where Director is running. Then launch Studio or GPMC and the new and updated policies are displayed.

For more information on the updated policies, see: [Visual display policy settings](#) for enhanced Thin-wire compatibility mode; [USB devices policy settings](#) for support for signature devices and drawing tablets; and [Flash redirection](#) and [Multimedia policy settings](#) for video fallback prevention.

StoreFront 3.0.1

LTSR version: 3.0.1

This version was first released on September 30, 2015 as part of Feature Pack 3 (CitrixStoreFront-x64.exe)

[System requirements](#)

[Fixed issues](#)

[Known issues](#)

Installing/Upgrading

Download the LTSR version of StoreFront to the StoreFront server and follow the [Upgrade instructions](#).

Provisioning Services 7.6 Update 1

LTSR version: Provisioning Services 7.6 Update 1 (Provisioning Services 7.6 Cumulative Update 1 for Server and Console); PVS760TargetDeviceWX64001.zip, PVS760TargetDeviceWX86001.zip

This version was first released: September 15, 2015 as PVS760ConsoleServerWX86001.zip; PVS760ConsoleServerWX64001.zip

Provisioning Services 7.6 Update 1 includes fixes for over 40 issues found in the base 7.6 version.

System requirements

Fixed issues

- Console, Server ([64-bit](#) and [32-bit](#))
- Target Devices ([64-bit](#) and [32-bit](#))

Installing/Upgrading

Download the LTSR version of Provisioning Services and follow the installation instructions in [Installing Provisioning Services Console Software](#) (Console), [Installing Provisioning Services Server Software](#) (Server), and [CTX135746](#) (Target Devices).

Session Recording 7.6.100

LTSR version: 7.6.100

This version was first released on June 30, 2015 as part of Feature Pack 2 (SessionRecording7.6.100.zip)

Session Recording 7.6.100 as released as part of Feature Pack 2 includes the following new features and enhancements.

- You can specify the connection credentials to the database when installing the Session Recording Database component.
- You can test the connectivity of database during the installation of the Session Recording Database and Session Recording Server components and test the connectivity of the Session Recording Server during the installation of Session Recording Agent component.
- Microsoft Shared Management Objects is no longer requirement for Session Recording Database installation.
- Citrix Experience Improvement Program (CEIP) is integrated in Session Recording. For more information, see [About the Citrix Customer Experience Improvement Program](#). Existing settings are retained during upgrade.

System requirements

Installing/Upgrading

Download the LTSR version and then follow the [upgrade instructions](#).

Known issues with Session Recording 7.6.100 when used in an LTSR deployment:

- Recordings of Microsoft Paint sessions do not play back correctly in the Session Recording Player. [0604700]
- An error occurs when you play back a session that was recorded on a multiple-monitor user device. [0605129]

Universal Print Server 7.6.300

LTSR version: 7.6.300

This version was first released on September 30, 2015 as part of Feature Pack 3 (UpsServer_7.6.300.zip)

Note: Universal Print Server consists of both client and server components. The client component installs as part of the VDAs; therefore no client installation files are included in the LTSR version. On the server side, LTSR does not support Universal Print Server on 32-bit Windows operating systems; therefore, only the 64-bit server installer is included.

System requirements

Fixed issues

Installing/Upgrading

The Universal Print Server package contains updated versions of the standalone UPS server component (UpsServer_x64.msi) and the prerequisite vcredist_x64.exe, vcredist_x86.exe, and cdf_x64.msi files.

1. Download the LTSR version to a Windows 2008 R2 SP1, Windows Server 2012, or Windows Server 2012 R2 print server.
2. Install the prerequisite vcredist_x64.exe, vcredist_x86.exe, and cdf_x64.msi files.
3. Install the Universal Print Server component, UpsServer_x64.msi.
4. Restart the server after installing the Universal Print Server component.

The UPClient component is part of the VDA installation. As a result, you do not need to manually install the client component, and it is not included as a standalone component of the LTSR version.

For more information, see [Provision printers](#).

HDX Flash redirection

HDX Flash redirection offloads the processing of most Adobe Flash content (including animations, videos, and applications) to users' LAN- and WAN-connected Windows devices, which reduces server and network load. This results in greater scalability while ensuring a high definition user experience.

The client-side components are installed as part of the Desktop and Server OS VDAs. As a result, upgrading to the LTSR versions of the VDAs upgrades your deployment to the latest version of HDX Flash redirection.

There are no server-side components to install. However, configuring Flash redirection requires both server-side and client-side settings. For information about configuring Flash redirection, see [Flash Redirection](#). For the latest updates to HDX Flash compatibility, see [CTX136588](#).

Issues fixed since XenApp and XenDesktop 7.6

June 28, 2019

XenApp/XenDesktop 7.6 LTSR Cumulative Update 1 addresses the following issues reported since the release of XenApp and XenDesktop 7.6.

For a list of all issues fixed since the release of 7.6 LTSR, see [Issues fixed since 7.6 LTSR](#).

Citrix Director

- User name searches in Director can experience random delays of up to two minutes.

[LC1250]

- When attempting to export a large amount of data in PDF format, the server's CPU and memory consumptions can approach 100% and the following error message appears:

“Action failed. Data source unresponsive or reported an error. View server event logs for further information.”

This fix introduces a configurable limit for the PDF export and as a result, at least a portion of the report can be obtained.

After installing this fix, you must configure the web.config file in the wwwroot\Director folder as follows:

Add the following line to “appSettings” section:

```
<add key="UI.ExportPdfDrilldownLimit" value="100"/>
```

The limit depends on the capability of the server, such as the memory size where the value specifies the count of rows in the PDF report.

[LC4108]

- Attempts to export reports in any file format might fail with the following error message:

“Action failed. Unexpected server error. View server event logs for further information.”

[LC4281]

- If a XenApp server has two IP addresses and the DNS server cannot resolve the first IP address, attempts to log on to Citrix Director by an administrator might fail with the following error message:

“The system is currently unavailable. Please try again later or contact your administrator.”

[LC4411]

- When attempting to export a large amount of data in CSV format, a timeout can occur and the export might fail with the following error message:

“Action failed. Data source unresponsive or reported an error. View Director server event logs for further information.”

This fix lets you configure the timeout value for exporting data.

After installing the fix, you must configure the web.config file in the wwwroot\Director folder as follows:

Add the following line to “appSettings” section:

<add key=”Connector.DataServiceContext.Timeout” value=”3600” /> where the value specifies the timeout in seconds.

[LC4467]

- Selecting a user to display that user’s session details can result in the user name that appears in the top left corner to show as “NULL.”

[LC4589]

- If the NetBios domain name contains an ampersand (&), shadowing from the Citrix Director console might fail. This issue occurs because the ampersand character is a reserved character in XML and can cause the parsing for the current logon to fail.

[LC4633]

Citrix Policy

- The Microsoft Management Console (MMC) fails if the “Console Root” is not selected in the navigation pane when closing Desktop Studio.

[LC1314]

- The Citrix Policy Engine might cause the server to become unresponsive. When this occurs, Citrix Receiver and RDP connection requests fail.

[LC1817]

- With this enhancement, modeling reports created by the Citrix Group Policy Modeling wizard appear in Citrix Studio’s middle pane.

[LC2189]

- When adding or creating a Citrix Administrator in Citrix Studio with a user or group that contains an underscore in the name, such as get\dl_lab_group, the first underscore does not appear in the details of the list of administrators. The name appears as dllab_group.

[LC2284]

- When running the Group Policy Modeling wizard on the policies node of AppCenter as a domain user, applied user and computer policies might not be visible.

[LC3284]

- Citrix Director administrators might not be able to view Citrix policies in session details.

[LC3941]

- Attempts to add multiple session printers to a group of user devices under the “Printer assignments” window fails to expand and display the scrollbar. As a result, attempts to add multiple session printers to a group of user devices can fail.

[LC4658]

Citrix Studio

- When you click the machine catalog in Desktop Studio, it might take a long time for the catalogs to appear. In addition, the hosting information also takes a long time to appear.

[LC0237]

- This fix addresses a security vulnerability. For more information, see Knowledge Center article [CTX213045](#).

Note: To enable this fix, you must update both Citrix Studio and the Controller components with 7.6 LTSR Cumulative Update 1.

[LC0559]

- Citrix Studio might not recognize Citrix Service Provider licenses and the following error message appears:

“Can’t find a valid license”

[LC0813]

- With this enhancement, Citrix Studio shows the correct user assignment data when adding users from multiple sites in an Active Directory (AD) domain.

[LC0889]

- This fix addresses an issue that prevents members from being added to a Delivery Group if they belong to a domain other than the one where Citrix Studio is located.

[LC0955]

- The Microsoft Management Console (MMC) fails if the “Console Root” is not selected in the navigation pane when closing Desktop Studio.

[LC1314]

- If the property of an application changes in the “Applications” window, the priority of the Delivery groups might change to zero.

[LC1489]

- After changing the Web Interface port number, Desktop Studio might incorrectly open the License upgrade prompt.

[LC1575]

- Attempts to configure a new site by using the XenDesktop High Level Powershell SDK command “New-XDSite” without configuring licensing and then following attempts to run the command “Get-XDSite” fail. The error message “The site has upgrade steps remaining. Run Get-XDUpgradeStatus to find out the remaining steps” appears.

[LC1612]

- Applications that use App-V integration might not use the correct working directory.

[LC1623]

- If the user configures the prelaunch and lingering sessions in Citrix Studio, the “MaxTimeBeforeDisconnect” property is set to zero minutes instead of the default value 15 minutes.

[LC1706]

- Attempts to start App-V applications through Citrix Receiver may fail after upgrading to App-V 5.0 Service Pack 3.

[LC1762]

- After upgrading to XenDesktop 7.6, Desktop Studio might take about three or four minutes to show the catalogs or Hosting information.

[LC1851]

- When a Delivery Controller goes offline or becomes otherwise unavailable, Citrix Studio might operate slowly.

[LC1891]

- Attempts to run the Create Catalog wizard can fail. The issue occurs when one of the connected hypervisors is in Maintenance Mode.

[LC1916]

- When running a query in Citrix Studio that was saved with an “Is Empty” operator, that operator is replaced by the default operator.

[LC1940]

- Attempts to automatically upgrade a site from XenDesktop 7.5 to XenDesktop 7.6 might fail because the “binding” property in Broker Service instances might not be compared correctly while

checking between the new and already existing instances. This can result in a “service instance already registered” error. The issue occurs when trying to register the service endpoints without unregistering the existing endpoints.

[LC2043]

- After a successful XenDesktop upgrade from Version 5.x or 7.x to Version 7.6, the following error message might appear when starting Studio:

“Upgrade remaining Delivery Controllers.”

This error message’s details specify the license server name even though the delivery controller is not installed on the license server.

[LC2044]

- Attempts to upgrade the site to the latest product version might fail. The issue occurs when the “Set-ConfigSite” commands fails to get the new upgraded value.

[LC2047]

- When adding or creating a Citrix Administrator in Citrix Studio with a user or group that contains an underscore in the name, such as get\dl_lab_group, the first underscore does not appear in the details of the list of administrators. The name appears as dllab_group.

[LC2284]

- In Delivery Groups, attempts to create an application folder that contains the word “Applications” can prevent the creation of sub-folders.

[LC2349]

- When you consolidate XenApp and XenDesktop licenses that have the same Subscription Advantage expiry dates into a single license file, some XenApp licenses might be missing from the license information visible in Studio.

Note: To enable this fix, you must update both Citrix Studio and the Controller components with 7.6 LTSR Cumulative Update 1.

[LC2350]

- This fix addresses a memory leak in Citrix Studio that occurs while running App-V app discovery.

[LC2559]

- When creating a custom role for administrators, the role is created with the following error message: “The Given key was not present in the dictionary.” Additionally, when starting Desktop Studio for the first time by using an administrator account, the same error message appears.

[LC2680]

- If the database owner is a group in Active Directory, attempts to remove XenDesktop Controller from a site can fail.

[LC2912]

- After installing Hotfix DStudio760WX86001 you might see an Access Denied error when trying to limit the visibility of some applications to users.

This issue is limited to environments with unidirectional trust relationships between domains.

[LC2956]

- Attempts to update a delivery group with multiple desktops by using commands or in Studio fails with the following error messages:
 - Object reference not set to an instance of an object.
 - Error Id: XDDS:0E01FE12

[LC2958]

- When using the Machine Creation Service to catalog VDAs for Server OS, unavailability of personal vDisk storage can incorrectly set the “CleanOnBoot” property of the catalog to “False.” As a result, the catalog might fail to update.

[LC2959]

- When two applications have the same ApplicationID, refreshing App-V applications can cause Citrix Studio to set the App-V package name incorrectly.

Note: To enable this fix, you must update both Citrix Studio and the Controller components with 7.6 LTSR Cumulative Update 1.

[LC2969]

- The existing user settings are deleted after editing the “Users” section on the “Machine allocation” page in the “Edit Delivery Group.” The issue occurs when adding users manually or when importing a list of users from a Microsoft Excel CSV file.

[LC3267]

- With this enhancement, the “Hosting Server Name” field is available in the Search views of “Desktop OS machines” and “Server OS machines” in the Desktop Studio.

[LC3343]

- Citrix Studio might become unresponsive while closing PowerShell resources.

[LC3612]

- Creating multiple applications in multiple folders under Delivery Groups in Citrix Studio might result in a large folder structure. The first time you open Citrix Studio and click folders or applications, the folders or applications might be dragged instead of being selected. This moves the selected object and causes the folder or application structure to change.

[LC3705]

- The Add-XDController cmdlet does not assign full custom database connection strings to the Controller.

Note: To enable this fix, you must update both Citrix Studio and the Controller components with 7.6 LTSR Cumulative Update 1.

[LC3860]

- Attempts to open Citrix Studio by users that are not members of the Database administrators user group can result in permission errors on the SQL Server.

Note: To enable this fix, you must update both Citrix Studio and the Controller components with 7.6 LTSR Cumulative Update 1.

[LC4127]

- Attempts to provision additional resources to a multi-tenant offering in App Orchestration 2.6 can fail if the offering already contains two or more tenants.

Note: To enable this fix, you must update both Citrix Studio and the Controller components with 7.6 LTSR Cumulative Update 1.

[LC4170]

- When multiple Citrix Studio sessions are open, policy changes made in one session can be lost and overwritten by those made in another.

Note: To enable this fix, you must update both Citrix Studio and the Controller components with 7.6 LTSR Cumulative Update 1.

[LC4487]

Controller

- When you click the machine catalog in Desktop Studio, it might take a long time for the catalogs to appear. In addition, the hosting information also takes a long time to appear.

[LC0237]

- When the user updates a catalog, the Configuration Logging reports that the “Update Machine Catalog” is successful but one of the tasks in the Task Details view shows the message “Release the provisioning scheme” failed.

[LC0518]

- This fix addresses a security vulnerability. For more information, see Knowledge Center article [CTX213045](#).

Note: To enable this fix, you must update both Citrix Studio and the Controller components with 7.6 LTSR Cumulative Update 1.

[LC0559]

- With this enhancement, Citrix Studio shows the correct user assignment data when adding users from multiple sites in an Active Directory (AD) domain.

[LC0889]

- If the XenServer parameter “TimeOffSet” exists on the master image virtual machine (VM), creating the Machine Creation Services (MCS) catalog fails. To check the existence of the parameter, in the XenServer console, run the command “xe vm-list uuid= params=other-config”. To resolve this issue, apply this hotfix or manually remove the parameter by running the XenServer command “xe vm-param-remove uuid= param-name=other-config param-key=timeoffset”.

[LC1071]

- The Monitoring Service prematurely deletes the application instance history after seven days instead of the default 90 days. This occurs in XenDesktop and XenApp deployments with Platinum Edition licensing.

[LC1129]

- In Desktop Director, on the “Trends > Hosted Applications Usage” tab, the totals for each application do not equal the sum total for all applications. This occurs in environments running for seven days or longer.

[LC1130]

- If you create virtual machines (VM) with Desktop Studio that uses Machine Creation Services and the VMs are hosted on a VMware hypervisor, attempts to update VMs that are part of the machine catalog fail. When this occurs, an error appears in the Machine Creation log that the virtual disk does not exist, but the directory in the datastore does exist.

[LC1201]

- In some Amazon Web Services environments, provisioning desktops with Machine Creation Services (MCS) might fail with the error “No facility for disk upload”, even when the environment is configured correctly.

[LC1295]

- When provisioning VDAs by using the Machine Creation Service, the primary DNS suffix changes for the VDAs.

[LC1300]

- The Microsoft Management Console (MMC) fails if the “Console Root” is not selected in the navigation pane when closing Desktop Studio.

[LC1314]

- When two or more instances of event ID 3012 record in the event log, event IDs 3020 and 3021 also appear in the log and the messages are incorrect. With this fix, if two or more instances of event ID 3012 record, then event IDs 3010 and 3011 correctly appear in the log.

[LC1425]

- The error messages for event IDs 1110 and 1111 are incorrect in the event log. With this fix, the following correct messages appear in the event log:
 - EventID:1110: To avoid excessive event logging, the service is temporarily suppressing related messages (event IDs 1100-1109, 1112-1116).
 - EventID:1111: The service is no longer suppressing related messages (event IDs 1100-1109, 1112-1116).

[LC1485]

- If a VDA in a shared delivery group is tagged and the tag is used as part of a policy filter, the policies are not applied to other VDAs in the delivery group.

[LC1506]

- After changing the Web Interface port number, Desktop Studio might incorrectly open the License upgrade prompt.

[LC1575]

- Creating new catalogs fail after upgrading to XenDesktop 7.6 and if the master VM image contains a nested hardware virtualization property that is enabled on VMware vSphere 5.1.

[LC1586]

- Attempts to configure a new site by using the XenDesktop High Level Powershell SDK command “New-XDSite” without configuring licensing and then following attempts to run the command “Get-XDSite” fail. The error message “The site has upgrade steps remaining. Run Get-XDUUpgradeStatus to find out the remaining steps” appears.

[LC1612]

- If the NetBios domain name contains an ampersand (&), attempts to start Citrix Studio fail with the error “You are not authorized to perform this operation” with the code XDDS:72182E6B.

[LC1646]

- If the user configures the prelaunch and lingering sessions in Citrix Studio, the “MaxTimeBeforeDisconnect” property is set to zero minutes instead of the default value 15 minutes.

[LC1706]

- In a Hyper-V environment with System Center Virtual Machine Manager, the BrokerService.exe process can consume up to 100% of system memory, preventing virtual desktops from being brokered successfully.

[LC1730]

- After upgrading to XenDesktop 7.6, Desktop Studio might take about three or four minutes to show the catalogs or Hosting information.

[LC1851]

- When a Delivery Controller goes offline or becomes otherwise unavailable, Citrix Studio might operate slowly.

[LC1891]

- Attempts to run the Create Catalog wizard can fail. The issue occurs when one of the connected hypervisors is in Maintenance Mode.

[LC1916]

- In some Active Directory organizational units (OUs), if the OU name contains a special character, the core services for XenDesktop (such as AD Identity Service or Broker Service) might not be able to bind to the OU. This can cause the CPU usage to be higher than normal. Additionally, Citrix Studio might become inaccessible as the services might close unexpectedly.

[LC1979]

- When using filtering by keywords for published applications, the workspace control might not work.

[LC2025]

- The tabs in the “Trends” page and “Filters option” page in Desktop Director might fail to show the data with an error message.

[LC2035]

- Attempts to automatically upgrade a site from XenDesktop 7.5 to XenDesktop 7.6 might fail because the “binding” property in Broker Service instances might not be compared correctly while checking between the new and already existing instances. This can result in a “service instance already registered” error. The issue occurs when trying to register the service endpoints without unregistering the existing endpoints.

[LC2043]

- After a successful XenDesktop upgrade from Version 5.x or 7.x to Version 7.6, the following error message might appear when starting Studio:

“Upgrade remaining Delivery Controllers.”

This error message's details specify the license server name even though the delivery controller is not installed on the license server.

[LC2044]

- Attempts to upgrade the site to the latest product version might fail. The issue occurs when the "Set-ConfigSite" commands fails to get the new upgraded value.

[LC2047]

- This release adds the `-enabled` flag to the command `Set-XDLogging -AdminAddress $ControllerName -AllowDisconnectedDatabase $true`.

[LC2162]

- In the Powershell snap-in, running the command `Get-Help set-MonitorConfiguration -detailed` returns the error message -"GroomApplicationInstanceRetentionDays <Int32> FIXME".

[LC2176]

- The following error message might be incorrectly logged in the application log each time the Citrix Monitor Service starts even though the service is working correctly:

"Error querying the Broker via GetBrokerObjects to obtain 'Controller Machine Details'"

[LC2239]

- If a Delegated Administrator account has User Access Control enabled, updates to Delivery Controller are installed to the default location in error. The default location is "%system-root%\Program Files\Citrix" and this might not be the same location where you originally installed Delivery Controller.

[LC2252]

- When adding or creating a Citrix Administrator in Citrix Studio with a user or group that contains an underscore in the name, such as `get\dl_lab_group`, the first underscore does not appear in the details of the list of administrators. The name appears as `dllab_group`.

[LC2284]

- If a virtual graphics processing unit (VGPU) is enabled in the VM master image in VMware vSphere 6 with a GRID board, the machine creation process fails.

[LC2326]

- When you consolidate XenApp and XenDesktop licenses that have the same Subscription Advantage expiry dates into a single license file, some XenApp licenses might be missing from the license information visible in Studio.

Note: To enable this fix, you must update both Citrix Studio and the Controller components with 7.6 LTSR Cumulative Update 1.

[LC2350]

- When users log off from a session, the End Date updates incorrectly in the database, including all application instances running within a session and applications that are closed before the session ended.

[LC2435]

- When creating a custom role for administrators, the role is created with the following error message: “The Given key was not present in the dictionary.” Additionally, when starting Desktop Studio for the first time by using an administrator account, the same error message appears.

[LC2680]

- The VDA provisioned by integrated Hyper-V appears unregistered after subscribing successfully.

[LC2722]

- After upgrading the Desktop Controller from Version 7.x to Version 7.6, if the PowerShell command “Set-MonitorConfiguration” is run, the following error message appears:

“A database operation failed and cannot be recovered.”

[LC2745]

- Attempts to add more than 999 virtual machines (VMs) to a single catalog might fail.

[LC2873]

- A published application name that contains a trailing space can result in several issues. These issues occur when generating browser names from the published name of the application that has truncated names containing a trailing space.

[LC2897]

- If the database owner is a group in Active Directory, attempts to remove XenDesktop Controller from a site can fail.

[LC2912]

- After installing Hotfix DStudio760WX86001 you might see an Access Denied error when trying to limit the visibility of some applications to users.

This issue is limited to environments with unidirectional trust relationships between domains.

[LC2956]

- Attempts to update a delivery group with multiple desktops by using commands or in Studio fails with the following error messages:
 - Object reference not set to an instance of an object.
 - Error Id: XDDS:0E01FE12

[LC2958]

- When two applications have the same ApplicationID, refreshing App-V applications can cause Citrix Studio to set the App-V package name incorrectly.

Note: To enable this fix, you must update both Citrix Studio and the Controller components with 7.6 LTSR Cumulative Update 1.

[LC2969]

- With this fix the following issues can be resolved:
 - When the host connection is configured to US-East-1e regions, the Amazon Web Services (AWS) connection can be established, but however, the machine creation might fail.
 - When attempting to add AWS host connection to use EU-Central-1, the host connection creation might fail with an authentication error.

[LC3239]

- Machine Creation Services (MCS) might not honor the “AvailableForPlacement” flag on System Center Virtual Machine Manager (SCVMM) 2012 hosts. As a result, the machine creation might fail if a host with insufficient resource is chosen.

[LC3426]

- When executing Set-BrokerDBConnection and related commands, the associated configuration logging entries in Citrix Studio list the corresponding “Main Task” with a status of “In Progress,” and the status is not updated when the task completes.

[LC3479]

- After performing an upgrade to XenDesktop 7.6 using the local system account (typically used by Electronic Software Distribution such as SCCM), the Analytics Service fails to start.

[LC3493]

- Performing a scheduled restart of a VDA for Server OS that is connected to a VMware Vsphere Hypervisor can cause the server to shut down and remain in a powered off state.
 - To enable the fix, set the following registry key:
HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\DesktopServer\RebootSchedule
Name: ShutdownTimeoutRecovery
Type: DWORD
Value: 1
 - To disable the fix, set the following registry key:
HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\DesktopServer\RebootSchedule
Name: ShutdownTimeoutRecovery
Type: DWORD
Value: 0

After setting the value, you must restart the Broker Service.

[LC3807]

- After Hotfix Rollup Pack 7 for System Center Virtual Machine Manager (SCVMM) is installed, catalog creation with Machine Creation Services (MCS) might fail.

[LC3822]

- The Add-XDController cmdlet does not assign full custom database connection strings to the Controller.

Note: To enable this fix, you must update both Citrix Studio and the Controller components with 7.6 LTSR Cumulative Update 1.

[LC3860]

- Attempts to open Citrix Studio by users that are not members of the Database administrators user group can result in permission errors on the SQL Server.

Note: To enable this fix, you must update both Citrix Studio and the Controller components with 7.6 LTSR Cumulative Update 1.

[LC4127]

- Attempts to provision additional resources to a multi-tenant offering in App Orchestration 2.6 can fail if the offering already contains two or more tenants.

Note: To enable this fix, you must update both Citrix Studio and the Controller components with 7.6 LTSR Cumulative Update 1.

[LC4170]

- When the setting “SupportMultipleForest” is enabled on the Controller to allow NTLM authentication, the Linux VDA might fail to complete the registration process as its Service Principal Name (SPN) might not be set in the EndpointReference of the Windows Communication Foundation (WCF).

[LC4235]

- If you create virtual machines (VMs) that are hosted on a VMware hypervisor, initial attempts to update or delete those VMs from Citrix Studio can fail with an “Error ID XDDS:B125B84A,” but subsequent attempts succeed.

[LC4436]

- When multiple Citrix Studio sessions are open, policy changes made in one session can be lost and overwritten by those made in another.

Note: To enable this fix, you must update both Citrix Studio and the Controller components with 7.6 LTSR Cumulative Update 1.

[LC4487]

- When running the PowerShell command `Get-LogSummary` for a date range that encompasses a switch to or from daylight saving time, the following error message appears:

“An item with the same key has already been added.”

The issue occurs when daylight saving time introduces ambiguous local dates or times. As a result, duplicate entries are created in the HashMap and an exception occurs.

This fix introduces a message to inform users to split the time span to account separately for the point in time when daylight saving time begins or ends.

[LC4612]

- Attempts to update machine catalogs in Amazon Web Services (AWS) environments can fail intermittently. To enable the fix, you must run the command, `Set-ProvServiceConfigurationData -Name ImageManagementPrep\ _DoImagePreparation -Value $false` for the image preparation phase to be skipped during the machine catalog update.

[LC4709]

- Controllers occasionally lose connectivity with the database when there is a high number of apps and VDA processes running. When that happens, VDAs remain in the initialization state and applications are unavailable.

[LC4848]

- When there are too many hypervisor alerts, the SQL database server’s CPU usage can reach 100%.

[LC5277]

- Under high utilization conditions (more than 5,000 users launching numerous apps on numerous VDAs for Server OS concurrently), the SQL database server’s CPU usage can reach 100%, which causes outages and apps are unable to launch.

[LC5315]

HDX MediaStream Flash Redirection

- If HDX MediaStream Flash Redirection is enabled, opening and closing multiple tabs in Internet Explorer with Flash content can cause Internet Explorer to exit unexpectedly.

[LC0375]

- With HDX Mediastream for Flash enabled, opening and closing multiple tabs in Internet Explorer can cause Internet Explorer to close unexpectedly.

[LC1141]

- When browsing websites with HDX MediaStream Flash Redirection enabled, the Flash redirection feature fails if the registry value of HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows NT\CurrentVersion\Windows\AppInit_DLLs is set to just “mfaphook.dll” or “mfaphook64.dll” instead of the full path to “mfaphook.dll” or “mfaphook64.dll.”

[LC4388]

Installer

- If you install version 7.6.300 of the VDA from the commandline, the /noreboot switch - depending on its location in the string of switches - is not being honored. As a result, the VDA restarts after the installation completes.

[LC4046]

- When installing a VDA, certain registry keys for performance might be installed even if you disable the “Optimize Performance” option during installation.

[LC4330]

Licensing

- Citrix Studio displays the licensing models in Spanish for license servers set to a French system locale.

[LC3450]

Provisioning Services

Console

- The XenDesktop Setup Wizard sets an invalid “default” generation ID when creating XenServer virtual machines.

[LA5924]

- After completing the XenDesktop wizard, the Machine Catalog in Studio is empty and the streaming IP address appears instead of the management IP address, which is incorrect. To use the management IP address, set the following registry key:

HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\ProvisioningServices

Name: UseManagementIpInCatalog

Type: DWORD

Value: 1

[LC0125]

- When running the Streamed VM Setup Wizard to add VMs to a Device Collection and if a hosting entry uses a different case format, the following error message appears:

“To avoid creating a duplicate key, the Add or Set command was cancelled”

Details:

Cannot insert duplicate key row in object ‘dbo.VirtualHostingPool’ with unique index ‘IDX_VirtualHostingPoolSiteIdName’. The duplicate key value is (18df503c-c745-452a-89aa-3bbf431c7b33, livsvmv01.livdc.local).

The statement has been terminated.

[LC0348]

- The Xen Desktop Setup Wizard does not use the template boot properties when creating targets. To fix this, create the following registry key:

HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\ProvisioningServices

Name: UseTemplateBootOrder

Type:REG_DWORD

Data: 1

[LC0382]

- When running the Streamed VM Setup Wizard, some Active Directory organizational units (OUs) might not appear in the wizard if the OU name contains special characters.

[LC0393]

- Attempts to map a disk on the Provisioning Service server by using either MCLI.exe or the command “mcli-runwithreturn mapdisk -p disklocatorName=MyDiskLocatorName, site-name=MySiteName, storeName=MyStoreName” fail and the following error message appears:

Object Reference not set to an instance of an object (MCLI command)

Attempts to run the command “mcli-run unmapdisk” fails and shows the error message “An unexpected MAPI error occurred.”

[LC0786]

- When trying to create machines by using the XenDesktop Setup Wizard, the hard drive and the virtual DVD drives are placed in different storage volumes, even though the hosting unit can only access one volume.

[LC0918]

- If the Desktop Delivery Controller contains a port number in the uniform resource identifier (URI), when the XenDesktop Setup Wizard runs, the Microsoft Management Console (MMC) stops responding.

[LC1248]

- The XenDesktop Setup Wizard fails when one of the Cluster Shared Volumes does not contain the StorageDisk location.

[LC1807]

- After installing Provisioning Services Console version 7.1.3, many .NET applications fail on Windows Server 2008 R2 and on Windows 7.

[LC1838]

- In some environments, when using the Provisioning Services 7.x bootstrap file, it can take a long time to start many target devices together.

Note: The issue can also occur in situations where a high load does not exist.

[LC1839]

- If the account used to log on to the Provisioning Services console is not the same account used to install Provisioning Services, running the XenDesktop Setup Wizard fails with the following error:

“Cannot connect to the XenDesktop controller at <address>. Some or all identity references could not be translated.”

[LC1952]

- In a Microsoft SCVMM environment, the XenDesktop Setup wizard does not assign a static MAC address to a non-streaming network adapter when the MAC address type in the template is static.

[LC2459]

- When running the XenDesktop Setup Wizard, not all virtual machines are created if the number of standard and PVD storages are not equal.

[LC2496]

- The XenDesktop Setup Wizard creates ESX virtual machine metadata in one store, instead of distributing the metadata with the different disks created for the virtual machine.

[LC2549]

- When creating virtual machines in XenServer by using the XenDesktop Setup Wizard, the template setting with the GPU assigned might not be retained.

[LC2859]

- Machines created with the XenDesktop Setup Wizard are not added to the XenDesktop machine catalog and the following error message appears:

“No items match the supplied pattern”

[LC2923]

- The XenDesktop Setup Wizard might fail to create machine when the VMware ESX host is in Maintenance Mode.

[LC3401]

- The XenDesktop Setup Wizard might fail to honor the “Superseded” flag on the Personal vDisk storage of the hosting unit.

[LC3573]

- When the Streamed VM Setup Wizard is running, enumerating templates on the VMware ESX cluster that contain many hosts and data stores can take a long time to complete.

[LC3674]

- When mounting and unmounting vDisks, the SOAP service might become unresponsive and the Provisioning Services Console might fail to start.

[LC3723]

- The following error message can appear while creating machines using the Streamed VM Setup Wizard:

“Object reference not set to an instance of an object.”

[LC3811]

- When a help desk administrator creates new virtual machines (VMs) from a standalone Provisioning Services Console through the XenDesktop Setup wizard, attempts to start a target device from a BDM partition can fail and cause an incorrect IP address for the logon server to appear.

[LC3911]

- Installing the Provisioning Services Console sets the following registry key to “1.” This can cause other .NET applications to try to use the wrong version of the Framework and possibly fail:

HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\.NETFramework

Name: OnlyUseLatestCLR

Type: REG_DWORD

Data: 1

[LC4197]

- Attempts to create virtual machines (VMs) by using the XenDesktop Setup wizard or the Streamed VM Setup wizard might fail in a Microsoft System Center Virtual Machine Manager (SCVMM) environment. With this fix, the fully qualified domain name (FQDN) of the host is used in the commands instead of short name.

[LC4230]

- The XenDesktop Setup wizard might fail to create Provisioning Services target devices in System Center Virtual Machine Manager (SCVMM) 2012 environments.

[LC4256]

- Attempts to connect to VMware Vsphere Hypervisor 5.1 by using the Streamed VM Setup wizard or the XenDesktop Setup wizard fail if User1 and User2 are configured to use different ports.

To use a different port to connect to the VMware ESX server, you must create the following registry key:

HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\ProvisioningServices\PlatformEsx

Name: Port

Type: DWORD

Value: <port_number>

[LC4283]

- SSL connections between the XenDesktop Setup wizard and XenServer fail.

[LC4377]

- This is an enhancement to facilitate NIC teaming with the latest Mellanox NICs and firmware used in HP Moonshot systems.

[LC4646]

- If the template created in System Center Virtual Machine Manager (SCVMM) has NICs on two different networks - for example, NIC1 on network xxx and NIC2 on network yyy - the XenDesktop Setup wizard default behavior is to change both NICs to the network of the host record (network zzz). For the NIC2 network to remain unchanged, after installing this fix, set the following registry key:

HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\ProvisioningServices\PlatformScvmm

Name: RequireMatchingNetworks

Type: REG_DWORD

Value: 1

[LC4650]

- Pressing “Ctrl+C” without any items selected, the Provisioning Services Console might exit unexpectedly with the following error message:

“MMC has detected an error in a snap-in and will unload it.”

Additionally, the issue can occur if the “Ctrl+C” key combination is automatically injected by certain third-party software.

[LC4909]

Server

- The SOAP Service might exit unexpectedly while changing the vDisk license mode to Key Management Service (KMS).

[LC0265]

- In Version 7.1 of Provisioning Services, attempts to set a subnet mask of 0.0.0.0 when configuring bootstrap to use the Gateway/DHCP settings to set the subnet mask value at runtime fail and the following error message appears

“Invalid Subnet mask.”

[LC0312]

- The Target device might return broadcasted ARP reply packets during the bootstrap process, causing excessive network traffic.

[LC0451]

- If there are five or more network adapters attached to the server, the following error messages appear:

- Message processor timed out. Error number 0XE0070003.
- No response received for successful send. Error number 0xA0070002.

[LC0455]

- When many targets attempt to reconnect after experiencing network issues, the Stream Process (StreamProcess.exe) might close unexpectedly due to extensive retry attempts to send the packets to the target devices.

[LC0488]

- When using the network settings of the DHCP in bootstrap configuration, if the “Router” option in DHCP is not configured, a false default gateway IP address might appear in the Provisioning Services Target device.

[LC0688]

- When installing the XenApp Enterprise and PVS Datacenter licenses on the Citrix License Server and starting the XenApp Target device from the vDisk, the PVS Datacenter licenses are not consumed in the License Management Console.

[LC0707]

- With this release, the vhdUtil tool can rename a virtual disk chain and prepare the chain to be imported as a new disk. During renaming, the following actions occur:
 - Updates the disk header, footer, and timestamp.
 - Renames the PVP file, if it exists.

- Creates an XML file based on the renamed chain that allows the renamed disk to be imported by the Provisioning Services console.

[LC0722]

- Attempts to map a disk on the Provisioning Service server by using either MCLI.exe or the command `mcli-runwithreturn mapdisk -p disklocatorName=MyDiskLocatorName , sitename=MySiteName, storeName=MyStoreName` fail and the following error message appears:

Object Reference not set to an instance of an object (MCLI command)

Attempts to run the command `mcli-run unmapdisk` fails and shows the error message "An unexpected MAPI error occurred."

[LC0786]

- After upgrading to Provisioning Services 7.1, if there are a large number of VDAs, it can take four to five hours to restart all VDAs.

[LC0941]

- When upgrading Provisioning Services from Version 7.1 to 7.6, if you run the `dbscript.exe` generator that is provided with Provisioning Services and is used to create an SQL script to upgrade the Provisioning Services database version, an error appears and the generated script is truncated.

[LC1087]

- The `Notifier.exe` process might experience an access violation and exit unexpectedly at random.

[LC1199]

- Target devices shows the correct number of retries, however the Provisioning Services console always shows zero retries.

[LC1427]

- When adding Dynamic vDisks to stores, the server reports an incorrect Replication Status after adding the Dynamic vDisk to the second store.

[LC1428]

- When copying and pasting properties between two virtual disks, the load balancing settings are not pasted on the second disk.

[LC1498]

- Provisioned virtual machines (VMs) might become unresponsive randomly while shutting down the system.

[LC1573]

- The Stream Service fails when starting and stopping the service.

[LC1664]

- The Powershell MCLI command `Mcli-Get DeviceInfo` returns an empty value in the “Status” field.

[LC1790]

- After installing Provisioning Services Console version 7.1.3, many .NET applications fail on Windows Server 2008 R2 and on Windows 7.

[LC1838]

- In some environments, when using the Provisioning Services 7.x bootstrap file, it can take a long time to start many target devices together.

Note: The issue can also occur in situations where a high load does not exist.

[LC1839]

- When configuring VMware PXE Manager for vCenter, if a default gateway IP address is not provided as part of the DHCP options, the bootstrap protocol incorrectly sets the gateway IP address (GIADDR) to the Relay Agent IP address.

[LC1966]

- The target device can experience delays on Microsoft Hyper-V when any key is pressed in the disk menu.

[LC1997]

- When the number of target devices increase on Microsoft Hyper-V, some targets fail to start and stop responding at the “Starting Windows” screen.

[LC2011]

- Occasionally, the Stream Service process stops responding when multiple target devices shut down.

[LC2141]

- If there are unresponsive threads, the Stream Service process cannot recover after automatically restarting.

[LC2227]

- If there are two Provisioning Servers configured to use the TFTP Service option and if NetScaler load balances the servers, if you increase the frequency of monitor probes to run faster than the default time of five seconds, memory consumption on `bntftp.exe` can increase to 7.5 gigabytes.

[LC2314]

- The XenDesktop Setup Wizard creates ESX virtual machine metadata in one store, instead of distributing the metadata with the different disks created for the virtual machine.

[LC2549]

- If a static IP address is assigned when running Boot Device Manager, after saving the .iso image the first time and then incrementing the IP address, subsequent attempts to save a new image overwrites the existing file.

[LC2619]

- The Soap Server might close unexpectedly when restarting the Provisioning Server.

[LC2750]

- Attempts to use MAK activation for Microsoft Windows can fail and the following error message appears:

“Confirmation ID not retrieved, check internet access.”

The issue occurs in scenarios where Microsoft Office is installed on the vDisk and the record of the Office product exists in the Volume Activation Management Tool (VAMT) database. During activation, the “Install-VamtproductKey” command attempts to install the Windows product key for both Windows and Office and then returns the same error. With this fix, Office is not included in in MAK activation.

Additionally, the result of the “Get-VamtConfirmationId” command is saved in the incorrect location so the same error also occurs when Microsoft Office is installed on the vDisk. With this fix, the result of the “Get-VamtConfirmationId” command is saved in the correct location.

Note: This fix does not provide support for Microsoft Office MAK. Provisioning Services does not support MAK for Office. The only supported way of installing Office on a PVS image is to use the Key Management Service (KMS) for both Windows and Office.

[LC3120]

- When using a BDM partition, target devices running on VMware do no attempt to log on to all servers in the list if the top-most server is unreachable.

[LC3805]

- Attempts to mount a vDisk on a Provisioning Server fail unless the server has logical access to the vDisk.

[LC3835]

- When a help desk administrator creates new virtual machines (VMs) from a standalone Provisioning Services Console through the XenDesktop Setup wizard, attempts to start a target device from a BDM partition can fail and cause an incorrect IP address for the logon server to appear.

[LC3911]

- When exporting a vDisk by running the PowerShell command `Mcli-Run ExportDisk -p DiskLocatorName="DISK_NAME", StoreName="STORE_NAME", SiteName="SITE _NAME,"` a manifest file with multiple entries for each version of the vDisk might be created. The issue occurs when a vDisk with the same name is present in multiple Sites. The number of duplicate entries per version corresponds to the number of sites that have the vDisk.

[LC4225]

- Machine creation fails with the XenDesktop Setup wizard in SCVMM environments if there is a trailing backslash (\) at the end of the VM storage path.

[LC4418]

- This is an enhancement to facilitate NIC teaming with the latest Mellanox NICs and firmware used in HP Moonshot systems.

[LC4646]

- If the template created in System Center Virtual Machine Manager (SCVMM) has NICs on two different networks - for example, NIC1 on network xxx and NIC2 on network yyy - the XenDesktop Setup wizard default behavior is to change both NICs to the network of the host record (network zzz). For the NIC2 network to remain unchanged, after installing this fix, set the following registry key:

HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\ProvisioningServices\PlatformScvmm

Name: RequireMatchingNetworks

Type: REG_DWORD

Value: 1

[LC4650]

Target

- The Windows Server 2008 R2 target device experiences a fatal exception with error code 0x4E appearing on a blue screen.

[LC0350]

- When many targets attempt to reconnect after experiencing network issues, the Stream Process (StreamProcess.exe) might close unexpectedly due to extensive retry attempts to send the packets to the target devices.

[LC0488]

- Provisioned virtual machines (VMs) might become unresponsive randomly while shutting down the system.

[LC1573]

- After enabling the target device log, BNDevice.exe fails.
[LC2058]
- If a server becomes unavailable, IO reconnect requests are sent to the unavailable server only and not to other servers in a high availability configuration.
[LC2146]
- When creating an image by using the Provisioning Services Imaging Wizard or if the image is in Private image mode, writing to the vDisk can cause a number of retries on the target.
[LC2218]
- On a target device in Microsoft Hyper-V, switching from a legacy to a synthetic network adapter does not occur when the operating system is Italian.
[LC2379]
- After building a Personal vDisk (PVD) and then installing Provisioning Services, when you use the XenDesktop Setup wizard to create a PVD-enabled pool, some VMs start and the PVD software initializes the write-cache drive as PVD. A write-cache is not created for Provisioning Services.
[LC2497]
- The host name on VMware ESX target devices is set to the MAC address after restarting.
[LC2816]
- Provisioning Services Target device installation on systems with ESX VMXNET3 Nics requires Microsoft hotfix <https://support.microsoft.com/en-us/kb/2550978> or a superseding hotfix to be installed. With this fix, rather than requiring KB2550978 explicitly, a warning message appears, advising administrators to make sure KB2550978 or a superseding hotfix is installed.
[LC3016]
- The target device might send an error log entry to the write cache disk for every write attempt that fails. As a result, an excess number of error messages appear in the Provisioning Server logs.
[LC3110]
- The PVS Device Service (BNDevice.exe) might not start successfully when the service logon account is set to “Local System,” which is the default value.
[LC3209]
- The logging level of some critical error logs that are related to Active Directory password change might not be set correctly and as a result, the logs are not sent to the server for Citrix Diagnostic Facility tracing.
[LC3803]

- Automatic vDisk Updates do not run inventory updates on PvD enabled vDisks.
[LC3997]
- ESX target devices utilizing a VMXnet3 network driver can experience a fatal exception, displaying a blue screen when using jumbo frames (frames with more than 1500 bytes of payload per frame).
[LC4238]
- Provisioned target devices have a 96 hour license grace period after which they shut down if no valid licenses are available. With this enhancement, the licensing grace period for target devices is extended to 30 days (720 hours).
[LC4645]

Session Recording

Agent

- With “Allow third party applications to record custom data on this VDA machine” enabled in the Session Recording Agent properties, the Session Recording Agent Service running on a Japanese language Windows operating system might fail to start and client sessions cannot be recorded.
[LC3861]

Player

- Recordings of Microsoft Paint sessions do not play back correctly in the Session Recording Player.
[LC4389]
- An error occurs when you play back a session that was recorded on a multiple-monitor user device.
[LC4391]

StoreFront

- This fix addresses inconsistencies in the Japanese translation of the term “Classic” in the Management Console user interface.
[LC3607]

- When you click to launch a second or subsequent application, one or more instances of the first application you started can launch. The issue occurs when using a version of Receiver other than Citrix Receiver for Web when multiple-site aggregation is configured. An additional instance of the first application launches from each aggregated Site.

[LC4278]

- Customizations for published desktops you make in the default.ica file might not be honored. For example, you might not be able to see the connection bar inside certain desktops even if you set “ConnectionBar=1.”

[LC4688]

- In certain scenarios, StoreFront generates enumeration responses that contain duplicate resources. This can cause Receiver for Web to report a failure and the apps might fail to appear. The issue occurs with one or more of the following conditions:
 - A farm is referenced by more than one UserFarmMapping in a multi-Site configuration.
 - The user belongs to Active Directory Groups wherein multiple UserFarmMapping are applied.
 - The EquivalentFarmSets that contain farms have no aggregation group, or there is a Delivery Group with multiple assignments for the user.

[LC4863]

Universal Print Server

Client

- Attempts to manage ports or printers on the remote print server from the Microsoft Print Management console on a VDA for Server OS might fail with the following error message: “Failed to complete the operation. This operation is not supported.” Also, when navigating to the Ports tab, ports might not be listed.

Additionally, when you right-click any printer and select “Open Printer Queue,” the following error message might appear:

“Windows can’t find the printer. Make sure the network is working and you’ve entered the name of the printer and print server correctly.”

To address this issue, delete the following registry key “HKEY_LOCAL_MACHINE\System\CurrentControlSet\Printer” from the registry of the VDA and restart the Print Spooler Service. The ports are enumerated correctly in the Microsoft Print Management Console and you can configure the ports and printers.

[LC3740]

Server

- Batch printing using the Microsoft GDI Print API can fail to where the last page does not print, and the following error message appears:

“Dispatch::CDriverTripSummary::PrintReport, Error Occured While Printing....Check Printer”

[LC3920]

- This fix introduces support for Citrix UPS Print Driver Certification Tool for Universal Print Server 7.6.300. For more information, see Knowledge Center article [CTX142119](#).

[LC4265]

VDA for Desktop OS

Content Redirection

- With content redirection enabled for Mailto links, Mailto links that contain commas fail to launch and the following error message appears:

“Could not perform this operation because the default mail client is not properly installed.”

The issue does not occur in console or Remote Desktop sessions.

[LC3701]

HDX 3D Pro

- In HDX 3D Pro dual-monitor configurations, locking Windows on one monitor can fail to blank the screen on the second monitor. The issue occurs after disconnecting from a dual-monitor client session, then reconnecting from a single monitor client, then disconnecting from the session, then reconnecting from the dual-monitor client.

[LC3934]

- The mouse pointer might not assume the proper shape when the mouse is positioned at the edge of a Microsoft Notepad application window.

To enable this fix, you must set the following registry key:

- On 32-bit Windows:

HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\HDX3D

Name: EnableUnknownCursorHandling

Type: REG_DWORD

Value: 1

- On 64-bit Windows:

HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Citrix\HDX3D

Name: EnableUnknownCursorHandling

Type: REG_DWORD

Value: 1

[LC4160]

- Attempts to resize the session screen resolution can fail intermittently, leaving the DesktopViewer window grayed out.

[LC4261]

- With HDX 3D Pro enabled, customized mouse pointers in 3D graphics rendering applications might appear incorrectly.

[LC4713]

HDX MediaStream Flash Redirection

- If HDX MediaStream Flash Redirection is enabled, opening and closing multiple tabs in Internet Explorer with Flash content can cause Internet Explorer to exit unexpectedly.

[LC0375]

- With HDX Mediastream for Flash enabled, opening and closing multiple tabs in Internet Explorer can cause Internet Explorer to close unexpectedly.

[LC1141]

- When browsing websites with HDX MediaStream Flash Redirection enabled, the Flash redirection feature fails if the registry value of HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows NT\CurrentVersion\Windows\AppInit_DLLs is set to just “mfaphook.dll” or “mfaphook64.dll” instead of the full path to “mfaphook.dll” or “mfaphook64.dll.”

[LC4388]

HDX MediaStream Windows Media Redirection

- In Receiver sessions, seeking forward in Windows Media Player while playing .MOD, ac3, and mpeg files might cause the video to play without audio.

[LC2768]

- If you play an .avi file with Windows Media Player within an ICA session (or published desktop session) and then start playing another .avi file without stopping the first one, the video frames might not be properly directed to the user device. As a result, the CPU usage of the mmvd-host.exe process can be higher than normal and the video might not render properly on the user device.

[LC4260]

Installing, Uninstalling, Upgrading

After installing one or more of the following Microsoft Security Updates, attempts to log on to a XenDesktop VDA 7.6.300 or 7.7 running either version of Windows 10 fail. For more information, see Knowledge Center article [CTX205398](#).

Windows 10 RTM [Build 10240]

(Current Business Branch and LTSB)

Security Updates

Release Date

[KB3124266](#)

January- 2016

[KB3135174](#)

February- 2016

[KB3140745](#)

March- 2016

[KB3147461](#)

April- 2016

[KB3156387](#)

May- 2016

Windows 10 Version 1511

[Build 10586.36]

[KB3124263](#)

January- 2016

[KB3124262](#)

January- 2016

[KB3135173](#)

February- 2016

[KB3140768](#)

March- 2016

[KB3147458](#)

April- 2016

[KB3156421](#)

May- 2016

Windows 10 Version 1511

(Updated Feb 2016)

Cumulative image inclusive of all updates up to February 2016

March- 2016

Note: If you have installed any of the Microsoft Security Updates above:

If you have installed any of the Microsoft Security Updates above on a Windows 10 RTM (Build 10240) VDA or on a Windows 10 Version 1511 (Build 10586.36) VDA and want to apply this update, do the following:

1. Reboot and log in to the Windows 10 VDA using Safe Mode.
2. Uninstall the Microsoft Security Updates above and reboot.
3. Install this update and reboot.
4. Install any applicable Microsoft Security Updates.

For new deployments of the 7.6.300 VDA on Windows 10 (RTM / Version 1511 / Version 1511 (Updated Feb 2016)), do the following:

1. Prepare a Windows 10 (RTM / Version 1511 / Version 1511 (Updated Feb 2016)) image.
Caution: Installing the VDA and rebooting in the next step can place the machine into an unrecoverable state. It is essential not to reboot after installing the VDA.
2. Install the 7.6.300 VDA and choose NOT to reboot.
3. Install this update and reboot.

[LC4604]

Keyboard

- If you are in a Citrix GoToMeeting running inside a VDA session and are made presenter, your mouse pointer might start to flicker. This occurs when the “Legacy graphics mode” policy setting is disabled for the session.

[LC3033]

Logon/Authentication

- If the Windows Remote Desktop Session Host Configuration policy setting “Always prompt for password upon connection” is enabled, when users log on to VDA 7.x by using the ICA protocol, users receive a prompt to enter their credentials again.

To enable this fix, set the following registry key:

HKEY_LOCAL_MACHINE\Software\Citrix\Portica

Name: AutoLogon

Type: DWORD

Data: 0x00000001 (value must be between 1 and 2147483647)

Note: The Citrix Display Drive can be marked for deletion if there are multiple attempts to run the MSP file. This causes the installation of the hotfix to fail. In addition, the display resolution of the VDA might not work. To allow this to work, restart the VDA and then install the hotfix again.

[LC1180]

- After installing Microsoft Hotfix KB3124266 (for Windows 10) or KB3124263 (for Windows 10 Version 1511), attempts to log on to a XenDesktop VDA 7.6.300 or 7.7 running on Windows 10 might fail. For more information see, Knowledge Center article [CTX205398](#).

Note: If you have already installed KB3124266 or KB3124263 and want to apply this update, do the following:

1. Reboot and log in to the Windows 10 machine using Safe Mode and uninstall KB3124266 or KB3124263
2. Reboot the Windows 10 machine and install this update.
3. Reinstall KB3124266 or KB3124263.

[LC4540]

Printing

- The Citrix Print Spooler Service might exit unexpectedly.

[LC4180]

Seamless Windows

- Seamless applications can become unresponsive and their icon in the Windows taskbar reverts to the generic Citrix Receiver icon.

[LC3783]

- When you close a seamless published application, the focus goes to another published application rather than honoring windows in the typical [Windows Z-order](#).

[LC4009]

Server/Site Administration

- When an administrator attempts to access a virtual machine from Hyper-V console, while there is a disconnected but active session, a black screen appears. The issue occurs in deployments that use XPDM drivers.

[LC3536]

- A VDA might stop accepting connections. After enabling the “Legacy graphics mode” policy, the VDA starts accepting connections again.

[LC3749]

- When launching VM hosted apps, the Windows logon screen might appear before the app is fully launched. This fix introduces a 15-second grace period before the Welcome screen appears. It also provides support for the following registry key that allows you to customize the duration of the grace period.

Note: During the grace period, there is no obvious indication to users that the app is launching. Configuring too high a grace period can delay application launches and cause users to inadvertently launch apps multiple times.

To change the duration of the grace period, set the following registry key:

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Citrix\wfshell\TWI

Name: LogonUIHideTimeout

Type: DWORD

Value: Any value greater than zero in milliseconds (for example, 20000 milliseconds for 20 seconds)

[LC3828]

- Attempts to use the attrib command to change file attributes of files on mapped client drives might fail.

[LC3958]

- The Output Session Bandwidth Performance Monitoring counter might report inconsistent values upon recording for a long period of time.

[LC4151]

- If you are logging on to a Version 7.6.300 VDA with explicit credentials (username/password) and User Account Control (UAC) enabled, and then attempt to authenticate to an application running in the session using a smart card, the following error message might appear:

“An authentication error has occurred. No credentials are available in the security package.”

[LC4486]

Session/Connection

- When multiple webcams or video capturing devices are installed on an endpoint, only one of the devices is mapped into the client session. Additionally, the device is mapped as Citrix HDX Web Camera, leaving no obvious clue as to which of the devices is mapped.

[LC1919]

- In sessions for which you enable Local App Access, the screensaver fails to get activated.

[LC3182]

- The Citrix policy “View window contents while dragging” does not work correctly.

[LC3552]

- Disconnected sessions might remain open on a physical machine even after the time specified under “Disconnect session timer interval” has passed.

To enable the fix, set the following registry keys:

HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\Portica

Name: ForceDisableRemotePC

Type: DWORD

Value: Any value greater than zero

[LC3650]

- If an endpoint loses network connectivity for several minutes, reconnection attempts can fail until the VDA is restarted.

[LC3700]

- When logging on to a VDA after it is in an idle state for an extended period of time, the credentials might not be passed through automatically to the logon screen upon reconnection and a prompt to enter the password appears on the logon screen.

[LC3720]

- The WFICA32.exe process might keep a file locked even after the file was closed by the associated published application. As a result, the file cannot be edited for a while.

[LC3724]

- Certain third-party published applications might fail to start on XenApp servers. As a result, the wfshell.exe process might close unexpectedly. When this error occurs, no indication that the session is starting or error messages appear on the user device.

[LC3766]

- After undocking the Thomson Reuters Eikon toolbar in a multiple monitor session, the space occupied by the toolbar is not reclaimed by the session.

In monitor configurations where the primary monitor is not located in the top left corner of the array, you must also install Fix #LC1599, which is included in Receiver for Windows 4.4 and later.

[LC3773]

- When the App-V configuration setting “EnablePublishingRefreshUI” is enabled on the session host and “Session Lingering” is enabled as well, attempts to close an application on an iOS device can result in a black window that stays on the device screen.

[LC3800]

- With the Citrix Windows XP Display Driver Model (XPDM) display driver enabled, the mouse shadow setting is always enabled even though it is disabled in the Control Panel.

[LC3806]

- With Excelhook enabled, minimizing and then restoring an Excel workbook can cause the Excel window to lose focus.

[LC3873]

- The “Restrict session clipboard write” and “Restrict client clipboard write” policies do not work properly for sessions using Citrix Receiver for Android. As a result, users can copy and paste content between the session and the user device regardless of the configuration of those two policies.

[LC3894]

- When you attempt to reconnect to a disconnected session, a Windows lock screen appears with a set of keys but without an option to enter your password. When you click “Other credentials,” a second credentials icon appears that allows you to enter the password and unlock the session.

[LC4053]

- If you power off or force a remote PC to restart while in an ICA session, all audio drivers might be disabled when the remote PC restart completes.

[LC4071]

- If you add a file to a user device folder while the associated published application is running and then try to open the file from within the application, the file might not appear in the application’s Open File Dialog - even after clicking the refresh button.

[LC4073]

- The VDA might become unresponsive at the “Welcome” screen due to a deadlock on picadm.sys.

[LC4195]

- With Generic USB Redirection enabled, each time a generic redirected USB device is physically disconnected and reconnected within a session, it is treated as a new device. As a result, each time you reconnect such a USB device, an additional GUID is created for it.

[LC4259]

- TLS connections between Citrix Receiver for Chrome and VDAs fail if all three of the following conditions are met:
 - Fix #LC2179 (Hotfix ICAWS760WX64032 or its replacement) is installed on the VDA
 - The connection is configured to use SSL
 - The Citrix Gateway Protocol (CGP) is disabled

[LC4405]

- After installing Hotfix ICAWS760WX64032 and enabling SSL, attempts to reconnect to a VDA might fail intermittently. The issue occurs if the Citrix ICA Service exits unexpectedly or becomes unresponsive as a result of an SSL Listener failure.

[LC4438]

- Sessions running on Version 7.6.300 of the VDA for Desktop OS with RES Workspace Manager installed can become unresponsive when roaming sessions between user devices.

[LC4570]

Smart Cards

- In Microsoft Internet Explorer, the user interface for smart card logons to certain websites can be intermittently unavailable.

[LC3988]

System Exceptions

- On logon or changing display resolution, the Ctxgfx.exe process may enter a deadlock causing the Session to hang.

[LC2410]

- The operating system experiences an error on picadm.sys and a blue screen appears with stop code 0x20.

[LC3473]

- The operating system experiences an error on picadm.sys and a blue screen appears with stop code 0x00000050.

[LC3921]

- The operating system experiences an error on ctxad.sys and a blue screen appears with bugcheck code 0xD1.

[LC4007]

- After upgrading a VDA for Desktop or Server OS to Version 7.6.300, the Citrix Print Manager Service (CpSvc.exe) can exit unexpectedly upon logoff.
[LC4102]
- The operating system experiences an error on picadm.sys and a blue screen appears with stop code 0x000000C1.
[LC4334]
- When you repeatedly play an .avi file on Windows Media Player, the memory consumption of the wfica32.exe process might continue to increase until the process exits unexpectedly.
[LC4335]
- VDAs can experience a fatal exception on picadd.sys, displaying a blue screen, upon logoff from a Citrix Receiver session.
[LC4360]
- VDAs can experience a fatal exception with bugcheck code 0x00000044 on ctxdvc.sys and a blue screen appears.
[LC4505]
- If the registry key HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\ICA\Thinwire\DisableOssForProcesses is defined, attempts to restart the VDA and launch a published desktop can result in a blue screen.
[LC4597]

VDA for Server OS

Content Redirection

- Server to client content redirection fails for VDAs other than those running on Windows Server 2008 R2. As a result, when you click a URL in a VDA session, the link opens in a browser running in the session rather than in a local browser.
[LC2221]
- With content redirection enabled for Mailto links, Mailto links that contain commas fail to launch and the following error message appears:
“Could not perform this operation because the default mail client is not properly installed.”
The issue does not occur in console or Remote Desktop sessions.
[LC3701]

HDX MediaStream Windows Media Redirection

- In Receiver sessions, seeking forward in Windows Media Player while playing .MOD, ac3, and mpeg files might cause the video to play without audio.

[LC2768]

- If you play an .avi file with Windows Media Player within an ICA session (or published desktop session) and then start playing another .avi file without stopping the first one, the video frames might not be properly directed to the user device. As a result, the CPU usage of the mmvd-host.exe process can be higher than normal and the video might not render properly on the user device.

[LC4260]

Keyboard

- If you are in a Citrix GoToMeeting running inside a VDA session and are made presenter, your mouse pointer might start to flicker. This occurs when the “Legacy graphics mode” policy setting is disabled for the session.

[LC3033]

Printing

- The Citrix Print Spooler Service might exit unexpectedly.

[LC4180]

Seamless Windows

- Seamless applications can become unresponsive and their icon in the Windows taskbar reverts to the generic Citrix Receiver icon.

[LC3783]

- When you close a seamless published application, the focus goes to another published application rather than honoring windows in the typical [Windows Z-order](#).

[LC4009]

Server/Site Administration

- When launching VM hosted apps, the Windows logon screen might appear before the app is fully launched. This fix introduces a 15-second grace period before the Welcome screen appears. It

also provides support for the following registry key that allows you to customize the duration of the grace period.

Note: During the grace period, there is no obvious indication to users that the app is launching. Configuring too high a grace period can delay application launches and cause users to inadvertently launch apps multiple times.

To change the duration of the grace period, set the following registry key:

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Citrix\wfshell\TWI

Name: LogonUIHideTimeout

Type: DWORD

Value: Any value greater than zero in milliseconds (for example, 20000 milliseconds for 20 seconds)

[LC3828]

- Attempts to use the attrib command to change file attributes of files on mapped client drives might fail.

[LC3958]

- Multiple, concurrent attempts to establish a Remote Desktop (RDP) connection to a VDA from separate user devices can cause the VDA to unregister.

[LC4014]

- The Output Session Bandwidth Performance Monitoring counter might report inconsistent values upon recording for a long period of time.

[LC4151]

- When a VDA for Server OS is unregistered or the Citrix Desktop Service is disabled, even domain administrators cannot log on to that VDA through a Remote Desktop (RDP) connection. While that behavior is as designed for non-administrator roles, administrators are expected to be able to log on.

[LC4290]

- If you are logging on to a Version 7.6.300 VDA with explicit credentials (username/password) and User Account Control (UAC) enabled, and then attempt to authenticate to an application running in the session using a smart card, the following error message might appear:

“An authentication error has occurred. No credentials are available in the security package.”

[LC4486]

- Live scrolling (the synced state of page scrolling and scrollbar motion) does not work in Excel spreadsheets. Version 7.6.300 of the VDA introduced Fix #LC2965, intended to address the issue.

However, Fix #LC2965 does not fully resolve the issue in all cases. This Fix, #LC4579, ensures that the issue is corrected even on systems where Fix #LC2965 does not work.

From the description of #LC2965:

Live scrolling (the synced state of page scrolling and scrollbar motion) does not work in Excel spreadsheets. The issue occurs because the key and value in registry location HKEY_CURRENT_USER\Control Panel\Desktop\UserPreferencesMask on the VDA are overwritten by the wfshell.exe process each time a user logs on to the VDA. To prevent this, create the following registry key on the VDA and set the value to 1:

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Citrix

Name: EnableVisualEffect

Type: REG_DWORD

Value: 1

[LC4579]

- After installing Hotfix ICATS760WX64022 (or its replacements), any new custom registry configuration under the registry key HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\Graphics\ might not be retained when you restart the system.

[LC4931]

Session/Connection

- The Source Network Address displays an incorrect IP address for remote user devices in the server's Windows Security Log with EVENT ID 4624.

[LC1352]

- With the Client audio redirection or Windows Media Redirection policies disabled, the Volume control (Speaker) icon in the notification area of a published desktop session can display an incorrect audio state.

[LC2538]

- In Citrix Receiver for Android published desktop sessions, attempts to open a Microsoft Outlook calendar invitation can fail with the following error message:

“Cannot open item”

The issue occurs with calendar invitation created by other users; invitations created by the same user are not affected.

[LC2828]

- In certain scenarios, the Client Printer Redirection and Citrix Group Policies' Access Control filters might fail to work while logging on or reconnecting to a disconnected session.

[LC3083]

- In sessions for which you enable Local App Access, the screensaver fails to get activated.

[LC3182]

- The WFICA32.exe process might keep a file locked even after the file was closed by the associated published application. As a result, the file cannot be edited for a while.

[LC3724]

- Certain third-party published applications might fail to start on XenApp servers. As a result, the wfshell.exe process might close unexpectedly. When this error occurs, no indication that the session is starting or error messages appear on the user device.

[LC3766]

- After undocking the Thomson Reuters Eikon toolbar in a multiple monitor session, the space occupied by the toolbar is not reclaimed by the session.

In monitor configurations where the primary monitor is not located in the top left corner of the array, you must also install Fix #LC1599, which is included in Receiver for Windows 4.4 and later.

[LC3773]

- When the App-V configuration setting “EnablePublishingRefreshUI” is enabled on the session host and “Session Lingering” is enabled as well, attempts to close an application on an iOS device can result in a black window that stays on the device screen.

[LC3800]

- The Service Host (svchost.exe) process that is registered with Terminal Services (TermService) might close unexpectedly on RPM.dll while connecting to a server through an RDP session.

[LC3808]

- With Excelhook enabled, minimizing and then restoring an Excel workbook can cause the Excel window to lose focus.

[LC3873]

- Even with the Client audio redirection policy enabled, audio (.wav) files can fail to play. The issue occurs in sessions where the session ID is reused and the Client audio redirection policy was disabled for the previous session.

[LC3882]

- The “Restrict session clipboard write” and “Restrict client clipboard write” policies do not work properly for sessions using Citrix Receiver for Android. As a result, users can copy and paste content between the session and the user device regardless of the configuration of those two policies.

[LC3894]

- When a connection to a Windows Server 2008 R2 VDA fails due to a license error, the error message “You cannot access this session because no licenses are available” fails to appear.

[LC4026]

- If you add a file to a user device folder while the associated published application is running and then try to open the file from within the application, the file might not appear in the application’s Open File Dialog - even after clicking the refresh button.

[LC4073]

- After logging off of a newly installed Feature Pack 3 VDA for Server OS (7.6.300), Citrix Studio might display that VDA’s status as “initializing” rather than “registered.” During that time, no new sessions will be brokered for that VDA.

[LC4188]

- The VDA might become unresponsive at the “Welcome” screen due to a deadlock on picadm.sys.

[LC4195]

- With Generic USB Redirection enabled, each time a generic redirected USB device is physically disconnected and reconnected within a session, it is treated as a new device. As a result, each time you reconnect such a USB device, an additional GUID is created for it.

[LC4259]

- COM port mapping can intermittently fail.

[LC4267]

- With Application Prelaunch enabled, a black window might appear temporarily on the user device. The issue can occur when you start Citrix Receiver without launching an application.

[LC4280]

- The Citrix policy “View window contents while dragging” does not work correctly on published desktops. When you log on to a VDA, windows content is displayed correctly. However, after you reconnect to a disconnected session, the windows content is no longer displayed.

[LC4301]

- TLS connections between Citrix Receiver for Chrome and VDAs fail if all three of the following conditions are met:
 - Fix #LC2179 (Hotfix ICATS760WX64032 or its replacement) is installed on the VDA
 - The connection is configured to use SSL
 - The Citrix Gateway Protocol (CGP) is disabled

[LC4405]

- When launching an application in a VDA 7.6.300 session, progress bar with the following message might appear for several minutes before the application launches: “Please wait for Local Session Manager.” In the meantime, the application appears to be unresponsive even though it is launching correctly.

[LC4406]

- Certain applications in a user session might default to an incorrect input method. You can correct that behavior by clearing the “Let me set a different input method for each app window” check box in various Control Panels. However, the settings revert to the incorrect defaults when you reconnect to the session.

To keep the settings from reverting, set the following registry key:

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Citrix

Name: EnableLocalInputSetting

Type: DWORD

Data: 1 (you can change the input method setting)

[LC4416]

- When connecting through the NetScaler Gateway, the SmartAccess Control filters might not be applied correctly.

[LC4503]

- The presence of non-ASCII characters in a published application path prevents the application from launching.

[LC4595]

- With the “Auto Client Reconnect” policy enabled, attempts to reconnect to a session can fail intermittently and cause the VDA to reregister. The following warning message appears:

“Event 1048, Citrix Desktop Service (Warning)

The Citrix Desktop Service is re-registering with the DDC: “NotificationManager:NotificationServiceThread: WCF failure or rejection by broker (<DDC: DDC NAME>)”

[LC4767]

Smart Cards

- In Microsoft Internet Explorer, the user interface for smart card logons to certain websites can be intermittently unavailable.

[LC3988]

System Exceptions

- The operating system experiences an error on picadm.sys and a blue screen appears with stop code 0x20.
[LC3473]
- The operating system experiences an error on picadm.sys and a blue screen appears with stop code 0x00000050.
[LC3921]
- After upgrading a VDA for Desktop or Server OS to Version 7.6.300, the Citrix Print Manager Service (CpSvc.exe) can exit unexpectedly upon logoff.
[LC4102]
- The Service Host (svchost.exe) process that is registered with Terminal Services (TermService) might exit unexpectedly.
[LC4150]
- The operating system experiences an error on picadm.sys and a blue screen appears with stop code 0x000000C1.
[LC4334]
- When you repeatedly play an .avi file on Windows Media Player, the memory consumption of the wfica32.exe process might continue to increase until the process exits unexpectedly.
[LC4335]
- VDAs can experience a fatal exception on picadd.sys, displaying a blue screen, upon logoff from a Citrix Receiver session.
[LC4360]
- VDAs can experience a fatal exception with bugcheck code 0x00000044 on ctxdvc.sys and a blue screen appears.
[LC4505]
- If the registry key HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\ICA\Thinwire\DisableOssForProcesses is defined, attempts to restart the VDA and launch a published desktop can result in a blue screen.
[LC4597]

User Experience

- When attempting to move a Microsoft Excel window within a seamless, dual-monitor session, the window might experience a delay while redrawing in the new location.

[LC4441]

Virtual Desktop Components - Other

- The operating system experiences an error on picadm.sys and a blue screen appears with stop code 0x20.

[LC3473]

- The operating system experiences an error on picadm.sys and a blue screen appears with stop code 0x00000050.

[LC3921]

- After upgrading a VDA for Desktop or Server OS to Version 7.6.300, the Citrix Print Manager Service (CpSvc.exe) can exit unexpectedly upon logoff.

[LC4102]

- The Service Host (svchost.exe) process that is registered with Terminal Services (TermService) might exit unexpectedly.

[LC4150]

- The operating system experiences an error on picadm.sys and a blue screen appears with stop code 0x000000C1.

[LC4334]

- When you repeatedly play an .avi file on Windows Media Player, the memory consumption of the wfica32.exe process might continue to increase until the process exits unexpectedly.

[LC4335]

- VDAs can experience a fatal exception on picadd.sys, displaying a blue screen, upon logoff from a Citrix Receiver session.

[LC4360]

- VDAs can experience a fatal exception with bugcheck code 0x00000044 on ctxdvc.sys and a blue screen appears.

[LC4505]

- If the registry key HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\ICA\Thinwire\DisableOssForProcesses is defined, attempts to restart the VDA and launch a published desktop can result in a blue screen.

[LC4597]

Features not in this release

March 29, 2019

Deprecated features

XenApp and XenDesktop 7.6 LTSR is based on XenApp and XenDesktop 7.6 RTM. The following features were deprecated in Version 7.6 RTM, and continue to be deprecated in LTSR:

- **Launch touch-optimized desktop** - This setting has been disabled for Windows 10 machines. For more information, see [Mobile experience policy settings](#).
- **Secure ICA encryption below 128-bit** - In releases earlier than 7.x, Secure ICA could encrypt client connections for basic, 40-bit, 56-bit, and 128-bit encryption. In 7.x releases, Secure ICA encryption is available only for 128-bit encryption.
- **Legacy printing** - The following printing features are not supported in 7.x releases:
 - Backward compatibility for DOS clients and 16-bit printers, including legacy client printer name.
 - Support for printers connected to Windows 95 and Windows NT operating systems, including enhanced extended printer properties and Win32FavorRetainedSetting.
 - Ability to enable or disable auto-retained and auto-restored printers.
 - DefaultPrnFlag, a registry setting for servers that is used to enable or disable auto-retained and auto-restored printers, which store in user profiles on the server.
- **Secure Gateway** - In releases earlier than 7.x, Secure Gateway was an option to provide secure connections between the server and user devices. NetScaler Gateway is the replacement option for securing external connections.
- **Shadowing users** - In releases earlier than 7.x, administrators set policies to control user-to-user shadowing. In 7.x releases, shadowing end-users is an integrated feature of the Director component, which uses Windows Remote Assistance to allow administrators to shadow and troubleshoot issues for delivered seamless applications and virtual desktops.
- **Power and Capacity Management** - In releases earlier than 7.x, the Power and Capacity Management feature could be used to help reduce power consumption and manage server capacity. The Microsoft Configuration Manager is the replacement tool for this function.
- **Flash v1 Redirection** - Clients that do not support second generation Flash Redirection (including Citrix Receiver for Windows earlier than 3.0, Citrix Receiver for Linux earlier than 11.100, and Citrix Online Plug-in 12.1) will fall back to server-side rendering for legacy Flash Redirection features. VDAs included with 7.x releases support second generation Flash Redirection features.

- **Local Text Echo** - This feature was used with earlier Windows application technologies to accelerate the display of input text on user devices on high latency connections. It is not included in 7.x releases due to improvements to the graphics subsystem and HDX SuperCodec.
- **Smart Auditor** - In releases earlier than 7.x, Smart Auditor allowed you to record on-screen activity of a user's session. This component is not available in 7.x releases. In 7.6 Feature Pack 1, it is replaced by Session Recording.
- **Single Sign-on** - This feature, which provides password security, is not supported for Windows 8 and Windows Server 2012 environments. It is still supported for Windows 2008 R2 and Windows 7 environments, but is not included with 7.x releases. You can locate it on the Citrix download website: <http://citrix.com/downloads>.
- **Oracle database support** - 7.x releases require a SQL Server database.
- **Health Monitoring and Recovery (HMR)** - In releases earlier than 7.x, HMR could run tests on the servers in a server farm to monitor their state and discover any health risks. In 7.x releases, Director offers a centralized view of system health by presenting monitoring and alerting for the entire infrastructure from within the Director console.
- **Custom ICA files** - Custom ICA files were used to enable direct connection from user devices (with the ICA file) to a specific machine. In 7.x releases, this feature is disabled by default, but can be enabled for normal usage using a local group or can be used in high-availability mode if the Controller becomes unavailable.
- **Management Pack for System Center Operations Manager (SCOM) 2007** - The management pack, which monitored the activity of farms using SCOM, does not support 7.x releases.
- **CNAME function** - The CNAME function was enabled by default in releases earlier than 7.x. Deployments depending on CNAME records for FQDN rerouting and the use of NETBIOS names might fail. In 7.x releases, Delivery Controller auto-update is the replacement feature that dynamically updates the list of Controllers and automatically notifies VDAs when Controllers are added to and removed from the Site. The Controller auto-update feature is enabled by default in Citrix policies, but can be disabled by creating a policy.

Alternatively, you can re-enable the CNAME function in the registry to continue with your existing deployment and allow FQDN rerouting and the use of NETBIOS names. For more information, see [CTX137960](#).

- **Quick Deploy wizard** - In Studio releases earlier than 7.x, this option allowed a fast deployment of a fully installed XenDesktop deployment. The new simplified installation and configuration workflow in 7.x releases eliminates the need for the Quick Deploy wizard option.
- **Remote PC Service configuration file and PowerShell script for automatic administration** - Remote PC is now integrated into Studio and the Controller.

- **Workflow Studio** - In releases earlier than 7.x, Workflow Studio was the graphical interface for workflow composition for XenDesktop. The feature is not supported in 7.x releases.
- **Color depth** - In Studio releases earlier than 7.6, this option in the Delivery group User Setting page set the color depth for a Delivery group. In version 7.6, Delivery group color depth can be set using the New-BrokerDesktopGroup or Set-BrokerDesktopGroup PowerShell cmdlet.
- **Launching of non-published programs during client connection** - In releases earlier than 7.x, this Citrix policy setting specified whether to launch initial applications or published applications through ICA or RDP on the server. In 7.x releases, this setting specifies only whether to launch initial applications or published applications through RDP on the server.
- **Desktop launches** - In releases earlier than 7.x, this Citrix policy setting specified whether non-administrative users can connect to a desktop session. In 7.x releases, non-administrative users must be in a VDA machine's Direct Access Users group to connect to sessions on that VDA. The **Desktop launches** setting enables non-administrative users in a VDA's Direct Access Users group to connect to the VDA using an ICA connection. The **Desktop launches** setting has no effect on RDP connections; users an VDA's Direct Access Users group can connect to the VDA using an RDP connection whether or not this setting is enabled.

Features not in Citrix Receiver or that have different default values

- **Citrix Receiver Enterprise Edition and offline plug-in** — Both Citrix Receiver Enterprise Edition and offline plug-in have reached End-of-Life. They are not being updated as part of the LTSR installer. Customers are encouraged to deploy the latest version of Citrix Receiver for Windows instead.
- **COM Port Mapping** — COM Port Mapping allowed or prevented access to COM ports on the user device. COM Port Mapping was previously enabled by default. In 7.x releases of XenDesktop and XenApp, COM Port Mapping is disabled by default. For details, see [Configure COM Port and LPT Port Redirection settings using the registry](#).
- **LPT Port Mapping** — LPT Port Mapping controls the access of legacy applications to LPT ports. LPT Port Mapping was previously enabled by default. In 7.x releases, LPT Port Mapping is disabled by default.
- **PCM Audio Codec** — Only HTML5 clients support the PCM Audio Codec in 7.x releases.
- **Support for Microsoft ActiveSync.**
- **Proxy Support for Older Versions** — This includes:
 - Microsoft Internet Security and Acceleration (ISA) 2006 (Windows Server 2003).
 - Oracle iPlanet Proxy Server 4.0.14 (Windows Server 2003).
 - Squid Proxy Server 3.1.14 (Ubuntu Linux Server 11.10).

Known issues

September 29, 2020

Known issues in Cumulative Update 9

- If you upgrade XenApp and XenDesktop 7.6 LTR CU9 to XenApp and XenDesktop 7.15 LTSR CU6 and check the site configuration before you upgrade the second DDC, errors are displayed on the site test report. As a workaround, upgrade both DDCs to 7.15 LTSR CU6 before you check the site configuration. [LCM-8424]

Known issues in Cumulative Update 8

- When you upgrade to CU8 using PowerShell cmdlets, VDA upgrades might exceed the time limit because multiple reg.exe processes might spawn child processes. As a workaround, update the install scripts (cmdlets) to not use the Start Process cmdlet with the -wait parameter. [LCM-6427, LCM-6622]

Known issues in Cumulative Update 7

No new issues have been found in CU7 to date.

Known issues in Cumulative Update 6

- Attempts to upgrade from Versions 2.5, 2.6, or 3.0.1 of StoreFront to any version of StoreFront included with any Cumulative Update for XenApp and XenDesktop 7.6 LTSR using the metainstaller can fail. The issue occurs when the StoreFront Management Console is open or a PowerShell session is running during the upgrade and without warning. [LCM-4801]
- After you upgrade to XenApp and XenDesktop 7.6 LTSR CU6, a site upgrade failure might occur when the site's License Server is not updated to the version that is released as a part of CU6. There are no notifications by the product installer during the upgrade. [LCM-5466]

Known issues in Cumulative Update 5

Attempts to upgrade from Versions 2.5 or 2.6 of StoreFront to any version of StoreFront included with any Cumulative Update for XenApp and XenDesktop 7.6 LTSR can fail. The issue occurs when the StoreFront Management Console is open or a PowerShell session is running during the upgrade and without warning. The issue is limited to systems running Windows 2012 R2 Server with .NET 4.6 or .NET 4.7 updates installed. [3283]

Known issues in Cumulative Update 4

No new issues have been found in CU4 to date.

Known issues in Cumulative Update 3

No new issues have been found in CU3 to date.

Known issues in Cumulative Update 2

- Attempts to manually update XenDesktop 5.6, 7.1, 7.5, or XenApp 7.5 deployments using the PowerShell SDK can fail to upgrade one or more DBSchemas. As a workaround, upgrade the Site DBschema using the Automatic or Manual Site upgrade methods from Citrix Studio rather than using the PowerShell SDK. [LCM-903]
- When using Citrix Receiver for Linux, HDX Flash redirection can fall back to server-side rendering and the websites are added to the dynamic blacklist. As a workaround, use Emulation Mode. [LCM-944]
- Citrix Studio can exit unexpectedly upon launch. The issue occurs if you have Studio and Storefront installed on a single Windows 2008 R2 SP1 system that was previously updated with Microsoft articles KB3163251 and KB3135996v2. The following error message appears in the Event Viewer:

“.NET Runtime version 2.0.50727.5485 - Fatal Execution Engine Error.”

As a workaround, run the following prompt from the command line:

“C:\windows\microsoft.net\framework64\v2.0.50727\ngen update /force” [LCM-969]

- Attempts to install VDA for Server OS can fail with a generic error code 1603. For more information, including a workaround, see Knowledge Center article CTX213807. [LCM-1013]
- **Note:** This issue is fixed as LC6934 in CU4.

Certain websites, including Qumu, are automatically blacklisted and fall back to server-side content rendering. As a workaround to keep affected sites from being blacklisted, set the following registry key on the VDA:

HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Citrix\HdxMediaStreamForFlash\Server\PseudoServer

Name: SupportedUrlHeads

Type: REG_MULTI_SZ

Data: each value on a separate line, null separated:

<http://>

<https://>
<file://> [LCM-1605]

- **Note:** This issue is fixed as LC6471 in CU3.

After installing StoreFront 3.0.1000 or 3.0.2000, the management console fails to start and the following error message appears: “The Management console is unavailable because of a root certificate missing, go to verisign and download the certificate - Verisign class primary CA - G5.” For more information, see Knowledge Center article CTX218815. [LC6471]

- **Note:** This issue is fixed as LC6816 in CU3.

Upgrading StoreFront to version 3.0.2000 from version 2.5 fails with Error 1603. For more information, see Knowledge Center article CTX220411. [LC6816]

Known issues in Cumulative Update 1

- If you install a component of this release using its standalone msi (not recommended) rather than through the Metainstaller, a prompt appears for the License Server compatibility check in Desktop Studio that makes sure that your License server is the required version. If you are using the License server released with XenApp/Desktop 7.6 or from a more recent version, you do not need to upgrade the License server. Click Continue to proceed with the DBschema upgrade. [575064]

- When you upgrade an instance of Version 11.12.1 of the license server (included in the XenApp/XenDesktop 7.6 RTM release) that was deployed using Active Directory, both the Citrix Licensing and the Citrix Licensing Support Services are disabled.

To prevent this issue, install Version 11.13.1 of the license server using citrixlicensing.exe from the CU1 media before installing the rest of CU1. [630116]

- **Note:** This issue is fixed as #630814 in CU2.

Site Setup in Citrix Studio might fail to proceed when choosing “Use an existing license.” As a workaround, restart the “Citrix Web Services for Licensing” service on the license server to complete its configuration. [630814]

- If you install a component of this release using its standalone msi (not recommended) rather than through the Metainstaller, Citrix Scout displays dual entries for that component. [636862]
- **Note:** This issue is fixed as LC6471 in CU3.

After installing StoreFront 3.0.1000 or 3.0.2000, the management console fails to start and the following error message appears: “The Management console is unavailable because of a root certificate missing, go to verisign and download the certificate - Verisign class primary CA - G5.” For more information, see Knowledge Center article CTX218815. [LC6471]

- **Note:** This issue is fixed as #LC6816 in CU3.

Upgrading StoreFront to version 3.0.2000 from version 2.5 fails with Error 1603. For more information, see Knowledge Center article CTX220411. [LC6816]

Known issues in LTSR

- Attempts to update a XenApp 6.5 server to become a VDA for Server OS can fail. The issue occurs on XenApp 6.5 servers that were installed in Controller and Session-Host mode because the Citrix XML Service shares a common port with IIS Server.

As a workaround, uninstall XenApp 6.5 server, restart the server, and then install LTSR or its current Cumulative Update. For more information, see Upgrade a XenApp 6.5 worker to a new VDA for Windows Server OS. [LCM-893]

- **Note:** This issue is fixed as LC5098 in the LTSR CU2 VDAs.

After updating your VDAs to 7.6 LTSR (7.6.300), client-side content redirection for DirectShow based applications (for example, - QUMU, QVOP) does not work, and videos fail to render. [LC5098-x]

- The VDA metainstaller no longer includes or updates the following Citrix clients:
 - Citrix Receiver for Windows, Enterprise Edition
 - Offline plug-in

Both clients have reached End of Life. The latest version of Citrix Receiver is available for download at <https://www.citrix.com/downloads/citrix-receiver.html>. [XA-1532]

- Universal Print Server printers selected on the virtual desktop do not appear in the **Devices and Printers** window in Windows Control Panel. However, when users are working in applications, they can print using those printers. This issue occurs only on the Windows Server 2012, Windows 10 and Windows 8 platforms. For more information, see Knowledge Center article [CTX213540](#). [335153]

System requirements

August 17, 2020

The system requirements in this document were valid when this product version released. System requirements components not covered here (such as StoreFront, host systems, receivers and plug-ins, and Provisioning Services) are described in their respective documentation.

Important: Review [Prepare to install](#) before beginning an installation.

Unless otherwise noted, the component installer deploys software prerequisites automatically (such as .NET and C++ packages) if they are not detected on the machine. The Citrix installation media also contains some of this prerequisite software.

The installation media contains several third-party components. Before using the Citrix software, check for security updates from the third party, and install them.

The disk space values are estimates only, and are in addition to the space needed for the product image, operating system, and other software.

If you install all the core components (Controller with SQL Server Express, Studio, Director, StoreFront, and Licensing) on a single server, you need a minimum of 3 GB of RAM to evaluate the product. More is recommended when running an environment for users. Performance varies depending on your exact configuration, including the number of users, applications, desktops, and other factors.

Important: After you install XenApp on a Windows Server 2012 R2 system, use the Kerberos Enable Tool (XASsonKerb.exe) to ensure the correct operation of Citrix Kerberos authentication. The tool is located **Support > Tools > XASsonKerb** folder on the installation media; you must have local administrator privileges to use the tool. To ensure correct Kerberos operation, run xassonkerb.exe -install from a command prompt on the server. If you later apply an update that changes the registry location HKLM\System\CurrentControlSet\Control\LSA\OSConfig, run the command again. To see all available tool options, run the command with the -help parameter.

Session Recording

Session Recording Administration components

You can install the Session Recording Administration components (Session Recording Database, Session Recording Server, and Session Recording Policy Console) on a single server or on separate servers.

Session Recording Database

Supported operating systems:

- Microsoft Windows Server 2012 R2
- Microsoft Windows Server 2012
- Microsoft Windows Server 2008 R2 with Service Pack 1

Requirements:

- .NET Framework Version 3.5 Service Pack 1 (Windows Server 2008 R2 only) or .NET Framework Version 4.5.2 or 4.6.

Session Recording Server

Supported operating systems:

- Microsoft Windows Server 2012 R2
- Microsoft Windows Server 2012Microsoft Windows Server 2008 R2 with Service Pack 1

Requirements:

Before starting the Session Recording installation, you must install some prerequisites. Open the **Server Manager** and add the IIS role. Select the following options:

- Application Development:
 - ASP.NET 4.5 on Server 2012 and Server 2012 R2, ASP.NET on Server 2008 R2 (other components are automatically selected. Click Add to accept required roles)
- Security - Windows Authentication
- Management Tools - IIS 6 Management Compatibility
 - IIS 6 Metabase Compatibility
 - IIS 6 WMI Compatibility
 - IIS 6 Scripting Tools
 - IIS 6 Management Console
- NET Framework Version 3.5 Service Pack 1 (Windows Server 2008 R2 only) or .NET Framework Version 4.5.2 or 4.6.
- If the Session Recording Server uses HTTPS as its communications protocol, add a valid certificate. Session Recording uses HTTPS by default, which Citrix recommends.
- Microsoft Message Queuing (MSMQ), with Active Directory integration disabled, and MSMQ HTTP support enabled.

Session Recording Policy Console

Supported operating systems:

- Microsoft Windows Server 2012 R2
- Microsoft Windows Server 2012
- Microsoft Windows Server 2008 R2 with Service Pack 1

Requirements:

- .NET Framework Version 3.5 Service Pack 1 (Windows Server 2008 R2 only) or .NET Framework Version 4.5.2 or 4.6.

Session Recording Agent

Install the Session Recording Agent on every XenApp and XenDesktop server on which you want to record sessions.

Supported operating systems:

- Microsoft Windows Server 2012 R2
- Microsoft Windows Server 2012
- Microsoft Windows Server 2008 R2 with Service Pack 1

Requirements:

- Microsoft Message Queuing (MSMQ), with Active Directory integration disabled, and MSMQ HTTP support enabled
- .NET Framework Version 3.5 Service Pack 1 (Windows Server 2008 R2 only) or .NET Framework Version 4.5.2 or 4.6.

Session Recording Player

Supported operating systems:

- Microsoft Windows 8.1
- Microsoft Windows 8
- Microsoft Windows 7 with Service Pack 1

For optimal results, install Session Recording Player on a workstation with:

- Screen resolution of 1024 x 768
- Color depth of at least 32-bit
- Memory: 1 GB RAM (minimum). Extra RAM and CPU/GPU resources can improve performance when playing graphics intensive recordings, especially when there are numerous animations in the recordings.

The seek response time depends on the size of the recording and your machine's hardware specification.

Requirements:

- .NET Framework Version 3.5 Service Pack 1 or .NET Framework Version 4.5.2 or 4.6.

Delivery Controller

Supported operating systems:

- Windows Server 2012 R2, Standard and Datacenter Editions
- Windows Server 2012, Standard and Datacenter Editions
- Windows Server 2008 R2 SP1, Standard, Enterprise, and Datacenter Editions

Requirements:

- Disk space: 100 MB. Connection leasing (which is enabled by default) adds to this requirement. Sizing depends on the number of users, applications, and mode (RDS or VDI). For example,

100,000 RDS users with 100 recently used applications require approximately 3 GB of space for connection leases; deployments with more applications can require more space. For dedicated VDI desktops, 40,000 desktops require at least 400–500 MB. In any instance, providing several GBs of extra space is suggested.

- Microsoft .NET Framework 3.5.1 (Windows Server 2008 R2 only).
- Microsoft .NET Framework 4.5.2, 4.6, 4.6.1
- Windows PowerShell 2.0 (included with Windows Server 2008 R2) or 3.0 (included with Windows Server 2012 R2 and Windows Server 2012).
- Visual C++ 2005, 2008 SP1, and 2010 Redistributable packages.

Database

Supported Microsoft SQL Server versions for the Site Configuration Database (which initially includes the Configuration Logging Database and the Monitoring Database):

- SQL Server 2017, Express, Standard, and Enterprise Editions.
- SQL Server 2016, Express, Standard, and Enterprise Editions.
- SQL Server 2014 through SP2, Express, Standard, and Enterprise Editions.
- SQL Server 2012 through SP3, Express, Standard, and Enterprise Editions. By default, before CU4, SQL Server 2012 SP1 Express is installed when you install the Controller unless an existing, supported SQL Server installation is detected. As of CU4, SQL Server 2012 SP3 Express is installed when you install the Controller unless an existing, supported SQL Server installation is detected.
- SQL Server 2008 R2 SP2 and SP3, Express, Standard, Enterprise, and Datacenter Editions.

The following database features are supported (except for SQL Server Express, which supports only standalone mode):

- SQL Server Clustered Instances
- SQL Server Mirroring
- SQL Server Always On Availability Groups(including Basic Availability Groups)

Windows authentication is required for connections between the Controller and the SQL Server database.

For information about the latest supported database versions, see [CTX114501](#).

Studio

Supported operating systems:

- Windows 8.1, Professional and Enterprise Editions
- Windows 8, Professional and Enterprise Editions
- Windows 7 Professional, Enterprise, and Ultimate Editions

- Windows Server 2012 R2, Standard and Datacenter Editions
- Windows Server 2012, Standard and Datacenter Editions
- Windows Server 2008 R2 SP1, Standard, Enterprise, and Datacenter Editions

Requirements:

- Disk space: 75 MB
- Microsoft .NET Framework 4.6.1
- Microsoft .NET Framework 4.5.2, 4.6
- Microsoft Management Console 3.0 (included with all supported operating systems)
- Windows PowerShell 2.0

Director

Supported operating systems:

- Windows Server 2012 R2, Standard and Datacenter Editions
- Windows Server 2012, Standard and Datacenter Editions
- Windows Server 2008 R2 SP1, Standard, Enterprise, and Datacenter Editions

Requirements:

- Disk space: 50 MB.
- Microsoft .NET Framework 4.5.2, 4.6
- Microsoft .NET Framework 3.5 SP1 (Windows Server 2008 R2 only)
- Microsoft Internet Information Services (IIS) 7.0 and ASP.NET 2.0. Ensure that the IIS server role has the Static Content role service installed. If these are not already installed, you are prompted for the Windows Server installation media, then they are installed for you.
- Supported browsers for viewing Director:
 - Internet Explorer 11 and 10.
Compatibility mode is not supported for Internet Explorer. You must use the recommended browser settings to access Director. When you install Internet Explorer, accept the default to use the recommended security and compatibility settings. If you already installed the browser and chose not to use the recommended settings, go to **Tools > Internet Options > Advanced > Reset** and follow the instructions.
 - Firefox ESR (Extended Support Release).
 - Chrome.

Virtual Delivery Agent (VDA) for Windows Desktop OS

Supported operating systems:

For information about Windows 10 compatibility, see our [blog](#).

- Windows 8.1, Professional and Enterprise Editions
- Windows 8, Professional and Enterprise Editions
- Windows 7 SP1, Professional, Enterprise, and Ultimate Editions

To use the Server VDI feature, you can use the command line interface to install a VDA for Windows Desktop OS on a supported server operating system; see [Server VDI](#) for guidance.

- Windows Server 2012 R2, Standard and Datacenter Editions
- Windows Server 2012, Standard and Datacenter Editions
- Windows Server 2008 R2 SP1, Standard, Enterprise, and Datacenter Editions

Requirements:

- Microsoft .NET Framework 4.5.2, 4.6, 4.6.1
- Microsoft .NET Framework 3.5.1 (Windows 7 only)
- Microsoft Visual C++ 2005, 2008, and 2010 Runtimes (32-bit and 64-bit).
- Microsoft Visual C++ 2008, 2010 and 2013 Runtimes (32-bit and 64-bit). This applies to XenApp and XenDesktop VDA Standalone installations.

Remote PC Access uses this VDA, which you install on physical office PCs.

Several multimedia acceleration features (such as HDX MediaStream Windows Media Redirection) require that Microsoft Media Foundation be installed on the machine on which you install the VDA. If the machine does not have Media Foundation installed, the multimedia acceleration features are not installed and does not work. Do not remove Media Foundation from the machine after installing the Citrix software; otherwise, users will not be able to log on to the machine. On most Windows 8.1, Windows 8, and Windows 7 editions, Media Foundation support is already installed and cannot be removed. However, N editions do not include certain media-related technologies; you can obtain that software from Microsoft or a third party.

During VDA installation, you can choose to install the HDX 3D Pro version of the VDA for Windows Desktop OS. That version is suited for use with DirectX and OpenGL-driven applications and with rich media such as video.

Virtual Delivery Agent (VDA) for Windows Server OS

Supported operating systems:

- Windows Server 2012 R2, Standard and Datacenter Editions
- Windows Server 2012, Standard and Datacenter Editions
- Windows Server 2008 R2 SP1, Standard, Enterprise, and Datacenter Editions

The installer automatically deploys the following requirements, which are also available on the Citrix installation media in the **Support** folders:

- Microsoft .NET Framework 4.5.2, 4.6, 4.6.1

- Microsoft .NET Framework 3.5.1 (Windows Server 2008 R2 only)
- Microsoft Visual C++ 2005, 2008, and 2010 Runtimes (32-bit and 64-bit).
- Microsoft Visual C++ 2008, 2010 and 2013 Runtimes (32-bit and 64-bit). This applies to XenApp and XenDesktop VDA Standalone installations.

The installer automatically installs and enables Remote Desktop Services role services, if they are not already installed and enabled.

Several multimedia acceleration features (such as HDX MediaStream Windows Media Redirection) require that the Microsoft Media Foundation be installed on the machine on which you install the VDA. If the machine does not have Media Foundation installed, the multimedia acceleration features are not installed and does not work. Do not remove Media Foundation from the machine after installing the Citrix software; otherwise, users will not be able to log on to the machine. On most Windows Server 2012 R2, Windows Server 2012, and Windows Server 2008 R2 editions, the Media Foundation feature is installed through the Server Manager (for Windows Server 2012 R2 and Windows Server 2012: ServerMediaFoundation; for Windows Server 2008 R2: DesktopExperience). However, N editions do not include certain media-related technologies; you can obtain that software from Microsoft or a third party.

Hosts / Virtualization resources

Supported platforms

IMPORTANT: The following *major.minor* versions are supported, including updates to those versions. [CTX131239](#) contains the most current hypervisor version information, plus links to known issues.

XenServer.

- XenServer 7.2
- XenServer 7.1
- XenServer 7.0
- XenServer 6.5 SP1
- XenServer 6.5
- XenServer 6.2 SP1 plus hotfixes (you must apply SP1 to enable application of future hotfixes)
- XenServer 6.1

VMware vSphere (vCenter + ESXi). No support is provided for vSphere vCenter Linked Mode operation.

- VMware vSphere 6.5
- VMware vSphere 6.0
- VMware vSphere 5.5
- VMware vSphere 5.1
- VMware vSphere 5.0
- VMware vCenter 5.5 / 6 appliance

System Center Virtual Machine Manager - Includes any version of Hyper-V that can register with the supported System Center Virtual Machine Manager versions.

- System Center Virtual Machine Manager 2012 R2
- System Center Virtual Machine Manager 2012 SP1
- System Center Virtual Machine Manager 2012

Nutanix Acropolis 4.5 - Several XenApp and XenDesktop features are not available when using this platform; see [CTX202032](#) for details. For more information on the use of the product with Acropolis, see <https://portal.nutanix.com/#/page/docs>.

Amazon Web Services (AWS)

- You can provision applications and desktops on supported Windows server operating systems.
- The Amazon Relational Database Service (RDS) is not supported.
- See [Citrix XenDesktop on AWS](#) for additional information.

Citrix CloudPlatform

- The minimum supported version is 4.2.1 with hotfixes 4.2.1-4.
- Deployments were tested using XenServer 6.2 (with Service Pack 1 and hotfix XS62ESP1003) and vSphere 5.1 hypervisors.
- CloudPlatform does not support Hyper-V hypervisors.
- CloudPlatform 4.3.0.1 supports VMware vSphere 5.5.
- See the CloudPlatform documentation (including the Release Notes for your CloudPlatform version) and XenApp and XenDesktop concepts and deployment on CloudPlatform for extra support and Linux-based system requirements information.

The following virtualization resource and storage technology combinations are supported for Machine Creation Services and runtime Active Directory account injection into VMs. Combinations marked with an asterisk (*) are recommended.

Virtualization resource	Local Disks	NFS	Block Storage	Storage Link
XenServer	Yes	Yes *	Yes	No
VMware	Yes (no vMotion or dynamic placement)	Yes *	Yes	No
Hyper-V	Yes	No	Yes * (requires Cluster Shared Volumes)	No

The Remote PC Access Wake on LAN feature requires Microsoft System Center Configuration Manager.

See [Configuration Manager and Remote PC Access Wake on LAN](#) for details.

Active Directory functional level support

The following functional levels for the Active Directory forest and domain are supported:

- Windows 2000 native (not supported for domain controllers)
- Windows Server 2003
- Windows Server 2008
- Windows Server 2008 R2
- Windows Server 2012
- Windows Server 2012 R2

HDX - Desktop Composition Redirection

The Windows user device or thin client must support or contain:

- DirectX 9
- Pixel Shader 2.0 (supported in hardware)
- 32 bits per pixel
- 1.5 GHz 32-bit or 64-bit processor
- 1 GB RAM
- 128 MB video memory on the graphic card or an integrated graphics processor

HDX queries the Windows device to verify that it has the required GPU capabilities and automatically reverts to server-side desktop composition if it does not. List the devices with the required GPU capabilities that do not meet the processor speed or RAM specifications in the GPO group for devices excluded from Desktop Composition Redirection.

The minimum available bandwidth is 1.5 Mbps. Recommended bandwidth is 5 Mbps. Those values incorporate end-to-end latency.

HDX - Windows Media Delivery

The following clients are supported for Windows Media client-side content fetching, Windows Media redirection, and real-time Windows Media multimedia transcoding: Receiver for Windows, Receiver for iOS, and Receiver for Linux.

To use Windows Media client-side content fetching on Windows 8 devices, set the Citrix Multimedia Redirector as a default program: in **Control Panel > Programs > Default Programs > Set your default programs, select Citrix Multimedia Redirector** and click either **Set this program as default** or **Choose defaults for this program**.

GPU transcoding requires an NVIDIA CUDA-enabled GPU with Compute Capability 1.1 or higher; see <http://developer.nvidia.com/cuda/cuda-gpus>.

HDX - Flash Redirection

The following clients and Adobe Flash Players are supported:

- Receiver for Windows (for second generation Flash Redirection features) - Second generation Flash Redirection features require Adobe Flash Player for Other Browsers, sometimes referred to as an NPAPI (Netscape Plugin Application Programming Interface) Flash Player
- Receiver for Linux (for second generation Flash Redirection features) - Second generation Flash Redirection features require Adobe Flash Player for other Linux or Adobe Flash Player for Ubuntu.
- Citrix Online plug in 12.1 (for legacy Flash Redirection features) - Legacy Flash Redirection features require Adobe Flash Player for Windows Internet Explorer (sometimes referred to as an ActiveX player).

The major version number of the Flash Player on the endpoint must be greater than or equal to the major version number of the Flash Player on the VDA. If an earlier version of the Flash Player is installed on the endpoint, or if the Flash Player cannot be installed on the endpoint, Flash content is rendered on the VDA.

The machines running VDAs require:

- Adobe Flash Player for Windows Internet Explorer (the ActiveX player)
- Internet Explorer 11 (in non-Modern UI mode). - Flash Redirection works by remoting the ActiveX protocol from the VDA to the Flash Player on the endpoint. Because Internet Explorer is the only browser that supports the ActiveX protocol, the feature does not work unless Internet Explorer is installed on the VDA. Otherwise, Flash content is rendered on the VDA.
- Protected mode disabled in Internet Explorer (**Tools > Internet Options > Security tab > Enable Protected Mode check box cleared**). Restart Internet Explorer to effect the change.

HDX 3D Pro

When installing a VDA for Windows Desktop OS, you can choose to install the HDX 3D Pro version.

The physical or virtual machine hosting the application can use GPU Passthrough or Virtual GPU (vGPU):

- GPU Passthrough is available with Citrix XenServer. GPU Passthrough is also available with VMware vSphere and VMware ESX, where it is referred to as virtual Direct Graphics Acceleration (vDGA).
- vGPU is available with Citrix XenServer; see www.citrix.com/go/vGPU (Citrix My Account credentials required).

Citrix recommends that the host computer has at least 4 GB of RAM and four virtual CPUs with a clock speed of 2.3 GHz or higher.

Graphical Processing Unit (GPU):

- For CPU-based compression (including lossless compression), HDX 3D Pro supports any display adapter on the host computer that is compatible with the application being delivered.
- For optimized GPU frame buffer access using the NVIDIA GRID API, HDX 3D Pro requires NVIDIA Quadro cards with the latest NVIDIA drivers. The NVIDIA GRID delivers a high frame rate, resulting in a highly interactive user experience.
- For vGPU using XenServer, HDX 3D Pro requirements include NVIDIA GRID K1 and K2 cards.

User device:

- HDX 3D Pro supports all monitor resolutions that are supported by the GPU on the host computer. However, for optimum performance with the minimum recommended user device and GPU specifications, Citrix recommends a maximum monitor resolution for user devices of 1920 x 1200 pixels for LAN connections, and 1280 x 1024 pixels for WAN connections.
- Citrix recommends that user devices have at least 1 GB of RAM and a CPU with a clock speed of 1.6 GHz or higher. Use of the default deep compression codec, which is required on low-bandwidth connections, requires a more powerful CPU unless the decoding is done in hardware. For optimum performance, Citrix recommends that user devices have at least 2 GB of RAM and a dual-core CPU with a clock speed of 3 GHz or higher.
- For multi-monitor access, Citrix recommends user devices with quad-core CPUs.
- User devices do not need a dedicated GPU to access desktops or applications delivered with HDX 3D Pro.
- Citrix Receiver must be installed.

HDX - Video conferencing requirements for webcam video compression

Supported clients: Citrix Receiver for Windows, Receiver for Mac, and Receiver for Linux.

Supported video conferencing applications:

- Citrix GoToMeeting HDFaces
- Adobe Connect
- Cisco WebEx
- IBM Sametime
- Microsoft Lync 2010 and 2013
- Microsoft Office Communicator
- Google+ Hangouts
- Media Foundation-based video applications on Windows 8.x, Windows Server 2012, and Windows Server 2012 R2
- Skype 6.7. To use Skype on a Windows client, edit the registry on the client and the server:

- Client registry key HKEY_CURRENT_USER\Software\Citrix\HdxRealTime
Name: DefaultHeight , Type: REG_DWORD, Data: 240
Name: DefaultWidth, Type: REG_DWORD, Data: 320
- Server registry key HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\Vd3d\Compatibility
Name: skype.exe, Type: REG_DWORD, Data: Set to 0

Other user device requirements:

- Appropriate hardware to produce sounds.
- DirectShow-compatible webcam (use the webcam default settings). Webcams that are hardware encoding-capable reduce client-side CPU usage.
- Webcam drivers, obtained from the camera manufacturer if possible.

HDX - Other

UDP audio for Multi-Stream ICA is supported on Receiver for Windows and Receiver for Linux 13.

Echo cancellation is supported on Citrix Receiver for Windows.

Universal Print Server Requirements

- Universal Print Server - The Universal Print Server comprises client and server components. The UPClient component is included in the VDA installation. The UPServer component (which you install on each print server where the shared printers reside that you want to provision with the Citrix Universal Print Driver in user sessions) is supported on:
 - Windows Server 2008 R2 SP1
 - Windows Server 2012 R2 and 2012.
- The following are prerequisites for installing the UPServer component on the print server:
 - Microsoft Visual Studio 2013 Runtime (both 32-bit and 64-bit)
 - Microsoft .NET Framework 4.5.2
 - CDF_x64.msi
 - UpsServer_x64.msi

User authentication during printing operations requires the Universal Print Server to be joined to the same domain as the Remote Desktop Services VDA.

Citrix Call Home

- The machine must be running PowerShell 3.0 or later.
- The Citrix Telemetry Service must be running on the machine.
- The system variable PSModulePath must be set to Telemetry's install path, for example, C:\Program Files\Citrix\Telemetry Service.

Other

- Citrix recommends installing or upgrading to the component software versions provided on the installation media for this release.
 - StoreFront requires 2 GB of memory. See the StoreFront documentation for system requirements. StoreFront 2.6 is the minimum supported version with this release.
 - When using Provisioning Services with this release, the minimum supported Provisioning Services version is 7.0.
 - The Citrix License Server requires 40 MB of disk space. See the licensing documentation for system requirements. Only Citrix License Server for Windows is supported. The minimum supported License Server version for XenApp and XenDesktop 7.6 LTSR CU6 and above is 11.15.0.0 Build 24100. The minimum supported License Server version for XenApp and XenDesktop 7.6 LTSR CU5 and below is 11.14.0.1 Build 22103.
 - To check XenApp and XenDesktop 7.6 LTSR minimum supported License Server versions for Windows, see [Licensing](#).
 - The Microsoft Group Policy Management Console (GPMC) is required if you store Citrix policy information in Active Directory rather than the Site Configuration database. For more information, see the Microsoft documentation.
 - By default, the Receiver for Windows is installed when you install a VDA. For system requirements information on other platforms, see the Receiver for Windows documentation.
 - The Receiver for Linux and the Receiver for Mac are provided on the product installation media. See their documentation for system requirements.
 - When using Access Gateway versions earlier than 10.0 with this release, Windows 8.1 and Windows 8 clients are not supported.
 - Desktop Lock - Supported operating systems:
 - Windows 7, including Embedded Edition
 - Windows XP Embedded
 - Windows Vista
- User devices must be connected to a LAN.
- Supported Receiver: Citrix Receiver for Windows Enterprise 3.4 package (minimum).
- Client folder redirection - Supported operating systems:
 - Server: Windows Server 2008 R2 SP1, Windows Server 2012, and Windows Server 2012 R2
 - Client (with latest Citrix Receiver for Windows): Windows 7, Windows 8, and Windows 8.1
 - Multiple NICs are supported.
 - See the [App-V](#) article for supported versions.

- In CU4, the software version provided on the media for Microsoft Visual C++ 2008 SP1 (9.0.30729.4148) was updated to Microsoft Visual C++ 2008 SP1 (9.0.30729.5677).

Prepare to install

December 1, 2020

May 11, 2018

The following tables list tasks to complete and things to consider or be aware of before installing the core components (Delivery Controller, Citrix Studio, Citrix Director, Citrix License Server, StoreFront) and Virtual Delivery Agents (VDAs).

Core component and general installation preparation

First:

- If you are unfamiliar with the product, review the [Technical overview](#) and related content.
- Check Known issues for installation issues you might encounter.
- If you are installing components in a cloud environment, see:
 - [Deploy XenApp and XenDesktop 7.5 and 7.6 with Amazon VPC](#) for Amazon Web Services;
- If you are using XenServer for your virtualization environment, see the XenServer documentation for guidance.
- If you are using [VMware](#) or [Microsoft System Center Virtual Machine Manager](#) for your virtualization environment, see the linked documents.

Decide where you will install the components and then prepare the machines and operating systems.

- Review [System requirements](#) for supported operating systems and versions for the Controller, Studio, Director, Virtualization resources, and VDAs. The Citrix StoreFront and the Citrix License Server requirements documents specify their supported platforms.
 - You can install the core components on the same server or on different servers. For example, to manage a smaller deployment remotely, you can install Studio on a different machine than the server where you installed the Controller. To accommodate future expansion, consider installing components on separate servers; for example, install the License Server and Director on different servers.
 - You can install both the Delivery Controller and the Virtual Delivery Agent for Windows Server OS on the same server. Launch the installer and select the Delivery Controller (plus any other core components you want on that machine); then launch the installer again and select the Virtual Delivery Agent for Windows Server OS.

- Do not install Studio on a server running XenApp 6.5 Feature Pack 2 for Windows Server 2008 R2 or any earlier version of XenApp.
- Be sure that each operating system has the latest updates.
- Be sure that all machines have synchronized system clocks. Synchronization is required by the Kerberos infrastructure that secures communication between the machines.
- Components are installed in C:\Program Files\Citrix by default. You can specify a different location during installation, but it must have execute permissions for network service.
- Most component prerequisites are installed automatically; however, the System requirements article notes exceptions.

Decide where to install the SQL Server software for the Site Configuration Database.

- By default, SQL Server 2012 Express is installed automatically on the server when you install the Controller, if another instance is not detected.

The default installation uses the default Windows service accounts and permissions. Refer to Microsoft documentation for details of these defaults, including the addition of Windows service accounts to the sysadmin role. The Controller uses the Network Service account in this configuration. The Controller does not require any additional SQL Server roles or permissions.

If required, you can select Hide instance for the database instance. When configuring the address of the database in Studio, enter the instance's static port number, rather than its name. Refer to Microsoft documentation for details about hiding an instance of SQL Server Database Engine.

- Alternatively, you can separately install a supported SQL Server version on that server or on a different server. In such cases, the SQL Server software does not need to be installed before you install the core components, but it must be installed before you create the Site.
- Review the database considerations, and set up any supported redundancy infrastructure.

Important: Windows authentication is required between the Controller and the database.

Decide how you want ports opened. By default, the following ports are opened automatically if the Windows Firewall Service is running, even if the firewall is not enabled. You can disable this default action and open the ports manually if you use a third-party firewall or no firewall, or if you just prefer to do it yourself.

- Controller: TCP 80, 443
- Director: TCP 80, 443
- License Server: TCP 7279, 8082, 8083, 27000
- StoreFront: TCP 80, 443

For complete port information, see [Communication Ports Used by Citrix Technologies](#). For additional installation options, see [Install using the command line](#).

Configure your Active Directory domain.

- In addition to being a domain user, you must be a local administrator on the machines where you are installing core components.
- Do not attempt to install any components on a domain controller.
- The System requirements article lists the supported functional levels. See the Microsoft documentation for instructions.

When you install the License Server, that user account is automatically made a full administrator on the license server.

For Director, decide if you will use the shadowing feature of Director, which uses Windows Remote Assistance.

Good to know:

- If a component does not install successfully, the process stops with an error message. Components that installed successfully are retained; you do not need to reinstall them.
- Studio starts automatically after it is installed. You can disable this action during installation.
- When you create objects before, during, and after installation, it is best practice to specify unique names for each object (for example networks, groups, catalogs, resources).
- After installing components in Amazon Web Services (AWS), you will need to know the region, availability zone, VPC name, subnet addresses, domain name, security group names, and credentials when you use Studio to create a Site.

VDA installation preparation

For VDAs for Windows Desktop OS, decide if you want to install the HDX 3D Pro version. The HDX3D Pro feature delivers desktops and applications that perform best with a GPU for hardware acceleration. For more information, see the HDX 3D Pro documentation.

Decide how you will use the VDA. The default setting assumes that you will use a master image containing an installed VDA with Machine Creation Services or Provisioning Services to create other virtual machines. You can override this default if you want to install the VDA on an existing machine.

Decide if you want to install Citrix Receiver for Windows (CitrixReceiver.exe). You can disable this default action.

Decide how you want ports opened. By default, the following ports are opened automatically if the Windows Firewall Service is running, even if the firewall is not enabled. You can disable this default action and open the ports manually if you use a third-party firewall or no firewall, or if you just prefer to do it yourself.

- Controller: TCP 80, 1494, 2598, 8008. For communication between user devices and virtual desktops, configure inbound TCP on ports 1494 and 2598 as port exceptions. For security, Citrix recommends that you do not use these registered ports for anything other than the ICA proto-

col and the Common Gateway Protocol. For communication between Controllers and virtual desktops, configure inbound port 80 as a port exception.

- Windows Remote Assistance: TCP 3389. Windows opens this port automatically if the feature is enabled, even if you choose to open the ports manually.
- Real-Time Audio Transport: UDP 16500-16509

For complete port information, see [CTX101810](#).

Decide how you will specify the locations of installed Controllers.

- Manually, by entering the Fully Qualified Domain Name (FQDN) of the Controller. Although you can specify a Controller that is not currently in the domain, a VDA can connect only to a Controller in the domain. Also, you can test the connection only for Controllers in the domain.
- Using Active Directory, if the Controller is in the domain.
- Allowing Machine Creation Services to specify the Controller.
- Later, by rerunning the installer, using Citrix policies, setting registry values, or using Active Directory OUs.

Citrix Group Policy settings that specify Controller locations will override settings provided during installation.

After you initially specify the Controller location, you can use the auto-update feature to update VDAs when additional Controllers are installed.

Decide if you want to use the following features:

- Optimize performance: When this feature is enabled, the optimization tool is used for VDAs running in a VM on a hypervisor. VM optimization includes disabling offline files, disabling background defragmentation, and reducing event log size. For more information, see [CTX224676](#). Do not enable this option if you will be using Remote PC Access. Default = enabled.
- Windows Remote Assistance: When this feature is enabled, Windows Remote Assistance is used with the user shadowing feature of Director, and Windows automatically opens TCP port 3389 in the firewall, even if you choose to open firewall ports manually. Default = enabled.
- Real-Time Audio Transport for audio: When this feature is enabled, UDP is used for audio packets, which can improve audio performance. Default = enabled.
- Personal vDisk: (Available only when installing a VDA for Windows Desktop OS on a VM.) When this feature is enabled, Personal vDisks can be used with a master image. For more information, see [Personal vDisks](#). Default = disabled.

Good to know:

- The Print Spooler Service is enabled by default on the Windows server. If you disable this service, you cannot successfully install a VDA for Windows Server OS. Therefore, ensure that this service is enabled before installing a VDA.
- The installer automatically detects your operating system and allows you to install only the VDA type supported on that system: VDA for Windows Server OS or VDA for Windows Desktop OS.

- Profile management is installed during VDA installation.
- When you install the VDA, a new local user group called Direct Access Users is automatically created. On a VDA for Windows Desktop OS, this group applies only to RDP connections; on a VDA for Windows Server OS, this group applies to ICA and RDP connections.
- When you install a VDA for Windows Server OS, Remote Desktop Services role services are automatically installed and enabled (if they are not already installed and enabled).
- For Remote PC Access configurations, install the VDA for Windows Desktop OS on each physical office PC that users will access remotely.
- As an alternative to using the full-product ISO to install VDAs, you can use a standalone VDA installation package. For details, see [Install VDAs using the standalone package](#).

Virtual Desktop Agents on Windows XP or Windows Vista

The latest Virtual Delivery Agents (VDAs) are not supported on Windows XP or Windows Vista systems. Additionally, some of the features in this release (and other recent releases) cannot be used on those operating systems. To use the full functionality in this release, Citrix recommends you replace Windows XP or Windows Vista systems with Windows 7, Windows 8 or Windows 10, then install a Virtual Delivery Agent from this release.

To accommodate cases when you must continue to accommodate machines running Windows XP or Windows Vista, you can install an earlier Virtual Desktop Agent version (5.6 FP1 with certain hotfixes). See [CTX140941](#) for details.

Keep in mind that:

- You cannot install core components (Controller, Studio, Director, StoreFront, Citrix License Server) on a Windows XP or Windows Vista system.
- Remote PC Access is not supported on Windows Vista systems.
- Citrix support for Windows XP ended April 8, 2014 when Microsoft ended its extended support.
- Continuing to use older VDAs can affect feature availability and VDA registration with the Controller; see [Mixed environment considerations](#).

Install VDAs using the standalone package

March 29, 2019

As an alternative to using the full-product XenApp or XenDesktop ISO to install Virtual Delivery Agents (VDAs), you can use a standalone VDA installation package. The smaller package more easily accommodates deployments using Electronic Software Delivery (ESD) packages that are staged or copied locally, have physical machines, or have remote offices.

The standalone VDA package is intended primarily for deployments that use command-line (silent) installation - it supports the same command line parameters as the XenDesktopVdaSetup.exe command, which is used by the full-product installer. The package also offers a graphical interface that is very similar to the VDA installer on the full-product ISO.

There are two self-extracting standalone VDA packages: one for installation on supported server OS machines, and another for supported workstation (desktop) OS machines.

Prerequisites and considerations

The supported operating systems for VDAs, plus other requirements before installation, are listed in [System requirements](#). See [Prepare to install](#) for details about the information you provide and choices you make during VDA installation.

The VDA package automatically deploys prerequisites, if the machine does not already have them; this includes Visual C++ 2008, 2010 and 2013 Runtimes (32-bit and 64-bit) and .NET Framework 4.5.1.

When installing on a supported server OS machine, the Remote Desktop Services (RDS) role services are installed and enabled before installing the VDA. Alternatively, you can install the prerequisites yourself before installing the VDA.

Exception: Verify that Windows Server 2008 R2 and Windows 7 machines have at least .NET 3.5.1 installed before you start the VDA installation.

About restarts

- A restart is required at the end of the VDA installation.
- To minimize the number of additional restarts needed during the installation sequence, ensure that .NET Framework 4.5.1 or 4.5.2 is installed before beginning the VDA installation. Also, for Windows Server OS machines, install and enable the RDS role services before installing the VDA. (Other prerequisites do not typically require machine restarts, so you can let the installer take care of those for you.)
- If you do not install prerequisites before beginning the VDA installation, and you specify the /noreboot option for a command line installation, you must manage the restarts. For example, when using automatic prerequisite deployment, the installer will suspend after installing RDS, waiting for a restart; be sure to run the command again after the restart, to continue with the VDA installation.

If you use the graphical interface or the command line interface option that runs the package, the files in the package are extracted to the Temp folder. More disk space is required on the machine when extracting to the Temp folder than when using the full-product ISO. Files extracted to the Temp folder are not automatically deleted, but you can manually delete them (from C:\Windows\Temp\Ctx-\$, where \$ is a random Globally Unique Identifier) after the installation completes.

Alternatively, use a third party utility that can extract cabinet archives from EXE files (such as 7-Zip) to extract the files to a directory of your choice, and then run the XenDesktopVdaSetup.exe command. You can use the /extract command with an absolute path. For more information, see [How to use](#) in the section below.

If your deployment uses Microsoft System Center Configuration Manager, a VDA installation might appear to fail with exit code 3, even though the VDA installed successfully. To avoid the misleading message, you can wrap your installation in a CMD script or change the success codes in your Configuration Manager package. For more information, see the forum discussion [here](#).

Citrix Display Only Driver

The Citrix Display Only Driver (DOD) is the only installed and supported display driver on the XenDesktop Standard VDA on Windows 10.

The Citrix DOD has no GPU assist, even if a GPU or vGPU is present. All rendering is performed by the MS Basic Renderer in the software using the CPU. The Citrix DOD does not support Desktop Composition Redirection (DCR). The Citrix DOD is not installed or supported on XenApp.

How to use

Important: You must either have elevated administrative privileges before starting the installation, or use “Run as administrator.”

1. Determine which VDA installer package to use. Use VDAServerSetup.exe if you’re installing on a supported server OS machine. Use VDAWorkstationSetup.exe if you’re installing on a supported desktop OS machine. For single user, single server OS deployments (for example, delivering Windows Server 2012 to one user for web development), use the VDAWorkstationSetup.exe package. For more information, see [Server VDI](#).
2. Install the VDA using the graphical interface or the command line interface.

Remember: You must either have elevated administrative privileges before starting the installation, or use **Run as administrator**.

Using the graphical interface:

Disable User Account Control (UAC), then right-click the downloaded package and choose **Run as administrator**. The installer launches and proceeds through the installation wizard. The restart at the end of the wizard is required before the VDA can be used in a site. (The wizard is the same as the one used in the full-product ISO to install a VDA; you will not encounter anything different.)

Using the command line interface:

Extract the files from the package and then run XenDesktopVdaSetup.exe.

To extract the files before installing, use /extract with the absolute path, for example:

.\VDAWorkstationSetup.exe /extract %temp%\CitrixVDAInstallMedia

Then, in a separate command, run XenDesktopVdaSetup.exe from the directory containing the extracted content. See [Install using the command line](#) and [CTX140972](#) for parameter information.

Run the appropriate VDA installer package as if it was the XenDesktopVdaSetup.exe command in everything except its name. See [Install using the command line](#) and [CTX140972](#) for parameter information.

For example, the most common installation command used for Remote PC Access installs a VDA on a physical office PC, without installing Citrix Receiver or Citrix Profile Manager. The machine will not automatically be restarted after the VDA is installed; however, a restart is required before the VDA can be used. The VDA will register initially with the Controller on the server named 'Contr-East'. Ports will be opened if the Windows Firewall Service is detected.

```
1 VDAWorkstationSetup.exe /quiet /components vda /exclude "Citrix User  
Profile Manager" ,"Citrix User Profile Manager WMI Plugin" /  
controllers "Contr-East.domain.com" /enable_hdx_ports /noreboot
```

Note

Excluding Citrix Profile management from the installation (Using the X:> XenDesktopVDASetup.exe /EXCLUDE "Personal vDisk","Citrix User Profile Manager", "Citrix User Profile Manager WMI Plugin" option) will affect monitoring and troubleshooting of VDAs with Citrix Director. On the User details and EndPoint pages, the Personalization panel and the Logon Duration panel will fail. On the Dashboard and Trends pages, the Average Logon Duration panel will display data only for machines that have Profile management installed.

Even if you are using a third party user profile management solution, it is recommended that you install and run the Citrix Profile management Service to avoid loss of monitoring and troubleshooting in Citrix Director (enabling the Citrix Profile management Service is not required).

Sessions

November 30, 2020

May 11, 2018

Note:

Session lingering does not work on Citrix Workspace app for iOS.

Log off or disconnect a session, or send a message to users

1. Select Delivery Groups in the Studio navigation pane.
2. Select a Delivery Group and then select View Machines in the Actions pane.
3. To log a user off a session, select the session or desktop and select Log off in the Actions pane. The session closes and the machine becomes available to other users, unless it is allocated to a specific user.

To disconnect a session, select the session or desktop, and select Disconnect in the Actions pane. Applications continue to run and the machine remains allocated to that user. The user can reconnect to the same machine.

To send a message to users, select the session, machine, or user, and then select Send message in the Actions pane. Enter the message.

You can configure power state timers for Desktop OS machines to automatically handle unused sessions. See [Power manage machines](#) for details.

Configure session prelaunch and session linger

Note: These features are supported on Server OS machines only.

The session prelaunch and session linger features help specified users access applications quickly, by starting sessions before they are requested (session prelaunch) and keeping application sessions active after a user closes all applications (session linger).

By default, session prelaunch and session linger are not used: a session starts (launches) when a user starts an application, and remains active until the last open application in the session closes.

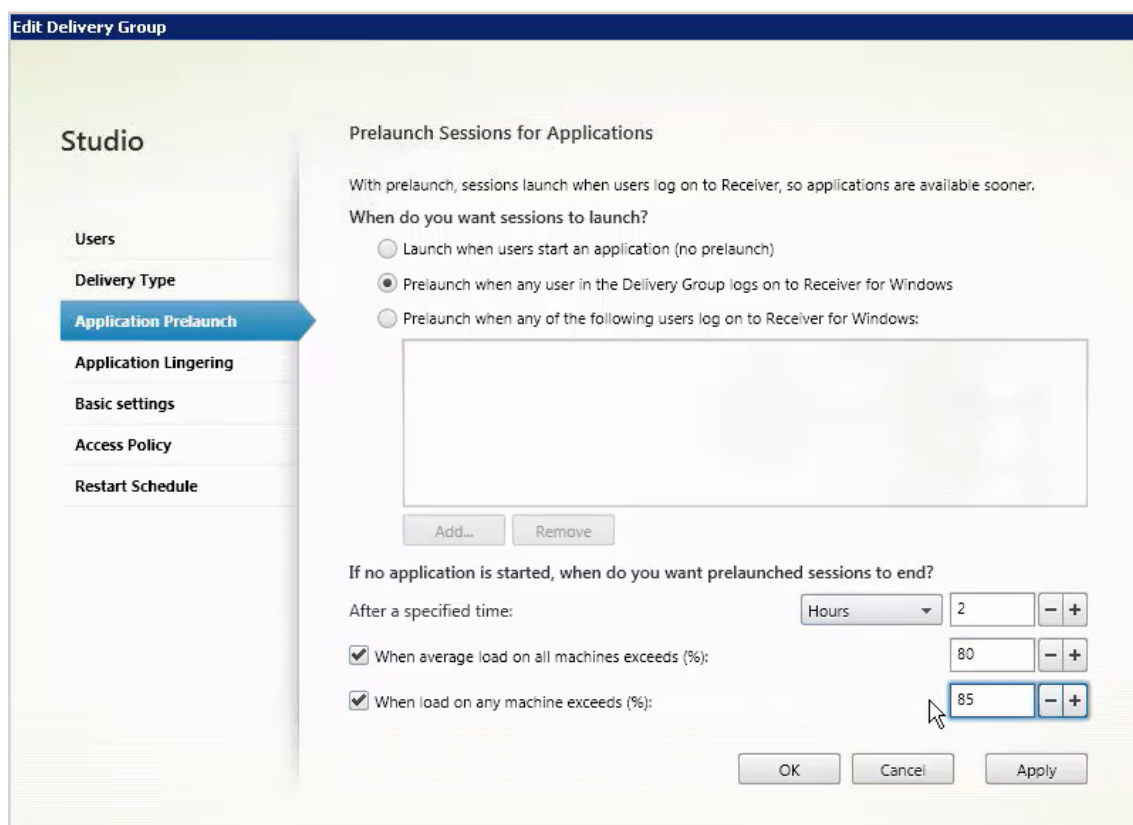
Considerations:

- The Delivery Group must support applications, and the machines must be running a VDA for Server OS, minimum version 7.6.
- Session prelaunch is supported only when using Citrix Receiver for Windows. Session linger is supported when using Citrix Receiver for Windows and Receiver for Web. Additional Receiver configuration is required. For instructions, search for “session prelaunch” in the eDocs content for your Receiver for Windows version.
- Note: Receiver for HTML5 is not supported.
- When using session prelaunch:
 - Regardless of the admin-side settings, if an end user’s machine is put into “suspend” or “hibernate” mode, prelaunch will not work.
 - Prelaunch will work as long as the end user locks their machine/session, but if the end user logs off from Citrix Receiver, the session is ended and prelaunch no longer applies.

- Prelaunched and lingering sessions consume a license, but only when connected. Unused prelaunched and lingering sessions disconnect after 15 minutes by default. This value can be configured in PowerShell (New/Set-BrokerSessionPreLaunch cmdlet).
- Careful planning and monitoring of your users' activity patterns are essential to tailoring these features to complement each other. Optimal configuration balances the benefits of earlier application availability for users against the cost of keeping licenses in use and resources allocated.
- You can also configure session prelaunch for a scheduled time of day in Receiver.

To enable session prelaunch:

1. Select Delivery Groups in the Studio navigation pane.
2. Select a Delivery Group, and then click Edit Delivery Group in the Actions pane.
3. On the Application Prelaunch page, enable session prelaunch by choosing when sessions should launch:
 - When a user starts an application. This is the default setting; session prelaunch is disabled.
 - When any user in the Delivery Group logs on to Receiver for Windows.
 - When anyone in a list of users and user groups logs on to Receiver for Windows. Be sure to also specify users or user groups if you choose this option.



4. A prelaunched session is replaced with a regular session when the user starts an application. If the user does not start an application (the prelaunched session is unused), the following set-

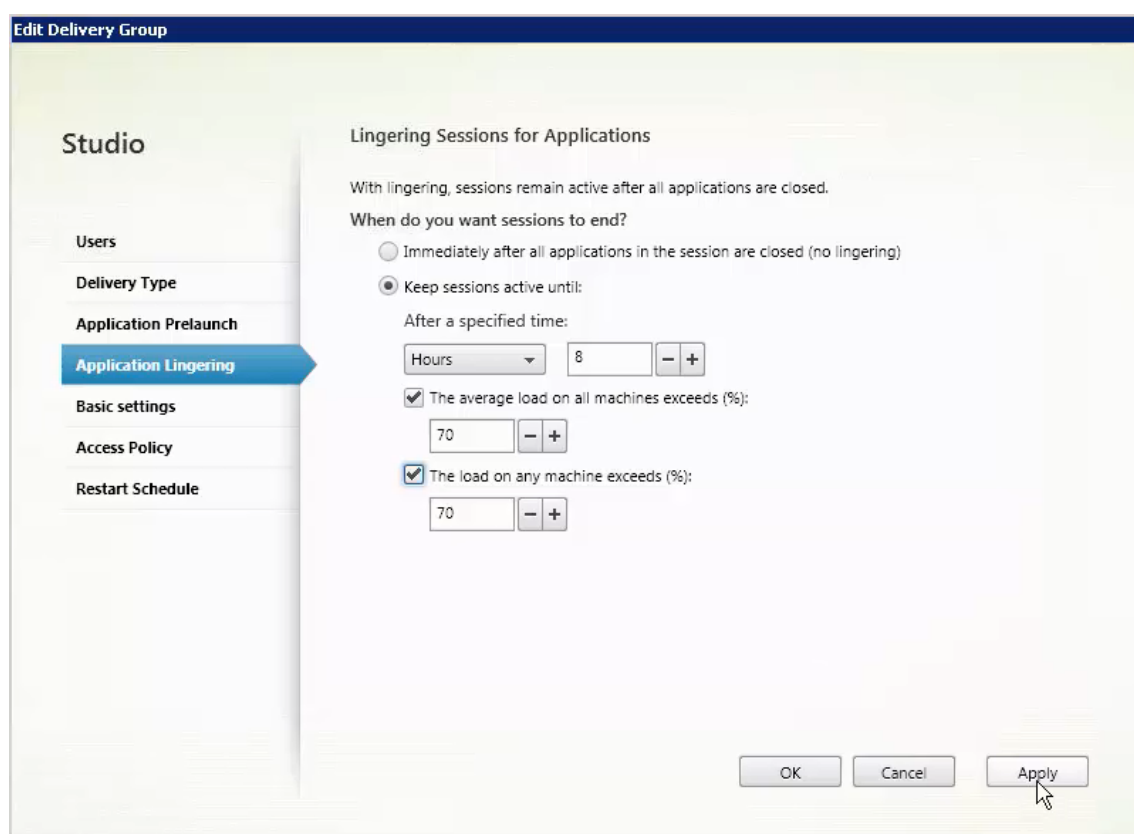
tings affect how long that session remains active. For details about these settings, see How long unused prelaunched and lingering sessions remain active below.

- When a specified time interval elapses. You can change the time interval (1-99 days, 1-2376 hours, or 1-142,560 minutes).
- When the average load on all machines in the Delivery Group exceeds a specified percentage (1-99%).
- When the load on any machine in the Delivery Group exceeds a specified percentage (1-99%).

Recap: A prelaunched session remains active until one of the following events occurs: a user starts an application, the specified time elapses, or a specified load threshold is exceeded.

To enable session linger:

1. Select Delivery Groups in the Studio navigation pane.
2. Select a Delivery Group, and then click Edit Delivery Group in the Actions pane.
3. On the Application Lingering page, enable session linger by selecting the Keep sessions active until radio button.



4. Several settings affect how long a lingering session remains active if the user does not start another application. For details about these settings, see How long prelaunched and lingering sessions remain active below.

- When a specified time interval elapses. You can change the time interval (1-99 days, 1-2376 hours, or 1-142,560 minutes).
- When the average load on all machines in the Delivery Group exceeds a specified percentage (1-99%).
- When the load on any machine in the Delivery Group exceeds a specified percentage (1-99%).

Recap: A lingering session remains active until one of the following events occurs: a user starts an application, the specified time elapses, or a specified load threshold is exceeded.

How long unused prelaunched and lingering sessions remain active - There are several ways to specify how long an unused session remains active if the user does not start an application: a configured timeout and server load thresholds. You can configure all of them; the event that occurs first will cause the unused session to end.

- **Timeout** - A configured timeout specifies the number of minutes, hours, or days an unused prelaunched or lingering session remains active. If you configure too short a timeout, prelaunched sessions will end before they provide the user benefit of quicker application access. If you configure too long a timeout, incoming user connections might be denied because the server doesn't have enough resources.

You cannot disable this timeout from Studio, but you can in the SDK (`New/Set-BrokerSessionPreLaunch cmdlet`). If you disable the timeout, it will not appear in the Studio display for that Delivery Group or in the Edit Delivery Group wizard.

- **Thresholds** - Automatically ending prelaunched and lingering sessions based on server load ensures that sessions remain open as long as possible, assuming server resources are available. Unused prelaunched and lingering sessions will not cause denied connections because they will be ended automatically when resources are needed for new user sessions.

You can configure two thresholds: the average percentage load of all servers in the Delivery Group, and the maximum percentage load of a single server in the Delivery Group. When a threshold is exceeded, the sessions that have been in the prelaunch or lingering state for the longest time are ended, sessions are ended one-by-one at minute intervals until the load falls below the threshold. (While the threshold is exceeded, no new prelaunch sessions are started.)

Servers with VDAs that have not registered with the Controller, and servers in maintenance mode are considered fully loaded. An unplanned outage will cause prelaunch and lingering sessions to be ended automatically to free capacity.

Upgrade a deployment

August 25, 2020

You can upgrade certain deployments to newer versions without having to first set up new machines or Sites; this is called an in-place upgrade. You can upgrade:

- From XenDesktop version 5.6 (or a later version) to the latest version of 7.6 LTSR
- From XenApp version 7.5 to the latest version of 7.6 LTSR

You can also use the latest XenApp 7.6 LTSR installer to upgrade a XenApp 6.5 worker server to the latest XenApp 7.6 LTSR VDA for Windows Server OS. This is a supplementary activity to migrating XenApp 6.5; see [Upgrade a XenApp 6.5 worker to a new VDA for Windows Server OS](#).

To start an upgrade, you run the installer from the new version to upgrade previously installed core components (Delivery Controller, Citrix Studio, Citrix Director, Citrix License Server) and VDAs. The installer determines which components require upgrading and then starts the upgrade at your command. After upgrading the components, you use the newly upgraded Studio to upgrade the Site database and the Site.

Be sure to review all the information in this article before beginning the upgrade.

Upgrade sequence

The following diagram summarizes the upgrade sequence. Details are provided in *Upgrade procedure* below. For example, if you have more than one core component installed on a server, running the installer on that machine will upgrade all components that have new versions. You might want to upgrade the VDA used in a master image, and then update the image. Then, update the catalog that uses that image and the Delivery Group that uses that catalog. Details also cover how to upgrade the Site databases and the Site automatically or manually.

Which product component versions can be upgraded

Using the product installer and Studio, you can upgrade:

- Citrix License Server, Studio, and StoreFront
- Delivery Controllers 5.6 or later
- VDA 5.6 or later
 - Unlike earlier VDA releases, you must use the product installer to upgrade VDAs; you cannot use MSIs.
 - If the installer detects Receiver for Windows (Receiver.exe) on the machine, it is upgraded to the Receiver version included on the product installation media.
- Director 1.0 or later
- Database: This Studio action upgrades the schema and migrates data for the Site database (plus the Configuration Logging and Monitoring databases, if you're upgrading from an earlier 7.x version)

Using the guidance in the feature/product documentation, upgrade the following if needed:

- Provisioning Services (for XenApp 7.x and XenDesktop 7.x, Citrix recommends using the latest released version; the minimum supported version is Provisioning Services 7.0).
 - Upgrade the Provisioning Services server using the server rolling upgrade, and the clients using vDisk versioning.
 - Provisioning Services 7.x does not support creating new desktops with XenDesktop 5 versions. So, although existing desktops will continue to work, you cannot use Provisioning Services 7.x to create new desktops until you upgrade XenDesktop. Therefore, if you plan a mixed environment of XenDesktop 5.6 and 7.x Sites, do not upgrade Provisioning Services to version 7.
- Microsoft System Center Virtual Machine Manager SCVMM. The current product supports SCVMM 2012 and SCVMM 2012 SP1; XenDesktop 5.x supports earlier versions. Use the following upgrade sequence to avoid downtime:
 1. If you have Controllers running versions earlier than XenDesktop 5.6 FP1, upgrade them to XenDesktop 5.6 FP1 (see the XenDesktop documentation for that version).
 2. Upgrade the SCVMM server to SCVMM 2012; see the Microsoft documentation for instructions.
 3. Upgrade XenDesktop components to the current version.
 4. Optionally, upgrade the SCVMM server to SCVMM 2012 SP1.
- StoreFront.

Limits

The following limits apply to upgrades:

Selective component install

If you install or upgrade any components to the new version but choose not to upgrade other components (on different machines) that require upgrade, Studio will remind you. For example, let's say an upgrade includes new versions of the Controller and Studio. You upgrade the Controller but you do not run the installer on the machine where Studio is installed. Studio will not let you continue to manage the Site until you upgrade Studio.

You do not have to upgrade VDAs, but Citrix recommends upgrading all VDAs to enable you to use all available features. If you do not plan to upgrade all VDAs to the latest version, review Mixed VDA support.

XenApp version earlier than 7.5

You cannot upgrade from a XenApp version earlier than 7.5. You can migrate from XenApp 6.x; see [Migrate XenApp 6.x](#).

Although you cannot upgrade a XenApp 6.5 farm, you can replace the XenApp 6.5 software on a Windows Server 2008 R2 machine with a current VDA for Server OS. See [Upgrade a XenApp 6.5 worker to a new VDA](#).

XenDesktop version earlier than 5.6

You cannot upgrade from a XenDesktop version earlier than 5.6.

XenDesktop Express Edition

You cannot upgrade XenDesktop Express edition. Obtain and install a license for a currently supported edition, and then upgrade it.

Early Release or Technology Preview versions

You cannot upgrade from a XenApp or XenDesktop Early Release or Technology Preview version.

Windows XP/Vista

If you have VDAs installed on Windows XP or Windows Vista machines, see [VDAs on machines running Windows XP or Windows Vista](#).

Product selection

When you upgrade from an earlier 7.x version, you do not choose or specify the product (XenApp or XenDesktop) that was set during the initial installation.

Mixed environments/sites

If you must continue to run earlier version Sites and current version Sites, see [Mixed environment considerations](#).

Preparation

Before beginning an upgrade:

Decide which interface to use

Use the installer's graphical or command-line interface to upgrade core components and VDAs. You cannot import or migrate data from an earlier version.

Check your Site's health

Ensure the Site is in a stable and functional state before starting an upgrade. If a Site has issues, upgrading will not fix them, and can leave the Site in a complex state that is difficult to recover from. To test the Site, select the **Site** entry in the Studio navigation pane. In the Site configuration portion of the middle pane, click **Test site**.

Back up the Site, monitoring, and Configuration Logging databases

Follow the instructions in [CTX135207](#). If any issues are discovered after the upgrade, you can restore the backup.

Optionally, back up templates and upgrade hypervisors, if needed.

Complete any other preparation tasks dictated by your business continuity plan.

In a high availability environment, ensure that the Site, monitoring, and Configuration Logging databases are running on the primary database server before starting an upgrade.

Ensure your Citrix licensing is up to date

Before upgrading the Citrix License Server, be sure your Subscription Advantage date is valid for the new product version. If you are upgrading from an earlier 7.x product version, the date must be at least 2016.0420.

Close applications and consoles

Before starting an upgrade, close all programs that might potentially cause file locks, including administration consoles and PowerShell sessions. (Restarting the machine ensures that any file locks are cleared, and that there are no Windows updates pending.)

Important: Before starting an upgrade, stop and disable any third-party monitoring agent services.

Ensure you have proper permissions

In addition to being a domain user, you must be a local administrator on the machines where you are upgrading product components.

The Site database and the Site can be upgraded automatically or manually. For an automatic database upgrade, the Studio user's permissions must include the ability to update the SQL Server database schema (for example, the db_securityadmin or db_owner database role). If the Studio user does not have those permissions, initiating a manual database upgrade will generate scripts. The Studio user runs some of the scripts from Studio; the database administrator runs other scripts using a tool such as SQL Server Management Studio.

Use StoreFront

If your deployment includes Web Interface, Citrix recommends using StoreFront.

Mixed environment considerations

When your environment contains Sites/farms with different product versions (a mixed environment), Citrix recommends using StoreFront to aggregate applications and desktops from different product versions (for example, if you have a XenDesktop 7.1 Site and a XenDesktop 7.5 Site). For details, see the StoreFront documentation.

- In a mixed environment, continue using the Studio and Director versions for each release, but ensure that different versions are installed on separate machines.
- If you plan to run XenDesktop 5.6 and 7.x Sites simultaneously and use Provisioning Services for both, either deploy a new Provisioning Services for use with the 7.x Site, or upgrade the current Provisioning Services and be unable to provision new workloads in the XenDesktop 5.6 Site.

Within each Site, Citrix recommends upgrading all components. Although you can use earlier versions of some components, all the features in the latest version might not be available. For example, although you can use current VDAs in deployments containing earlier Controller versions, new features in the current release may not be available. VDA registration issues can also occur when using non-current versions.

- Sites with Controllers at version 5.x and VDAs at version 7.x should remain in that state only temporarily. Ideally, you should complete the upgrade of all components as soon as possible.
- Do not upgrade a standalone Studio version until you are ready to use the new version.

VDAs on machines running Windows XP or Windows Vista

You cannot upgrade VDAs installed on machines running Windows XP or Windows Vista to a 7.x version. You must use VDA 5.6 FP1 with certain hotfixes; see [CTX140941](#) for instructions. Although earlier-version VDAs will run in a 7.x Site, they cannot use many of its features, including:

- Features noted in Studio that require a newer VDA version.
- Configuring App-V applications from Studio.
- Configuring Receiver StoreFront addresses from Studio.
- Automatic support for Microsoft Windows KMS licensing when using Machine Creation Services. See [CTX128580](#).
- Information in Director:
 - Logon times and logon end events impacting the logon duration times in the Dashboard, Trends, and User Detail views.
 - Logon duration breakdown details for HDX connection and authentication time, plus duration details for profile load, GPO load, logon script, and interactive session establishment.

- Several categories of machine and connection failure rates.
- Activity Manager in the Help Desk and User Details views.

Citrix recommends reimaging Windows XP and Windows Vista machines to a supported operating system version and then installing the latest VDA.

VDAs on machines running Windows 8.x and Windows 7

To upgrade VDAs installed on machines running Windows 8.x or Windows 7 to Windows 10, Citrix recommends reimaging Windows 7 and Windows 8.x machines to Windows 10 and then installing the supported VDA for Windows 10, using the standalone VDA installation package delivered with XenApp and XenDesktop 7.6 FP3. If reimaging is not an option, uninstall the VDA prior to upgrading the operating system, otherwise the VDA will be in an unsupported state.

Mixed VDA support

When you upgrade the product to a later version, Citrix recommends you upgrade all the core components and VDAs so you can access all the new and enhanced features in your edition.

In some environments, you may not be able to upgrade all VDAs to the most current version. In this scenario, when you create a machine catalog, you can specify the VDA version installed on the machines. By default, this setting specifies the latest recommended VDA version. Consider changing this setting only if the machine catalog contains machines with earlier VDA versions. Mixing VDA versions in a machine catalog is not recommended.

If a machine catalog is created with the default recommended VDA version setting, and any of the machines in the catalog has an earlier VDA version installed, those machines will not be able to register with the Controller and will not work.

For example, you create a machine catalog with the default VDA setting: “7.6 (recommended, to access the latest features).” You add three machines to that catalog: two with VDA 7.6 and one with VDA 7.1. The VDA 7.1 machine will not register with the Controller. If you cannot upgrade that VDA, consider creating a separate machine catalog configured with a VDA setting of “version 7.0 or later” and adding that machine. Although that machine will not be able to take advantage of new 7.6 features, it will be able to register with the Controller.

Upgrade procedure

To run the product installer graphical interface, log on to the machine and then insert the media or mount the ISO drive for the new release. Double-click **AutoSelect**. To use the command-line interface, see *Install using the command line*.

Step 1. If more than one core component is installed on the same server (for example, the Controller, Studio, and License Server) and several of those components have new versions available, they will all be upgraded when you run the installer on that server.

If any core components are installed on machines other than the Controller, run the installer on each of those machines. The recommended order is: License Server, StoreFront, and then Director.

Step 2. If you use Provisioning Services, upgrade the PVS servers and target devices, using the guidance in the Provisioning Services documentation.

Step 3. Run the product installer on machines containing VDAs. (See Step 12 if you use master images and Machine Creation Services.)

When upgrading VDAs from an earlier 7.x version that are installed on physical machines (including Remote PC Access), use the command-line interface with the option `/exclude "Personal vDisk";"Machine Identity Service"`. For example:

```
C:\x64\XenDesktop Setup\XenDesktopVdaSetup.exe /exclude "Personal vDisk";"Machine Identity Service"
```

Step 4. Run the product installer on half of the Controllers. (This also upgrades any other core components installed on those servers.) For example, if your Site has four Controllers, run the installer on two of them.

- Leaving half of the Controllers active allows users to access the Site. VDAs can register with the remaining Controllers. There may be times when the Site has reduced capacity because fewer Controllers are available. The upgrade causes only a brief interruption in establishing new client connections during the final database upgrade steps. The upgraded Controllers cannot process requests until the entire Site is upgraded.
- If your Site has only one Controller, the Site is inoperable during the upgrade.

Step 5. If Studio is installed on a different machine than one you've already upgraded, run the installer on the machine where Studio is installed.

Step 6. From the newly upgraded Studio, upgrade the Site database. For details, see *Upgrade the databases and the Site* below.

Step 7. From the newly upgraded Studio, select **Citrix Studio** *site-name* in the navigation pane. Select the **Common Tasks** tab. Select **Upgrade remaining Delivery Controllers**.

Step 8. After completing the upgrade and confirming completion, close and then reopen Studio.

Step 9. In the Site Configuration section of the Common Tasks page, select **Perform registration**. Registering the Controllers makes them available to the Site.

Step 10. After you select **Finish** when the upgrade completes, you are offered the opportunity to enroll in the Citrix telemetry programs, which collect information about your deployment. That information is used to improve product quality, reliability, and performance.

Step 11. After upgrading components, the database, and the Site, test the newly-upgraded Site. From Studio, select **Citrix Studio** *site-name* in the navigation pane. Select the **Common Tasks** tab and then select **Test Site**. These tests were run automatically after you upgraded the database, but you can run them again at any time.

Step 12. If you use Machine Creation Services and want to use upgraded VDAs: After you upgrade and test the deployment, update the VDA used in the master images (if you haven't done that already). Update master images that use those VDAs. Then update machine catalogs that use those master images, and upgrade Delivery Groups that use those catalogs.

Note:

Steps 7 through 9 are optional during an upgrade, unless you are prompted for a Dbschema upgrade.

Upgrade the database and Site

After upgrading the core components and VDAs, use the newly upgraded Studio to initiate an automatic or manual database and Site upgrade.

- For an automatic database upgrade, the Studio user's permissions must include the ability to update the SQL Server database schema (for example, the db_securityadmin or db_owner database role).
- If the Studio user does not have those permissions, initiating a manual database upgrade will generate scripts. The Studio user runs some of the scripts from Studio. The database administrator runs other scripts using a tool such as SQL Server Management Studio. If the SQL scripts are run manually, they should be run using either the SQLCMD utility or the SQL Management Studio in SQLCMD mode. Inaccurate errors may result otherwise.

Important: Citrix strongly recommends you back up the databases before upgrading, as described in [CTX135207](#).

During a database upgrade, product services are disabled. During that time, Controllers cannot broker new connections for the Site, so plan carefully.

After the database upgrade completes and product services are enabled, Studio tests the environment and configuration, and then generates an HTML report. If problems are identified, you can restore the database backup. After resolving issues, you can upgrade the database again.

Upgrade the databases and Site automatically

Launch the newly upgraded Studio. After you choose to start the Site upgrade automatically and confirm that you are ready, the database and Site upgrade proceeds.

Upgrade the databases and Site manually

This process includes generating and running scripts.

Step 1. Launch the newly created Studio. After you choose to manually upgrade the Site, the wizard prompts to confirm that you have backed up the databases. Then, the wizard generates and displays the scripts and a checklist of upgrade steps.

Step 2. Run the following scripts in the order shown.

- **DisableServices.ps1:** PowerShell script to be run by the Studio user on a Controller to disable product services.
- **UpgradeSiteDatabase.sql:** SQL script to be run by the database administrator on the server containing the Site database.
- **UpgradeMonitorDatabase.sql:** SQL script to be run by the database administrator on the server containing the Monitor database.
- **UpgradeLoggingDatabase.sql:** SQL script to be run by the database administrator on the server containing the Configuration logging database. Run this script only if this database changes (for example, after applying a hotfix).
- **EnableServices.ps1:** PowerShell script to be run by the Studio user on a Controller to enable product services.

Step 3. After completing all the checklist tasks shown in the wizard, click **Finish upgrade**.

Dbschema upgrade

When you update your deployment to a new CU, several of your database schemas are upgraded. Consult the following table for information about which database schemas are being upgraded in the process:

XenApp and XenDesktop 7.6 Long Term Service Release (LTSR)

To From	7.6 FP1	7.6 FP2	7.6 FP3	7.6 CU1	7.6 CU2	7.6 CU3	7.6 CU4	7.6 CU5	7.6 CU6	7.6 CU7	7.6 CU8	7.6 CU9
7.6	Site; Monitor ; Config	Site; Monitor; Config	Site; Monitor; Config	Site; Monitor; Config	Site; Monitor; Config	Site; Monitor; Config	Site; Monitor; Config	Site; Monitor; Config	Site; Monitor; Config	Site; Monitor; Config	Site; Monitor; Config	Site; Monitor; Config
7.6 FP1		Site	Site	Site; Monitor; Config	Site; Monitor; Config	Site; Monitor; Config	Site; Monitor; Config	Site; Monitor; Config	Site; Monitor; Config	Site; Monitor; Config	Site; Monitor; Config	Site; Monitor; Config
7.6 FP2			Site	Site; Monitor; Config	Site; Monitor; Config	Site; Monitor; Config	Site; Monitor; Config	Site; Monitor; Config	Site; Monitor; Config	Site; Monitor; Config	Site; Monitor; Config	Site; Monitor; Config
7.6 FP3				Site; Monitor; Config	Site; Monitor; Config	Site; Monitor; Config	Site; Monitor; Config	Site; Monitor; Config	Site; Monitor; Config	Site; Monitor; Config	Site; Monitor; Config	Site; Monitor; Config
7.6 CU1					Site; Config	Site; Config	Site; Config	Site; Monitor; Config	Site; Monitor; Config	Site; Monitor; Config	Site; Monitor; Config	Site; Monitor; Config
7.6 CU2						Site; Config	Site; Config	Site; Monitor; Config	Site; Monitor; Config	Site; Monitor; Config	Site; Monitor; Config	Site; Monitor; Config
7.6 CU3							Config	Site; Monitor; Config	Site; Monitor; Config	Site; Monitor; Config	Site; Monitor; Config	Site; Monitor; Config
7.6 CU4								Site; Monitor; Config	Site; Monitor; Config	Site; Monitor; Config	Site; Monitor; Config	Site; Monitor; Config
7.6 CU5									Config	Config	Config	Config
7.6 CU6										Config	Config	Config
7.6 CU7											Config	Config
7.6 CU8												Config

Definition of terms:

- Site = Site Datastore; Dbschema update is made to the Site Datastore.
- Monitor = Monitor Datastore; Dbschema update is made to the Monitor Datastore.
- Config = Feature table, Configuration table; Desktop Studio version, License Server version, or both are updated in the Configuration table.

SSL

March 29, 2019

Configuring a XenApp or XenDesktop Site to use the Secure Sockets Layer (SSL) security protocol includes the following procedures:

- Obtain, install, and register a server certificate on all Delivery Controllers, and configure a port with the SSL certificate. For details, see [Install SSL server certificates on Controllers](#).

Optionally, you can change the ports the Controller uses to listen for HTTP and HTTPS traffic.

- Enable SSL connections between users and Virtual Delivery Agents (VDAs) by completing the following tasks:
 - Configure SSL on the machines where the VDAs are installed. (For convenience, further references to machines where VDAs are installed are simply called “VDAs.”) You can use a PowerShell script supplied by Citrix, or configure it manually. For general information, see [About SSL settings on VDAs](#). For details, see [Configure SSL on a VDA using the PowerShell script](#) and [Manually configure SSL on a VDA](#).
 - Configure SSL in the Delivery Groups containing the VDAs by running a set of PowerShell cmdlets in Studio. For details, see [Configure SSL on Delivery Groups](#).

Requirements and considerations:

- Enabling SSL connections between users and VDAs is valid only for XenApp 7.6 and XenDesktop 7.6 Sites, plus later supported releases.
- Configure SSL in the Delivery Groups and on the VDAs after you install components, create a Site, create Machine Catalogs, and create Delivery Groups.
- To configure SSL in the Delivery Groups, you must have permission to change Controller access rules; a Full Administrator has this permission.
- To configure SSL on the VDAs, you must be a Windows administrator on the machine where the VDA is installed.
- If you intend to configure SSL on VDAs that have been upgraded from earlier versions, uninstall any SSL relay software on those machines before upgrading them.
- The PowerShell script configures SSL on static VDAs; it does not configure SSL on pooled VDAs that are provisioned by Machine Creation Services or Provisioning Services, where the machine image resets on each restart.

For tasks that include working in the Windows 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.

For information about enabling SSL to the Site database, see [CTX137556](#).

Install SSL server certificates on Controllers

For HTTPS, the XML Service supports SSL features through the use of server certificates, not client certificates. To obtain, install, and register a certificate on a Controller, and to configure a port with the SSL certificate:

- If the Controller has IIS installed, follow the guidance in <https://technet.microsoft.com/en-us/library/cc771438%28v=ws.10%29.aspx>.
- If the Controller does not have IIS installed, one method of configuring the certificate is:
 1. Obtain an SSL server certificate and install it on the Controller using the guidance in <http://blogs.technet.com/b/pki/archive/2009/08/05/how-to-create-a-web-server-ssl-certificate-manually.aspx>. For information on the certreq tool, see [http://technet.microsoft.com/en-us/library/cc736326\(W.S.10\).aspx](http://technet.microsoft.com/en-us/library/cc736326(W.S.10).aspx).
If you intend to use the PowerShell script to configure SSL on VDAs, and unless you intend on specifying the SSL certificate's thumbprint, make sure the certificate is located in the Local Computer > Personal > Certificates area of the certificate store. If more than one certificate resides in that location, the first one found will be used.
 2. Configure a port with the certificate; see <http://msdn.microsoft.com/en-us/library/ms733791%28v=vs.110%29.aspx>.

Change HTTP or HTTPS ports

By default, the XML Service on the Controller listens on port 80 for HTTP traffic and port 443 for HTTPS traffic. Although you can use non-default ports, be aware of the security risks of exposing a Controller to untrusted networks. Deploying a standalone StoreFront server is preferable to changing the defaults.

To change the default HTTP or HTTPS ports used by the Controller, run the following command from Studio: `BrokerService.exe -WIPORT <http-port> -WISSLPART <https-port>`

where <http-port> is the port number for HTTP traffic and <https-port> is the port number for HTTPS traffic.

Note: After changing a port, Studio might display a message about license compatibility and upgrading. To resolve the issue, re-register service instances using the following PowerShell cmdlet sequence:

```
1 Get-ConfigRegisteredServiceInstance -ServiceType Broker -Binding
2 XML_HTTPS | Unregister-ConfigRegisteredServiceInstance
3 Get-BrokerServiceInstance | where Binding -eq "XML_HTTPS" |
```

Enforce HTTPS traffic only

If you want the XML Service to ignore HTTP traffic, set the following registry value in HKLM\Software\Citrix\DesktopS on the Controller and then restart the Broker Service.

To ignore HTTP traffic, set XmlServicesEnableNonSsl to 0.

There is a corresponding registry value to ignore HTTPS traffic: XmlServicesEnableSsl. Ensure that this is not set to 0.

About SSL settings on VDAs

When you configure SSL on VDAs, it changes permissions on the installed SSL certificate, giving the ICA Service read access to the certificate's private key, and informing the ICA Service of the following:

- **Which certificate in the certificate store to use for SSL.**
- **Which TCP port number to use for SSL connections.**

The Windows Firewall (if it is enabled) must be configured to allow incoming connection on this TCP port. This configuration is done for you when you use the PowerShell script.

- **Which versions of the SSL protocol to allow.**

The supported SSL protocol versions follow a hierarchy (lowest to highest): SSL 3.0, TLS 1.0, TLS 1.1, and TLS 1.2. You specify the minimum allowed version; all protocol connections using that version or a higher version are allowed.

For example, if you specify TLS 1.1 as the minimum version, then TLS 1.1 and TLS 1.2 protocol connections are allowed. If you specify SSL 3.0 as the minimum version, then connections for all the supported versions are allowed. If you specify TLS 1.2 as the minimum version, only TLS 1.2 connections are allowed.

- **Which SSL ciphers to allow.**

A cipher suite is a list of common SSL ciphers. When a client connects and sends a list of supported SSL ciphers, the VDA matches one of the client's ciphers with one of the ciphers in its configured cipher suite and accepts the connection. If the client sends a cipher that is not in the VDA's cipher suite, the VDA rejects the connection.

Three cipher suites are supported: GOV(ernment), COM(mercial), and ALL. The ciphers in those cipher suites depend on the Windows FIPS mode; see <http://support.microsoft.com/kb/811833> for information about Windows FIPS mode. The following table lists the ciphers in each supported cipher suite.

SSL cipher suite	GOV	COM	ALL	GOV	COM	ALL
FIPS Mode	Off	Off	Off	On	On	On
RSA_KEYX	x	x	x	x	x	x
RSA_SIGN	x	x	x	x	x	x
3DES	x		x	x		x
RC4		x	x			
MD5	x	x	x			
SHA	x	x	x	x	x	x
SHA_256	x	x	x	x	x	x
SHA_384	x	x	x	x	x	x
SHA_512	x	x	x	x	x	x
AES	x	x	x	x	x	x

A Delivery Group cannot have a mixture of some VDAs with SSL configured and some VDAs without SSL configured. When you configure SSL for a Delivery Group, you should have already configured SSL for all of the VDAs in that Delivery Group.

Configure SSL on a VDA using the PowerShell script

The Enable-VdaSSL.ps1 script enables or disables the SSL listener on a VDA. This script is available in the Support >Tools > SslSupport folder on the installation media.

When you enable SSL, the script disables all existing Windows Firewall rules for the specified TCP port before adding a new rule that allows the ICA Service to accept incoming connections only on the SSL TCP port. It also disables the Windows Firewall rules for:

- Citrix ICA (default: 1494)
- Citrix CGP (default: 2598)
- Citrix WebSocket (default: 8008)

The result is that users can connect only over SSL; they cannot use raw ICA, CGP, or WebSocket to connect.

The script contains the following syntax descriptions, plus additional examples; you can use a tool such as Notepad++ to review this information.

You must specify either the `-Enable` or `-Disable` parameter; all other parameters are optional.

Syntax:

```
Enable-VdaSSL {-Enable -Disable} [-SSLPort <port>] [-SSLMinVersion
"<min-ssl-version>"] [-SSLCipherSuite
"<suite>"] [-CertificateThumbPrint
"<thumbprint>"]
```

Parameter	Description
<code>-Enable</code>	Installs and enables the SSL listener on the VDA. Either this parameter or the <code>-Disable</code> parameter is required.
<code>-Disable</code>	Disables the SSL listener on the VDA. Either this parameter or the <code>-Enable</code> parameter is required. If you specify this parameter, no other parameters are valid.
<code>-SSLPort <port></code>	SSL port. Default: 443
<code>-SSLMinVersion "<min-ssl-version>"</code>	Minimum SSL protocol version, enclosed in quotation marks. Valid values: "SSL_3.0", "TLS_1.0", "TLS_1.1", and "TLS_1.2". Default: "TLS_1.0"
<code>-SSLCipherSuite "<suite>"</code>	SSL cipher suite, enclosed in quotation marks. Valid values: "GOV", "COM", and "ALL". Default: "ALL"
<code>-CertificateThumbPrint "<thumbprint>"</code>	Thumbprint of the SSL certificate in the certificate store, enclosed in quotation marks. This parameter is generally used when the certificate store has multiple certificates; the script uses the thumbprint to select the certificate you want to use. Default: the first available certificate found in the Local Computer > Personal > Certificates area of the certificate store.

Examples:

The following script installs and enables the SSL listener, using default values for all optional parameters.

```
1 Enable-VdaSSL - Enable
```

The following script installs and enables the SSL listener, and specifies SSL port 400, the GOV cipher suite, and a minimum TLS 1.2 SSL protocol value.

```
1 Enable-VdaSSL - Enable - SSLPort 400 'SSLMinVersion "TLS_1.2"  
2 - SSLCipherSuite "GOV"
```

The following script disables the SSL listener on the VDA.

```
1 Enable-VdaSSL - Disable
```

Manually configure SSL on a VDA

When configuring SSL on a VDA manually, you grant generic read access to the SSL certificate's private key for the appropriate service on each VDA: NT SERVICE\PorticaService for a VDA for Windows Desktop OS, or NT SERVICE\TermService for a VDA for Windows Server OS. On the machine where the VDA is installed:

1. Launch the Microsoft Management Console (MMC): Start > Run > mmc.exe.
2. Add the Certificates snap-in to the MMC:
 - a) Select File > Add/Remove Snap-in.
 - b) Select Certificates and then click Add.
 - c) When prompted with "This snap-in will always manage certificates for:" choose "Computer account" and then click Next.
 - d) When prompted with "Select the computer you want this snap-in to manage" choose "Local computer" and then click Finish.
3. Under Certificates (Local Computer) > Personal > Certificates, right-click the certificate and then select All Tasks > Manage Private Keys.
4. The Access Control List Editor displays "Permissions for (FriendlyName) private keys" where (FriendlyName) is the name of your SSL certificate. Add one of the following services and give it Read access:
 - For a VDA for Windows Desktop OS, "PORTICASERVICE"
 - For a VDA for Windows Server OS, "TERMSERVICE"

5. Double-click the installed SSL certificate. In the certificate dialog, select the Details tab and then scroll to the bottom. Click Thumbprint.
6. Run regedit and go to HKLM\SYSTEM\CurrentControlSet\Control\Terminal Server\Wds\icawd.
 - a) Edit the SSL Thumbprint key and copy the value of the SSL certificate's thumbprint into this binary value. You can safely ignore unknown items in the Edit Binary Value dialog box (such as '0000' and special characters).
 - b) Edit the SSLEnabled key and change the DWORD value to 1. (To disable SSL later, change the DWORD value to 0.)
 - c) If you want to change the default settings (optional), use the following in the same registry path:
 - SSLPort DWORD – SSL port number. Default: 443.
 - SSLMinVersion DWORD – 1 = SSL 3.0, 2 = TLS 1.0, 3 = TLS 1.1, 4 = TLS 1.2. Default: 2 (TLS 1.0).
 - SSLCipherSuite DWORD – 1 = GOV, 2 = COM, 3 = ALL. Default: 3 (ALL).
7. Ensure the SSL TCP port is open in the Windows Firewall if it is not the default 443. (When you create the inbound rule in Windows Firewall, make sure its properties have the “Allow the connection” and “Enabled” entries selected.)
8. Ensure that no other applications or services (such as IIS) are using the SSL TCP port.
9. For VDAs for Windows Server OS, restart the machine for the changes to take effect. (You do not need to restart machines containing VDAs for Windows Desktop OS.)

Configure SSL on Delivery Groups

Complete this procedure for each Delivery Group that contains VDAs you have configured for SSL connections.

1. From Studio, open the PowerShell console.
2. Run `asnp Citrix.*` to load the Citrix product cmdlets.

```
Run Get-BrokerAccessPolicyRule                               Set-BrokerAccessPolicyRule -HdxSslEnabled  
-DesktopGroupName '<delivery-group-name>'                 $true.
```

3. where `<delivery-group-name>` is the name of the Delivery Group containing VDAs.
4. Run `Set-BrokerSite -DnsResolutionEnabled $true`.

Troubleshooting

If a connection error occurs, check the VDA's system event log.

When using Receiver for Windows, if you receive a connection error (such as 1030) that indicates an

SSL error, disable Desktop Viewer and then try connecting again; although the connection will still fail, an explanation of the underlying SSL issue might be provided (for example, you specified an incorrect template when requesting a certificate from the certificate authority).

Licensing

August 17, 2020

Note

Studio and Director do not support Citrix License Server VPX. For more information about Citrix License Server VPX, see the Citrix Licensing documentation.

From Studio, you can manage and track licensing, if the license server is in the same domain as Studio or in a trusted domain. For information about other licensing tasks, see [Licensing Your Product](#).

You must be a full license administrator to complete the tasks described, except for viewing license information. To view license information in Studio, an administrator must have at least the Read Licensing Delegated Administration permission; the built-in Full Administrator and Read-Only Administrator roles have that permission.

The following table lists the supported editions and license models:

Products	Editions	License models
XenApp	Platinum, Enterprise, Advanced	Concurrent
XenDesktop	Platinum, Enterprise, App, VDI	User/Device, Concurrent

Important:

The newest supported and recommended version of the Citrix License Server for Windows is 11.15.0.0 Build 26000 (MSI Installer Version 15.6.0.26000).

License Server for Windows versions older than 11.14.0.1 Build 22103 (MSI Installer Version 14.2.0.22103) are no longer supported.

The following table lists the minimum supported license versions for XenApp and XenDesktop.

Long Term Service Release	Minimum supported License	
	Server version	MSI installer version
7.6 LTSR CU6 and later	11.15.0.0 Build 24100	15.4.0.24100

Long Term Service Release	Minimum supported License	
	Server version	MSI installer version
7.6 LTSR CU5 and earlier	11.14.0.1 Build 22103	14.2.0.22103
7.6 LTSR	11.14.0.1 Build 22103	14.2.0.22103

To view license information:

In the **Studio** navigation pane, select **Configuration** and then **Licensing**. A summary of license usage and settings for the site is displayed with a list of all the licenses currently installed on the specified license server.

To manage licensing:

In the **Studio** navigation pane, select **Configuration** and then **Licensing**. Then:

- To download a license from Citrix:
 1. In the Actions pane, select Allocate Licenses.
 2. Type the License Access Code, which is supplied in an email from Citrix.
 3. Select a product and click Allocate Licenses. All the licenses available for that product are allocated and downloaded. After you allocate and download all the licenses for a specific License Access Code, you cannot use that License Access Code again. To perform more transactions with that code, log on to My Account.
- To add licenses that are stored on your local computer or on the network:
 1. In the Actions pane, select Add Licenses.
 2. Browse to a license file and add it to the license server.
- To change the license server:
 1. In the Actions pane, select Change License Server.
 2. Type the address of the license server in the form name:port, where name is a DNS, Net-BIOS, or IP address. If you do not specify a port number, the default port (27000) is used.
- To select the type of license to use:
 - When configuring the Site, after you specify the license server, you are prompted to select the type of license to use. If there are no licenses on the server, the option to use the product for a 30-day trial period without a license is automatically selected.
 - If there are licenses on the server, their details are displayed and you can select one of them. Or, you can add a license file to the server and then select that one.
- To change the product edition and licensing model:
 1. In the Actions pane, select Edit Product Edition.
 2. Update the appropriate options.
- To access the License Administration Console, in the Actions pane, select License Administration Console. The console either appears immediately, or if the dashboard is configured as

password-protected, you are prompted for License Administration Console credentials. For details about how to use the console, see [Licensing Your Product](#).

- To add a licensing administrator:
 1. In the middle pane, choose the Licensing Administrators tab.
 2. In the Actions pane, select Add licensing administrator.
 3. Browse to the user you want to add as an administrator and choose permissions.
- To edit or delete a licensing administrator, when you select an administrator, the options to Edit licensing administrator (to change the administrator permissions for that administrator) and Delete licensing administrator appear in the Actions pane.
 1. In the middle pane, choose the Licensing Administrators tab and select the administrator you want to delete or edit.
 2. In the Actions pane, select either Edit licensing administrator or Delete licensing administrator.
- To add a licensing administrator group:
 1. In the middle pane, choose the Licensing Administrators tab.
 2. In the Actions pane, select Add licensing administrator group.
 3. Browse to the group you want to act as licensing administrators and choose permissions. Adding an Active Directory Group gives licensing administrator permissions to the users within that group.
- To edit or delete a licensing administrator group:
 1. In the middle pane, choose the Licensing Administrators tab and select the administrator group you want to delete or edit. When you select a licensing administrator group, the options to Edit licensing administrator group (to change the administrator permissions for that group) and Delete licensing administrator group appear in the Actions pane.
 2. In the Actions pane, select either Edit licensing administrator group or Delete licensing administrator group.

**Locations**

Corporate Headquarters | 851 Cypress Creek Road Fort Lauderdale, FL 33309, United States
Silicon Valley | 4988 Great America Parkway Santa Clara, CA 95054, United States

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