Citrix Ready® workspace hub

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About this release

September 7, 2025

What's new

What's new in 1909

- **Mirror your Mac or Windows display to the nearby hub by using the IP-based method.** If your device doesn't have Bluetooth enabled or your hub doesn't appear in the **Hub List** menu, you can manually enter the hub's IP address. Your Mac or Windows device then mirrors the desktop display to the specified hub. For more information, see the documentation for Mac and Windows devices.
- **Disconnect your session on Mac and Windows devices automatically.** When you close your laptop, the screen casting session automatically disconnects and exits the hub. To disable this setting, see Disconnect the screen casting session.

What's new in 1906

- **Control your Mac and Windows session on the workspace hub using peripheral devices.** You can now use the keyboard and mouse on both the hub and the device to manage the session. For more information, see Citrix Casting.

What's new in 1904

This release contains enhancements that help improve overall performance and stability.

- **Enhanced secure connection between the workspace hub and client.** To optimize the security of the Citrix Ready workspace hub, configure the domain and host name. For more information, see Security connection.
- **Optimized performance for displaying web content.** You can now improve the delivery of web browser content by configuring the Browser content redirection policy. For information, see Optimization of browser content.

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Fixed issues

Fixed issues in 1909

- This release addresses a number of issues that help improve overall performance and stability.

Fixed issues in 1906

- Citrix Casting™ does not record logs when set to INHERIT(VERBOSE). [WH-1754]

Fixed issues in 1904

- After upgrading the WebkitGTK version to 2.16 in the Raspbian Stretch OS, you can observe some performance delays. A request to downgrade the image to version 2.09 has been submitted to Stratodesk. [WH-1665]
- The mouse cursor might move slowly across the secondary display adapter. [WH-1664]
- In the upgraded Raspbian Stretch OS, the USB microphone fails when starting audio calls for the HDX™ RealTime Optimization Pack. [WH-1647]
- A DisplayConnector mouse thread might be terminated unexpectedly during session casting from a Xiaomi Mi pad. [WH-1419]
- In the Android proximity configuration, the text overlaps the **On/Off** setting. [WH-1407]
- The initial launch screen might exit unexpectedly and the hub logon page appears. [WH-1371]

Fixed issues in 1812

- When running the wshcollect.sh file in the Stratodesk image, the data doesn't display properly. [WH-1619]
- Mouse and keyboard actions can cause screen anomalies, such as unresponsiveness and cycling of the initial launch screen. [WH-1662, WH-1609, WH-1608]
- The `controlservice` process doesn't stop running after you exit the initial launch screen in a new Raspbian Stretch OS. The workspace hub fails to launch. [WH-1586]
- After upgrading to the Raspbian Stretch OS, you might not be able to stop the session casting on an Android device. [WH-1547]
- When using Citrix Workspace™ app for Linux in the VDA session, the Outlook bookings display a time that is one hour earlier than the workspace hub time. [WH-1511]
- The mouse might jump to the middle of the screen when you exit extended mode for screen casting on a Windows device. [WH-1402]
- There are unexpected black lines on the Microsoft Windows 10 session desktop. [WH-860]

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Known issues

Known issues in 1909

- No new issues have been observed in this release.

Known issues in 1906

- Currently, a keyboard connected to the hub only supports the US layout. For better performance, align the VDA side keyboard with the hub. [WH-1798]

Known issues in 1904

- No new issues have been observed in this release.

Known issues in 1812

- After upgrading the WebkitGTK version to 2.16 in the Raspbian Stretch OS, you can observe some performance delays. A request to downgrade the image to version 2.09 has been submitted to Stratodesk. [WH-1665]
- The mouse cursor might move slowly across the secondary display adapter. [WH-1664]
- In the upgraded Raspbian Stretch OS, the USB microphone fails when starting audio calls for the HDX RealTime Optimization Pack. [WH-1647]
- A DisplayConnector mouse thread might be terminated unexpectedly during session casting from a Xiaomi Mi pad. [WH-1419]
- The initial launch screen might exit unexpectedly and the hub logon page appears. [WH-1371]

Known limitations

- Web Interface stores do not support session roaming. As a result, do not select the **Add account type as Web Interface** check box.
- If you disconnect your session on Windows, it might take approximately 20 seconds for the session to exit on the hub.
- Dual monitors support session roaming. Session casting is not supported.
- To use the HDX RealTime Optimization Pack, **Use Hardware Rendering** must be set to **Off**. The feature works only on the primary screen. The window on the secondary screen is gray.
- Wireless mouse devices - You might notice a lag when dragging a wireless mouse. Report this error in the Citrix Ready® workspace hub Discussions forum. Include the make and model of the mouse.

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- Citrix Casting works only when the mobile device is connected to the same network as the workspace hub.
- 5G Wireless - The workspace hub is built on the Raspberry Pi3 platform, which does not currently support 5G wireless. However, it is possible to support 5G using a USB Wi-Fi dongle (not recommended).
- The Enlightened Data Transport (EDT) protocol is not supported with Citrix Ready workspace hub.

System requirements

September 7, 2025

Network

- The mobile device must be on the same network (Wi-Fi or a local area network) as the workspace hub.
- Do not block Port 55555 between the mobile device and the workspace hub.
- For Citrix Casting™, do not block port 1494.
- Port 55556 is the default port for SSL connections between mobile devices and the Citrix Ready® workspace hub. You can configure a different SSL port on Pi's settings page. If the SSL port is blocked, users cannot establish SSL connections to the hub.

Citrix Virtual Desktops™

Citrix Ready workspace hub is supported on Citrix XenDesktop 7.6 and later.

- For session roaming, ensure that Citrix Ready workspace hub can access HDX™ servers (VDA).
- For session roaming and screen casting, ensure the Use video codec for compression policy in Citrix Studio is set to For the entire screen. Failure to do so might cause performance issues.

Hardware

- Citrix Ready workspace hub
- Two monitors (for dual monitor setups only)
- Mobile device running Citrix Workspace™ app
- HDMI cable and power supply
- Micro USB to USB A Cable (if a secondary display adapter [SDA] is used)

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- Optional hardware, such as a USB keyboard, USB mouse, or headphones
- SDA powered by Raspberry Pi Zero

As of October 2018, we support devices running on the following operating systems and versions of Citrix Receiver™ or Citrix Workspace app:

- Android: Citrix Receiver 3.13.5 and later; Citrix Workspace app for Android 1808 and later
- iOS: Citrix Workspace app for iOS 1810.1 and later
- Mac: Citrix Workspace app for Mac 1808 and later (Screen casting only)
- Windows: Citrix Workspace app for Windows 1809 and later (Screen casting only)

Get started

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Upgrade HDX™ Ready Pi

To upgrade an existing HDX Ready Pi device to a Citrix Ready® workspace hub, see the following procedures.

- **Viewsonic:** https://www.stratodesk.com/t25-upgrade
- **NComputing:** https://www.ncomputing.com/hub

Initial setup with internal centralized management

To create a Stratodesk Management console, go to Stratodesk's website and create an account https://www.stratodesk.com/kb/Main_Page.

Initial setup with Citrix Endpoint Management™

To use Citrix Endpoint Management as the management solution for Citrix Ready workspace hub, you need to configure workspace hub to point to the central management URL. Follow the steps documented at Citrix Endpoint Management Server.

> Note:
>
> If you've previously pointed your device at a NoTouch Management console, you might need to reset the device to factory defaults.

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Configuration without centralized management

1. Start the Citrix Ready workspace hub device.
2. Go to **Start** > **Configuration**. The default password is “admin”.
3. Go to **Connections** > **Add**.
4. Edit the new connection and choose **Citrix/WorkspaceHub** from Connection mode. Click **Save**.
5. At the top of the screen, click the **Workspace Hub** button.
6. Type the desired URL for the initial launch screen (add `http://` or `https://` to the URL). The link typically points to a StoreFront or Citrix Gateway URL; however, you can configure any URL you want to launch on the hub.
7. Click **Save**.
8. Reboot the Citrix Ready workspace hub.

Citrix Virtual Apps and Desktops™ configuration

Configure the Citrix Virtual Apps and Desktops components to optimize the audio and video quality on the hub.

Optimization of browser content

You can enhance the delivery of web content for the session running on the hub. The Browser content redirection policy customizes the hardware overlay and improves its performance on the workspace hub.

1. Configure the Browser content redirection policy.
2. On the workspace hub, disable **Use Hardware Rendering** in **Connections > Citrix Workspace™ Hub > Citrix Workspace App > Secondary Display**. For a seamless browsing experience, use one redirection tab.

> Note:
>
> Only Internet Explorer supports the browser optimization feature.

Skype for Business

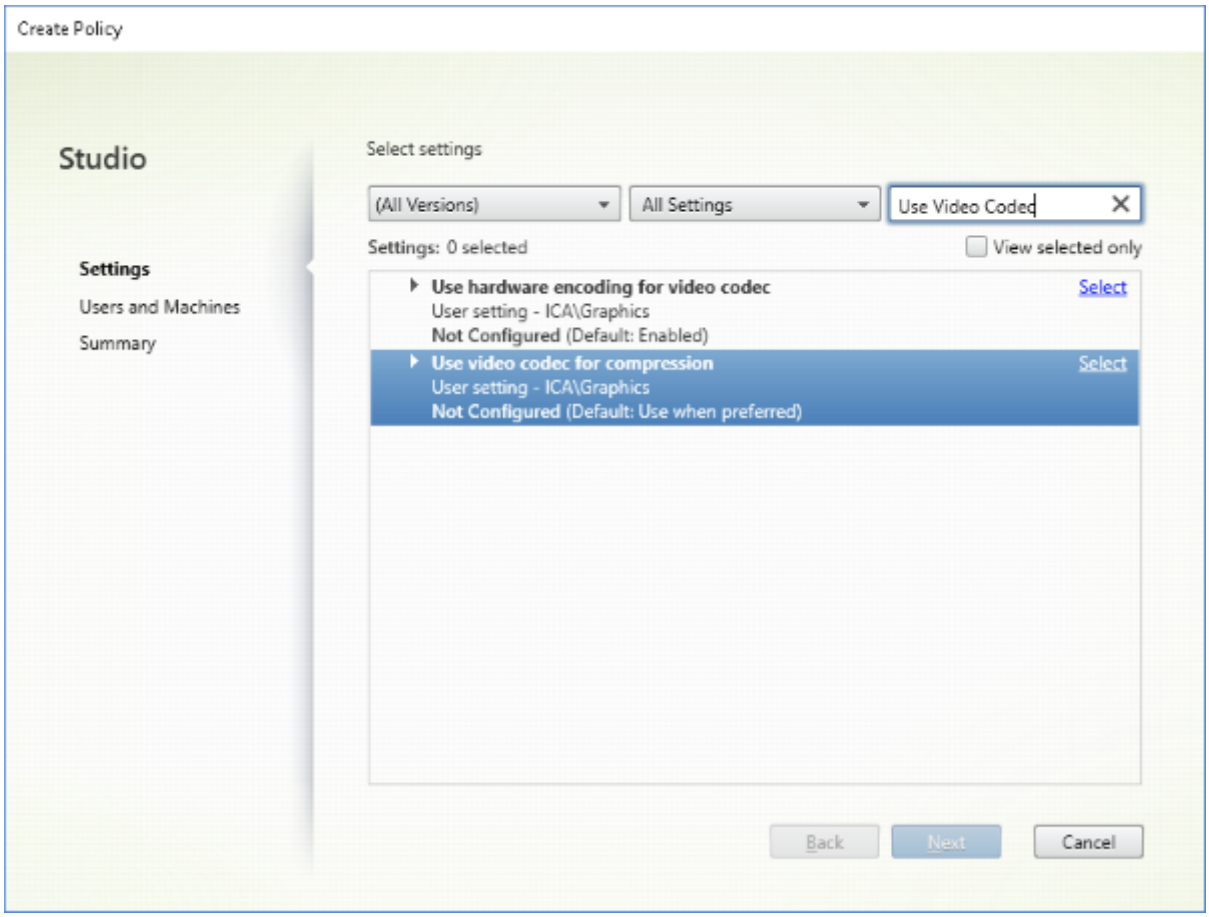
To use Skype for Business, install the HDX RealTime Optimization Pack version 2.4 or later on the VDA. Set **Use Hardware Rendering** to **Off** if the Optimization Pack is being used (see the following Performance policy section for more details).

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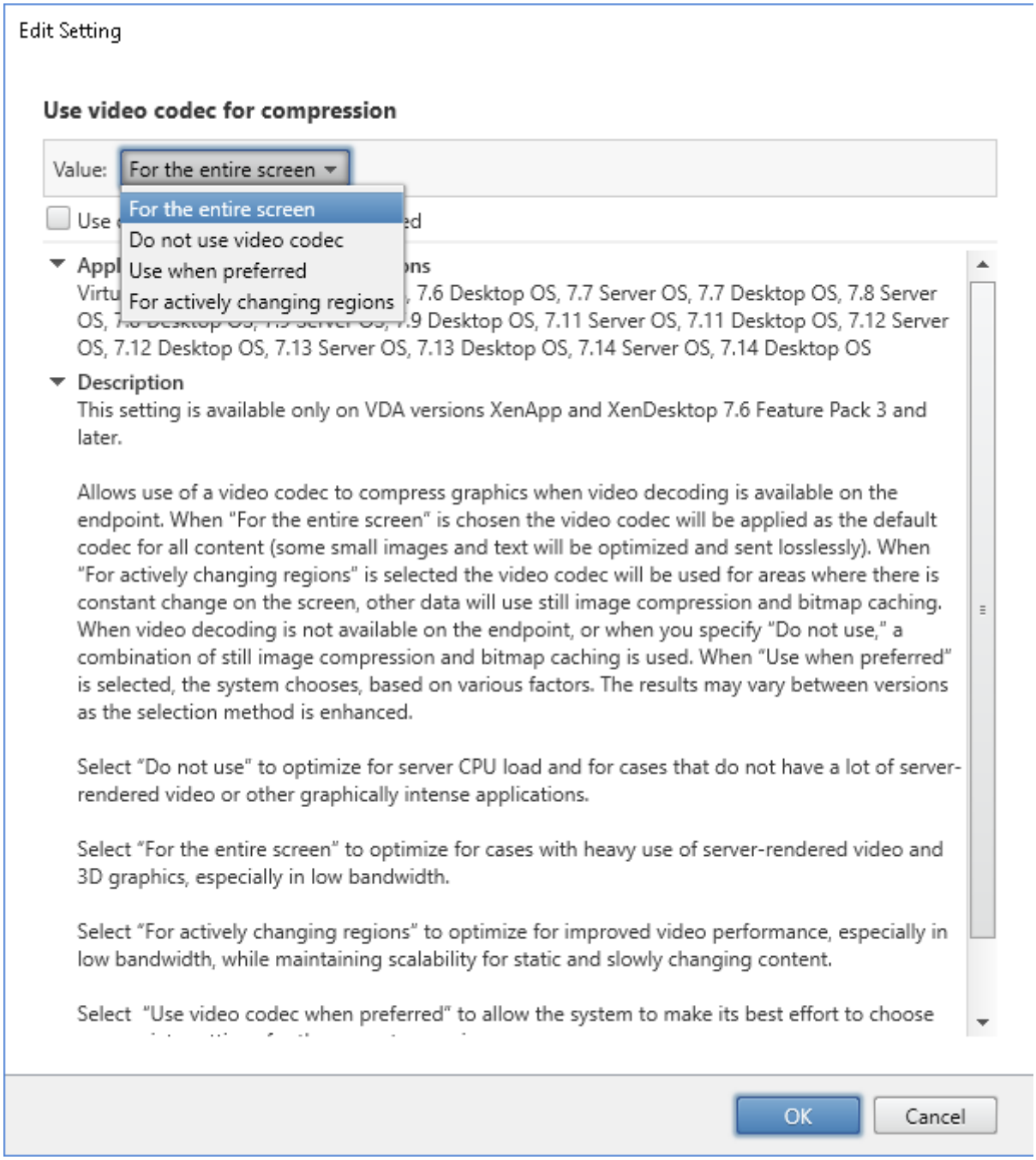
> Note:
>
> Currently, dual display is not supported in version 2.4 of the Optimization Pack.

Performance policy

To get the best experience on your Citrix Ready workspace hub (and the secondary display adaptor (SDA)), enable H.264 encoding for full-screen mode. To do this, create a policy and enable the video codec for H.264 compression (H.264) for full-screen mode.



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To confirm that H.264 compression is enabled for full-screen mode so that the SDA can function properly, see one of the following procedures.

- Review Citrix Policy from the Deliver Controller.
- In a VDA session, use the HDX Monitor 3.x. See Knowledge Center article CTX135817.
- In a VDA session, place the following line into the terminal: `wmic /namespace:\root\citrix\hdx path citrix_virtualchannel_thinwire get /value`

Then you can verify that the graphic mode is configured correctly for full-screen H.264 mode:

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1. **Component_VideoCodecUse = FullScreen**
2. **Component_Encoder = DeepCompressionV2Encoder**
3. **IsActive = Active**

If the graphic mode is configured for selective screen H.264, confirm that:

1. **Component_VideoCodecUse = For actively changing regions**
2. **Component_Encoder = CompatibilityEncoder**
3. **IsActive = Active**

For a better display resolution, enable the **ClearType** attribute on the Windows VDA. See Microsoft Cleartype overview and How to turn on or off ClearType in Windows 10 for more information.

Dual monitor setup

A secondary display adapter (SDA) is required to support dual monitors. You can purchase SDAs from ViewSonic or NComputing. For more information, see https://www.stratodesk.com/kb/Multimonitor.

Physical setup

There are two micro USB ports on the SDA. One is labeled "Power"the other is labeled "USB."Plug a standard Raspberry Pi USB power adapter into the power port, and then connect the SDA's USB port and the workspace hub using a standard micro USB-to-USB cable.

Software setup

See the earlier section Citrix Virtual Apps and Desktops Configuration. Follow the Performance policy in setting up H.264 rendering on both screens.

When you roam a session to the Citrix Ready workspace hub, dual monitors can be started automatically. To change the layout and alignment configuration, from the Stratodesk Management console, go to the configuration path **Connections > Workspace Hub > Citrix Workspace app > Secondary Display**.

Citrix Ready workspace hub in Citrix Workspace app

You can enable the Citrix Workspace app for use with the Citrix Ready workspace hub. This easy-to-use software provides seamless and secure access to the specific workspace applications and desktops to which users are entitled. The workspace hub allows you to launch the workspace resources from

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multiple platforms and clients. For more information on configuring the devices for use with the workspace hub, see the documentation for Android, iOS, Windows, and Mac platforms.

Use Citrix Ready® workspace hub

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Citrix Casting™

Citrix Ready workspace hub enables Citrix Casting, which makes it possible to securely roam and cast a mobile session, and mirror your desktop display. To roam your session, enter the proximity authentication range or scan the QR code on the hub. Session casting, however, requires that you open the session on the mobile device and then trigger the QR code to transfer it. For Mac and Windows, you can only mirror the screen to the hub. Session roaming and session casting are not available on these platforms.

Here's a video explaining how to use Citrix Casting.



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Session roaming with proximity authentication

With proximity authentication, you can launch a session automatically without touching the device. Proximity relies on Bluetooth technology to locate the mobile device. For Android 6.0 and later, enable both Bluetooth and location permissions. After configuring the device and launching Citrix Workspace app, the session roams to the workspace hub when the device enters the proximity authentication range of the hub. This feature is available for the Android devices only.

Session roaming with QR code authentication

Scan the QR code on the hub to roam the session from your iOS or Android device. When the session roams to a hub, the workspace hub has a full control of all the peripherals available within the session. For more information, see the help documentation for iOS and Android devices.

Session casting with QR code authentication

Launch the remote session on the iOS or Android device, and transfer the screen to the hub by scanning the QR code. You can use your keyboard and mouse on the mobile device and on the hub to control the session. For more information, see the help documentation for iOS and Android devices.

Screen casting with proximity discovery

Cast your desktop display to the hub without starting a remote session. The discovery method, comprised of Bluetooth and Wi-Fi technology, detects your Mac or Windows device and mirrors the entire desktop display to the hub. You can also leverage the IP-based method by manually entering the hub's IP address to stream your content. To exit the session on Mac or Windows platforms, close your laptop or manually disconnect the device in settings.

Your hub's session can be controlled using the mouse and keyboard on both your device and the hub. For more information, see the documentation for Mac and Windows.

Long running session

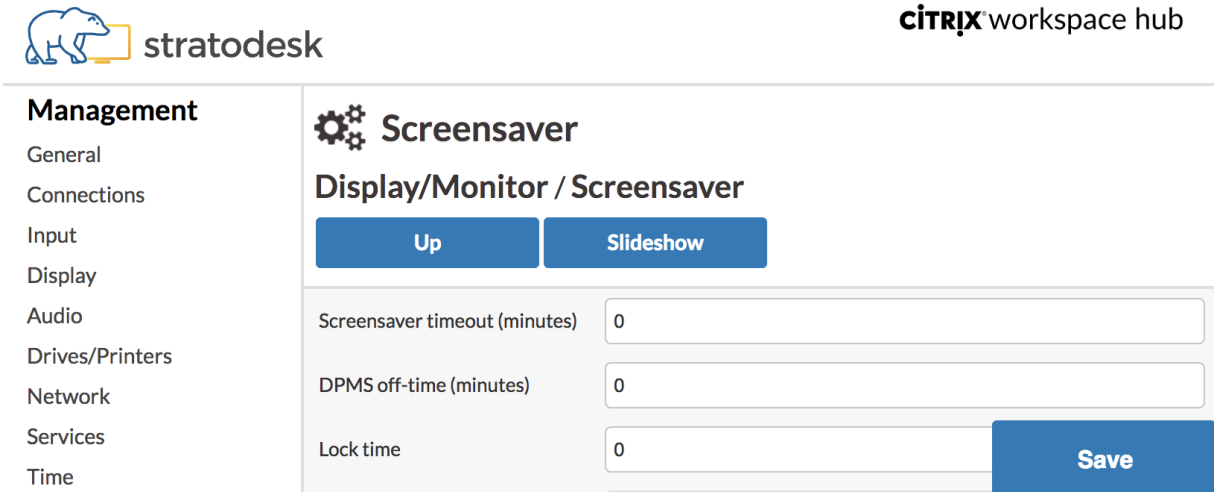
During a long running session, you can put the device down with the screen locked. To ensure that the session runs uninterrupted, consider the following tips:

- Battery optimization can interfere with your session. To avoid the effects of battery optimization, add Citrix Workspace™ app to the Android battery optimization ignore lists:
  - On a Google Pixel, go to **Settings > Battery > Battery optimization > All apps > Citrix Receiver™ > Don't optimize**.

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  - On most Samsung devices, go to **Settings > Battery > Battery usage > Optimize battery usage > All apps > Citrix Receiver > Don't optimize**.
  - If you're using a third-party battery optimization app, remove Citrix Workspace app for Linux from its optimization list.

- Citrix recommends that you bring the Citrix Workspace app's main interface to the foreground before locking your screen. Doing so ensures that the mobile device operating system does not end the Citrix Workspace app session.
- The screen saver mode might terminate your session when the device screen turns off. To use a long running session, set the **Display > Screensaver** setting to **0**.



Standard logging

Standard logging records the execution of the processes running in the Citrix Ready workspace hub and provides a way to dynamically change the debug level for different modules.

Support for Citrix Virtual Apps™

Citrix Ready workspace hub can seamlessly launch multiple virtual applications or only one desktop session at a time. When you launch multiple applications from the workspace hub using Citrix Workspace app, your applications might open behind the hub's initial launch screen. There are two ways to bring applications to the foreground.

1. In the menu icon on the hub's initial launch screen, click **Citrix Virtual Apps > Show all Citrix Virtual Apps** to view the launched sessions in a windowed mode.
2. Select **Citrix Virtual Apps >** `ApplicationName` to display a specific session on the foreground.

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Automatic navigation of the initial launch screen

With the Citrix Ready workspace hub 1812 release, Citrix introduces automatic navigation of the initial launch screen as an experimental feature. Configure multiple URLs for the initial launch screen in the workspace hub. Click the arrows at the bottom of the page to seamlessly navigate between your resources.

Disconnect the screen casting session

Workspace hub automatically disconnects your session on Mac and Windows devices when you close your laptop.

To disable this setting on Windows,

1. Go to the registry file: `HKEY_CURRENT_USER\SOFTWARE\Citrix\WorkspaceHub\Docker\LidStatusDisconnectConfigure`
2. Set the `LidStatusDisconnectEnable` value to **False**.

To disable this setting on Mac,

1. Go to the preference file: `/Users/Shared/Citrix Casting/CtxCfg.plist`
2. Set the `AutoDisconnectCastingWhenCloseLaptop` value to **False**.

Configuration

The `ctxlogd daemon` and the `setlog` utility are included in the hub package. By default, the `ctxlogd daemon` starts when you start the hub.

ctxlogd daemon All other services that are traced depend on the `ctxlogd daemon`. You can stop the `ctxlogd daemon` if you do not want to keep the hub traced by terminating the process relating to `ctxlogd`. The log file, wsh.log, is located at `/opt/Citrix/WorkspaceHub/Logs`.

setlog utility The `setlog` utility, at `/opt/Citrix/WorkspaceHub/lib/wshlog`, lets you dynamically change the debug level for different modules. Only root users have permission to run it. You can add `sudo` to the head of the command to run the command by using the Pi user.

For example:

1. To check the current log level for all modules:

   ```
   sudo /opt/Citrix/WorkspaceHub/lib/wshlog/setlog levels
   ```

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2. To set the log level as verbose for the **controlService** module:

```
sudo /opt/Citrix/WorkspaceHub/lib/wshlog/setlog level WSH_CONTROLSERVICE
 verbose
```

You can get more usage information from the help manual `sudo /opt/Citrix/WorkspaceHub /lib/wshlog/ setlog --help`.

Citrix Customer Experience Improvement Program (CEIP)

When you participate in the CEIP, Citrix receives anonymous statistics and usage information to help improve the quality and performance of Citrix products.

The Citrix Ready workspace hub uses Google Analytics as documented in How Google uses data when you use our partners' sites or apps to do the data analysis. When you turn off the CEIP, only minimum information is collected during the workspace hub heartbeat. For more information, see the **CEIP data collected from the workspace hub** table.

CEIP switch

By default, you automatically participate in the CEIP. You can turn off CEIP through the Stratodesk UI.

CEIP data collected from the workspace hub

The following table lists the types of anonymous information collected. The data does not contain any details that identify you as a customer.

Data point	Key name	Description
Auto navigation feature is enabled or not	auto_navigation	Indicating whether the Auto Navigation feature is enabled or not. 1: enabled. 0: disabled
OS release	os_release	Release information of PI OS, such as 4.9.35-v7
OS version	os_version	Version information of PI OS, such as 2017-07-05-raspbian-Jessie
Workspace hub version	wsh_version	Version information of the workspace hub, such as 1.0.72

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Data point	Key name	Description
SSL feature is enabled or not	ssl_mode	Indicating whether the SSL feature is enabled or not. 1: enabled. 0: disabled
Dual monitor is used or not	monitor_mode	Indicating whether the dual monitor is used or not. 1: dual monitor. 0: single monitor
Monitor resolution	monitor_resolution_p3	Screen resolution for the monitor connecting with p3
Monitor resolution	monitor_resolution_p0	Screen resolution for the monitor connecting with p0
Session duration time (for session roaming only)	session_time	The duration time of a session
Workspace hub MAC address	wsh_mac	The MAC address of the hub
Workspace hub CEIP mode	ceip_mode	Indicating whether the CEIP feature is enabled or not. 1: enabled. 0: disabled
Multiple-token feature toggle	Multiple-token	Indicating whether the multiple-token feature is enabled or not. 1: enabled. 0: disabled

When you turn the CEIP off, Citrix collects the following types of anonymous information:

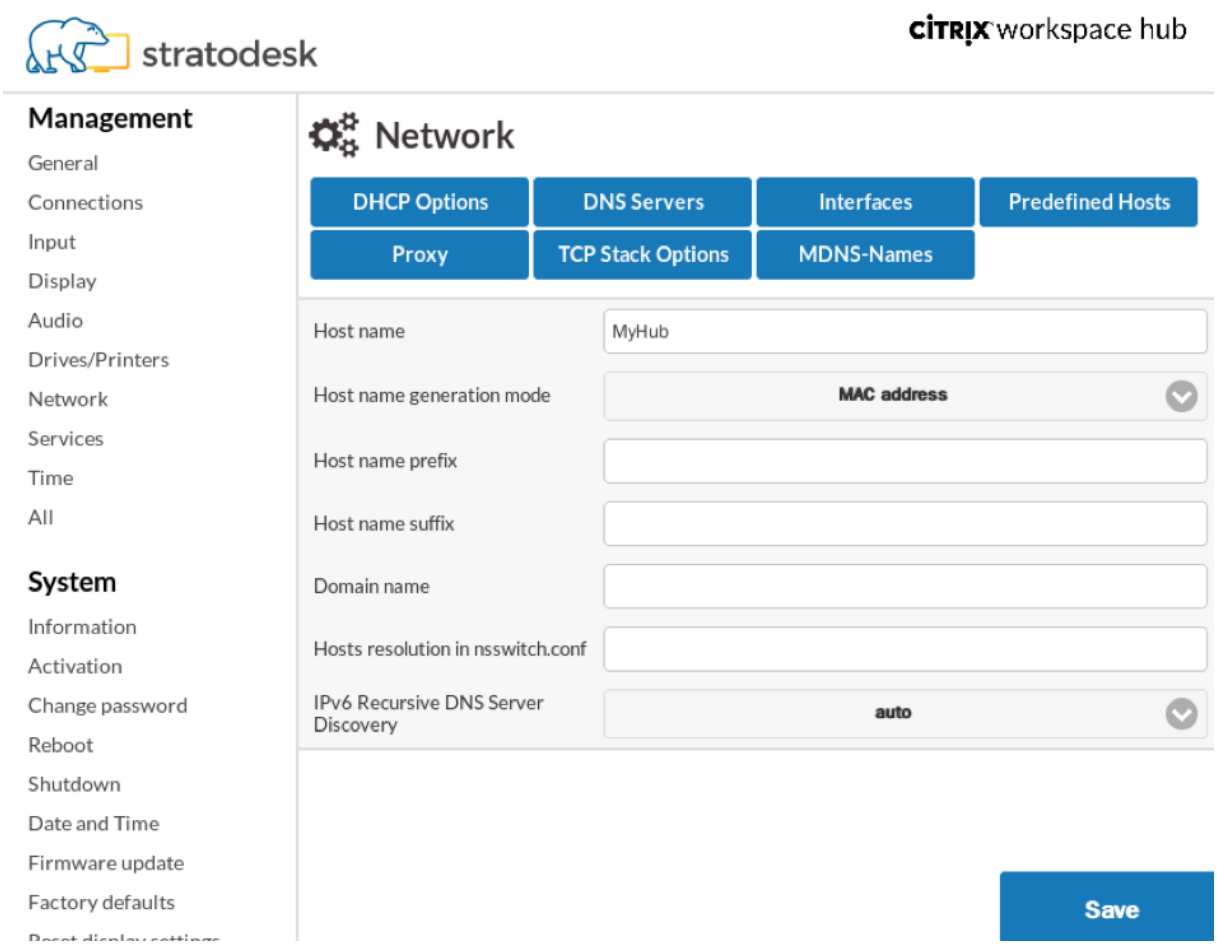
Data point	Key name	Description
OS release	os_release	Release information of Pi OS, such as 4.9.35-v7
OS version	os_version	Version information of Pi OS, such as 2017-07-05-raspbian-Jessie
Workspace hub version	wsh_version	Version information of the workspace hub, such as 1.0.72
Workspace hub MAC address	wsh_mac	The MAC address of the hub

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Security connection

Citrix Ready workspace hub supports a Secure Sockets Layer (SSL) connection between the mobile devices and the hub for security purposes. You need to set a Fully Qualified Domain Name (FQDN) either manually or automatically to uniquely identify each device.

Configure the domain and host name manually



1. In the **Network** group, enter your host name. Ensure that the common name of the Certificate Authority (CA) matches the host name.
2. Save the changes and restart the hub.
3. In **Network > DNS server**, add the DNS server name to generate the domain name. Ensure that your domain has been successfully created under **System > Information**.

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Configure the domain and host name automatically

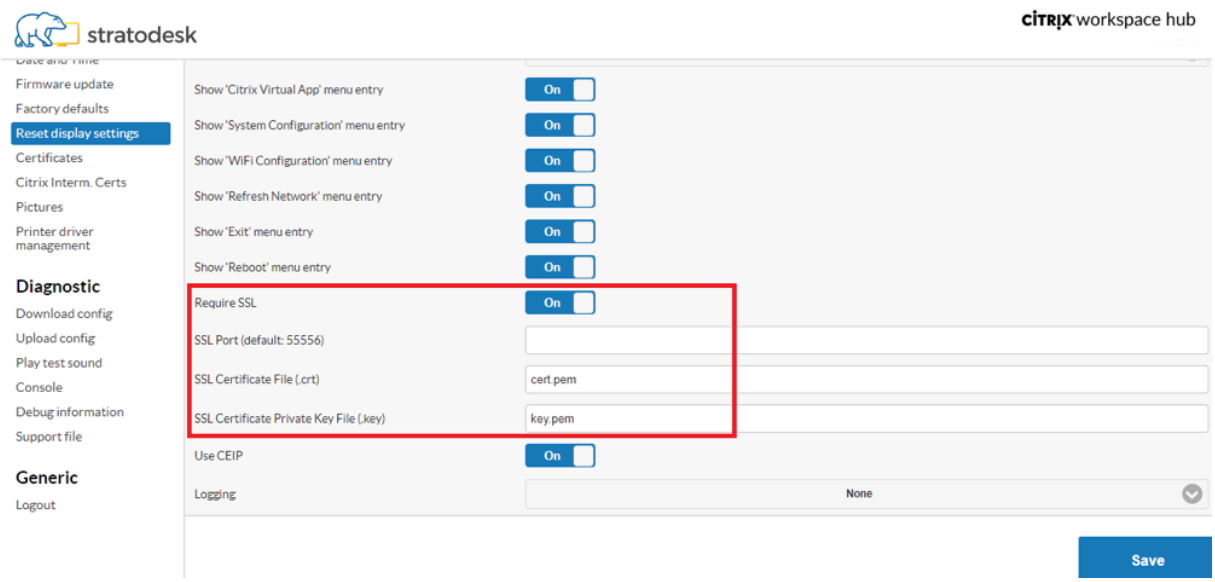
You can generate the FQDN directly from the Dynamic Host Configuration Protocol server. For more information, see Network Configuration.

> Note:
>
> If the SSL connection is disabled or the domain name can't be retrieved, the QR code includes the IP address instead of the domain name.

Install a certificate

Configure the SSL key and certificate for your domain.

1. For information about adding certificates and private keys to the Citrix Ready workspace hub, see https://www.stratodesk.com/kb/Certificates.
2. Update the certificate file (cert.pem) and private key file (key.pem) names, and then click **Save**. Both options are under **Connections > Workspace Hub > Workspace Hub**.
3. Restart the workspace hub for the changes to take effect.



If the mobile device doesn't have the root CA certificate installed, you can configure the self-signed certificate before users start working on the hub. When the SSL connection is enabled, the client checks the certificate and verifies the host name. The certificate installation process varies depending on the model of device.

1. Download and install the certificate on the mobile device.

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> Note:
>
> For iOS devices running without centralized management, ensure that you send the certificate to the users.
>
> If the Android device does not recognize the certificate format, change the suffix from (.pem) to (.crt).

2. Enable the SSL trust settings for your certificate.

   For more information, see the Help documentation for iOS and Android devices.

Shortcuts

- Control-Alt-S, gives a readout of relevant troubleshooting information.
- Control-Alt-C, brings up the configuration menu.
- When Citrix Casting, swiping down on the phone with two fingers disconnects the session, regardless of the session state or how you cast it to the workspace hub.

Troubleshoot

September 7, 2025

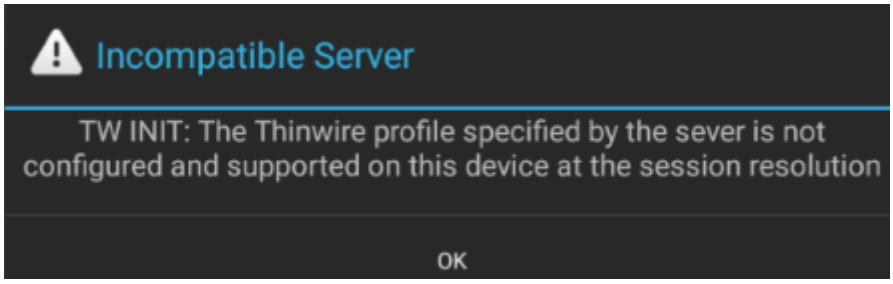
Session casting failure

Session casting for Citrix Ready workspace hub supports both full-screen H.264 and selective H.264 graphic modes. However, for optimal performance, Citrix recommends that you use full-screen H.264. If you are experiencing issues with session casting, check the graphic mode to ensure that it is configured properly.

“Incompatible server”message

In Citrix Workspace™ app for Android, a failure in session casting leads to the following message:

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This error occurs if the graphic mode is configured as selective H.264 on the VDA. Screen casting performs better with the full-screen H.264 graphic mode. Reconfigure the graphic mode to **Full Screen** in **System Configuration** > **Connections** > **Workspace Hub**, or upgrade the VDA to version 1808 or later.

SSL related issues

By default, SSL is enabled on the Citrix Ready workspace hub. Ensure that the SSL certificate is loaded and that its path is configured correctly on the hub. SSL configuration issues can result in failed launches of Citrix Casting. An alert message notifies you if the session stops responding.

User issue	Suggestion
The `WorkspaceHubControlService` process is not initiated properly.	In the terminal, enter the command: `ps –ef|grep ControlService`. If no process is found, check with IT to confirm that ports 55555 and 55556 are not blocked on the network.
SSL is enabled without certificates installed on the hub, or it is configured with an incorrect certificate path.	Verify that the certificates and key files are installed on the Citrix Ready workspace hub. To do this, go to `/opt/Citrix/WorkspaceHub/keystore/certs` and confirm that the certificates are installed. If you are using a Stratodesk image, follow the path to find the `ssl_enabled` configuration item at **System Configure** > **Connections** > **Citrix Workspace Hub** > **Workspace Hub**. If using a Citrix image, check the **ssl.config** file at `/opt/Citrix/WorkspaceHub/config/`.
SSL is enabled on the Citrix Ready® workspace hub, but the certificate is not installed on the client.	Install the key files on the client.

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User issue	Suggestion
A **DisplayConnector** process is already running.	An earlier instance of the **DisplayConnector** process was not terminated properly. Terminate the process and try casting again.

Session roaming failure

This issue can occur after setting up a new Citrix Ready workspace hub. Session roaming can stop working properly when the workspace hub configurations do not comply with the VDA session.

To resolve this issue:

1. Start the VDA session using Citrix Workspace app for Linux installed on the hub.
2. Verify that the SSL is configured properly.

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