Citrix Workspace app for Chrome
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About this release

December 19, 2019

What’s new

What’s new in 1912

Support for Asset ID

Starting with this release, Citrix Workspace app for Chrome uses an Asset ID that administrators set through the Google Admin Console as a client name for sessions launched from enrolled Chromebooks.

By default, Citrix Workspace app continues to generate a unique client ID for enrolled Chromebooks, which is similar to earlier versions. To use this feature, you must set a policy for Citrix Workspace app. For more information, see Asset ID.

What’s new in 1911

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

What’s new in 1909

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

What’s new in 1908

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

What’s new in 1907

High DPI scaling

Starting in this release, the High DPI Scaling feature is disabled by default for app and desktop sessions. For better resolution on high DPI enabled devices, go to Settings and select the High DPI Scaling check box. For more information, see DPI scaling.
What's new in 1906

Support for high DPI client scaling for app sessions

Starting in this release, Citrix Workspace app for Chrome allows the operating system to control the resolution of an app session. Citrix Workspace app for Chrome supports high DPI client scaling for app sessions on a single monitor. Earlier versions of Citrix Workspace app for Chrome allowed the operating system to control the resolution of desktop sessions only. For more information, see DPI scaling.

What's new in 1905

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

What's new in 1904

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

What's new in 1903

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

What's new in 1902

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

What's new in 1901

Support for managed Chromebook devices to stay awake

With this release, Citrix Workspace app for Chrome keeps managed Chromebook devices awake even when the users are not active. Earlier, when users were not active, by default, the operating system was dimming the screen and eventually suspending the system. For more information, see Awake setting.

What's new in 1811.3

This release addresses a number of issues that help to improve overall performance and stability.
What’s new in 1811.2

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

What’s new in 1811

Support for DPI scaling

With this release, Citrix Workspace app for Chrome allows the operating system to control the resolution of a desktop session.

Citrix Workspace app for Chrome provides support for DPI scaling by allowing you to set the VDA resolution on the monitors that have a high pixel ratio. When you set the resolution correctly on the VDA, blurry text becomes crisper. For more information about DPI scaling, see [DPI scaling](#).

Support for assistive cursor

Citrix Workspace app for Chrome now supports an assistive cursor to be displayed in a desktop session when the cursor is not visible within the session. For more information about assistive cursor, see [Assistive cursor](#).

What’s new in 1809.1

Enhanced support for multi-monitor display in kiosk mode for desktop sessions

Citrix Workspace app for Chrome provides enhanced support for multi-monitor display in kiosk mode for desktop sessions. The applications inside a desktop session can now be maximized to either of the two monitors instead of spanning across both monitors. For more information about enhanced multi-monitor display in kiosk mode, see [To use enhanced multi-monitor display in kiosk mode](#).

Improved network throughput for graphics over high latency connections

The default number of ICA output buffers that are used to send and receive data has been raised. This change provides improved network throughput performance even on high latency connections.

What’s new in 1809

USB device redirection support for UC-Logic Tablet WP5540U

Citrix Workspace app for Chrome now supports USB redirection for the UC-Logic Tablet WP5540U into a session.
Citrix Workspace app for Chrome

What's new in 1808

Support for proxy connections

Citrix Workspace app for Chrome supports opening documents from Google drive using published applications through the unauthenticated proxy servers. To enable this, configure the proxy setting in internet options.

Fixed issues

Fixed issues in 1912

- When you set the session state policy to full screen mode and attempt to launch a session, the session or the app might fail to launch. This error message might appear in the console.log:

  Cannot read property ‘window’ of undefined

  [RFHTMCRM-3097]

Fixed issues in 1911

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

Fixed issues in 1909

- The HDX SDK for Chrome might not launch sessions when Citrix Workspace app is not running in the background. [RFHTMCRM-3001]

Fixed issues in 1908

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

Fixed issues in 1907

- Attempts to open files from a Google Drive using Citrix Workspace app might fail. [RFHTMCRM-2857]
**Fixed issues in 1906**

- Single sign-on might not work with Citrix Workspace app for Chrome. The issue occurs in Chrome OS version 72 and later. [RFHTMCRM-2791]

- When you connect to a Chromebook device that has two external monitors, the session can extend to two monitors. The third monitor might appear as a blank window. [RFHTMCRM-2815]

**Fixed issues in 1905**

- With this fix, you can enable the FPS meter to debug graphical issues through the Google Admin Policy. [RFHTMCRM-2772]

- When a session that is running on a Chromebook device is active for 53 minutes or more, you might not be able to lock the session. You can see a locking screen that eventually becomes unresponsive. [LD1060]

**Fixed issues in 1904**

- When you open a session that is a fixed size through the Chrome HDX SDK and then change the resolution by setting `autoresize: true` to auto fit to the window, the session might not resize. [RFHTMCRM-2571]

- With this fix, Citrix Workspace app for Chrome supports localization in the Dutch language. [RFHTMCRM-2663]

- When you open a desktop session or an app using Citrix Workspace app for Chrome on a touch-enabled Chromebook and change the resolution to a fixed value that is larger than the window size, the session might not pan. [RFHTMCRM-2712]

- After you upgrade to Chrome 72, smart card redirection might stop working. This fix updates corresponding libraries to redirect the smart card successfully.

**Fixed issues in 1903**

- When a store URL that auto reconnects to applications or desktops is used within the Citrix Workspace app for Chrome, a blank window opens as a new tab in the Chrome browser. The issue occurs in Chrome OS Version 72 and later. [RFHTMCRM-2698]

**Fixed issues in 1902**

- When you start a session in multi-monitor mode, the keyboard input might not work within the secondary monitor. [RFHTMCRM-2631]
Citrix Workspace app for Chrome

**Fixed issues in 1901**

- When the HDX SDK for Chrome and the Virtual Channel SDK for Chrome files are included in the same HTML file, the APIs of one SDK might override the other, depending on the order added. [RFHTMCRM-2581]
- The DPI scaling feature might not work for managed Chromebook devices. [RFHTMCRM-2594]

**Fixed issues in 1811.3**

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

**Fixed issues in 1811.2**

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

**Fixed issues in 1811**

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

**Fixed issues in 1809.1**

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

**Fixed issues in 1809**

- The touch screen might behave inconsistently in a user session. For each tap performed, double clicks are reported. [LC9703]

**Fixed issues in 1808**

**Version 18.8.1.4043**

- The LongCommandLine path to the VDA might be formed incorrectly if the path has LongCmd-Line parameters. [RFHTMCRM-2413]
Known issues

Known issues in 1912

- Google Cloud Print might not work with Citrix Workspace app for Chrome. On Citrix Workspace app for Chrome, if you navigate to Settings > Printer and then attempt to open Google Cloud Print by entering credentials on the logon page, this error message appears:

Sign in with Google temporarily disabled for this app

This app has not been verified yet by Google in order to use Google Sign In.

As a workaround, use the Citrix PDF Printer option to print a file. This is a third-party issue. For more information, see Google bug ID #1034865. [RFHTMCRM-3127]

Known issues in 1911

No new issues have been observed in this release.

Known issues in 1909

No new issues have been observed in this release.

Known issues in 1908

No new issues have been observed in this release.

Known issues in 1907

- When you attempt to redirect the Microsoft LifeCam USB device in a session, the redirection might fail. [RFHTMCRM-2856]

Known issues in 1906

- The window’s border or shelf might appear in full-screen mode for Citrix Workspace app for Chrome public sessions. [RFHTMCRM-2792]

- In a multi-monitor environment, when you attempt to add or remove an external monitor, the session might become unstable. [RFHTMCRM-2853]
Known issues in 1905

- Single sign-on might not work with Citrix Workspace app for Chrome. The issue occurs in Chrome OS version 72 and later. [RFHTMCRM-2791]

Known issues in 1904

No new issues have been observed in this release.

Known issues in 1903

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Known issues in 1901

No new issues have been observed in this release.

Known issues in 1811.3

No new issues have been observed in this release.

Known issues in 1811.2

No new issues have been observed in this release.

Known issues in 1811

- After you redirect the USB device UC-Logic Tablet WP5540U and enable the assistive cursor in a multi-monitor environment, the assistive cursor movement might not align with the stylus action. [RFHTMCRM-2472]

Known issues in 1809.1

No new issues have been observed in this release.
Known issues in 1809

No new issues have been observed in this release.

Known issues in 1808

Version 18.8.1.4043

No new issues have been observed in this release.

Version 1808

• When you start applications and desktops from multiple VDAs and set one VDA with applications and desktops in focus, the applications and desktops from the other VDAs that are not in focus might become black. As a workaround, minimize all the applications and then start the required applications from the taskbar. [RFHTMCRM-2408]

Prerequisites for installing

November 14, 2019

System requirements and compatibility

Requirements

All devices must meet the minimum hardware requirements for the installed operating system.

Users devices require the Google Chrome operating system (version 50 or later) to access desktops and apps using Citrix Workspace app for Chrome. Citrix recommends that you use Citrix Workspace app for Chrome with releases from the Google Chrome stable channel. Citrix Workspace app for Chrome is supported only on Chrome OS.

Supportability matrix

Citrix Workspace app for Chrome supports access to desktops and applications through the following versions of StoreFront. Stores must be accessed through Citrix Workspace app for Web sites. Citrix Workspace app for Chrome does not support direct access to StoreFront stores, either using the store URL or the XenApp Services URL.
Citrix Workspace app for Chrome

- StoreFront 2.5 and later
- Web Interface 5.4

Citrix Workspace app for Chrome can be used to access desktops and applications delivered by the following product versions:

- XenApp and XenDesktop 7.6 and later
- XenApp 6.5

**Secure user connections**

In a production environment, Citrix recommends securing communications between Citrix Workspace for Web sites and users’ devices with Citrix Gateway and HTTPS. Citrix recommends using SSL certificates with a key size of at least 1024 bits throughout the environment in which Citrix Workspace app for Chrome is deployed. Citrix Workspace app for Chrome enables user access to desktops and applications from public networks with the following versions of Citrix Gateway.

- NetScaler Gateway 10.5 and later

Citrix Workspace app for Chrome supports CloudBridge disabling compression and printer compression as well as using HDX Insight analytics to display in CloudBridge Insight Center.

- CloudBridge 7.4 and later

**Note:**

If there is an issue connecting to the SSL-enabled VDA with Citrix Workspace app for Chrome, configure the cipher suites as specified in TLS settings on VDAs.

**Secure ICA**

Starting with Version 2.1, Citrix Workspace app for Chrome supports RC5 (128 bit) encryption.

**Note:**

If any encryption format other than basic is set, Citrix Workspace app for Chrome upgrades the encryption format to RC5 (128 bit).

**Tip:** Citrix recommends that you use a SSL-enabled VDAs for end-to-end SSL encryption.

**Install**

November 14, 2019
Install manually

There are a number of options for deploying Citrix Workspace app for Chrome.

- You can use Google App management console to configure Citrix Workspace using Google policy. For more information on Chrome configuration, see Knowledge Center article CTX141844.
- You can repackage Citrix Workspace app for Chrome to include a Citrix Workspace configuration (.cr) file you have generated. The .cr file contains the connection details for Citrix Gateway and the Citrix Workspace for Web site that provides users' desktops and apps. Users browse to chrome://extensions and then drag and drop the repackage app (.crx) file onto the Chrome window to install Citrix Workspace app for Chrome. Because the app is pre-configured, users can start working with Citrix Workspace app for Chrome as soon as they install it, without a need to perform additional configuration steps.

You can deliver your custom Citrix Workspace app for Chrome application to users in the following ways:

- Publish the repackage application for users through Google Apps for Business using the Google Admin Console.
- Provide the .crx file to users through other means, such as through email.
- Users install Citrix Workspace app for Chrome from the Chrome Web Store by searching for Citrix Workspace and clicking Add to Chrome.

Once installed, Citrix Workspace app for Chrome must be configured with connection details for Citrix Gateway and the Citrix Workspace for Web site providing that provides users' desktops and apps. This can be achieved in two ways:

- Generate a .cr file containing the appropriate connection details and distribute this file to users. To configure Citrix Workspace app for Chrome, users double-click the .cr file and click Add when prompted. For more information about generating .cr files from StoreFront, see Export store provisioning files for users.
- Provide users with the URL they must enter manually when they first start Citrix Workspace app for Chrome.

Repackage

To simplify the deployment process for users, you can repackage Citrix Workspace app for Chrome with a new .cr file to preconfigure Citrix Workspace app for Chrome with the appropriate connection details for your environment. Users can start working with Citrix Workspace app for Chrome as soon as they have installed it without the need to perform any additional configuration steps.

1. Download the unpackaged version of Citrix Workspace app for Chrome to a suitable location.
2. Download the sample configuration file and customize it as appropriate for your environment.
3. Rename the modified configuration file to default.cr and copy it to the Citrix Workspace app for Chrome root directory.

Configuration files with different names or in other locations are not included when Citrix Workspace app for Chrome is repackaged.

4. By default, the in-session toolbar is enabled. If you want to disable the in-session toolbar perform the following steps.

Note: We recommend that you back up the configuration.js file before making any changes to it.

a) Use a text editor to open the configuration.js file in the Citrix Workspace app for ChromeApp root directory.

b) Locate the following section in the file.

```javascript
pre codeblock 'appPrefs':{ 'chromeApp':{ 'ui': { 'toolbar': { 'menubar':true, 'clipboard': false
```

Note: To override any previous configuration, we recommend that you use the Google Admin console to push the policy.

5. By default, Citrix Workspace app for Chrome can open any file extension in the Files App in a Chromebook intended for opening files in Google Drive using the FileAccess component in the VDA. If an administrator wants to disable this option to download the unpackaged version of Citrix Workspace app for Chrome and edit the “file handlers” section in manifest.js to resemble the following:

```json
1 "file handlers" : {
2   "text" : {
3     "extensions" : [
4       "ica",
5       "cr"
6     ]
7   }
8  }
9 }
```

6. In Chrome, browse to chrome://extensions, select the Developer mode check box in the top right corner of the page and then click the Pack extension button.

For security reasons, StoreFront only accepts connections from known Citrix Workspace app for Chrome instances. You must whitelist your repackaged application to enable users to connect
Citrix Workspace app for Chrome

to a Citrix Workspace for Web site.

7. On the StoreFront server, use a text editor to open the web.config file for the Citrix Workspace for Web site, which is typically located in the C:\inetpub\wwwroot\Citrix\storename Web directory, where storename is the name specified for the store when it was created.

8. Locate the following element in the file.

```
<codeblock>
<
</codeblock>

```

9. Change the value of the `chromeAppOrigins` attribute to `chrome-extension://packageid`, where `packageid` is the ID generated for your repackaged application.

Uninstall

After installing and configuring Citrix Workspace app for Chrome, select the Citrix Workspace icon in the Chrome apps list to start Citrix Workspace app for Chrome, as shown in the following figure. To remove Citrix Workspace app for Chrome from their devices, right-click the Citrix Workspace icon in the Chrome apps list and select Uninstall.

Upgrade

To upgrade to the new Citrix Workspace app, do any of the following steps:
Citrix Workspace app for Chrome

- Download the Citrix Workspace app from the Citrix download page and install the app to upgrade from Citrix Receiver to Citrix Workspace app.
- Upgrade your Citrix Workspace app using your OS app store.
- On Windows and macOS, auto-update to Citrix Workspace app from Citrix Receiver using Citrix Receiver Updates.

For the documentation of Citrix Receiver for Chrome, see Citrix Receiver.

Get started

November 14, 2019

Set up

Desktops and applications appear after logging in. You can search for resources and click an icon to start a desktop or application in a new window.

When you start an additional application, Citrix Workspace app for Chrome checks if the application can be launched in an existing session before creating a new session. This enables you to access multiple applications in a single session.

You can configure the features and functionalities of Citrix Workspace app for Chrome using any of the following methods:

- Google Admin Policy
- Web.config in StoreFront
- default.ica
- configuration.js

**Note:**
As of version 1901, the splash screen is no longer visible to users. The schema “splashScreen”: false will no longer be supported in future releases. You must remove the schema, if present, from the Google Admin policy or the configuration.js file.

Using Google Admin policy

**Note:**
Citrix recommends using this method only when Citrix Workspace app for Chrome is repackaged for users.
Before Version 2.1, only store/beacon related configurations could be pushed through Google Admin Policy. For additional information about this policy, see the Knowledge Center articles CTX141844 and CTX229141.

With Citrix Workspace app for Chrome Version 2.1, other Chrome configurations can also be pushed through the Google Admin Policy.

For more information, see the sample policy text below:

```json
{
    "settings": {
        "Value": {
            "settings_version": "1.0",
            "store_settings": {
                "name": "RTST",
                "gateways": [
                    {
                        "url": "https://yourcompany.gateway.com",
                        "is_default": true
                    }
                ],
                "beacons": {
                    "internal": [
                        {
                            "url": "http://yourcompany.internalwebsite.net"
                        }
                    ],
                    "external": [
                        {
                            "url": "http://www.yourcompany.externalwebsite.com"
                        }
                    ]
                }
            }
        }
    }
}
```
"url": "http://yourcompany.storefrontstoreweb.net",
}
,  
"engine_settings":{
"ui":{
  "sessionsize": {
    "windowstate": "fullscreen",
    "available": {
      "default": "Fit_To_Window",
      "values": ["Fit_To_Window", "Use_Device_Pixel_Ratio","1280x800","1440x900","1600x1200"]
    }
  }
,  
  "toolbar": {
    "menubar":true,
    "usb":true,
    "fileTransfer":true,
    "about":true,
    "lock":true,
    "disconnect":true,
    "logoff":true,
    "fullscreen":true,
    "multitouch":true,
    "preferences":true,
    "gestureGuide":true
  }
,  
  "features":{
    "com":{
      "portname": "COM5"
    }
}
"graphics": {
  "features": {
    "graphics": {
      "jpegSupport": true,
      "h264Support": {
        "enabled": true,
        "losslessOverlays": true,
        "dirtyRegions": true,
        "yuv444Support": false
      }
    },
    "filetransfer": {
      "allowupload": true,
      "allowdownload": true,
      "maxuploadsize": 2147483647,
      "maxdownloadsize": 2147483647
    },
    "nacl": {
      "supportNacl": true,
      "graphics": {
        "enable": true
      }
    },
    "video": {
      "enable": true
    },
    "audio": {
      "enable": true
    }
  }
}
Using Web.config

Note:
Citrix recommends that you use the web.config file method for configuration purposes only when a store version of Citrix Workspace app for Chrome is being used.

To change the configuration using the Web.config file:

1. Open the web.config file for the Citrix Workspace for Web site. This file is typically located in C:\inetpub\wwwroot\Citrix\storenameWeb, where storename is the name specified for the store when it was created.
2. Locate the chromeAppPreferences field and set its value with the configuration as a JSON string.

For example:

```
chromeAppPreferences = '{“ui”: {“toolbar”: {“menubar”: false}}}'
```

Using the default.ica file

Note:
Citrix recommends that you use the default.ica file method for configuration purposes only for Web Interface users.

Citrix Workspace app for Chrome allows Custom .ica files without any initial program value.

To change the configuration using the default.ica file:

1. Open the default.ica file typically located at C:\inetpub\wwwroot\Citrix\<site name>\conf\default.ica for Web interface customers, where sitename is the name specified for the site when it was created.
   In case of Storefront customers, default.ica file is typically located at C:\inetpub\wwwroot\Citrix\<Storename>\App_Data\default.ica, where storename is the name specified for the store when it was created.
2. Add a new key at the end of the file, chromeAppPreferences with its value set to configuration as the JSON object.
For example:

chromeAppPreferences={“ui”:{“toolbar”: {“menubar”: false}}}  

A sample **default.ica** file looks like below:

```
; ICA Override File

; Add ICA file settings that you want to be sent to client devices
to this file. Settings contained in this file override any
settings generated by Delivery Services.

[WFClient]
Version=2
RemoveICAFiler=Yes
ProxyTimeout=30000
ProxyFavorIEConnectionSetting=Yes
ProxyUseFQDN=Off

[ApplicationServers]
Application=

[Application]
TransportDriver=TCP/IP
DoNotUseDefaultCSL=On
```
BrowserProtocol=HTTPonTCP
LocHttpBrowserAddress=!  
WinStationDriver=ICA 3.0
ProxyTimeout=30000
AutologonAllowed=ON

;EncryptionLevelSession=RC5 (128 bit)

[EncRC5-0]
DriverNameWin16=pdc0w.dll
DriverNameWin32=pdc0n.dll

[EncRC5-40]
DriverNameWin16=pdc40w.dll
DriverNameWin32=pdc40n.dll

[EncRC5-56]
DriverNameWin16=pdc56w.dll
DriverNameWin32=pdc56n.dll

[EncRC5-128]
DriverNameWin16=pdc128w.dll
DriverNameWin32=pdc128n.dll

[Compress]
DriverNameWin16=pdcompw.dll
Using the configuration.js file

The configuration.js file is located in the ChromeApp root folder. Access this file directly to make changes to Citrix Workspace app for Chrome.

Note:

- Citrix recommends that you back up the configuration.js file before making any changes to it.
- Administrator-level credentials are required to edit the configuration.js file; after editing the file, repackage the app to make additional modifications to toolbar elements.
- In kiosk mode, the toolbar is hidden by default. When editing the configuration.js file to enable the toolbar, ensure that kiosk mode is disabled. Citrix recommends that you use one of the alternative methods (for example, the default.ica file) to enable the toolbar.

Configure

December 19, 2019

Content Collaboration Service integration

This release introduces integration of Citrix Content Collaboration Service with Citrix Workspace app. Citrix Content Collaboration enables you to easily and securely exchange documents, send large documents by email, securely handle document transfers to third parties, and access a collaboration space. Citrix Content Collaboration provides many ways to work, including a web-based interface, mobile clients, desktop apps, and integration with Microsoft Outlook and Gmail.
Citrix Workspace app for Chrome

You can access Citrix Content Collaboration functionality from the Citrix Workspace app using the Files tab displayed within Citrix Workspace app. You can view the Files tab only if Content Collaboration Service is enabled in the Workspace configuration in the Citrix Cloud console.

Note:
Citrix Content Collaboration integration in Citrix Workspace app is not supported on Windows Server 2012 and Windows Server 2016 due to a security option set in the operating system.

The following image displays example contents of the Files tab of the new Citrix Workspace app:

Limitations:

- Resetting Citrix Workspace app does not cause Citrix Content Collaboration to log off.
- Switching stores in Citrix Workspace app does not cause Citrix Content Collaboration to log off.

To enable Citrix Workspace app for Chrome for users to access resources hosted on Citrix Virtual Apps and Desktops, you must create a StoreFront store. You must also enable WebSocket connections on Citrix Gateway, Citrix Virtual Apps, and Citrix Virtual Apps and Desktops, as required.
**Asset ID**

Citrix Workspace app for Chrome uses an Asset ID that administrators set through the Google Admin Console as a client name for sessions launched from enrolled Chromebooks.

By default, Citrix Workspace app continues to generate a unique client ID for enrolled Chromebooks, which is similar to earlier versions. To use this feature, you must set a policy for Citrix Workspace app.

**Configuring Asset ID**

1. Log on to the Google Admin Console.
2. Go to Device Management > Chrome > Devices Console and add Asset ID for the device.
3. Edit the Google Admin Console policy and set the value of useAssetID to true. By default, the useAssetID is set to false.

```json
{
  "settings": {
    "Value": {
      "settings_version": "1.0",
      "engine_settings": {
        "uniqueID": {
          "useAssetID": true
        }
      }
    }
  }
}
```

**Limitations:**

- You must have a Google Admin policy that can be pushed. Otherwise, the current method of generating a unique client ID for managed Chromebooks remains in use.
- The data value you enter cannot contain more than 15 characters.
Multiple StoreFront

You can change the Store address without having to restart Citrix Workspace. Existing Citrix Workspace sessions, if any, continue to run uninterrupted.

To add multiple stores and switch between them using Chrome:

1. Click **Settings** in Citrix Workspace app for Chrome and, in the **Account** pane, click **Add a store**.

   ![Account settings page]

2. Enter the StoreFront URL in the **Store Address** field.

3. Click **Apply** to save the new store.
4. You can select an existing store from the drop-down list.
5. To delete a store from the list, click the **Delete** icon next to the store address you want to delete and confirm deletion.
6. When you select a different store from the drop down-list, the **Apply** button changes to **Switch**.

7. Click **Switch** to confirm that you want to switch to a different store.
Limitations:

- This feature is supported in user and public modes but not in kiosk mode.
- This feature supports adding up to five stores.

Selective H.264

Configuring Selective H.264 in StoreFront using the web.config file

To change the Selective H.264 configuration using the web.config file:

1. Open the web.config file for Citrix Workspace for Web site.
   This file is typically located in the C:\inetpub\wwwroot\Citrix\<Storename> Web folder, where Storename is the name specified for the store when it was created.
2. Locate the chromeAppPreferences field and set its value with the configuration as a JSON string; for example:
   chromeAppPreferences="{"graphics":{"selectiveH264":false}}"
Configuring Selective H.264 using the configuration.js file

The configuration.js file is located in the ChromeApp root folder. Edit this file to make changes to Citrix Workspace app for Chrome.

By default, selective H.264 is set to true.

To disable the Selective H.264 configuration using the configuration.js file:

1. Open the configuration.js file and set the selectiveH264 attribute to **false**.

```javascript
'graphics': {
    'selectiveH264': false
}
```

**Note:**
- Citrix recommends that you back up the configuration.js file before making any changes to it.
- Citrix recommends using this method only when Citrix Workspace app for Chrome is repackaged for users.
- Administrator-level credentials are required to edit the configuration.js file; after editing the file, repackage the app for the changes to take effect.

Full-screen mode

To configure your desktop session to always open in full-screen mode, edit the Google Admin Policy by including the following:

```json
  "settings": {
    "Value": {
      "settings\_version": "1.0",
      "engine\_settings": {
        "ui": {
          "sessionsize": {
```
Awake setting

Citrix Workspace app for Chrome keeps managed Chromebook devices awake even when the users are not active.

The awake setting feature is disabled by default.

To enable the feature, edit the Google Admin Console policy and set the value of the keep_awake_level property under power_settings to either “system” or “display” and then restart the session.

The “system” level keeps the system awake, but allows the screen to be dimmed or turned off. The “display” level keeps the system awake and active.
Note:
For Kiosk mode, make sure that the Allow app to manage power setting in the Google Admin console is disabled.

Multi-monitor display

Multi-monitor supports only one external monitor. By default, the multi-monitor feature is set to enabled.

Note:
• If you are using Citrix Workspace app for Chrome running on XenApp 6.5, set the shadowing policy to Disabled to use the multi-monitor feature.
• In a desktop session, when the window is set to full screen, the Display Resolution option in Preferences is deactivated.
• UI dialogs and toolbars appear only on primary monitor. However, USB and smart card authentication dialogs span across monitors.

To use enhanced multi-monitor display in kiosk mode

Enhanced multi-monitor display in kiosk mode is enabled by default.

To disable kiosk mode, edit the configuration.js file or the Google Admin Console policy and set the value of kioskMultimonitor property to false.

```javascript
{}  
"settings": {
  "Value": {
    "settings_version": "1.0",
    "engine_settings": {
      "features": {
        "graphics": {
          "kioskMultimonitor": false
        }
      }
    }
  }
}
```
Note:
To be able to launch a session in kiosk mode, you must enable Unified Desktop mode.

1. Launch a web browser and enter the following command: chrome://flags
2. From the list of flags, search for UnifiedDesktopMode and set it to Enabled.

**To configure Unified Desktop mode using Google Admin policy**

1. Log on to the Google Admin console.
2. Go to Device management > Chrome Management > User Settings.
3. Set the Unified Desktop policy to Make Unified Desktop mode available to user.
4. Click Save.

**To disable multi-monitor feature**

By default, multi-monitor is enabled.

1. Launch Citrix Workspace app for Chrome.
2. Select Settings > General.
3. Uncheck Use all the monitors to span display.
Multi-monitor display is available on both desktops and applications.

When using multi-monitor display, the desktop session can span across multiple monitors in two ways:

4. Windowed mode: The desktop session displays in single monitor mode.

5. Full-screen mode: When a desktop session is switched to full-screen mode, the session displays in multi-monitor mode only when Use all the monitors to span display is selected.

For the display to span across monitors in a desktop session, select **Use all the monitors to span display** option and click full-screen mode when the two monitors are connected.

In an application session, when two monitors are connected and **Use all the monitors to span display** option is selected, the session automatically displays in a multi-monitor mode.

**Using Citrix Virtual Desktops on dual monitors:**

1. Click **Multimonitor** in the toolbar.

   The screen is now extended to both the monitors.

**Limitations:**

- Citrix Workspace app for Chrome does not support full-screen H.264 graphic mode for multiple monitors.
Serial COM port redirection

To configure serial COM port redirection, enable the feature by applying Citrix Virtual Apps and Desktops port redirection policy settings. For more information on port redirection, see Port redirection policy settings.

**Note:**
By default, Citrix Workspace app for Chrome maps COM5 as a preferred serial COM port for redirection.

After enabling serial COM port redirection policy settings on the VDA, configure Citrix Workspace app for Chrome using one of the following methods:

- Google Admin Policy
- configuration.js file
- Changing the default mapping by issuing a command in an active ICA session.

Using Google Admin Policy to configure COM port redirection

Use this method to redirect the serial COM port by editing the policy file.

**Tip:**
Citrix recommends that you configure the COM port using the policy file only when Citrix Workspace app for Chrome is repackaged.

Edit the Google Admin Policy by including the following:

```
{
    "settings": {
        "Value": {
            "settings_version": "1.0",
            "store_settings": {
                "rf_web": {
                    "url": "http://YourStoreWebURL"
                }
            }
        },
        "engine_settings": {
```

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Using the configuration.js file to configure COM port redirection

Use this method to redirect the serial COM port by editing the configuration.js file. Locate the portname field in the configuration.js file and edit the value by changing the port number.

For example:

```
"com" : {
  "portname" : "COM4"
}
```

**Note:**
Citrix recommends using the configuration.js file method to configure serial port redirection only when Citrix Workspace app for Chrome is repackaged and republished from StoreFront.

Issuing a command in an ICA session to configure COM port redirection

Use this method to redirect the serial COM port by executing the following command in an active ICA session:
Tip:
In the example above, COM4 is the preferred serial port used for redirection.

Citrix Universal Print Driver

The Citrix PDF Universal Printer driver enables users to print documents opened with hosted applications or applications running on virtual desktops delivered by XenDesktop 7.6 and XenApp 7.6 or later. When a user selects the Citrix PDF Printer option, the driver converts the file to PDF and transfers the PDF to the local device. The PDF then opens in a new window for viewing and printing through Google Cloud Print.

When printing a document opened with a hosted application or an application running on a virtual desktop, the user is given the option to print the document to PDF. The PDF is then transferred to the local device for viewing and printing from a locally attached printer or Google Cloud Print. The file is not stored in Citrix Workspace app for Chrome.

Important
Local PDF printing is supported only on XenApp and XenDesktop 7.6 or later.

Requirements

To access the Citrix Workspace app for Chrome download page, you need a MyCitrix account.

Download the Citrix PDF Printer from the Citrix downloads page.

To enable users to print documents opened with hosted desktop and applications:

1. Download the Citrix PDF Printer and install the Citrix PDF Universal Printer driver on each machine that delivers desktops or apps for Citrix Workspace app for Chrome users. After installing the printer driver, restart the machine.

2. In Citrix Studio, select the Policy node in the left pane and either create a new policy or edit an existing policy.
   For more information about configuring Citrix Virtual Apps and Desktops policies, see Policies.

3. Set the Auto-create PDF Universal Printer policy setting to Enabled.
**Google Cloud Print**

Google Cloud Print allows you to make remote printing devices (such as a printer at home) available to you or anyone you choose.

You can configure Citrix Workspace to use Google Cloud Print by default to redirect your files, rather than having to select and configure it every time you print.

To use Google Cloud Print:

- You must install the Citrix PDF printer driver in the VDA; refer to the Citrix download site for the latest software packages.
- Google Cloud Printers should be registered with a user’s Google account. Refer to the Google Cloud Print website for more information.
- If a customized Citrix Workspace app for Chrome package is deployed using the Google Management console, ensure the Citrix Workspace app for Chrome package contains the correct OAuth2.0 credentials in the manifest.json file. Refer to the Google Developers site for information about obtaining OAuth2.0. For example:

```json
    "oauth2": {
        "client_id": "replace this with your client ID",
        "scopes": ["https://www.googleapis.com/auth/cloudprint"]
    }
```

**Note:**

This feature only works with Google Cloud Printer. Refer to the Google Developers site for additional information.

**Google Drive access**

With Google drive support your users can open, edit, and save Windows file types from a Chrome device running Citrix Workspace. While running a Google Chrome device, your users can seamlessly use existing Windows-based applications (for example, Microsoft Word) and access the files residing on Google Drive.
Citrix Workspace app for Chrome

For example, if a user opens a file in Google Drive (for instance, a .DOC file attachment downloaded from Gmail), edits it, and saves it to Google Drive, the file can be accessed in a Citrix Virtual Apps hosted application. The file can be viewed, edited, and saved to Google Drive.

Prerequisites

To enable Google Drive access, you must install the Citrix File Access component (FileAccess.exe) on your VDA and enable file type associations in Citrix Studio. You can download Citrix File Access from the Citrix downloads page.

To enable Google Drive access from Citrix Workspace

1. Install FileAccess.exe on each Citrix Virtual Apps or Citrix Virtual Apps and Desktops VDA.
2. Configure the appropriate FTAs for published applications in Citrix Studio.
3. On the Citrix Virtual Apps or Citrix Virtual Apps and Desktops VDA, https://accounts.google.com and <https://ssl.gstatic.com> have to be trusted and cookies from these sites should be enabled.

Only files from Google Drive can be opened using Citrix Workspace. To open a file from Google Drive, right-click and open the file using Citrix Workspace.

Citrix recommends that you associate one file type with only one published application.

Proxy connection support

The Citrix Workspace app for Chrome supports opening documents from Google drive using published applications through the unauthenticated proxy servers. To enable this, configure the proxy setting in internet options.

To disable Google Drive access from Citrix Workspace

In the manifest.json file, replace:

```json
"file_handlers" : {

  "all-file-types" : {

    "extensions" : [
```

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Kiosk mode

Citrix Workspace app for Chrome kiosk mode provides the ability to run all apps in the same window. Using this feature, you can run Citrix Workspace apps in kiosk mode, and then launch any Windows app or desktop using the same mode. In addition, kiosk mode allows you to publish remote apps or desktops as a dedicated Chrome package using a persistent URL.

You can control this feature by adjusting the kiosk settings in the Chrome admin panel for managed Chrome devices.

See the Google support site for instructions on enabling the Citrix Workspace app to run in kiosk mode on managed and non-managed Chrome devices.

If you are deploying a Citrix Workspace app, you should publish using the visibility options set to Public/unlisted to ensure interoperability with kiosk mode. Go to the Chrome Web Store Developer Dashboard

The store URL is read-only when kiosk mode is active and cannot be edited using the Account settings screen. However, you can change this setting by either repackaging the app with the .cr file or through Google Policy Management using the Google Admin Console.
If you are using the Google Admin Console, edit the policy.txt file containing the Citrix Workspace configuration. Replace the value of “url” under “rf_web” with a persistent URL.

```json
{
    "settings": {
        "Value": {
            "settings_version": "1.0",
            "store_settings": {
                "beacons": {
                    "external": [
                        {
                            "url": "http://www.yourcompany.externalwebsite.com"
                        }
                    ],
                    "internal": [
                        {
                        }
                    ]
                }
            }
        }
    }
}
```
Citrix Workspace app for Chrome supports HTML format in addition to plain text between the client and the VDA in a session. This support is useful when using Microsoft Office apps and browsers. Enhanced clipboard support is available only on Chrome and Safari browsers.

**Configuring clipboard**

You can copy HTML content and retain formatting when copying a link in Chrome. An `<img>` tag is added in HTML format, which allows you to copy images as well as text. This feature is richer than plain text.

To enable this feature, add the following registry entry to the VDA:

```json
"url": "http://yourcompany.internalwebsite.net"
"gateways": [
  {
    "is_default": true,
    "url": "https://yourcompany.gateway.com"
  },
  {
    "name": "mystore",
    "rf_web": {
      "url": "http://your_RfWebURL_or_persistenturl"
    }
  }
]
```
**Citrix Workspace app for Chrome**

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Citrix\wfshell\Virtual Clipboard\Additional Formats\HTML Format

“Name”=”HTML Format”

**Warning**

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

For additional information about the issues resolved by the introduction of this feature, see Knowledge Center article CTX086028.

**Shortcuts**

You can use standard Windows shortcuts to copy data, including text, tables, and images, between hosted applications, both within the same session and between different sessions. Only Unicode plain text can be copied and pasted between hosted applications and the local clipboard on the device.

Users can use standard Windows keyboard shortcuts with Citrix Workspace app for Chrome because these shortcuts are passed from Chrome OS to hosted applications. Similarly, shortcuts specific to particular applications can also be used, provided they do not conflict with any Chrome OS shortcuts. However, note that the Windows key must also be pressed for function keys to be recognized, so an external keyboard is required. For more information about using Windows keyboards with Chrome OS, see https://support.google.com/chromebook/answer/1047364. Citrix-specific shortcuts, such as those for switching between sessions and windows, cannot be used with Citrix Workspace app for Chrome.

**USB device redirection**

Citrix Workspace app for Chrome supports a wide range of USB peripherals. With this added functionality, you can create a Google policy to identify the PID/VID of the device to enable its use in Citrix Workspace. This support extends to new USB devices, including 3D Space mouse, additional composite devices, Bloomberg keyboards, and UC-Logic Tablet WP5540U.

For more information on configuring USB devices, see the Knowledge Center article CTX200825.

**Automatic redirection of USB devices**

In kiosk mode, USB devices are redirected automatically inside a session without any manual intervention. In user and public modes, for the first time, you must manually redirect the USB device into
the session from the toolbar or the Connection Center. This manual USB redirection is done to grant permission to the Chrome operating system for accessing the USB device. When a USB device is inserted, it is redirected into the session automatically.

If you insert a USB device when multiple sessions are running, it is redirected into the session that is in focus. If there are no sessions in focus, the USB device is not redirected into any session. If a single session is running and if it is not in focus when you insert the USB device, the device might not be redirected.

**File transfer**

Citrix Workspace app for Chrome provides secure file transfer functionality between a user device and a Citrix Virtual Apps and Desktops session. This feature uses a file transfer virtual channel instead of client drive mapping.

By default, users can:

- Upload files from a local download folder or attached peripheral
- Seamlessly access data from their Citrix Virtual Apps and Desktops sessions.
- Download files from their Citrix Virtual Apps and Desktops sessions to a local folder or a peripheral on their user device.

Administrators can configure file transfer, uploads, and downloads using policies in Citrix Studio.

**Prerequisites**

- XenApp or XenDesktop 7.6 or later, with:
  - Hotfix ICATS760WX64022.msp on server OS VDAs (Windows 2008 R2 or Windows 2012 R2)
  - Hotfix ICAWS760WX86022.msp or ICAWS760WX64022.msp on client OS VDAs (Windows 7 or Windows 8.1)
- To change file transfer policies: Group Policy Management (GPM) hotfix GPMx240WX64002.msi or GPMx240WX86002.msi on machines running Citrix Studio.

**Limitations:**

- A user can upload or download a maximum of 10 files at a time.
- Maximum file size:
  - For uploads: 2147483647 bytes (2 GB)
  - For downloads: 262144000 bytes (250 MB)
- If either the ‘Upload file to Desktop’ or the ‘Download file from Desktop’ policy is set to Disabled, the toolbar still displays both the Upload and the Download icons but the functionality is based on the policy setting. However, if both policies are set to Disabled, the Upload and Download icons are not displayed in the toolbar.
Citrix Workspace app for Chrome

**Configuring file transfer policies**

To configure file transfer using a Citrix Studio policy

By default, file transfer is enabled.

Use Citrix Studio to change the following policies, located under User Setting > ICA > File Redirection.

<table>
<thead>
<tr>
<th>CITRIX STUDIO POLICY</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allow file transfer between desktop and client</td>
<td>To enable or disable the file transfer feature</td>
</tr>
<tr>
<td>Upload file to Desktop</td>
<td>To enable or disable file upload in the session. Requires the “allow file transfer between desktop and client” policy to be set to true.</td>
</tr>
<tr>
<td>Download file from Desktop</td>
<td>To enable or disable file download from the session. Requires the “allow file transfer between desktop and client” policy to be set to true.</td>
</tr>
</tbody>
</table>

**To configure file transfer using configuration.js file**

The configuration.js file is located in the ChromeApp root folder. Edit this file directly to make changes to Citrix Workspace app for Chrome.

**Note:**

Citrix recommends that you back up the configuration.js file before making any changes to it. Administrator level credentials are required to edit the configuration.js file; After editing the file, repackgage the app to make additional modifications to toolbar elements.

**To change the file transfer configuration using the configuration.js file:**

Open the configuration.js file and configure the settings as below:

<table>
<thead>
<tr>
<th>FILE TRANSFER CLIENT SETTINGS</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>AllowUpload</td>
<td>To enable or disable upload from client-side. By default set to true (enabled).</td>
</tr>
<tr>
<td>AllowDownload</td>
<td>To enable or disable download from the client-side. By default set to true (enabled).</td>
</tr>
</tbody>
</table>
Citrix Workspace app for Chrome

<table>
<thead>
<tr>
<th>MaxUploadSize</th>
<th>To set the maximum size of the file that can be uploaded in bytes. By default set to 2147483648 bytes (2GB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MaxDownloadSize</td>
<td>To set the maximum size of the file that can be downloaded in bytes. By default set to 2147483648 bytes (2GB).</td>
</tr>
</tbody>
</table>

Following are the behavior cases when the policy set in Citrix Studio and the client are different.

<table>
<thead>
<tr>
<th>Citrix Studio Policy Upload / Download</th>
<th>Client- side setting Upload / Download</th>
<th>Resulting Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISABLED</td>
<td>ENABLED</td>
<td>DISABLED</td>
</tr>
<tr>
<td>DISABLED</td>
<td>DISABLED</td>
<td>DISABLED</td>
</tr>
<tr>
<td>ENABLED</td>
<td>DISABLED</td>
<td>DISABLED</td>
</tr>
<tr>
<td>ENABLED</td>
<td>ENABLED</td>
<td>ENABLED</td>
</tr>
</tbody>
</table>

Note: When there is a conflicting value set for Maximum File Size upload or download in the registry and in the client-side settings, the minimum size value among the two is applied.

File transfer logs

The file transfer logs can be retrieved from both the client and the server.

To retrieve file transfer logs from the client:

1. Launch a browser.
2. Go to the following URL to start logging:
   `<storefronturl>/clients/html5client/src/viewlog.html`
   where `<storefronturl>` is the FQDN or IP address of the StoreFront server where the store is configured.

For more information on file transfer, see HTML5 and Chrome File Transfer Explained.
Logging

Citrix Workspace app for Chrome provides timestamps for the logs generated by the user device. To assist with troubleshooting connection issues, logs can be generated on both the user device and the machines providing desktops and applications.

To enable logging on user devices

1. On the user device, select the button with a settings image on it in the bottom-right corner of the Citrix Workspace app for Chrome login page.
2. In the Settings dialog, select Start Logging.
   Details of the collected log files are listed in the Settings dialog.
3. Select Stop Logging to end the collection of logs on the user device.

Taskbar icons

Applications and desktops configured using Citrix Virtual Apps and Desktops in an active session are displayed as separate apps in the taskbar (shelf) on a Chrome device. This feature applies to published applications and desktops. The functionality and behavior of this feature is similar to the taskbar experience that is provided by the Windows Operating system.

By default, this feature is enabled.

Configuring taskbar icons using Google Admin policy

Note:
Citrix recommends using this method only when Citrix Workspace app for Chrome is repackaged for users.

1. Log on to the Google Admin Console.
2. Go to Device management > Chrome Management > User Settings.
3. Add the below strings to the policy.txt file.

   ```
   //Preferences for chrome app
   'appPrefs':{
       'chromeApp':{
           'seamless': {
               'showInShelf': false
           },
   ```
4. Click Save and close the file.
Citrix Workspace app for Chrome

Configuring taskbar icons using the Web.config in StoreFront

**Note:**
Citrix recommends that you use the web.config file method for configuration purposes only when a store version of Citrix Workspace app for Chrome is being used.

1. Open the web.config file for the Citrix Workspace for Web site. This file is typically located in `C:\inetpub\wwwroot\Citrix\<Storename>Web`, where Store name is the name specified for the Store when it was created.
2. Locate the `chromeAppPreferences` field and set its value with the configuration as a JSON string.

   For example:
   ```
   chromeAppPreferences='{"seamless":{"showInShelf":false}}
   ```

Configuring taskbar icons using the configuration.js file

The configuration.js file is located in the ChromeApp root folder. Access this file directly to make changes to Citrix Workspace app for Chrome.

**Note:**
Administrator-level credentials are required to edit the configuration.js file; after editing the file, repackagethe app for the changes to take effect.

To change the Chrome OS taskbar using the configuration.js file:

1. Open the configuration.js file and set the `showInShelf` attribute to true.

For example:

   ```javascript
   //Preferences for chrome app
   'appPrfcs':{
     'chromeApp':{
       'seamless':{
         'showInShelf':false
       }
     }
   },
   ```

Limitations:

1. When more than one instance of the same application is launched, the app icon is not stacked and appears as two separate icons. For example, two instances of Notepad display two icons of Notepad in the taskbar.
2. App pinning is not supported.

Configuring CEIP
**Note:**

1. When CEIP is disabled, minimal information, containing the installed Citrix Workspace app for Chrome version is uploaded; this happens weekly. This minimal information is valuable to Citrix because it provides the distribution of different versions used by customers.
2. When Citrix Workspace app for Chrome is launched in a public session mode, CEIP data is not collected.

No user identifiable information is collected from the customer environment with CEIP; collected information includes:

- System information details like the version of operating system, installed version of Citrix Workspace, language, and the browser version.
- Usage tracking details like statistics of application launch over the course of a week, monitor resolutions, graphics mode, decoder, and renderer.
- Critical to quality details like connection and launch failures and statistics on session connection time.
- Configuration tracking details like data points tracking to check if a feature is enabled or disabled.

**To disable CEIP using Google Admin Policy**

**Note:**

Administrator-level credentials are required to perform this procedure.

1. Log on to the Google Admin Console.
2. Go to **Device management > Chrome Management > User Settings**.
3. Add the strings shown after Step 4 to the policy.txt file under the `engine_settings` key.
4. Click **Save**.

For more information on google policy, see Knowledge Center article **CTX141844**.

For Citrix Workspace app 1907 for Chrome and earlier, set the enabled attribute under `ceip` to **false**.

```json
'ceip':{
  'enabled':false,
}
```

For Citrix Workspace app 1908 for Chrome and later, set the enabled attribute under `analytics` to **false**. However, the `analytics` key is backward compatible with the `ceip` key.

```json
'analytics':{
  'enabled':false,
}
```
To disable CEIP using configuration.js

The configuration.js file is located in the ChromeApp root folder. Edit this file to configure Citrix Workspace app for Chrome.

Note:

- Citrix recommends that you back up the configuration.js file before making any changes to it.
- Citrix recommends using this method only if Citrix Workspace app for Chrome is repackaged for users.
- Administrator-level credentials are required to edit the configuration.js file; after editing the file, repackage the app for the changes to take effect.

For Citrix Workspace app 1907 for Chrome and earlier, set the enabled attribute under `ceip` to `false` in the configuration.js file.

```javascript
{ 'ceip':{
    'enabled':false,
}
}
```

For Citrix Workspace app 1908 for Chrome and later, set the enabled attribute under `analytics` to `false` in the configuration.js file.

```javascript
{ 'analytics':{
    'enabled':false,
}
}
```

To disable CEIP using graphical user interface

Note:

You can modify the CEIP settings using GUI only when the administrator has enabled it using any of the above methods.

1. Launch Citrix Workspace app for Chrome.
2. Select Settings > General.

Relaunch the session for the changes to take effect.
Citrix Workspace app for Chrome

Redesigned toolbar

Citrix Workspace app for Chrome provides a redesigned toolbar to improve the user experience. This enhancement provides new options that are accessible from the toolbar to facilitate common tasks, such as:

- switching to full-screen mode
- upload or download a file
- copy content from an active session to the clipboard to enable sharing between sessions
- access additional options

![Redesigned toolbar](image)

Configuring redesigned toolbar

By default, the enhanced toolbar is enabled.

To hide the toolbar configuration using the configuration.js file:

The configuration.js file is located in the ChromeApp root folder. Edit this file directly to make changes to Citrix Workspace app for Chrome.

1. Open the configuration.js file and set the menubar attribute to false.

You can also hide an individual icon to prevent it from displaying in the toolbar. For example, to hide the Ctrl+Alt+Del button in the toolbar:

1. Open the configuration.js file and set the lock attribute to false.

Note:

- Citrix recommends that you back up the configuration.js file before making any changes to it.
- Administrator-level credentials are required to edit the configuration.js file; after editing the file, repackaging the app for the changes to take effect.
**DPI scaling**

Citrix Workspace app for Chrome allows the operating system to control the resolution of app and desktop sessions and supports DPI client scaling for app sessions on a single monitor.

The **High DPI Scaling** feature is disabled by default for app and desktop sessions. For better resolution on high DPI enabled devices, go to **Settings** and select the **High DPI Scaling** check box.

You can configure the **High DPI Scaling** setting using the Google Admin policy only.

The DPI scaling feature **Scale the session for monitors with high device pixel ratio** is enabled by default.

Citrix Workspace app for Chrome supports DPI scaling by allowing you to set the VDA resolution on monitors that have a high pixel ratio. To set the resolution for desktop sessions, go to the session toolbar. Select **Preferences > Display Resolution > Use device pixel ratio** for the correct resolution to be set on the VDA. When the resolution is set properly on the VDA, blurry text becomes crisper.

To enable or disable the feature, edit the **Google Admin Console** policy and set the value of **scaleToDPI** property to **true** or **false**.

For example, to disable the feature, set **scaleToDPI** property to **false**.
{  
  "settings": {  
    "Value": {  
      "settings_version": "1.0",  
      "engine_settings": {  
        'features': {  
          'graphics': {  
            'dpiSetting': {  
              'scaleToDPI': false  
            }  
          }  
        }  
      }  
    }  
  }  
}

Assistive cursor

When a cursor is not visible inside a desktop session, you can enable an assistive cursor. Launch the next session for the setting to take effect.
The assistive cursor feature is disabled by default.

To enable the feature, edit the Google Admin Console policy and set the value of the `assistiveCursor` property under `ui` to `true` and then restart the session.

```json
{
    "settings": {
        "Value": {
            "settings_version": "1.0",
            "engine_settings": {
                "ui": {
                    "assistiveCursor": true
                }
            }
        }
    }
}
```
Note:

- If an administrator enables the assistive cursor as described above, the corresponding check box in the client-side setting is selected by default. To disable the feature, clear the check box.
- If an administrator disables the assistive cursor as described above, the check box is cleared and the feature disabled.

Connection Center

Connection Center facilitates application management in seamless sessions. This is done by providing a taskbar that lists all opened applications.

To launch the Connection Center, right-click the Citrix Workspace icon and then select Connection Center.

Using Connection Center, you can select an application and:

1. Display devices.
2. Send a Ctrl+Alt+Del command.
3. Disconnect from a session.
4. Logoff from the session.

You can also terminate an app using the Connection Center by selecting the radio button of the corresponding application and clicking **Terminate**.

**Seamless window integration**

Citrix Workspace app for Chrome improves the user experience by adding seamless integration of multiple apps hosted in separate windows within an active session. Using this functionality, Citrix Workspace app for Chrome enables you to launch applications in an independent user interface compared as opposed to launching all apps for a session in a single window.

Seamless applications can be hosted in separate windows. With this functionality, remote applications are run natively on the client device.
Limitations:

- Extra entries appear in the Chrome task bar; click any of these to bring the selected session to the front.
- All opened apps in an active session run in a single window; focusing on one app in an active session brings that window into focus along with all other apps belonging to that session.

Use the seamless session taskbar to quickly move between apps:
Tip:
All apps in one session run in a single window. When moving an app to a second monitor, all apps that are part of that session move to the second monitor.

Reload store

In Citrix Workspace app for Chrome window, a button is added for reload operation. By clicking the button, the cookies of the store get cleared and the store page is reloaded.

Webcam

Citrix Workspace app for Chrome provides an enhancement to webcam redirection functionality. H.264 hardware encoding for webcam input helps reduce CPU load and increases battery efficiency for Chromebook devices. These devices have encoders for H.264, which leverages Intel functionality through the PPB_VideoEncoder API.

Session sharing

For session sharing, the applications must be hosted on the same machine and must be configured in seamless window mode with the same settings for parameters, such as window size, color depth, and encryption. Session sharing is enabled by default when a hosted application is made available.

Google policies

December 20, 2019

You can configure the features and functionalities of Citrix Workspace app for Chrome using Google Policy.

Before Citrix Workspace app for Chrome (earlier known as Citrix Receiver for chrome) Version 2.1, only store or beacon related configurations could be pushed through Google Admin Policy. A few more policies are added that can be applied by the administrators. For additional information about this policy, see the Knowledge Center articles CTX141844 and CTX229141.


For more information, see the sample policy text below:
{  
  "settings": {  
    "Value": {  
      "settings_version": "1.0",  
      "store_settings": {  
        "name": "RTST",  
        "gateways": [  
          {  
            "url": "https://yourcompany.gateway.com",  
            "is_default": true  
          }  
        ],  
        "beacons": {  
          "internal": [  
            {  
              "url": "http://yourcompany.internalwebsite.net"  
            }  
          ],  
          "external": [  
            {  
              "url": "http://www.yourcompany.externalwebsite.com"  
            }  
          ]  
        },  
        "rf_web": {  
          "url": "http://yourcompany.storefrontstoreweb.net"  
        }  
      }  
    }  
  }  
}
"ui": {
  "sessionsize": {
    "windowstate": "fullscreen",
    "available": {
      "default": "Fit_To_Window",
      "values": ["Fit_To_Window", "Use_Device_Pixel_Ratio", "1280x800", "1440x900", "1600x1200"]
    }
  },
  "toolbar": {
    "menubar": true,
    "usb": true,
    "fileTransfer": true,
    "about": true,
    "lock": true,
    "disconnect": true,
    "logoff": true,
    "fullscreen": true,
    "multitouch": true,
    "preferences": true,
    "gestureGuide": true
  }
},
"features": {
  "com": {
    "portname": "COM5"
  },
  "graphics": {
    "features": {
      "graphics": {
        "jpegSupport": true
      }
    }
  }
}
"h264Support" : {
  "enabled" : true,
  "losslessOverlays" : true,
  "dirtyRegions" : true,
  "yuv444Support" : false
}
,
"filetransfer" : {
  "allowupload" : true,
  "allowdownload" : true,
  "maxuploadsize" : 2147483647,
  "maxdownloadsize" : 2147483647
}
,
"nacl" : {
  "supportNacl" : true,
  "graphics": {
    "enable": true
  }
,
  "video": {
    "enable": true
  }
,
  "audio": {
    "enable": true
  }
}
Asset ID

Citrix Workspace app for Chrome uses an Asset ID that administrators set through the Google Admin Console as a client name for sessions launched from enrolled Chromebooks.

By default, Citrix Workspace app continues to generate a unique client ID for enrolled Chromebooks, which is similar to earlier versions. To use this feature, you must set a policy for Citrix Workspace app.

To configure Asset ID

1. Log on to the Google Admin Console.
2. Go to Device Management > Chrome > Devices Console and add Asset ID for the device.
3. Edit the Google Admin Console policy and set the value of useAssetID to true. By default, the useAssetID is set to false.

```
{
  "settings": {
    "Value": {
      "settings_version": "1.0",
      "engine_settings": {
        "uniqueID": {
          "useAssetID": true
        }
      }
    }
  }
}
```

Limitations:
Citrix Workspace app for Chrome

- You must have a Google admin policy that can be pushed. Otherwise, the current method of generating a unique client ID for managed Chromebooks remains in use.
- The data value you enter cannot contain more than 15 characters.

**Full-screen mode**

To configure your desktop session to always open in full-screen mode, edit the Google Admin Policy by including the following:

```json
{
  "settings": {
    "Value": {
      "settings\_version": "1.0",
      "engine\_settings": {
        "ui": {
          "sessionsize": {
            "windowstate": "fullscreen"
          }
        }
      }
    }
  }
}
```

**Awake setting**

Citrix Workspace app for Chrome keeps managed Chromebook devices awake even when the users are not active.
The awake setting feature is disabled by default.

To enable the feature, edit the Google Admin Console policy and set the value of the `keep_awake_level` property under `power_settings` to either “system” or “display” and then restart the session.

The “system” level keeps the system awake, but allows the screen to be dimmed or turned off. The “display” level keeps the system awake and active.

```json
{
  "settings": {
    "Value": {
      "settings_version": "1.0",
      "power_settings": {
        "keep_awake_level": "system" or "display"
      }
    }
  }
}
```

**Note:**
For Kiosk mode, make sure that the Allow app to manage power setting in the Google Admin console is disabled.

**Multi-monitor display**

By default, the multi-monitor feature is set to enabled.

**Note:**
- If you are using Citrix Workspace app for Chrome running on XenApp 6.5, set the shadowing policy to Disabled to use the multi-monitor feature.
- In a desktop session, when the window is set to full screen, the Display Resolution option in Preferences is deactivated.
- UI dialogs and toolbars appear only on primary monitor. However, USB and smart card authentication dialogs span across monitors.
To use enhanced multi-monitor display in kiosk mode

Enhanced multi-monitor display in kiosk mode is enabled by default.

To disable kiosk mode, edit the `configuration.js` file or the Google Admin Console policy and set the value of `kioskMultimonitor` property to `false`.

```javascript
{
    "settings": {
        "Value": {
            "settings_version": "1.0",
            "engine_settings": {
                "features": {
                    "graphics": {
                        "kioskMultimonitor": false
                    }
                }
            }
        }
    }
}
```

**Note:**

To be able to launch a session in kiosk mode, you must enable **Unified Desktop** mode.

1. Launch a web browser and enter the following command: `chrome://flags`
2. From the list of flags, search for UnifiedDesktopMode and set it to **Enabled**.

**To configure Unified Desktop mode**

1. Log on to the Google Admin console.
2. Go to **Device management > Chrome Management > User Settings**.
3. Set the Unified Desktop policy to **Make Unified Desktop mode available to user.**
4. Click **Save.**

**Serial COM port redirection**

To configure serial COM port redirection, enable the feature by applying Citrix Virtual Apps and Desktops port redirection policy settings. For more information on port redirection, see [Port redirection policy settings](#).

**Note:**
By default, Citrix Workspace app for Chrome maps COM5 as a preferred serial COM port for redirection.

After enabling serial COM port redirection policy settings on the VDA, configure Citrix Workspace app for Chrome using using the Google Admin Policy.

**To configure COM port redirection**

Use this method to redirect the serial COM port by editing the policy file.

Edit the Google Admin Policy by including the following:

```json
{
    "settings": {
        "Value": {
            "settings_version": "1.0",
            "store_settings": {
                "rf_web": {
                    "url": "http://YourStoreWebURL"  
                }
            }
        }
    },
    "engine_settings": {
        "features": {
            "com": {
            
            }
        }
    }
}
```
"portname" : "<COM4>", where COM4 indicates the port number that is set by the administrator.

Kiosk mode

The store URL is read-only when kiosk mode is active and cannot be edited using the Account settings screen. However, you can change this setting by either repackaging the app with the .cr file or through Google Policy Management using the Google Admin Console.

If you are using the Google Admin Console, edit the policy.txt file containing the Citrix Workspace configuration. Replace the value of “url” under “rf_web” with a persistent URL.
{  
  "settings": {  
    "Value": {  
      "settings_version": "1.0",
      "store_settings": {  
        "beacons": {  
          "external": [  
            {  
              "url": "http://www.yourcompany.externalwebsite.com"
            }  
          ],  
          "internal": [  
            {  
              "url": "http://yourcompany.internalwebsite.net"
            }  
          ]  
        },  
        "gateways": [  
          {  
            "is_default": true,
            "url": "https://yourcompany.gateway.com"
          }  
        ]  
      },  
      "name": "mystore",
      "rf_web": {  
        "url": "http://your_RfWebURL_or_persistenturl"
      }
    }
  }
}
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Taskbar icons

Applications and desktops configured using Citrix Virtual Apps and Desktops in an active session are displayed as separate apps in the taskbar (shelf) on a Chrome device. This feature applies to published applications and desktops. The functionality and behavior of this feature is similar to the taskbar experience that is provided by the Windows Operating system.

By default, this feature is enabled.

To configure taskbar icons

1. Log on to the Google Admin Console.
2. Go to Device management > Chrome Management > User Settings.
3. Add the below strings to the policy.txt file.

```json
//Preferences for chrome app
'appPrefs':{
    'chromeApp':{
        'seamless':{
            'showInShelf': false
        }
    }
}
```

4. Click Save and close the file.

Configuring CEIP

To disable CEIP

Note:
Administrator-level credentials are required to perform this procedure.

1. Log on to the Google Admin Console.
2. Go to Device management > Chrome Management > User Settings.
3. Add the strings shown after Step 4 to the policy.txt file under the engine_settings key.
4. Click Save.

For more information on google policy, see Knowledge Center article CTX141844.

For Citrix Workspace app 1907 for Chrome and earlier, set the enabled attribute under ceip to false.
For Citrix Workspace app 1908 for Chrome and later, set the enabled attribute under analytics to false. However, the analytics key is backward compatible with the ceip key.

```json
'ceip':{
  'enabled':false,
}
```

**DPI scaling**

You can configure the High DPI Scaling setting using the Google Admin policy only.

The DPI scaling feature Scale the session for monitors with high device pixel ratio is enabled by default.

To enable or disable the feature, edit the Google Admin Console policy and set the value of scaleToDPI property to true or false.

For example, to disable the feature, set scaleToDPI property to false.

```json
{
  "settings": {
    "Value": {
      "settings_version": "1.0",
      "engine_settings": {
        'features': {
          'graphics': {
            'dpiSetting': {
              'scaleToDPI': false
            }
          }
        }
      }
    }
  }
}
```
Assistive cursor

When a cursor is not visible inside a desktop session, you can enable an assistive cursor. Launch the next session for the setting to take effect.

The assistive cursor feature is disabled by default.

To enable the feature, edit the Google Admin Console policy and set the value of the assistiveCursor property under ui to true and then restart the session.
Citrix Workspace app for Chrome

```json
{
    "settings": {
        "Value": {
            "settings_version": "1.0",
            "engine_settings": {
                "ui": {
                    "assistiveCursor": true
                }
            }
        }
    }
}
```

**Note:**
- If an administrator enables the assistive cursor as described above, the corresponding check box in the client-side setting is selected by default. To disable the feature, clear the check box.
- If an administrator disables the assistive cursor as described above, the check box is cleared and the feature disabled.

**Authenticate**

November 14, 2019

**Smart card**

Citrix Workspace app for Chrome provides support for USB smart card readers with StoreFront. You can use smart cards for the following purposes:

- Smart card logon authentication to Citrix Workspace app for Chrome.
- Smart card-aware published apps to access local smart card devices.
Citrix Workspace app for Chrome

- Applications such as Microsoft Word and Outlook that are launched in ICA sessions can access smart cards for signing documents and email.

Supported smart cards include:

  - PIV cards
  - common access cards

Prerequisites:

  - StoreFront versions 3.6 or later

**Important:**

For smart card authentication to StoreFront 3.5 or earlier, users require a custom script to enable smart card authentication. Contact Citrix Support for details.

  - XenDesktop 7.6 or later
  - XenApp 6.5 or later

To configure smart card support on your Chrome device:

1. Install the smart card connector application. Note that the smart card application is required for PCSC support on the Chrome device. This application reads the smart card using the USB interface. You can install this application from the Chrome website.

2. Install the middleware application. Note that a middleware application (for example, Charismathics, or CACKey) is required because it serves as an interface that communicates with the smart card and other client certificates.
   
   - To install the Charismathics smart card extension or CACKey, see the instructions on the Chrome website.
   
   - For more information about middleware applications and smart card authentication, see the Google support site.

3. Configure smart card authentication using Citrix Gateway. For more details, see Configuring Smart Card Authentication in Citrix Gateway documentation.

**Limitations:**

  - The smart card certificate is cached even after the smart card is removed from the Chrome device. This is a known issue that exists in Google Chrome. Restart the Chrome device to clear the cache.
  - When Citrix Workspace app for Chrome is repackaged, administrators should get the appId whitelisted by Google to ensure that the smart card connector application passes through.
  - Only one smart card reader is supported at a time.
SAML authentication

To configure Single Sign-on:

1. Set up the third-party Identity provider (IdP) for SAML authentication if it is not already configured (for example, ADFS 2.0). For more information, see Knowledge Center article CTX133919.

2. Setup Single Sign-on with Google Apps using SAML IdP; this enables users to leverage third-party identity to use Google apps instead of the Google Enterprise account. For more information, see Set up Single Sign-On (SSO) for Google Apps accounts using third-party identity providers on Google support.

3. Configure Chrome devices to log on via SAML IdP. This enables users to log on to Chrome devices using a third-party identity provider. For more information, see Configure SAML Single Sign-On for Chrome devices on Google support.

4. Configure Citrix Gateway to log on via SAML IdP. This enables users to log on to Citrix Gateway using a third-party identity provider. For more information, see Configuring SAML Authentication.

5. Configure Citrix Virtual Apps and Desktops for Federated Authentication to allow logons to Citrix Virtual Apps and Desktops sessions using dynamically generated certificates after the SAML logon process instead of typing username/password combinations. For more information, see Federated Authentication Service.

6. Install and configure SAML SSO for Chrome app extension on Chrome devices. For more information, see the Google website. This extension retrieves SAML cookies from the browser and provides them to Citrix Workspace. This extension must be configured with the following policy to allow Citrix Workspace to get SAML cookies.

```json
{
  "whitelist": {
    "Value": [
      {
        "appId": "haiffjcadagljijoggckpgfnoeiflnem",
        "domain": "saml.yourcompany.com"
      }
    ]
  }
}
```
If you are repackaging Citrix Workspace app for Chrome, change the appld accordingly. In addition, change the domain to your company’s SAML IdP domain.

7. Configure Citrix Workspace to use Citrix Gateway configured for SAML logon. This enables users to use the Citrix Gateway configured for SAML logon. For more information on Chrome configuration, see Knowledge Center article CTX141844.

SDK and API

November 14, 2019

HDX SDK

Citrix Workspace app for Chrome introduces an API (Experimental API) that allow third-party Chrome apps to lock, unlock and disconnect from a Citrix Virtual Apps and Desktops session. Using this API, Citrix Workspace app for Chrome can be launched in both embedded mode and kiosk mode. Sessions launched in embedded mode function in ways similar to sessions launched kiosk mode.

For the SDK documentation, see HDX SDK for Citrix Workspace app for Chrome.
For HDX SDK examples, refer to the Citrix download page.

Citrix Virtual Channel SDK

The Citrix Virtual Channel Software Development Kit (SDK) provides support for writing server-side applications and client-side drivers for additional virtual channels using the ICA protocol. The server-side virtual channel applications are on Citrix Virtual Apps or Citrix Virtual Apps and Desktops servers. This version of the SDK provides support for writing new virtual channels for Citrix Workspace app for Chrome. If you want to write virtual drivers for other client platforms, contact Citrix.

The Virtual Channel SDK provides:

- An easy interface that can be used with the virtual channels in the Citrix Server API SDK (WFAPI SDK) to create new virtual channels.
- Working source code for several virtual channel sample programs that demonstrate programming techniques.
- The Virtual Channel SDK requires the WFAPI SDK to write the server side of the virtual channel.

For the VC SDK documentation, see Citrix Virtual Channel SDK for Citrix Workspace app for Chrome.
For VC SDK examples, refer to the Citrix download page.
Citrix Workspace app for Chrome

Procedure to consume the API in the third-party Chrome app

1. Install the latest version of Citrix Workspace app for Chrome. See Citrix downloads page for details.

2. Whitelist the third-party Chrome app by adding the policy file for Citrix Workspace app for Chrome using Chrome management settings.
   For more details, see Manage Chrome Apps by organizational unit on Google support.
   The Sample policy.txt file to whitelist the third-party Chrome app is as below:

   ```json
   {
     "settings": {
       "Value": {
         "settings_version": "1.0",
         "store_settings": {
           "externalApps": ["<3rdParty_App1_ExtnID>", "<3rdParty_App2_ExtnID>"
           ]
         }
       }
     }
   }
   ```

   Note:
   <3rdParty_App1_ExtnID> is used as an example for the name of externalApps and can send messages to Citrix Workspace app for Chrome. Get your appid from the chrome://extensions site.

3. Launch the application or desktop session in Citrix Workspace for Chrome by following the steps below:

   ▪ Get the workspaceappId

   ```javascript
   var workspaceappId = "haiffjcadagijoggckpgfnoeiflnem";
   ```

   Note:
   In this example, workspaceappId indicates the store version of Citrix Workspace app for Chrome. If you are using a repackaged version of Citrix Workspace app for Chrome, use the
Citrix Workspace app for Chrome

- appropriate workspace appID.
- Convert ICA data from INI to JSON format.

Note:
Typically, the ICA file is retrieved from StoreFront as an INI file. Use the following helper function to convert a ICA INI file into JSON.

```javascript
// Helper function to convert ICA INI format to JSON
function convertICA_INI_TO_JSON(data){
  var keyVals = {};
  if (data) {
    var dataArr;
    if(data.indexOf('')== -1){
      dataArr = data.split('
');
    } else{
      dataArr = data.split('
');
    }
    for(var i = 0; i < dataArr.length; i++) {
      var nameValue = dataArr[i].split('=', 2);
      if(nameValue.length == 2) {
        keyVals[nameValue[0]] = nameValue[1];
      }
    }
    // This is required as LaunchReference will contain '=' as well. The above split('=', 2) will not provide
    // the complete LaunchReference. Ideally, something like the following should be used generically as well
    // because there can be other variables that use the '=' character as part of the value.
    if (nameValue[0] == "LaunchReference") {
      var index = dataArr[i].indexOf('=');
      var value = dataArr[i].substr(index + 1);
      keyVals[nameValue[0]] = value;
    }
  }
  console.log(keyVals); // to remove
  return keyVals;
}
return null;
```

- Send an ICA message from the third-party Chrome app to Citrix Workspace app for Chrome.

```javascript
var icaFileJson = {
  ... 
}```
```javascript
var message = {
  "method": "launchSession",
  "icaData": icaJSON
};

chrome.runtime.sendMessage(workspaceappID, message, function(launchStatus) {
  if (launchStatus.success) {
    // handle success.
    console.log("Session launch was attempted successfully");
  } else {
    // handle errors.
    console.log("error during session launch: ", launchStatus.message);
  }
});
```

For more details on sendMessage API commands, see the following links:

https://developer.chrome.com/extensions/runtime#event-onMessageExternal

https://developer.chrome.com/extensions/runtime#method-sendMessage