Citrix Workspace app for HTML5
# Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>About this release</td>
<td>3</td>
</tr>
<tr>
<td>Prerequisites for installing</td>
<td>12</td>
</tr>
<tr>
<td>Install</td>
<td>14</td>
</tr>
<tr>
<td>Get Started</td>
<td>23</td>
</tr>
<tr>
<td>Configure</td>
<td>24</td>
</tr>
<tr>
<td>SDK and API</td>
<td>43</td>
</tr>
</tbody>
</table>
About this release

February 6, 2020

What’s new

What’s new in 2002

Support for USB device redirection

This release supports generic USB device redirection on Chrome browsers (Version 61 and later) running on Chrome, Mac, and Linux operating systems. This feature is supported on sessions launched over secure HTTPS connections. This feature supports redirection of two USB devices simultaneously. For more information, see USB device redirection.

What’s new in 1912

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

What’s new in 1911

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

What’s new in 1910

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

What’s new in 1909

Support for DPI scaling

Starting with this release, Citrix Workspace app for HTML5 supports DPI scaling for app and desktop sessions on a single monitor. It lets you 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.
Citrix Workspace app for HTML5

What’s new in 1908

**Autoupdate support for Citrix Workspace app for HTML5 using HDX SDK for HTML5**

Starting in this release, Citrix HDX SDK for HTML5 enhances the `setPath` API to consume the latest build of Citrix Workspace app for HTML5 from the Content Delivery Network (CDN). This enhancement allows Citrix Workspace app for HTML5 to run on the latest version seamlessly. For existing HDX SDK for HTML5 users, change `citrix.receiver.setPath` in the customer code to use the latest version from the CDN. For new users, the `setPath` API provides the option by default. For more information, see [HDX SDK for HTML5](#).

What’s new in 1907

**Support for copy and paste between a remote session and a local device**

In earlier versions, you had to use the toolbar to perform copy and paste operations between the session and your client device. Starting in this release, you can use the `Ctrl C` and `Ctrl V` hotkeys (for Windows or Chrome operating systems) and `CMD C` and `CMD V` hotkeys (for Mac operating system) to copy and paste. For more information, see [Enhanced clipboard experience](#).

What’s new in 1906

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

What’s new in 1905

**Support for copy and paste between a remote session and a local device - Experimental feature**

In earlier versions, you had to use the toolbar to perform copy and paste operations between the session and your client device. Starting in this release, as an experimental feature, you can now use the `Ctrl C` and `Ctrl V` hotkeys to copy and paste.

What’s new in 1904

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

What’s new in 1902.1

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

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

What's new in 1809.1
Support for file downloads using the Safari browser
Citrix Workspace app for HTML5 supports downloading files on a MacBook using the Safari browser.

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
Support for application and desktop titles in parentheses
Citrix Workspace app for HTML5 supports displaying titles of the applications and desktops in parentheses (for example, VDA(1) and VDA(2)) in the browser tab. For more information, see Get started.
Fixed issues

Fixed issues in 2002

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

Fixed issues in 1912

• Attempts to launch sessions might fail on touch screen devices. [RFHTMCRM-3109]

Fixed issues in 1911

• When you attempt to launch a session in private browsing mode on Internet Explorer or Microsoft Edge browser, the session might fail to launch. [RFHTMCRM-3039]

Fixed issues in 1910

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

Fixed issues in 1909

• When you use the Korean Input Method Editor (IME) to input the characters dkdk, the keystrokes are incorrectly interpreted after you input the last character k. The issue occurs when you use the Firefox and the Internet Explorer browsers. [LD1614]

• Attempts to launch sessions might fail if the uBlock extension is added to the browser. [RFHTMCRM-2998]

Fixed issues in 1908

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

Fixed issues in 1907

• When you select the Citrix PDF printer to print a blank PDF file, the message Getting PDF File displays indefinitely. The issue occurs on the Chrome and Firefox browsers with XenApp and XenDesktop 7.15 LTSR CU2 installed. Subsequent print operations fail until you restart the session. [RFHTMCRM-2667]
Fixed issues in 1906

- The desktop app switcher is disabled, and you launch the application sessions using Citrix Workspace app for HTML5. You then enable the desktop app switcher by navigating to the Toolbar > Switch apps > Show taskbar, and maximize and minimize the app. When you click the desktop app switcher icon to bring the app to focus, the desktop app switcher is hidden. [RFHTMCRM-2767]

- Attempts to enter a backslash in an HTML5 session that you launch through a Firefox browser might fail. [RFHTMCRM-2777]

- When you select the Citrix PDF printer to print a PDF file, the message Getting PDF File displays indefinitely. The issue occurs on the Chrome and Firefox browsers when you print the file inside the session with Citrix Gateway logged off. [RFHTMCRM-2789]

Fixed issues in 1905

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

Fixed issues in 1904

- When you open a session that is a fixed size through the HTML5 HDX SDK and then change the resolution by setting autosize: true to auto fit to the browser, the session might not resize. [RFHTMCRM-2571]

- With this fix, Citrix Workspace app for HTML5 supports localization in the Dutch language. [RFHTMCRM-2663]

- When you open a Citrix Workspace app for HTML5 session in a browser on a mobile device and use the display resolution dialog box to change the resolution to a fixed value that is larger than the mobile screen size, the session might not pan. [RFHTMCRM-2712]

- When you use the Japanese Input Method Editor (IME) and press the Spacebar or the Shift key along with the Spacebar, the space does not appear as an input. The issue occurs when you use the Internet Explorer 11 or Firefox browsers. [LD1343]

Fixed issues in 1902.1

- Attempts to print documents using the Citrix PDF printer in the Chrome and Firefox browsers might fail. The issue occurs for sessions that are launched through the HTML5 HDX SDK. [RFHTMCRM-2630]
Citrix Workspace app for HTML5

Fixed issues in 1902

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

Fixed issues in 1901

- When you attempt to click Multimonitor in the toolbar, the multi-monitor mode might not work. The issue occurs when the sessions are launched using the HTML5 HDX SDK. [RFHTMCRM-2575]
- Time zone redirection might not work for certain time zones when using the Chrome browser. The issue occurs when observing daylight savings time and the time zone in the session doesn’t match the time zone on the endpoint. [LD0289]

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

- When you start a YouTube video in full-screen mode from a published application that is connected to a Linux VDA 1808, HTML5 might display the following error message: General error: To resolve this issue, please report this error to your help desk. [RFHTMCRM-2407]
- If you open Microsoft Internet Explorer on an iPad using Citrix Receiver for HTML5 and attempt to open the soft keyboard on an iPad, the webpage zooms in. However, you must manually zoom out the webpage after closing the soft keyboard. [LC9838]
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]

Version 1808

- With SmartControlPolicy policy enabled, the Citrix Workspace app for HTML5 might fail to connect to Linux VDA through Netscaler Gateway 12.0 and later versions. [RFHTMCRM-2349]

Known issues

Known issues in 2002

No new issues have been observed in this release.

Known issues in 1912

- When you launch mstsc.exe in full screen mode in a remote session, the AppSwitcher taskbar running on Citrix Workspace app for HTML5 might overlap the remote desktop window. [CVADHELP-12522]

Known issues in 1911

No new issues have been observed in this release.

Known issues in 1910

No new issues have been observed in this release.

Known issues in 1909

- In certain scenarios, the connecting screen might remain stuck when there is a network disruption. No error message appears, and you cannot perform any action. As a workaround, relaunch the session. [RFHTMCRM-2956]
Known issues in 1908

No new issues have been observed in this release.

Known issues in 1907

When you select the Disable Copy Confirmation option in the Preferences dialog, the Display Resolution button might overlap the Preferences dialog in non-English language environments. [RFHTMCRM-2918]

Known issues in 1906

No new issues have been observed in this release.

Known issues in 1905

No new issues have been observed in this release.

Known issues in 1904

No new issues have been observed in this release.

Known issues in 1902.1

- The audio is playing on the VDA. When you start a session, the audio that is already playing might not be heard until you click anywhere within the session. The issue occurs for sessions that are launched through the HTML5 HDX SDK. The HTML5Client originates somewhere else. [RFHTMCRM-2659]

Known issues in 1902

No new issues have been observed in this release.

Known issues in 1901

- Attempts to print documents using the Citrix PDF printer in Chrome and Firefox browsers might fail. The issue occurs for sessions that are launched through the HTML5 HDX SDK.

As a workaround, set supportedBrowsers to false in the configuration.js file:
When you use the preceding workaround and attempt to print a PDF, a **Continue** print dialog appears, prompting your confirmation to print. [RFHTMCRM-2592]

**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**

No new issues have been observed in this release.

**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
No new issues have been observed in this release.

Prerequisites for installing

February 6, 2020

System requirements and compatibility

This topic lists the supported Citrix product versions for Citrix Workspace app for HTML5 and the requirements for users to access virtual desktops and applications. It is assumed that all computers meet the minimum hardware requirements for the installed operating system.

Requirements

Users require devices running the following web browsers and operating systems to access desktops and applications using Citrix Workspace app for HTML5.

Browsers

- Apple Safari 7 or later
- Google Chrome 50 or later
- Microsoft Edge
- Microsoft Internet Explorer 11
- Mozilla Firefox 35 or later

Operating systems

- Windows 10
- Windows Phone 10
- Windows 8.1
- Windows 8 Pro and Enterprise (32-bit and 64-bit editions)
- Windows 7 Service Pack 1 (32-bit and 64-bit editions)
- Windows Server 2008 R2
- Windows Server 2012 R2
- Windows Server 2016
- Mac OS X 10.8 and later
Citrix Workspace app for HTML5 supports access to desktops and applications through the following versions of StoreFront. Stores must be accessed through Citrix Workspace for Web sites. Citrix recommends the following:

- StoreFront 2.5 (or later)
- Citrix Workspace app for HTML5 allows you to upgrade from any version of StoreFront 2.5 or later.

When users connect through Citrix Gateway, Citrix Workspace app for HTML5 can be used to access desktops and applications delivered by all the versions of Citrix Virtual Apps and Desktops that are supported by StoreFront.

For direct connections through StoreFront without Citrix Gateway, Citrix Workspace app for HTML5 can be used to access desktops and applications delivered by the following product versions:

- XenDesktop 7.6 and later
- XenApp 6.5 (Hotfix Rollup Pack 3 or later and the Group Policy Management 1.7 update must also be installed on the XenApp 6.5 server)

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 HTML5 is deployed. Citrix Workspace app for HTML5 enables user access to desktops and applications from public networks with the following versions of Citrix Gateway.

- NetScaler Gateway 10.5 or later

Citrix Workspace app for HTML5 now supports CloudBridge disabling compression and printer compression as well as using HDX Insight analytics to display in CloudBridge Insight Center.

- CloudBridge 7.4 or later

Note:

If there is an issue connecting to the SSL-enabled VDA with Citrix Workspace app for HTML5, configure the cipher suites as specified in TLS settings on VDAs.
Install

February 6, 2020

StoreFront

Enable Citrix Workspace app for HTML5 on the Citrix Workspace for Web site for the StoreFront store that provides the desktops and applications you want to make available to Citrix Workspace app for HTML5 users.

**Important:**
In multiple-server StoreFront deployments, use only one server at a time to change the configuration of the server group. Ensure that the Citrix StoreFront management console is not running on any of the other servers in the deployment. Once complete, propagate your configuration changes to the server group so you update the other servers in the deployment.

1. If you have not already done so, deploy StoreFront and create a store aggregating the desktops and applications you want to make available to Citrix Workspace app for HTML5 users.

   A Citrix Workspace for Web site is created automatically for new stores. For more information about creating StoreFront stores, see Create or remove a store.

2. In the Citrix StoreFront management console, perform the following steps:
   - On the Windows Start screen or Apps screen, locate and click the Citrix StoreFront tile.
   - In the left pane, select Stores and in the Action pane, select Manage Receiver for Web Sites, and click Configure.
   - Select Deploy Citrix Receiver/Workspace app.

3. Enable Citrix Workspace app for HTML5 by selecting one of the options.

   - If you want to access desktops and applications from the site using a locally installed version of Citrix Workspace, select Use Receiver for HTML5 if local Citrix Receiver/Workspace app is unavailable. If you already have Citrix Workspace installed, you cannot use the Citrix Workspace app for HTML5 to access resources from the site. Windows and Mac OS X users without Citrix Workspace app for HTML5 are prompted to install it every time they log on to the site. They can use Citrix Workspace app for HTML5 if they are unable to install Citrix Workspace.

   When you select Use Receiver for HTML5 if local Citrix Receiver/Workspace app is unavailable, the Change Citrix Receiver option appears. This option allows you to switch to the light or the native version dynamically based on the application or the desktop that
you want to launch. Also, you can view the Change Citrix Receiver option under the Profile option.

- If you want to use Citrix Workspace app for HTML5 to access applications or desktops from Citrix Virtual Apps and Desktops, select **Always use Receiver for HTML5**.

**WebSocket**

1. Go to the Group Policy Management Console or Citrix Studio and select **Policy** to configure the policies.

2. In the middle pane, under **Policies**, either modify an existing policy or create a policy.

![Citrix Group Policy Management Console](image1.png)

3. To edit an existing policy, in the right pane, under **Actions**, select **Edit Policy…**.

![Citrix Group Policy Management Console](image2.png)

4. The Edit Unfiltered window appears. Type **websoc** and select **Enter**. The three WebSockets related policy settings are filtered.

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5. Click **Select** for each policy, select **Allowed**, and then click **OK**.

6. Leave the default values, select **OK**, and then click **Next**.

7. Enter a policy name or leave the default value. Ensure you select **Enable policy** and then click **Finish**.

   **Note:**
   If you modify an existing default (unfiltered) policy, the option Assign policy to user and
machine objects is not available. Therefore, we recommend you either modify an existing (not default) policy or create a policy.

8. To create a policy in Citrix Studio, under **Actions**, select **Policy** and then click **Create Policy**. The **Create Policy** window opens.

9. In the search field, type **websoc** and select **Enter**. The search filters all three WebSockets related policy settings.

10. Click **Select** for each policy, and then select **Next**.
11. Assign the permission based on the Delivery Group. Select **Delivery Group** and click **Assign**.

12. The **Assign Policy** window appears. Select the appropriate Delivery Group from the list and click **OK**.
13. Select the **Delivery Group type** and click **Assign**. You can select the Delivery Group from the list.

14. If you select **Organizational Unit (OU)**, you can select a specific OU from your Active Directory environment.
15. On the **Summary** window, review your policy settings, and select **Finish**.

16. If you changed the port used when you allowed WebSocket connections on Citrix Virtual Apps or Citrix Virtual Apps and Desktops, complete the following steps to change the WebSocket port for the Citrix Workspace for Web site.

   a) 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\storenameWeb directory, where *store-name* is the name specified for the store when it was created.

   b) Locate the following element in the file.

   ```
   <html5 ... preferences="" ... />
   ```
c) Set the value of the preferences attribute to \texttt{wsPort:portnumber;}, where \texttt{portnumber} is the port that you configured in the policy.

**To verify HTML5 by accessing the desktop and applications using a web browser**

1. Log on to the StoreFront using the URL, \url{http://<XDControllerIPaddressorFQDN>/Citrix/StoreWeb} using domain credentials based on the permission (users/groups) in the Delivery Group. This page appears when you select \textbf{Use Receiver for HTML5 if local Citrix Receiver/Workspace app is unavailable}. Use the light version to access HTML5.

   You have the following two options:
   - Citrix Receiver Plug-in
   - Receiver for HTML5

2. Click \textbf{Log On}.

3. Enter the correct Username and Password.

4. The page enumerates all the apps and desktops you have access to. You can launch desktops and applications using an HTML5 browser. The desktops and applications are launched in a new tab.

**To view Citrix Receiver for HTML5 logs by navigating to the log page**

1. Log on to the Citrix Receiver for Web site.
   - For Citrix Workspace app 1908 for HTML5 and later, open a new tab and navigate to \url{siteurl/Clients/HTML5Client/src/SessionWindow.html#engineType=log}, where \texttt{siteurl} is the URL of the Receiver for Web site (\url{http://server.domain/Citrix/StoreWeb}).
   - For Citrix Workspace app 1907 for HTML5 and earlier, open a new tab and navigate to \url{siteurl/Clients/HTML5Client/src/ViewLog.html}, where \texttt{siteurl} is the URL of the Citrix Receiver for Web site (\url{http://server.domain/Citrix/StoreWeb}).
Direct connections to Citrix Virtual Apps and Desktops

Citrix Workspace app for HTML5 uses the WebSocket protocol to access virtual desktops and hosted applications. By default, WebSocket connections are prohibited on Citrix Virtual Apps and Desktops. If you plan to enable users to access desktops and applications from the local network without connecting through Citrix Gateway, allow WebSocket connections on Citrix Virtual Apps and Desktops.

WebSocket connections are also disabled by default on Citrix Gateway. For remote users accessing their desktops and applications through Citrix Gateway, you must create an HTTP profile with WebSocket connections enabled and either bind this to the Citrix Gateway virtual server or apply the profile globally. For more information about creating HTTP profiles, see HTTP Configurations.

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

Note:
If you are using SecureICA to encrypt communications between users’ devices and your Citrix Virtual Apps and Desktops or Citrix Virtual Apps servers, Citrix Workspace app for HTML5 supports Basic encryption only.

Citrix Provisioning Services

To deploy provisioned (non-persistent) machines using Citrix Provisioning Services, create the machine catalog and delivery group on which you want to enable Citrix Workspace app for HTML5 connections. Ensure that the configured WebSocket policies apply to your machine catalog.

Restart the machine to apply the WebSocket policies. For Citrix Provisioning Services-based machines configured to use persistent write cache files and machines deployed using MCS (which have separate identity disks), the policies are persisted when the machines restart. However, for Citrix Provisioning Services-based machine catalogs configured to use temporary write cache files, these policies must be applied to the vDisk or they will not be implemented successfully on target devices.

Complete the following steps to ensure that the policies are correctly applied to the vDisk.

1. Using the Citrix Provisioning Console, shut down a target device that is part of the machine catalog and delivery group. Change the access type of the target device from Production to Maintenance.

   For details, see Target Devices. You must use a target device that is part of the machine catalog and delivery group or the policies will not be applied.
2. Create a new version of your vDisk and set the Access to Maintenance. For details, see **Manually updating a virtual disk image**.

3. Start the maintenance target device, selecting the maintenance vDisk version from the boot menu. Verify that the following keys are added to the registry:
   
   a) HKEY_LOCAL_MACHINE\SOFTWARE\Policies\Citrix\ICAPolicies\AcceptWebSocketsConnections
   
   b) HKEY_LOCAL_MACHINE\SOFTWARE\Policies\Citrix\WebSocketsPort
   
   c) HKEY_LOCAL_MACHINE\SOFTWARE\Policies\Citrix\WSTrustedOriginServerList

4. Shut down the target device, change the target device access type back to Production, and promote the new vDisk version to production. Then, start the target device and restart any other target devices currently running from the existing vDisk.

If you do not use vDisk versioning, you can apply the policies to your base vDisk image by shutting down all the target devices that use the vDisk, placing the vDisk in Private Image mode, and then starting the target device to update the image.

**Upgrade**

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

- 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 HTML5, see **Citrix Receiver**.

**Get Started**

February 6, 2020

**Set up**

Citrix Workspace app for HTML5 integrates with Citrix Workspace for Web sites. To access their virtual desktops and hosted applications using Citrix Workspace app for HTML5, users navigate to a Citrix Workspace for Web site using a compatible browser running on a supported operating system.

The user experience with Citrix Workspace app for HTML5 is as follows:
Citrix Workspace app for HTML5

- If you did not configure the site to always use Citrix Workspace app for HTML5, the site attempts to determine whether Citrix Workspace is installed locally on devices running Windows and Mac OS X. When Citrix Workspace cannot be detected, users are prompted to download and install the appropriate Citrix Workspace for their platform. For users who are unable to install Citrix Workspace, this happens every time they log on to the Citrix Workspace app for Web site. Users who already have Citrix Workspace installed locally must use this version to access resources from the site and are not given the option to use Citrix Workspace app for HTML5. When you configure the Citrix Workspace for Web site to always use Citrix Workspace app for HTML5, all users must access resources from the site through Citrix Workspace app for HTML5 regardless of whether they have a locally installed version of Citrix Workspace.

- When users access a desktop or application through Citrix Workspace app for HTML5, the resource starts in a new browser tab or window, according to the user's browser settings. You can configure Citrix Workspace app for HTML5 so that resources are always started in the same tab as the Citrix Workspace for Web site.

- When a user starts an additional application, Citrix Workspace app for HTML5 checks whether the application can be started within an existing session before creating a new session. This enables users to access multiple applications over a single connection so that the available resources are used more efficiently.

- Citrix Workspace app for HTML5 supports displaying titles of the applications and desktops in parentheses (for example, VDA(1) and VDA(2)) in the browser tab. To enable this feature, select Launch applications in the same tab as Receiver for Web in StoreFront. For more information, see Configure.

Configure

February 6, 2020

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.

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:

![Files Tab Example](image)

**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 users to access resources hosted on Citrix Virtual Apps and Desktops in their browsers, you must create a StoreFront store and enable Citrix Workspace app for HTML5. You must also enable WebSocket connections on Citrix Gateway, Citrix Virtual Apps, and Citrix Virtual Apps and Desktops, as required. Additionally, you can enhance the user experience by installing optional components on the machines providing the desktops and applications.
Multi-monitor display

Multi-monitor display lets you create a secondary window of the desktop or application session to which you are connected. You can then drag the secondary window to the secondary monitor.

Multi-monitor display is available for both desktop and application sessions.

To switch to multimonitor mode, click Multimonitor in the toolbar. Doing so creates a secondary window with a 1024x768 resolution. It also updates the server with the dual monitor information. You can drag and resize the secondary window and even go to full-screen mode on one or both monitors. Every time you resize the window, the secondary window resolution is updated on the server. To exit multi-monitor mode, close the secondary window.

Even though the resolution details of the secondary monitor are unknown to Citrix Workspace, multi-monitor mode gives you the flexibility of resizing to adjust to the resolution you prefer.

For the session to take focus, click Multimonitor in the toolbar.

This feature is enabled by default.

To disable the feature, edit the configuration.js file and set the value of the multiMonitor property to false.

```javascript
'ui' : {
  'toolbar' : {
    'multiMonitor' : true
  }
},
```

Using Citrix Virtual Desktops on dual monitors:

1. Click Multimonitor in the toolbar.

2. An extended window is created. Drag the window to the extended monitor.

   The screen is now extended to both the monitors.

Limitations:

- This feature is supported on desktop browsers except for Internet Explorer and Edge.
• On a Mac, the secondary window opens as a new tab in Chrome. When you drag this secondary window directly to the secondary monitor and resize it, the window might become invisible with an entry being shown in the Chrome taskbar.

Workaround: Drag the window to the primary monitor and then back to the secondary monitor.

**USB device redirection**

Generic USB device redirection is supported on Chrome browsers (Version 61 and later) running on Chrome, Mac, and Linux operating systems. This feature is supported on sessions launched over secure HTTPS connections. This feature supports redirection of two USB devices simultaneously.

1. **Redirecting a USB device** As a prerequisite, enable the USB redirection policy on the server. For more information, see [Enabling USB redirection on the server](#).

2. Connect the USB device to the machine.

3. Click on the **USB Devices** icon available on the in-session toolbar.

4. In the **USB Devices** dialog box, click on **Add**.

This action opens a Chrome dialog box that displays a list of devices.
Note:
The Chrome dialog box displays USB devices that might not always be redirected through Citrix Workspace app for HTML5. The USB devices that can be redirected through Citrix Workspace app for HTML5 are displayed in the USB devices dialog box within the app.

5. Select devices to be redirected and then click on Connect. After successful redirection, you are returned to the USB Devices dialog box, and the device appears as Connected.

6. When you attempt to redirect a USB device that is not supported by Citrix Workspace app for HTML5, the following error message appears.

7. Click Release to release a device from the remote session.
8. If you launch more than one session, USB devices that are connected inside a different session show as **Already is use**. Click **Transfer here** to transfer the devices to the current session.

9. When you redirect more than one USB device to a session, click **Release all devices** to remove the devices from the session.
10. When you disconnect a redirected USB device from the machine without clicking **Release**, the following error message appears. 

The USB device redirection feature is applicable only to USB devices for which the client operating systems (such as Mac and Chrome) does not load the device drivers by default. For example, the feature is applicable to Brother QL-580N Label Printer.

In case you are unable to redirect USB devices on a Linux operating system, try setting up the user accounts and providing permissions to open the USB devices as described in the Google developers’ document [https://developers.google.com/web/fundamentals/native-hardware/build-for-webusb#linux](https://developers.google.com/web/fundamentals/native-hardware/build-for-webusb#linux).

**Enabling USB redirection on the server**

Perform the following step to enable the USB device redirection on the server:

- Enable the policy for USB device redirection on the Domain Controller.
Configuring USB redirection for Citrix HTML5 client

By default, the USB device redirection feature is enabled on the client if the USB device redirection policy is enabled on the server.

To disable it, edit the configuration.js file and set the value of `usb` under `toolbar` to `false`. This setting is applicable to the StoreFront. The configuration.js file is located in `C:\program Files\Citrix\actual path\HTML5Client`.

```javascript
'ui' : {
  'toolbar' : {
    'usb' : false
  }
}
```

Behavior of Chrome browser

- When you click on the padlock icon, the browser tab shows the Secure Connection dialog box. You can see the USB devices for which the browser tab has received user permission. Although there are multiple USB devices, only the devices that the Citrix HTML5 client can redirect appear in the Citrix USB Devices dialog box. Those devices can be used inside a remote session.
Citrix Workspace app for HTML5

- If you want to revoke access permissions granted to the browser tab, click on the x icon next to the USB device. As a result, the Reload button appears. If you click on Reload, the session closes. Relaunch the session for the changes to take effect.

Limitations:

- The USB device redirection feature is not applicable to some USB devices for which the client operating system such as Windows loads the device drivers by default.
- Only USB Type A devices can be redirected to the session. But, you can connect Type A devices through a Type C connector.
- Releasing a USB hub device might not result in releasing connected USB Type A devices.
- HID devices, Mass Storage devices, and Web camera redirection might not work.
- This feature has been tested and is supported on VDAs running on Windows 10.
- This feature has been tested for up to two USB devices simultaneously.

DPI scaling

Citrix Workspace app for HTML5 supports DPI scaling for app and desktop sessions on a single monitor.

Citrix Workspace app for HTML5 lets you set the VDA resolution on the monitors that have a high pixel ratio. The DPI scaling feature is disabled by default for app and desktop sessions.

For Citrix Workspace app 1908 for HTML5 and earlier, go to the session toolbar and then select Toolbar > More > Preferences > Display Resolution to set the resolution for app and desktop sessions. The correct resolution is set on the VDA.

For Citrix Workspace app 1909 for HTML5 and later, go to the session toolbar and then select Toolbar > More > Display Resolution > Device Pixel Ratio Scaling to set the resolution for app and desktop sessions. The correct resolution is set on the VDA.

When you set the resolution correctly on the VDA, blurry text becomes crisper.

Limitations:

- The High DPI scaling feature is disabled on touch screen devices.

Custom Cursor

Citrix Workspace app for HTML5 now supports custom cursors on the Microsoft Internet Explorer (IE). This enhancement ensures that you have a consistent browsing experience across browsers. By default, the custom cursor is enabled.
To disable the custom cursor in Microsoft IE or Edge using configuration.js

The configuration.js file is located in the HTML5Client folder. Edit this file to configure Citrix Workspace app for HTML5 by performing the following step:

Open the `configuration.js` file and set the value of `handleMouseCursorUsingDivForIE` under `ui` to false.

```
'ui': {
'handleMouseCursorUsingDivForIE': false
}
```

Customer Experience Improvement Program

**Note:**
- When CEIP is disabled, minimal information, containing the installed Citrix Workspace app for HTML5 version is uploaded; this happens weekly. This minimal information is valuable to Citrix because it provides the distribution of different versions used by customers.
- When Citrix Workspace app for HTML5 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, renderer.
- Critical to quality details like connection and launch failures and statistics on session connection time.
- Configuration tracking details like datapoints tracking to check if a feature is enabled or disabled.

To disable CEIP using configuration.js

In Citrix Workspace app for HTML5, the configuration.js file is located in the HTML5Client folder. Edit this file to configure Citrix Workspace app for HTML5.

**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 for Chrome is repackaged for
Citrix Workspace app for HTML5

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

For Citrix Workspace app HTML5 versions 1905 and earlier, set the enabled attribute under `ceip` to `false` in the configuration.js file.

```javascript
1 'ceip':{
2  'enabled':false,
3 }
```

For Citrix Workspace app HTML5 versions 1906 and later, set the enabled attribute under `analytics` to `false` in the configuration.js file.

```javascript
1 'analytics':{
2  'enabled':false,
3 }
```

To disable CEIP using graphical user interface

**Note:**
You can modify the CEIP settings using graphical user interface only when the administrator has enabled it using configuration.js.

1. Launch Citrix Workspace app for HTML5.
2. From the toolbar, select **Preferences**.
3. Uncheck **Help improve Citrix Workspace by sending anonymous usage statistics**.

**Note:**
Relaunch the session for the changes to take effect.

Selective H.264

Configuring selective H.264 using the configuration.js file

**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 HTML5 is repackaged.
Citrix Workspace app for HTML5

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

By default, selectiveH264 is set to **true**.

The configuration.js file is located under `C:\program Files\Citrix<actual path>\HTML5Client`. Edit this
file and change `selectiveH264` to **false** as shown below.

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

**PDF printing**

**To configure PDF printing**

The Citrix PDF Universal Printer driver enables users to print documents opened with hosted applica-
tions or applications running on virtual desktops delivered by XenApp and XenDesktop Version 7.6. 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 is then opened in a new browser tab for viewing and printing from a
locally attached printer.

If you want to enable users to print documents opened with hosted applications or applications running on virtual desktops delivered by XenDesktop 7.6 and XenApp 7.6, complete the following steps.

1. Download the Citrix PDF Printing Feature Pack and install the Citrix PDF Universal Printer driver
   on each machine providing desktops or applications for Citrix Workspace app for HTML5 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**.

**Enhanced PDF printing experience**

In earlier releases, when attempting to print a PDF, a **Continue** print dialog appeared, prompting your
confirmation to print.

With this release, the **Print** window appears within your Citrix Workspace session. You can directly
print the document from the **Print** window.
This enhancement is fully supported and enabled by default in Chrome and Firefox. To disable it in Chrome and Firefox, set the value of supportedBrowsers to false in the configuration.js file. The configuration.js file is located under C:\program Files\Citrix<actual path>\HTML5Client.

This enhancement is partially supported in Internet Explorer 11 with some known limitations, and disabled by default. To enable this feature in Internet Explorer, set the value of IE to true in the configuration.js file. The configuration.js file is located under C:\program Files\Citrix<actual path>\HTML5Client.

```json
'pdfPrinting': {
    'directPrint': {
        'supportedBrowsers': true,
        'IE': false
    }
}
```

Limitations:

- In Internet Explorer, the content of a printed PDF is scaled down and does not fit the page.
- In Internet Explorer, when printing a large file or a file with a large number of pages, the browser might stop responding or the print operation might fail intermittently.
- This enhancement is not supported for sessions that are launched through the HTML5 HDX SDK.

To suppress the Continue print dialog

When the enhanced printing experience feature is disabled, you can print a PDF by suppressing the appearance of the Continue print dialog.

By default, the printDialog property of the hide object is set to false.

The configuration.js file is located under C:\program Files\Citrix<actual path>\HTML5Client.

To do this, set the printDialog property of the hide object to true.

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 HTML5 is repackaged.
for users.

- Administrator-level credentials are required to edit the configuration.js file; after editing the file, repackagetheappforthechanges to take effect.

```javascript
{
  'ui': {
    "hide":{
      'printDialog': true
    }
  }
}
```

**Session reliability**

With session reliability, the session remains active on the server. To indicate that connectivity is lost, the user’s display freezes until connectivity resumes on the other side of the tunnel. The user continues to access the display during the interruption and can resume interacting with the application when the network connection is restored. Session reliability reconnects users without reauthentication prompts.

**Note:**

Citrix Workspace app for HTML5 users cannot override the server setting.

You can use session reliability with Transport Layer Security (TLS).
Citrix Workspace app for HTML5

Note:
TLS encrypts only the data sent between the user device and Citrix Gateway.

For more information on configuring session reliability, see Session reliability policy settings in Citrix Virtual Apps and Desktops documentation.

Mobility support

To enable the auto soft keyboard popup

To enable this feature, configure the automatic keyboard policy to display the soft keyboard when clicking any editable area:

1. Open Citrix Studio on DDC.
2. Select Policies.
3. Click Create Policy.
4. Search for Automatic Keyboard Display and select Allowed.

File Transfer

By default, users can:

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

Administrators can selectively enable or disable file transfer, uploads, or downloads through policies in Citrix Studio.

Citrix Workspace app for HTML5 supports downloading files on a MacBook using the Safari browser.

Requirements

- XenApp and 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)

File Transfer policies

By default, file transfer is enabled. Use Citrix Studio to change these policies, located under User Setting < ICA\File Redirection. Consider the following when using file transfer policies:

• Allow file transfer between desktop and client. Allows or prevents users from transferring files between a Citrix Virtual Apps and Desktops session and their devices.
• Upload file to the desktop. Allows or prevents users from uploading files from their device to a Citrix Virtual Apps and Desktops session.
• Download file from desktop. Allows or prevents users from downloading files from a Citrix Virtual Apps and Desktops session to their device.

Clipboard

Prior to introducing this feature, Citrix Workspace did not support copying and pasting HTML-formatted text from a local application to another application (for example, Microsoft Excel) using the Paste Special feature. As a result, the targeted app (in this case, Microsoft Excel) would not retain its HTML formatting characteristics.

Citrix Workspace app for HTML5 supports HTML format in addition to plain text between client and a session. This support is useful for Office apps and browsers. Enhanced clipboard support is only available on Chrome and Safari browsers. You can copy HTML content and retain formatting; when copying a link in Chrome, a <img> tag is added in HTML format, which effectively allows you to copy images as well as text. This feature is richer than plain text but does not work in all applications.

To configure clipboard support, add the following registry entry to the VDA:

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Citrix\wfshell\Virtual Clipboard\Additional Formats\HTML Format
“Name”=”HTML Format”

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

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.

Enhanced clipboard experience

When you launch multiple Virtual Desktop hosted applications or desktops on Windows, Mac, or Chrome operating systems using the browser based Citrix Workspace app for HTML5, you might want to copy and paste text between the session and your client device. With this feature, you can use the Ctrl C and Ctrl V hotkeys (for Windows or Chrome operating systems) and CMD C and CMD V hotkeys (for Mac operating system) to copy and paste.

This feature is enabled by default.

On Firefox and Edge browsers, to copy the text from a remote session to a local device, press Ctrl C and then click Confirm.

Disable the copy confirmation dialog by selecting the Disable Copy Confirmation check box in Preferences on the toolbar. Clear the check box to enable the option again.

To disable the enhanced clipboard experience

To disable this feature, edit the configuration.js file located inside the HTML5Client folder (C:\Program Files\Citrix\Receiver StoreFront\HTML5Client) and set the value of directClipboard to false.

Limitations:

- You can copy and paste only plain text and not images and files.
- Does not support large data.
- The Ctrl key might remain stuck in the down position. This issue occurs when you press the right Ctrl key for a long time and then press C to copy the text. As a workaround, click the right Ctrl key multiple times.
- Copying text from a secondary monitor requires an extra click (through the Copy confirmation dialog) for Google Chrome and Safari browsers. For Edge and Firefox browsers, copying text from both, single and secondary monitors requires an extra click.
- Use the Ctrl c or CMD C and Ctrl V or CMD V keys to copy and paste. Using the Edit menu or right-click option to copy the text might require an extra click using the Confirm dialog.

Toolbar

By default, the enhanced toolbar feature is enabled.

To hide the toolbar:
1. While logged in as an administrator, access the *configuration.js* file in `C:\ProgramFiles\Citrix<actual path>\HTML5Client`.
2. Search the *configuration.js* file to locate ‘menubar key.’
3. In the *configuration.js* file, set “menubar”:false.

You can also hide an individual icon to prevent it from showing up in the toolbar. For example, to hide the ctrl+alt+del button in the toolbar:

1. While logged in as an administrator, access the *configuration.js* file in `C:\ProgramFiles\Citrix<actual path>\HTML5Client`.
2. Search the *configuration.js* file to locate ‘lock.’
3. In the *configuration.js* file, set lock:false.

### Session sharing

For session sharing to occur, 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.

If App Switcher is installed on the machine providing the applications, a taskbar appears at the bottom of the window. The taskbar displays all the applications currently running in the session, enabling users to switch between those applications. Users can configure the taskbar to auto-hide and switch to small icons to minimize the amount of space taken up by the taskbar.

A floating toolbar containing controls for Citrix Workspace app for HTML5 is displayed in the browser tab, as shown in the following figure. The clipboard button enables users to copy and paste Unicode plain text between the local clipboard on the device and the resource running in the browser. Users 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. Users can also send the CTRL+ALT+DELETE key combination to their desktops and applications using a button on the toolbar.
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. The file is removed from the device when the user closes the PDF.

A user who clicks a link in a document opened using a hosted application is given the choice of whether to open the URL in a hosted browser application within the session or to use the browser on the local device.

**HTML5 logs**

Citrix Workspace app for HTML5 provides timestamps for the logs generated by the user device.

**To assist with troubleshooting issues, you can view Citrix Workspace app for HTML5 session logs.**

The log page allows users to:

- Enable Logging: Enable logging to view the HTML5 logs.
- Disable Logging: Disable logging to stop logging in a session.
- View logs: View the logs generated for a session.
- Clear logs: Delete the log file generated in a session.
- Download log file: Download the log file to a desired location.

**To view Citrix Workspace app for HTML5 logs by navigating to the log page**

1. Log on to the Citrix Workspace or Web site.
2. In another browser tab or window, navigate to siteurl/Clients/HTML5Client/src/ViewLog.html, where siteurl is the URL of the Citrix Workspace app for web site, typically `<http://server.domain/Citrix/StoreWeb>`.
3. On the logging page, click Start Logging.
4. On the Citrix Workspace for Web site, access a desktop or application using Citrix Workspace app for HTML5.

The log file generated for the Citrix Workspace app for HTML5 session is shown on the logging page. You can also download the log file for further analysis.

**To view Citrix Workspace app for HTML5 logs using the toolbar**

1. Log on to the Citrix Workspace for Web.
2. In the Citrix Workspace for Web, access a desktop or application.
3. From the session toolbar, select **Logging**.
4. Click **Start Logging**.
SDK and API

February 6, 2020

HDX SDK

Citrix Workspace app for HTML5 enhances support for HDX and SDK sessions by enabling you to customize your delivery model for Citrix hosted apps and desktops through your website. This feature is particularly useful for building a rich app experience in your Enterprise portals. It can be used to provide a rich app experience for users as a service when hosting Citrix Workspace app for HTML5 on your web server while launching Citrix hosted apps and desktops from your website.

For the HDX SDK for Citrix Workspace app for HTML5 documentation, see HDX SDK for HTML5.

For HDX SDK examples, refer to the Citrix download page.

Autoupdate support for Citrix Workspace app for HTML5 using HDX SDK for HTML5

Citrix HDX SDK for HTML5 enhances the setPath API to consume the latest build of Citrix Workspace app for HTML5 from the CDN. This enhancement allows Citrix Workspace app for HTML5 to run on the latest version seamlessly. For existing HDX SDK for HTML5 users, change citrix.receiver.setPath in the customer code to use the latest from the CDN. For new users, the setPath API provides the option by default.

CDN is provided as the default and the hosted location is provided as a fallback path if there are any issues with the CDN. For more information, see HDX SDK for HTML5.
Locations
Corporate Headquarters | 851 Cypress Creek Road Fort Lauderdale, FL 33309, United States
Silicon Valley | 4988 Great America Parkway Santa Clara, CA 95054, United States

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