About Citrix Receiver for Chrome 1.5

Oct 09, 2015

Citrix Receiver for Chrome lets users access virtual desktops and hosted applications from devices running the Google Chrome operating system. Resources delivered by XenDesktop and XenApp are aggregated in a StoreFront store or Web Interface and made available through a Receiver for Web site or Web Interface site.

Users access the site through Receiver for Chrome, where their desktops and applications appear in a single window.

What's New in Receiver for Chrome

Receiver for Chrome offers the following new features and enhancements:

- **Web Interface custom web portal support**. Users can open .ica files in Citrix Receiver to launch XenDesktop and XenApp sessions. Users can also use the Web Interface URL inside the Citrix Receiver app.
- **Robust connection to StoreFront**. Receiver for Chrome now supports StoreFront beacons to determine network connectivity.
- **Support for HDX Insight**. You now have NetScaler HDX Insight support for Receiver for Chrome traffic to monitor applications launched inside a session.
- **Support for CloudBridge**. Receiver for Chrome now supports CloudBridge, disabling compression and printer compression, as well as using HDX Insight analytics to appear in CloudBridge Insight Center.
- **Configure Citrix Receiver for Chrome by Google policy**. You can use Google policy to configure Store connection in Citrix Receiver for Chrome. Google policy for this configuration is currently available as a tech preview capability from Google. Please contact your Google representative for access.

Note: In order to use a fully localized version of Citrix Receiver, ensure that the Chrome OS language and the browser preferred language is set in Chrome settings. For details, refer to https://support.google.com/chromebook/answer/1059490?hl=en and https://support.google.com/chromebook/answer/1059492?hl=en

Known Issues

The following is a list of known issues in this release. **Read it carefully before installing the product**.

- Session might fail to launch when App Switcher is first installed. The administrator needs to restart the host/VDA after installation to correct the issue. [#525108]
- Session roaming might not work when Chrome Receiver is configured to Web Interface. [#524944]
- Users might not be able to share sessions if application is launched by the same user and originated from the same host or VDA. [#521552]
- Users might have issues with Audio-Video sync while playing videos longer than 5 minutes. [#524355]
- Beacons URLs must start with "https://" or "http://" or Receiver for Chrome will fail to connect event to the correct URL. [#521288]
- Users might experience a delay in appearance of “Receiving PDF File” after clicking print. [#518587]

System requirements

Dec 19, 2014

This topic lists the supported Citrix product versions for Receiver for Chrome 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.

User device requirements

Users require devices running the Google Chrome operating system (version 37 or later) to access desktops and applications using Receiver for Chrome. Citrix recommends that you use Receiver for Chrome with releases from the stable channel of Google Chrome. Receiver for Chrome is only supported on Chrome OS.

Citrix server requirements

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

- StoreFront 2.6
- StoreFront 2.5
- Web Interface 5.4

When users connect through NetScaler Gateway, Receiver for Chrome can be used to access desktops and applications delivered by all the versions of XenDesktop and XenApp that are supported by StoreFront. For details, see the StoreFront 2.6 system requirements or the StoreFront 2.5 system requirements, as appropriate.

For direct connections through StoreFront without NetScaler Gateway, Receiver for Chrome can be used to access desktops and applications delivered by the following product versions.

- XenDesktop
  - XenDesktop 7.6
- XenApp
  - XenApp 7.6
  - 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.

Secure user connections

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

- NetScaler Gateway 10.5
- NetScaler Gateway 10.1

Receiver for Chrome now supports CloudBridge disabling compression and printer compression as well as using HDX Insight analytics to display in CloudBridge Insight Center.

- CloudBridge 7.3.1

Configure

Dec 22, 2014

To enable Receiver for Chrome users to access resources hosted on XenDesktop and XenApp, you must create a StoreFront store. You must also enable WebSocket connections on NetScaler Gateway, XenApp, and XenDesktop, as required. Additionally, you can enhance the user experience by installing optional components on the machines providing the desktops and applications.

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

To enable direct connections to XenDesktop and XenApp

Receiver for Chrome uses the WebSocket protocol to access virtual desktops and hosted applications. By default, WebSocket connections are prohibited on XenDesktop and XenApp. If you plan to enable users to access desktops and applications from the local network without connecting through NetScaler Gateway, WebSocket connections must be allowed on XenDesktop and XenApp.

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

Important: If you are using SecureICA to encrypt communications between users' devices and your XenDesktop or XenApp servers, note that Receiver for Chrome supports Basic encryption only.

1. 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 XenDesktop and XenApp policies, see Citrix policies.
2. Set the WebSockets connections policy setting to Allowed.
3. If you want to change the port used for WebSocket connections, edit the WebSockets port number policy setting.
   By default, XenDesktop and XenApp use port 8008 for WebSocket connections. If you decide to use a different port, due to firewall or other network restrictions, for example, you must also configure the Receiver for Web site to use the new port.
4. To restrict access to XenDesktop or XenApp to specific trusted Receiver for Web sites, specify a comma-separated list of trusted site URLs for the WebSockets trusted origin server list policy setting.
   By default, connections from all Receiver for Web sites are accepted.
5. On each machine providing desktops and applications for Receiver for Chrome users, verify that incoming TCP connections to the port you configured for WebSocket connections are not blocked by firewalls, that no other applications are using the port, and that traffic to the port is not being redirected to other ports.
6. If you are running XenDesktop, ensure that you have updated each machine providing desktops for Receiver for Chrome users with the latest available Virtual Delivery Agent updates and hotfixes.
7. If you plan to create machines using Machine Creation Services (MCS), on the master image, create a registry entry at HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\GroupPolicy\Defaults\ICAPolicies if it is not already present and then add the following registry keys.
   - Create a registry key with a value type of REG_DWORD at HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\GroupPolicy\Defaults\ICAPolicies\AcceptWebSocketsConnections. Set

the value of the new key to 1.

- Create a registry key with a value type of REG_DWORD at HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\GroupPolicy\Defaults\ICAPolicies\WebSocketsPort. Set the value of the new key to the port you chose for WebSocket connections in the XenDesktop or XenApp policy. The default port is 8008.
- Create a registry key with a value type of REG_SZ at HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\GroupPolicy\Defaults\ICAPolicies\WSTrustedOriginServerList. For the value of the new key, either specify a comma-separated list of trusted Receiver for Web site URLs or set the value to * to accept connections from all Receiver for Web sites.

Do not apply the XenDesktop or XenApp WebSocket policies to machines provisioned using this master image. You can check whether the WebSocket policies are applied on the master image VM using the rsop.msc tool or by running the gpresult command from a command prompt.

This workaround cannot be used with deployments delivered and managed with App Orchestration.

8. If you plan to deploy provisioned (non-persistent) machines using Provisioning Services, create the machine catalog and delivery group for which you want to enable Receiver for Chrome connections. Ensure that the WebSocket policies you configured apply to your machine catalog.
   Machines must be restarted to apply the WebSocket policies. For 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 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 Provisioning Services 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 Managing 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 leave it with Access set to Maintenance.
      For details, see Manually Updating a vDisk 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.
      HKEY_LOCAL_MACHINE\SOFTWARE\Policies\Citrix\ICAPoliciesAcceptWebSocketsConnections

      HKEY_LOCAL_MACHINE\SOFTWARE\Policies\Citrix\WebSocketsPort

      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.

To configure optional components

Two optional components are available that enhance the experience for Receiver for Chrome users by increasing integration between XenDesktop, XenApp, and Chrome OS.

- App Switcher enables users to switch between multiple applications running in the same session. When session sharing is enabled on XenApp, which it is by default, applications opened within the same session appear in the same window. App Switcher provides a taskbar running within the session that displays all the applications currently running in the session, enabling users to switch between them.
- 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. 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 window for viewing and printing through Google Cloud Print.

1. If you plan to enable session sharing on your XenApp deployment, download the App Switcher installer. Ensure that .NET Framework 4.5 is installed and enabled, then install App Switcher on each machine providing applications for Receiver for Chrome users.
   App Switcher is configured to run automatically in the background when users establish a session.

2. 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 Receiver 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 XenDesktop and XenApp policies, see Citrix policies.
   3. Set the Auto-create PDF Universal Printer policy setting to Enabled.

Deploy

Dec 22, 2014

There are a number of options for deploying Receiver for Chrome.

- You can use Google App management console to configure Citrix Receiver using Google policy. For more information, see CTX141844
- You can repackage Receiver for Chrome to include a Citrix Receiver configuration (.cr) file you have generated. The .cr file contains the connection details for NetScaler Gateway and the Receiver for Web site providing users' desktops and applications. Users browse to chrome://extensions and then drag and drop the repackaged application (.crx) file onto the Chrome window to install Receiver for Chrome. As the application is preconfigured, users can start working with Receiver for Chrome as soon as they have installed it without needing to perform additional configuration steps.
  You can deliver your custom Receiver for Chrome application to users in the following ways.
  - Publish the repackaged application for users through Google Apps for Business using the Google Admin Console.
  - Provide the .crx file to users by other means, such as through email.
- Users install Receiver for Chrome from the Chrome Web Store by searching for Citrix Receiver and clicking Add to Chrome. Once installed, Receiver for Chrome must be configured with connection details for NetScaler Gateway and the Receiver for Web site providing users' desktops and applications. This can be achieved in two ways.
  - You generate a .cr file containing the appropriate connection details and distribute this file to users. To configure Receiver 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.
  - You provide users with the URL they must enter manually when they first start Receiver for Chrome.

To repackage Receiver for Chrome

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

1. Download the unpackaged version of Receiver for Chrome to a suitable location.
2. Download the sample configuration file and modify it as appropriate for your environment.
3. Rename the modified configuration file to default.cr and copy it to the Receiver for Chrome root directory.
   Configuration files with different names or in other locations are not included when Receiver for Chrome is repackaged.
4. If you want to enable the in-session toolbar that lets users send the CTRL+ALT+DELETE key combination to their desktops and applications, complete the following steps.
   1. Use a text editor to open the configuration.js file in the Receiver for Chrome root directory.
   2. Locate the following section in the file.

```
'appPrefs':{
 'chromeApp':{
  'ui' : {
   'toolbar' : {
    'menubar':false,
    'clipboard': false
```

   3. Change the setting for the menubar attribute to true.
      When you enable the in-session toolbar in this way, it is not necessary to enable the toolbar in the Receiver for Web

site configuration file.

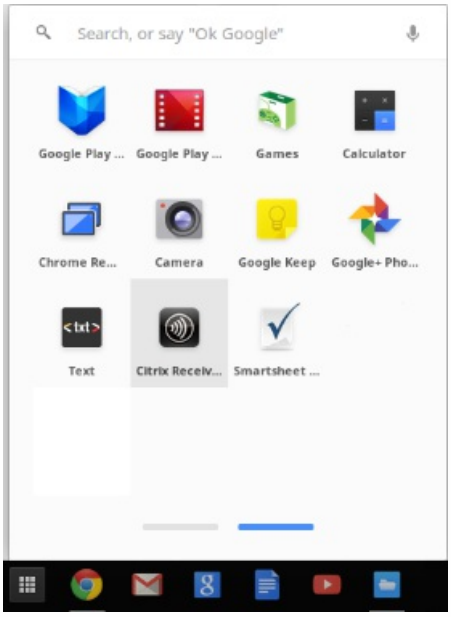
5. In Chrome, browse to chrome: //extensions, select the Developer mode check box in the top right corner of the page and then click the Pack extension button.
   For security reasons, StoreFront only accepts connections from known Receiver for Chrome instances. You must whitelist your repackaged application to enable users to connect to a Receiver for Web site.

6. On the StoreFront server, use a text editor to open the web.config file for the Receiver for Web site, which is typically located in the C:\inetpub\wwwroot\Citrix\storenameWeb directory, where storename is the name specified for the store when it was created.
7. Locate the following element in the file.
   `<html5 ... chromeAppOrigins="chrome-extension://haiffjcadagjlijoggckpgfnoeiflnem" ... />`
8. Change the value of the chromeAppOrigins attribute to **chrome-extension://haiffjcadagjlijoggckpgfnoeiflnem|chrome-extension://*packageid***, where packageid is the ID generated for your repackaged application.

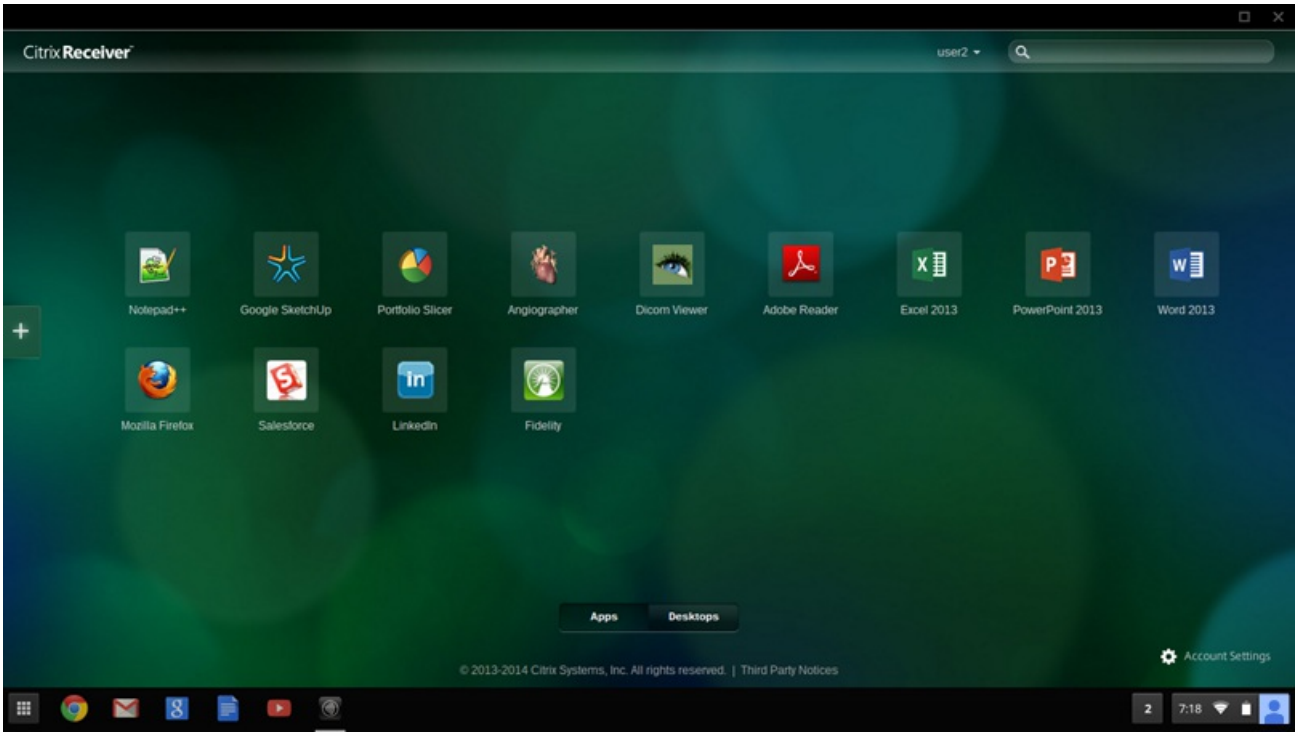
User experience

Dec 22, 2014

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



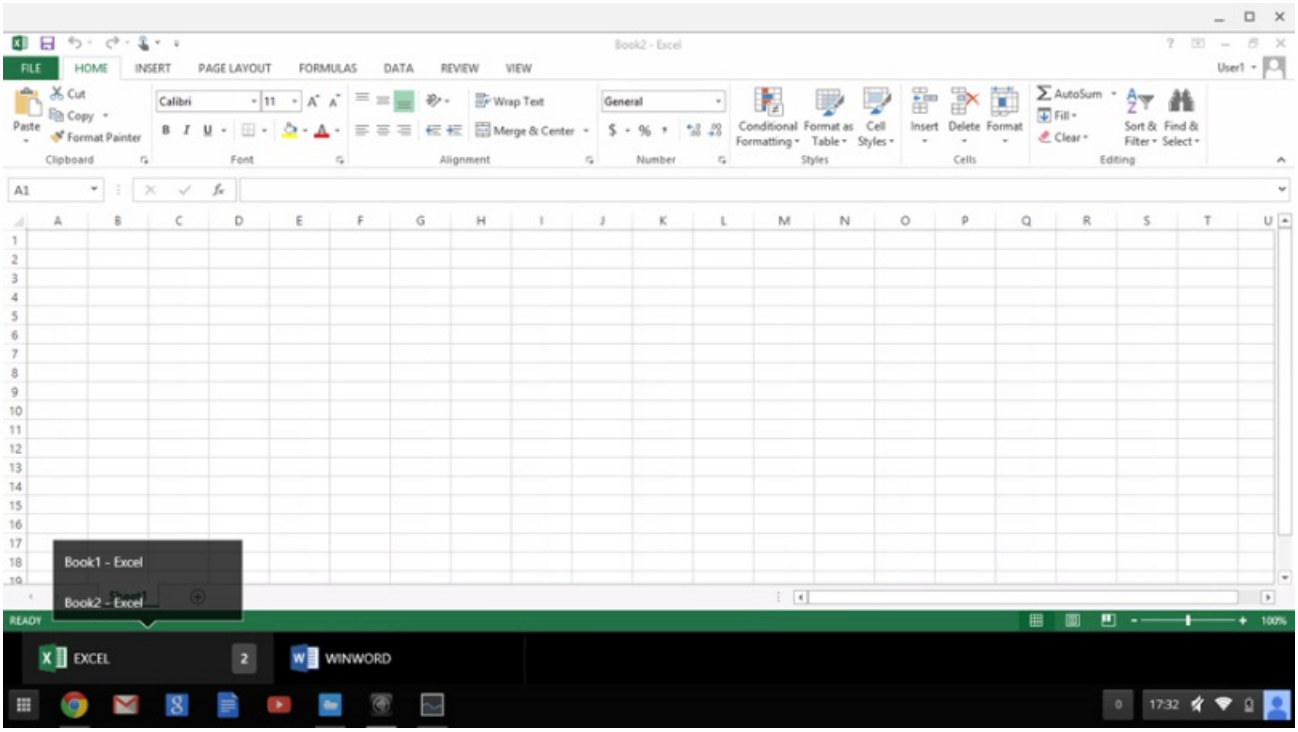
After they have logged on, users' desktops and applications appear, as shown in the following figure. Users can search for resources and click an icon to start a desktop or application in a new window.



When a user starts an additional application, Receiver for Chrome 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.

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.

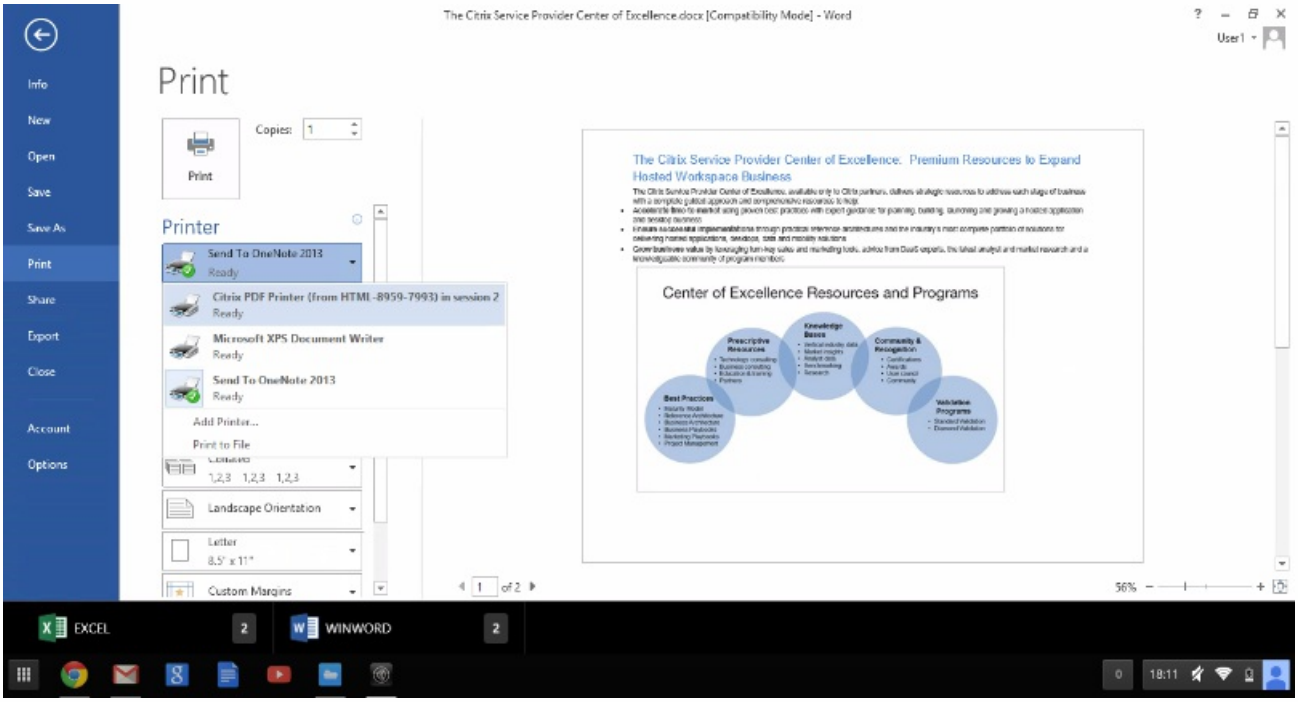
Applications running in the same session appear in the same window. If App Switcher is installed on the machine providing the applications, a taskbar appears at the bottom of the window, as shown in the following figure. The taskbar displays all the applications currently running in the session, enabling 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.



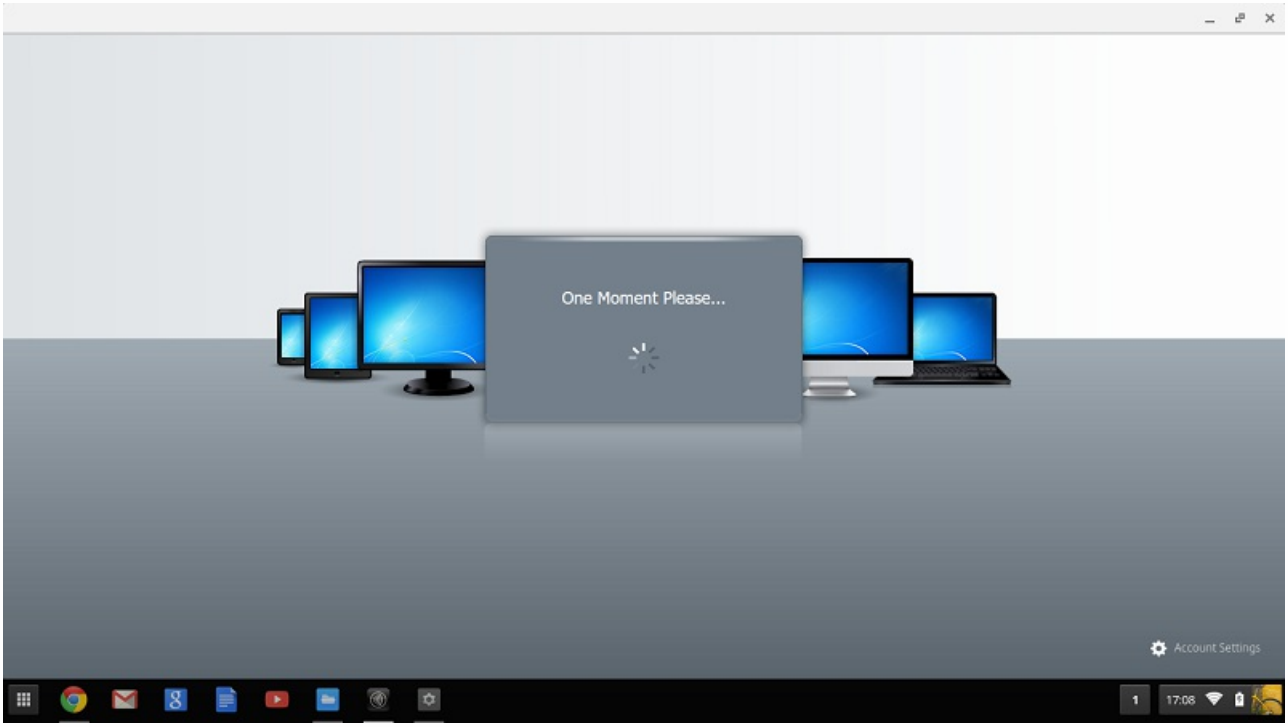
Users can use standard Windows shortcuts to copy data, including text, tables, and images, between hosted applications, both within the same session and between different sessions. Only Unicode plain text can be copied and pasted between hosted applications and the local clipboard on the device.

Users can use standard Windows keyboard shortcuts with Receiver 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 Receiver for Chrome.

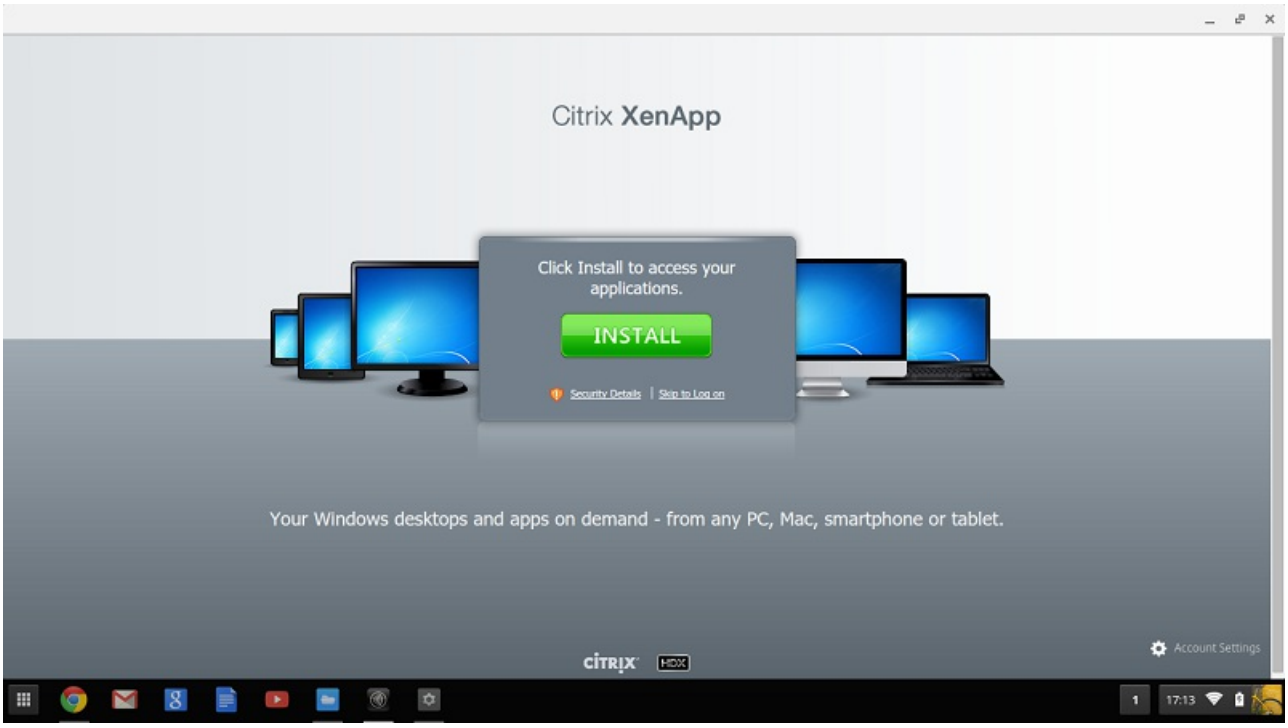
When printing a document opened with a hosted application or an application running on a virtual desktop, the user is given the option to print the document to PDF, as shown in the following figure. The PDF is then transferred to the local device for viewing and printing from a locally attached printer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



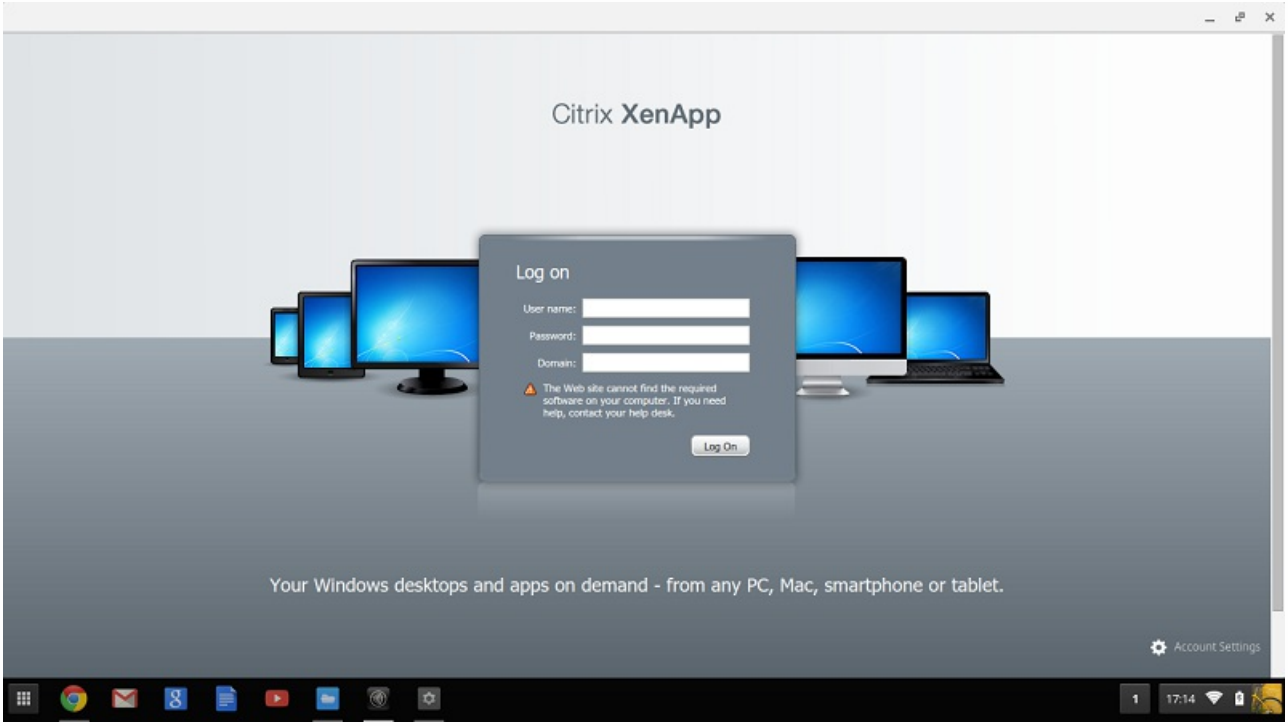
Users can now connect to the Web Interface and open hosted applications and desktops. They need to configure Receiver for Chrome by providing the Web Interface URL, for example http://webinterface.yourdomain.com/Citrix/<your XenApp website



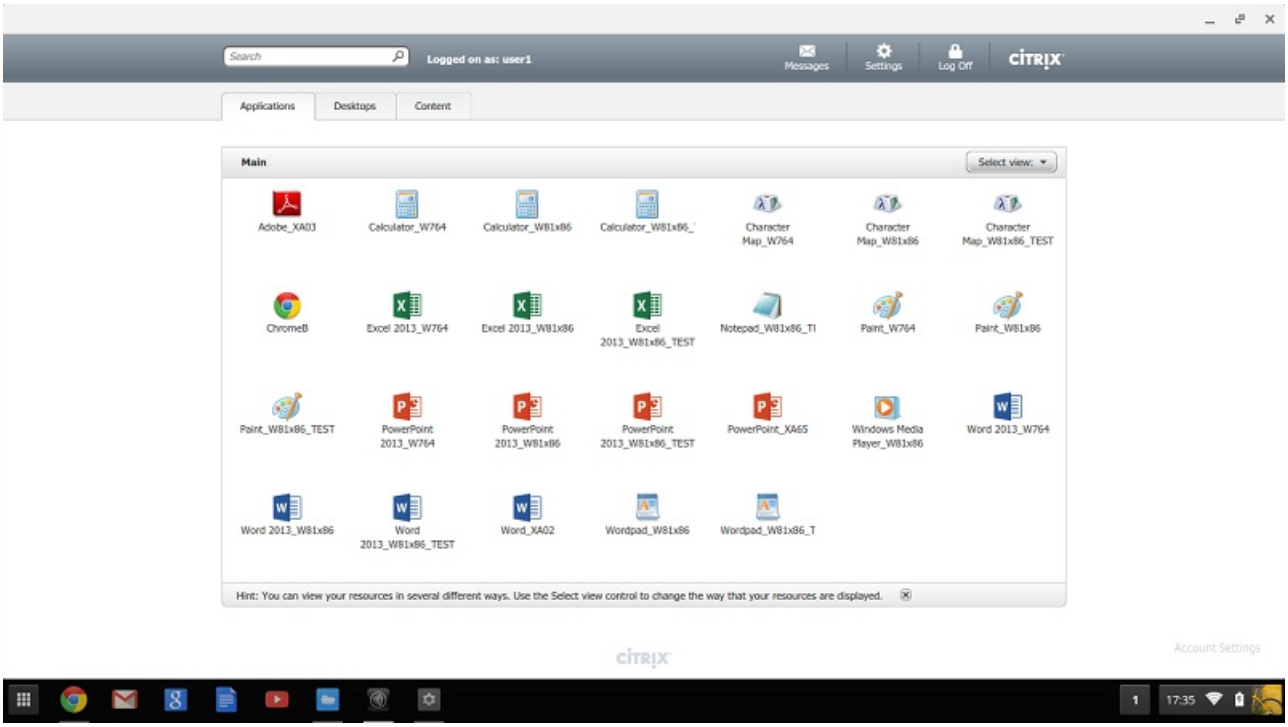
Users needs to click Skip to Log on.



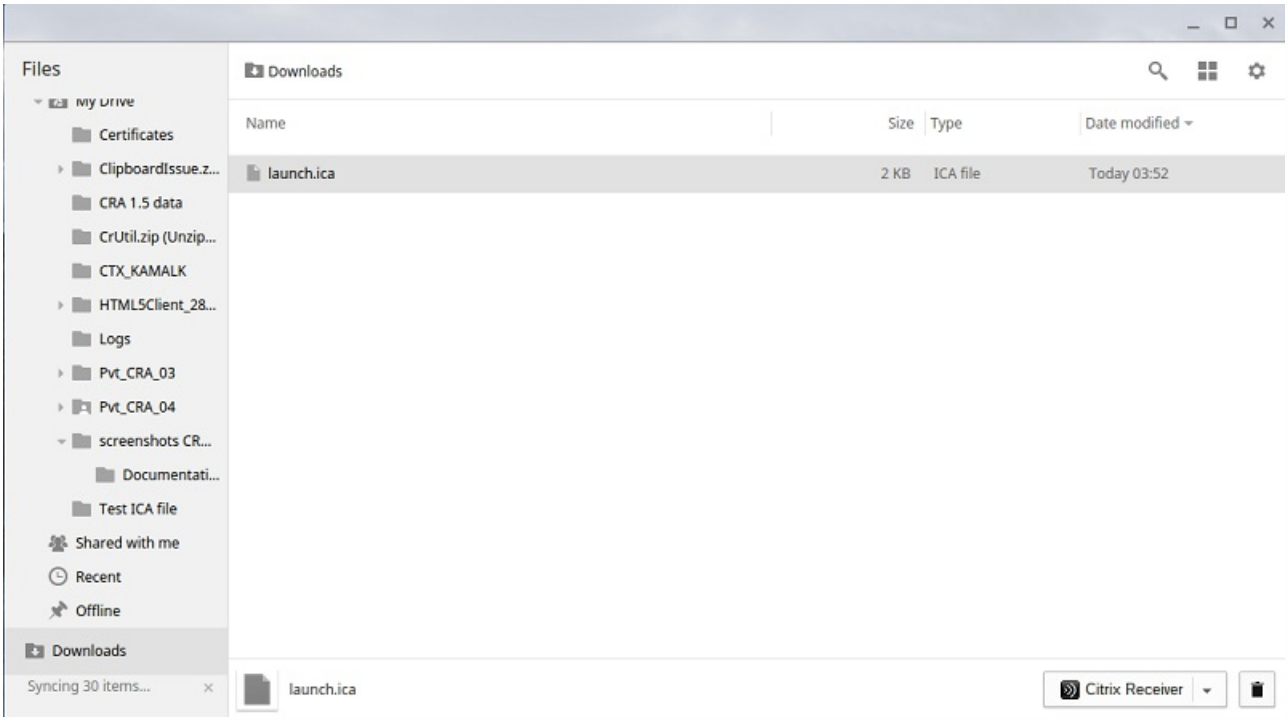
Note: For the above screen, follow the instructions at Web Interface 5.4.



After users log on, their desktops and applications should appear.



Users can open hosted applications and desktops by opening an .ica file with Chrome Receiver.



To enable logging for Receiver for Chrome

To assist with troubleshooting connection issues, logs can be generated on both the user device and the machines providing desktops and applications for users.

1. To capture logs on a user device, complete the following steps.
    1. On the user device, click Account Settings in the bottom-right corner of the Receiver for Chrome logon page.
    2. In the Settings dialog box, click Start Logging.

Details of the collected log files are listed in the Settings dialog box.

3. Click Stop Logging to end the collection of logs on the user device.

2. To enable logging for App Switcher on machines providing applications for users, complete the following steps.
   1. Use a text editor to open the AppSwitcher.exe.config file, which is typically located in the C:\Program Files (x86)\Citrix\App Switcher directory.
   2. Locate the following section in the file.

```
<applicationSettings>
    <Citrix.AppSwitcher.Properties.Settings>
        <setting name="TraceEnabled" serializeAS="String">
            <value>False</value>
        </setting>
    </Citrix.AppSwitcher.Properties.Settings>
</applicationSettings>
```

   3. Change the content of the <value> element to True to enable App Switcher logging.
      The App Switcher log files are saved in the \AppData\Citrix\AppSwitcher\Logs directory. The \AppData directory is hidden by default.