Abstract

This guide describes how to configure and use the Sun Ray Connector for Citrix XenDesktop.

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Preface

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The *Sun Ray Connector for Citrix XenDesktop Administration Guide* provides instructions for managing and configuring the Citrix XenDesktop connector.

1. Audience

This document is intended for users with system administration experience. It is assumed that readers are familiar with Web technologies and have a general understanding of Windows and UNIX platforms.

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3. Conventions

The following text conventions are used in this document:

<table>
<thead>
<tr>
<th>Convention</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>boldface</strong></td>
<td>Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.</td>
</tr>
<tr>
<td><strong>Convention</strong></td>
<td><strong>Meaning</strong></td>
</tr>
<tr>
<td>----------------</td>
<td>-------------</td>
</tr>
<tr>
<td><em>italic</em></td>
<td>Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.</td>
</tr>
<tr>
<td><em>monospace</em></td>
<td>Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.</td>
</tr>
</tbody>
</table>
Chapter 1. Overview and Requirements

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This chapter provides an overview of the Sun Ray Connector for Citrix XenDesktop (or the Citrix XenDesktop connector) and the requirements needed to use it.

For details on any changes from the previous release, see Appendix A, Release Notes.

1.1. Overview

Sun Ray Connector for Citrix XenDesktop enables users to leverage the benefits of Sun Ray technology with existing Citrix XenDesktop deployments. Citrix XenDesktop users can use highly secure Sun Ray Clients and Oracle Virtual Desktop Clients to access XenDesktop virtual machines (VMs).

Sun Ray Software provides a Citrix XenDesktop kiosk session type that communicates with the Citrix XenDesktop Web Interface Server for authenticating and brokering of XenDesktop VMs. Once a request is accepted, a RDP connection is established between the Sun Ray server and the XenDesktop Windows VM. There is no ICA connection to the XenDesktop VMs.

For an overview of the complete Citrix XenDesktop virtualization solution, refer to the Citrix XenDesktop documentation at http://support.citrix.com/proddocs/index.jsp.

1.2. Citrix XenDesktop Connector Requirements

The Citrix XenDesktop connector, version 1.1, requires Sun Ray Software 5.2 or later.

The Citrix XenDesktop connector, version 1.1, supports Citrix XenDesktop 4.0 or later with Citrix Web Interface 5.4.

1.3. Windows Virtual Desktop Requirements

The Citrix XenDesktop connector supports the following Windows virtual desktops:

- Windows 7 SP1 Enterprise Edition (32-bit and 64-bit)
- Windows XP Professional with SP3 (32-bit)
- Windows XP Professional with SP2 (64-bit)

To provide enhancements like USB redirection and video acceleration, the Windows connector components must be installed for some Windows platforms.

Note

Some Windows virtual desktops may not be supported by Citrix XenDesktop when used with a specific hypervisor.
1.4. Related Documentation

Refer to the following documentation libraries for more information about the Sun Ray Software product:

Chapter 2. Installing

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This chapter describes how to install the Citrix XenDesktop connector on a Sun Ray server. Uninstall steps are also included.

2.1. How to Install the Citrix XenDesktop Connector

The following procedure describes how to install Citrix XenDesktop connector on a Sun Ray server.

1. Become superuser on the server.

2. Download and unzip the Sun Ray Connector for Citrix XenDesktop file from the Sun Ray Software media pack and make it accessible to the Sun Ray server.

   • Sun Ray Software download page - http://www.oracle.com/technetwork/server-storage/sunrayproducts/docs/index.html

3. Install the Citrix XenDesktop connector based on the operating system running on the server:

   • Solaris
      
      # pkgadd -d SUNWkio-srxc-1.1-nn.pkg

   • Linux
      
      # rpm -i SUNWkio-srxc-1.1-nn.noarch.rpm

2.2. How to Uninstall the Citrix XenDesktop Connector

The following procedure describes how to unconfigure the Citrix XenDesktop kiosk session type and uninstall the Citrix XenDesktop connector on a Sun Ray server.

1. Become superuser on the server.

2. Unconfigure the Citrix XenDesktop connector kiosk session type by using the Sun Ray Software Admin GUI.

   a. Log in to the Admin GUI.

   b. Click the Advanced tab and Kiosk Mode sub-tab.

   c. Click Delete.

      A confirmation window for the deletion is displayed.

   d. Click OK.

3. Uninstall the Citrix XenDesktop connector based on the operating system running on the server:

   • Solaris
How to Uninstall the Citrix XenDesktop Connector

- Linux

```
pkgrm SUNWkio-srxc
```

```
rpm -e SUNWkio-srxc
```
Chapter 3. Configuring the Citrix XenDesktop Environment

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3.2. Enabling Remote Access for Domain Users ........................................................................ 6
3.3. Enabling RDP Access for Desktop Groups ........................................................................ 6
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This chapter describes the changes needed to the Citrix XenDesktop environment before configuring and using the Citrix XenDesktop connector.

3.1. Enabling RDP Connections on the Virtual Desktops

You must enable the Remote Desktop Protocol (RDP) on the virtual desktops. The following information describes how to enable RDP in Windows 7 and Windows XP.


Figure 3.1, “Example for Enabling RDP Connections” shows how to enable RDP connections using the System Properties page.

Figure 3.1. Example for Enabling RDP Connections

![System Properties](image-url)
3.2. Enabling Remote Access for Domain Users

In addition to enabling RDP connections on the virtual desktops, you must also specify the users in the domain that can connect to the virtual desktops.

To enable remote access for all virtual desktops by adding users to the active directory remote group, see http://technet.microsoft.com/en-us/library/cc758036%28WS.10%29.aspx.

To enable remote access for a specific virtual desktop, see http://technet.microsoft.com/en-us/library/bb457106.aspx#ECAA.

3.3. Enabling RDP Access for Desktop Groups

You must enable RDP access for Desktop Groups in the Citrix XenDesktop environment. To enable RDP access for Desktop Groups, use the following procedure to modify the Desktop Group Properties:

1. Open the Citrix Delivery Services Console.
2. Expand Desktop Delivery Controller.
3. Select the appropriate Farm.
4. Expand Desktop Groups.
5. Right click on the appropriate Desktop Group and choose Modify Desktop Group Properties and then Modify All Properties.
7. Choose Client Options.
8. In the Connection Protocols section, click Add..., and the following Add New Protocol screen is displayed:

   **Figure 3.2. Add New Protocol Screen**
9. For the **Enter new protocol name** field, enter **RDP** and click **OK**.

10. In the Connection Protocols section, select **RDP** and click the up button until **RDP** is at the top of the list.

11. Click **OK**.

### 3.4. Enabling RDP in the Citrix Web Interface Site

You must enable RDP in the Citrix Web Interface site.

1. **Choose** *Start > All Programs > Citrix > Management Consoles > Citrix Web Interface Management* to access the Citrix Web Interface Management console.

2. **Select** the Web Interface site and click **Client Deployment** from the Edit Settings pane on the right-hand side.

3. **On the Manage Client Deployment screen, select** **Remote Desktop Connection (RDP)**, as shown below:

   ![Figure 3.3. Manage Client Deployment Screen](image)

   **Figure 3.3. Manage Client Deployment Screen**

4. Click **OK**.
Chapter 4. Configuring with Sun Ray Software

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This chapter describes how to configure the Citrix XenDesktop connector with Sun Ray Software and
provides an example of the user login process.

4.1. How to Configure the Citrix XenDesktop Connector with Sun Ray Software

The following procedure describes how to configure a Sun Ray server using the Sun Ray Software Admin
GUI to automatically provide users direct access to their Windows desktops through the Citrix XenDesktop
connector. This configuration is done through the kiosk mode feature and the Citrix XenDesktop session
type.

This Citrix XenDesktop connector session type is provided through the following files:

- /etc/opt/SUNWkio/sessions/srxc.conf - Session descriptor file
- /opt/SUNWsrxc/bin/srxc - Session script file
- /opt/SUNWsrxc/etc/services.csv - Sample file for the custom service menu
- /opt/SUNWsrxc/lib/srxc.jar - Sun Ray Connector for Citrix XenDesktop Java archive

For more details about configuring Sun Ray Software, refer to the Sun Ray Software Administration Guide.

Steps

1. Install the Citrix XenDesktop connector on all the Sun Ray servers in the failover group.
   See Section 2.1, “How to Install the Citrix XenDesktop Connector”.
2. Configure the Citrix XenDesktop environment for the Citrix XenDesktop connector.
   See Chapter 3, Configuring the Citrix XenDesktop Environment
3. Log in to the Admin GUI.
4. Click the Advanced tab and Kiosk Mode sub-tab. Then click Edit.
5. Choose Citrix XenDesktop Session from the Session (Session Type) menu.
6. (Optional) Modify the session parameters.
7. Add the required and any optional session type arguments to the Arguments field as follows:
   
   `session-type-arguments [-- uttsc-arguments]`

   For a list of examples, see Section 4.1.1, “Example Citrix XenDesktop Session Arguments for Sun Ray
   Software”.


Table 4.1, “Required Kiosk Session Arguments for Citrix XenDesktop Connector” lists the required session arguments:

**Table 4.1. Required Kiosk Session Arguments for Citrix XenDesktop Connector**

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>-d domain-name</td>
<td>Specifies the Windows domain of the virtual desktops, which is preselected</td>
</tr>
<tr>
<td></td>
<td>in the login screen. You can provide a comma separated list, which displays</td>
</tr>
<tr>
<td></td>
<td>a pull-down menu to the user.</td>
</tr>
<tr>
<td>-s server-url</td>
<td>The URL of the Citrix XenDesktop Web Interface Server, either the IP</td>
</tr>
<tr>
<td></td>
<td>address or hostname. For example, <a href="http://192.168.10.1">http://192.168.10.1</a>.</td>
</tr>
</tbody>
</table>

Table 4.2, “Optional Kiosk Session Arguments for Citrix XenDesktop Connector” lists the optional session arguments:

**Table 4.2. Optional Kiosk Session Arguments for Citrix XenDesktop Connector**

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>-B banner-image-url</td>
<td>A URL to an image file used as the background for the Available Desktops</td>
</tr>
<tr>
<td></td>
<td>and Desktop Login dialog screens. Supported file formats are png, gif, and</td>
</tr>
<tr>
<td></td>
<td>jpg. The URL can be either http:// or file://. Shortened URLs, such as</td>
</tr>
<tr>
<td></td>
<td>from bitly, are supported.</td>
</tr>
<tr>
<td>-g background-color</td>
<td>Background color (RGB value) for the Citrix XenDesktop connector screen.</td>
</tr>
<tr>
<td></td>
<td>When this option is used with the -G option, it defines the top color of</td>
</tr>
<tr>
<td></td>
<td>the gradient background. Example value is 225,225,225.</td>
</tr>
<tr>
<td></td>
<td>The default background color is a gradient from 143,158,170 to 95,108,120.</td>
</tr>
<tr>
<td>-G bottom-gradient-color</td>
<td>Bottom color of background gradient (RGB value) for the Citrix XenDesktop</td>
</tr>
<tr>
<td></td>
<td>connector screen. This option requires the -g option, which becomes the top</td>
</tr>
<tr>
<td></td>
<td>color of the background gradient. Example value is 225,225,225.</td>
</tr>
<tr>
<td>-M</td>
<td>Enable the custom service menu. See Section 4.1.3, “Custom Service Menu”</td>
</tr>
<tr>
<td></td>
<td>for more information.</td>
</tr>
<tr>
<td>-p proxy-port</td>
<td>Proxy port number. Default value is 80.</td>
</tr>
<tr>
<td>-P proxy-host</td>
<td>Proxy host. The value can be either a host name or an IP address, without</td>
</tr>
<tr>
<td></td>
<td>the http:// prefix. This may be needed when using an external URL with the</td>
</tr>
<tr>
<td></td>
<td>-B or -W option.</td>
</tr>
<tr>
<td>-r screen-resolutions</td>
<td>Screen resolution options for the Options menu. Format is</td>
</tr>
<tr>
<td></td>
<td>width1xheight1[,width2xheight2...]. Example value is 1024x768,1280x800.</td>
</tr>
<tr>
<td>-T text-color</td>
<td>Text color (RGB value). Example value is 225,225,225.</td>
</tr>
<tr>
<td>-u alt-base</td>
<td>An alternative for the Citrix Web Interface base URL. The default is /</td>
</tr>
<tr>
<td></td>
<td>Citrix/DesktopWeb/. The path must be enclosed in slashes. Example value is</td>
</tr>
<tr>
<td></td>
<td>/path1/path2/.</td>
</tr>
<tr>
<td>-W wallpaper-url</td>
<td>A URL to an image file used as the wallpaper for the Citrix XenDesktop</td>
</tr>
<tr>
<td></td>
<td>connector screen. Supported file formats are png, gif, and jpg. The URL</td>
</tr>
<tr>
<td></td>
<td>can be either http:// or file://. Shortened URLs, such as from bitly, are</td>
</tr>
<tr>
<td></td>
<td>supported.</td>
</tr>
</tbody>
</table>

8. Add any Windows connector (utsc) arguments after the double dash (--) to the Arguments field.
Example Citrix XenDesktop Session Arguments for Sun Ray Software

All options located after the double dash (--) are passed to the Windows connector (uttsc command). Some uttsc options are sent automatically and should not be specified. Do not include the following uttsc options: -i, -u, -d, -p, and -m.

9. Click OK.

10. Configure the server to use kiosk mode for card and non-card users.
    a. Click the System Policy sub-tab on the Advanced menu.
    b. Enable Kiosk Mode for both card and non-card users.
    c. Make sure to disable the Mobile Sessions (NCSM) policy.

11. Click Save.

12. If you configured the server to use kiosk mode in the System Policy page, perform a cold restart of the Sun Ray server.

All new or restarted sessions matching the policy configuration to use kiosk mode will access the new session type.

### 4.1.1. Example Citrix XenDesktop Session Arguments for Sun Ray Software

This example connects to a Citrix XenDesktop Web Interface Server with an IP address of 192.168.10.1 located in the desktop.local domain:

```bash
-d desktop.local -s http://192.168.10.1
```

This example enables the audio input and USB redirection features of the Windows connector:

```bash
-d desktop.local -s http://192.168.10.1 -- -r soundin:high -r usb:on
```

### 4.1.2. Customizing the Citrix XenDesktop Connector Interface

Here are some additional notes about using graphics to customize the Citrix XenDesktop connector screen:

- Instead of specifying the -B or -W options, you can place images in the server's /opt/SUNWsrxc/custom directory. The image files must be named banner.png or logo.png, respectively. Using the -B or -W options overrides these defaults.
- Graphics do not autoscale. You must provide graphics with the correct sizes.
- Using graphics for the background and wallpaper may increase the load time of the Citrix XenDesktop connector interface.

### 4.1.3. Custom Service Menu

When configuring the Citrix XenDesktop connector, you can use the -M option to add menu items to the existing Options menu. New menu items can provide users access to important applications, such as a web browser or a support tool.

You can customize the service menu through the server's /opt/SUNWsrxc/etc/services.csv file, where you need to provide a single line of three arguments for each additional menu items. An example for providing a Firefox menu item is show below:
# "App Name","App Exec","App Icon"
"Firefox","/opt/firefox/firefox","file:///opt/firefox/chrome/icon/default/default16.png"

Here are descriptions for the three arguments. All arguments must be enclosed in parentheses and separated by a comma.

- "App Name" - The name of the menu item.
- "App Exec" - The absolute path to the executable file on the Sun Ray server.
- "App Icon" - (Optional) The URL to an image file used as an icon for the menu item. The supported file format is png and the image size must have a resolution of 16x16. The URL can be either http:// or file://. You may need to set a proxy for the kiosk session (using the -P option) if you specify an external URL.

Some applications require a window manager to operate properly, which means you must create an additional script to run the application. You then need to point the "App Name" field to the script instead of the application executable. The following example shows a script to run Firefox in a window manager, which enables the user to enter text into the browser:

```sh
#!/bin/sh

# Start a window manager
metacity &

# Start Firefox
/opt/firefox/firefox

# Kill window manager once Firefox exits
pkill -9 -u $USER metacity
```

### 4.2. User Login Process with Sun Ray Software

The following procedure describes the user login process when the Citrix XenDesktop connector is configured with Sun Ray Software.

1. Log in to a Sun Ray Client or Oracle Virtual Desktop Client.

   The Desktop Login screen is displayed requesting credentials for the Citrix XenDesktop Web Interface Server.
The Options menu enables you to specify the following settings:

- **Screen Resolution** - Sets the screen resolution for the session.
- **Language** - Sets the language displayed for the Desktop Login screen and the Available Desktops screen.

2. Enter your login information and click **Log In**.

   The Available Desktops screen is displayed.

   **Note**

   If there is only one virtual desktop configured for you, the Available Desktops screen does not display and you are automatically logged into your desktop.
3. Click the name of the desktop to access the desktop.

You are logged in to the virtual Windows desktop.

**Note**

You can restart the desktop by clicking the restart button on the right side of the desktop entry.

**Note**

If the connection to the virtual desktop fails after a disconnection just occurred on the virtual desktop, try again. It takes a few minutes for a virtual desktop to become available after disconnecting from the Citrix XenDesktop connector, even though the Available Desktops screen shows that the virtual desktop is available. Do not restart the virtual machine because of this problem, because you may lose unsaved data.
Chapter 5. Troubleshooting

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Status and error messages for the Citrix XenDesktop connector are provided in the /var/opt/SUNWut/log/message log file.

You can ignore the error message Your virtual desktop $S1-1 => null listed in the log file. This message is logged when a user is trying to connect to a virtual desktop (shown as available in the Available Desktops screen) that is still disconnecting from a previous session.

5.1. Common Problems

Here is a list of common problems with some proposed solutions.

- **Client is cycling.**
  - A Citrix XenDesktop connector kiosk argument is wrong, which is an argument before the double dashes (--). See Table 4.1, “Required Kiosk Session Arguments for Citrix XenDesktop Connector” and Table 4.2, “Optional Kiosk Session Arguments for Citrix XenDesktop Connector” for more details.

- **Client cannot connect to Citrix Web Interface.**
  - SSL is configured on the Citrix Web Interface, but it is not configured on the Citrix XenDesktop connector.
  - The URL to the Citrix Web Interface or the alternate Citrix Web Interface URL is wrong or not provided in the kiosk arguments.

- **Nothing happens after clicking a virtual machine on the Available Desktops screen.**
  - A Windows connector kiosk argument is wrong, which is an argument after the double dashes (--).
  - The virtual machine is not registered with the Citrix Farm, but it is assigned to the user. Or, the Citrix XenDesktop Agent is not installed or is pointed at the wrong Farm.
  - The Desktop Group is not enabled for RDP access. See Section 3.3, “Enabling RDP Access for Desktop Groups” for details.
  - RDP is not enabled on the virtual machine. See Section 3.1, “Enabling RDP Connections on the Virtual Desktops” for details.
Appendix A. Release Notes

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This appendix provides the list of changes, including bug fixes, between Sun Ray Connector for Citrix XenDesktop version 1.0 and version 1.1.

A.1. What's New in Version 1.1

Here is the list of overall changes for the Sun Ray Connector for Citrix XenDesktop 1.1 release:

• Disabling automatic client detection on the Citrix XenDesktop Web Interface Server is no longer required for the Citrix XenDesktop connector.

A.2. Changelog

Here is the list of bugs fixed for the Sun Ray Connector for Citrix XenDesktop 1.1 release:

• 13867551 - Assigned desktops are unbrokered and become available in 2 min.