

# **Sun Ray Connector for Citrix XenDesktop**

## **Administration Guide, Version 1.0**

**ORACLE**

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# Sun Ray Connector for Citrix XenDesktop: Administration Guide, Version 1.0

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## Abstract

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

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# Chapter 1. Overview and Requirements

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

### 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 requires Sun Ray Software 5.2 or later.

The Citrix XenDesktop connector supports Citrix XenDesktop 4.0 with Citrix Web Interface 5.4.

#### Note

An issue has been identified preventing full interoperability with Citrix XenDesktop 5.x platforms. Therefore, use of the Citrix XenDesktop connector is now limited to Citrix XenDesktop 4.0.

### 1.3. Windows Virtual Desktop Requirements

The Citrix XenDesktop connector supports the following Windows virtual desktops:

- Windows 7 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.



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## 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.

See <http://www.oracle.com/technetwork/server-storage/sunrayproducts/downloads/index.html>

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

- Solaris

```
# pkgadd -d SUNWkio-srxc-1.0-nn.pkg
```

- Linux

```
# rpm -i SUNWkio-srxc-1.0-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

```
# pkgrm SUNWkio-srxc
```

- Linux

```
# rpm -e SUNWkio-srxc
```



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# Chapter 3. Configuring the Citrix XenDesktop Environment

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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. Disabling Automatic Client Detection

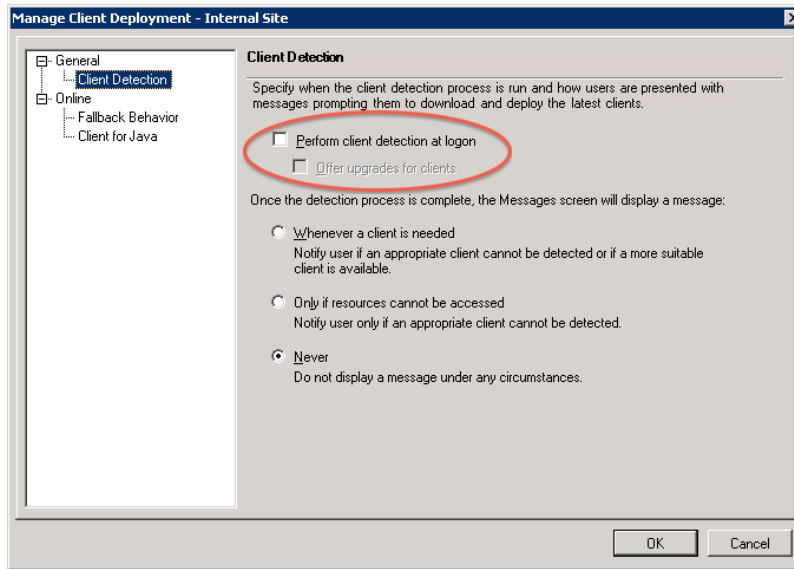
You must disable the automatic client detection as part of the client deployment properties. From a server with the Citrix Web Interface Management console installed, perform the following steps:

#### Note

If you don't want to disable automatic client detection for the default Citrix Web Interface, you can disable automatic client detection on an alternate Citrix Web Interface and use the `-u` option for the kiosk session.

1. On the Windows Start menu, click `All Programs > Citrix > Management Consoles > Citrix Web Interface Management`.
2. In the left pane of the Citrix Web Interface Management console, click `XenApp Web Sites` and select your XenDesktop site in the results pane.
3. In the Action pane on the right, click `Client Deployment`.
4. From the Manage Client Deployment window, click `Properties`.
5. Under General, click `Client Detection`.
6. Under Client Detection, deselect `Perform client detection at logon`, as shown below.

**Figure 3.1. Example for Disabling Automatic Client Detection**



7. Click **OK** on the Properties window and click **OK** on the Manage Client Deployment window.
8. Exit the Citrix Web Interface Management console.

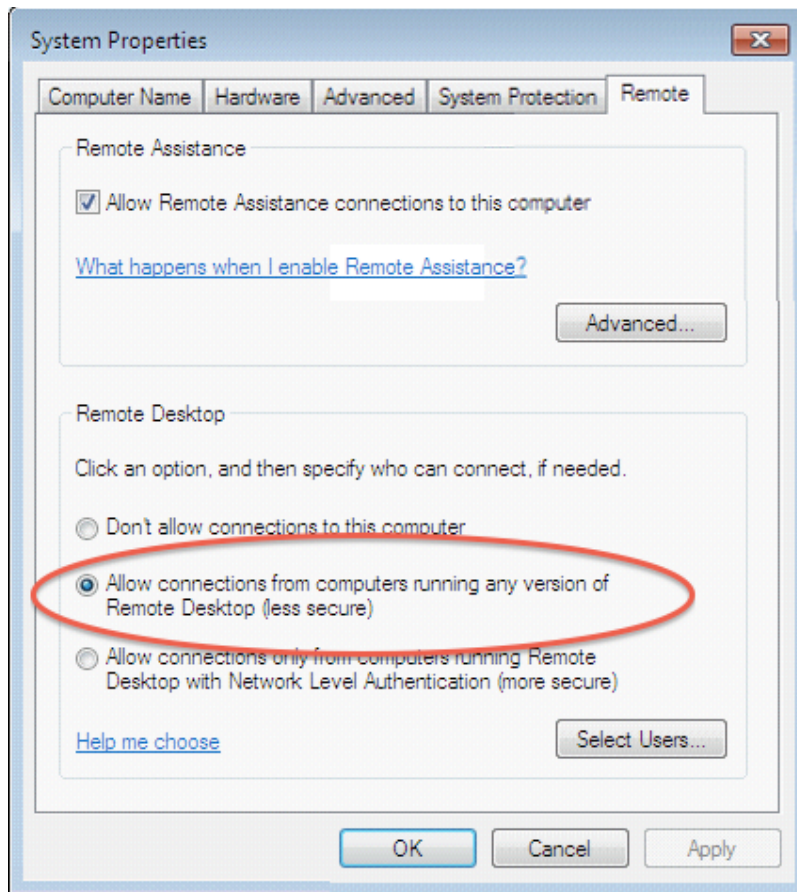
## 3.2. Enabling RDP Connections on the Virtual Desktops

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.

- Windows 7 - <http://technet.microsoft.com/en-us/magazine/ff404238.aspx>
- Windows XP - <http://technet.microsoft.com/en-us/library/bb457106.aspx#ECAA>

Figure 3.2, “Example for Enabling RDP Connections” shows how to enable RDP connections using the System Properties page.

Figure 3.2. Example for Enabling RDP Connections



### 3.3. 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>.

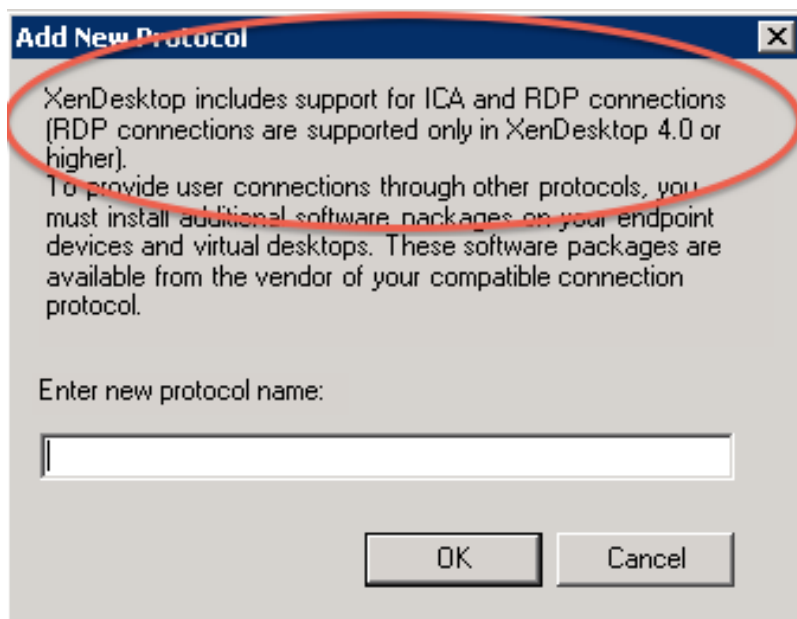
### 3.4. Enabling RDP Access for Desktop Groups

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](#).
6. On the [Desktop Group Properties](#) screen, expand [Advanced](#).
7. Choose [Client Options](#).
8. In the Connection Protocols section, click [Add...](#), as shown below:

**Figure 3.3. 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](#).

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## 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

#### Steps

1. Log in to the Admin GUI.
2. Click the Advanced tab and Kiosk Mode sub-tab. Then click `Edit`.
3. Choose `Citrix XenDesktop Session` from the `Session` (Session Type) menu.
4. (Optional) Modify the session parameters.
5. Add the required and any optional session type arguments to the `Arguments` field as follows:

```
session-type-arguments [-- uttsc-arguments]
```

See the examples provided at the end of this procedure.

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**

Argument	Description
<code>-d domain-name</code>	Specifies the Windows domain of the virtual desktops, which is preselected in the login screen. You can provide a comma separated list, which provides a pull-down menu to the user.

Argument	Description
<code>-s server-url</code>	The URL of the Citrix XenDesktop Web Interface Server, either the IP address or hostname. For example, <a href="http://192.168.10.1">http://192.168.10.1</a> .

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**

Argument	Description
<code>-B banner-image-url</code>	A URL to an image file used as the background for the Available Desktops and Desktop Login dialog screens. Supported file formats are <a href="#">png</a> , <a href="#">gif</a> , and <a href="#">jpg</a> . The URL can be either <a href="http://">http://</a> or <a href="file://">file://</a> . Shortened URLs, such as from <a href="#">bitly</a> , are supported.
<code>-g background-color</code>	Background color (RGB value) for the Citrix XenDesktop connector screen. When this option is used with the <code>-G</code> option, it defines the top color of the gradient background. Example value is <code>225,225,225</code> .  The default background color is a gradient from 143,158,170 to 95,108,120.
<code>-G bottom-gradient-color</code>	Bottom color of background gradient (RGB value) for the Citrix XenDesktop connector screen. This option requires the <code>-g</code> option, which becomes the top color of the background gradient. Example value is <code>225,225,225</code> .
<code>-M</code>	Enable the custom service menu. See <a href="#">Section 4.4, “Custom Service Menu”</a> for more information.
<code>-p proxy-port</code>	Proxy port number. Default value is <code>80</code> .
<code>-P proxy-host</code>	Proxy host. The value can be either a host name or an IP address, without the <a href="http://">http://</a> prefix. This may be needed when using an external URL with the <code>-B</code> or <code>-W</code> option.
<code>-r screen-resolutions</code>	Screen resolution options for the Options menu. Format is <code>width1xheight1[,width2xheight2...]</code> . Example value is <code>1024x768,1280x800</code> .
<code>-T text-color</code>	Text color (RGB value). Example value is <code>225,225,225</code> .
<code>-u alt-base</code>	An alternative for the Citrix Web Interface base URL. The default is <a href="#">/Citrix/DesktopWeb/</a> . The path must be enclosed in slashes. Example value is <a href="#">/path1/path2/</a> .
<code>-W wallpaper-url</code>	A URL to an image file used as the wallpaper for the Citrix XenDesktop connector screen. Supported file formats are <a href="#">png</a> , <a href="#">gif</a> , and <a href="#">jpg</a> . The URL can be either <a href="http://">http://</a> or <a href="file://">file://</a> . Shortened URLs, such as from <a href="#">bitly</a> , are supported.

6. Add any Windows connector (`uttsc`) arguments after the double dash (`--`) to the `Arguments` field.

```
session-type-arguments [-- uttsc-arguments]
```

All options that follow 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`.

7. Click `OK`.
8. 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.
9. Click Save.
  10. 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.

## 4.2. Example Citrix XenDesktop Session Arguments

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:

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

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

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

## 4.3. 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 `/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.

## 4.4. 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 `/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:

```
# !/bin/sh

# Start a window manager
metacity &

# Start Firefox
/opt/firefox/firefox

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

## 4.5. 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.

**Figure 4.1. Desktop Login Screen**

The Options menu enables you to specify the following settings:



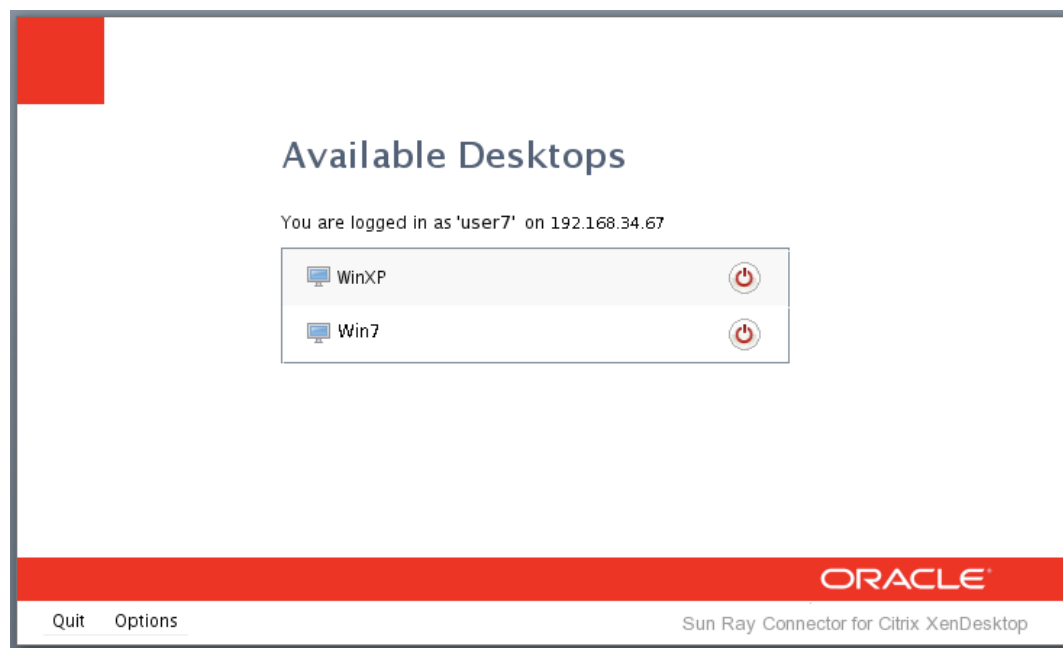
- Screen Resolution - Sets the screen resolution for the session.
  - Language - Sets the language displayed for the Desktop Login screen and the Available Desktops screen.
2. Enter your login information and click [Log In](#).

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.

**Figure 4.2. Available Desktops Screen**



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.



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# 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.
  - The automatic client detection is not disabled. See [Section 3.1, “Disabling Automatic Client Detection”](#) for more details.
- **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 3.4, “Enabling RDP Access for Desktop Groups”](#) for details.
  - RDP is not enabled on the virtual machine. See [Section 3.2, “Enabling RDP Connections on the Virtual Desktops”](#) for details.

