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This document, *VMware Horizon Client for Android User Guide*, explains how to use VMware Horizon® Client™ for Android to connect to and use remote desktops and applications.

For information about the software installed on your remote desktops, contact your system administrator.

This document assumes that Horizon Client for Android is already installed and configured on your client device. For information about installing and configuring Horizon Client for Android, see the *VMware Horizon Client for Android Installation and Setup Guide* document.
How Do I Log In?

Before you can log in and connect to a remote desktop or application, a system administrator at your company must set up your user account. If your system administrator has not set up your user account, you cannot use Horizon Client or HTML Access.

If Horizon Client prompts you for a server name and domain name, your system administrator must tell you the server name to type and domain to select. At some companies, Horizon Client automatically connects to the correct server and selects the correct domain for you.

If you do not know your user name or password or how to reset your password, contact the system administrator at your company.

When you are ready to log in and get started, see Chapter 3 Connecting to Remote Desktops and Applications.
Connecting to Remote Desktops and Applications

You can use Horizon Client to connect to remote desktops and applications.

This chapter includes the following topics:

- Setting the Certificate Checking Mode in Horizon Client
- Connect to a Remote Desktop or Application
- Use Unauthenticated Access to Connect to Remote Applications
- Switch Remote Desktops or Published Applications
- Reconnecting to a Desktop or Published Application
- Disconnecting From a Remote Desktop or Application
- Log Off From a Remote Desktop

Setting the Certificate Checking Mode in Horizon Client

You can determine whether client connections are rejected if any or some server certificate checks fail by configuring a setting in Horizon Client.

Certificate checking occurs for SSL connections between the server and Horizon Client. Certificate verification includes the following checks:

- Is the certificate intended for a purpose other than verifying the identity of the sender and encrypting server communications? That is, is it the correct type of certificate?
- Has the certificate expired, or is it valid only in the future? That is, is the certificate valid according to the computer clock?
- Does the common name on the certificate match the host name of the server that sends it? A mismatch can occur if a load balancer redirects Horizon Client to a server that has a certificate that does not match the host name entered in Horizon Client. Another reason a mismatch can occur is if you enter an IP address rather than a host name in the client.
- Is the certificate signed by an unknown or untrusted certificate authority (CA)? Self-signed certificates are one type of untrusted CA.

To pass this check, the certificate's chain of trust must be rooted in the device's local certificate store.
To set the certificate checking mode, start Horizon Client and open **Settings**. In **Settings**, tap **Security options** and tap **Security mode**. You have three choices:

- **Never connect to untrusted servers.** If any of the certificate checks fails, the client cannot connect to the server. An error message lists the checks that failed.
- **Warn before connecting to untrusted servers.** If a certificate check fails because the server uses a self-signed certificate, you can click **Continue** to ignore the warning. For self-signed certificates, the certificate name is not required to match the server name you entered in Horizon Client.
- **Do not verify server identity certificates.** This setting means that no certificate checking occurs.

If the certificate checking mode is set to **Warn**, you can still connect to a server that uses a self-signed certificate.

**Connect to a Remote Desktop or Application**

To connect to a remote desktop or application, you must provide the name of a server and supply credentials for your user account.

**Prerequisites**

Obtain the following information from your system administrator:

- Instructions about whether to turn on a VPN (virtual private network) connection.
- Server name to use for connecting to the server.
- If the port is not 443, the port number to use for connecting to the server.
- Credentials to log in, such as an Active Directory user name and password, RSA SecurID user name and passcode, RADIUS authentication user name and passcode, or smart card personal identification number (PIN).
- Domain name for logging in.
- Instructions about whether you can use fingerprint authentication.

If your system administrator sent you an email that contains a URL to use for setting up an RSA SecurID software token on your client device, open that email and verify that you also have the activation code or that the activation code appears at the end of the URL.

If your system administrator instructs you to configure the certificate checking mode, see **Setting the Certificate Checking Mode in Horizon Client**.

**Procedure**

1. If a VPN connection is required, turn on the VPN.
2. On the client device, tap the **Horizon** app icon.
3 Connect to a server.

<table>
<thead>
<tr>
<th>Option</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connect to a new server</td>
<td>Enter the name of a server, enter a description (optional), and tap Connect.</td>
</tr>
<tr>
<td>Connect to an existing server</td>
<td>Tap the server shortcut on the Servers tab.</td>
</tr>
</tbody>
</table>

Connections between Horizon Client and servers always use SSL. The default port for SSL connections is 443. If the server is not configured to use the default port, use the format shown in this example: **view.company.com:1443**.

4 If a smart card is required or optional, select the smart card certificate to use and enter your PIN.

If your smart card has only one certificate, that certificate is already selected. If there are many certificates, you can scroll through the certificates.

5 If you are prompted for RSA SecurID credentials or RADIUS authentication credentials, either type your credentials or, if you plan to use an embedded RSA SecurID token, install an embedded token.

<table>
<thead>
<tr>
<th>Option</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing token</td>
<td>If you use a hardware authentication token or software authentication token on a smart phone, enter your user name and passcode. The passcode might include both a PIN and the generated number on the token.</td>
</tr>
<tr>
<td>Install software token</td>
<td>Tap External Token. In the Install Software Token dialog box, paste the CT-KIP URL or CTFString URL that your administrator sent to you in email. If the URL contains an activation code, you do not need to enter anything in the Password or Activation Code text box.</td>
</tr>
</tbody>
</table>

6 If you are prompted a second time for RSA SecurID credentials or RADIUS authentication credentials, enter the next generated number on the token.

Do not enter your PIN, and do not enter the same generated number that you entered before. If necessary, wait until a new number is generated.

7 If you are prompted for a user name and password, supply your Active Directory credentials.

   a Type the user name and password as instructed by your system administrator.

   b Select a domain.

      If the Domain drop-down menu is hidden, type the user name as **username@domain** or **domain\username**.

   c (Optional) If the Enable Fingerprint check box is available, select it to use fingerprint authentication.

      The Enable Fingerprint check box is available only if biometric authentication is enabled on the server and you have not previously authenticated with fingerprint authentication.
d  (Optional) Select the Save Password check box if your administrator has enabled this feature and if the server certificate can be fully verified.

If this is the first time you are saving a password, you are prompted to activate the device administrator, which is required to save a password on client devices.

e  Tap Connect.

If fingerprint authentication is enabled and you are logging in for the first time, your Active Directory credentials are stored securely in the client device’s database for future use.

8  If you are prompted for fingerprint authentication, place your finger on the fingerprint sensor.

If you do not want to use fingerprint authentication, tap Cancel. You can connect to the server again and tap Use password to enter a user name and password.

9  (Optional) Tap the display protocol settings icon in the upper-right corner of the window to select the display protocol to use.

VMware Blast provides better battery life and is the best protocol for high-end 3D and mobile device users.

10  Tap a desktop or application to connect to it.

If you are connecting to a published desktop, and if the desktop is already set to use the Microsoft RDP display protocol, you cannot connect immediately. You are prompted to have the system log you off the remote operating system so that a connection can be made with the PCoIP display protocol or the VMware Blast display protocol.

The remote desktop or application starts.

If you are using Horizon Client on a Chromebook or an Android device in DeX desktop mode, the remote desktop or application starts in a new window instead of in the original window. The desktop and application selector window also remains open, so that you can connect to multiple items at the same time. When you open a new application, Horizon Client opens all previous application sessions. Horizon Client does not open previous application sessions when you open a remote desktop session. You can have a maximum of four sessions at the same time.

After you connect to a desktop or application for the first time, a shortcut for the desktop or application is saved to the Recent tab. The next time you want to connect to the remote desktop or application, you can tap the shortcut instead of tapping the server icon.

Use Unauthenticated Access to Connect to Remote Applications

A Horizon administrator can use the Unauthenticated Access feature to create Unauthenticated Access users and entitle those users to remote applications on a Connection Server instance. Unauthenticated Access users can log in to the server anonymously to connect to their remote applications.
Prerequisites

Obtain the following information from your system administrator:

- Instructions for whether to turn on a VPN (virtual private network) connection.
- Server name to use for connecting to the server.
- Port number to use for connecting to the server if the port is not 443.
- An Unauthenticated Access user account to use for logging in anonymously.

If your system administrator instructs you to configure the certificate checking mode, see Setting the Certificate Checking Mode in Horizon Client.

Procedure

1. If a VPN connection is required, turn on the VPN.
2. On the client device, open the Horizon app.
3. Tap the **Settings** (gear) icon in the upper-right corner of the Horizon Client window, tap **Unauthenticated access**, and select the **Unauthenticated access** check box.
4. Connect to the server on which you have unauthenticated access to remote applications.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connect to a new server</td>
<td>Enter the name of a server, enter a description (optional), and tap <strong>Connect</strong>.</td>
</tr>
<tr>
<td>Connect to an existing server</td>
<td>Tap the server shortcut on the <strong>Servers</strong> tab.</td>
</tr>
</tbody>
</table>

Connections between Horizon Client and servers always use SSL. The default port for SSL connections is 443. If the server is not configured to use the default port, use the format shown in this example: `view.company.com:1443`.

5. When the login window appears, select a user account from the **User account** drop-down menu, if required.

   If only one user account is available, the user account is automatically selected.

6. (Optional) Select the **Always use this account** check box to bypass the login window the next time you connect to the server.

   To deselect this setting before you connect to the server the next time, touch and hold the server shortcut until the context menu appears, tap **Edit**, tap **Forget the saved Unauthenticated Access account** *(name)*, and tap **Done**.

7. Tap **Connect** to log in to the server.

   The application selection window appears.

8. Tap an application icon to start the application.

After you connect to a remote application for the first time, a shortcut for the application is saved to the **Recent** tab. The next time you want to connect to the application, you can tap the shortcut instead of tapping the server icon.
Switch Remote Desktops or Published Applications

Horizon Client supports multiple remote desktop and application sessions when you use a Chromebook or an Android device in DeX desktop mode. You can switch these remote desktop and application sessions.

Procedure

- Select a remote desktop or published application from the same server or a different server.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
</table>
| Choose a different desktop or application on the same server | From the desktop and application selector window, tap the other desktop or application. The desktop or application opens in a new window so that now you have multiple windows open and you can switch between them.  
  **Note** If the new application is in the same farm as the current application, the new application opens in the same window. |
| Choose a different desktop or application on a different server | Tap the Back button or the Disconnect icon in the upper-right corner of the desktop and application selector window and tap Log Out to disconnect from the server. You can now connect to a different server and open a new desktop or application. |

Reconnecting to a Desktop or Published Application

For security purposes, a Horizon administrator can set timeouts that log you off of a server after a certain number of hours and that lock a published application after a certain number of minutes of inactivity.

If you have not used a published application for a certain amount of time, you receive a warning prompt 30 seconds before the application is automatically locked. If you do not respond, the application is locked. By default, the timeout occurs after 15 minutes of inactivity, but your Horizon administrator can change the time period. For example, if you have one or more applications open and you walk away from your computer, the application windows might no longer be open when you return an hour later. Instead you might see a dialog box that prompts you to click OK so that the application windows appear again.

The server timeout period is typically set for a certain number of hours of inactivity. By default, you are required to log in again if you have Horizon Client open and connected to a particular server for more than 10 hours. This timeout applies to both published application and remote desktop connections.

On a Chromebook or an Android device in DeX desktop mode, if you navigate to the desktop and application selector window and one or more previous application sessions are disconnected, Horizon Client prompts you to reconnect to the previous application sessions. You can click **Reconnect to applications** to open the previous application sessions, or click **Not now** to dismiss the message. You can also select a check box to not show the message again.
Disconnecting From a Remote Desktop or Application

You can disconnect from a remote desktop without logging off, so that applications remain open on the remote desktop. You can also disconnect from a remote application so that the remote application remains open.

On a mobile device, when you are using a remote desktop or application in full-screen mode, you can disconnect by tapping the Horizon Client Tools radial menu icon and tapping the Disconnect icon. If you are not using full-screen mode, Disconnect is in the menu in the upper-right corner of the Horizon Client toolbar.

On a thin client, when you are connected to a remote desktop or application, you disconnect by clicking the Disconnect icon in the Unity Touch sidebar or in a pop-up menu, depending on your thin client model. For more information, see Using Horizon Client on a Thin Client.

Note A Horizon administrator can configure a remote desktop to automatically log off when it is disconnected. In that case, any open programs in the remote desktop are stopped.

Log Off From a Remote Desktop

You can log off from a remote desktop operating system, even if you do not have a desktop open in Horizon Client. If you are currently connected to and logged in to a remote desktop, you can use the Windows Start menu to log off. After Windows logs you off, the desktop is disconnected.

Prerequisites

Obtain the credentials that you use to log in, such as your Active Directory user name and password, RSA SecurID user name and passcode, or RADIUS authentication user name and passcode.

Procedure

1. On the Servers tab, tap the server shortcut.
2. If prompted, supply your RSA user name and passcode, your Active Directory user name and password, or both.
3. Touch and hold the desktop name until the context menu appears.
   You can perform this step from either the All or Favorites tab.
4. Tap Log Off in the context menu.

Any unsaved files that are open on the remote desktop are closed during the logoff operation.

What to do next

Tap the Back button or the Disconnect icon in the upper-right corner of the window and tap Log Out to disconnect from the server.
Using Remote Desktops and Applications

You can use Horizon Client to connect to remote desktops and applications. Horizon Client includes additional features to aid navigation.

This chapter includes the following topics:

- Using the Unity Touch Sidebar with a Remote Desktop
- Using the Unity Touch Sidebar with a Remote Application
- Horizon Client Tools on a Mobile Device
- Gestures
- Using Native Operating System Gestures with Touch Redirection
- Copying and Pasting Text and Images
- Dragging and Dropping Text and Image Files
- Saving Documents in a Published Application
- Share Access to Local Storage with Client Drive Redirection
- Multitasking
- Configure Horizon Client in Thin Client Mode
- Using Horizon Client on a Thin Client
- Using Android 7.0 Nougat Multi-Window Modes with Horizon Client

Using the Unity Touch Sidebar with a Remote Desktop

You can quickly navigate to a remote desktop application or file from a Unity Touch sidebar. From this sidebar, you can open files and applications, switch between running applications, and minimize, maximize, restore, or close windows and applications in a remote desktop.

The Unity Touch feature is available only if a Horizon administrator has enabled it. A Horizon administrator might have also created a default Favorite Applications list. You see this list only the first time you log in to the remote desktop. You can create your own list after you log in.

If the Unity Touch feature is enabled, the sidebar appears on the left side of the window when you first access a remote desktop.
If you access a desktop that has Unity Touch enabled but the sidebar is not displayed, you can see a tab on the left side of the window. Besides swiping this tab to the right to open the sidebar, you can slide the tab up or down.

From this sidebar, you can perform many actions on a file or application.

<table>
<thead>
<tr>
<th>Table 4-1. Unity Touch Sidebar Actions for a Remote Desktop</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Action</strong></td>
</tr>
<tr>
<td>Show or hide the onscreen keyboard</td>
</tr>
<tr>
<td>Change the Horizon Client settings</td>
</tr>
<tr>
<td>Disconnect from the desktop</td>
</tr>
<tr>
<td><strong>Action</strong></td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>Show the sidebar</td>
</tr>
<tr>
<td>Hide the sidebar</td>
</tr>
<tr>
<td>Navigate to an application</td>
</tr>
<tr>
<td>Navigate to a file</td>
</tr>
</tbody>
</table>
| Search for an application or file | ▪ Tap in the Search box and type the name of the application or file.  
▪ To use voice dictation, tap the microphone on the keyboard.  
▪ To launch an application or file, tap the name of the application or file in the search results.  
▪ To return to the home view of the sidebar, tap the X to close the Search box. |
| Open an application or file | Tap the name of the file or application in the sidebar. The application starts and the sidebar closes. |
| Switch between running applications or open windows | Tap the application name under Running Applications. If more than one file is open for one application, tap the chevron (>) next to the application to expand the list. |
| Minimize a running application or window | Touch and hold the application name under Running Applications until the context menu appears. Tap Minimize. |
| Maximize a running application or window | Touch and hold the application name under Running Applications until the context menu appears. Tap Maximize. |
| Close a running application or window | Touch and hold the application name under Running Applications until the context menu appears. Tap Close. |
| Restore a running application or window to its previous size and position | Touch and hold the application name under Running Applications until the context menu appears. Tap Restore. |
| Create a list of favorite applications or files | 1 Search for the application or file, or tap Manage under the Favorite Applications or Favorite Documents list.  
If the Manage bar is not visible, tap the chevron (>) next to Favorite Applications or Favorite Files.  
2 Tap the check box next to the names of your favorites in the search results or in the list of available applications or files.  
The favorite that you add last appears at the top of your favorites list. Your favorites are remembered across all of your mobile devices so that, for example, you have the same list whether using your smart phone or your tablet. |
Table 4-1. Unity Touch Sidebar Actions for a Remote Desktop (Continued)

<table>
<thead>
<tr>
<th>Action</th>
<th>Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remove an application or file from the favorites list</td>
<td>1. Search for the application or file, or tap <strong>Manage</strong> under the <strong>Favorite Applications</strong> or <strong>Favorite Documents</strong> list. If the <strong>Manage</strong> bar is not visible, tap the chevron (&gt;) next to <strong>Favorite Applications</strong> or <strong>Favorite Documents</strong>. 2. Tap to remove the check mark next to the name of the application or file in the favorites list.</td>
</tr>
<tr>
<td>Reorder an application or file in the favorites list</td>
<td>1. Tap <strong>Manage</strong> under the <strong>Favorite Applications</strong> or <strong>Favorite Documents</strong> list. If the <strong>Manage</strong> bar is not visible, tap the chevron (&gt;) next to <strong>Favorite Applications</strong> or <strong>Favorite Documents</strong>. 2. In the favorites list, touch and hold the handle on the left side of the application or file name and drag the favorite up or down the list.</td>
</tr>
</tbody>
</table>

Using the Unity Touch Sidebar with a Remote Application

You can quickly navigate to a remote application from a Unity Touch sidebar. From this sidebar, you can launch applications, switch between running applications, and minimize, maximize, restore, or close remote applications. You can also switch to a remote desktop.

The Unity Touch feature is available only if a Horizon administrator has enabled it.

When you access a remote application, the Unity Touch sidebar appears on the left side of the window. If the Unity Touch sidebar is closed, a tab appears on the left side of the window. You can swipe this tab to the right to reopen the sidebar. You can also slide the tab up or down.

Figure 4-3. Unity Touch Sidebar for a Remote Application on a Mobile Device
From the Unity Touch sidebar, you can perform many actions on a remote application.

<table>
<thead>
<tr>
<th>Action</th>
<th>Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Show or hide the onscreen keyboard</td>
<td>(Thin client only) Select the Keyboard icon.</td>
</tr>
<tr>
<td>Modify Horizon Client settings</td>
<td>(Thin client only) Select the Settings icon.</td>
</tr>
<tr>
<td>Disconnect from the application</td>
<td>(Thin client only) Select the Disconnect icon.</td>
</tr>
<tr>
<td>Show the sidebar</td>
<td>Swipe the tab to the right to open the sidebar. When the sidebar is open, you cannot perform actions on the application window.</td>
</tr>
<tr>
<td>Hide the sidebar</td>
<td>Swipe the tab to the left to close the sidebar. When the sidebar is open, you cannot perform actions on the application window.</td>
</tr>
<tr>
<td>Switch between running applications</td>
<td>Tap the application under Current Connection.</td>
</tr>
<tr>
<td>Open an application</td>
<td>Tap the name of the application under Applications in the sidebar. The application starts and the sidebar closes.</td>
</tr>
</tbody>
</table>
| Close a running application    | 1 Touch and hold the application name under Current Connection until the context menu appears.  
                                  | 2 Tap Close. |
| Minimize a running application | 1 Touch and hold the application name under Current Connection until the context menu appears.  
                                  | 2 Tap Minimize. |
| Maximize a running application | 1 Touch and hold the application name under Current Connection until the context menu appears.  
                                  | 2 Tap Maximize. |
| Restore a running application  | 1 Touch and hold the application name under Current Connection until the context menu appears.  
                                  | 2 Tap Restore. |
| Switch to a remote desktop     | Tap the desktop name under Desktops. |
Horizon Client Tools on a Mobile Device

On a mobile device, the Horizon Client Tools include buttons for displaying the onscreen keyboard, virtual touchpad, configuration settings, and a virtual keypad for arrow keys and function keys.

When you use a remote desktop or application in full-screen mode, the Horizon Client Tools radial menu icon appears at the right edge of the window. You can drag the radial menu icon to relocate it. Tap to expand the radial menu and display icons for each tool, which you can tap to select. Tap outside the tool icons to collapse the icons back into the radial menu icon.

If the remote desktop or application is not in full-screen mode, a toolbar appears on the right side of the menu bar at the top of the window. You can tap the Full Screen icon on the toolbar to enter full-screen mode. When you are in full-screen mode, you can tap a similar icon in the radial menu to exit full-screen mode.

The radial menu includes several tools.

### Table 4-3. Radial Menu Icons

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Horizon Client Tools radial menu" /></td>
<td>Horizon Client Tools radial menu</td>
</tr>
<tr>
<td><img src="image" alt="Disconnect" /></td>
<td>Disconnect</td>
</tr>
<tr>
<td><img src="image" alt="Onscreen keyboard (toggles to show or hide)" /></td>
<td>Onscreen keyboard (toggles to show or hide)</td>
</tr>
<tr>
<td><img src="image" alt="Settings" /></td>
<td>Settings</td>
</tr>
<tr>
<td><img src="image" alt="Navigation keys" /></td>
<td>Navigation keys</td>
</tr>
<tr>
<td><img src="image" alt="Virtual touchpad" /></td>
<td>Virtual touchpad</td>
</tr>
<tr>
<td><img src="image" alt="Gesture help" /></td>
<td>Gesture help</td>
</tr>
</tbody>
</table>

**Onscreen Keyboard**

The onscreen keyboard has more keys than the standard onscreen keyboard, for example, Control keys and function keys are available. To display the onscreen keyboard, tap the screen with three fingers at the same time or tap the Keyboard icon.
If you are using a remote desktop or application in full-screen mode, the **Keyboard** icon is in the Horizon Client Tools radial menu. If you are not using full-screen mode, the **Keyboard** icon is on the Horizon Client toolbar.

You can also use the feature that displays the onscreen keyboard whenever you tap a text field, such as in a note or new contact. If you then tap in an area that is not a text field, the keyboard is dismissed.

To turn this feature on or off, use the **Keyboard popup** and **Keyboard dismiss** options. To display these options when you are using a remote desktop or application in full-screen mode, tap the Horizon Client Tools radial menu icon, tap the gear icon, and tap **Keyboard**. If you are not using full-screen mode, **Settings** is in the menu in the upper-right corner of the Horizon Client toolbar. If you are not connected to a remote desktop or application, tap the gear icon in the upper right corner of the Horizon Client window.

**Note** On Kindle Fire tablets, tapping with three fingers does not display the onscreen keyboard. You can instead tap the **Keyboard** icon on the Horizon Client toolbar to display the onscreen keyboard.

Even if you use an external keyboard, a one-row onscreen keyboard might still appear, which contains function keys, and the Ctrl, Alt, Win, and arrow keys. Some external keyboards do not have all these keys.

**Sending a String of Characters**

From the onscreen keyboard, tap the pen icon on the left side of the Ctrl key to display the local input buffer. Text that you type into this text box is not sent to an application until you tap **Send**. For example, if you open an application such as Notepad and tap the pen icon, the text that you type does not appear in the Notepad application until you tap **Send**.

Use this feature if you have a poor network connection. That is, use this feature if, when you type a character, the character does not immediately appear in the application. With this feature, you can quickly type up to 1,000 characters and then either tap **Send** or tap **Return** to have all 1,000 characters appear at once in the application.

**Navigation Keys**

Tap the **Ctrl/Page** icon in the Horizon Client Tools or onscreen keyboard to display the navigation keys. These keys include Page Up, Page Down, arrow keys, function keys, and other keys that you often use in Windows environments, such as Alt, Del, Shift, Ctrl, Win, and Esc. You can press and hold arrow keys for continuous key strokes. For a picture of the Ctrl/Page icon, see the table at the beginning of this topic.

Use the Shift key on this keypad when you need to use key combinations that include the Shift key, such as Ctrl+Shift. To tap a combination of these keys, such as Ctrl+Alt+Shift, first tap the onscreen Ctrl key. After the Ctrl key turns blue, tap the onscreen Alt key. After the Alt key turns blue, tap the onscreen Shift key. A single onscreen key is provided for the key combination Ctrl+Alt+Del.

**Onscreen Touchpad and Full-Screen Touchpad**

The virtual touchpad can be either regular-size, to resemble a touchpad on a laptop computer, or full screen, so that the entire device screen is a touchpad.
By default, when you tap the touchpad icon, you can touch anywhere on the screen to move the mouse pointer. The screen becomes a full-screen touchpad.

- Moving your finger around the touchpad creates a mouse pointer that moves around the remote desktop or application.
- You can use the regular-size and full-screen virtual touchpad for single-clicking and double-clicking.
- The regular touchpad also contains left-click and right-click buttons.
- You can tap with two fingers and then drag to scroll vertically.

You can drag the regular-size virtual touchpad to the side of the device so that you can use your thumb to operate the touchpad while you are holding the device.

You can make the virtual touchpad resemble the touchpad on a laptop, including right-click and left-click buttons, by setting the **Full screen touchpad** setting to off. If you are using the remote desktop or application in full-screen mode, tap the Horizon Client Tools radial menu icon, tap the gear icon, tap **Touch**, and deselect the **Full screen touchpad** setting.

To adjust how quickly the pointer moves when you use the touchpad, adjust the **Touchpad sensitivity** option. If you are using the remote desktop or application in full-screen mode, tap the Horizon Client Tools radial menu icon, tap the gear icon, tap **Touch**, tap **Touchpad sensitivity**, and drag the slider.

If you are not using full-screen mode, **Settings** is in the menu in the upper-right corner of the Horizon Client toolbar. If you are not connected to a remote desktop or application, tap the gear icon in the upper right corner of the Horizon Client window.

**Gestures**

VMware has created user interaction aids to help you navigate conventional Windows user interface elements on a non-Windows device.

**Clicking**

As in other applications, you tap to click a user interface element.

**Right-Clicking**

The following options are available for right-clicking:

- Use the Horizon Client Tools to display the regular virtual touchpad and use the touchpad's right-click button.
- On a touch screen, tap with two fingers at nearly the same time. The right-click occurs where the first finger tapped.
- On some devices, you can use an external mouse, such as a USB or Bluetooth mouse, to right-click.
Scrolling and Scrollbars

The following options are available for vertical scrolling.

- On a touch screen, tap with one or two fingers and then drag to scroll. The text under your fingers moves in the same direction as your fingers.

  **Important** Scrolling with one finger has the following limitations: It does not work if you have zoomed in, or when the onscreen keyboard is displayed, or when you are using the full-screen touchpad.

- Use the Horizon Client Tools to display the touchpad, tap the touchpad with two fingers, and then drag to scroll.

- Use the onscreen touchpad to move the mouse pointer and click scroll bars.

Zooming In and Out

As in other applications, pinch your fingers together or apart to zoom on a touch screen.

Window Resizing

If you use the full-screen touchpad to resize a window, touch and hold one finger at the corner or side of the window and drag to resize.

If you use the regular-size virtual touchpad, touch and hold the left-click button while dragging the corner or side of a window.

Sound, Music, and Video

If sound is turned on for your device, you can play audio in a remote desktop.

Using a Thin Client

How you interact with Windows user interface elements when Horizon Client is installed on a thin client depends on the thin client model and the external input device you are using with the thin client. For more information, see Using Horizon Client on a Thin Client.

Using Native Operating System Gestures with Touch Redirection

You can use native operating system gestures from a touch-based mobile device when you are connected to a Windows 8, Windows 10, or Windows Server 2012 remote desktop, or to a remote application that is hosted on Windows Server 2012. For example, you can touch, hold, and release an item on a Windows 8 desktop to display the item's context menu.
When touch redirection is enabled, you can use only native operating system touch gestures. Horizon Client local gestures, such as double-click and pinch, no longer work. You must drag the Unity Touch tab button to display the Unity Touch sidebar.

Touch redirection is enabled by default when you connect to a Windows 8, Windows 10, or Windows Server 2012 remote desktop, or to a remote application that is hosted on Windows Server 2012.

To disable touch redirection, open Settings, tap Touch, and deselect the Windows native touch gestures check box. If you are connected to a remote desktop or application in full-screen mode, tap the Horizon Client Tools radial menu icon and tap the gear icon. If you are not using full-screen mode, Settings is in the menu in the upper-right corner of the Horizon Client toolbar. If you are not connected to a remote desktop or application, tap the gear icon in the upper right corner of the Horizon Client window.

Copying and Pasting Text and Images

By default, you can copy and paste plain text from the client device to a remote desktop or application. If a Horizon administrator enables the feature, you can also copy and paste plain text from a remote desktop or application to the client device, or between two remote desktops or applications.

A Horizon administrator can configure this feature so that copy and paste operations are allowed only from the client device to a remote desktop or application, or only from a remote desktop or application to the client device, or both, or neither.

You can also copy and paste images and Rich Text Format (RTF) text, but the following restrictions apply:

- You cannot copy and paste RTF text on a Chromebook.
- You can copy and paste images and RTF text from the client device to a remote desktop or application. You cannot copy and paste images and RTF text from a remote desktop or application to the client device.
- Only Google apps are supported. For example, you can copy and paste images and RTF text from Google Docs, Gmail, Chrome, Google+, Google Hangouts, Google Calendar, Google Sheets, and Google Slides.
- You can copy and paste images only when the client device can access the Google website.
- If you select an image and RTF text (or plain text) together, the image is discarded and only the text is copied and pasted. To copy and paste an image, you must select only the image.

The clipboard can accommodate a maximum of 1 MB of data for copy and paste operations. If the text and RTF data together use less than maximum clipboard size, the formatted text is pasted. Often the RTF data cannot be truncated, so that if the text and formatting use more than the maximum clipboard size amount, the RTF data is discarded, and plain text is pasted. If you are unable to paste all of the formatted text you selected in one operation, you might need to copy and paste smaller amounts in each operation.

Dragging and Dropping Text and Image Files

You can drag a text file or an image file from local storage on the client device to a published application or an open application in a remote desktop and drop the content of the file into the application.
For example, if Horizon Client is installed on an Android phone, you can select Settings > Storage > Explore or open the MyFiles app, select a folder, and drag a text file to the Wordpad application in a remote desktop. If Horizon Client is installed on a Chromebook, you can drag files from the Downloads folder or from a USB device attached to the Chromebook.

This feature has the following limitations and requirements:

- You can drag and drop a maximum of 1 MB of data.
- You cannot drag and drop Rich Text Format (RTF) text.
- If you select multiple files, only the content of the first file is dropped into the application.
- You cannot drag and drop text files and image files from a remote desktop or application to the client device.
- Android 7.0 or later is required for Android client devices.
- Chrome OS M63 or later is required for Chrome client devices.

A Horizon administrator can disable this feature.

**Saving Documents in a Published Application**

With certain published applications, such as Microsoft Word or WordPad, you can create and save documents. Where these documents are saved depends on your company's network environment. For example, your documents might be saved to a home share mounted on your local computer.

Contact your system administrator to find out where documents created in published applications are saved in your environment.

**Share Access to Local Storage with Client Drive Redirection**

You can configure Horizon Client to share local storage with a remote desktop or application. This feature is called client drive redirection.

In a Windows remote desktop or remote application, local storage appears in the Devices and drives section in the This PC folder, or in the Other section in the Computer folder. The folders and storage devices that you select for sharing use the naming format *name on HorizonClient*.

**Prerequisites**

- Verify that a Horizon administrator has enabled the client drive redirection feature. You cannot share local storage with a remote desktop or application if the client drive redirection feature is not enabled.
- Connect to the remote desktop or application with which you want to share local storage. If you have not logged in at least once, become familiar with the procedure Connect to a Remote Desktop or Application.
Procedure

1. Open **Settings** and tap **Local storage redirection**.

   If you are connected to the remote desktop or application in full-screen mode, tap the Horizon Client Tools radial menu icon and tap the gear icon. If you are not using full-screen mode, **Settings** is in the menu in the upper-right corner of the Horizon Client toolbar.

2. Tap **Local Storage Redirection** and configure the local storage redirection options.

<table>
<thead>
<tr>
<th>Option</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automatically share all removable storage devices</td>
<td>Select the Enable auto direct for mounted storage check box. All removable storage devices mounted to your device are automatically shared with the remote desktop or application. This option is selected by default.</td>
</tr>
</tbody>
</table>
| Do not automatically share all removable storage devices | Deselect the Enable auto direct for mounted storage check box. The next time you connect to the remote desktop or application, removable storage devices mounted to your device are not automatically shared with the remote desktop or application.  

**Note**  Deselecting the Enable auto direct for mounted storage check box does not stop sharing a removable storage device that is already shared with the remote desktop or application. |
| Share a specific folder or removable storage device | Select the check box next to the name of the local folder or removable storage device in the list. The device becomes available in the remote desktop or application.  

When you connect a removable storage device, its name appears in the list.  
When you disconnect a removable storage device, its name is removed from the list. |
| Stop sharing a specific folder or removable storage device | Deselect the check box next to the name of the local folder or removable storage device in the list. The device is no longer available in the remote desktop or application. |

3. Tap **OK** to save your settings.

What to do next

Verify your changes from within the remote desktop or application.

- From within a Windows remote desktop, open the **This PC** folder and look in the **Devices and drives** section, or open the **Computer** folder and look in the **Other** section. If you shared a folder or storage device, you should see the folder or device. Shared folders and storage devices use the naming format *name on HorizonClient*.

- From a remote application, select **File > Open** or **File > Save As**, if applicable. If you shared a folder or storage device, you should be able to navigate to the folder or device. Shared folders and storage devices use the naming format *name on HorizonClient*.

Multitasking

You can switch between Horizon Client and other apps without losing a remote desktop or application connection.
In a WiFi network, by default Horizon Client runs in the background indefinitely. In a 3G network, Horizon Client suspends data transmission when you switch to another app. Data transmission resumes when you switch back to Horizon Client.

The Horizon Client icon appears in the status bar when the app is running in the background and there is a connection to a remote desktop. To switch back to Horizon Client, tap the icon in the status bar.

**Configure Horizon Client in Thin Client Mode**

You can configure Horizon Client to work on a thin client by enabling the Thin Client mode setting.

**Prerequisites**

Install Horizon Client on the thin client. For thin client requirements, see the *VMware Horizon Client for Android Installation and Setup Guide* document.

**Procedure**

1. Start Horizon Client on the thin client.
2. Tap the Settings (gear) icon in the upper-right corner of the Horizon Client window.
3. Tap Thin Client mode and select the Thin Client mode check box.

**What to do next**

See Using Horizon Client on a Thin Client.

**Using Horizon Client on a Thin Client**

Some features are different or unavailable when you use Horizon Client in thin client mode.

- The Horizon Client window resolution is set to Auto-fit by default. The auto-fit resolution is the same as the thin client's HDMI output. For example, if the thin client supports HDMI 4K output, the auto-fit resolution is 4K. If the thin client supports HDMI 1080p output, the auto-fit resolution is 1920x1080. You can downscale the resolution by modifying the Horizon Client Resolution setting.
- The Horizon Client Presentation Mode and Stay Awake display settings are not available.
- You cannot modify the Horizon Client Keyboard display settings.
- The Horizon Client Tools radial menu is not available in remote desktops and applications.
- In general, the gestures you use in Horizon Client depend on the thin client model and the type of external input device that you use with the thin client. For example, you might have a keyboard, mouse, remote control, or game controller. See the documentation for the external input device for more information.
- The Unity Touch sidebar contains Keyboard, Settings, and Disconnect icons. For more information, see Using the Unity Touch Sidebar with a Remote Desktop and Using the Unity Touch Sidebar with a Remote Application.
- The Unity Touch sidebar is supported on Remix Mini and NVIDIA SHIELD Android TV devices. The Unity Touch sidebar is not supported on Amazon Fire TV.
If you are connected to a remote desktop or application from an Amazon Fire TV device, you must use a pop-up menu to display Horizon Client Settings and to disconnect from the remote desktop or application. On a remote control or external keyboard, press the **Menu** button to display the pop-up menu.

**Using Android 7.0 Nougat Multi-Window Modes with Horizon Client**

Android 7.0 Nougat allows several apps to share the screen at the same time. You can use split-screen mode with Horizon Client on an Android 7.0 Nougat device. Horizon Client does not support picture-in-picture mode.

With split-screen mode, you can run Horizon Client and another app side-by-side, or one-above-the other. A dividing line separates the two apps, and you can make one app larger and the other app smaller.
Using Shortcuts

You can create server, desktop, and application shortcuts and select favorite desktops and applications in Horizon Client.

This chapter includes the following topics:

- Manage Server Shortcuts
- Manage Desktop and Application Shortcuts
- Create a Remote Desktop or Application Shortcut
- Select a Favorite Remote Desktop or Application
- Configure the Horizon Client Default View

Manage Server Shortcuts

After you connect to a server, Horizon Client creates a server shortcut. You can edit and remove server shortcuts.

Horizon Client saves the server name or IP address in a shortcut, even if you mistype the server name or type the wrong IP address. You can delete or change this information by editing the server name or IP address. If you do not type a server description, the server name or IP address becomes the server description.

Server shortcuts can appear on multiple pages and you can swipe across pages to see more shortcuts. Horizon Client creates new pages, as needed, to accommodate all of your server shortcuts.

Procedure

1. On the Servers tab, touch and hold the server shortcut until the context menu appears.
2. Use the context menu to delete the server or edit the server name, server description, or user name.
   - You can also remove a credential that was saved for fingerprint authentication by tapping Remove Credential.

Manage Desktop and Application Shortcuts

After you connect to a remote desktop or application, Horizon Client saves a shortcut for the recently used desktop or application. You can rearrange and remove these shortcuts.
Desktop and application shortcuts can appear on multiple pages and you can swipe across pages to see more shortcuts. Horizon Client creates new pages, as needed, to accommodate all of your shortcuts.

**Procedure**

- Perform these steps to remove a desktop or application shortcut from the Recent tab.
  a. Touch and hold the shortcut until Remove Shortcut appears at the bottom of the window.
  b. Drag the shortcut to Remove Shortcut.
- To move a desktop or application shortcut, touch and hold the shortcut and drag it to the new location.
  You cannot drag a shortcut to another page unless that page already exists.

**Create a Remote Desktop or Application Shortcut**

You can add a shortcut for a remote desktop or application to the Android home screen and then tap the shortcut to open the remote desktop or application. When Horizon Client is installed on a Chromebook, Horizon Client adds the remote desktop or application shortcut to the Chrome App Launcher.

On Android 4 through 7 devices, Horizon Client adds the remote desktop or application shortcut to the Android home screen.

On Android 8 devices, remote desktop and application shortcuts appear as entries above the Horizon app icon when you touch and hold the app icon. You can drag an entry from the app icon to the Android home screen to create a shortcut directly on the Android home screen.

This feature is not available on Amazon devices, on Android devices that are managed by AirWatch, or when you connect to the server anonymously by using the Unauthenticated Access feature.

**Procedure**

1. You can add a desktop or application shortcut before or after you connect to a server.

   If you are not connected to a server, you must have connected to the remote desktop or application at least once from the device so that a shortcut for the desktop or application appears on the Recent tab.

<table>
<thead>
<tr>
<th>Option</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>If you have not connected to a server</td>
<td>On the Recent tab, touch and hold the shortcut until Add To Home appears at the bottom of the window and then drag the shortcut to Add To Home.</td>
</tr>
<tr>
<td>If you are connected to a server</td>
<td>On the All or Favorites tab, touch and hold the desktop or application shortcut until the context menu appears and tap Add To Home.</td>
</tr>
</tbody>
</table>

2. Type a name for the shortcut and tap **OK**.

   If the name is longer than 12 characters, the extra characters do not appear in the shortcut.
Select a Favorite Remote Desktop or Application

You can select remote desktops and applications as favorites. Favorites are identified by a star. The star helps you quickly find your favorite desktops and applications. Your favorite selections are saved, even after you log off from the server.

Prerequisites

Obtain the credentials you need to connect to the server, such as a user name and password or RSA SecurID and passcode.

Procedure

1. On the Servers tab, tap the server shortcut to connect to the server.
2. If prompted, supply your RSA user name and passcode, your Active Directory user name and password, or both.
3. Perform these steps to select or deselect a desktop or application as a favorite.

<table>
<thead>
<tr>
<th>Option</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select a favorite</td>
<td>Touch and hold the desktop or application name until the context menu appears and tap Mark as Favorite. A star appears in the upper right corner of the name and the name appears on the Favorites tab.</td>
</tr>
<tr>
<td>Deselect a favorite</td>
<td>On the All or Favorites tab, touch and hold the desktop or application name until the context menu appears and tap Unmark Favorite. A star no longer appears in the upper right corner of the name and the name disappears from the Favorites tab.</td>
</tr>
</tbody>
</table>

4. (Optional) Tap the Favorites tab to display only favorite desktops or applications.
   You can tap the All tab to display all the available desktops and applications.

Configure the Horizon Client Default View

You can configure whether recently used desktops and applications or server shortcuts appear when you launch Horizon Client.

Procedure

1. Open Settings and tap Display.
   If you are connected to a remote desktop or application in full-screen mode, tap the Horizon Client Tools radial menu icon and tap the gear icon to access Settings. If you are not using full-screen mode, Settings is in the menu in the upper right corner of the Horizon Client toolbar. If you are not connected to a remote desktop or application, tap the gear icon in the upper right corner of the Horizon Client window.
2. Tap Default launch view.
3 Tap an option to select the default view.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recent</td>
<td>The Recent tab appears when you launch Horizon Client. The Recent tab contains shortcuts to recently used desktops and applications. This is the default setting.</td>
</tr>
<tr>
<td>Servers</td>
<td>The Servers tab appears when you launch Horizon Client. The Servers tab contains shortcuts to the servers that you added to Horizon Client.</td>
</tr>
</tbody>
</table>

The default view you selected takes effect immediately.
Using External Devices

You can use external keyboards, external displays, microphones, and other external devices with remote
desktops and applications in Horizon Client.

This chapter includes the following topics:

- Input Devices, Keyboards, and Keyboard Settings
- Enable the Japanese 106/109 Keyboard Layout
- Screen Resolutions and Using External Displays
- Using the Real-Time Audio-Video Feature for Microphones
- Using Horizon Client with Samsung DeX
- Enable the DeX Mode Auto Launch Feature

Input Devices, Keyboards, and Keyboard Settings

Horizon Client supports Bluetooth and docked keyboard devices and keyboards. You can also set
preferences for settings such as auto-capitalization and text correction.

External Keyboards and Input Devices

For information about the devices that a specific tablet supports, see the documentation from the tablet
manufacturer.

External keyboards are sometimes automatically detected by Horizon Client. For some external
keyboards, you must either tap the tablet screen with three fingers at the same time, or you must tap the
Keyboard icon. If you are using a remote desktop or application in full-screen mode, the Keyboard icon
is in the Horizon Client Tools radial menu. If you are not using full-screen mode, the Keyboard icon is on
the Horizon Client toolbar.

**Note** On Kindle Fire tablets, tapping with three fingers does not display the onscreen keyboard. You can
instead use the Keyboard icon to display the onscreen keyboard.

After the external keyboard is detected, you might not be able to use the Horizon Client Tools or three-
finger tap to display the onscreen keyboard. You might first have to deactivate the external keyboard by
pressing its Eject key.
International Onscreen Keyboards

With the correct input methods installed, you can input characters for the following languages: English-United States, Japanese, French, German, Simplified Chinese, Traditional Chinese, Korean, and Spanish.

To choose a language for the keyboard or voice, tap the Keyboard Settings key on the onscreen keyboard. The Keyboard Settings key is the left-most key on the bottom row of the onscreen keyboard. When you finish selecting settings, tap the Back button to dismiss the dialog box.

Enable the Japanese 106/109 Keyboard Layout

If you are connected to a Windows XP desktop, you can configure Horizon Client to use the Japanese 106/109 keyboard layout.

Prerequisites

Use Horizon Client to connect to a Windows XP desktop that has the Japanese keyboard layout enabled.

Procedure

1. Open Settings and tap Keyboard.
   - If you are using the remote desktop in full-screen mode, tap the Horizon Client Tools radial menu icon and tap the gear icon. If you are not using full-screen mode, Settings is in the menu in the upper-right corner of the Horizon Client toolbar. If you are not connected to a remote desktop or application, tap the gear icon in the upper right corner of the Horizon Client window.

2. Tap Use Japanese 106/109 Keyboard Layout to select the check box.
   - This setting is disabled if the keyboard layout on the Windows XP desktop is not set to Japanese or if the desktop is not running Windows XP.

Screen Resolutions and Using External Displays

You can use Horizon Client with external displays and you can change screen resolutions.

When you connect a client device to an external display or projector, Horizon Client supports certain maximum display resolutions. You can change the screen resolution used on the client device to allow scrolling a larger screen resolution.

Enlarging the Screen Resolution for a Remote Desktop

By default, the display resolution is set so that the entire Windows desktop fits inside the client device, and the desktop icons and task bar icons are a certain size. If you change the default to a higher resolution, the desktop still fits inside the client device, but the desktop and taskbar icons become smaller.

You can pinch your fingers apart to zoom in and make the desktop larger than the device screen. You can then tap and drag to access the edges of the desktop.
Changing the Display Resolution Setting

You can use the Resolution setting to set the display resolution to a larger value. If you are using a remote desktop or application in full-screen mode, tap the Horizon Client Tools radial menu icon, tap the gear icon, tap Display, and tap Resolution. If you are not using full-screen mode, Settings is in the menu in the upper-right corner of the Horizon Client toolbar. If you are not connected to a remote desktop or application, tap the gear icon in the upper right corner of the Horizon Client window.

Using High Quality Mode

You can use the High Quality Mode feature to obtain the best display quality in remote desktops and applications.

To enable High Quality Mode, before you connect to a remote desktop or application, tap the gear icon in the upper right corner of the Horizon Client window, tap Display, and then tap High Quality Mode. You cannot enable the High Quality Mode setting after you connect to a remote desktop or application.

The High Quality Mode feature has the following requirements and limitations:

- You cannot use the High Quality Mode feature for existing sessions. You must log out and log in to a new session for the feature to take effect.
- The High Quality Mode setting is not available if the client device has less than an extra-high density (xhdpi) screen.
- The High Quality Mode feature requires Horizon Agent 7.0.3 or later.

High Quality Mode is disabled by default.

Using External Displays

You can use the Enable External display setting to configure settings for external displays, such as projectors and attached monitors.

When the Enable External display setting is selected, you can select the Presentation mode, Multi-Monitor mode, Keep screen on when external display is connected, and Zoom settings. When the Enable External display setting is not selected, all of the external display settings are disabled.

In Presentation mode, a keyboard and expanded onscreen touchpad appear on the device when you display a remote desktop on an external display. The expanded touchpad and keyboard appear when you plug the device into the external display. The device detects the maximum resolution provided by the external display. The presentation mode feature requires an Android 4.2 or later client device.

You can use the Multi-Monitor mode setting on an Android client to extend a secondary desktop on an external display. The Unity Touch sidebar is supported only on the client's internal monitor. You cannot change the orientation and full-screen mode. You can interact with remote desktops and applications on the external display with the onscreen touchpad and full-screen touchpad. The multi-monitor mode feature has the following requirements and limitations when used with an Android client.

- Android 4.2 or later is required.
- You cannot use the physical mouse on the external display.

You can use the **Keep screen on when external display is connected** setting to keep the display from turning off after a period of inactivity. You can drag the **Zoom** slider to set the resolution for the external display.

If you are connected to a remote desktop or application, pressing the **Back** button quits presentation mode or multi-monitor mode and the **Enable External display** setting is deselected.

To configure external display settings if you are using a remote desktop or application in full-screen mode, tap the Horizon Client Tools radial menu icon, tap the gear icon, tap **Display**, and then tap **External Display Options**. If you are not using full-screen mode, **Settings** is in the menu in the upper-right corner of the Horizon Client toolbar. If you are not connected to a remote desktop or application, tap the gear icon in the upper right corner of the Horizon Client window.

Do not use an external mouse, such as a Bluetooth mouse, when using the **Presentation mode** setting. Instead, use the large onscreen touchpad on the client device. If you attempt to use a mouse, the mouse pointer might not be able to move to the bottom or right side of the screen, and when moved to the top of the screen, might conflict with some of the function keys shown on the large onscreen touchpad, rather than the top of the remote desktop.

### Using Multi-Monitor Mode with Horizon Client for Android on a Chromebook

When Horizon Client for Android is installed on a Chromebook device, there is no option for the multi-monitor feature in **Settings**. Instead, when you maximize a session window in the internal display, a new window opens and is maximized in the external display and the session enters multi-monitor mode. When you restore the window in the internal display from the maximized state, the window in the external display is closed and the session quits multi-monitor mode.

The multi-monitor mode feature has the following requirements and limitations when used with a Chromebook device.

- Chrome OS M64 or later is required.
- Only one external display is supported.
- Unified desktop mode must not be enabled on the Chromebook.

### Using the Real-Time Audio-Video Feature for Microphones

With the Real-Time Audio-Video feature, you can use a microphone connected to the client device on a remote desktop. Real-Time Audio-Video is compatible with standard audio devices and with standard conferencing applications such as Skype, WebEx, and Google Hangouts.

Real-Time Audio-Video is enabled by default when you install Horizon Client on the client device.

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**Note**  Only the audio-in feature is supported. The video feature is not supported.
The first time you use the microphone, Horizon Client prompts you for permission to access it. You must grant permission for the microphone to work with the remote desktop. You can enable and disable access to the microphone by changing the Microphone permission for Horizon Client in the iOS Settings app.

**Using Horizon Client with Samsung DeX**

If the Android device supports Samsung DeX, you can use Horizon Client in DeX desktop mode. When the device is in DeX desktop mode, Horizon Client treats the device as a thin client and Thin Client mode is enabled. For more information, see Using Horizon Client on a Thin Client.

The following features are supported when you use Horizon Client in Horizon DeX desktop mode:

- You can configure Horizon Client to start automatically when you switch to DeX desktop mode. See Enable the DeX Mode Auto Launch Feature.
- Desktop and application sessions continue to run after you enter or exit from DeX desktop mode.
- If Horizon Client is maximized, remote desktops enter full-screen mode after you switch to DeX desktop mode.
- You can use the language switch key on a Samsung physical keyboard to switch the language input method in a remote desktop.
- You can connect to multiple remote desktops and applications at the same time. Smart card authentication is not supported for multiple sessions.

**Enable the DeX Mode Auto Launch Feature**

You can configure Horizon Client to start automatically when you switch the Android device to DeX desktop mode.

If you added a desktop or application shortcut to the Android home screen, Horizon Client connects to the most recent shortcut after Horizon Client starts. For information about adding shortcuts to the Android home screen, see Create a Remote Desktop or Application Shortcut.

The DeX mode auto launch feature is disabled by default.

You cannot enable the DeX mode auto launch feature if a default Connection Server instance is configured for Horizon Client.

**Prerequisites**

Verify that the Android device supports Samsung DeX.

**Procedure**

1. Before you log in to a server, tap the **Settings** (gear) icon in the upper-right corner of the Horizon Client window.
2. Tap **Display**, tap **Dex Mode Auto Launch**, and select the **Dex Mode Auto Launch** check box.
Troubleshooting Horizon Client

You can solve most Horizon Client problems by resetting the desktop or reinstalling the app. You can also enable log collection and send log files to VMware for troubleshooting.

This chapter includes the following topics:

- Restart a Remote Desktop
- Reset a Remote Desktop or Remote Applications
- Uninstall Horizon Client
- Collecting and Sending Logging Information to VMware
- Report Horizon Client Crash Data to VMware
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Restart a Remote Desktop

You might need to restart a remote desktop if the desktop operating system stops responding. Restarting a remote desktop is the equivalent of the Windows operating system restart command. The desktop operating system usually prompts you to save any unsaved data before it restarts.

You can restart a remote desktop only if a Horizon administrator has enabled the desktop restart feature for the desktop.

Prerequisites

- Obtain login credentials, such as a user name and password, RSA SecurID user name and passcode, RADIUS authentication user name and passcode, or smart card personal identification number (PIN).
- If you have not logged in at least once, become familiar with the procedure Connect to a Remote Desktop or Application.

Procedure

1. On the Servers tab, tap the server shortcut to connect to the server.
2 If prompted, supply your RSA user name and passcode, your Active Directory user name and password, or both.

3 Touch and hold the desktop name until the context menu appears.
   You can perform this step from either the All or Favorites tab.

4 Tap Restart in the context menu.
   Restart is available only if the status of the desktop is such that the action can be taken.

The operating system in the remote desktop reboots and Horizon Client disconnects and logs off from the desktop.

What to do next
Wait an appropriate amount of time for system startup before you attempt to reconnect to the remote desktop.

If restarting the remote desktop does not solve the problem, you might need to reset the remote desktop. See Reset a Remote Desktop or Remote Applications.

Reset a Remote Desktop or Remote Applications
You might need to reset a remote desktop if the desktop operating system stops responding and restarting the remote desktop does not solve the problem. Resetting remote applications quits all open applications.

Resetting a remote desktop is the equivalent of pressing the Reset button on a physical PC to force the PC to restart. Any files that are open on the remote desktop are closed and are not saved.

Resetting remote applications is the equivalent of quitting the applications without saving any unsaved data. All open remote applications are closed, even applications that come from different RDS server farms.

You can reset a remote desktop only if a Horizon administrator has enabled the desktop reset feature for the desktop.

Prerequisites
- Obtain login credentials, such as a user name and password, RSA SecurID user name and passcode, RADIUS authentication user name and passcode, or smart card personal identification number (PIN).
- If you have not logged in at least once, become familiar with the procedure Connect to a Remote Desktop or Application.

Procedure
1 On the Servers tab, tap the server shortcut to connect to the server.

2 If prompted, supply your RSA user name and passcode, your Active Directory user name and password, or both.
3  Touch and hold the desktop or application name until the context menu appears.
   
   You can perform this step from either the All or Favorites tab.

4  Tap Reset in the context menu.
   
   Reset is available only if the status of the desktop or application is such that the action can be taken.

When you reset a remote desktop, the operating system in the remote desktop reboots and Horizon Client disconnects and logs off from the desktop. When you reset remote applications, the applications quit.

What to do next

Wait an appropriate amount of time for system startup before attempting to reconnect to the remote desktop or application.

Uninstall Horizon Client

You can sometimes resolve problems with Horizon Client by uninstalling and reinstalling Horizon Client.

You uninstall Horizon Client just as you would any Android app.

Procedure

1  On your device, go to the Horizon app.

2  Touch and hold the app icon until the Uninstall (trash can) icon appears on your device.

3  Drag the app to the Uninstall (trash can) icon.
   
   Alternatively, you can go to Apps > Settings and select Applications > Manage Applications to uninstall Horizon Client.

What to do next

Reinstall Horizon Client.

See the VMware Horizon Client for Android Installation and Setup Guide document.

Collecting and Sending Logging Information to VMware

You can configure Horizon Client to collect log information and send log files to VMware for troubleshooting.

If Horizon Client quits unexpectedly, Horizon Client immediately prompts you to send log files to VMware. If log collection is enabled, the crash log file contains detailed debug information. If log collection is disabled, only certain exception information is included in the crash log file.

Horizon Client generates three types of log files (Horizon_View_Client_logs_timestamp.txt, libcduck_timestamp.txt, and pcoip_client_timestamp.txt) and keeps the last five log files of each type.
If you choose to send log files to VMware, Horizon Client uses the available email client on the client device to create a message. If the email client can send multiple attachments, Horizon Client attaches the last five log files of each type to the message. If the email client cannot send multiple attachments, Horizon Client compresses the last five log files of each type and attaches a ZIP file to the message. The ZIP file name contains a time stamp, for example, Horizon_View_Client_logs_timestamp.zip.

You can also manually retrieve and send log files at any time.

**Enable Horizon Client Log Collection**

When you enable log collection, Horizon Client creates log files that contain information that can help VMware troubleshoot problems with Horizon Client.

Because log collection affects the performance of Horizon Client, enable log collection only if you are experiencing a problem.

**Prerequisites**

Verify that an email client is available on the device. Horizon Client requires an email client to send log files.

**Procedure**

1. Open **Settings** and tap **Log collection**.

   If you are connected to a remote desktop or application in full-screen mode, tap the Horizon Client Tools radial menu icon and tap the gear icon. If you are not using full-screen mode, **Settings** is in the menu in the upper right corner of the Horizon Client toolbar. If you are not connected to a remote desktop or application, tap the gear icon in the upper right corner of the Horizon Client window.

2. Tap **Enable log** to select the check box and tap **OK** to confirm your choice.

After log collection is enabled, Horizon Client generates a log file it quits unexpectedly or when it is exited and relaunched.

**Manually Retrieve and Send Horizon Client Log Files**

When Horizon Client log collection is enabled on your device, you can manually retrieve and send log files at any time.

This procedure shows you how retrieve and send log files through Horizon Client. You can also retrieve log files by using tools that can access app storage space. Horizon Client saves log files in the Android/data/com.vmware.view.client.android/files directory.

**Prerequisites**

- Verify that an email client is available on the device. Horizon Client requires an email client to send log files.
- Enable Horizon Client log collection. See **Enable Horizon Client Log Collection**.
Procedure

1  Open Settings and tap Log collection.

If you are connected to a remote desktop or application in full-screen mode, tap the Horizon Client Tools radial menu icon and tap the gear icon. If you are not using full-screen mode, Settings is in the menu in the upper right corner of the Horizon Client toolbar. If you are not connected to a remote desktop or application, tap the gear icon in the upper right corner of the Horizon Client window.

2  Tap Send the log.

Horizon Client uses the email client on the device to create a message. The body of the message contains information about your device. If your email client can send multiple attachments, Horizon Client attaches the last five log files of each type to the message. If your email client cannot send multiple attachments, Horizon Client compresses the last five log files of each type and attaches a ZIP file to the message.

Disable Horizon Client Log Collection

Because log collection affects the performance of Horizon Client, disable log collection if you are not troubleshooting a problem.

Procedure

1  Open Settings and tap Log collection.

If you are connected to a remote desktop or application in full-screen mode, tap the Horizon Client Tools radial menu icon and tap the gear icon. If you are not using full-screen mode, Settings is in the menu in the upper right corner of the Horizon Client toolbar. If you are not connected to a remote desktop or application, tap the gear icon in the upper right corner of the Horizon Client window.

2  Tap Enable log to clear the check box.

Report Horizon Client Crash Data to VMware

You can configure Horizon Client to report crash data to VMware.

Procedure

1  Tap the Settings (gear) icon in the upper right corner of the Horizon Client window.

2  Tap Crash Reporting.

3  Tap Crash Reporting to enable or disable the check box.

   The setting is enabled by default.

If Horizon Client stops responding, a crash log file is uploaded to the VMware server the next time Horizon Client starts.
Horizon Client Stops Responding or the Remote Desktop Freezes

When the window freezes, first, try resetting the remote desktop operating system.

Problem

Horizon Client does not work or repeatedly exits unexpectedly or the remote desktop freezes.

Cause

Assuming that Horizon servers are configured properly and that firewalls surrounding them have the correct ports open, other issues usually relate to Horizon Client on the device or to the guest operating system on the remote desktop.

Solution

- If the operating system in the remote desktop freezes, use Horizon Client on the device to reset the desktop.
  
  This option is available only if the Horizon administrator has enabled this feature.
- Uninstall and reinstall the app on the device.
- If resetting the remote desktop and reinstalling Horizon Client do not help, you can reset the Android device, as described in the user guide for your Android device.
- If you get a connection error when you attempt to connect to the server, you might need to change your proxy settings.

What to do next

If the problem is with the operating system inside the remote desktop, see Reset a Remote Desktop or Remote Applications.

Problem Establishing a Connection When Using a Proxy

Sometimes if you attempt to connect to Connection Server using a proxy while on the LAN, an error occurs.

Problem

If the Horizon environment is set up to use a secure connection from the remote desktop to Connection Server, and if the client device is configured to use an HTTP proxy, you might not be able to connect.

Cause

Unlike Windows Internet Explorer, the client device does not have an Internet option to bypass the proxy for local addresses. When an HTTP proxy is used for browsing external addresses, and you try to connect to Connection Server using an internal address, you might see the error message Could not establish connection.
Solution

- Remove the proxy settings so that the device no longer uses a proxy.

**Connecting to a Server in Workspace ONE Mode**

If you cannot connect to a server directly through Horizon Client, or if your desktop and application entitlements are not visible in Horizon Client, Workspace ONE mode might be enabled on the server.

**Problem**

- When you try to connect to the server directly through Horizon Client, Horizon Client redirects you to the Workspace ONE portal.
- When you open a desktop or application through a URI or shortcut, or when you open a local file through file association, the request redirects you to the Workspace ONE portal for authentication.
- After you open a desktop or application through Workspace ONE and Horizon Client starts, you cannot see or open other entitled remote desktops or applications in Horizon Client.

**Cause**

Beginning with Horizon 7 version 7.2, a Horizon administrator can enable Workspace ONE mode on a Connection Server instance. This behavior is normal when Workspace ONE mode is enabled on a Connection Server instance.

**Solution**

Use Workspace ONE to connect to a Workspace ONE enabled server and access your remote desktops and applications.