

# VMware Horizon Client for Chrome Installation and Setup Guide

15 JUNE 2018

VMware Horizon Client for Chrome 4.8



vmware®

You can find the most up-to-date technical documentation on the VMware website at:

<https://docs.vmware.com/>

If you have comments about this documentation, submit your feedback to

[docfeedback@vmware.com](mailto:docfeedback@vmware.com)

**VMware, Inc.**  
3401 Hillview Ave.  
Palo Alto, CA 94304  
[www.vmware.com](http://www.vmware.com)

Copyright © 2018 VMware, Inc. All rights reserved. [Copyright and trademark information.](#)

# Contents

## VMware Horizon Client for Chrome Installation and Setup Guide 4

### 1 Setup and Installation 5

- System Requirements 5
- Preparing Connection Server and Security Servers 6
- Prepare Desktops, Pools, and Farms 8
- Install or Upgrade Horizon Client for Chrome 9
- Register the VMware Horizon Client for Chrome Extension 9
- Configuring a List of Servers and a Default Server for Chromebook Devices 10
- Configure HTML Access Agents to Use New TLS Certificates 11
- Configure HTML Access Agents to Use Specific Cipher Suites 15
- Using a CA-Signed Certificate with Unified Access Gateway 15
- Data Collected by VMware 16

### 2 Managing Remote Desktop and Published Application Connections 17

- Connect to a Remote Desktop or Published Application 17
- Trust a Self-Signed Root Certificate 19
- Setting the Time Zone 19
- Allowing H.264 Decoding 20
- Log Off or Disconnect 20

### 3 Using a Remote Desktop or Published Application 22

- Feature Support Matrix 22
- Using the Sidebar 24
- Using Multiple Monitors 25
- Using the Real-Time Audio-Video Feature for Webcams and Microphones 26
- Copying and Pasting Text and Images 27
- Share Access to Local Folders and Drives with Client Drive Redirection 28
- Sound 29
- Shortcut Key Combinations 29

### 4 Troubleshooting Horizon Client 32

- Restart a Remote Desktop 32
- Reset a Remote Desktop or Published Applications 33
- Uninstall Horizon Client for Chrome 33
- Enable Log Collection 34

# VMware Horizon Client for Chrome Installation and Setup Guide

This document, *VMware Horizon Client for Chrome Installation and Setup Guide*, provides information about installing, configuring, and using VMware Horizon<sup>®</sup> Client<sup>™</sup> for Chrome on a Chromebook.

This information is written for experienced system administrators who are familiar with virtual machine technology and data center operations.

If you are an end user, see the *VMware Horizon Client for Chrome User Guide* document on [VMware Docs](#), or view the Horizon Client for Chrome online help.

# Setup and Installation

Setting up Horizon Client involves installing the Horizon Client for Chrome app on client devices, configuring Connection Server, and opening the required ports.

This chapter includes the following topics:

- [System Requirements](#)
- [Preparing Connection Server and Security Servers](#)
- [Prepare Desktops, Pools, and Farms](#)
- [Install or Upgrade Horizon Client for Chrome](#)
- [Register the VMware Horizon Client for Chrome Extension](#)
- [Configuring a List of Servers and a Default Server for Chromebook Devices](#)
- [Configure HTML Access Agents to Use New TLS Certificates](#)
- [Configure HTML Access Agents to Use Specific Cipher Suites](#)
- [Using a CA-Signed Certificate with Unified Access Gateway](#)
- [Data Collected by VMware](#)

## System Requirements

The device on which you use Horizon Client for Chrome must meet certain software requirements.

<b>Device models</b>	Chromebook
<b>Operating systems</b>	Chrome OS 44 or later
<b>CPU architecture</b>	ARM or x86
<b>Remote desktops and published applications</b>	A Horizon administrator must configure certain pool and farm settings and install Horizon Agent on virtual desktops and RDS hosts in the data center. See <a href="#">Prepare Desktops, Pools, and Farms</a> .

**Connection Server,  
security server, and  
View Agent or  
Horizon Agent**

Horizon 6 version 6.2.6 or Horizon 7 version 7.4 and later releases.

To connect to a Horizon 7 version 7.4 server, you must register the Horizon Client for Chrome extension on the server. This change is not required for Horizon 6 version 6.2.6 or Horizon 7 version 7.5 and later servers. For more information see [Register the VMware Horizon Client for Chrome Extension](#).

If client systems connect from outside the corporate firewall, use a security server or a Unified Access Gateway appliance so that client systems do not require a VPN connection.

For more information, see [Preparing Connection Server and Security Servers](#).

**Third-party firewalls**

Firewalls must allow inbound traffic on certain TCP ports. See [Firewall Rules for Client Web Browser Access](#).

**Display protocol**

VMware Blast (requires Horizon Agent 7.0 or later)

## Preparing Connection Server and Security Servers

Before end users can connect to a server and access a remote desktop or published application, a Horizon administrator must install Connection Server and install security servers, if used.

You can use Unified Access Gateway appliances, rather than security servers, for secure external access. For more information, see the *Deploying and Configuring Unified Access Gateway* document.

Following is a check list of tasks that a Horizon administrator must perform to use Horizon Client for Chrome.

- 1 Install Connection Server. For installation instructions, see the *Horizon 7 Installation* document.
- 2 If you use security servers, install Security Server. The version of Security Server must match the version of Connection Server. For installation instructions, see the *Horizon 7 Installation* document.
- 3 Verify that each Connection Server instance or security server has a TLS certificate that can be fully verified by using the host name that you enter in the Web browser. For more information, see the *Horizon 7 Installation* document.
- 4 To use two-factor authentication, such as RSA SecurID or RADIUS authentication, verify that this feature is enabled on Connection Server. For more information, see the topics about two-factor authentication in the *Horizon 7 Administration* document.

---

**Important** If you enable the **Hide domain list in client user interface** settings and select two-factor authentication (RSA SecureID or RADIUS) for the Connection Server instance, do not enforce Windows user name matching. Enforcing Windows user name matching prevents users from entering domain information in the user name text box and login always fails. For more information, see the topics about two-factor authentication in the *Horizon 7 Administration* document.

---

- 5 If you use third-party firewalls, configure rules to allow inbound traffic to TCP port 8443 for all security servers and Connection Server hosts in a replicated group, and configure a rule to allow inbound traffic (from servers) to TCP port 22443 on remote desktop virtual machines and RDS hosts in the data center. For more information, see [Firewall Rules for Client Web Browser Access](#).

After the servers are installed, the **Blast Secure Gateway** setting is enabled on the applicable Connection Server instances and security servers in Horizon Administrator. Also, the **Blast External URL** setting is configured to use the Blast Secure Gateway on the applicable Connection Server instances and security servers. By default, the URL includes the FQDN of the secure tunnel external URL and the default port number, 8443. The URL must contain the FQDN and port number that a client system can use to reach the Connection Server host or security server host. For more information, see "Set the External URLs for a Connection Server Instance," in the *Horizon 7 Installation* document.

## Firewall Rules for Client Web Browser Access

To allow client Web browsers to make connections to security servers, Connection Server instances, remote desktops, and published applications, your firewalls must allow inbound traffic on certain TCP ports.

Horizon Client for Chrome connections must use HTTPS. HTTP connections are not allowed.

By default, when you install a Connection Server instance or security server, the **VMware Horizon View Connection Server (Blast-In)** rule is enabled in the Windows Firewall and the firewall is configured to allow inbound traffic to TCP port 8443.

**Table 1-1. Firewall Rules for Client Browser Access**

Source	Default Source Port	Protocol	Target	Default Target Port	Notes
Client Web browser	TCP Any	HTTPS	Security server or Connection Server instance	TCP 443	To make the initial connection, the Web browser on a client device connects to a security server or Connection Server instance on TCP port 443.
Client Web browser	TCP Any	HTTPS	Blast Secure Gateway	TCP 8443	After the initial connection is made, the Web browser on a client device connects to the Blast Secure Gateway on TCP port 8443. The Blast Secure Gateway must be enabled on a security server or Connection Server instance to allow this second connection to take place.

**Table 1-1. Firewall Rules for Client Browser Access (Continued)**

Source	Default Source Port	Protocol	Target	Default Target Port	Notes
Blast Secure Gateway	TCP Any	HTTPS	HTML Access Agent	TCP 22443	If the Blast Secure Gateway is enabled, after the user selects a remote desktop or published application, the Blast Secure Gateway connects to the HTML Access Agent on TCP port 22443 on the remote desktop virtual machine or RDS host. This agent component is included when you install Horizon Agent.
Client Web browser	TCP Any	HTTPS	HTML Access Agent	TCP 22443	If the Blast Secure Gateway is not enabled, after the user selects a remote desktop or published application, the Web browser on a client device makes a direct connection to the HTML Access Agent on TCP port 22443 on the remote desktop virtual machine or RDS host. This agent component is included when you install Horizon Agent.

## Prepare Desktops, Pools, and Farms

Before end users can access a remote desktop or published application, a Horizon administrator must configure certain pool and farm settings and install Horizon Agent on desktop virtual machines and RDS hosts in the data center.

### Prerequisites

- Verify that the Horizon components meet the system requirements for Horizon Client. See [System Requirements](#).
- Verify that the Windows firewalls on Connection Server instances and any security servers allow inbound traffic on TCP port 8443. See [Preparing Connection Server and Security Servers](#).
- If you use third-party firewalls, configure a rule to allow inbound traffic from Horizon servers to TCP port 22443 on desktop virtual machines and RDS hosts in the data center. See [Firewall Rules for Client Web Browser Access](#).
- Become familiar with the procedures for creating pools and farms and entitling users. See the *Setting Up Virtual Desktops in Horizon 7* and *Setting Up Published Desktops and Applications in Horizon 7* documents.
- To verify that the remote desktop or published application is accessible to end users, install Horizon Client for Windows on a client system. You can use Horizon Client for Windows to test the connection before you attempt to connect from a Web browser. For installation instructions, see the *VMware Horizon Client for Windows Installation and Setup Guide* document.

### Procedure

- 1 For published desktops and applications, use Horizon Administrator to create or edit the farm and enable the **Allow HTML Access to desktops and applications on this farm** option in the farm settings.



- 2 For virtual desktop pools, use Horizon Administrator to create or edit the desktop pool so that the pool can be used with HTML Access.
  - a Enable the **HTML Access** in the Desktop Pool settings.
  - b In the pool settings, verify that the **Max resolution of any one monitor** setting is **1920x1200** or higher.
- 3 After the pools are created, recomposed, or upgraded to use Horizon Agent with the **Allow HTML Access to desktops and applications on this farm** or **HTML Access** option, use Horizon Client for Windows to connect to a remote desktop or published application.

With this step, before you attempt to use Horizon Client for Chrome, you verify that the pool is working correctly.

#### What to do next

For added security, if your security policies require that the HTML Access Agent on the remote desktop uses a TLS certificate from a certificate authority, see [Configure HTML Access Agents to Use New TLS Certificates](#).

## Install or Upgrade Horizon Client for Chrome

Horizon Client for Chrome is a Chrome app, and you install it in the same way that you install other Chrome apps.

#### Prerequisites

Verify that the client device meet the system requirements for Horizon Client for Chrome. See [System Requirements](#).

#### Procedure

- 1 Log in to the Chromebook.
- 2 Download and install VMware Horizon Client for Chrome from the Chrome Web Store.

## Register the VMware Horizon Client for Chrome Extension

To enable users to connect to a Horizon 7 version 7.4 server with Horizon Client for Chrome, you must register the VMware Horizon Client for Chrome extension. This procedure is not required to connect to Horizon 6 version 6.2.6 or Horizon 7 version 7.5 and later servers.

#### Prerequisites

Install VMware Horizon Client for Chrome on the client device. See [Install or Upgrade Horizon Client for Chrome](#).

#### Procedure

- 1 On the Connection Server host, navigate to the `install_directory\VMware\VMware View\Server\sslgateway\conf\settings.properties` file.

- 2 In a text editor, open the `settings.properties` file and add the following line.  
**`chromeExtension.1=ppkfnjlimknmjoaemnpidmdlfcchehe1`**
- 3 Save the `settings.properties` file.
- 4 To make your changes take effect, restart the VMware Horizon View Security Gateway Component service.

### What to do next

Verify that you can use Horizon Client for Chrome to connect to a remote desktop or published application. See [Connect to a Remote Desktop or Published Application](#).

## Configuring a List of Servers and a Default Server for Chromebook Devices

You can configure a list of Connection Server instances and a default Connection Server instance for Horizon Client on enrolled Chromebook devices.

When you configure a list of servers, the servers appear as shortcuts in Horizon Client. If you configure a default server, Horizon Client connects to that server automatically.

To configure a list of servers or a default server, you must create a JSON configuration file. A Chrome administrator must use the Google Admin console to upload the JSON configuration file for the Horizon Client app. For detailed information about using the Google Admin console, see the G Suite Administrator Help.

For example, the following JSON configuration file specifies a list of servers. The `server` property specifies the IP address or host name of the server, the `username` and `domain` properties specify the name and domain of a user that is entitled to use the server, and the `description` property specifies a description of the server. The `username`, `domain`, and `description` properties are optional.

```
{
  "broker_list": "
    {
      \"settings\": {
        \"server-list\": [{
          \"server\": \"123.456.1.1\",
          \"description\": \"View Server 1\",
          \"username\": \"User1\",
          \"domain\": \"TestDomain1\"
        }, {
          \"server\": \"123.456.1.2\",
          \"description\": \"View Server 2\",
          \"username\": \"User2\",
          \"domain\": \"TestDomain2\"
        }, {
          \"server\": \"123.456.1.3\",
          \"description\": \"View Server 3\",
          \"username\": \"User3\",
          \"domain\": \"TestDomain3\"
        }, {
```

```

        \"server\": \"viewserver4.mydomain.com\",
        \"description\": \"View Server 4\",
        \"username\": \"User4\",
        \"domain\": \"TestDomain4\"
    }
}

```

The following example shows how to use the `default` property to specify a default server. Valid values are `true` and `false`.

```

{
  \"broker_list\": \"
  {
    \"settings\": {
      \"server-list\": [{
        \"server\": \"123.456.1.1\",
        \"description\": \"View Server 1\",
        \"default\": true,
        \"username\": \"User1\",
        \"domain\": \"TestDomain1\"
      }
    ]
  }
}

```

## Configure HTML Access Agents to Use New TLS Certificates

To comply with industry or security regulations, you can replace the default TLS certificates that the HTML Access Agent generates with certificates that a Certificate Authority (CA) signs.

When you install the HTML Access Agent on remote desktops, the HTML Access Agent service creates default self-signed certificates. The service presents the default certificates to browsers that use Horizon Client for Chrome.

---

**Note** In the guest operating system on the desktop virtual machine, this service is called the VMware Blast service.

---

To replace the default certificates with signed certificates that you obtain from a CA, you must import a certificate into the Windows local computer certificate store on each remote desktop. You must also set a registry value that allows the HTML Access Agent to use the new certificate.

If you replace the default HTML Access Agent certificates with CA-signed certificates, configure a unique certificate on each remote desktop. Do not configure a CA-signed certificate on a parent virtual machine or template that you use to create a desktop pool. That approach results in hundreds or thousands of remote desktops that have identical certificates.

## Add the Certificate Snap-In to MMC on a Remote Desktop

Before you can add certificates to the Windows local computer certificate store, you must add the Certificate snap-in to the Microsoft Management Console (MMC) on the remote desktops where the HTML Access Agent is installed.

### Prerequisites

Verify that the MMC and Certificate snap-in are available on the Windows guest operating system where the HTML Access Agent is installed.

### Procedure

- 1 On the remote desktop, click **Start** and type **mmc.exe**.
- 2 In the **MMC** window, go to **File > Add/Remove Snap-in**.
- 3 In the **Add or Remove Snap-ins** window, select **Certificates** and click **Add**.
- 4 In the **Certificates snap-in** window, select **Computer account**, click **Next**, select **Local computer**, and click **Finish**.
- 5 In the **Add or Remove snap-in** window, click **OK**.

### What to do next

Import the SSL certificate into the Windows local computer certificate store. See [Import a Certificate for the HTML Access Agent into the Windows Certificate Store](#).

## Import a Certificate for the HTML Access Agent into the Windows Certificate Store

To replace a default HTML Access Agent certificate with a CA-signed certificate, you must import the CA-signed certificate into the Windows local computer certificate store. Perform this procedure on each remote desktop where the HTML Access Agent is installed.

### Prerequisites

- Verify that the HTML Access Agent is installed on the remote desktop.
- Verify that the CA-signed certificate was copied to the remote desktop.
- Verify that the Certificate snap-in was added to MMC. See [Add the Certificate Snap-In to MMC on a Remote Desktop](#).

### Procedure

- 1 In the MMC window on the remote desktop, expand the **Certificates (Local Computer)** node and select the **Personal** folder.
- 2 In the Actions pane, go to **More Actions > All Tasks > Import**.
- 3 In the **Certificate Import** wizard, click **Next** and browse to the location where the certificate is stored.

- 4 Select the certificate file and click **Open**.

To display your certificate file type, you can select its file format from the **File name** drop-down menu.

- 5 Type the password for the private key that is included in the certificate file.
- 6 Select **Mark this key as exportable**.
- 7 Select **Include all extendable properties**.
- 8 Click **Next** and click **Finish**.

The new certificate appears in the **Certificates (Local Computer) > Personal > Certificates** folder.

- 9 Verify that the new certificate contains a private key.
  - a In the **Certificates (Local Computer) > Personal > Certificates** folder, double-click the new certificate.
  - b In the General tab of the Certificate Information dialog box, verify that the following statement appears: You have a private key that corresponds to this certificate.

#### What to do next

If necessary, import the root certificate and intermediate certificates into the Windows certificate store. See [Import Root and Intermediate Certificates for the HTML Access Agent](#).

Configure the appropriate registry key with the certificate thumbprint. See [Set the Certificate Thumbprint in the Windows Registry](#).

## Import Root and Intermediate Certificates for the HTML Access Agent

If the root certificate and intermediate certificates in the certificate chain are not imported with the SSL certificate that you imported for the HTML Access Agent, you must import these certificates into the Windows local computer certificate store.

#### Procedure

- 1 In the MMC console on the remote desktop, expand the **Certificates (Local Computer)** node and go to the **Trusted Root Certification Authorities > Certificates** folder.
  - If your root certificate is in this folder, and there are no intermediate certificates in your certificate chain, skip this procedure.
  - If your root certificate is not in this folder, proceed to step 2.
- 2 Right-click the **Trusted Root Certification Authorities > Certificates** folder and click **All Tasks > Import**.
- 3 In the **Certificate Import** wizard, click **Next** and browse to the location where the root CA certificate is stored.
- 4 Select the root CA certificate file and click **Open**.
- 5 Click **Next**, click **Next**, and click **Finish**.

- 6 If an intermediate CA signed your server certificate, import all intermediate certificates in the certificate chain into the Windows local computer certificate store.
  - a Go to the **Certificates (Local Computer) > Intermediate Certification Authorities > Certificates** folder.
  - b Repeat steps 3 through 6 for each intermediate certificate that must be imported.

#### What to do next

Configure the appropriate registry key with the certificate thumbprint. See [Set the Certificate Thumbprint in the Windows Registry](#).

## Set the Certificate Thumbprint in the Windows Registry

To allow the HTML Access Agent to use a CA-signed certificate that was imported into the Windows certificate store, you must configure the certificate thumbprint in a Windows registry key. You must take this step on each remote desktop on which you replace the default certificate with a CA-signed certificate.

#### Prerequisites

Verify that the CA-signed certificate is imported into the Windows certificate store. See [Import a Certificate for the HTML Access Agent into the Windows Certificate Store](#).

#### Procedure

- 1 In the MMC window on the remote desktop where the HTML Access Agent is installed, navigate to the **Certificates (Local Computer) > Personal > Certificates** folder.
- 2 Double-click the CA-signed certificate that you imported into the Windows certificate store.
- 3 In the Certificates dialog box, click the Details tab, scroll down, and select the **Thumbprint** icon.
- 4 Copy the selected thumbprint to a text file.

For example: 31 2a 32 50 1a 0b 34 b1 65 46 13 a8 0a 5e f7 43 6e a9 2c 3e

---

**Note** When you copy the thumbprint, do not include the leading space. If you inadvertently paste the leading space with the thumbprint into the registry key (in Step 7), the certificate might not be configured successfully. This problem can occur even though the leading space is not displayed in the registry value text box.

---

- 5 Start the Windows Registry Editor on the desktop where the HTML Access Agent is installed.
- 6 Navigate to the HKEY\_LOCAL\_MACHINE\SOFTWARE\VMware, Inc.\VMware Blast\Config registry key.
- 7 Modify the SslHash value and paste the certificate thumbprint into the text box.
- 8 Reboot Windows.

When a user connects to a remote desktop through Horizon Client for Chrome, the HTML Access Agent presents the CA-signed certificate to the user's browser.

## Configure HTML Access Agents to Use Specific Cipher Suites

You can configure the HTML Access Agent to use specific cipher suites instead of the default set of ciphers.

By default, the HTML Access Agent requires incoming SSL connections to use encryption based on certain ciphers that provide strong protection against network eavesdropping and forgery. You can configure an alternative list of ciphers for the HTML Access Agent to use. The set of acceptable ciphers is expressed in the OpenSSL format, which is described at

<https://www.openssl.org/docs/manmaster/man1/ciphers.html>.

### Procedure

- 1 Start the Windows Registry Editor on the desktop where the HTML Access Agent is installed.
- 2 Navigate to the HKEY\_LOCAL\_MACHINE\SOFTWARE\VMware, Inc.\VMware Blast\Config registry key.
- 3 Add a new String (REG\_SZ) value, `SslCiphers`, and paste the cipher list in the OpenSSL format into the text box.
- 4 Restart the VMware Blast service to make your changes take effect.

In the Windows guest operating system, the service for the HTML Access Agent is called VMware Blast.

To revert to using the default cipher list, delete the `SslCiphers` value and restart the VMware Blast service. Do not simply delete the data part of the value because the HTML Access Agent will then treat all ciphers as unacceptable, in accordance with the OpenSSL cipher list format definition.

When the HTML Access Agent starts, it writes the cipher definition in the VMware Blast service's log file. You can discover the current default cipher list by inspecting the logs when the VMware Blast service starts with no `SslCiphers` value configured in the Windows Registry.

The HTML Access Agent's default cipher definition might change from one release to the next to provide improved security.

## Using a CA-Signed Certificate with Unified Access Gateway

If you use a Unified Access Gateway appliance instead of a Connection Server or security server, you must install a CA-signed certificate that has a Subject Alternative Name (SAN) configured.

If you use a CA-signed certificate that does not have a SAN configured, or a self-signed certificate, users receive a "Your connection is not private" error and cannot connect with Horizon Client for Chrome.

---

**Note** If you use a Connection Server instance or security server, users can still connect by clicking the `Proceed to ip-address (unsafe)` link.

---

For information about installing and configuring certificates for Horizon 7, see the *Horizon 7 Installation* document. For information about installing certificates in Chrome, see the Google Chrome documentation.

## Data Collected by VMware

If your company participates in the customer experience improvement program, VMware collects data from certain client fields. Fields containing sensitive information are made anonymous.

VMware collects data on the clients to prioritize hardware and software compatibility. If a Horizon administrator has opted to participate in the customer experience improvement program, VMware collects anonymous data about your deployment to improve VMware's response to customer requirements. No data that identifies your organization is collected. Client information is sent first to Connection Server and then on to VMware, along with data from servers, desktop pools, and remote desktops.

To participate in the VMware customer experience improvement program, the administrator who installs Connection Server can opt in while running the Connection Server installation wizard, or an administrator can set an option in Horizon Administrator after the installation.

**Table 1-2. Client Data Collected for the Customer Experience Improvement Program**

Description	Field name	Is This Field Made Anonymous?	Example Value
Company that produced the application	<client-vendor>	No	VMware
Product name	<client-product>	No	VMware Horizon Client for Chrome
Client product version	<client-version>	No	4.8.0-build_number
Client binary architecture	<client-arch>	No	browser
Native architecture of the browser	<browser-arch>	No	ChromeOS
Browser user agent string	<browser-user-agent>	No	Chrome/3.0.1750
Browser's internal version string	<browser-version>	No	3.0.1750 (for Chrome)
Browser's core implementation	<browser-core>	No	Chrome
Whether the browser is running on a handheld device	<browser-is-handheld>	No	true



# Managing Remote Desktop and Published Application Connections

## 2

End users can use Horizon Client to connect to a server, log in to or off of remote desktops, and use published applications. For troubleshooting purposes, end users can also reset remote desktops and published applications.

This chapter includes the following topics:

- [Connect to a Remote Desktop or Published Application](#)
- [Trust a Self-Signed Root Certificate](#)
- [Setting the Time Zone](#)
- [Allowing H.264 Decoding](#)
- [Log Off or Disconnect](#)

## Connect to a Remote Desktop or Published Application

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

Before you have end users access their remote desktops and published applications, test that you can connect to a remote desktop or published application from a client device.

### Prerequisites

- Obtain login credentials, such as a user name and password, RSA SecurID user name and passcode, or RADIUS authentication user name and passcode.
- Obtain the NETBIOS domain name for logging in. For example, you might use mycompany rather than mycompany.com.
- Perform the administrative tasks described in [Preparing Connection Server and Security Servers](#) and [Prepare Desktops, Pools, and Farms](#).
- If you are outside the corporate network and require a VPN connection to access remote desktops and published applications, verify that the client device is set up to use a VPN connection and turn on that connection.
- Verify that you have the fully qualified domain name (FQDN) of the server that provides access to the remote desktop or published application. Underscores (\_) are not supported in server names. If the port is not 443, you also need the port number.

## Procedure

- 1 Log in to the Chromebook.
- 2 If a VPN connection is required, turn on the VPN.
- 3 Open the VMware Horizon Client app.
- 4 Connect to a server.

Option	Action
Connect to a new server	Click the plus sign (+), enter the name of the server, and click <b>Connect</b> .
Connect to an existing server	Click the server shortcut.

Connections between Horizon Client and servers always use TLS. The default port for TLS 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 If you are prompted for RSA SecurID credentials or RADIUS authentication credentials, enter the user name and passcode, and click **Login**.

The passcode might include both a PIN and the generated number on the token.

- 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 entered previously. If necessary, wait until a new number is generated. If this step is required, it is required only when you mistype the first passcode or when configuration settings in the RSA server change.

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

- a Enter the user name and password of a user who is entitled to use at least one desktop or application pool.
- b Select a domain.

If you cannot select a domain, you must enter the user name in the format **username@domain** or **domain\username**.

- c Tap **Login**.

- 8 (Optional) To mark a remote desktop or published application as a favorite, click the gray star inside the icon for the remote desktop or published application.

The star icon turns from gray to yellow. The next time you log in, you can click the star icon in the upper-right part of the browser window to show only favorite items.

- 9 To connect to remote desktop or published application, click its icon in the desktop and application selector window.

The remote desktop or published application appears in your browser. A navigation sidebar is also available. You can click the tab at the left side of the browser window to show the sidebar. You can use the sidebar to access other remote desktops or published applications, open the **Settings** window, and perform other tasks. For more information, see [Using the Sidebar](#).

#### What to do next

If, soon after connecting to a remote desktop or published application, you are disconnected and see a prompt that asks you to click a link to accept the security certificate, select whether to trust the certificate. See [Trust a Self-Signed Root Certificate](#).

If the time zone in the remote desktop or published application does not use the time zone set in the client device, set the time zone manually. See [Setting the Time Zone](#).

## Trust a Self-Signed Root Certificate

Sometimes, when connecting to a remote desktop or application for the first time, the browser might prompt you to accept the self-signed certificate that the remote machine uses. You must trust the certificate before you can connect to the remote desktop or published application.

Chrome gives you the option to trust the self-signed certificate permanently. If you do not trust the certificate permanently, you must verify the certificate every time you restart your browser.

#### Procedure

- 1 If the browser presents an untrusted certificate warning, or a warning that your connection is not private, examine the certificate to verify that it matches the certificate that your company uses.

You might need to contact your system administrator for assistance. For example, in Chrome, you might use the following procedure.

- a Click the lock icon in the address bar.
- b Click the **Certificate information** link.
- c Verify that the certificate matches the certificate that your company uses.

You might need to contact your system administrator for assistance.

- 2 Accept the security certificate.

In Chrome, you can click the **Advanced** link on the browser page, and click **Proceed to server-name (unsafe)**.

The remote desktop or published application starts.

## Setting the Time Zone

The time zone that a remote desktop or published application uses is set to the time zone in your local system automatically.

When you use Horizon Client, if the time zone cannot be correctly determined due to certain daylight saving policies, you might need to set the time zone manually.

To set the correct time zone information to use before you connect to a remote desktop or published application manually, click the **Settings** toolbar button in the upper-right corner of the desktop and application selector window. Turn off the **Set Time Zone Automatically** option in the **Settings** window and select one of the time zones from the drop-down menu.

The value you selected is saved as your preferred time zone to use when connecting to a remote desktop or published application.

If you are already connected to a remote desktop or published application, return to the desktop and application selector window to change the current time zone setting.

The **Set Time Zone Automatically** option is not available from the **Settings** window that is accessible from the sidebar.

## Allowing H.264 Decoding

When you use a Chrome browser, you can allow H.264 decoding in the client for remote desktop and published application sessions.

When you allow H.264 decoding, Horizon Client uses H.264 decoding if the agent supports H.264 encoding. If the agent does not support H.264 encoding, Horizon Client uses JPEG/PNG decoding.

If you are connected to a remote desktop or published application, you can allow H.264 decoding by turning on the **Allow H.264 decoding** option in the **Settings** window, which is available from the sidebar. You must disconnect and reconnect to the remote desktop or published application for the new setting to take effect.

If you are not connected to a remote desktop or published application, you can click the **Settings** toolbar button in the upper-right corner of the desktop and application selector window and turn on the **Allow H.264 decoding** option in the **Settings** window. The new setting takes effect for any sessions that are connected after you change the setting.

## Log Off or Disconnect

If you disconnect from a remote desktop without logging off, applications in the remote desktop might remain open. You can also disconnect from a server and leave published applications running.

### Procedure

- Log out of the server and disconnect from (but do not log out from) the remote desktop or quit the published application.

Option	Action
From the desktop and application selector window, before connecting to a remote desktop or published application	Click the <b>Log Out</b> toolbar button in the upper-right corner of the window.
From the sidebar when connected to a remote desktop or published application	Click the <b>Log out</b> toolbar button at the top of the sidebar.

- Close a published application.

Option	Action
From within the published application	Quit the published application in the usual manner, for example, click the <b>X</b> (Close) button in the corner of the published application window.
From the sidebar	Click the <b>X</b> next to the published application name in the <b>Running</b> list in the sidebar.

- Log off or disconnect from a remote desktop.

Option	Action
From within the remote desktop	To log off, use the Windows <b>Start</b> menu to log off.
From the sidebar	<p>To log off and disconnect, click the <b>Open Menu</b> toolbar button next to the remote desktop name in the <b>Running</b> list in the sidebar and select <b>Log Off</b>. Files that are open on the remote desktop are closed without being saved first.</p> <p>To disconnect without logging off, click the <b>Open Menu</b> toolbar button next to the remote desktop name in the <b>Running</b> list and select <b>Close</b>.</p> <p><b>Note</b> A Horizon administrator can configure the remote desktop to log off automatically when disconnected. In that case, any open applications in the remote desktop are closed.</p>

# Using a Remote Desktop or Published Application

Horizon Client provides a familiar, personalized desktop and application environment.

This chapter includes the following topics:

- [Feature Support Matrix](#)
- [Using the Sidebar](#)
- [Using Multiple Monitors](#)
- [Using the Real-Time Audio-Video Feature for Webcams and Microphones](#)
- [Copying and Pasting Text and Images](#)
- [Share Access to Local Folders and Drives with Client Drive Redirection](#)
- [Sound](#)
- [Shortcut Key Combinations](#)

## Feature Support Matrix

When planning which features to make available to your end users, use the following information to determine which guest operating systems support the feature.

**Table 3-1. Features Supported for Windows Virtual Desktops**

Feature	Windows 7 Desktop	Windows 8.x Desktop	Windows 10 Desktop	Windows Server 2008 R2 Desktop	Windows Server 2012 R2 Desktop	Windows Server 2016 Desktop
RSA SecurID or RADIUS	X	X	X	X	X	X
Single sign-on	X	X	X	X	X	X
RDP display protocol						
PCoIP display protocol						
VMware Blast display protocol	X	X	X	X	X	X
USB redirection						
Real-Time Audio-Video (RTAV)	X	X	X	X	X	X
Wyse MMR						

**Table 3-1. Features Supported for Windows Virtual Desktops (Continued)**

Feature	Windows 7 Desktop	Windows 8.x Desktop	Windows 10 Desktop	Windows Server 2008 R2 Desktop	Windows Server 2012 R2 Desktop	Windows Server 2016 Desktop
Windows Media MMR						
Virtual printing						
Location-based printing	X	X	X	X	X	X
Smart cards						
Multiple monitors	X	X	X	X	X	X

For descriptions of these features and their limitations, see the *Horizon 7 Architecture Planning* document.

## Features Supported for Published Desktops on RDS Hosts

RDS hosts are server computers that have Windows Remote Desktop Services and View Agent or Horizon Agent installed. Multiple users can have remote desktop sessions on an RDS host simultaneously. An RDS host can be either a physical machine or a virtual machine.

**Note** The following table contains rows only for the features that are available from RDS hosts if you use Horizon Client for Chrome. Additional features are available if you use an installed version of Horizon Client, such as Horizon Client for Windows.

**Table 3-2. Features Supported for RDS Hosts with View Agent 6.1.1 or Later, or Horizon Agent 7.0 or Later, Installed**

Feature	Windows Server 2008 R2 RDS Host	Windows Server 2012 or 2012 R2 RDS Host	Windows Server 2016
RSA SecurID or RADIUS	X	X	Horizon Agent 7.0.2 and later
Single sign-on	X	X	Horizon Agent 7.0.2 and later
VMware Blast display protocol	X	X	Horizon Agent 7.0.2 and later
Location-based printing	X (virtual machine only)	X (virtual machine only)	Horizon Agent 7.0.2 and later (virtual machine only)
Real-Time Audio-Video (RTAV)	Horizon Agent 7.0.2 and later	Horizon Agent 7.0.2 and later	Horizon Agent 7.0.3 and later
Multiple monitors	X	X	X

For information about which editions of each guest operating system are supported, see the *Horizon 7 Installation* document.

## Using the Sidebar

After you connect to a remote desktop or published application, you can use the sidebar to start other remote desktops and published applications, switch between running remote desktops and published applications, and perform other actions.

The sidebar appears on the left side of the remote desktop or published application window. To show or hide the sidebar, click the sidebar tab. You can also slide the tab up and down.

To see the list of the documents opened by a running published application, click the expander arrow next to the published application in the **Running** list.

**Note** If you have two documents open from the same, but separate, published applications hosted on two different servers, the published application appears twice in the **Running** list in the sidebar.

You can perform many actions from the sidebar.

**Table 3-3. Sidebar Actions**

Action	Procedure
Show the sidebar	When a published application or remote desktop is open, click the sidebar tab. When the sidebar is open, you can still perform actions in the published application or remote desktop window.
Hide the sidebar	Click the sidebar tab.
Start a published application or remote desktop	Click the name of a published application or remote desktop in the <b>Available</b> list in the sidebar. Remote desktops are listed first.
Search for a published application or remote desktop	<ul style="list-style-type: none"> <li>Click in the <b>Search</b> box and begin typing the name of the published application or remote desktop.</li> <li>To start a published application or remote desktop, click its name in the search results.</li> <li>To return to the home view of the sidebar, tap the <b>X</b> in the search box.</li> </ul>
Create a list of favorite published applications and remote desktops	Click the gray star next to the name of the remote desktop or published application in the <b>Available</b> list in the sidebar. You can then click the <b>Show Favorites</b> toolbar button (star icon) next to <b>Available</b> to show a list of only favorites.
Switch between published applications or remote desktops	Click the published application or remote desktop name in the <b>Running</b> list in the sidebar.
Close a running remote desktop	<p>Click the <b>Open Menu</b> button next to the remote desktop name in the <b>Running</b> list in the sidebar and select an action.</p> <ul style="list-style-type: none"> <li>Select <b>Close</b> to disconnect from the remote desktop without logging off from its operating system. A Horizon administrator can configure a remote desktop to log off automatically when disconnected. In that case, unsaved changes in open applications are lost.</li> <li>Select <b>Log off</b> to log off from the operating system and disconnect from the remote desktop. Any unsaved changes in open applications are lost.</li> </ul>
Close a running published application	<p>Click the <b>X</b> next to the file name under the published application name in the <b>Running</b> list in the sidebar. Click the <b>X</b> next to the published application name to quit the published application and close all open files for that published application.</p> <p>You are prompted to save changes made to the files.</p>



**Table 3-3. Sidebar Actions (Continued)**

Action	Procedure
Reset a remote desktop	Click the <b>Open Menu</b> button next to the remote desktop name in the <b>Running</b> list in the sidebar and select <b>Reset</b> . Any files that are open on the remote desktop are closed without being saved first. You can reset a remote desktop only if a Horizon administrator has enabled this feature.
Restart a remote desktop	Click the <b>Open Menu</b> button next to the remote desktop name in the <b>Running</b> list in the sidebar and select <b>Restart</b> . The remote 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 this feature.
Reset all running published applications	Click the <b>Open Menu</b> toolbar button at the top of the sidebar, click <b>Settings</b> , and click <b>Reset all your running applications</b> . All unsaved changes are lost.
Use key combinations that include the Windows key	Click the <b>Open Menu</b> toolbar button at the top of the sidebar, click <b>Settings</b> , and turn on <b>Enable Windows Key for Desktops</b> . For more information, see <a href="#">Shortcut Key Combinations</a> .
Send Ctrl+Alt+Del to current work area	Click the <b>Send Ctrl+Alt+Del</b> toolbar button at the top of the sidebar.
Disconnect from a server	Click the <b>Open Menu</b> toolbar button at the top of the sidebar and click <b>Log out</b> .
Allow H.264 decoding	Click the <b>Open Menu</b> toolbar button at the top of the sidebar, click <b>Settings</b> , and turn on <b>Allow H.264 decoding</b> . For more information, see <a href="#">Allowing H.264 Decoding</a> .
Use multiple monitors	Click the <b>Open Menu</b> toolbar button at the top of the sidebar, select <b>Settings</b> , and turn on <b>Use Multi Monitors if there are two monitors</b> . For more information, see <a href="#">Using Multiple Monitors</a> .
Show help topics	Click the <b>Open Menu</b> toolbar button at the top of the sidebar, click <b>Settings</b> , and click <b>Help</b> . You can also click the Horizon logo at the top of the sidebar and click <b>Help</b> .
Show the About VMware Horizon Client dialog box	Click the <b>Open Menu</b> toolbar button or the Horizon logo at the top of the sidebar and click <b>About</b> . You can also click the Horizon logo at the top of the sidebar.

## Using Multiple Monitors

You can use up to two monitors with remote desktops.

If you are not connected to a remote desktop, click the **Settings** toolbar button in the upper-right corner of the desktop and application selector window and turn on the **Use Multi Monitors if there are two monitors** option in the **Settings** window. If you have two monitors and you connect to a remote desktop, the multiple-monitor feature is used. If you have only a single monitor, or more than two monitors, single-monitor mode is used. If you switch to another remote desktop, it opens in multiple-monitor mode and the previous remote desktop reverts back to single-monitor mode.

If you are already connected to a remote desktop, you can enable the multiple-monitor feature by turning on the **Use Multi Monitors if there are two monitors** option in the **Settings** window, which is available from the sidebar.

The multiple-monitor feature has the following limitations.

- It is not supported for published applications.

- It is disabled when the client device is working in kiosk mode.
- It is not supported if Unified Desktop mode is enabled for the client device.

For information about how to disable kiosk mode or Unified Desktop mode, see the Google Chrome documentation.

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

With the Real-Time Audio-Video feature, you can use the client machine's webcam or microphone in a remote desktop or published application. Real-Time Audio-Video is compatible with standard conferencing applications and browser-based video applications, and it supports standard webcams, audio USB devices, and analog audio input.

The default video resolution is 320 x 240. The default Real-Time Audio-Video settings work well with most webcam and audio applications.

For information about changing the Real-Time Audio-Video settings, see "Configuring Real-Time Audio-Video Group Policy Settings" in the *Configuring Remote Desktop Features in Horizon 7* document.

When a remote desktop or published application is connected to the client machine's webcam or microphone, before the remote desktop or published application can use the webcam or microphone, Chrome asks for permission the first time. If you allow the device to be used, Chrome does not ask for permission again.

When a remote desktop is connected to the client machine's webcam or microphone, an icon for each device appears at the top of the sidebar. A red question mark appears over the device icon in the sidebar to indicate the permission request. If you allow a device to be used, the red question mark disappears. If you reject a permission request, the device icon disappears.

If Real-Time Audio-Video is being used in a remote desktop or published application session and you open a connection to a second remote desktop or published application, and if a security warning appears (for example, if a valid certificate was not installed), ignoring the warning and continuing to connect to the second remote desktop or published application causes Real-Time Audio-Video to stop working in the first session.

## Select a Preferred Webcam or Microphone

With the Real-Time Audio-Video feature, if multiple webcams or microphones are connected to the local client system, only one of the devices is used in the remote desktop or published application. To specify which webcam or microphone is preferred, you can configure Real-Time Audio-Video settings in Horizon Client.

If it is available, the preferred webcam or microphone is used in the remote desktop or published application. If the preferred webcam or microphone is not available, another webcam or microphone is used.

## Prerequisites

- Verify that a USB webcam or USB microphone, or other type of microphone, is installed and operational on the local client system.
- Connect to a server.

## Procedure

- 1 Click the **Settings** toolbar button in the upper-right corner of the desktop and application selector window and scroll down to the Real-Time Audio-Video settings.
- 2 From the **Preferred microphone** drop-down menu, select a preferred microphone.
- 3 From the **Preferred webcam** drop-down menu, select a preferred webcam.

The next time you start a remote desktop or published application, the preferred webcam or microphone that you selected is redirected to the remote session.

## Copying and Pasting Text and Images

By default, you can copy and paste plain text and HTML-format rich text from the client device to a remote desktop or published application.

You can also copy and paste plain text and HTML-format rich text from a remote desktop or published application to the client device if a Horizon administrator enables this feature.

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

When you copy and paste images and rich text, the following restrictions apply.

- If the clipboard source is a Google app, such as Google Docs, you can copy and paste images only when the client device can access the Google website.
- If you copy an image and rich text (or plain text) together from the client device, and the destination is an application that supports only rich text, such as WordPad, the image is discarded and only the text is copied and pasted. If the destination application supports HTML/XML-format rich text, such as Microsoft Word, this restriction does not apply.
- A Horizon administrator can use group policies to restrict clipboard formats during copy and paste operations. The clipboard format filter policies for Microsoft Office Chart and Smart Art data and Microsoft Text Effects data is not supported. For information about clipboard format filter policies, see the *Configuring Remote Desktop Features in Horizon 7* document. Using Smart Policies to control the copy and paste behavior in remote desktops is not supported.

You can copy a maximum of 1 MB of data from a remote desktop or published application to the client device. Plain text that exceeds this limit is truncated. Rich text is converted to plain text.

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

## Share Access to Local Folders and Drives with Client Drive Redirection

With the client drive redirection feature, you can share folders or drives on the local client system with remote desktops and published applications.

Shared drives can include mapped drives and USB storage devices.

The client drive redirection feature has the following limitations.

- Using the Windows registry key settings `ForcedByAdmin`, `default shares`, and permissions to configure client drive redirection are not supported.
- The TCP and UDP side channels are not supported. If the agent machine is configured to use either of these side channels, you cannot use the client drive redirection feature.
- User Environment Manager policies are not supported.
- Network recovery is not supported. You cannot use client drive redirection after network reconnection unless you disconnect the session and connect again.
- You can use the client drive redirection feature with only one remote session at a time. Multiple remote sessions are not supported.
- You cannot change properties for shared folders or files in the remote desktop.

### Prerequisites

To share folders and drives with a remote desktop or published application, a Horizon administrator must enable the client drive redirection feature. This task involves installing Horizon Agent 7.4 or later and enabling the agent **Client Drive Redirection** option. It can also include setting policies to control the client drive redirection behavior. For more information, see the *Configuring Remote Desktop Features in Horizon 7* document.

### Procedure

- 1 Click the **Settings** toolbar button in the upper-right corner of the desktop and application selector window and turn on the **Enable folder sharing** option in the Settings window.
- 2 To select a specific folder or drive to share, click **Select**, click **Add**, browse to and select the folder or drive, and click **OK**.

You can add multiple folders and drives, but you can select only one item at a time. You can remove a folder or drive by clicking the **X** next to its name in the Folder Sharing dialog box.

### 3 To save the settings, click **OK**.

The folder sharing settings apply to all remote desktops and published applications.

In a remote desktop, a network location appears for each folder and drive that you shared. For example, if you shared a folder named `test1`, the `test1(Z:)` network location might appear in the remote desktop. A device also appears for each shared folder and drive. The device name format is *folder* on Horizon, for example, `test1` on Horizon.

In a published application, you can select **File > Open** or **File > Save As**, if applicable, and navigate to the shared folder or drive.

## Sound

You can play sound in remote desktops and published applications, but some limitations apply.

By default, sound playback is enabled for remote desktops and published applications, but a Horizon administrator can set a policy to disable sound playback.

The following limitations apply to sound playback in remote desktops and published applications.

- To turn up the volume, use the sound control on the client system, not the sound control in the remote desktop.
- Occasionally, the sound might go out of sync with the video.
- In conditions of heavy network traffic, or if the browser is performing many tasks, sound quality might be reduced.

## Shortcut Key Combinations

Some key combinations cannot be sent to a remote desktop or published application, regardless of the language that you use.

Chrome allows some key presses and key combinations to be sent to both the client system and the destination system. For other keys and key combinations, the input is processed only locally and is not sent to the destination system.

The following keys and keyboard combinations often do not work in remote desktops.

- Ctrl+T
- Ctrl+W
- Ctrl+N
- Command key
- Alt+Enter
- Ctrl+Alt+*any\_key*

---

**Important** To input Ctrl+Alt+Del, use the **Send Ctrl+Alt+Delete** toolbar button at the top of the sidebar.

---

- Caps Lock+*modifier\_key* (such as Alt or Shift)
- Function keys on a Chromebook
- Windows key combinations

If you enable the Windows key for remote desktops, the following Windows key combinations do work in remote desktops. To enable this key, click the **Open Settings Window** toolbar button in the sidebar and turn on **Enable Windows Key for Desktops**.

After you turn the **Enable Windows Key for Desktops**, you must press Ctrl+Search to simulate pressing the Windows key.

These key combinations do not work for published applications. These key combinations do work for Windows Server 2008 R2, Windows Server 2012 R2, and Windows Server 2016 remote desktops and published desktops.

Some key combinations that work in remote desktops that have a Windows 8.x or Windows Server 2012 R2 operating system do not work in remote desktops that have a Windows 7, Windows Server 2008 R2, or Windows 10 operating system.

**Table 3-4. Windows Key Shortcuts for Windows 10 Remote Desktops and Windows Server 2016 Remote Desktops**

Keys	Action	Limitations
Win	Open or close Start.	
Win+A	Open Action center.	
Win+E	Open File Explorer.	
Win+G	Open game bar when a game is open.	
Win+H	Open the Share charm.	
Win+I	Open the Settings charm.	
Win+K	Open the Connection quick action.	
Win+M	Minimize all windows.	
Win+R	Open the Run dialog box.	
Win+S	Open Search.	
Win+X	Open the <b>Quick Link</b> menu.	
Win+, (comma)	Temporarily peek at the remote desktop.	
Win+Shift+M	Restore minimized windows on the remote desktop.	
Win+Enter	Open Narrator.	

**Table 3-5. Windows Key Shortcuts for Windows 8.x and Windows Server 2012 R2 Remote Desktops**

Keys	Action	Limitations
Win+F1	Open Windows Help and Support.	
Win	Show or hide the Start window.	

**Table 3-5. Windows Key Shortcuts for Windows 8.x and Windows Server 2012 R2 Remote Desktops (Continued)**

Keys	Action	Limitations
Win+B	Set focus on the notification area.	
Win+C	Open the Charms panel.	
Win+D	Show and hide the remote desktop.	
Win+E	Open File Explorer.	
Win+H	Open the Share charm.	
Win+I	Open the Settings charm.	
Win+K	Open the Devices charm.	
Win+M	Minimize all windows.	
Win+Q	To search everywhere or within the open app, if the app supports app search, open the Search charm.	
Win+R	Open the Run dialog box.	
Win+S	To search Windows and the Web, open the Search charm.	
Win+X	Open the <b>Quick Link</b> menu.	
Win+Z	Show the commands available in the app.	
Win+, (comma)	Temporarily show the remote desktop, as long as you continue pressing the keys.	Does not work on Windows 2012 R2 operating systems.
Win+Shift+M	Restore minimized windows on the remote desktop.	
Win+Home	Minimize all but the active remote desktop window (restores all windows when you press Win+Home a second time).	
Win+Enter	Open Narrator.	

**Table 3-6. Windows Key Shortcuts for Windows 7 and Windows Server 2008 R2 Remote Desktops**

Keys	Action	Limitations
Win	Open or close the <b>Start</b> menu.	
Win+D	Show and hide the remote desktop.	
Win+M	Minimize all windows.	
Win+E	Open the Computer folder.	
Win+R	Open the Run dialog box.	
Win+Home	Minimize all but the active remote desktop window.	
Win+G	Cycle through running remote desktop gadgets.	
Win+U	Open the Ease of Access Center.	

# Troubleshooting Horizon Client

You can solve most Horizon Client problems by restarting or resetting remote desktops or published applications, or by reinstalling Horizon Client.

This chapter includes the following topics:

- [Restart a Remote Desktop](#)
- [Reset a Remote Desktop or Published Applications](#)
- [Uninstall Horizon Client for Chrome](#)
- [Enable Log Collection](#)

## Restart a Remote Desktop

If the remote desktop operating system stops responding, you might need to restart a remote desktop. Restarting a remote desktop is similar to using the Windows operating system restart command. The remote 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 restart feature for the remote desktop.

For information about enabling the desktop restart feature, see the *Setting Up Virtual Desktops in Horizon 7* or *Setting Up Published Desktops and Applications in Horizon 7* document.

### Prerequisites

Obtain login credentials, such as an Active Directory user name and password, RSA SecurID user name and password, or RADIUS authentication user name and password.

### Procedure

- ◆ Click the **Open Menu** toolbar button next to the remote desktop name in the **Running** list in the sidebar and select **Restart**.

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

### What to do next

Wait an appropriate amount of time for the system to restart before you attempt to reconnect to the remote desktop.



## Reset a Remote Desktop or Published 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 published applications quits all open applications.

Resetting a remote desktop is the same as 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 published applications quits the applications without saving any unsaved data. All open published 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 reset feature for the remote desktop.

For information about enabling the desktop reset feature, see the *Setting Up Virtual Desktops in Horizon 7* or *Setting Up Published Desktops and Applications in Horizon 7* document.

### Procedure

- ◆ Use the **Reset** command.

Option	Action
<b>Reset published applications from the application selector window</b>	From the desktop and application selector screen, before connecting to a remote desktop or published application, to reset all running published applications, click the <b>Settings</b> toolbar button in the upper-right corner of the screen, and click <b>Reset</b> .
<b>Reset a remote desktop from the sidebar</b>	When connected to a remote desktop, click the <b>Open Menu</b> toolbar button next to the desktop name in the <b>Running</b> list in the sidebar and select <b>Reset</b> .
<b>Reset published applications from the sidebar</b>	To reset all running applications, click the <b>Open Settings Window</b> toolbar button at the top of the sidebar, and click <b>Reset</b> .

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

### What to do next

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

## Uninstall Horizon Client for Chrome

To uninstall the VMware Horizon Client for Chrome app, you remove it in the same way that you remove other Chromebook apps.

### Procedure

- 1 Log in to the Chromebook.
- 2 Right-click the VMware Horizon Client app and select **Uninstall**.

## What to do next

To reinstall the VMware Horizon Client for Chrome app, see [Install or Upgrade Horizon Client for Chrome](#).

# Enable Log Collection

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

You cannot enable log collection after you connect to a remote desktop or published application.

## Prerequisites

Connect to a server.

## Procedure

- 1 Click the **Settings** toolbar button in the upper-right corner of the desktop and application selector window.

- 2 To enable log collection, turn on the **Collect Log** option in the **Settings** window.

To disable log collection, you can turn off the **Collect Log** option.

- 3 Browse to and select a folder in which to save the log file and click **Save**.

The default log filename is `vmware-horizon-chromeclient-xxxx-xx-xx.log`, where `xxxx-xx-xx` is the year, month, and day. You can customize the log filename.

After you click **Save**, the path to the folder that you selected, and the log filename, appear under the **Collection Log** option in the **Settings** window. You can click this information to change the path or log filename.

- 4 To close the **Settings** window, click **Close**.

Horizon Client collects and saves logging information continuously until you quit Horizon Client.