About this Guide

This document is intended for administrators who are installing the Remote Workstation Card Software for Windows on PC/workstations using the PCoIP Remote workstation Card. It is recommended that users have an understanding of the PCoIP protocol and its advantages as well as environments using PCoIP Remote Workstation Cards and PCoIP Zero Clients.

Welcome to the Remote Workstation Card Software for Windows

Remote Workstation Card Software provides additional features and enhancements for use via the PCoIP Remote Workstation Cards installed in remote PCs/workstations, and provides compatibility for PCoIP Zero Clients or Teradici Software clients in sessions with Remote Workstation Cards. The Remote Workstation Card Software works with the PCI device function called **Host Driver Function**. If the administrator installs the software on the PC/workstation, users can manage additional features.

The Remote Workstation Card Software user interface (UI) is installed when the Remote Workstation Card Software is installed. The UI communicates with the PCoIP firmware via the device drivers installed by the Remote Workstation Card Software, and configures the features of the Remote Workstation Card Software.

This software allows user to:

- Use local cursor and keyboard.

- Lock the host PC when a session is terminated.

- Use a host PC NIC for Wake-on-LAN (WOL).

- Disconnect a session.

- View host statistics and connection information.

System Requirements

Before installing the Remote Workstation Card Software, ensure your PC or workstation meets the following requirements:

- PCoIP Remote Workstation Card firmware 20.07

- PCoIP Zero Client firmware 20.07

- The Host Driver Function is enabled on the PCoIP Remote Workstation Card (see Enabling Host Driver Function).

- Administrator has administrative permissions.

- Supported operating systems:

    ◦ Windows 10 64-bit

Remote Workstation Card Software features may be affected by restrictions/limitations of the client connecting to the Remote Workstation Card. To see any further restrictions, see system requirements documentation of your client.

> ✏️ **Software Client USB support**
>
> USB devices connected to Teradici Software Client hosts are not supported when connecting to Remote Workstation Cards or Remote Workstation Card Agents.

- Software Client for Windows

> 🔥 **Restrictions**
>
> Remote Workstation Card Software imposes some limitations to prevent users from getting their system into a state where the keyboard and mouse do not work. If the local cursor and keyboard feature is not enabled, mouse and keyboard input from the software client is not sent to the PC/workstation.
>
> - Users cannot disable the local cursor feature on the **Login** screen. This restriction affects both zero client and software client users, which would later prevent a user from logging into the machine.
>
> - Users cannot disable the local cursor feature while connected to the PC/workstation from a software client.

> ✏️ **Added support for sending host cursor changes to client**
>
> Remote Workstation Card Software release 3.5.20 adds support for sending host cursor changes to the client (see Remote Workstation Card Software Features Tab). This feature does not work with VMware View soft clients running releases 5.0 and older. This feature is supported in later soft client releases.

Compatibility

The compatibility matrix below lists the firmware releases and the compatible PCoIP Remote Workstation Card Software releases. We recommend that you install the PCoIP Remote Workstation Card Software release that corresponds to the firmware uploaded to the Remote Workstation Card and PCoIP Zero Client.

Some features added to new releases of the Remote Workstation Card Software require firmware upgrades on the PCoIP Remote Workstation Card and/or PCoIP Zero Client.

Firmware and Remote Workstation Card Software Compatibility

Remote Workstation Card Software Release	Recommended Remote Workstation Card Firmware Release	Recommended Zero Client Firmware Release	Compatible Firmware Release
20.07	20.07	20.07	Remote Workstation Card: 20.04 PCoIP Zero Client: 20.04
20.04	20.04	20.04	Remote Workstation Card: 20.01 PCoIP Zero Client: 20.01

What's New in this Release

PCoIP Remote Workstation Card Software for Windows release 20.07 provides compatibility with PCoIP Zero Clients running firmware 20.07 connecting to PCoIP Remote Workstation Cards running firmware 20.07.

There are no new features in this release.

Release Notes

Release Notes for Remote Workstation Card Software releases can be found at the Teradici support site on the release notes page.

Installing the Remote Workstation Card Software for Windows

Teradici strongly recommends that you install the version of Remote Workstation Card Software that is released with the version of the firmware loaded on the Remote Workstation Card and PCoIP Zero Client. For details, see Firmware Compatibility Matrix. It is also recommended that users should not install the Remote Workstation Card Software while connected to the PC/ workstation from a soft client to avoid the possibility of not having access to the local keyboard and cursor.

Before you install the software, you must enable the Host Driver Function on the PCoIP Remote Workstation Card.

> ✏️ **Do not install Remote Workstation Card Software in systems with multiple Remote Workstation Cards**
>
> The Remote Workstation Card Software is not designed to work in systems with more than one Remote Workstation Card. Do not attempt to install and use this software in systems with more than one Remote Workstation Card.

Enabling Host Driver Function

To enable the Host Driver Function on the PCoIP Remote Workstation Card:

1. Open a web browser on a PC or workstation connected to the same network as the PCoIP host computer. Browse to the Remote Workstation Card's webpage, and log in.
2. From the **Configuration** menu, select **Host Driver Function**.
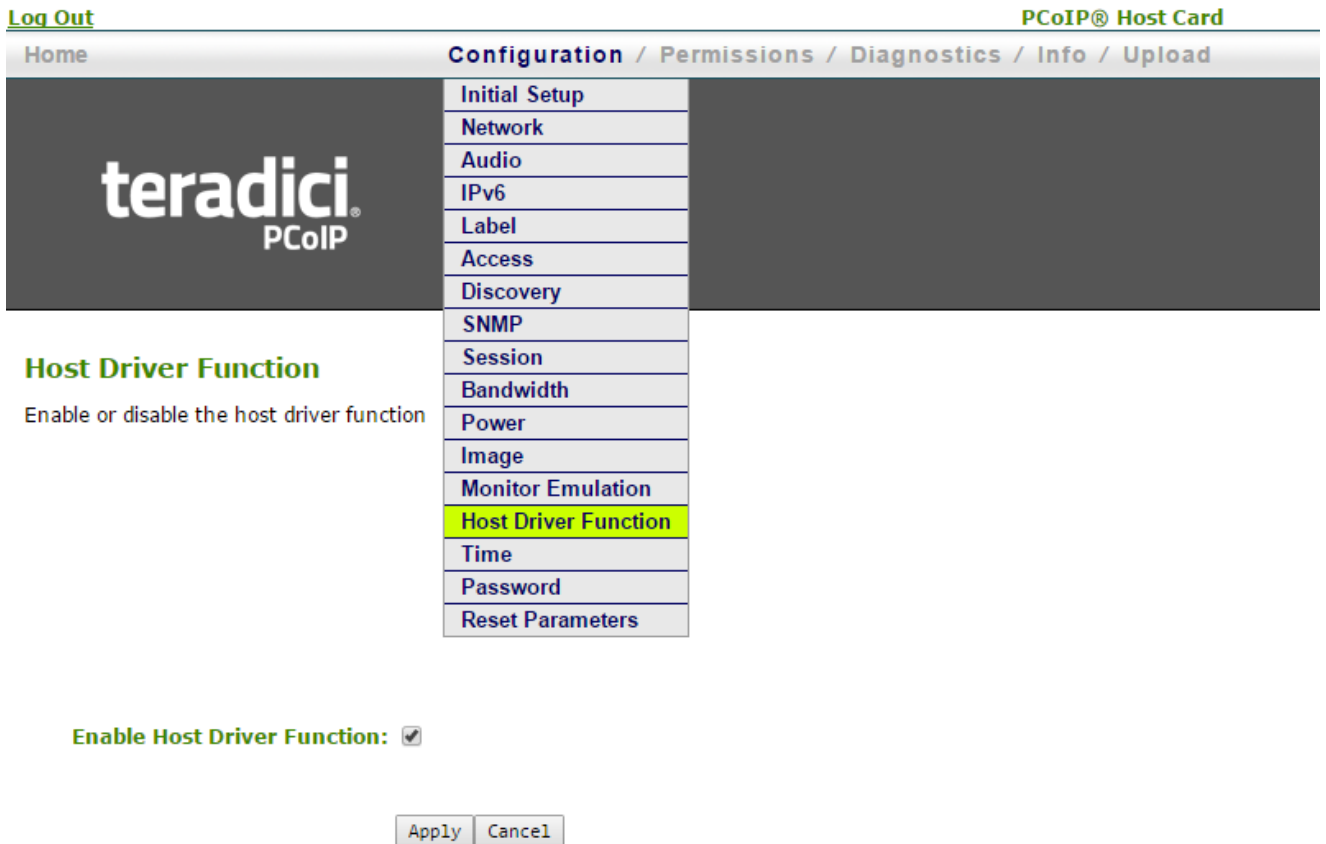
3. Check the **Enable Host Driver Function** option and click **Apply**. A prompt appears to indicate the host PCoIP processor must be reset.

4. Click **Reset** and then click **OK** to schedule a deferred reset.

5. Restart the PCoIP host by restarting the PC or workstation.

6. After the workstations boots, log into the PC or workstation.

7. If a **Found Hardware** dialog appears after logging into Windows, click **Cancel**.

Installing Remote Workstation Card Software

The Remote Workstation Card Software for Windows is provided as a msi file or Windows installation package.

You must have administrative rights to install the software.

> ⚠ **Cannot run installer while connected using a soft client**
>
> As an administrator, you cannot run the Remote Workstation Card Software installer while connected to a host system using a soft client. The local cursor feature is disabled during the installation process. This disables the user's keyboard and mouse, and prevents the user from completing the installation process.

You can run the installer by:

- Connecting to the host using RDP or VNC.

- Connecting to the host using a zero client in a non-VMware View brokered environment.

- Connecting a monitor, keyboard, and mouse directly to the host system.
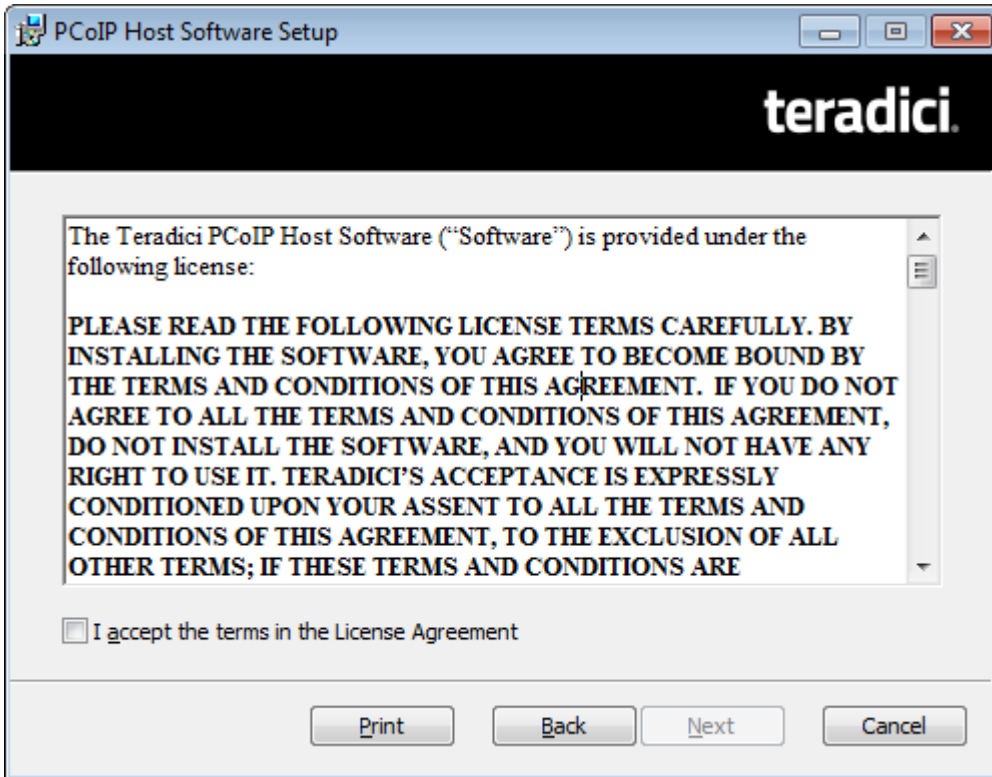
To install the software:

1. Double-click the installer file. The welcome screen appears, similar to the example shown next.
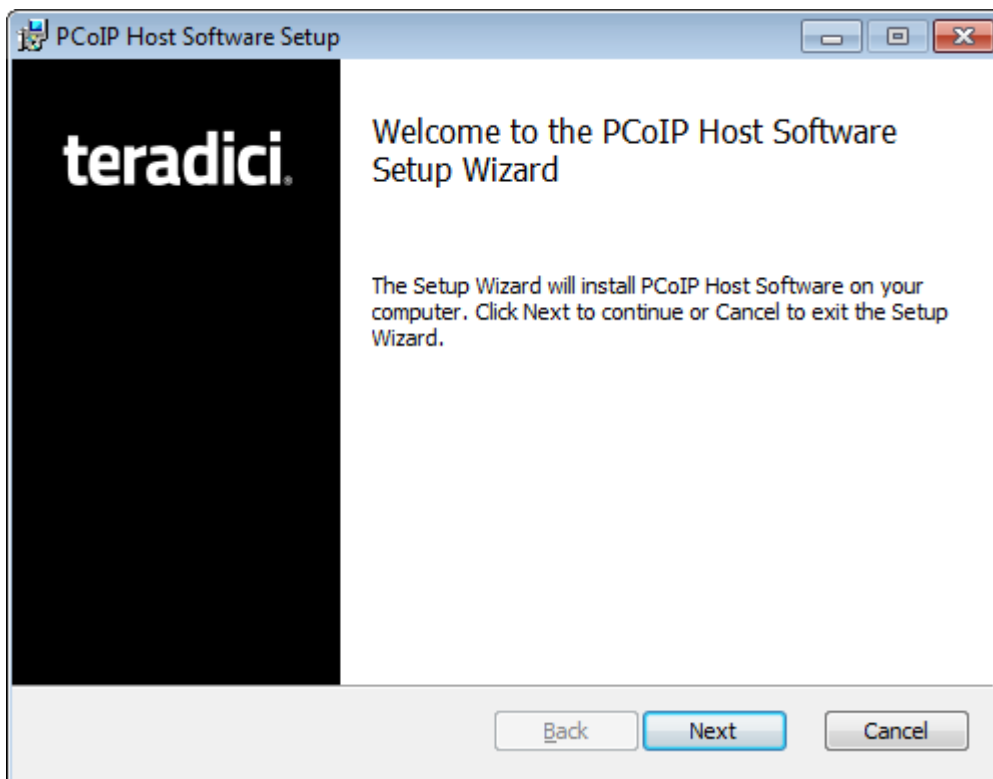

2. If a previous version of the remote workstation card software is installed, a confirmation dialog will be displayed. Click **Yes** to continue.
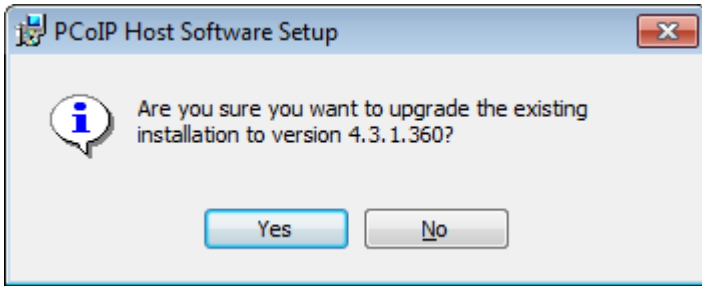
3. Review and accept the terms of the End User License Agreement and click **Next** to proceed.

4. Accept the default installation path or click **Change** to set a custom path. Click **Next** to proceed.

5. Click **Install** to start the installation process.
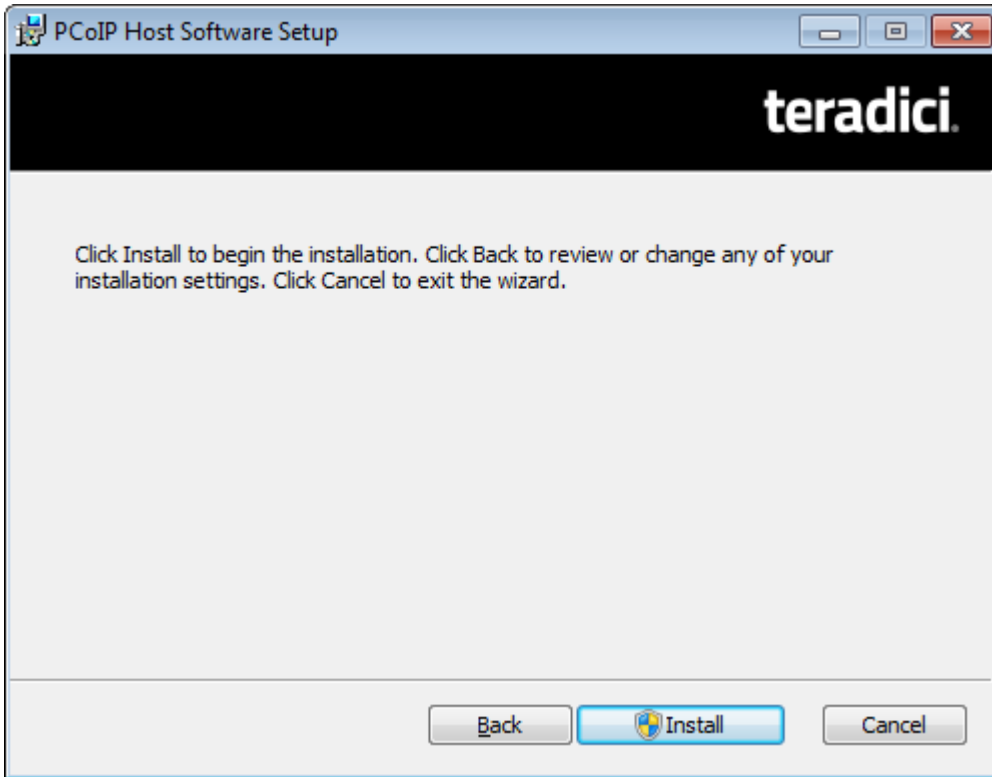
6. During the installation process, the installer might need to reboot. If so, click **OK** or **Yes** to reboot the PC or workstation. After rebooting, the installing continues the installation.

7. When the installation is complete, click **Finish**.
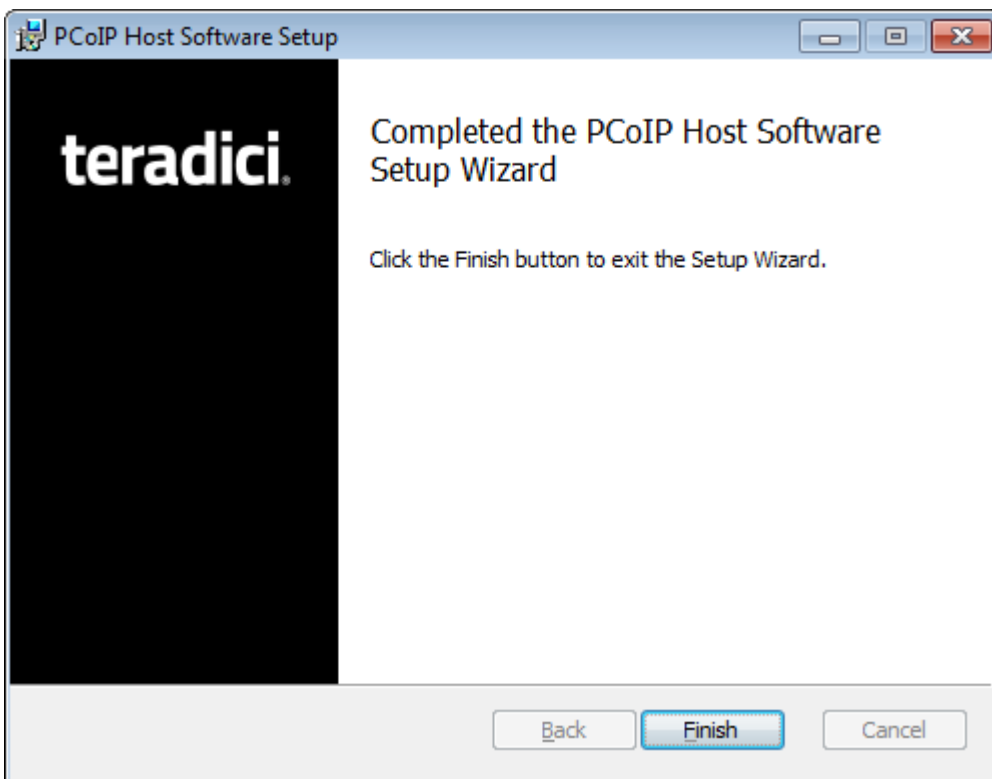
> 🔥 **Error during installation**
>
> If you experience issues during installation, rerun the Setup Wizard or reboot the workstation and try again.

Uninstalling the Remote Workstation Card Software for Windows

You can remove the Remote Workstation Card Software from the PC or workstation at any time. If you no longer need the software, disable the Host Driver Function in firmware. See Disabling Host Driver Function.

To uninstall the Remote Workstation Card Software for Windows:

1. On the PC or workstation, go to the Control Panel.

2. Go to **Programs and Features** (Windows 7 and later).

3. Select the **Remote Workstation Card Software** entry and click **Uninstall**.

4. Follow the onscreen instructions.

> ✏️ **Installing an older version of the Remote Workstation Card Software**
>
> If you want to install an older version of the Remote Workstation Card Software, you must uninstall the newer version, reboot the PC, and then install the older version. Sometimes the older version fails to install. If this happens, reboot the PC and then retry the installation.

> ✏️ **Reconfigure WOL settings**
>
> The Wake-on-LAN (WOL) settings are discarded during an uninstallation or upgrade. You must reconfigure the WOL settings after installing a new version of the software.

Disabling the Host Driver Function

Disabling the PCoIP Host Driver Function on the PCoIP host prevents Windows from seeing an unknown PCI device under Device Manager and the Found New Hardware Wizard dialog associated with the unknown device.

To disable the Host Driver Function on the PCoIP host:

1. Open a web browser on a PC or workstation connected to the same network as the PCoIP host.

2. Log in using the PCoIP host web page.

3. Choose **Configuration > Host Driver Function**. For details, see Enabling Host Driver Function.

4. Uncheck the **Enable Host Driver Function** option and click **Apply**. A prompt indicates you must reset the host PCoIP processor.

5. Click **Reset** and then click **OK** to schedule a deferred reset.

6. Restart the PCoIP host by restarting the PC or workstation.

Customizing the Remote Workstation Card Software for Windows

The Remote Workstation Card Software (also known as PCoIP Host Software) stores configuration settings in the Windows registry. Most settings are updated using the UI. Some settings are updated using the following Group Policy Object (GPO) administrative template file, found in the PCoIP Host Software installation directory:

```
C:\Program Files\Teradici Corporation\PCoIP Host
Software\extras\GroupPolicyFiles\pcoip_host_sw.adm
```

Session Disconnect Script

The one available GPO setting supports running a user-defined script when a PCoIP session is disconnected. This feature can be used to close an application running on a workstation when a PCoIP session ends. To use this feature, the GPO setting must be configured with the path and file name of a script the PCoIP Host Software runs when a session is disconnected while a user is logged in.

This setting can be enabled by the GPO Administrative template file.

Using the GPO Administrative Template File

To configure settings supported by the Remote Workstation Card Software administrative template file:

1. Copy **pcoip_host_sw.adm** from the location described above to `C:\Windows\INF` on the workstation. Save the old **pcoip_host_sw.adm** to a different name if another **pcoip_host_sw.adm** is present.

2. Click **Start > Run**, and then enter **gpedit.msc**.

3. Navigate to **Local Computer Policy > Computer Configuration > Administrative Templates**.

4. Right-click **Administrative Templates** and select **Add/Remove Templates**.

5. Click **Add** in the dialog box that appears.

6. In the right pane of the new window, select the **pcoip_host_sw.adm** file and click **Open**.

7. Copy the file in the manner desired (if presented with this option).

8. Ensure the **pcoip_host_sw** template is visible in the **Add/Remove Templates** window (remove any previous pcoip_host_sw templates) and select **Close**.

9. Navigate to **Local Computer Policy > Computer Configuration > Administrative Templates > Classic Administrative Templates (ADM) > PCoIP Host Software Variables > Not Overridable Administrator Settings**.

> ✏️ **Classic Administrative Templates (ADM) location**
>
> The **Classic Administrative Templates (ADM)** folder will appear after the addition of the ADM template.

10. In the right pane, right click the **Run script on PCoIP session disconnect** setting and select **Edit**.

11. Enter the path and file name of the script used to close an application running on a workstation and click **Apply**.

12. Select the **Enabled** radio button and then **OK**.

Using the Remote Workstation Card Software User Interface

After you install the PCoIP Host Sofware package, the user interface (UI) is available in the Windows system tray. To access the UI, double-click the icon located in the Windows system tray, as shown next.
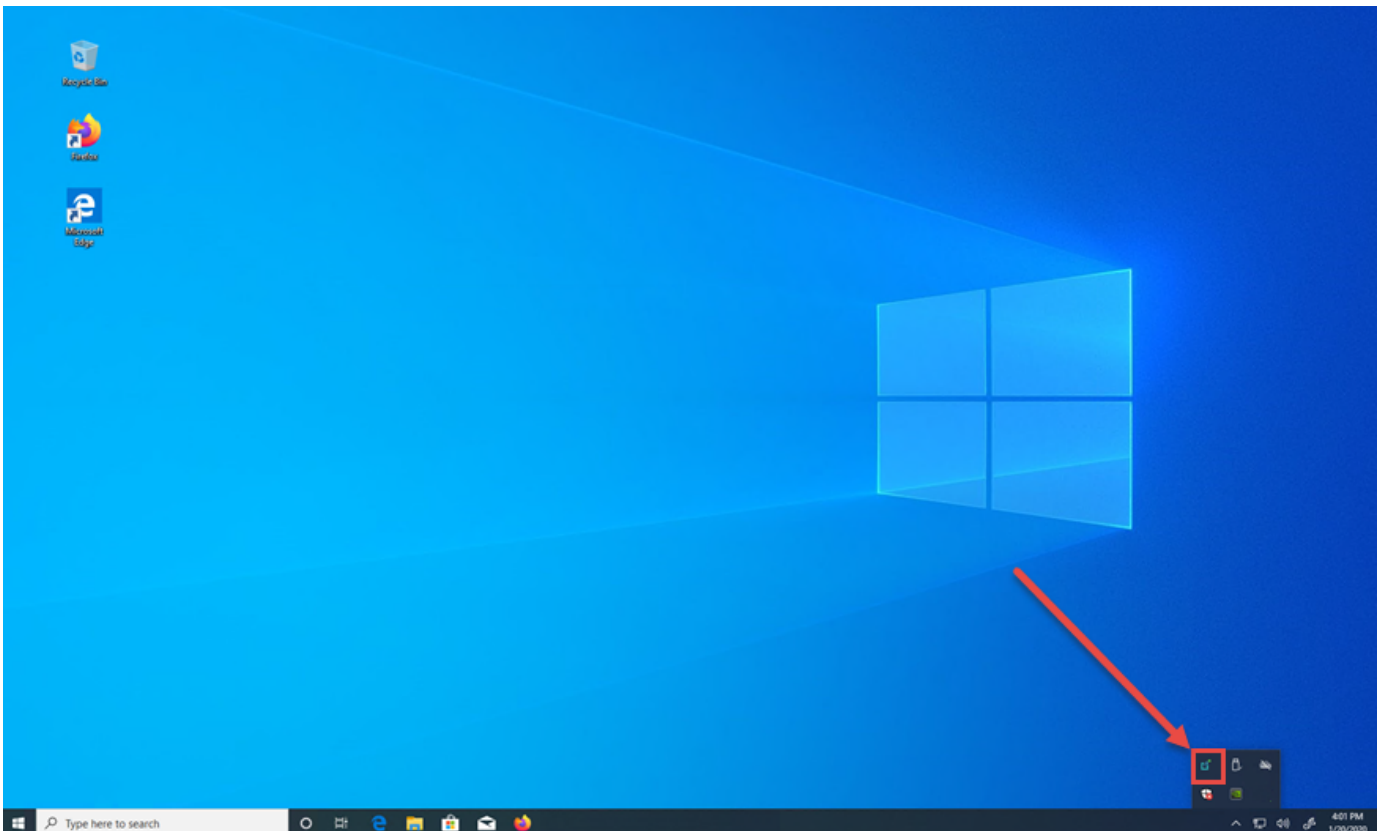
The UI provides multiple tabs that enables you to access different features.

The UI supports an additional feature that lets you disconnect the PCoIP session, if one is active. To initiate this feature:

- Right-click the UI icon in the Windows system tray and select **Disconnect PCoIP Session**.
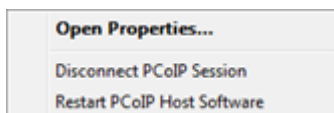
The PCoIP UI is automatically started during Windows startup. The UI is the only configurable software in the software package.

Remote Workstation Card Software Features Tab

The following figure shows the Features tab of the UI.
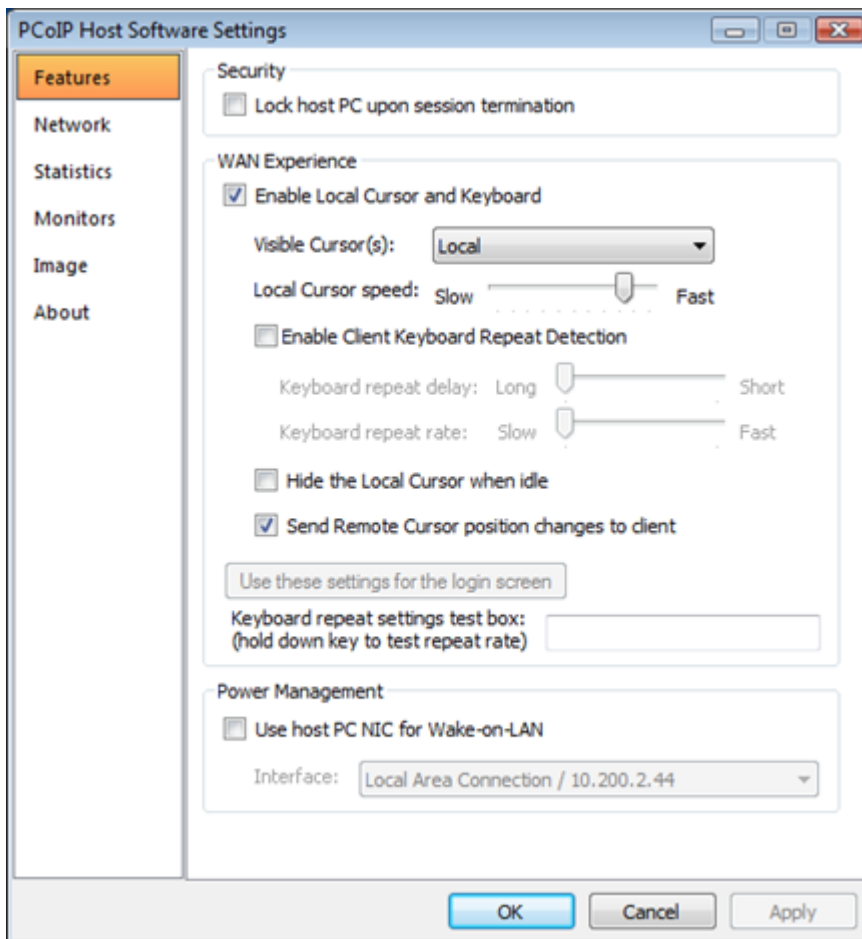
Security

The **Security** feature lets you lock the PC or workstation to ensure other users do not log into another user's session when the user disconnects from a PCoIP session.

- **Lock host PC upon session termination:** Select this option to lock the Host PC when a PCoIP session is disconnected.

WAN Experience

The **WAN Experience** local cursor and keyboard features may be useful in WAN deployments where network latency exceeds 40-60 ms. In these environments, users may notice a visible lag between the movement of the mouse and the movement of the cursor. Key presses may be dropped or falsely repeated key presses may occur under very high network latency scenarios. Both of these side effects of high-network latency hinder user experience. The local cursor and keyboard features help lessen latency effects.

Latency effects are noticed differently by users. With network latency less than 40 ms, most users notice the local cursor overlay and desktop cursor moving in tandem. With higher network latencies, the local cursor overlay moves according to the user's movements, and the desktop cursor follows with visible lag. Because the overlay provides instantaneous feedback, the user can move the mouse freely without having to wait for the desktop cursor to catch up.

> ✏️ **WAN Experience**
>
> The Remote Workstation Card Software stores separate copies of the **WAN Experience** configuration settings for each client a user connects to a host from. This lets users enable the feature on certain clients and disable it on other clients. This is useful when a user connects to a host from a client at work over a LAN connection and another client at home over a WAN connection. In this scenario the user might disable the **Local Cursor and Keyboard** feature for the work client and enable the feature for the home client.

> ✏️ **Settings for each user account**
>
> You can configure the Remote Workstation Card Software configuration settings for each user account on the PC or workstation.

- **Enable Local Cursor and Keyboard:** The local cursor is enabled when this option is selected and the mouse device's movements are recorded at the client. The movement is reflected via the local cursor overlay in real time. The movements and mouse clicks are sent to the PCoIP host and then to a driver via the exposed PCoIP Host Function PCI device and device drivers. When the driver receives the movement information, the cursor on the workstation is updated.

  The local keyboard feature works on a similar concept. The client captures and records keyboard key presses, and then sends them to the PCoIP host. This feature prevents key presses from being dropped. The local keyboard feature does not display an overlay for the typed text, and the text that appears on the screen is affected by the network latency.

> ✏ **Considerations**
>
> - The **Enable Local Cursor and Keyboard** option may be grayed out if not supported. When this happens, a "Why is this unavailable?" link appears on the UI Features tab. Move the mouse over the link to see a tooltip explaining how to fix the problem.
>
> - Remote Workstation Card Software release 3.2.20 and firmware release 3.2.0 add support for rotated displays. Users who want to use the **Enable Local Cursor and Keyboard** feature on systems with rotated displays may encounter problems. See for details.
>
> - When a soft client session is active, you cannot disable the **Enable Local Cursor and Keyboard** feature. See Soft Client Restrictions for details.

- **Visible Cursor(s):** The available options are:

  - **Remote:** cursor shape drawn by the workstation/host. When the **Remote** visible cursor is selected, you cannot select **Hide the Local Cursor when idle**.
    The **Remote** visible cursor option should only be used with PCoIP systems running firmware release 3.2.0 or later. The local cursor may become visible if the PCoIP host and client are running a firmware release prior to 3.2.0.

  - **Local:** cursor shape drawn by the client. When the **Local** visible cursor option is selected, the remote cursor is hidden. Applications that override the Windows standard cursor (such as Windows Paint) may display both the local and remote cursors. See Resolving Issues and Workarounds.

    When the local cursor is visible, the Remote Workstation Card Software imposes limits on the size of the cursor bitmap displayed by the client. When the size of the cursor bitmap exceeds these limits, the Remote Workstation Card Software crops the bitmap resulting in the client displaying a portion of the host drawn cursor. If the Remote Workstation Card Software fails to crop the bitmap, an arrow with an "L" character inside it is displayed.

    When the **Local** visible cursor option is selected, the remote cursor is hidden.

    The local cursor overlay icon appears as an arrow with an "L" in it when the local cursor is visible and the Remote Workstation Card Software cannot display the correct host drawn cursor.

    For details including information on problems that may occur when hiding the remote cursor, see section Resolving Issues and Workarounds.

  - **Local and Remote.**

○ **Local Cursor speed:** Sets the speed of the local cursor overlay. The local cursor speed setting is separate from the mouse speed in Windows Linux.

> ✏️ **Cursor speed slider**
>
> • You can also configure the zero client cursor speed using the PCoIP On Screen Display (OSD). See the Tera2 PCoIP Zero Client Firmware 4.x and Remote Workstation Card Firmware 4.9 Administrators' Guide.
>
> • The cursor speed slider only works with zero clients. You cannot adjust the soft client cursor speed.

○ **Enable Client Keyboard Repeat Detection:** Select this option for the client to perform keyboard repeat detection. Uncheck this box for the host OS to perform keyboard repeat detection.

Enable this feature if the latency of the connection exceeds ~150 ms. When this feature is disabled, the host OS performs keyboard repeat detection. The host OS may incorrectly report repeated keys for high-latency connections.

This feature is supported on PCoIP systems running firmware release 3.2.0 or later.

  • Keyboard repeat delay: Set the length of time that elapses before a character begins to repeat when you hold down a key. This setting is only used when the client performs keyboard repeat detection.

  • Keyboard repeat rate: Set the speed at which a character repeats when you hold down a key. This setting is only used when the client performs keyboard repeat detection.

    You can also configure the Zero Client Keyboard repeat delay and Keyboard repeat rate using the OSD. See the Tera2 PCoIP Zero Client Firmware 4.x and Remote Workstation Card Firmware 4.9 Administrators' Guide

○ **Hide the Local Cursor when idle:** Select this option to set the local cursor overlay to disappear after one second of idle mouse movement. Uncheck this box to always display the local cursor overlay.

○ **Send Remote Cursor position changes to client:** Check this box to enable forwarding host PC or workstation cursor location updates to the client. Client HID devices only control the client cursor when this feature is disabled.

Some applications update the cursor position while the user enters data. This feature should be enabled to let these updates be reflected on the client.

- **Use these settings for the login screen:** Click this button to use the current settings on the screen for the Windows login screen.

> ✏️ **Considerations**
>
> - On Windows XP 32-bit, the Windows standard arrow cursor may not be hidden at the login screen even if the option is set. This is seen on PCoIP sessions with network latency of 125 ms or more.
>
> - The Remote Workstation Card Software installer included with releases 3.1.11 through 4.0.9 configures default settings for the local cursor login settings and the settings are overwritten each time the Remote Workstation Card Software is installed. The installer configures the settings to enable the local cursor, sets the visible cursor to Local, disables hiding the local cursor when idle and enables sending remote cursor position changes to the client. You can modify these settings using the UI after you install the Remote Workstation Card Software but they are overwritten if the Remote Workstation Card Software is reinstalled or upgraded/downgraded. You cannot disable the local cursor on the login screen. This is done to prevent problems when establishing a PCoIP session from a soft client, which requires the local cursor feature to always be enabled. As of release 4.0.10, the Remote Workstation Card Software installer no longer overwrites the login settings if they already exist. This enables users to customize the login settings once.

- **Keyboard repeat settings test box:** Position the cursor in this test box and hold down a key to test the keyboard repeat settings.

Power Management

Power Management enables you to choose the PC or workstation NIC as an alternative to the PCoIP Host NIC for Wake-on-LAN (WOL) power management.

- **Use host PC NIC for Wake-on-LAN:** Select this option to use a NIC on the PC or workstation, instead of the NIC on the PCoIP Host, for waking up the Host PC. The UI lists all PC or workstation NICs that have a valid IP address.

- **Interface:** Select the NIC on the PC or workstation to use from the dropdown list.

> 🔥 **WoL**
>
> - Make sure the WOL feature is configured properly on the selected PC or workstation NIC when using this option.
>
> - The WOL settings are discarded when uninstalling or upgrading the Remote Workstation Card Software. You must reconfigure WOL after you install a new version of the software.

If there is an update to the PC or workstation NIC IP address, the UI picks up the new IP and automatically sends it to the zero client. Your software will also autonomously resolve the following changes:

- **The IP address on the selected NIC changes:** The IP address is sent to the zero client.

- **The selected NIC is no longer available:** The UI starts a timer for 20 seconds. If the selected interface becomes valid again, i.e., gets an IP address, the UI sends the new IP address to the zero client. If the timer times out, a balloon tooltip appears to advise users that the WOL configuration is invalid. UI automatically disables WOL.

- **UI detects no valid NICs:** UI automatically disables the WOL feature on the zero client. This case is mutually exclusive with the second case.

> ✏️ **Horizon Brokered Connections**
>
> The Remote Workstation Card Software for Windows for View brokered connections does not support the **Power Management** feature because the PCoIP host device cannot be placed in a low power state.
> PCoIP power management lets a PC or workstation that is in a sleep or shutdown state be wakened or powered up by a WOL magic packet.

Remote Workstation Card Software Network Tab

The Network tab (shown next) displays the network settings of the PCoIP host.
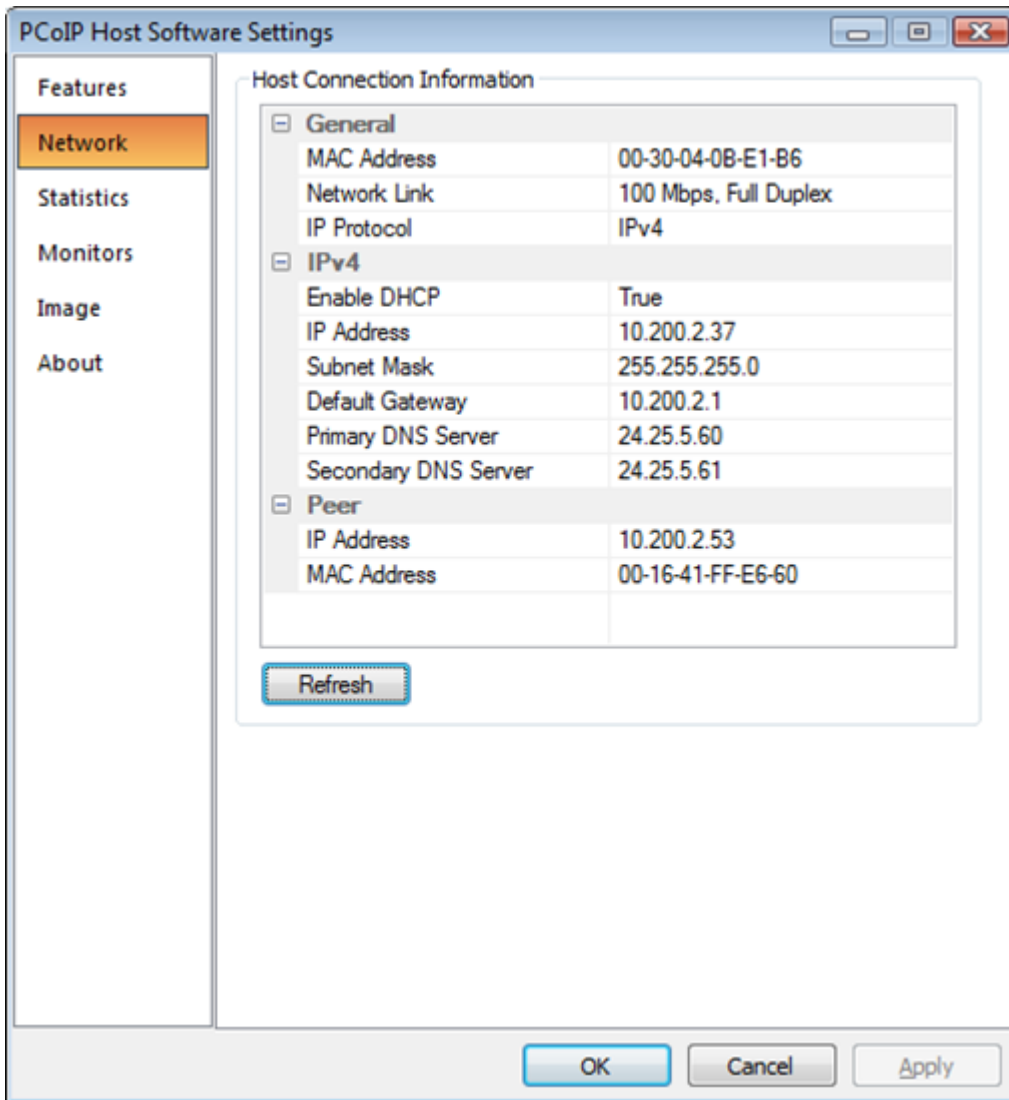
The **Network** tab shows the current network information for the host. This tab also reports status information on the NIC of the PCoIP host (speed, duplex setting, and link state – up/down). It also displays the IP and MAC addresses of the client connected to the host under the Peer settings.

- **Refresh:** Click this button to get the most up-to-date network settings of the host.

> ✏️ **UI for changing network settings unsupported**
>
> The UI does not support changing the network settings. You can configure the network settings through the PCoIP Management Console (see the PCoIP Management Console 1.x User Manual), the PCoIP Administrative Web Interface (see Tera2 PCoIP Zero Client Firmware 4.x and Remote Workstation Card Firmware 4.9 Administrators' Guide), or a connection broker.

Remote Workstation Card Software Statistics Tab

The *Statistics* tab (shown next) shows the measured rates for data packet traffic, round-trip latency, bandwidth, and imaging, as discussed next.

You can also access the PCoIP host card statistics through the PCoIP Administrative Web Interface (see Tera2 PCoIP® Zero Client Firmware Administrators' Guide or Remote Workstation Card Firmware Administrators' Guide).
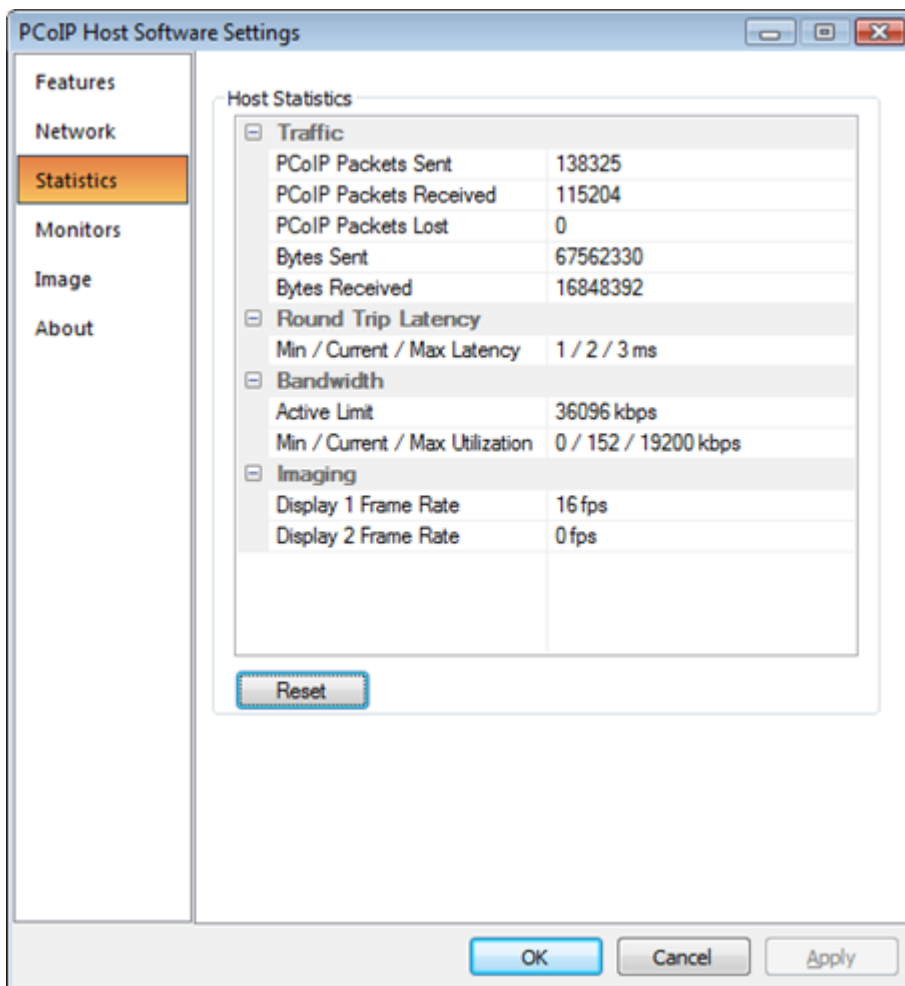
Traffic

The **Traffic** statistics show the number of packets sent and received by the PCoIP host.

- **PCoIP Packets Sent:** Total number of PCoIP packets sent by the host.

- **PCoIP Packets Received:** Total number of PCoIP packets received by the host.

- **PCoIP Packets Lost:** Total number of PCoIP packets that were not received by the host.

- **Bytes Sent:** Total number of bytes sent by the host.

- **Bytes Received:** Total number of bytes received by the host.

Round Trip Latency

The **Round Trip Latency** statistics report the total roundtrip PCoIP system (for example, host to client and back to host) and network latency in milliseconds (± 1 ms). The UI reports the minimum, current, and maximum values.

Bandwidth

The **Bandwidth** statistics show the host's active bandwidth settings.

- **Active Limit:** The maximum amount of network traffic the PCoIP host may currently generate. The value is derived from the host's configured bandwidth settings (see the (Undefined variable: Guides.Guide_ZC_Host_Admin)) and the current network congestion levels.

- **Min / Current / Max Utilization:** The minimum, current, and maximum amount of traffic generated by the PCoIP host at a particular moment in time.
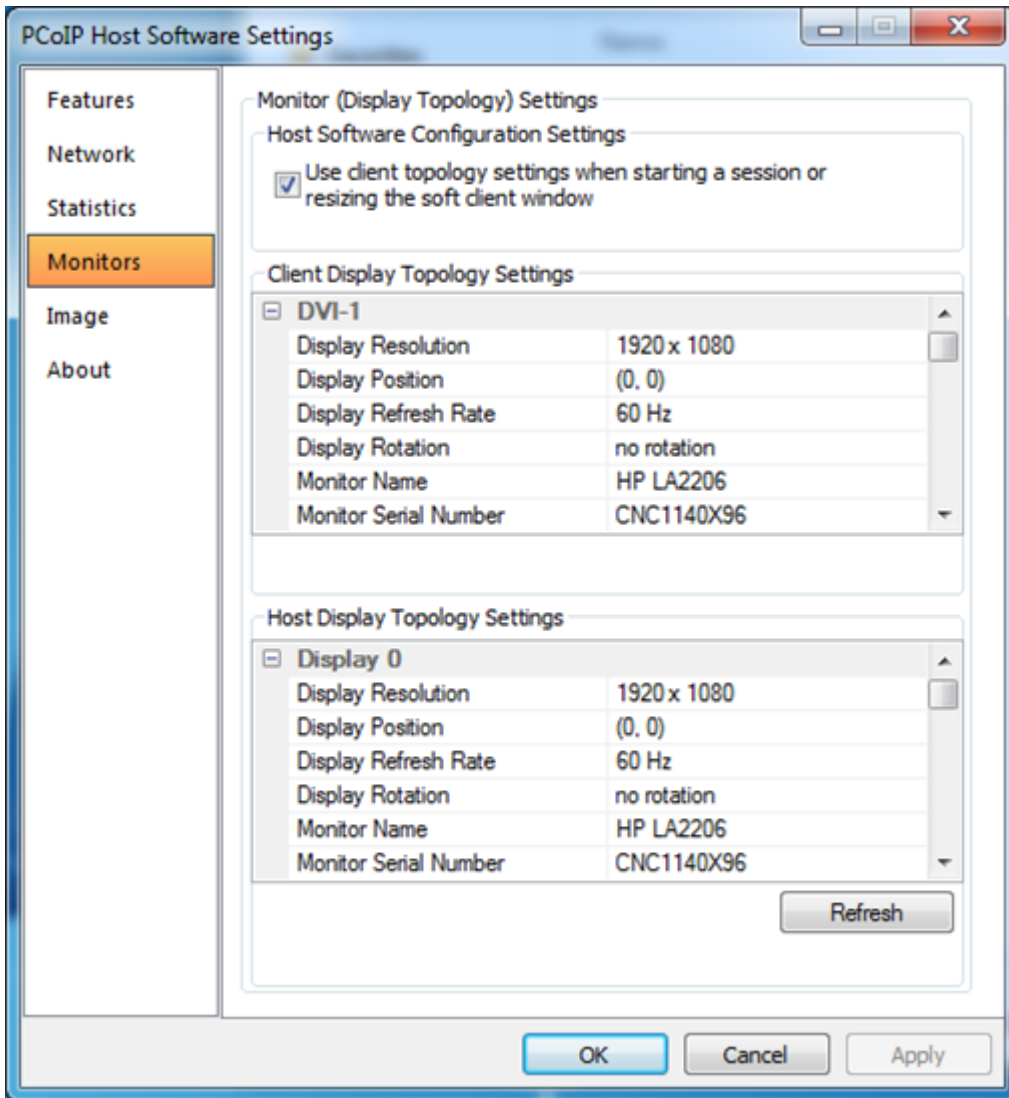
Imaging

The **Imaging** statistics show frame-rate information for the displays connected to the client.

- **Display X Frame Rate:** The frame rate of Display X. The statistic is reported in frames per second (fps).

Remote Workstation Card Software Monitors Tab

The Monitors tab, shown next, shows the client and host display topology settings.

You can configure the following options and/or view the following settings:

remote workstation card software Configuration Settings

The remote workstation card software Configuration Settings section lets you choose to activate the client display topology settings. When this feature is enabled, the host topology settings are updated at the start of a session for both soft and zero clients. The topology settings are also updated when the size of the soft client window is adjusted.

- **Use client topology settings when starting a session or resizing the soft client window:** The client display topology settings are activated at the start of a session and when the soft client window is resized under the following conditions:
  - This box is checked.

- The **Enable Configuration** option on the zero client OSD **Options > User Settings > Display Topology** page is checked (only applies to zero clients).

- The PCoIP host and zero client are running firmware release 3.2.0 or later.

- The VMware View soft client version is release 4.6 or later.

> 🔥 **Considerations**
>
> - This feature only works with clients in PCoIP sessions. The client topology settings are not written to the host OS when in an RDP session.
>
> - If a problem occurs while trying to write the client display topology settings to the host OS, a 'Why are the client topology settings not in use?' link appears on the UI **Monitors** tab. Move the mouse over the link to see a tooltip explaining how to fix the problem.
>
> - Sometimes the Remote Workstation Card Software fails to activate the client topology settings. When this happens try changing the topology settings using another utility on the host such as the **Control Panel > All Control Panel Items > Display > Screen Resolution** utility found on Windows 7.

Client Display Topology Settings

The Client Display Topology Settings section displays the client display topology settings.

- **Display Resolution:** The number of pixels in each dimension that can appear.

- **Display Position:** The X and Y coordinates of the display's upper left-hand corner.

- **Display Refresh Rate:** The display's refresh rate in Hz.

- **Display Rotation:** Specifies the rotation of the display relative to the normal landscape display orientation (no rotation, 90° clockwise, 180° rotation, or 90° counter-clockwise).
  This parameter specifies the rotation of the physical display, not the image.

- **Monitor Name, Serial Number, Vendor ID, and Product ID:** The client extracts this information from the attached monitor's EDID (Extended Display Identification Data).

Host Display Topology Settings

The Host Display Topology Settings section shows the active topology settings read by the UI from the host OS that match the displays connected to the client. This section does not show information about monitors that are not connected to the client.

- **Display Resolution, Display Position, Display Refresh Rate,** and **Display Rotation**: See the description of these terms listed in the previous section.

- **Monitor Name, Serial Number, Vendor ID,** and **Product ID:** The UI extracts this information from the EDID reported by the host operating system.

- **Refresh:** Click this button to get the most up-to-date client and host display topology settings.

Remote Workstation Card Software Image Tab

The following figure shows the Image tab. This lets you view and adjust the PCoIP session image quality preference setting.
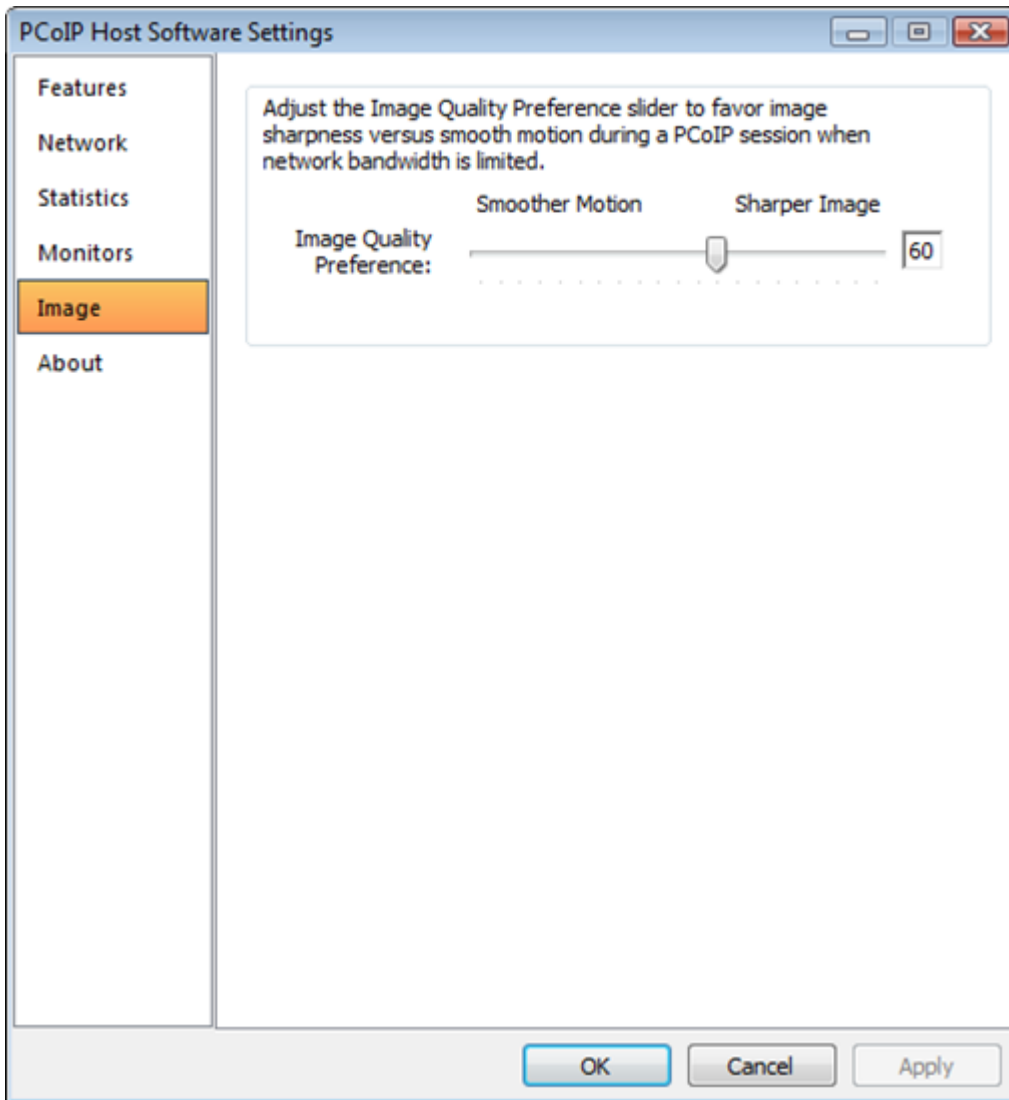
The PCoIP protocol adjusts image quality settings when the network connection between a PCoIP host and client is constrained and unable to provide enough bandwidth to support full frame rate video. The Image Quality Preference setting lets you configure a preference for smoother motion (higher frame rate) versus sharper image (higher image quality).

> 🔥 **Tip**
>
> Firmware release 3.5.0 is the first release that supports Image Quality Preference.

Resolving Issues and Workarounds

This topic outlines some common issues and suggested solutions. For more troubleshooting details, see the Knowledge Base on the Teradici support website.

Common Issues and Solutions

Item	Description	Solution
1	The **Local Cursor and Keyboard** feature is enabled but the cursor response is sluggish when moving the mouse.	This occurs if the mouse is not controlled by the client mouse driver. To check if this is the cause of the problem, log into the zero client web interface while a session is active and open the **Diagnostics > Attached Devices** page. The mouse **Status** field shows **Locally Connected** when the mouse is properly connected. If the **status** field is not **Locally Connected**: • Ensure the mouse is connected directly to one of the zero client USB ports. • If the mouse is connected to the client through a USB hub, ensure the zero client is running firmware release 4.1.0 or later and also ensure only HID devices are connected to the hub.
2	The local cursor does not move when the **Local Cursor and Keyboard** feature is enabled and the **Send remote cursor position changes to the client feature** is disabled.	This happens if the mouse is not controlled by the client mouse driver. See the solution for the previous entry in this table.

Item	Description	Solution
3	Key presses on the keyboard are dropped when the **Local Cursor and Keyboard** feature is enabled and the latency of the PCoIP session exceeds 60 ms.	This can occur if the keyboard is not controlled by the client keyboard driver. To check if this is the cause of the problem, log into the zero client web interface while a session is active and open the **Diagnostics > Attached Devices** page. The keyboard **Status** field shows **Locally Connected** when the keyboard is properly connected. If the **Status** field is not **Locally Connected**: • Ensure the keyboard is connected directly to one of the zero client USB ports. • If the keyboard is connected to the client through a USB hub, ensure the zero client is running firmware release 4.1.0 or later and also ensure only HID devices are connected to the hub. This can also happen when the latency of the connection exceeds 150 ms. To fix this check the **Enable Client Keyboard Repeat Detection** box on the UI **Features** tab.
4	The **Send Remote Cursor position changes to client** feature does not work with a VMware View soft client.	remote workstation card software release 3.5.20 includes support for sending host cursor changes to the client (see Remote Workstation Card Software Features Tab). This feature does not work with VMware View soft clients running releases prior to and including 5.0. This feature is supported in VMware View soft client releases 5.1 and later.
5	Animated cursors do not appear properly when the **visible cursor** is **Local** or **Local and Remote**.	When the local cursor is visible and an animated cursor is active, the Remote Workstation Card Softwaredisplays only the first frame rather than all of the cursor frames. This results in a static cursor shape instead of an animated cursor. **Workaround:** Set the **visible cursor** to **Remote** or disable the **Local Cursor and Keyboard** feature.

Item	Description	Solution
6	The **Use these settings for the login screen** button is grayed out.	You must have Administrator rights to set the settings for the login screen. Under Windows Vista and Windows 7, User Account Control (UAC) prevents the PCoIP UI from accessing the registry. **Workarounds:** • Disable UAC on Windows Vista systems • Set the UAC slider bar equal to **Never Notify** on Windows 7 systems. Remote workstation card software release 3.1.11 and later prevents users from disabling the local cursor feature on the login screen because soft client HID devices require this feature to be enabled.
7	When multiple displays are connected to the zero client and the graphics software driver enables Clone mode (the same image appears on two screens), the local cursor feature is disabled.	The current Remote Workstation Card Software does not support Clone mode. **Workaround:** Disable clone mode.
8	Only the left, middle, right, forwards, and backwards buttons work on the mouse when local cursor and keyboard is enabled.	The current Remote Workstation Card Software supports the left, middle, right, forwards, and backwards mouse buttons in local cursor mode.
9	The local cursor and keyboard is not automatically enabled at the login screen after the host PC finishes booting, even though it is enabled via the PCoIP UI.	The local cursor and keyboard feature requires the PCoIP UI to be running. On some Windows systems, it may take up to 30 seconds before the PCoIP UI starts while in the login screen.
10	The local cursor speed is different than the Windows host cursor speed.	The zero client local cursor does not use Windows' host pointer speed nor acceleration settings. The local cursor speed is configured using the **Local cursor speed** slider on the UI Features tab or the zero client OSD. The **Cursor speed slider** only works with zero clients. You cannot adjust the soft client cursor speed.

Item	Description	Solution
11	Some features in the UI are grayed out and the help tooltip says **No link to the PCoIP device or Feature not supported.**	Ensure the installed version of the Remote Workstation Card Software is the same version released with the firmware on the PCoIP host and zero client (see Firmware Compatibility Matrix). 1. Ensure the PCoIP session is active. 2. Ensure the **Host Driver Function** is enabled (see Enabling Host Driver Function). 3. Disconnect and reconnect the PCoIP session. 4. Restart the PC or workstation. 5. Uninstall and reinstall the Remote Workstation Card Software.
12	The **Enable Local Cursor and Keyboard** checkbox is grayed out.	Hover the mouse over the **Why is this unavailable?** text. The tooltip that appears lists possible causes and solutions. Review Requirements for Local Cursor and Keyboard.
13	On Windows XP 32-bit, the Windows standard arrow cursor is still shown on the login screen, even though it is set to hide.	The current software exhibits this behavior on PCoIP sessions with 125 or more ms of network latency. Try disconnecting and reconnecting the PCoIP session.
14	Keyboard and mice connected to the client do not work immediately after disabling the local cursor and keyboard.	When the state of the local cursor feature changes to disabled, the zero client keyboard and mice must be enumerated by Windows. This process can take more than 30 seconds to complete.

Item	Description	Solution
15	The system is configured to use the client display topology settings but the settings are not activated when the PCoIP session starts.	Open the Monitor tab of the UI and position the mouse over the **Why are the client topology settings not in use?** The tooltip that appears lists possible causes and solutions. Review the requirements for using the client display topology settings in Requirements for Using the Client Display Topology. See Problems with Rotated Displays for more details. The problem might be caused by the graphics driver. Graphics driver problems include the graphics driver not responding to monitor hot plug events, rotating the display without properly informing the host OS and not providing accurate EDID information to the host OS. Upgrade the graphics driver to the latest supported version. The graphics driver may not support the client display resolution setting. Try setting the client setting to **Native**. If this works, test other resolutions until an acceptable resolution is found. The problem may occur if the zero client has a monitor connected to one of its DVI ports and the monitor is turned off. Either disconnect the monitor or turn on the monitor. The problem may occur when switching between clients with different sized monitors. If this happens, reconfigure the topology settings using a utility on the host such as the Windows 7 **Control Panel > All Control Panel Items > Display > Screen Resolution**. Try disconnecting and restarting the PCoIP session. This problem can occur if the workstation is locked when the session starts. Windows imposes a security restriction that prevents applications from changing the display topology settings on locked workstations. In this scenario the Remote Workstation Card Software will attempt to activate the client topology settings after the workstation is unlocked.

Item	Description	Solution
16	Remote workstation card software does not work after modifying the audio permissions on the PCoIP host card.	The PCoIP host card has a configuration setting that lets you enable/disable HD audio. This setting is configured on the host card's **Permissions > Audio** page. If this setting is modified after the Remote Workstation Card Software is installed, the Remote Workstation Card Software does not work when the PC/workstation is rebooted. **Resolution:** 1. Uninstall the Remote Workstation Card Software. 2. Modify the audio setting. 3. Reboot the PC/workstation. 4. Install the Remote Workstation Card Software.
17	Two cursors are displayed under the following conditions: • **Local cursor and keyboard** feature is enabled. • **Visible cursor** feature is **Local**. • An application is active that displays application specific cursors. Microsoft Paint is an application that displays application specific cursors.	This problem occurs under the following conditions. Applications activated by clicking **Run as administrator** that create application specific cursors display two cursors when UAC is enabled. **Workarounds:** • Do not run the application as the administrator. • Disable UAC on the workstation. • Set the **visible cursor** feature to **Remote**. 32-bit applications that create application specific cursors will display two cursors on 64-bit workstations. **Workarounds:** • Run a 64-bit version of the application. • Set the **visible cursor** feature to **Remote**.

Item	Description	Solution
18	The zero client topology settings are not activated after connecting or disconnecting a monitor from the zero client while a PCoIP session is active.	The Remote Workstation Card Software only activates zero client topology settings at the start of a session. If a monitor is plugged in OR unplugged while a session is active the Remote Workstation Card Software does not attempt to activate the zero client topology settings. **Workaround**: Disconnect and re-establish the PCoIP session to activate the zero client topology settings.

The following table describes problems that affect older Remote Workstation Card Software releases or systems not running the recommended versions of firmware. For the recommended firmware release, see the Firmware Compatibility Matrix.

Troubleshooting Older Releases

Item	Description	Solution
1	The **Image Quality Preference** slider is grayed out.	This occurs when the host card is not running a FW release that supports the image quality preference setting. Install FW release 3.5.0 or later.
2	The multimedia keys on the keyboard do not work when local cursor and keyboard is enabled.	Remote Workstation Card Software releases prior to release 3.3.20 support only the standard keyboard keys. Multimedia keys (USB HID usage page 12) are supported on systems running Remote Workstation Card Software release 3.3.20 or higher and firmware release 3.3.0 or higher. Power keys (USB HID usage page 1) are supported on systems running Remote Workstation Card Software release 3.5.20 or later and firmware release 3.4.0 or later.

Item	Description	Solution
3	On a dual monitor setup with the local cursor enabled the Windows cursor is active on one display while the local cursor is active on the second display.	This may occur while using Remote Workstation Card Software release 3.1.11 with firmware releases 3.0 and 3.1.x. These releases impose a restriction where the zero client's lowest numbered DVI connector must be the left monitor in a horizontal display arrangement or the top monitor in a vertical display arrangement. Solutions to the problem: • Install Remote Workstation Card Software release 3.2.20 or later and firmware release 3.2.0 or later, which no longer restrict the monitor arrangement. • If using Remote Workstation Card Software release 3.1.11 and firmware releases 3.0 or 3.1.x connect the zero client monitors according to the following rules. Horizontal display arrangements must connect the left monitor to the lowest numbered DVI port. Vertical display arrangements must connect the top monitor to the lowest numbered DVI port.
4	Zero client resets while connecting to a PCoIP host.	This occurs under the following conditions: • Host is running firmware release 3.2.x. • Zero client is running firmware release 3.1.x. • remote workstation card software release 3.2.20 or higher is loaded on the PC/workstation. **Resolution:** Download firmware release 3.2.x or later to the zero client.

Debug Logs

The Remote Workstation Card Software for Windows writes debug information to log files that can assist in debugging problems. The files are stored in the following directories.

• Windows XP:

```
<Drive Letter>:\Documents and Settings\All Users\Application Data\Teradici
Corporation\Remote Workstation Card Software\Logs
```

• Windows Vista, Windows 7, and Windows 8.1:

```
<Drive Letter>:\ProgramData\Teradici Corporation\Remote Workstation Card
Software\Logs
```

Requirements for Local Cursor and Keyboard

The local cursor and keyboard feature depends on a number of requirements. If the Enable Local Cursor and Keyboard checkbox is grayed out, ensure the following requirements are met:

- The PCoIP host and zero client both use the same firmware that supports local cursor and keyboard.

- The **Host Driver Function** option is enabled on the PCoIP host and the PC or workstation is restarted after changing the option.

- A PCoIP session is established between the PCoIP host and client.

- The graphics card is not configured to scale the image (that is, not using technologies such as horizontal/vertical span mode from NVIDIA).

- The graphics card is configured to use the monitor's built-in scaling when a non-native resolution is selected.

- The display(s) are not rotated.
  This is required for systems running firmware releases prior to 3.2.0 and Remote Workstation Card Software releases prior to 3.2.20. Systems using firmware release 3.2.0 or later and Remote Workstation Card Software release 3.2.20 or later can enable the local cursor with rotated displays on some systems. Section 7.5 describes some problems with using rotated displays.

- If using firmware release 4.1.0 or higher and the mouse or keyboard are connected behind a USB hub, ensure only HID devices (keyboard and mouse) are connected to the USB hub.

- If using a firmware release lower than 4.1.0, the mouse and keyboard are connected directly to the USB ports on the zero client (that is, the devices are not connected to a USB hub).

- The mouse and keyboard devices function correctly with the zero client's OSD.

- Multi-monitor systems that arrange the monitors horizontally must connect the left display to the zero clients' lowest numbered DVI connector and systems that arrange the monitors vertically must connect the top display to the zero clients' lowest numbered DVI connector. Note: This requirement is true for systems running firmware release 3.0 and 3.1.x with Remote Workstation Card Software release 3.1.11. This requirement does not apply to systems

running firmware release 3.2.0 or later and Remote Workstation Card Software release 3.2.20 or later.

- The local cursor feature might not work with some non-native display resolutions. This only affects connections from zero client devices. We recommend you use the display's native resolution or choose a resolution on which the feature works.*

Requirements for Using the Client Display Topology

Using the client display topology settings on the host depends on a number of requirements. If you see 'Why are the client topology settings not in use?' on the Monitors tab, ensure the following requirements are met:

- PCoIP host and zero client are running firmware that supports using the client display topology settings (firmware release 3.2.0 or later).

- The version of the VMware View soft client is release 4.6 or later.

- The version of the Teradici PCoIP Software Client is release 1.0 or later.

- The **Use client topology settings when starting a session or resizing the soft client window** tab is checked.

- When using a zero client, the **Enable Configuration** checkbox on the zero client OSD **Options > User Settings > Display Topology** page is checked.

- The **Host Driver Function** option is enabled on the PCoIP host and the PC or workstation is restarted after changing the option from disabled to enabled.

- A PCoIP session is established between the PCoIP host and client.

- The graphics card is configured to use the monitor's built in scaling when a non-native resolution is selected.

Problems with Rotated Displays

Remote Workstation Card Software release 3.2.20 and firmware release 3.2 0 added support for rotated displays and using the client display topology settings. Depending on the workstation configuration, you may encounter problems if you use the **Enable Local Cursor and Keyboard** or **Use**

client topology settings when starting a session or resizing the soft client window features. This section summarizes the issues and limitations.

- Software clients running on Windows XP systems do not support rotation. On these systems, Windows does not report valid rotation information. To rotate the soft client window, run the client from a workstation running Windows Vista, Windows 7, or Windows 8.1.

- Workstations running Windows XP with Nvidia graphics cards do not support rotation. The Remote Workstation Card Software cannot activate client topology settings if any of the client monitors are rotated and the local cursor feature will not work. To rotate a monitor, install Windows Vista, Windows 7, or Windows 8.1 on the workstation.

- Workstations running Windows XP with AMD graphics cards do not support activating client topology settings if any of the client monitors are rotated.

- The local cursor and keyboard feature might work on workstations running Windows XP with AMD graphics cards. Our testing showed the feature worked with the AMD FirePro RG220 and failed with the AMD Radeon HD 3650.

- USB devices connected to Teradici Software Client hosts are not supported when connecting to Remote Workstation Cards or Remote Workstation Card Agents.

Getting Support

For more questions about Remote Workstation Card Software and Teradici products and components, visit Teradici Support Center or join the PCoIP Community Forum.

Feature Reference

The following table lists the Remote Workstation Card Software features that require firmware changes. The features on the PCoIP Remote Workstation Card and PCoIP Zero Client are available if the released versions are equal to or higher than those listed.

New Feature Software/Firmware Requirements

New Feature Description	Remote Workstation Card Software Release	Firmware Release
New release versioning	20.01	20.01
Support for Windows 10 64-bit. See System Requirements.	4.3.1	4.9
Microsoft-signed Windows 10 drivers.	4.3.1	4.9
Support for Tera2 PCoIP Remote Workstation Card.	4.0.7	4.0.1
Configure PCoIP session image quality setting (see Remote Workstation Card Software Image Tab).	3.5.2	3.5.0
Support IT auditing feature that gathers workstation and PCoIP Remote Workstation Card network settings (see Using the Remote Workstation Card Software UI).	3.5.2	3.5.0
Support of soft clients connecting to PCoIP Remote Workstation Cards (see Soft Client Restrictions and Remote Workstation Card Software Monitors Tab).	3.3.2	3.3.0
Support for processing multimedia keys. Example keys include: volume up, mute, and browser. Previous versions of the Remote Workstation Card Software did not process these keys when the local cursor feature was enabled.	3.3.2	3.3.0
Support brokering sessions between PCoIP hosts and zero clients or soft clients using VMware View Manager.	3.3.2	3.3.0

New Feature Description	Remote Workstation Card Software Release	Firmware Release
Support for configuring client keyboard repeat detection (see Remote Workstation Card Software Features Tab).	3.2.2	3.2.0
Support for configuring client display topology (see Remote Workstation Card Software Monitors Tab).	3.2.2	3.2.0
Support for configuring display rotation (see Remote Workstation Card Software Monitors Tab).	3.2.2	3.2.0
Support for configuring transparent local cursor shape (see Remote Workstation Card Software Features Tab).	3.2.2	3.2.0

Support for soft clients operating with PCoIP Remote Workstation Card

Support for soft clients operating with PCoIP Remote Workstation Cards was introduced in firmware release 3.3.0, Remote Workstation Card Software release 3.3.20, and VMware View release 4.6.

Resource: Running Remote Workstation Card Software to broker sessions using VMware View

Remote Workstation Card Software 3.1.11 for Windows supports using VMware View 4 to broker sessions on host machines running 32-bit versions of Windows. Remote Workstation Card Software 3.2.20 for Windows supports using VMware View 4.5 or later to broker sessions on host machines running 32-bit or 64-bit versions of Windows.

For more information on configuring a system to operate in this mode, see Using PCoIP® Host Cards with VMware View.