

VMware® View™ 4 to PCoIP® Zero Client Optimization Guide

TECHNICAL NOTES



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This document provides optimization guidelines for connecting PCoIP® zero clients to VMware® View™ 4 virtual desktops in proof-of-concept and trial deployment scenarios. It is not intended to replace the more detailed documentation provided by VMware and Teradici.

Note: Software View Clients do not require the optimizations included in this guide.

Detailed information on configuring VMware View or PCoIP zero clients can be found in the following documents:

- Using PCoIP Zero Clients with VMware View 4 (TER0904005)*.
- VMware View 4 Feature Support Matrix: http://www.vmware.com/pdf/view401_architecture_planning.pdf.
- Getting Started with VMware View (EN-000276-00): http://www.vmware.com/pdf/view40_quickstart.pdf.
- For additional VMware View documents, see <http://www.vmware.com/support/pubs>.

Note: Specifications are subject to change without notice.

1 System Requirements

Prerequisites for connecting a PCoIP zero client to VMware View 4 include:

- A functional VMware View VDI environment using the latest release of VMware View with the View Manager and View Agent installed.
 - VMware tools must be installed before the View Agent is installed.
 - The View Agent must be un-installed and reinstalled after an upgrade of the VMware tools package.
- Virtual desktops with Microsoft Windows XP or Vista installed. Support for Windows 7 in View 4.0.1 is experimental and requires replacing the WDDM driver with the VMware SVGA driver. In the upcoming View 4.5 release, Windows 7 is fully supported with the WDDM driver.
- A PCoIP zero client with the latest 3.x firmware uploaded. For a list of VMware Ready PCoIP zero clients, see <http://www.teradici.com/pcoip/pcoip-products/vmware-view-clients.php> (clients listed with an OS of ThreadX are PCoIP zero clients).

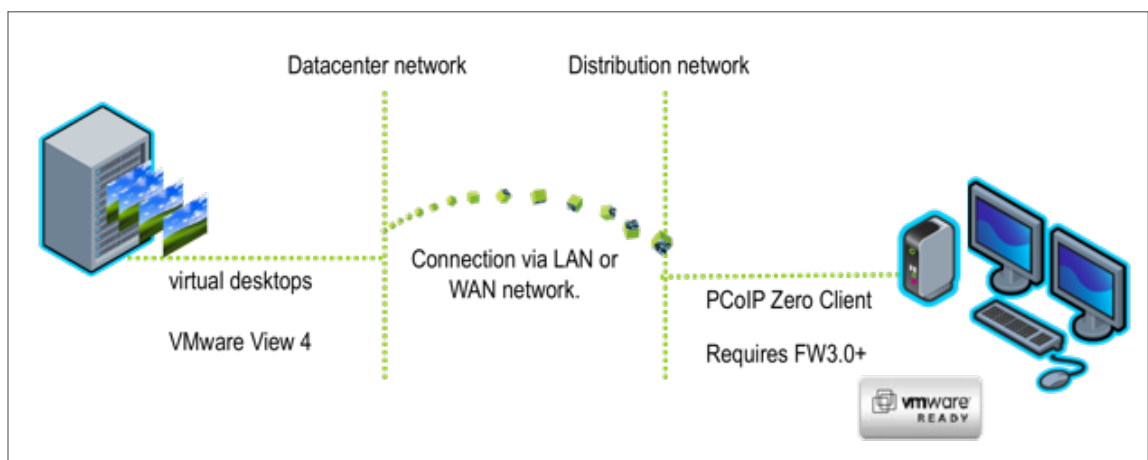


Figure 1: Connecting a PCoIP zero client to VMware View 4

* Your PCoIP solution vendor should be your first contact for PCoIP support and information. Teradici manages a support site (<https://support.teradici.com>) that provides PCoIP documentation, knowledge base, and downloads. Contact support@teradici.com to request username and password for access to the Teradici support site.

2 Creating the Virtual Desktop in VMware vCenter™

- The default setting for a VMware View virtual desktop is one vCPU. The virtual desktop should be configured to use two vCPUs for viewing videos greater than 480p (e.g., 720p or 1080p HD videos).
- Under the Adobe Flash parameters:
 - Set Adobe Flash to “Do Not Control.”
 - Set the Adobe Flash Throttling to “Disabled.”

3 View Manager Settings for the Desktop

3.1 Display

- Confirm the default display protocol is set to PCoIP.
- Set the desktop display resolution to a valid resolution for the display attached to the zero client. Ideally, the resolution setting should match the native resolution of the display attached to the zero client. This must be done for each virtual desktop.
- Disable Multimedia Redirect (MMR) for the desktop policy (globally or per desktop) since MMR uses CPU cycles even though the zero clients do not support this feature.
- To support dual displays at the zero client, ensure that the display setting is assigned to “2.”

3.2 Network

- Confirm a full-duplex, end-to-end network link is used. Some older switches incorrectly default to half duplex when connected to a link with auto-negotiation (the switch link must set to full duplex in this case).
- Confirm there is network connectivity between the VDI server, View Manager, and the PCoIP zero client.
- Firmware release 3.1.0, or greater, can display up to 100 domains in the View GUI (firmware release 3.0 supported the display of only five domains).
- Confirm that there is sufficient bandwidth available on the network
 - The bandwidth used between a View 4 virtual desktop and a PCoIP zero client depends on the activity on the user display (e.g., simple form entry screens vs. 720p video). A typical desktop using Microsoft Office applications can use an average of 100-200kbps.
 - Provision the network with a minimum bandwidth of 350kbps per user. Note that the actual bandwidth used will depend on the activity on the user display and will be as low as 10kbps for a static user display.
 - For more demanding desktop environments, consider increasing the minimum network bandwidth available.
- Latency
 - Confirm that the round-trip network latency is less than 250ms.
 - Confirm that any routers have buffering set to minimize router latency.

3.3 Security

- Select SALSA20-256 (and deselect AES-128) encryption for an improved user experience.
- VMware Security Server does not yet support PCoIP traffic. VPN tunneling can be used to access a virtual desktop over a WAN.
- Set Smart Card to “never” in View Manager when connecting to zero clients with Firmware release 3.0 and View 4.0. With FW 3.1, the setting can be left as “Optional,” which is the default.

3.4 I/O

- Since zero clients do not support ThinPrint, ThinPrint can be uninstalled for the virtual desktop using the View Agent installer in order to reduce CPU cycles.
- Audio input (e.g., microphone) is not yet supported in VMware View 4.0. Audio output (e.g., speakers) is supported.
- Bulk and interrupt USB devices (e.g., flash drives) are supported with PCoIP zero clients. However, isochronous USB devices (e.g., webcams) are not yet supported.

4 Zero Client Configuration

- Confirm that the “Enable Connection Management” check box is unchecked and the “Enable VMware View” check box is checked.
- Enter your View Connection Server IP address in the zero client onscreen display “VMware View” tab in Options > Configuration.
- Use the default PCoIP protocol when connecting to a View virtual desktop.

For more detailed information on VMware View 4 to PCoIP zero client operations, such as frequently asked questions, known issues, and troubleshooting tips, see “Using PCoIP Zero Clients with VMware View 4” (TER0904005).

