

Teradici PCoIP® Hardware Accelerator (APEX 2800) Driver Release Notes

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Issue 15



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Revision History

Version	Date	Description
Issue 15	August 18, 2014	This release contains an updated VM driver to support VMware Horizon 6, and an updated ESXi driver for bug fixes and feature additions.

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1 Preface

The Teradici PCoIP® Hardware Accelerator (APEX 2800) provides consistent user experience and delivers higher frames per second (FPS) to the remote end point by offloading PCoIP encoding tasks from the CPU. The PCoIP Hardware Accelerator is only supported on VMware Horizon View™ VDI back end systems.

Available as a standard PCIe expansion card for industry-standard servers, and as a mezzanine card for Dell and HP blade servers, the PCoIP Hardware Accelerator monitors the graphical demands of all displays and dynamically offloads the image encoding of up to the most demanding 100 displays.

As demands change, the PCoIP Hardware Accelerator seamlessly and automatically shifts between hardware encoding on the card and software encoding on the virtual desktop's vCPU(s), ensuring the best user experience at all times to all users.

The PCoIP Hardware Accelerator is the ideal complement to GPU implementation on VMware Horizon View™ (both vSGA and vDGA).

This document provides a summary of PCoIP Hardware Accelerator features, resolved issues, and known issues for release 2.4.

1.1 Audience

This document is intended for IT administrators who have deployed or plan to deploy the PCoIP Hardware Accelerator in a virtual desktop (VMware Horizon View™ VDI) environment.

1.2 Additional Resources

The following resources are also available:

- "Teradici PCoIP® Hardware Accelerator (APEX 2800) Administrator's Guide" (TER1109003)
This guide is located in the **Server Solutions** section in the Teradici Support [Documentation Center](#).
- Teradici PCoIP Hardware Accelerator [installation video tutorial](#)
- [Teradici APEX 2800 Evaluation and Demo Guide](#)
- [APEX 2800 Dashboard for simple testing and evaluation of the PCoIP Hardware Accelerator](#)

2 PCoIP Hardware Accelerator Release 2.4.0

This release includes the following features:

- **VM driver:** The PCoIP Hardware Accelerator now supports VMware Horizon 6.
- **ESXi driver:** The ESXi version number now displays in the command output when you list the installed vSphere Installation Bundle (VIB) packages in your ESXi host. Previously, the version column in the output table showed only the Teradici ESXi driver release number and build number (e.g., **2.3-023839**). Now it also appends the ESXi version number for each VIB (e.g., **2.4.0.35302-esxi.5.5.0**).

2.1 Drivers Package Contents

The PCoIP Hardware Accelerator drivers package includes the following software components:

- **VM driver:** apex2800-2.4.0-rel-35302.exe
- **ESXi driver:** apex2800-rel-2.4.0.35302-*<esxi version>*.zip

2.2 Version

Version information for the ESXi driver can be checked using the command “pcoip-ctrl -I”, as shown in the following sample output:

```
APEX2800 Driver Information:
- SVN revision (35302), Built Jul 15 2014 : 12:42:58
- Display Manager is (ENABLED)
- Display Portrait Mode is (DISABLED)
- Maximum Resolution Supported: 1920 x 1200
- Number of displays supported: 64

APEX2800 Device Summary:
(1) APEX2800 device present
-- APEX2800-LP PCIe (Bus 5) (IN_SERVICE)
++ Serial Number (L12110006584)
++ Firmware SVN revision (35302), Built Jul 15 2014 : 12:40:05
++ CPU Temperature (39c), Ambient/Board Temperature (35c)
++ Device Util (2), Image Pipeline (5130) Kpps

Virtual Machine Summary:
-- (7) Virtual Machines Found
-- (1) PCoIP Sessions Found
-- (1) PCoIP Displays Offloaded
```

2.3 Compatibility

2.3.1 Server Platform

The virtual server platform for the PCoIP Hardware Accelerator requires an available card slot for one of the following form factors:

- PCIe x8 or x16, full height, half length for the standard PCoIP Hardware Accelerator (supports PCIe Gen 1.1)
- PCIe x4, half height, half length for the PCoIP Hardware Accelerator LP (supports PCIe Gen 2.0)
- PCoIP Hardware Accelerator MXM for HP blade servers
- Teradici PCoIP Hardware Accelerator by Amulet HotKey (DXM-A) for Dell "M" series blade servers

This release is compatible with all previous ESXi updates. It has been tested on the following platforms:

- ESXi 5.5 Patch 2 (build 1892623)
- ESXi 5.1 Express Patch 5 (build 1900470)
- ESXi 5.0 Express Patch 6 (build 1918656)
- ESXi 4.1 Patch 11 (build 1682698)

VMware Horizon View versions supported:

- VMware Horizon View 6.0.0
- VMware Horizon View 5.3
- VMware Horizon View 5.2

Virtual operating systems:

- Windows 7 32-bit/64-bit
- Windows Vista 32-bit/64-bit
- Windows XP

2.3.2 Client Platform

This release has been tested on the following client platforms:

- PCoIP zero clients with firmware 4.5.1 (Tera2/Tera1)
- VMware Horizon Clients 3.0
- Displays with a maximum resolution of 2560 x 1600

2.4 Resolved Issues

The following issues have been resolved in this release:

Teradici Reference	Description
10520	On a dual-monitor system with image caching enabled, trail artifacts occurred when a window was moved from one display to another. This issue is now fixed.
10625	Occasionally when using multi-monitor PCoIP sessions, some tearing was observed when display activity occurred on both displays simultaneously, e.g., when dragging windows across both displays. This issue is now fixed.
10664	Image caching was not working when more than one display was connected to a VM. This issue is now fixed.

2.5 Known Issues

The following issues have been observed during the testing of this release:

Teradici Reference	Description
6622	With certain workload types, the Horizon View client output frame rate is sometimes slightly lower when a display is being processed by the PCoIP Hardware Accelerator. Teradici PCoIP zero clients are unaffected.
13184	A Purple Screen event has occasionally occurred on ESXi 5.0.0 servers with an MXM mezzanine card installed. Teradici is currently investigating this problem.
13373	If a user drags a window while a VMotion migration is in progress, the session may freeze and stop responding.
13379	An image may not build to a completely lossless state if a user drags the image around while the build-to-lossless process is occurring.
13490	Occasionally a user's screen may go blank. The screen will return to normal after a second.

Glossary of Definitions

ESX/ESXi

VMware hypervisor (virtual machine manager)

FPS

Frames per second

GPU

Graphics Processing Unit

MXM

Mobile PCI Express Module

OS

Operating System

PCIe

Peripheral Component Interconnect Express

PCoIP software

Software implementation of the PCoIP protocol that is integrated into VMware View Agent/Client release 4.0 and later

PCoIP zero client

Desktop (client) side of PCoIP system; e.g., PCoIP zero client or PCoIP integrated display

PCoIP[®]

Personal Computer over Internet Protocol (PC-over-IP)

PC-over-IP[®]

Personal Computer over Internet Protocol

vCPU

Virtual CPU within a virtual machine

vDGA

Virtual Dedicated Graphics Acceleration

VDI

Virtual Desktop Infrastructure

VIB

VMware vSphere Installation Bundle

VM

Virtual Machine

vSGA

Virtual Shared Graphics Acceleration

zero client

See PCoIP zero client