Teradici PCoIP® Solutions
Teradici PCoIP technology is the fabric of the virtual workspace. Integrated with VMware® Horizon View™, and with a broad ecosystem, PCoIP technology is deployed end-to-end in virtual environments, from hardware accelerators to zero clients, standalone workstations and mobile devices. With PCoIP technology, doctors quickly and securely review radiology images wherever they are, education IT staff easily and efficiently manage BYOD programs, the military test battlefield technology, traders make million-dollar decisions, automotive manufacturers design new supercars, and artists create award-winning 3D special effects. Simple, cost-effective, and environmentally responsible, PCoIP technology delivers a secure, high-definition computing experience.
The Teradici PCoIP protocol is an innovative remote display technology that allows the user’s desktop operating system, applications, and data to reside in the datacenter, eliminating the need for traditional desktop workstations, PCs and thin clients. It delivers an uncompromised user experience to each person, anywhere, over any network and to any type of device without incurring the security risks associated with having data reside in remote PCs, laptops, or tablets.

PCoIP technology provides high resolution, full frame rate 3D graphics and high-definition media, with full USB peripheral interoperability, locally over a LAN or remotely over a high-latency WAN. The PCoIP protocol compresses, encrypts and encodes the entire computing experience at the datacenter and transmits it ‘pixels only’ across a standard IP network to secure, high-performance PCoIP zero clients, flexible PCoIP Optimized™ thin clients, and mobile devices.

The PCoIP protocol is implemented in several configurations, as software in VMware Horizon View and as custom designed Teradici silicon for hardware accelerated performance and enhanced security. A growing ecosystem of over 50 third-party vendors provide a wide variety of PCoIP products, including hardware accelerators, rack and tower workstations, blade PCs, zero clients, optimized software clients, integrated monitors, and touch-screen devices.

Host rendering

PCoIP technology uses host rendering, which means all rendering is centralized at the host where applications and data are housed, not at the desktop. Once the image is rendered on the host, the PCoIP protocol broadcasts just the encrypted pixels across the network to the client. With PCoIP technology and host rendering a PC-like experience is preserved intact: system performance is maintained, hardware interfaces remain unaffected, applications perform as they should, and no driver changes are required. There are no application dependencies or incompatibilities between the host and the client.

Intelligent image decomposition

PCoIP technology is a multi-codec protocol, continuously analyzing and decomposing the image elements – graphics, text, icons, video, etc. – and compressing them with the right codec for each pixel. This enables efficient transmission and decoding, saves bandwidth, and enables image elements that rapidly change to be displayed. PCoIP codecs can build every pixel to a lossless state once they stop changing, which is critical when the image contains important information, such as medical diagnostics, or optionally can build to perceptual lossless to maximize bandwidth savings.

Dynamic network adaptation

The PCoIP protocol dynamically adapts to network conditions in real time. Image quality settings can be easily configured to manage bandwidth use and PCoIP adaptive encoders adjust image quality according to congestion on the network, within set limits. Because PCoIP technology transmits just the pixels, not data, it utilizes UDP, a real-time, highly efficient protocol, which is ideally suited to the practicalities of working remotely over a limited bandwidth network, and results in increased responsiveness and improved user experience.
PCoIP Remote Workstation Solutions

The Teradici PCoIP Remote Workstation Solution enables remote access to high-performance workstations with no loss in performance. PCoIP remote workstation products are created for IT managers needing a secure, reliable and easy-to-manage solution and the ability to give workstation users flexible access to high performance, graphically demanding applications.

Used worldwide by professionals who make award-winning films, design luxury cars, trade international currencies and collaborate on multi-national projects, Teradici remote workstation products deliver high fidelity, uncompromised workstation performance to any remote location. This portable workstation access enables remote viewing of accurate color 3D and video graphics from around the office or around the globe. With unshackled cloud computing performance, designers can now increase productivity and collaboration whether working on designs from a remote office, at home, or on-the-go.

The Teradici Remote Workstation Solution, made up of Remote Workstation Cards and PCoIP Zero Clients, is available worldwide and integrated by Teradici OEM partners for use with tower, rack, and blade workstations. Supported in Windows or Linux OS environments, the Teradici Remote Workstation Card delivers remote workstation access over standard IP networks from under-the-desk tower workstations or from the datacenter. Connection to PCoIP zero clients is supported via direct connection or brokered through Ericom, Leostream, or VMware.
PCoIP Zero Clients

PCoIP Zero Clients are the easiest to manage, most secure, and highest performing endpoint devices available for virtual environments. PCoIP zero clients are powered by Teradici’s highly integrated, purpose-built processors that allow a great variety of form factors, such as integrated displays, touchscreen monitors and stand-alone desktop devices.

PCoIP zero clients receive encrypted pixels from the host and perform image decompression and decoding at the desktop. They are ultra-secure and easy to manage clients that do not require regular updates or patches because they do not have a general purpose CPU, local data storage or an application operating system.

PCoIP zero clients provide the best user experience for office workers and power users alike. Extensive USB security and authentication features are provided, including single sign-on capabilities for use with smart cards and proximity cards. Supporting up to four displays at 1920x1200, or dual 2560x1600 resolution, PCoIP zero clients have been widely deployed in Fortune 500 enterprises, educational institutions, and government agencies around the world.

All PCoIP zero clients support connectivity to VMware Horizon View virtual desktops and high-performance remote workstation solutions, and are compatible with the Teradici PCoIP Hardware Accelerator (APEX 2800).

Readily available from a wide variety of OEM partners, PCoIP zero clients deliver the highest performance with the lowest management cost.
**PCoIP Optimized Thin Clients**

PCoIP Optimized clients are software-based clients that have been optimized to take advantage of thin client platforms including system on chip (SoC) processors. PCoIP Optimized software is developed by Teradici as a custom software project for each supported platform in order to deliver the best possible combination of features and performance.

PCoIP Optimized clients offer a balance between performance, security and flexibility. They generally support multiple protocols and in many cases, you can install software or drivers in the local operating system. PCoIP Optimized clients are compatible with the PCoIP Hardware Accelerator (APEX 2800) and support Horizon View virtual environments.
The Teradici PCoIP Management Console is a web-based management tool that allows administrators to manage an entire enterprise deployment of PCoIP devices from a central console, further streamlining the already minimal management of a PCoIP infrastructure.

The PCoIP Management Console automatically discovers PCoIP devices and enables new PCoIP clients to be added to a network automatically. It enables remote configuration, management and monitoring of host and client device parameters, allows control of power and reset, and provides remote update of the firmware for all the PCoIP devices in an organization – all through a single web interface.

The management console is available for download at no charge from the Teradici support site.
By constantly monitoring the graphic encoding demands of all the displays rendered on the server, the PCoIP hardware accelerator determines – in real time – the most active displays that will benefit the most from hardware acceleration. It then dynamically and seamlessly offloads the most demanding PCoIP protocol image encoding tasks from the CPU to the dedicated Teradici processor.

As the Hardware Accelerator reduces server CPU utilization, the extra headroom can be used to improve consolidation ratio by up to two times. Recent driver updates allow IT managers to cut bandwidth usage by up to 50% and use the solution in conjunction with a physical GPU for the best experience working with graphically intense workloads.

The PCoIP hardware accelerator is available in a PCIe x4 low profile card (Half Height, Half Length) and in mezzanine form factor for blade servers. It is certified by all leading server OEMs such as Cisco, Dell, HP, IBM and Lenovo on rack offerings, and integrated with VDI-in-a-box vendors such as HVE Systems, Pivot3 and V3 Systems.

VMware Horizon View with PCoIP

VMware Horizon View with PCoIP technology delivers a secure and high-performance desktop experience for virtual desktop users in government, healthcare, financial services, education and other enterprise environments. Built for real-time desktop delivery, VMware Horizon View with the PCoIP protocol dynamically adjusts to changing network conditions to deliver the optimal user experience across the LAN or WAN.

Teradici PCoIP protocol is integrated into VMware Horizon View in the datacenter and on a variety of client devices on the desktop. Horizon View software clients include Windows, OS X, Linux and mobile clients on iOS and Android devices. PCoIP zero clients and PCoIP Optimized clients are also fully compatible with Horizon View and deliver enhanced security and performance. VMware Horizon View with PCoIP provides IT organizations with a single point of management and a flexible deployment model to deliver the best user experience and an increased return on investment.
Teradici technology is the fabric of the virtual workspace. We power the spectrum of local, remote, mobile and collaborative workstyles, fundamentally simplifying how computing is provisioned, managed and used.

Teradici customers benefit from a broad product ecosystem, and include Fortune 500 enterprises, local and federal government agencies, and cloud and service providers.

Teradici was founded in 2004, and is headquartered in California and British Columbia.

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