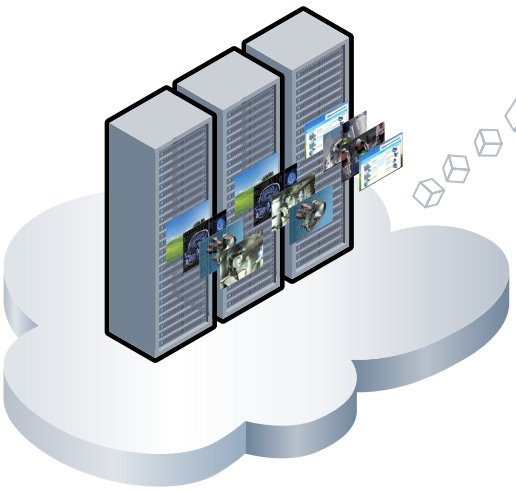
Zero clients: when nothing is better than something

Simple to manage, no applications, no OS, no virus updates, no hard drive to fail.

teradici PCoIP®



PCoIP® Zero Clients are the perfect enterprise desktops for VDI, DaaS and Teradici Cloud Access Software deployments.

- Radically simplify desktop maintenance
- Lock down your data, remote the pixels only
- Deliver an uncompromised visual experience in full HD
- Works with Teradici Cloud Access Software, Amazon WorkSpaces, VMware® Horizon, VMware Horizon™ DaaS® and PCoIP Remote Workstation environments

teradici PCoIP®

"My PCoIP Zero Clients have provided a seamless and consistent desktop experience for my end users while at the same time decreasing my capital expenditures and improving the back end management by my IT staff."

SCOTT CHILLE
IT DIRECTOR
MASON CITY CLINIC

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, laptops and stand-alone desktop devices. PCoIP Zero Clients receive encrypted pixels from the host and perform image decompression and decoding at the desktop. With no general purpose CPU, local data storage, or an application operating system, these ultra secure and easy to manage clients do not require regular updates or patches. Tera2 PCoIP Zero Clients support Voice Unified Communications that works across the broadest range of SIP-compliant environments, including Alcatel-Lucent, Avaya, Broadsoft, Cisco, Metaswitch Networks and Mitel. PCoIP Zero Clients provide an outstanding user experience for office workers and power users alike.

low ownership cost

Because only stateless zero client devices are needed at the desktop the challenges of provisioning, managing, maintaining and securing enterprise desktops are eliminated. The efficiency and security of centralized computing increases and network loads are reduced, driving down operational costs across your organization. And with the low power consumption and long lifespan of PCoIP Zero Clients, there's no better way to go green.

intrinsic security

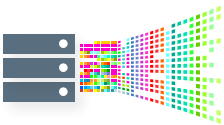
With computing performed in the datacenter or cloud, stateless zero clients with no Windows/ Linux OS, and no local storage are excellent clients for security-critical deployments. PCoIP technology enables the ultimate in security – there's no need for client antivirus programs or client security updates." PCoIP technology provides extensive USB security and authentication features, and because only encrypted pixels are transmitted, your data never leaves the data center or cloud and communications are secure.

extensive ecosystem

Over 1.5 Million PCoIP Zero Clients have been have been deployed across industries such as education, finance, healthcare, and local and federal government agencies. PCoIP technology is available in a wide array of products and solutions from leading OEMs and partners, providing the choice that you need for on-premises or cloud-based virtualization.

PCoIP® technology explained

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 or the cloud, 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 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 or cloud, and transmits it 'pixels only' across a standard IP network to secure, high-performance PCoIP zero clients.



Host rendering

In a regular PC the applications operating system and graphics drivers are tightly coupled to the display and are optimized for performance. Other protocols use client rendering, which separates these components by a network. To render an image each command from the host and response from the client has to travel across the network, which degrades application performance as it waits for the rendering to complete.

Host rendering preserves the PC environment so that applications perform as they should. Once the image is rendered on the host, the PCoIP protocol broadcasts only the encrypted pixels, not the data, across the network to the client – which makes it possible to have stateless decode-only endpoint devices.

PCoIP Zero Clients do not have a general purpose CPU, RAM, graphics processor, disk, or fan. Instead, stateless PCoIP Zero Clients have a single highly integrated purpose-built processor that supports a rich multimedia experience.

PCoIP Zero Clients bring low maintenance, increased security, and cost savings because the client's task is only to decode the pixels in order to display the image. There are no application dependencies between the host and the client and future applications will simply work, which increases the useful lifespan of the client.

Host rendering is also insensitive to latency. With the PCoIP protocol the one-way delivery of only pixels to the Zero Client provides complete independence from network latency and bandwidth limitations, and enables a rich user experience even on high latency Wide Area Networks.

Multi-codec

The PCoIP protocol is uniquely a multi-codec protocol. Not all image elements on a PC display are of the same type; using the same codec for all elements uses excessive bandwidth and degrades the user experience. Instead, the PCoIP protocol continuously analyses and decomposes image elements, graphics, text, icons, photographs, videos, etc. and compresses them with the right codec for the right pixels.

Intelligent image decomposition and optimized image encoding using multiple codecs enables efficient transmission and decoding. This saves bandwidth, while delivering an outstanding user experience. PCoIP codecs can build every pixel to a lossless state once they stop changing to insure a pixel-perfect image regardless of network limitations.

Dynamic network adaption

The PCoIP protocol dynamically adapts to network conditions. The PCoIP image quality settings can be easily configured to manage bandwidth use. PCoIP adaptive encoders automatically adjust image quality on a congested network, within the limits that you set, then resume the maximum image quality when the network is no longer congested. Because the PCoIP protocol does not transfer data files, just the pixels themselves, it makes sense to use a real time protocol to insure a responsive interactive remote user experience. For that reason, PCoIP uses the User Datagram Protocol (UDP), the same protocol used in Voice over Internet Protocol (VoIP) and Internet Protocol Television (IPTV).

For more information visit:
www.teradici.com/zeroclients

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