Configuring high-performance workstation access for remote learning

Making the grade with secure and flexible connectivity wherever students are located

The year 2020 has brought many uncertainties, and higher education institutions have had to be nimble in their responses. In an effort to continue their mission to serve students and cope with the new normal, however long it may last, institutions are looking for ways to ensure:

1. school semesters and classes can continue later in the year;
2. student enrollment can be maintained; and
3. students can access their learning materials no matter where they need to be.

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School administrators and support staff are working hard to try to deliver quality content, provide a positive, consistent learning experience, and ensure student engagement remains healthy.

This is a tall order, but perhaps at least the IT infrastructure portion of it doesn't have to be as hard as you think. Existing IT infrastructure, lab spaces, and workstation equipment can all be used to provide flexible, remote access to students and staff. Virtualization technology can provide high-performance computing power with a solid user experience to students anywhere they are, on campus or off.

Meet specialized computing needs quickly to keep students engaged

While it's true that most students today come with their own computers and can adapt to many online course requirements quickly, some courses and learning environments are more challenging to shift effectively online. Courses that require graphics-intensive computing capabilities, such as those in animation, VFX, architecture, or video editing, the essential hands-on training usually provided in on-campus labs is a key benefit of the program. Schools will need to address how these computing capabilities can be offered to students in a remote setting.

In an ever-increasing competitive landscape, schools that can offer innovative approaches to remote classroom learning for both domestic and international students will stand out as leaders. Schools providing outstanding, student-centered technology delivery will be rewarded with stronger student engagement and motivation.

Critical challenges in providing high-performance computing environments at higher-education Institutions

Protection of and access to information across multiple locations

Many schools already span multiple locations managed by a single IT department, including multiple labs and administrative offices across different faculties and even campuses in different cities. Information travelling between these locations can create an opportunity for data breaches. Valuable intellectual property, such as student data, exam information, or working files need to be tightly controlled and securely accessed. Adding more off-campus endpoints as more students, staff, and faculty work from home increases the risk.

Costly hardware refreshes and lab environment constraints
Maintaining and replacing high-end workstations to keep up with the current applications students need for their training can be prohibitively expensive, leading to higher operating costs for institutions and students. Institutions need to consider options to extend the life of existing equipment.

Management and staffing concerns
Setting up a training environment presents staffing challenges, such as limited human resources or expertise. Here are three common scenarios:

1. Ongoing maintenance that is time-consuming due to manual steps (e.g. OS application patching, hard drive cloning, and on-site visits);
2. Resource allocation of lab environments - an onerous responsibility for institutions with large numbers of students; and
3. Inexperience or inability to define, manage and drive IT initiatives despite receiving project funds.

No need to start from scratch with desktop and workstation virtualization solutions

Forget about overhauling your entire infrastructure, and forget about having to set up a VPN for students to access programs, applications, or files. Instead, take advantage of what you already have in your computer labs and classrooms. You can provide students with access to those workstations remotely, providing them with the resources they need and the security and management control you need, regardless of location.

In providing remote workstations, you do not have to rip everything apart; and you don't have to change security parameters or licensing. When using a remote display protocol such as PCoIP® technology, no data is being transferred between the remote endpoints your students or staff are using and the host workstations; instead, just encrypted pixels—what would normally be displayed on the host workstation monitor—are displayed remotely. The two-way interaction supports keyboard, mouse, USB and other peripheral input devices such as Wacom displays and tablets.

Implementing or deploying virtual workstations can be daunting, but it doesn't have to be an extreme challenge. The ease with which students can set things up at home if they have minimal IT knowledge or low grade devices is something to keep in mind, as you want a system to be seamless and straightforward as possible to ensure the success of the virtualization solution.

For more information, check out this **Teradici Help Article**, or this helpful **Work from Home Guide**.

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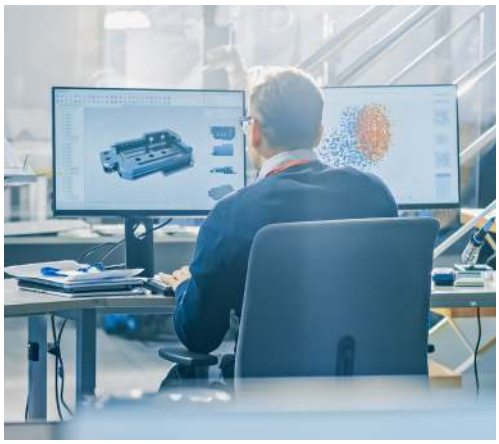
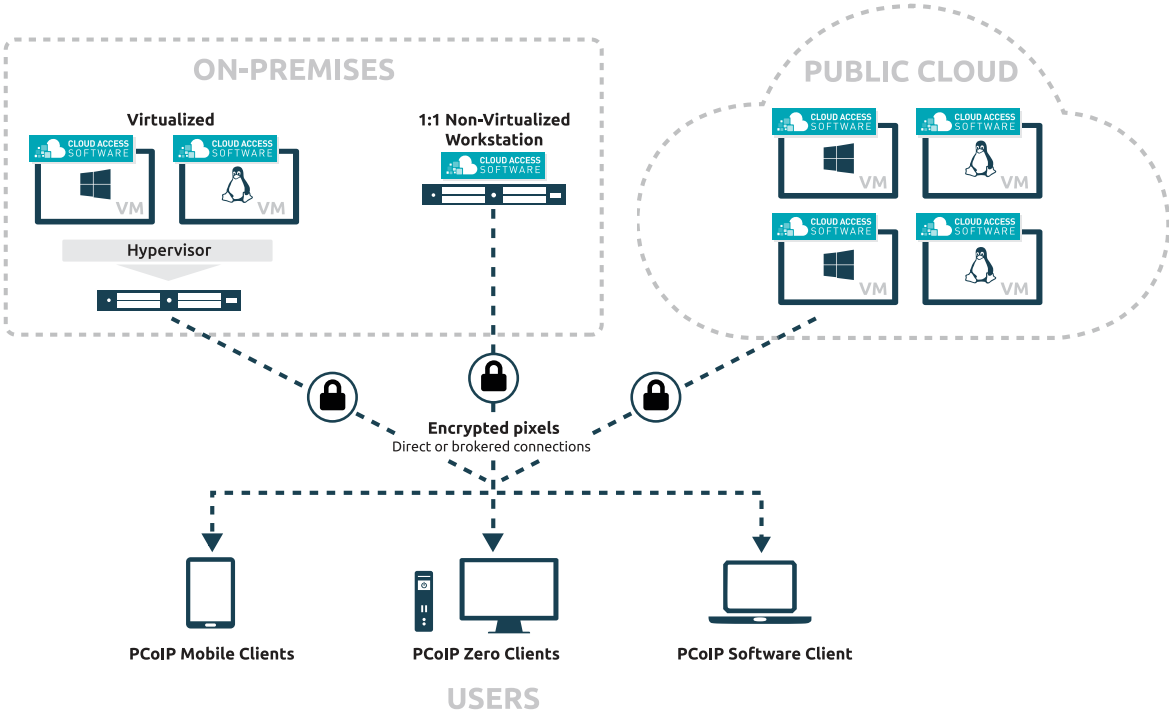
Address the IT computing challenges with Teradici Cloud Access Software



Virtualized computing provides staff and students with unparalleled access to applications and data with the highest levels of security.

With Teradici Cloud Access Software, you can securely deliver high-performance desktops and workstations to students and staff who require even the most graphics-intensive applications, like those working within technical computing programs, animation/VFX programs, computer-aided design (CAD), architectural design, 3D modelling, video editing, and similar courses where interactive applications are mission-critical.

Built on industry-leading PCoIP® technology, Teradici Cloud Access Software delivers high-performance virtual workstations from the cloud or directly from your lab or data center to the endpoint of your choice. Create virtual environments on AWS, Google Cloud, Microsoft Azure, or your on-premises infrastructure. With simplified and flexible multi-cloud support, Cloud Access Software with the included Cloud Access Manager gives you the power to deploy and manage end-user desktops from any combination of public clouds or private data centers. Remote desktops and workstations can be accessed via a variety of endpoints, including PCoIP Zero Clients and PCoIP-enabled PCs, iOS/Android devices, Chromebooks, and other tablets.



Cloud Access Software deployment scenarios: ultra-secure access to on-premises or public cloud workstations from a broad range of endpoints.

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Media & Entertainment studios already trust Teradici

For technical schools specializing in animation, VFX, and video production, rest assured that Teradici is very well known within the industry. Major studios rely on the PCoIP protocol to provide their artists with high-performance workstations and enable them to comply with MPAA (Motion Picture Association of America), CDSA (Content Delivery & Security Association) and TPN (Trusted Partner Network) best practices security standards. For example:

DNEG

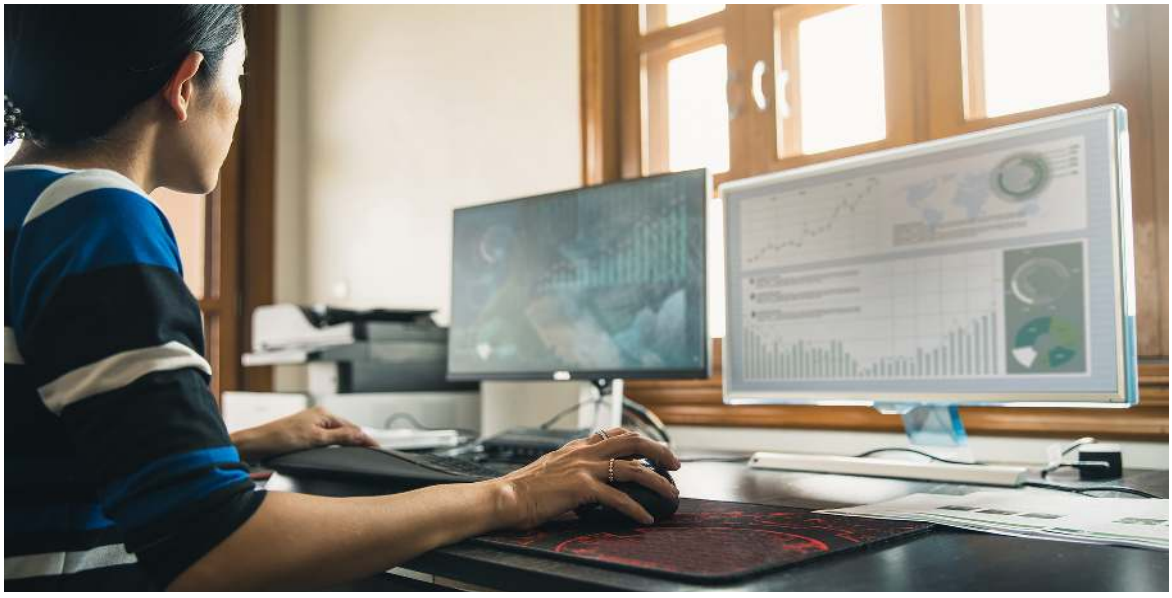
Visual effects leader, **DNEG** successfully provisioned virtual workstations for 200 artists in a new studio in record time

JELLYFISH PICTURES

Rapid growth has allowed **Jellfyish Pictures** to hire top talent anywhere and rethink the way it delivers graphics desktops

INDUSTRIAL LIGHT & MAGIC

Industrial Light & Magic utilized PCoIP technology to provide flexible, secure, high-performance remote access to centralized assets and remote viewing of dailies



PCoIP technology provides an unrivalled remote user experience for students and staff in media and communications training programs. Access go-to editorial or VFX applications configured for multi-monitor 4K or UHD display topologies, including lossless text and color accuracy – no more blocky compression artifacts imposed by the display protocol. Use **Wacom devices** for artistic editing with near-imperceptible interactive latency.

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Top considerations of a virtualization solution

Selecting a virtualization solution that fits your performance, cost, and security requirements can be challenging, so here are a few things to consider when assessing your needs and evaluating a potential workstation virtualization partner.

- ☐ What different use cases and workloads need to be accommodated by the solution?
- ☐ What level of security is required for data and intellectual property, and how does the virtualization solution protect the data and network interface?
- ☐ What existing equipment can be used or repurposed to provide the virtual desktops or workstations, and what additional equipment would need to be purchased?
- ☐ What level of ongoing maintenance and management will be required for the virtual training environment, and how well will my current team be able to provide that?
- ☐ What options are available for where workstations are hosted: on-premises, public cloud, or hybrid? How can they be combined if required?
- ☐ What does the solution offer to help in scheduling multiple students connecting to a finite set of computing services?

A model for secure, virtualized training environments

With the right building blocks in place, you can provide students and staff with anytime, anywhere desktop computing access, even for the most demanding use cases in terms of performance and security requirements. With the proper setup and Teradici technology, users can even forget they're operating in a virtual environment, as peripherals function seamlessly and latency is typically unnoticeable. IT and system administrators can provision and remotely update virtual machines, and can scale them up or down with ease if needed. Access to on-premises workstations can be brokered according to student and staff schedules, enabling you to provide workstations to students at specific times to meet lab session requirements, for example.

With the shifting role of technology and the need for flexible remote desktop access, take advantage of technology that is readily available and ensure a seamless transition for students, whatever the upcoming year brings.

For more information, check out **teradici.com/remote-work** or **contact us** to get started today.