



Lambton College – Teradici APEX™ 2800 Server Offload Card Case Study

Deploying the Teradici APEX 2800 server offload card in a VMware View environment

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Lori Atkin, Systems Administrator
Lambton College

CHALLENGE

With over 6,500 students, Lambton College has a fast growing student base with limited classroom and computer lab space. To match lab sizes with the number of current classes, Lambton College recently began moving from traditional desktop PCs to a virtualized VMware View® environment with the goal of allowing students and faculty to navigate between labs and also work on personal devices off campus.

However, the first phase of the deployment identified some serious issues around the user experience with video playback workloads, used quite extensively in the curriculum. With the minimum server density already reached to make the business case work, Lambton College needed a high-performance solution that would be able to support the graphic intensive workloads of its students while maintaining its target ROI.

SOLUTION

Ensuring the success of any VMware View deployment, the Teradici APEX™ 2800 server offload card empowers IT managers to protect and provide the highest quality user experience on a variety of devices for any type of workload.

With the APEX 2800, Lambton College was able to manage overall CPU demand and provide a reliable and consistent level of experience to students and faculty regardless of the overall demand on the CPUs.

SUCCESSES

- Improved user experience and application performance
- Ensured a consistent user experience even with 1 vCPU per VM
- Eliminated customer tickets around user experience (even with graphic intensive workloads)
- Enabled Lambton College to continue to reach its virtualization goals

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Improved user experience

With over 6,500 students and 412 full-time employees, Lambton College has a full array of computing and software needs. Faced with various space constraints, the college's IT staff struggled to match computer lab sizes to class sizes, as well as making sure each computer had the software needed for each specific course.

In 2012, the IT staff put into place a five-year virtualization plan aiming to have no more than 100 desktop computers throughout the campus. With this plan, the IT team began implementing a VMware View environment using a combination of zero clients, smart clients and repurposed desktops using Windows 7 thin PCs.

With two VMware ESXi hosts running ESX 5.0 with VMware View 5.1, Lambton College began to notice that, although the new system worked in terms of flexibility, students and faculty running graphics intensive workloads were struggling with the quality provided. With professors integrating YouTube videos into their daily curriculum, students and faculty began to notice poor video and sound quality.

“The beginning process of our five-year virtualization plan appeared to be seamless, however, we began to experience problems with both video and graphics,” said Lori Atkin, Systems Administrator at Lambton College. “We started receiving complaints and running into issues with any graphic intensive program. Even a simple YouTube video created a performance problem, and our confidence in the virtual devices was quickly diminishing.”

Instant relief

After attending a VMware View training course, Mrs. Atkin learned about Teradici and began looking into its portfolio of solutions. As performance issues continued to surface, she decided to begin testing the PCoIP hardware encoding solution of the APEX 2800 server offload card on one of the servers.

The APEX 2800 card began to help immediately. It monitored the activity of all the VMs and dynamically offloaded the PCoIP encoding to ensure a consistent user experience. Lambton College was able to manage overall CPU demand and provide a reliable and consistent level of experience to students and faculty regardless of the overall demand on the CPUs.

“When I was introduced to Teradici's solution, I was very interested to hear about a product that could potentially alleviate some of the pain points we were currently experiencing,” said Lori Atkin, Systems Administrator of Lambton College. “After implementing the APEX 2800 card, we instantly saw the relief provided to the VM, pushing video and application quality up to the level we expected. The solution was easy to install, and offloaded our performance issues with graphic intensive workloads. Simply put, the APEX 2800 server offload card saved our VMware View proof of concept.”

Back on track!

Lambton College's five-year virtualization plan is back on track, with students and faculty benefitting from all the advantages of virtual desktop infrastructure providing access from anywhere, on any device, with the same user experience as on a local desktop PC. The Teradici APEX 2800 server offload card provided Lambton College with a solution capable of ensuring the highest level of performance for a View environment at all times while keeping the overall system in line with their financial target. Concludes Lori Atkin, “The combination of our View environment and the Teradici APEX 2800 card has allowed us to successfully roll out VDI at the college and provide an uncompromised user experience for our students and staff.”

Project achievements

■ Improved user experience

With the implementation of the Teradici APEX 2800 server offload card, students and faculty can now run graphic intensive applications and programs from any of the zero clients, thin clients and PCs located within the college classrooms and computer labs. The APEX card ensures consistent application performance and protects the user experience as workloads change.

■ Simple to install and setup

The Lambton College IT staff was able to implement their PoC in just 6 weeks. With the APEX 2800 server offload card, no complex configuration is required. The IT staff simply inserts the card into the server, installs the drivers and clicks to enable hardware acceleration in VMware View Administrator.

PRODUCTS USED

VMware vSphere® 5
VMware View® 5.1
Teradici APEX™ 2800
PCoIP Zero Clients

ABOUT LAMBTON COLLEGE

Lambton College, located in Sarnia, Ontario, Canada, promotes student and community success through quality teaching and an interactive learning environment. The college focuses on providing relevant, accessible, and value-added programs and services that engage and develop the student as a whole, proactively addressing the needs of a constantly changing job market.

ABOUT PCOIP TECHNOLOGY

The PCoIP® (PC-over-IP®) protocol is a revolutionary display, encryption and remoting technology. The PCoIP protocol compresses, encrypts and encodes the entire computing experience at the data center and transmits it 'pixels only' across a standard IP network to stateless PCoIP desktop devices.

PCoIP technology allows an organization's PCs and workstations to be centrally managed in a data center while providing high resolution, full frame rate 3D graphics and HD media, with full USB peripheral interoperability, locally over a LAN or remotely over a high-latency WAN.

ABOUT TERADICI

Teradici drives innovation to fundamentally change the way people use and deploy computers by developing technology and solutions that deliver a true, uncompromised PC user experience over IP networks. Our focused approach in designing advanced image processing algorithms enables the physical separation of the computer and the user, and ultimately will change the way enterprises compute.