VDI CONNECTS HEALTHCARE PROFESSIONALS, ANYTIME, ANYWHERE

Image courtesy of Paul Strickland Scanner Centre

DELL Technologies | **NVIDIA**

The Paul Strickland Scanner Centre enables radiologists working remotely to access and report on high-resolution patient scans.

SUMMARY

> Achieving real-time rendering of scans means no noticeable difference between remote and on-site working.

> Reusing radiologists' home client devices and the centre's IT infrastructure is now possible.

> Removed all barriers to scan access, enabling remote reporting.

> No interruption to patient diagnoses or treatments during lockdown.

> Enables collaborative and flexible working environments for radiologists with other medical experts.

> Improved system stability reduces required IT support time.

SOFTWARE

Hypervisor: VMware vSphere ESXi

Graphics Acceleration: NVIDIA RTX™ Virtual Workstation (vWS)

HARDWARE

Server: Dell EMC Hyperconverged Infrastructure

GPU: NVIDIA Data Center GPUs

CHALLENGE STATEMENT

The Paul Strickland Scanner Centre (PSSC) is an independent medical charity that works to improve the lives of people affected by cancer and other serious conditions. PSSC had a long-standing goal to allow radiologists to access and report on scans remotely, but the systems available were too slow and cumbersome.

SOLUTION STATEMENT

An Urgent Need for Change

When the global pandemic lockdown began, several radiologists were forced to work from home because they were self-isolating or because there wasn't enough space to work within the social distancing rules in the centre safely.

Dr Andrew Gogbashian, lead radiologist for CT and consultant oncological radiologist at the centre, identified a solution based on the MITIS Health Primary Diagnosis Medical VDI. And Dell Technologies servers equipped with NVIDIA GPUs and NVIDIA RTX™ Virtual Workstation (vWS) software via a VDI (virtual desktop infrastructure) were perfectly suited to the task.

The solution proposed by MITIS Health enabled up to eight radiologists to access specialist software on the system simultaneously, without degradation of image quality or having to download the images. This is because each radiologist had access

CUSTOMER PROFILE

> "One of our biggest challenges in the centre is space, which is limited in terms of health and safety regulations. The new system allows more staff to work offsite which means we have more space available for patients."

Dr Subhadip Ghosh-Ray
Consultant Head and Neck Radiologist, Lead Consultant for Information Technology, PSSC

> "The Dell and NVIDIA technology in the MITIS VDI allows access of imaging datajust like streaming, with no delays. Having this amount of flexibility can only benefit us going forward."

Dr Andrew Gogbashian
Lead Radiologist for CT, Consultant Oncological Radiologist.
PSSC

to a virtual workstation accelerated by NVIDIA GPUs installed in the Dell server. With NVIDIA RTX vWS software, each radiologist could share the GPUs in the server, providing a cost-effective and high performance solution.

"The fact that powerful Dell Technologies and NVIDIA hardware delivered the system was a key decision factor," says Dr. Subhadip Ghosh-Ray, consultant head and neck radiologist, lead consultant for information technology. "It was important that Dell Technologies and NVIDIA knew each other and have the lion's share of the market — this mitigated the risk of failure and was one of the main reasons for going forward with the MITIS VDI."

Radiologists and administrative staff could access the centre's systems from home, using existing client devices where available. Dr Gogbashian explains, "You don't need a powerful computer to access scans, provided you have a suitable monitor."

RESULTS STATEMENT

Maintaining Patient Services

Following an initial pilot system trial, MITIS Health, Dell Technologies and NVIDIA collaborated to get the new system up and running within weeks. This prevented an otherwise unavoidable interruption to patient services during lockdown.

As well as meeting the urgent requirements of the centre, the MITIS Health solution enabled other, longer-term benefits. For example, not necessarily being constrained by 9–5 'office hours', means radiologists can now work in more flexible and responsive ways.

"I can't tell the difference between images viewed on-site and off-site," says Dr. Gogbashian. "Our team did look at other options, but they weren't comparable in quality to the MITIS Health, Dell Technologies and NVIDIA solution."

As more radiologists have the ability to work remotely, the centre will be able to free up space for patients while they wait for scans, and provide a more comfortable and welcoming environment.

> "The biggest strength is that multidisciplinary teams can collaborate on patient cases wherever they are, at any time. Any barriers or delays that obstruct discussing results would clearly have a negative impact on patient outcomes."

Dr Subhadip Ghosh-Ray
Consultant Head and Neck Radiologist, Lead Consultant for Information Technology. PSSC

The MITIS Health Primary Diagnosis Medical VDI is highly stable and much easier for the centre to manage. The radiology team had no problems adjusting to a new way of working and there are no scan analysis backlogs.

"The biggest strength is that multidisciplinary teams can collaborate on patient cases wherever they are, at any time," adds Dr. Ghosh-Ray. "Any barriers or delays that obstruct discussing results would clearly have a negative impact on patient outcomes."

SUMMARY

Planning for the Future
Now that the MITIS Health Solution is in place, the centre is applying artificial intelligence to diagnostics, and integrating other data sources with scans for electronic patient records. "The Dell and NVIDIA technology in the MITIS VDI allows access of imaging data just like streaming, with no delays," says Dr. Gogbashian, who concludes, "Having this amount of flexibility can only benefit us going forward."

To learn more about NVIDIA virtual GPU technology, visit:

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