



## Executive summary

# Deliver a better virtual desktop experience with Dell Technologies APEX Private Cloud using NVIDIA GPUs

## A VDI cluster with NVIDIA T4 GPUs delivered more frames per second and reduced end-user latency vs. the same cluster without GPUs

Selecting on-premises infrastructure with APEX Cloud solutions to support your virtual desktop infrastructure (VDI) can provide IT flexibility—but the configuration you choose contributes to the type of experience remote desktop users will have.

In testing with APEX Private Cloud, we found that using the NVIDIA® GPU-enabled configuration provided a better overall virtual desktop experience while running the NVIDIA nVector Knowledge Worker workload compared to the same solution without GPUs. The NVIDIA GPU-powered configuration offered 21.4 milliseconds lower end-user latency and had a higher frame rate than the solution with CPUs alone.

To help your remote workforce better connect with a more responsive and smoother experience, consider deploying an APEX solution with NVIDIA GPUs to host your virtual desktops.



### Keep latency in an acceptable range

21.4 milliseconds lower end-user latency (12.5% decrease)



### Smoother user experience

8 more frames per second (57.3% increase)

## Give remote workers a better virtual workspace

When remote employees log into their virtual desktop sessions, they need a responsive experience that helps them get down to business. Our testing shows that organizations running VDI workloads can keep user wait times within an acceptable range and deliver an overall smoother experience by selecting APEX Private Cloud configurations that feature NVIDIA GPUs.

For our comparison, we hosted 192 virtual desktops on Dell VxRail™-based APEX Private Cloud clusters that were nearly identical; one solution used CPU alone for image processing and video rendering while the other used both CPU and NVIDIA GPUs as well.

Keeping end-user latency (wait times) low can improve user experience, which makes it an important measure of VDI performance. In our tests, the configuration with NVIDIA GPUs reduced average end-user latency by 21.4 milliseconds, or 12.5 percent (see Figure 1).

Frame rates also indicate how well virtual desktop workloads are performing. Configurations that can process more frames per second offer users a less choppy desktop experience. As Figure 2 shows, the NVIDIA GPU-enabled configuration averaged 57.3 percent more frames per second than the CPU-only solution, indicating that the NVIDIA GPU-powered solution could give remote users a smoother experience working on their virtual desktops.

To learn more about how selecting NVIDIA GPU-powered configurations can affect your virtual desktop infrastructure performance, [read the full report](#).

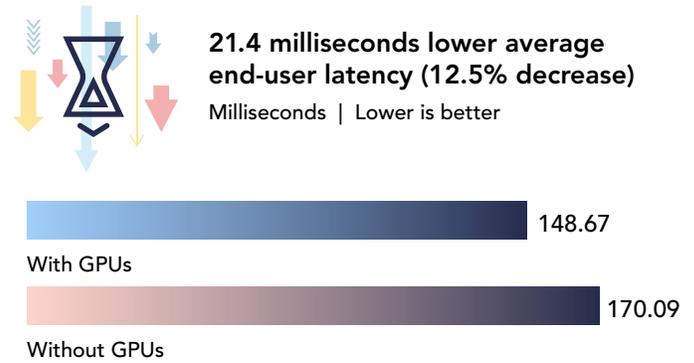


Figure 1: End-user latency (in milliseconds) for both APEX Private Cloud configurations, reported by the NVIDIA nVector benchmark. Lower numbers are better. Source: Principled Technologies.

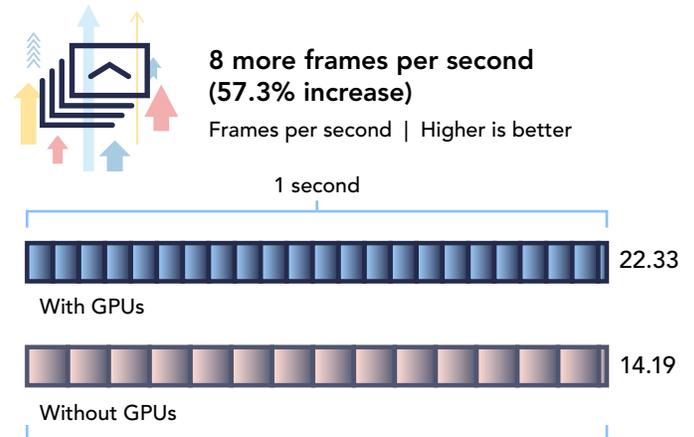


Figure 2: Frame rate (in frames per second) for both APEX Private Cloud configurations, reported by the NVIDIA nVector benchmark. Higher numbers are better. Source: Principled Technologies.

Read the report at <https://facts.pt/Of9XvuT> ▶



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