



Faster application response time

14.9% overall faster application response time



Room to grow

500 users generated under 70% CPU usage

Dell APEX Private Cloud can provide faster application response times in a VDI environment

The Dell APEX solution outperformed a comparable Amazon WorkSpaces solution using the Login Enterprise benchmark

For organizations and institutions that provide remote virtual desktops at scale, users need a fast and reliable platform they can depend on. By choosing the right cloud option, organizations can provide their users with a better virtual desktop infrastructure (VDI) experience and faster application response times, which can lead to a more productive workforce. With multiple cloud options available, both public and private, it can be difficult to know which is right for your organization and your users.

To compare the user experience and application response times of VDI solutions hosted by Dell APEX Private Cloud and Amazon WorkSpaces, we used the Login Enterprise benchmark, which is a tool for measuring app performance on virtual machines (VMs). We found that the Dell APEX solution delivered a 14.9 percent overall faster application response time than the Amazon WorkSpaces solution we tested. Both solutions achieved strong Login Enterprise End User Experience (EUX) scores. Our Dell environment also supported 500 users across all four nodes while only requiring 68.7 percent CPU usage. These results indicate that organizations deciding which cloud option to use for their VDI could provide their users with faster application response times and a strong user experience by choosing Dell APEX Private Cloud.

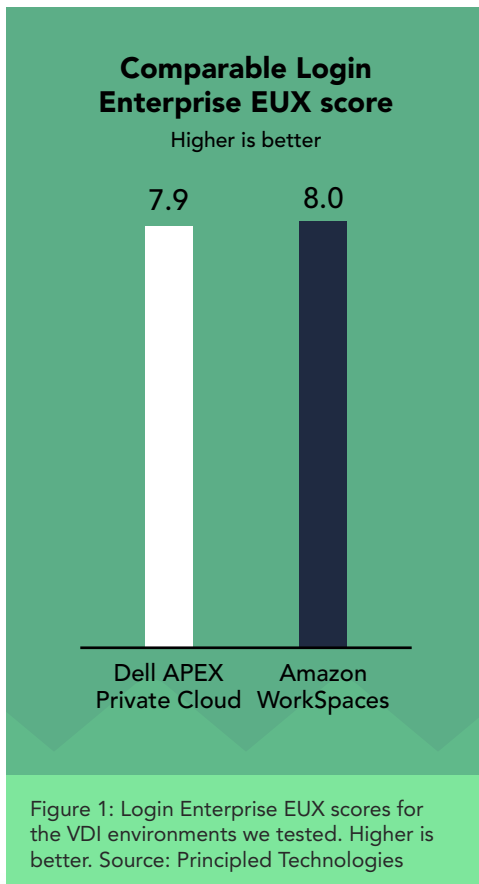
How we tested

We used a four-node Dell APEX Private Cloud VDI cluster and an infrastructure cluster. The infrastructure cluster hosted VMware Horizon®, Active Directory®, and 20 launcher VMs. The launcher VMs initiated our individual client workloads for each of our virtual desktops. The Dell APEX Private Cloud cluster hosted our pool of user VMs.

We set up an Amazon WorkSpaces environment with comparable specs. We used the Login Enterprise benchmark to evaluate the user experience and application response time of the Dell APEX Private Cloud and Amazon WorkSpaces VDI environments. The Login Enterprise End User Experience (EUX) score measures the experience that actual users might have when using a virtual machine. It is important to know that the EUX score encompasses user experience elements beyond application response times. The application response time reflects how long users might find themselves waiting while using the environment. We based our workload on the knowledge worker workload. For more information visit <https://support.loginvsi.com/hc/en-us/articles/360001046100-Login-VSI-Workloads-Default-workloads-information>.

Private cloud vs. public cloud

A private cloud is infrastructure that an organization hosts, often on-premises. An organization usually hosts a public cloud off-premises and a third-party cloud service provider (CSP) offers this service. According to Dell, APEX Private Cloud allows you to “simplify operations with built-in lifecycle automation capabilities with infrastructure owned and deployed by Dell.”¹



Provide a strong user experience by choosing Dell APEX Private Cloud

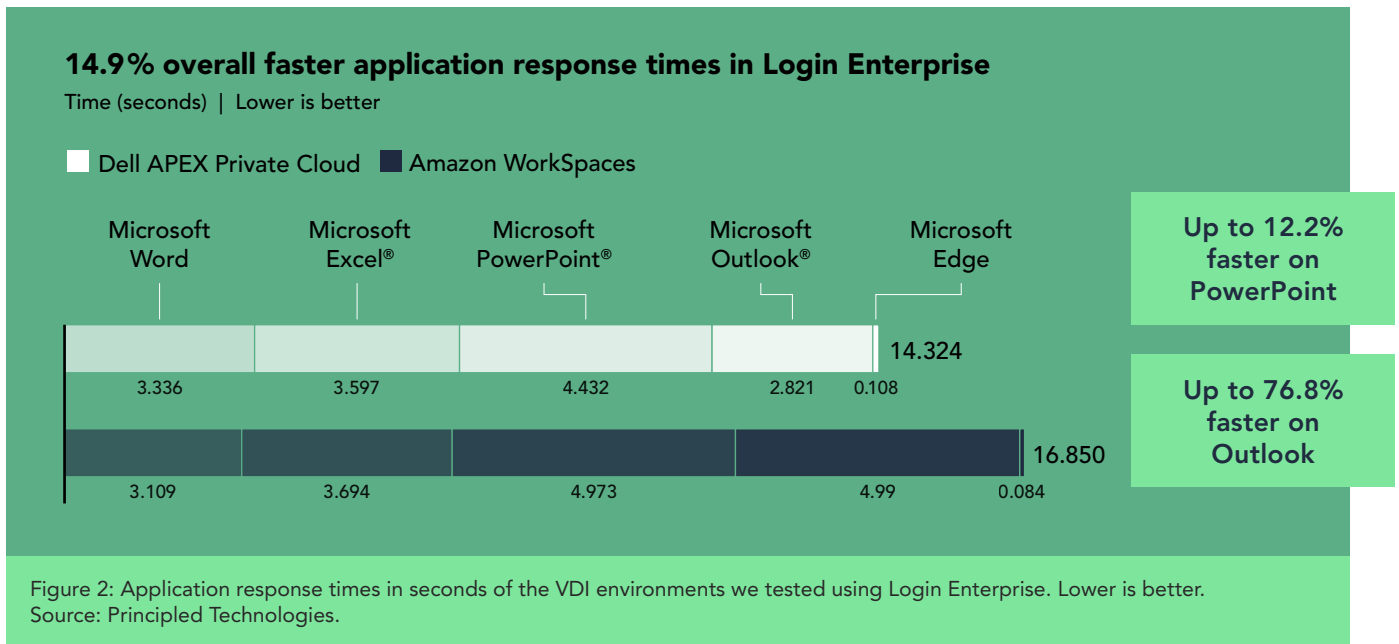
To evaluate the experience users could expect from these two VDI environments, we used the Login Enterprise End User Experience (EUX) score. Login VSI created the score using feedback from humans using virtual machines. According to Login VSI, the score is based on four actions:

- Launch a complete application with UI until it is ready for user input
- Keyboard input processing
- CPU-heavy actions
- Actions that mix CPU and disk IO²

We found that both environments offered strong Login Enterprise EUX performance. The Dell APEX Private Cloud environment achieved a Login Enterprise EUX score of 7.9, which was comparable to the 8.0 score the Amazon WorkSpaces environment achieved. This indicates that choosing Dell APEX Private Cloud to deploy your VDI could provide a strong experience for users.

Unlock productivity for users working from anywhere

By reducing the amount of time VDI users spend waiting on applications, organizations can potentially increase productivity. We totaled the average application response times for both the Dell APEX Private Cloud and Amazon WorkSpaces VDI environments and calculated the difference. (See the [science behind the report](#) for more details.) We found the Dell APEX Private Cloud environment offered an average of 14.9 percent overall faster application response time than the Amazon WorkSpaces environment. This means choosing Dell APEX Private Cloud to deploy your VDI could save your users time, which could boost productivity.



About Login Enterprise

The Login Enterprise platform offers a 360° agentless approach to managing the performance, cost, and capacity of virtual desktops and applications. Login VSI, the company behind Login Enterprise, claims the technology offers a holistic view of the delivery chain of service, from production to delivery and across locations, and works alongside existing vendor, monitoring, and service desk tools.³

About Login Enterprise EUX score

According to Login VSI, the Login Enterprise “EUX score (End User Experience score) represents the performance of any windows machine (virtual, physical, cloud or on premises) and ranks it between 0 and 10” as a user experiences it.⁴ Login VSI used real human feedback from users working on real virtual machines to develop the metrics, so it attempts to assign a score that is an accurate assessment of the actual experience users can expect using a virtual machine.

Learn more about Login Enterprise at <https://www.loginvsi.com/products/login-enterprise-platform-overview/>.

Dell APEX Private Cloud

According to Dell, APEX Private Cloud is “perfect for getting started with cloud or expanding your data center out to the edge.”⁵ Dell provides users of APEX Private Cloud with a single point of contact to assist with their cloud maintenance and needs. Dell says that the service provides a small footprint and features built-in lifecycle automation.⁶

For more information about Dell APEX Private Cloud, visit <https://www.dell.com/en-us/dt/apex/cloud-services/private-cloud.htm>.

Conclusion

As remote and hybrid work have become more common, providing VDI users with more secure and seamless access has become more important. By choosing the right cloud option, your organization can maximize the productivity of your users and minimize the amount of down time. When we compared the user experience and application response times of a Dell APEX Private Cloud environment to those of an Amazon Web Services environment, we found that the Dell APEX Private Cloud environment achieved a similar EUX score and provided faster application response time than the Amazon WorkSpaces environment which could mean your users could spend less time waiting, and more time being productive.

About the Intel Xeon Gold 6338 Processor

Part of the 3rd Generation Intel Xeon Scalable Processor family, the Intel Xeon Gold 6338 Processor has 32 cores, 64 threads, a maximum turbo frequency of 3.20 GHz, a processor base frequency of 2.00 GHz, and a 48MB cache. According to Intel, this processor family offers optimization for “cloud, enterprise, HPC, network, security, and IoT workloads with 8 to 40 powerful cores and a wide range of frequency, feature, and power levels.”⁷

1. Login VSI, “Login Enterprise EUX Score,” accessed December 9, 2022, <https://support.loginvsi.com/hc/en-us/articles/4408717958162-Login-Enterprise-EUX-Score->
2. Login VSI, “Digital Workspace Reliability,” accessed December 9, 2022, <https://www.loginvsi.com>.
3. Login VSI, “Login Enterprise For 360° Proactive Visibility,” accessed January 25, 2023, <https://www.loginvsi.com>.”
4. Login VSI, “Login Enterprise EUX Score.”
5. Dell, “APEX Private Cloud,” accessed December 9, 2022, <https://www.dell.com/apex-private-cloud>
6. Dell, “APEX Private Cloud.”
7. Intel, “3rd Gen Intel® Xeon® Scalable Processors,” accessed March 23, 2023, <https://www.intel.com/content/www/us/en/products/docs/processors/xeon/3rd-gen-xeon-scalable-processors-brief.html>.

▶ View the original version of this report at <https://facts.pt/oX4aL61>

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