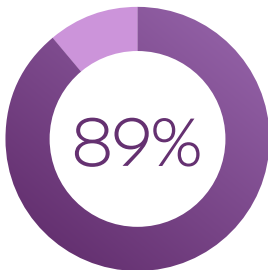
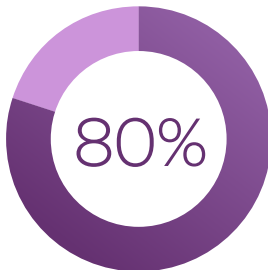


The Challenge

Delivering IT Services to a Workforce in Transition



of people worked remotely in 2020¹



are still working remotely today¹

The Solution

By running **Citrix Virtual Desktop on VMware vSAN™**, administrators can centralize the management, administration, and delivery of applications while using their existing server virtualization platform across multiple servers.²

This provides corporate data protection as well as an accessible hybrid work solution for employees. Because all data is stored more securely in the data center, end-users can work more securely from anywhere, on any device, and over any network with a fully IT-provided experience.

IT also gains the benefit of centralized management. By separating endpoints and corporate data, resources stay better protected even if the devices are compromised.¹

Citrix VDI with Intel® Optane™ PMem

No matter how they're deployed, applications and desktops act just like they would if they were running on employees' actual PCs, and look the same whether they're being accessed from Windows, Mac or mobile devices.



Solution Snapshot

Intel® Select Solutions for Virtual Desktop Infrastructure

with Citrix Virtual Apps and Desktops



Use Cases³



Enhance the Worker Experience



Secure Access to Internal Apps



Business Continuity



Modernize IT Security



Regulatory Compliance

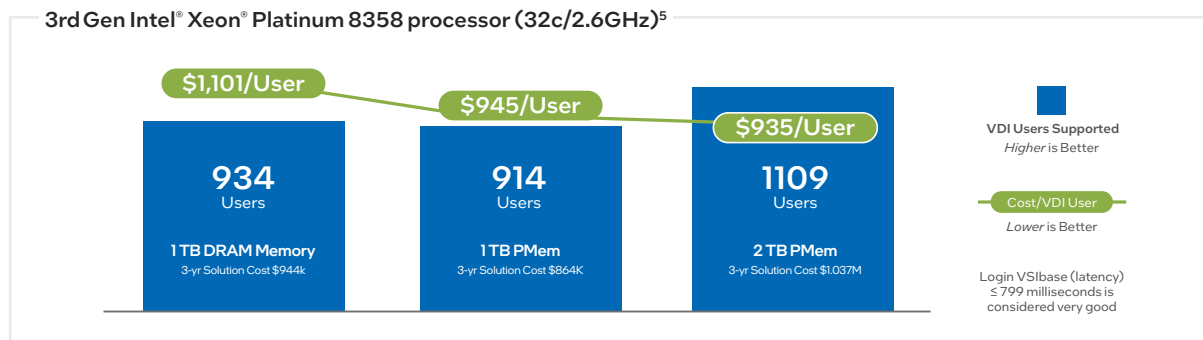
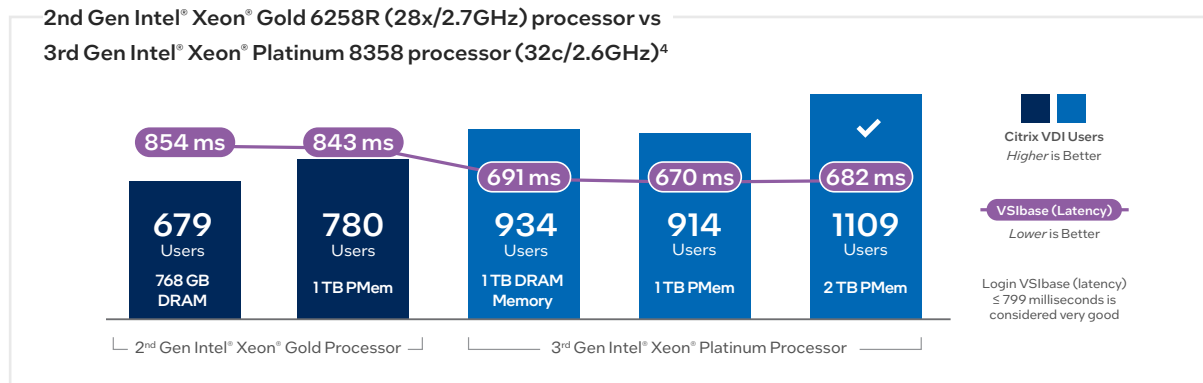


Temp Employees/Contractors/Call Centers

Performance varies by use, configuration and other factors. Learn more at www.Intel.com/PerformanceIndex. Performance results are based on testing as of dates shown in configurations and may not reflect all publicly available updates. See backup for configuration details. No product or component can be absolutely secure. Your costs and results may vary. Intel technologies may require enabled hardware, software or service activation. © Intel Corporation. Intel, the Intel logo, and other Intel marks are trademarks of Intel Corporation or its subsidiaries. Other names and brands may be claimed as the property of others.

Proof Points

Citrix Virtual Apps and Desktops 7 2103 on VMware ESXi 7.0U2 vSAN 4-Node Cluster, LoginVSI Knowledge Worker Workload



Why Intel for VDI w/Citrix

Optimized Performance

- Leveraging key Intel® technologies including Intel® Xeon® Scalable processors, Intel® Optane™ Persistent Memory (PMem), Intel® Optane™ SSDs, and Intel® Ethernet 800 series network adapter
- Takes advantage of VMware vSAN™ performance optimizations

Cost Effectiveness⁵

- Intel® Optane™ PMem delivers comparable performance to DDR4 for VDI workloads
- Support more users at a lower cost per user by using Intel® Optane™ PMem
- Improve user experience for knowledge and power workers by cost-effectively assigning more memory per user with Intel® Optane™ PMem

Scalability

- Support 17% more users (gen over gen 1TB Intel® Optane™ PMem configs) using Intel® Optane™ PMem - 2nd Gen to 3rd Gen⁵
- Utilizes 32 core CPUs to optimize VMware licensing costs
- With RDMA in Intel® 800 series network adaptors, scale further, increase efficiency, and lower latency

Want More Information?

Intel® Select Solutions

Speed time to value with workload-optimized hardware and software solutions that are ISV certified, OEM validated, and performance verified.

Learn more

Contact your Intel® account executive to learn how we can help modernize your VDI Citrix Solution.

1 https://cdn.mos.cms.futurecdn.net/PTwepigd7KVdhnoR68PvHB/return_to_work_survey_infographic.pdf

2 <https://www.citrix.com/solutions/vdi-and-daas/>

3 <https://www.citrix.com/solutions/digital-workspace/use-cases.html>

4 Chart data source: Evaluator Group, Lab Insight, Intel vs. AMD for Citrix VDI: Leveraging Intel PMem to Improve Efficiency, November 2021. 2 - Knowledge worker workload is allocated 2 vCPUs and 4GB of RAM per user. See configuration details below. Results may vary.

Config 1 – 2nd Gen Intel® Xeon® Gold, 679 users 4-node, Each node: Intel S2600WFT servers with 2 Intel Xeon 6258R processors each (2.7GHz, 28 cores), ucode version: 0x5000021, BIOS version: SE5C620.8 6B.02.01.0008.031920191559, HT ON (in BIOS), Turbo ON, 768GB (12x64GB DDR4-2993), Storage: OS drive: 1x SSD, Cache device: 2x Intel Optane DC P4800X1.6TB, NVMe 2.5", Capacity devices: 6x Intel P4610 (6.4TB) NVMe 2.5", vSAN configured in 2 groups (1 cache drive + 3 capacity drives in RAID 10), Network: 1x Intel XL710 40GbE QSFP+ for management, 1x XL710 40GbE QSFP+ for vMotion, Clients, and VMs. ESXi 7.0u2 1764055, vCenter 7.0u1, Citrix Virtual Apps and Desktops 7 2009, LoginVSI 4.1.40. Knowledge worker profile 2vCPU/4GB. Tested by Evaluator Group as of January 2021

Config 2 – 2nd Gen Intel® Xeon® Gold, 780 users 4-node, Each node: Intel S2600WFT servers with 2 Intel Xeon 6258R processors each (2.7GHz, 28 cores), ucode version: 0x5000021, BIOS version: SE5C620.8 6B.02.01.0008.031920191559, HT ON (in BIOS), Turbo ON, 1TB (12x16GB DDR4-2993 + 3x128GB Optane Pmem), Storage: OS drive: 1x SSD, Cache device: 2x Intel Optane DC P4800X1.6TB, NVMe 2.5", Capacity devices: 6x Intel P4610 (6.4TB) NVMe 2.5", vSAN configured in 2 groups (1 cache drive + 3 capacity drives in RAID 10), Network: 1x Intel XL710 40GbE QSFP+ for management, 1x XL710 40GbE QSFP+ for vMotion, Clients, and VMs. ESXi 7.0u2 1764055, vCenter 7.0u1, Citrix Virtual Apps and Desktops 7 2009, LoginVSI 4.1.40. Knowledge worker profile 2vCPU/4GB. Tested by Evaluator Group as of January 2021

Config 3 – 3rd Gen Intel® Xeon® Platinum, 934 users 4-node, Each node, Intel Software Development Platform, 2x Intel® Xeon 8358 (32C, 2.6GHz, 250W TDP), HT On, Turbo On, SNC OFF, Total Memory: 1TB (16 slots/ 64GB/ 3200 MHz), ucode: x280, 2x 25GbE Columbiaville E810-XXVDA2, Gen4 x8, Per node cache tier: 2x 400GB Optane P5800x, Gen4, Per node capacity tier: 6x Intel P5510 3.84TB, Gen4, ESXi 7.0u2 1764055, vCenter 7.0u2 17694817, Citrix Virtual Apps and Desktops 7 2103, LoginVSI 4.1.40. Knowledge worker profile 2vCPU/4GB. Tested by Evaluator Group as of July 2021

Config 4 – 3rd Gen Intel® Xeon® Platinum, 914 users 4-node, Each node, Intel Software Development Platform 1TB Pmem, 2x Intel® Xeon 8358 (32C, 2.6GHz, 250W TDP), HT On, Turbo On, SNC OFF, Total Memory: 1TB (16 slots/ 16GB/ 3200 MHz + 8 slots/128GB/PMem), ucode: x280, 2x 25GbE Columbiaville E810-XXVDA2, Gen4 x8, Per node cache tier: 2x 400GB Optane P5800x, Gen4, Per node capacity tier: 6x Intel P5510 3.84TB, Gen4, ESXi 7.0u2 1764055, vCenter 7.0u2 17694817, Citrix Virtual Apps and Desktops 7 2103, LoginVSI 4.1.40. Knowledge worker profile 2vCPU/4GB. Tested by Evaluator Group as of July 2021

Config 5 – 3rd Gen Intel® Xeon® Platinum, 1109 users 4-node, Each node, Intel Software Development Platform 2TB Pmem, 2x Intel® Xeon 8358 (32C, 2.6GHz, 250W TDP), HT On, Turbo On, SNC OFF, Total Memory: 2 TB (16 slots/ 32GB/ 3200 MHz + 16 slots/128GB/PMem), ucode: x280, 2x 25GbE Columbiaville E810-XXVDA2, Gen4 x8, Per node cache tier: 2x 400GB Optane P5800x, Gen4, Per node capacity tier: 6x Intel P5510 3.84TB, Gen4, ESXi 7.0u2 1764055, vCenter 7.0u2 17694817, Citrix Virtual Apps and Desktops 7 2103, LoginVSI 4.1.40. Knowledge worker profile 2vCPU/4GB. Tested by Evaluator Group as of July 2021

5 Chart data source:

Evaluator Group, Lab Insight, Intel vs. AMD for Citrix VDI: Leveraging Intel PMem to Improve Efficiency, November 2021. 2 - Knowledge worker workload is allocated 2 vCPUs and 4GB of RAM per user. See configuration details below. Results may vary. See Configs 3, 4 & 5 in Footnote 4

Systems	HW 4 Nodes	VMware (vSphere Ent. +, Plus vSAN Adv.)	# Citrix Users	Citrix Desktop Premium - 3 Years	Total, 3 years (HW+SQ+Sup.)
Intel® Xeon® Platinum 8358 processor with 1TB DRAM	\$306,655.48	\$132,783.76	934	\$504,360.00	\$943,799.24
Intel® Xeon® Platinum 8358 processor with 2TB PMem	\$305,003.64	\$132,783.76	1109	\$598,860.00	\$1,036,647.40
Intel® Xeon® Platinum 8358 processor with 1TB PMem	\$237,358.84	\$132,783.76	914	\$493,560.00	\$863,702.60