Intel® Select Solutions for Nutanix

The Challenge

Evaluating every available solution takes time and resources. Customers need tested, pre-validated technology they can deploy and execute with confidence.

Overview + Benefits

Intel® Select Solutions are predefined, workload-optimized solutions designed to simplify and accelerate infrastructure evaluation and deployment. These solutions have been tested and optimized to meet or exceed minimum performance levels. Intel® Select Solutions are available from multiple server platform manufacturers and can support a wide variety of workloads, ranging from the data center to the edge.

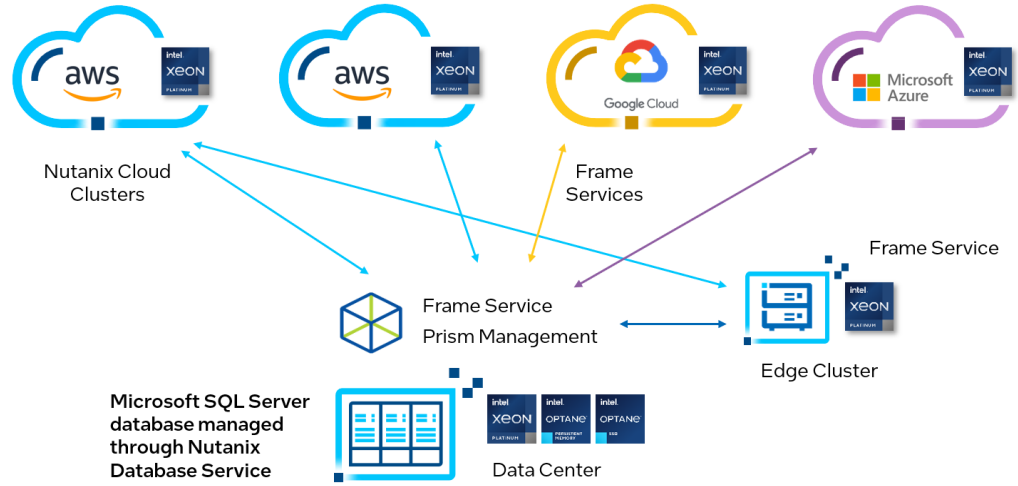
Use Cases:

- Artificial Intelligence
- Analytics
- Hybrid/ Multi-Cloud
- Network/Edge
- Database
- VDI/DaaS

Value Props

- ISV Certified
- OEM Validated
- Intel Verified
- Workload Optimized
- Latest Intel® Technologies

Real-World Hybrid and Multi-Cloud Use Case



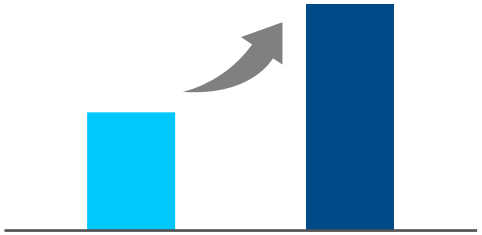
Proof Points

Popular Workloads on Nutanix Can Improve Performance and Reduce Latency Gen-over-Gen[1]

Up To **91%** Higher SQL New Orders per Minute (NOPM)

Combined With

29% Average Reduced I/O Latency on Nutanix Cluster



Intel® Xeon® Gold 6226 Processor
Base Configuration

Intel® Xeon® Gold 6330 Processor
Base Configuration

- Benchmarked 2nd Gen versus 3rd Gen Intel® Xeon® Scalable processors with Nutanix AOS
- Tested multiple configurations, measuring I/O performance and Microsoft SQL operations
- Realized strong performance improvements with latest gen hardware and software
- Saw incremental performance improvements by adding higher frequency Intel® Xeon® Scalable CPUs, Intel® Optane™ persistent memory, and Intel® Optane™ SSDs, especially paired with Advanced NVMe Tiering for Optane in AOS 6.1
- Take advantage of this reference design - Nutanix OEMs can deliver the configs tested

We've spent months testing, so you don't have to!

Nutanix + Intel® Select Solutions Highlights

- **Tailor Platform Deployments** for each workload with varying amounts of compute, storage, or memory as needed.
- **Optimize** using Intel® Optane™ SSDs with Advanced NVMe Tiering in Nutanix AOS.
- **Run New or More Workloads** on HCI and build the foundation for a hybrid cloud with workload-optimized and cloud-ready infrastructure.
- **Simplify Management** by consolidating workloads onto fewer high-performance servers and extending to the cloud through the same management plane.
- **Transparently Expand Memory** for memory-intensive workloads like VDI and Databases with Intel® Optane™ PMem.
- **Provide Flexible and Scalable I/O Virtualization** with Intel® Virtualization Technology (Intel® VT). Intel® Ethernet 700 Series delivers outstanding I/O performance in virtualized server environments.
- **Provide Intelligent and Dynamic Data Management:**
  - Data Locality: Place data on the same HCI node as the application.
  - Data Resiliency: Replicate data across multiple nodes in the system for resiliency in case of failures.

1. Tests by Intel as of January 2022.

CLX BASE : Intel® Xeon® Gold 6226 Processor: 4 Nodes, 2x Intel® Xeon® Gold 6226 CPU at 2.70 GHz (12 cores/24 threads, 125 W) or higher number SKU, 1x Intel® Server Board S2600WF0, Total Memory: 384 GB (12x32 GB 2933 MHz DDR4 DIMM), HyperThreading: Enable, Turbo: Enable, uCode: 0x500002c, Storage (Boot Drive) Intel® DC S4510 240GB M.2, Storage (Meta Data Tier) Intel® DC P4510 2 TB 2.5" PCIe, Storage (Capacity Tier) Intel® DC D3-P4510 1.92 TB 2.5" PCIe, Data Network: 2x25 GbE Intel® XXV710-DA2, Windows Server 2019 (v 1809) Nutanix 5.18.06 STS (NCC 3.10.1, LCM 2.4), Microsoft SQL Server 2019 15.0.2000.5, HammerDB 3.3, using 7 instances of SQL, with 1000 warehouses and 100 users. Average Nutanix storage cluster IO latency measured during SQL benchmark test. Performance results are based on Intel internal testing as of January 2022.

ICX BASE: Intel® Xeon® Gold 6330 Processor: 4 Nodes, 2x Intel® Xeon® Gold 6330 CPU at 2.00 GHz (28 cores/56 threads, 205 W) or higher number SKU, 1x Intel® Server Board M50CYP2UR, Total Memory: 512 GB (16x32 GB 2933 MHz DDR4 DIMM), HyperThreading: Enable, Turbo: Enable, uCode: 0xd000280, Storage (Boot Drive) Intel® DC S4510 240GB M.2, Storage (Meta Data Tier) Intel® DC P4510 2 TB 2.5" PCIe, Storage (Capacity Tier) Intel® DC D3-P4510 1.92 TB 2.5" PCIe, Data Network: 2x25 GbE Intel® XXV710-DA2, Windows Server 2019 (v 1809) Nutanix 5.18.06 STS (NCC 3.10.1, LCM 2.4), Microsoft SQL Server 2019 15.0.2000.5, HammerDB 3.3, using 7 instances of SQL, with 1000 warehouses and 100 users. Average Nutanix storage cluster IO latency measured during SQL benchmark test. Performance results are based on Intel internal testing as of January 2022.

Want More Information?

Contact your Nutanix or Intel representative to learn how we can help you transform your infrastructure for hybrid cloud.

Where to buy

https://www.nutanix.com/partners/oem

Resources

https://www.nutanix.com/intel

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.

Intel contributes to the development of benchmarks by participating in, sponsoring, and/or contributing technical support to various benchmarking groups, including the BenchmarkXPRT Development Community administered by Principled Technologies.

Your costs and results may vary.

Intel technologies may require enabled hardware, software, or service activation.

Some results may have been estimated or simulated.

Intel does not control or audit third-party data. You should consult other sources to evaluate accuracy.

All product plans and roadmaps are subject to change without notice.