Solution Brief

Intel® Data Center Systems for HCI, certified for Nutanix Enterprise Cloud Platform

The right choice for virtualized servers and business-critical applications

- **Broad set of components validated by Intel and certified by Nutanix** allows for configuring systems to meet your customer's needs
- **Technology leadership,** including Intel® Optane™ SSD and Intel® Optane™ persistent memory (supported on Intel® Server M50CYP) and NVM Express (NVMe)
- **Designed for the fast-growing HCI market** that offers private cloud security and affordability with public cloud scalability
- **Non-branded hardware** enables you to add Nutanix solutions into your own brand portfolio
- **Standard Intel 3-year warranty** with 5-year warranty options available to ensure customer satisfaction

Hyper-Converged Infrastructure (HCI) Growth Opportunity

As business demands become more dynamic, running workloads on rigid legacy architectures no longer makes sense. Enterprises are shifting from separate storage, networks, and servers to Hyper-Converged Infrastructure (HCI) systems. A single HCI system enables an agile, scalable cloud foundation that delivers more flexibility, easier provisioning, and lower costs. With that in mind, it's no surprise that HCI is a fast-growing market, with an eight-year CAGR of 25 percent and revenues expected to hit $7.225 billion in 2021, according to research firm Straits Research[1].

Trusted Intel Hardware Certified by Nutanix

Collaboratively, Nutanix and Intel have developed fully validated Intel® Data Center Systems (Intel® DCS) for HCI. The result of this collaboration enables you to accelerate your path to market, grow your business with new revenue streams, and deliver peace of mind to your customers with technology and support from industry leaders.

Intel® DCS for HCI, certified for Nutanix Enterprise Cloud Platform are available as configure-to-order systems that include processors, server boards, chassis, power supply, storage, networking, and memory that have been validated to optimally work together. Value- Added Resellers (VARs) and System Integrators (SIs) can add Nutanix Enterprise Cloud OS software to provide a fast route for building both on-premises and hybrid clouds.

HCI and the Nutanix Enterprise Cloud Advantage

Your customers are modernizing their data centers and moving to cloud. They need help to transition, deploy, and scale. Intel® DCS for HCI, certified for Nutanix Enterprise Cloud Platform are designed to allow IT teams to build and operate solutions that meld private, public, and distributed hybrid-/multi- cloud operating environments. In addition, they provide a single point of control to manage IT infrastructure and applications at any scale.

With hyperconverged infrastructure, siloed servers, storage networks, and storage arrays are replaced with a single scale-out solution, giving enterprises newfound agility and capabilities.

intel Xeon Silver · intel Xeon Gold · intel Xeon Platinum

NUTANIX™ Your Enterprise Cloud Platform

Nutanix Enterprise Cloud Platform delivers the public cloud benefits that customers want with the private cloud control customers need.

Full Cloud Stack
Complete IT infrastructure integrates all compute, storage and virtualization resources to run nearly any application.

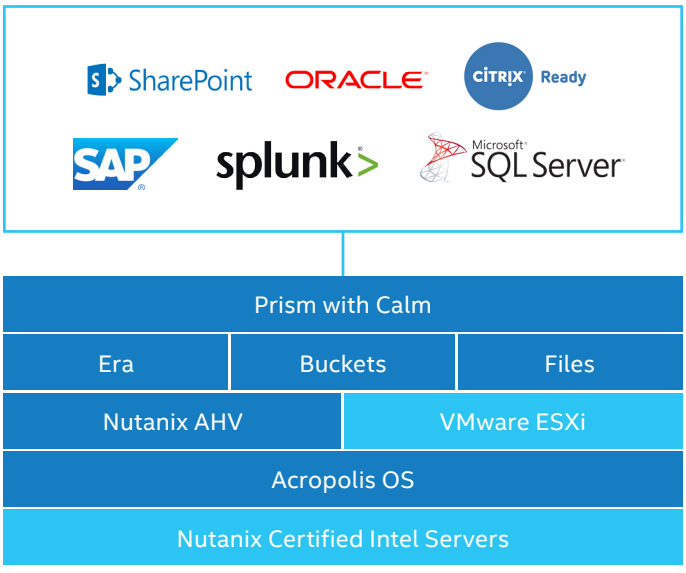
One-Click Simplicity
Consumer-grade management streamlines IT lifecycle management and eliminates the need for specialized IT teams.

Deploy Application in Minutes
Allows delivery of infrastructure in record time; no more waiting weeks or months to run business applications or new workloads.

Automate Application Management
Automate common IT tasks and give application owners and developers on-demand IT services.

Lower TCO
Enables reduced IT costs and quick investment payback.

Hybrid Cloud
Combines public and private cloud operations with unified management of IT infrastructure and applications.



Differentiated Systems with Technology Leadership

Intel® DCS for HCI, certified for Nutanix Enterprise Cloud Platform is configurable based on the latest two generations of Intel® Xeon® Scalable processor families:

- 2U 1-node system based on Intel® Server Board M50CYP with 3rd Gen Intel® Xeon® Scalable processors
- 2U 1-node system based on Intel® Server Board M50FCP with the latest 4th Gen Intel® Xeon® Scalable processors

These systems are the perfect example for redefining performance, capacity and TCO for 2U servers—while delivering extraordinary versatility to run a wide array of scaleup and scale-out workloads.

The 2U 1-node Intel® DCS for HCI, certified for Nutanix Enterprise Cloud Platform, based on the Intel® Server Board M50CYP, includes 3rd Generation Intel® Xeon® Scalable processors, and is architected for up to 24 high performance flash storage devices, with balanced input and output operations. Greater throughput and lower latency allow for faster access to large datasets, which is desirable for enterprise-class workloads in cloud environments.

2023 brings the 4th Gen Intel® Xeon® Scalable processor-based Intel® Server Board M50FCP with TDP up to 350W, and up to 120 processor cores per server. It also supports up to 12TB of DDR5 memory per server with DRAM, providing 1.5x memory bandwidth improvement versus the 3rd Gen platform[2] . Additionally, this new platform brings PCIe 5.0 support for add-in cards, such as GPGPUs, and up to 24 direct-attach NVMe drives, delivering 2x I/O performance versus previous generation[3].

These systems contain the hardware essential to hosting the Nutanix Enterprise Cloud OS. These include a chassis with redundant power, one server board, up to 24 x 2.5" drive bays, SAS controllers as needed per the number of drive bays, redundant cooling, and advanced server management.

All platforms allow for customization to meet the compute, storage, and networking requirements of specific end users. A Nutanix Channel representative can also help provide accurate infrastructure sizing using the Nutanix Sizer Tool.

Nutanix Certified Intel Servers provide an exceptional foundation for enterprise applications.

Customize Your Solution Using Intel's Configure-to-Order Tool

Nutanix-certified Intel® Data Center Systems for HCI are available with a range of configurations for a fast, simple, risk-free selection to fit different business use cases. These include enterprise applications, Server Virtualization, Virtualized Desktop Infrastructure (VDI), databases, Remote Office Branch Office (ROBO), and many more.

Intel's configure-to-order (CTO) system allows for customization and is designed to take the risk out of component selection by allowing only certified and compatible options. Customers are able to configure a solution that starts with either an Intel® Server M50FCP or an Intel® Server M50CYP-based platform and allows a variety of validated choices from the following items to meet their requirements:

Feature	Intel® Server Board M50CYP	Intel® Server Board M50FCP
CPU	3rd Gen Intel® Xeon® Scalable processors	4th Gen Intel® Xeon® Scalable processors
Memory	32 DDR4 DIMM slots (up to 6TB per socket)	32 DDR5 DIMM slots (up to 6TB per socket)
Intel® Optane™ PMem	200 series supported	N/A
Storage	2U: 12x 3.5" SAS/SATA HDD 2U: 24x 2.5" SAS/SATA/NVMe SSD 8x Slimline SAS PCIe G4 connectors on board to NVMe drives	2U 16x 2.5" NVMe SSD 2U: 24x 2.5" NVMe SSD 16x MCIO PCIe connectors on board to NVMe drives
Networking	Type 1 OCPv3 slot for optional 1/10/25/40/50/100 GbE module	Type 1 OCPv3 slot for optional 1/10/25/40/50/100 GbE module

Get started with the CTO tool today:
https://orderconfigurator.intel.com/

Peace of Mind with Support from Industry Leaders

Intel and Nutanix are collaborating to provide integrated support to help ensure a seamless customer experience. Intel® DCS for HCI hardware is backed by world-class technical support and Intel's standard three-year warranty from the date of purchase, with optional five-year warranty plans available for select components. They are also eligible for Advanced Warranty Replacement, allowing a replacement part to be sent before the defective part is returned, reducing downtime and speeding time to resolution. Intel® DCS for HCI, certified for Nutanix Enterprise Cloud Platform are backed by award-winning support, industry-leading services, and global training. Resellers for this joint solution can capitalize on Intel member programs.

Deploy with Confidence with Intel Quality, Reliability, Service, and Support

Intel servers aren't just packed with innovation—they all come with Intel's highly rated, comprehensive services and support package, delivering differentiating value to every stage of the server lifecycle—from pre-purchase and deployment to operations, management and support.

You can take advantage of Intel's proven support and service, including a 3-year warranty (optional 5-year) and global technical support.

Intel Server Systems are also easy to deploy and operate, with comprehensive documentation for integration, configuration and management. All Intel Server Systems are fully integrated systems with options of configure-to-order CPU, memory, storage, and more.

Reduce Risk of Counterfeit Parts with Intel® Transparent Supply Chain

Counterfeit electronic parts are a growing security concern across all organizations. These concerns have grown as supply chains have become increasingly complex, multi-layered and global.

Current supply chain practices start with trusting the source, but processes are limited for screening out counterfeit components, particularly for products containing many subsystems.

Intel® Transparent Supply Chain helps partners and customers verify the authenticity and firmware version of servers and their components through a set of tools, policies, and procedures. These verification steps, implemented on the factory floor at server manufacturers, enable enterprises to verify the authenticity and firmware version of systems and their components when systems arrive at their site.

This industry-leading approach helps:

- Provide component-level traceability and visibility
- Detect tampering of components and configuration state between stops
- Deliver fleet-level insights across suppliers

These and other safeguards combine to increase assurance and trust that the Intel servers you're purchasing and deploying are free of counterfeit components that could compromise your business or customers.

Additional Resources

- For more information on Nutanix Enterprise Cloud Platform, visit: **https://Nutanix.com/intel**
- For more information on Intel® DCS for HCI, certified for Nutanix Enterprise Cloud Platform, visit: **https://intel.com/Nutanix**
- For more information on Intel Components qualified for Intel® DCS for HCI, certified for Nutanix Enterprise Cloud Platform, visit: **The Hardware Compatibility List (hosted by Nutanix)**
- For warranty details, visit: **https://www.intel.com/content/dam/support/us/en/documents/services/dcb-blocks-warranty-brief.pdf**

1) Source: https://straitsresearch.com/report/hyper-converged-infrastructure-market
2) DDR5 memory for 1.5x memory bandwidth versus previous generation compares 4th Gen Intel® Xeon® Scalable Processor (formerly codenamed Sapphire Rapids) with 8 channels of DDR5 at up to 4800 MT/s for 1 DIMM per Channel (1 DPC) vs. 3rd Gen Intel® Xeon® Scalable Processor (formerly codenamed Ice Lake-SP) with 8 channels of DDR4 at 3200 MT/s for 2 DIMMs per Channel (2 DPC).
3) 2x I/O performance versus previous generation compares PCIe 5.0 at 32 GT/s transfer rate vs. PCIe 4.0 at 16 GT/s.

Performance varies by use, configuration, and other factors. Your costs and results may vary. Learn more at www.Intel.com/PerformanceIndex.

Intel technologies may require enabled hardware, software, or service activation. No product or component can be absolutely secure. All product plans and roadmaps are subject to change without notice.

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