



HP Integrity NonStop NB50000c BladeSystem Proven NonStop 24/7 leadership in a server blade



Overview

- Double the performance in half the footprint with the new Integrity NonStop BladeSystem
- Reduce IT and per-transaction costs in a trusted NonStop fault tolerant environment
- Simplify infrastructure and lower total cost of ownership

To succeed in today's business environment, organizations are expected to satisfy customers, grow their business, and cut costs. There is a constant struggle to respond to customer demands quickly and accurately, while managing huge volumes of transactions securely and in real time. Equally challenging is the drive to modernize and simplify business infrastructure to stay competitive.

Needless to say, the pressure to meet customer service demands, improve financial performance, and still maintain high levels of security and availability required by more and more organizations is extreme. Making the right business technology decisions is critical to your organization's success—business technology that

meets your most demanding environments now, and provides the scalability and flexibility you need for the future.

What if your business infrastructure could provide continuous availability and fail-safe data integrity, perform better and faster, scale up and scale out—to accommodate higher service levels that will inevitably emerge? What if you could also lower costs and evolve your infrastructure—all at the same time? Now you can.

Meet the world's first 24/7 computing platform in a bladed form factor—the Integrity NonStop NB50000c BladeSystem. For decades, enterprises have trusted HP NonStop systems to power business-critical 24/7 solutions, recognizing their distinct advantages of unmatched reliability, scalability, and availability. Now experience the same trusted NonStop advantages along with the efficiency and flexibility of blades. You will get even more out of your technology investments by doubling performance and saving space, time, and money.

“We’re looking for performance. Our expectation of the blade environment is that we will be able to take advantage of faster processing speeds... The blade environment is also more compact; it will use less space in our datacenter, and space is a premium for us.”

John Hart, managing director of Technology Engineering,
CME Group

The Integrity NonStop NB50000c BladeSystem combines the economies of standards-based, modular computing with all the trusted 24/7 fault-tolerant availability and data integrity of NonStop. The result is an excellent price/performance ratio that includes lower per-transaction cost, making it an ideal choice for businesses with very high transaction volumes such as finance, healthcare, and telecommunications.

In a nutshell, the NB50000c BladeSystem helps your organization adapt more quickly to changing business situations and simplifies the complexity of your IT environment. It serves as an ideal launch pad for moving to an Adaptive Infrastructure through standards-based, modular computing, and next-generation technologies that can accommodate more robust applications for business growth.

Run your business with complete confidence

You can depend on Integrity NonStop’s continuously available and self-healing software for industry leading 24/7 availability. The NB50000c BladeSystem is no exception. Improved middleware and a new NonStop operating system enhance multiple failure fault tolerance, increase online manageability, and ease upgrades. Leveraging Intel’s improvements in chip-level data integrity and the capability to prevent data corruption end-to-end, it also provides industry-leading end-to-end transaction integrity for the most reliable data.

Double performance to drive next-generation applications

The NB50000c BladeSystem is the first NonStop system to deliver multi-core processing, featuring Intel® Itanium® 9100 series dual-core 1.66GHz processors. To support these powerful multi-core processors, HP introduces the new NonStop Multi-core Architecture (NSMA)—a performance-oriented architecture that runs relational database and transaction processing software.

With the introduction of the NSMA also comes a new release series of the NonStop Operating System called the J-series, which has been integrated with and customized for use in a multi-core architecture environment.

Multi-core processing capabilities allow the NB50000c BladeSystem to scale up, providing nearly twice as much processing power per logical processor at a lower per-transaction cost. As is typical with other NonStop systems, the NB50000c BladeSystem scales out through built-in clustering of logical processors—up to 4,080 logical processors in the maximum number of clustered systems (8,160 cores).

Together, the NSMA and NonStop Operating System J-series help you achieve a significant boost in performance—double, in fact, compared to the performance of other Integrity NonStop NS-series systems. For the NB50000c BladeSystem to achieve such high levels of performance, both cores in a dual-core Integrity logical processor are deployed resulting in improved performance.

The NB50000c BladeSystem uses a novel I/O Infrastructure with a standard SAS storage adapter called Cluster I/O Module (or Storage CLIM) and a standard Ethernet controller called IP Cluster I/O Module (or IP CLIM). The Storage CLIM supports more storage capacity at a lower cost, provides fault tolerance, and delivers improved performance. The IP CLIM provides support for IPSec, SCTP, IPv6, and facilitates improved NonStop processor utilization. Overall, this new standards-based NonStop I/O infrastructure improves response time and throughput.

Simplify your infrastructure

Use of standard, modular components helps drive down costs and simplify infrastructure across your data center. The NB50000c BladeSystem leverages the following standards-based, modular HP BladeSystem components.

- HP Integrity server blade—In the NB50000c BladeSystem configuration, the Integrity server blade is a full-height blade server featuring Intel® Itanium® 9100 series dual-core 1.66GHz processors supporting up to 48 GB memory (12 DIMM slots) and fortified with the ServerNet fault tolerant server area networking interconnect.
- HP c-Class BladeSystem enclosure—The c-Class BladeSystem enclosure has been modified to provide the NB50000c BladeSystem with the power, cooling, and I/O infrastructure needed to support modular server, interconnect, and storage components. The enclosure is 10U high and holds up to eight Integrity server blades.
- HP BladeSystem manageability software—The NB50000c BladeSystem also comes standard with HP Systems Insight Manager, the Integrity Lights Out 2 Advanced Pack, and the Onboard Administrator—the same solutions used by other HP BladeSystem environments to provide better system manageability.

By utilizing these HP BladeSystem components, the NB50000c BladeSystem has half the footprint of NS-series platforms, yet delivers up to twice as much processing power per unit floor space within the same power envelope. Increased manageability also saves on administration resources. As a result, it has a much lower total cost of ownership and lower per-transaction cost than other NonStop systems as well as mainframe systems.

Run SOA smoothly and efficiently

The scalability, standards-based infrastructure, and integrated management of the NB50000c BladeSystem serve as an ideal platform for SOA.

Multi-core processing boosts computing and scaling capacity, letting you maintain service level agreements with end users. The standards-based infrastructure of the NB50000c BladeSystem improves interoperability that enables higher-level services to be deployed. And because SOA services are inherently distributed across a heterogeneous set of systems, the ability to get a single management view of the SOA fabric of different platforms is important. The NB50000c BladeSystem leverages the unified management capability of Systems Insight Manager to facilitate easier management of SOA. An array of additional infrastructure and manageability software is available for the NB50000c BladeSystem to further ease SOA operations.

Evolve for better business results

Improved TCO makes the NB50000c BladeSystem a good choice for migration of existing business-critical applications. Migrating from earlier generation rack-mount systems requires replacing rack-mount processor components with HP BladeSystem chassis and components, and installing the new NonStop J-series Operating System and NonStop J-series release infrastructure software. Integrity NonStop applications and binaries are easily migrated, without modification, to the NB50000c BladeSystem—just move applications to the NSMA system environment, and they are ready to run. Integrating a NSMA-based system to a ServerNet cluster is equally simple—add it just as if it were an Integrity NonStop NS-series system. In addition, the NB50000c BladeSystem supports existing modular I/O subsystems (IOAME, FCDM, FCSA, G4SA)—thereby upholding customer investment protection.

Migrating NonStop S-series applications to the NSMA environment is nearly identical to migration from NonStop S-series to Integrity NS-series systems. For example, simply use an HP cross compiler on the S-series code base to create application binaries customized for the Integrity NonStop platform.

A move to the NB50000c BladeSystem is compelling for enterprise customers with business-critical applications—multi-core processing provides high performance for power-hungry applications, and NonStop technology reliably delivers 24/7 availability. Standards-based modular components used in the NB50000c BladeSystem let businesses pack more computing power in the same datacenter space and streamline operations while making future growth and reconfiguration easier.

Look to the future

With technology playing a more critical role in business success today, it is essential that enterprises such as yours proactively maintain their advantage and invest accordingly. The NB50000c BladeSystem is designed to handle the world's most demanding, transaction-intensive applications with continuous availability, unmatched data integrity, and the capability to achieve virtually unlimited scalability—all in a reduced footprint. For enterprises with business-critical applications, the NB50000c BladeSystem helps maintain stringent service levels while protecting existing investment. Evolve to an NB50000c BladeSystem and take advantage of modern technology in the most seamless cost-effective way imaginable.

The HP commitment to innovate in core Integrity NonStop technology while simultaneously extending the NonStop system fundamentals to the broader market is reflected in the NB50000c BladeSystem. The bottom line is that enterprises—in any industry—can now leverage the NB50000c BladeSystem to help turn their forward-looking business vision into reality. Future-proof your organization for better business outcomes.

For more information

To learn more about HP Integrity NonStop servers contact your local sales representative or authorized HP reseller, or visit www.hp.com/go/nonstopblade

HP Services

HP's service solutions, built on the Solution Lifecycle (SLC) process, offer consistent quality and service levels for the Integrity NonStop servers. The SLC process helps achieve rapid productivity and maximum availability by examining specific needs at each of five distinct phases (Plan, Design, Integrate, Install and Manage) and then designing solutions around those needs. We offer three different service solutions designed to meet customer needs:

HP Critical Service Solution

- Startup and Deployment Services—build the solution to your exact specifications, complete the installation, and make the solution application-ready
 - Assessment and Design Services—define requirements and translate your business and technical needs into a solution that melds the necessary hardware and software
 - Deployment Management Services—upfront project coordination from HP
 - Education Services—training curriculums relevant to needs and existing expertise based upon a needs analysis
- HP Critical Service—comprehensive, on-going support designed to help minimize the business impact of downtime for business-critical applications

HP Proactive Service Solution

- Startup and Deployment Services
- HP Proactive 24 Service—integrated hardware and software support, including proactive and reactive services to improve stability and availability across your IT environment

HP Foundation Service Solution

- Startup and Deployment Services
- HP Support Plus 24 Service—integrated hardware & software support services designed specifically for your technology

For more information, visit www.hp.com/services/nonstop

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Technology for better business outcomes