



HP Integrity NonStop NB50000c-cg BladeSystem

Peak performance while continuing to achieve the highest levels of availability, scalability, and data integrity

Overview

- Double the performance in half the footprint
- Simplify infrastructure and improve Total Cost of Ownership (TCO)
- Achieve nearly continuous availability and high data integrity
- Accommodate higher service level requirements
- Benefit from unified management

Your customers now connect, compute, fax, conference, text, and even entertain—using a single device. The lines that divide broadcast, cable, satellite, and telephone are fast disappearing. Even as the staggering data volumes continue to increase as you integrate diverse services, analysts predict broadening of subscriber usage.

As usual, there is also a rising need to sustain innovation and service quality to reduce customer churn in the face of strong competition. This is imperative not only because customer retention reduces the investment required to win new subscribers and increases network efficiency, but also it is critical in reducing bad debts and maintaining investor confidence.

The new carrier-grade NonStop platform

The HP Integrity NonStop NB50000c-cg BladeSystem (NB50000c-cg) platform is designed specifically for the telecommunications environment as well as communications, media and entertainment (CME) industries—where customers demand exceptional levels of performance and scalability without compromising on system availability.

With the NB50000c-cg, you can:

- Deliver rock solid services and best-in-class availability
- Deploy hardware platforms, software, custom applications, and capabilities—quickly and efficiently
- Access solutions at competitive prices and enable near continuous improvement of TCO over time
- Avoid slowing down of projects due to the need to build additional data center space



- Know that service is prompt, dependable, and can provide systems that are highly flexible and expandable

Specifically designed for telecommunications carriers, the NB50000c-cg lets you:

- Facilitate support for telecommunication business interactions with the highest levels of service
- Double the performance in half the footprint
- Reduce IT and per-transaction costs in a trusted NonStop fault-tolerant environment
- Achieve a simplified infrastructure and lower TCO for complex business-critical applications
- Build a solid foundation to leverage and capitalize on change
- Develop one-stop accountability and a complete portfolio for industry-leading CME solutions
- Use flexible financing options and services enhanced for near continuous application availability
- Gain unmatched expertise through HP Services
- Protect your previous investment in NonStop server-based applications

Business-critical offering in a bladed infrastructure

Leverage efficiencies while tailoring solutions to meet individual needs. This advanced modular computing technology lets you streamline and modernize your data center, increase energy efficiency, and achieve the cost benefits of unified management.

The NB50000c-cg delivers nearly continuous availability and exceptional performance, and it is the most affordable system in its class. It offers a platform that is most suitable to host applications such as, but not limited to:

Subscriber data management

- Home Location Register (HLR)
- Home Subscriber Server (HSS)
- Profile Manager
- Equipment Identity Register/ADD (Device Management)

Messaging

- Short Messaging Service
- Multimedia Messaging Service
- Inter-carrier Gateway (For SMS/text messages)

Mobile data services/intelligent network services

- Call Control/Call Routing
- Advanced call management functions, including number translations (for example: 800#), caller name, call control, parental controls, location-based charging, and calling circles

Billing/mediation/customer care

- Real-time convergent charging systems
- Intelligent network mediation for hot-billing prepay
- Real-time rating for voice and data services
- Cable Multi System Operator billing and customer care
- Cable Multi System Operator operational data store
- Service order management

Location-based services

- E911 Emergency Location Services (mobile phones) and commercial location services
- Roadside assistance

Helps overcome challenges confronting Telco players

As a telecommunication service provider, you face the reality of having to satisfy your customers with better-than-before features and services, even as you aim to fulfill the unenviable mandate of cutting costs recurring from your technology infrastructure.

You now have a solution. One that leverages the modular efficiencies of the industry-leading, proven BladeSystem technology by HP in the most-trusted, highly-available environment of the NonStop platform.

The NB50000c-cg enables you to streamline manageability—letting you manage more with less—and upgrade with ease. With the new standards-based NonStop carrier-grade I/O infrastructure, it improves response time and throughput. Plus, it prevents data corruption and provides end-to-end transaction integrity for the most reliable data. 24x7 availability is, of course, a given.

The NonStop Multi-core Architecture (NSMA) and the J-series NonStop Operating System release leverage multi-core processing capabilities to achieve a significant boost in performance, with the ability to scale both up and out—even greater than before.

For the first time, with the introduction of the NB50000c-cg, Integrity NonStop platform for telecommunications scales out up to 4,080 logical processors over ServerNet through hardware-based clustering. Take advantage of this near linear scalability and expand your systems: yet manage them as a single system image with a small operations staff. The NB50000c-cg scale-up also gives you twice the processing power of the NS16000CG.

What enable these benefits are the c-class BladeSystem infrastructure from HP, the multi-core Itanium® processors from Intel®, and extensive NonStop hardware and software technologies.

Realize an attractive TCO, by achieving an unprecedented gain in price/performance and reduced IT cost. Subsequently, this helps you drive down your cost per transaction by doubling the performance in half the footprint. The cost factor also makes the NB50000c-cg a good choice for migration of existing business-critical applications. Integrity NonStop applications are easily migrated, without modification, to the NSMA system environment, and they are ready to run. Migrating NonStop S-series applications to the NSMA environment is nearly identical to migration from NonStop S-series to Integrity NS-series systems.

The NonStop NB50000c-cg ships with the NonStop Operating System for telecommunications carriers (bundles QSN21, TQSN21).

Smaller footprint, reduced power consumption, and increased performance

HP Services

The end-to-end Service Solutions from HP, which are built on the Solution Lifecycle (SLC) process, offer consistent quality and service levels for the Integrity NonStop and NonStop BladeSystem. The SLC process helps achieve rapid productivity and high 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. They are:

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:** Use upfront project coordination from HP
- **HP Education Services:** Make use of curricula that are designed to help you quickly ramp up on your new NonStop technology
- **HP Critical Service:** Access comprehensive on-going support designed to help decrease the business impact of downtime for business-critical applications

HP Proactive Service Solution

- **Startup and Deployment Services**
- **HP Proactive 24 Service:** Use 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:** Use integrated hardware and software support services designed specifically for your technology.
- For more information, visit www.hp.com/go/nonstopblade

New I/O controllers introduced with the NB50000c-cg platform offer you state-of-the-art Telco protocol functionalities through standards based software and hardware: New carrier-grade storage, IP, and Telco Cluster I/O Modules (CLIMs).

Ideal for use in regions where extremes in operating conditions such as power outages, fluctuations in ambient temperatures, and earthquakes are common.

Support for the Telco protocols

With the NB50000c-cg, HP introduces a novel carrier-grade I/O infrastructure offering enhanced capabilities that complement new blade and multi-core processor technologies. These new carrier-grade storage and communications I/O controllers and adapters are built on standards-based components and are tightly integrated with the NonStop NB50000c-cg through ServerNet.

CLIMs are available in three functional types:

- Carrier-grade Storage CLIM: Enables attachment of Serial Attached SCSI (SAS) disks and SAS-connected DAT160 tape drives.
- Carrier-grade IP CLIM: Supports up to five gigabit-per-second Ethernet ports—plus TCP/IP v6 and v4, IP Security (IPSec), and the Stream Control Transmission Protocol (SCTP) for the telecommunication industry
- Carrier-grade Telco CLIM: Supports up to five gigabit-per-second copper Ethernet ports—plus the M3UA protocol for connection to the Signaling System 7 (SS7 over IP) communication standard used by telecommunication switching systems to control call setup and management

Additionally, the NB50000c-cg offers support for traditional channelized and unchannelized Signaling System 7 (SS7) links. Compliance for MTP, SCCP, TCAP, and ISUP protocol layers is per ITU-T White Book and the ANSI Issue 3 standards. Also, support for China and

Japan TTC SS7 standards is provided.

Designed for extreme operating conditions

The HP Integrity NonStop NB50000c-cg platform provides a scalable platform for the –48 volt DC environment. It is designed to meet the rigorous standards set for equipment used in telecommunications central office environments, with features such as a rugged design, –48 VDC power, and new four-stage alarm interface.

It complies with Bellcore's Network Equipment Building System (NEBS) generic equipment requirements and can withstand extremes in operating conditions such as power outages, fluctuations in ambient temperatures, and earthquakes.

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

Technology for better business outcomes

To learn more, visit www.hp.com/go/nonstopblade

© Copyright 2008 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

4AA2-2449ENW, September 2008

