



WHITEPAPER

BCS

HP'S BUSINESS CRITICAL SERVERS—THE NEXT GENERATION

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**HP Integrity servers deliver the
first mission-critical converged
infrastructure**

**Revolutionary Blade Scale architecture combines
the no.1 blade platform with always-on resiliency**

Tomorrow's business will be built on a converged infrastructure

Data centre sprawl has been the enemy of IT innovation for far too long. Over the past 40 years, IT infrastructures have been built in a piecemeal fashion. With systems deployed for specific applications and connected in an ad hoc manner, most data centres today are a labyrinth of teams, tools and processes. Monolithic hard-wired systems require excessive manpower to operate and do not scale easily. When an urgent application need emerges, the solution is often simply to add more hardware. Over time, these practices have added complexity and stifled flexibility. Most data centre assets today are underutilised and straining business performance to the breaking point.

As a decision maker focused on increasing your competitive advantage, you are likely searching for new ways to free untapped IT capacity and react quickly to business opportunity. For mission-critical environments, this is especially crucial because minutes of downtime can mean lost business. The solution for tomorrow's business is a converged infrastructure – one that aligns IT with business demands. A converged infrastructure consists of:

- A common modular infrastructure
- A common network fabric
- Comprehensive cross-domain control
- Comprehensive power and cooling management

If only that infrastructure were available now.

It is. HP Integrity systems, based on the revolutionary Blade Scale architecture, deliver a mission-critical converged infrastructure today – providing a flexible foundation for the IT environment of tomorrow.

Blade Scale architecture: the foundation of the next decade of mission-critical computing

The newest line of HP Integrity systems combine years of trusted HP Integrity resiliency with HP BladeSystem efficiencies. As the foundation of the world's first mission-critical converged infrastructure, Blade Scale architecture delivers:

- **A unified blade architecture from x86 to HP Superdome** – allowing you to consolidate applications on a common platform
- **FlexFabric** – virtual fabric that lets you flexibly scale resources to any workload

- **Always-on resiliency** – backed by 100+ innovations for business continuity
- **Matrix Operating Environment** – one common management platform helps to provision infrastructure for applications in minutes

Unified blade architecture from x86 to Superdome

Blades-based architectures are a smart design choice for a common IT, including modular building blocks, common components and standard design. Ours is the world's no.1 blades platform, meaning that HP customers like you are well aware of the value of this common design. In fact, 1.8 million HP BladeSystem enclosures are in use today.

The Blade Scale architecture includes a common, modular platform for critical applications, a common way to connect to networks, a common way to optimise energy usage and a common console to manage your infrastructure. It helps you move from 'one-of-everything IT' to a modular 'one IT that does everything'.

The result is a common mission-critical platform from x86 to Superdome systems. By standardising the way you design, deploy and manage systems, the Blade Scale architecture enables you to certify once, train once and deploy once.

With the ability to add new capacity in seconds, you can start with just one blade and grow to a full-scale HP Integrity Superdome 2. Plus, the breadth of partitioning capabilities with HP Integrity systems lets you increase utilisation dramatically within each blade, from sub-operating-system virtual machines to electrically isolated hard partitions.

Mission-critical FlexFabric scales resources to any workload

The Blade Scale architecture includes a common FlexFabric for a wide range of scaling needs, which makes it easy for you to scale up, scale out and scale within the system. With innovations such as the Blade Link and Superdome 2 Crossbar Fabric, scalability and robustness are engineered directly into Integrity systems. For scaling across the network, HP Virtual Connect technologies allow you to wire once and adapt new connections on the fly, reducing cabling by 97%. Finally, to manage virtual resource pools dynamically across the FlexFabric, HP relies on Insight Dynamics – VSE for a continuum of flexible resource scaling.



Integrity Superdome 2 is the ultimate mission-critical platform for scaling up, out and within



HP Integrity server blades are the world's first scale-up UNIX® blades built on the industry's leading blade infrastructure

HP-UX 11i v3: mission-critical UNIX

HP-UX 11i v3 is the result of more than 25 years of innovation and real-world experience. The first operating environment for managing mission-critical converged infrastructures adjusts complete IT infrastructures instantly to business demands with mission-critical levels of availability. With automated features that reduce maintenance requirements, improve availability and enhance security for mission-critical systems, this operating environment allows businesses to lower operational costs and increase efficiency of demanding applications such as on-line transaction processing or business intelligence solutions.

Always-on resiliency offers 100+ innovations to sustain business continuity

Blade Scale architecture is, quite simply, designed to keep your mission-critical applications up and running. With power-on-once technology, HP delivers a resilient design and on-line, tool-free serviceability, keeping applications available during maintenance. What's more, unique HP innovations such as the Superdome 2 Crossbar Fabric are designed to boost infrastructure reliability by up to 450% with self-diagnosing, self-healing features designed into the heart of the system.

Matrix Operating Environment with HP-UX provides a common management platform that lets you do more with less

HP BladeSystem Matrix with HP-UX is a common management environment designed to simplify the deployment of applications and business services by delivering IT capacity through pools of readily deployed resources. Matrix with HP-UX accelerates provisioning and optimises IT capacity across physical and virtual environments to maintain predictable delivery and service levels. IT can provision infrastructure for applications in minutes while doubling administrator productivity and reducing deployment time by as much as 50%. Matrix with HP-UX delivers a range of benefits for flexibility and performance, including:

- Automated infrastructure orchestration to provision your infrastructure for applications in minutes
- Comprehensive virtualisation capabilities to maximise utilisation within each blade
- High availability and disaster recovery solutions, integrated with virtualisation, utility pricing and storage management
- Built-in continuous optimisation, allowing you to match resource supplies precisely to business demand, in real time
- Built-in availability and comprehensive security, protecting your data and applications with high availability and disaster recovery
- Comprehensive power and cooling management, enabled by a built-in 'sea of sensors' to optimise energy usage without compromising performance or reliability
- A fully integrated management environment to promote more consistent, predictable installation

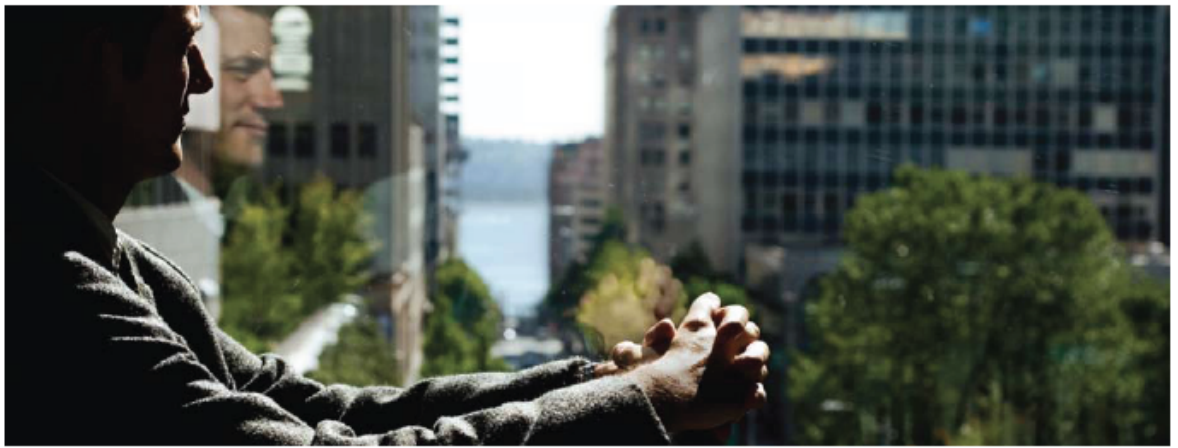
The combination of HP Integrity servers, HP-UX 11i v3, HP Serviceguard solutions and HP Insight Dynamics – VSE provides the foundation for mission-critical computing:

- HP Serviceguard solutions are integrated with HP-UX to address the business and operational impact of downtime. You can define, implement and manage solutions that secure infrastructure, protect data and align business continuity with business needs.
- HP Insight Dynamics – VSE lets you optimise server utilisation in real time, enabling you to double your utilisation rates through virtualisation.

HP Integrity systems deliver modern mission-critical results

The new line-up of Integrity systems blend BladeSystem efficiency with Integrity resiliency. Designed for investment protection and longevity, these servers will support three generations of Intel® Itanium® processors.

- **HP Integrity Superdome 2** is the ultimate mission-critical platform, scaling up, out and within to consolidate applications on a common platform. Engineered with trusted Superdome reliability, Superdome 2 now includes a modular bladed design, common components and standard racks. What's more, Superdome 2 is more reliable than ever before, with a 450% boost to infrastructure reliability and fault-tolerance built into the crossbar fabric.
- **HP Integrity server blades** are the world's first scale-up UNIX blades built on the industry's leading blade infrastructure. There are three models: the HP Integrity BL860c i2, the BL870c i2 and the BL890c i2 – the industry's first 8-socket scale-up UNIX blade. All feature HP's unique Blade Link technology, which combines multiple blades to create 2-, 4- and 8-socket systems. HP Virtual Connect Flex-10 offers increased network scalability and configuration flexibility with up to 20 times more networking bandwidth. Plus, Integrity server blades offer more than double the performance in half the footprint with built-in resiliency and less power. Finally, the ability to mix and match HP Integrity, ProLiant and StorageWorks blades within the same enclosure provides flexibility to grow as your business demands change.
- **HP Integrity rx2800 i2 Server** is a 2U, 2-socket rack-mount server that draws on your existing rack-mount investments – bringing you flexibility, choice and familiarity in design and skill sets. The Integrity rx2800 i2 Server is ideal for smaller, more remote deployments such as branch office applications.



HP StorageWorks: mission-critical computing requires mission-critical storage

A core element of the HP Converged Infrastructure, HP StorageWorks enables virtual pools of capacity that are built on a foundation of platform modularity, capacity optimisation and application integration. Clustered scale-out storage solutions from HP – which virtualise at the disk, network and file system level – provide always-on resiliency, improve scalability dramatically and simplify management. This improves utilisation rates significantly while reducing management costs by 50%. HP StorageWorks solutions reduce risk and provide 24x7 operations via completely redundant hardware platforms and unique replication capabilities.

HP Services: integrated for better business outcomes

To stay competitive, organisations need IT environments that are right for today and ready to evolve as business needs change. HP Services helps you meet this challenge with services designed to lower your IT costs, increase availability, improve service quality, reduce multi-vendor complexity and accelerate system implementation.

To break down costly technology silos, we deliver consulting and integration services – allowing you to access, share and synchronise applications and data across your heterogeneous environment. For more information, please visit:
www.hp.com/services/enterprise

One key to business success is an agile IT infrastructure, poised to adapt to changing needs while maintaining predictable service levels and keeping your business running smoothly. That is one of the benefits of comprehensive HP support services: we cover the whole IT solution life-cycle, helping you design, deploy, integrate and manage an agile IT infrastructure – including convenient pre-packaged HP Care Pack service options and custom support solutions. For more information, please visit:
www.hp.com/services/always-on

Only HP has the breadth of innovation, partnerships and expertise to bring it all together

HP has the most flexible and complete set of mission-critical services in the industry. With thousands of infrastructure professionals and global recovery centres in 40 countries, we serve over 250 mission-critical ERP clients with 300,000 named users in 22 countries speaking 9 languages. Please visit:
www.hp.com/services

To learn more

For more information about HP Integrity systems with Blade Scale architecture, please contact your HP sales representative or visit:
www.hp.com/go/integritynow



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