



HP Integrity systems  
Family guide



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## Build an IT environment that delivers better business results

Shift your IT from technology that merely supports the business to an environment where technology powers the business and is measured in terms of delivering better business outcomes. The HP Adaptive Infrastructure range creates the foundation for delivering better business outcomes by enabling you to reduce operational costs, accelerate the speed of IT change and deliver a higher quality of service.

Fundamental to establishing an adaptive infrastructure are your underlying platform choices. What kind of server best suits your needs? What levels of high availability and performance do you require? How many users will be supported? What operating system will you be using? Whether you require a departmental server, an enterprise data centre, or anything in between, HP is committed to meeting your exact needs. This commitment has led more customers to choose HP servers than any other vendor's servers.\*

If you are an IT manager, you must juggle many challenges: Business units are demanding higher service levels. Mergers and restructurings may require rapid systems integration as well as database and server consolidation. Security is a growing concern.

You are likely trying to meet these challenges with a complex infrastructure that already supports tens, hundreds, or even thousands of applications. You may be running a broad range of servers, including both outdated and under-utilised machines, and you may be under pressure to meet ambitious new goals while cutting costs and conserving valuable floor space.

From consolidating multiple servers to hosting data warehouses, enterprise resource planning (ERP) applications and other business-critical environments, HP Integrity systems are the answer for you. The HP Integrity range are dynamically scalable solutions, from entry-class to Superdome to NonStop servers – and even business-critical blades. This family of servers provide intelligent virtualisation with HP Virtual Server Environment and supports a multi-operating-system (OS) ecosystem for the most available UNIX® (HP-UX 11i), Windows® (Microsoft® Windows Server 2003) and Linux environments – plus OpenVMS and NonStop for 24x7 solutions. Integrity systems offer a unique combination of scalability, virtualisation and availability, enabling you to optimise your business outcomes while you decrease cost and reduce risk.

Integrity is more than technology at HP – it is a business-critical infrastructure as well as a core value in the solutions we develop and deliver. It has helped make us the most trusted, always.

The Integrity systems family includes:

- **HP Integrity NonStop servers** – real-time, 24x7 business solutions for mission-critical environments
- **HP Integrity servers** – business-critical infrastructure, from entry-class to Superdome, with unique multi-OS capabilities and leading virtualisation
- **HP Integrity server blades** – business-critical capabilities of Integrity systems in a modular and efficient HP BladeSystem infrastructure

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\*Source: IDC Worldwide Quarterly Server Tracker, May 2008.

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In addition to the Integrity systems family, HP offers the HP ProLiant server family. ProLiant servers offer a superior platform for your mainstream 32-bit and emerging 64-bit x86 applications and have been the world's top-selling x86 industry-standard servers since the third quarter of 1996.

You may be looking for additional ways to simplify a growing, multi-server environment. How can you integrate all the moving parts and deliver business solutions on time and under budget? HP BladeSystem is a simple, modular infrastructure that is consolidated up-front to save you time, energy and money – regardless of what you put inside. In one consolidated box, a BladeSystem supports Integrity and ProLiant server blades, StorageWorks storage blades, and an array of virtual machine, client, and workstation solutions. With the essential IT elements – compute, network, storage, management, power and cooling – built in, the BladeSystem delivers reliable, cost-effective services to your business.

To gain the full value from your investments, you also need expert services throughout the IT life-cycle, intelligent software, advanced storage devices and system-enhancing options.

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\*Source: IDC Worldwide Quarterly Server Tracker, May 2008.

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- **Services** – How important is it that your service partner provide a single point of ownership and accountability? Are service needs being met throughout your organisation? Have you achieved the mission-critical reliability you require to meet your business needs? From training and basic product support to selective outsourcing, our services help you realise the full potential of your technology to meet your business requirements.
- **Software** – Do you need a single interface to monitor, automate and control your complex IT environment? Will pooling and sharing resources increase your IT utilisation? Do you need to reduce the business risk associated with unplanned downtime? Our software allows you to manage, virtualise, and protect IT resources to simplify and optimise your infrastructure.
- **Storage** – Do you need help optimising your storage resources, managing multi-vendor environments and evolving to open architectures? Our network and direct-attached storage devices help you keep large amounts of information protected and readily accessible to people when needed.
- **Options** – Do you have everything you need to meet your infrastructure needs? Our server options – including memory, drives, processors, racks, operating system software, power and cooling – help optimise your solution by enhancing system performance and functionality.

# HP Integrity server blades

Bringing business-critical capabilities of Integrity systems to the modular and efficient BladeSystem infrastructure

## Server blades

Updated



**HP Integrity BL860c Server Blade**  
Robust value and virtualisation of Integrity systems coupled with the economics of BladeSystem

Updated



**HP Integrity BL870c Server Blade**  
Ideal for application consolidation and larger business-critical workloads in a BladeSystem

<b>Processors supported</b>	Intel® Itanium® processor 9100 series 1.66 GHz (dual-core) with 18 MB cache (667 MHz FSB) 1.42 GHz (dual-core) with 12 MB cache 1.6 GHz (single-core) with 12 MB cache	Intel Itanium processor 9100 series 1.6 GHz (dual-core) with 24 MB cache 1.6 GHz (dual-core) with 18 MB cache 1.42 GHz (dual-core) with 12 MB cache
<b>Number of processors</b>	1 – 2	1 – 4
<b>Maximum number of cores</b>	4	8
<b>Scalable processor chipset</b>	zx2	zx2
<b>Operating systems supported</b>	HP-UX 11i v3 <sup>1</sup> and HP-UX 11i v2 <sup>2</sup> Microsoft Windows Server 2008 and 2003 <sup>3</sup> for Itanium-based systems Red Hat Enterprise Linux 5 and 4; Novell SUSE Linux Enterprise Server 10 OpenVMS v8.3 – 1H1 <sup>2</sup>	HP-UX 11i v3 <sup>1</sup> and HP-UX 11i v2 <sup>2</sup> Microsoft Windows Server 2008 and 2003 <sup>3</sup> for Itanium-based systems Red Hat Enterprise Linux 5 and 4; Novell SUSE Linux Enterprise Server 10 OpenVMS v8.3 – 1H1 <sup>2</sup>
<b>Maximum memory</b>	48 GB	192 GB
<b>I/O slots</b>	3 HP BladeSystem c-Class mezzanine form factor I/O slots Core I/O includes 2 dual-port Gigabit Ethernet (GbE) (total 4) Additional GbE available via mezzanine expansion cards	3 HP BladeSystem c-Class mezzanine form factor I/O slots Core I/O includes 2 dual-port Gigabit Ethernet (total 4) Additional GbE available via mezzanine expansion cards
<b>Internal hard disk drives</b>	2	4
<b>Management</b>	HP Systems Insight Manager HP Integrity iLO 2 (Advanced Pack included)	HP Systems Insight Manager HP Integrity iLO 2 (Advanced Pack included)
<b>Form factor</b>	Full-height blade 8 blades in 10U; 4 blades in 6U	Double-wide, full-height blade 4 blades in 10U; 2 blades in 6U

## HP related selections

<b>Storage</b>	Enterprise Virtual Array 4400 Modular Smart Array 2000fc <sup>4</sup>	Enterprise Virtual Array 4400 Modular Smart Array 2000fc <sup>4</sup>
<b>Software</b>	HP Virtual Server Environment HP Serviceguard Storage Management for Oracle®	HP Virtual Server Environment HP Serviceguard Storage Management for Oracle
<b>Services</b>	HP Proactive 24 Service <sup>5</sup> HP Critical Service <sup>5</sup>	HP Proactive 24 Service <sup>5</sup> HP Critical Service <sup>5</sup>
<b>Hardware options</b>	4 Gb Fibre Channel adaptors 4X InfiniBand adaptors	4 Gb Fibre Channel adaptors 4X InfiniBand adaptors

<sup>1</sup> Choice of Data Center, High Availability, Virtual Server, or Base Operating Environment

<sup>2</sup> Choice of Mission Critical, Enterprise, or Foundation Operating Environment

<sup>3</sup> Enterprise Edition

<sup>4</sup> Support under HP-UX 11i, Windows, Linux and OpenVMS is planned for 4Q CY08

<sup>5</sup> All blades within a single HP BladeSystem enclosure must be at the same service level

# HP Integrity servers: entry-class

Providing the flexibility you need for diverse workloads, multiple operating environments and future business growth, all at the price/performance your business demands

## Entry-class

Updated



**HP Integrity rx2660 Server**  
Entry-class value with incredible flexibility and high performance/watt

Updated



**HP Integrity rx3600 Server**  
Powerful, scalable entry system for demanding database and application performance

Updated



**HP Integrity rx6600 Server**  
Highly expandable platform for workload consolidation and virtualisation

<b>Processors supported</b>	Intel Itanium processor 9100 series 1.66 GHz (dual-core) with 18 MB cache (667 MHz FSB) 1.42 GHz (dual-core) with 12 MB cache 1.6 GHz (single-core) with 12 MB cache	Intel Itanium processor 9100 series 1.66 GHz (dual-core) with 18 MB cache (667 MHz FSB) 1.42 GHz (dual-core) with 12 MB cache	Intel Itanium processor 9100 series 1.6 GHz (dual-core) with 24 MB cache 1.6 GHz (dual-core) with 18 MB cache 1.42 GHz (dual-core) with 12 MB cache
<b>Number of processors</b>	1 – 2	1 – 2	1 – 4
<b>Maximum number of cores</b>	4	4	8
<b>Scalable processor chipset</b>	zx2	zx2	zx2
<b>Operating systems supported</b>	HP-UX 11i v3 <sup>1</sup> and HP-UX 11i v2 <sup>2</sup> Microsoft Windows Server 2008 and 2003 <sup>3</sup> for Itanium-based systems Red Hat Enterprise Linux 5 and 4; Novell SUSE Linux Enterprise Server 10 OpenVMS v8.3 – 1H1 <sup>2</sup>	HP-UX 11i v3 <sup>1</sup> and HP-UX 11i v2 <sup>2</sup> Microsoft Windows Server 2008 and 2003 <sup>3</sup> for Itanium-based systems Red Hat Enterprise Linux 5 and 4; Novell SUSE Linux Enterprise Server 10 OpenVMS v8.3 – 1H1 <sup>2</sup>	HP-UX 11i v3 <sup>1</sup> and HP-UX 11i v2 <sup>2</sup> Microsoft Windows Server 2008 and 2003 <sup>3</sup> for Itanium-based systems Red Hat Enterprise Linux 5 and 4; Novell SUSE Linux Enterprise Server 10 OpenVMS v8.3 – 1H1 <sup>2</sup>
<b>Maximum memory</b>	32 GB	192 GB	384 GB
<b>I/O slots</b>	3	8	8
<b>Internal hard disk drives</b>	8	8	16
<b>Management</b>	HP Systems Insight Manager HP Integrity iLO 2 (optional Advanced Pack)	HP Systems Insight Manager HP Integrity iLO 2 (optional Advanced Pack)	HP Systems Insight Manager HP Integrity iLO 2 (optional Advanced Pack)
<b>Rack height (EIA unit)</b>	2	4	7

## HP related selections

<b>Storage</b>	Modular Smart Array 2000fc <sup>4</sup> Enterprise Virtual Array 4400	Modular Smart Array 2000fc <sup>4</sup> Enterprise Virtual Array 4400	Enterprise Virtual Array 6100 Enterprise Virtual Array 4400
<b>Software</b>	HP Virtual Server Environment HP Serviceguard Storage Management for Oracle	HP Virtual Server Environment HP Serviceguard Storage Management for Oracle	HP Virtual Server Environment HP Serviceguard Storage Management for Oracle
<b>Services</b>	HP Proactive 24 Service HP Critical Service	HP Proactive 24 Service HP Critical Service	HP Proactive 24 Service HP Critical Service
<b>Hardware options</b>	10000 G2 Series rack 2 Gb Fibre Channel and Gigabit Ethernet multi-function adaptors	10000 G2 Series rack 4 Gb Fibre Channel adaptors	10000 G2 Series rack 4 Gb Fibre Channel adaptors

<sup>1</sup> Choice of Data Center, High Availability, Virtual Server, or Base Operating Environment

<sup>2</sup> Choice of Mission Critical, Enterprise, or Foundation Operating Environment

<sup>3</sup> Enterprise Edition

<sup>4</sup> Support under HP-UX 11i, Windows, Linux and OpenVMS is planned for 4Q CY08

# HP Integrity servers: mid-range

Flexible, available servers for your business computing needs, incorporating high-end functionality in the mid-range market – perfect for multi-OS consolidation, scale-up and performance applications

## Mid-range

Updated



**HP Integrity rx7640 Server**  
Excellent performance and compute density for data-centre applications

Updated



**HP Integrity rx8640 Server**  
Ideal platform for scale-up, performance and server consolidation workloads with low total cost of ownership (TCO)

<b>Processors supported</b>	Intel Itanium processor 9100 series 1.6 GHz (dual-core) with 24 MB cache 1.6 GHz (dual-core) with 18 MB cache 1.4 GHz (dual-core) with 12 MB cache	Intel Itanium processor 9100 series 1.6 GHz (dual-core) with 24 MB cache 1.6 GHz (dual-core) with 18 MB cache 1.4 GHz (dual-core) with 12 MB cache
<b>Number of processors</b>	1 – 8	1 – 16
<b>Maximum number of cores</b>	16	32
<b>Scalable processor chipset</b>	sx2000	sx2000
<b>Operating systems supported</b>	HP-UX 11i v3 <sup>1</sup> and HP-UX 11i v2 <sup>2</sup> Microsoft Windows Server 2008 and 2003 for Itanium-based systems Red Hat Enterprise Linux 5 and 4; Novell SUSE Linux Enterprise Server 10 OpenVMS v8.3 – 1H1 <sup>2</sup>	HP-UX 11i v3 <sup>1</sup> and HP-UX 11i v2 <sup>2</sup> Microsoft Windows Server 2008 and 2003 for Itanium-based systems Red Hat Enterprise Linux 5 and 4; Novell SUSE Linux Enterprise Server 10 OpenVMS v8.3 – 1H1 <sup>2</sup>
<b>Maximum memory</b>	256 GB	512 GB
<b>I/O slots</b>	15 with one hard partition (nPar), 14 with two nPars	16 (32 with SEU-2 <sup>3</sup> )
<b>Internal hard disk drives</b>	4	4 (8 with SEU-2 <sup>3</sup> )
<b>Hard partitions (nPars)</b>	1 – 2	1 – 2 (1 – 4 with SEU-2 <sup>3</sup> )
<b>Management</b>	HP Systems Insight Manager HP Integrity iLO 2	HP Systems Insight Manager HP Integrity iLO 2
<b>Rack height (EIA unit)</b>	10	17 (26 with SEU-2 <sup>3</sup> )

## HP related selections

<b>Storage</b>	XP20000 Disk Array Enterprise Virtual Array 6100	XP20000 Disk Array Enterprise Virtual Array 8100
<b>Software</b>	HP Virtual Server Environment HP Serviceguard Extension for SAP	HP Virtual Server Environment HP Serviceguard CFS for RAC
<b>Services</b>	HP Critical Service HP Proactive 24 Service	HP Critical Service HP Proactive 24 Service
<b>Hardware options</b>	Instant Capacity (iCAP) and Temporary Instant Capacity (TiCAP) processors HP Lights Out Advanced KVM Card	Instant Capacity (iCAP) and Temporary Instant Capacity (TiCAP) processors HP Lights Out Advanced KVM Card

<sup>1</sup> Choice of Data Center, High Availability, Virtual Server, or Base Operating Environment

<sup>2</sup> Choice of Mission Critical, Enterprise, or Foundation Operating Environment

<sup>3</sup> SEU-2 = Server Expansion Unit 2

# HP Integrity servers: high-end

For enterprise-class customers requiring superior single-system high availability, leading price/performance, strong virtualisation and long-term investment protection for consolidating their demanding multi-OS applications

High-end

Updated



**HP Integrity Superdome**  
Scalability and virtualisation ideal for enterprise consolidation

Updated



**HP Integrity Superdome**  
Top scalability and virtualisation for larger enterprise consolidation requirements

<b>Processors supported</b>	Intel Itanium processor 9100 series 1.6 GHz (dual-core) with 24 MB cache 1.6 GHz (dual-core) with 18 MB cache	Intel Itanium processor 9100 series 1.6 GHz (dual-core) with 24 MB cache 1.6 GHz (dual-core) with 18 MB cache
<b>Number of processors</b>	1 – 32	2 – 64
<b>Maximum number of cores</b>	64	128
<b>Scalable processor chipset</b>	sx2000	sx2000
<b>Operating systems supported</b>	HP-UX 11i v3 <sup>1</sup> and HP-UX 11i v2 <sup>2</sup> Microsoft Windows Server 2008 and 2003 for Itanium-based systems Red Hat Enterprise Linux 5 and 4; Novell SUSE Linux Enterprise Server 10 OpenVMS v8.3 – 1H1 <sup>2</sup>	HP-UX 11i v3 <sup>1</sup> and HP-UX 11i v2 <sup>2</sup> Microsoft Windows Server 2008 and 2003 for Itanium-based systems Red Hat Enterprise Linux 5 and 4; Novell SUSE Linux Enterprise Server 10 OpenVMS v8.3 – 1H1 <sup>2</sup>
<b>Maximum memory</b>	1 TB	2 TB
<b>I/O slots</b>	96 (with I/O expansion)	192 (with I/O expansion)
<b>Internal hard disk drives</b>	N/A	N/A
<b>Hard partitions (nPars)</b>	1–8	1–16
<b>Management</b>	HP Systems Insight Manager HP Integrity iLO 2	HP Systems Insight Manager HP Integrity iLO 2
<b>Rack height (EIA unit)</b>	Delivered in Superdome cabinet	Delivered in Superdome cabinets

## HP related selections

<b>Storage</b>	XP24000 Disk Array Enterprise Virtual Array 8100	XP24000 Disk Array Enterprise Virtual Array 8100
<b>Software</b>	HP Virtual Server Environment HP Metrocluster and Continentalclusters	HP Virtual Server Environment HP Operations Software for UNIX
<b>Services</b>	Three pre-defined support service levels: <ul style="list-style-type: none"> <li>• Critical Service Solution</li> <li>• Proactive Service Solution</li> <li>• Foundation Service Solution</li> </ul>	Three pre-defined support service levels: <ul style="list-style-type: none"> <li>• Critical Service Solution</li> <li>• Proactive Service Solution</li> <li>• Foundation Service Solution</li> </ul>
<b>Hardware options</b>	Instant Capacity (iCAP) and Temporary Instant Capacity (TiCAP) processors HP Lights Out Advanced KVM Card	Instant Capacity (iCAP) and Temporary Instant Capacity (TiCAP) processors HP Lights Out Advanced KVM Card

<sup>1</sup> Choice of Data Center, High Availability, Virtual Server, or Base Operating Environment

<sup>2</sup> Choice of Mission Critical, Enterprise, or Foundation Operating Environment

# HP Integrity NonStop servers

Ultra-robust servers that deliver 24x7 continuous availability, unrivalled data integrity and virtually unlimited scalability – ideal for demanding, transaction-intensive applications

## NonStop



**HP Integrity NonStop NS1200 Server**  
Entry-class, software fault-tolerant solution for emerging markets



**HP Integrity NonStop NS14200 Server**  
Mid-range solution offering highest application availability with absolute data integrity and linear scalability



**HP Integrity NonStop NS16200 Server**  
Highest application availability with absolute data integrity and linear scalability

<b>Processors supported</b>	Intel Itanium processor 9100 series	Intel Itanium processor 9100 series	Intel Itanium processor 9100 series
<b>Clustering</b>	Supports Expand over IP (does not support ServerNet clustering)	Supports ServerNet clustering	Supports ServerNet clustering
<b>Number of logical processors</b>	2 – 8 per system	2 – 8 per node	2 – 16 per node
<b>Maximum number of logical processors per cluster</b>	8	2,040	4,080
<b>Operating system supported</b>	NonStop OS	NonStop OS	NonStop OS
<b>Maximum memory</b>	64 GB	16 TB	127 TB <sup>1</sup>
<b>ServerNet processor connectivity</b>	Versatile I/O (VIO)	Versatile I/O (VIO)	P-Switch Also supports S-series I/O connectivity
<b>Maximum I/O adaptors</b>	6	6	60
<b>Internal hard disk drives</b>	336	448	3,248
<b>Management</b>	NonStop System Console (NSC) HP Systems Insight Manager	NonStop System Console (NSC) HP Systems Insight Manager	NonStop System Console (NSC) HP Systems Insight Manager
<b>Rack height (EIA unit)</b>	42 (36 in some configurations)	Delivered in modular cabinet(s)	Delivered in modular cabinet(s)

## HP related selections

<b>Storage</b>	FC internal hard disk drives (146 GB and 300 GB @ 15k rpm) XP Disk Array family (e.g., XP24000)	FC internal hard disk drives (146 GB and 300 GB @ 15k rpm) XP Disk Array family (e.g., XP24000)	FC internal hard disk drives (146 GB and 300 GB @ 15k rpm) XP Disk Array family (e.g., XP24000)
<b>Software</b>	HP NonStop SQL Database Software HP NonStop RDF/ZLT Replication Software	HP NonStop SQL Database Software HP NonStop RDF/ZLT Replication Software	HP NonStop SQL Database Software HP NonStop RDF/ZLT Replication Software
<b>Services</b>	Three pre-defined support service levels: • Critical Service Solution • Proactive Service Solution • Foundation Service Solution	Three pre-defined support service levels: • Critical Service Solution • Proactive Service Solution • Foundation Service Solution	Three pre-defined support service levels: • Critical Service Solution • Proactive Service Solution • Foundation Service Solution
<b>Hardware options</b>	HP Virtual TapeServer Expansion board for Fibre Channel or Ethernet	HP Virtual TapeServer Expansion board for Fibre Channel or Ethernet	Fibre Channel ServerNet Adaptor (FCSA) Ethernet ServerNet Adaptor (G4SA)

<sup>1</sup> 127 TB capable, based upon 32 GB of memory per processor

# HP Integrity NonStop servers

Ultra-robust servers that deliver 24x7 continuous availability, unrivalled data integrity and virtually unlimited scalability – ideal for demanding, transaction-intensive applications

NonStop

New



## HP Integrity NonStop NB50000c BladeSystem

Industry-leading 24x7 availability, scalability and data integrity with the highest level of performance

Processors supported	Intel Itanium processor 9100 series (dual-core)
Clustering	Supports ServerNet clustering
Number of logical processors	2 – 16 per node
Maximum number of logical processors per cluster	4,080
Operating system supported	NonStop OS
Maximum memory	191 TB
ServerNet processor connectivity	InterConnect ServerNet Switches
Maximum I/O adaptors	60
Maximum clustered I/O modules (CLIMs)	24
Internal hard disk drives	3,248 FC disks with all I/O adaptor module enclosure (IOAME)-based storage and IP connectivity; no CLIMs 2,300 serial-attached SCSI (SAS) disks with all CLIM-based storage and IP connectivity; no IOAME
I/O infrastructure	IP CLIM, Storage CLIM
Management	NonStop System Console (NSC) HP Systems Insight Manager
Rack height (EIA unit)	Delivered in modular cabinet(s)

## HP related selections

Storage	FC internal hard disk drives (146 GB and 300 GB @ 15k rpm) SAS internal hard disk drives (72 GB @ 15k rpm and 146 GB @ 10k rpm) XP Disk Array family (e.g., XP24000)
Software	HP NonStop SQL Database Software HP NonStop RDF/ZLT Replication Software
Services	Three pre-defined support service levels: <ul style="list-style-type: none"><li>• Critical Service Solution</li><li>• Proactive Service Solution</li><li>• Foundation Service Solution</li></ul>
Hardware options	Fibre Channel ServerNet adaptor (FCSA) Ethernet ServerNet adaptor (G4SA)

# HP Integrity systems family



# HP related selections

## Comprehensive solutions for the Integrity systems family

HP Software	Description
<b>Virtualisation</b>	
<b>HP Virtual Server Environment (VSE)</b>	Creates virtual servers that can grow and shrink automatically based on service-level objectives set for each application they host. Through tight integration with partitioning, high availability and utility pricing, the HP VSE allows you to optimise your server utilisation in real time.
HP Integrity Virtual Machines*	Improves utilisation by allowing several virtual machines to share a single CPU and I/O resources. Each virtual machine runs its own guest operating-system instance (HP-UX 11i, Windows and Linux) and offers complete software isolation.
HP Virtual Partitions (vPars)*	Improves utilisation by allowing multiple HP-UX instances to share one server or hard partition. Each vPar runs its own copy of HP-UX and offers complete software isolation.
HP Capacity Advisor*	Simulates placement of application workloads to help IT administrators improve server utilisation through an easy-to-use tool for ongoing capacity planning. Its 'what if' resource modelling capabilities present multiple outcomes that let you choose the configurations which best fit your business needs.
HP Virtualisation Manager*	Reduces complexity by providing unified visualisation and management of physical and virtual servers. It enables you to visualise and configure graphically the way your virtual resources are being used and how they map to your physical infrastructure.
HP Global Workload Manager*	Allocates server resources automatically so that the highest-priority applications get the resources they need. Designed for multi-system Integrity server environments, it is ideal for large, centralised IT environments that host applications for many departments.
<b>Availability</b>	
<b>HP Serviceguard*</b>	Keeps your business up and running 24x7 with a broad range of integrated HP-UX and Linux solutions. HP Serviceguard builds on the concept of virtualisation by grouping multiple servers into a cluster to provide fast failover while preserving data integrity.
<b>HP Serviceguard Storage Management Suite</b>	Combines the power of the premier high-availability UNIX solution, HP Serviceguard, HP VSE, and Symantec's Veritas Storage Foundation into a comprehensive, highly available clustering and file management solution for HP-UX 11i. Two key products from this suite provide enhancements for Oracle environments: <ul style="list-style-type: none"><li>• HP Serviceguard Storage Management for Oracle – improves Oracle database performance up to 10 times</li><li>• HP Serviceguard CFS for RAC – simplifies the manageability and increases the availability of Oracle Real Application Clusters (RAC) environments</li></ul>
<b>HP Serviceguard Extension for SAP</b>	Extends Serviceguard's powerful failover capabilities to complex high-availability SAP environments by monitoring, detecting faults, and recovering transparently, thereby eliminating planned and unplanned downtime.
<b>HP Metrocluster and Continentalclusters</b>	Provides the highest level of availability and business continuity for enterprise data centres and is HP's disaster-tolerant solution for local and unlimited distances. This solution is built upon HP's foundation clustering software, HP Serviceguard.
<b>Management</b>	
<b>HP Systems Insight Manager</b>	Maximises system uptime, reduces total cost of ownership, and provides powerful monitoring and control of multiple HP Integrity servers.
<b>HP Ignite-UX</b>	Permits fast deployment of HP-UX 11i for single or multiple servers, provides the means to create and reuse standard system configurations, provides for replication of systems, permits post-installation customisation, and operates in both interactive and unattended modes.
<b>HP GlancePlus Pak Software</b>	Combines real-time diagnostic and monitoring capabilities with the ability to perform historical data collection and analysis, providing an ideal solution to manage the availability and performance of a single system while retaining valuable historical information for use with enterprise management products.
<b>HP Operations Software for UNIX</b>	Discovers, monitors, controls, and reports on the availability and performance of heterogeneous, large-scale IT environments. Consolidates information for all IT components – network, systems, storage, databases and applications.
<b>HP Integrity iLO 2</b>	Delivers advanced remote management built into the system management processor.
<b>HP NonStop Software for HP Integrity NonStop servers</b>	
<b>HP NonStop SQL Database Software</b>	NonStop SQL is a distributed relational database management system that uses ANSI-standard Structured Query Language (SQL) to deliver a scalable, fault-tolerant database. NonStop SQL includes open database connectivity (ODBC) and Java™ Database Connectivity (JDBC) software, and a report writer.
<b>HP NonStop RDF/ZLT Replication Software</b>	NonStop RDF/Zero Lost Transactions (ZLT) software offers high-speed, low-latency transaction replication between NonStop servers and furthers total data integrity for every transaction.
<b>HP Pathway with NonStop TS/MP Software</b>	Pathway with NonStop TS/MP is a highly scalable and available application server for mission-critical online transaction processing (OLTP) applications.
<b>HP NonStop Servlets for JavaServer Pages</b>	NonStop Servlets for JavaServer Pages is a highly scalable Apache Tomcat-based Web container for hosting enterprise Java components.
<b>HP NonStop Tuxedo Software</b>	NonStop Tuxedo is a highly scalable and available version of the popular BEA Tuxedo transaction processing monitor.
<b>HP NonStop CORBA Software</b>	NonStop CORBA is a highly scalable and available Object Management Group (OMG) Common Object Request Broker Architecture (CORBA)-compliant software.

\*HP recommends purchasing these software products as part of the fully integrated HP Virtual Server Environment (VSE); or for HP-UX 11i v3, as part of the Virtual Server OE or Data Center OE.

## HP Services

## Description

### HP Critical Service – 24x7 comprehensive hardware and software services with enhanced escalation

Provides highest level of 24x7 mission-critical support, enhanced escalation processes, standard 6-hour call-to-repair commitment (confirm region availability) and round-the-clock system monitoring. Ideal for reducing downtime risks in mission-critical environments.

### HP Proactive 24 – 24x7 proactive hardware and software account services

Complements your internal IT resources with proactive advice and account services including integrated hardware (4-hour on-site response), software and technical advice. 24x7 coverage of the whole IT infrastructure, improving stability and operational effectiveness.

### HP Service Solutions with three pre-defined service levels for Integrity Superdome and Integrity NonStop servers

All three service levels provide pre-installation, deployment and education. The Service Solutions are designed to speed and simplify Integrity Superdome and Integrity NonStop server implementations.

- **Critical Service Solution** – highest level of 24x7 mission-critical support for environments where unplanned downtime carries serious business consequences; enhanced escalation processes, repair time commitments and round-the-clock system monitoring
- **Proactive Service Solution** – 24x7 proactive advice and account services coverage, including integrated hardware (4-hour on-site response), software and technical advice
- **Foundation Service Solution** – integrated hardware and software support for mature, stable environments or non-production systems (i.e., test, development and backup systems)

## HP Storage

## Description

### XP Disk Array family

An enterprise-class storage system that delivers state-of-the-art reliability and around-the-clock availability for mission-critical applications where downtime is not an option. The family offers broad scalability to support mission-critical processes:

- XP24000 – scales up to 851 TB of internal and 247 PB of external capacity
- XP20000 – scales up to 177 TB of internal and 96 PB of external capacity
- XP12000 – scales up to 332 TB of internal and 32 PB of external capacity
- XP10000 – scales up to 69 TB of internal and 16 PB of external capacity

### Enterprise Virtual Array family

An enhanced virtual storage array family for organisations requiring an easy-to-use, high-performing mid-range disk array with outstanding TCO to support business-critical processes:

- EVA 8100 – scales up to 120 TB of capacity
- EVA 6100 – scales up to 56 TB of capacity
- EVA 4400 – scales up to 96 TB of capacity

### Modular Smart Array 2000fc

A low-cost, high-capacity storage area network (SAN) array for FC networks. Ideal for smaller data centres and remote office locations, the MSA2000fc provides up to 36 TB of capacity and offers the most affordable data protection and performance features in its class.

### Fibre Channel internal hard disks (146 GB and 300 GB @ 15k rpm)

Latest-generation Fibre Channel attached drives deliver the best available performance for system and user disks.

### SAS internal hard disks (72 GB @ 15k rpm and 146 GB @ 10k rpm)

These 2.5-inch SAS disks – for CLIM-based I/O – support caching technology and deliver the best available performance for system and user disks.

# HP related selections

## Comprehensive solutions for the Integrity systems family

### HP Options

### Description

<b>Instant Capacity (iCAP) cells, processors and memory</b>	Capacity eliminates over-provisioning and helps to link IT costs to revenue by deferring these costs until they are needed. iCAP hardware is purchased for only 25 per cent of the price of active hardware and does not require software or support. When additional capacity is needed, the remaining 75 per cent is paid and the component is activated with a simple command.
<b>Temporary Instant Capacity for processors (TiCAP)</b>	Temporary Instant Capacity is like a pre-paid phone card that provides 30 days of activation for iCAP processor cores. TiCAP is consumed at your own pace, and includes OS and HP VSE licences and support. TiCAP allows you to meet short-term peaks in application demands by paying for them only when they occur.
<b>Global Instant Capacity (GiCAP)</b>	Global Instant Capacity allows you to move the usage rights for hardware and licences for software within a group of servers, deactivating components effectively in one server in order to activate them in another. GiCAP is a unique HP differentiator that offers cost-effective high availability and load balancing.
<b>10000 G2 Series rack</b>	The 10000 G2 Series enterprise-class rack solution combines unparalleled structural integrity, cooling, and cable management, and can be used for all HP rack-mounted server and storage products.
<b>2 Gb Fibre Channel and Gigabit Ethernet multi-function adaptors</b>	HP PCI-X 2 Gb Fibre Channel and Gigabit Ethernet multi-function adaptors deliver the performance, flexibility and high availability you need to support the connectivity requirements for server consolidation in your Adaptive Enterprise. These versatile adaptors offer 2 Gb Fibre Channel I/O for mass storage connectivity and 1000Base-SX or 1000Base-T Gigabit Ethernet I/O for networking connectivity, higher port density for I/O slot-constrained systems and higher levels of failover protection.
<b>4 Gb Fibre Channel adaptors</b>	HP 4 Gb Fibre Channel adaptors offer the highest level of availability and support when used in conjunction with HP StorageWorks storage arrays, tape storage systems and Fibre Channel switches. The dual- and single-channel 4 Gb Fibre Channel adaptors double performance over previous-generation FC adaptors. In addition, the 4 Gb FC adaptors auto-negotiate 1 Gb, 2 Gb, or 4 Gb transfer rates, allowing full legacy support for existing SAN infrastructures to protect your current SAN investment.
<b>4X InfiniBand adaptors</b>	HP 4X Fabric solutions provide high-speed, low-latency switched fabric solutions optimised for server clusters. HP 4X Fabric products provide a leading-edge interconnect for both High Performance Computing (HPC) customers who want to deploy clusters for scientific and engineering applications, and for commercial customers who want to deploy highly available and scalable database clusters.
<b>HP Integrity Lights Out Advanced KVM Card</b>	HP Integrity Integrated Lights Out (iLO) management processors make it simpler, faster and less costly to manage your Integrity servers remotely. The Integrity Lights Out Advanced KVM Card is an optional accessory that combines a physical graphics/USB card with additional logic to permit the Lights Out Advanced features of Virtual Media and Integrated Remote Console.
<b>Fibre Channel ServerNet Adaptor (FCSA)</b>	Two-port Fibre Channel adaptor card provides two Fibre Channel ports to connect to internal Fibre Channel Disk Modules (FCDMs), HP XP Disk Array family and tape storage products.
<b>Ethernet ServerNet Adaptor (G4SA)</b>	Four-port Ethernet adaptor card provides two 10/100 Mbps ports and two 10/100/1000 Mbps ports.
<b>Expansion board for Fibre Channel or Ethernet</b>	An optional expansion board expands the VIO subsystem by providing either an additional four Fibre Channel ports beyond the four embedded Fibre Channel ports, all with FCSA-like functionality; or an additional four Ethernet ports beyond the four embedded Ethernet ports, with G4SA functionality.
<b>HP Virtual TapeServer</b>	A flexible, high-performance disk-based backup and restore system that automates operations, reduces backup windows and improves restore operations dramatically. <ul style="list-style-type: none"><li>• Multi-site backup data replication for disaster recovery (DR) redundancy</li><li>• Data encryption, data compression and clustering for availability and security</li><li>• Open systems backup application integration for autonomous operations</li></ul>
<b>2 GB, 4 GB, or larger memory upgrades</b>	HP branded memory is the easiest way to enhance and improve overall system performance quickly for demanding database and application workloads. Larger memory increases performance and is available in 2 GB, 4 GB, or larger increments. HP memory modules are qualified and tested to strict HP standards to ensure consistently high levels of performance and reliability in HP servers. Memory upgrade options differ by server. Most HP Integrity servers offer Double Chip-Spare technology.

## Integrated service solutions for better business outcomes

Competitive IT organisations need an environment that is both right for today and ready to evolve as your business needs change. HP Services meets this challenge with services designed to lower your IT costs, increase availability, reduce the complexity of multi-vendor services and accelerate system implementation.

- A key to business success is an agile IT infrastructure that adapts to changing needs while keeping the business running smoothly. Maintaining predictable service levels is one of the benefits of HP's comprehensive support services. To help you design, deploy, integrate and manage an agile IT infrastructure, we cover the complete IT solution life-cycle – including convenient pre-packaged HP Care Pack service options and custom support solutions.
- Break down costly technology silos with our consulting and integration services, which allow you to access, share, and synchronise applications and data across your existing heterogeneous environment.
- Do you dream of being able to focus more on your core competencies – and less on day-to-day IT services? Our outsourcing services and global IT expertise can make this dream a reality.
- To speed product implementation, consider our factory-direct capabilities. Our plug-and-play solutions are integrated, tested and shipped in a fully configured rack. Pre-delivery site reviews, factory installation and configuration, on-site installation, and product orientation are included.

- In today's fast-paced business environment, your employees must assimilate new IT skills quickly. HP can help you achieve this goal with an array of training services, including instructor-led classes, customised on-site training and innovative remotely assisted classes.

Capitalise on your IT environment capabilities with a service partner who has a thorough understanding of server, storage and network technology in a multi-vendor environment. Working in partnership with HP authorised Channel Partners, HP has this expertise. Whether your company is a medium-sized organisation or a large global corporation, HP Services can help. To learn more, visit: [www.hp.com/hps/support](http://www.hp.com/hps/support)

## Flexible financing for lower costs

HP eases the burden on your balance sheet by offering flexible financing options through HP Financial Services. One popular option is Pay per use, a metered utility pricing solution – available with selected HP Integrity server platforms – that lets you pay for capacity as you use it. In addition, HP Financial Services can help you move from your existing solution to a new one by helping you uncover the value in your unwanted equipment. With our Asset Recovery Services, HP Financial Services will pay you for equipment that has remaining market value and manage the disposition of truly obsolete equipment in accordance with environmental regulations. No matter which combination of HP solutions you need, HP Financial Services offers a full range of 'acquire-to-retire' services to put those solutions within reach. For more information, contact your HP sales representative or visit: [www.hp.com/go/hpfinancialservices](http://www.hp.com/go/hpfinancialservices)

## The right partner

We are here to help you build an infrastructure that is designed for your business needs. HP is investing to unify across the data centre infrastructure so that customers can standardise management tools, enclosures and power monitoring while drawing on their investments. Are spiralling power and cooling costs draining your budget? Our energy-saving tools and technologies can help you cut costs significantly by regulating and monitoring power usage throughout your infrastructure. Are you trying to get the greatest utilisation from your data-centre floor space? We offer a complete range of solutions, including small-footprint options. Do you need help scaling up or out, or designing a data centre that can change along with your business need? Look to HP. Do you want the broadest range of choice from best-in-class IT providers? Our hardware, software and service partners deliver thousands of solutions designed specifically for HP products. The bottom line is that HP is the right partner to help you use technology for better business outcomes.

## For more information

To learn more about how HP Integrity servers are the best choice for today's dynamic IT environments, contact your local HP sales representative or authorised HP reseller, or visit:

[www.hp.com/go/integrity](http://www.hp.com/go/integrity)

To learn more, visit [www.hp.com/go/integrity](http://www.hp.com/go/integrity)

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Technology for better business outcomes