

ITANIUM[®] SOLUTIONS

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SUCCESS IS YOURS FOR THE TAKING. JOIN US.

Hardware Overview

Purpose of this session

1. Review Developer Days Schedule
2. Provide a brief overview of the lab systems.
3. Show the product lines from multiple ISA Founding Sponsors, so that you know Itanium is available for any size of project.

ISA Developer Days Schedule:

Wednesday, April 26	
Intel Enterprise Strategy - Intel Keynote	Don Soltis and James Reinders (Intel)
The Itanium® Architecture	Cameron McNairy (Intel)
Hardware Overview	Jeff Donsbach (HP)
Itanium Firmware (EFI)	Jeff Donsbach (HP)
Systematic Approach to Tuning Software	Sverre Jarp - CERN (European Organization for Nuclear Research)
Completing a Successful Migration	Jeff Donsbach (HP)
Ask the Experts	Ray Asbury (ISA)
Novell	JS Riehl (Novell)
Thursday, April 27	
Linux Compilers	Eric Moore (Intel) & Ray Asbury (ISA)
Linux Compilers Lab	Eric Moore (Intel) & Ray Asbury (ISA)
Linux Debuggers	Eric Moore (Intel) & Ray Asbury (ISA)
System & Application Performance Tools	Jeff Donsbach (HP)
Caliper Lab	Dave Babcock (HP)
Migrating 32-bit Applications	Eric Moore (Intel) & Ray Asbury (ISA)
Friday, April 28	
Introduction to Intel Vtune	Eric Moore (Intel) & Ray Asbury (ISA)
Vtune Lab	Eric Moore (Intel) & Ray Asbury (ISA)

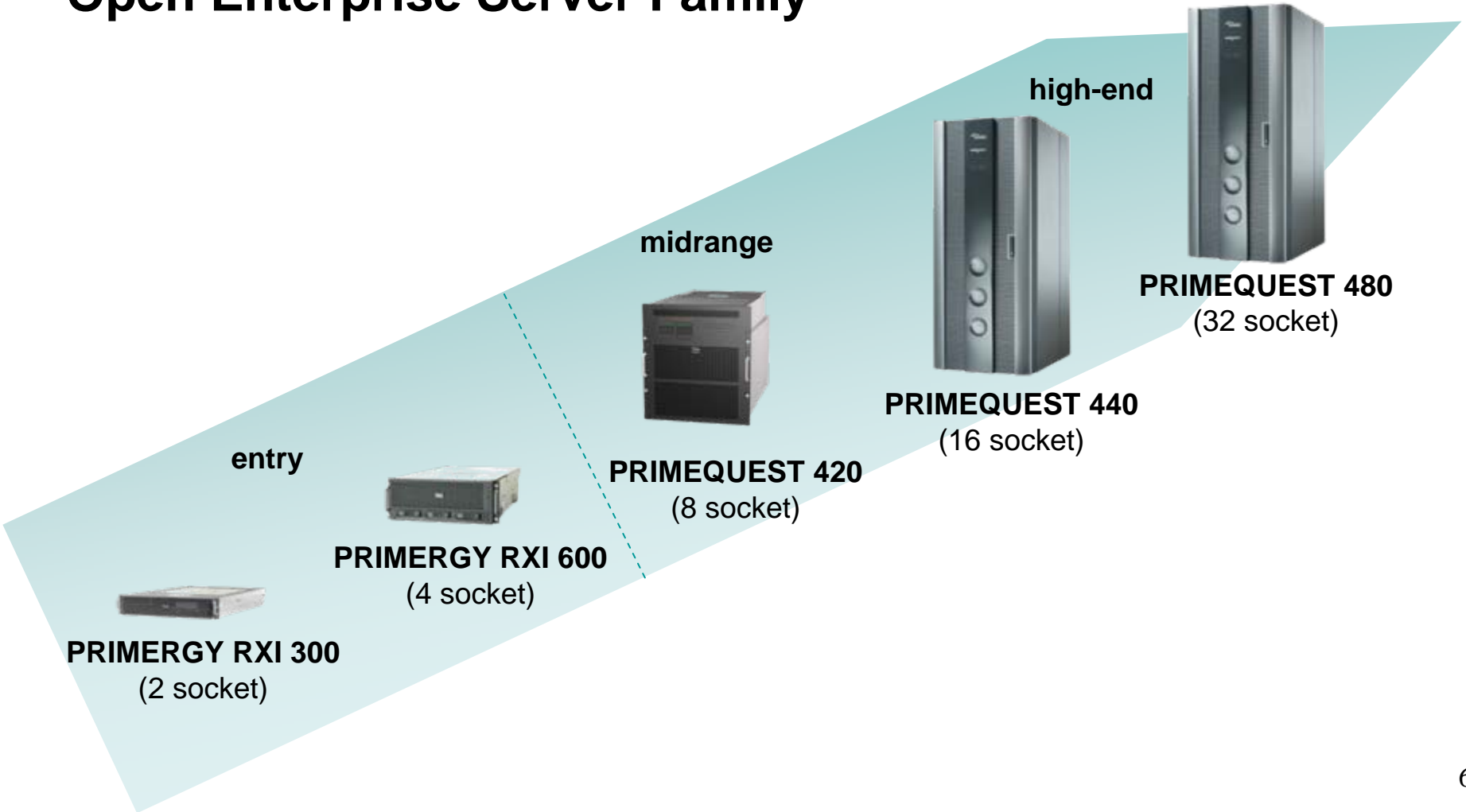
Lab System Hardware Specifications:

CHASSIS	Bar Harbor (SBHG2) 2U base system Madison	1
CPU	Itanium2 MP Madison 1.6Ghz 9M (80543KC0259M)	2
HEATSINK	HS – Itanium2 1.7G (C14577-001 or A94382-001)	2
MEMORY	512MB PC266 Reg ECC DDR (Bar Harbor)	4
SCSI HARDDRIVE	Maxtor SCSI U320 73GB 15K PB-free FW JNZ3/JNZH (8K073J0)	1
POWER SUPPLY	Pwr Supply, Bar Harbor 350W Redunt AGFTPS350 (854804)	1
POWER SUPPLY	Bar Harbor – Power pod ABHMPPOD (854807)	2
MOUSE	Logitech mouse 2btn wheel USB-PS2 optical (black)	1
KEYBOARD	Belkin 104-key keyboard, USB w/w. rest, black.	1
POWER CORD	Pwr Cord – PWRCABLEUS (816324)	2

Fujitsu Siemens Computers Itanium-based server product line



Fujitsu Siemens Computers Open Enterprise Server Family



Basic Specifications:

Model/ sockets	Processors GHz/ MB L3	Memory	Internal discs	I/O slots	Other features
PRIMERGY RXI 300 2	1.6 / 3 MB 1.6 / 9 MB	16 GB	DVD + 2x 73/146	3 PCI-X	2 U
PRIMERGY RXI 600 4	1.5 / 4 MB 1.6 / 9 MB	32 GB	DVD + 3x 73/146/300	7 PCI-X	4 U Integrated HW RAID
PRIMEQUEST 420 8	1.5 / 4 MB 1.6 / 9 MB	256 GB	DVD + 8x 36/73	2 PCIe + 16 PCI-X	12 U 2 hard partitions
PRIMEQUEST 440 16	1.5 / 4 MB 1.6 / 9 MB	512 GB	DVD + 16x 73/146	64 PCI-X	4 hard partitions
PRIMEQUEST 480 32	1.5 / 4 MB 1.6 / 9 MB	1,024 GB	DVD + 32x 73/146	128 PCI-X	8 hard partitions

All running **Linux (RedHat, SuSE) and Windows Server 2003**

Hitachi Itanium-based server product line

HITACHI
Inspire the Next

- **2 sockets Intel® Itanium® Blades**

- Max. CPU Performance – 1.66GHz/9MB L3 667FSB
- Max. Memory Capacity – 32GB / 16 slots @ 2way, 128GB / 64 slots @ 8way
- Blade Interconnection Technology - Scalable up to 8way SMP
- Mainframe Class Hitachi Virtualization Technology

- **Storage blade**

- 1 slot type (146GB x 3), 2 slot type (146GB x 6)



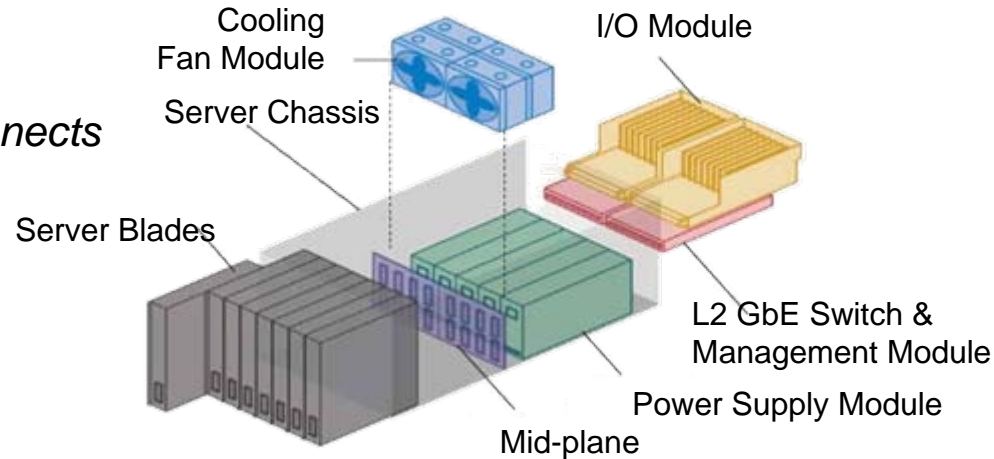
Hitachi Unique Advantages – I/O

Chassis

- Bandwidth - 22Gbps per blade*
- Reliability - Passive Backplane*
- Availability – Independent I/O interconnects*

Flexible I/O Modules

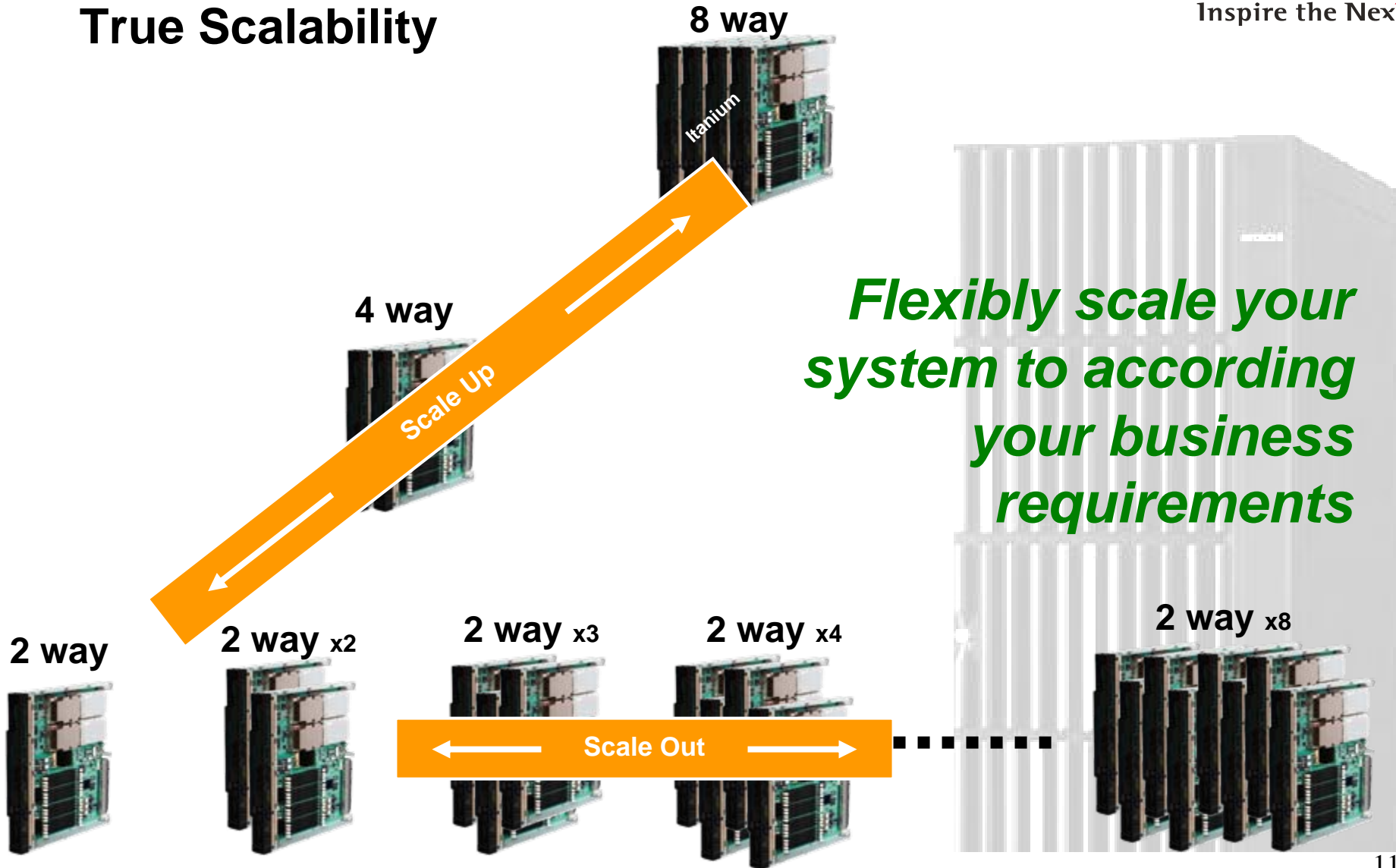
- **PCI-X module**
Capacity – 8 Slots per module
- **PCI-Express module**
Capacity – 8 Slots per module
Performance – 4 Lane PCI Express (Up to 10Gbps per slot)



Shared I/O Modules

- **4 port L2 GbE Switch**
- **4 port FC Switch Module**

True Scalability



HP Itanium-based Integrity server family



HP Integrity server family with



high-end

mid-range

entry-class



Superdome
(64 socket)



rx8640
(16 socket)



rx7640
(8 socket)



rx4640
(4 socket)



rx2620
(2 socket)



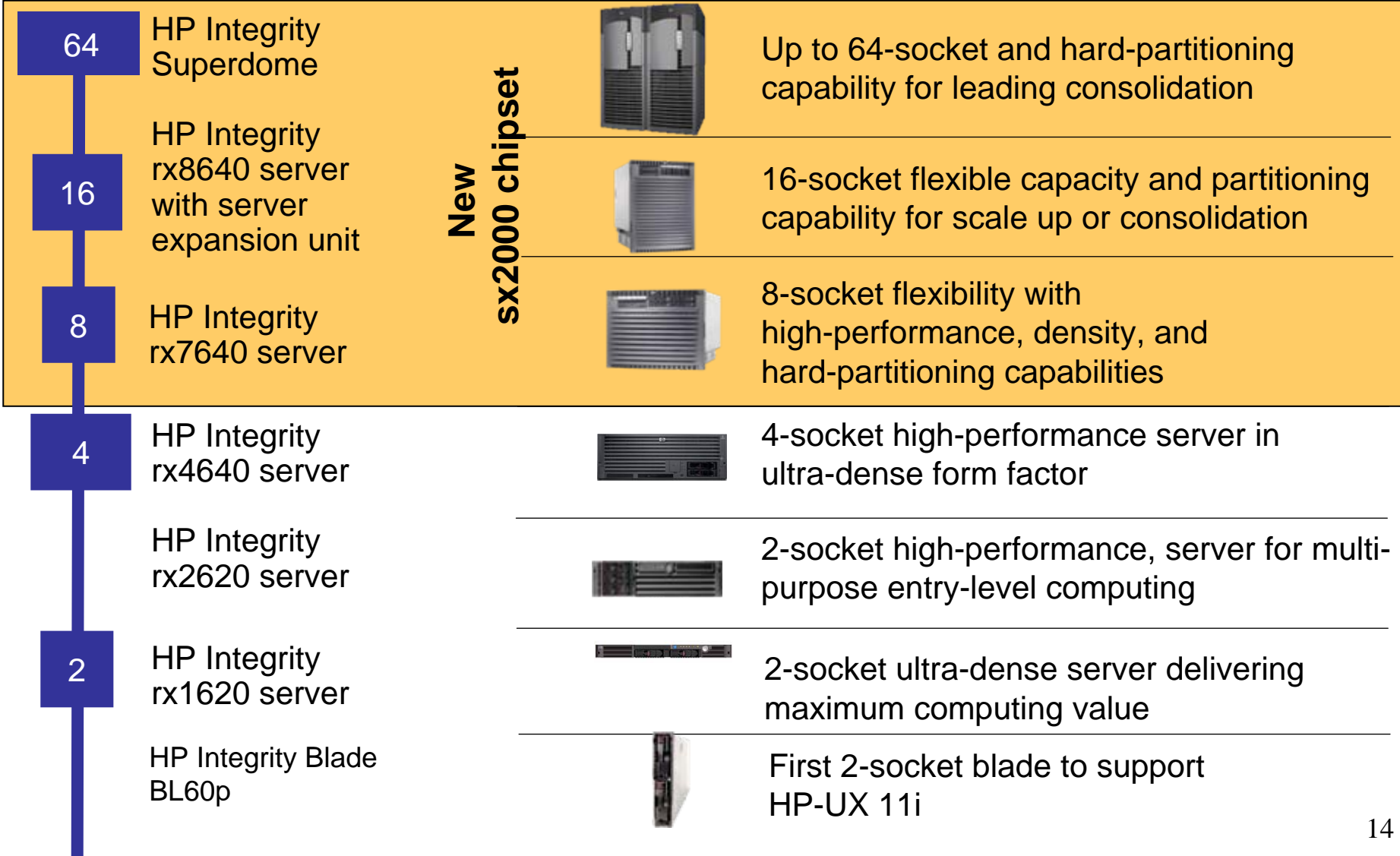
rx1620
(2 socket)



BL60p
(2 socket)

- flexible capacity
- secured availability
- simplified management

HP Integrity servers: The broadest line of enterprise systems



HP Integrity Product line basic specifications

Model/ (sockets)	Processors GHz / MB L3	Memory	Internal discs (Max. Capacity)	I/O slots	Other features
Superdome (64)	1.6 / 9MB	1TB	None	192 PCI-X	1-16 hard partitions
rx8640 (16)	1.6 / 6MB	128GB	1.2 TB	16+16 PCI-X 266	1-4 hard partitions
rx7640 (8)	1.6 / 6MB	64GB	1.2 TB	15 PCI-X 266	1-2 hard partitions
rx4640 (4)	1.5 / 4MB 1.6 / 6MB 1.6 / 9MB	128GB	600 GB	6 PCI-X	4 U
rx2620 (2)	1.3 / 3MB 1.6 / 3MB	32GB	900 GB	4 PCI-X	2 U
rx1620 (2)	1.3 / 3MB 1.6 / 3MB	16GB	600 GB	2 PCI-X	1 U
BL60p (2)	1.6 / 3MB	8GB	292 GB		6 U for 8 blades

Running **HP-UX 11i, Linux, Windows, and OpenVMS**

HP Itanium-based Integrity NonStop Server family



HP Integrity NonStop Server family

Highest service level right out of the box



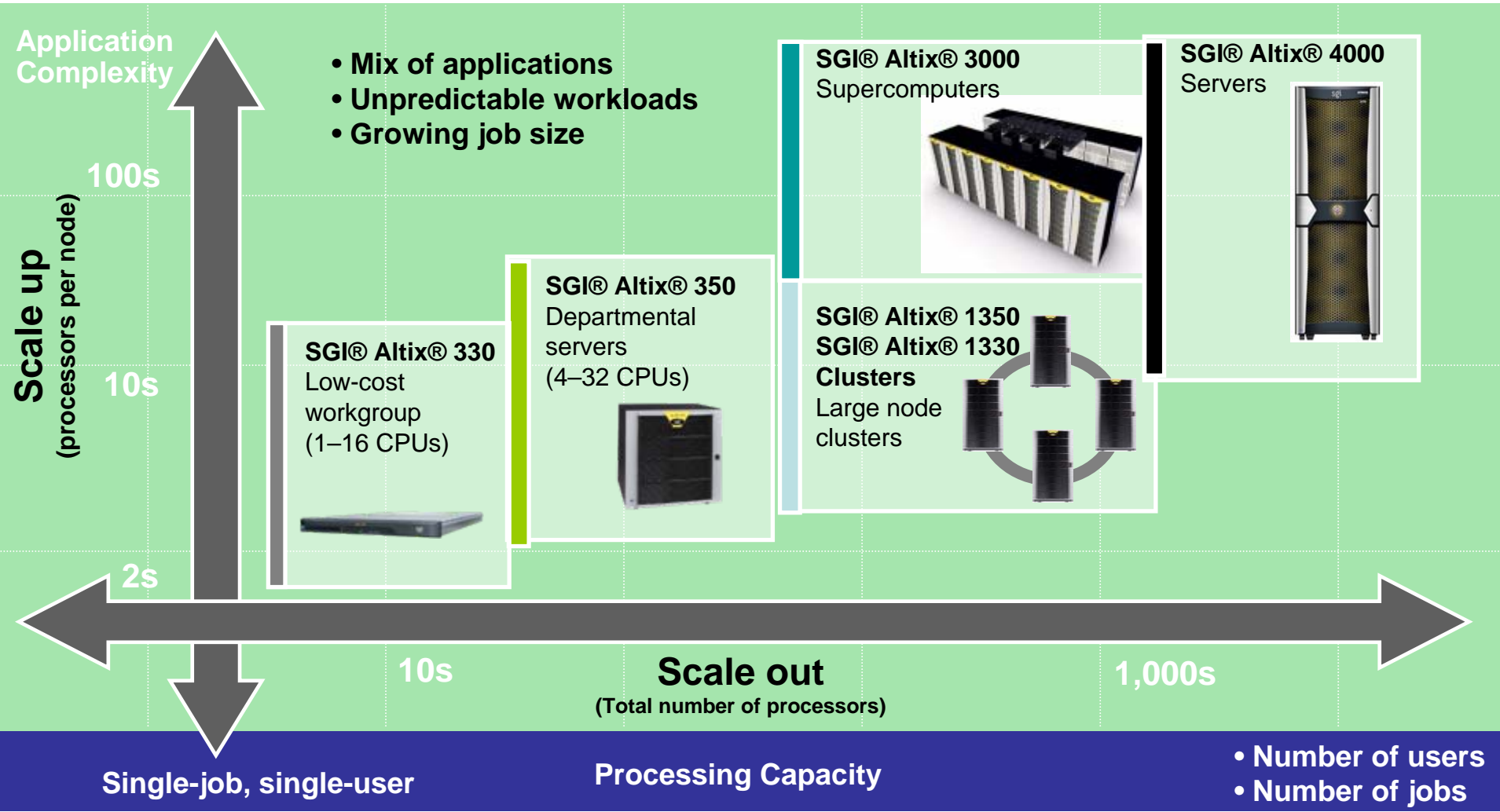
- Continuous availability with fail-safe data integrity and linear scalability
- Best-in-industry application availability at a compelling price point
- Simplified manageability with out-of-the-box capabilities

	NS14000	NS16000
Processors GHz/ MB	1.5/4MB	1.6/6MB
Processors Supported	2, 4, 8 processors	2, 4, 8, 16 processors
Memory	4 or 8 GB memory per processor	4, 8, or 16 GB memory per processor
Internal Disc Capacity	32 TB per node	473 TB per node
I/O Slots	6 I/O adapters	60 I/O adapters
Architecture	NonStop Advanced Architecture (NSAA)	NonStop Advanced Architecture (NSAA)
Availability	Dual Modular Redundancy (DMR) or Triple Modular Redundancy (TMR)	Dual Modular Redundancy (DMR) or Triple Modular Redundancy (TMR)
Scalability	Linear scalability to 255 nodes of 8 processors	Linear scalability to 255 nodes of 8 processors

SGI Itanium-based server product line

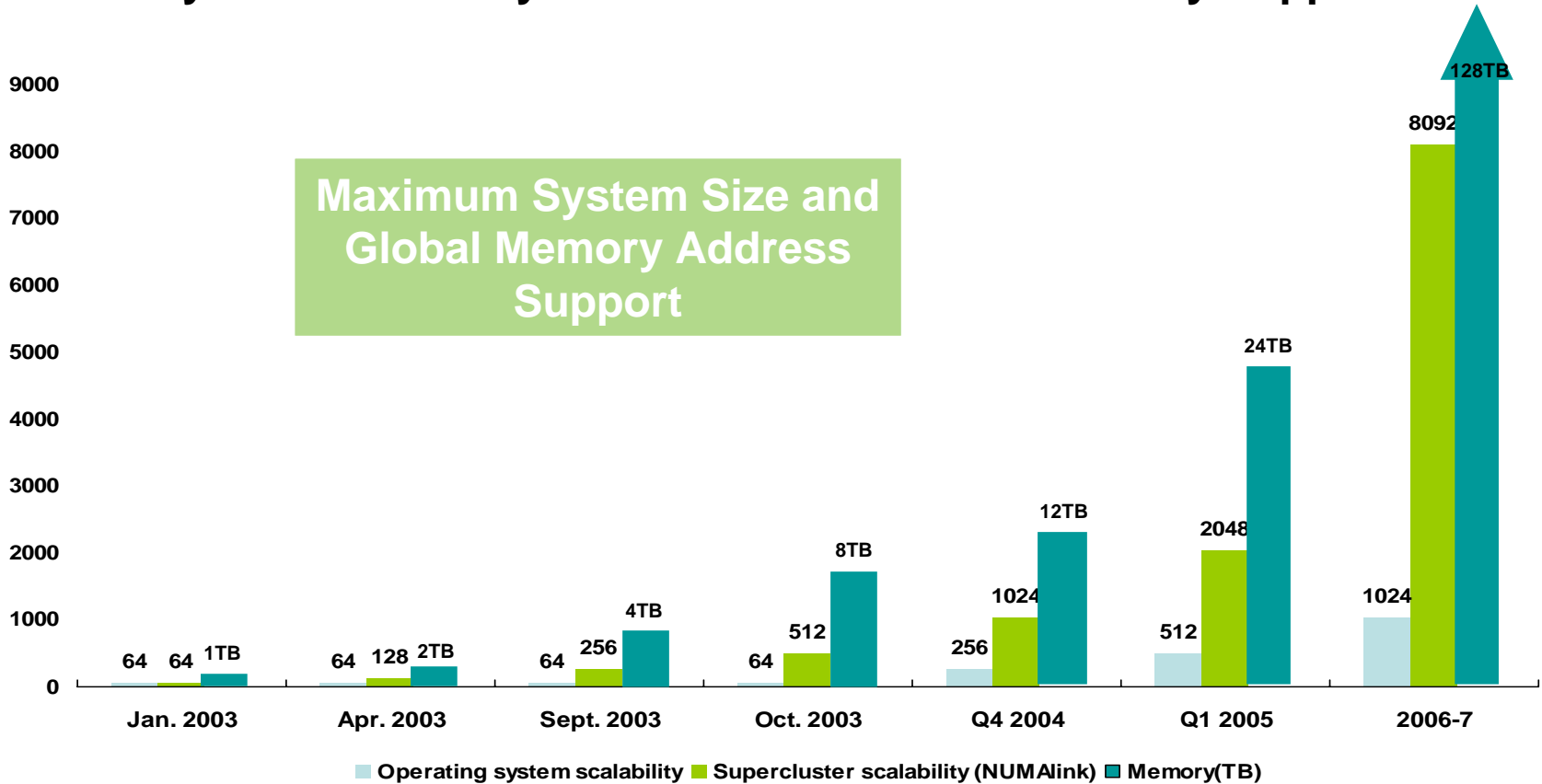


High-Performance SGI® Altix® Servers and Supercomputers





System Scalability—Processor Cores and Memory Supported



SGI® Altix® Product Comparison



	SGI® Altix® 330 Server	SGI® Altix® 350 Server	SGI® Altix® 1330 Cluster Solution	SGI® Altix® 3700 Bx2
Processors	1-16	1-32	1-128 (integrated)	16 to 512 (per OS image)
Form Factor	1U, 2P	2U, 2P	1U, 2P	4U, 8P
Density	78p in 39U	38p in 39U	78p in 39U	64P in 40U
Memory	Up to 128 GB/system	Up to 384 GB/system	Up to 128 GB/node	Up to 6 TB/system
I/O expansion	1 PCI-X slot/ module Up to six additional PCI-X slots Expandable via PA-brick	Four PCI/PCI-X slots/module, 32 slots max	1 PCI-X slot/ module Up to six additional PCI-X slots Expandable via PA-brick	12 PCI/PCI-X slots on six buses, expandable via PA, PX bricks to 95 slots
Interconnect	NUMALink™ 4 intra-node Infiniband 4x, GigaBit Ethernet cross node	NUMALink 4 – Single-plane ring, dual-plane fat-tree	NUMALink 4 intra-node Infiniband 4x, GigaBit Ethernet cross node	NUMALink 4 < 64P as hypercube, else dual-plane fat-tree

Questions?

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