

Power Systems Announcement



Franz Dornig

Smarter systems for a Smarter Planet.

Willkommen zum Webcast!



Kontaktdaten





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1 gefundenes Mitglied

Stichwörter: franz dornig



Franz Dornig  
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Meine Gruppen

Suche nach: Gruppen Artikel Meine Artikel

Ich bin Moderator der folgenden Gruppen

Gruppe

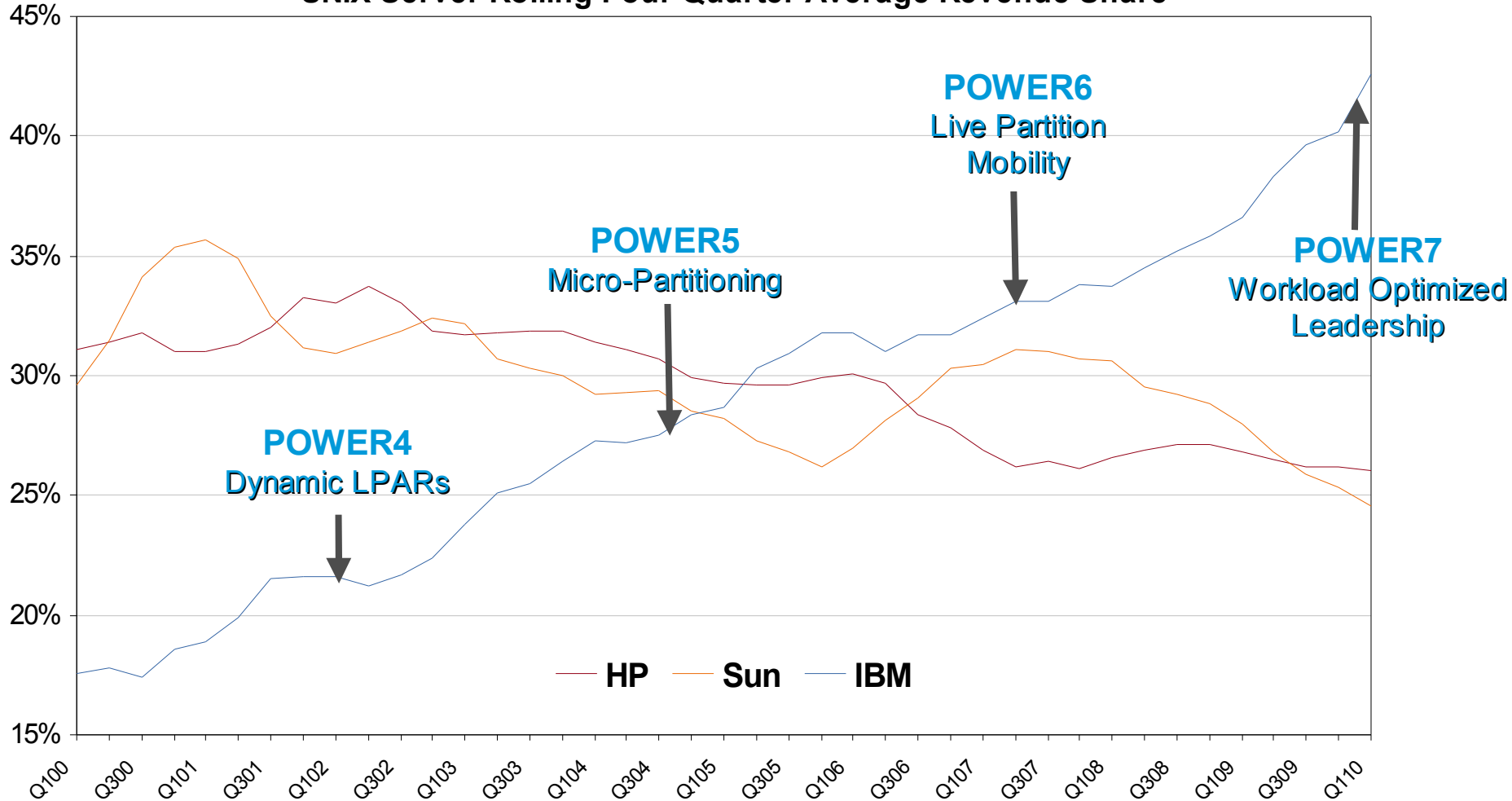


[IBM Power Systems Community](#)

IBM'S 10-year march to UNIX leadership

...the largest shift of customer spending in UNIX history

UNIX Server Rolling Four Quarter Average Revenue Share



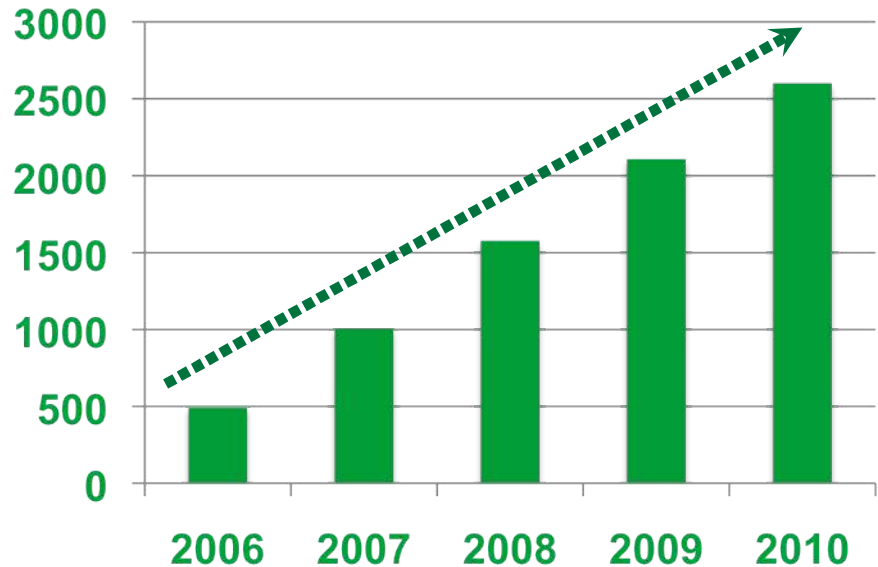
Source: IDC Server Tracker, May 2010

2,600

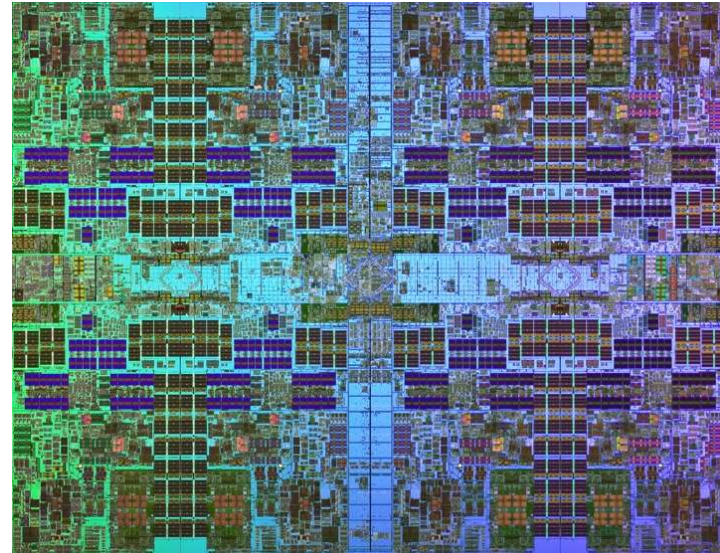
successful Power Migration Factory migrations to date.

There were over 500 Power migrations during 2009, with more than 90% from Sun and HP customers (including x86 consolidation). In 1H10 alone, Power® Systems achieved over 500 competitive migrations.

Cumulative Migration Factory Wins To Date



Technology leadership



- ✓ 4, 6 or 8 cores per socket
- ✓ 3.0 to 4.14 GHz
- ✓ Up to 4 threads per core
- ✓ Integrated eDRAM L3 Cache
- ✓ Dynamic Energy Optimization

Power Systems 2010 Launch Timeline

POWER7 Launch 1:
Feb 9

POWER7 Servers

Systems Director Editions

Benchmarks Feature SAP / Infrastructure Leadership

POWER7 Launch 2:
April 13

POWER7 Blades

IBM i 7.1 & AIX Express Edition

Benchmarks Feature Database Scalability Leadership

POWER7 Launch 3:
August 17

POWER7 HE & Express

AIX 7, PowerVM, PowerHA, Systems Director Editions

Smart Analytics, CloudBurst, ISDM, Rational Appliance, i Solution Editions,



Power 795



Leadership Power Systems Portfolio

Select from the broadest system portfolio in the industry

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New Power 795
Power 595

Power 780

Power 770
Power 570

Power 750
Power 550

New Power 720/740
Power 520

New Power 710/730

High Performance Computing

PS Blades
JS Blades

New

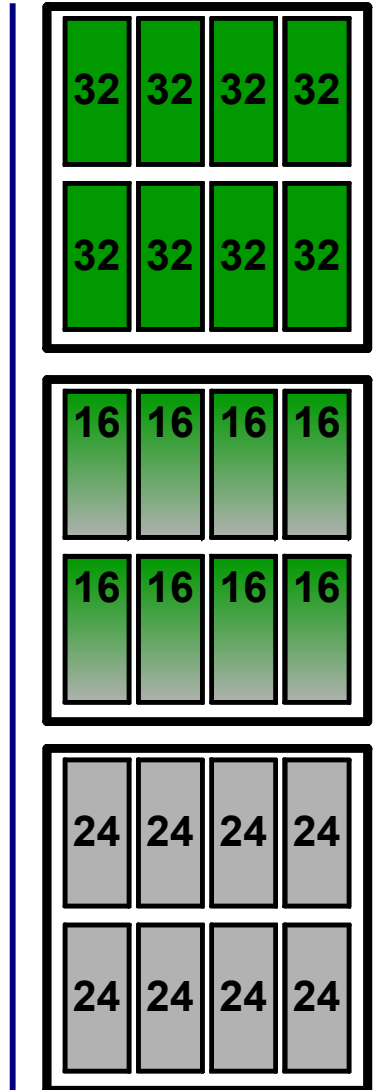


Power 755

Power 575



Power System 795



**256 Cores / 32 Core Books
MaxCore Chips (8 Cores)
@ 4.0 GHz**

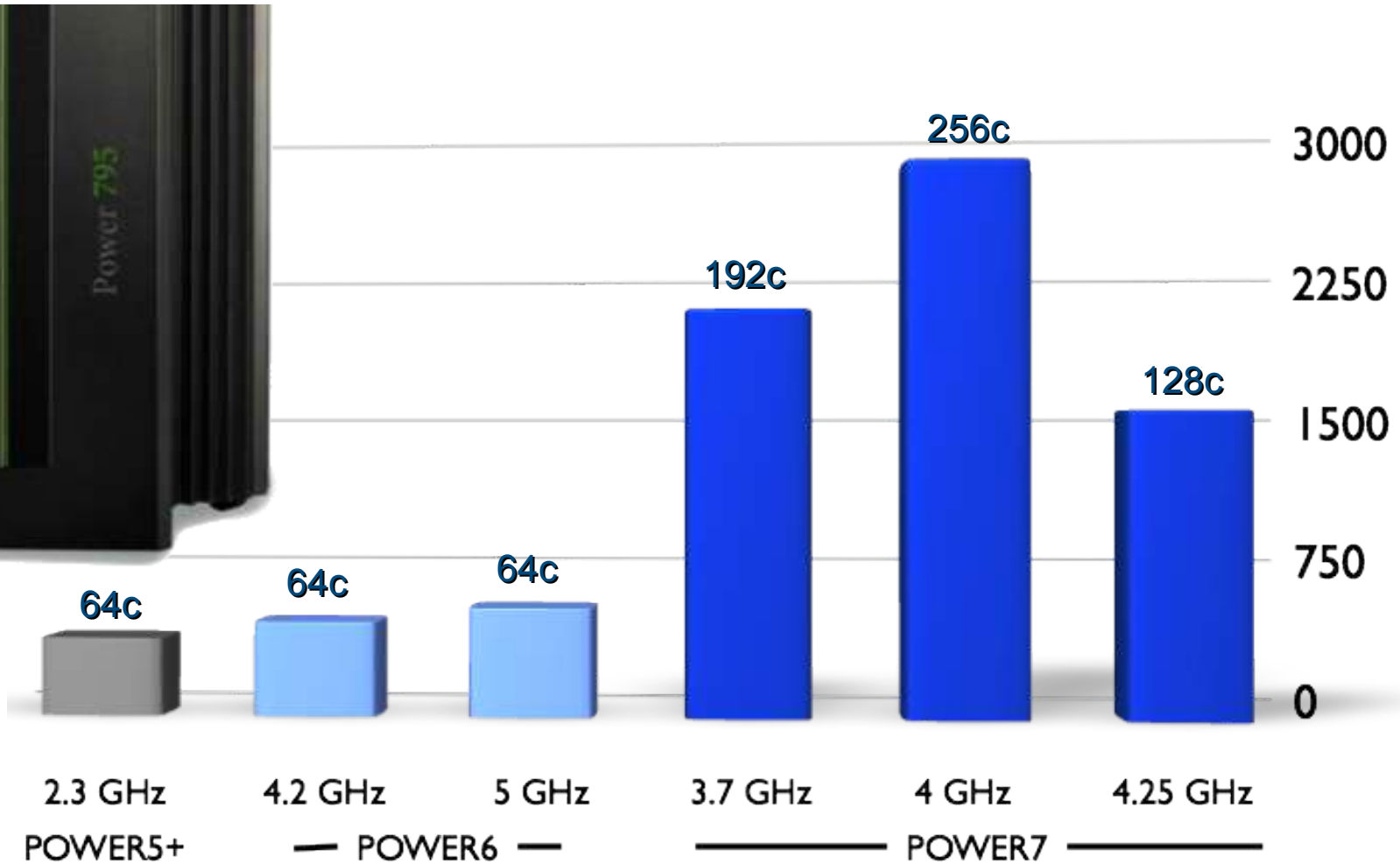
**128 Cores / 16 Core Books
TurboCore Chips (4 Cores)
@ 4.256 GHz**

**192 Cores / 24 Core Books
6 Core Chips
@ 3.72 GHz**



Power your planet.

Performance: System Capacity Moves Up with POWER7



rPerf performance for fully-configured systems.
 4GHz & 4.25GHz estimates shown of system configured with 64-way LPARs.
 3.7 GHz estimate shown of configured with 48-way LPARs.

Upgrade: Power 795 Upgrade Components

Replaced

Bulk Power Controllers (2)

Light Panel

Processor Books (up to 8)

- CPUs
- Memory
- Node Controllers (2)
- DCA (2)
- Locking bracket

System Controllers (2)

Retained

Frame

Bulk Power Supply

Network Switch

Media Drawer

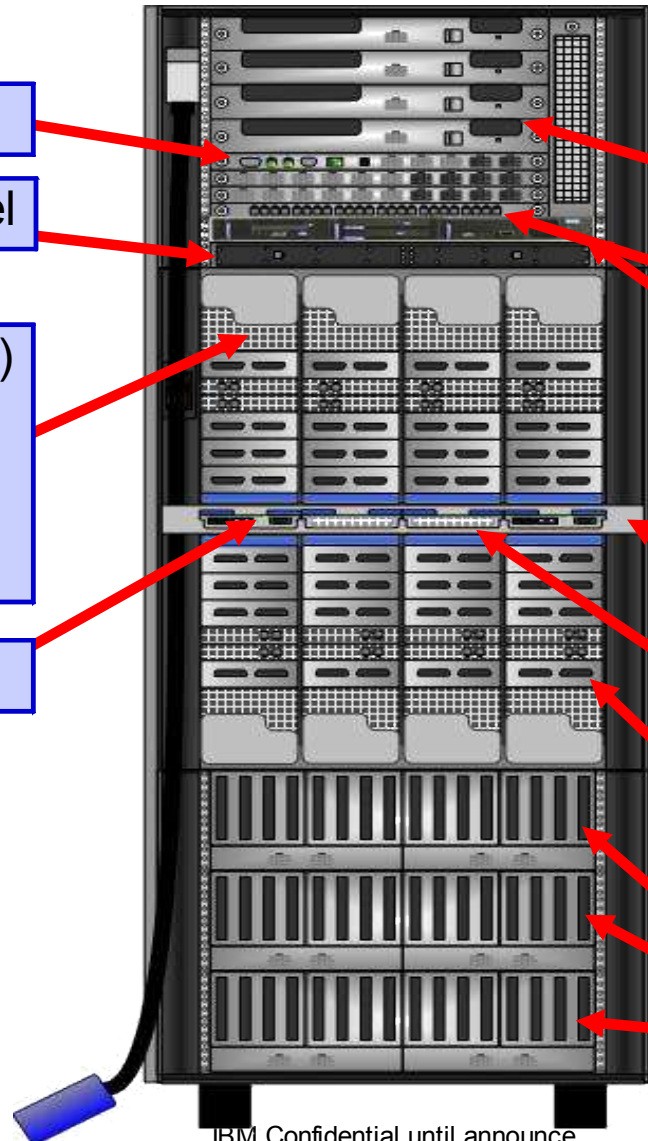
Cables

Midplane

System Clocks (2)

I/O Hub cards
Up to 4 per node

12X I/O Drawers



New IDC Study - Server Consolidation



WHITE PAPER

The Business Value of Large-Scale Server Consolidation

Sponsored by: IBM

Jean S. Bozman

Randy Perry

August 2010

EXECUTIVE SUMMARY

This paper examines the results of an IDC study of enterprise organizations that have deployed IBM Power Systems to achieve workload consolidation, improved uptime, and reduced operational costs. These systems are highly virtualized platforms that supported consolidation of workloads and provided near-term payback from the initial investment.

www.idc.com

http://www.ibm.com/common/ssi/cgi-bin/ssialias?infotype=SA&subtype=WH&appname=STGE_PO_PO_USEN&htmlfid=POL03073USEN&attachment=POL03073USEN.PDF

Alinean TCO Tool - Ultimate Business Value

Project Analysis
IBM Server Consolidation TCO Calculator for Power (Unix) for Power 595 UPGRADE to Power 795

Email a Report Create a Report

Questionnaire Solution Selection Financing TCO Analysis Benefits Investments ROI

recommendations below are based on a high level assessment of relative workload requirements for the specified systems in the Questionnaire tab and based on published benchmarks. The demonstration systems below represent a sustained level of high utilization and extensive virtualization. The new IBM POWER7 products are capable of sustained utilization rates in excess of 90%. Many factors will influence the final solution needed to consolidate your environment and those final results may be different from the tool recommendations. List pricing for the various systems models represent typical and average configurations including memory, storage, network interface cards, cables, and chassis. Cost for racks and HMC is not included. All prices are in USA \$. Prices from resellers may vary. Prices are subject to change without notice.

Will software licenses be transferred from retired systems where applicable, or purchased new?

Transferred

Would you like to include server virtualization in the analysis?

Yes

Would you like to configure the solution for high availability?

No

Server Component	Recommendation	Quantity	Price	Net Price
<input checked="" type="checkbox"/> Servers	IBM - Power System 795 3.7GHz (24)	1	471.982€	471.982€ <input type="button" value="i"/>
<input checked="" type="checkbox"/> Operating system	IBM AIX + PowerVM	1	78.785€	78.785€ <input type="button" value="i"/>
<input checked="" type="checkbox"/> Virtualization software	IBM PowerVM	1	0€	0€ <input type="button" value="i"/>
<input type="checkbox"/> Virtualization management				
<input checked="" type="checkbox"/> Database				

TCO Comparison Average by Year	Solution A: Current (As Is) Environment	Solution B: IBM Server Solution	Difference (A - B)	Difference (A - B)%
IT Costs				
Server Hardware Costs	2.626.583€	930.806€	1.695.777€	64,6%
Server Software Costs	3.767.808€	1.590.587€	2.177.220€	57,8%
Systems Management Labor	30.004€	24.068€	5.936€	19,8%
Power and Facilities Costs	124.825€	14.606€	110.220€	88,3%
Professional Services Fees	0€	0€	0€	0,0%
Total IT Costs	6.549.219€	2.560.067€	3.989.153€	60,9%

https://roianalyst.alinean.com/ibm_stg/AuthenticateLogin.do

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Power 755

Power 575



Power 710 Express

- ✓ 1 Socket 2U
- ✓ 4, 6, or 8 cores
- ✓ 3.0, 3.72, 3.55 GHz
- ✓ 64GB Memory
- ✓ 1.8TB Disk
- ✓ GA September 17, 2010

8231-E2B



Power 730 Express

8231-E2B

- ✓ 2 Socket 2U
- ✓ 8, 12, or 16 cores
- ✓ 3.0, 3.72, 3.55 GHz
- ✓ 128GB Memory
- ✓ 1.8TB Disk
- ✓ GA September 17, 2010



Power 720 Express

8202-E4B



- ✓ 1 Socket 4U
- ✓ 4, 6 or 8 cores
- ✓ 128GB Memory
- ✓ 2.4TB Disk
- ✓ I/O Drawers on 6/8 core
- ✓ GA September 17, 2010



Why 720/740 are a good fit for IBM i Clients vs. 710/730

- ✓ **Similar pricing**
- ✓ Same IBM i SW tier
- ✓ **Rack density not that important**
- ✓ Internal storage support
- ✓ Internal tape options
- ✓ Larger memory capacity
- ✓ More PCI slots
- ✓ Tower and 'office acoustics'

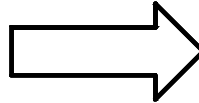
	Power 710/730	Power 720/740
Footprint	2U rack	4U rack + tower
SW tiers	same	same
Internal drives	6	8
12X I/O drawers	No	Yes
Disk only drawers	Yes	Yes
Max. GB of Memory	128	256

IBM i CPW compares

720 6 or 8-core

520

# Cores	CPW
1	4,700
2	9,500
4	18,300



# Cores	CPW	%
1	5950 ₁	27%
2	11,800 ₁	24%
4	23,800	30%
6	35,200	
8	46,800	

750

# Cores	CPW	%
4	27,900	36%
8	47,800	26%
32	181,000	

550

# Cores	CPW
4	20,550
8	37,950



740

# Cores	CPW	%
4	27,900	36%
8	47,800	26%
16	98,700	

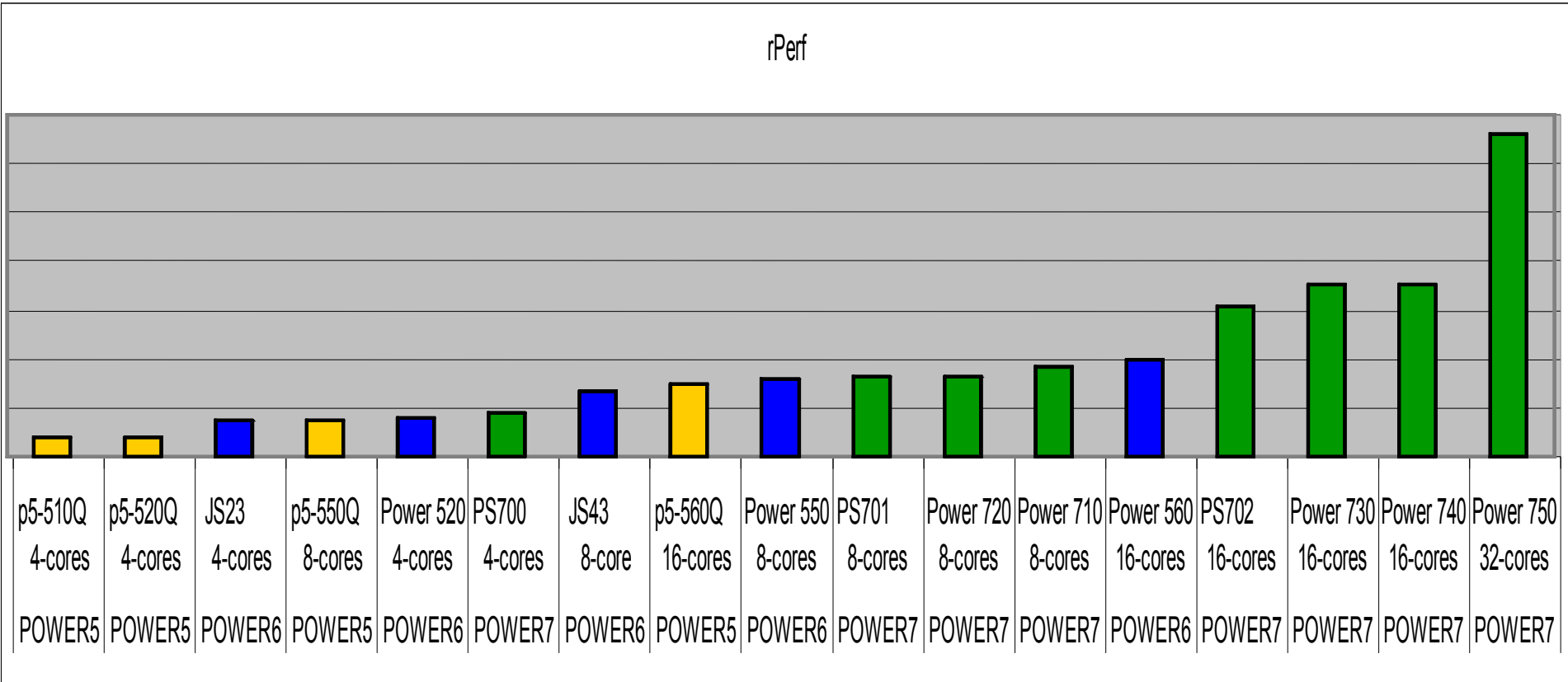


* 4 & 8 core at 3.3 Ghz

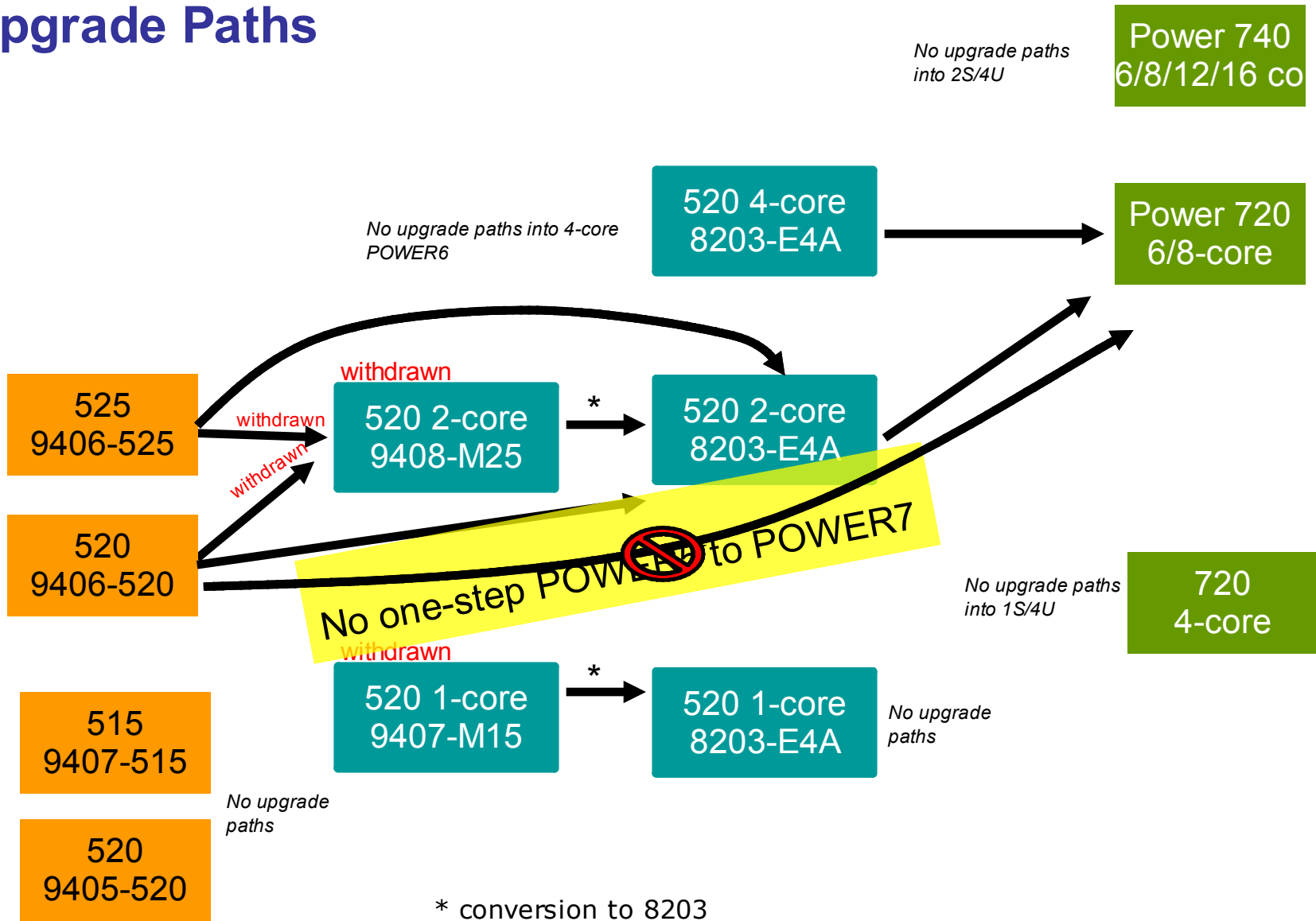
System Performance Continues Upward (P5, P6 and P7)

- ✓ *POWER7 Express servers deliver greater system performance:*
 - ✓ *4 times better than POWER5 based servers*
 - ✓ *2 times better than POWER6 based servers*

rPerf



Upgrade Paths



POWER5, POWER6, POWER7

Power 720 Pricing

HW prices only

POWER6 520 1-core Express Edition for IBM i

- ✓ 1 core 4,2 Ghz
- ✓ 8 GB memory DDR2
- ✓ 2 x 70 GB Disks
- ✓ Raid Enablement
- ✓ DVD
- ✓ DAT160 Tape
- ✓ HW Maintenance 36 Months

Starting at € 15,800

Upgrade to

POWER7 720 4-core Express Edition for IBM i

- ✓ 4 core 3,0 Ghz
- ✓ 8GB memory DDR3
- ✓ 2 x 70 GB Disks
- ✓ Raid Enablement
- ✓ DVD
- ✓ DAT160 Tape
- ✓ **HW Warranty 36 Months**



Starting at €11,700

Power 740 Express

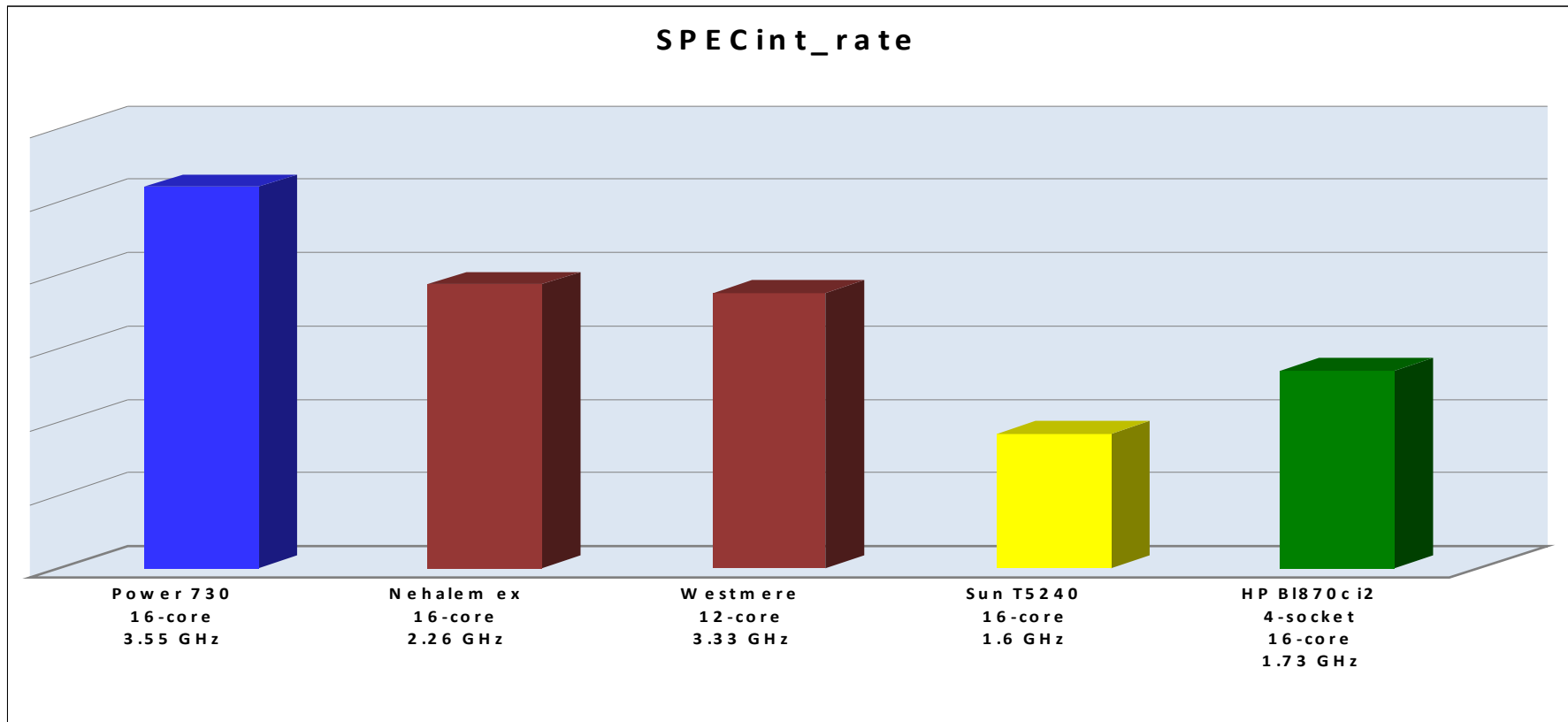


8205-E6B

- ✓ 1 or 2 Socket 4U
- ✓ 4, 6 or 8 cores per socket
- ✓ 3.3, 3.72, 3.55 GHz
- ✓ 256GB Memory
- ✓ 2.4TB Disk
- ✓ I/O Drawers
- ✓ GA September 17, 2010

Power 730: best SPECint_rate2006 performance

- ✓ **2.8X** better performance than **Sun T5240** server
- ✓ **1.7 to 2.2X** advantage versus **Nehalem-EX** and **Westmere-EP** with virtualization
(~20%-40% performance degradation with VMWare)
>30% better bare metal performance versus **Nehalem-EX** and **Westmere-EP**
- ✓ **1.9X** the performance of new **HP Integrity Blade BI870c**



4 times better

Improve performance and energy efficiency with increased processor and memory capacity for a server that can seamlessly replace your existing **p5-510** systems

The industry's fastest 2U, 1-socket server:

- ✓ **4X better system performance**
- ✓ **2X better performance per core**
- ✓ **Unique Active Memory Expansion**
- ✓ **Simplified deployment and maintenance with Systems Director**
- ✓ **Improve energy efficiency**
- ✓ **run AIX, Linux and/or IBM i applications simultaneously**



IBM Power 710 Express



Leverage PowerVM and consolidate four p5-510 systems and save ~**\$400 per month** in HW support costs while simplifying your infrastructure and saving on energy, space, management and maintenance costs

2 times better

The ability to grow within similar system size and energy envelope while improving processor and memory capacity, virtualization capability, energy efficiency and performance for the price vs. the current Power 520

The industry's most flexible entry server:

- ✓ 2X better system performance than a Power 520
- ✓ Up to 21% more performance per core can lower software licensing costs
- ✓ Unique Active Memory Expansion
- ✓ Simplified deployment and maintenance with Systems Director
- ✓ Improve energy efficiency by 2X
- ✓ run AIX, Linux and/or IBM i



IBM Power 720 Express



Move from a p5-520Q to a Power 720 and save ~\$200 per month in HW support costs

Power your planet.

47 to 1

Number of Sun SPARC Enterprise T2000s that can be consolidated into a single IBM Power 730 2-socket system.

Save 95% of the cores for software licensing, 97% on floor space, and 95% on energy.



IBM Power 730 Express



See Power 710 server consolidation of T2000 servers for full substantiation detail
Source: SPECijbb2005. For the latest SPEC benchmark results, visit <http://www.spec.org>.

POWER7 powers IBM Software

Delivering workload optimized systems

38% lower cost

DB2 pureScale on Power 780 has lower cost per TPM than Oracle RAC on Nehalem¹

Announcing:
IBM pureScale
Application System

100% better performance

Business analytic queries run up to 100% faster on POWER7 than on Nehalem

Announcing:
IBM Smart Analytics
System 7700

Transaction Processing

and Database



Analytics



POWER7

Announcing:
New compilers optimized
for POWER7 – Linux &
AIX



Business
Applications



Web, Collaboration
and Infrastructure

Announcing:
IBM Cloudburst
IBM Service Delivery Mgr

73% better performance

Using single **JVM of WebSphere** on POWER7 versus competitive application server on Nehalem²

40% lower cost

Lotus Domino on POWER7 supporting 40,000 users versus Microsoft Exchange on Nehalem³

¹ Prices are list prices in USD as April 13, 2010. Prices from resellers may vary. All prices are subject to change without notice. IBM DB2 9.7 and Oracle Enterprise Edition, Oracle Real Application Clusters and Oracle Partitioning. See Oracle vs. DB2 savings claim substantiation for more details. ²Exchange on Nehalem configuration from HP's sizing tool. HP sizer for Microsoft Exchange Server 2010. ³As much as 40% improved throughput vs. Power in Tivoli portfolio for the identify duplicated process and event processing bus.

Superior Virtualization with POWER7 and PowerVM

- PowerVM
- 3 Editions to suit broad range of client needs
- For AIX, IBM i, Linux/Power and Linux/x86 workloads
- Virtualization performance and scalability superior to x86 blades



Virtualization Scalability	VMware vSphere (on 2-socket Nehalem blade)	PowerVM (on POWER7 blade)
Virtual CPUs per VM	8	16
CPU threads per blade	32	64
Micro-partitioning granularity to .01	No	Yes
Dynamic virtualized I/O	No	Yes
Cross-platform virtualization	No	Yes (PowerVM Lx86)

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DANKKE!!

