Deploying PeopleSoft on Blade Systems

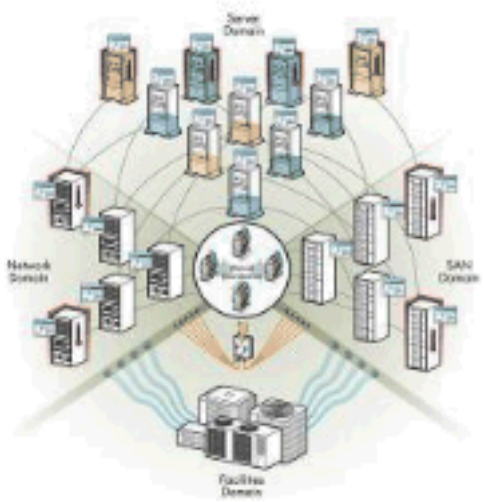
Michael St-Jean
Hewlett-Packard Company, Oracle Global Alliances

Colorado Convention Center , 407 , Thursday, April 17, 2008 , 9:45 AM - 10:45 AM

It's a racked, stacked and wired world

The root cause of datacenter pain

The functionality of today's datacenter is constrained by the form of their building blocks and the processes required to manage them



Inflexible: Static and hardwired

Manually coordinated: Change requires too many people and steps

Over-provisioned: Wasting power, cooling, space, people and money

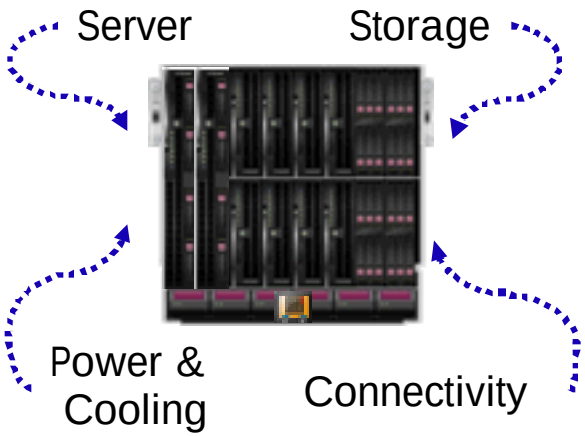
Managed 1 by 1: Processes are unique, with unique tools and inconsistency

Expensive: More expensive to own than to build

Because of conventional IT's limited form and processes, the potential to improve the operational efficiency, cost and flexibility are limited

The HP BladeSystem approach to simplify infrastructure

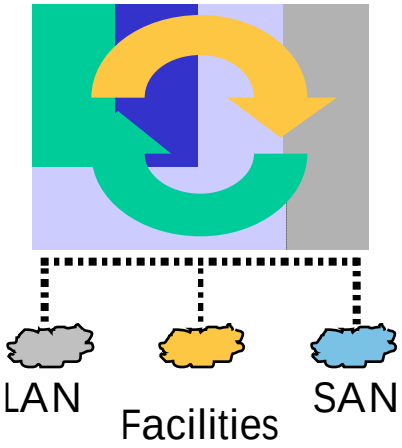
Consolidate



- Modularize and integrate components
- Surround with intelligence
- Manage as one

Reduce time and cost to buy, build and maintain

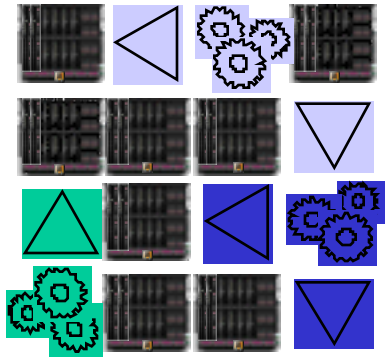
Virtualize



- Create logical, abstracted connection to LAN / SAN
- Pool and share server, storage, network, and power

Greater resource efficiency and flexibility

Automate



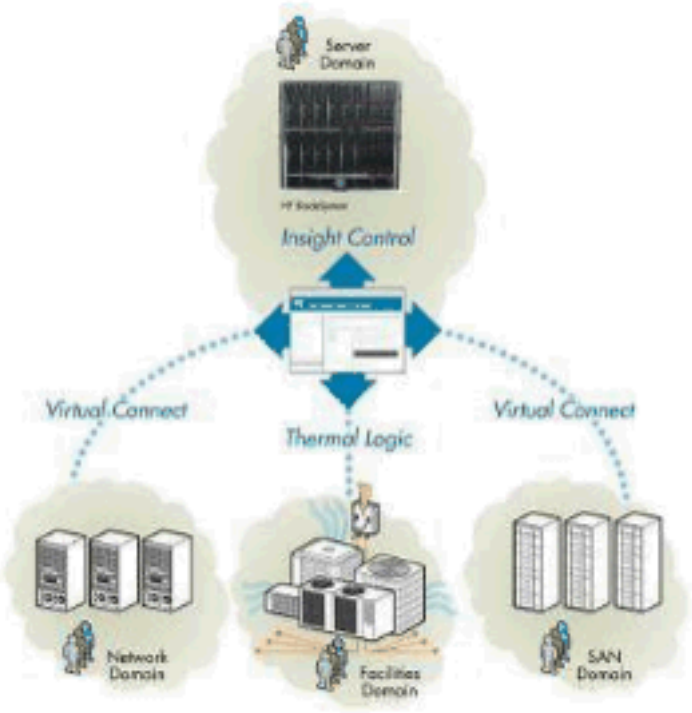
Policy and Task

- Simplify routine tasks and processes to save time
- Keep control

Free IT resources for revenue bearing projects

The Bladed World

Time-smart, change-ready and cost-savvy system to give you the greatest control, most flexibility and best savings for business.



Provisioned JIT: Pre-provisioned and wired-once. Ready for change.

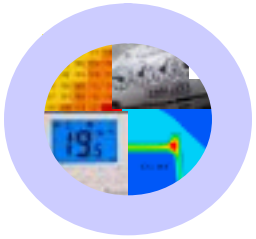
Automated coordination: Domains and people are isolated from the upheavals of change

Virtual: Devices and connections managed as pools of resources.

Lights-Out, '1 to n' management: Group management. Processes are reduced, streamlined.

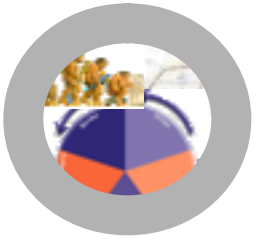
Most efficient: Less expensive to own and buy than conventional IT

BladeSystem Benefits



Energy-thrifty

- HP Thermal Logic
- HP Active Cool Fans
- PARSEC cooling architecture
- HP Dynamic Power Saver
- HP Power Regulator



Change-ready

- HP Virtual Connect Architecture
- HP Insight Control
- HP Virtual Machine Manager
- HP Virtual Server Environment

Time-smart

- HP Onboard Administrator
- HP Automation Engine
- HP Virtual Connect Architecture

Cost-savvy

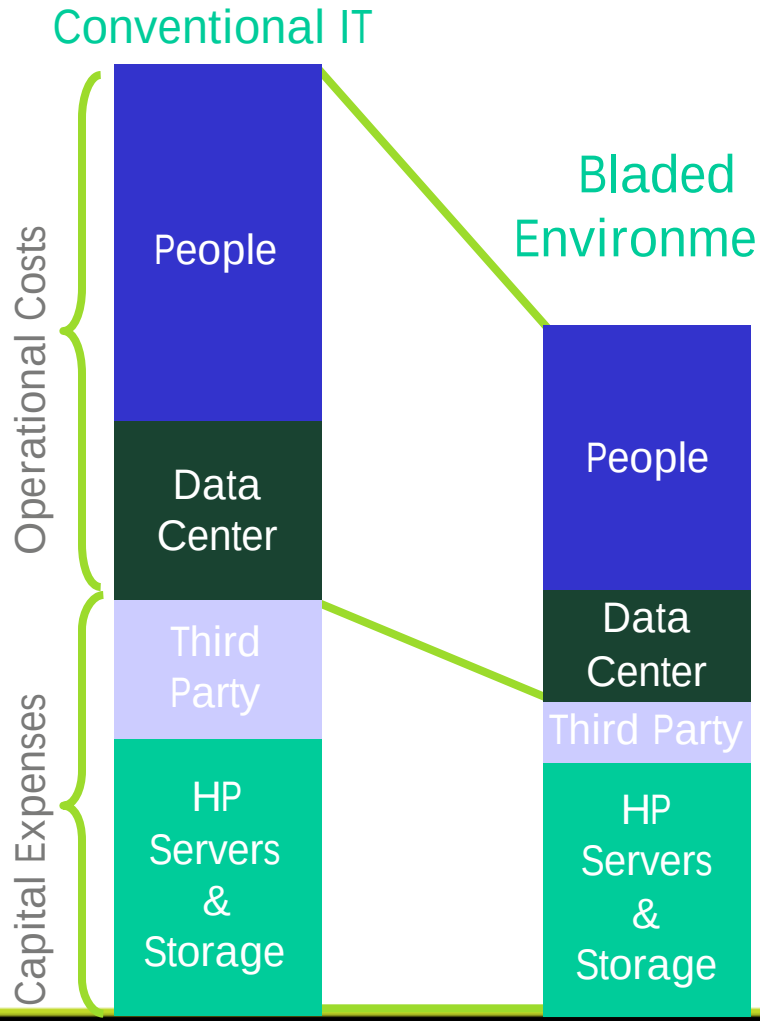
- Consolidated from the start
- Modular system components
- Streamlined infrastructure design

HP BladeSystem c7000

HP BladeSystem c3000

BladeSystem c-Class

Delivering tangible savings for business



Lower TCO
Simplicity
Greater Agility

- ü Reduce or eliminate lengthy processes
- ü Simplify procedures
- ü Reduce complexity

- ü Lower power, fewer cables
- ü Less space

- ü Reduced Ethernet / FC costs
- ü Lower cost HP management tools

- ü Integration of components
- ü Sharing of resources
- ü Infrastructure control software

Cost comparisons favor blades

Acquisition cost summary (8 servers)

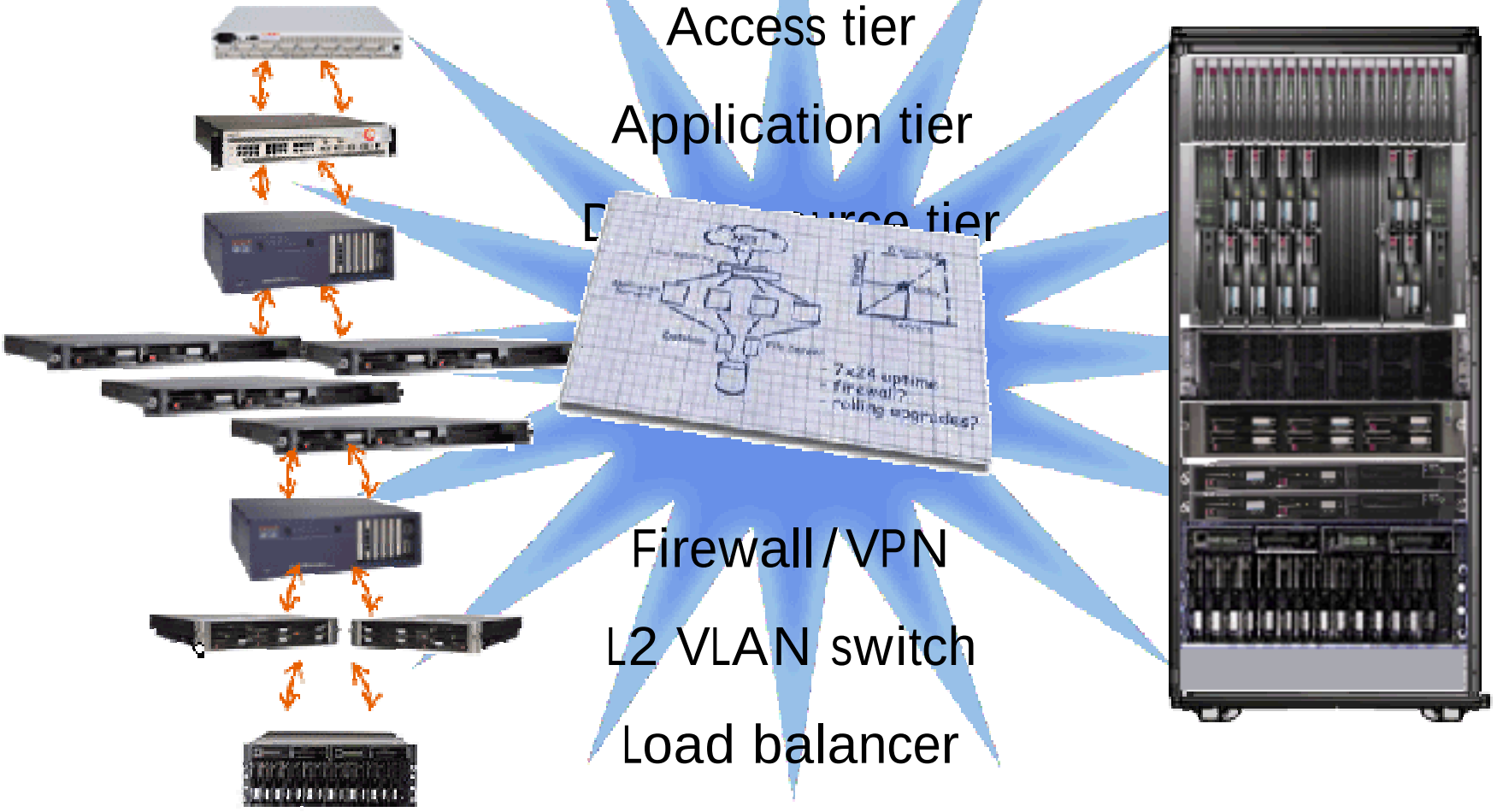
Summary of Acquisition Cost differences (Blade systems vs. 1U rack-mounted servers)	SAN connected	No SAN connectivity
10/100 Network	**BladeSystems are ~4% less costly**	**BladeSystems are ~6% more costly**
GbE Network	**BladeSystems are ~16% less costly**	**BladeSystems are ~11% less costly**

Note: The above summary ignores blade system savings from datacenter space, power & cooling, installation & operational efficiencies.

Whitepaper: TCO/NPV, acquisition, installation, operation, datacenter efficiency

Tool: New interactive TCO tool available

HP Blade systems: Integrates servers, network, and storage



Rack-mounted server architecture

Blade system architecture

Solutions with less effort

Less cost, wires, time and power

Storage + Servers in one box, managed together

Ease of customization and upgrade

Rapid response to users

Fast to create and deploy

Secure with a rapid ROI; low TCO

NAS or iSCSI Shared Storage
HP SB600c All-in-One

Security and Remote Access
MS Forefront, Exchange 07 Edge, VPN

Core Services: AD, DHCP/DNS, File/Print
Collaboration: SharePoint
Management: System Center, HP SIM

Simple Connectivity

Redundant Connectivity

Oracle 11g Database
BL465c with SB40c

PeopleSoft Application Server
BL465c

Oracle Application Server
BL465c

Blade Portfolio

BladeSystem Enclosures

#1 worldwide

HP BladeSystem c7000

Adaptive infrastructure in box optimized for large datacenters

16 server and storage blades
8 high-speed networking bays

New 2007

HP BladeSystem c3000 in rack or tower versions

Versatile, hassle-free BladeSystem ideal for small spaces with big computing and storage needs

8 server and storage blades
4 high-speed networking bays

Similarities and differences

- Same blades and network options
- Run same OS and applications
- Supports Virtual Connect, Thermal Logic, Insight Control
- Both become killer platforms when combined with virtualization

- Lowest cost per blade
- 110V & 220V power—single and three phase power
- 16 blade bays; 8 high-speed network bays

- Lowest total cost
- 110V or 220V single phase power; Optional DC power (phase 2)
- 8 blade bays; 4 high-speed network bays

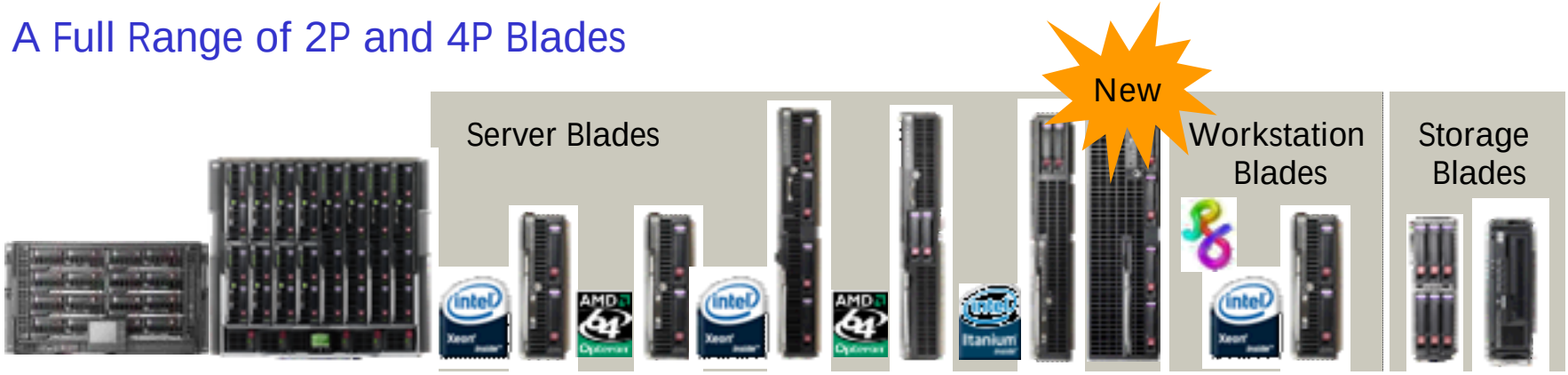
For small sites, c3000 helps tackle the top IT projects on your business short list

In an all-in-one design, midsize businesses can:

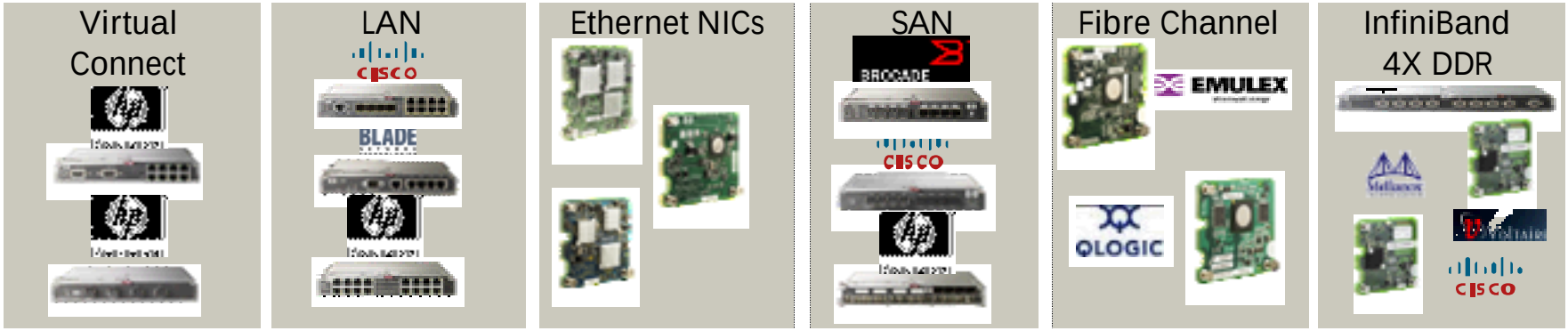
- Grow the business
  - Increase revenue, business insight, and productivity
  - Upgrade CRM, ERP, BI, Exchange, DB, infrastructure
- Protect the business
  - Add compliance, data protection, and simplify storage expansion
  - Implement disaster recovery, back-up, archive, SAN
- Simplify the business
  - Virtualization, consolidation
  - Streamline IT costs, save time, power, and simplify change

Greater choice with a robust blade ecosystem

A Full Range of 2P and 4P Blades



Interconnect choices for LAN, SAN, and Scale-Out Clusters



Unified Management

Choice of Power

Complete Services

Assessment
Implementation
Support

HP BladeSystem c-Class server blades

Model	BL460c	BL465c	BL480c	BL680c	BL685c	BL860c	BL870c
Processors	2-socket dual- or quad-core Intel Xeon	2-socket dual-core AMD Opteron 2000 Series	2-socket dual- or quad-core Intel Xeon	4-socket dual- or quad-core Intel Xeon	4-socket dual-core AMD Opteron 8000 Series	2-socket Intel Itanium2	4-socket Intel Itanium2
Memory	FBDimm 667MHz (8) DIMMs / 32GB	DDR2 667MHz (8) DIMMs / 32GB	FBDimm 667MHz (12) DIMMs / 48GB	FBDimm 667MHz (16) DIMMs / 128GB	DDR2 667MHz (16) DIMMs/64GB	DDR 533MHz (12) DIMMs/48GB	DDR 533MHz (24) DIMMs/96GB
Management	iLO 2 Standard Blade Edition	iLO 2 Standard Blade Edition	iLO 2 Standard Blade Edition	iLO 2 Standard Blade Edition	iLO 2 Standard Blade Edition	iLO 2 Standard Blade Edition	iLO 2 Standard Blade Edition
Internal HP Storage	(2) SFF SAS/SATA bays	(2) SFF SAS/SATA bays	(4) SFF SAS/SATA bays	(2) SFF SAS/SATA bays	(2) SFF SAS/SATA bays	(2) SFF SAS bays	(4) SFF SAS bays
RAID	RAID 0/1 controller w/ BBWC option	RAID 0/1 controller w/ BBWC option	RAID 0/1/5 controller w/ BBWC option	RAID 0/1/5 controller w/ BBWC option	RAID 0/1 controller w/ BBWC option	RAID 0/1 controller	RAID 0/1 controller
NICs	(2) GbE MF NICs	(2) GbE MF NICs	(2) GbE MF NICs (2) GbE Standard NICs	(2) GbE MF NICs (1) GbE dual NICs (1) 10/100 mgmt	(2) GbE MF NICs (2) GbE Standard NICs	(4) GbE Standard NICs	(4) GbE Standard NICs
Mezzanine slots	2	2	3	3	3	3	3

HP StorageWorks Storage Blades

Current product line-up

HP StorageWorks SB40c

Direct Attach Storage Blade

Cost effective and simple Storage Expansion for BladeSystem c-Class servers

HP StorageWorks Ultrium SB448c and SB920c

Tape Blade

Data Restoration & Data Protection —

Direct and network backup of data within the enclosure

HP StorageWorks AiO SB600c

New!

AiO Shared Storage Blade

- Shared file and application storage
- Application centric management
- Integrated data protection

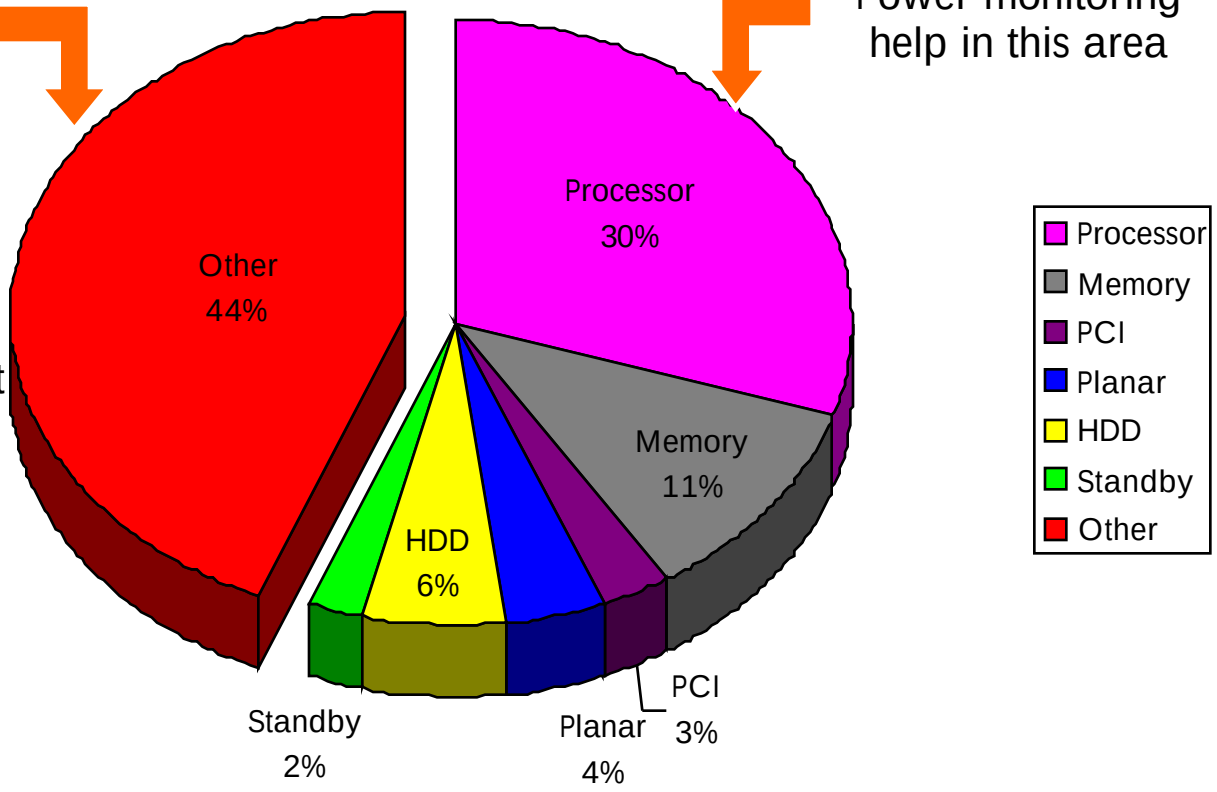
What's using the power?

- The processor power growth is the largest single contributor but there are many other areas- the more you pack into a server the more power it needs!

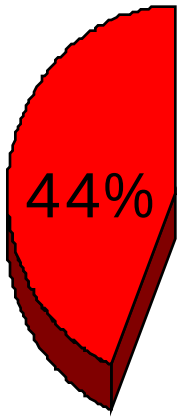
BladeSystem helps in this area

Power Regulator for Power monitoring help in this area

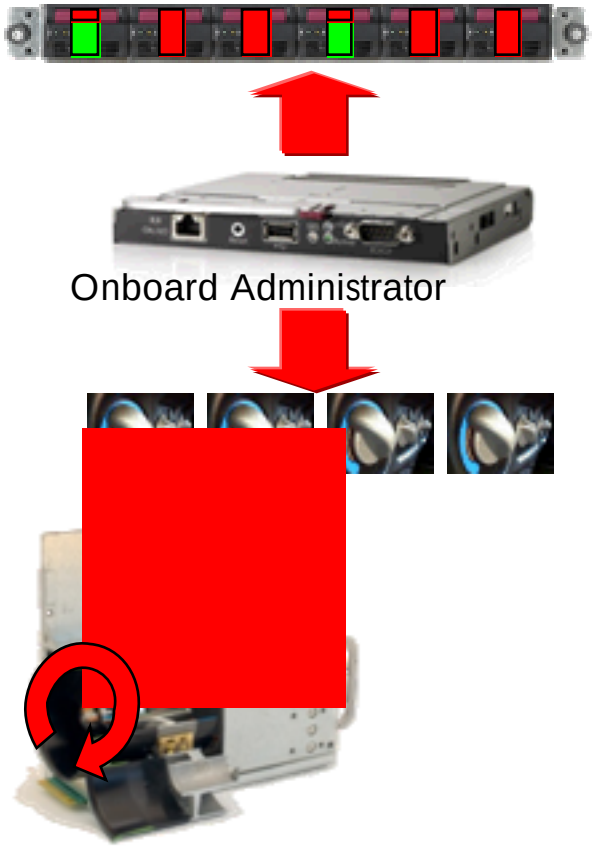
OTHER includes
- AC to DC Transitions
- DC to DC Deliveries
- Fans and air movement



Thermal Logic technology with c-class



- HP Dynamic Power Saver
  - Enables the enclosure to operate at optimum efficiency. Real time monitoring to achieve the best efficiency
- HP Thermal Logic technology
  - Dynamically adapt thermal controls to optimize performance, power, and cooling capacity to maximize power budget and ensure availability.
- Active Cool fans
  - Control algorithm to optimize Airflow, Acoustics, Power, and Performance



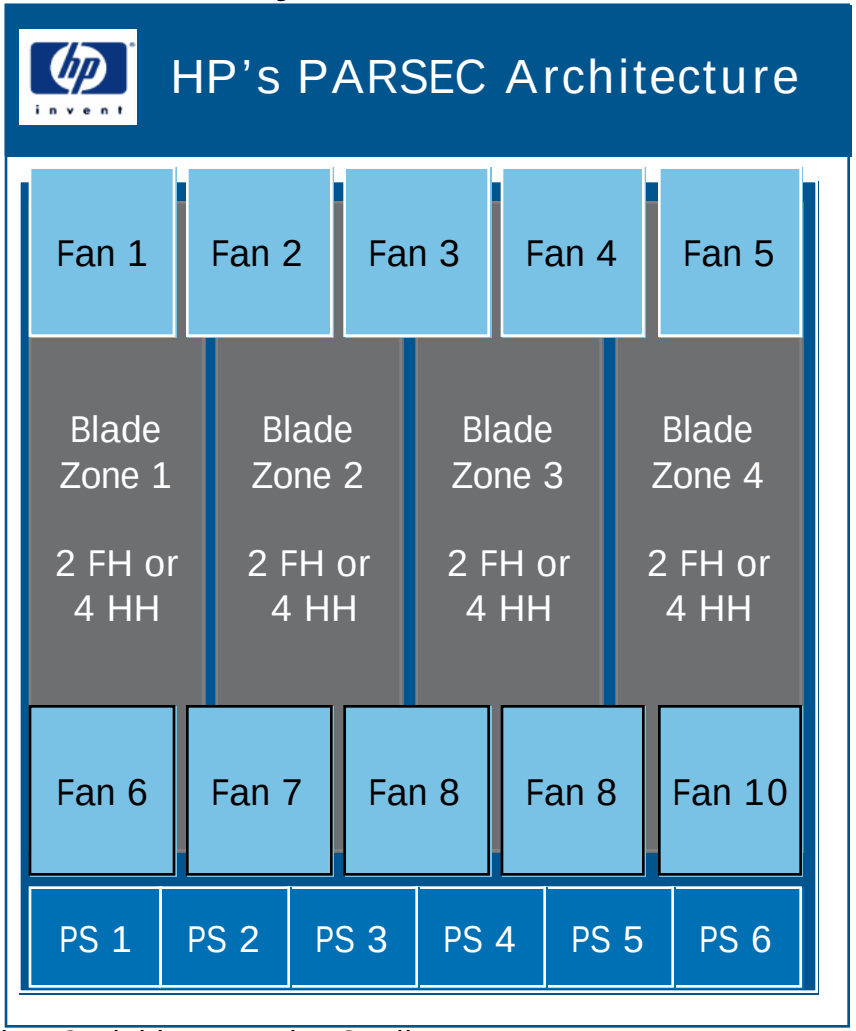
Instant thermal monitoring Real-time heat, power and cooling data

Control algorithm to optimize Airflow, Acoustics, Power, and Performance

HP's new PARSEC* architecture delivers maximum cooling and power efficiency

Maximum efficiency and cost savings

- **Concentrated cooling** for blades in 4 zones
- **Redundant**: Impact of lost fan is isolated to that zone
- **Flexible design** to meet cooling requirements of next generation systems
- **Cooling capacity scales** with number of blades deployed
- **Airflow speeds adjust** to unique cooling demands of devices in specific zone

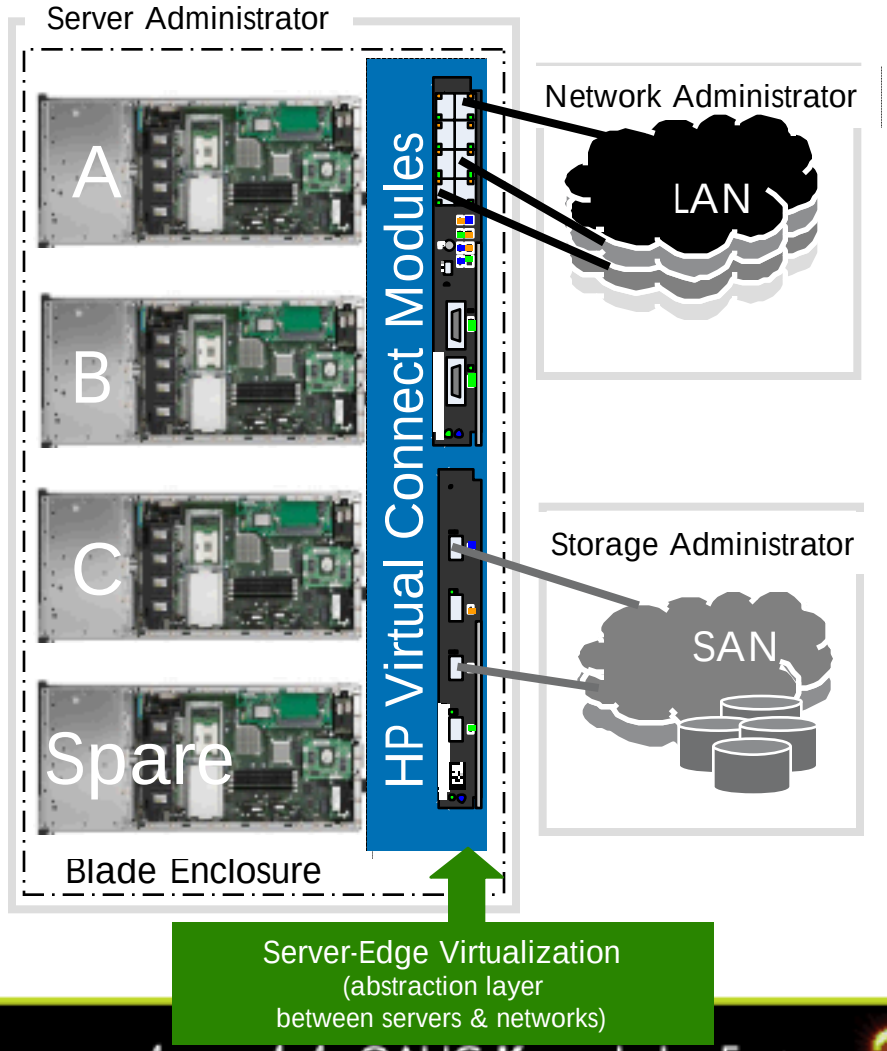


PARSEC = Parallel Architecture for Redundant Scalable Enterprise Cooling

HP Virtual Connect Architecture

Boosts data center productivity with server-edge virtualization

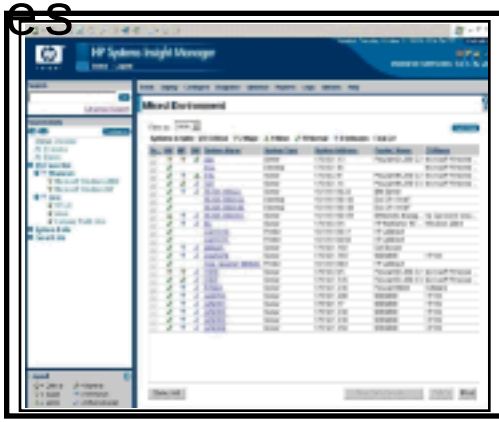
- More efficient use of costly resources: Server admins can now work faster and by themselves without disrupting Network and Storage admins.
- Simplifies networks: Reduces cables without adding switches. No new FC domains!
- Keeps end-to-end connections of favorite brands (Cisco, BNT, Brocade, McData, etc.)
- Cleanly separates server from LAN & SAN
- Maximum flexibility, easy to use: add, move, replace, upgrade without affecting LAN or SAN



HP System Management of Blades

Remotely manage multiple blade types

HP Systems Insight Manager offers an easy-to-use GUI and command-line interface for multi-OS, multi-system management

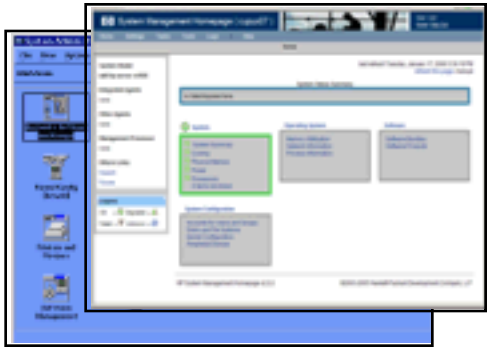


Integrated Lights Out (iLO) allows remote management of blades from any networked system, supporting various virtual media

Onboard Administrator facilitates remote management of the enclosure and many blade parameters from any networked system

System Management Homepage

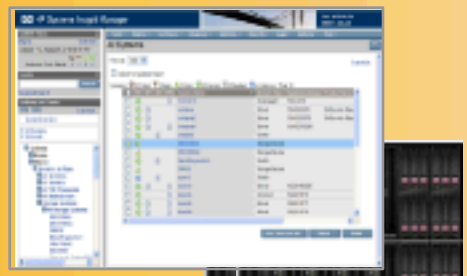
provides powerful, easy-to-use, Web-based visualization and management

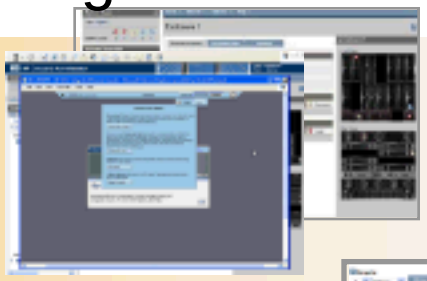


HP Insight Control Environment: Everything for BladeSystem management

HP Systems Insight Manager 5.1

- Central management services
- Unified server and storage mgmt



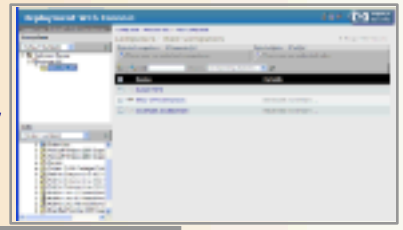


Always available remote administration

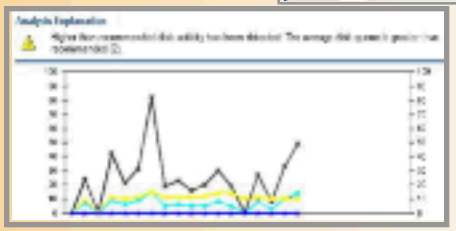
New

Power Measurement & Regulation

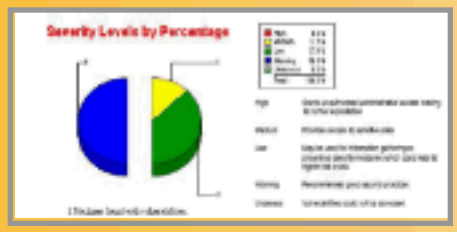
Embedded management



Rapid server and OS deployment



Proactive performance management and bottleneck analysis



Consolidated vulnerability & patch management

PeopleSoft and HP BladeSystem

Managing Growth

First Deployment is a full Stack implementation of PeopleSoft Enterprise on an AMD b465c Server Blade with a SB40 Storage Blade

Test and Development is a requirement to assure proper management of production environment.

Full Stack for both servers equals Oracle 10g Database + PSFT App + Oracle Application Server (OAS)

Production Server

B465c & SB40

Test / Development Server
BL465c & SB40

Core Services: AD, DHCP / DNS, File / Print
Collaboration: SharePoint
Management: System Center, HP SIM

Simple Connectivity

Reporting server (Crystal, nVision, Adobe, etc.)

(Windows only)
BL465c

Managing Growth

Original full stack server becomes database server only on AMD b465c Server Blade with a SB40 Storage Blade

Test and Development (Full Stack) is a requirement to assure proper management of production environment.

Database Server

B465c & SB40

Oracle Application Server and PSFT Application Server

Core Services: AD, DHCP/DNS, File/Print

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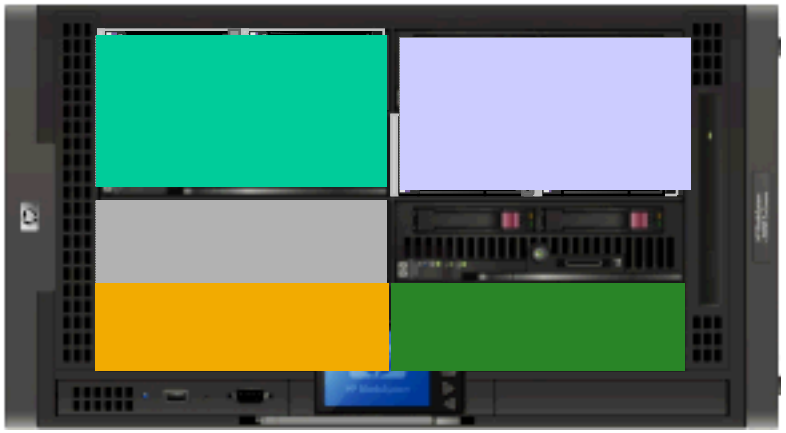

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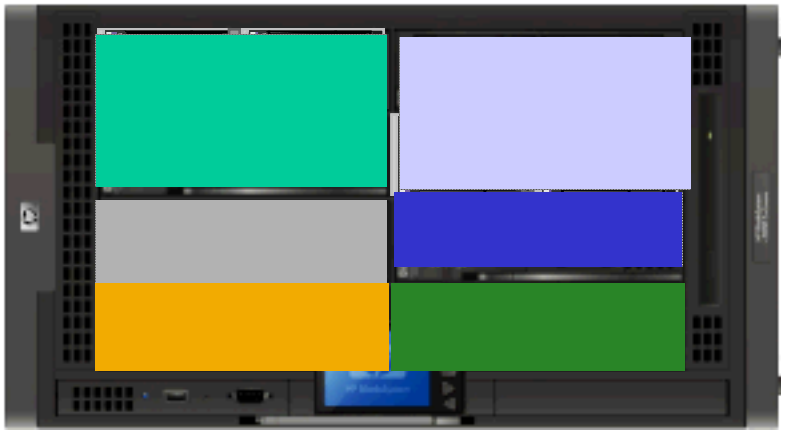


Simple Connectivity

Redundant Connectivity

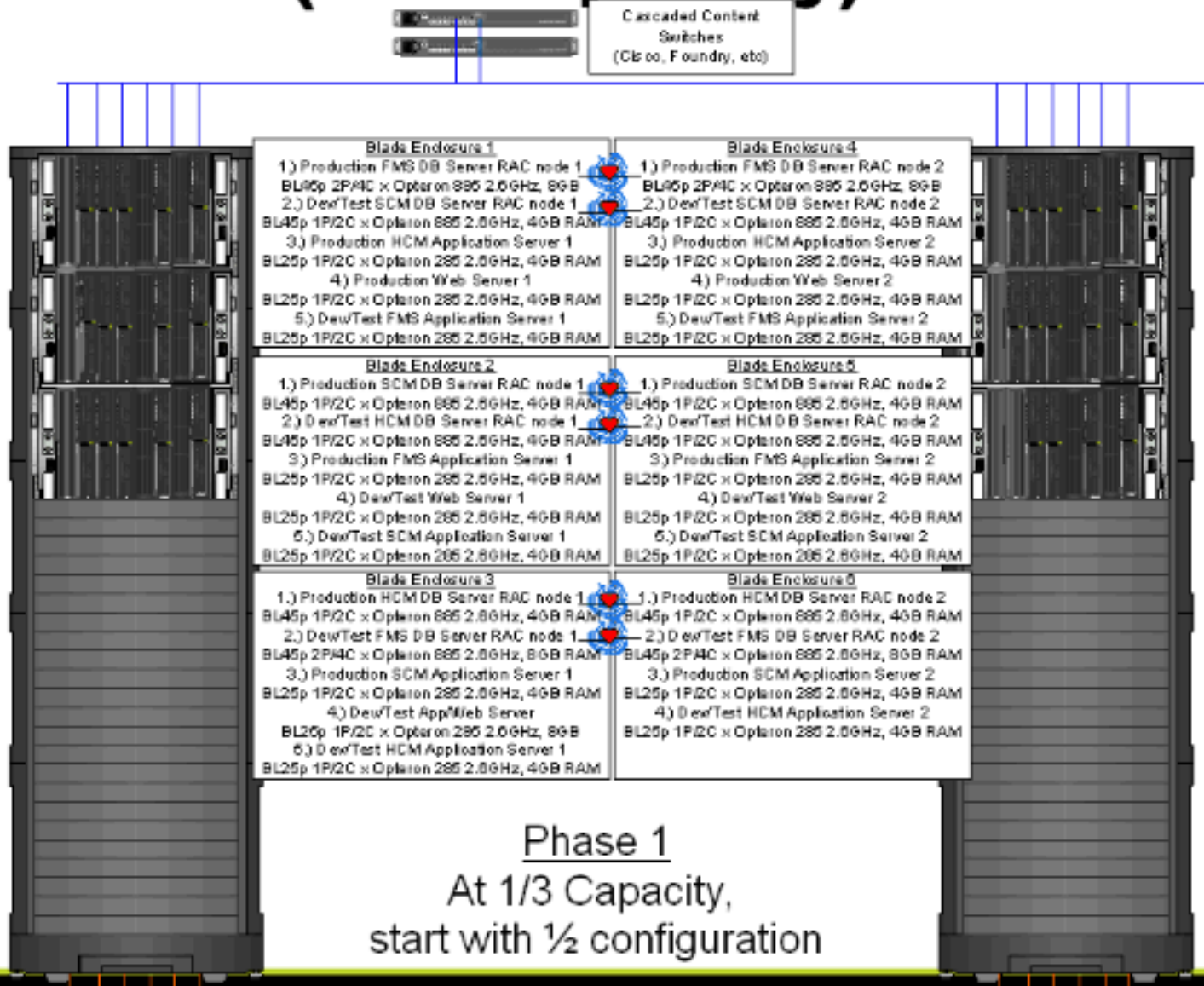
Test/Development Server
BL465c & SB40

PSFT Application Server
BL465c

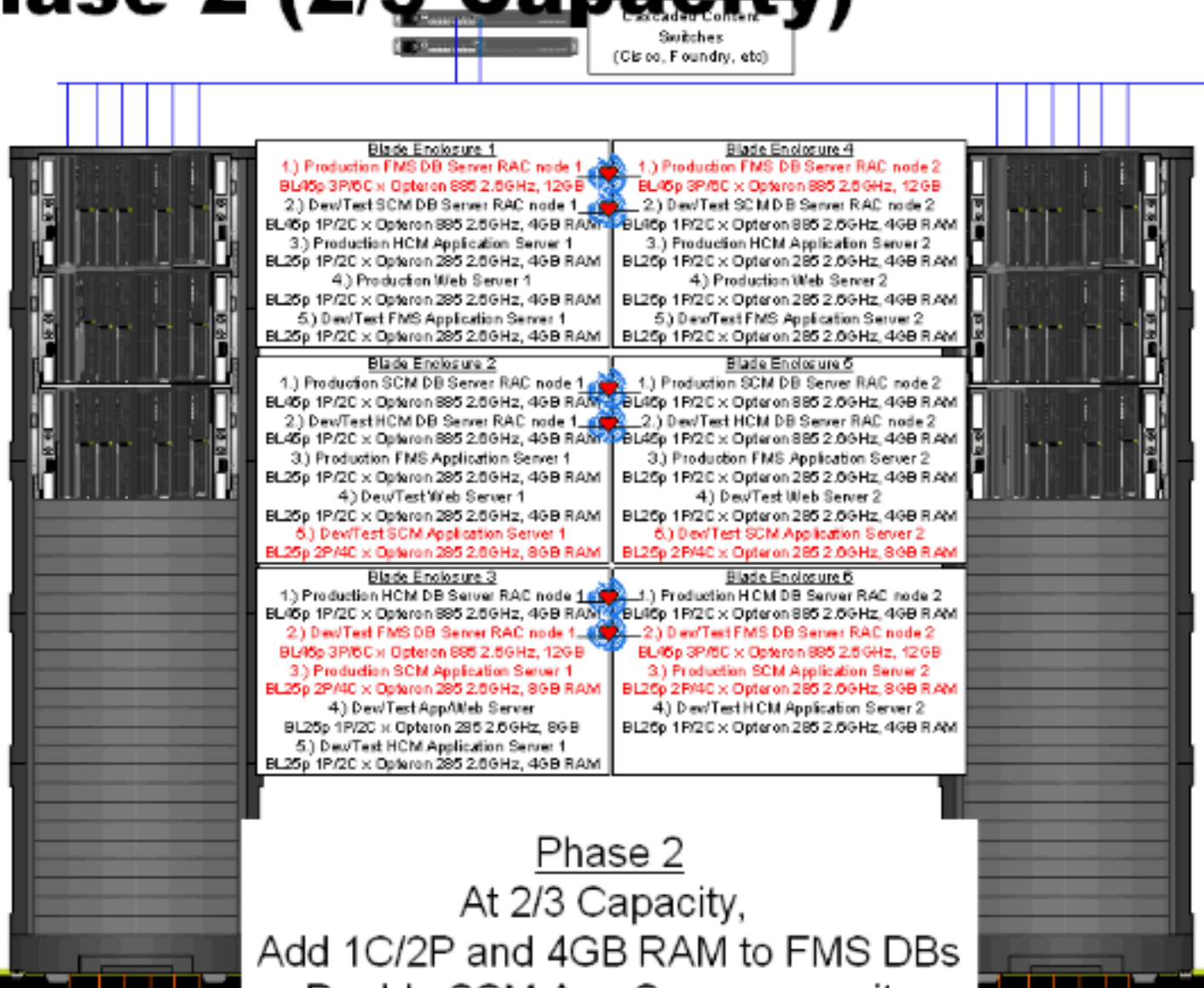
Reporting server (Crystal, nVision, Adobe, etc.)

(Windows only)
BL465c

Phase 1 (1/3 Capacity)

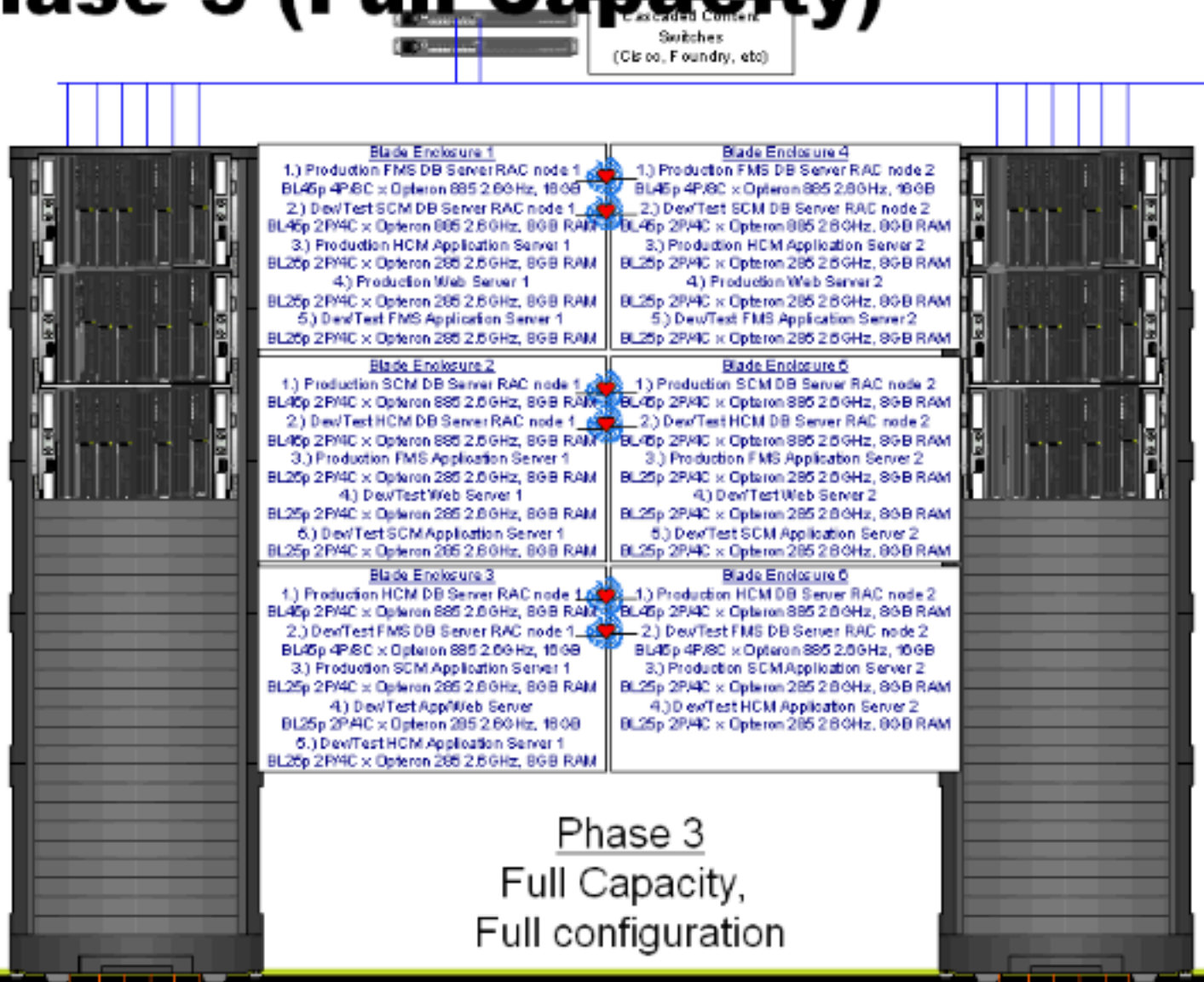


Phase 2 (2/3 Capacity)



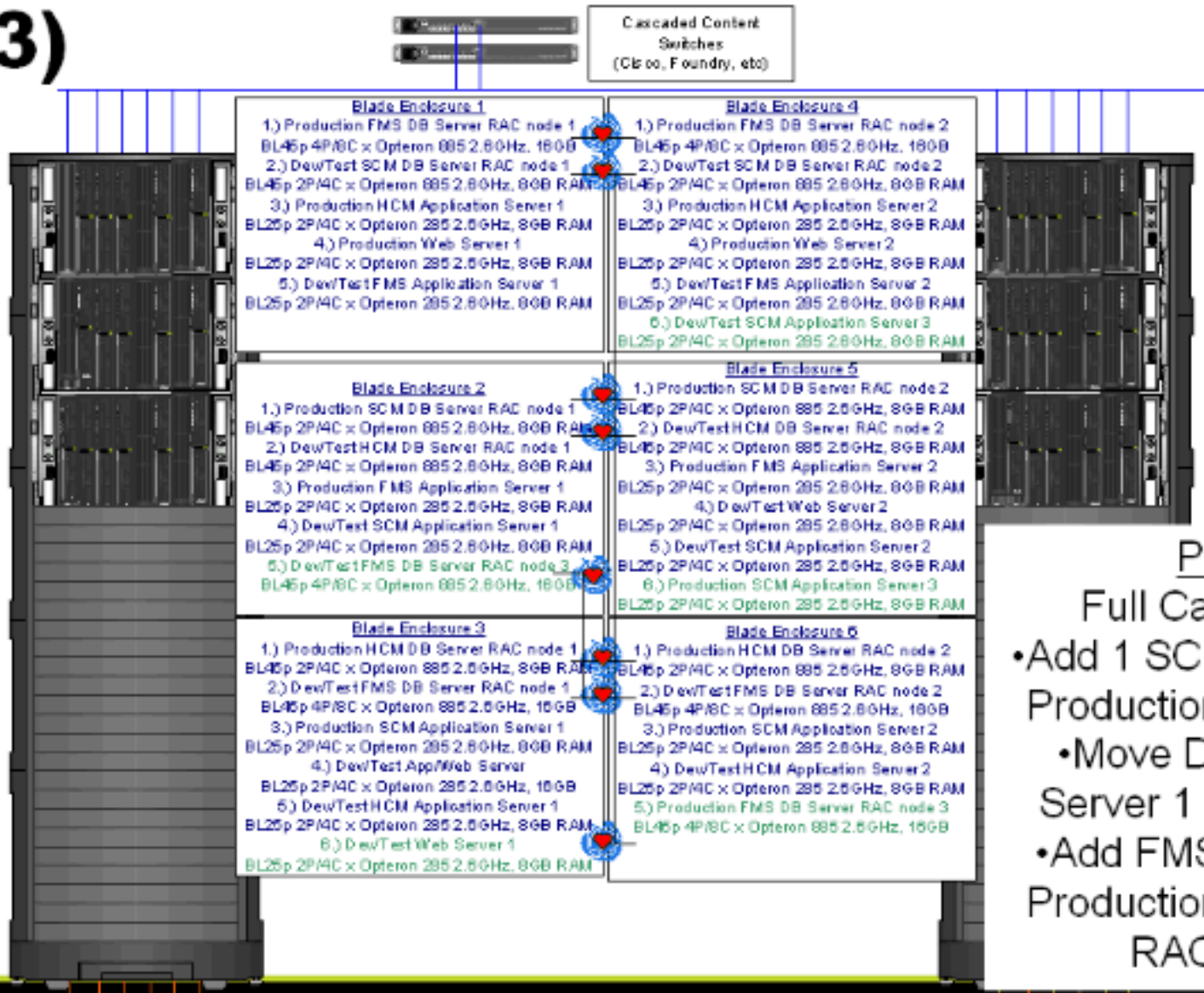
Phase 2
At 2/3 Capacity,
Add 1C/2P and 4GB RAM to FMS DBs
Double SCM App Server capacity

Phase 3 (Full Capacity)



Phase 3
Full Capacity,
Full configuration

Phase 4 (Full Capacity + 1/3)



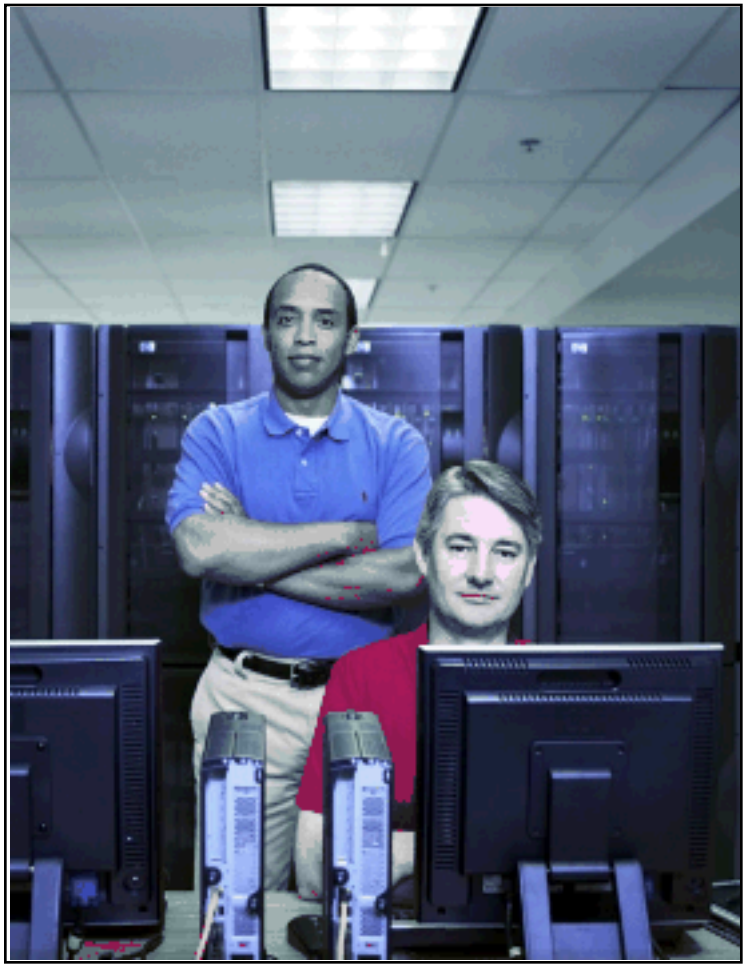
Phase 4

Full Capacity +1/3,

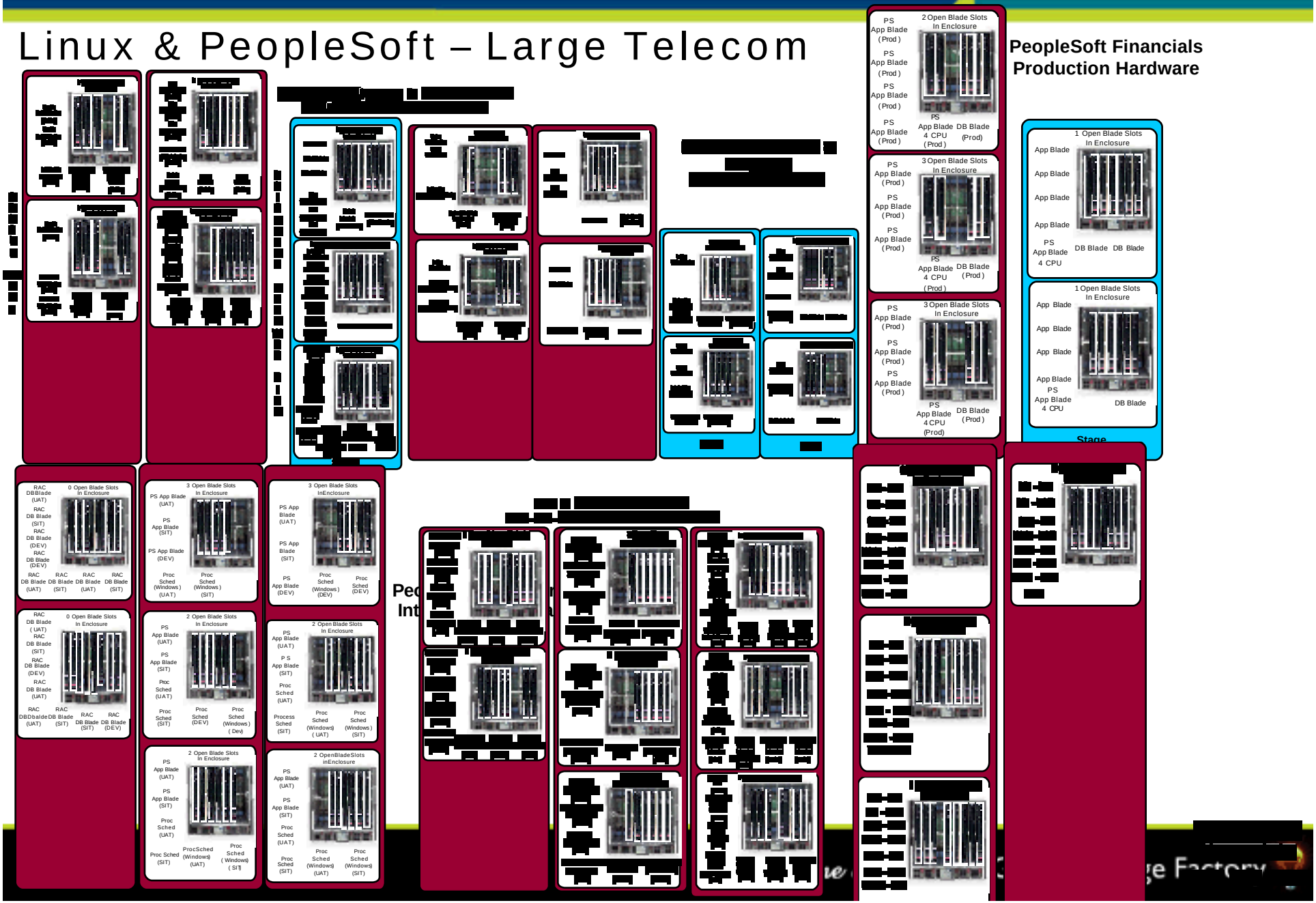
- Add 1 SCM App server to Production and Dev/Test
- Move Dev/Test Web Server 1 to enclosure 3
- Add FMS DB Server to Production and Dev/Test RAC clusters

Benefits of Linux

- Stable and flexible enterprise-class operating environment
- Unix-like experience on **industry-standard platforms**
- Scale-out architecture minimizes large capital outlays
- Proven scalability with 64-bits and up to 64 processors
- Availability of applications from numerous independent software vendors
- Widespread business application, resource, and support options



Linux & PeopleSoft – Large Telecom



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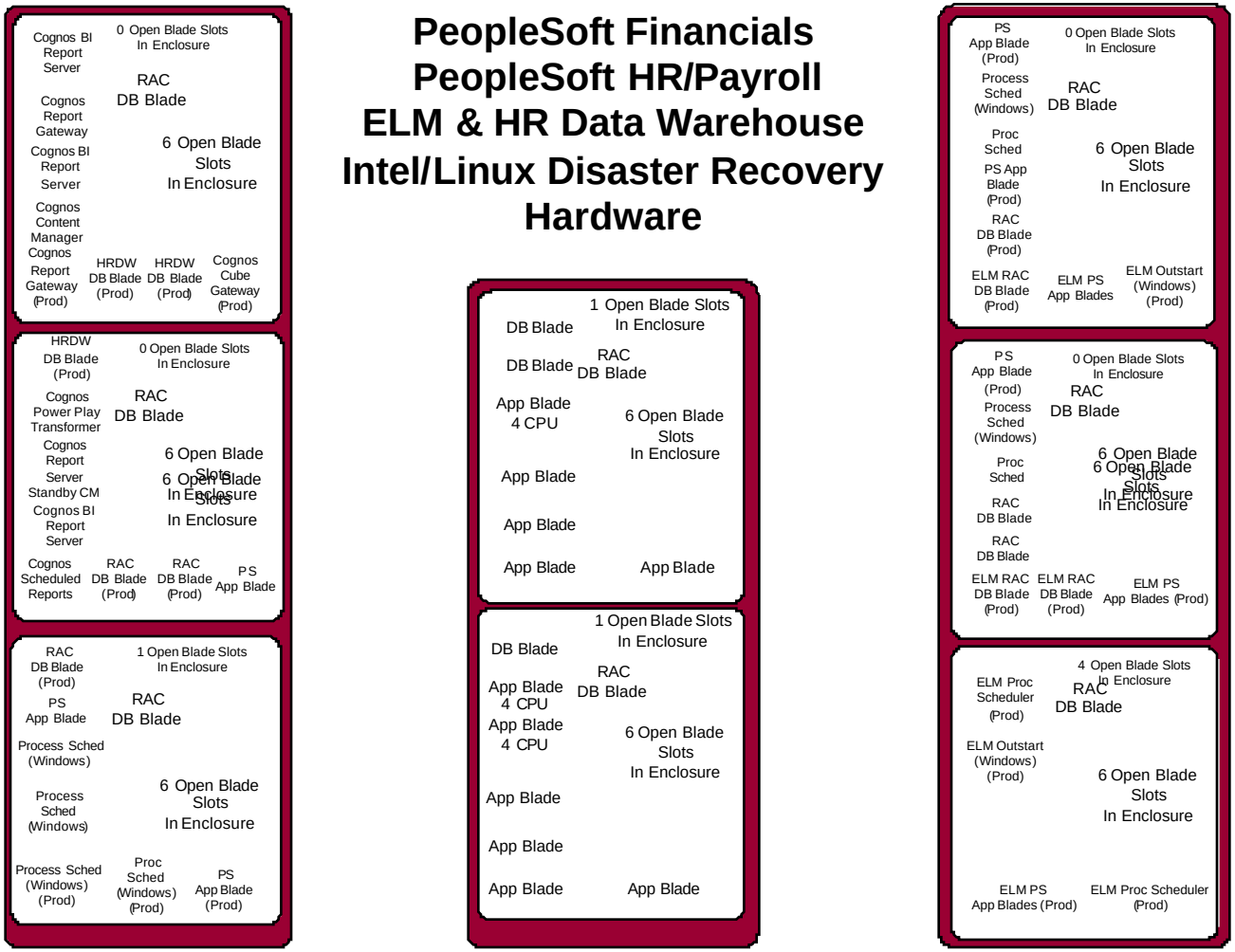


Check us out at:

www.hp.com/go/bladesystem

www.hp.com/linux

www.hp.com/go/linuxbladesystem

Provisioning Blades

Business Case Scenario – Resource Flexing

Temporary spike in application demand results in poor service response times…. poor response means lost revenue!

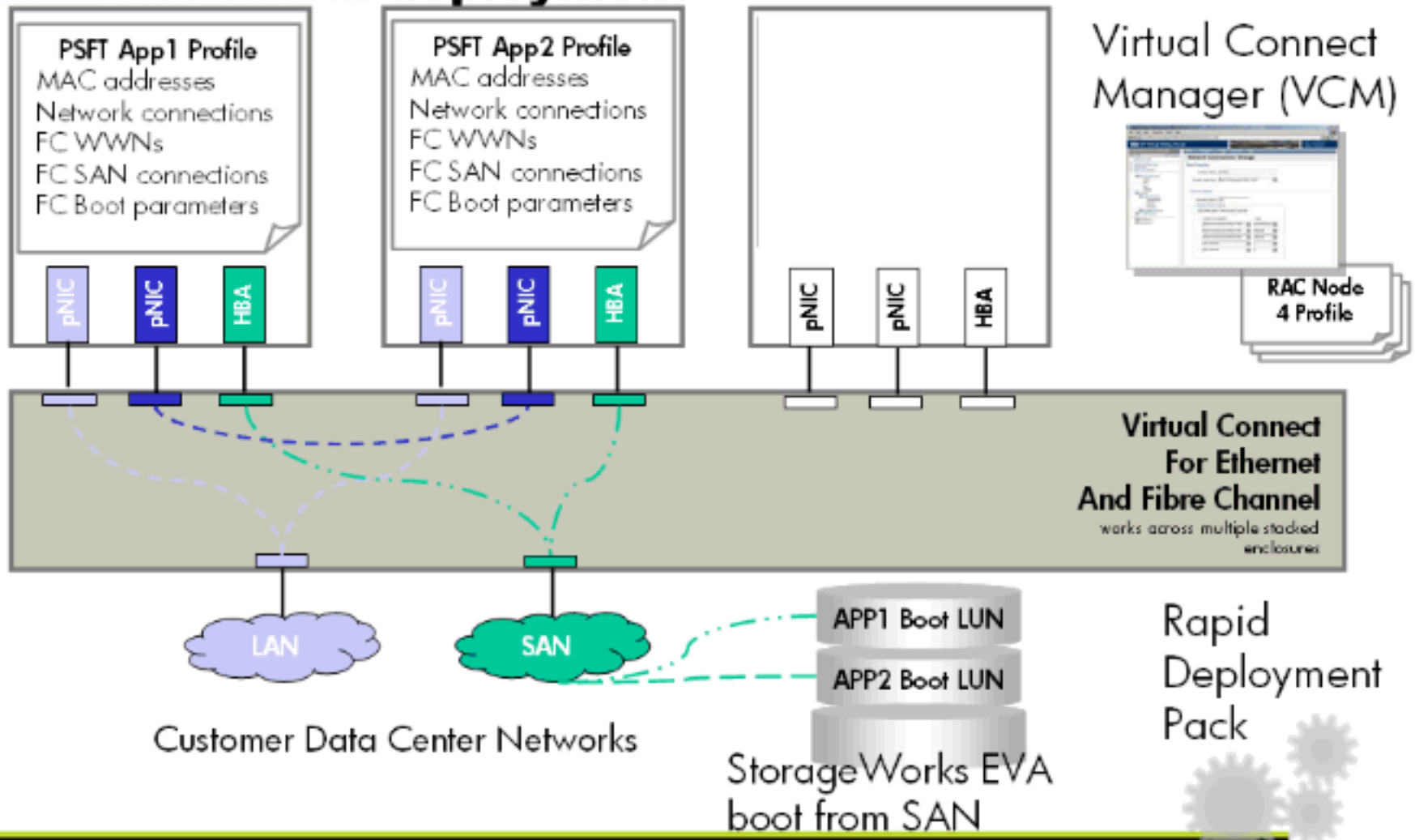
"We struggle to meet service level agreements and fast response times for critical workloads…"

- Capability sets needed for efficient response:
  - Integrated Oracle and HP Management framework
  - HP BladeSystem
  - StorageWorks Enterprise Virtual Array

The following functionality is possible with p-class and c-class enclosures




Dynamic flexing – Virtual Connect / EVA boot-from-SAN - bare metal deployment



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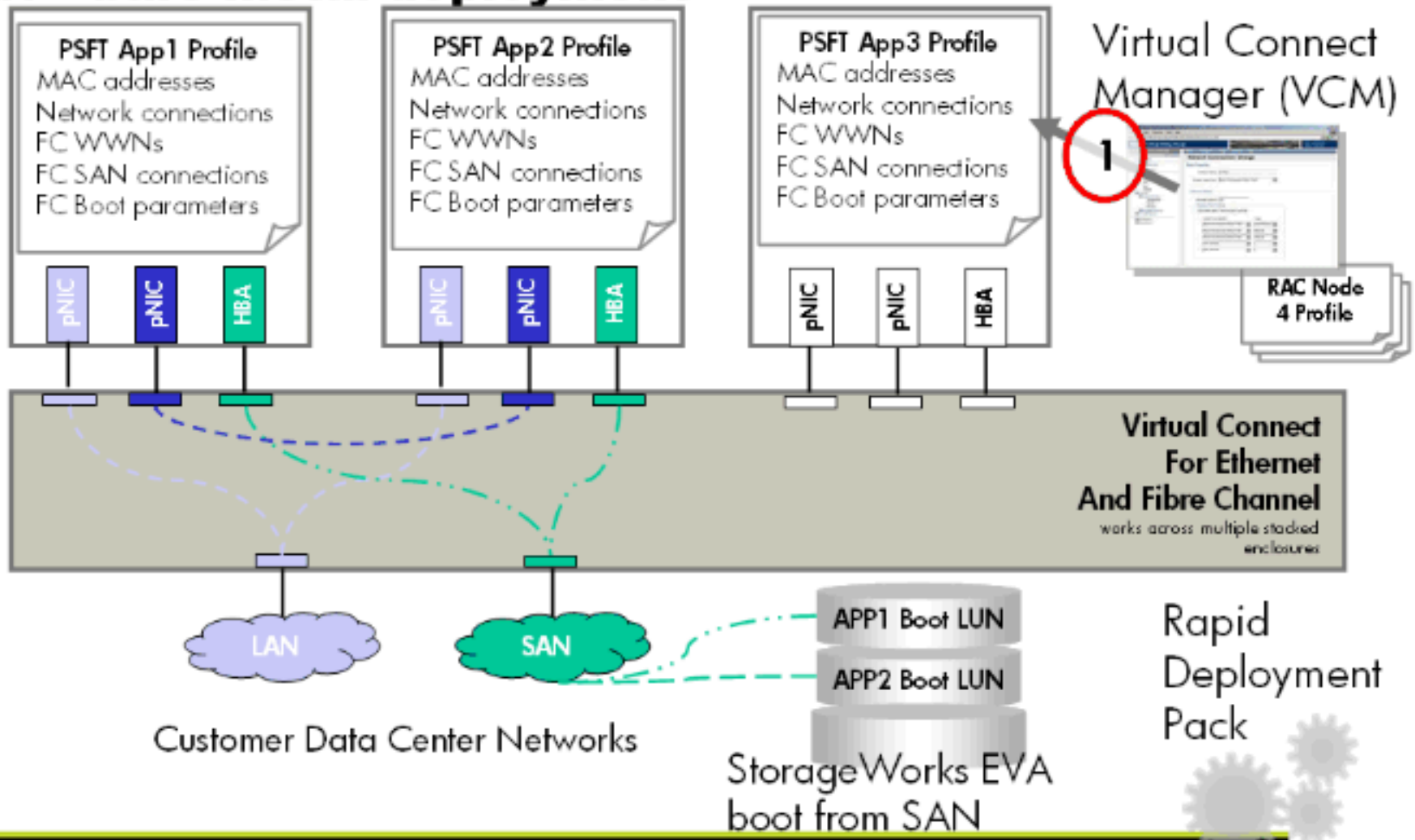
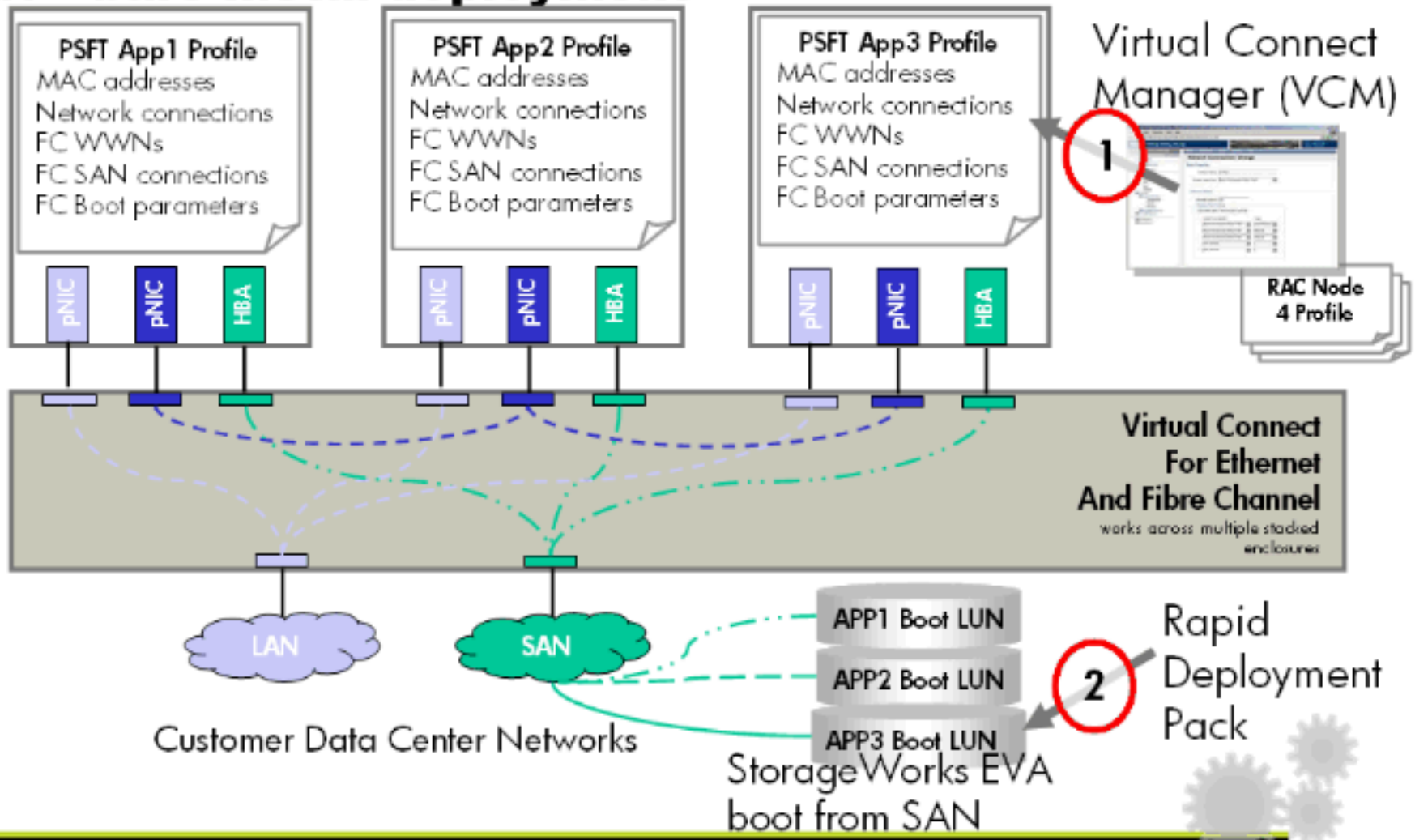


Dynamic flexing – Virtual Connect / EVA boot-from-SAN - bare metal deployment



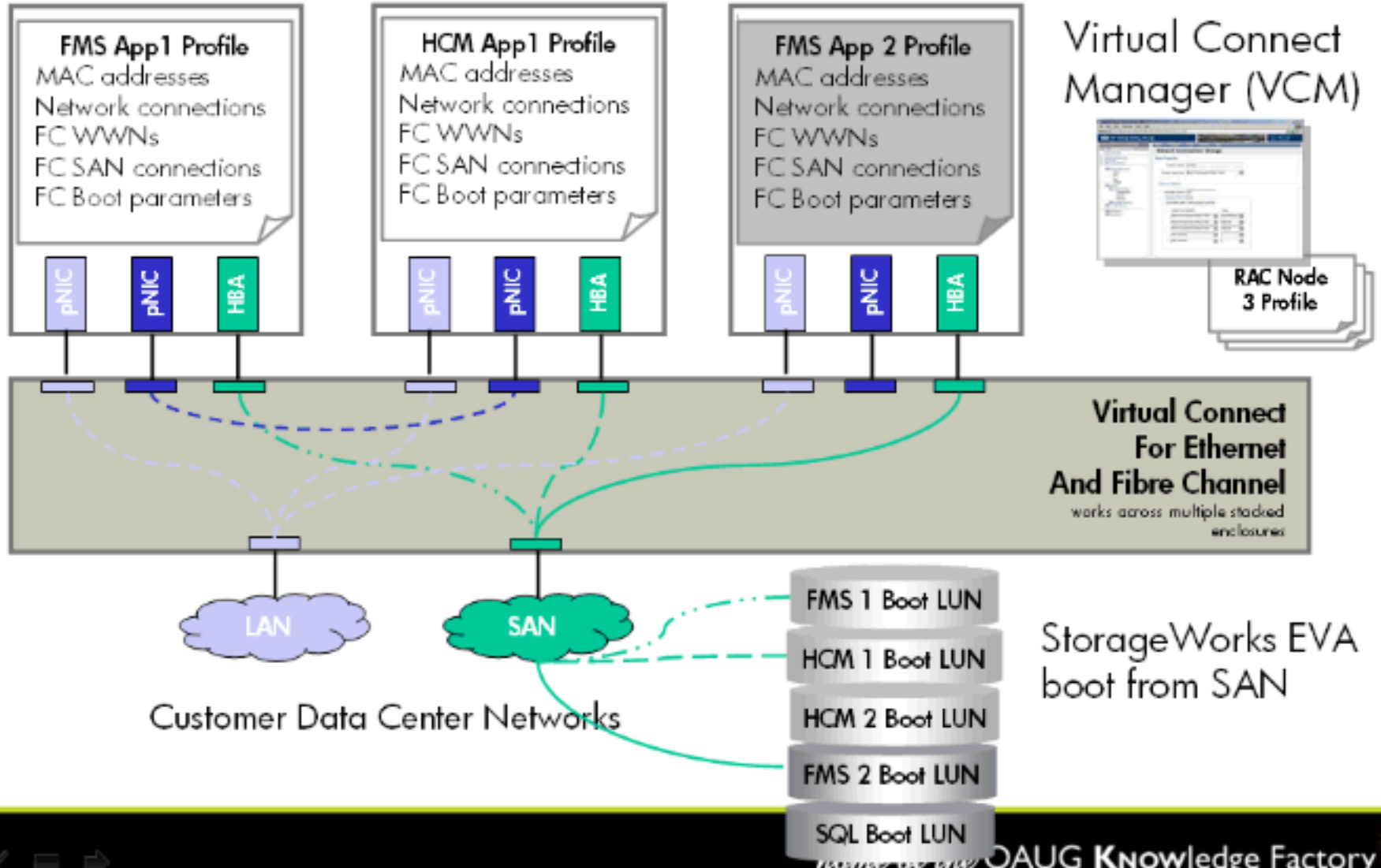
Fast enough response?

Depends on service level impact on the business

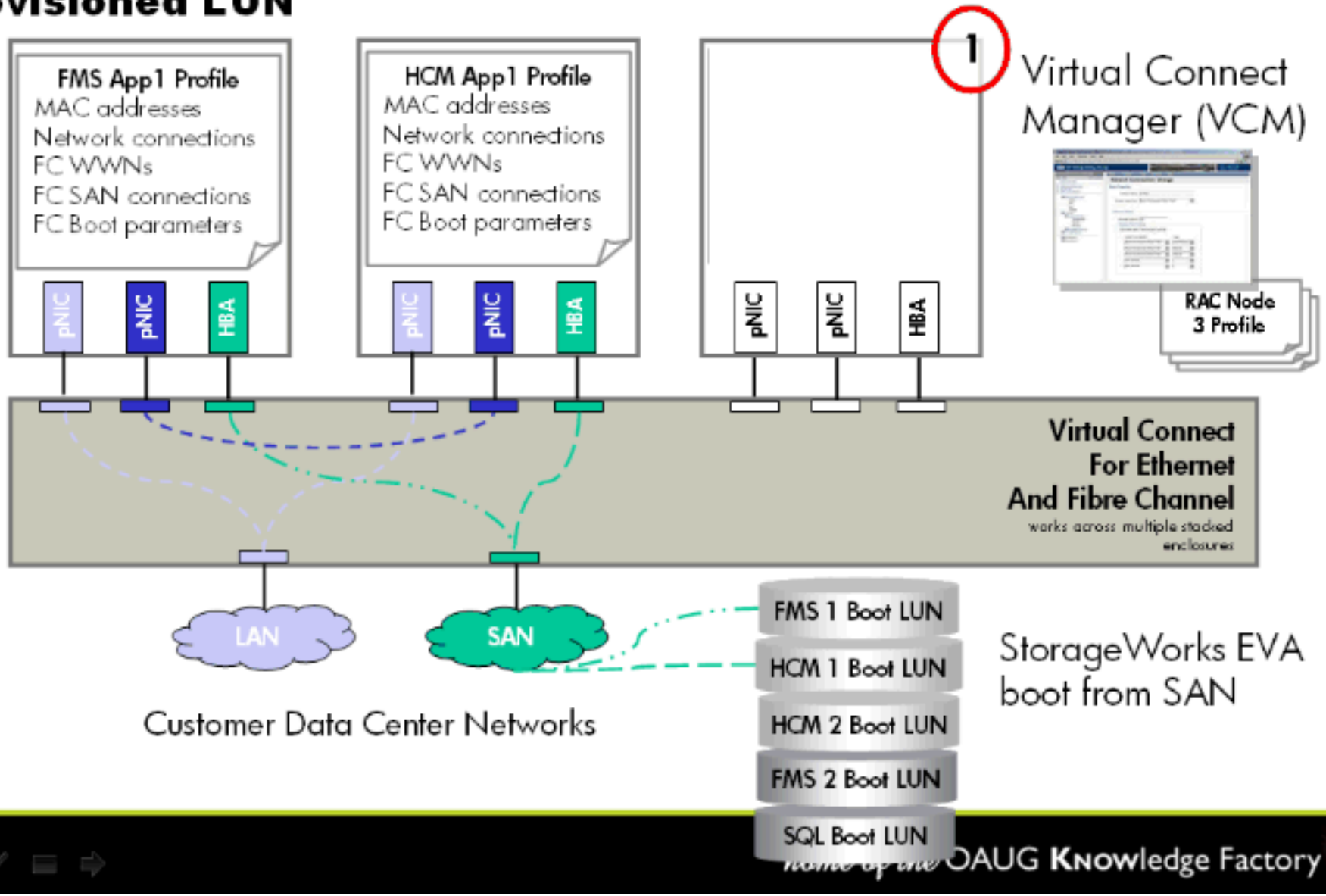
- Blades environment reduces infrastructure configuration by hours*
- Virtual Connect reduces infrastructure configuration by additional hours*
- Rapid Deployment Pack scripting ensures consistency and reduces time to deployment by 10s of minutes*
- Oracle Grid environment automates workload distribution and load balancing saving hours* compared to other database environments.

* Exact savings depend on too many customer specific variables for more precision

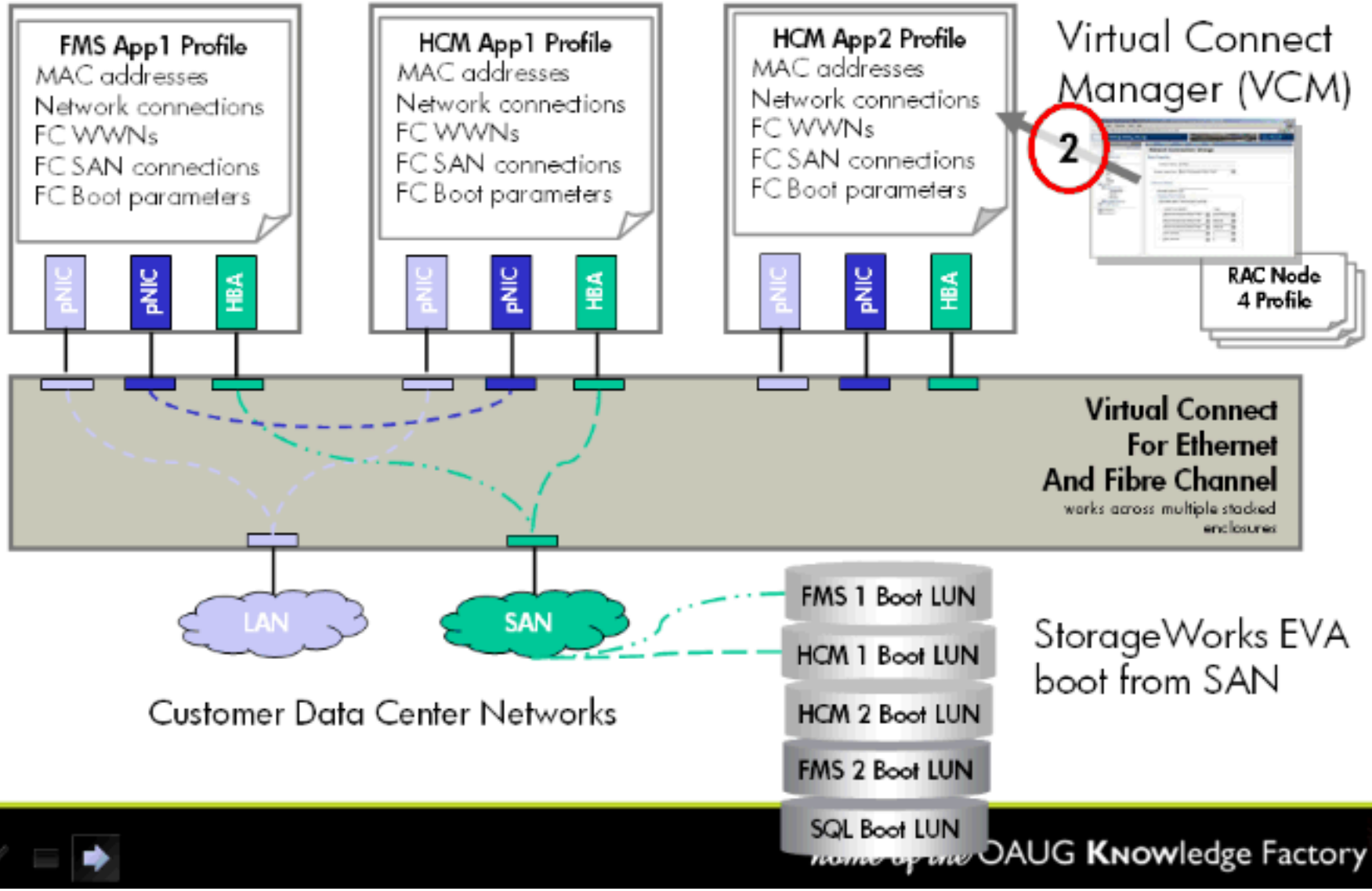
Dynamic flexing – Virtual Connect / EVA boot-from-SAN - pre-provisioned LUN



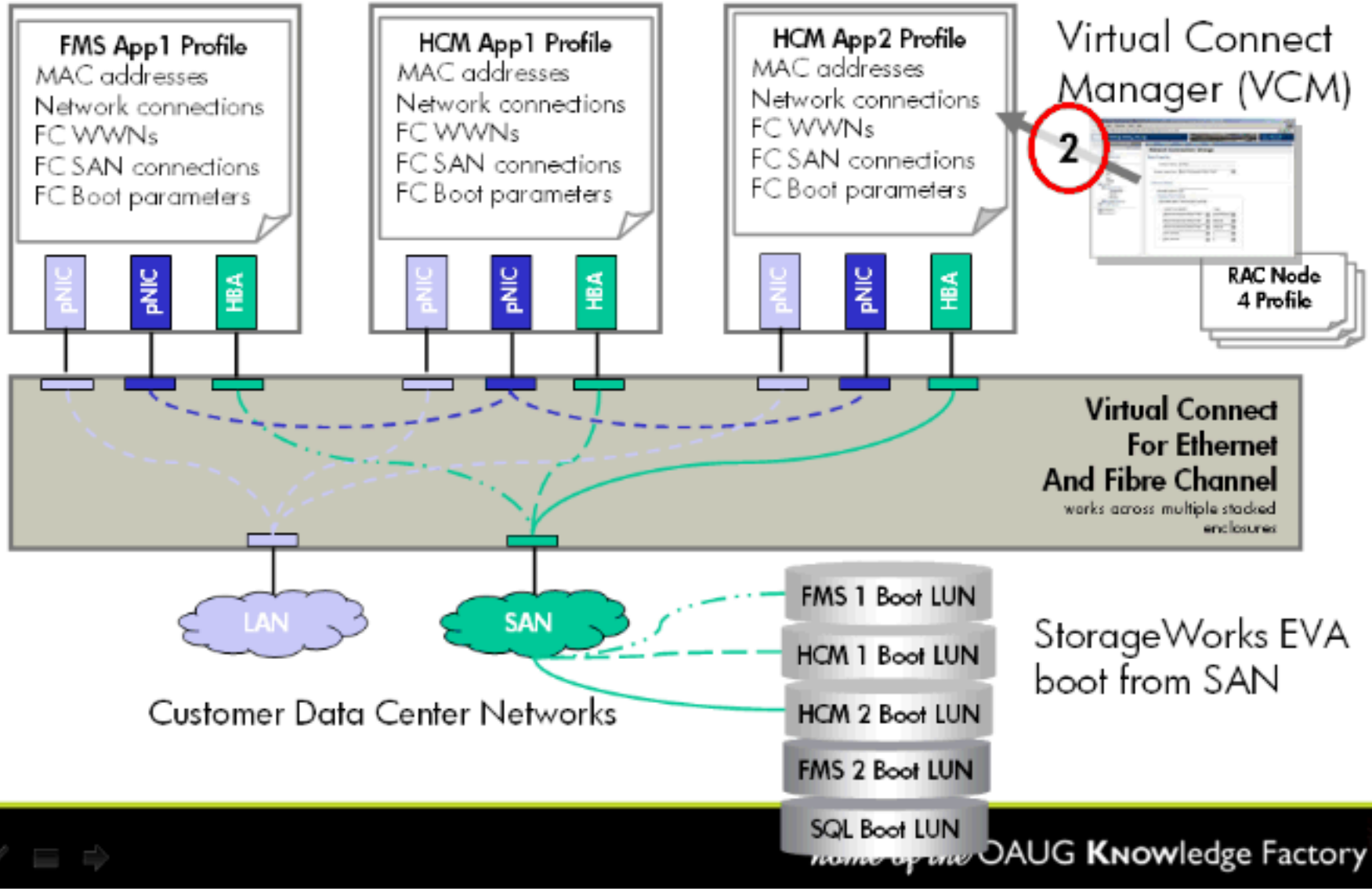
Dynamic flexing – Virtual Connect / EVA boot-from-SAN - pre-provisioned LUN



Dynamic flexing – Virtual Connect / EVA boot-from-SAN - pre-provisioned LUN



Dynamic flexing – Virtual Connect / EVA boot-from-SAN - pre-provisioned LUN



Pretty fast

Depends on service level impact on the business

- Blades environment reduces infrastructure configuration by hours*
- Virtual Connect reduces infrastructure configuration by additional hours*
- EVA Boot from SAN pre-provisioned node eliminates installation process delay
- Oracle Grid environment automates workload distribution and load balancing saving hours* compared to other database environments.

* Exact savings depend on too many customer specific variables for more precision

Integrity Server Blade

Business critical reliability you trust with a more efficient infrastructure

Modular infrastructure efficiencies

- HP BladeSystem c-Class
  - Unifies server, storage, network, power/cooling and management capabilities
    - Cost savvy
    - Change ready
    - Energy thrifty
    - Time-smart
  - To provide the modular building block of next-generation datacenters

+

for business critical workloads

1. Integrity means business critical
2. Integrity Always Delivers


ALWAYS AVAILABLE

ALWAYS SCALABLE


ALWAYS VIRTUALIZED

3. Integrity is future focused

Integrity BL870c Server Blade

Processors and Chipset

- Up to 4 Intel® Itanium® 9100 series processors
  - DC 1.6GHz 24MB FSB533
  - DC 1.6GHz 18MB FSB533
  - DC 1.42GHz 12MB FSB533
- HP zx2 Chipset

I/O Subsystem

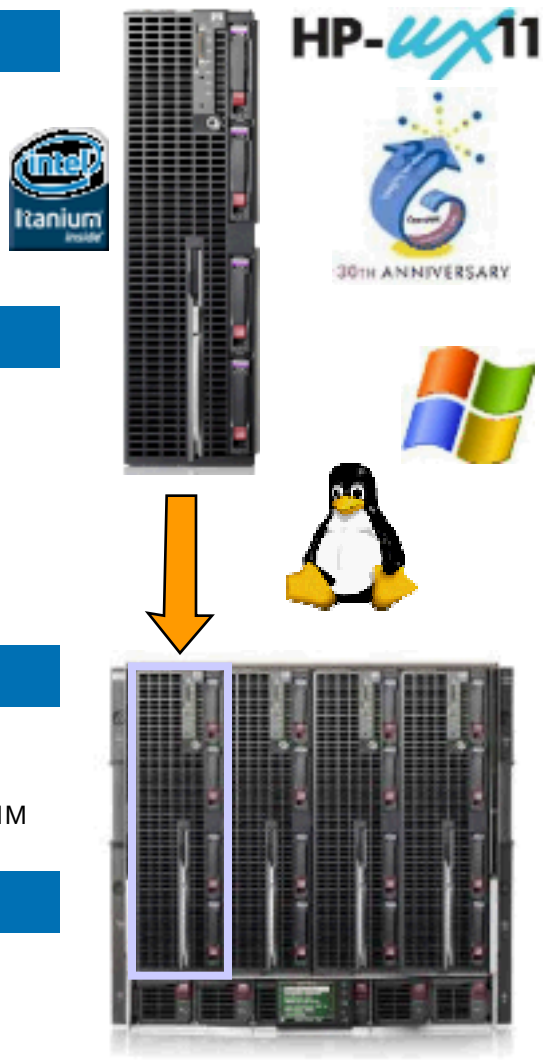
- 4 GbE NIC ports standard
- 3 mezzanine expansion I/O slots
  - 4-port GbE expansion; 2-port 4xFC; 4xDDR IB
- Mgmt LAN, 100Base-T, USB, VGA, RS232 serial port
- 2 SAS (Serial Attached SCSI) Channels

Memory

- 4 GB to 96 GB
- PC4200 ECC double chip spare DDR2
- Support for up to 96GB memory in 24 DIMM slots

Management

- Integrity Integrated Lights Out (iLO 2)
- Integrity iLO 2 Advanced Pack license included with blade



Peripherals

- 4 hot-plug SFF SAS HDDs
- External DVD/CD-RW

Form Factor

- Double wide, full height c-Class blade
- 4 BL870c in c7000; 2 in a c3000
- 16 BL870c's in a 42U rack
- Designed for data center and utility closet operation (5–35°C)
- Integrity, ProLiant & StorageWorks in one enclosure

High Availability

- Redundant, hot-plug, modular, pooled power & fans for HA and efficiency via BladeSystem enclosure
- Optional redundant enclosure manager
- Dual SAS channels
- Dynamic processor resilience
- Double chip sparing for exceptional availability

Operating Systems

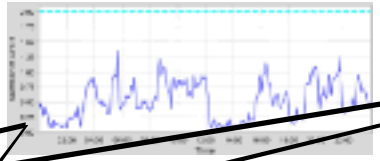
- HP-UX 11i v3 and 11i v2
- Windows Server 2003 – Enterprise and Datacenter editions
- Red Hat and SUSE Linux
- OpenVMS

HP Virtual Server Environment (VSE) For Integrity Blades

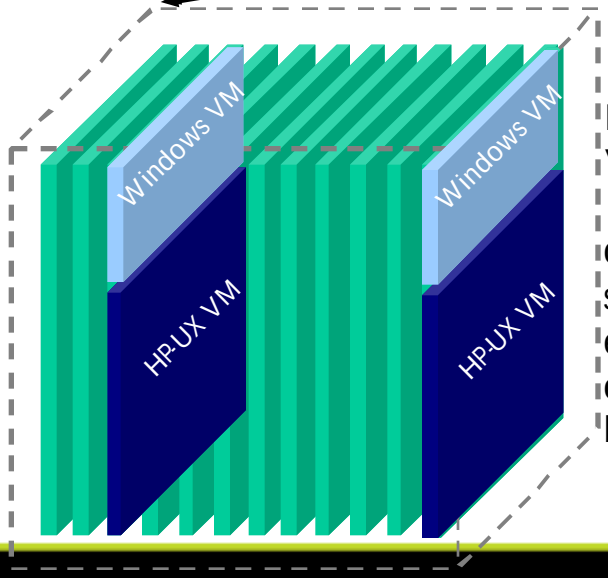
Optimize server utilization in real-time

Serviceguard for failover protection and migration of individual VMs on a blade

Capacity Advisor for intelligent workload and VM placement across a virtualized blade environment



Virtualization Manager for easy visualization, navigation and in-context launch of other configuration tools



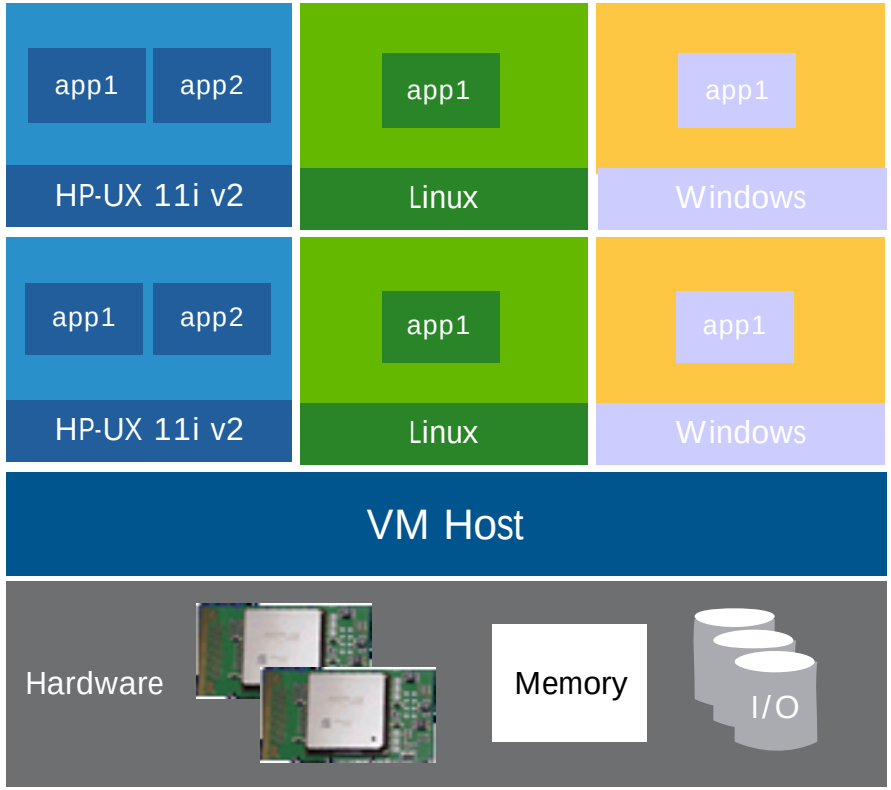
Integrity Virtual Machines consolidates small-scale environments on single blades

Secure Resource Partitions allows secure application stacking within blades or VMs

gWLM flexes resource allocation to VMs or Resource Partitions to help meet service levels

HP Integrity Virtual Machines (VM)

Optimum utilization across multiple OS



- Sub CPU virtual machines with shared I/O
- Dynamic resource allocation built in
- Resource guarantees as low as 5% CPU granularity
- OS fault and security isolation
- Supports all (current and future) HP Integrity servers
- Designed for multi OS
  - HP-UX 11i v2 guests
  - Windows guest support
  - Linux guest support
  - OpenVMS guest support
- Integrated with VSE

Integrity Blades already delivering business critical computing with better efficiency

Large Health Care Provider

- 200% annual growth in critical applications
- Limited data center space and resources
- Performance, flexibility and energy conservation are key

"We have been using HP Integrity BL860c Server Blades in our Oracle and HP-UX 11ienvironment with excellent results. Limited space and energy efficiency are critical issues in our data center, so we like that the blade form factor reduces energy consumption – without sacrificing data integrity or processing capabilities. We were briefed on the Integrity BL870c and like what we heard. HP is taking Integrity blades to another level. When we need to purchase new servers, we definitely will consider including HP's next generation of Integrity server blades."

Manager of Infrastructure Engineering
Large Health Care Provider

Customers benefit from HP's leading modular infrastructure efficiencies

- Save space and energy (BL870c vs rack-mount configuration)
  - Over 2.5 times within the same space
  - Up to 25% power savings
- Streamline management with Systems Insight Manager
  - Cutting the time of IT maintenance tasks from 50 to 90 percent or more
- Optimize resource utilization with HP Virtual Server Environment
- Wire once with HP Virtual Connect
  - Reduction in number of cables
- Same Integrity operating system tools

Gain efficiency and save time with Integrity's robust operating system ecosystem

Integrity operating system tools carried forward to business critical bladed environments

Deploy

- HP Ignite-UX
- Rapid Deployment Pack

Monitor

- HP Systems Management Homepage
- GlancePlus Pak

Control

- Integrity iLO 2 Advanced Pack, factory integrated
- Integrity iLO Power Regulator

Protect

- HP-UX Bastille
- Secure Resource Partitions
- Software Assistant

Optimize

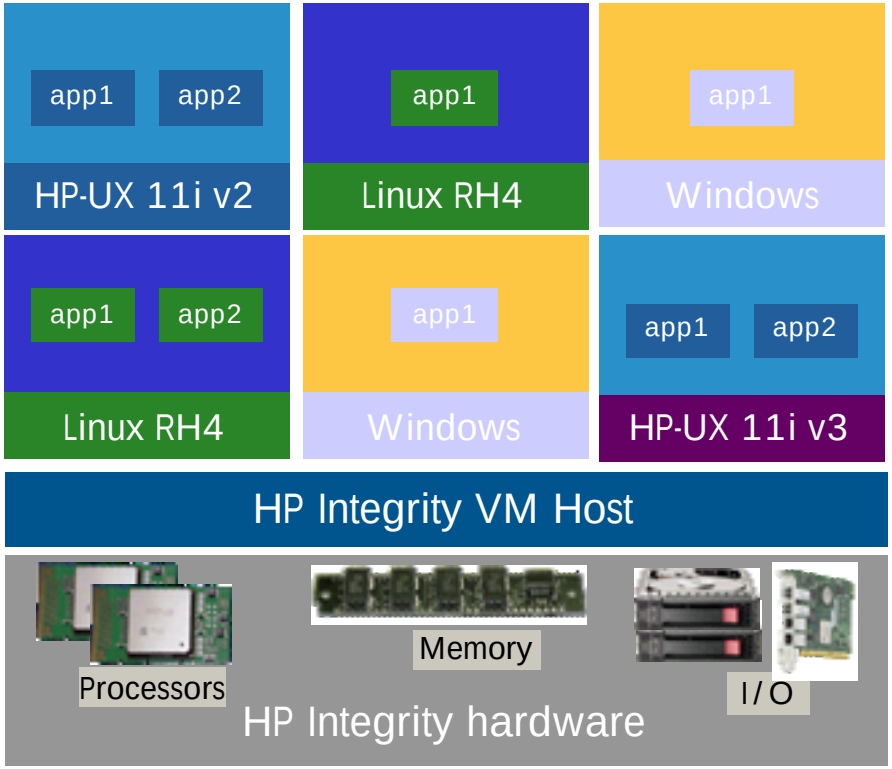
- Capacity Advisor
- Virtualization Manager
- Process Resource Manager
- HP Insight Power Manager

Integrate

- HP Virtual Server Environment Suite for HP-UX 11i

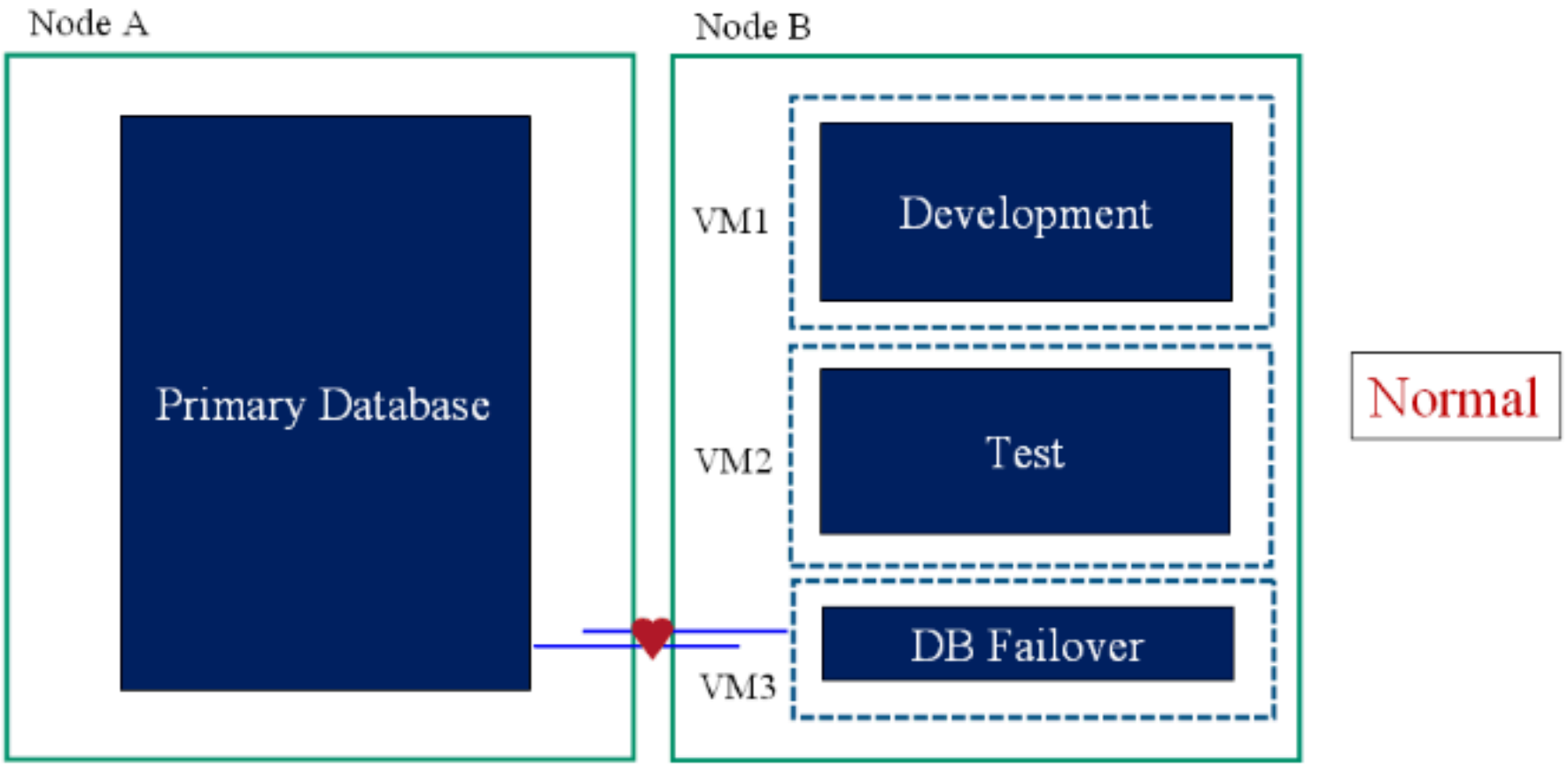
HP Integrity Virtual Machines (VM)

Optimum utilization across multiple OS

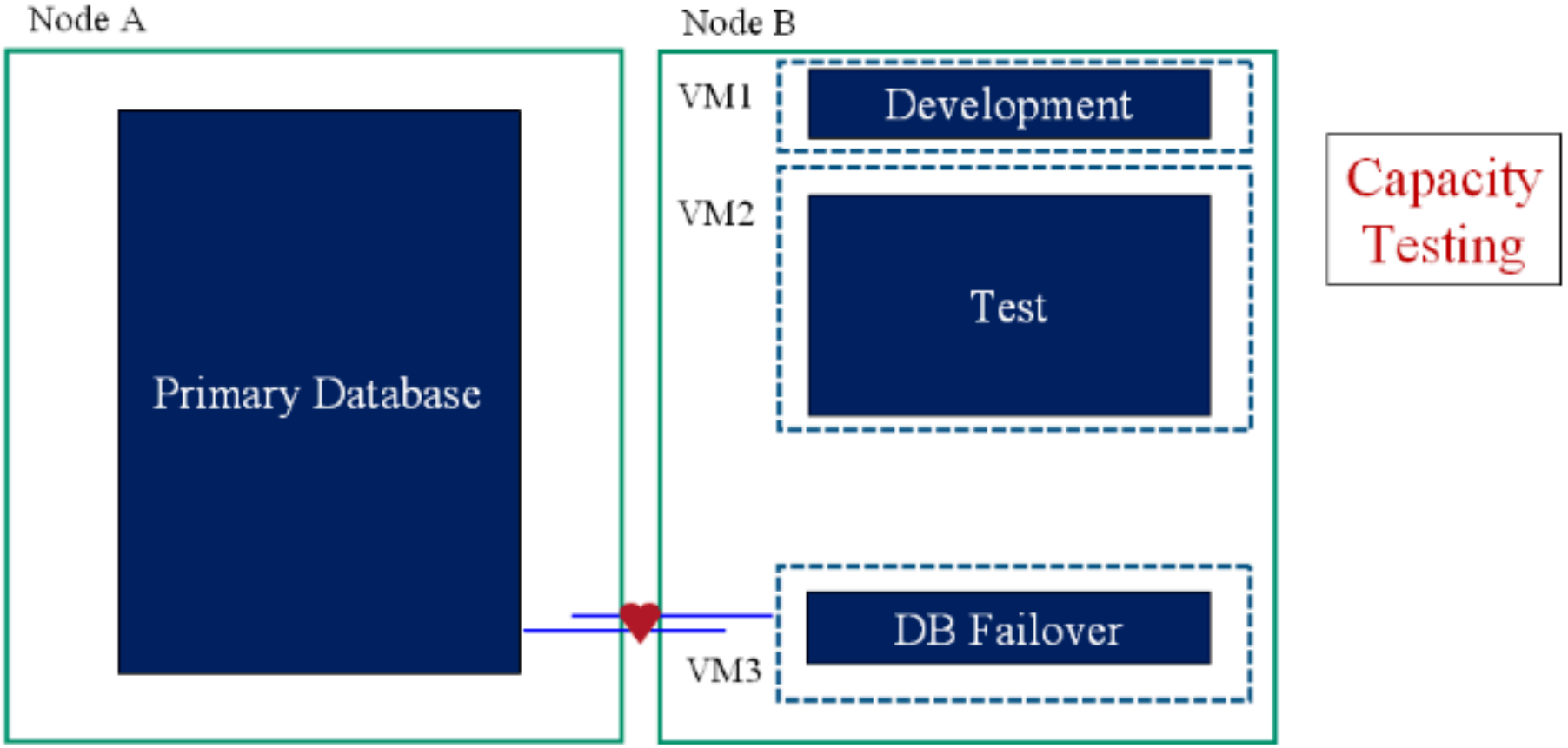


- Virtual machines with shared processors and shared I/O
- Runs on any HP Integrity: server, nPartition, or blade
- Dynamic resource allocation built in
- Up to 20 virtual CPUs per core
- OS fault and security isolation
- Designed for off-the-shelf multi OS:
  - HP-UX 11i v2, 11i v3 (June '07)
  - Windows Server 2003 ®
  - Red Hat ® RHEL 4 Updates 4 & 5 (June '07)
  - SUSE ® Linux & OpenVMS (planned for future)
- Integrated with VSE for management, high availability and instant capacity

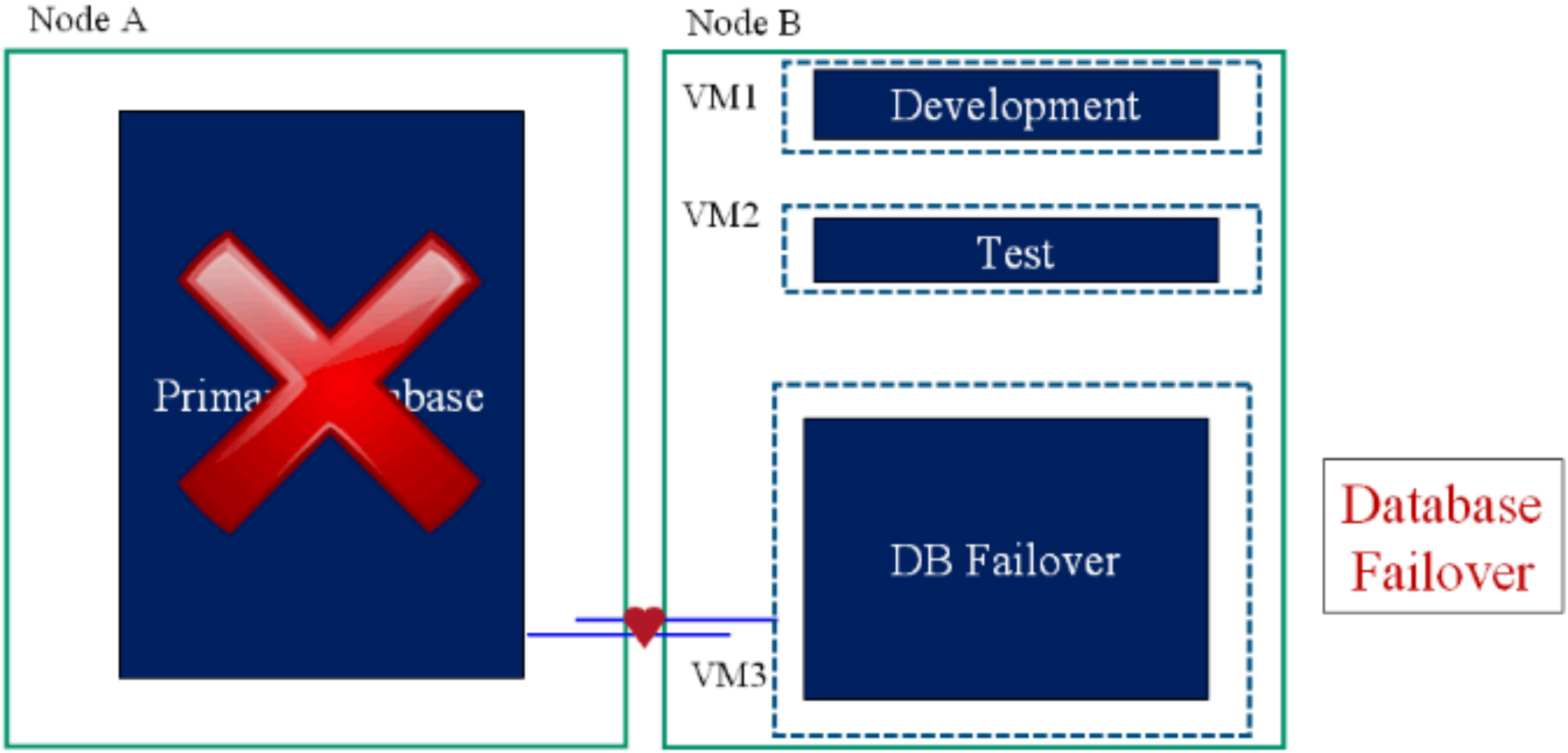
Typical Scenario: Virtual Machines



Typical Scenario: Virtual Machines



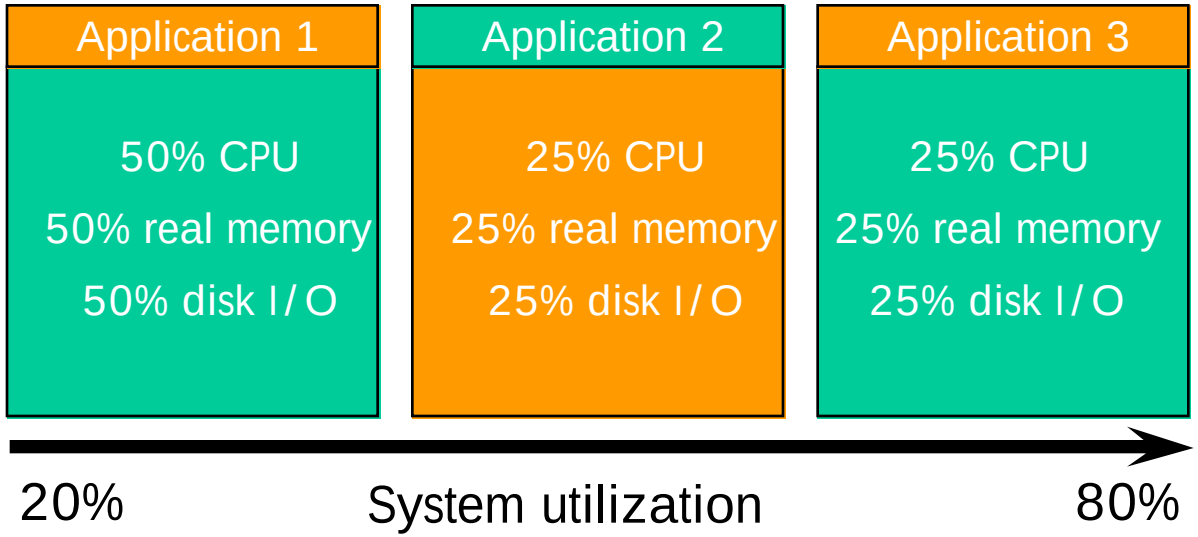
Typical Scenario: Virtual Machines



HP Process Resource Manager (PRM)

Predictable service level management

Resource partitions within a single OS image

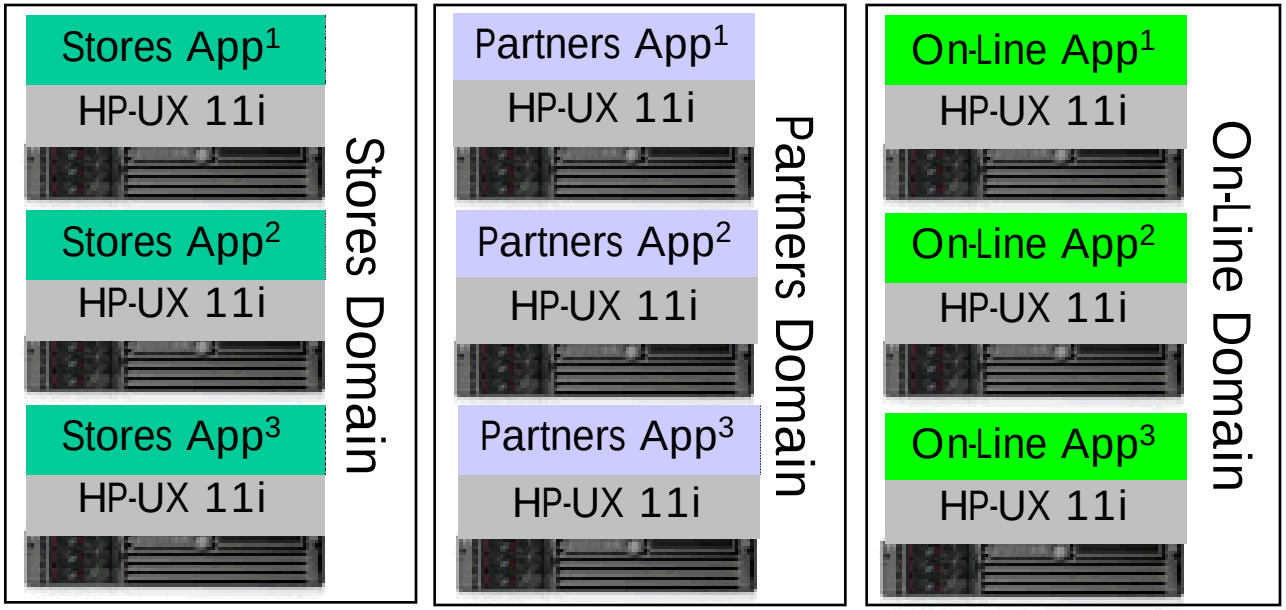


PRM allows you to drive up system utilization by running more applications per server: the result is a better ROI

Application Tier - A customer example

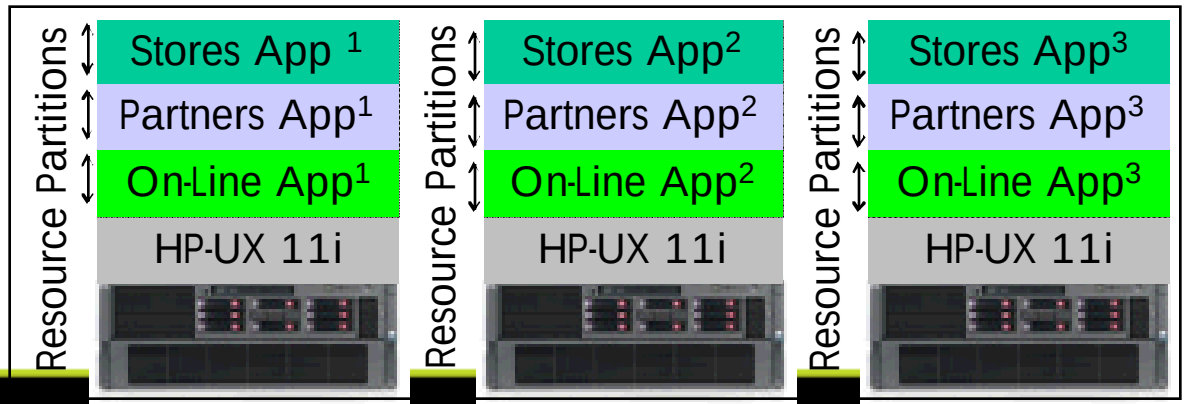
Initial Departmental Design

- 3 isolated domains
- 9 servers / OS images
- Low server utilization

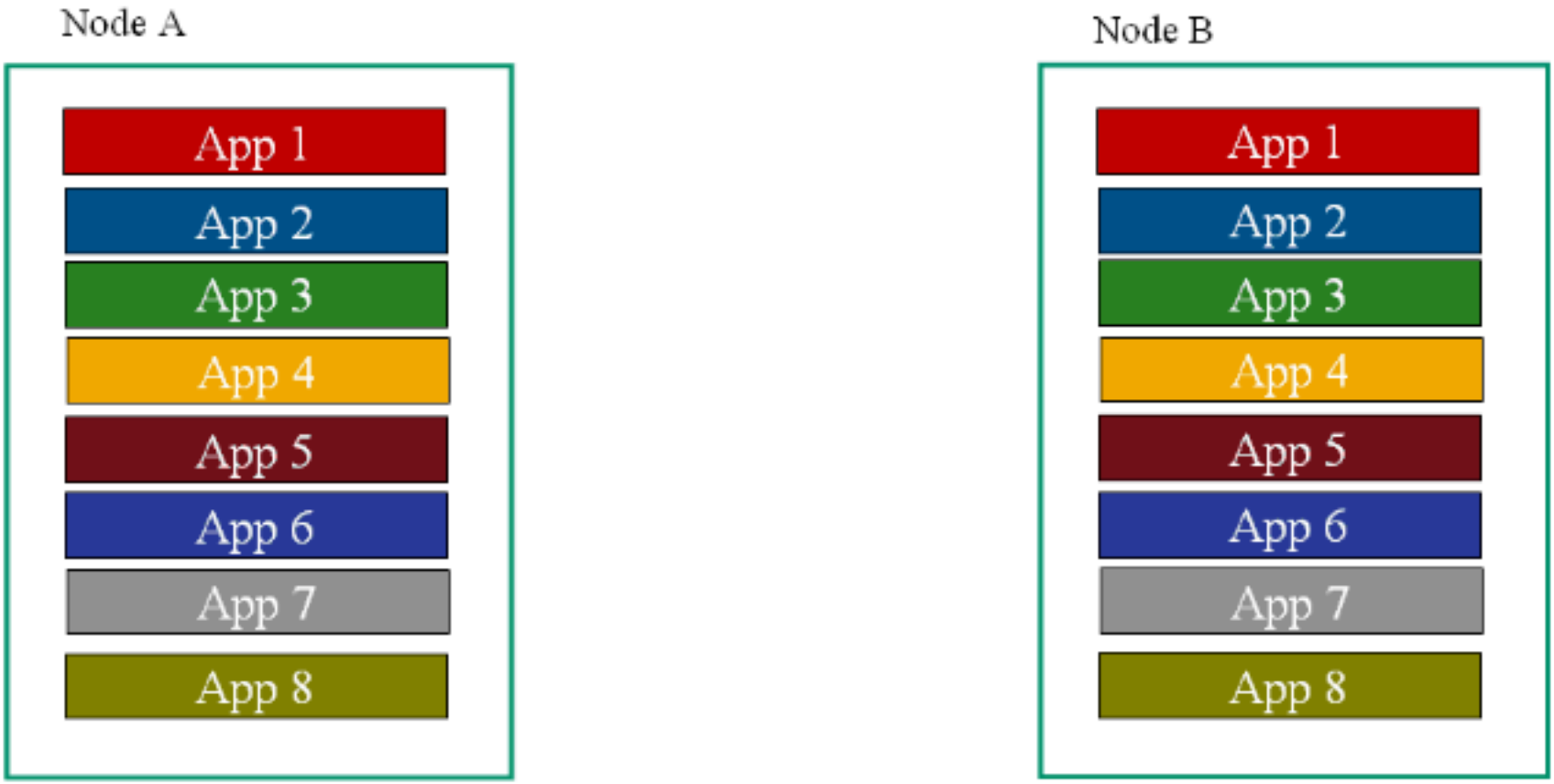


New Shared Service Design

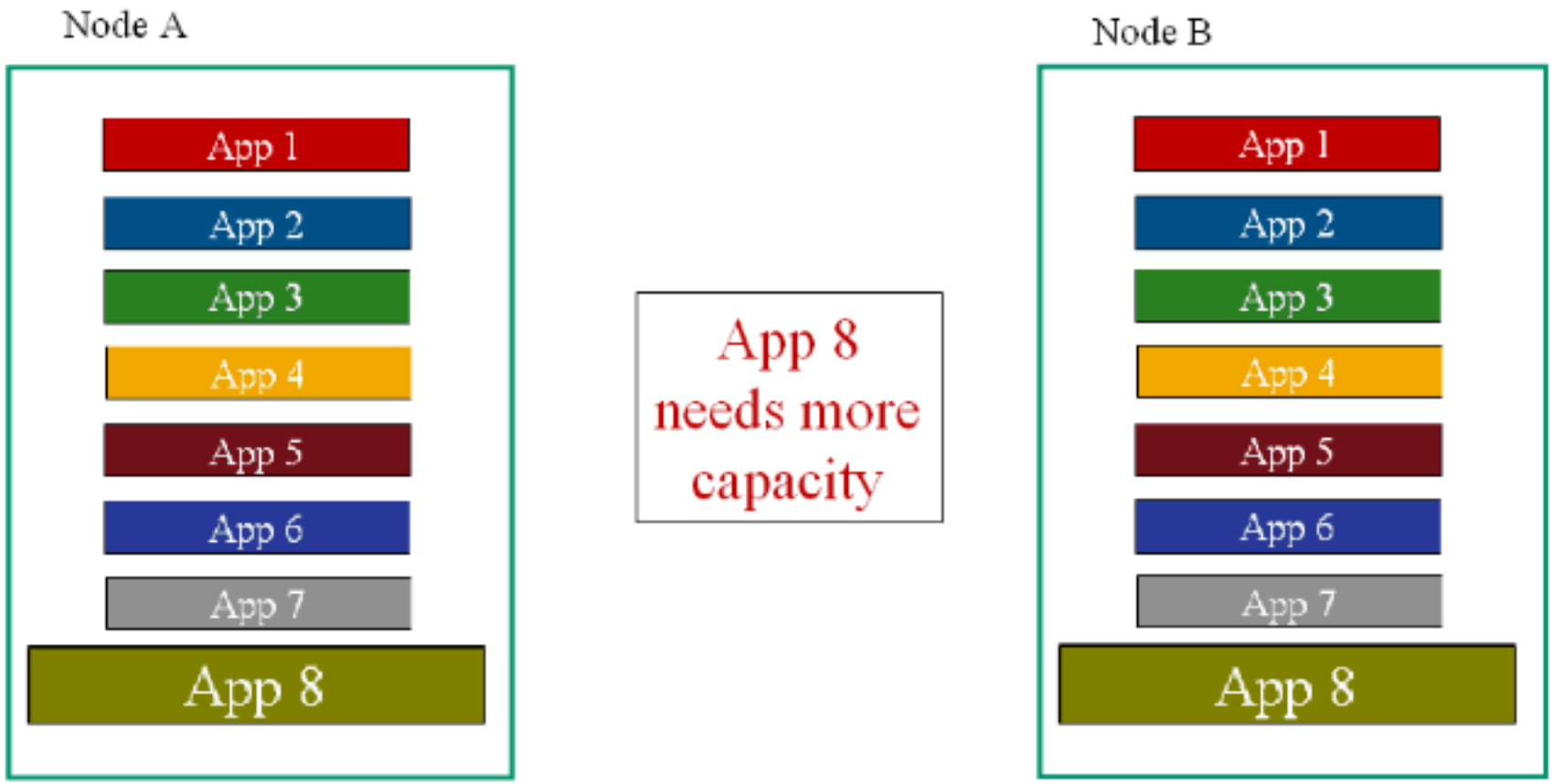
- Consolidated platform
- 3 servers / OS images
- Automated resource flexing
- Improved server utilization



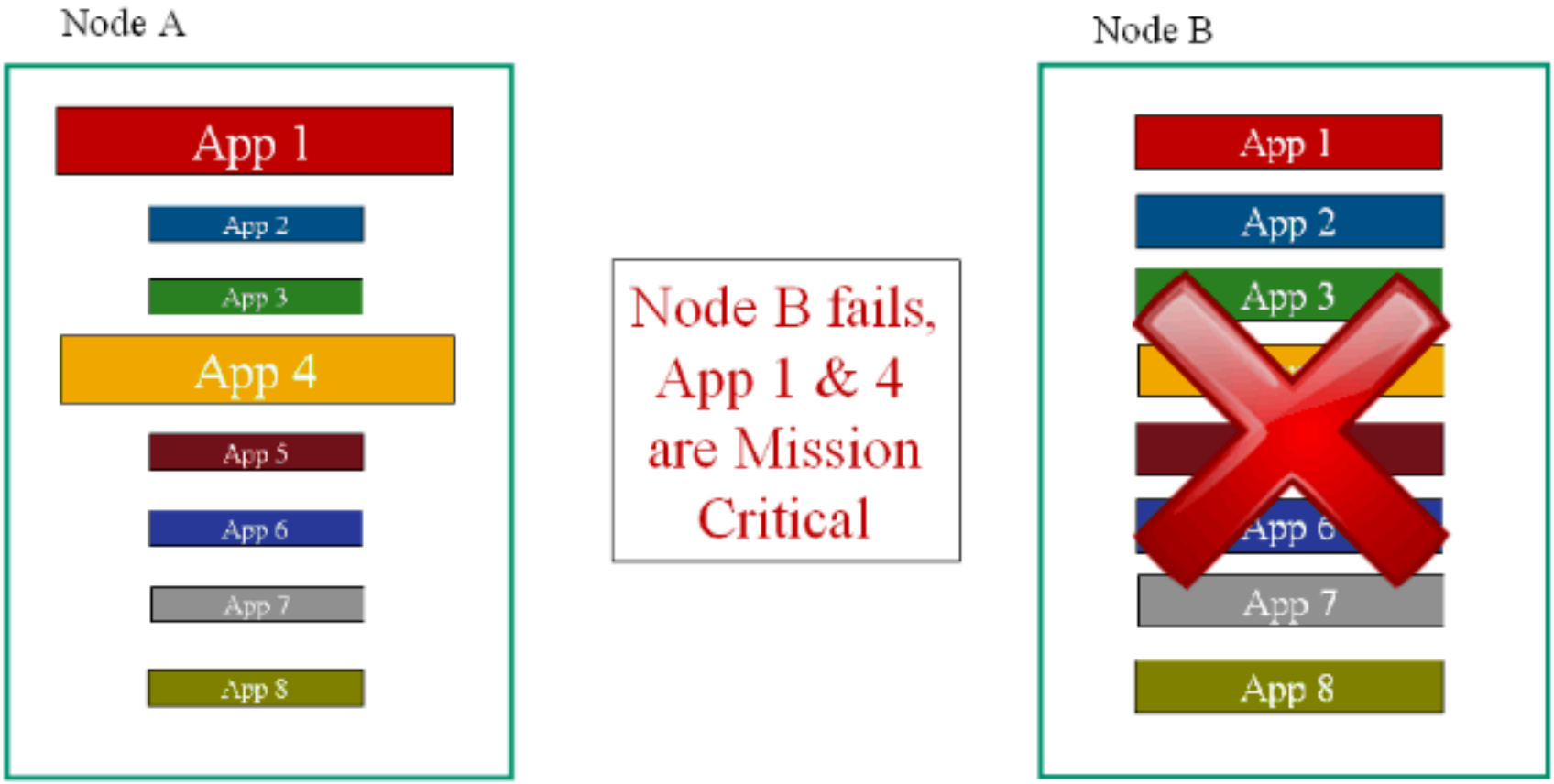
Typical Scenario: Resource Partitions



Typical Scenario: Resource Partitions



Typical Scenario: Resource Partitions



HP-approved configurations for every organization

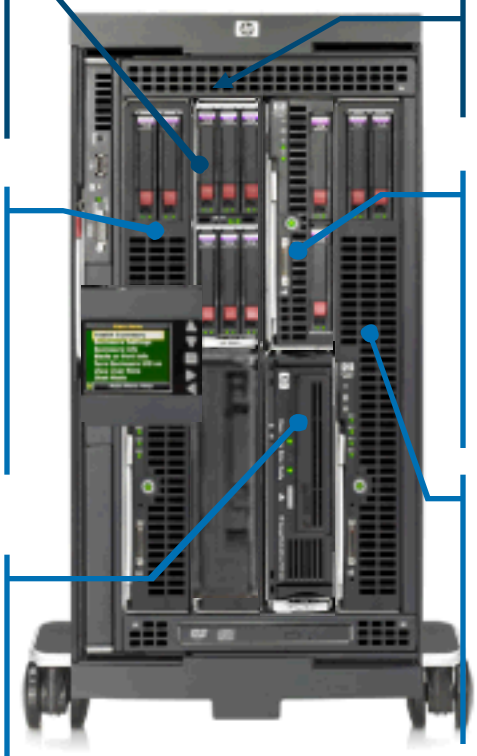
Whether your business applications require basic support or a plan for business continuity, HP has the configuration options to address a cost effective support plan encompassing phone support, field service, high-availability, and complete disaster recovery planning

As your needs grow, you can upgrade your solution however you prefer

HP BladeSystem with HP Integrity server blades and PeopleSoft Enterprise 9.0

HP-approved configuration (All-in-one basic configuration – up to 500 concurrent users)

1 x HP StorageWorks Storage Blade 40 (SB40c) up to 876GB capacity



1 x HP BladeSystem c3000 enclosure

Production Web/application/database server

1 x HP Integrity BL860c Server Blade with 2 x Intel Itanium dual-core processors with 32GB RAM

Backup/restore

1 x HP StorageWorks SB448c Tape Blade with 173GB/hour, 400GB capacity

Reporting/verity server

1 x HP ProLiant BL460c Server Blade with 1 x Intel Xeon™ 5460 Quad Core Processor and 8GB RAM

Demo/development/test/train server

1 x HP Integrity BL860c Server Blade with 2 x Intel Itanium 2 Dual Core Processors with 32GB of RAM

HP BladeSystem with HP Integrity server blades and PeopleSoft Enterprise 9.0

HP-approved configuration (medium configuration – up to 1500 concurrent users)

Demo/development/test/train server

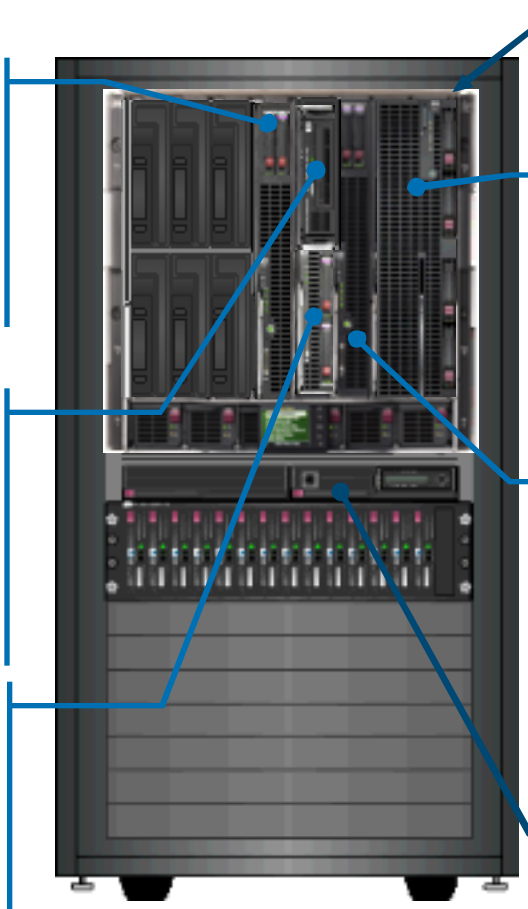
1 x HP Integrity BL860c Server Blade with 2 x Intel Itanium 2 dual-core processors and 32GB RAM

Backup and restore

1 x HP StorageWorks SB920c Tape Blade with 432GB/hour, 800GB capacity

Reporting/verity server

1 x HP ProLiant BL460c Server Blade with 1 x Intel Xeon™ 5460 quad core processor and 8GB RAM



1 x HP BladeSystem c7000 enclosure

Web/application server

1 x HP Integrity BL870c Server Blade with 4 x Intel® Itanium® dual-core processors with 32GB RAM

Database server

1 x HP Integrity BL860c Server Blade with 2 x Intel Itanium 2 dual-core processors with 32GB RAM

HP StorageWorks 1500 csModular Smart Array (MSA1500)

HP BladeSystem with HP Integrity server blades and PeopleSoft Enterprise 9.0

HP-approved configuration (high availability configuration – up to 2500 concurrent users)

2 x HP BladeSystem c7000 enclosures

Web/application servers

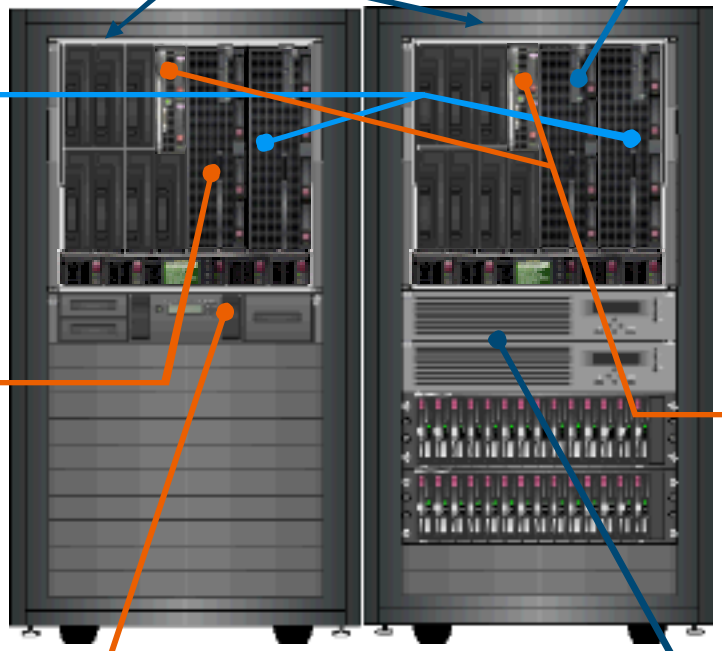
2 x HP Integrity BL870c Server Blade with 4 x Intel Itanium 2 Dual Core Processors with 32GB of RAM

Database server

1 x HP Integrity BL870c Server Blade with 4 x Intel Itanium 2 Dual Core Processors with 32GB of RAM

Backup/Restore

1 x HP StorageWorks MLS2024 Tape Library with 864GB/hour, 38.4TB capacity



HP Integrity virtual machines (Integrity VM) 1–3

1 x HP Integrity BL870c Server Blade with 4 x Intel Itanium 2 Dual Core Processors with 64GB of RAM

- HP Integrity VM 1 – demo/development
- HP Integrity VM 2 – Test/train
- HP Integrity VM 3 – Production database failover

Reporting/verity servers

1 x HP ProLiant BL460c Server Blade with 1 x Intel Xeon 5460 Quad Core Processor with 8GB RAM

HP StorageWorks Enterprise Virtual Array 4100 (EVA4100)

Virtualization/Provisioning drives down TCO

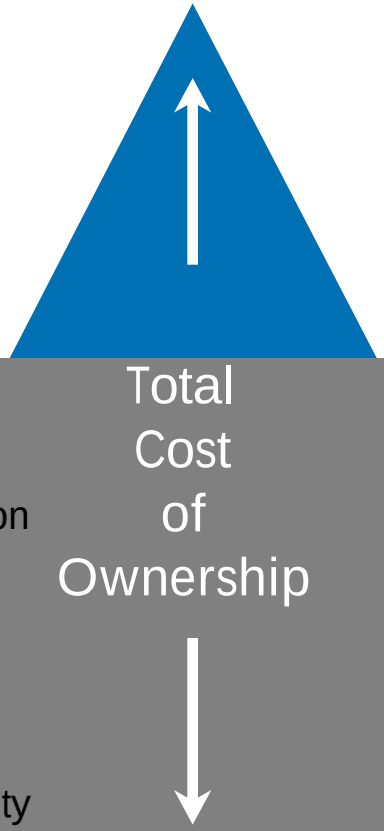
Freeing resources for innovation

~25%

Direct one-time costs
- Hardware acquisition
- Software acquisition
- Support contracts

~75%

+ On-going costs
- Support costs
- IT operations and administration
- Facility costs
- Change costs
- Downtime planned
- Downtime unplanned
- Security
- Business impact and opportunity



Lower costs through:

- Virtualization; optimized asset utilization, availability & control lowers cost & risk of unplanned downtime
- Utility pricing; increased capacity & bandwidth on-demand
- Availability; dynamic tunables, clustering, disaster tolerance & recovery
- Security; prevent, detect, and contain
- Management; seamless single asset view & control
- Engineering: relentless design focus to lower power, cooling, and space
- Agility

Oracle's PeopleSoft and HP Integrity server difference

- Lower total cost of ownership than any other information management solution available today
- Integrated with Oracle Fusion Middleware today
- Clear path to Oracle Fusion Apps tomorrow
- PeopleSoft has native 64-bit implementation build
  - Takes full advantage of HP Integrity's 64-bit power
- Enhanced versions of 3rd party completer apps
- HP Integrity servers best suited for complex, mixed transaction workloads

Now is the time

- Reduced cost of operation
  - Lower total cost of ownership than other solutions available today
  - Multiple operating system support enables consolidation of servers
  - Increased utilization of available resources reduces costs
    - Makes your company more agile and competitive
  - Enhanced features reduce management, maintenance and support

Take the next steps

- Technical presentation
- Evaluation
- Environmental assessment
- Proof-of-concept testing

HP BladeSystem with HP Integrity server blades and Oracle's PeopleSoft Enterprise solutions:
www.hp.com/go/solutionblocks

Resources

Services for Oracle Applications

- Application Architecture Assessment
- Configuration Optimization
- Performance Analysis
- Performance Tuning
- Jumpstart and Migration Services (Custom)

- http://www.hporacleapps.com/go/services
- Email: services.oracleapps@hp.com

Alliance contacts

Global

Vice-President - Global Oracle Alliance:

Mike Crowsen	+1 (281) 927-8196

Database & Tools Alliance Manager

Tim Aylott	+1 (303) 933-3280

Applications Alliance Managers

Donna Newkirk	+1 (972) 497-2564
Camala Kolseth	+1 (408) 873-5104

Global Alliance Technical Services

JDE – Rob Stults	+1 (970) 372-1126
Siebel - Chuck Hall	+1 (512) 366-9183
Retail - Mark Houghton	+1 (706) 348-1506
DB/Tools - Kelton Keller	+1 (801) 763-0845
EBS - Sonal Mehta	+1 (508) 936-6836
PSFT - Michael St-Jean	+1 (603) 580-1987
OFM – Grant Sidwall	+1 (204) 989-3503

Oracle Competency Centers

Americas - oracle-sizing@hp.com

EMEA - oracle-sizing.emea@hp.com

Asia-Pacific/Japan - oracle-sizing.apj@hp.com

Americas

Director - Americas Oracle Alliance

Riadh Dridi	+1 (408) 447-4449

Canada

Ann Martinello	+1 (905) 948-3456

Eastern US

Nancy Davidson	+1 (860) 635-1345

Central US

Sandy Do	+1 (630) 724-5219

Western US

Ann Mueller	+1 503 892-5379

Latin America

Miguel Lavalle	+1 (281) 514-6849

Europe

Elke Thoma	+49 89 93923919

Asia Pacific

Chee-Ming Ong	+65 6336 3333

Japan

Kenji Fukuda	+81 3 5495 2121

- Oracle Alliance link: www.hp.com/go/oracle
  - Oracle alliance strategy
  - Reference architectures
  - Collateral, etc.
- Oracle Applications Website: www.hporacleapps.com
  - Applications Portal
  - Benchmarks
  - White Papers
  - Datasheets
  - Presentations
  - Sizing information
    - Questionnaires
    - 5-min Sizing Guides
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- Oracle Alliance Newsletter for Sales
  - email address to hporaclesubscribe@hp.com
- External hp resources:
  - **www.hp.com/go/oracle**
  - **www.hp.com/go/siebel**
  - **www.hporacleapps.com**

HP Oracle eNewsletter – quarterly customer distribution

HP Oracle eNewsletter
Applications Update

Hot News

» JD Edwards Integrity Certification announcement
HP Integrity server is a solid platform for JD Edwards Enterprise One – and Oracle has announced support for HP Integrity servers running JD Edwards EnterpriseOne applications.

» HP and Oracle customer: Willbros Group, Inc.
Three-way collaboration puts international contractor first.

HP and Oracle–partnered for your success - Winter 2007

Dear [First Name],

HP and Oracle have been strategic partners for over 25 years, offering integrated world-class hardware and software solutions. Our shared goal is to maximize the value of the investments our customers have made in our products and services. We are working in partnership to enable efficient and outstanding support for our joint customers, and to communicate the most up-to-date information about our combined technologies and applications. We hope you find this newsletter valuable, and encourage your feedback.

Ann Livermore
EVP, Technology Solutions Group
Hewlett-Packard

Charles E. Phillips, Jr.
President
Oracle Corporation

In the spotlight

5 New Releases.
6 Continents.
24 Hours.
January 31, 2007
February 1, 2007

» Join the Oracle Applications Unlimited Launch!
Coming to a city near you. Join for an unprecedented event in the history of business software. On January 31 and February 1, 2007, Oracle will launch five new releases of applications products at events around the world.

» Learn more

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Thank you
for your time and
consideration