

# Building a Better Infrastructure With IBM Middleware on IBM Power™ Systems

Introduction

## Introducing Service Oriented Finance

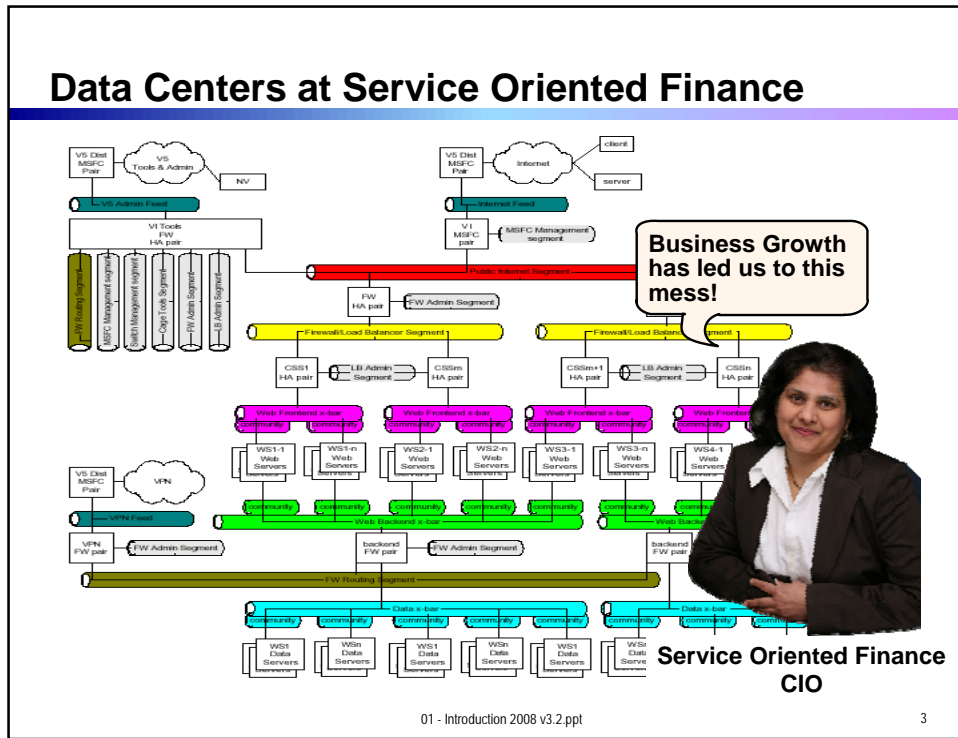
We are a successful business  
that has grown rapidly.

However, IT is now becoming  
a roadblock to our growth.

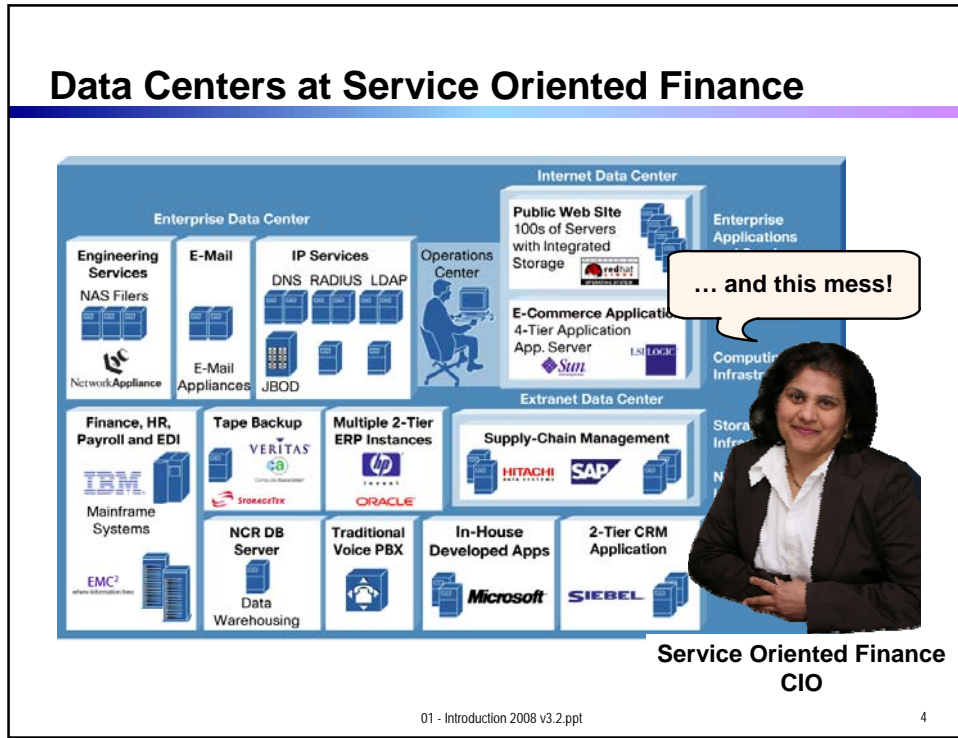


Service Oriented Finance  
CEO

## Data Centers at Service Oriented Finance



## Data Centers at Service Oriented Finance



## Internal IBM Consolidation Project – Distributed Cost Per Server

**Annual Operations Cost Per Server**  
(Averaged over 3917 Distributed Servers)

Power	\$731
Floor Space	\$987
Annual Server Maintenance	\$777
Annual Connectivity Maintenance	\$213
Annual Disk Maintenance	\$203
Annual Software Support	\$10,153
Annual Enterprise Network	\$1,024
Annual System Administration	\$20,359
<b>Total Annual Costs</b>	<b>\$34,447</b>

**\$34,447!**

These annual operating costs are consuming my budget.

There's nothing left for new projects!

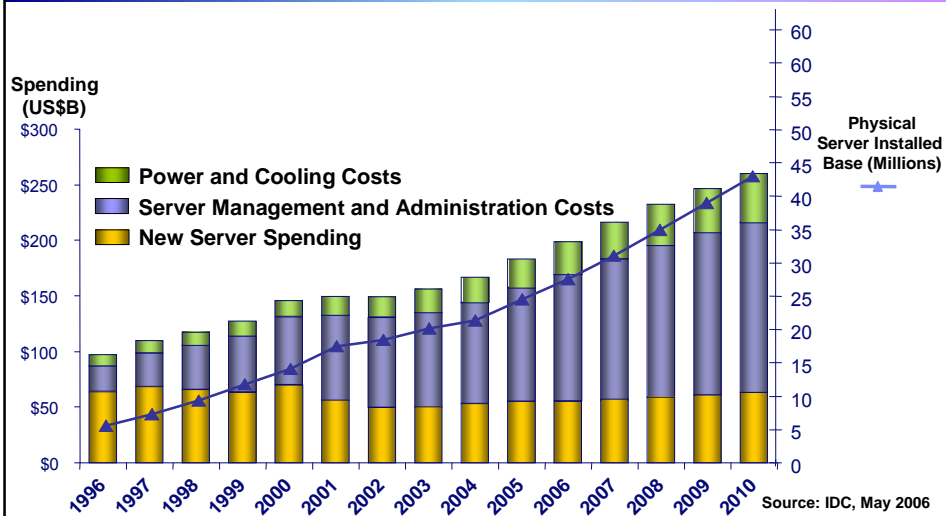


The largest cost component was labor for system administration - 7.8 servers per headcount @ \$159,800/yr/headcount.

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## Rising Server Management Costs



Total cost of ownership (TCO) for servers continues to rise significantly, even as total server spending remains nearly flat - Management costs are the reason, driven by the increasing number of systems

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## Data Centers at Service Oriented Finance

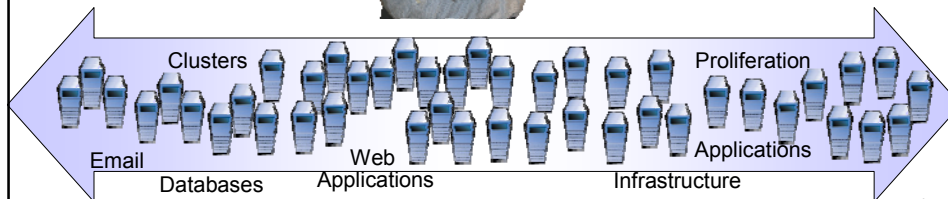


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## IBM Software and IBM Power Systems Can Reduce IT Clutter

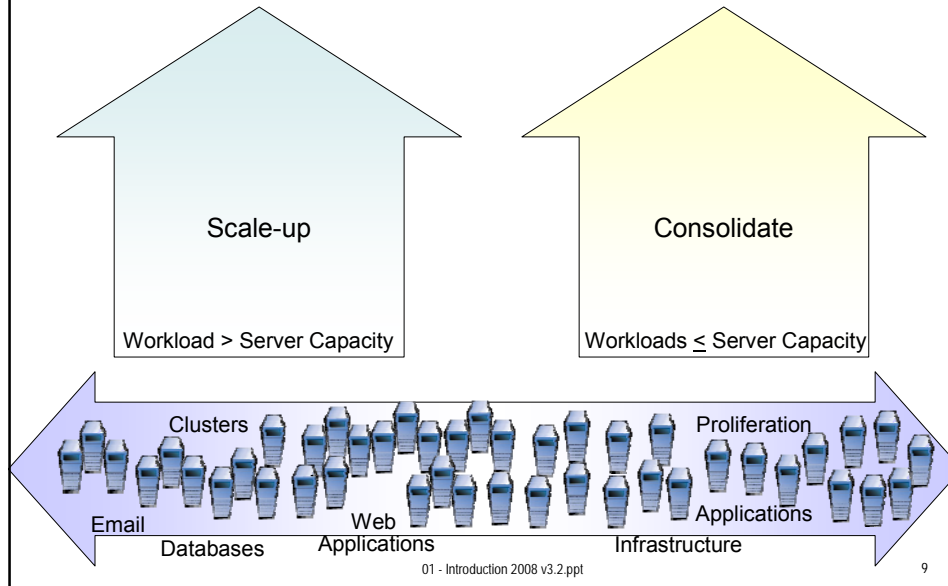
The combination of  
IBM Middleware and  
IBM Power Systems  
can help you fix this.



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## Reduce Data Center Complexity by Scaling-up and Consolidating



## Jebsen & Jessen Benefits From Scale-Up and Consolidation

### Challenges

- Migrate business critical SAP environment to a new database
- Consolidate physical server infrastructure
- Drive down TCO

### Solution

- Replaced **seven** HP-UX servers with **three** IBM Power Systems running IBM AIX
- Implemented SAP ERP on IBM DB2

**Jebsen & Jessen SEA doubles performance and cuts 20 percent from TCO with DB2 on IBM Power Systems.**

*"We felt that the IBM hardware was technically superior."*

**- Roy Lim, Operations Manager – Jebsen & Jessen SEA**

*"The migration of our SAP ERP environment to IBM DB2 on IBM System p5 servers has delivered improved performance and availability."*

**- Gopal Varutharaju, Director – Information Technology Jebsen & Jessen SEA**

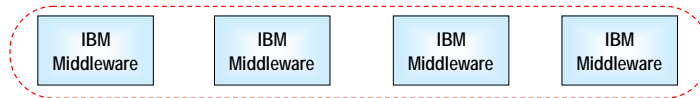
## IBM Middleware Runs on Many Platforms

### IBM Software Efficiencies

Software designed to save the business money

Superior software performance benchmarks

Better administrator productivity



HP



IBM Power Systems



Dell



Sun

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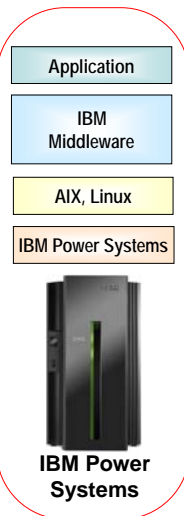
## IBM Power Systems Have The Best Hardware Performance

### IBM Power Systems

Superior performance

Scale-up capabilities

Consolidation via PowerVM



HP



IBM Power Systems



Dell



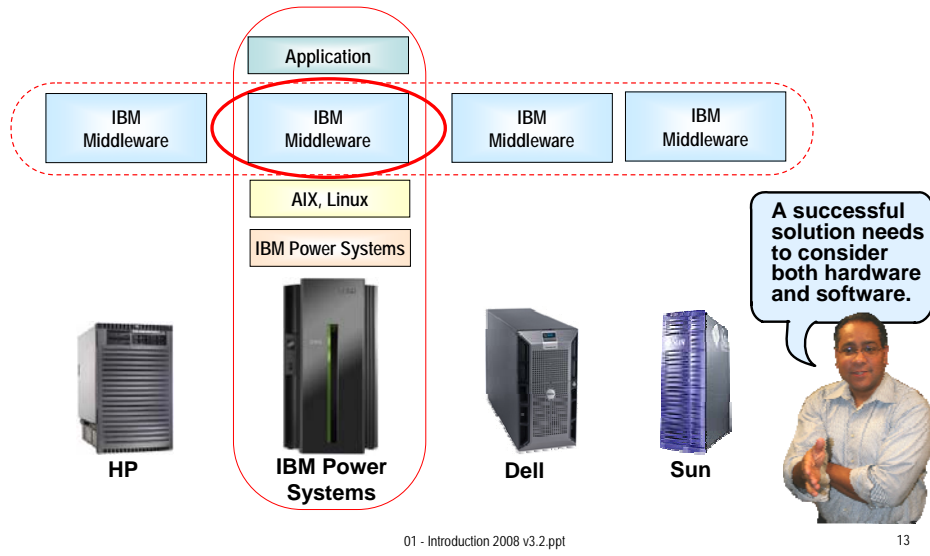
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## An Unbeatable Combination for TCO

IBM Middleware plus IBM Power Systems – The best combination for optimized IT!



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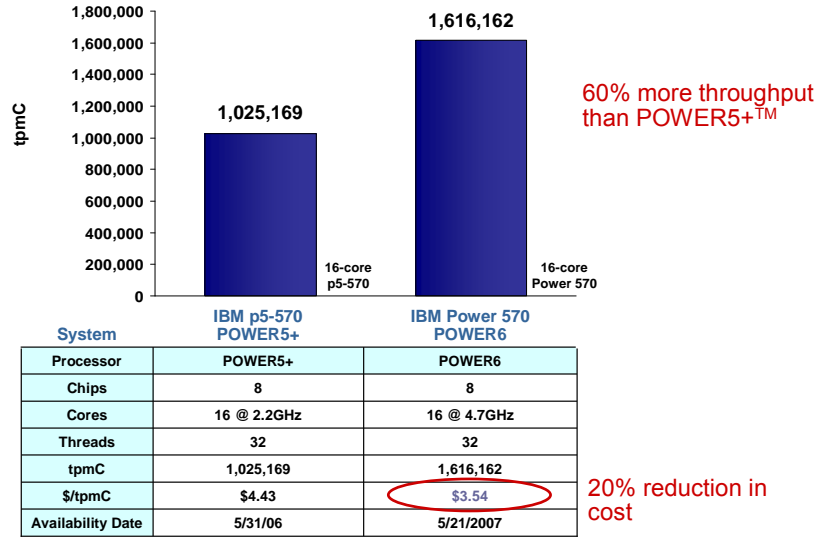
## IBM Middleware – Designed to Work Best on IBM Power Systems

- DB2
  - ▶ Optimizations to exploit large page sizes, decimal floating point, Simultaneous Multi-threading, storage protection keys
  - ▶ Recovery integration, first failure data capture
- Lotus
  - ▶ Integrated collaboration environment that can support more than 15,000 users on a single IBM Power Systems server
  - ▶ The internal mail system at IBM is deployed with Domino on IBM Power Systems
- WebSphere
  - ▶ Takes advantage of IBM Power Systems 64-bit architecture and large memory to provide enhanced performance by caching, just-in-time compilation, etc.
  - ▶ WebSphere provides flexible deployment options that can take advantage of IBM Power Systems virtualization and partitioning

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## New POWER6™ Breakthrough Performance!



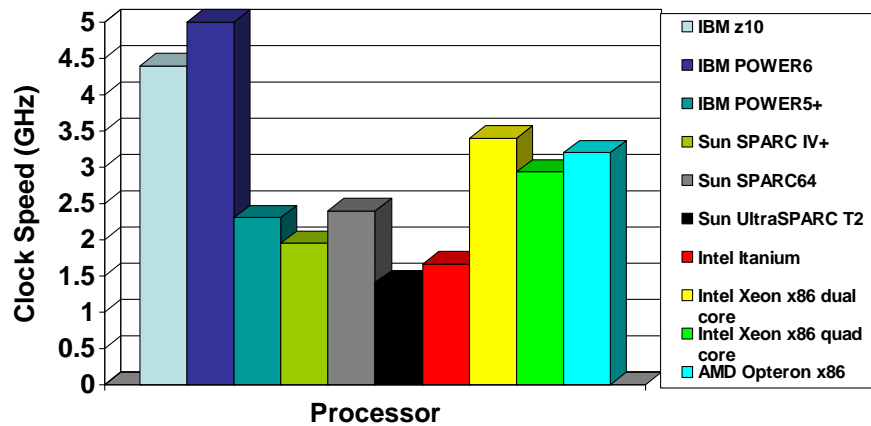
Source: www.tpc.org

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## POWER6 And IBM z10 Lead the Competition

Fastest Available Processor Technology



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## IBM Power Systems Are Designed to Easily Scale-Up or to Consolidate

### Scale-up Features

- ▶ Up to a 64-core SMP server
- ▶ Simultaneous Multi-threading
- ▶ Larger page sizes
- ▶ Hardware decimal floating point
- ▶ Dynamic reconfiguration to deliver capacity on-demand

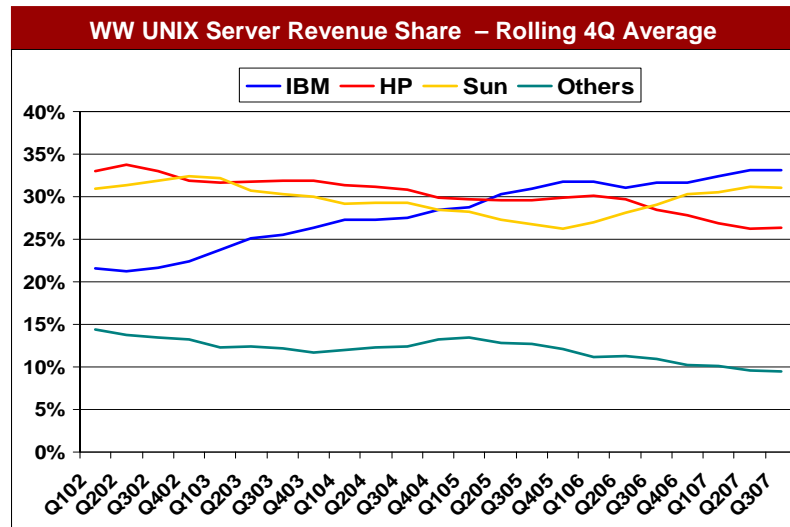
### Consolidation Features

- ▶ Hardware virtualization with hypervisor support
- ▶ Dynamic resource allocation
- ▶ Up to 10 logical partitions per core
- ▶ Storage protection keys
- ▶ Virtual I/O
- ▶ Linux support
- ▶ PowerVM Lx86
- ▶ Live Partition Mobility

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## Unix Server Rolling Four Quarter Average Revenue Share



Source: Worldwide Quarterly Server Tracker, IDC, November 2007.

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## IBM Middleware Is Designed to Save the Business Money

### WebSphere

Extend the value of applications and business processes with SOA

**Build Business Capability Faster**

### Information Management

Integrate data and enterprise content to leverage information on demand

**Better Business Decisions**

### Lotus

Enables businesses to communicate, collaborate and increase productivity

**Employees Respond to Business Challenges Effectively**

### Rational

Govern software and systems delivery

**Development Efficiency and Project Success**

### Tivoli

Manage infrastructure, operations and IT processes, to more effectively deliver services aligned to business goals

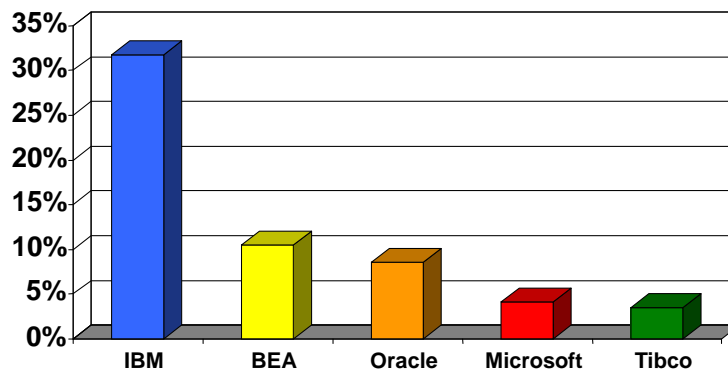
**Continuous Business Operation**

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## IBM Is the World's Largest Middleware Vendor

### WW Middleware Revenue Market Share

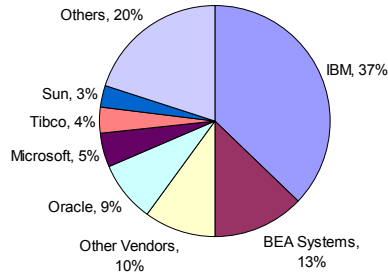


Source: Market Share: Portal, Process and Middleware Software, Worldwide, 2004-2006, Gartner, June 27, 2007.

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## IBM Middleware Leads in Key Indicators



Highest Application Integration  
Middleware Market Share

Source: Worldwide AIM and Portal Software, Gartner, 2005.



Best Middleware Vendor

Source: Gartner Magic Quadrant on Application Infrastructure, Gartner, May 2007.

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## IBM Provides a Simplified, Integrated and Open Middleware Stack

**IBM**  
Consistent programming model on an integrated stack

Collaboration
Portal
Enterprise Service Bus
WebSphere Process Server
WebSphere Adapters
JEE
WebSphere Application Server

**BEA**  
Confusing product Choices

Plumtree or WebLogic?
Aqualogic Service Bus
Which one? WLI, ALSB or Fuego
Third Party Adapters
JEE
WebLogic Application Server

**ORACLE**  
Two programming models

Collaboration
Oracle Portal Control Logic
Oracle Integration Interconnect
Oracle Workflow in Application Suite
EBSuite Adapters
PL/SQL
Oracle Application Server

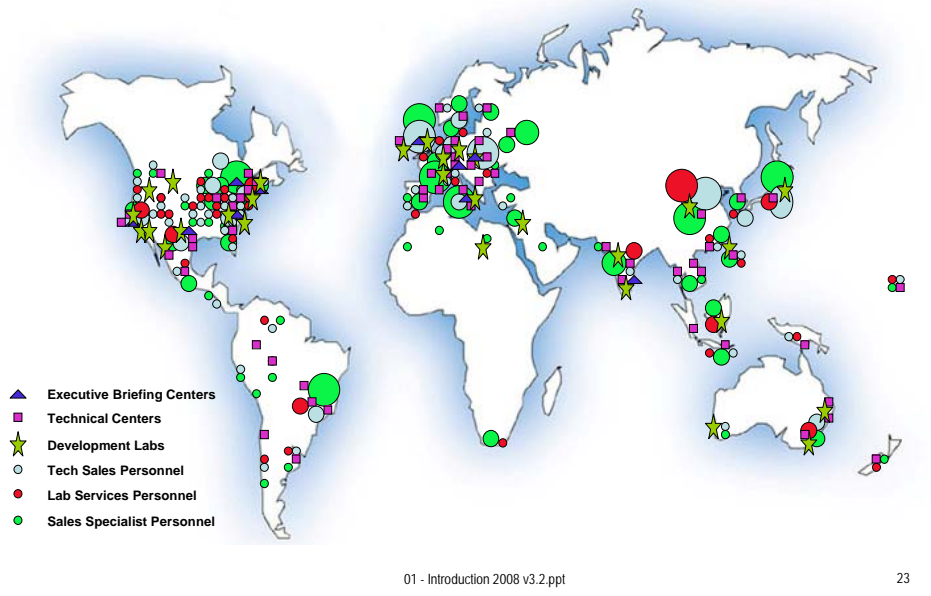
Years of migration confusion

WebCenter
Oracle Portal Content
Human Task Services
BPEL Process Manager
Third Party Adapters Technology Adapters
JEE

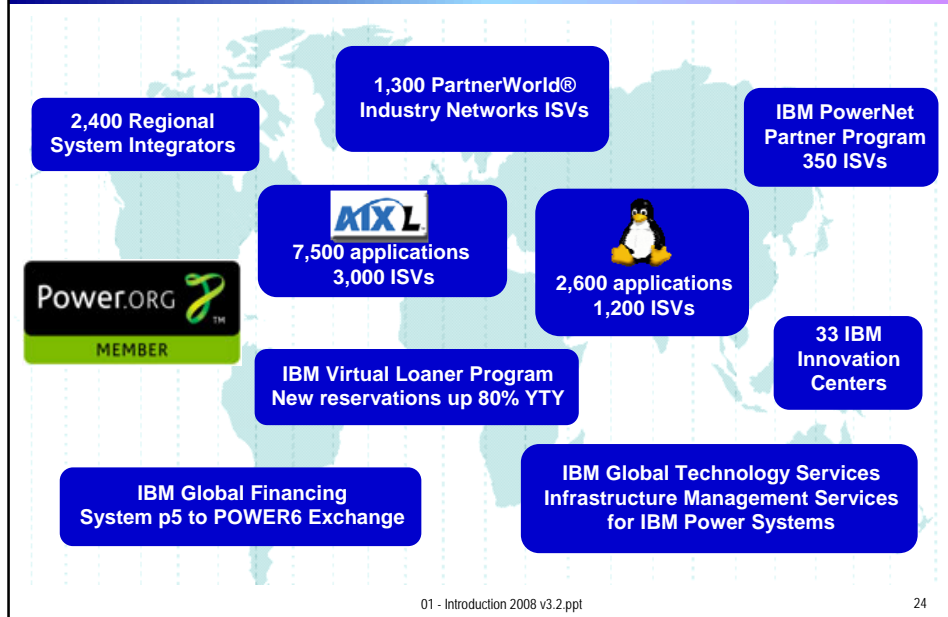
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## IBM Has Skilled People Near You



## IBM Power Systems Worldwide Ecosystem



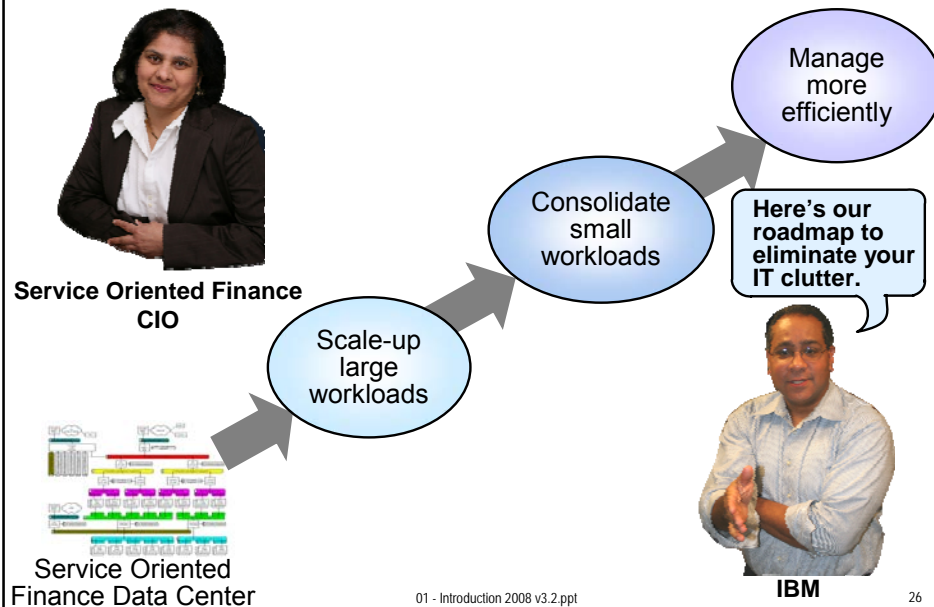
## Why is IBM Middleware + IBM Power Systems the Best Solution to Simplify Your IT Environment?

- Fast and powerful IBM Power Systems servers can handle several workloads
- Software designed to lower cost and improve flexibility
  - ▶ Designed with business costs in mind
  - ▶ Integrated software environment
  - ▶ Software designed to take advantage of a fast server
    - DB2, Lotus, WebSphere, Tivoli, Rational
  - ▶ Software designed to easily consolidate workloads
- Software management to simplify and contain labor costs
- Net result - great price/performance and reduced complexity

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## Three Steps to Optimizing IT



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**SHOW ME MORE!**



**Service Oriented Finance  
CIO**

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## **Agenda**

- Introduction
- POWER Hardware Improves Utilization and Reduces Costs
- Break
- Reduce Database Complexity and Improve Performance with DB2
- Simplify Collaboration Services with Lotus Domino
- Lunch
- Consolidation Through Virtualization Saves Space, Energy and Costs
- Simplify Sprawling Web Tiers To Scalable WebSphere Servers
- Break
- Manage Datacenter Services With Best Practices
- IT Accounting in a Virtualized Environment
- IBM Middleware on Power Systems - An Unbeatable Combination for TCO

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