IBM: The Software Agenda

Stephen Smith
VP Enterprise Sales Software Group, IBM
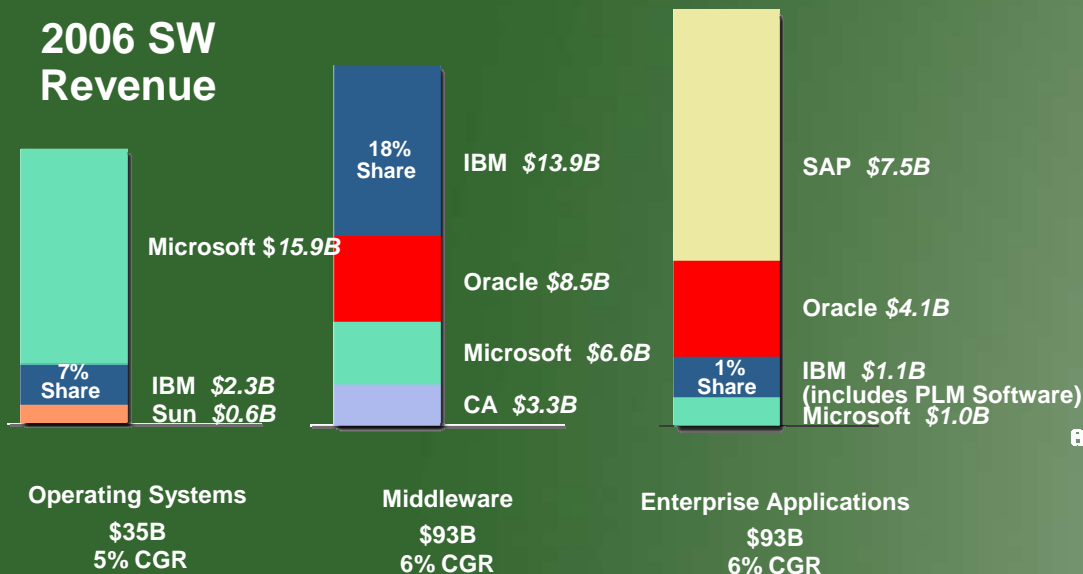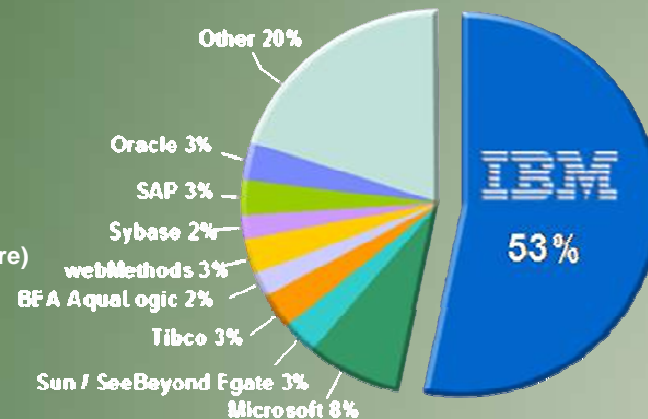
IBM Software Group

☞ **2nd Largest Software Vendor in the Industry**
☞ **The Market Share Leader in Middleware**
☞ **Software is the most profitable part of IBM**
☞ **IBM's software unit leads the way on income**
☞ **SW accounts for 20% of revenue & generates 40% of pretax earnings**

2006 SW Revenue

Operating Systems
$35B
5% CGR

- 7% Share
- Microsoft $15.9B
- IBM $2.3B
- Sun $0.6B

Middleware
$93B
6% CGR

- 18% Share
- IBM $13.9B
- Oracle $8.5B
- Microsoft $6.6B
- CA $3.3B

Enterprise Applications
$93B
6% CGR

- 1% Share
- SAP $7.5B
- Oracle $4.1B
- IBM $1.1B (includes PLM Software)
- Microsoft $1.0B

Source: (1) Only top market share leaders listed; IBM share includes software revenue from IGS transactions
(2) IBM GMV2H07, IBM CSV 9/04/07; Middleware excludes operational security; CGR is '07– '11

SOA Market Leadership
2006 Market Share

- Other 20%
- Oracle 3%
- SAP 3%
- Sybase 2%
- webMethods 3%
- BFA Aqual ogic 2%
- Tibco 3%
- Sun / SeeBeyond Egate 3%
- Microsoft 8%
- IBM 53%

Worldwide Services Oriented Architecture (SOA) Engine and Collaboration License, Services and Maintenance
Market Shares, 2006 – Source: WinterGreen Research, April 2007 - SOA Engines and Components only

The Future Runs on System z

SWG Globally Integrated Team

Major R&D Locations

45,000 + SW Employees Worldwide
- 20,000 Developers
- 15,000 + Customer Facing Employees
  including over 5,000 Field Technical Support and 3,800 Lab Services
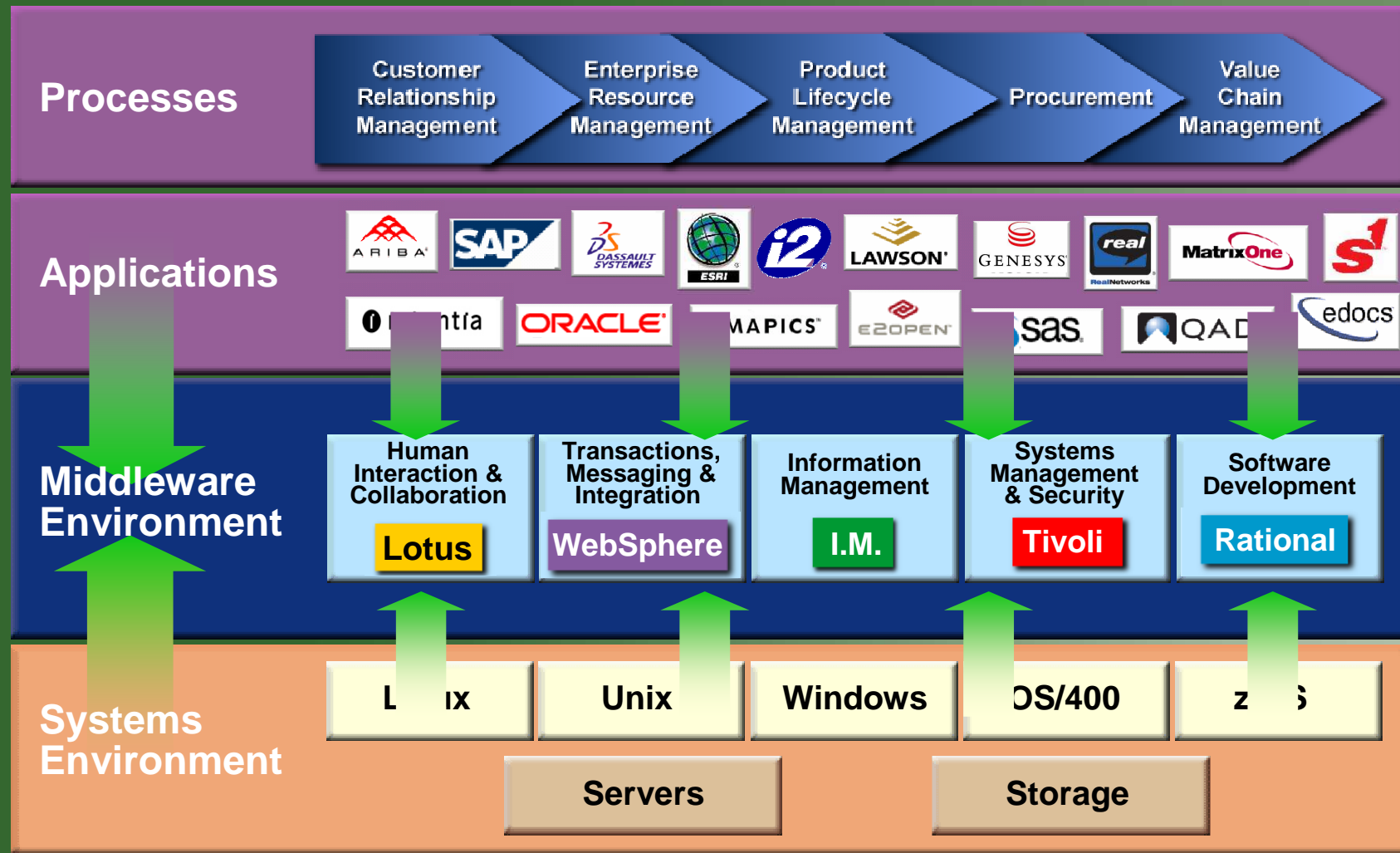
plus… **over 30,000 SW Partners**

Canada

Dublin

Staines
Hursley

Boeblingen

Paris

Krakow

Haifa

Rome

Cairo

China
Beijing, Shanghai

Taiwan

Yamato

United States
California
Massachusetts
Minnesota
New York
North Carolina
Texas

Brazil

India
Bangalore
Pune
Hyderabad
Gurgaon

Malaysia

Singapore

Perth

Gold Coast
Sydney
Canberra

350,000 + IBM Employees Worldwide
- 30,000 + Developers
- 100,000 + Sales, Support & Marketing

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Middleware Evolution

Market Leaders across SWG Portfolio

Pie chart labels

- Social Networking
- Collaboration
- Information Integration
- Content Management
- Data Services
- Application Servers
- Process Servers
- Portals
- Security
- Systems Mgt
- Storage
- Systems Mgt
- Quality Mgt
- SW Lifecycle Mgt
- Architecture & Construction

Pie segments: Lotus, Rational, Information Management, Tivoli, WebSphere
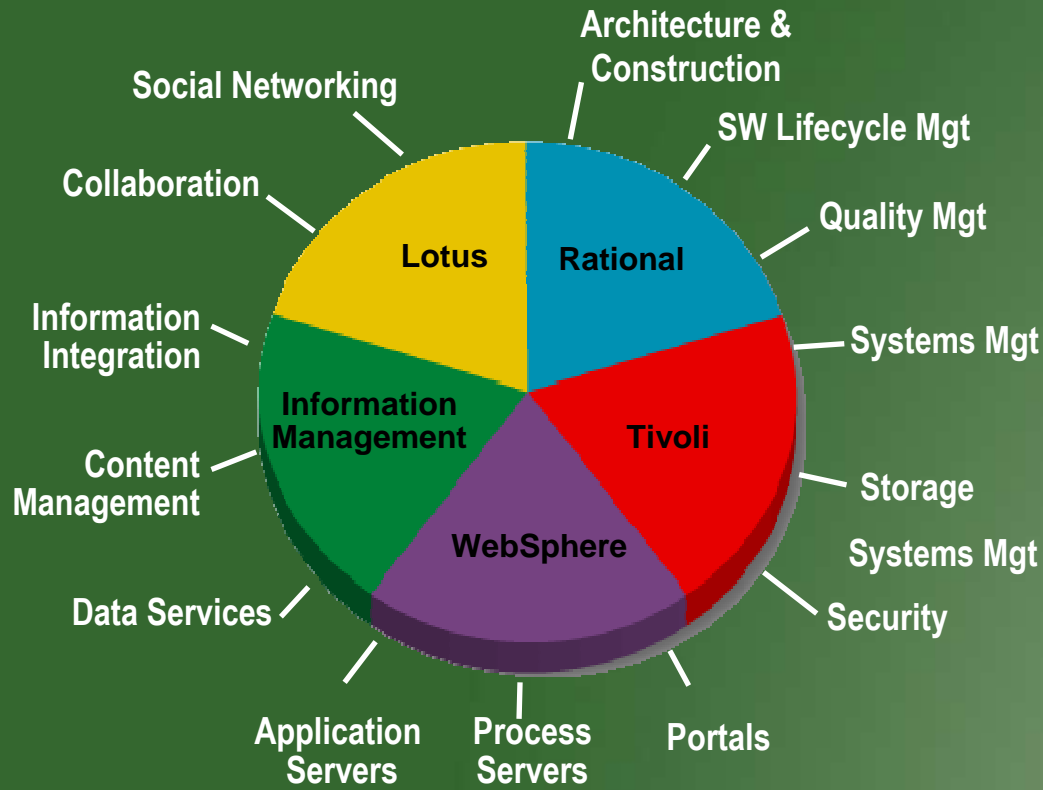
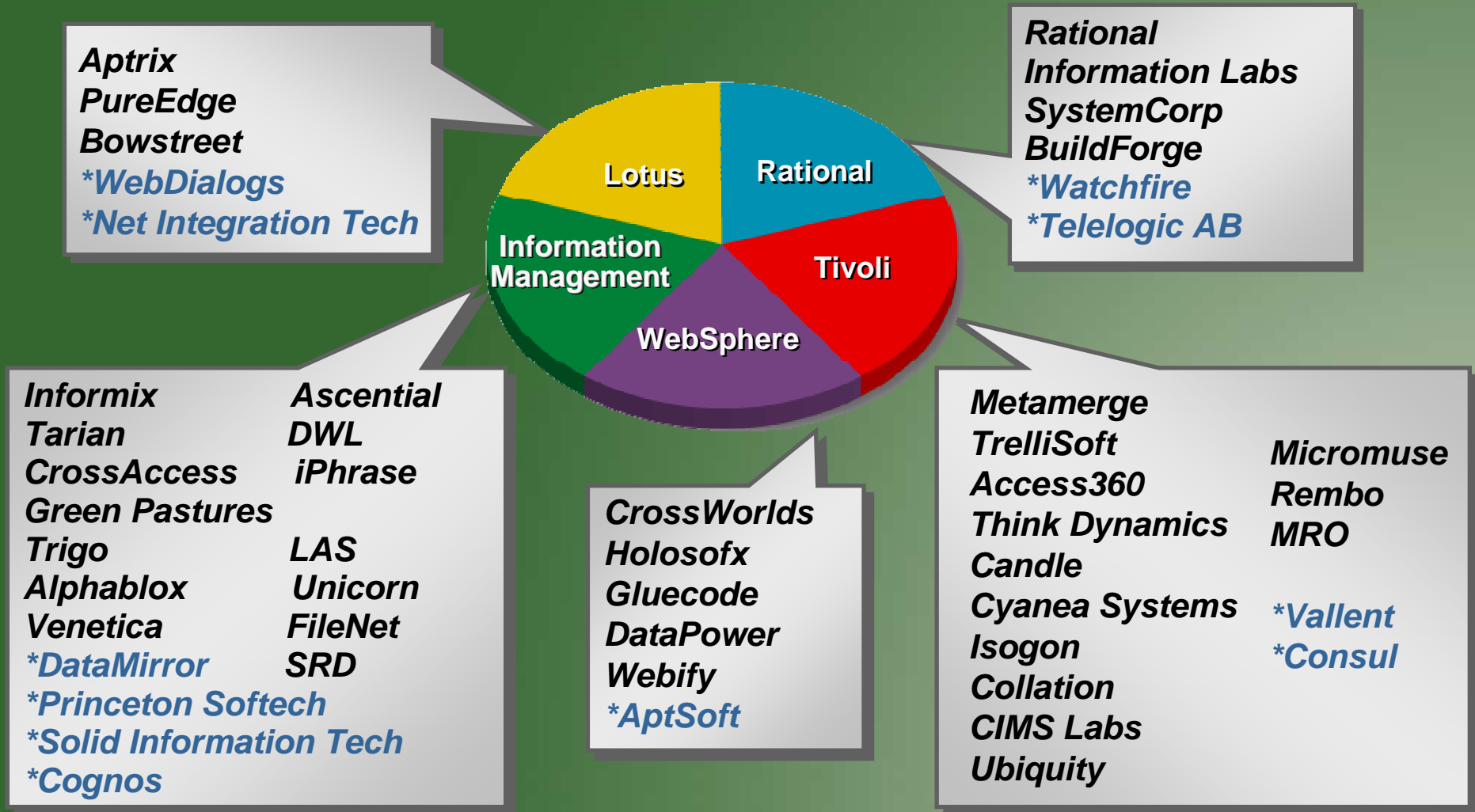| Key Product Segments	IBM Share Position
WebSphere	**#1**
Integration Server	#1
Web Application Server	#1
Portal Server	#1
Information Management	**#2**
Enterprise Content Management	#1
Information Integration (incl MDM)	#1
Database Engines & Tools	#2
Lotus	**#2**
Collaboration	#2
Tivoli	**#2**
Security Management	#1
Storage management	#3
Rational	**#1**
Software Configuration Mgmt	#1
Software Lifecycle Mgmt & Governance	#1

Service Oriented Architecture (SOA)	Information on Demand	Next Generation Collaboration	IT Service Management	IT Lifecycle Management & Governance

IBM

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Software Group Acquisitions

Aptrix
PureEdge
Bowstreet
WebDialogs
Net Integration Tech

Rational
Information Labs
SystemCorp
BuildForge
Watchfire
Telelogic AB

Lotus

Rational

Information Management

Tivoli

WebSphere

Informix   **Ascential**
Tarian   **DWL**
CrossAccess   **iPhrase**
Green Pastures
Trigo   **LAS**
Alphablox   **Unicorn**
Venetica   **FileNet**
DataMirror   **SRD**
Princeton Softech
Solid Information Tech
Cognos

CrossWorlds
Holosofx
Gluecode
DataPower
Webify
AptSoft

Metamerge
TrelliSoft
Access360   **Micromuse**
Think Dynamics   **Rembo**
Candle   **MRO**
Cyanea Systems
Isogon   *Vallent*
Collation   *Consul*
CIMS Labs
Ubiquity

*Note: Acquisitions since Jan 2001; * 2007/2008 Acquisitions*

IBM.   **The Future Runs on System z**

System z10 – the Software value snapshot

WAS for z/OS - Powerful combination with new z10
Taking advantage of hardware capabilities

- *Facilitates transaction workloads with hardware features*

  - **Increased CPU power (64 CPUs per image)**

  - **Very large real memory (1 TB)**

  - **Increased I/O and network bandwidth**

  - **Hyper Dispatch**

- *Improves Security*

  - **Advanced Encryption Standard (AES) using 256 bit key**

- *Estimate WAS V6.1 (Java5) performance on z10 to be 1.5 times faster*

- *Java6 promises additional improvements*

  - **Large page exploitation in managing heap**

  - **Extensive exploitation of new hardware instructions**

  - **Decimal Floating Point exploitation through the BigDecimal class**

Hardware, operating system, and middleware working together…

The importance of Enterprise Modernization
To improve IT flexibility, you need to modernize your enterprise in the following areas:

Solution #1 Modernize Your Asset Management
Discover, understand, and leverage existing applications and services (WSAA,ATW, Rat Requisite Pro, Rat Asset Mgr, WSRR)

Solution #2 Modernize Your Architectures & Skills
Develop new SOA applications rapidly from the ground up (HATS, RatBDEext, WDZ, Rat SW Architect, Rat Data Architect)

ASSETS
Discover, understand, and transform existing applications and services

ARCHITECTURES
Develop new SOA applications, reuse existing applications as services

PROCESSES AND TOOLS
Leverage modern processes and technology to reduce costs, improve quality and productivity

SKILLS
Rapidly develop cross-platform applications using new and existing skills

INVESTMENTS
Invest resources in new opportunities

| System z | System i | Distributed |

- ✓ **EXTEND VALUE** *of existing enterprise assets*

- ✓ **LEVERAGE** *& modernize existing & new **SKILLS***

- ✓ **DRIVE INNOVATION** *with technology advancements & **IMPROVE** team collaboration and responsiveness*

- ✓ *Enable **BUSINESS FLEXibility** & **CHANGE** across the software lifecycle*

- ✓ **SHOWCASE in Montpellier!**

Solution 3# Modernize Your Team Infrastructure
Provide coordination, traceability, consistency across platforms (ClearQuest, ClearCase, BuildForge)
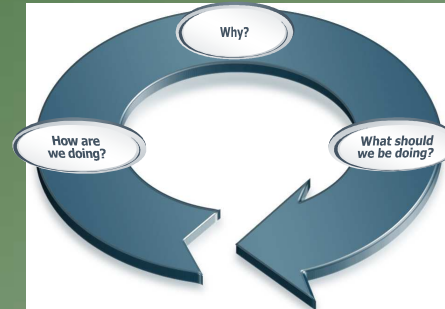
New Information On Demand Software for System z
Better business decisions, faster and with a lower overall TCO

Cognos 8 Business Intelligence for System z

Coming!

Single solution for reporting, analysis, dashboards and scorecards

Delivers a competitive advantage for organizations with operational information on System z
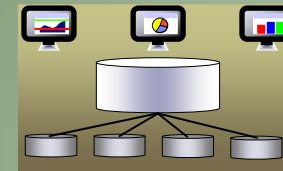
DB2 for z/OS Value Unit Edition

Now Available

New one-time-charge offering that simplifies the deployment of new application workloads

Data Warehousing on System z

More than 50 new features in DB2 for z/OS supporting warehousing

Information Server for System z - brings new scalability, information consistency and performance

InfoSphere Master Data Management Server for System z

More effectively manage high-value operational information

Addresses and solves the root cause of master data complexity

Coming!

New Tivoli System Management Capabilities for System z
unprecedented levels of Visibility, Control and Automation

System Automation for z/OS and NetView®

- Enhanced integration with IBM Tivoli® OMEGAMON XE
- Workload Scheduler for z/OS, and System Automation for Integrated Operations Management reduces manual intervention by enabling batch workloads to automatically start and stop resources

Tivoli zSecure Suite

- Real-time mainframe monitoring solution that enables efficient monitoring of intruders and improper configurations
- Windows based interface for immediate productivity
- Offline management of RACF® resources – RACF for z/VM March '08

Tivoli OMEGAMON

- Automatic CICS® Transactions Gateway Discovery for monitoring and TS Server analysis
- Views into CTG transaction and CICS TS Server workload, resource and utilization ensuring process availability and efficiency.
- Integration of Tivoli Discovery Library Adapter with CCMDB for automatic service population
- Simultaneous sessions for CICS on z/OS for TS

IBM Tivoli Monitoring Green Energy Agent

- Reports additional data (power and thermal metrics) into IBM Tivoli Monitor
- Power / Energy data reported in Tivoli Enterprise Portal
- Support of Tivoli Data Warehouse for storage of energy data
- ITM can control server power through manual / automatic action

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Delivering value for the Platform
System z Software Agenda

- *Keep investing in delivering new, tightly-coupled technology (HW & SW)*
- *Significant performance gains for IBM software running on System z10 EC*
- *New Software announcements strengthening System z as the:*
  - Enterprise Hub for Mission Critical Data & SOA
  - Enterprise Business Resilience Manager
  - Enterprise Security Manager
  - Enterprise Workload Manager
- *Simplify & Modernize the platform for the New Generation of IT professionals*
- *System z platform for new workloads helps clients attain the following benefits*
  - Faster response to demands by business for change
  - Reduced dependency on specialized skill-sets
  - Reduced cost of workloads and management
  - Reduced risk associated with changing IT infrastructure
  - Better alignment of IT with business
- *All in All…keep improving the TCO of the platform !*

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Key 2008 System z Software Events

get connected with other IBM customers & understand how to leverage even more your System z platform

- IMPACT 2008
  - *April 6 - 11, 2008, Las Vegas*
  - *http://www-306.ibm.com/software/websphere/events/impact2008/*

- Spring 2008 System z Premier Event
  - *May 6 - 8, 2008, Valencia, Spain*

- Pulse 2008
  - *May 18 - 21, 2008, Orlando*
  - *http://www-306.ibm.com/software/tivoli/pulse08/index.html*

- Rational Development Conference
  - *June 1-5, 2008, Orlando*
  - *http://www-306.ibm.com/software/rational/events/rsdc2008/general-info.html*

  - *Information On Demand 2008*
  - *April 15, 2008 , Milan*
  - *June 3-6, 2008, The Hague*
  - *October 26-31, 2008, Las Vegas*
  - *http://www-306.ibm.com/software/data/conf/*

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Domino	HyperSwap	PR/SM	VSE/ESA
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DS8000	IMS	RMF	z/OS*
Encina*	Intelligent Miner	System i	z/VM*
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