



IBM Software Group

# IT Service Management for System z

*A Better Way to Manage the Business of IT*

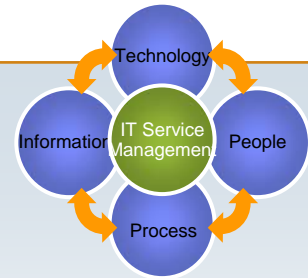
**Tivoli** software

A decorative horizontal bar spanning the width of the slide, composed of various colored segments: red, purple, cyan, green, yellow, a white asterisk on a red background, a woman's face, a grid of four white circles on a red background, and other abstract patterns.

**ON DEMAND BUSINESS™**

# Today's Discussion

- **IT Service Management and System z: Taking z Expertise to the Enterprise**
- **Roadmap Update: Acquisitions and Deliverables**
- **Tivoli End-to-End Management Service Enterprise-wide Management Solutions**
- **Security: An End to End Strategy**
- **Wrap Up**



# IT Service Management and System z: Taking z Expertise to the Enterprise



# The Challenge: IT Organizations Are Under Tremendous Pressure



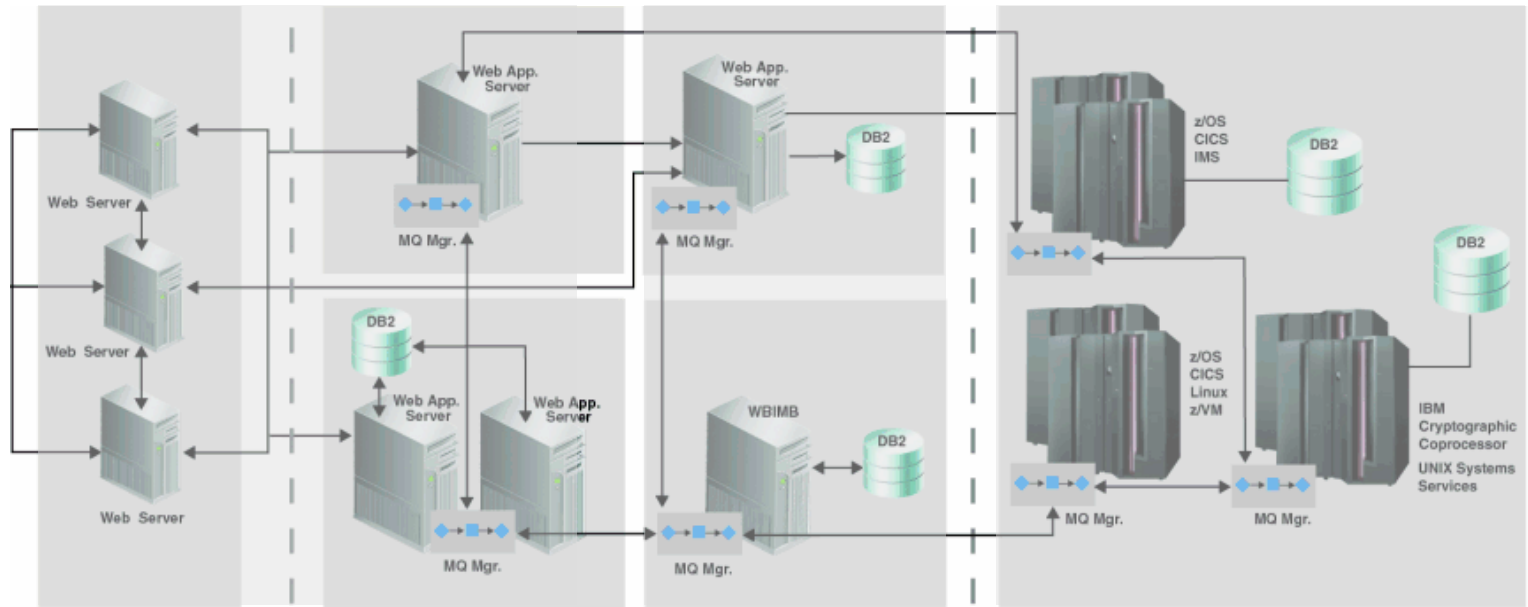
- **Change:** Market demands, workloads, service levels
- **Compliance:** Regulations, security, audit capabilities
- **Complexity:** Heterogeneous resources, silos, composite applications
- **Cost:** Management and administration

*“We’re trying to resolve a huge morass of IT complexity, while demand for our services keeps going up. We’re getting hit from both sides. So what are we doing about it? We’re delivering an adaptive IT organization that provides services on demand to support the needs of the business.”*

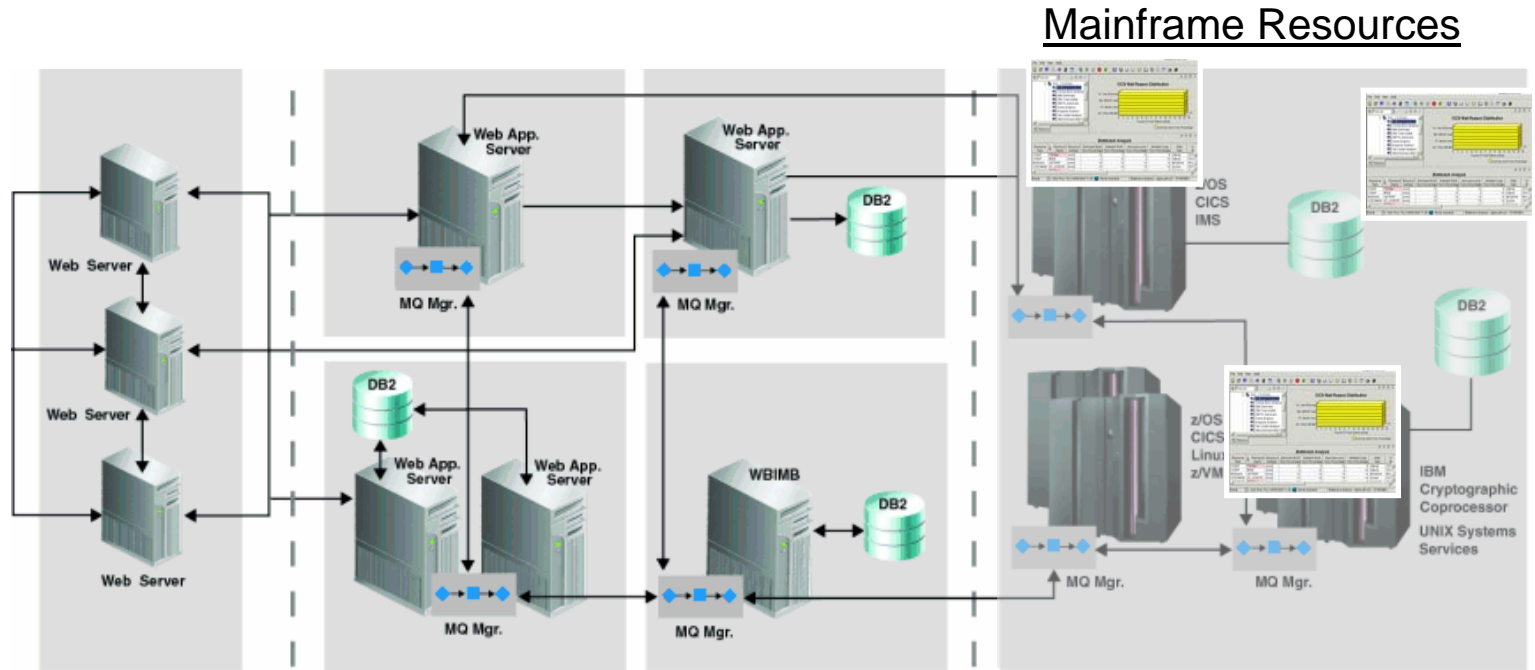
– George Surdu, Director, Global Information Technology Infrastructure, Ford Motor Company, September 2005



# System z to the Enterprise: How We Got Here



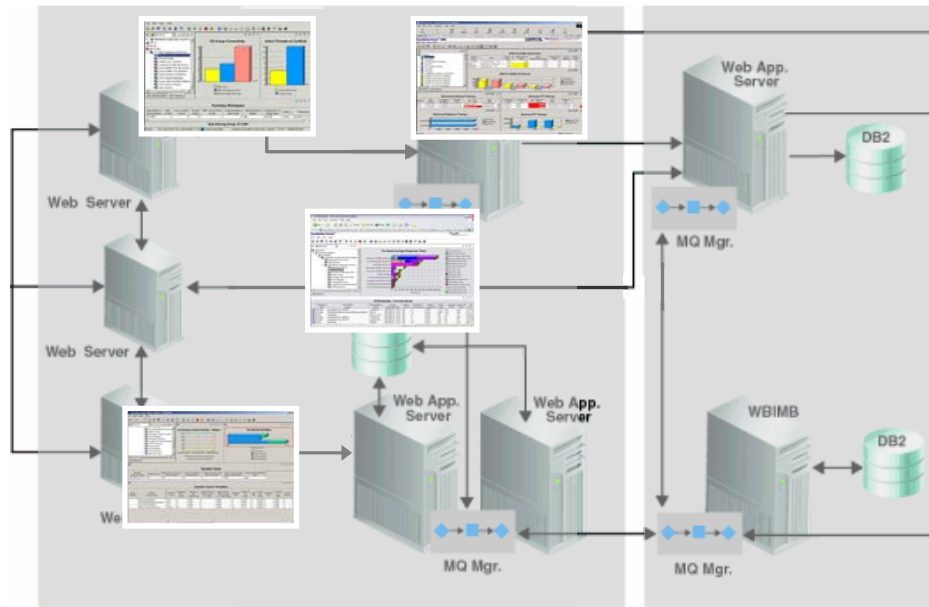
# System z to the Enterprise: How We Got Here



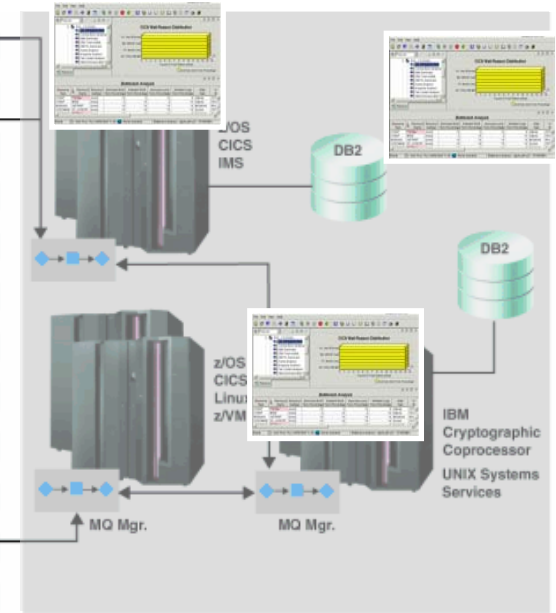
- System, Middleware, Application Availability
- Workload Management
- System, Network & transaction Performance
- Capacity Management
- Sysplex and GDPS

# System z to the Enterprise: How We Got Here

## Distributed Resources



## Mainframe Resources

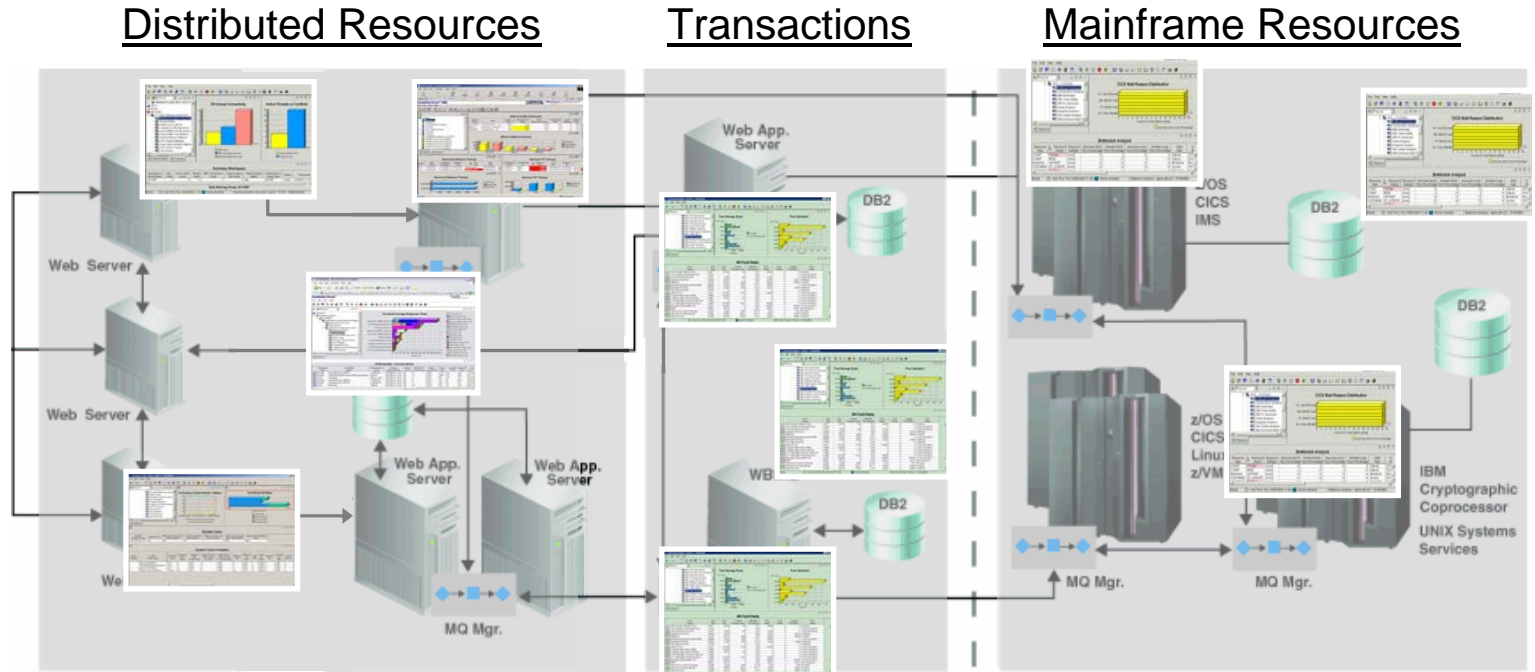


- System & Application Availability
- Workload Provisioning
- System and Network Performance Management

- System, Middleware, Application Availability
- Workload Management
- System, Network & transaction Performance
- Capacity Management
- Sysplex and GDPS



# System z to the Enterprise: How We Got Here



- System & Application Availability
- Workload Provisioning
- System and Network Performance Management

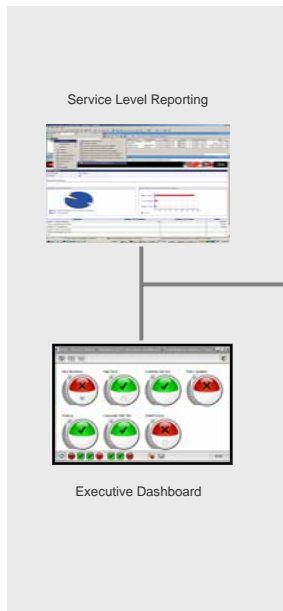
- Composite Application Availability
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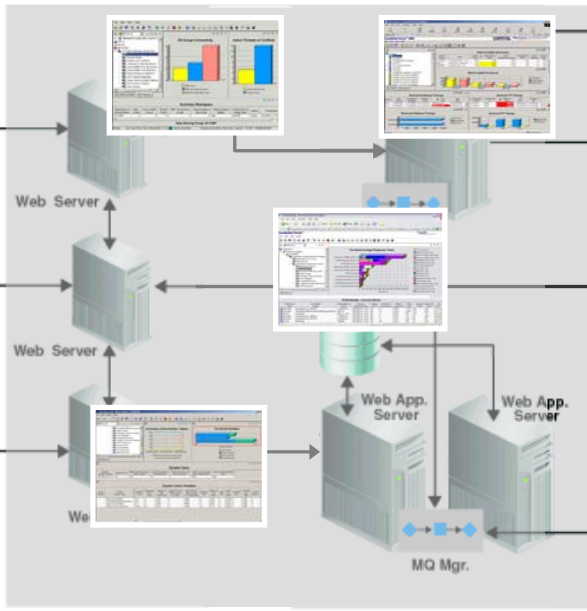


# System z to the Enterprise: How We Got Here

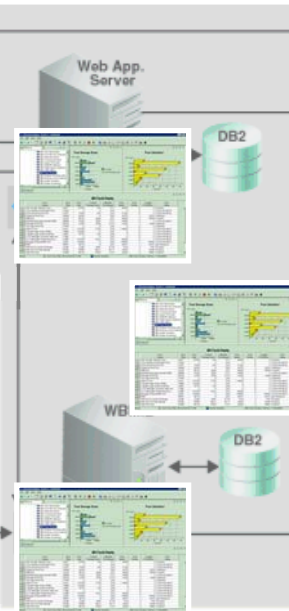
## Business Services



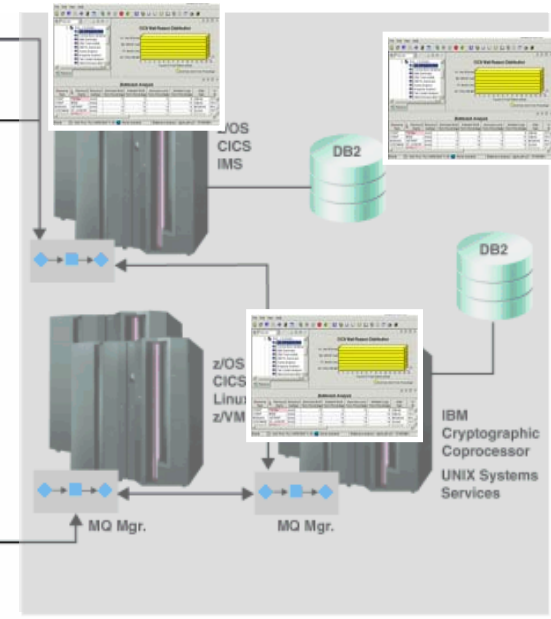
## Distributed Resources



## Transactions



## Mainframe Resources



- Business Service Availability
- Service Provisioning
- System, Network, Transaction & Service Performance Management

- System & Application Availability
- Workload Provisioning
- System and Network Performance Management

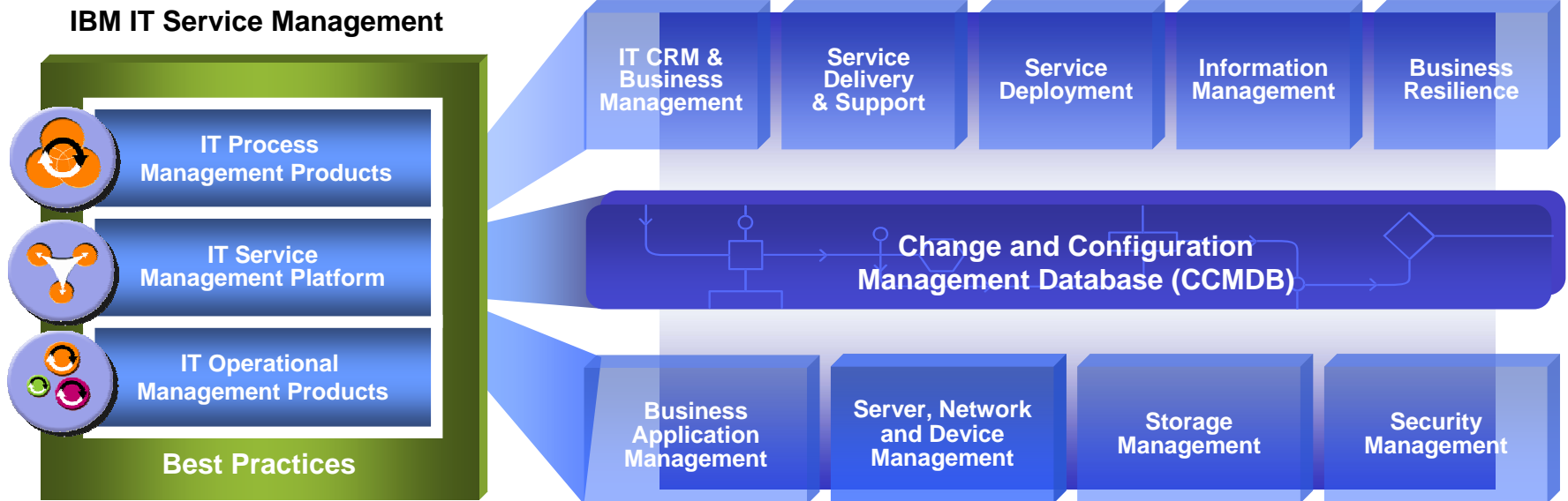
- Composite Application Availability
- Workload Provisioning
- System, Network & Transaction Performance Management

- System, Middleware, Application Availability
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# IBM IT Service Management – Innovation that Matters

The industry's most comprehensive set of products, services and solutions

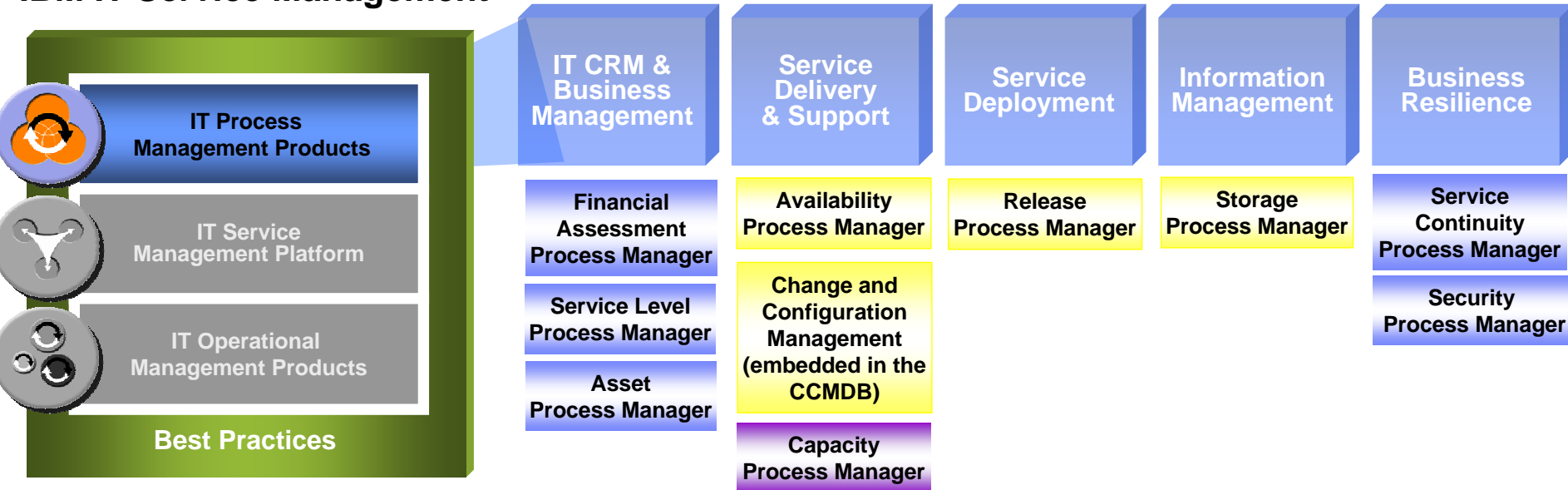


- Open and federated Change and Configuration Management Database (CCMDB)
- Proven technology for integrating 'Process to Product' -- including third-party vendors
- Based on self-managing autonomic technologies and best practices such as ITIL and eTOM
- Built on an SOA architecture, and can manage and secure SOA environments



# IT Process Managers Bridge Organizational Silos

## IBM IT Service Management



*Available Now!*

*Available in 2H 2006!*

*Future Directions*

- Automates IT management processes for rapid responsiveness and greater flexibility
- Based on experience applying ITIL, eTOM, CoBIT and CMMI in customer environments
- Extends autonomic computing technology experience to people, processes and information

# A CMDB Needs to Do More Than Just Store Data

- **Data management and integration**

- ▶ Integrates and shares data across complex organizational silos
- ▶ Proactively manages data currency and accuracy
- ▶ Is the true, authoritative source of record

- **Workflow integration**

- ▶ Is coupled with an automated change management process to ensure integrity and consistency of configuration items
- ▶ Increases coordination and data sharing

- **Policy integration**

- ▶ Enforces policies for compliance with internal and regulatory requirements

## IBM IT Service Management



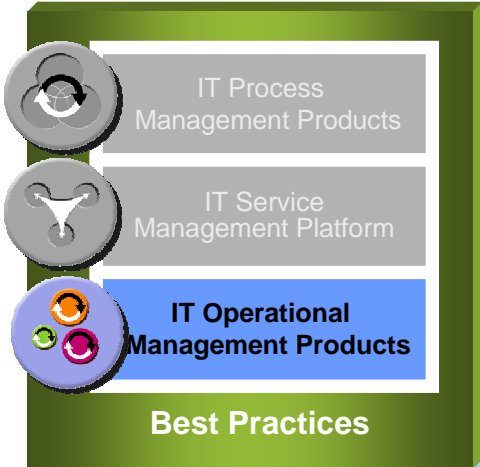
The diagram shows a blue horizontal bar with a white outline of a network or database structure. The text 'Change and Configuration Management Database (CCMDB)' is centered in white. A blue beam of light points from the left towards the bar.

## Change and Configuration Management Database (CCMDB)

Information isn't valuable until it's acted upon ...  
a CMDB should facilitate action

# IT Operational Management Products

*Integrated across silos through the ITSM platform to the IT process management products*



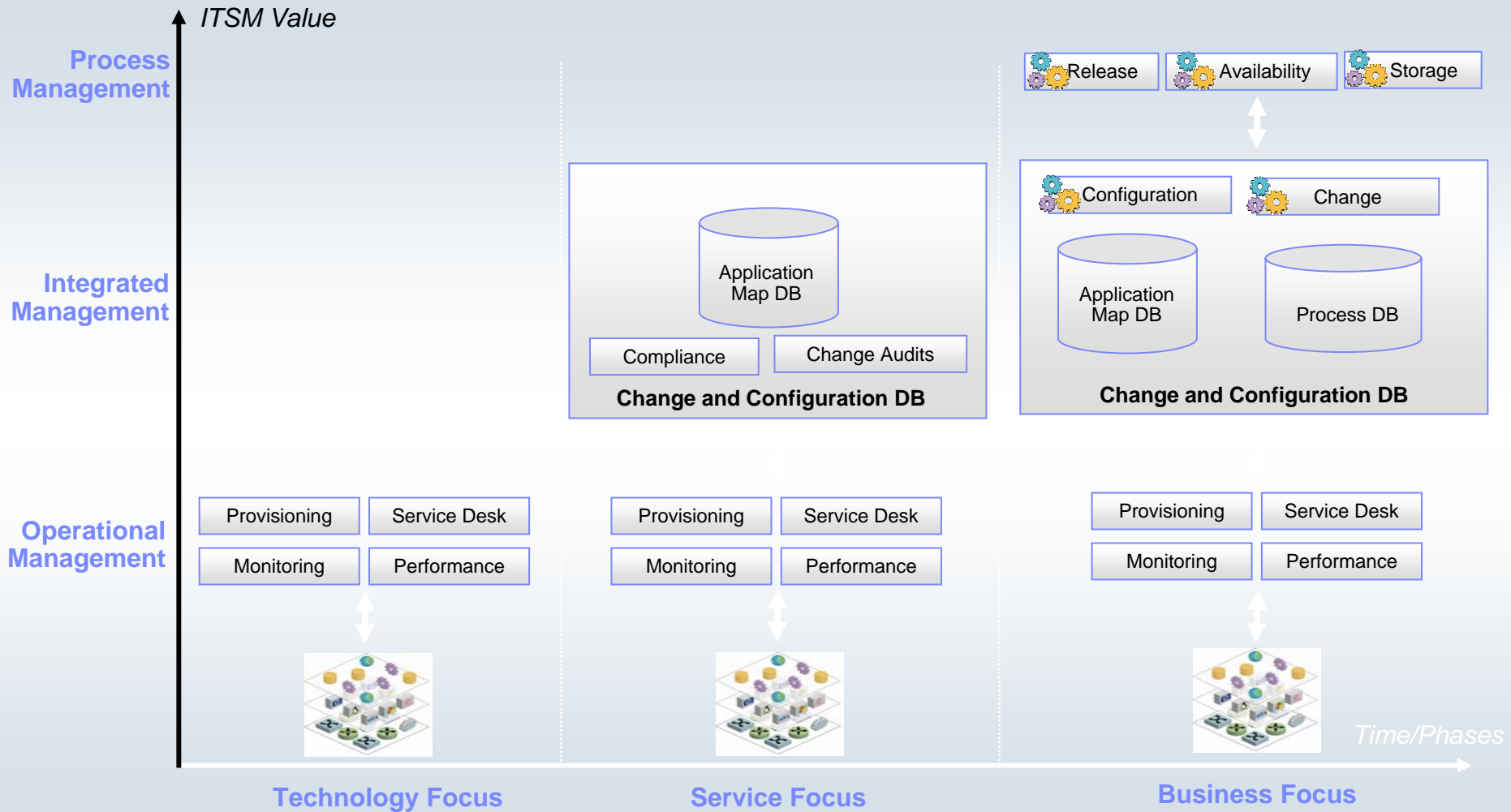
**Tivoli Product Portfolio Available TODAY!**

**Tivoli Products in Technology Preview Announcement**

Business Application Management	Server, Network & Device Management	Storage Management	Security Management
<p><b>Products include:</b></p> <ul style="list-style-type: none"> <li>▪ <b>Tivoli Composite Application Manager Family</b></li> <li>▪ Tivoli Business Systems Manager</li> <li>▪ Tivoli Intelligent Orchestrator</li> <li>▪ Tivoli Service Level Advisor</li> <li>▪ Tivoli Contract Compliance Manager</li> <li>▪ Tivoli License Compliance Manager Family</li> <li>▪ Netcool/Impact</li> <li>▪ Netcool/RAD</li> </ul>	<p><b>Products include:</b></p> <ul style="list-style-type: none"> <li>▪ Tivoli Enterprise Console</li> <li>▪ Tivoli Monitoring Family</li> <li>▪ Tivoli OMEGAMON Family</li> <li>▪ Tivoli NetView Family</li> <li>▪ Tivoli Remote Control</li> <li>▪ Tivoli System Automation Family</li> <li>▪ Tivoli Workload Scheduler Family</li> <li>▪ Tivoli Provisioning Manager</li> <li>▪ Tivoli Configuration Manager</li> <li>▪ Tivoli Decision Support for z/OS</li> <li>▪ Netcool/OMNibus</li> <li>▪ Netcool/Proviso</li> <li>▪ Netcool/Precision</li> <li>▪ Netcool/Monitors</li> </ul>	<p><b>Products include:</b></p> <ul style="list-style-type: none"> <li>▪ Tivoli Storage Manager</li> <li>▪ Tivoli Continuous Data Protection for Files</li> <li>▪ TotalStorage Productivity Center</li> </ul>	<p><b>Products include:</b></p> <ul style="list-style-type: none"> <li>▪ Tivoli Access Manager Family</li> <li>▪ Tivoli Identity Manager Family</li> <li>▪ Tivoli Federated Identity Manager Family</li> <li>▪ Tivoli Directory Server</li> <li>▪ Tivoli Directory Integrator Family</li> <li>▪ Security Compliance Manager</li> <li>▪ Tivoli Security Operations Manager</li> </ul>



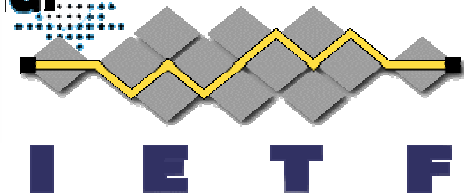
# Taking a Modular Approach to IT Service Management



# IBM's Leadership in Driving Open Standards

## Developing and promoting open standards for IT Service Management

- ITIL best practices: Active contributor, reviewer and supporter since 1988
- Web Services Distributed Management (WSDM)
- Aperi open source ecosystem for storage management
- Solution Deployment Descriptor in OASIS workgroup
- Open standards for application response time measurement (ARM)



**New!**

Download IBM's IT Service Management Standards Reference model at:  
[ibm.com/tivoli/itsmstandardsmodel](http://ibm.com/tivoli/itsmstandardsmodel)



# CMDB Federation Open Standards



- Multi-vendor collaboration
- Industry-wide specification for CMDB federation
- Enables clients to share information between CMDBs and other data repositories across heterogeneous IT environments
- Submission to standards body later this year
- Endorsed by itSMF





# Best Practices Bring It All Together

## IBM IT Service Management



- **IBM Tivoli Unified Process (ITUP)**
  - ▶ Process Reference Model for IT incorporates ITIL, COBIT, and IBM best practice processes
  - ▶ Tools Mentor - makes ITIL actionable!
- **Open Process Automation Library (OPAL)**
- **IBM Global Services**
  - ▶ Innovation Workshops
  - ▶ Infrastructure Services Readiness Engagement
  - ▶ IT Service Management Design
  - ▶ Implementation Services
- **Ecosystem of System Integrators and other Business Partners**
  - ▶ Vision Creation Workshops
  - ▶ Readiness Assessments
  - ▶ ITIL Process Design
  - ▶ Consulting and outsourcing services
  - ▶ Implementation and deployment services

\* ITUP and OPAL  
available at:  
<http://www.ibm.com>



# ITUP Today

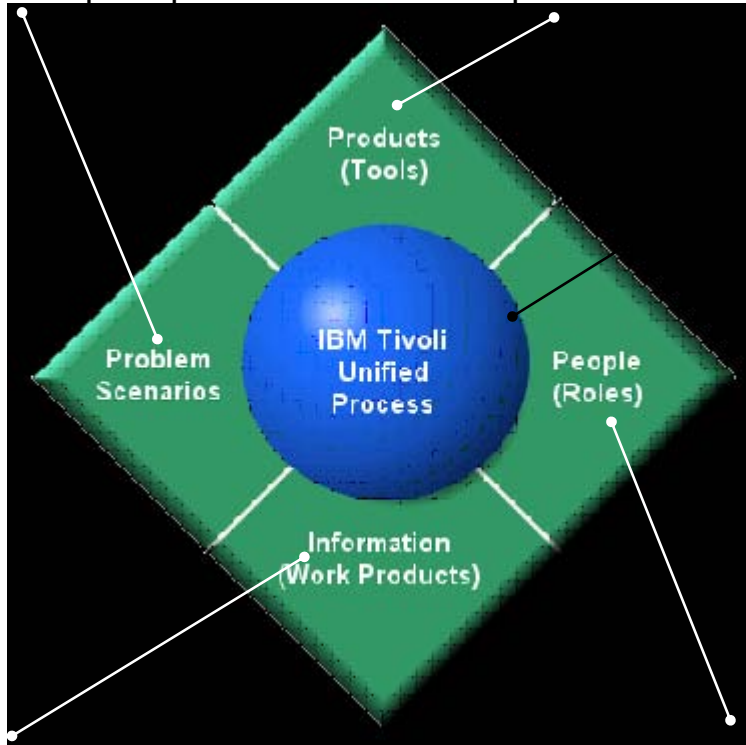
<http://www.ibm.com/software/tivoli/features/it-serv-mgmt/itup/tool.html>

## Scenarios

- How various elements of ITUP work together to solve an IT pain point

## Tool mentors

- How to use specific tools to implement process activities



## Processes

- ITIL-aligned** processes for managing IT (down to activity)

## Roles

- Roles performed and detailed responsibilities

## Work products

- What is consumed and produced by each process activity

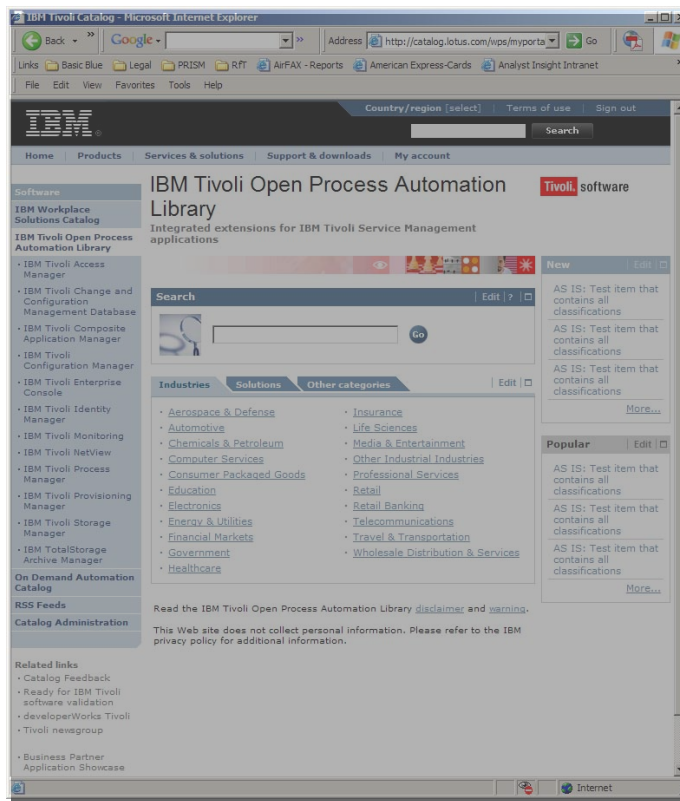
*ITUP is based on IBM's Process Reference Model for IT (PRM-IT). PRM-IT was developed jointly by IGS and Tivoli experts based on the experience from hundreds of customer engagements and the best practices in industry process methodologies. In the area of IT Service Management, the focus of ITUP & PRM-IT is strongly aligned with the Information Technology Infrastructure Library (ITIL)*



# OPAL – Partnering for Your Success

Online ecosystem for sharing IT Service Management best practices and new capabilities

- Comprehensive online catalog of more than 300 validated product extensions
- Automation packages, integration adapters, agents, documentation and more
- Helps customers get more value from Tivoli products ... and faster!
- For information about OPAL: <http://www.ibm.com/software/tivoli/opal>



# Roadmap Update: Acquisitions and Deliverables



# Key Acquisitions Speed Customer Value

## Unifying enterprise asset management and IT Service Management



- Service management covering layer 1 to layer 7 network monitoring



- Application discovery and dependency mapping



- End-to-end software asset management - from Mainframe to distributed



- IT chargeback to lines of business

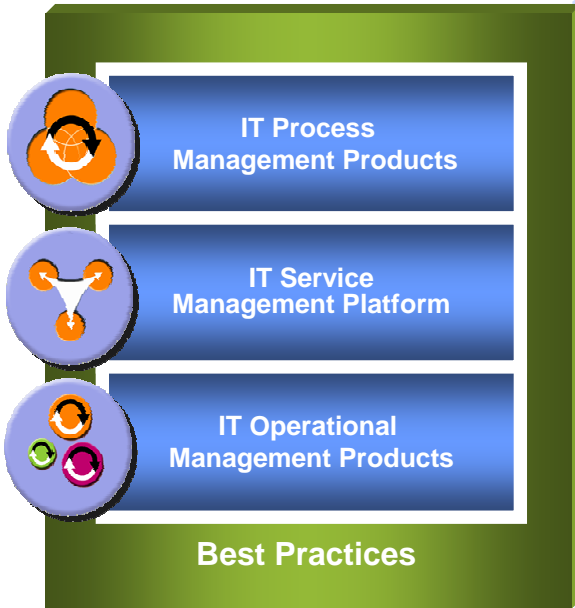


- Automatic install/upgrade operating systems on servers, laptops, desktops



# Key Acquisitions Speed Customer Value

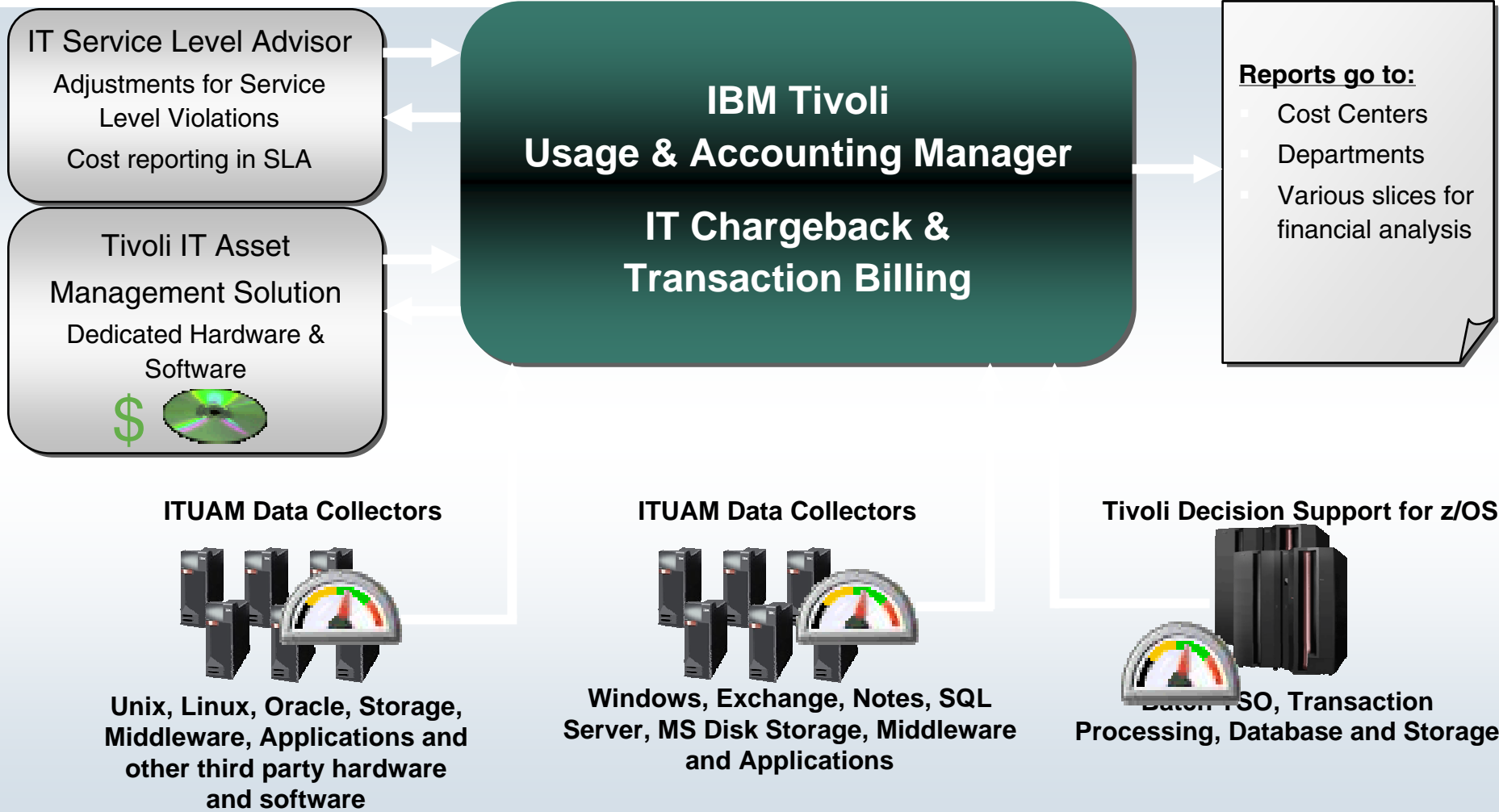
## Unifying enterprise asset management and IT Service Management



### Announcing: IBM acquiring MRO Software

- Founded in 1968
  - Public company since 1994
  - Over 900 employees worldwide
  - Headquartered in Bedford, MA
- 
- **Integrated asset and service management product portfolio under the flagship Maximo® brand**
  - **More than 10,000 customers worldwide**
  - **Customers across all industries worldwide with historical strength in utilities, government, manufacturing and financial services**
  - **Worldwide direct sales and partner ecosystem with deep enterprise asset and service management experience**

# From CIMS Labs ... Tivoli Usage & Accounting Manager





# Introducing the Netcool Suite to ITSM

- **Extensive product portfolio under the flagship Netcool® brand**
- **Extend IT Service Management with real-time Network Service Assurance capabilities**
- **Manages the world's most complex networks and services**



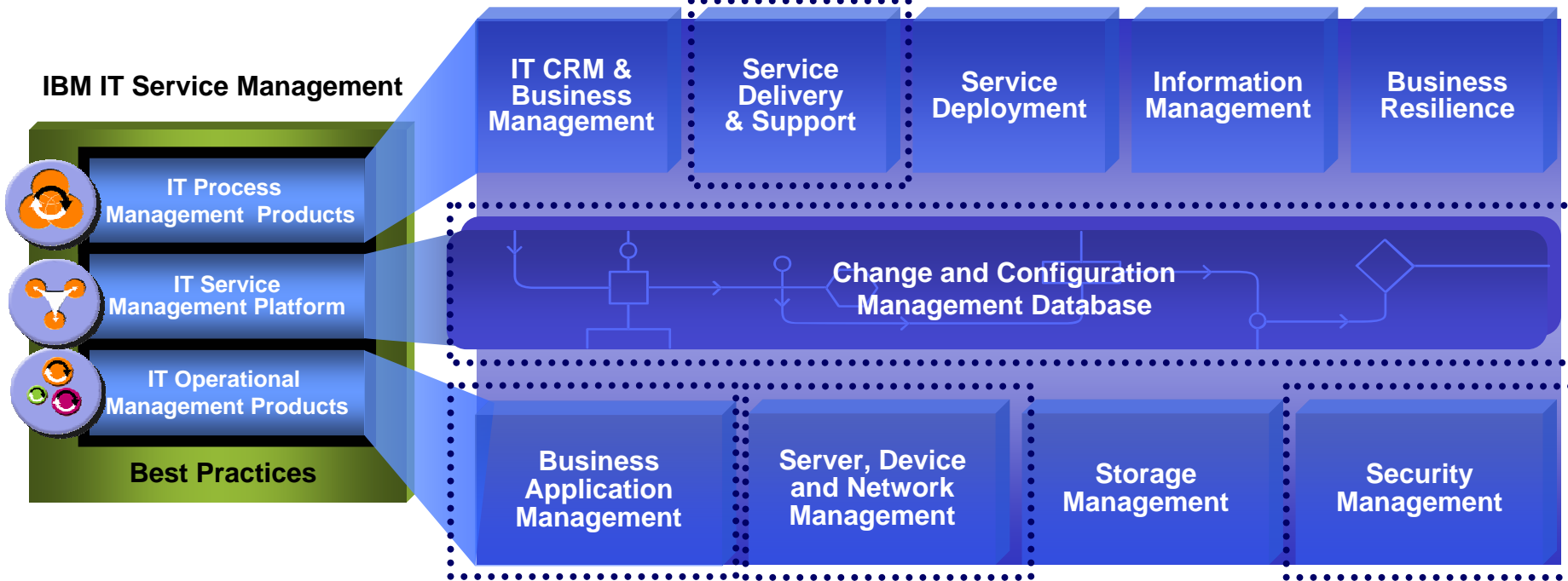
“As our business grows, we must deal with increasing complexity while delivering high quality IT services to our business users. The combined Netcool and Tivoli suite will help us meet the challenge.”

— *Mr. Yuan Jun De, Deputy General Manager, Bank of China Information Center*





# What Do Netcool Products Mean to IT Operations?



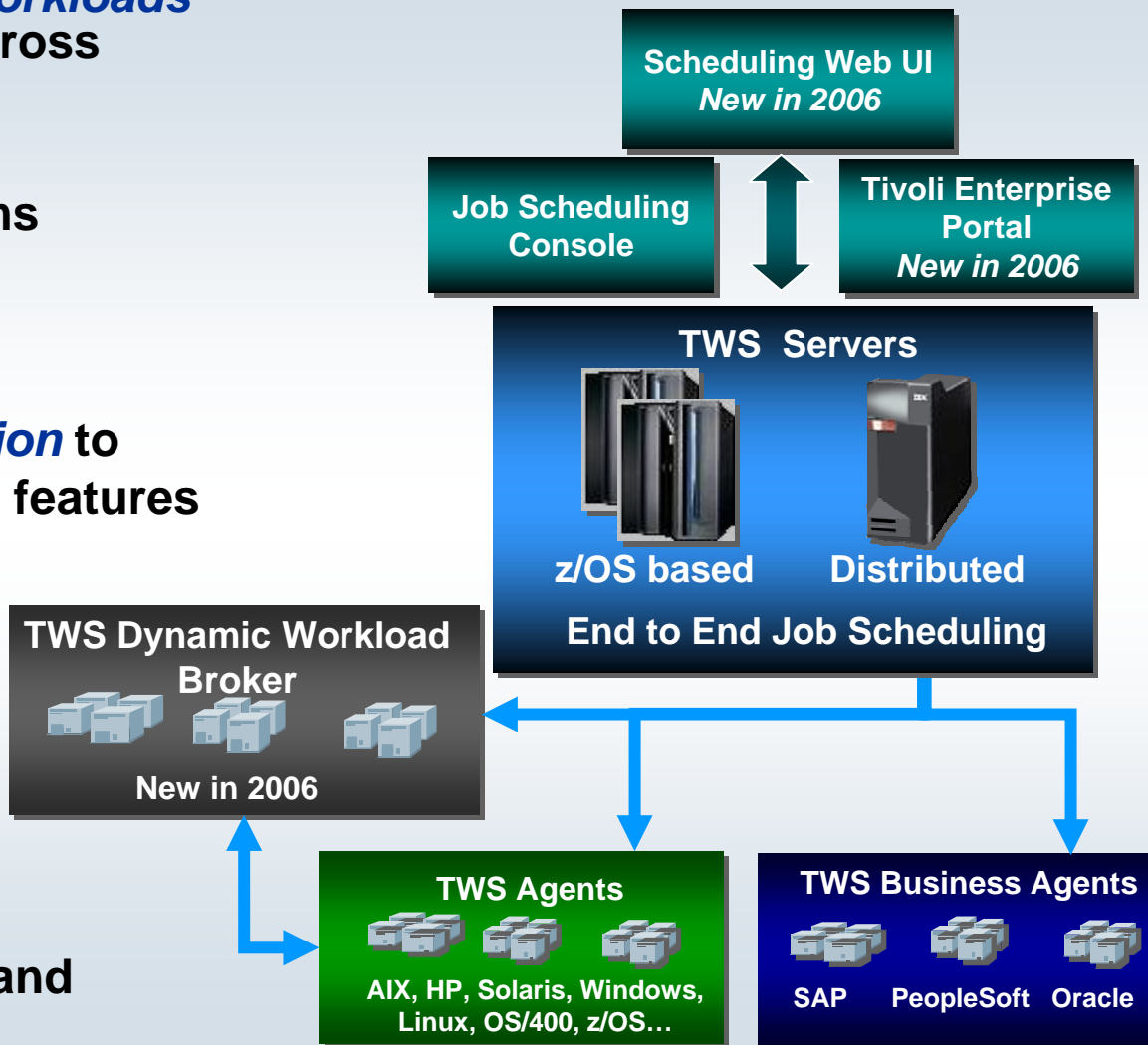
## Netcool Solutions bring leading management capabilities:

- **Network Management** - Provides layers 1-3 discovery, topology and RCA – feeds CCMDB
- **Security Management** - Strengthens event correlation, and compliance reporting
- **Resource Monitoring** - Extends monitoring with support for new applications and protocols
- **IP Convergence** - Solutions to manage voice, video, data and IMS converged offerings
- **Performance Management** - Multi-domain solution for historical reporting, capacity planning
- **Event Consolidation** - Enhances monitoring, correlation, enrichment and automations
- **Business Service Management** – Enhances service modeling, impact analysis and KPIs



# IBM Tivoli Workload Scheduler

- **Single solution to integrate workloads** from multiple applications, across multiple platforms
- **Improves availability and integrity** of production systems
- **High Availability and Fault Tolerant** architecture
- **Enhanced TWS-WLM integration** to support new WLM scheduling features
- **New TEP integration** to monitor the status of TWS critical jobs
- **Dynamic real-time workload automation** in addition to traditional calendar and event-based scheduling
- **New Critical Path Monitoring** and management feature for TWS



# System Automation & NetView for z/OS

- Enhanced **Tivoli System Automation on z/OS** (TSA) integration with Tivoli Workload Scheduler (TWS)
  - ▶ Issue TSA commands from within the TWS console
  - ▶ Launch TEP in context to TSA
- **TSA Multiplatform** provides integration with IBM High Availability Cluster Multiprocessing (HACMP) and Microsoft Server Cluster Service (MSCS)
  - ▶ Centrally manage high availability for composite applications running in heterogeneous environments
- **Tivoli NetView on z/OS** enhanced TEP integration
  - ▶ With OMEGAMON XE for Mainframe Networks and new interoperability with OMEGAMON XE for z/OS, DB2 PE/PM, and CICS



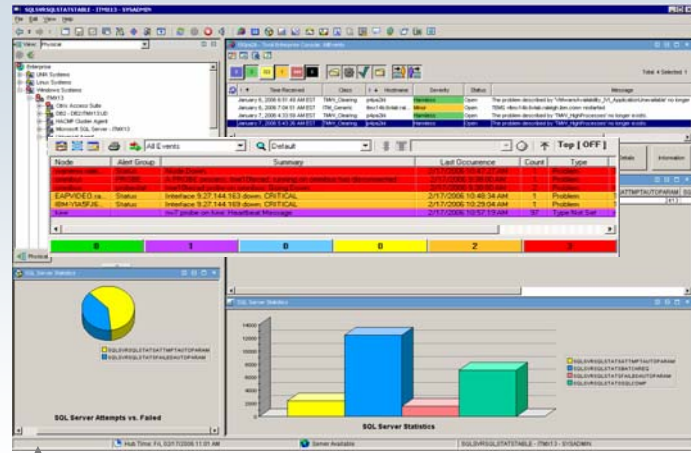
# Event and Automation Roadmap

## ■ Critical Concepts

- ▶ Moving to *Single Console*
- ▶ Everything to Event MoM
  - The Event Infrastructure is just plumbing
- ▶ Flexibility of Correlation

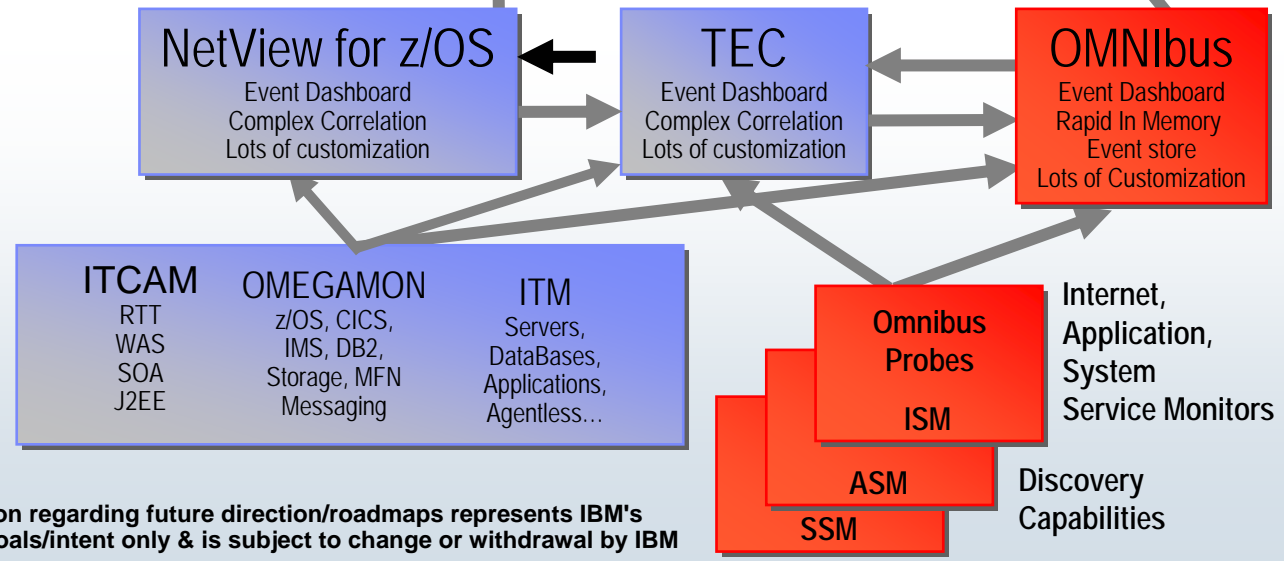
## ■ Converged Event Manager

- ▶ Performance, Scalability, Resiliency



## ■ Protect Existing Investment:

- ▶ TEC Rulesets
- ▶ OMNibus Integration, scale and availability



Information regarding future direction/roadmaps represents IBM's current goals/intent only & is subject to change or withdrawal by IBM

# New Releases of IBM Tivoli Products

*All new product releases are planned for GA during 4Q06 except as noted*

## Monitoring

### IBM Tivoli OMEGAMON XE

- ▶ z/OS V4.1.0 (*First Quarter 2007 availability*)
- ▶ CICS on z/OS V4.1.0
- ▶ IMS on z/OS V4.1.0
- ▶ DB2 Performance Expert on z/OS V4.1.0
- ▶ DB2 Performance Monitor on z/OS V4.1.0
- ▶ Mainframe Networks V4.1.0
- ▶ Storage on z/OS V4.1.0
- ▶ z/VM and Linux V4.1.0
- IBM OMEGAMON z/OS Management Console V4.1.0 (*First Quarter 2007 availability*)
- Installation and Customization Assistance Tool (ICAT) V3.1.0 – a component with OMEGAMON products
- Tivoli NetView for z/OS V5.2 Sparkler Release
- Web Access v1.3 for InfoMan Sparkler Release



# New Releases of IBM Tivoli Products

*All new product releases are planned for GA during 4Q06 except as noted*

## **Application Management**

- IBM Tivoli Composite Application Manager (ITCAM)
  - ▶ WebSphere V6.1 and ITCAM for J2EE V6.1
  - ▶ SOA V6.1
  - ▶ Response Time Tracking V6.1 (Available now)
- IBM Tivoli Performance Modeler V2.3

## **Automation**

- IBM Tivoli System Automation
  - ▶ z/OS 3.1 – sparkler for TWS integration
  - ▶ Multiplatforms v2.2
- Tivoli Workload Scheduler
  - ▶ z/OS v8.2 – sparkler for TSA integration
  - ▶ z/OS v8.3

## **Storage**

- IBM Backup and Restore Manager for z/VM V1.2.0

## **Security**

- Tivoli Federated Identify Manager for z/OS v6.1 (Available now)

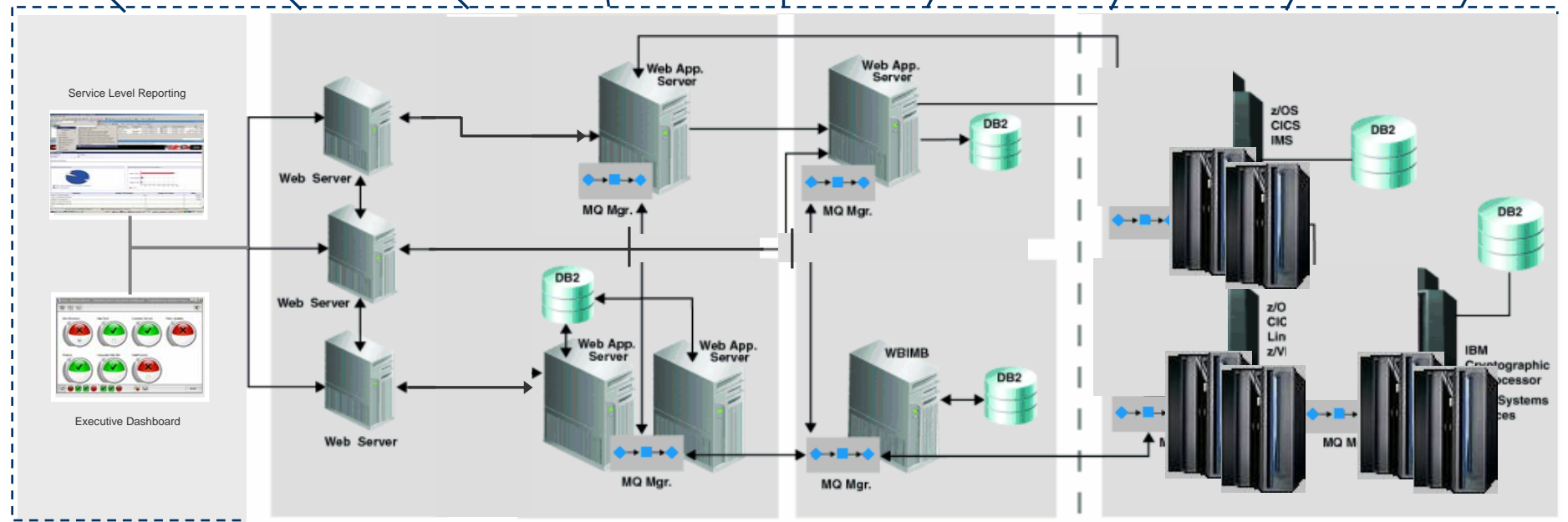


# Tivoli Management Services: Enterprise-wide Management Solutions



# End to End Management from Tivoli System z Portfolio

IBM Tivoli Monitoring v6.1	Tivoli Enterprise Console v3.9	OMEGAMON XE on z/OS v4.1.0	OMEGAMON XE for DB2 PE/PM v4.1.0	OMEGAMON XE for CICS & IMS v4.1.0	OMEGAMON XE for MF Networks v4.1.0	OMEGAMON XE for Storage v4.1.0	License Compliance Manager for z/OS v4.1	Contract Compliance Manager v3.7
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System Automation for Multiplatforms v2.2	Composite Application Manager for WebSphere V6.1	Composite Application Manager for R.T. Tracking V6.1	Composite Application Manager for SOA V6.1	NetView on z/OS v5.2	System Automation for z/OS 3.1	Workload Scheduler for z/OS 8.3	Usage and Accounting Manager v6.1
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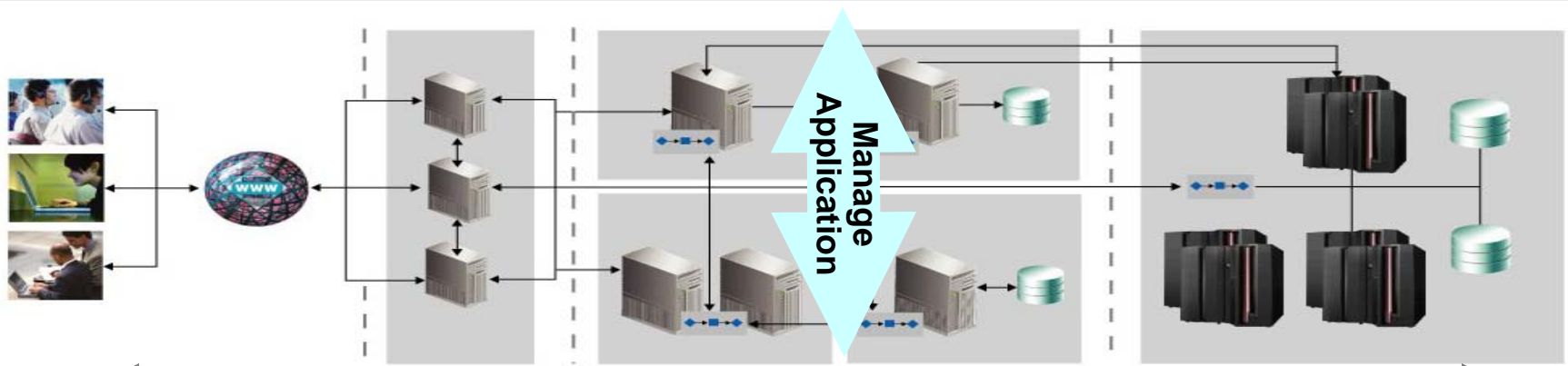




# The ITCAM Solution Portfolio

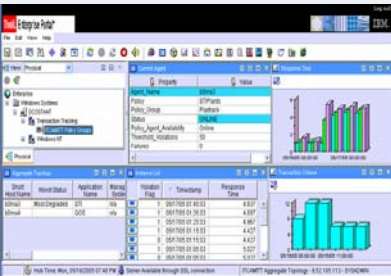
## Delivering high-performing composite applications.

Analyze and Measure Transactions & Services



Monitor Infrastructure

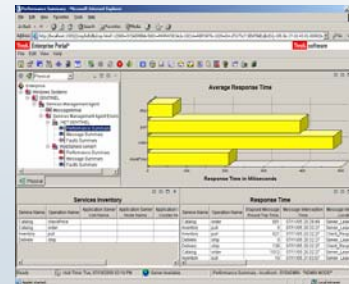
**ITCAM for RTT**



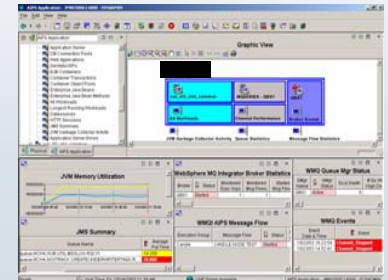
**ITCAM for WebSphere**



**ITCAM for SOA**



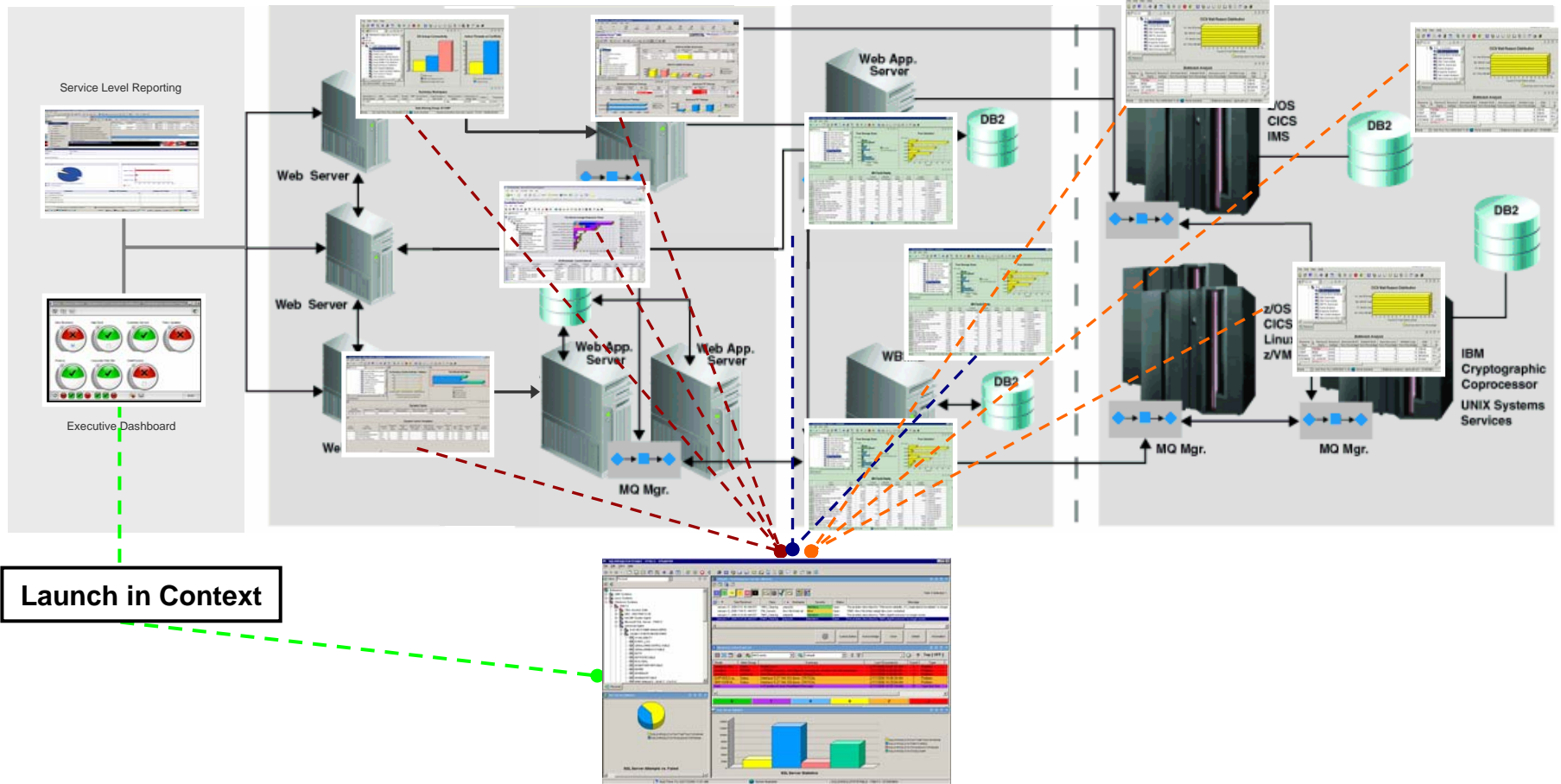
**ITM, OMEGAMON XE**



# A Complete View IT Infrastructure Performance

*A single portal to monitor the overall health of the infrastructure*

## Business Services   Distributed Resources   J2EE Transactions   Mainframe Resources



SQLSVRSQLSTATSTABLE - ITMX13 - SYSADMIN

View: Physical

- Enterprise
  - UNIX Systems
  - Linux Systems
  - Windows Systems
    - ITMX13
      - Citrix Access Suite
      - DB2 - DB2:ITMX13:UD
      - HACMP Cluster Agent
      - Microsoft SQL Server - ITMX13
      - Universal Agent
        - 9-42-48-0:SNMP-MANAGER00
        - candlex13:MICROMUSESSM00
          - AVAILABILITY
          - EVENT\_LOG
          - GENALARMCNTROLTABLE
          - GENALARMDATATABLE
          - ISFTP
          - ISFTPSITETABLE
          - ISGLOBAL
          - ISSMTPSERVERTABLE
          - ISWEB
          - ISWEBASP
          - ISWEBSITETABLE
          - PERFORMANCE\_OBJECT\_STATUS

f50pa2b - Tivoli Enterprise Console: AllEvents

Total: 4 Selected: 1

Time Received	Class	Hostname	Severity	Status	Message
January 6, 2006 6:51:49 AM EST	TMW_Clearing	p4pa2kk	Harmless	Open	The problem described by 'VMwareAvailability_IVI_ApplicationUnavailable' no longer exists.
January 6, 2006 7:04:51 AM EST	ITM_Generic	itm:14b.tivlab.ra...	Minor	Open	TEMS <itm:14b.tivlab.ra...
January 7, 2006 4:33:59 AM EST	TMW_Clearing	p4pa2kk	Harmless	Open	The problem described by 'TMW_HighProcesses' no longer exists.
January 7, 2006 5:43:26 AM EST	TMW_Clearing	p4pa2kk	Harmless	Open	The problem described by 'TMW_HighProcesses' no longer exists.

Micromuse Active Event List

Buttons: Custom Button, Acknowledge, Close, Details, Information

# Tivoli Enterprise Portal

*Everything at your Fingertips*

Last Occurrence	Count	Type
2/17/2006 10:47:27 AM	1	Problem
2/17/2006 9:38:00 AM	1	Problem
2/17/2006 9:38:00 AM	2	Problem
2/17/2006 10:48:34 AM	1	Problem
2/17/2006 10:29:04 AM	1	Problem
2/17/2006 10:57:19 AM	97	Type Not Set

0 1 0 0 2 3

SQL Server Statistics

SQL Server Attempts vs. Failed

- SQLSVRSQLSTATSATTMPTAUTOPARAM
- SQLSVRSQLSTATSFAILEDAUTOPARAM

SQL Server Statistics

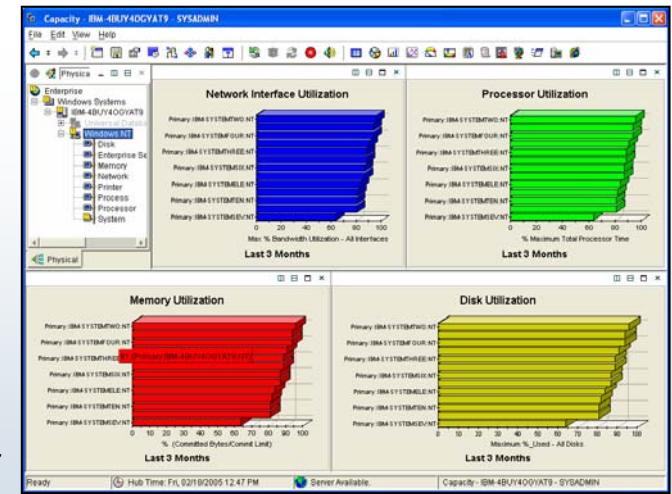
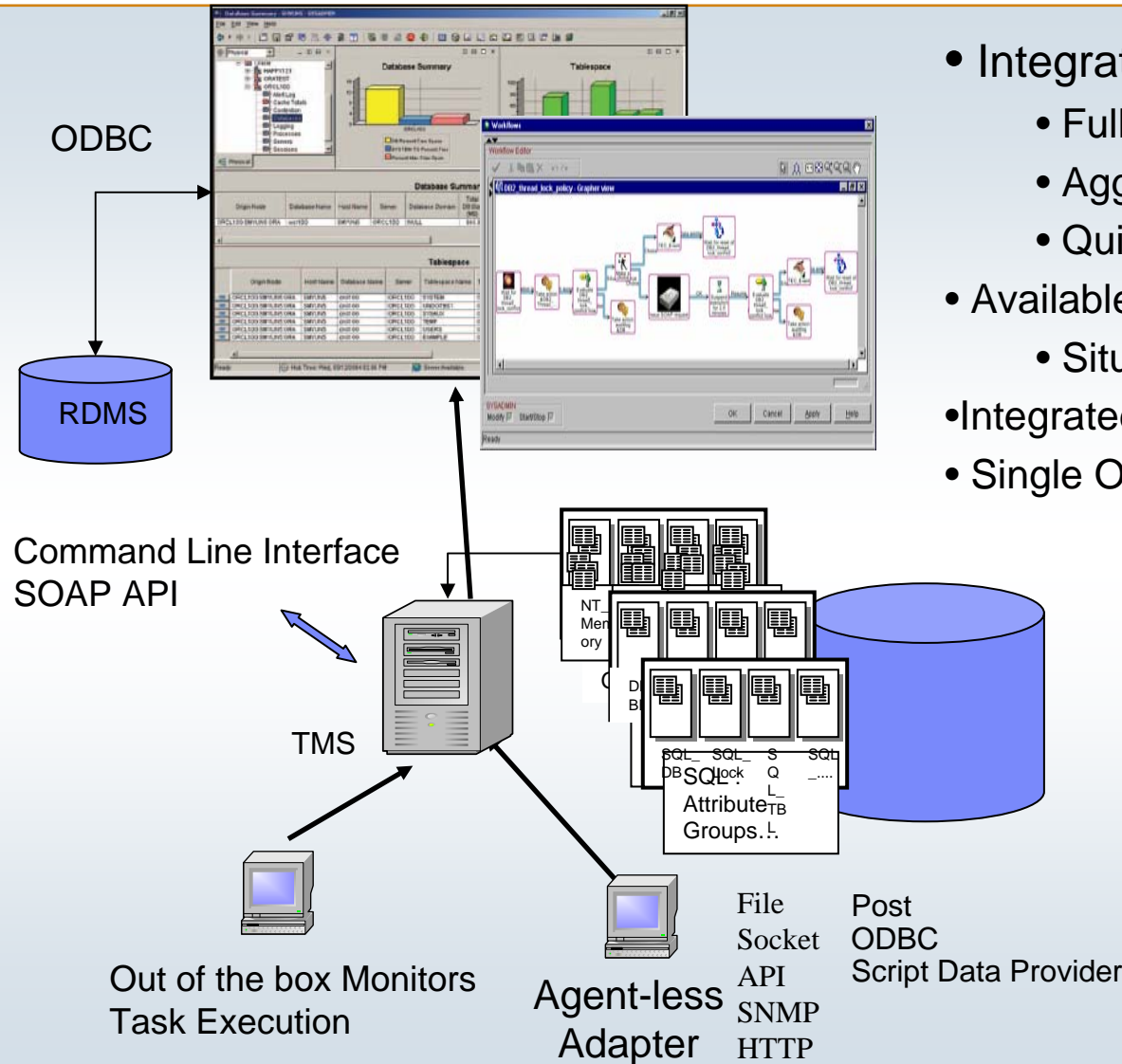
SQL Server Statistics

- SQLSVRSQLSTATSATTMPTAUTOPARAM
- SQLSVRSQLSTATSBATCHREQ
- SQLSVRSQLSTATSFAILEDAUTOPARAM
- SQLSVRSQLSTATSSQLCOMP

Hub Time: Fri, 02/17/2006 11:01 AM      Server Available      SQLSVRSQLSTATSTABLE - ITMX13 - SYSADMIN

# Tivoli Enterprise Portal – More than Visualization

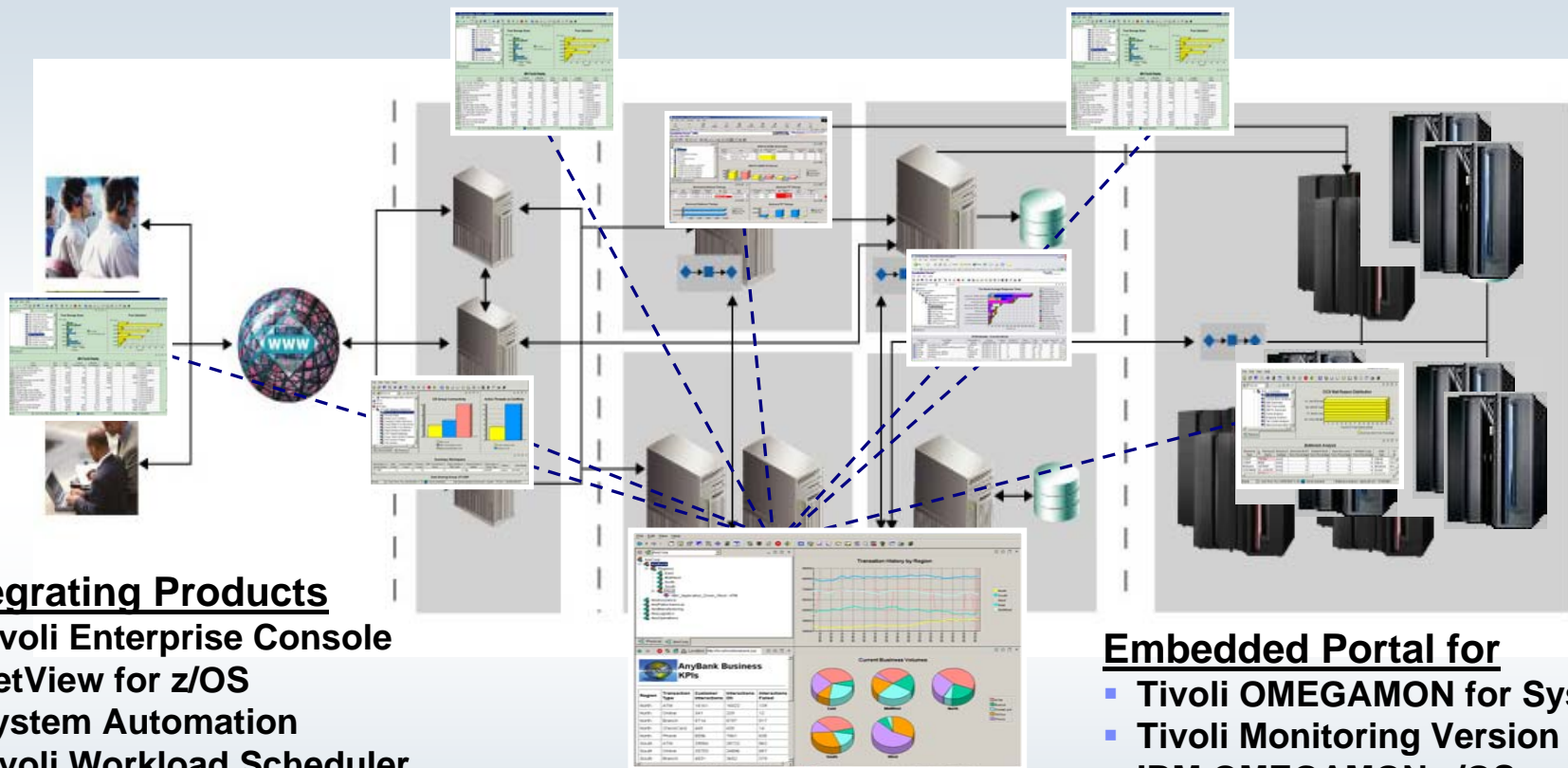
- Integrated Warehouse
  - Full Operational Data
  - Aggregation and Pruning
  - Quick Setup
- Available Data Management:
  - Situations, Workflows, Policies
- Integrated Run-book with Expert Advice
- Single Operations Console with Workflow





# Complete View Of Application Performance

*A Dynamic Role-based Policy Workspace for Integrating IT Operations Silos*



## Integrating Products

- Tivoli Enterprise Console
- NetView for z/OS
- System Automation
- Tivoli Workload Scheduler
- Tivoli Monitoring Version 5
- Tivoli Service Level Advisor
- Tivoli Business Systems Manager
- *Netcool OMNibus Active Event List*

## Tivoli Enterprise Portal (TEP)

## Embedded Portal for

- Tivoli OMEGAMON for System z
- Tivoli Monitoring Version 6
- IBM OMEGAMON z/OS Management Console
- Tivoli Composite Application Manager Family



# Security: An End to End Strategy



# Securing The Enterprise

- System z has 40 years proven experience in securing complex commercial applications
  - ▶ **It *is* the world's most secure platform!**
- Tivoli has proven experience in securing distributed computing environments
- Both solutions embrace standards, common criteria
- The strengths of System z and Tivoli are best when leveraged together
  - ▶ **Solution greater than the sum of its parts**



- Modern computing environments require a paradigm shift in security
- End to end security requires a seamless and complete security approach
- New solutions integrate IBM capabilities....
- A combined approach for the best in policy, auditing, identity, access and risk management....and more



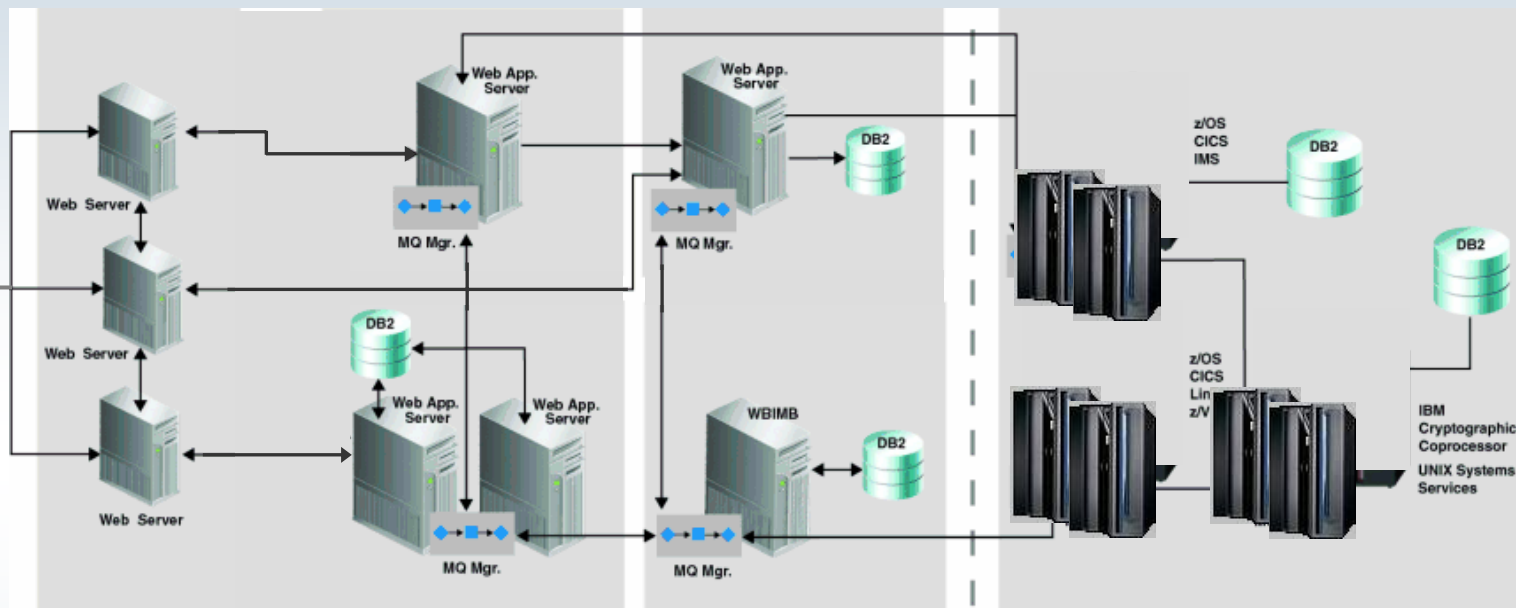
# End to End Security

## Policy-based Identity Management

Service Level Reporting



Executive Dashboard



HR Systems



RACF

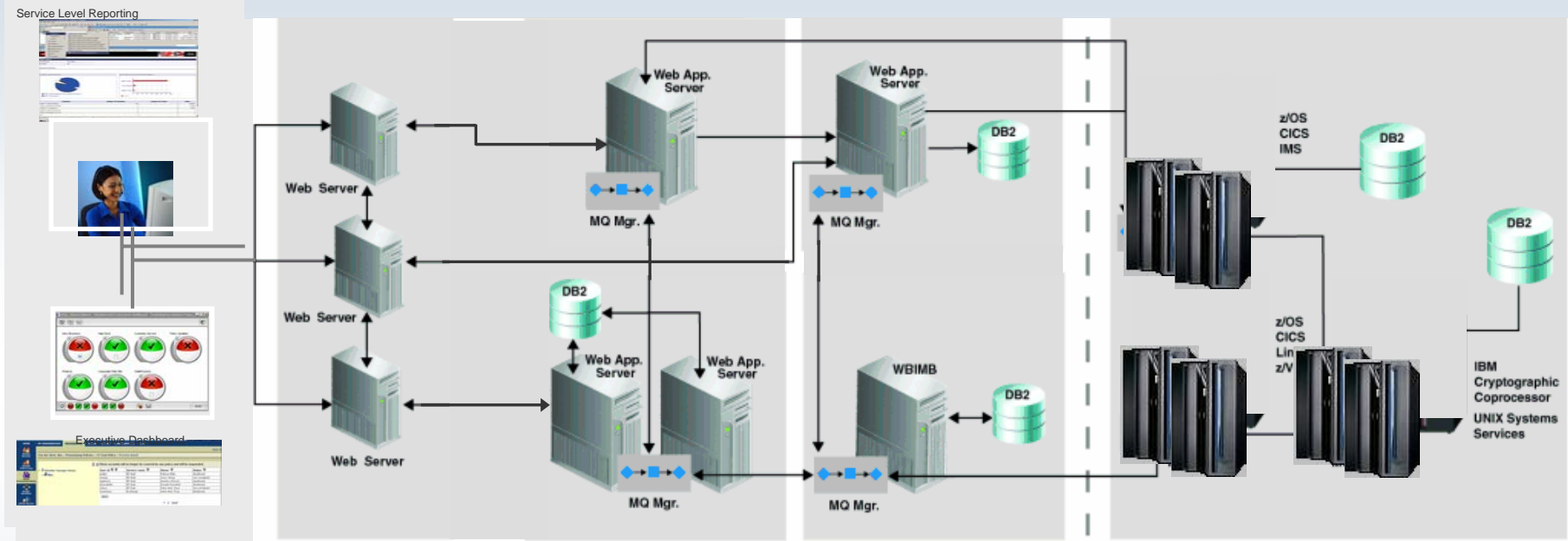


Identity Stores

- Enforcement of enterprise wide policies for managing identities
- Authorization through roles and user privileges
- User Control introduced through Eclipse Higgins Project



# End to End Security



HR Systems



RACF



PKI

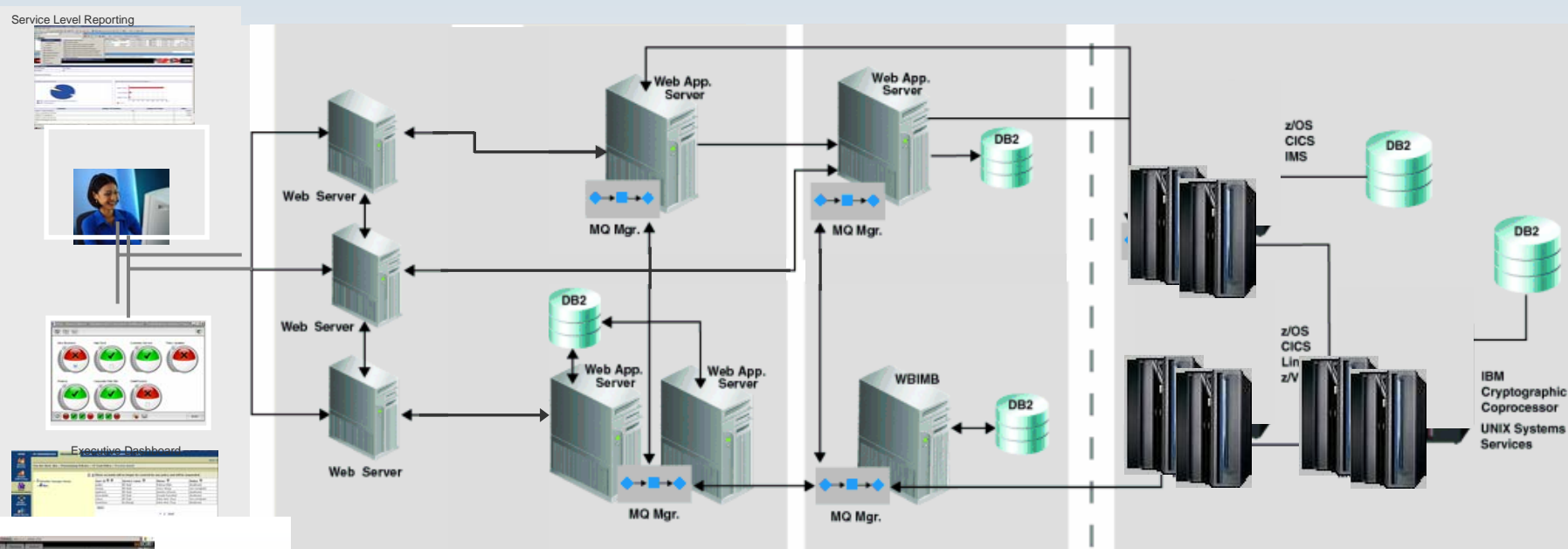


Identity Stores

- Scalable Directory Services
- Cross-platform, cross-vendor synchronization
- Express product for Directory Integration

# End to End Security

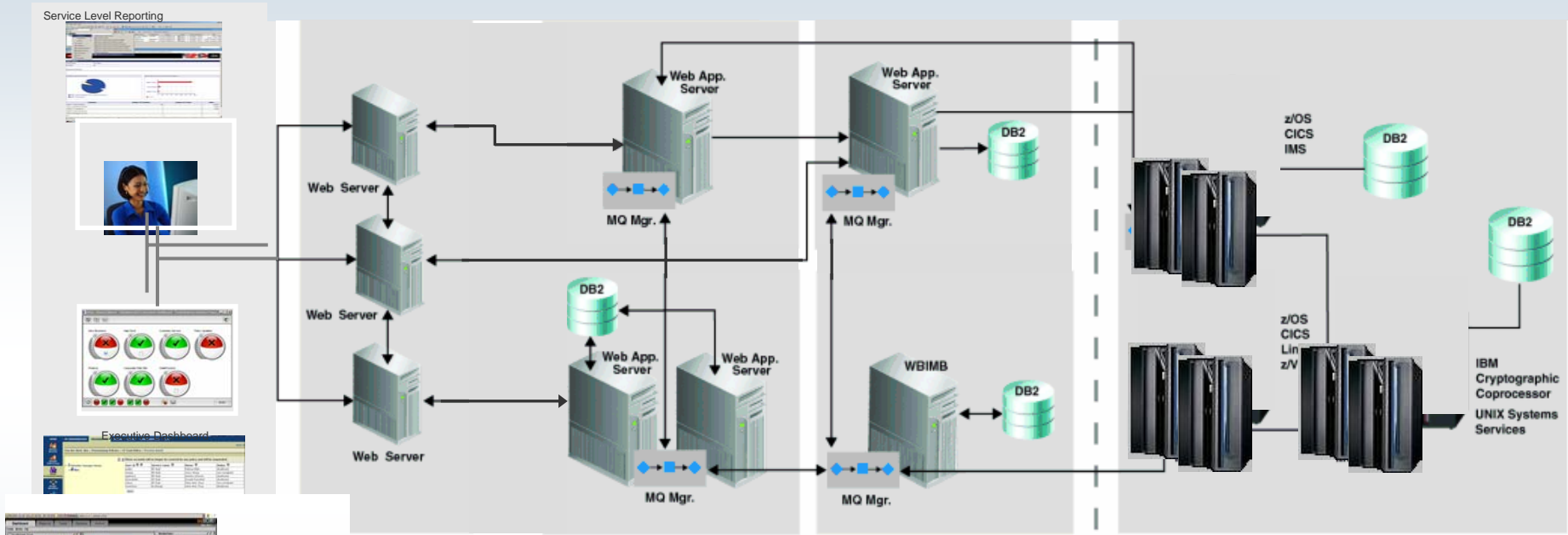
End User Single Sign-On



- Network access based on device compliance
- Multi-factor authentication integrated with access management
- Desktop Browser and Federated Single Sign-on between enterprises
- Identity context passed from point of entry to the mainframe

# End to End Security

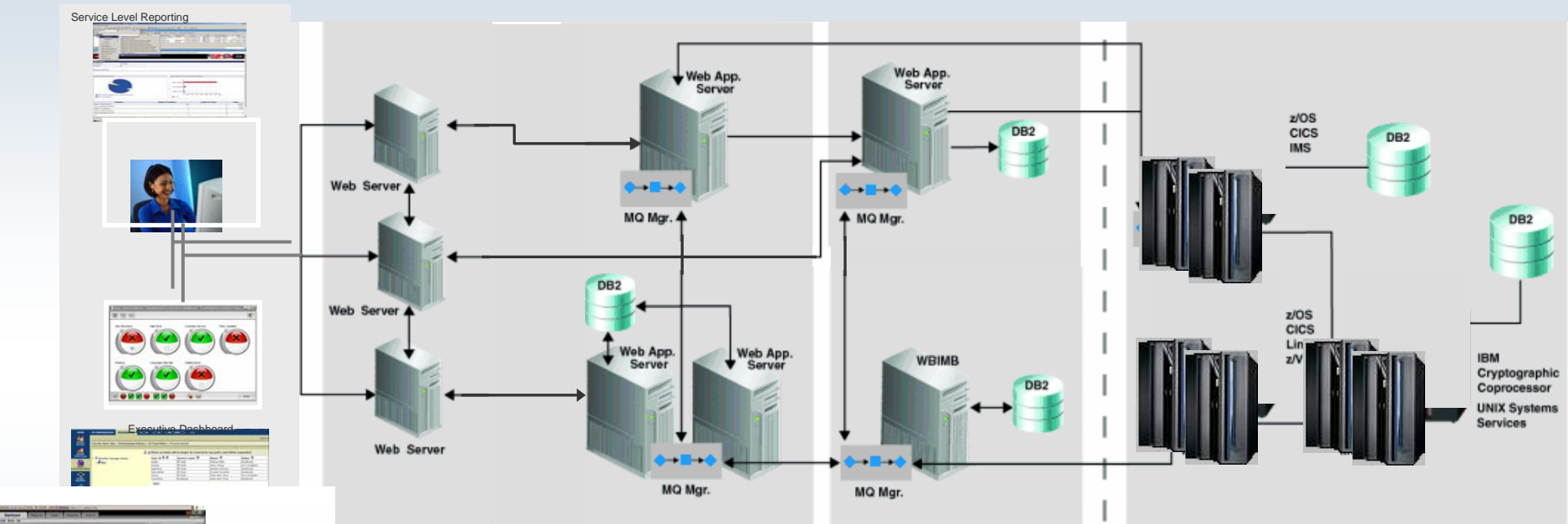
## Cross System Auditing and Compliance Reporting



- Common Audit and Reporting Subsystem for access logs
- Security Information and Event Monitoring for Risk Management
- Compliance reporting from Identity and Access products
- Console for cross-system and cross-application IT compliance

# End to End Security

## Secure Business Processes in a SOA Environment



- Secure Web Services integration with business partners and within the enterprise
- Data confidentiality with secure key management
- End-to-end security management and credential transform in an SOA environment



# Tivoli System z Road Ahead

4Q06

1Q06

**Availability**

- OMEGAMON for z/VM 6.3.2 (z/VM 5.2 Support)
- NetView for z/OS 5.2 Japanese
- Operations Manager for z/VM 1.2
- Tape Manager for z/VM 1.2

**Provisioning**

- TSA for z/OS V3.1 Resource Aware appl

**Security**

- WebSphere MQ Extended Security Edition v1.0

**Optimization**

- TDS/z 1.7.1 PTFs z/OS 1.7 CICS TS V3
- License Compliance Manager for z/OS 4.1

2Q06

**Availability**

- OMEGAMON XE Messaging V6.0
- ITCAM for SOA V6.0 Sparkler

**Security**

- IBM Tivoli Federated Identity Manager for z/OS 6.1
- IBM Tivoli Access Manager for Business Integration

3Q06

**Availability**

- ITCAM for RTT V6.1
- Backup and Restore Manager for z/VM 1.2

**Security**

- IBM Tivoli Directory Server for z/OS (with z/OS 1.8)

**Provisioning**

- TSA for z/OS 3.1 Sparkler: TWS Integration

**Optimization**

- Workload Scheduler V8.2 PTF Integration with TSA
- TDS/z 1.7.2

**Availability**

- IBM OMEGAMON z/OS Management Console 2.1
- ITCAM for WebSphere V6.1
- ITCAM for J2EE V6.1
- ITCAM for SOA V6.1
- IBM Tivoli OMEGAMON 4.1
  - z/OS
  - CICS, IMS,DB2 PE/PM
  - Mainframe Networks
  - Storage
  - z/VM & Linux
- Archive Manager for z/VM 1.2
- WAI for Info/Man 1.3

**Security**

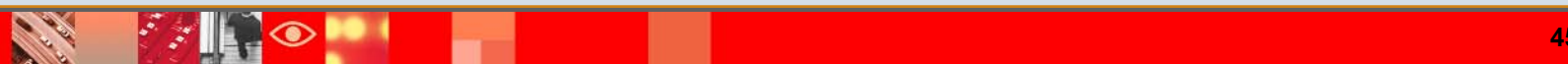
- IBM Tivoli Identity Manager for z/OS 4.6
- IBM Tivoli Directory Integrator on z/OS 6.1

**Provisioning**

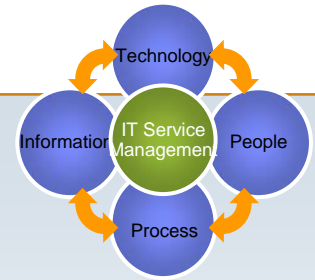
- TSA for MP V2.2
- TSA IOM V2.1

**Optimization**

- Workload Scheduler for z/OS V8.3
- License Compliance Manager for z/OS 4.2
- Contract Compliance Manager V4.2



# Summary



- **IBM Tivoli is committed to bringing System z solutions that:**
  - ▶ Expand System z capabilities while enhancing its proven strengths
  - ▶ Reduce the costs associated with operational and systems management
- **Integrate and Interoperate**
  - ▶ Maintaining our leadership in enhancing System z hardware and software to integrate and interoperate with new platforms and applications
- **End to End Solutions**
  - ▶ Providing End-to-End management solutions to find and fix problems quickly, leveraging System z and Tivoli solutions
- **IT Service Management Solutions**
  - ▶ Delivering ITSM solutions that can meet your key IT challenges cost effectively





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