



End to End Security and Management on the Mainframe

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IBM Software Group*

7 February 2007



Agenda

- **Challenges and Trends**
- **The IBM Service Management Strategy and Approach**
- **Securing the Enterprise**
- **Managing the Enterprise**
- **Integration Beyond Visualization**
- **Summary**

Businesses are Under Pressure to Innovate and Grow

- **Competitive Advantage through Service excellence**
 - Need to retain and add new customers through quality and value add services
- **Operational Efficiency and Effectiveness**
 - Cost containment
 - Reduce the risk of security exposure
 - Greater regulatory and auditing requirements
- **Business Growth**
 - Financial performance & market share growth expectations from investors

Business Depends on Quality Service Delivery



Challenges to Delivering Innovation and Growth

- **Growing Complexity**
 - Disparate technologies and service infrastructures
- **Rapid, Constant Change**
 - Industry consolidation, technology convergence
- **Rising Costs**
 - Process inefficiencies, administration, maintenance
- **Tougher Compliance**
 - Added security, audit and governance requirements
- **Lack of Service Context**
 - Silos of people, process, technology, information



Businesses Aren't Organized to Deal With the Challenges

Business Objectives

Diminished Business Performance



People

CxO CIO Operations LOB Other Staff

Lack of service context.



Processes

Requirements and Planning Delivery Assurance Deployment and Fulfillment Continuity Resilience Financial Management

Silo-specific. Not Integrated.



Information

Config Data Asset Relationship Billing Data Operational Data Compliance Data...

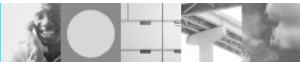
Not closed-looped. Not automated.



Technology

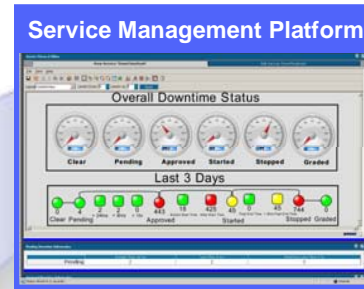
Apps Network Data Security Voice Storage ...

Data not shared or integrated.

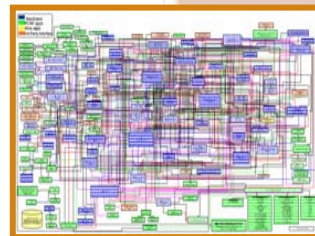


Criteria for Service Management: Autonomic Approach

- **Event Management**
- **Business Service Visualization**
- **Process Automation**



How does this relate to the business service?

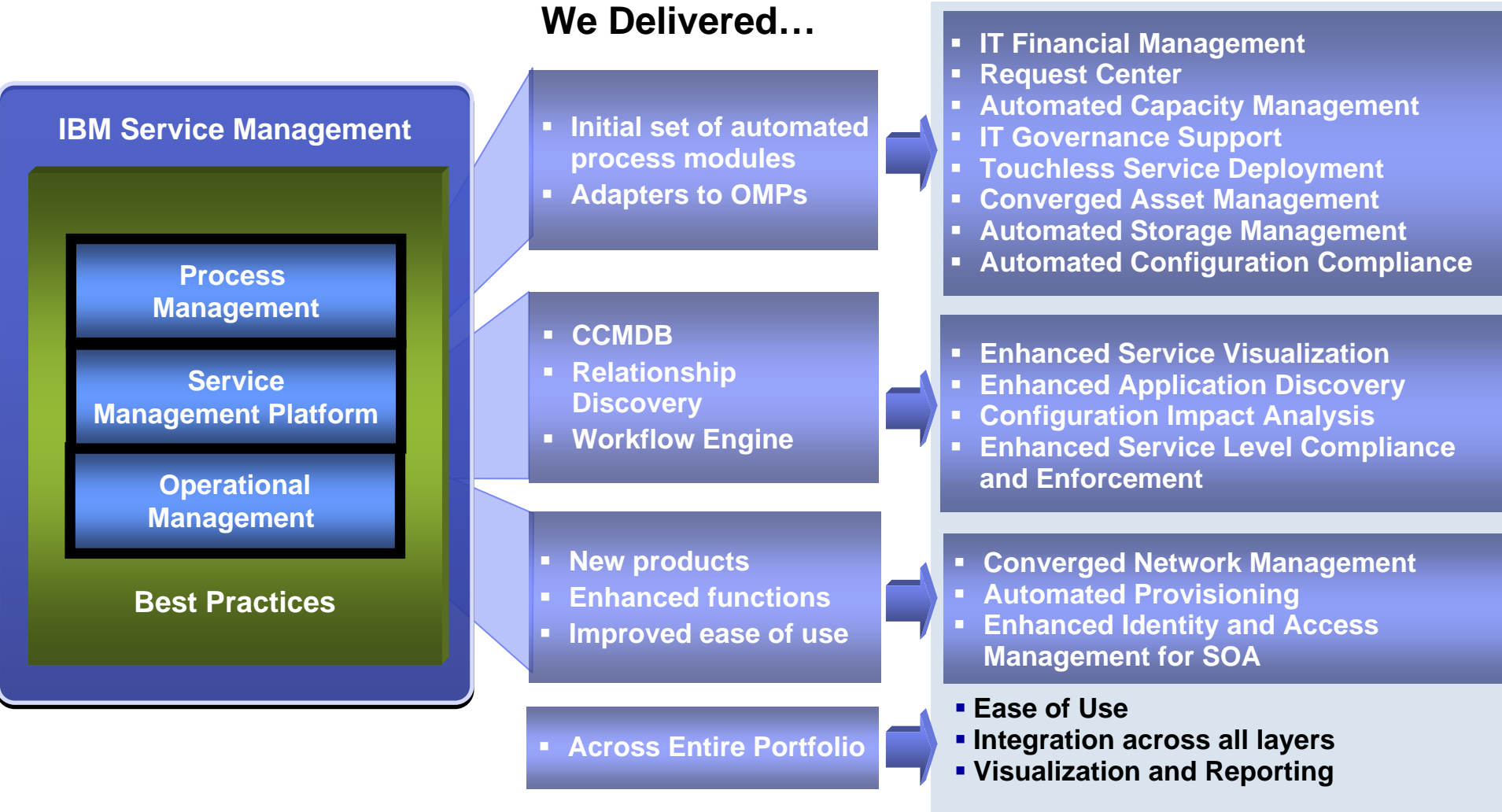


What's happening with the infrastructure?



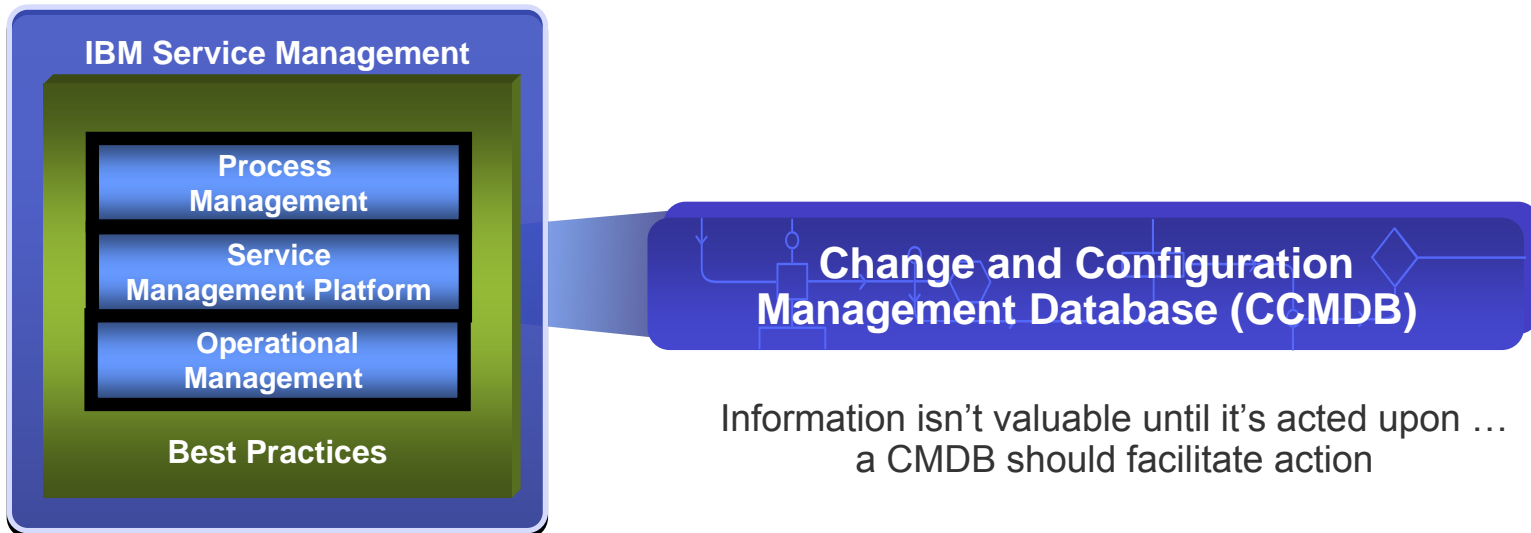
What actions do we take to correct the problems?

Extending Service Management Client Value



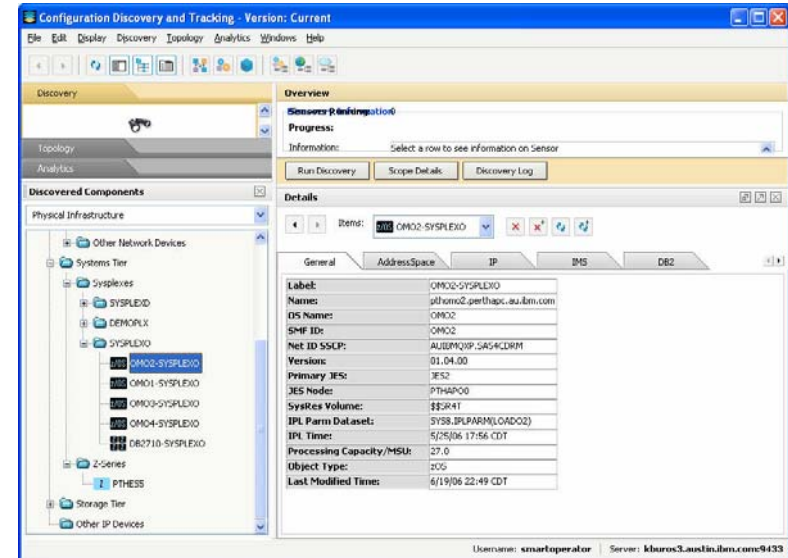
A CMDB Needs to Do More Than Just Store Data

- **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



2006 CCMDB and System z Resources

- **z/OS Discovery Library Adapter**
 - Includes System z resources such as LPAR, z/OS, IMS, DB2, CICS, MQ and WebSphere
- **Tivoli Business System Manager integration for Line of Business objects to leverage investment in TBSM resources**
- **Discovery of IP networking resources from NetView for z/OS**
- **Info/Man Incidents affecting Computer Systems**
- **Context sensitive launch to OMEGAMON XE**

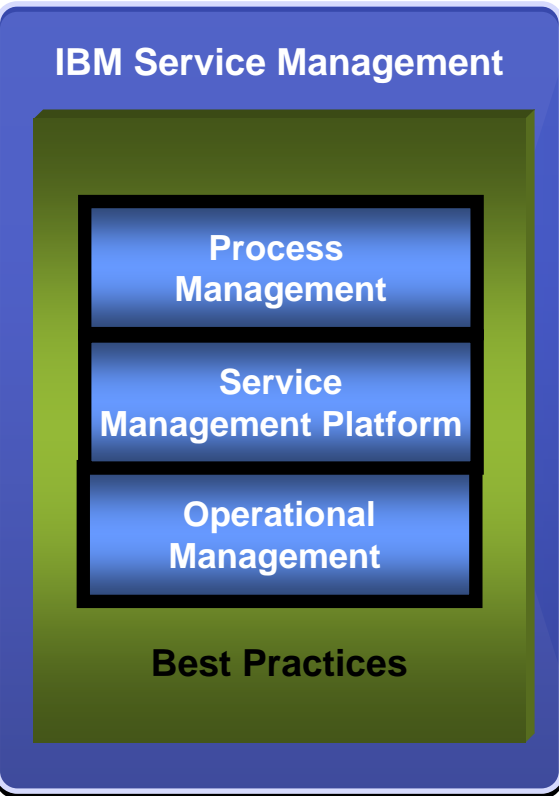


CCMDB Extends System z Coverage in Early 2007

- **Relationships for CCMDB Topology Views**
 - Linking distributed with z/OS subsystems
 - Linking z/OS subsystem to z/OS subsystems (extending distributed to z/OS further) e.g. WAS to CICS to DB2
- **Attributes for CCMDB Detail, Comparison & Change Views**

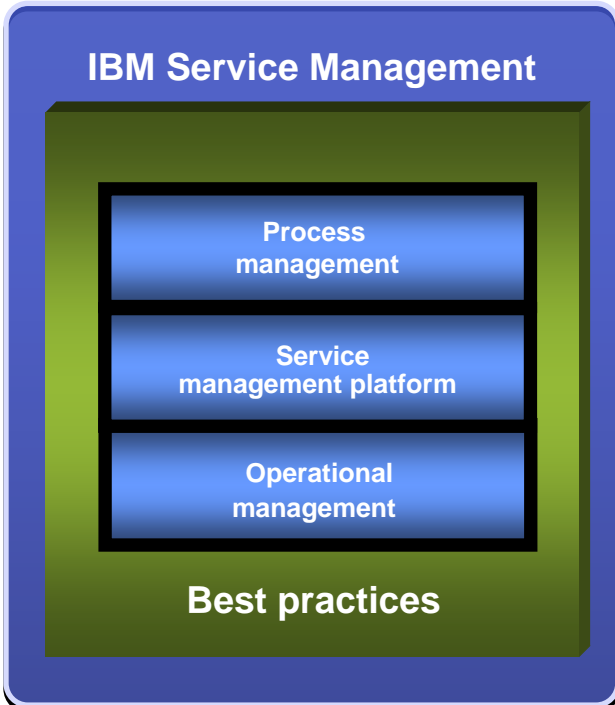
z/OS	Link list datasets, Parmlib datasets, Proclib datasets, Volumes etc
Address Space	Dataset Allocations etc
IMS	Transactions, Programs, Databases etc
CICS	Transactions, Programs, Files etc
DB2 for z/OS	Databases, Tablespaces, Tables, Views etc
MQ for z/OS	Channels, Queues etc
WAS for z/OS	Comprehensive coverage via the CCMDB WAS sensor. This sensor currently supports distributed WAS only and will be enhanced to support WAS on z/OS. The z/OS DLA will discover the WAS Soap Port to seed this discovery.

Operational Management Products



Business Application Management	Server, Network & Device Management	Storage Management	Security Management
<p>Products include:</p> <ul style="list-style-type: none"> ▪ Tivoli Composite Application Manager Family ▪ Tivoli Business Systems Manager ▪ Tivoli Intelligent Orchestrator ▪ Tivoli Service Level Advisor ▪ Maximo Asset Management for IT (Replaces Tivoli Contract Compliance Manager) ▪ Tivoli License Compliance Manager Family ▪ Tivoli Usage and Account Manager ▪ Netcool/Impact ▪ Netcool/RAD ▪ Tivoli Decision Support for z/OS 	<p>Products include:</p> <ul style="list-style-type: none"> ▪ Tivoli Enterprise Console ▪ Tivoli Monitoring Family ▪ Tivoli OMEGAMON Family ▪ Tivoli NetView Family ▪ Tivoli Remote Control ▪ Tivoli System Automation Family ▪ Tivoli Workload Scheduler Family ▪ Tivoli Provisioning Manager ▪ Tivoli Configuration Manager ▪ Operations Manager for z/VM ▪ Tivoli Performance Modeler for z/OS ▪ Netcool/OMNibus ▪ Netcool/Proviso ▪ Netcool/Precision ▪ Netcool/Monitors 	<p>Products include:</p> <ul style="list-style-type: none"> ▪ Tivoli Storage Manager ▪ IBM DFSMS Family ▪ Tivoli Continuous Data Protection for Files ▪ TotalStorage Productivity Center ▪ Tivoli Allocation Optimizer ▪ Tivoli Output Manager ▪ Tivoli Automated Tape Allocation Manager ▪ Tivoli Tape Optimizer ▪ Tivoli Advanced Catalog Management ▪ Tivoli Advanced Audit for DFSMSHsm ▪ Tivoli Advanced Backup & Recovery for z/OS ▪ Tape Manager for z/VM ▪ Backup & Restore Manager for z/VM ▪ Archive Manager for z/VM 	<p>Products include:</p> <ul style="list-style-type: none"> ▪ Tivoli Access Manager Family ▪ Tivoli Identity Manager Family ▪ Tivoli Federated Identity Manager Family ▪ Tivoli Directory Server ▪ Tivoli Directory Integrator Family ▪ Tivoli Security Compliance Manager ▪ Tivoli Security Operations Manager ▪ Consul zSecure ▪ Consul InSight

Demonstrating our continued commitment



Service management for converged networks

Network management

Network performance and wireless

Service deployment

Automated provisioning

Service delivery and support

Change and configuration management

Service asset management

Software asset management

IT asset management and enterprise asset management

Governance and security

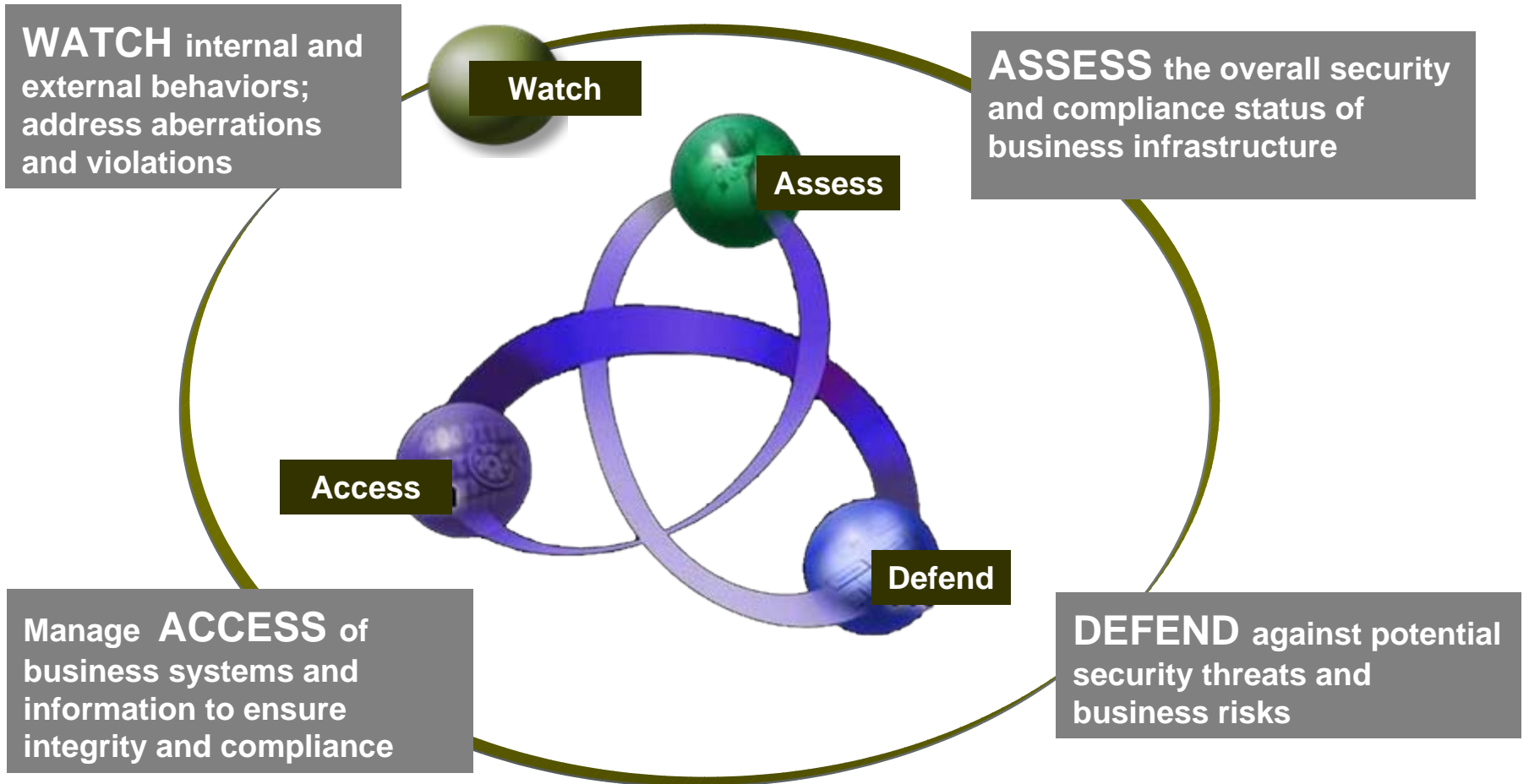
Software usage metering

Log management, access monitoring & compliance reporting

Internet security

IBM's security management vision and strategy:

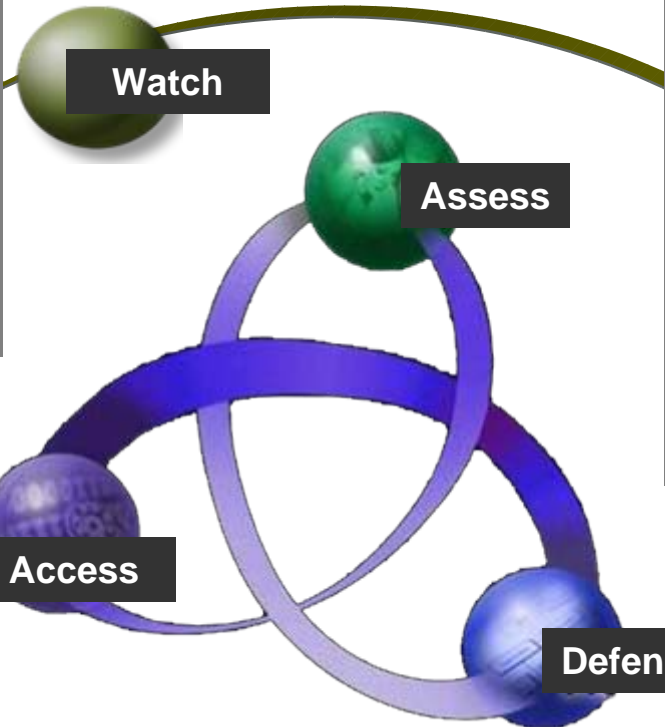
Proactive, comprehensive security and compliance offerings



IBM's security management vision and strategy:

Integrated capabilities from Tivoli, Consul, ISS, and IGS

- ISS Site Protector
- Tivoli Security Operations Manager
- IBM Health Checker for z/OS
- Consul InSight Suite
- Consul zSecure Suite



- GBS Assessment consulting
- ISS Vulnerability Assessment Service
- ISS Enterprise Scanner
- Tivoli Security Compliance Manager
- Consul InSight Suite
- Consul zSecure Suite

- Tivoli Identity and Access Management Solutions
- RACF
- Consul InSight Suite
- Consul zSecure Suite

- ISS preemptive security solutions (ahead of the threat)
- ISS Products & Managed Services



Consul InSight and zSecure

Comprehensive compliance, integrated security management and mainframe administration



Enterprise security audit and compliance

For:

- Chief information officers
- Chief information security officers
- Chief financial officers
- Enterprise security managers
- Compliance officers
- Auditors and regulators
- Network administrators

Concerned about:

- Regulations
- Privileged-user access
- Trusted-user access
- Log Management
- Security event management
- Network complexity
- Passing stringent audits
- Identity and access management



Mainframe security audit and management

For:

- Mainframe security managers
- Mainframe auditors
- RACF administrators
- System programmers
- Helpdesk managers

Concerned about:

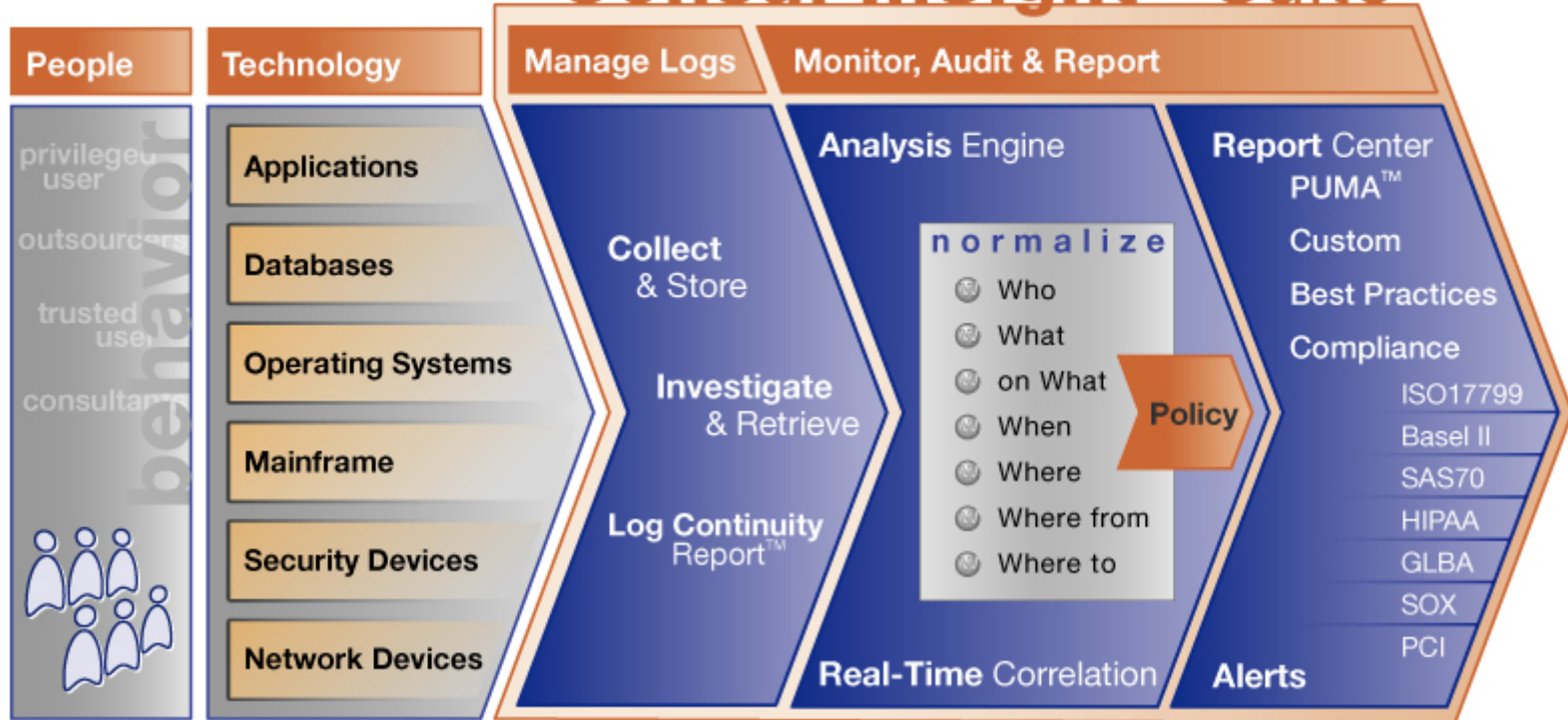
- Regulations
- Audit and monitoring
- Intrusion detection and alerting
- Policy enforcement
- RACF administration
- Distributed administration
- CICS and API interface



Compliance monitoring, auditing, and reporting with InSight

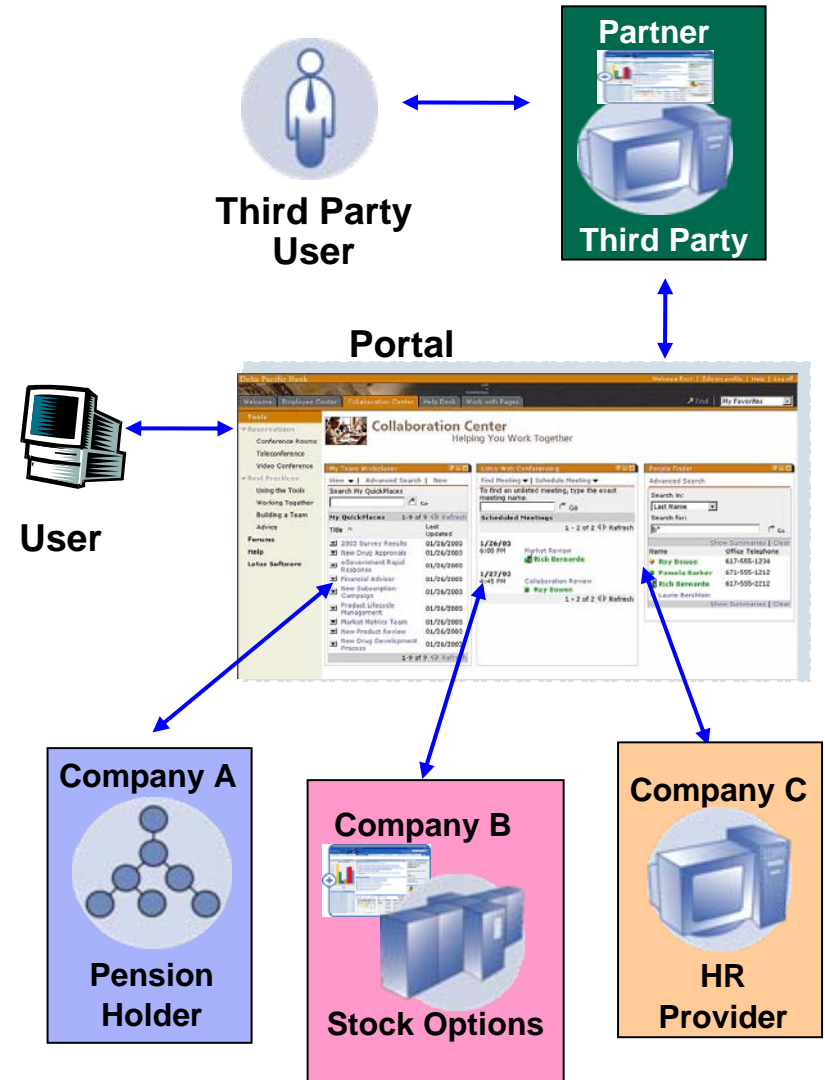
- Patent-pending W-7 methodology and 7 out-of-the box compliance support modules to help accelerate clients' policy, and compliance initiatives

the **Consul InSight™** Suite



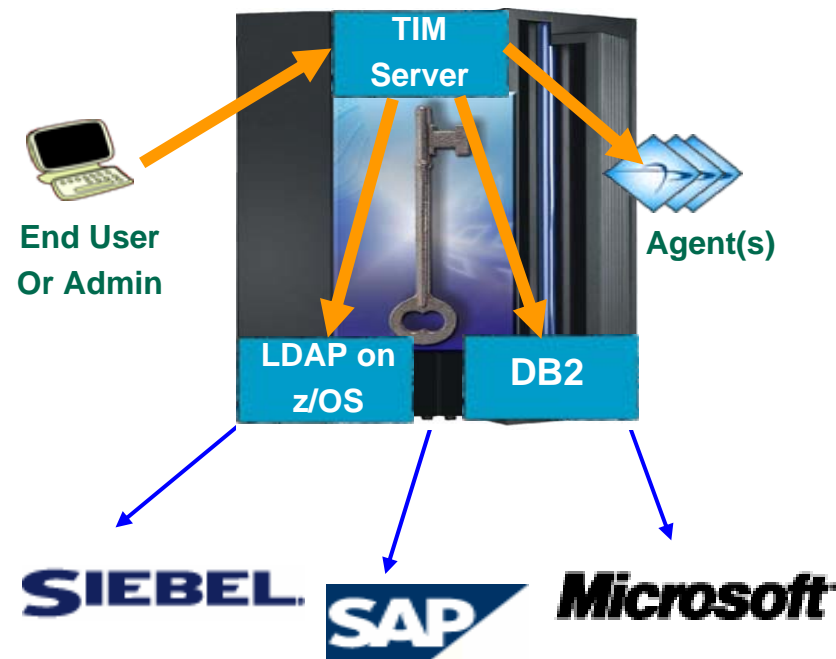
Federated Identity Manager for z/OS

- Allows web services, backed by z/OS subsystems such as CICS, to be secured by z/OS Security Services
- Preserves identity at the granularity of the requesting user for audits
- Uses z/OS auditing (SMF) to improve regulatory compliance
- Improves integration and user experience
- Can be used between business partners or between multiple lines of business within an enterprise enabling secure, trusted transactions



Identity Manager for z/OS

- Automates and centralizes access rights management and provisioning across systems, applications and databases
- Role based provisioning
- Web GUI for administration – common look and feel when provisioning accounts
- User self service and self registration
- Integrated workflow to authorize accounts
- Built-in reporting and auditing
- Installation and configuration is performed using SMP/E and TSO ISPF Panels
- Runs on z/OS and allows you to leverage the power, stability and security of the Mainframe



End to end tape encryption solution: An Industry First!

- IBM System Storage TS1120 Tape Drive
- New Encryption Key Manager program
- Manage tape encryption based on security policies
- Integration with IBM tape systems, libraries
- Enhancements to Tivoli Storage Manager
- Integration with System z security and encryption capabilities



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

Introducing the Netcool Suite to Service Management

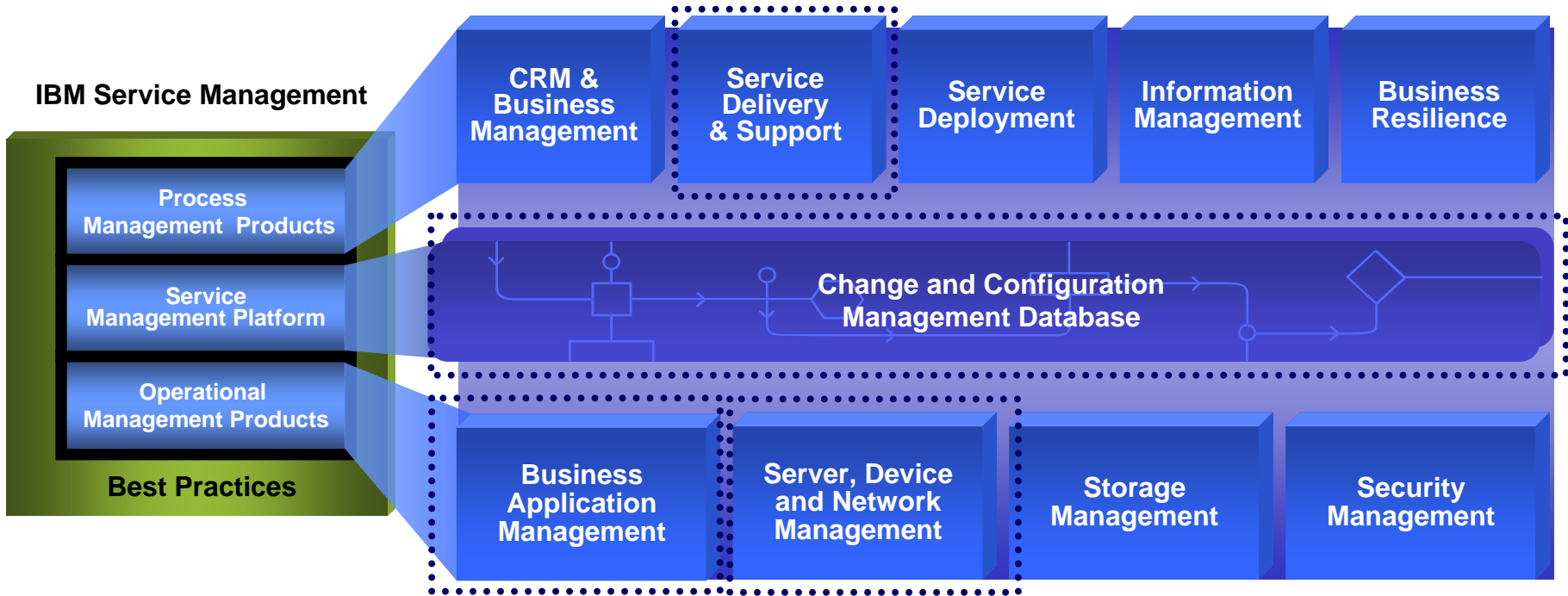
- **Extensive product portfolio under the flagship Netcool® brand**
- **Extend IBM Service Management with real-time Network Service Assurance capabilities**
- **Manages the world's most complex networks and services**

“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 Netcool Products Mean to IT Operations



Netcool Solutions bring leading management capabilities:

- Network Management
- Resource Monitoring
- IP Convergence
- Performance Management
- Event Consolidation
- Business Service Management

OMEGAMON XE Monitoring Solutions

IBM Tivoli OMEGAMON XE
on z/OS v4.1.0

IBM Tivoli OMEGAMON XE
for CICS on z/OS v4.1.0

IBM Tivoli OMEGAMON XE
for IMS on z/OS v4.1.0

IBM Tivoli OMEGAMON XE
for DB2 Performance Expert
on z/OS v4.1.0

IBM Tivoli OMEGAMON XE
for DB2 Performance
Monitor on z/OS v4.1.0

IBM Tivoli OMEGAMON XE for
Mainframe Networks v4.1.0

IBM Tivoli OMEGAMON XE for
Storage on z/OS v4.1.0

IBM Tivoli OMEGAMON XE for
z/VM and Linux v4.1.0

IBM OMEGAMON z/OS
Management Console v4.1.0

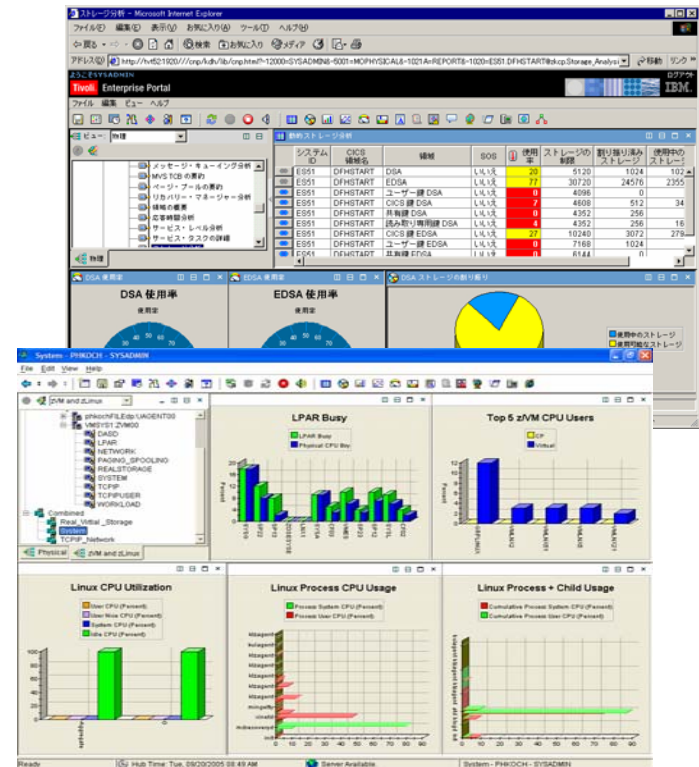
**Diagnose IT
problems across
applications,
middleware and
systems**

**SOA-enabled or
traditional
computing
infrastructures**

New OMEGAMON XE Capabilities

Common across the OMEGAMON portfolio of solutions

- **CCMDB Integration**
- **Language globalization**
 - French, German, Italian, Spanish, Portuguese, Chinese (simple & traditional), Japanese, Korean
- **Advanced interoperability via workspace linkages**
 - Enhances and improves problem resolution
- **Problem Determination Guides**
 - Improves diagnose and operational problem solving
- **Multi-product version support**
 - Enables incremental deployment of products
- **IBM zIIP monitoring**



IBM OMEGAMON z/OS Management Console

- **Available at no charge for z/OS 1.4 and above**
 - Easy upgrade to comprehensive Tivoli Monitoring products
- **For monitoring the health of z/OS sysplexes and systems**
 - Replaces complex DISPLAY commands
 - Integrated Health Checker reports
- **Powerful features:**
 - Event notification
 - Drill-down to problem details and expert advice
- **Version 4.1 adds new workspaces**
 - Monitoring sysplexes
 - LPAR clusters

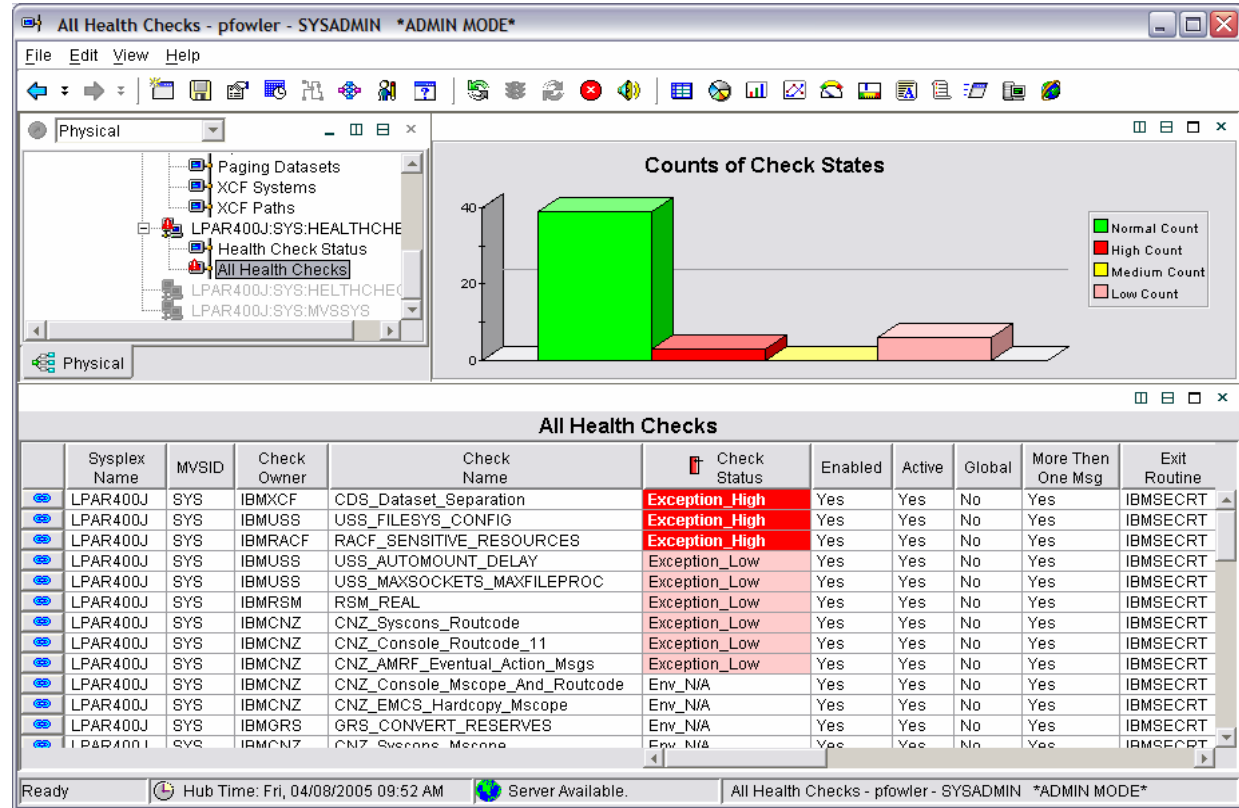


z/OS Health Checks in the Management Console

The Health Checker examines configuration values for deviations from best practices

Health check exceptions are highlighted in the zMC

IT staff can open a report for details and recommended corrective actions



Health Checker integration is a unique feature of the IBM OMEGAMON z/OS Management Console (zMC)

Composite Application Management Solutions

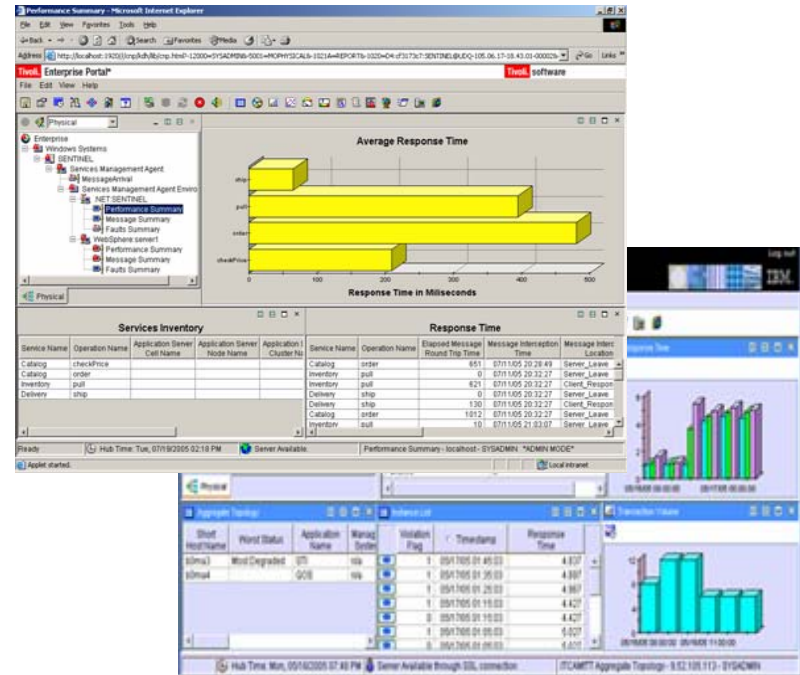
IBM Tivoli Composite Application Manager for WebSphere v6.1

IBM Tivoli Composite Application Manager for J2EE v6.1

IBM Tivoli Composite Application Manager for SOA v6.1

IBM Tivoli Composite Application Manager for Response Time Tracking v6.1

IBM Tivoli OMEGAMON XE for Messaging v6.0

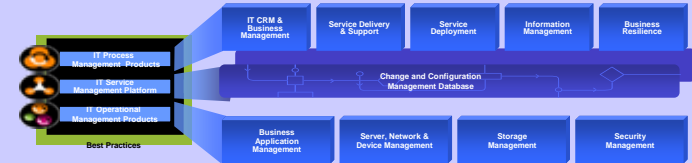


Automatically monitor, analyze and resolve problems within component-based applications regardless of their cause

Composite Application Manager for SOA v6.1

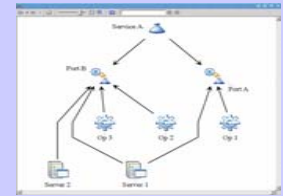
Support for ISM strategy

- Discovery Library Adapters add discovered Service information to CCMDB



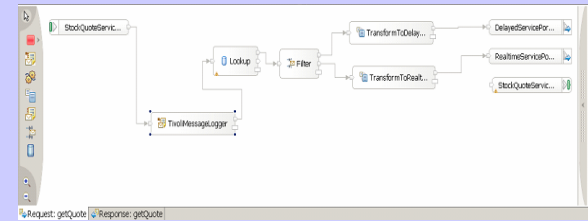
Integration with WebSphere Service Registry and Repository

- Reconciliation of registered services with those monitored by TCAM
- Tivoli Enterprise Portal views show business process relationships for impact analysis



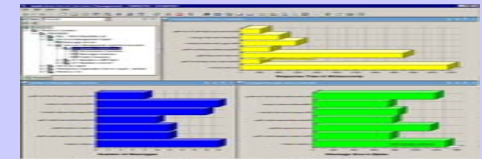
Integration with WebSphere Enterprise Service Bus SCA runtime

- Provides SCA-based mediation primitives for enhancing management functions (monitoring, logging, routing and transformation)



New Platform support

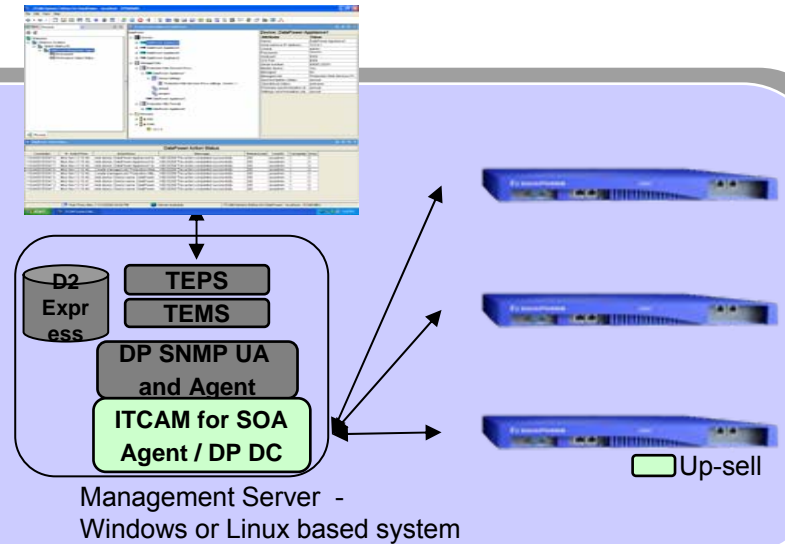
- CICS TS 3.1, DataPower SOA Appliances, WebSphere ESB, WebSphere CE, JBOSS Application Server, SAP NetWeaver



IBM Tivoli Composite Application Manager System Edition for WebSphere DataPower v6.1

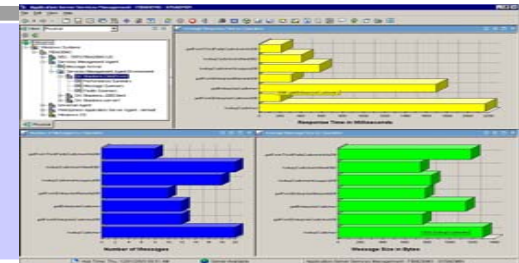
Management Solution for multiple WebSphere DataPower SOA Appliances

- Single Agent designed to manage multiple WebSphere DataPower SOA Appliances
- Basic monitoring for the appliances included
- Provided with every appliance or firmware upgrade



Integration with ITM and ITCAM for SOA

- Easy to add ITCAM for SOA or other ITM agents
- System Edition views coexist with ITM and SOA monitoring and management TEP portal views



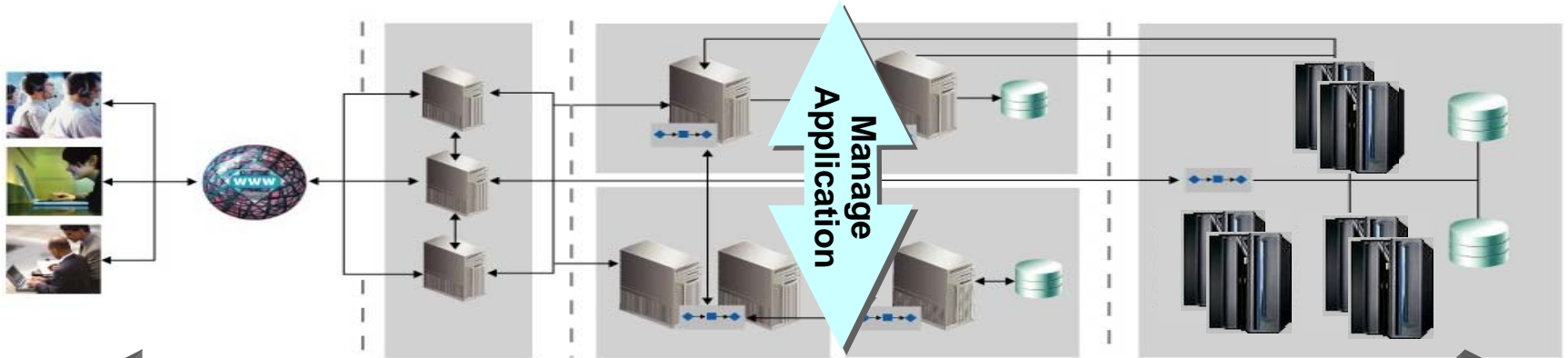
Integration with WebSphere DataPower Web GUI

- Provides ability to launch into WebSphere DataPower Web GUI for appliance configuration



Tivoli Composite Application Management Portfolio

Delivering high-performing composite applications

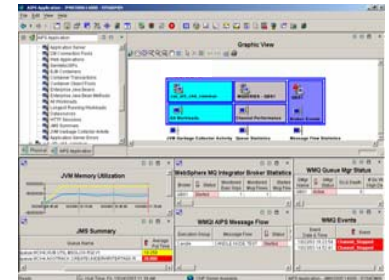
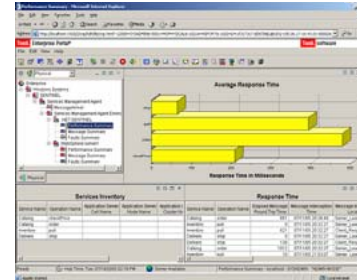
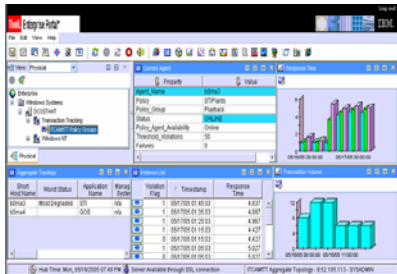


Composite Application Manager for for RTT

Composite Application Mgr for WebSphere & J2EE

Composite Application Manager for SOA

OMEGAMON XE and ITM



Workload and System Automation Solutions

IBM Tivoli Workload Scheduler for z/OS v8.3

Monitor, manage and automate workloads across traditional infrastructure and SOA-enabled environments

IBM Tivoli Dynamic Workload Broker v8.3

Extends the automatic clustering, scheduling and management capabilities of TWS to virtual computing and SOA

IBM Tivoli System Automation for Multiplatforms v2.2

Automate I/O operations, Sysplex resources, and system operations from a single point of control

IBM Tivoli AF/REMOTE v1.0.1

Enhanced alerting, notification and escalations

IBM Tivoli System Automation for z/OS v3.1 (for TWS integration)

Automatically start and stop application groups according to planned, event-based or ad hoc TWS workload schedules

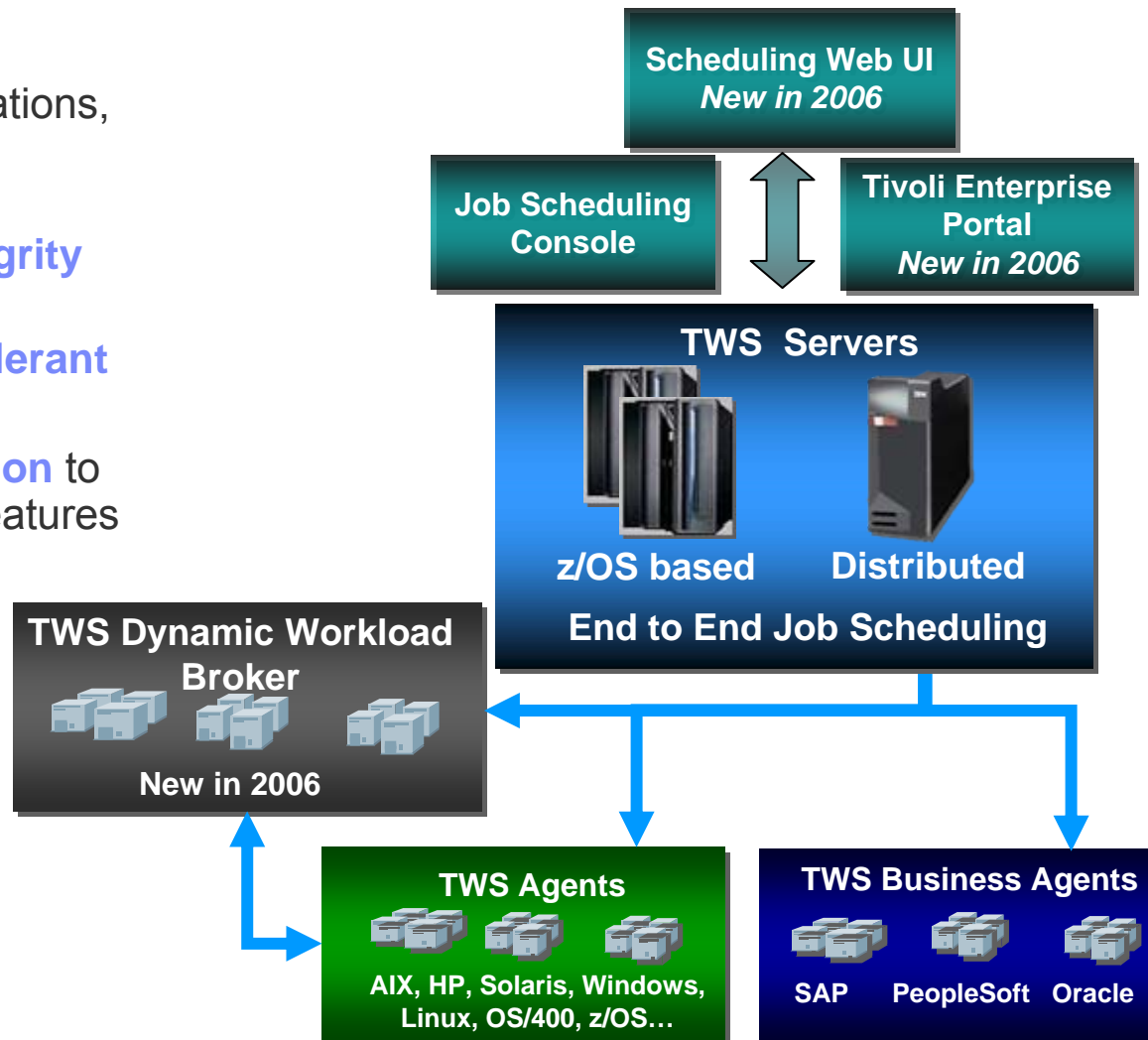
IBM Operations Manager for z/VM v1.2

Automate z/VM routine tasks by using defined actions to automatically respond to specific issues when they arise



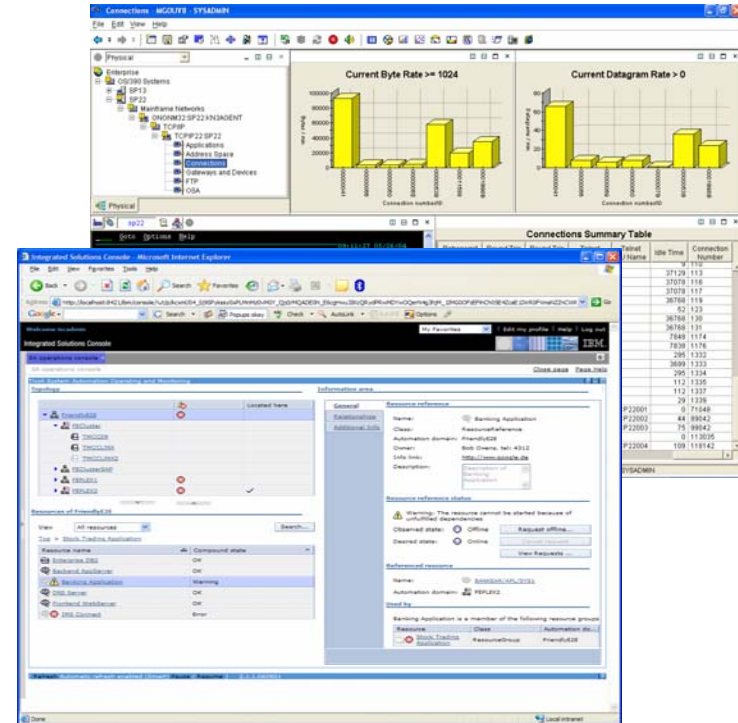
IBM Tivoli Workload Scheduler

- **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



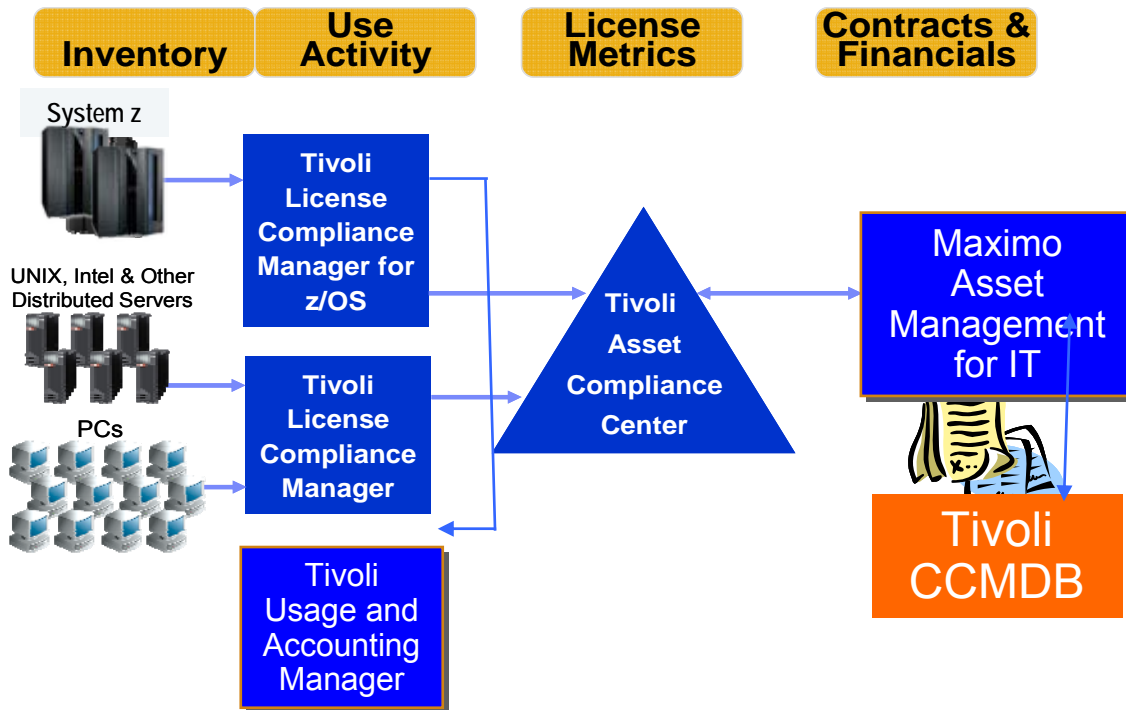
System Automation & NetView for z/OS

- Enhanced **Tivoli System Automation on z/OS** (TSA) integration with Tivoli Workload Scheduler (TWS)
- **Tivoli System Automation for Multiplatforms** provides integration with IBM High Availability Cluster Multiprocessing (HACMP) and Microsoft Server Cluster Service (MSCS)
- **Tivoli NetView on z/OS** enhanced TEP integration improved network availability and performance management



Tivoli End-to-End Asset Management

“Enterprises that begin an asset management program experience up to a 30% reduction in costs the first year.. and continue savings of 5-10% for the next 5 years” – *Gartner*



Only IBM Tivoli delivers the four essential sets of integrated information required for effective Software Asset Management: across all significant environments.

Business Challenges

- Software costs are difficult to “control”
- Potential for unexpected expensive software license compliance costs
- Hard to obtain essential “who uses what software” information that enables effective software asset management
- Difficult to shift software spending to align with business needs
- Align costs of business services to departments for budgets and chargeback

Tivoli Asset Management Benefits

- Tivoli end-to-end asset management solutions help control software costs and license compliance exposure to free up funds for priority projects
- Helps organizations demonstrate adherence to stringent accounting standards (Sarbanes-Oxley)
- Track usage of software packages, storage and system z IO for resource accounting and chargeback

Event and Automation Roadmap

■ Critical Concepts

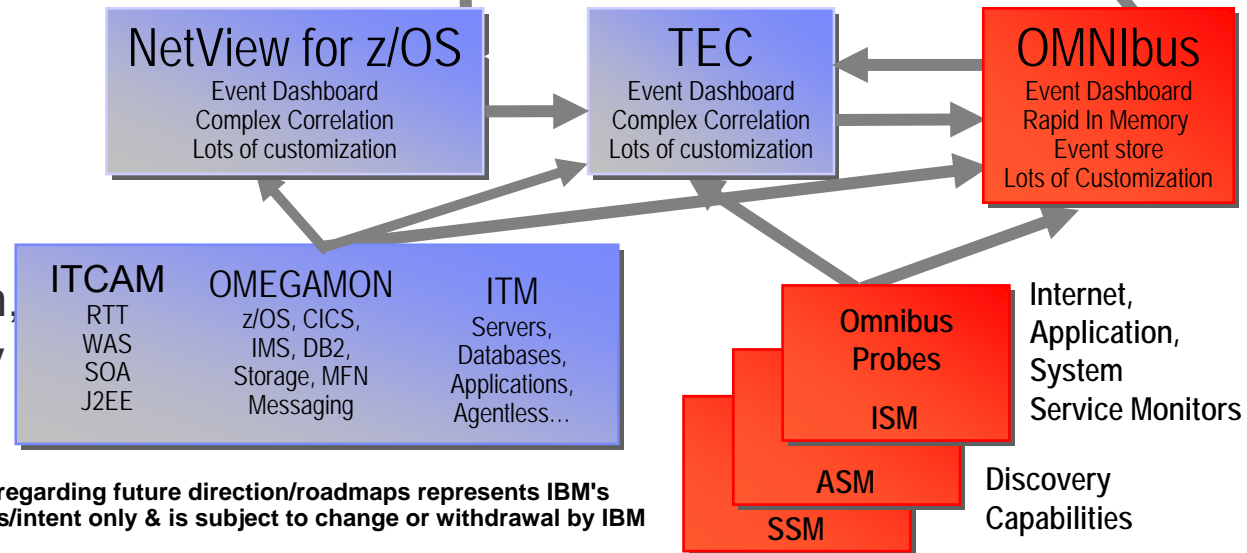
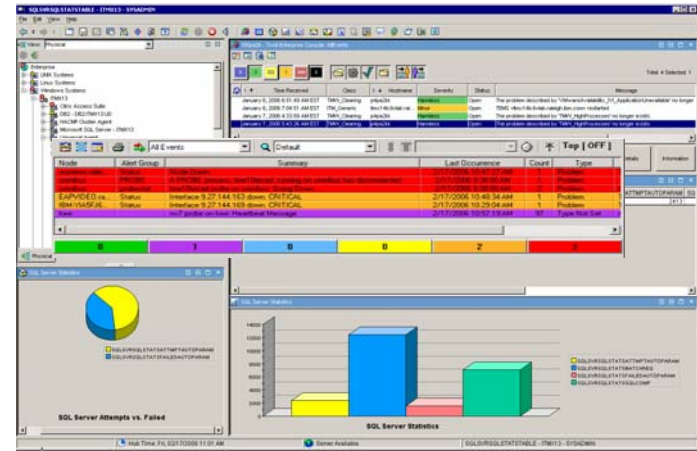
- Moving to *Single Console*
- Everything to Event MoM
 - The Event Infrastructure is just plumbing
- Flexibility of Correlation

■ 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

Today's Storage Management Challenges

60%+ of CEOs: Need to do a better job capturing and understanding information rapidly in order to make swift business decisions

Only **1/3** of CFOs believe that the information is easy to use, tailored, cost effective or integrated

79% of companies: have 2 + repositories...
25%: have 15 +

48 disparate financial sys. and 2.7 ERP sys. in the average \$1B company

17% of IT Budgets Spent on Storage HW, SW, People

30% of people's time is spent searching for relevant information



40% of IT budgets may be spent on integration

37% CGR Disk Storage Growth '96-'07

80% of IT problems are reported by end users

IBM End-to-End IBM Storage Management Direction

Expand Storage Management ISM Solutions

- Enable common process execution across all platforms

Integrate System z & Open Storage Management

- Leverage CCMDB as a common data repository
- Provide common end-to-end reporting

Unify System z Storage Portfolio

- Leverage TEP technology to provide a more integrated System z Storage portfolio

Comprehensive IBM System z Storage Management

IBM service management

Process management

Service management platform

Operational management

Best practices and services

Storage Infrastructure management

IBM Data Facility Product (DFSMSdfp)

IBM Tivoli OMEGAMON XE for Storage v4.1

IBM Tivoli Advanced Catalog Management v1.1

IBM Tivoli Allocation Optimizer v1.2

Allows administrators to manage data and a broad range of devices such as switches, tape, removable media and storage servers

Business Continuity

IBM Data Set Services (DFSMSdss)

IBM Backup and Restore Manager for z/VM v1.2

IBM Tivoli Advanced Backup & Recover for z/OS v1.1

IBM z/OS Global Mirror v1.1

Minimizes operational risk by ensuring business data meets backup and recovery objectives

Data Retention

IBM Hierarchical Storage Manager (DFSMSHsm)

IBM Tivoli Advanced Audit for DFSMSHsm v1.1

IBM Archive Manager for z/VM v1.1

Helps control storage growth and control costs for data requiring long retention periods.

Resource Virtualization

IBM Removable Media Manager (DFSMSrmm)

IBM Tivoli Tape Optimizer v1.2

IBM Tape Manager for z/VM V1.2

IBM Tivoli Automated Tape Allocation Manager v2.2

Increases flexibility and improves resources optimization



Centralized IT Operations Management

- z/1P
- RMP
- CICS
- CICS
- CICS
- Ente
- IMS
- IMS
- DB2
- DB2
- SQL
- Com
- Man
- EE &
- DFH
- z/VM
- z/VM

The screenshot displays the Tivoli Enterprise Portal interface. On the left is a navigation tree for 'Enterprise' with categories like UNIX Systems, Linux Systems, and Windows Systems. The main area is divided into several panels:

- Top Panel:** 'i50pa2b - Tivoli Enterprise Console: AllEvents' showing a table of events.

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_IV_ApplicationUnavailable' no longer exists.
January 6, 2006 7:04:51 AM EST	ITM_Generic	itm:14b.tivlab.ra...	Minor	Open	TEMS <itm:14b.tivlab.raleigh.ibm.com> restarted
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.
- Middle Panel:** 'Micromuse Active Event List' showing a table with columns for Node, Alert Group, Summary, Last Occurrence, Count, and Type.

Node	Alert Group	Summary	Last Occurrence	Count	Type
			7:27 AM	1	Problem
			8:00 AM	1	Problem
			8:00 AM	2	Problem
			8:34 AM	1	Problem
			9:04 AM	1	Problem
			7:19 AM	97	Type Not Set
- Bottom Left Panel:** 'SQL Server Statistics' featuring a pie chart titled 'SQL Server Attempts vs. Failed'.

Category	Count
SQLSVRSQLSTATSATTMPTAUTOPARAM	3
SQLSVRSQLSTATSFAILEDAUTOPARAM	2
- Bottom Right Panel:** 'SQL Server Statistics' featuring a 3D bar chart.

Category	Count
SQLSVRSQLSTATSATTMPTAUTOPARAM	3
SQLSVRSQLSTATSBATCHREQ	1
SQLSVRSQLSTATSFAILEDAUTOPARAM	0
SQLSVRSQLSTATSSQLCOMP	0

At the bottom of the interface, there are status indicators: 'Hub Time: Fri, 02/17/2006 11:01 AM', 'Server Available', and the window title 'SQLSVRSQLSTATSTABLE - ITMX13 - SYSADMIN'.

Tivoli Enterprise Portal
Everything at your Fingertips

BASE
 ESX

Tivoli IBM System z Road Ahead

4Q 2006

4Q 2007

3Q 2007

2Q 2007

1Q 2007

- IBM Tivoli OMEGAMON v4.1
 - CICS, IMS, DB2 PE/PM
 - Mainframe Networks
 - Storage
 - z/VM & Linux
- IBM Tivoli Composite Application Manager
 - for WebSphere v6.1
 - For J2EE v6.1
 - for SOA v6.1
- IBM Tivoli Identity Manager for z/OS v4.6
- IBM Tivoli Federated Identity Manager for z/OS v6.1.1
- IBM Tivoli System Automation for Multiplatforms v2.2
- IBM Tivoli Workload Scheduler for z/OS v8.3
- IBM Tivoli License Compliance Manager for z/OS v4.2
- IBM Tivoli Usage and Accounting Manager v6.1
- IBM Tivoli Asset Management for IT v6.2
- IBM Tivoli Performance Modeler for z/OS v2.3
- IBM Tivoli Advanced Catalog Management for z/OS v1.1
- IBM Tivoli Advanced Audit for DFSMSHsm v1.1
- IBM Tivoli Advanced Backup & Recovery for z/OS v1.1

- IBM Tivoli OMEGAMON on z/OS v4.1
- IBM OMEGAMON z/OS Management Console v4.1
- IBM Tivoli System Automation for z/OS v3.1 (SPE) Sparkler – TEP Integration
- Consul zSecure v1.8

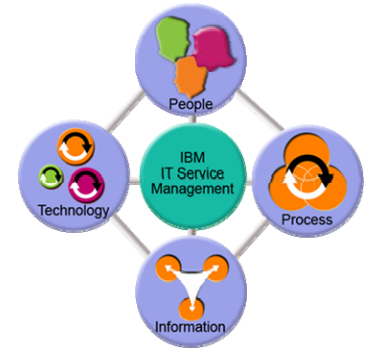
- IBM Tivoli NetView for z/OS v5.3
- IBM Tivoli System Automation for z/OS v3.1 (SPE) Sparkler – GDPS Enhancements
- IBM Tivoli Directory Server for z/OS v1.8
- IBM Tivoli Directory Integrator for z/OS v6.1.1
- IBM Maximo Asset Management for IT v6.3
- IBM Tivoli Advanced Reporting for DFSMSHsm v1.1

- IBM Tivoli OMEGAMON for CICS TG on z/OS v4.1.0
- IBM Tivoli System Automation Multiplatforms v2.3
- IBM Tivoli System Automation for Integrated Operations Management v2.1
- IBM Tivoli Usage & Accounting Manager for z/OS v7.1
- IBM Tivoli Decision Support for z/OS v1.8
- Consul zSecure v1.8.1

- IBM Tivoli System Automation for z/OS v3.2
- IBM Tivoli License Compliance Manager for z/OS v5.1
- IBM Tivoli Advanced Catalog Management for z/OS v1.2
- IBM Tivoli Advanced Audit for DFSMSHsm v1.2
- IBM Tivoli Advanced Reporting for DFSMSHsm v 1.2
- IBM Tivoli Advanced Backup & Recovery for z/OS v1.2
- IBM Tivoli Federated Identity Manager for z/OS v6.2

IBM Service Management 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
- **IBM Service Management Solutions**
 - Delivering IBM Service Management solutions that can meet your key challenges cost effectively



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