



From Monitoring to Business Service Management – How end-to-end visibility can deliver better service management

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Pulse2012

Meet the Experts. Optimise your infrastructure.

May 31 – June 1

Sheraton on the Park Hotel, Sydney

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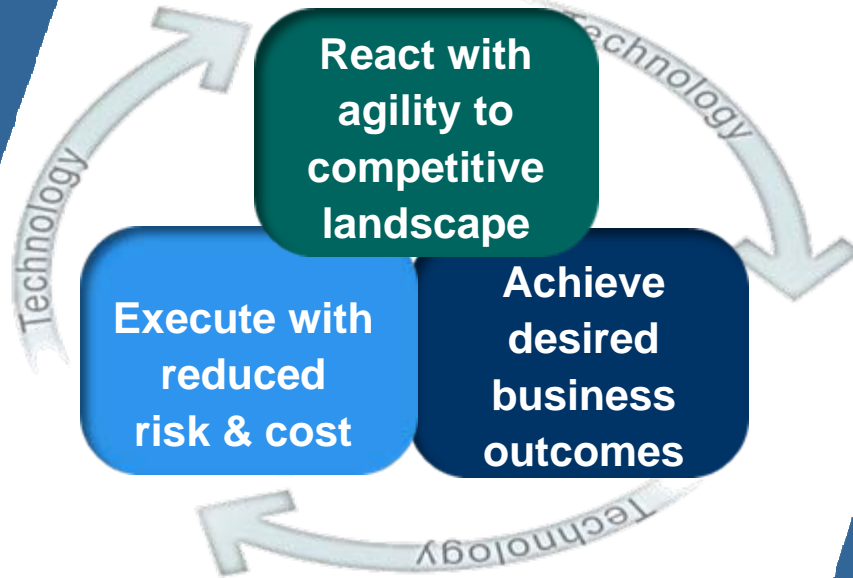
Agenda

- IT's Transformation to Shared Infrastructure
- Market Insights
- IBM SmartCloud Application Performance Management Capabilities
- Business Service Management
- Demo of the new (beta) APM User Interface

Today's businesses face unparalleled rate of change...

80%

CEOs anticipate turbulent change and bold moves.



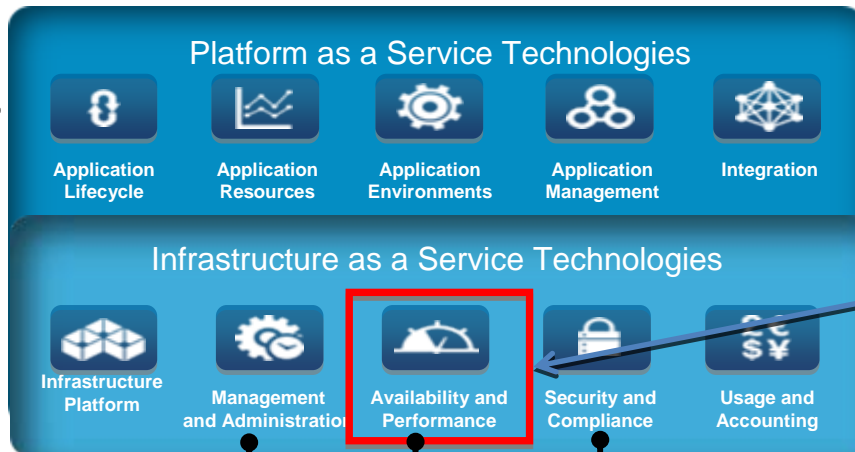
64%

of CIOs work with senior business executives to drive innovation.

IBM SmartCloud Foundation

AUTOMATION

- Integrated lifecycle management of cloud services (DevOps)
- Collaborative service development, testing and service provisioning
- Customized workload patterns tied to provisioning engine



SmartCloud
APM
You are
here!

CONTROL

- Simplified administration enabling rapid, scalable provisioning while controlling image sprawl
- Reduce service disruptions with integrating service desk, change & maintenance management
- Lower costs and improve overall performance by virtualizing and better controlling storage resources

VISIBILITY

- Improved visibility into the performance of cloud resources and services optimizing usage & QoS
- Health analytics for capacity planning and workload placement improving utilization
- Secure the Cloud by enforcing policy-based access controls, including from mobile devices

Integrated service management supports successful IT transformation to cloud & shared infrastructure

Business Services & Assets



Transitioning to Smarter, flexible infrastructures



Converging Digital & Physical Assets



Leveraging Mobile & Web Endpoints



Addressing data growth, threats, & compliance

Common questions from customers during their IT transformation to cloud & shared infrastructure

Infrastructure Teams



How can I monitor availability and manage capacity of dynamic IT infrastructure, events, networks, & highly virtualized environments?

Line of Business Teams



How can I manage services and the underlying IT & network infrastructure based on business priorities and with business context?

Operations Teams

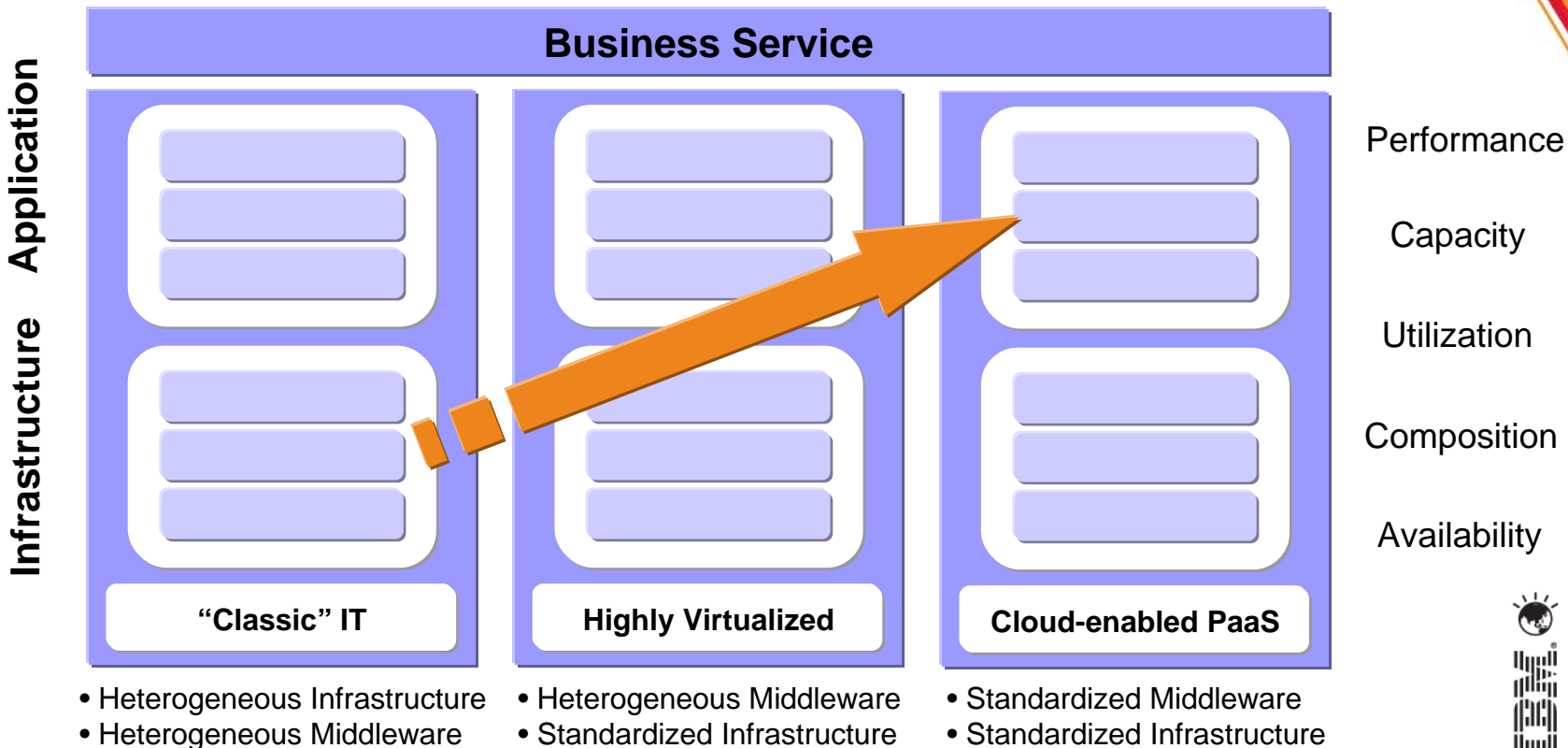


How can I monitor, optimize, and analyze application performance, transactions, and processes end-to-end?



Evolving operations management

Cloud drives increased need to manage at the application and service level



Evolving operations management

Cloud requires broadening management focus beyond availability

Attaining the true economic, service delivery, and performance gains cloud & shared infrastructure can provide, requires a broader, more disciplined approach to application and service management

Management Facets in the Cloud

AVAILABILITY	COMPOSITION	PERFORMANCE	UTILIZATION	CAPACITY
Ensure constant infrastructure availability as demand constantly shifts in dynamic environments	Discover in real-time application infrastructure and application dependencies, as they change regularly in cloud & shared environments	Holistic performance management of composite applications across your hybrid environment to ensure strong end user experience	Optimize the use of your limited resources to maximize efficiency, minimize CAPEX costs, without risking over utilization	Proactively manage capacity to meet your needs today while confidently understanding and supporting your needs tomorrow

Smarter Planet

VISIBILITY

Predict & resolve application problems before client impact

CONTROL

Effectively manage application changes, compliance & risk

AUTOMATION

Scale to peaks in demand while reducing administrative costs

Costs of poor performing applications are sky-rocketing...

Online Outage On Black Friday

AP) High traffic disrupted Wal-Mart Stores Inc.'s Web site for much of Friday, one of the year's busiest shopping days.

The Walt Disney Co. also had problems handling the rush of online activity Friday, while Amazon.com Inc.'s site had brief disruptions a day earlier due to a Thanksgiving Day sale on Microsoft Corp.'s Xbox 360 video game machines.



... issues with application performance are impacting corporate revenues by up to 9%.”
“Poor application performance translates to lost

InformationWeek

BestBuy.com Experiences Overnight Web Site Outage, According To Monitor Service

December 15, 2006, InformationWeek

BestBuy's Web site response times have been climbing as holiday shopping has become more popular in December, according to WebSitePulse.com.

By Charles Babcock
InformationWeek

“Organizations spend 54% of each outage detecting and identifying.”
— EMA Decreasing IT Operational Costs by Accelerating Problem Resolution, EMA

Computer Glitch Delays IRS Rebate Checks

Computer glitch dumps kids from state health insurance

By DEBORAH CIRCELLI
Staff writer

DAYTONA BEACH — Computer errors in a state health insurance program has dumped tens of thousands of children who

““Nearly 60% of survey respondents reported the inability to identify issues before end users are impacted...”

“Poor application performance translates to lost revenue, research shows”, Network World

suffered a major breakdown in services.

A computer glitch meant customers were unable to get money from cash machines or use credit cards and Switch cards.



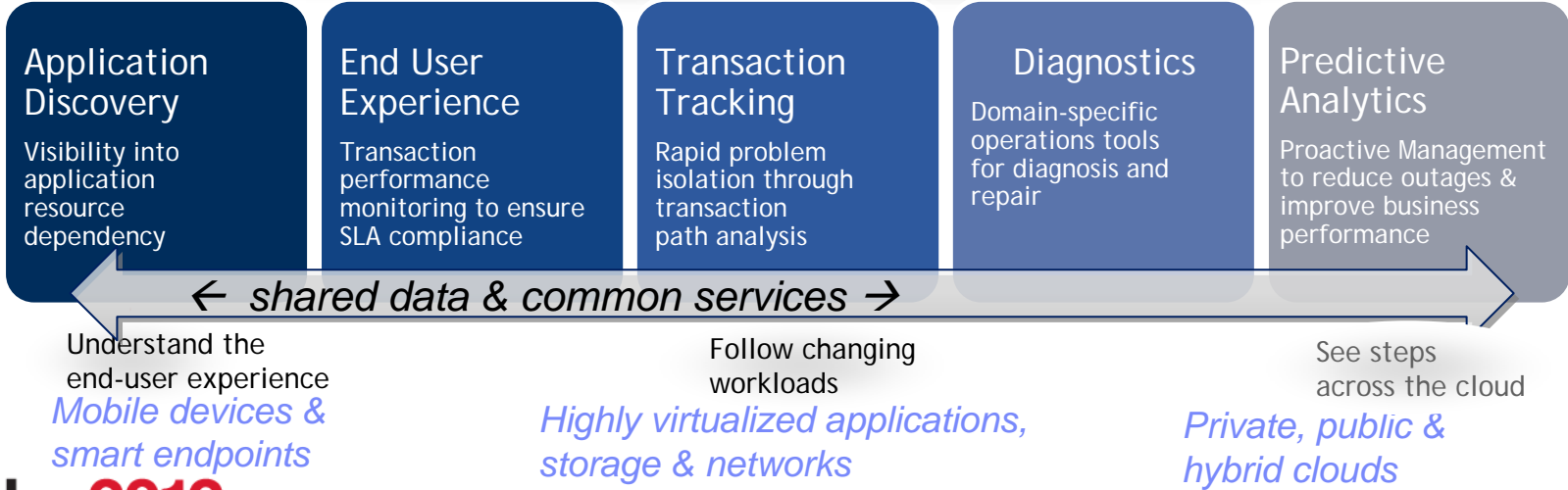
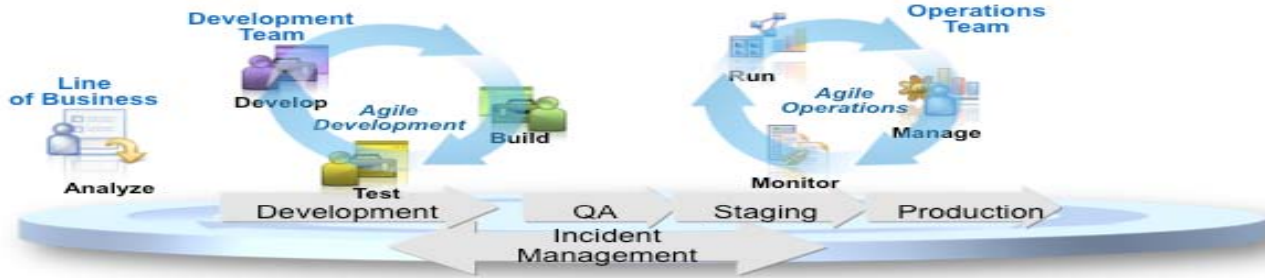
Bargain hunters may have been hit by HSBC's problems

to access their personal accounts the bank's internet service.

HSBC said the glitch was the most serious the bank had experienced in its history, but most problems

IBM Application Performance Management

Provides visibility, control and automation to intelligently manage your critical applications in cloud and hybrid environments.

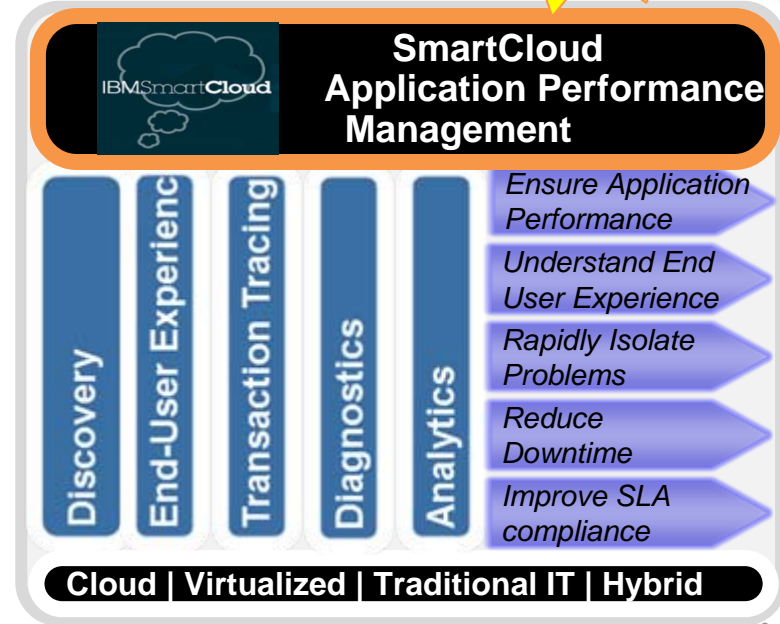


IBM SmartCloud Application Performance Management

Intelligently managing your critical applications in cloud and hybrid environments



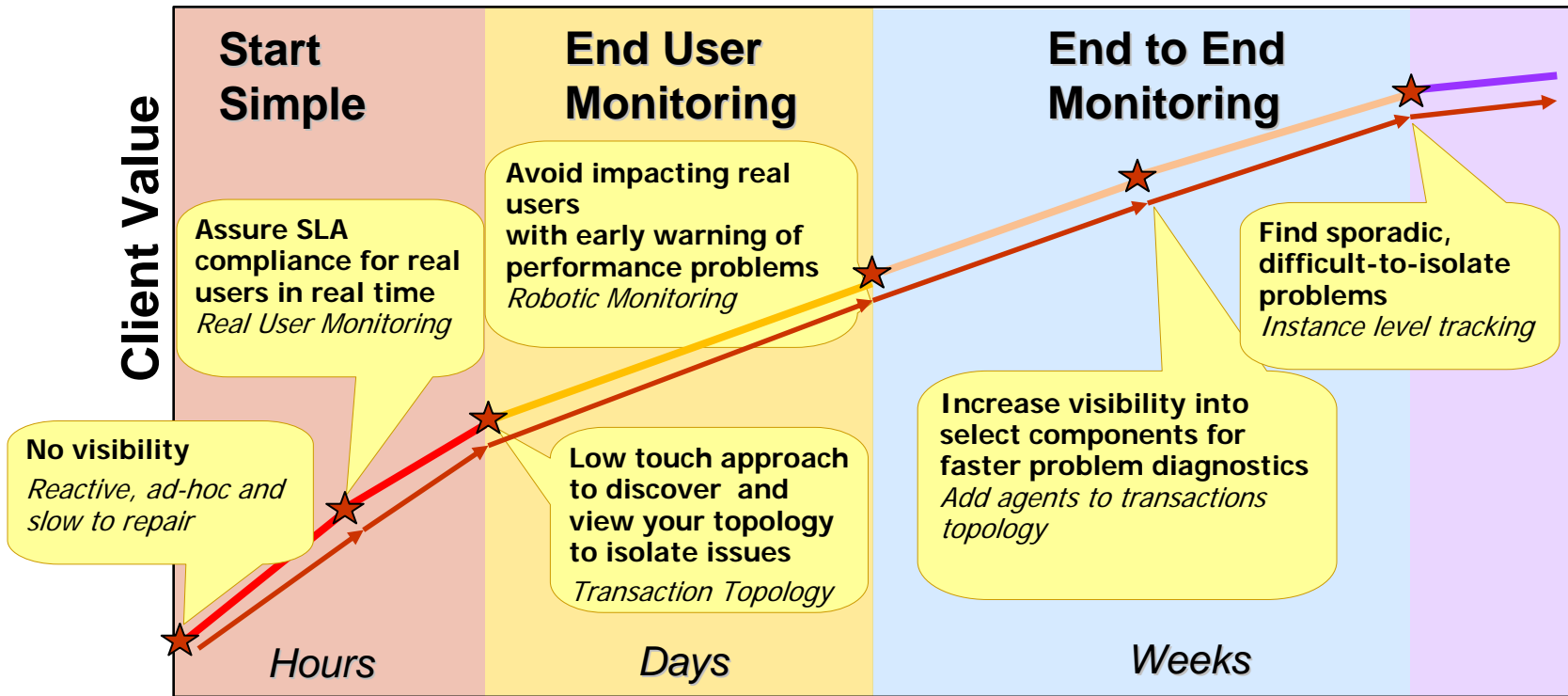
- **A single solution to manage performance, Availability, and Capacity for your complex application infrastructure**
 - Real time end User Response for low overhead easy to install and configure End User Experience Monitoring
 - Low Overhead Service Availability Monitoring
 - Agentless and agent-based Transaction Tracking
 - Breadth of domain coverage for diagnostics
 - Performance and Predictive Analysis Reporting
- **New!**
 - Web based dashboards
 - Enhanced SAP, DataPower, DB2 & Siebel capabilities



www.ibm.com/Tivoli/APM



Best Practices for Adopting Application Performance Management



Effort with IBM's SmartCloud Application Performance Management

End User Monitoring

Ensure end user's experience always meets their expectations

- **See what your users are experiencing**
- **Identify problems before they affect SLAs:**
 - Real-User monitoring
 - Robotics monitoring
- **Continuously validate** production system performance
 - Captures performance and availability data of actual users for SLA reporting
 - Monitors network traffic for HTTP(S) requests to the web server
 - Completely non-invasive, agentless monitoring
- **If you have a problem, find out about it before the customers complain**



50% of problems found through customer complaints to help desk!

Agentless Transaction Tracking

Simple

✓ Quick and easy to deploy

- Install ITCAM for Transactions 7.3
- One simple network configuration change enables tracking of an entire network segment
- No impact to any production servers or applications

Effective

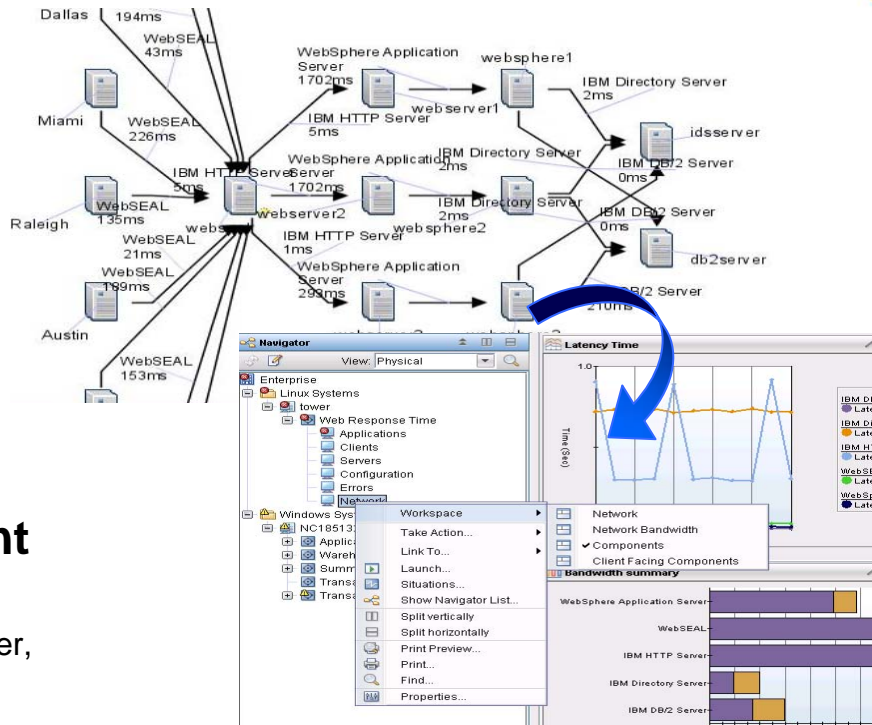
✓ Immediate value, immediate visibility

- Server and component topology plus performance metrics
- Hotspot analysis on baselined deviations

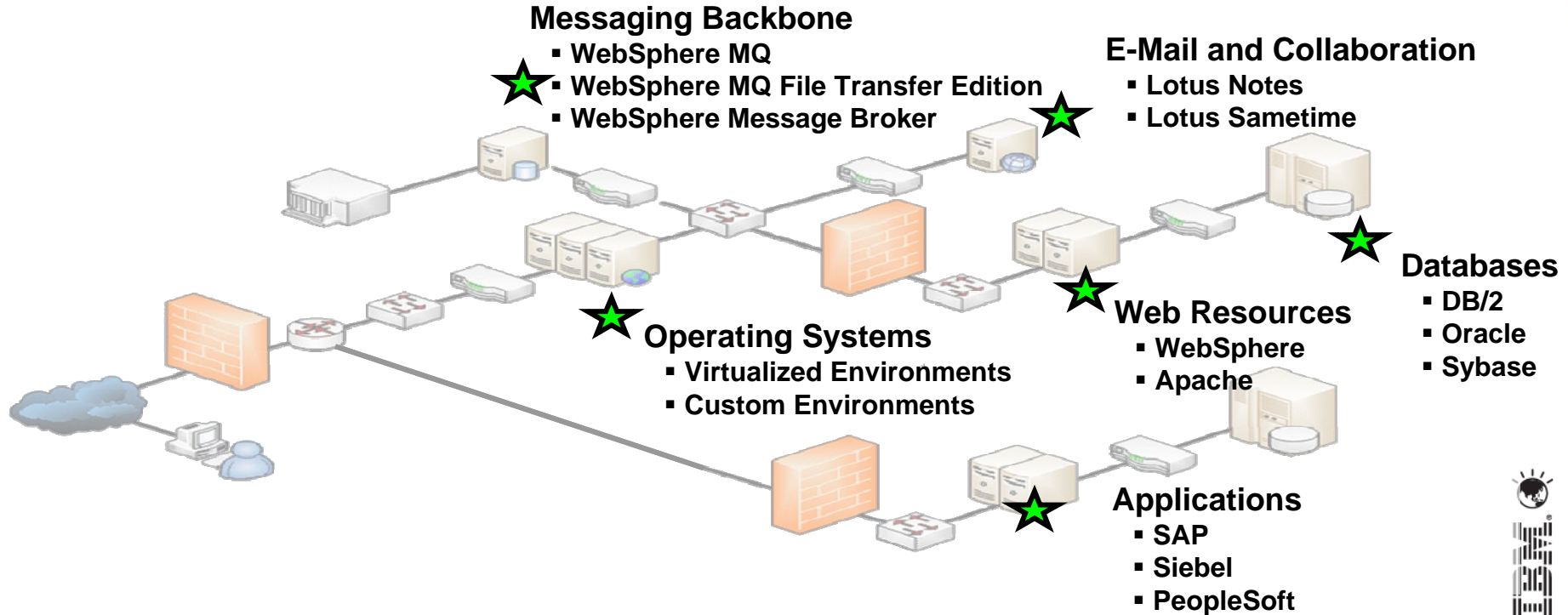
Configurable

✓ Customize for your environment

- Add custom network applications
- Build dedicated environment topology per server, per technology



Managing the Applications and Application Infrastructure



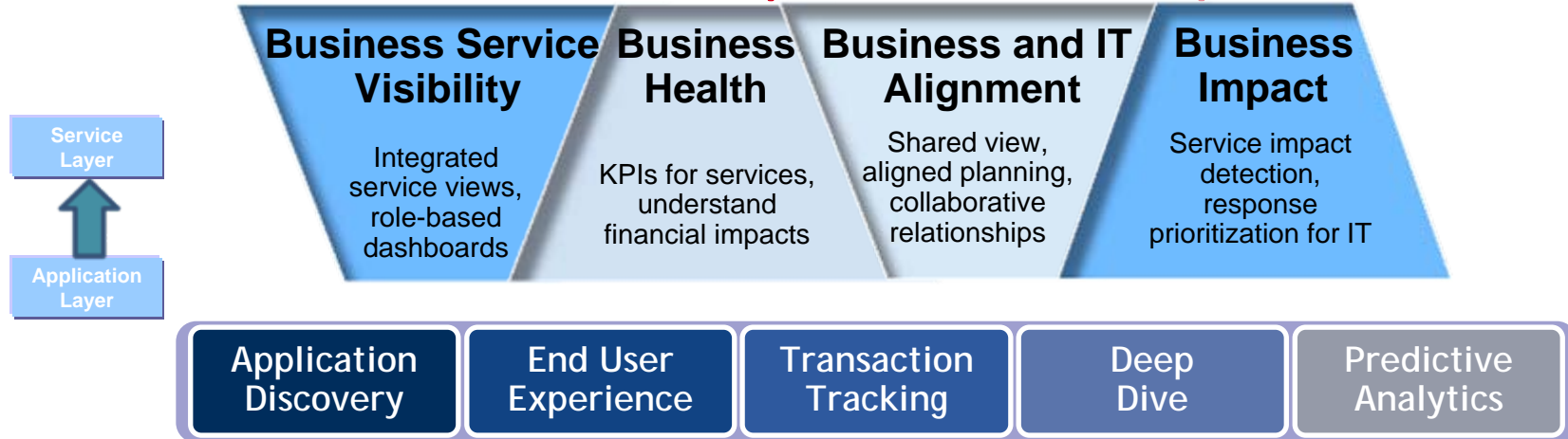
Dramatically simplified visibility into the application environment

- Take the guesswork out of end user experience management with smart drill downs
- Easy to understand dashboards track availability, performance, and capacity
- Role-specific screens for both Operators and Application Development teams
- Built on best practices, yet easily customizable with a wide variety of widgets
- Runs on smart devices
- **Transparent Development**
 - **Download the beta**



Business Service Management

Collaborative management of services, applications and the IT infrastructure based on business prioritization and impact



Service Visibility

- Role based dashboards
- Integrated service views
- Fully End-to-End

Service Health

- Understand the financial impacts
- Representative KPI's to reflect the health of a service

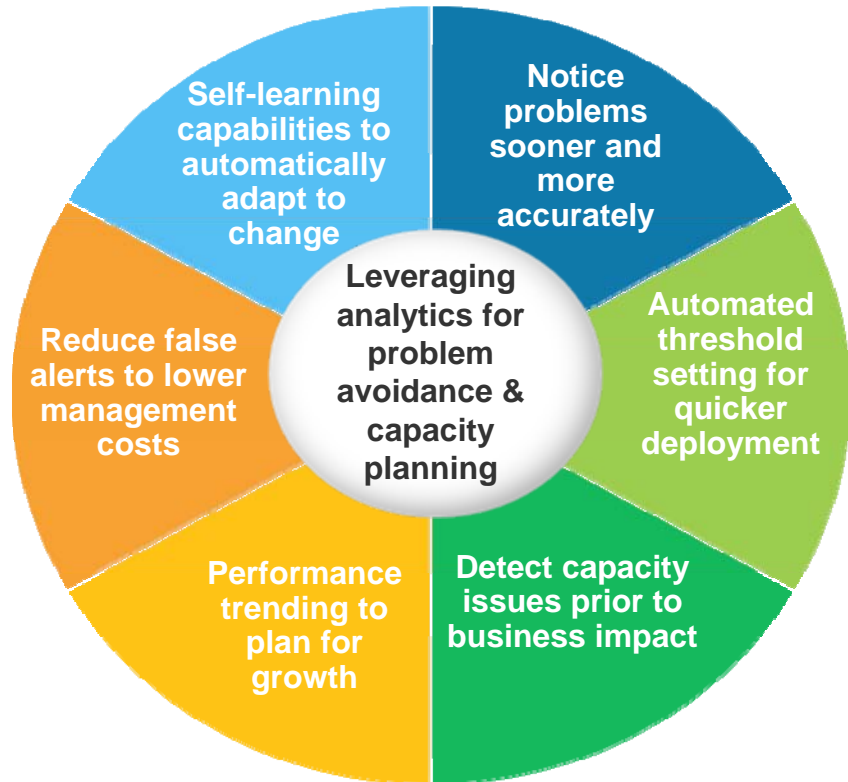
Service Alignment

- Management of the underlying applications and infrastructure of that service
- Facilitate a collaborative relationship around the business service

Service Impact

- Real-time service impact detection
- Dynamic view definitions between IT and business

Analytics to proactively mitigate risk, attain insights to optimize operations, and reduce cost of ownership



Predictive Analytics enables **forecasting** and **trending** to provide foresight in resource demand, capacity & availability and clarify potential risks.

Dynamic Threshold management to adjust policies in-line with seasonal variations.

Simple ad-hoc and scheduled **Reporting** to enable comparison of multiple metrics and data-sources

Provide holistic and accurate diagnosis by using guiding technology with **behavioral learning** capabilities.

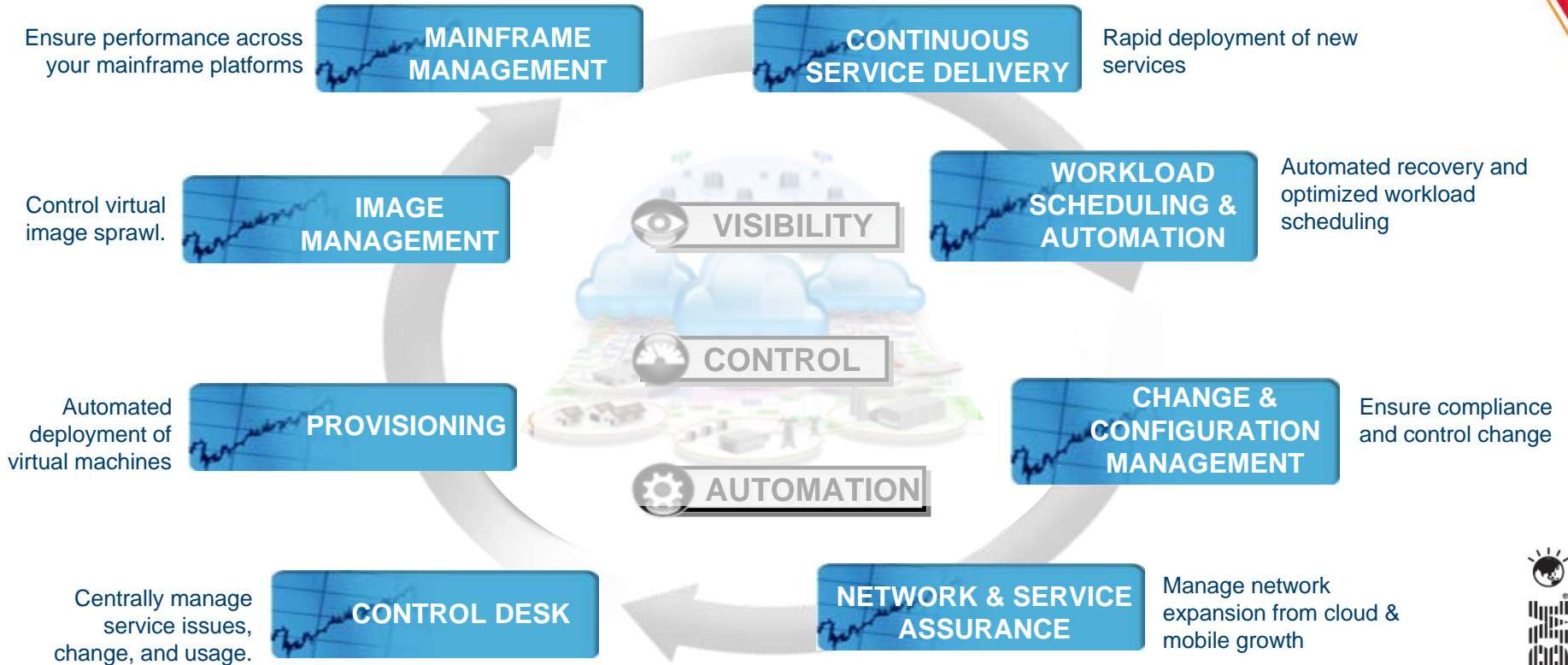
Advanced correlation and pattern recognition to identify and resolve complex and undetectable events in real-time.

COGNOS

SPSS



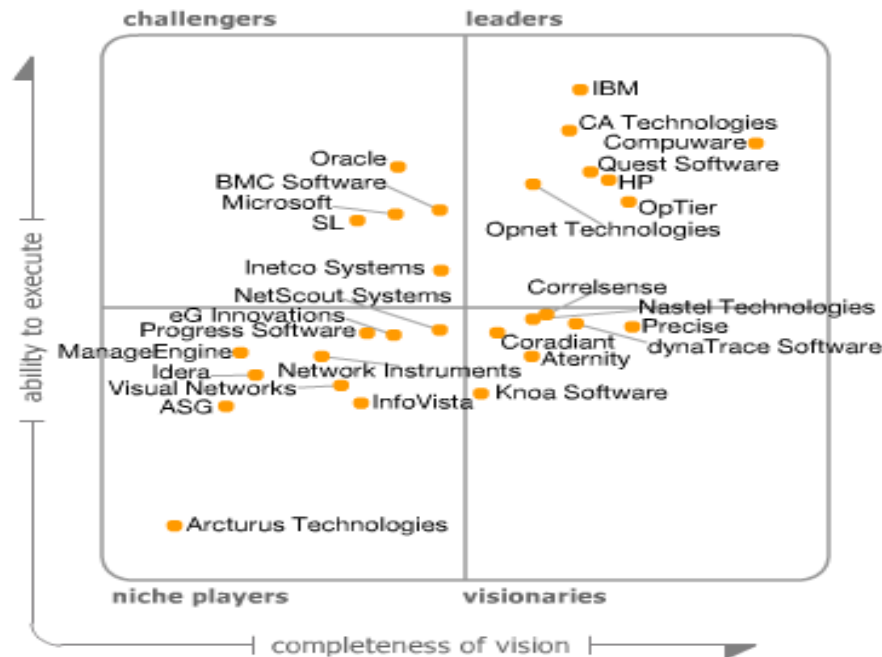
Integrated IBM solutions for end-to-end service management



Gartner has recognized IBM as a leader in Application Performance Monitoring

Magic Quadrant for: Application Performance Monitoring

Will Cappelli, Jonah Kowall
September 19, 2011

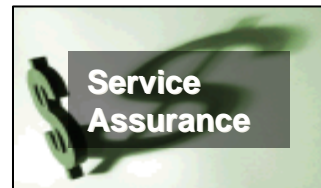
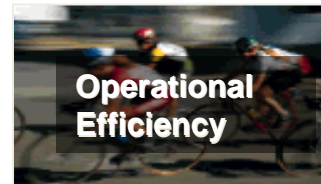


As of September 2011



Why IBM for Application Performance Management Per Gartner?

- ✓ **BREADTH:** Offers comprehensive, end-to-end application performance management spanning mobile, endpoints, virtualized infrastructures and hybrid cloud environments
- ✓ **INTEGRATION:** Delivers the only solution with common visualization, navigation, security, data warehouse & reporting
- ✓ **EFFICIENCY:** Provides a single-pane-of-glass across IBM Tivoli & 3rd party tools improving return on investment
- ✓ **INTELLIGENCE:** Predict problems and improve MTTR across domains with automated analysis, contextual drill down & actions
- ✓ **EXTENSIBILITY:** Offers add-on capabilities for Business Service & event Management & Data Center Management
- ✓ **LEADERSHIP:** Proven technology & market leadership with thousands of customer implementations worldwide



IBM APM solutions provide the integrated visibility, control & automation Operations needs to help improve efficiency, reduce costs & assure services.

Open Beta Programs Available today!

1. SOA application infrastructure monitoring, covering:
 - IBM BPM based business process solutions
 - SOA Governance: SLA Policy driven monitoring of services
 - Performance monitoring of WebSphere DataPower SOA appliances
2. Deep diagnostics of critical WebSphere Application Server and WebSphere Portal solutions
3. Dramatically simplify your view into the health of the application environment with new easy to understand, easy to customize dashboards



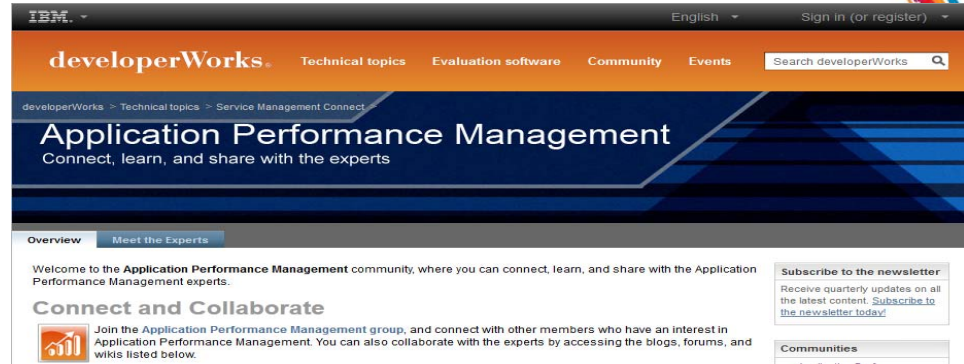
Enhance the performance and availability management for your application infrastructure

Details on IBM Service Management Connect

<https://www.ibm.com/developerworks/servicemanagement/apm/index.html>

Join the Discussion!

- **IBM Service Management Connect**
 - Connect and Collaborate with IBM and the APM community
 - Participate in design programs and beta's
 - Access whitepapers, demos, downloads, and much more!
- **Tivoli RFE**
 - Collaborate directly with Tivoli Product Development Teams and other product users
 - Submit enhancement requests and track progress
 - Vote on priorities!

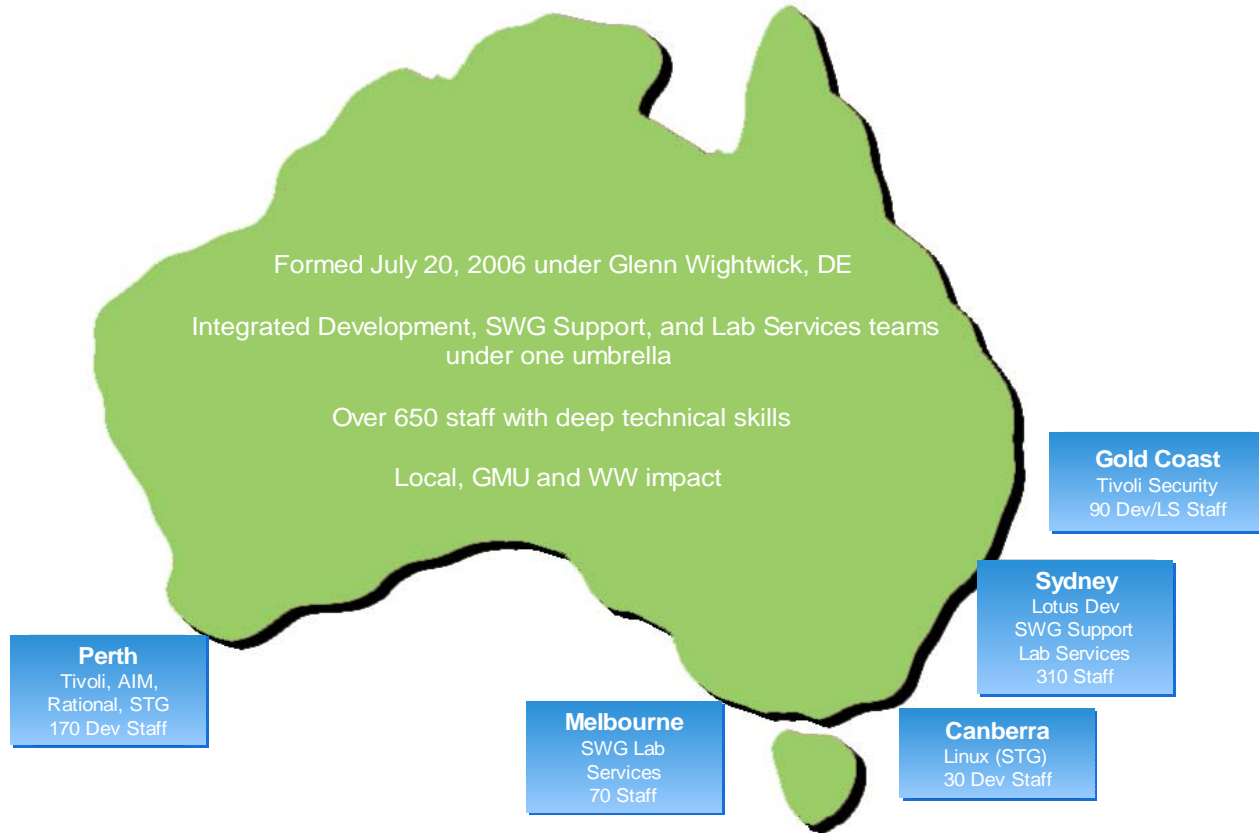


<https://www.ibm.com/developerworks/servicemanagement/>



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Australia Development Lab



PLEASE RATE THIS SESSION VIA THE PULSE 2012 MOBILE CONFERENCE GUIDE!

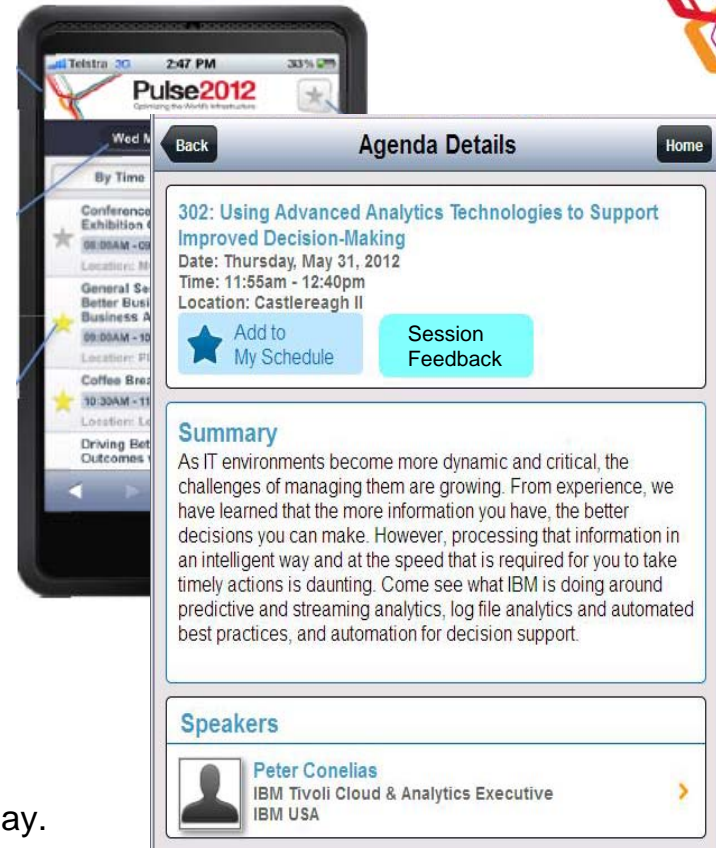
HTTP://PULSE2012.MOBI

username: <your email address>

password: pulse2012

Each session you rate gives you
an additional entry into the Pulse prize draw!

The winner will be announced during the conference close on Friday.



Major Prize – Stay Connected Total RRP \$2K

Samsung Galaxy Tab 8.9 4GB
Approx Cost: \$840



Magic Cube – virtual keyboard
Approx cost \$168



Navman MY85XLT In-Car GPS
Approx Cost: \$216



Jabra Freeway Handsfree Car Kit
Approx Cost: \$129



Olympus TG-320 Tough Digital Camera Red
Approx Cost: \$242



Tivoli model three platinum radio
Approx Cost: \$499.00



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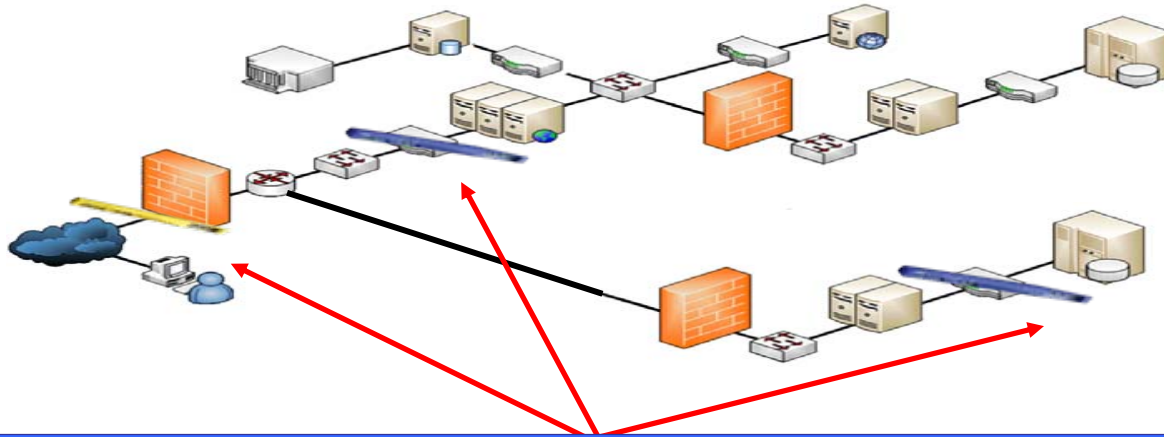
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Backup



DataPower Monitoring in ITCAM for SOA Platform



ITCAM for SOA Platform

ITCAM for SOA agent

Monitor the web services traffic (response time, message count, message size, fault rate, etc.) through:

- Web Services proxy
- Multi-Protocol Gateway

ITCAM Agent for WebSphere DataPower

Monitor the health of the appliance:

- Availability
- Resource utilization
- Performance
- Workload

**ITCAM Agent for
DataPower
Available Now**

SOA Governance – SLA Policy Automation

WebSphere software

WebSphere Service Registry & Repository
(Policy Administration Point)

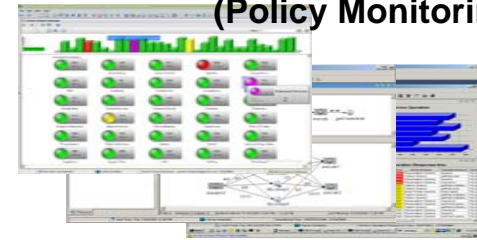


Monitoring Policy

Event Status

Tivoli software

ITCAM for SOA
(Policy Monitoring Point)

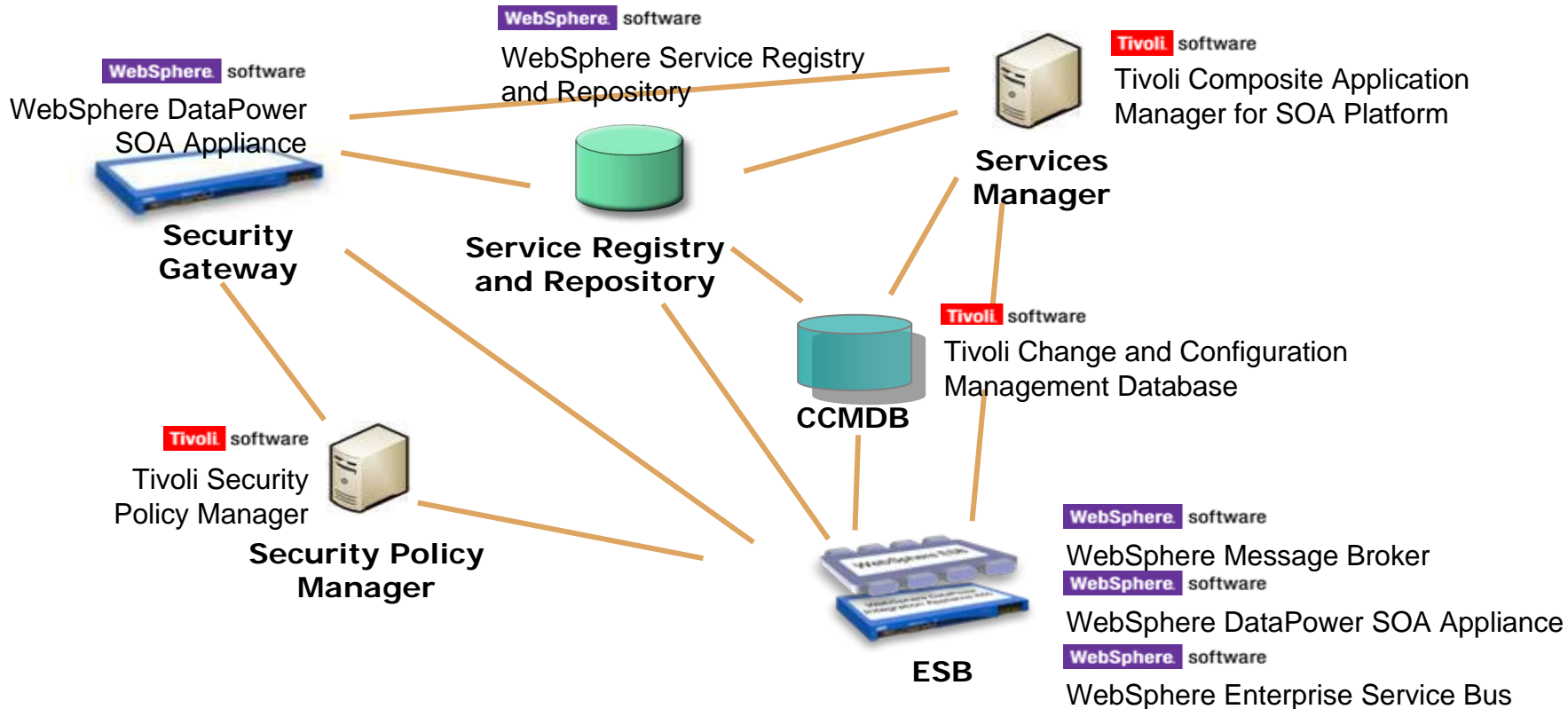


- **SLA Policy Automation – monitoring of a service based on its Service Level monitoring policy**

- Using **WebSphere Service Registry and Repository (WSRR)**, users can associate a Service Level Definition (SLD) policy to a service, and have **ITCAM for SOA** automatically define and deploy situations and automated take actions based on that service's SLD policy.

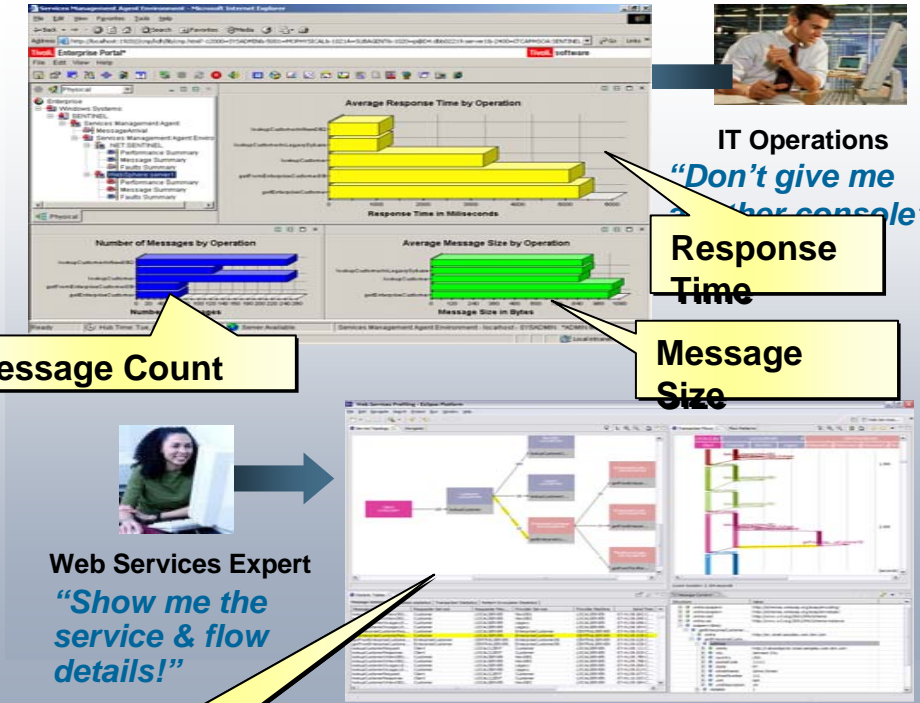
Available Now
ITCAM for SOA
monitors a web service,
based on its SLA policy
as defined in WSRR

IBM Products for SOA Governance – at Runtime



Service problem identification and resolution

- To ensure service levels conform to agreed upon specifications, you need:
 - Views and analysis of Web service interactions for IT Operations to quickly identify source of errors, and take corrective action through situations, workflow and mediations
 - Detailed views of operational SOAP/XML message content, flow patterns and topology for Web services experts and support teams
 - Highly performing and flexible enforcement points



Web Services Navigator

Service Management Automation

The screenshot displays the IBM Service Management Automation interface for monitoring message sizes. The main window is titled "MessageSize - IBM-I08ELJUR9W3 - SYSADMIN". It features a tree view on the left showing the system hierarchy, including "Enterprise", "Windows Systems", and "IBM-I08ELJUR9W3". The central area contains two tables: "Initial Situation Values" and "Current Situation Values". Both tables list message lengths, origin nodes, interception locations, and times. A "Take Action" dialog is open at the bottom, showing a list of actions and a "Run" button. An "Expert Advice" window is also visible, providing guidance on message length thresholds.

Message Length	Origin Node	Message Interception Location	Message Interception Time	Thread Identifier	Elapsed M Round Tr
1825	D4:e28497c:claimsvr01-server1	Server_Enter	01/13/06 22:08:41	1750203661	
1825	D4:e28497c:claimsvr01-server1	Server_Enter	01/13/06 22:08:41	1750203661	
1813	D4:e28497c:claimsvr01-server1	Server_Enter	01/13/06 22:08:29	1750203661	
1813	D4:e28497c:claimsvr01-server1	Server_Enter	01/13/06 22:08:29	1750203661	
1807	D4:e28497c:claimsvr01-server1	Server_Enter	01/13/06 22:07:08	1750203661	
1807	D4:e28497c:claimsvr01-server1	Server_Enter	01/13/06 22:07:08	1750203661	
1686	D4:e28497c:claimsvr01-server1	Server_Enter	01/13/06 22:06:42	1750203661	
1686	D4:e28497c:claimsvr01-server1	Server_Enter	01/13/06 22:06:42	1750203661	

Message Length	Origin Node	Message Interception Location	Message Interception Time	Thread Identifier	Elapsed M Round Tr
1825	D4:e28497c:claimsvr01-server1	Server_Enter	01/13/06 22:08:41	1750203661	
1825	D4:e28497c:claimsvr01-server1	Server_Enter	01/13/06 22:08:41	1750203661	
1813	D4:e28497c:claimsvr01-server1	Server_Enter	01/13/06 22:08:29	1750203661	
1813	D4:e28497c:claimsvr01-server1	Server_Enter	01/13/06 22:08:29	1750203661	
1807	D4:e28497c:claimsvr01-server1	Server_Enter	01/13/06 22:07:08	1750203661	
1807	D4:e28497c:claimsvr01-server1	Server_Enter	01/13/06 22:07:08	1750203661	
1686	D4:e28497c:claimsvr01-server1	Server_Enter	01/13/06 22:06:42	1750203661	
1686	D4:e28497c:claimsvr01-server1	Server_Enter	01/13/06 22:06:42	1750203661	

Take an action, such as adding a filter control, to mitigate the problem

Shows Initial values that triggered Situation

Shows current threshold values

Shows Expert Help, which can be customized

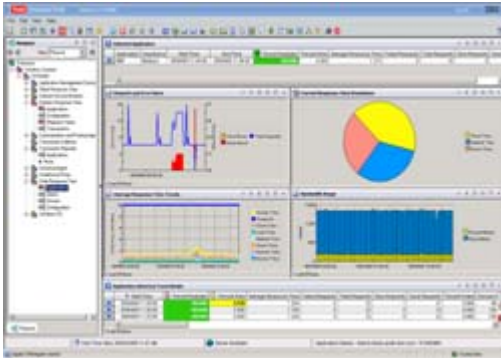
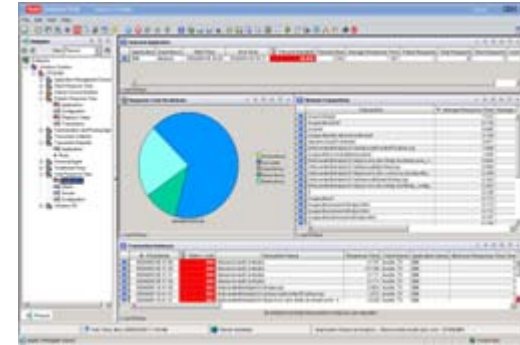
The length of the message is above the monitored threshold. This might be caused by a problem with an application not sending the entire message (if this threshold is defined to check for message length less than the monitored threshold), or sending a message larger than expected. Examine the message being sent to determine if it is an acceptable length for your environment. If so, you should consider adjusting the threshold for this situation for your environment.



Two Techniques for Response Time Monitoring

Real End User Transactions

- **Web Response Time Monitoring**
 - Monitors actual customer experience
 - Agentless solution
- **Client Response Time Monitoring**
 - Monitors real-user client desktop applications
 - Detailed response measurement for VIP customers



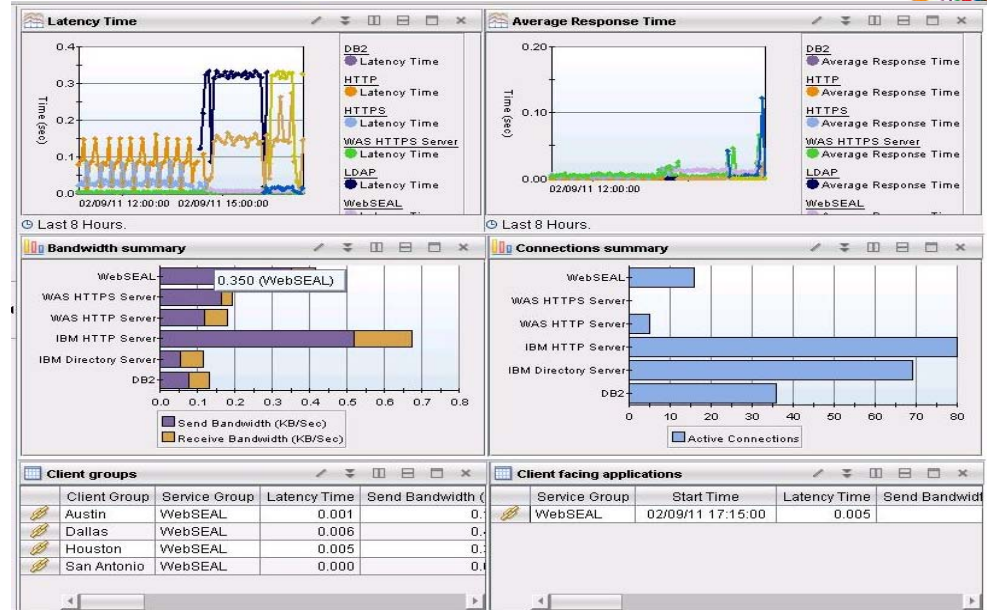
- **Robotic Response Time Monitoring**
 - Repeatable testing of high-priority transactions
 - Early warning of failures or performance problems
- **Internet Service Monitoring**
 - Periodic testing of services that make systems run
 - Simple and lightweight

Robotic Transactions

Real User Monitoring

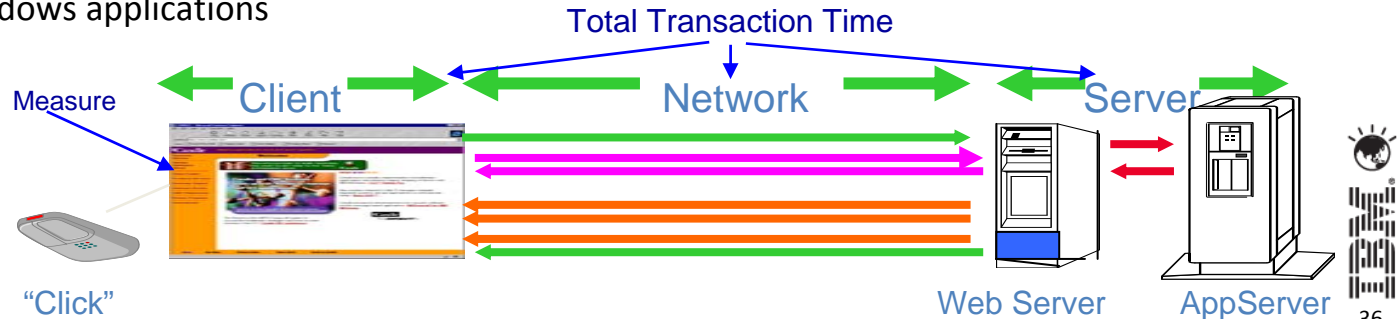
Web Applications - Agentless

- Captures performance and availability data of actual users for SLA reporting
- Completely non-invasive, agentless monitoring
- Monitors network traffic for HTTP(S) requests to the web server



Windows Applications - Agent

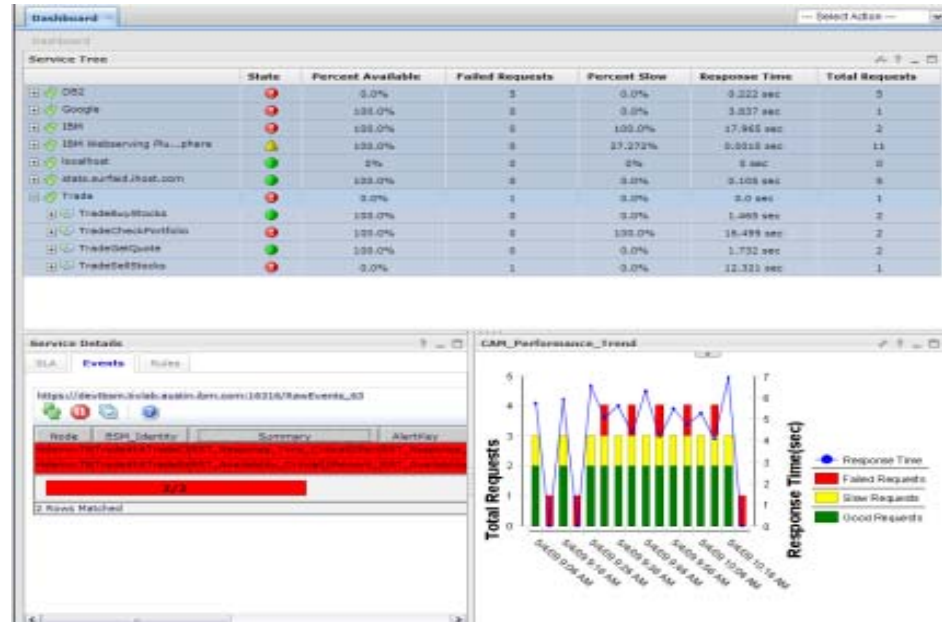
- Monitors selected Windows applications
- Agent on client workstation provides details response time analysis



Agentless Real-User (Passive) Monitoring

Monitor every end user's experience

- See what your users are experiencing and immediately identify problems
- Agentless – no impact to production machines
- User/session tracking – observe individual user experience
- Multi-protocol support (beyond HTTP/S)



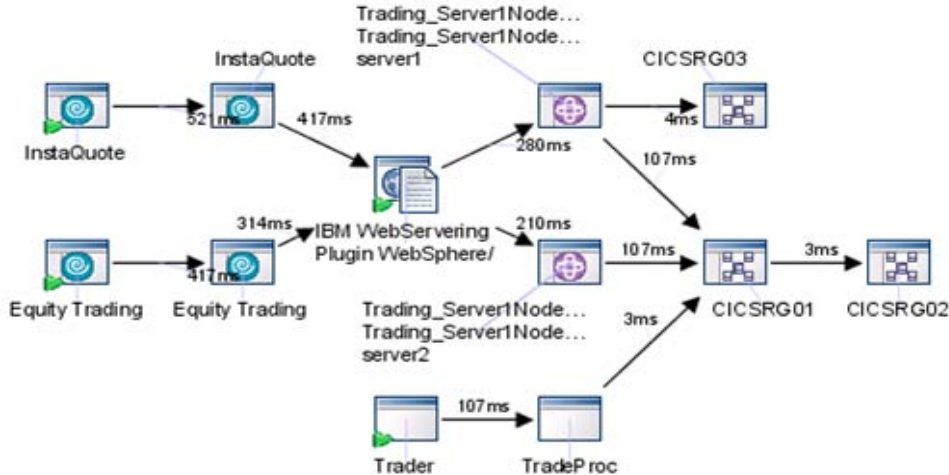
Robotic Monitoring

- Verification Points for content matching and response code checking
- HTTP transactions correlate with downstream instrumentation for problem isolation
- Improved scalability for more concurrent playbacks on a single agent
- Support for a growing list of protocols: HTTP(S), Siebel, Citrix, web services



Problem Isolation Through Transaction Tracking

- Unified, end-to-end transaction tracking
- Heterogeneous environments
 - fully integrated across distributed and System z



- Support for asynchronous transactions
- Extensible, modular framework
- Integrated response time and transaction tracking