IBM

IBM Tivoli – Application Performance Monitoring
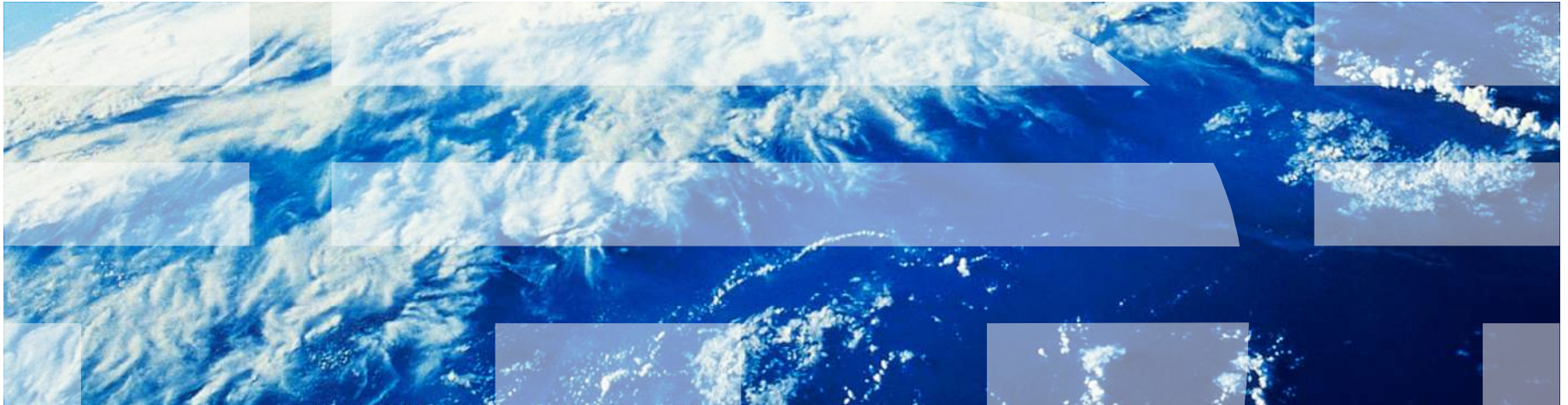
Service Availability and Performance Management

Business Service Management

Service-centric Modeling, impact & RCA

Consolidated Operations Management

Cross-domain Correlation, Topology & Analytics

Tivoli Netcool/OMNIbus & Analytic

Domain-Specific Management

| Performance | Application | Network | Security |
| Transaction | System | Mainframe | Storage |

Enrichment & Operational Automation

Leverage external data, enrich and automate actions.

Dependency Collection   **Event & Performance Collection**

Applications   Systems   Wireless   Network   Voice   Security   Mainframe   Storage   Business   Other

Note: All layers are inclusive of distributed and mainframe.

Application Performance Management

Discovery

Services Management

End-User Performance

Application Performance Management

Diagnostics

Transaction Tracking

Availability & Performance
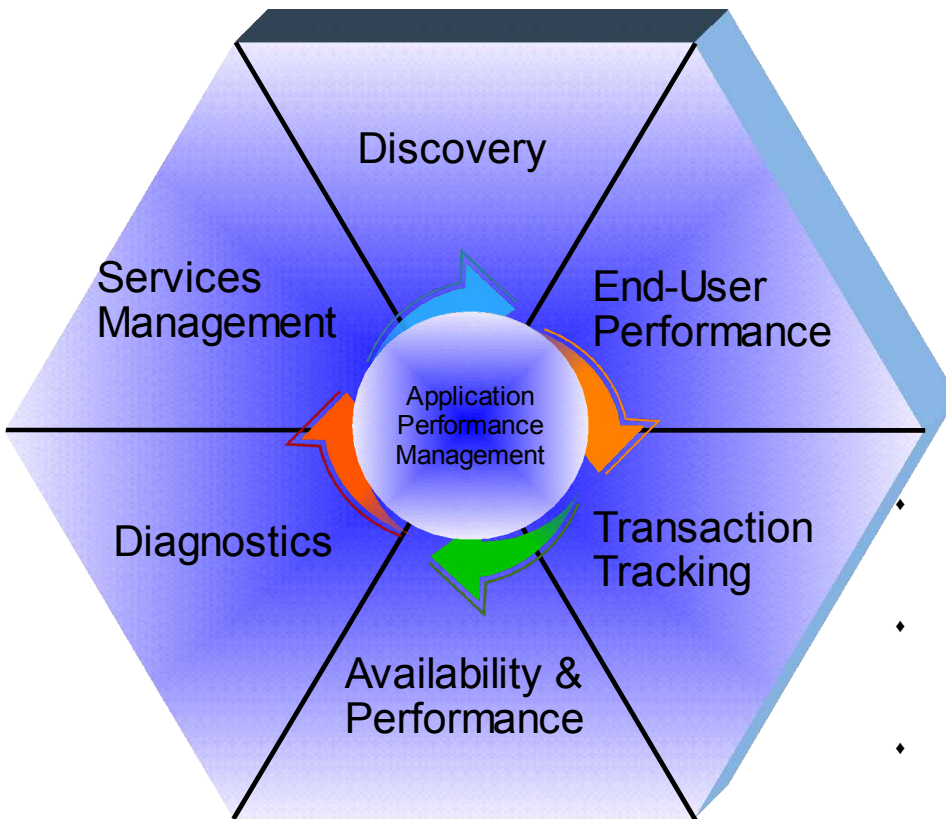
- **Reduce** the cost of maintaining applications

- **Improve** the availability of key business services

- **Manage** risk and avoid problems

✓Continuously evaluate the performance of business transactions
✓Quickly isolate faulty domains affecting transactional performance
✓Pro-actively manage performance and availability
✓Manage and leverage dependency and configuration data
✓Efficiently diagnose application performance issues
✓Monitor all relevant application resources
✓Automate recovery actions

Tivoli Enterprise Portal
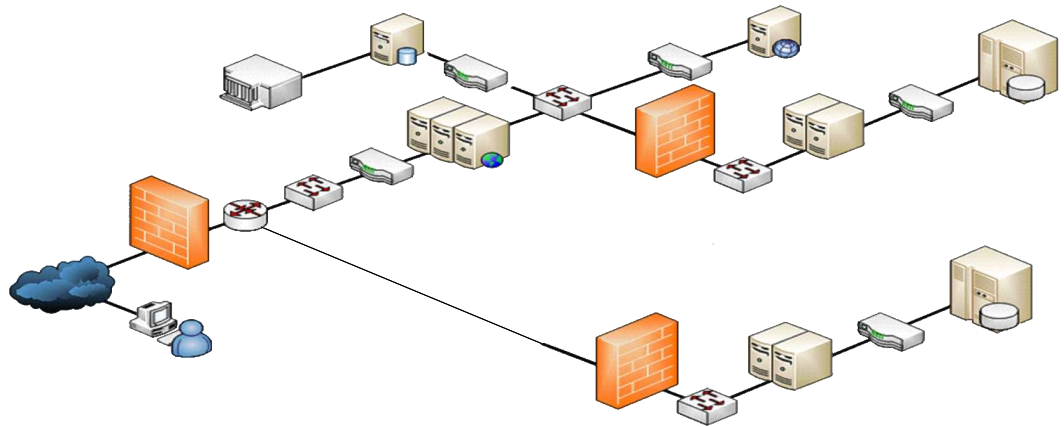
Tivoli Data Warehouse

Tivoli Common Reporting

Tivoli Capacity Planning
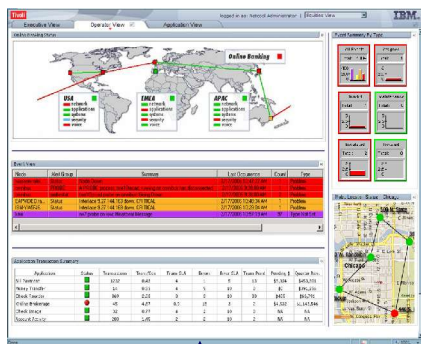
Highly Scalable   Integrated   Heterogeneous

SIMPLE!!

ITM
ITCAM
OMEGAMON

Sense   Isolate   Diagnose

Optimize

Integrated Availability Management

IBM

Netcool/OMNIBUS

TBSM
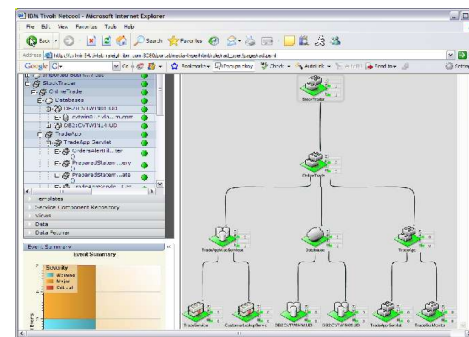
**ITCAM
ITM**
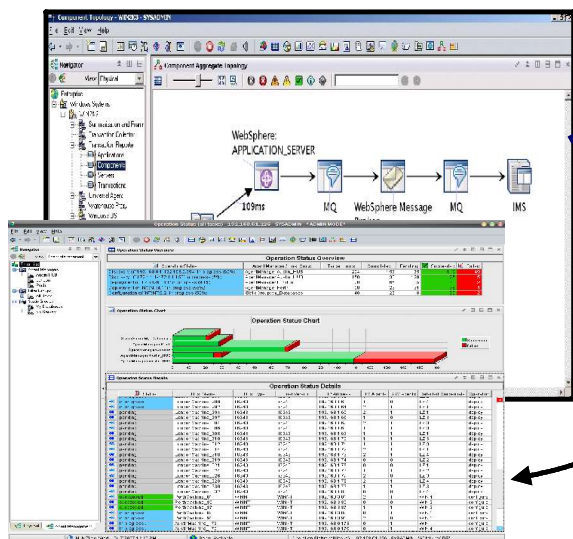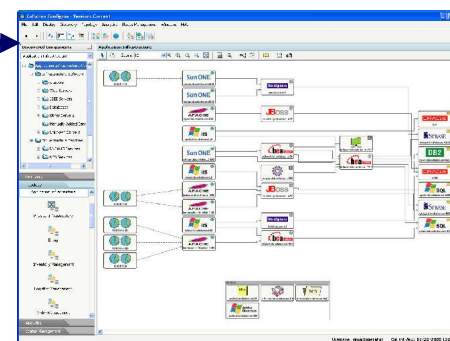
Launch in context for
problem isolation

Events and
Alerts

Performance and Availability
Data

Cross tier application maps

Configuration changes

**TADDM
CCMDB**

Automatic Service
Model Generation

Discovery

Launch in
Context

5

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Expanding Set of Agent Options

- **Intelligent agents may be connected or autonomous**

- **Connected Agents**
  - Centrally managed and configured
  - Data warehousing available

- **Autonomous Agents – New in v6.2.2**
  - All processing occurs at the agent - without management infrastructure
  - Applies to ALL ITM Agents including custom ones
  - Emit SNMP or EIF event directly from agent

- **Provides largest array of deployment options**
  - Fault Management – local resource monitoring with eventing directly to OMNIbus
  - Performance Management – central control of eventing and warehousing for visualization, analysis and reporting
  - Mixed – Choose which behaviors are local and which leverage infrastructure

Agent Driven

Granular Warehouse Data Collection
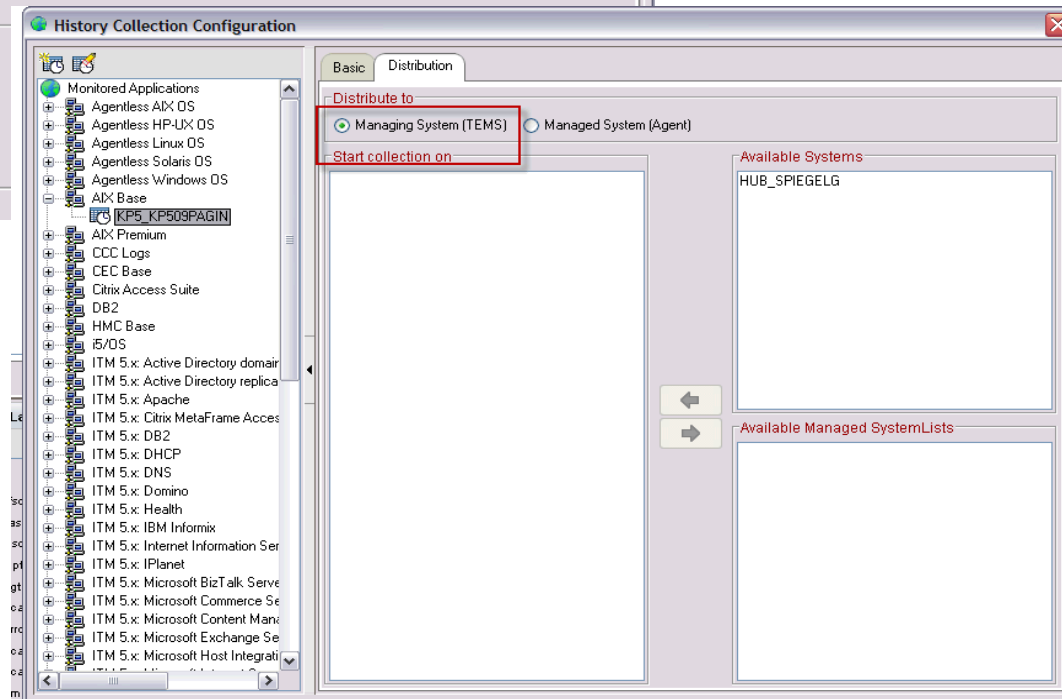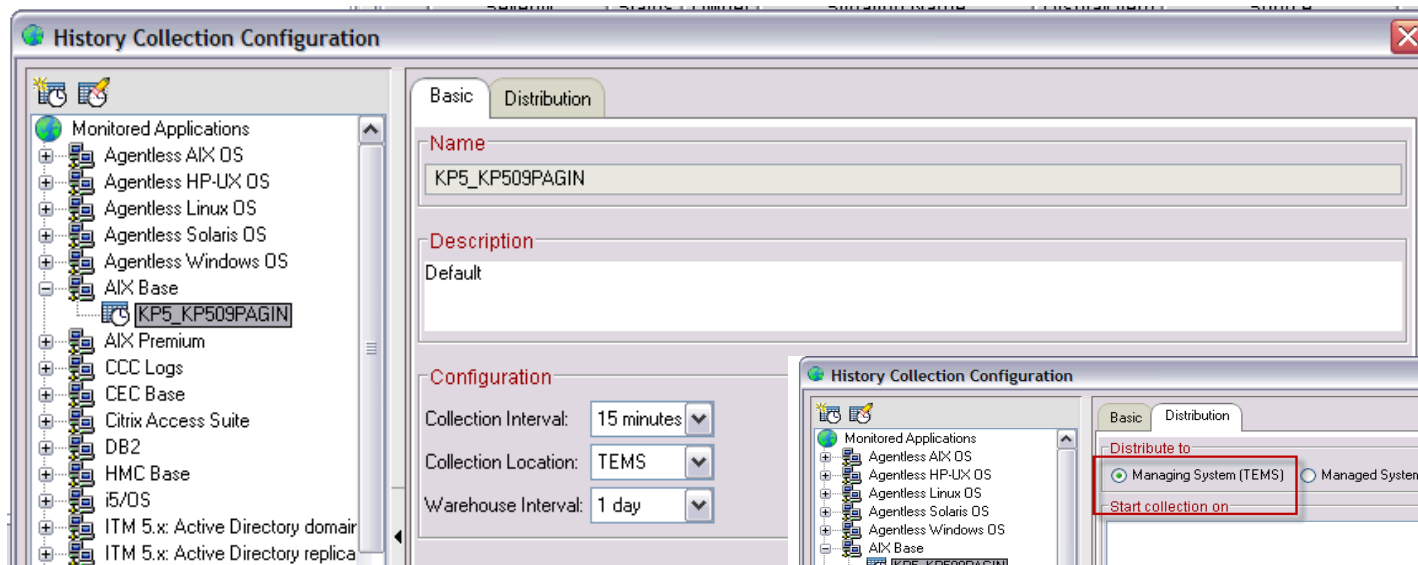
Minimize collection of unneeded data – improves performance and allows dramatic reduction in resource consumption

Visual Baselining

Determine expected efficacy of new thresholds based on known problem times or historical trends

Potential thresholds can be calculated and drawn on the chart.

• Choose from set of attributes

• Specify the time span to use – real time and time-aligned historical

• The threshold for the metric is visualized as a dark shaded area, and changes as the operator or condition value change, or when the user clicks on the chart.

Automatically generate a Situation

• Overrides not applicable via TEP, but can use CLI to establish baselines with overrides.

Companies Need Availability Solutions:
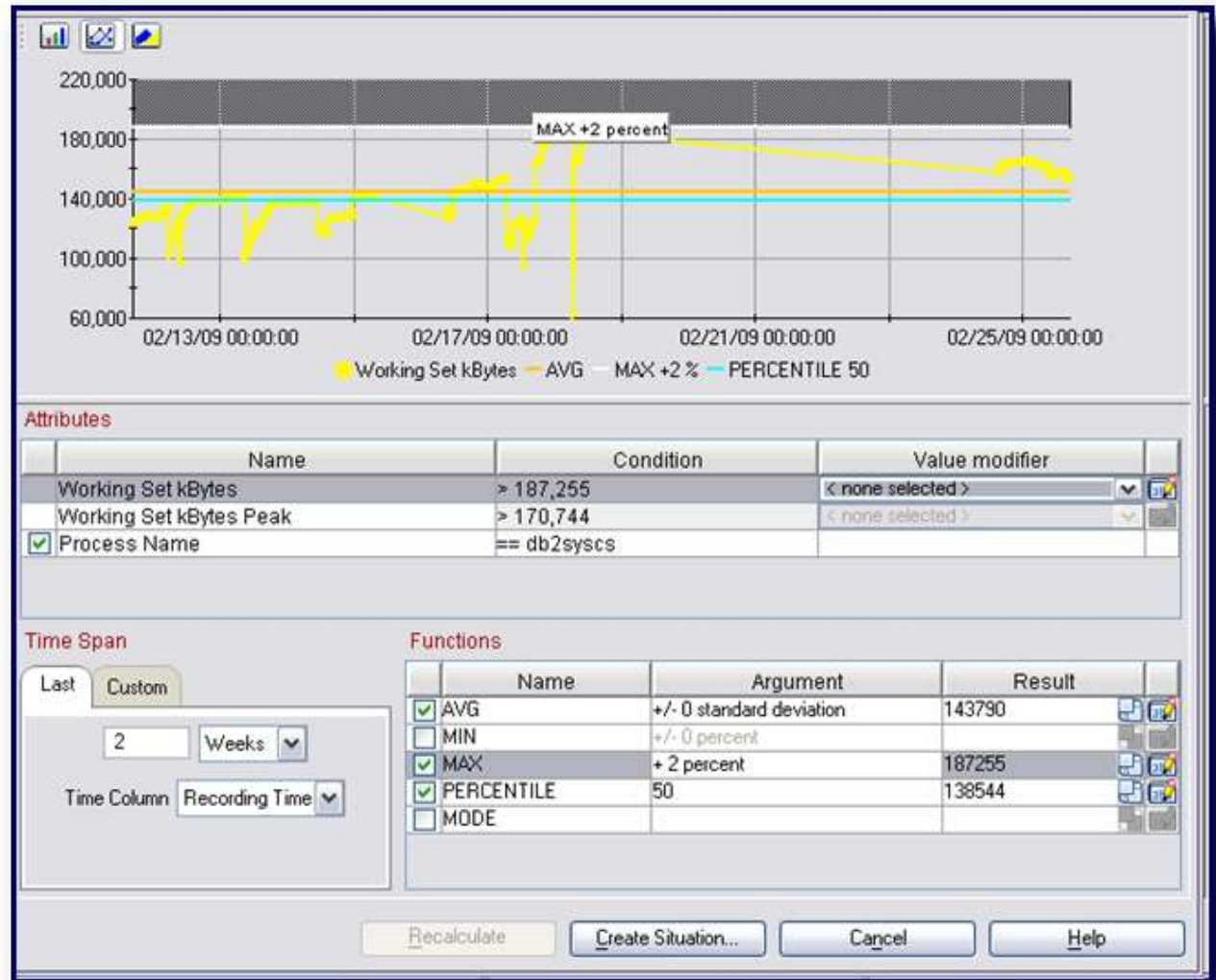
Diagnose and Fix

How can I quickly diagnose and fix problems before customers are impacted?

End User Experience

How can I understand my customer's end user experience?

IMPROVE SERVICE
REDUCE COST
MANAGE RISK

Dynamic Infrastructure

Business Applications

How can I make sure my business applications are supporting my business?
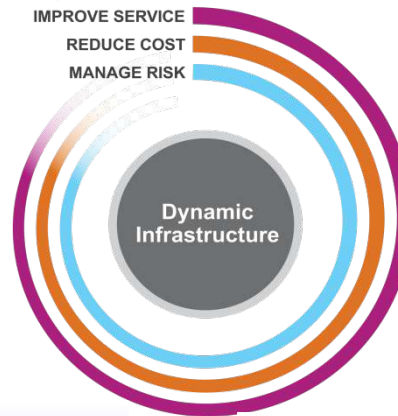
Track and Report

How can I easily understand how well my IT environment is supporting my business?
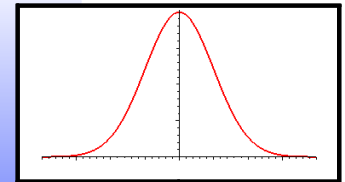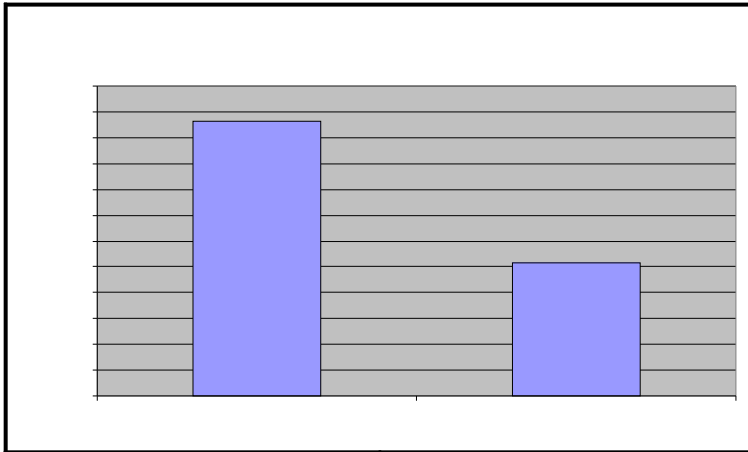
Discover and Manage

How can I know that I am really monitoring all of the servers in my production environment?

Optimize My Hardware

How can I visualize resource utilization to optimize hardware costs?

__ROI__ - Many companies cut their budgets due to economy - they need to more quickly receive greater value from their IT investments and may face greater risks

General Business Midmarket 2010 opportunity for Service Management:

➢ *Application Management: $1,213M*

➢ *Service Desk: $588M*

Midmarket represents substantial opportunity in emerging markets - surpass US and Europe in total opportunity in next couple of years

How do we make enterprise software more consumable for Midmarket? Alternative delivery models offer lower costs and reduced complexity

%of All Respondents for Each Delivery Methods

	Completed	Current/Planning/Investigating	Not Considering	Unfamiliar
SaaS	40	45	8	7
Software Appliance	34	49	7	10
Hardware Appliance	32	44	12	12
Virtual Appliance	25	49	13	13

0% 50% 100%
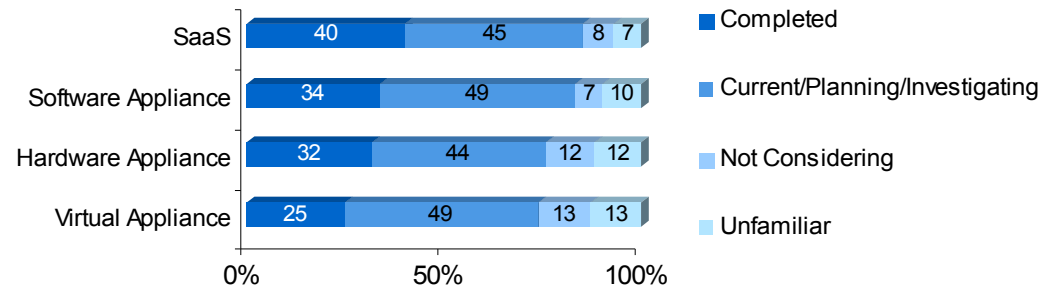
*Sources: IBM Primary Research and IDC, 2008; Projection for 2010 assumes 7% CAGR

Tivoli Monitoring Delivers Application Management

Tivoli Foundations Application Manager

- Up to 200 servers per instance with no interlocking data warehouses
- Agent or Agentless heterogeneous monitoring
- Capital and Operational Expense
- Tivoli event management integration allowed
- TEP, TDW, TCR, TPA
- Microsoft Support
- Oracle, DB/2, SQL
- Upgradeable to ITCAM for Applications
- Turnkey Solution
- One-time software charge with on-going software and subscription charges
- Lightweight network monitoring

Tivoli Live Monitoring Services

- From 25 to 500 monitored services
- Agent or Agentless heterogeneous monitoring
- Operational Expense of $44 to $58 per month
- Tivoli event management integration allowed
- TEP, TDW, TCR
- TPA (additional cost)
- Fastest time to value
- SAP, Domino monitoring
- Web Server monitoring
- Internet delivered services
- Coming in 2010
  - Lightweight network monitoring

Monitoring for Microsoft Applications

- No limit on number of servers
- Microsoft Agent and Agentless monitoring
- Capital and Operational Expense
- Single package for Microsoft environments including VMware
- Upgrade or add-on ITM – ITCAM – OMEGAMON Solution Family
- TEP, TDW, TCR, TPA
- One-time software charges with on-going software and subscription charges
- Coming in 2010
  - Integrated Discovery
  - Lightweight network monitoring
  - Microsoft Knowledge base

Integrated Service Management Choices

On Premise Custom Solutions	Software as an Appliance	Software as a Service (SaaS)
End to End service management (Storage, Systems, Security, Asset)	Monitoring and Service Desk	Monitoring
Modular pricing that allows purchase of the right software for the functions needed	Priced for Midmarket: low on-boarding costs, does not require large IT staff	Low on-boarding cost plus monthly charge
Deployment that fits complex environments – install what you need when you need it	Simple deployment: pre-integrated service management infrastructure for rapid deployment (<1hr)	Simple deployment - dedicated and pre-configured monitoring infrastructure provided by IBM
Flexible configuration	Out of the box configuration	Pre-defined configuration
Highly customizable	Optional customization	Optional customization
Broad set of functionality to fit complex needs	Targeted core set of functionality to meet specific GB needs	Targeted core set of functionality to meet specific GB needs
Scalability for large enterprises and service providers	Scalability for Midmarket environments (Monitor 150 servers, Service Desk 20 users)	Scales to 500 monitored resources
Extensive integration to other parts of the ISM portfolio	Works with enterprise ISM solutions	Extensive integration to other parts of the ISM portfolio
Competitors: BMC, CA, HP	Competitors: HP, AccelOps, ManageEngine	Competitors: Freeware, Nagios
Opportunity: Sell software and services for installation and customization.	Opportunity: Sell Software appliance, Installation, Customization services	Opportunity: Sell the SaaS service, Customization, Training services
Target: GM >5k Employees	Target: GB 100-1K Employees	Target: GB 500+ Employees

- **Enterprise Organizations**
  - Product has been sold at some of our largest enterprise customers
  - Appealing to those enterprises that have standardized (or have a focused investment in) Microsoft applications and operating systems
  - A heterogeneous environment with perhaps thousands of servers, running mission-critical applications on Microsoft platforms
  - Large IT staff, often with a distinct Microsoft IT management staff
  - Sponsor would be IT Operations Manager or CIO equivalent

- **Large General Business Organizations**
  - Greater than 1000 employees with remote offices or departments
  - More likely to have a significant IT staff…but not necessarily at their remote offices
  - Need greater scalability and flexibility than less mature solutions provide, but still want an affordable, easy-to-use solution that's extensible.
  - Sponsor would be IT Operations Manager or CIO equivalent.

- ***Offered in all of IBM Tivoli Monitoring's Supported Languages***

- **General Business Midmarket companies**
  - Between 100 and 1000 employees are the primary target
  - An average of 25-50 servers running MS Windows or Linux applications
  - Less likely to have a large IT staff
  - Sponsor would be office administrator or a contracted service provider.
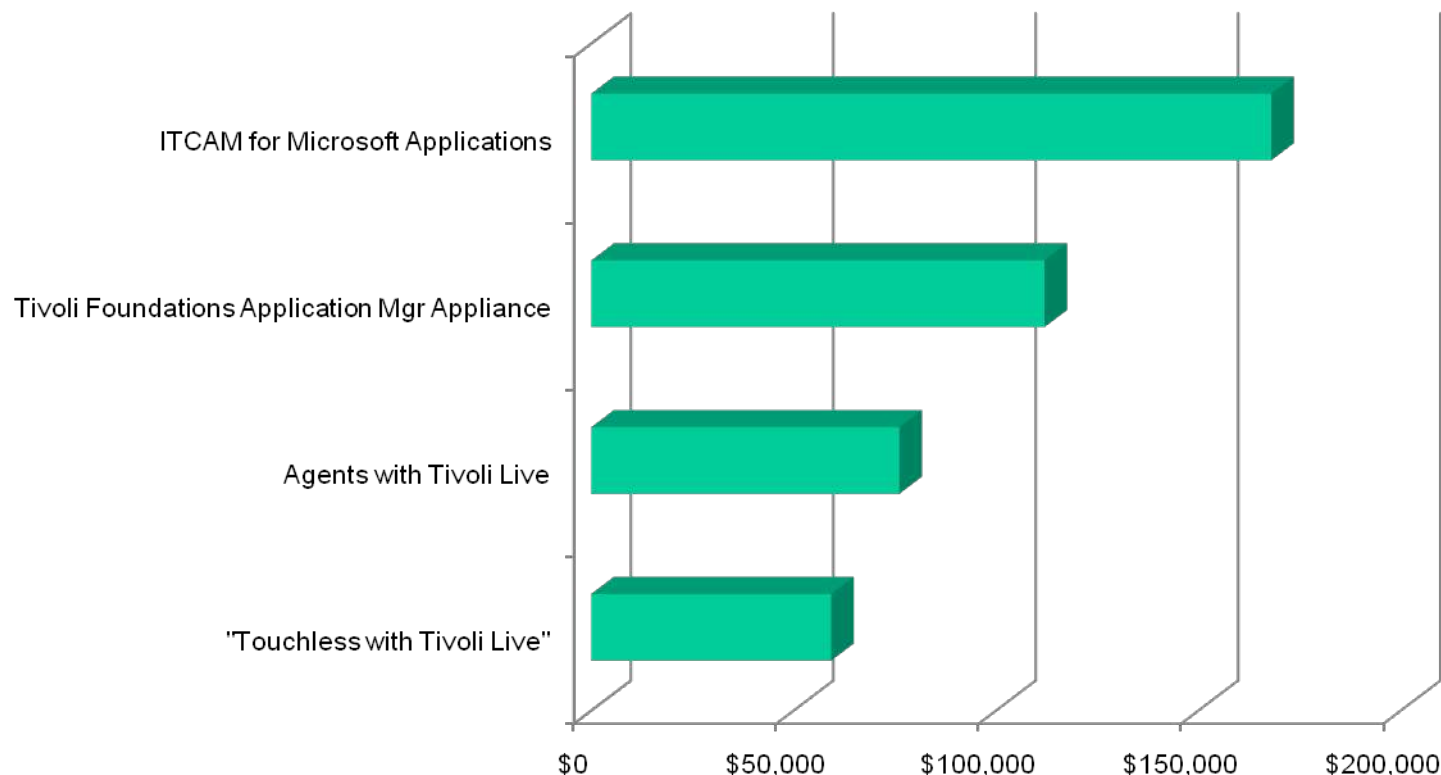
- **General Business Enterprise companies**
  - Greater than 1000 employees with remote offices or departments
  - More likely to have a large IT staff…but not at their remote offices
  - Sponsor would be IT Operations Manager or CIO equivalent.

- **Service providers**
  - Serve as the IT department for several clients.
  - Sponsor would be IT Operations Manager or CIO equivalent

- **Available in the following languages**: *English, German, Italian, French, Spanish, Brazilian Portuguese, Japanese, Korean, Simplified & Traditional Chinese, Hungarian, Czechoslovakian, Polish, Russian*

- **Characteristics of General Business Buyer:**
  - GB company with average 150-250 servers
  - Mix of OS and application monitoring
  - Basic performance and health metrics
  - Limited operational staff (both in size and skill) and budget
  - Many customers need more scale than single appliance

- **This is not designed for large-scale Enterprise Deployment**
  - Up to 500 monitored resources
  - Practical constraint on size of Tivoli Data Warehouse and type of agents
  - "No frills" service: basic support options, basic service delivery metrics (no guarantees and no penalties – 'best effort')
  - Could be appropriate for limited enterprise deployment, (i.e., a department, a branch or satellite office) or trial run

Bar chart comparing price points of mid-market solutions:
- ITCAM for Microsoft Applications: ~$175,000
- Tivoli Foundations Application Mgr Appliance: ~$120,000
- Agents with Tivoli Live: ~$75,000
- "Touchless with Tivoli Live": ~$60,000

(x-axis: $0, $50,000, $100,000, $150,000, $200,000)

These price points are high-level comparisons, to illustrate their relative positions to one another. Note that the price points for the SaaS offerings are for one year, so those solutions would look more expensive in a three-year projection

IBM Tivoli Monitoring Solutions

Integrated Service Management offerings that are:

- Flexible and configurable service options to deploy only what you need

- Based on affordable enterprise class technology

- Pricing and payment options that fit any budget

- IBM proven technology delivers what you need when you need it

- Secure, easy-to-use, web interface for quick access to information

ITM

*Proposed new feature content;
subject to change*

- **TCO/Very Large Scale Mgmt**
    - Self-Describing Agents
    - Policy-based admin/agent mgmt
    - Federation of multiple installations at UI
    - Scheduling Service
- **Security**
    - Role-based Access Control
    - Increased Granularity
    - Common Security Roles
- **Advanced Predictive Analytics**
    - Agent-based trending/Bottleneck Monitors
- **Warehousing**
    - Granular data warehousing
- **Serviceability**
    - Maintenance application
    - Audit
    - Self-Monitoring
- **Platform currency**
- **TIP Exploitation**
    - Initial Focus on Operator Use Cases
    - Multi-HUB Visualization

ITCAM for Applications – Planned Futures

ITCAM for Applications

Proposed new feature content;
subject to change

- **WebSphere and HTTP Servers**
    - Performance and Scale enhancements

- **WebSphere MQ/MB**
    - File Transfer Edition support
    - Enterprise Message Search
    - MQ Pub/Sub configuration support

- **Databases**
    - 64bit Oracle / DB2 on 64bit Windows
    - Oracle Data Guard support
    - DB2 HADR support
    - New Informix monitor

- **Applications**
    - Siebel, Peoplesoft monitoring enhancements
    - New Lotus Sametime monitor
    - Lotus Domino monitoring enhancements (Intelliwatch replacement)
    - SAP Solution Manager integration
    - SAP XI support

ITCAM for Microsoft Applications – Planned Futures
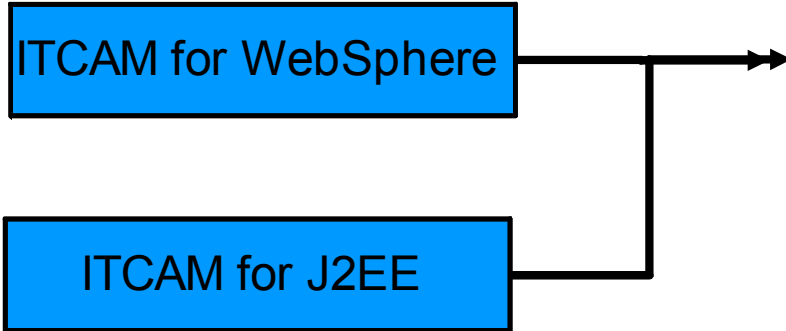
ITCAM for Microsoft Applications

Proposed new feature content; subject to change

- **Enhanced Feature Set**
  - Built-in Discovery
  - Lightweight Network Monitoring
  - IBM Director Integration
  - Microsoft Technet Integration
  - TADDM Integration
- **Consumability Enhancements**
  - Composite Workspaces for Cross-Agent Integration
  - Enhanced Best Practices Documentation for Microsoft Monitoring
  - Application LaunchPad
- **Platform Currency**
  - Microsoft Exchange 2010
  - .Net Framework 4.0
  - 64-bit Native Agents
  - ITM v6.2.2
- **New Applications**
  - Microsoft Host Integration Server
  - Microsoft Internet Security and Acceleration Server

ITCAM for Transactions – planned futures

IBM

(2010+)

*Proposed new feature content;
subject to change*

- **Agentless transaction tracking**
- **.NET tracking support**
- **JDBC exception handling**
- **WRT screen capture on failure**
- **WRT Multi-URL transaction support**
- **WRT additional protocol support**
- **Additional integration with:**
  - CCMDB
  - TSRM
  - ITNM
- **Expanded domain support**

ITCAM for Application Diagnostics

IBM

ITCAM for WebSphere

ITCAM for J2EE

Manage Java Applications and Application Servers

- WebSphere
- WebLogic
- JBOSS
- Netweaver
- Apache
- IIS
- Sun Java System

ITCAM for Application Diagnostics V7.1

- **Support for WebSphere Application Server V7**

- **Support for WebSphere VE**

- **Integration with ITCAM for Transactions**

- **Installation/Deployment improvements**

- **Reduced footprint, resource consumption**

- **UI, Usability improvements**

- **Currency updates**

ITCAM for Application Diagnostics
planned futures

2010+

Proposed new feature content;
subject to change

- **Expand beyond Java**

- **Expand WebSphere and other JEE App server coverage**

- **Full virtualization support**

- **Integrated infrastructure (no more MS)**

- **Installation/Deployment improvements**

- **Performance and scalability**

- **UI, Usability improvements**

- **Currency updates**

Tivoli Monitoring for Virtual Servers
planned futures

ITM and ITM for VS

Proposed new feature content;
subject to change

- **Functional updates & currency**
  - IBM Power Systems
  - VMWare (including NetApp, vSphere, etc)
  - KVM
  - Xen
  - Hyper-V
  - z/VM
- **Integration and visualization**
  - Visualization dashboard (TIP-based)
  - VMControl, TPM, TPC, TADDM
- **Server Consolidation & Workload Optimization**
  - Automated recommendations for consolidation, workload placement, configuration
  - Optimize resource and energy
- **Desktop virtualization**
  - Agents for desktop brokers (VMWare, Citrix)