



IBM Smarter Business and Technology Series

A headstart for the next decade

25 November 2010 Kuala Lumpur

Driving Service Delivery Effectiveness Through Integrated Management

Tivoli Service Availability and Performance Management

Lau Eng Heng

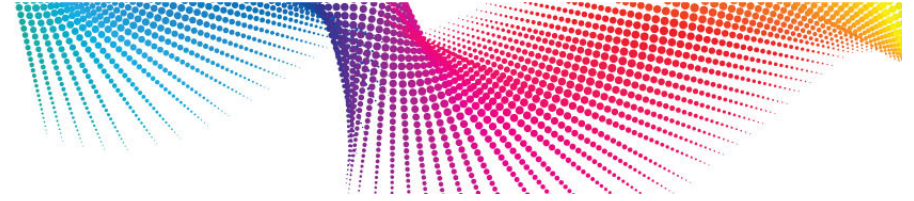
Tivoli Software

Client Technical Professional





IBM Smarter Business and Technology Series



**Integrated Service Management provides Visibility. Control. Automation.™
across business infrastructure**

Integrated Service Management

for Industries

Industry-unique architectures, capabilities and expertise to assist clients with delivering innovative service to customers through integrated management of the technology infrastructure, including IT.

for Design & Delivery

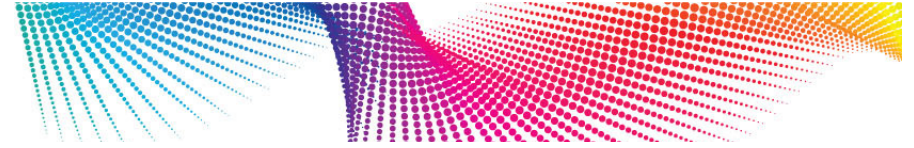
Expertise and capabilities to assist clients with product and service innovation through the integrated processes of design, delivery and management of software engineered into intelligent devices and services.

for Data Centers

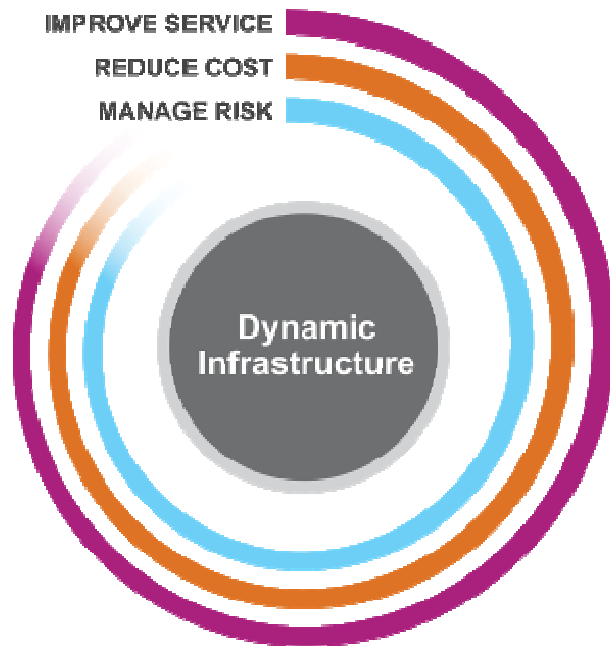
Expertise and capabilities to assist clients with improving efficiency of IT Operations while improving effectiveness of the business services delivered and managed by IT from the next generation of data centers.

....to deliver innovative products and services to customers.





A dynamic infrastructure is required to address today's needs... and lay the foundation for the future.



Delivering superior business and IT services with agility and speed.

IMPROVE SERVICE
Manage the Service as it is experienced by the Consumer ...

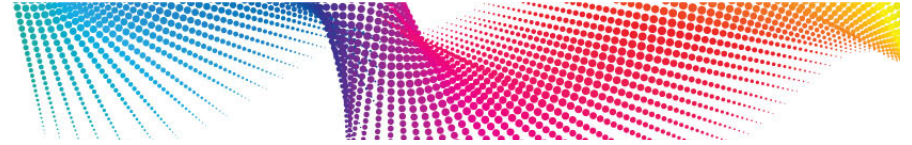
... *Providing for real-time, dynamic access to innovative new services.*

REDUCE COST
Contain operational cost and complexity today ...

... *Achieving breakthrough productivity gains tomorrow.*

MANAGE RISK
Leverage topology insight and Predictive Analytics to avoid problems, not respond to them ...

... *Preparing for the new risks of a more connected and collaborative world.*



Service Availability and Performance Management

Visibility



- Inform
 - Provide **Operator & Business Views** – different consolidated views of the same data - via configurable Dashboards

Control



- Collect and Consolidate
 - **Collect & consolidate** events across the business infrastructure
 - Maintain **Service Relationships** to relate IT to Business in dynamic infrastructure
- Analyze
 - **Enrich events** - business intelligence & service affecting
 - **Predictive Analytics:** Baselining and Trending of Event and Performance Data leading to Incident Avoidance
 - Identify **root-cause & symptoms** events

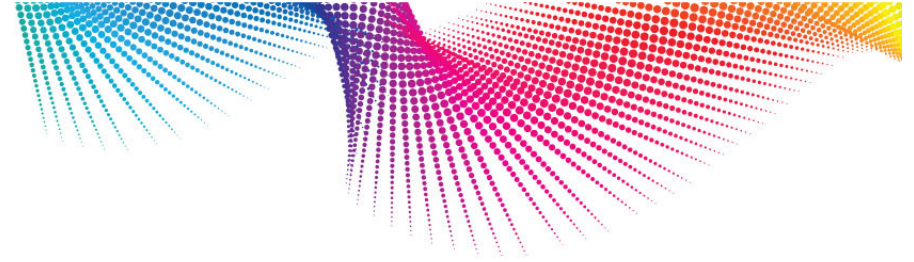
Automation



- Integrate
 - Integrate with diagnostic, troubleshooting & OAM tools
 - **Integrate with OSS tools** – CCMDDB, trouble-ticketing, billing, provisioning ... etc
 - Reduce **Operator Costs** with Automated Response

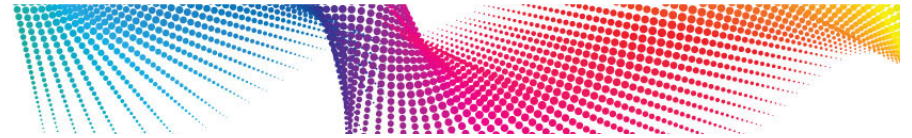


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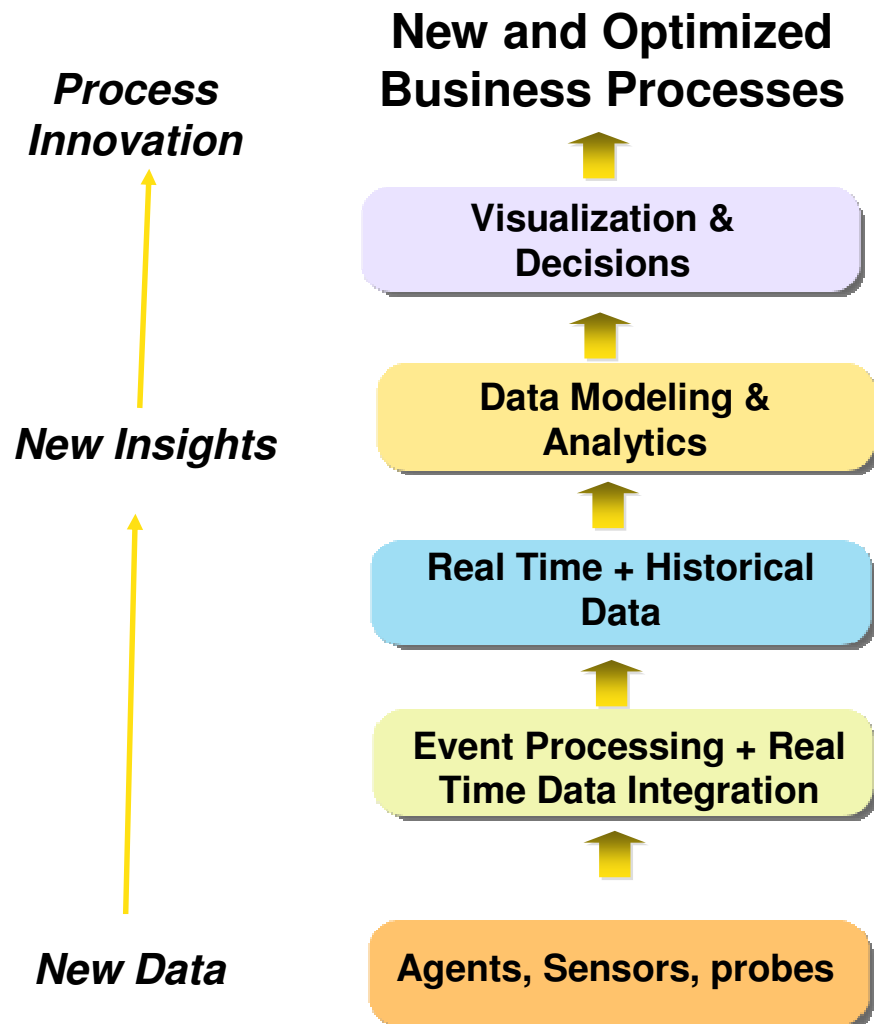


Changing Economy of Operations

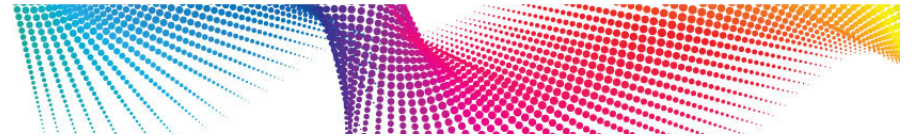
Business and Technology Evolution
demand an Outside-In Approach



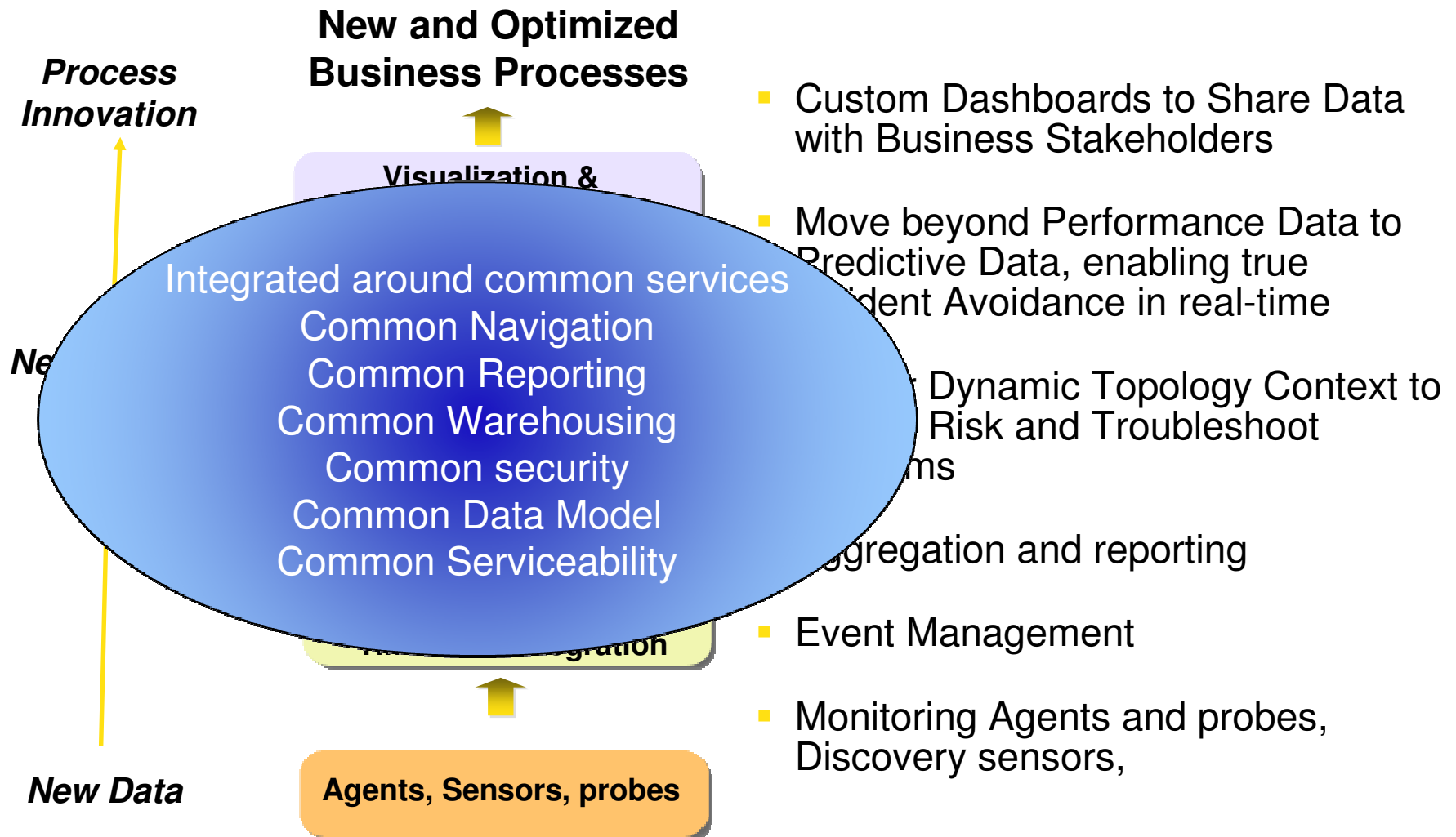
Service Availability and Performance Management - What Does It Mean to Be Smarter?



- Custom Dashboards to Share Data with Business Stakeholders
- Move beyond Performance Data to Predictive Data, enabling true Incident Avoidance in real-time
- Deliver Dynamic Topology Context to assess Risk and Troubleshoot problems
- Aggregation and reporting
- Event Management
- Monitoring Agents and probes, Discovery sensors,



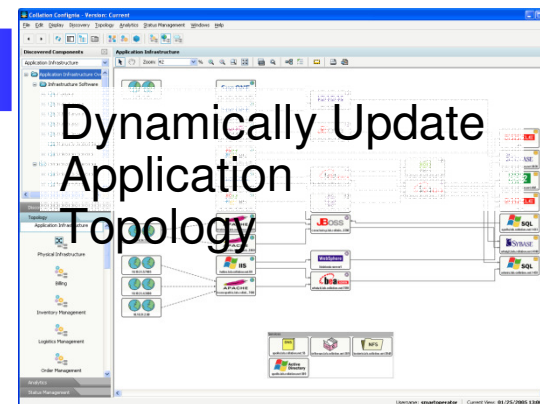
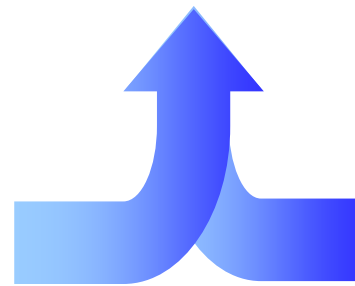
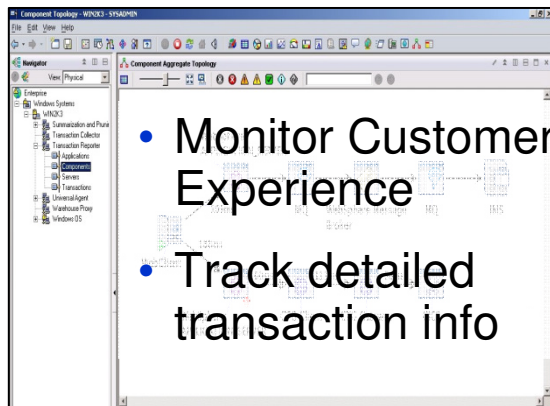
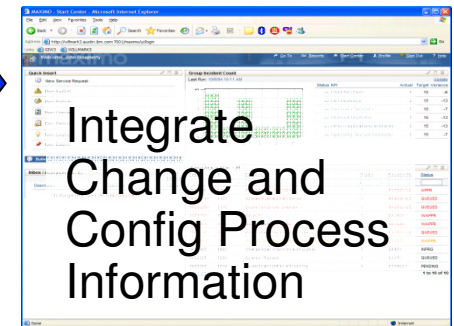
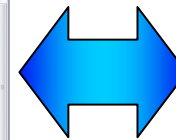
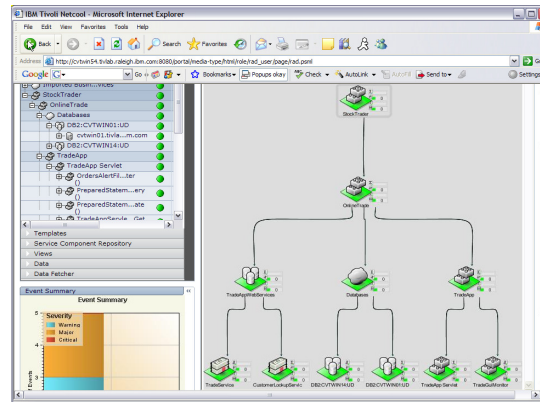
Service Availability and Performance Management - What Does It Mean to Be Smarter?



Outside-In Service View

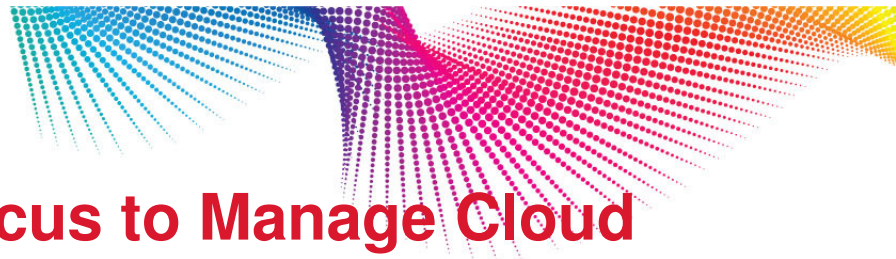
Integrate Dynamic Information on Customer Experience, Application Topology, Redundancy and Risk into one view

- **Deliver real-time experience data to the business**
- **Manage IT based on Business Goals**
- **Combine Transaction data, Application Topology and process activity into a single view for Operations**

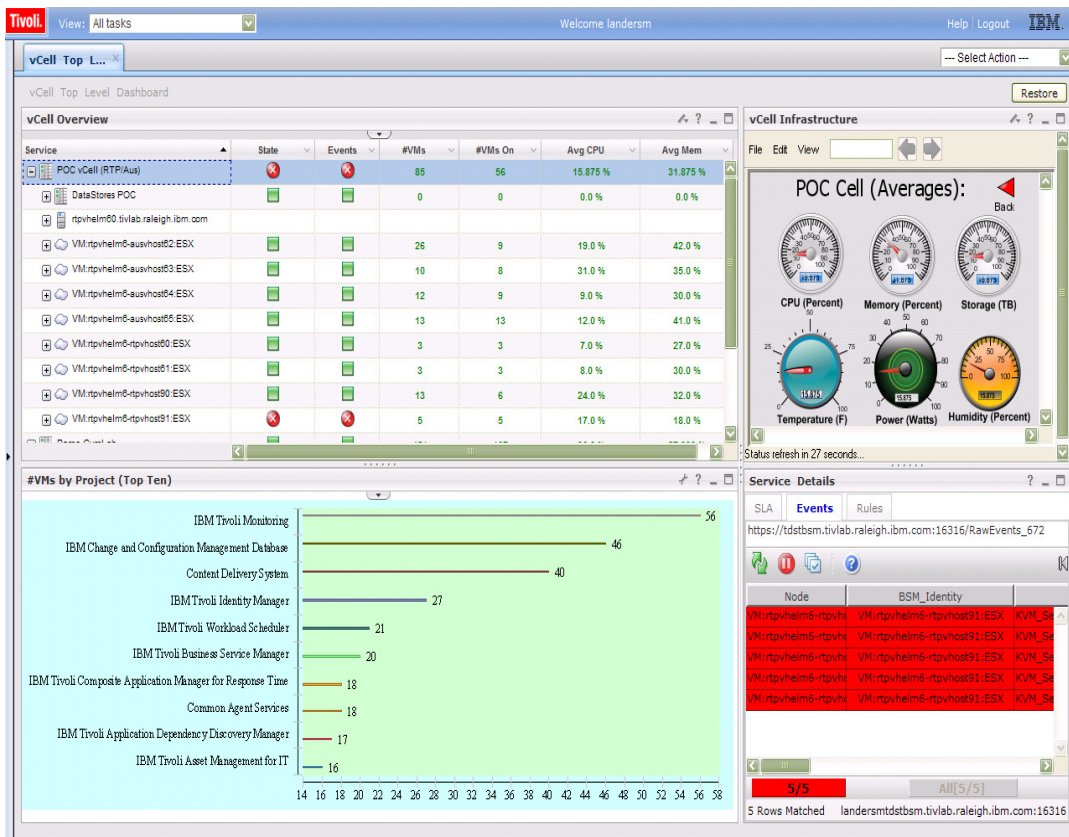


Show your Business what's Important. Dynamically Track Changes





Using Business Service Focus to Manage Cloud

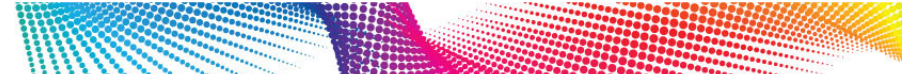


- Visualize all Cloud-based services in a single dashboard
- Gain Outside-In Service Perspective to enable End User driven decisions
- Leverage OMNibus,
- Tivoli Monitoring,
- Systems Director and
- Tivoli Storage Manager
- Full visibility into cloud to optimize for power, performance, cooling and storage

Tivoli Service Automation Manager :

- Deliver Automated Image and Service Management for Cloud
- Federated image library
- Automated Provisioning new VM takes 5% as long as provisioning manually
- Increased (and simple) sharing between Development and Test for faster rev

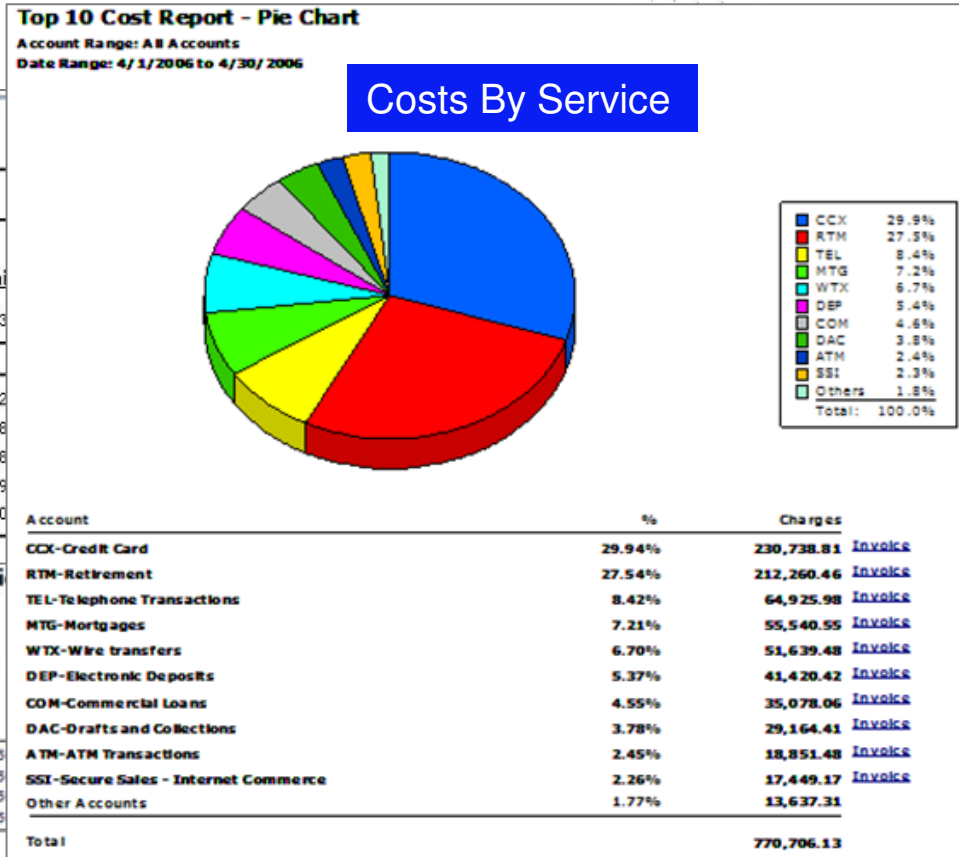




Generate Business Reports from IT Data to Drive IT Operations Improvement

The Big Time Bank Roseville, CA		Costs By LoB	
AA - Northern California Branch Operations			
		Unit	
Wire Transfers		50,093	
Total International Banking Charges			
ATM Transactions		61,612	
Credit Card Transactions		607,266	
Electronic Deposits		113,666	
Online Electronic Payments		30,119	
Telephone Transactions		47,590	
Total Global Consumer Charges			
Drafts and Collections			
Secure Sales - Internet Commerce			
Total Cash Management Charges			
Commercial Loans			
Mortgages			
Total Loan and Credit Charges			
Retirement			
Total Investing Charges			
Total for AA - Northern California			

Detail Rate Codes by Identifier			
Account Range: All Accounts			
Date Range: 03/01/2007 to 03/06/2007			
MACHINE	MACHINE_TYPE		
IBM AUSTIN			
arlz009	IBM xSeries 365		
arlz009	IBM xSeries 365		
arlz009	IBM xSeries 365		
arlz009	IBM xSeries 365		
Total For: IBM AUSTIN			
IBM RALEIGH			
arlz005	IBM xSeries 3550	49.14	
arlz005	IBM xSeries 3550		
arlz005	IBM xSeries 3550		
arlz005	IBM xSeries 3550		
arlz005	IBM xSeries 3550		
arlz005	IBM xSeries 3550		
Total For: IBM RALEIGH			
Run Total			

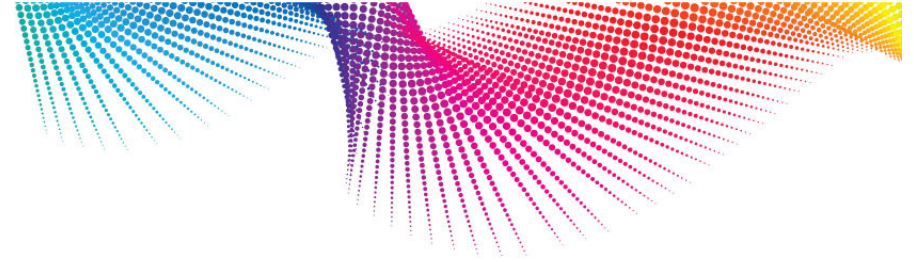


Account	%	Charges
CCX-Cred R Card	29.94%	230,738.81 Invoice
RTM-Retirement	27.54%	212,260.46 Invoice
TEL-Telephone Transactions	8.42%	64,925.98 Invoice
MTG-Mortgages	7.21%	55,540.55 Invoice
WTX-Wire transfers	6.70%	51,639.48 Invoice
DEP-Electronic Deposits	5.37%	41,420.42 Invoice
COM-Commercial Loans	4.55%	35,078.06 Invoice
DAC-Drafts and Collections	3.78%	29,164.41 Invoice
ATM-ATM Transactions	2.45%	18,851.48 Invoice
SSI-Secure Sales - Internet Commerce	2.26%	17,449.17 Invoice
Other A accounts	1.77%	13,637.31
Total		770,706.13



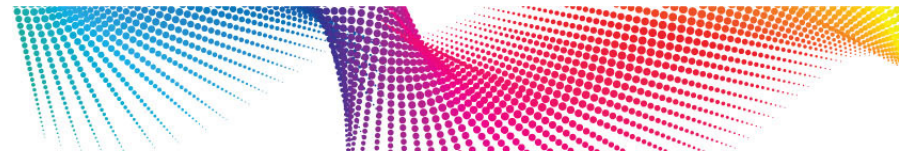


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Manage Risk

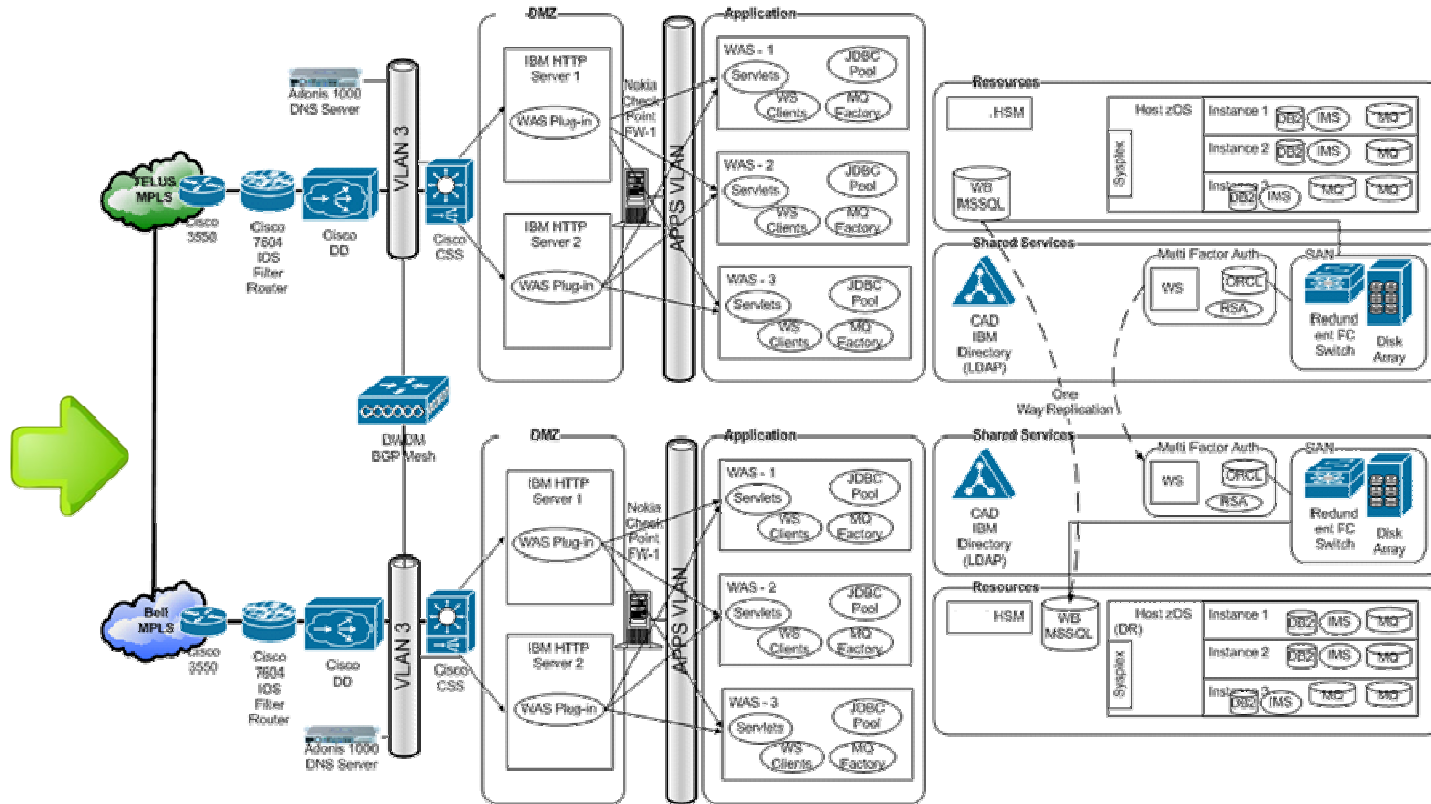
Availability Assurance
Predictive Analytics



Manage Complexity with Integrated Solutions

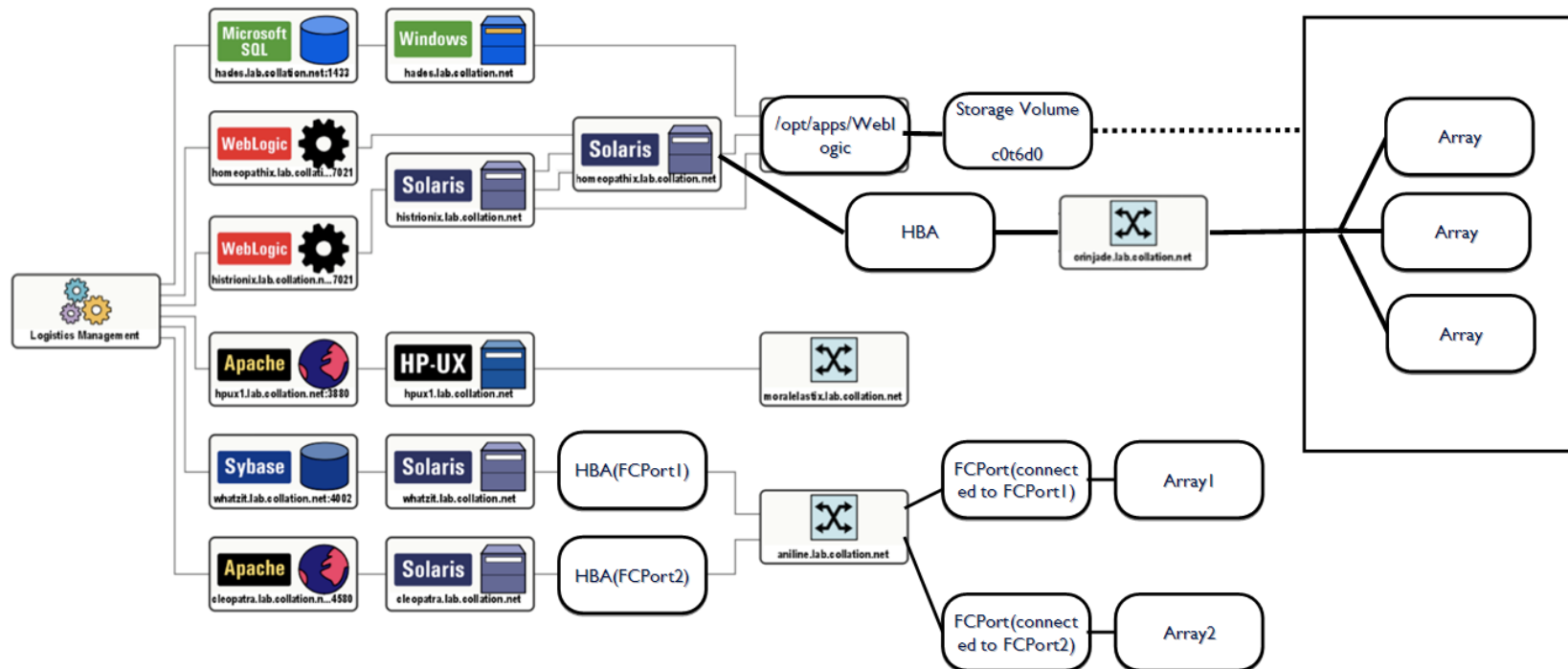
When a service is Complex and Dynamic, total up-to-date context is crucial to quick problem resolution

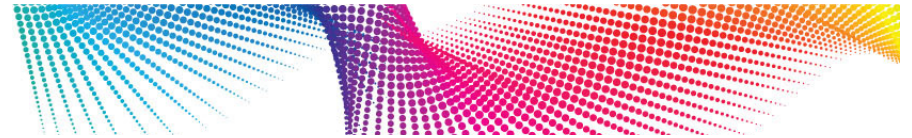
Consumer



Dynamic Discovery and Change Management

- Understand Application Topology and Relationships
- Maintain Business Service Redundancy Information
- Maintain Configuration Information and History
- Assure Configuration Compliance

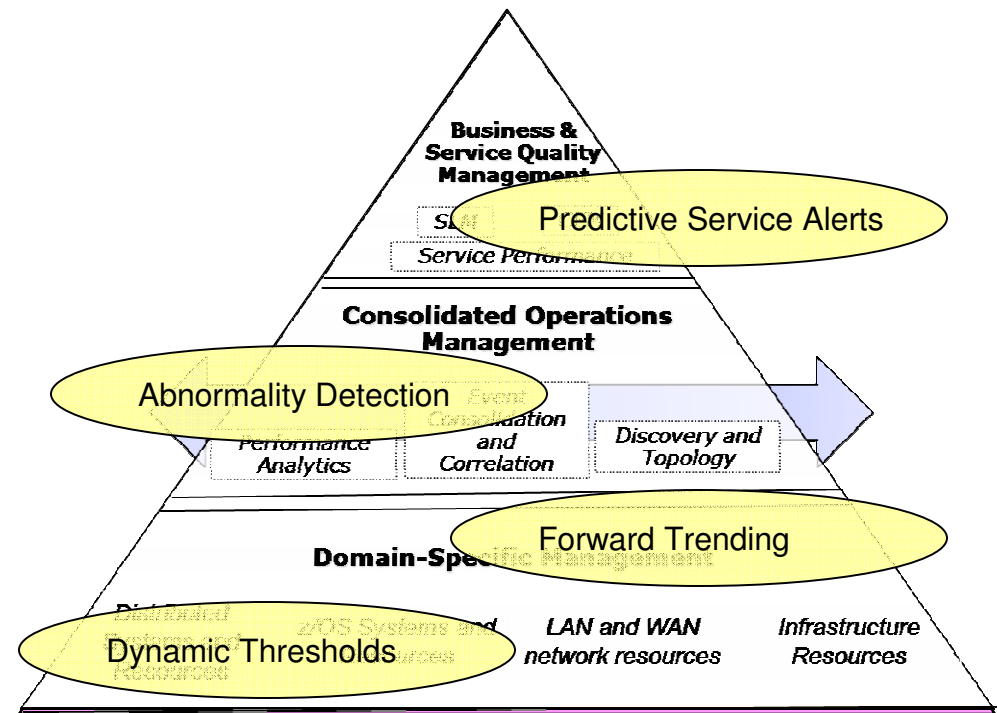




Predictive Analytics built *into* the Solution, not *onto*

Tivoli Solution

- ✓ **Predictive Analytics across all layers:** Built-in PAM span all levels of technology stack!
- ✓ **Broad collection/integration:** Largest available experience library of collectors, integrations, and run-books!
- ✓ **Robust domain experience:** We're investing more intelligence up-front!
- ✓ **Efficient & scalable:** We collect the right data, not just lots of data!
- ✓ **Robust visibility:** Get the metrics that matter most, more frequently!
- ✓ **Maximum intelligence:** Nimble approach to collecting & storing data for maxim intel




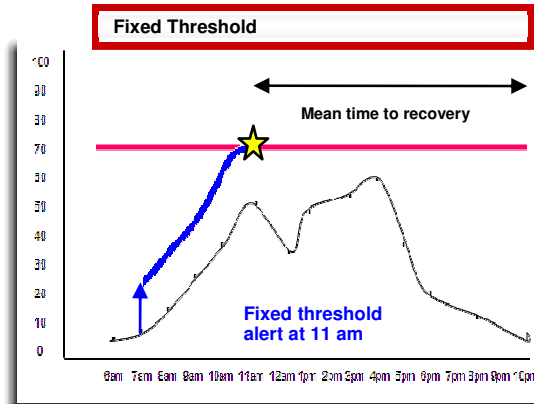
Add Predictive Capabilities into the data you are already collecting, distributed across the solution to provide maximum value with minimum extra effort

Getting Ahead of Service Outages

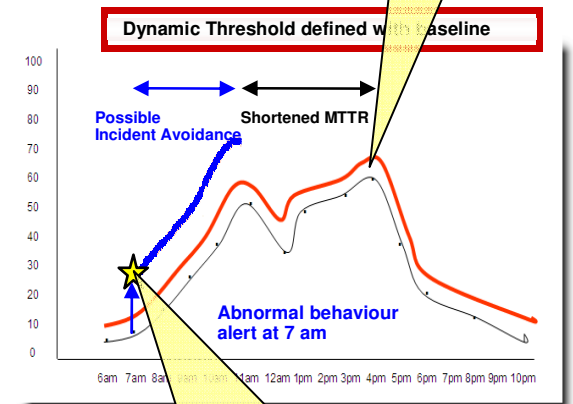
Baselining

- Track Normal behavior of services and resources
- Escalate Abnormal behaviors as soon as they are detected
- Reduce False Positives
- Reduce Configuration Challenges
- Increase Warning on Service Affecting Incidents

-  - No automated approach to define
- No warning of abnormal behaviors prior to peak periods
- No flexibility in the monitoring environment

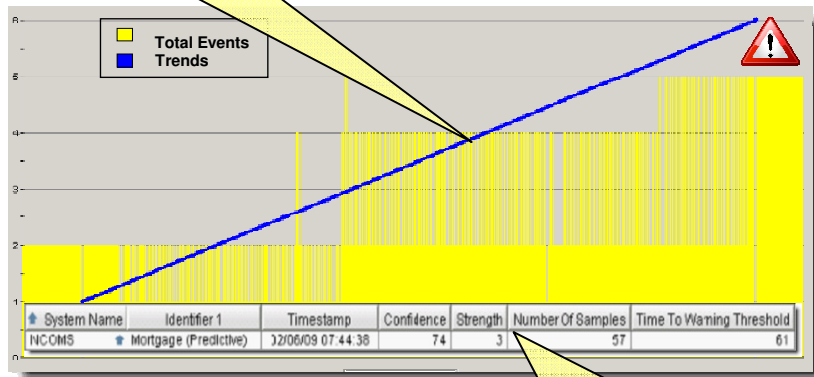


-  Automated definitions with + or - variations



Proactive warning for abnormal behavior occurring before peak periods or during non-peak periods

Predictive reporting, forecasting and alerting

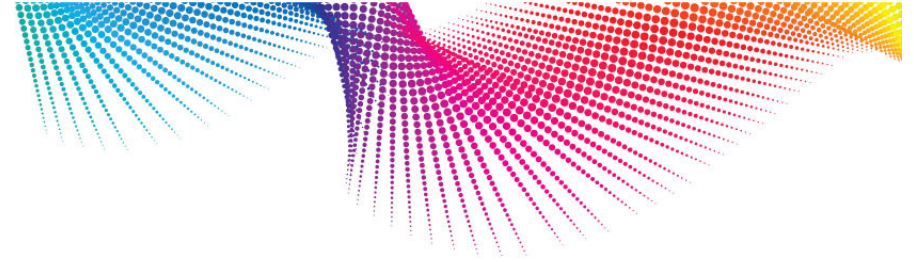


Trends analysis based on sample size, confidence and strength levels

Trending

- Monitor Service and Resource Utilization
- Predict Emerging Capacity Issues
- Vary Sensitivity:
 - Short term high confidence analysis for virtual provisioning activities
 - Longer lead time alerting for problems that may require physical updates (purchase hardware)





Reduce Costs

- Automate Response to Frequent Problems
- Optimize Capital Resource Utilization
- Provide Context for Quick Solutions when Problems Arise



Realize Immediate Savings with Incident response Automation



- Event Enrichment – *Save minutes of lookups on every event*



- Task Automation -- *Take Simple actions to remediate Incidents*
- Business Resiliency – *Automate Application Restart and Automatically Optimize Component Distribution*
- Unify Context -- *Consolidated Operations View*



Configuration Management

Server	Type	Operating System	IP Address
DB2	CCS	Southbury	10.74.171

Change Management

Recent Changes	Risk	Scheduled Start	Scheduled End	Abstract
64991	Medium	09-10 21:00	05-10 23:00	APAR Updates
64824				Disk Replacement

Knowledge Library

ManageHow Number	Service Impact	Impact Statement	Command Center	Customer
29782127	SORT (Sales Out Reporting and Tracking) process is not available.	Sales Out Reporting and Tracking- If the SORT application is not available, business partner incentive payments and IBM sales rep commissions will be impacted. The site is available, however, until the SORT application is restored, the SORT application will be running with old data.	Poughkeepsie	AHE IBM 942

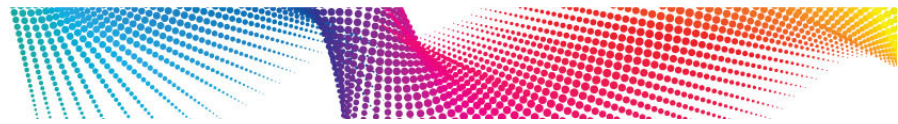
Contact Details

Contact Group	Role	Details
Uma Loof	Manager	Cell: 587-890-2134
Kevin Morris	CCE DPE	Cell: 587-899-9898
		Cell: 545-555-5555
		Cell: 536-535-9934
		Cell: 227-965-9907
		Pager: 535-333-6335

Events

Node	Summary	Tally	Severity	Customer	LastOccurrence
d02rdb108.southbury.ibm.com	DVC Failed - Pings Complete: Timed out	302	5	Lenovo	1162579115
d02rdb108.southbury.ibm.com	Event based attribute IsmcompStatusRules of template Host and service d02rdb108.southbury.ibm.com has value Bad	1	5		1162525167
Application DB2.d02rdb108.southbury.ibm.com	Overall Attribute of the Application is Bad	1	5		1162525167
Application DB2.d02rdb108.southbury.ibm.com	Overall Attribute of the Host tag of d02rdb108.southbury.ibm.com is Bad	1	5		1162525167
Application DB2.d02rdb108.southbury.ibm.com	Overall Attribute of DB2.d02rdb108.southbury.ibm.com is Bad	1	5		1162525167
Application DB2.d02rdb108.southbury.ibm.com	Overall Attribute of d02rdb108.southbury.ibm.com is Bad	1	5		1162525167



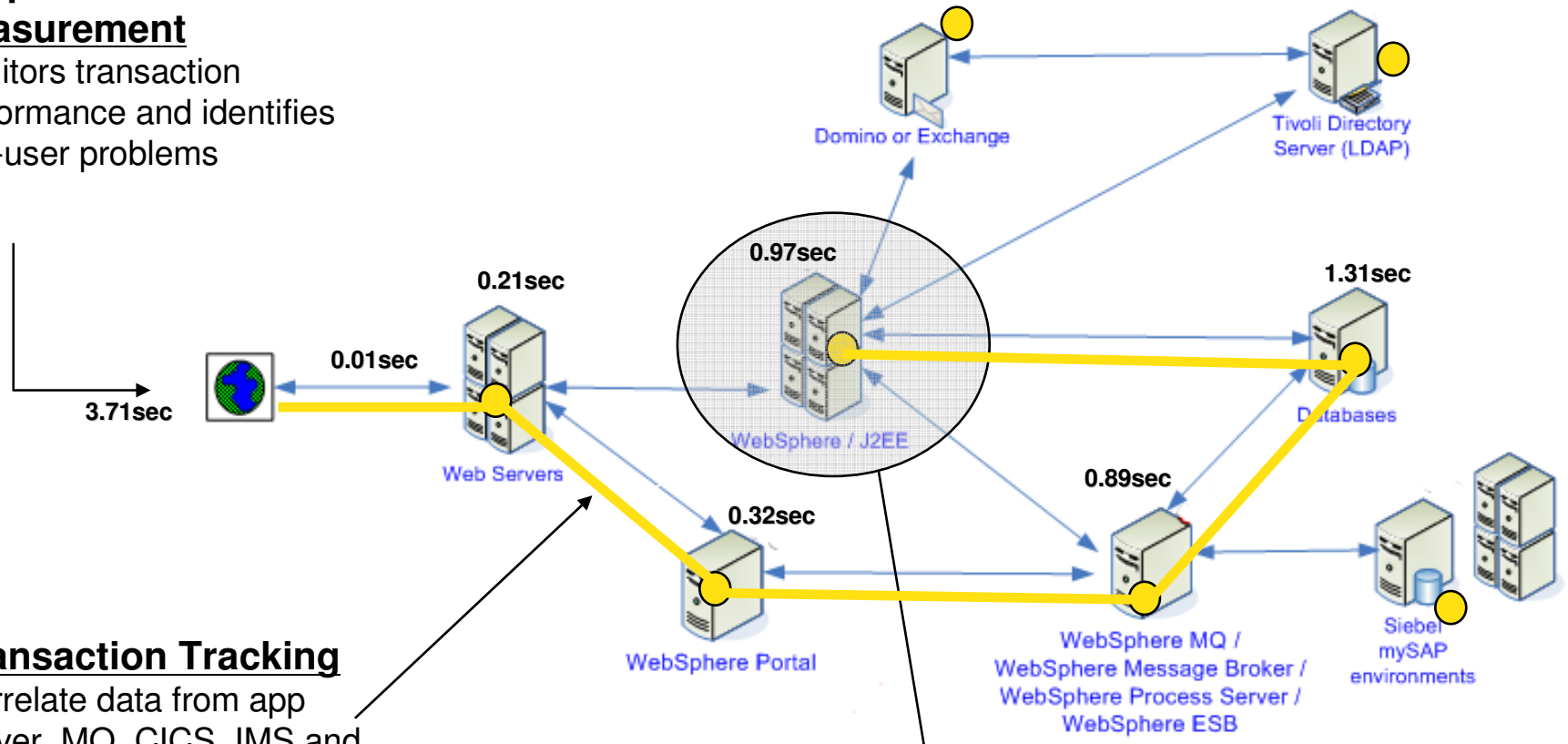


End-to-End Monitoring, Tracking and Isolation

Response Time

Measurement

Monitors transaction performance and identifies end-user problems



Transaction Tracking

Correlate data from app server, MQ, CICS, IMS and custom instrumentation to show topology and isolate problems

Detailed Problem Isolation

Launch in context to SME capabilities including SME level tracking within specific domain



Application Health Management

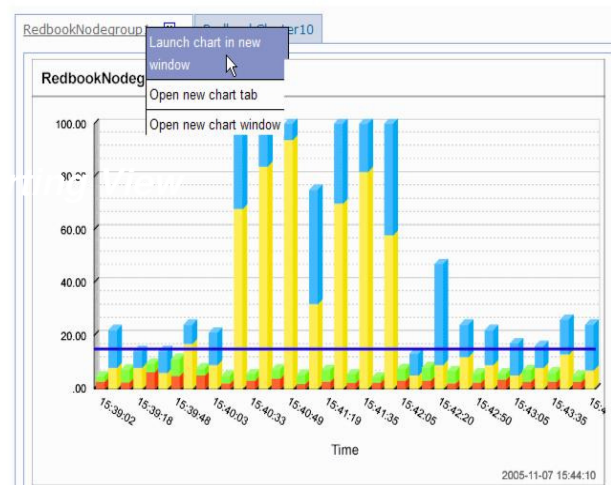
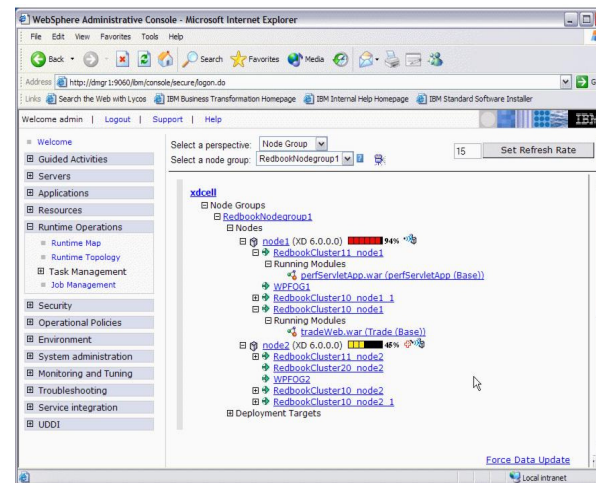
Ensure Highest-Priority Mission Critical Applications
Provide Fast Response Times and Meet Service Levels

Increase application availability by diagnosing and automatically correcting common application server problems

Meet service level agreements by dynamically delivering resources according to service policies

Improve performance by scaling workloads with advanced clustering, data replication services and unique workload distribution

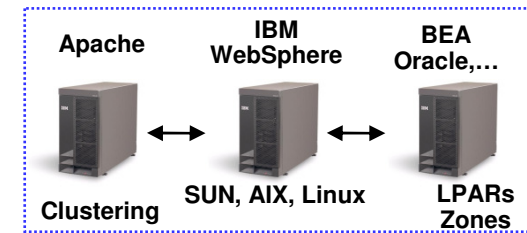
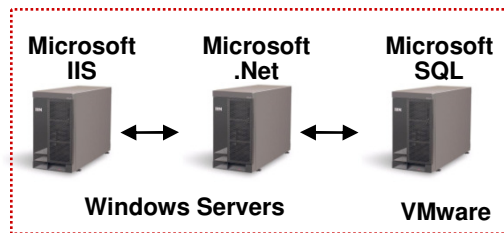
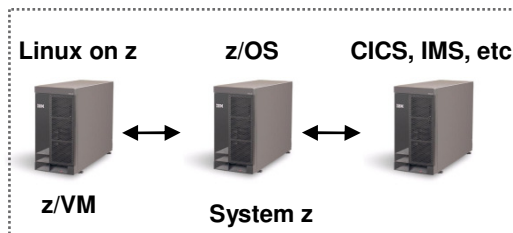
Interruption-free application upgrades by running multiple versions in production at the same time



Unified Visibility into All Critical Resources

Physical and Virtual Resources integrated on a Single Console enabling rapid identification of problems for quick resolution

- Optimize workload
- Automate action to address resource constraints
- Manage Virtual Environment
 - Hypervisors, VIOS, etc.
 - Dynamic Mapping of Virtual Resources
- Gain Visibility into all critical resources
 - Servers, Middleware, Applications
 - J2EE, Web Servers, WebSphere
 - Mainframe and System z

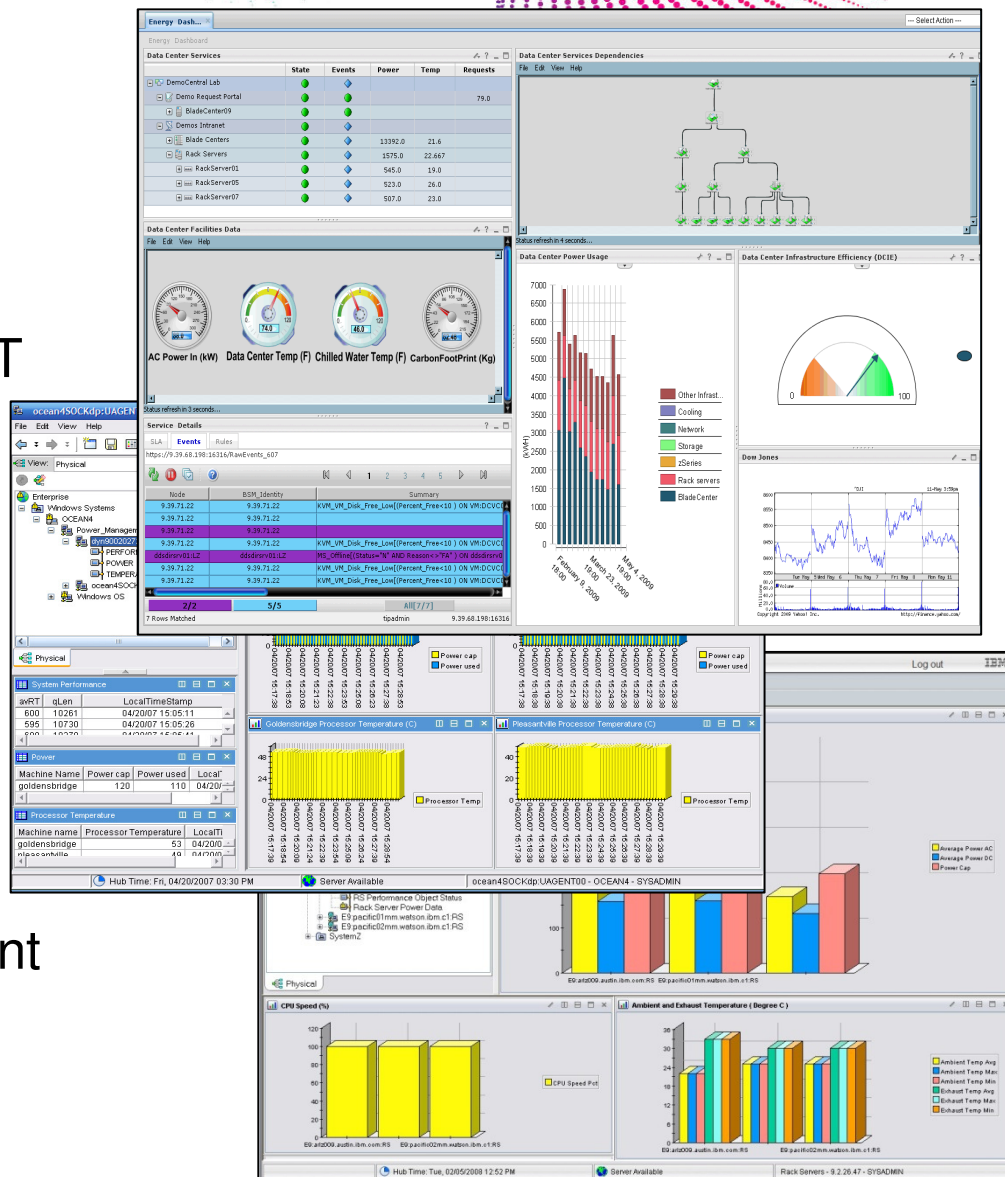




Extend Optimization to Energy Management



- A Single Dashboard to Consolidate Energy Usage and Performance information
- Collect Key Data From across IT and Facilities
 - As a consolidation point for energy related information
- Deliver Context to enable Optimization of Energy Costs without sacrificing Consumer Performance
- Expand from DataCenter to Integrated Facilities Management



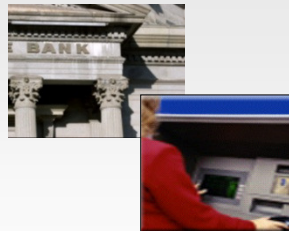


Improving Operations Worldwide

US-based bank:

“Now we immediately see everything from the ATMs low on cash; highest transaction frequency; location density to the diverging activity or service level trends”

- 60% reduction in time spent investigating and managing incidents



Labor Efficiency
& Cost Reduction

Improved MTTR

European Cable Provider:

“Prior to Tivoli Netcool, manual searches took eight to 12 minutes per alarm and one hour of staff time per day to calculate the impact. With this step alone, we achieved a time reduction to one minute per alarm.”

- Can roll out new services to gain a competitive advantage, using the same headcount



European Managed Service Provider:

“We have built a successful cloud computing infrastructure using IBM Tivoli Monitoring software and working closely with IBM.”

- Automate and Simplify on-boarding of new customers



Implementing Cloud Solutions

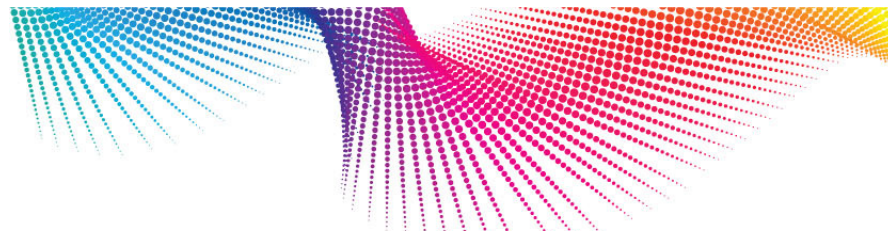
Outside-In Tracking and Troubleshooting

Global Electronics Manufacturer:

“The ability of ITCAM to provide a comprehensive, detailed view of the transaction as it traces its path across the infrastructure enabled us to identify not only where the problem occurred but to pinpoint the cause of the problem. In the end, we were able to ... identify problems that resulted from the way our applications handled transactions.”

- Improved End User Response and Application Quality

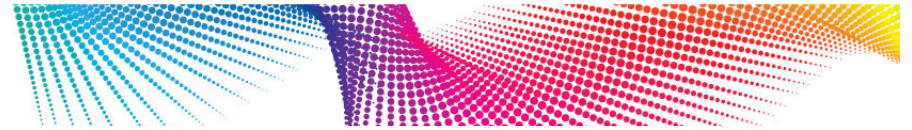




Tivoli re-shapes IT to Respond to the Business



- Production Applications are the face of your Business
- **Customer Response & Application Service Quality** are key Differentiators
- **Dynamic Infrastructure and Cloud Computing** enables IT to deliver value at lower cost but add Complexity
- **Dynamic Application Discovery, Transaction Tracking, and rich Automation** help manage that complexity
- **Optimize Service Performance** with a Comprehensive Infrastructure View
- Monitor **Application Component Relationships** to ensure Business Service is resilient
- Use **Predictive Operations Analytics** to provide real-time view of emerging performance or operational risks



Questions?

