



IBM Technical Summit 2013

DevOps: **Monitor and Optimize**

Enterprise Monitoring, Analytics and Automated Service Management

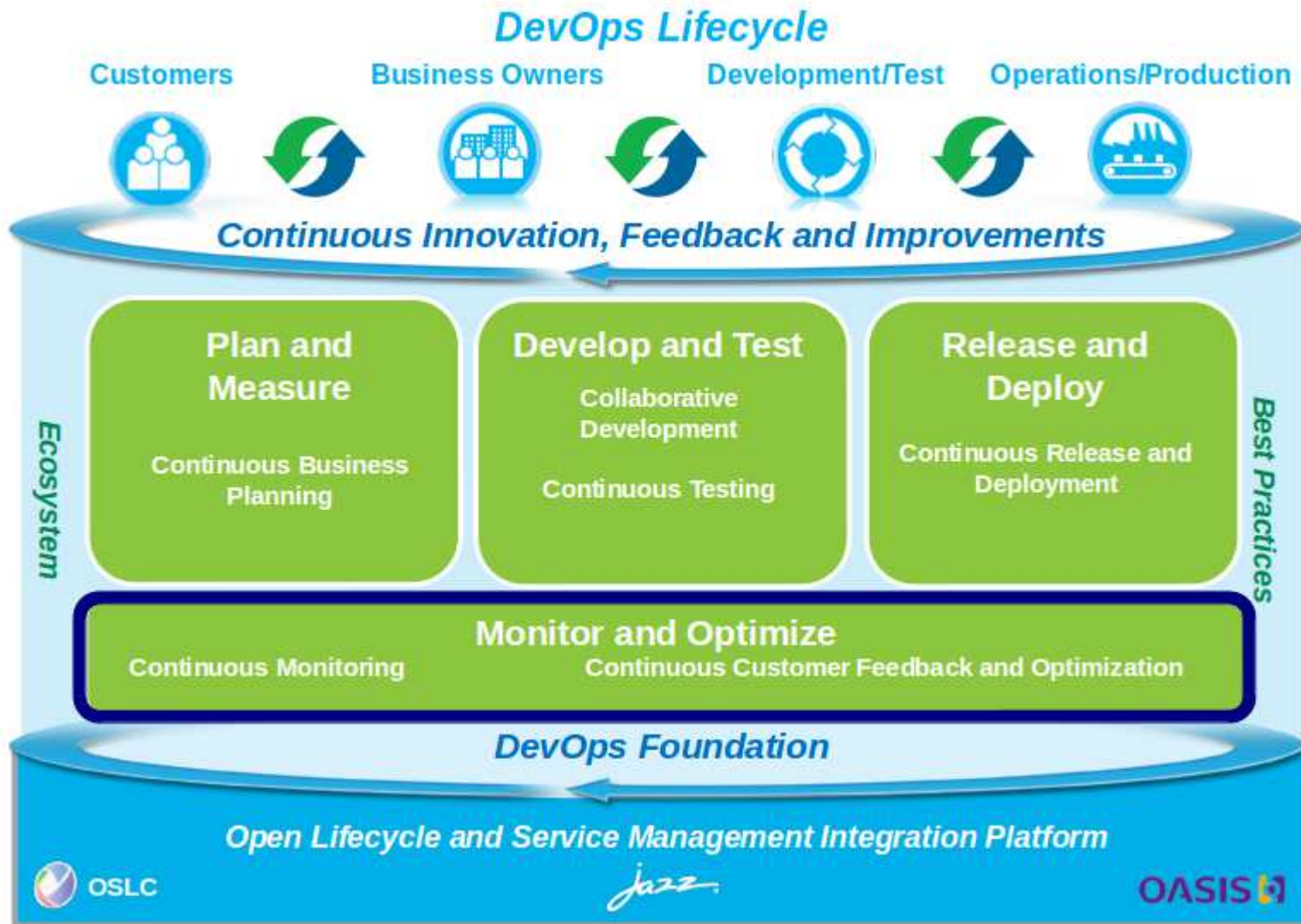
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IBM Technical **Summit**





DevOps: Monitor and Optimize





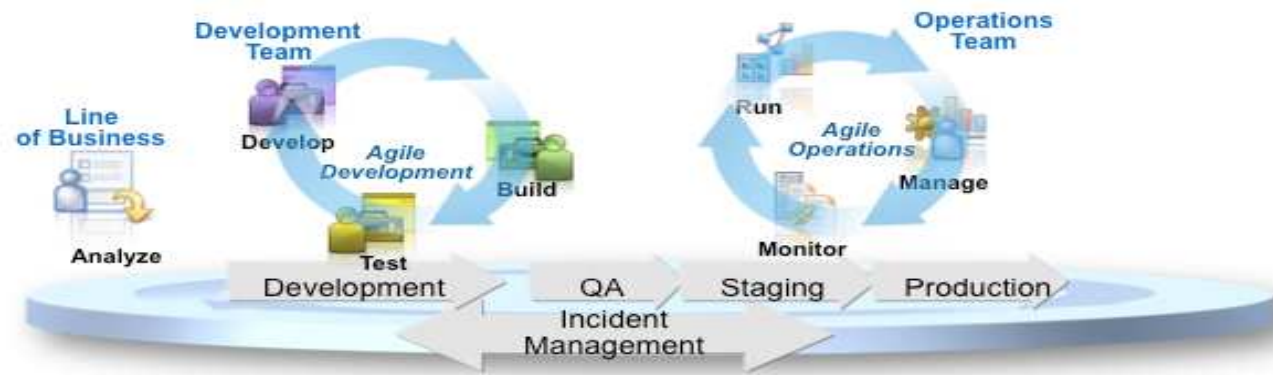
DevOps Movement Context

- Customers expect fast delivery of innovative capabilities
- Rapid development cycles
- Short release cycles (often several times a day)
- Continuous delivery
- Need to manage complexity - multiple platforms, cloud, mobile
- Context awareness
- Lean, responsive and agile SW development focused on customer experience
- Automation of processes between Development and Operations and Customers
- Automate tasks, remove manual work (e.g. speed of bug fix)
- Predict problems – analytics
- Peer-to-peer interaction, collaboration – incident and process automation
- Reuse assets, APIs – need for Service Catalog
- Push to reduce cost and risk



What is Proper Monitoring?

Visibility, Control and Automation to intelligently manage critical applications across your environment



Understand the end-user experience

Follow changing workloads

See steps across the cloud

Mobile devices & smart endpoints

Highly virtualized applications, storage & networks

Private, public & hybrid clouds

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Cloud and Smarter Infrastructure (Tivoli) Continuous Monitoring and Feedback Offerings



- **IBM® SmartCloud Application Dependency Discovery Management** – Resource and relationships mapping across application environment
- **IBM® SmartCloud Application Performance Management** – Manages and optimizes application and infrastructure performance. Suite of monitoring tools.
- **IBM® SmartCloud Monitoring – Application Insight** – Provides lightweight real-time monitoring of public and hybrid clouds (SCP, VMWare, EC2)
- **IBM® SmartCloud Log Analytics** – Provides the capability to rapidly analyze unstructured data to assist in problem identification, isolation and repair.
- **IBM® SmartCloud Predictive Analytics** – Real-time application and service anomaly prediction using advanced analytics. Spot problems before they occur.
- **IBM® SmartCloud Control Desk** – manage business processes for both digital and physical assets. Incident management.



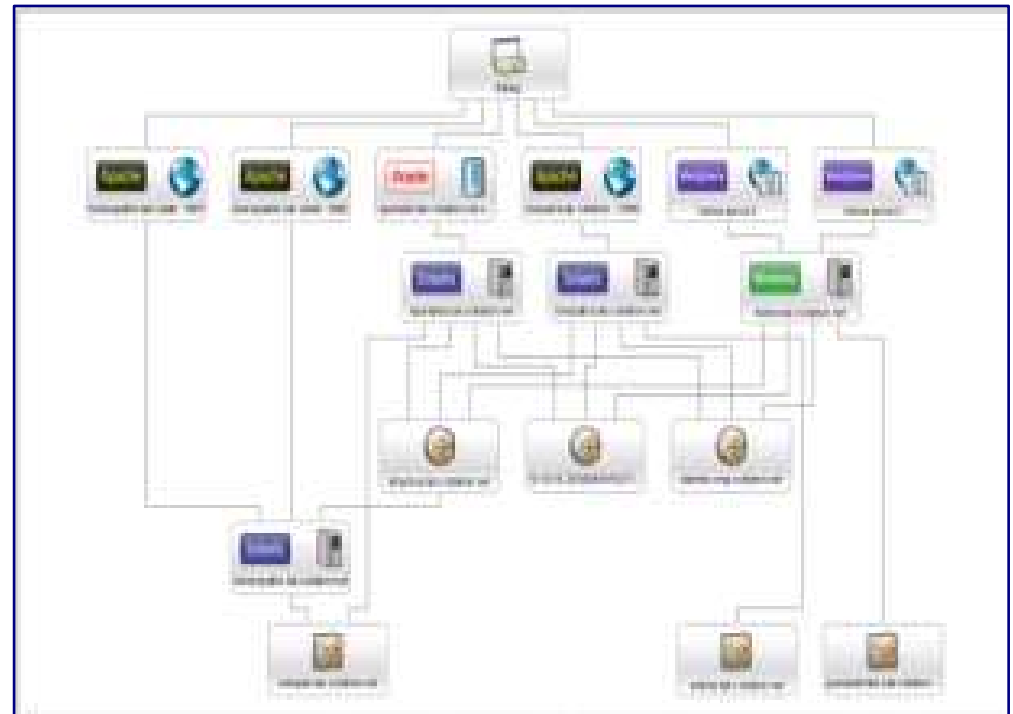
Application Discovery

Managing applications end-to-end requires an accurate and up-to date view of the environment

Application & resource mapping with **relationships** across the application environment

Track changes on resources

Ensure **IT compliance** with policies across the application environment



Over 80% of problems are caused by changes in the environment.
Understand impact of a change to the application.

End User Monitoring

Ensure end user's experience always meets their expectations



See what your users are experiencing

- Real-User monitoring
- Robotics monitoring (Rational Performance Tester)



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





Tealeaf – Qualitative Digital Analytics

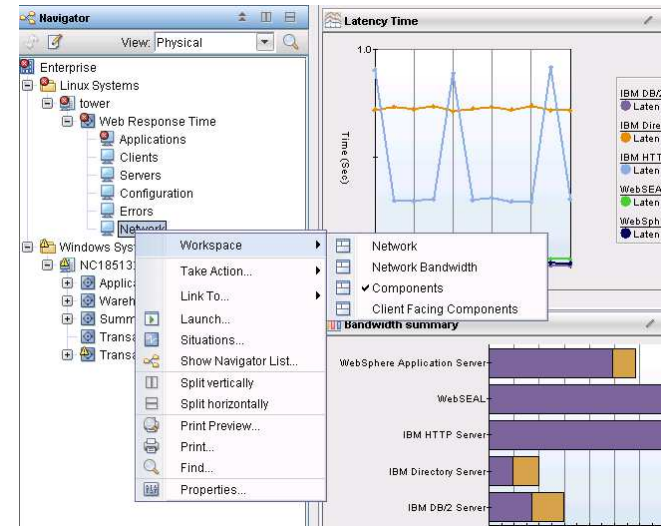
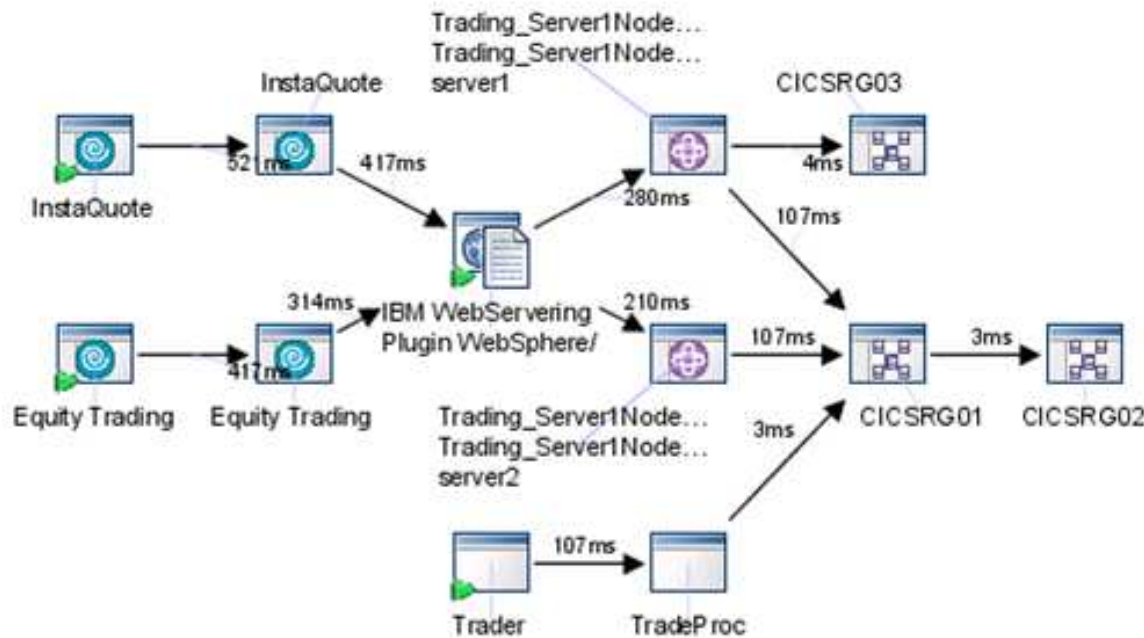
- Tealeaf is a **Customer Experience Management (CEM)**
- Tealeaf **captures website interaction** from the actual users' perspectives.
- Provides visibility into the online customer experience by capturing, analyzing and **replaying details** of customers' visits to find site **errors** or issues and understand the impact that transaction failures have on business processes.





Transaction Tracking - Problem Isolation

- Measure transaction response times across the path
- Monitors real end user web transactions (HTTP/S)
- Agent-based and Agent-less Transaction Tracking





Application Performance and Diagnostics

Operating Systems	Infrastructure	Application and Collaboration	Business Integration	Web Environment	Database	Agent Builder
AIX	AIX (LPAR DLPAR WPAR) VMware Windows Hyper-V Solaris Zones Citrix Clustering	SAP	CICS	WebSphere	DB2	Agentless or Agent Adapter <i>(Universal Agent)</i> OPAL solutions <i>(100+ packages)</i> Microsoft Message Queue and more.... Blackberry Micromuse
i5/OS		Siebel	Web Services	WebLogic	SQL	
z/OS		PeopleSoft	IMS	IIS	Oracle	
Windows		Tuxedo	MQ	Oracle	Sybase	
Linux		Domino	Message Broker	NetWeaver	Informix	
Unix		Exchange .Net Biztalk Sharepoint		JBoss		
			Apache			
			Sun Java System			

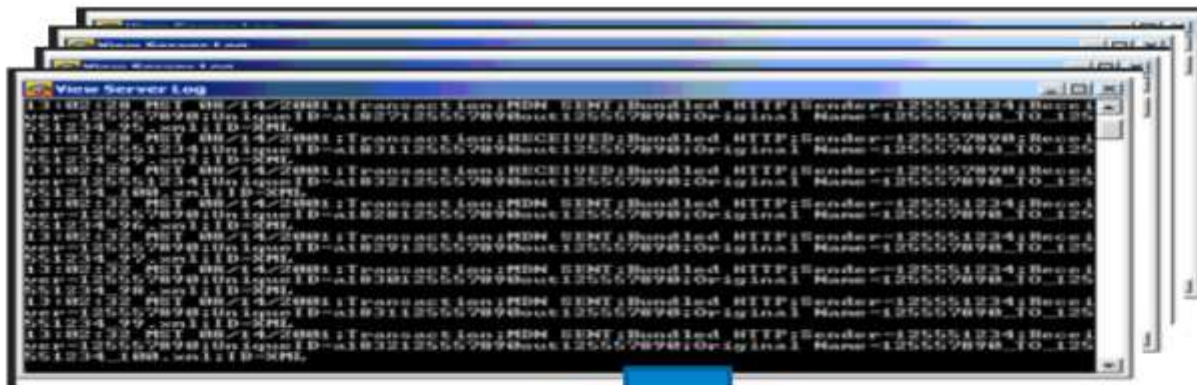
Application Performance and Diagnostics – Dashboards





Log Analytics (Google-like search within applications logs)

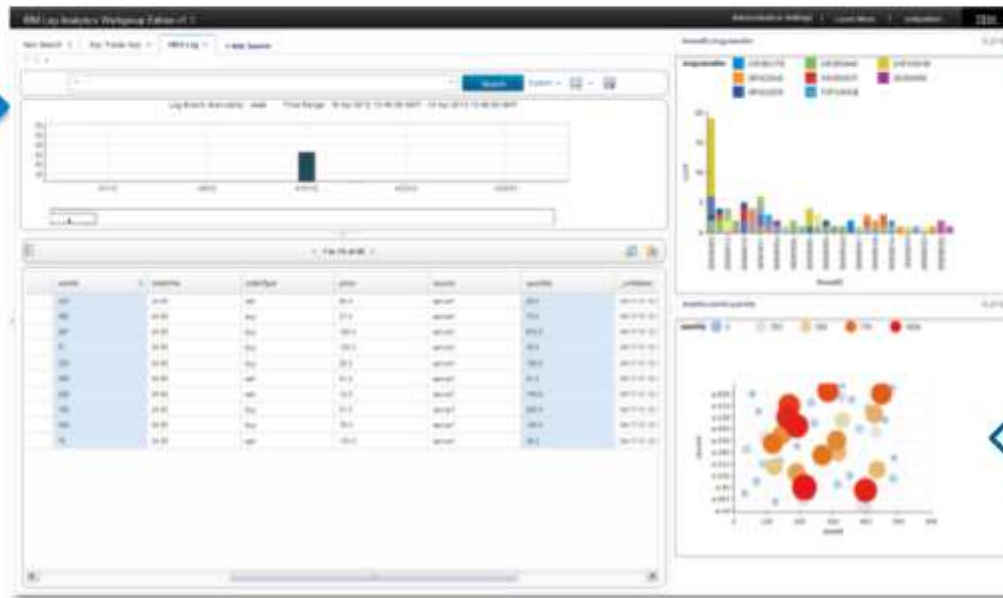
Collects large volumes of obscure unstructured data and transform and index through analytics into actionable intelligence.



GBs of Obscure Log Files



Intelligent Support Docs Integration through Advanced Text Analytics



Single Actionable Dashboard

Insight Packs



Predictive Analytics – Embedded in APM suite

Adaptive Baselines

Learn the normal range of values for a given metric based on its history

Dynamic Thresholds

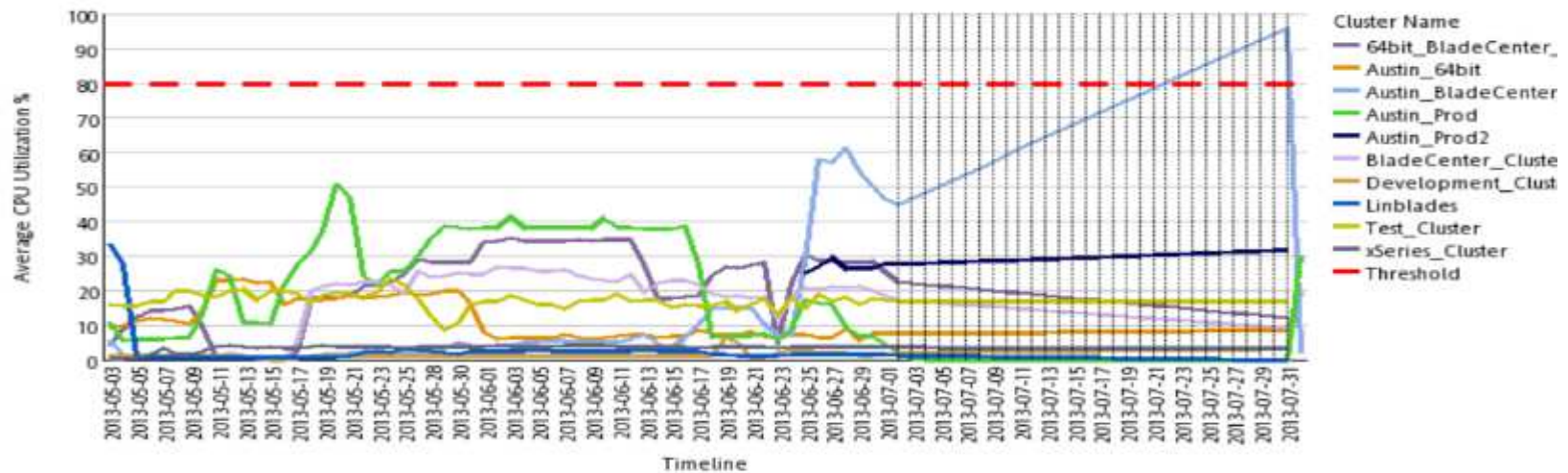
Based on the history (TDW) of the specific resource or metric.

Predictive Alerts

Alerts are generated when a dynamic threshold is crossed. Anomaly warning.

Linear Trending

Directional trends of performance metrics. Average CPU Utilization

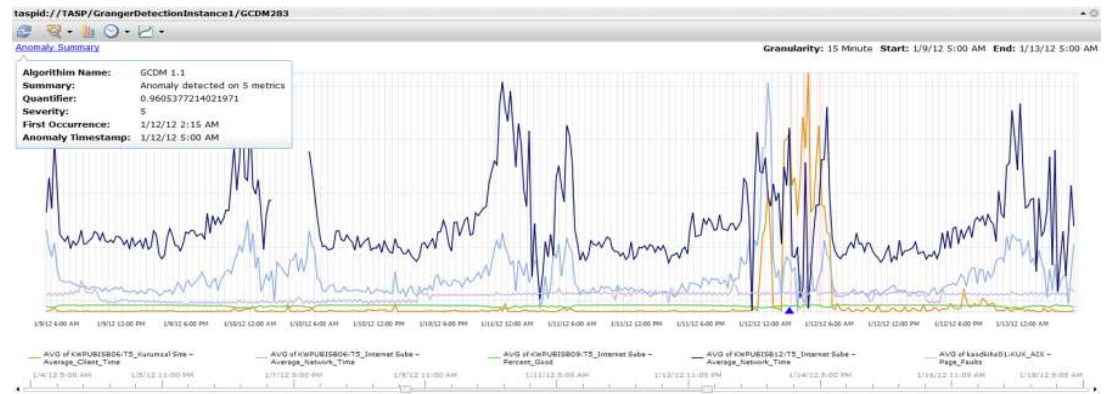
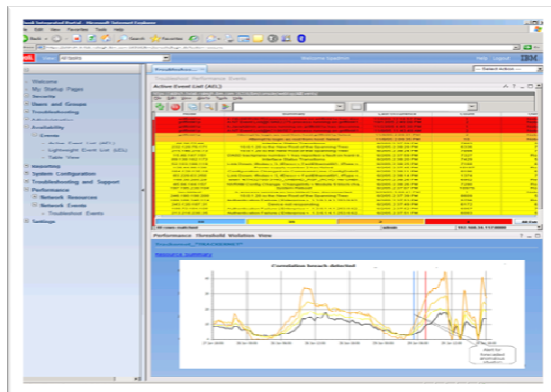
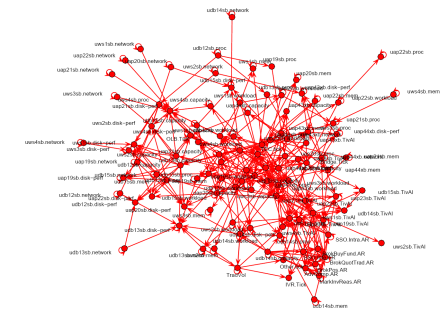




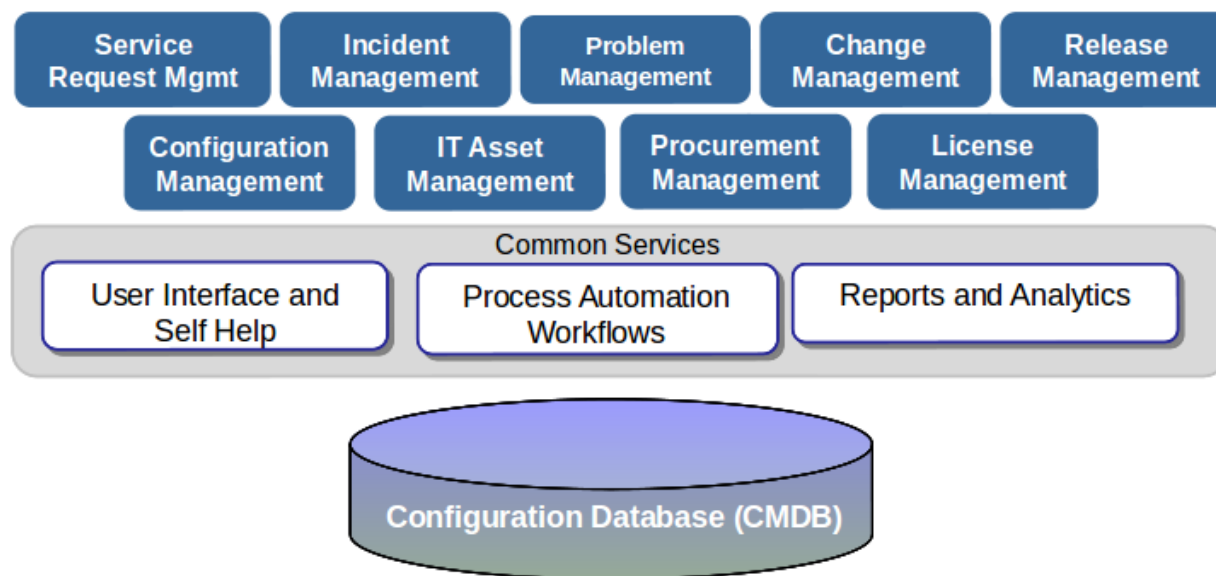
Predictive Insight

Anomaly Detection using Behavior Learning

- Collect metrics from heterogeneous sources in real-time
- Learn the environment through statistical analysis & correlation
- Powered by Streams (BigData, Watson)
- Predict problems with high confidence based on changes in metric behavior
- Discover and Group Resources based on behavior



Customer Feedback: IBM® SmartCloud Control Desk



Service request management gives you an efficient service desk for handling service requests and managing incidents.

Change, Configuration and Release management provides advanced impact analysis and automated change procedures designed to reduce risk and support integrity of services.

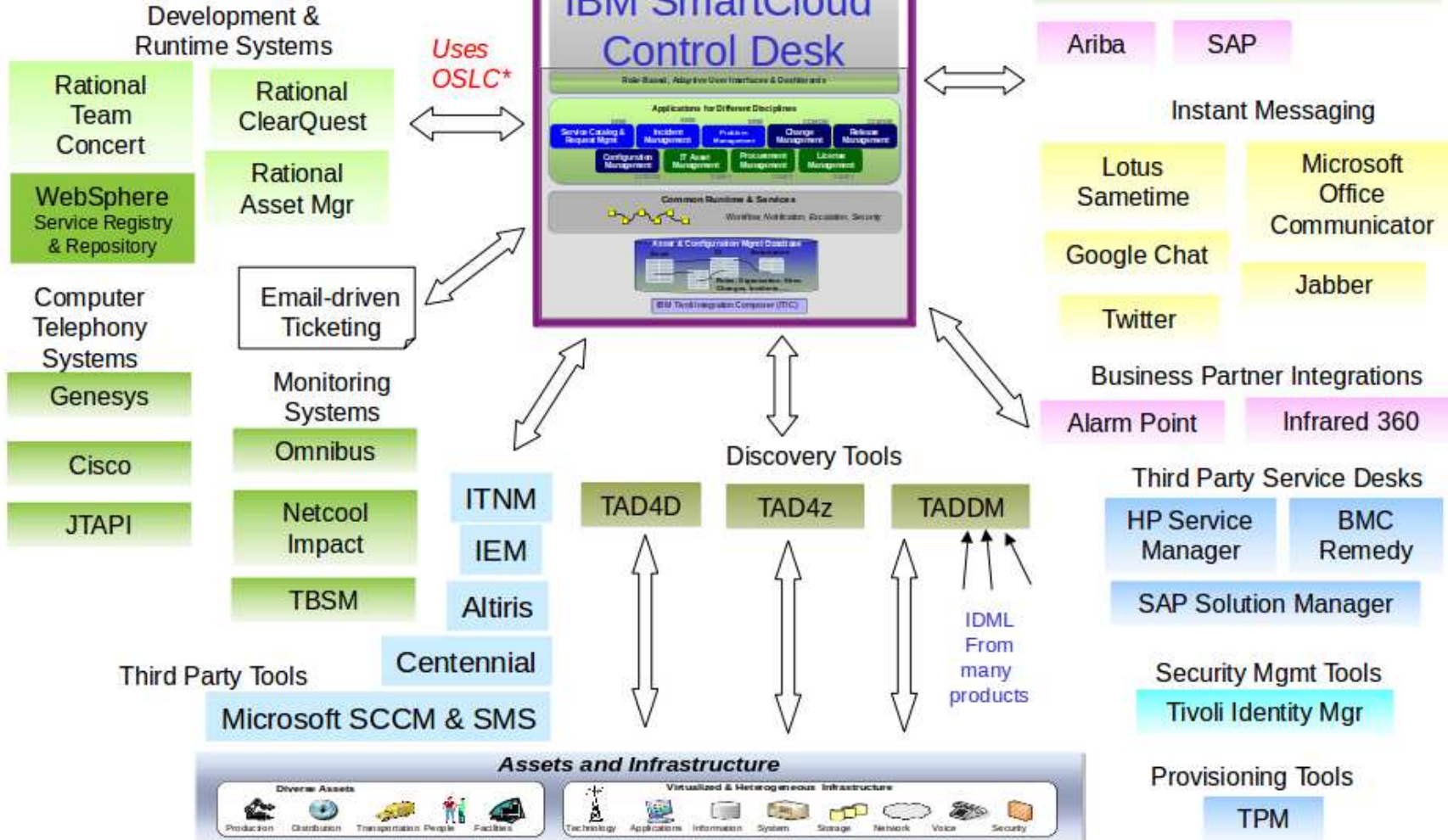
IT asset lifecycle management provides inventory management and software license compliance capabilities.

Service Catalog helps users solve their own problems. Provides an intuitive self-help portal and a complete catalog of services.



SCCD Extensive Integrations

*OSLC = Open Services for Lifecycle Collaboration
<http://open-services.net>





Thank You

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