



Service Management for the Mobile Mainframe – Delivered via Cloud Lunch and Learn

Mike Baskey,
DE, Cloud and Smarter Infrastructure
IBM

August 15, 2013
Session 14345



Mainframe applications increasingly used by Mobile devices supported on Private/Hybrid Clouds



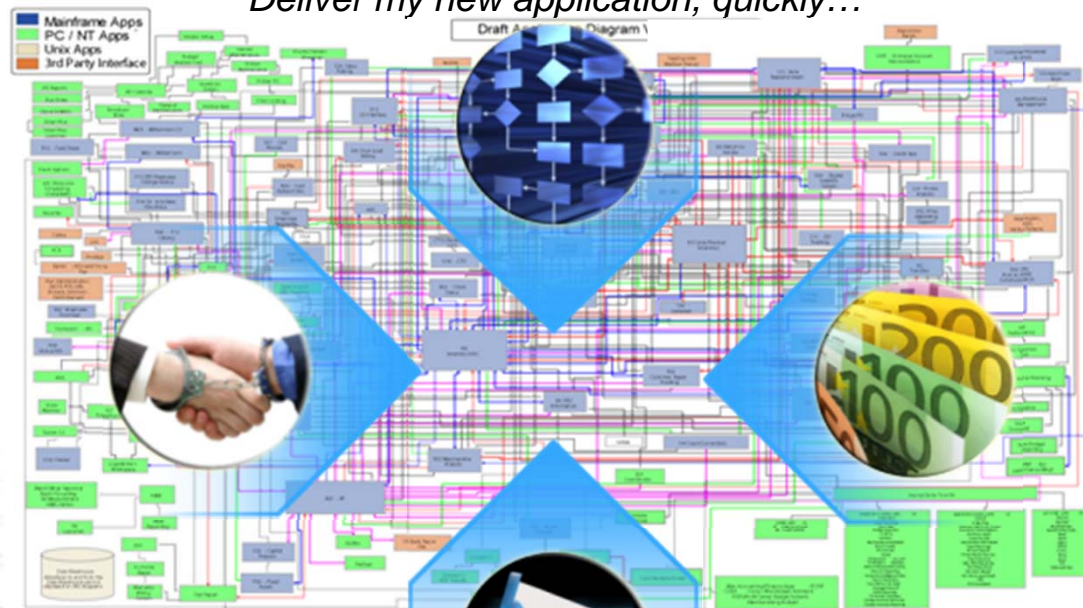
1. IBM provides System z Service Management leadership supporting **Mobile and Cloud**
2. Mobile requirements for **high reliability and ability to scale** cost effectively make mainframe good fit
3. IBM's Open Standards **SmartCloud Orchestrator** provides end-to-end Cloud support for Mobile Mainframe

Systems Infrastructures Today... Pressure from All Sides...



Line of Business, CMO

"Deliver my new application, quickly..."



Vendors

"Standardize..."

"Mobile..."

"Automate..."

"Cloud..."

CFO

*"Reduce cost,
Increase value of IT,
Meet regulations,"*

Consultants

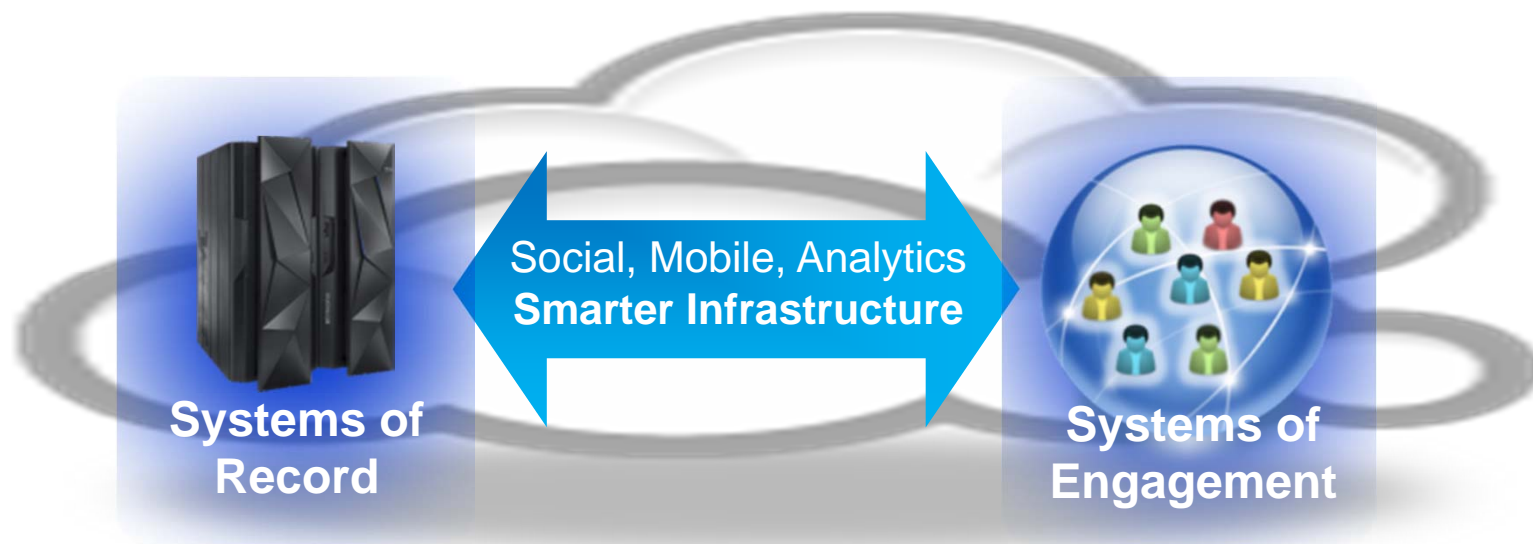
"Strategy and change..."



Complete your sessions evaluation online at SHARE.org/BostonEval

Rapid growth of next generation technologies supported seamlessly on zEnterprise

System z scaling model and security to manage and optimize both



- Business Transactions
- Quality of Service
- Command & Control
- Facts and data “source of truth”
- z/OS

- Mobile and Social
- Dynamic
- Interactions and Collaboration
- Insight, trends, analytics
- Linux on System z

System z proven platform to seamlessly address challenges for mobile and Cloud



Mobile

- Mobile Business workloads require security and high availability
- Increased mobile business data access and complexity
- Drives Scale-up and Scale-out Enterprise challenges



Cloud

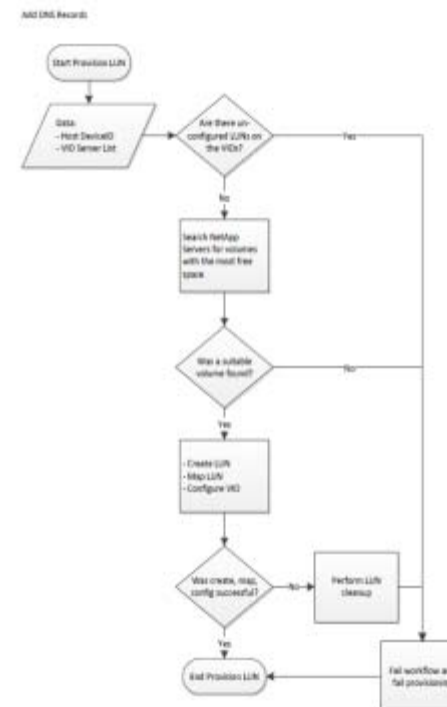
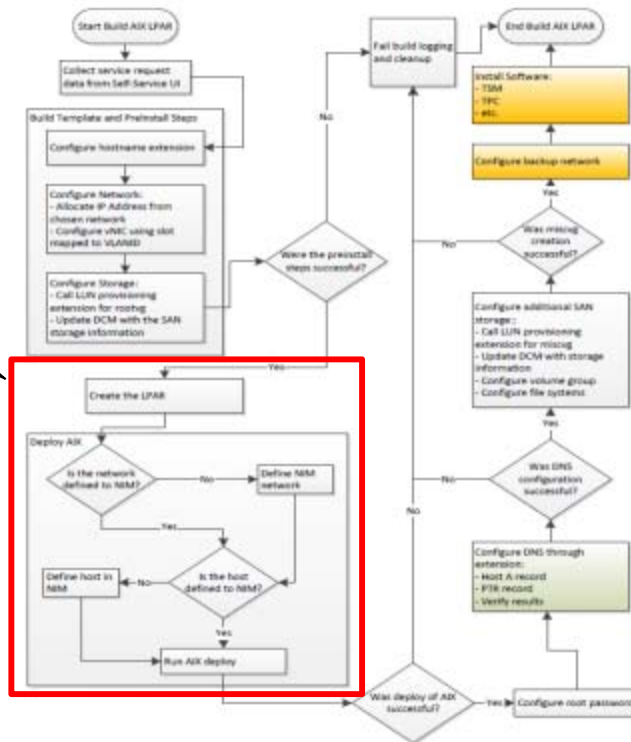
- Performance, security, high availability and disaster recovery
- Data protection and regulatory compliance
- Ability to quickly and easily provision and orchestrate

Evolving Data Centers to include Cloud



- Automated** End to end automation of cloud service delivery to achieve greater returns and accelerate time to deploy new apps – many mobile oriented
- Standardized** Deliver “services”: repeatable process, controlled, simplified consumption, auditable
- Flexible** Each customer has unique requirements to integrate with existing data center processes and tools.

VM Provisioning



Real customer example



Cloud implementation can improve overall data center operations



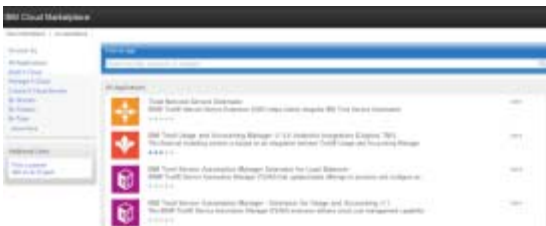
An open and scalable cloud platform

An easy to use pallet to define cloud service automation



A marketplace for automation packages sharing and re-use

A rich set of ready to use automation packages



Nationwide Insurance cuts costs with smart workload consolidation of Cloud on System z



Business Challenge:

- 3,000 distributed servers inefficient and costly. 80-90% capacity unused, software licenses on every server
- Need to standardize development in Fit-for-Purpose model
 - Take advantage of best platform that met characteristics
- Monitoring/capacity management spans x, z and p based on SLA

Solution description:

Consolidated distributed servers to Linux virtual servers running WAS, DB2, and z/VM on System z creating a multi-platform private cloud optimized for all its different workloads

Customer Value:

- Application Development
- 80 percent reduction in power, cooling and floor space requirements

“The creation of a private cloud built around the z196 servers supports our business transformation goals by enabling the rapid, seamless deployment of new computing resources to meet emerging requirements,” Jim Tussing, CTO for Operations, Nationwide

IBM Cloud implementations built on Open Standards based architecture



Governance Services:

- Ease coordination of complex tasks and workflows, leveraging existing skills
- Support of OSLC from OASIS

Platform Services:

- Simplify deployment and lifecycle management middleware and application patterns
- Support of TOSCA from OASIS

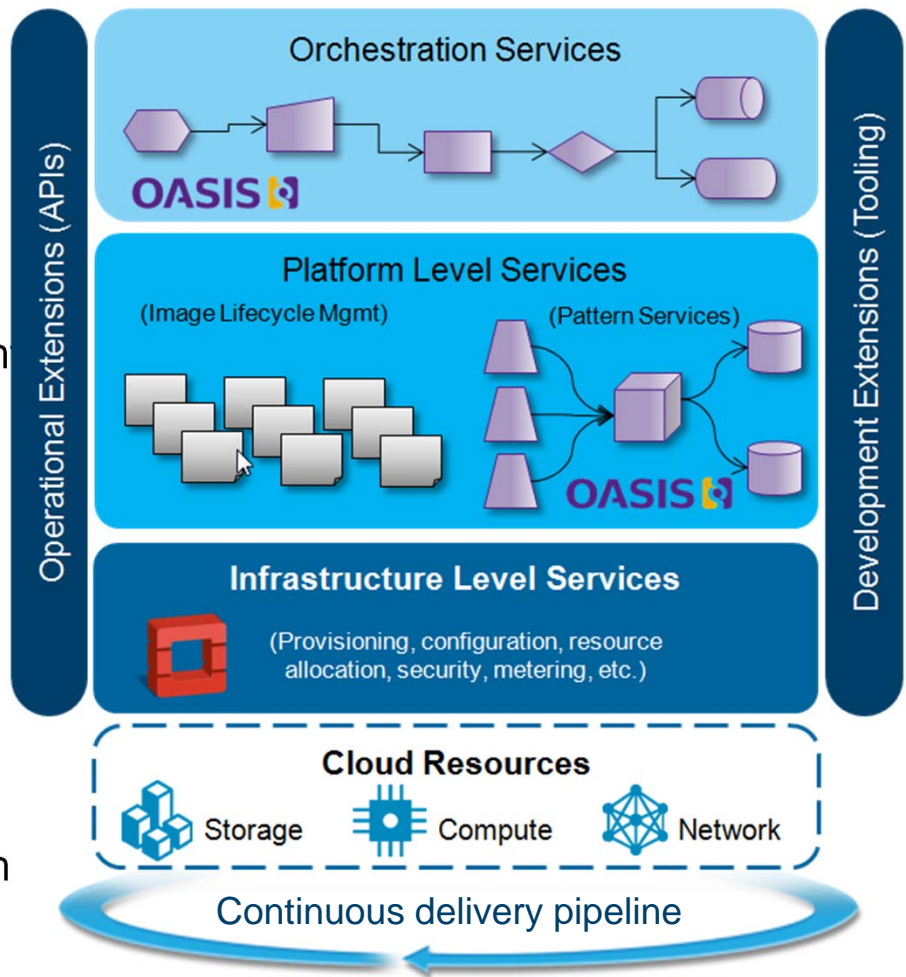
Infrastructure Services:

- Highly flexible, scalable infrastructure on heterogeneous resources
- Built on OpenStack

Extensibility:

- Plug and play service management integration
- Development tooling integration
- Pre-built images, patterns, process automation

Common Cloud Management Services



With IBM SmartCloud, start simple and scale as Mobile and Business requirements dictate



Virtualization	Cloud Service Delivery	Cloud Service Management	Cloud Enable Data Center
Computing Resources	Visibility • Control • Automation	Images • Patches • Threats	Services • Storage • Network

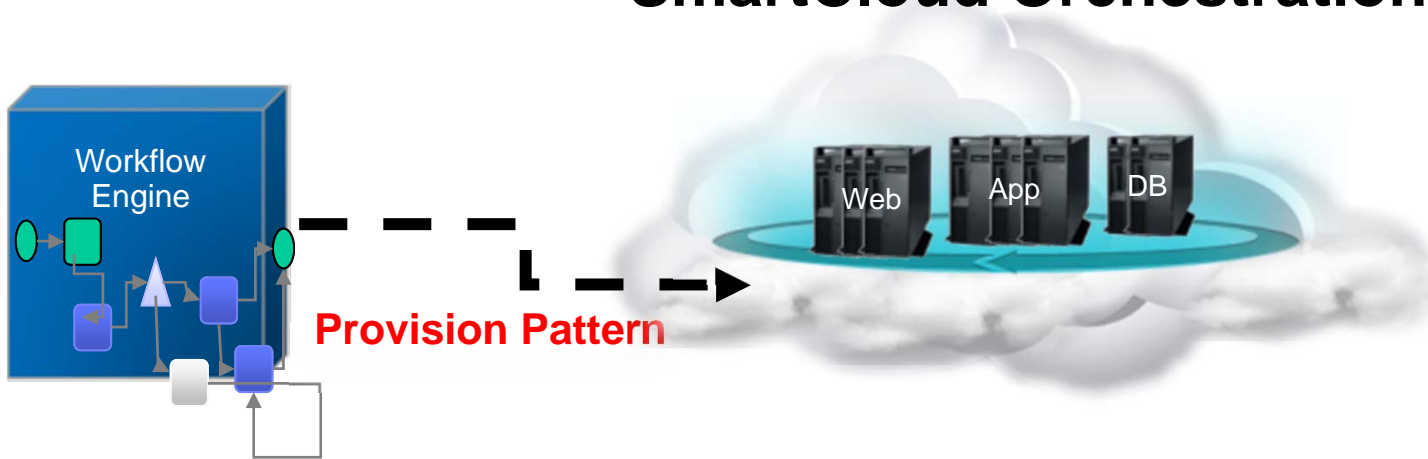


Complete your sessions evaluation online at SHARE.org/BostonEval

Manage all pieces of Data Center Lifecycle with Cloud



SmartCloud Orchestration



<p>Resource Management Onboard, provision, manage CPU, Storage and Network</p>	<p>Workload Management Workload aware placement, optimization and operation</p>	<p>Service Management Manage the lifecycle of business applications</p>
---	--	--



Application Performance Management (APM) provides actionable insights into Mobile and Cloud



Connecting Systems of Record through Cloud to System of Engagement

Follow changing workloads



Highly scalable, reliable support for applications and data

Drill into an issue



Private, & hybrid clouds

Visualize transactions across cloud

Manage end-user experience



Mobile devices & smart endpoints

Complete your sessions evaluation online at SHARE.org/BostonEval



Enhanced visibility and management for z/VM and Linux Cloud and Mobile applications



OMEGAMON for z/VM and Linux V4.3 and SmartCloud Monitoring
Single Source of all z/VM Performance Metrics

Mobile & Cloud Monitoring



Increased Performance & Availability

- z/VM Live Guest Relocation & Single System Image
 - Monitors all hypervisor guest relocations both in realtime, and using historical data

Cloud Health Visibility and Optimization

- Performance and Availability metrics/analytics
 - z/VM Monitor Service and Linux Application Monitor
 - Integrated, consistent metric reporting across all z/VM

Optimize Cloud workload resources

- Business Expansion based on capacity planning
 - Grow without adding hardware

Exploit Linux on System z to save money and simplify Enterprise operations

- Incorporate Systems of Record with Systems of Engagement on zEnterprise
- Manage mobile application workstreams running across z/OS and Linux
- Consolidation of zEnterprise Visibility, Control and Automation on Linux on z.



**Systems of
Record**

zOS

- Cost Management
 - Accurately assess shared resource usage
 - Using TDSz as data collector of z/OS
- Application Performance Management
 - Classify mobile transactions, track E2E SLA
 - Merging information with OMEGAMON
- Log Analytics
 - Insights on Events
 - Application running on z/OS and zLinux



**Systems of
Engagement**

zLinux

System z Infrastructure Services manage high growth rates of Mobile applications and data requirements



- Dynamic scaling of Mobile workloads drives critical requirement for enhanced automation
 - 24/7 availability requires high degree of mainframe **System and Workload Automation**
- Network visibility and management important to keeping mobile apps available and performing
 - **End-to-end monitoring** with OMEGAMON
- Mobile as an extension of Cloud
 - Requires business critical asset and **end-point management** across distributed & System z



Top Mobile Adoption Concerns:

1. Security/privacy (53%)
2. Cost of developing for multiple mobile platforms (52%)
3. Integrating cloud services to mobile devices (51%)

University of Florida (UF) keeps students on track with mobile applications built on zEnterprise



Client Challenges:

- Smartphone ownership at UF jumped from 27% (2009) to 69% (2012) and growing. The message is clear. Want to reach university students - do it with a smartphone
- Enable 50,000 students and 5,400 faculty members to access a rich selection of online features anytime and anywhere with mobile device

Solution:

- Created UF Mobile web with access to Integrated Student Information System for tracking all class related information
- CICS Transaction Server running on upgraded zEnterprise® 114 with OMEGAMON XE for CICS monitoring and management

Benefits:

- Non-disruptive expansion of current applications to support Mobile
- Handling over one million Transactions per day at peak registration times
- “The UF Mobile Web helps students navigate through this information overload and meet their responsibilities.” Steve Ware, systems administrator/programmer, UF

zEnterprise continues to provide value in implementing growing Mobile, Big Data and Cloud workloads



1. IBM strategy and tools support reliably running **Mobile, Big Data and Cloud** workloads on System z cost effectively
2. IBM can orchestrate across **Systems of Record and Systems of Engagement** for workload aware performance, analytics and monitoring
3. IBM only vendor who can tie technologies together with **Visibility, Control and Automation** to meet end-to-end SLA

Learn more about the IBM's Mobile, Cloud and SmartCloud Foundation Solutions

Mainframe Service Management	http://www-01.ibm.com/software/os/systemz/itsm/
Enterprise Cloud Computing	http://www-03.ibm.com/systems/z/solutions/cloud/
Enterprise Linux Server	http://www-03.ibm.com/systems/z/os/linux/els.html
Workload and System Automation	http://www-01.ibm.com/software/tivoli/solutions/system-workload-automation/
Tivoli Workload Scheduler	http://www-01.ibm.com/software/tivoli/products/scheduler/
IBM Tivoli Monitoring	http://www-01.ibm.com/software/tivoli/products/monitor/
OMEGAMON XE Family	http://www-01.ibm.com/software/tivoli/products/omegamonxeproductline/
Tivoli System Automation for z/OS	http://www-01.ibm.com/software/tivoli/products/system-automation-zos/
IBM Tivoli NetView for z/OS	http://www-01.ibm.com/software/tivoli/products/netview-zos/

Thank
You

Track, allocate and report mobile resource usage accurately including chargeback



With SmartCloud Cost Management, accurately assess shared computing resource usage

- Insights into relationships between virtualized and physical IT assets
- Usage metering coverage to help determine costs based on allocation and utilization.
- End user visibility into cost implications of services requesting .
- Mechanism for chargeback with accurate metering and cost rating tool
- Integrates secure cloud usage reporting with the cloud provisioning and management so users can manage infrastructure costs