



Service Management for the Mobile Mainframe – Delivered via Cloud

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Mike Baskey,
Distinguished Engineer,
Cloud and Smarter Infrastructure, IBM





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

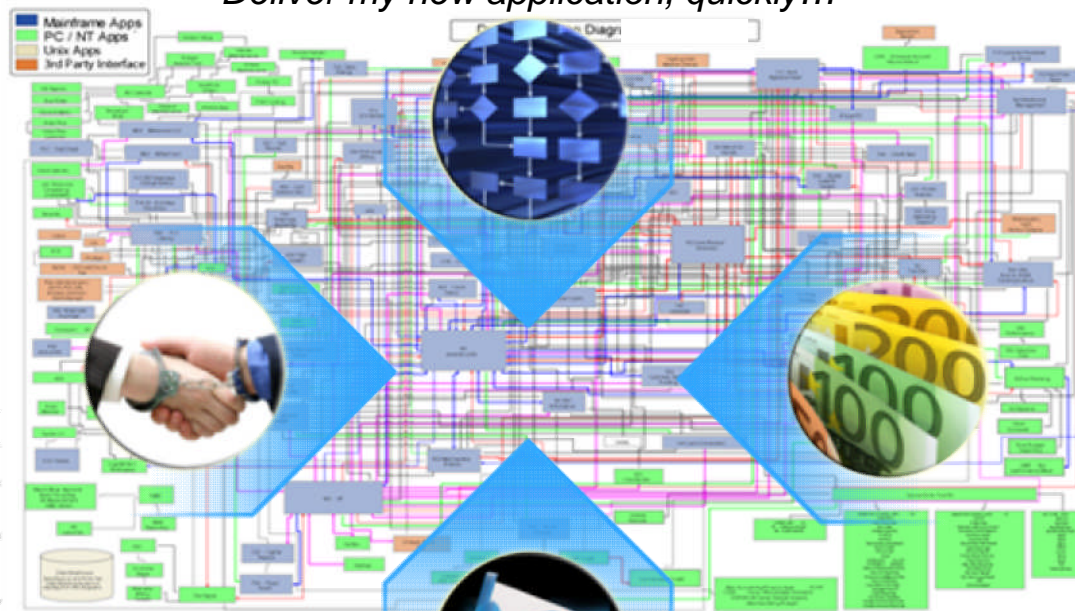
“Reduce cost,

Increase value of IT,

Meet regulations,”

Consultants

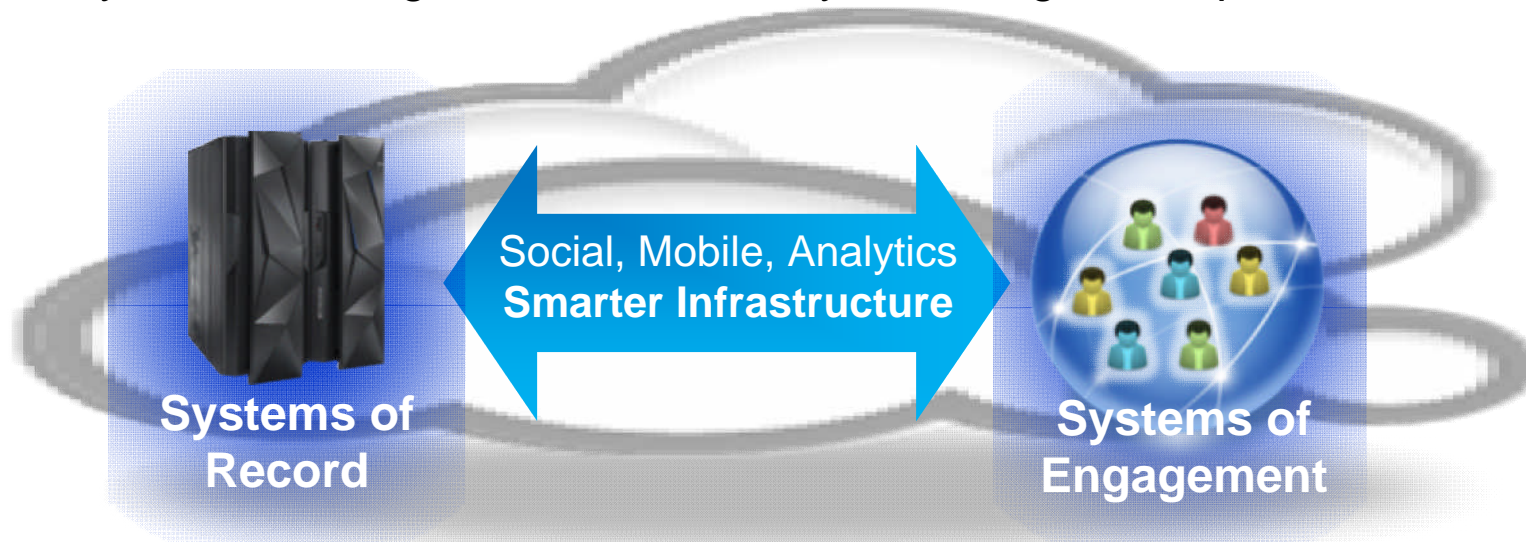
“Strategy and change...”





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

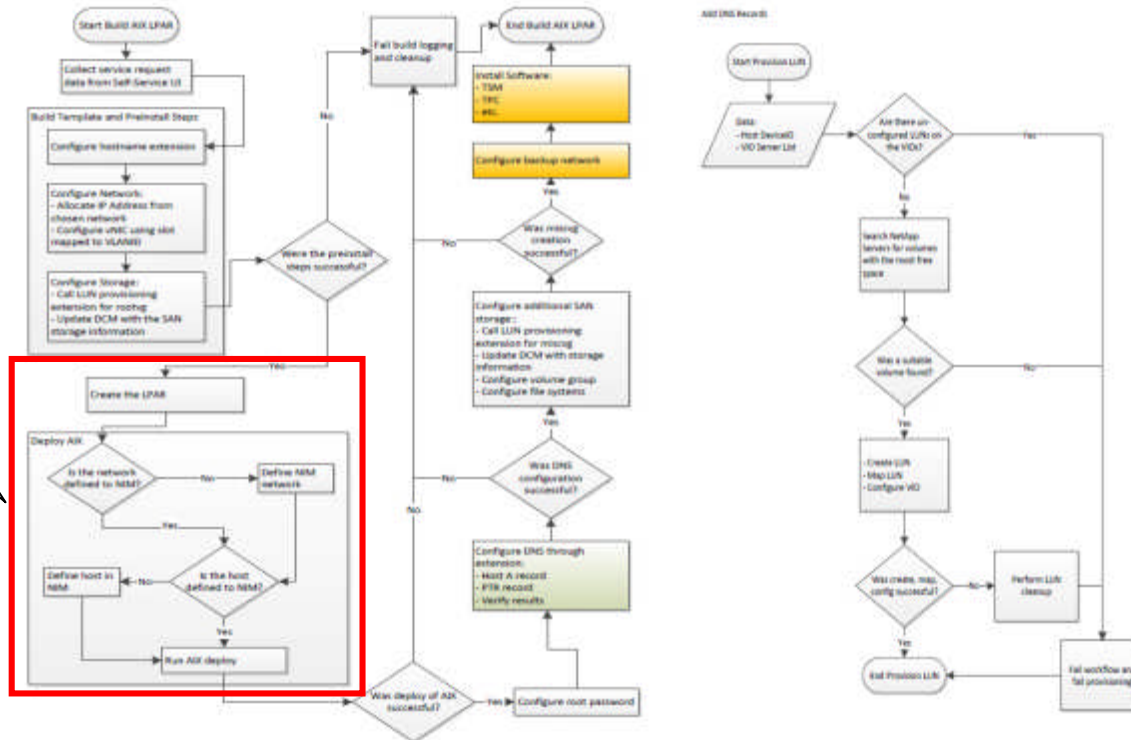
- Performance, security, high availability and disaster recovery
- Data protection and regulatory compliance
- Ability to quickly and easily provision and orchestrate



Evolving Data Centers to include Cloud

- Automated** Cloud service delivery to deploy new apps – many mobile oriented
- Standardized** Deliver “services”: repeatable, controlled, simplified, auditable
- Flexible** Address unique requirements to integrate with existing processes and tools.

VM Provisioning



Real customer example



Cloud implementation can improve overall data center operations

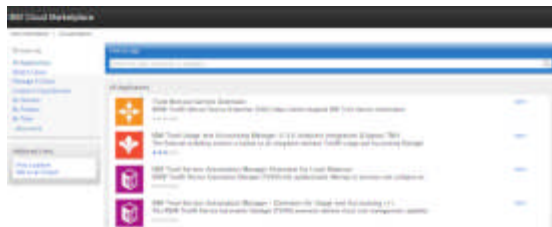
An open and scalable cloud platform

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





Quick and easy implementation of Private Cloud on zEnterprise with provisioning of images and applications

Cloud Ready for Linux on System z

Cloud Monitoring

Service Lifecycle Management

Cloud Backup/Recovery

Automated Provision/De-Provision

Cloud Automation

Installation/Configuration support



Benefits:

- Bring up Cloud on Linux on System z in less than a week
- Improve productivity with user self-service portal



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
- Support of OSLC from OASIS

Platform Services:

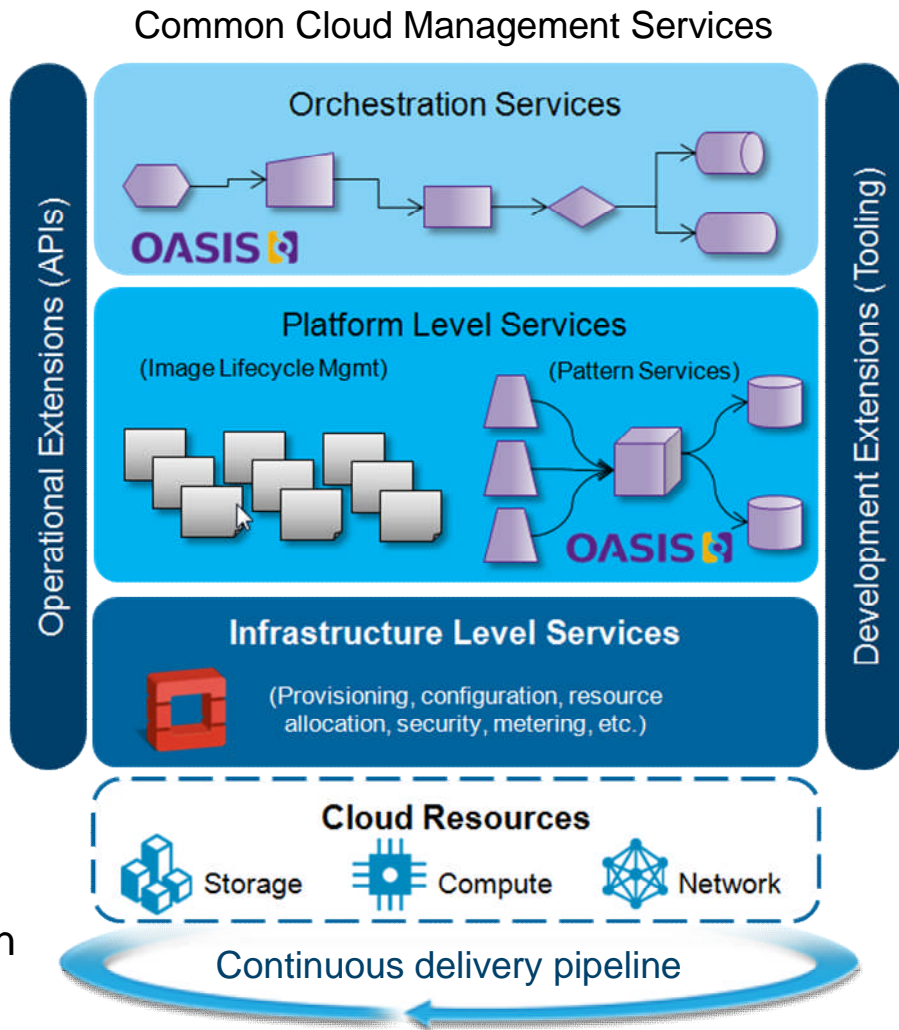
- Simplify deployment & lifecycle management
- Support of TOSCA from OASIS

Infrastructure Services:

- Highly flexible and heterogeneous
- Built on OpenStack

Extensibility:

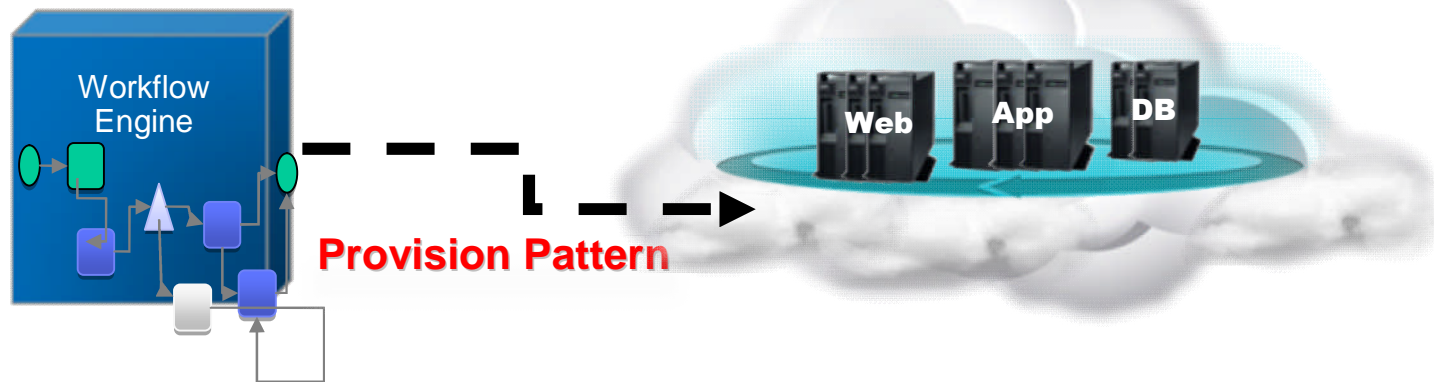
- Plug and play
- Development tooling integration
- Pre-built images, patterns, process automation





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>
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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



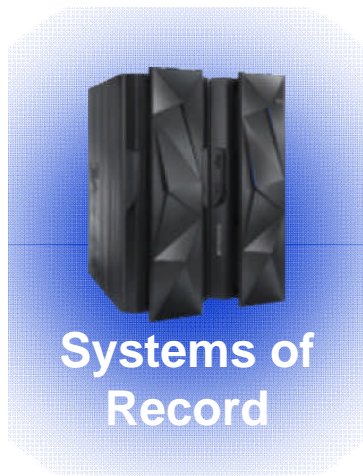
Mobile devices & smart endpoints



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

Manage mobile application workstreams running across z/OS and Linux

- 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



zOS




zLinux



System z Service Management handles high growth rates and scalability of Mobile applications

- 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.
- 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
- CICS Server running on z114 with OMEGAMON XE for CICS monitoring & 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, and Cloud workloads



1. IBM strategy and tools support reliably running **Mobile and Cloud** workloads on System z cost effectively
2. IBM can orchestrate across **z/OS Systems of Record and Linux on z 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/



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