

The value of System Automation for supporting mobile and cloud for System z

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System z proven platform to seamlessly address challenges for Mobile, Cloud and Big Data workloads



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



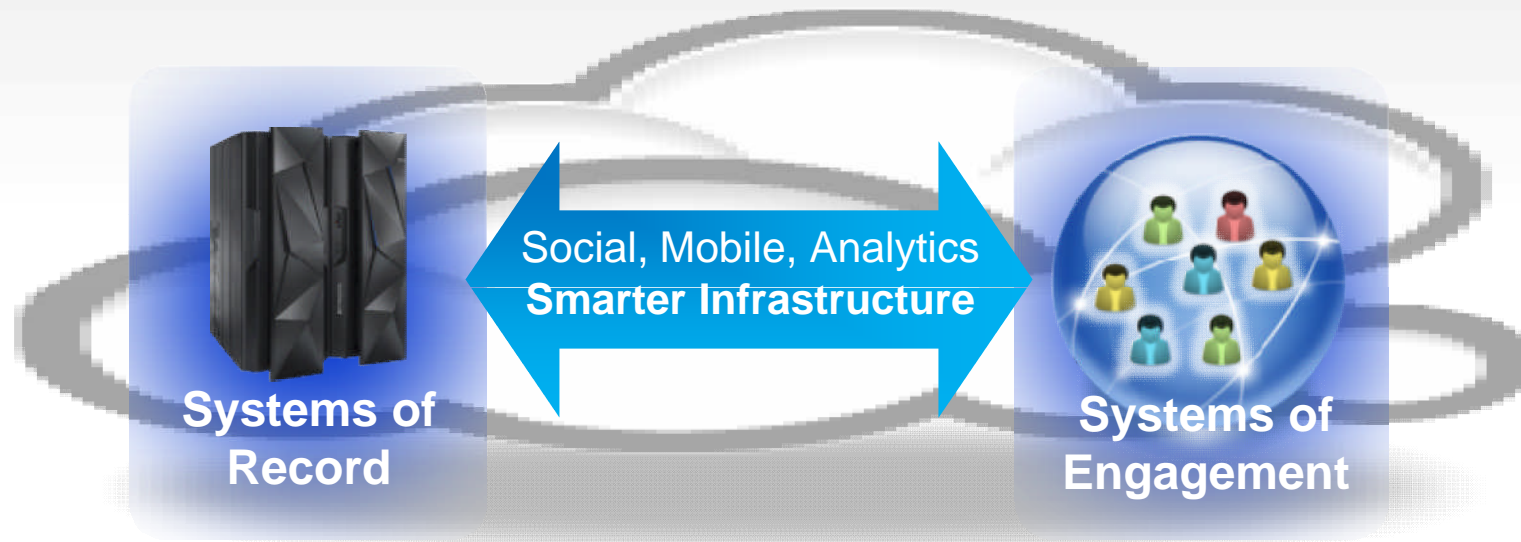
Analytics/Big Data

- Complex, non-traditional data require enterprise-wide data management
- Analytics requires fast, easy heterogeneous data access



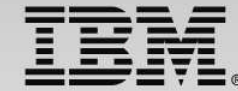
Rapid growth of next generation technologies supported seamlessly on zEnterprise

System z scaling model and security to manage and optimize both



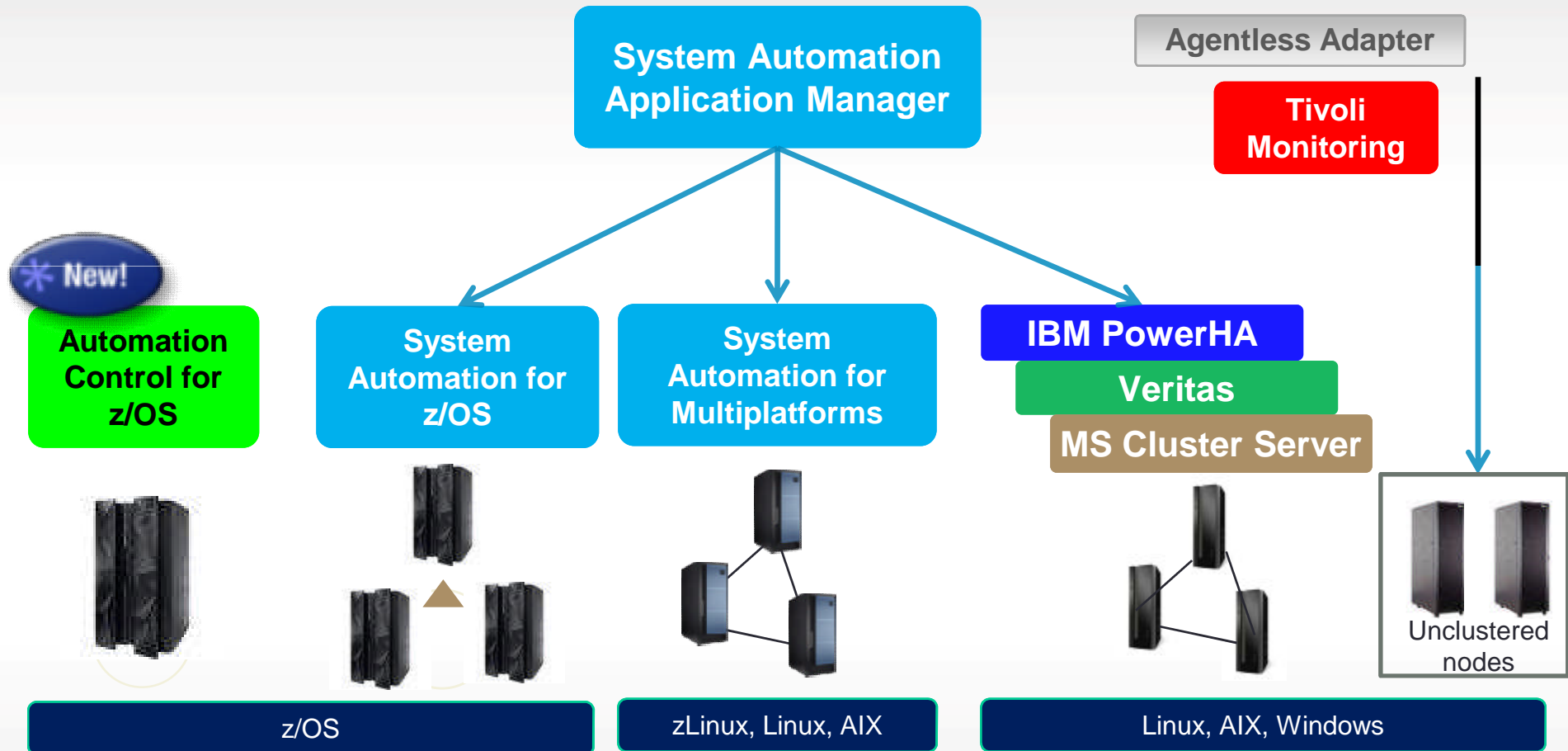
- Business Transactions
- Quality of Service
- Command & Control
- Facts and data “source of truth”
- z/OS

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



IBM System Automation family works together to provide Enterprise-wide cost savings with increased availability

IBM only vendor to provide end-to-end, cross-platform automation

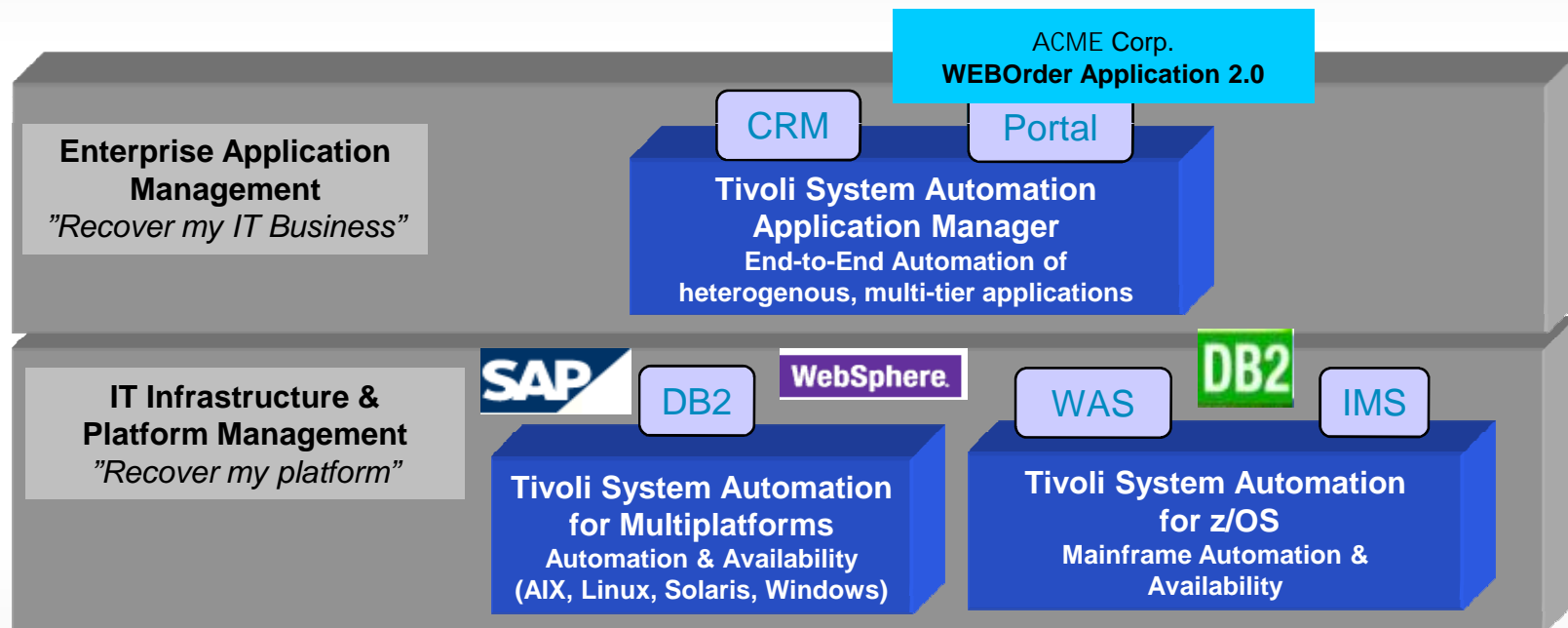




The Value of System Automation



- SA z/OS and SA for Multiplatforms (SAMP) are products ensuring **High Availability** and **Automation** for **complex applications** on different platforms (z,x,p) running z/OS, Linux, AIX, Solaris, Windows
- SA Application Manager (SA AM) delivers a consistent **cross-platform Operation View** and **cross-platform Automation** for **composite applications**
- Together with GDPS the **SA family** delivers unique capabilities for **Disaster Recovery** – ensuring that systems, applications and data are being safely and consistently moved to a secondary datacenter.





System Automation for z/OS (SA z/OS)



What is SA for z/OS?

- Industry leading z/OS automation solution
- Availability and resiliency solution to ensure critical systems are up and running
- For larger clients with **Parallel Sysplex** requiring High Availability and Disaster Recovery
- Policy based. Automates starts, stops, maintenance, restarts

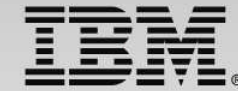
What is the value of SA for z/OS?

- **Automate** routine tasks and reduce manual time and effort
- **Maximize** availability of critical systems and applications
- **Avoid** outages and improve resiliency
- **Increase** performance and operational efficiency



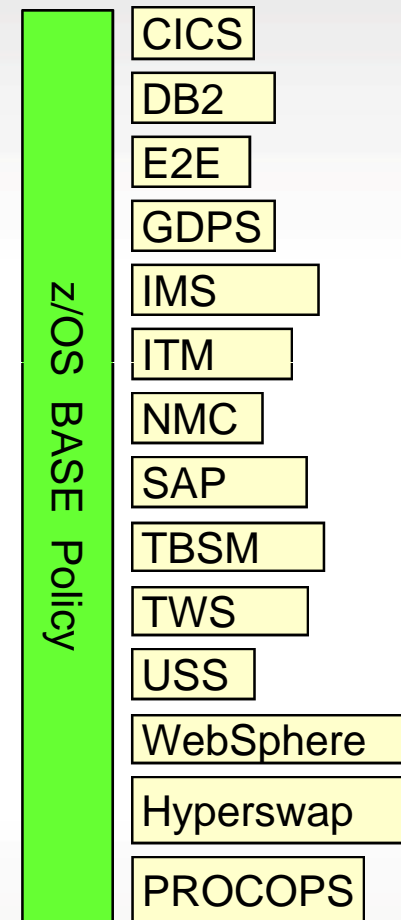


Don't invent the wheel twice – Best Practice Automation Policies out of the box



- Easy to apply for complex System z environments
- Shortening ,Time to Value‘
- Full transparency of automation setup through graphics and HTML-Reports
- Integral part of the product
- Best Practice Automation Policies available for a wide range of applications and subsystems
 - Add-on policies for selective installation

Add-on Policies





IBM Automation Control for z/OS (IACz) targeted at Mid-market single System z environments

- ➔ Entry-level Automation solution on z/OS to start, stop, monitor, and recover z/OS Monoplex environments as well as local System z HW resources
- ➔ Automation Control for z/OS is an Easy to operate solution without additional software pre-reqs

Easy to install & configure - *Smart Configuration Assistance* dramatically improves Time To Value

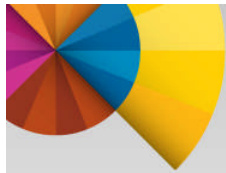
Policy-based & Goal-driven – Maximize efficiency and availability of critical systems and applications.

Secure – Protect your Systems with role based security, simplified operations, and improved usability and auditability

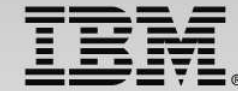
Integrated – With z/OS and IBM Tivoli solutions to improve efficiency and availability



zEnterprise BC12



High Availability Clustering

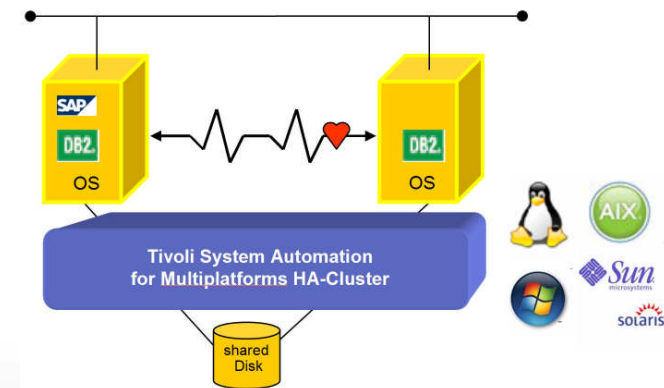


- **Tivoli System Automation for Multiplatforms**

- Provides a **High Availability Cluster**
- **Automates startup and shutdown** in correct sequence of complex, statefull applications
- **Actively monitors** all resources and **reacts on outages of SW and HW** components by automatic restart in correct context

- **Automation Policies** define the **Automation Scope**

- Describe **resources, groups** and **relationships**
- **Define the desired target availability situation**
- No need to develop automation workflow scripts.



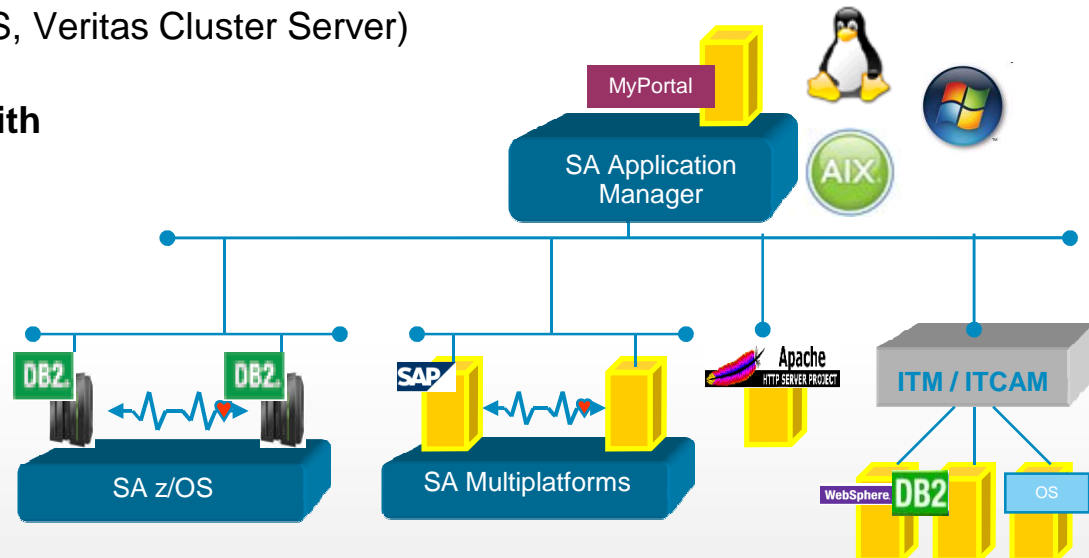


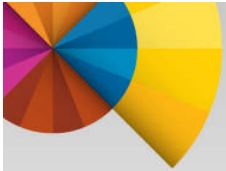
Cross-Platform Business Application Management



Tivoli System Automation Application Manager

- **High Availability and Disaster Recovery management of composite business applications** (Cross-Cluster + Cross-System + Cross-Site)
- **Automates startup, shutdown and resynchronisation** of composite business applications running on different platforms.
- **Integrates ITM/ ITCAM** managed Endpoints for a consistent **management of End-to-End composite business applications**
- **Integrates various High-Availability Clusters** (e.g. SA MP, SA z/OS, PowerHA, MSCS, Veritas Cluster Server)
- **Integrates application components with replicated storage devices** in order to provide a **Multi-site disaster recovery solution.**





System Automation Application Manager offers new Dashboard UI and dynamic automation constructs

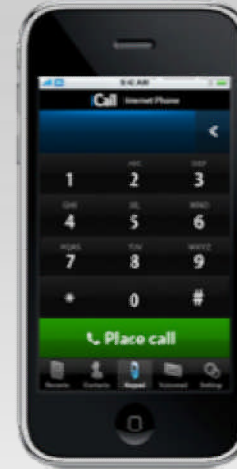
- **Continuous availability** of business applications even in virtualized infrastructure
 - Reduced costs with automatic site failover of applications forming composite workloads
 - Dynamic automation policy constructs allow to grow and shrink application stack on demand
- **Disaster recovery (DR)** capability
 - Site failover of entire business IT environment across unlimited distances
 - Reduced costs thru simplified cross-platform DR capabilities – integrated with GDPS
- **Enhanced Cloud** application management and visualization
 - Build-in for SCO cloud management stack automation
 - Technological Outlook: Monitor and control cloud applications and classic workload through modern Dashboard UI technology
- **Pro-active automation:** Smart integration with IBM Tivoli Monitoring (ITM)
 - Enhanced availability through automatic recovery actions across multiple systems
 - Save 50% on environment customization effort



Mainframe Service Management 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

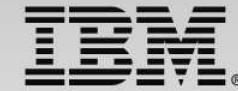


Top Mobile Adoption Concerns:

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



Welcome to System Automation's intended new Dashboard



A set of „pre-defined“ **dashboards** for an operator are intended to deliver information needed for daily work. Each dashboard can be customized to your needs.
Try it: [SA AM transparent development program](#)



IBM Open Service Delivery Platform (JazzSM) – Main Idea



- Common Platform - A **unified platform for UI, Reporting, Registry, Admin and Security** used across different IBM solutions.
- **UI Services** - A **consistent set of UI capabilities with enhancements for dashboard visualization, OSLC linked data support, and focus on improving the overall user experience for both desktop and mobile.**
- **Reporting Services** - A consistent set of reporting capabilities based on IBM's strategic business intelligence platform with enhancements for Mobile, iPad, Drag & Drop Reporting, and more
- **Security Services** – Enables single sign-on capability in Tivoli solutions containing non-WebSphere based products.

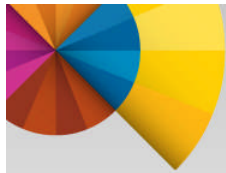
Easier to Navigate: Graphical Navigation, Favorites, and Search



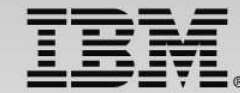
Mobile Support

Solution Dashboards





Get an Overview



- This dashboard shows you **all domains** in your datacenter and the health of the selected domain via icon (health of top-level resource) or via gauge.
- It shows in addition the usage of our new „**SA Global Messages**“ data provider – which gives you a cross domain/ cross operator overview whatsbeing worked on...

The screenshot displays the IBM Dashboard Application Services Hub interface. The main area shows a hierarchy of domains and nodes. A tooltip for the 'FriendlyEZE' domain is visible, providing details such as Name, Communication State, Domain Health State, Log Status, Observed State, Automation Engine Hostname, Automation Product, and Automation Version.

Domains and Nodes

- Domains: DomTask0, DomTask1, DomTask2, FriendlyEZE, KEYAPLEX, SAWAPLEX
- Nodes: DomAppServ, DomAppServ, DomAppServ, DomAppServ, DomAppServ

Online Resources

FriendlyEZE: 3

Resource States

- 3 (Green)
- 3 (Yellow)
- 2 (Red)
- 0 (Grey)

Top Level Resources

Filter

- Error
 - WebServA2 (Unknown)
 - AppServA2 (Unknown)
- Warning
 - WebSphere E2E (Unknown)
 - A1Repl (Unknown)
 - Friendly Computer Shop (Unknown)
- OK
 - WebServA1 (Online)

Messages

Time	Severity	Text	Originator
Feb 3, 2014 1:38:59 PM	OK	The online request against WebServA1 has been submitted for processing	eezadmin
Jan 30, 2014 5:44:51 PM	OK	The command to cancel the operator request against AppServA1 has been submitted for process	eezadmin

Total: 47 Selected: 0

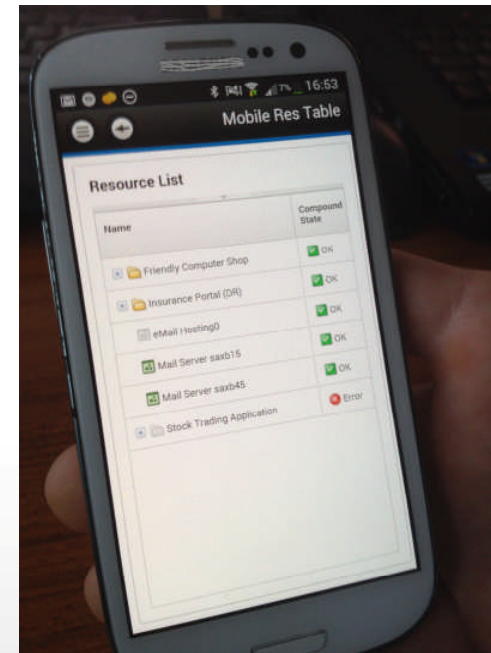
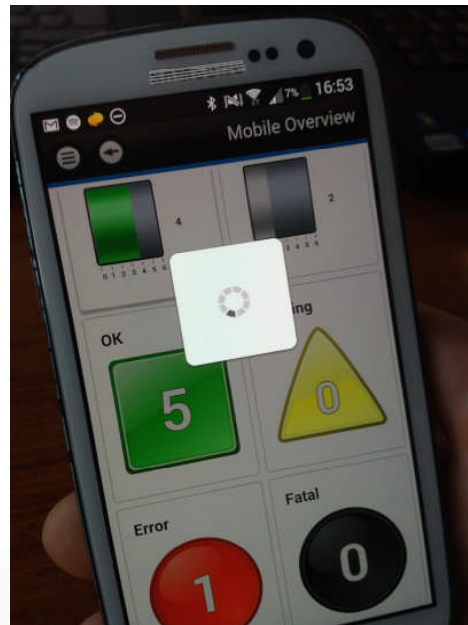
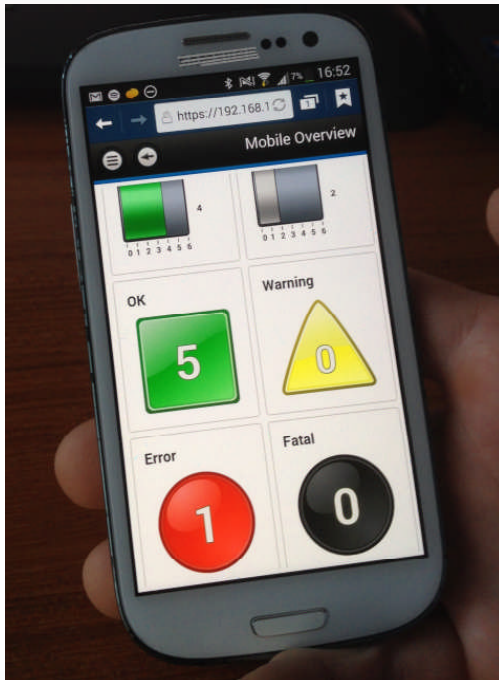


Cool Idea: Create SA Dashboards suitable for Mobile



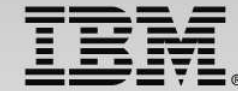
Just try it: Create an interactive SA mobile dashboard

Source: [SA AM transparent development program](#)





Enable one-click-resilience for Cloud Service Consumers

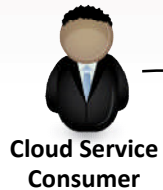


System Automation Cloud Support

The Cloud Service Consumer ...

... can request the deployment of a **cloud service with Resilient QoS** (e.g. RTO/RPO).

... does not need to know technical details about (hidden complexity)

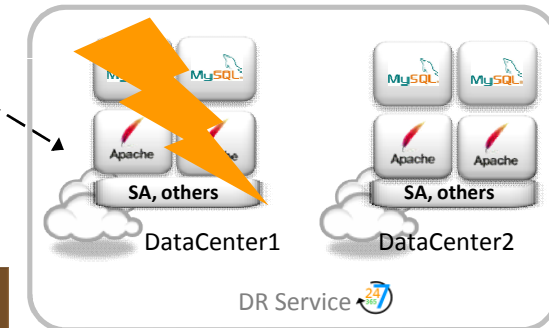
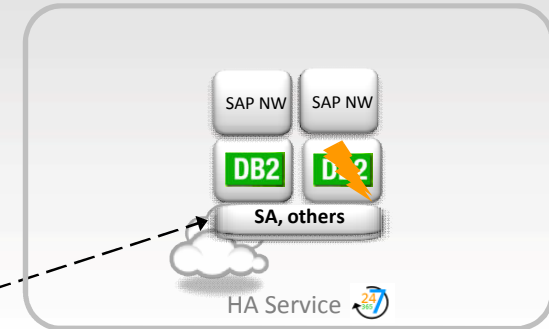


Cloud Service Consumer

TOSCA-based Cloud Service Offerings with Resilience QoS

- SAP CRM HA enabled**
 - High Availability QoS
 - RTO = 5 mins
 - RPO = 0 s
- SugarCRM DR enabled**
 - Disaster Recovery QoS
 - RTO = 12 hours
 - RPO = 1 hour

Cloud Mgmt Stack



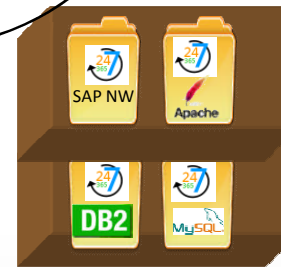
The Cloud Service Provider ...

... can offer pre-canned, TOSCA-based cloud service with Resilient QoS provided by IBM, ISW, others

... build **aggregated cloud service offerings** with resilient QoS based on existing patterns or provide new resilience patterns for middleware components



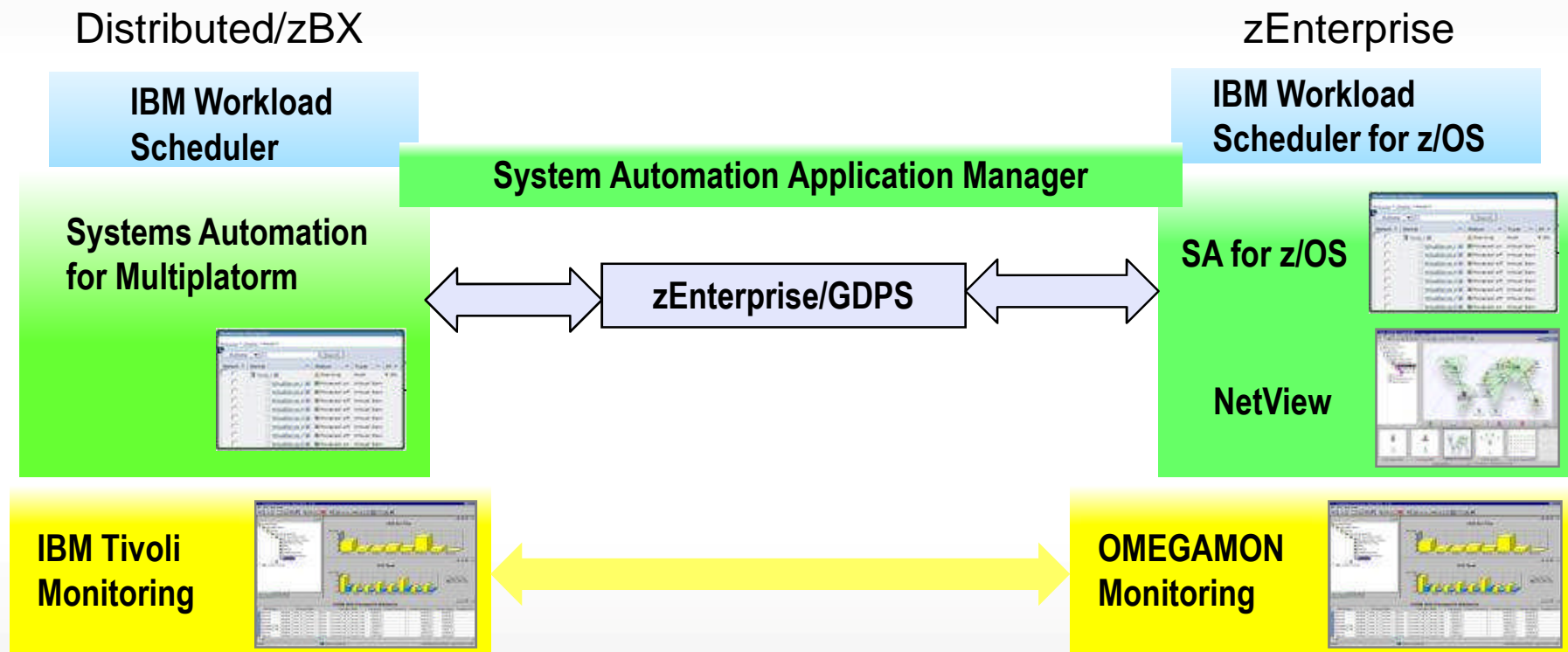
Cloud Service Provider





Monitoring, System and Workload Automation work together across entire enterprise, including cloud

IBM provides end-to-end support including high availability





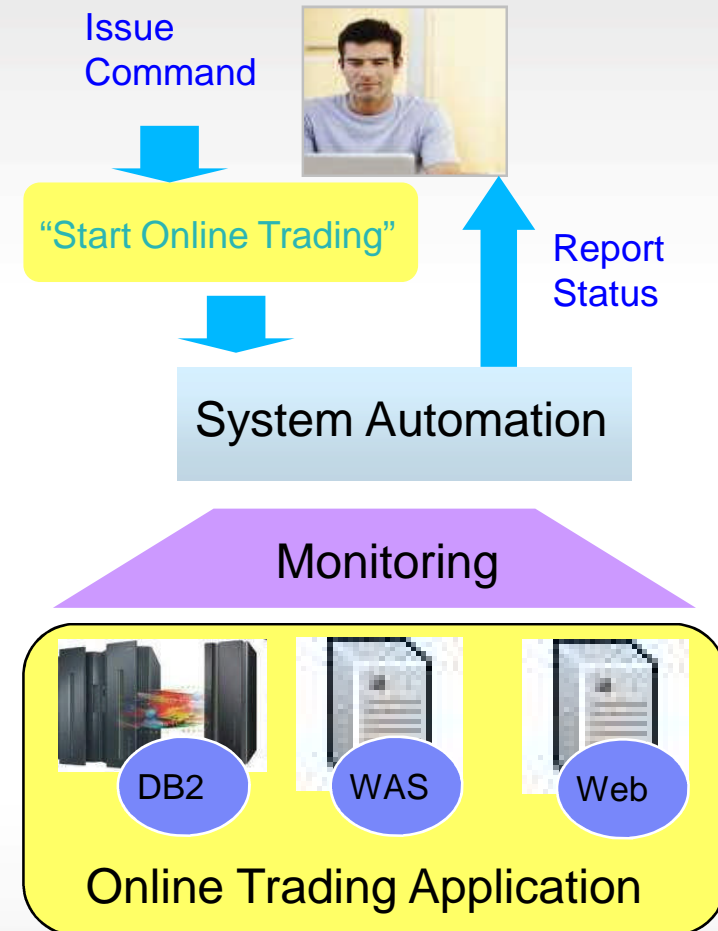
End-to-End Automation with System Automation and monitoring simplify operations and increase availability

Scenario:

- Operator triggers start of application with command
- After startup, Monitoring Agents reports online status
- SA sets aggregated state of “Online Trading Appl.” to “online”
- Agents monitor application and report to SA

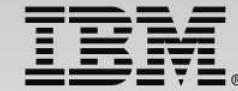
Value:

- System Automation provides single view of entire application (distributed and z)
- SA can monitor application based on KPIs and manage problems before they become outages
- Manage availability with automatic recovery actions across entire application
- Automate operations to free up staff to handle more important tasks.





Customers like it: GAD



Client statement on the value of System Automation

"System Automation for Multiplatforms (SAMP) and Application Manager (SAAM) help us to manage our Linux environment much more efficiently.

We think it saves us up to 4 person years of otherwise required scripting effort and it provides us with a unified way of controlling our resources.

Our operators have a single place to visualize and control services on up to 1000 Systems. We can also exploit SAAM functionality to control clustered systems and applications through other products such as Tivoli Workload Scheduler.

Mainframe resources managed by SA z/OS are included and managed as resources in our SAAM Operations Console – that gives us a cross-cluster span of control across all clustered platforms.

In the next release, we especially like the new SAAM Operations Console which offers customizable Dashboards to better visualize and operator our environment. This new technology is more intuitive, flexible and faster – we think this will improve our operator efficiency.



Industry: Banking, Financial Markets

Profile: GAD eG provides information technology (IT) services to the banking industry, serving as one of only two companies in Germany that offers data-processing-center services.

Muenster-based, the company is an IT service provider for approximately 500 cooperative banks in Germany, and it's a software developer for the cooperative organization Genossenschaftlicher FinanzVerbund.

Size: 1000–4999

Category: SMB



Business success directly dependent on health of underlying IT systems, applications, and networks



1. IBM System Automation supports reliably running **Mobile and Cloud** workloads on System z cost effectively
2. IBM System Automation can orchestrate across **Systems of Record and Systems of Engagement** for workload aware application management
3. IBM only vendor who can tie technologies together with **Visibility, Control and Automation** to meet end-to-end SLA

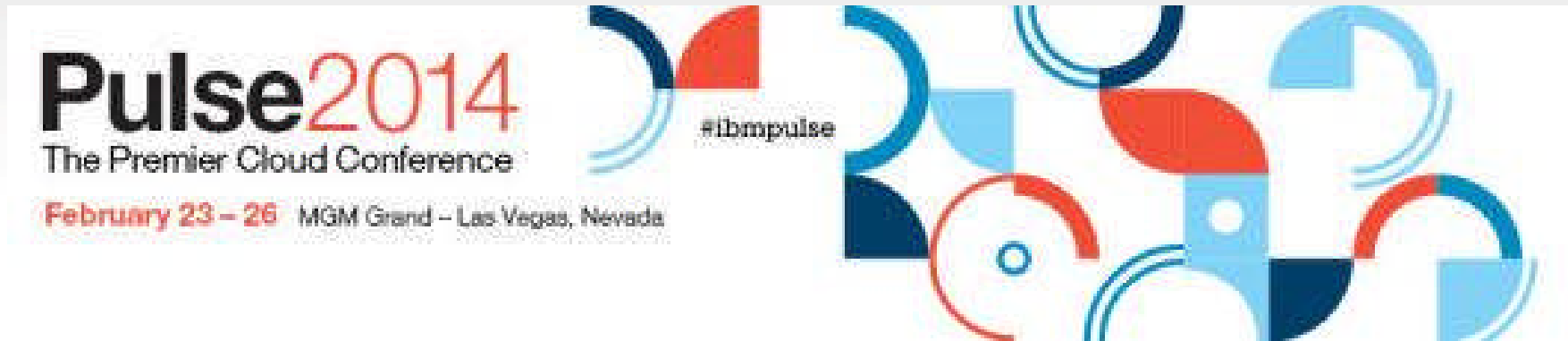


Learn more about the individual capabilities of IBM's System Automation Solution

IBM Tivoli NetView for z/OS	http://www-01.ibm.com/software/tivoli/products/netview-zos/
IBM Tivoli Network Manager	http://www-01.ibm.com/software/tivoli/products/network-mgrproductline/
Tivoli Application Dependency Discovery Manager	http://www-01.ibm.com/software/tivoli/products/taddm/
Tivoli Workload Scheduler	http://www-01.ibm.com/software/tivoli/products/scheduler/
Tivoli Netcool/OMNIBus	http://www-01.ibm.com/software/tivoli/products/netcool-omnibus/
Tivoli Business Service Manager	http://www-01.ibm.com/software/tivoli/products/bus-srv-mgr/
IBM Tivoli Monitoring	http://www-01.ibm.com/software/tivoli/products/monitor/
Tivoli OMEGAMON XE for Mainframe Networks	http://www-01.ibm.com/software/tivoli/products/omegamon-xe-mainframe/
Tivoli System Automation for z/OS	http://www-01.ibm.com/software/tivoli/products/system-automation-zos/
IBM Geographically Dispersed Parallel Sysplex	http://www-03.ibm.com/systems/z/advantages/gdps/index.html



Learn more about System Automation and Cloud on System z at Pulse 2014



- System z track: Over 40 sessions
 - Customer, Analyst and Business Partner Sessions
- Meet the Experts
- Demos and Hands on Labs

<http://www-01.ibm.com/software/os/systemz/pulse/index.html>



Keep up with what is happening on Tivoli System z

Pulse

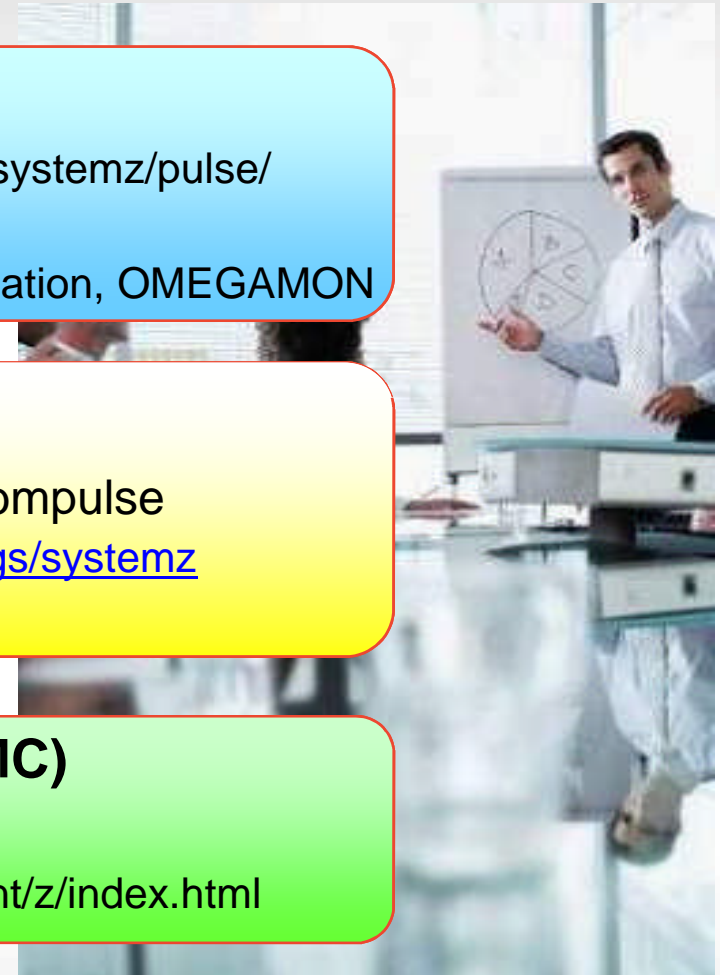
- Pulse System z: <http://www-01.ibm.com/software/os/systemz/pulse/>
- Meet the Experts Sessions in Expo Hall
- System z track: System Automation, Workload Automation, OMEGAMON

Service Management Social Media

- Twitter: @servmgtconnect, #mainframe and #ibmpulse
- System z Blog: <https://www.ibm.com/connections/blogs/systemz>
- Tivoli Blog: <http://www.servicemanagement360.com/>

System z Service Management Connect (SMC)

- Latest News and Connect with Experts
- <http://www.ibm.com/developerworks/servicemanagement/z/index.html>





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