



What's New with Workload Automation and Scheduling on z/OS

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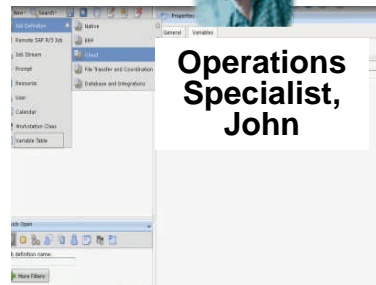


Let's start with a Tivoli Workload Scheduler for z/OS scenario

CIO of a retail company



Operations Specialist, John



Operations Specialist, John



CIO



- Need to monthly analyze up-to-date business reports
- On sales periods, need to analyze business reports at will
- Processes in support of business reports run on distributed servers
- Need to save resource costs



- Define a workflow through TWS z/OS web console
- Links together FTP processes, ETL and Cognos applications
- Starts with a provisioning and ends with a de provisioning task
- Assigns “just-in-time” resources to the workflow



- Defines a business service called “Report generation” in the Self-Service Catalog
- Links “Report generation” with the previously created workflow



- From a smart phone, accesses the catalog of services
- Selects “Report generation” and launches
- Report will be produced and send to her email address

Products: TWS z/OS + “z-centric” agents, SmartCloud Provisioning

Tivoli Workload Scheduler focuses on increasing business agility with enhanced automation

Enhanced flexibility	Extended automation	Cloud optimization
<ul style="list-style-type: none">• Streamlines business services mapping with better modeling, crisper policies for automated reaction, and better interface presentation.	<ul style="list-style-type: none">• Improved organizational efficiencies by integrating processes across all frontiers, teams and platforms in end-to-end solutions.	<ul style="list-style-type: none">• Reduced application management costs through exploitation of cloud computing models.

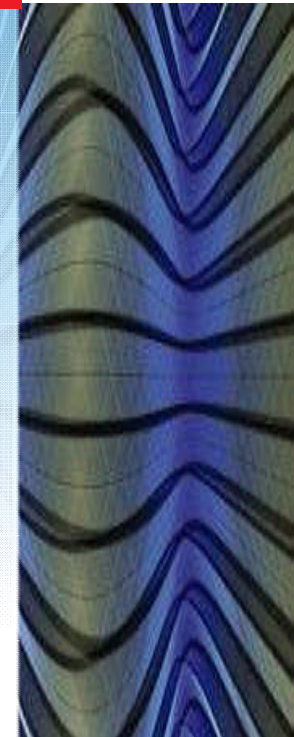
Upcoming Workload Scheduler and Automation provides right level of flexibility to move applications into Cloud

Improved Visibility, Control and Automation decreases costs and improves productivity



Enhanced flexibility

- Decouple scheduling logic from objects through “Run-Cycle groups”
- Enhance choreography with new matching to solve dependencies
- Apply quick filters on TDWC monitoring views
- Impact analysis scenarios with LTP graphical view
- Mirroring DB and its impacts on TDWC performances



Increase productivity by decoupling scheduling logic from objects

Value

- More flexible, easier and re-usable definition of scheduling rules
- Enhanced ability to map all environment constraints and dependencies
- Reduce the human intervention to a minimum level (reduced need to generate “periods” and “calendars”)



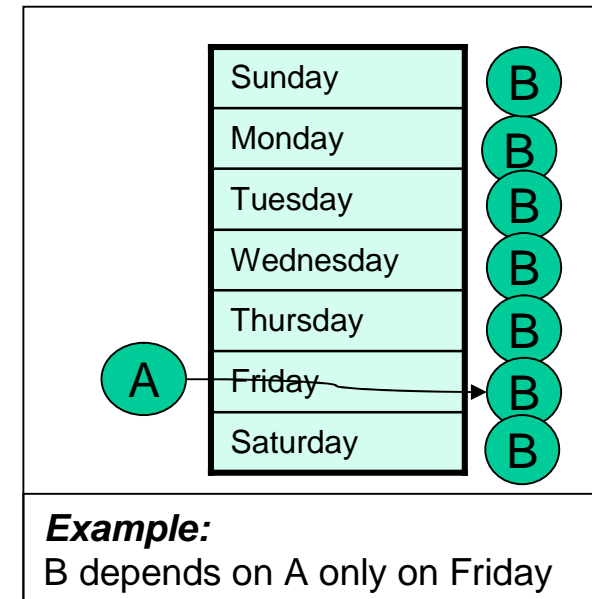
Features

- New distinct “Run Cycle Group” database object decouples the scheduling logic from the scheduled objects
- More sophisticated scheduling rules are allowed through the definition of logical rules applied to subsets in Run Cycle Groups
- Run Cycle Groups can be used as Periods (TWS z/OS) or Calendars (TWS d)
- “Shift” can be defined for Run Cycles as well as Run Cycle Groups

Increase flexibility with new criteria to link jobs in chains

Value

- Enhanced ability to map all environment constraints and dependencies
- Standard behavior across mainframe and distributed engines



Features

- Additional “matching criteria” to resolve dependencies in TWS z/OS jobs
 - Closest input arrival time within the same day
 - Closest input arrival time within a relative interval
 - Closest input arrival time within an absolute interval
- “Mandatory” dependencies to map on-demand scheduling scenarios

Simplify operations with new Tivoli Dynamic Workload Console quick filters

Value

- Improved operations and speed of use

Features

- Free text field to reduce monitoring query results
- Applicable to task lists
- Wildcards supported

All Jobs in plan (Distributed) (Owner: tipadmin; Engine: nc926121_QA,Distributed)

Monitor Jobs ▸ Active Tasks (1) × ▸ All Jobs in plan (Distributed) (Owner... ×

Close Plan Name: Current Plan

Job Log... Dependencies... Release Dependencies Rerun... Show Rerun Instances More Actions ▾ Graphical Views ▾

HP123

Showing 9 out of 169 containing 'HP123' in All columns Clear filter

	Status	Internal Status	Job	Job Type	Workstation (Job)	Job Stream	Workstation (Job Stream)
<input type="checkbox"/>	Waiting	HOLD	AGINESTR_JOB_	Executable	AGT91HP123456789	AGINESTR_CRITJS	NC926121_MASTE
<input type="checkbox"/>	Waiting	HOLD	AGINESTR_JOB_	UNIX	FTA91HP123456789	AGINESTR_CRITJS	NC926121_MASTE

Enhance impact analysis using Long Term Plan graphical views

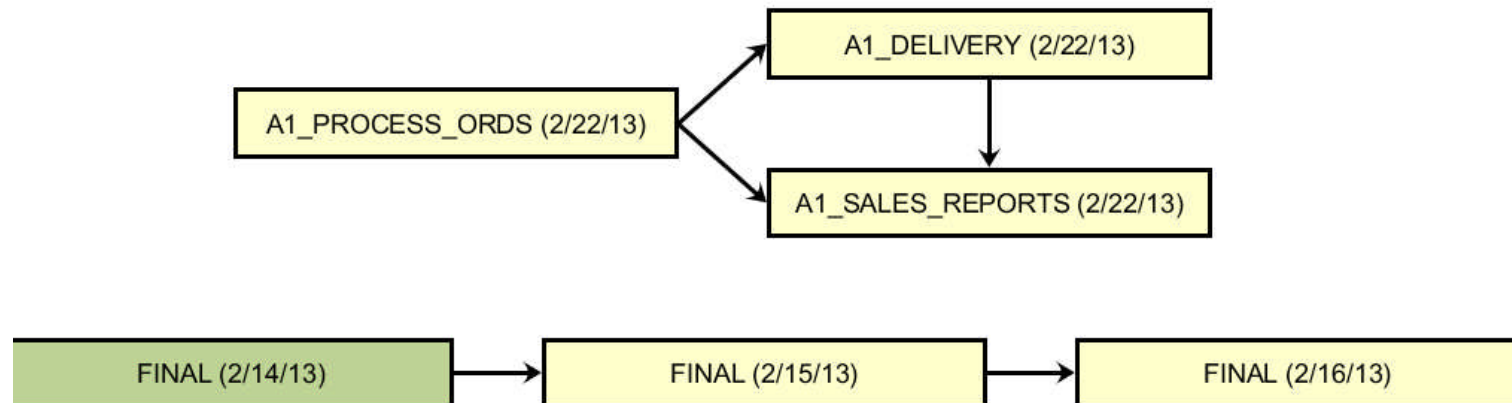


Value

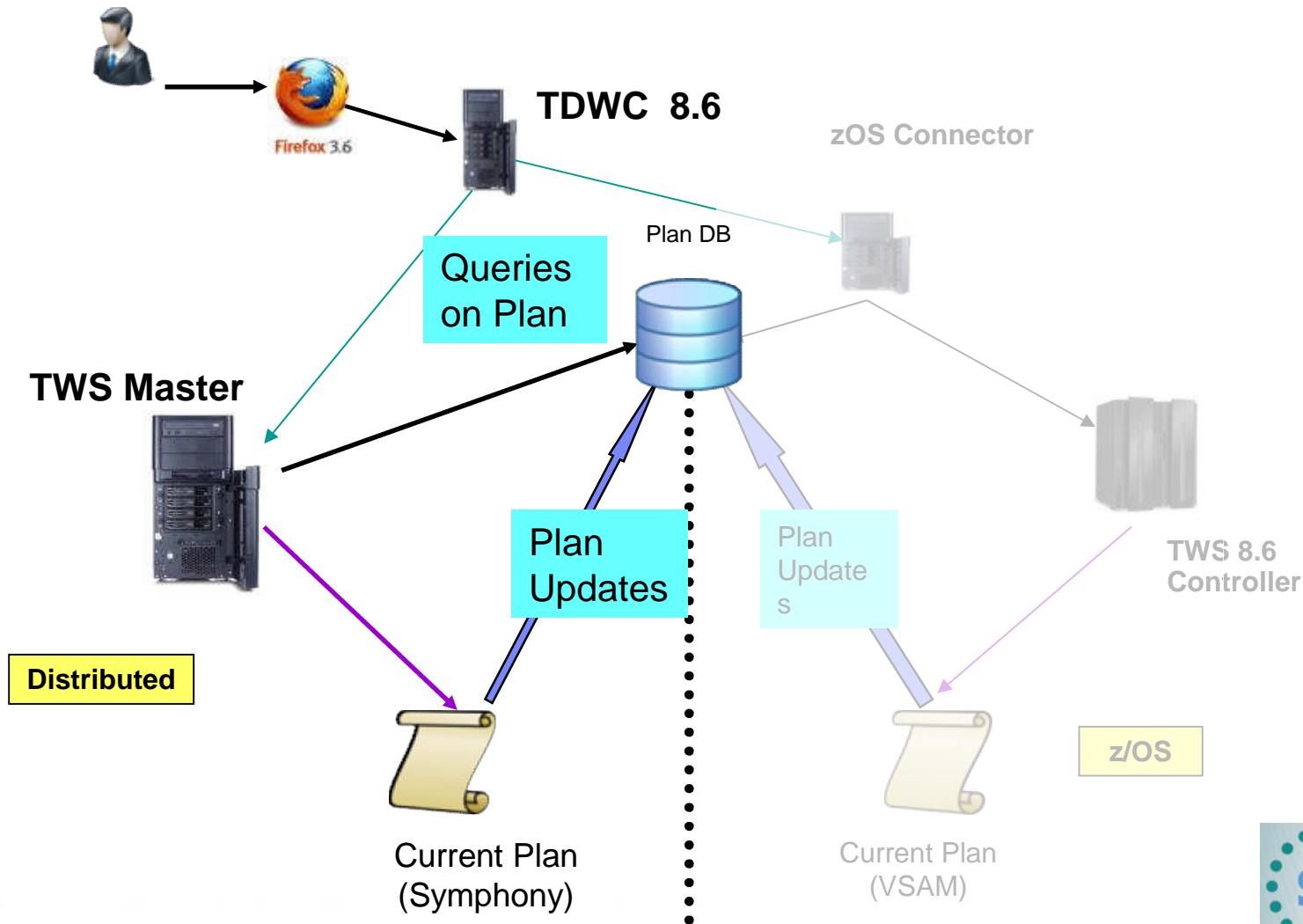
- Impact analysis of scheduling changes
- Streamlined view of workflows and easy understanding of impact changes beforehand

Features

- Pre production graphical view in TWS distributed
- Shows jobstreams and their dependencies in a specific timeframe



Increase end-to-end support with mirroring Database



Improved productivity and ability to meet SLAs with extension to automation

Extended Automation

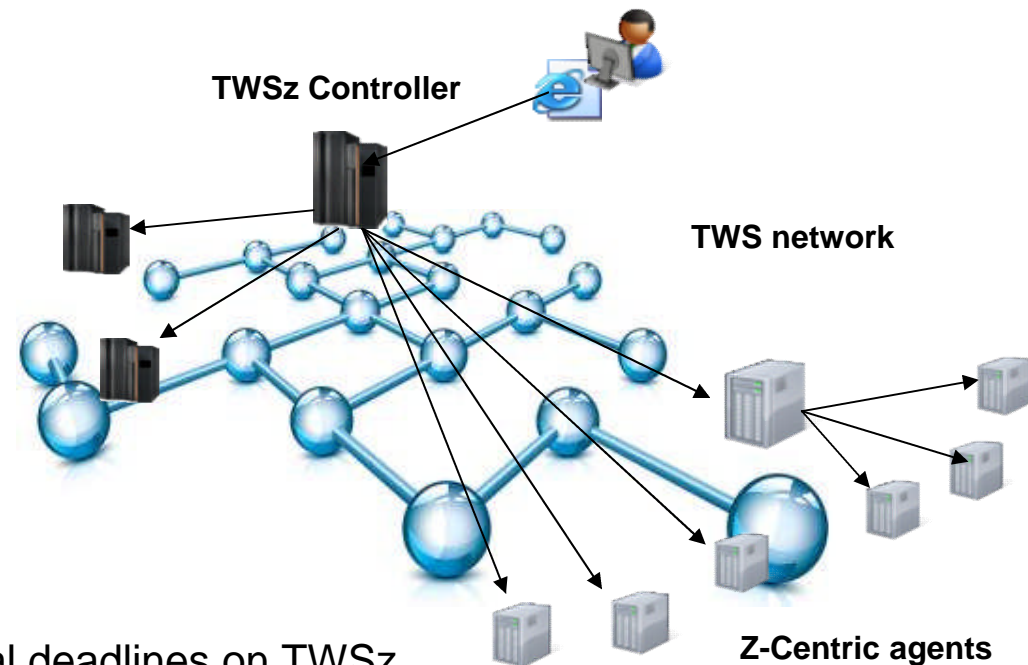
- Workload Service Assurance enhanced in z-Centric to end-to-end solutions
- Event Driven Workload Automation can be implemented in z-Centric solutions with easier deployment
- Automatic and centralized upgrade of a z-Centric environment
- Exploiting RES capability



Increase ability to meet SLAs with enhanced workload service assurance

Value

- Workload Services Assurance maps business Service Level Objectives into products
- New features will enhance the ability to match SLA

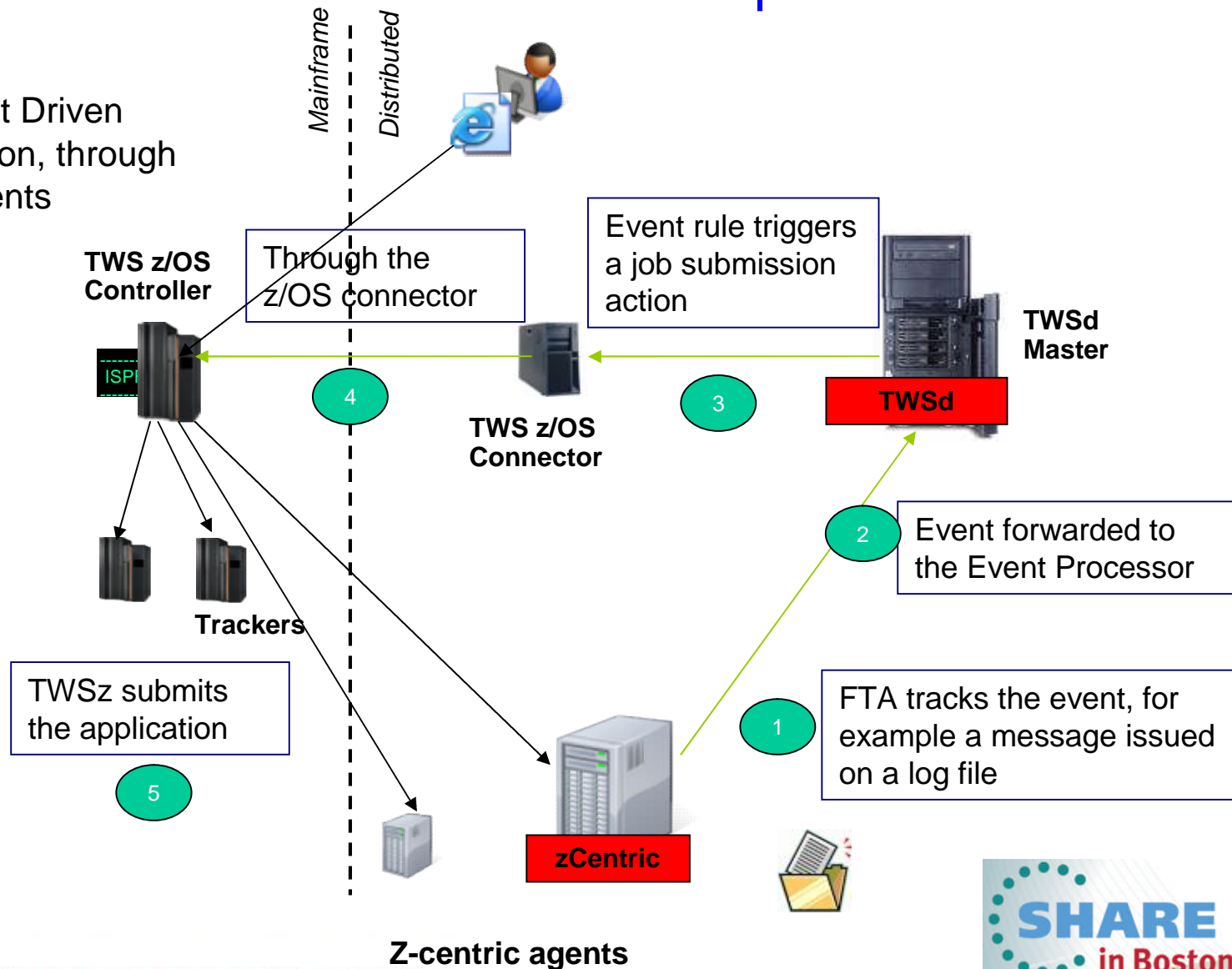


Features

- Easy modeling through optional deadlines on TWSz
 - Increase scheduling accuracy and WSA configuration
- Promotion algorithm extended to distributed jobs in a z-Centric network
- Changes to SLA jobs produce proactive alerts
- SLA data are stored for Reporting purposes

New event driven workload automation on TWS z/OS z-centric moves automation one step forward

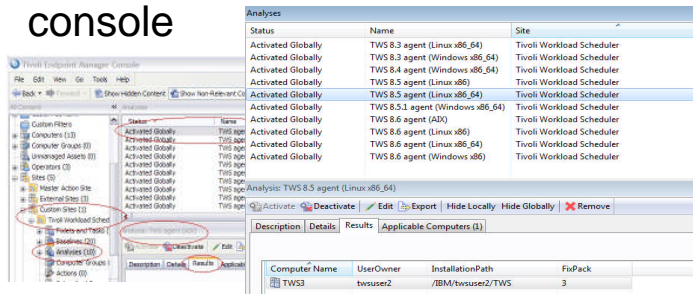
Sophisticated Event Driven Workload Automation, through additional components



Automatic upgrade of distributed network reduces maintenance costs

Value

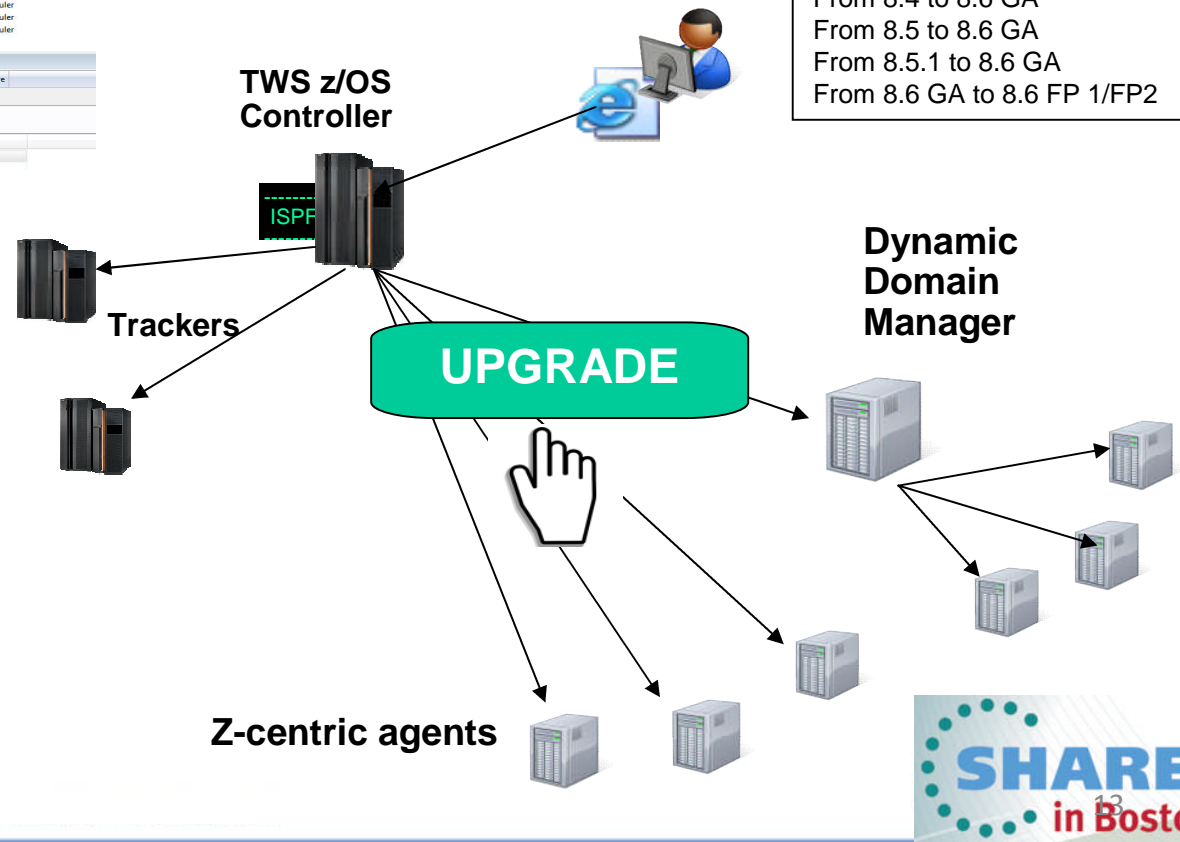
- TWS integration with IBM Endpoint Manager (IEM) provides a unified, real-time visibility and enforcement to deploy and manage upgrades to all endpoints from a single IEM console



From 8.3 FP >= 7 to 8.6 GA
 From 8.4 to 8.6 GA
 From 8.5 to 8.6 GA
 From 8.5.1 to 8.6 GA
 From 8.6 GA to 8.6 FP 1/FP2

Features

- Analysis** can be applied to a filter/list of all TWS agents and provide info on the fixpack level
- Fixlets/tasks** automatically finds the agents where to install upgrades. When the Fixlets become relevant, you can schedule or run a TWS upgrade installation



Research for Enterprise Systems (RES) Business Partner products extends overall workload automation operations



1 *Jobs and Applications Management*

- ❖ Simplified Automation

2 *IT Asset Documentation:*

- ❖ Workload Knowledge

3 *Batch Environment Reengineering*

- ❖ Performance and Reliability

4 *End-User Autonomy*

- ❖ End-user autonomy

5 *Being Proactive*

- ❖ Forecast and monitoring - Proactivity

**RES
SUITE**

J-MAN

Docet/MP & WIC

Re-Engineering

UpTown/MP

Ws-Planning

Research for Enterprise Systems (RES) Business Partner products extends overall workload automation operations



What's new

- IBM recently announced a sales relationship with a key Workload Automation Business Partner, Research for Enterprise Systems (RES).
- The RES Suite of products add significant value to TWS z/OS.

Features/Business Value

RES adds value to IBM Tivoli Workload Scheduler for z/OS. The RES Suite helps streamline systems governance, operations, automation, quality control, and data management in System z® environments.

- RES Suite J-MAN V4.1 - Reduces development and maintenance efforts while migrating System z and scheduling objects definition from development, to test, to production environments. It implements changes of Job Control Language and Tivoli Workload Scheduler for z/OS or other vendor scheduler's objects, plus automatic cloning and replication of environments.
- RES Suite Docet/MP V4.1 - Supports consistency of Tivoli Workload Scheduler for z/OS and IT system objects through complete documentation and cross-reference mapping of all IT assets.
- RES Suite Re-Engineering V4.1 - Reduces CPU consumption by reducing the batch window through increased parallelism in workload execution.
- RES Suite Uptown/MP V4.1 - Facilitates scheduling operations by giving complete autonomy for users to execute and manage on-demand batch processing.
- RES Suite Ws-Planning V4.1 - Reduces human intervention to a minimum level through predictive analytics on business services.



Workload Automation will be critical for successful deployment of Cloud



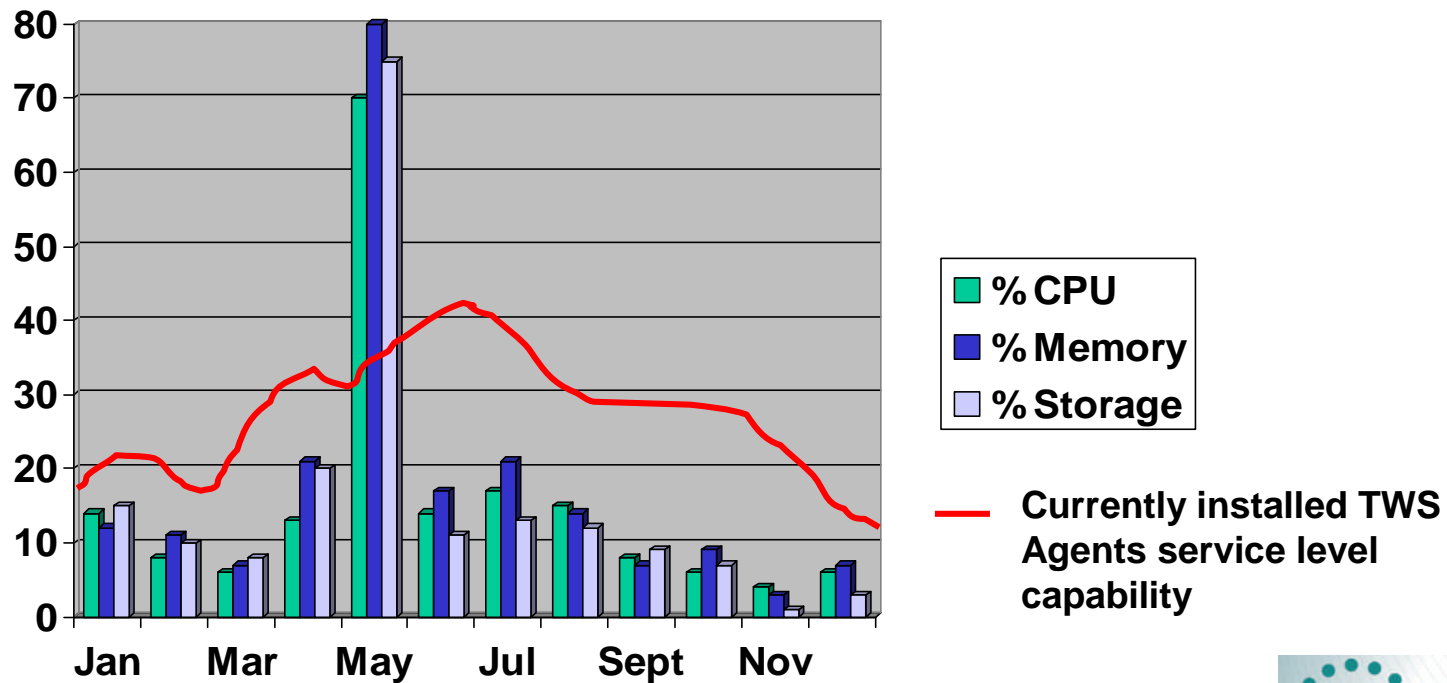
Cloud Optimization

- Run applications on “just-in-time” provisioned cloud resources
- Streamline lifecycle management of workload automation through reuse of patterns with built-in experience (“workload application template”)
 - Envision scenarios where patterns provided out of cloud
- OSLC integration, TWS as provider and consumer of automation services



Batch Cloud Scenario Example

- A very big cross platform batch application needs to run once a year
- A huge number of distributed servers is necessary
- TWS agents currently installed cannot cover all the demanded resources



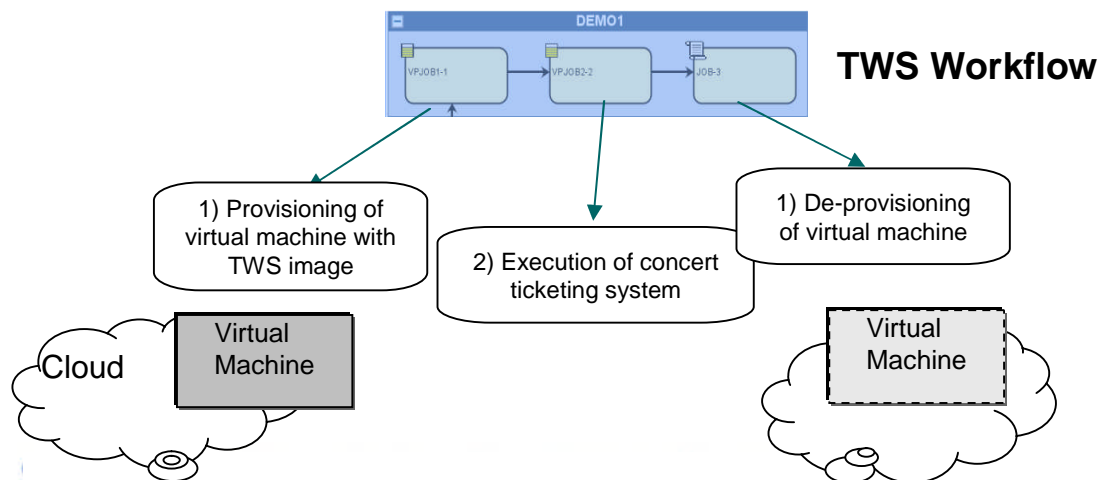
Run applications on “just-in-time” provisioned resources (concept of IT without infrastructure)



Value and Features

- Automate end-to-end applications that span from physical machines, virtual machines, private cloud and public cloud
- Leverage cloud’s elastic capabilities to expand or shrink investment levels in real-time based on changing business needs, thus lowering IT costs and improve time to value
- Dynamic provisioning (and de-provisioning) of a new workload automation (distributed or z-Centric) environment for applications subject to high demand over a short period of time

Example: Concert Ticketing System



SmartCloud Provisioning integration

- Automate SCP job for provisioning/deprovisioning of Cloud resources
- Integrate with other applications and tasks in the same workflow



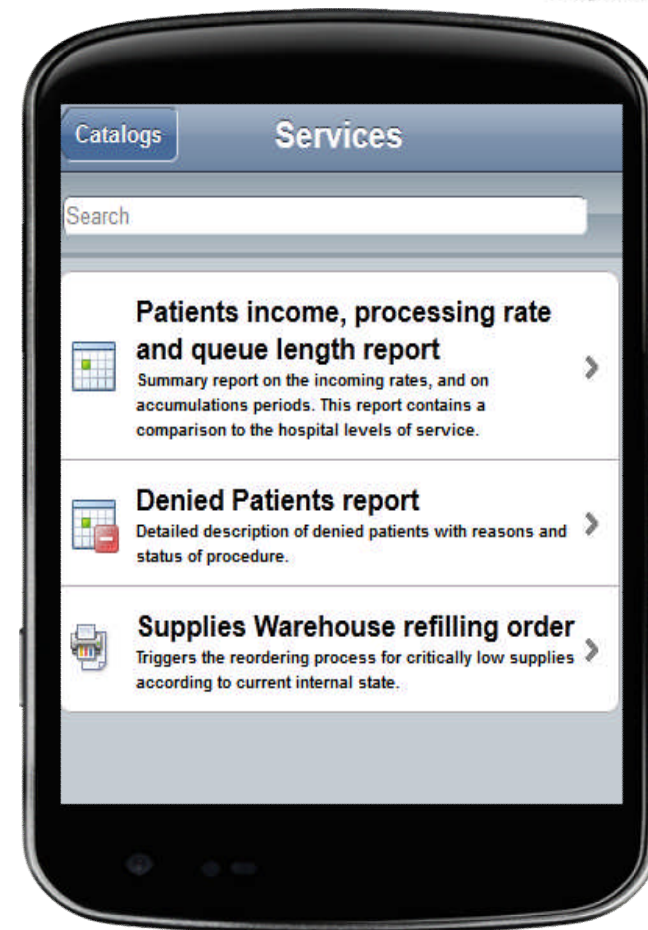
Offer all the services from a self-service catalog

Value

- New web-based interface, based on Service Catalog paradigm, for business users to trigger and monitor business services
- Available on smart devices
- On-demand submission of workflows guarantees autonomy to business users
- Available and unique for TWS z/OS and TWS distributed

Features

- Deliver customized information to the business
- Hide complexity of operations
- Allows to run business services from anywhere at anytime
- Displays Service Level Agreements



Standardize and re-use new ‘workload application templates’ for easier ability to move to cloud

Value

- Improved TTV through asset reuse, standardization and sharing across user communities
- Streamline lifecycle management of workload automation solutions, by importing/exporting workload application templates from development to test to production with minimum customization effort
- Re-use patterns with built-in user experience, by instantiating workload application templates throughout different locations of an organization
- Deploy TWS solutions over cloud-provisioned IT resources for a self-contained solution to be created and destroyed on demand



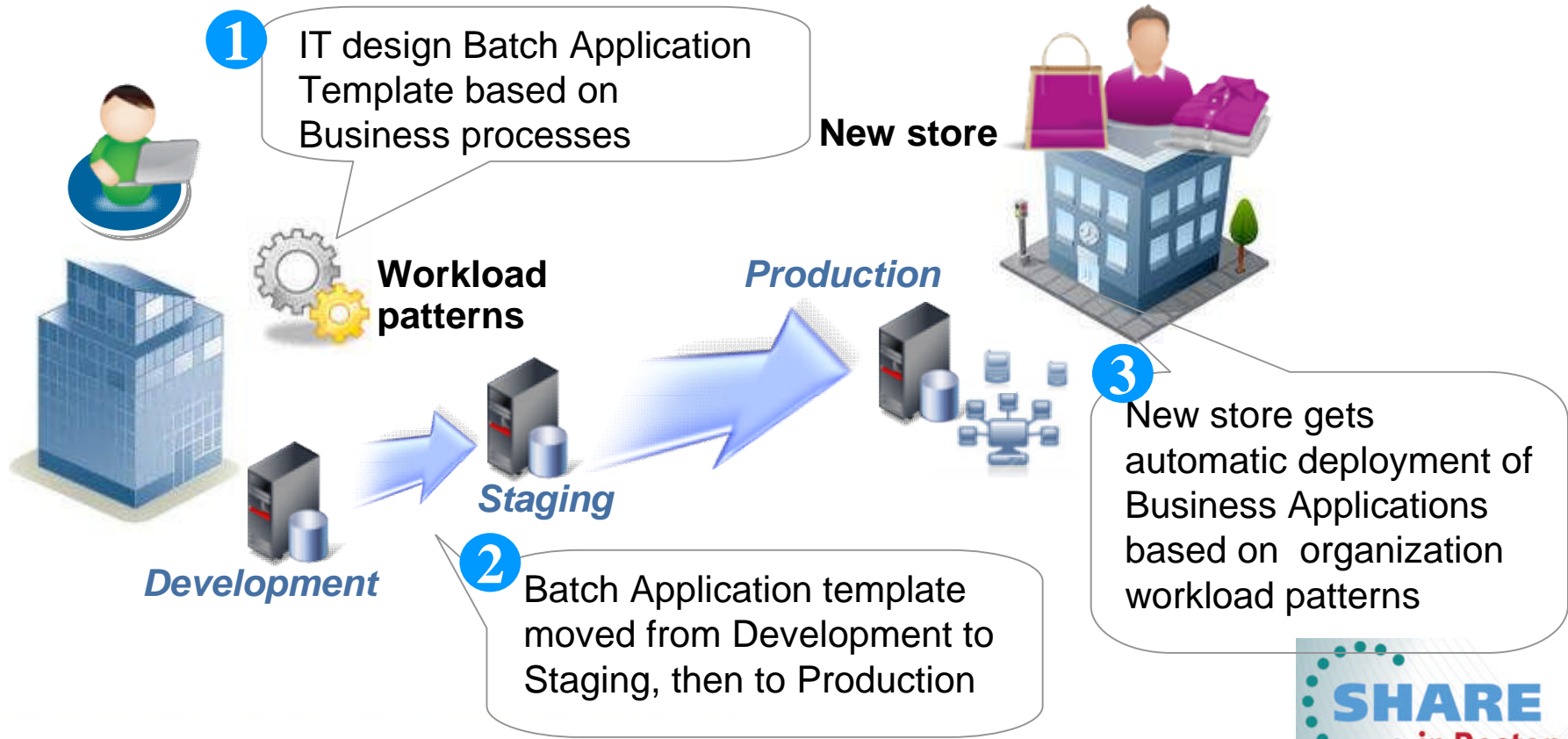
Features

- New TWS (distributed) “workload application template” object
- Acts as container for all TWS assets (jobs, run-cycles, variables) needed to run TWS
- Import/export of workload application templates

Example of using Templates shows value based on quickly getting new workloads up and running



Easy launch of new stores with their own IT infrastructure. IT manager build Batch Application Template from workload patterns and provision new service infrastructure.



IBM Automation moving to Open Standards to simplify cross product integration



Value

- Easier integrations. Help customers build ideal development and operations environment, connect disjointed workflows, minimize frustration, and save time and money
- Better analyze, track, and explore that data to make better decisions



Features

- Streamline integration of TWS (and SCWA) with other applications, to easily map Business Service Management scenarios
- Implement scenarios where TWS provider and consumer of services
 - Allows TWS to remotely automate and control workflows running on another TWS systems.

IBM enhanced Workload Automation provides key support for moving to Mobile and Cloud



Key Takeaways



- IBM is a leader in Workload Automation, and continues to enhance capabilities to support new technologies like Cloud, Big Data and Mobile
- IBM Workload Automation provides end-to-end ability to manage applications that span the virtual and physical; the public cloud and the private cloud; and the mainframe and distributed systems
- Reduce costs, save time and increase productivity with new IBM Workload Automation capability

IBM about to deliver next generation of Workload Automation and Scheduling services

Workload Automation Opportunities to ...

Optimize with Cloud



Enable Smart Scheduling



Streamline Integrations



Manage from Mobile



Orchestrate Business Intelligence



Join the **Transparent Development** community to get access to Next Release details



Community

<http://ibm.biz/Bdx4a7>



Discover new features



Beta

<http://ibm.biz/BdxKWA>



Beta D



Beta Z

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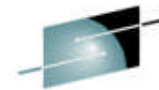
See you at SHARE in Boston



- Be sure to attend Workload Automation session

Learn more about Tivoli Workload Automation Family

<http://www-03.ibm.com/software/products/us/en/tivoworkauto/>



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Thank
You