

## DevOps: Multiplatform Application Deployment

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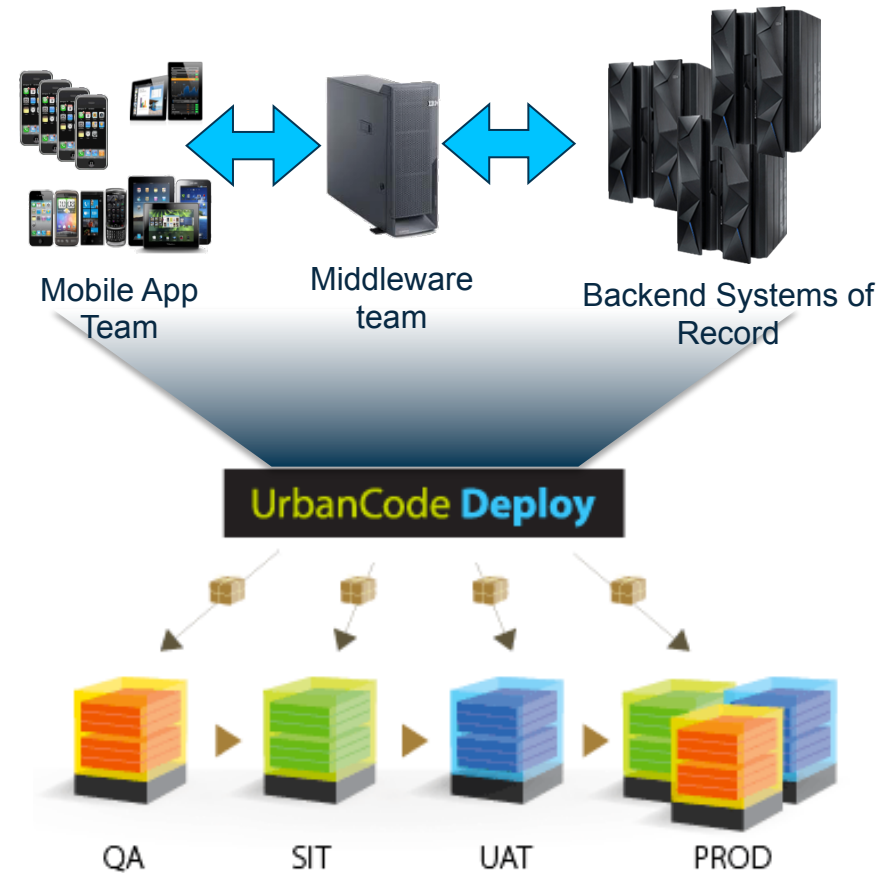
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# Multi-Platform Application Deployment Automation

*Visibility and automated control of your application deployment process*

- Manage application components and versions
- Manage configurations across all environments
- Offer secure ‘self-service’ capabilities
- Increase transparency
- Ensure governance and compliancy



# Intuitive and Scalable Model Driven Deployment



Composite Applications



Re-usable Workflows



The “Where”

Environment Management



The “How”

The “What”



Components

Deployment Automation

Complete your session evaluations online at [www.SHARE.org/Orlando-Eval](http://www.SHARE.org/Orlando-Eval)

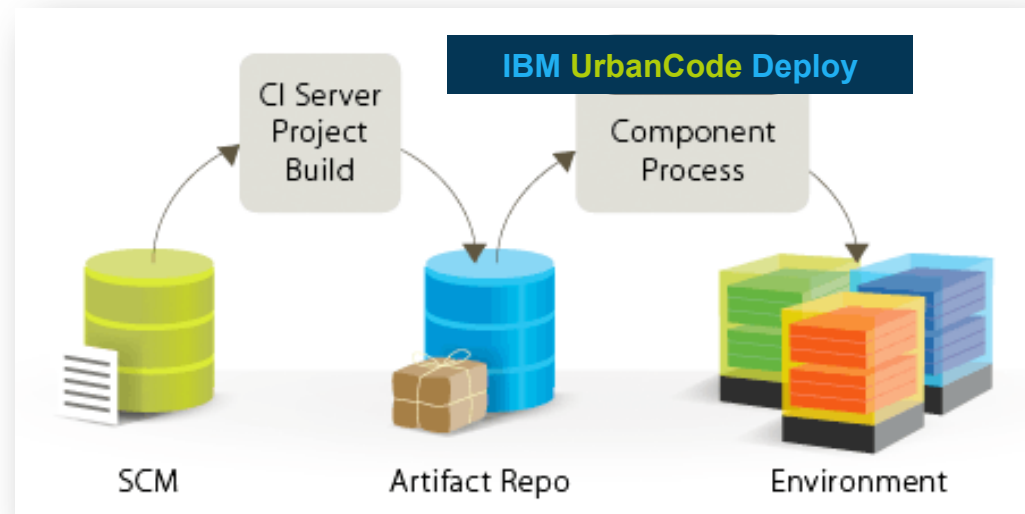
**SHARE**  
in Orlando **2015**



# IBM UrbanCode Deploy

*Application deployment automation*

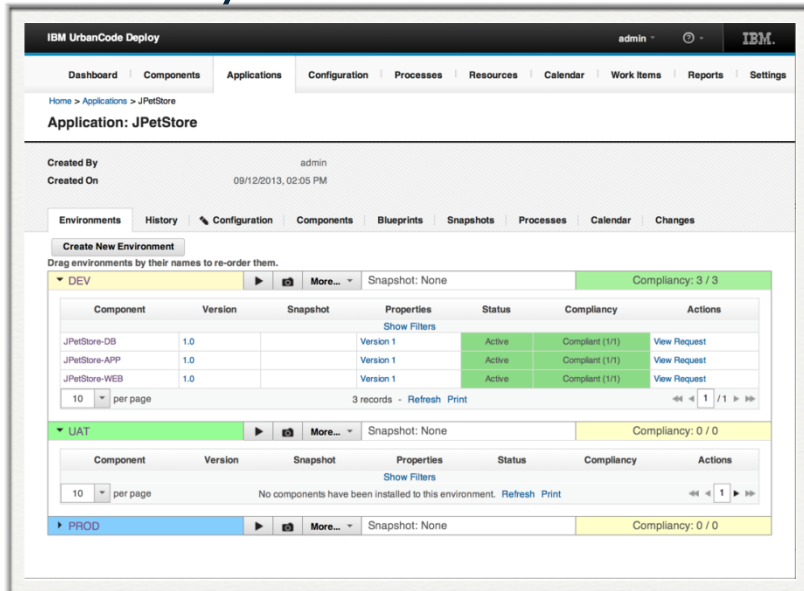
- Manage application components and versions
- Manage environment configuration from dev/test through production
- Ensure compliance
  - Audit history
  - Quality gates
- Easy to use process designer
  - Automate and reuse deployment processes
- Automates deployment to existing and new resources
- Environment Inventory
  - What is deployed where?



*Enterprise quality and scale*

Complete your session evaluations online at [www.SHARE.org/Orlando-Eval](http://www.SHARE.org/Orlando-Eval)

# Key Features



**Application: JPetStore**

Created By: admin  
Created On: 09/12/2013, 02:05 PM

Environments: History Configuration Components Blueprints Snapshots Processes Calendar Changes

Create New Environment

Drag environments by their names to re-order them.

DEV Snapshot: None Compliance: 3 / 3

Component	Version	Snapshot	Properties	Status	Compliance	Actions
JPetStore-DB	1.0		Version 1	Active	Compliant (1/1)	View Request
JPetStore-APP	1.0		Version 1	Active	Compliant (1/1)	View Request
JPetStore-WEB	1.0		Version 1	Active	Compliant (1/1)	View Request

UAT Snapshot: None Compliance: 0 / 0

PROD Snapshot: None Compliance: 0 / 0

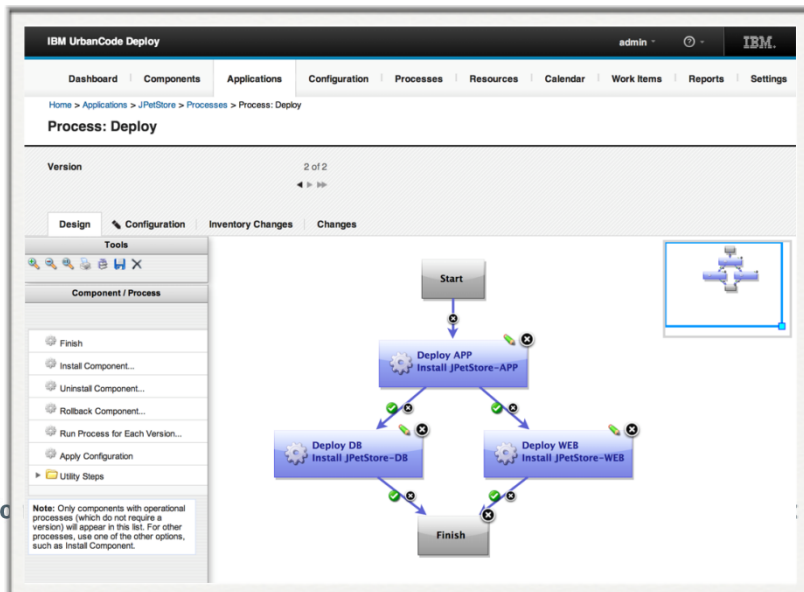
Intuitive Deployment Model

Environment Configuration Management

Rich Drag-and-Drop Workflow Designer

Distributed Deployment Automation

Deployment Inventory



**Process: Deploy**

Version: 2 of 2

Design Configuration Inventory Changes Changes

Tools

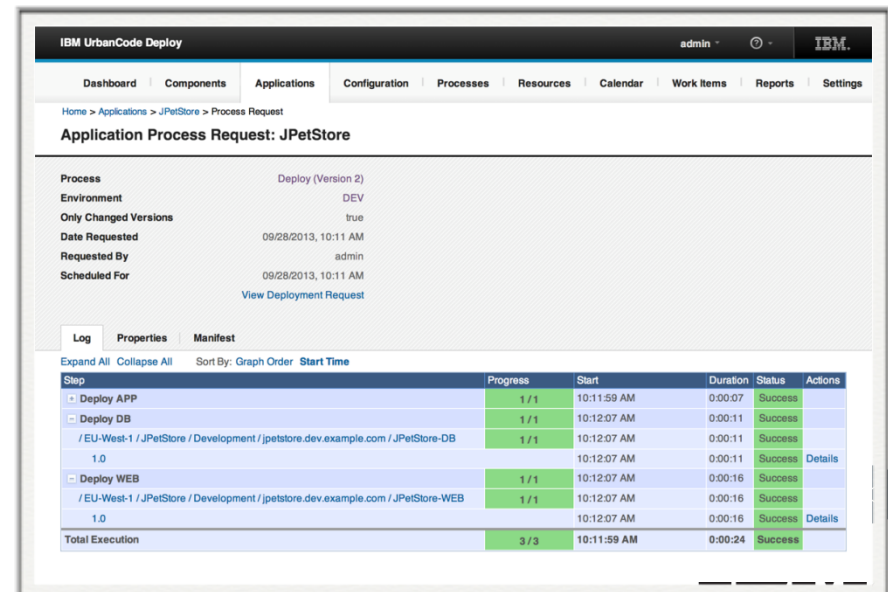
Component / Process

- Finish
- Install Component...
- Uninstall Component...
- Rollback Component...
- Run Process for Each Version...
- Apply Configuration
- Utility Steps

Note: Only components with operational processes (which do not require a version) will appear in this list. For other processes, use one of the other options, such as Install Component.

```

graph TD
    Start([Start]) --> DeployAPP[Deploy APP  
Install JPetStore-APP]
    DeployAPP --> DeployDB[Deploy DB  
Install JPetStore-DB]
    DeployAPP --> DeployWEB[Deploy WEB  
Install JPetStore-WEB]
    DeployDB --> Finish([Finish])
    DeployWEB --> Finish
  
```



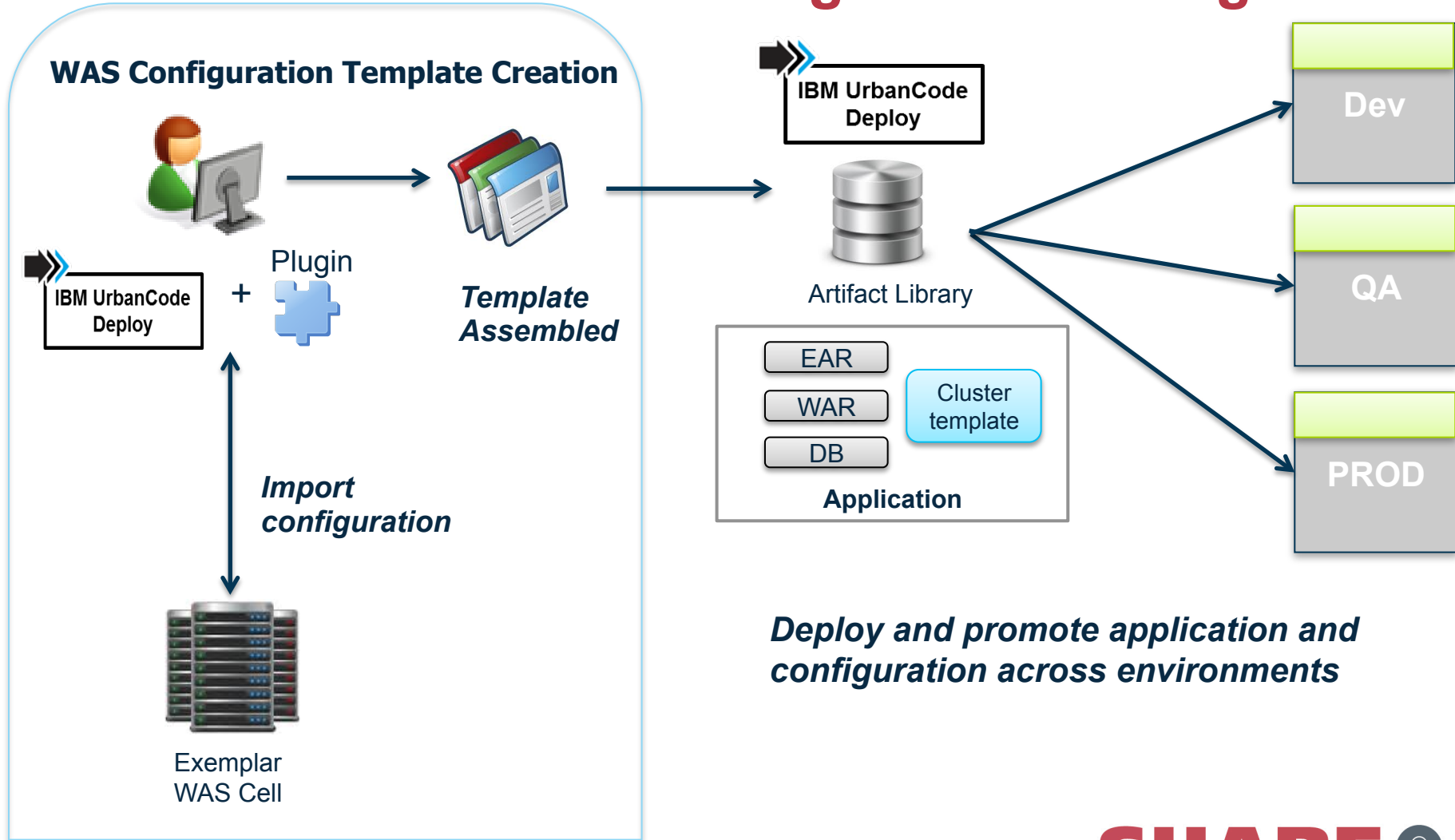
**Application Process Request: JPetStore**

Process: Deploy (Version 2)  
Environment: DEV  
Only Changed Versions: true  
Date Requested: 09/28/2013, 10:11 AM  
Requested By: admin  
Scheduled For: 09/28/2013, 10:11 AM

Log Properties Manifest

Step	Progress	Start	Duration	Status	Actions
Deploy APP	1 / 1	10:11:59 AM	0:00:07	Success	
Deploy DB	1 / 1	10:12:07 AM	0:00:11	Success	
/EU-West-1 /JPetStore / Development / jpetstore.dev.example.com / JPetStore-DB	1 / 1	10:12:07 AM	0:00:11	Success	
1.0		10:12:07 AM	0:00:11	Success	Details
Deploy WEB	1 / 1	10:12:07 AM	0:00:16	Success	
/EU-West-1 /JPetStore / Development / jpetstore.dev.example.com / JPetStore-WEB	1 / 1	10:12:07 AM	0:00:16	Success	
1.0		10:12:07 AM	0:00:16	Success	Details
<b>Total Execution</b>	<b>3 / 3</b>	<b>10:11:59 AM</b>	<b>0:00:24</b>	<b>Success</b>	

# Reliable Middleware Configuration Management



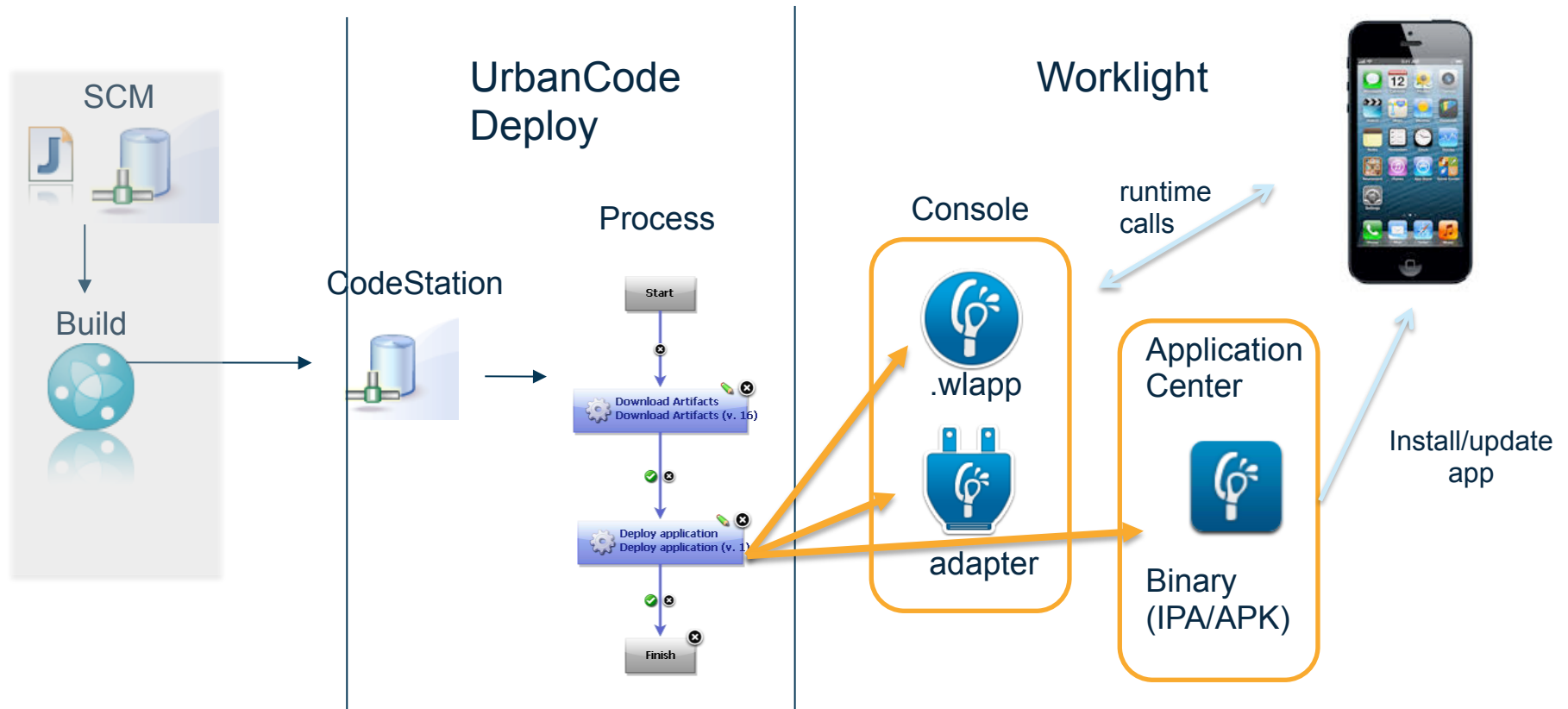
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# Application deployment automation with IBM Worklight



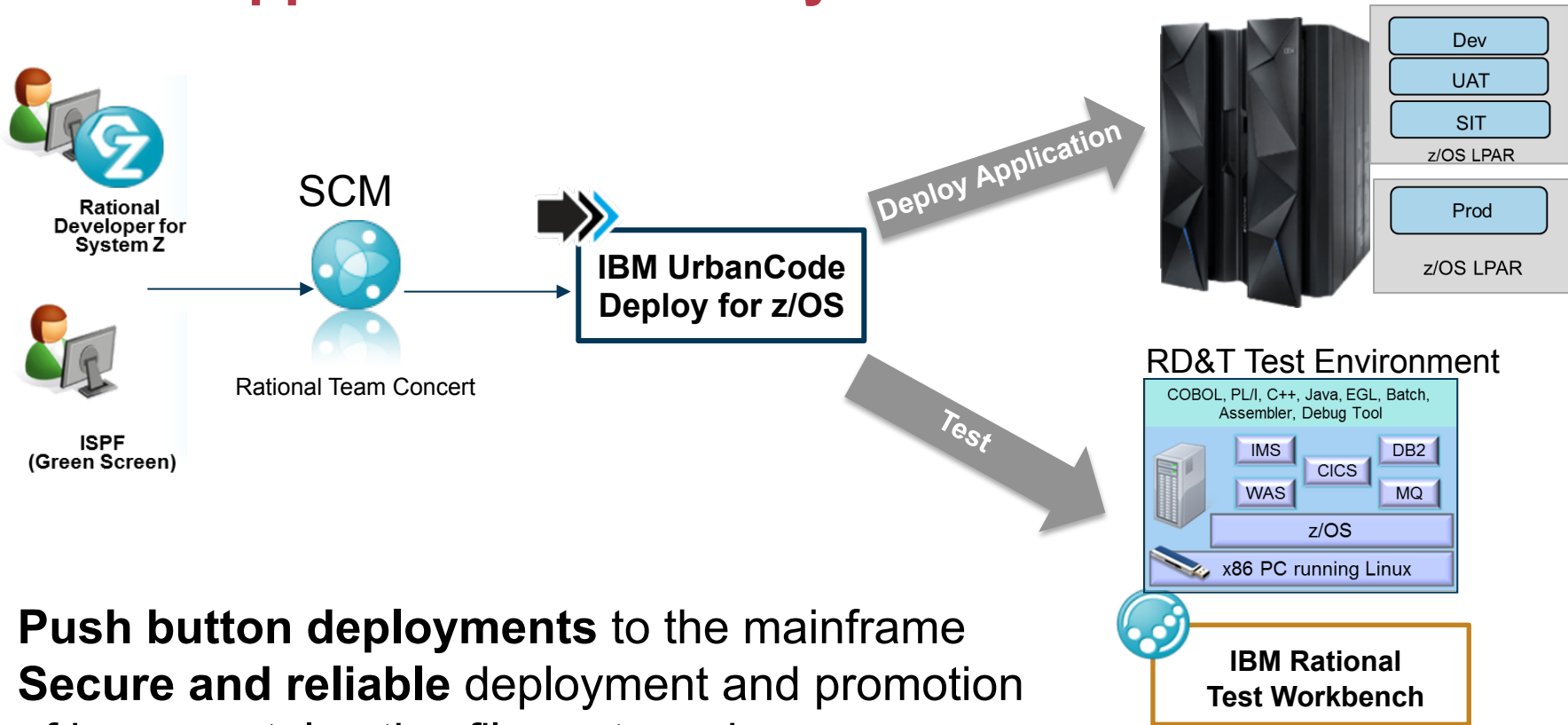
- ✓ The new plugin enables automated deployment to Worklight Console and Application Center  
*Supports Worklight Apps targeting iOS and Android*



✓ Use App Server, Database and other plugins to configure environments and Worklight projects

Complete your session evaluation

# Extend support to back-end Systems of Record

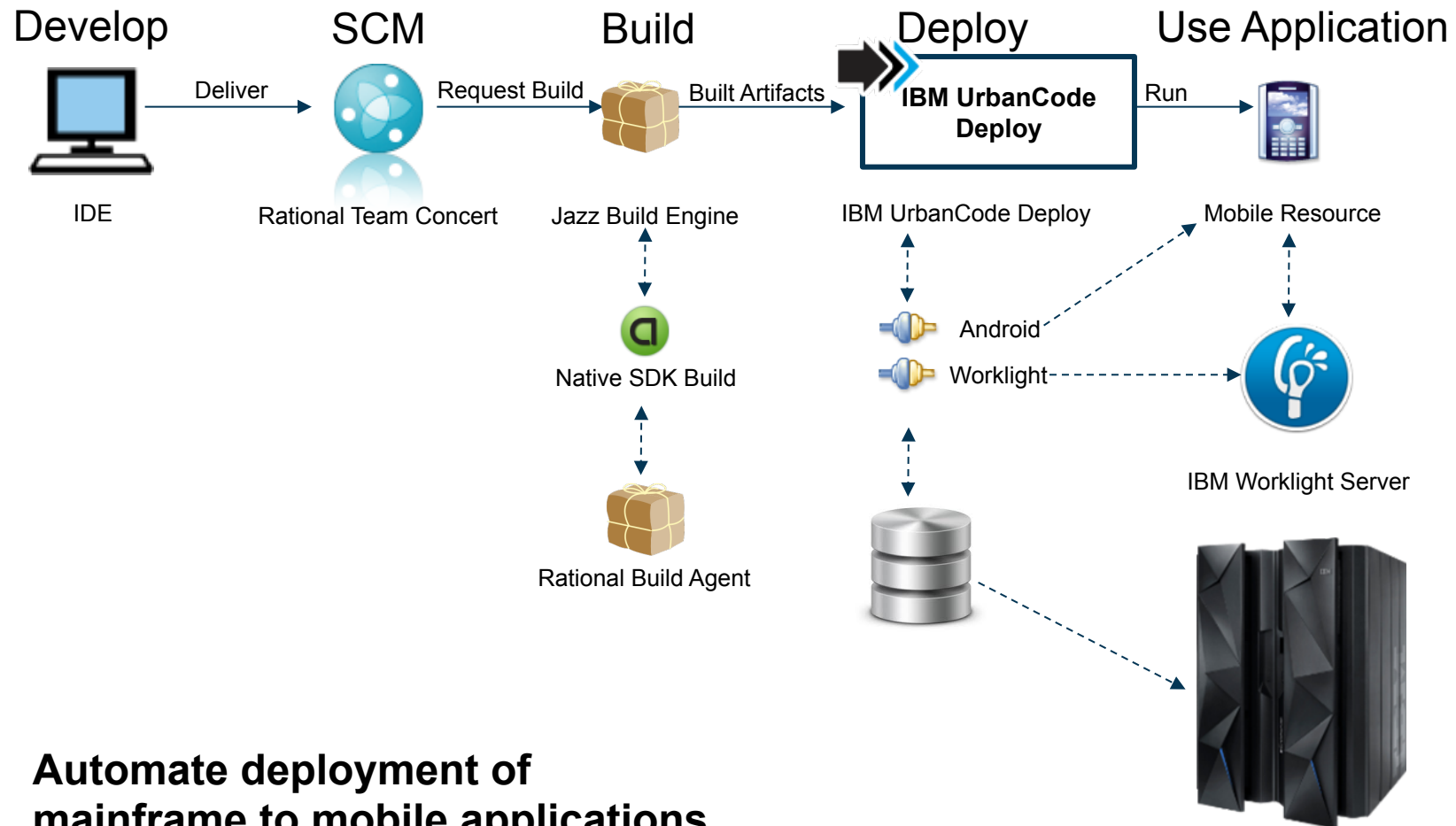


- **Push button deployments** to the mainframe
- **Secure and reliable** deployment and promotion of incremental native file system changes across environments
- **Greater visibility** of “what is where” with the ability rollback to any prior version at ease

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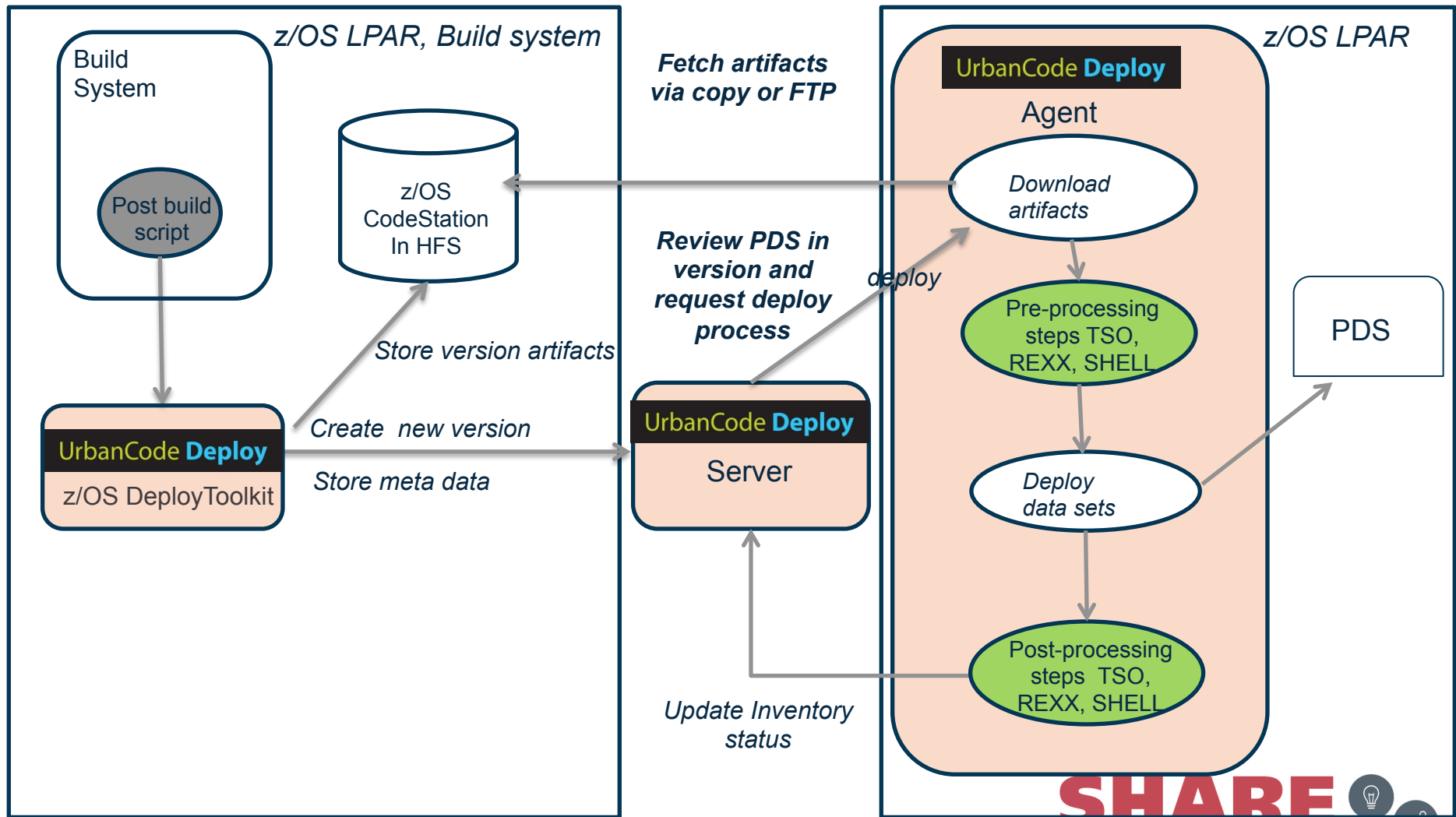
# Enable rapid delivery of multi-tier applications



- Automate deployment of mainframe to mobile applications

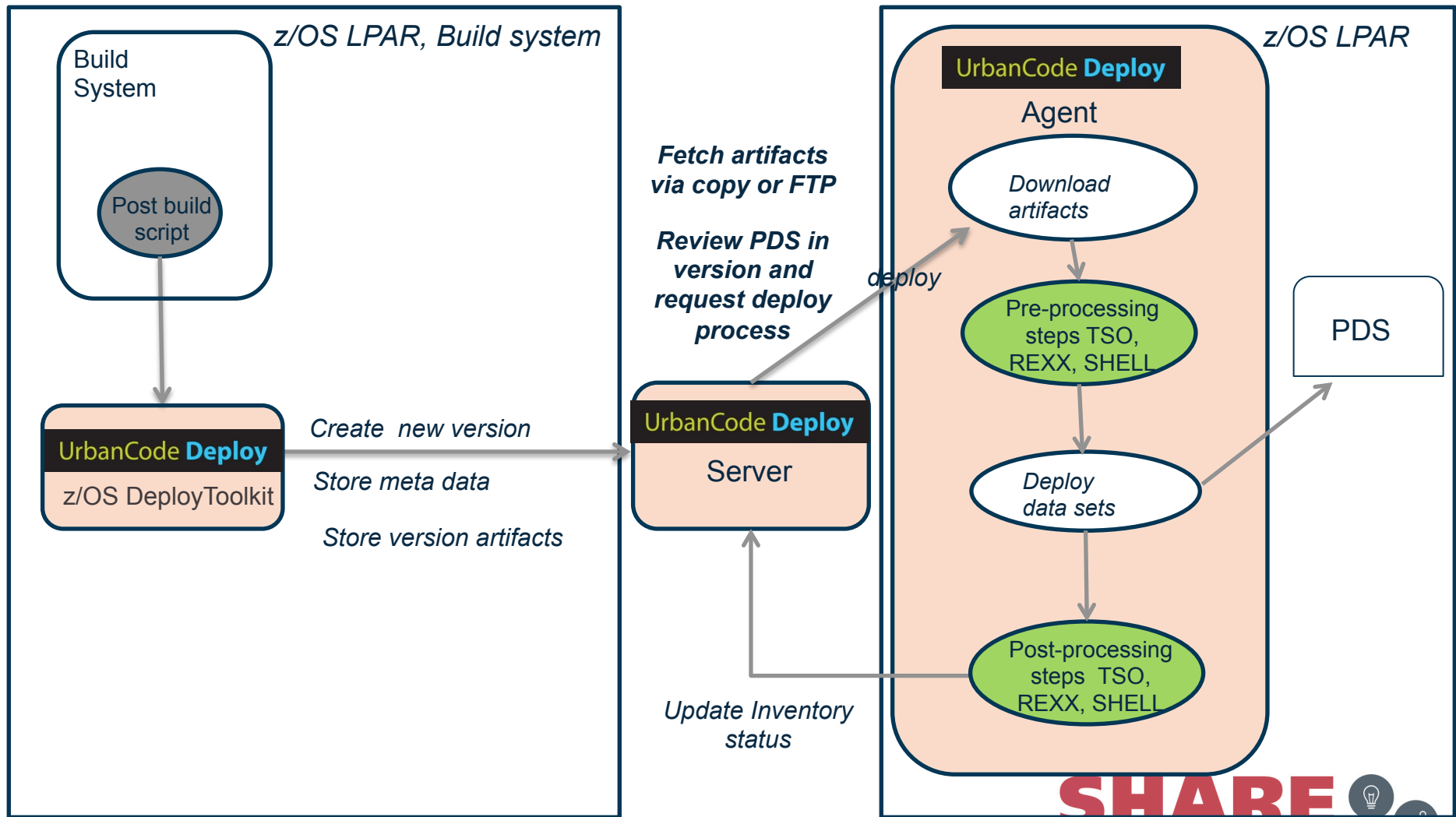
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# High Level Overview of Deployment Capabilities



Complete your session evaluations online at [www.SHARE.org/Orlando-Eval](http://www.SHARE.org/Orlando-Eval)  
*Note: LPARs can be the same or different LPARs*

# High Level Overview of Deployment Capabilities



Complete your session evaluations online at [www.SHARE.org/Orlando-Eval](http://www.SHARE.org/Orlando-Eval)  
 Note: LPARs can be the same or different LPARs

# z/OS deployment both traditional applications and HFS artifacts



- Deployment support for artifacts in the HFS
- Allows coordination between Load module deploy and service artifacts or Java on z.

Environments | History | Configuration | Components | Blueprints | Snapshots | Processes | Calendar | Changes

[Create New Environment](#) Drag environments by their names to re-order them. 2 Environments

Search by Name  or Search by Blueprint  [Collapse All](#) [Expand All](#)

Test		Snapshot: None	Compliance 29 / 29			
Component	Version	Snapshot	Properties	Status	Compliance	Actions
<input type="text"/>	<input type="text"/>	<input type="text"/>		<input type="text"/>		
HomesteadWebApp	30			Active	Compliant (1/1)	<a href="#">View Request</a>
HomeSteadCICS	20141015-0939380566 (+ 26 more)		Version 1	Active	Compliant (27/27)	<a href="#">View Request</a>
HomeSteadWSBIND	v2.3		Version 1	Active	Compliant (1/1)	<a href="#">View Request</a>

[Refresh](#) [Print](#)

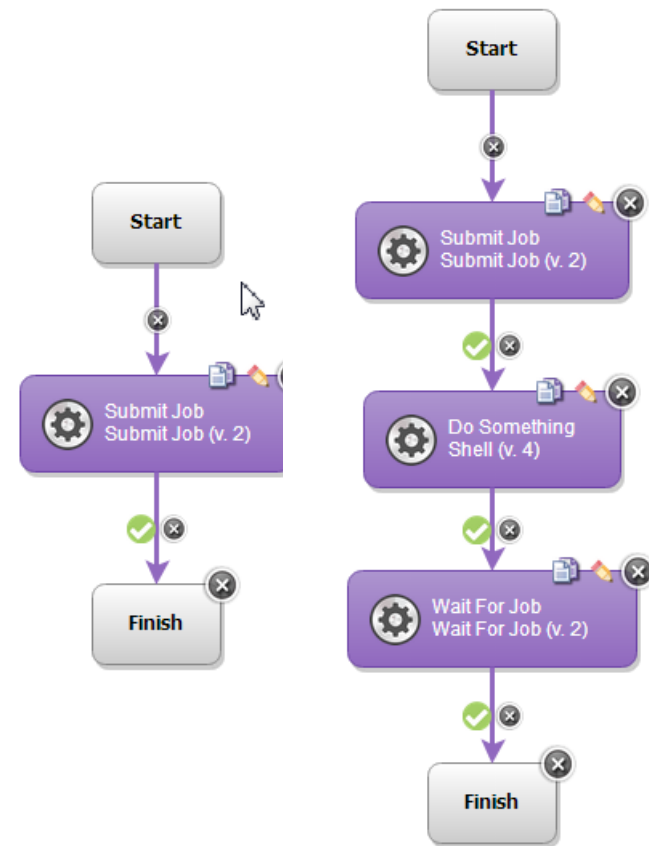
Production		Snapshot: Release2	Compliance 21 / 21			
------------	--	--------------------	--------------------	--	--	--

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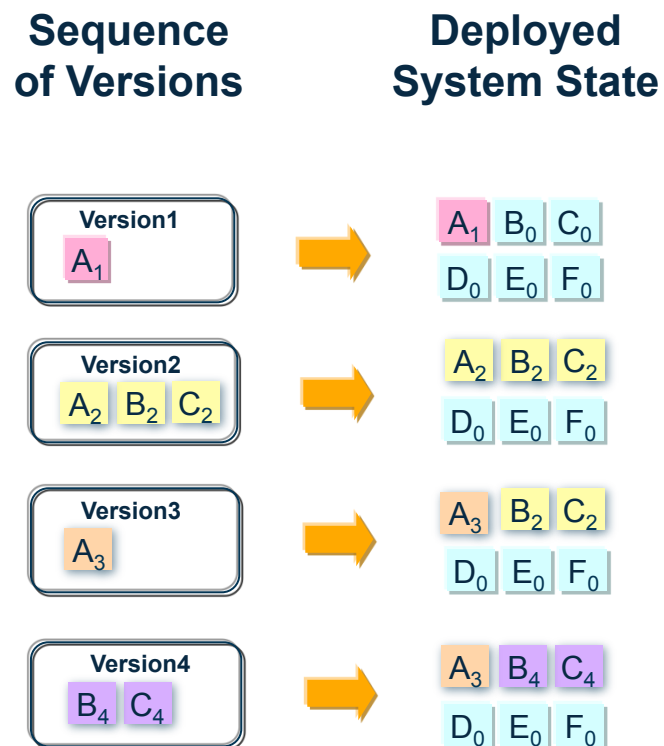
## JCL Plug-in V6.1.0.2

- ✓ Mode
  - Synchronized (Submit & wait for completion)
  - Asynchronized (Submit, check status later)
- ✓ Source of JCL
  - MVS Data Set
  - Unix file
  - Input JCL content in the step
  - Replace tokens
- ✓ Logs & Status
  - Select output data set to be printed in log
  - Status based on MaxCC (default)
  - Customize status



# Managing Redundant Versions V6.1.0.2

- Redundant versions are versions replaced by one or more subsequent incremental versions.



At this point Version 1 is replaced

At this point Version 1 & 2 are replaced

# RTC Packaging for UrbanCode Deploy

Package Definition

ID: UCDPKG.zMortgage.int Project or Team Area: babtest

z/OS ISPF gateway script:

Delete obsolete work item outputs

**UrbanCode packaging options**  
Specify properties to create package or manifest for UrbanCode Deploy

UrbanCode Deploy package type  Generate UrbanCode Deploy package

UrbanCode Deploy Toolkit script: /var/testsrn1/ucd611/agent/bin/buztool.sh

UrbanCode Deploy component name: BabTestComp2

UrbanCode Deploy version naming convention:  Timestamp  First work item number  Prompt on request

(Optional) Prefix for UrbanCode version name: prefix3.

- IBM i
- z/OS
  - Data Set Definitions
  - Language Definitions
    - Translators
      - BAB\_BMS map processing (copybook ge
      - BAB\_BMS map processing (object deck g
      - BAB\_COBOL compilation
      - BAB\_COBOL compilation (CICS)
      - BAB\_COBOL compilation (CICS&DB2)
      - BAB\_COBOL compilation (for subroutine
      - BAB\_Link-edit
      - BAB\_Link-edit (for CICS)
      - BAB\_Link-edit using linkage-editor deck
      - BAB\_MFS Language Utility - Phase 1
      - BAB\_MFS Language Utility - Phase 2

Complete your session e

IBM UrbanCode Deploy

galibrier.rtp.raleigh.ibm.com:8080/#version/80626b53-3f81-485b-8cce-98c5042d6ed4

Apps Mobile Organized IBM-Preload Browser-Preload Other book

**Artifacts**  
Total: 4 members in 2 data sets

Expand All Collapse All

Name	Deploy Type	Last Modified	Properties
▼ BABIN0.DEV60.TST2.DBRM			
EPSCMORT	DBRM	3/16/2015, 11:42 PM	
▼ BABIN0.DEV60.TST2.LOAD			
EPSCMORT	LOAD	3/16/2015, 11:42 PM	
EPSCSMRD	CICS	3/19/2015, 2:52 PM	
EPSMPMT	LOAD	3/19/2015, 2:52 PM	

Down

DD allocations:

DD Name	Data Set Definition	Memb...	O...	C...	Keep	Mod	Out...	Deployment Type	Publ...	
SYSIN	<INPUT>	no			no	no	no		no	Add...
SYSLIN	BAB_Temporary f...	no			yes	no	no		no	Edit...
DBRMLIB	BAB_DBRM library	yes	S...		no	no	yes	DBRM	no	Remove
SYSPRINT	BAB_Temporary f...	no			no	no	no		yes	Up
SYSUT1	BAB_Temporary f...	no			no	no	no		no	Down
SYSUT2	BAB_Temporary f...	no			no	no	no		no	
CVSIITR	R&R_Temporary f...	no			no	no	no		no	

Variables

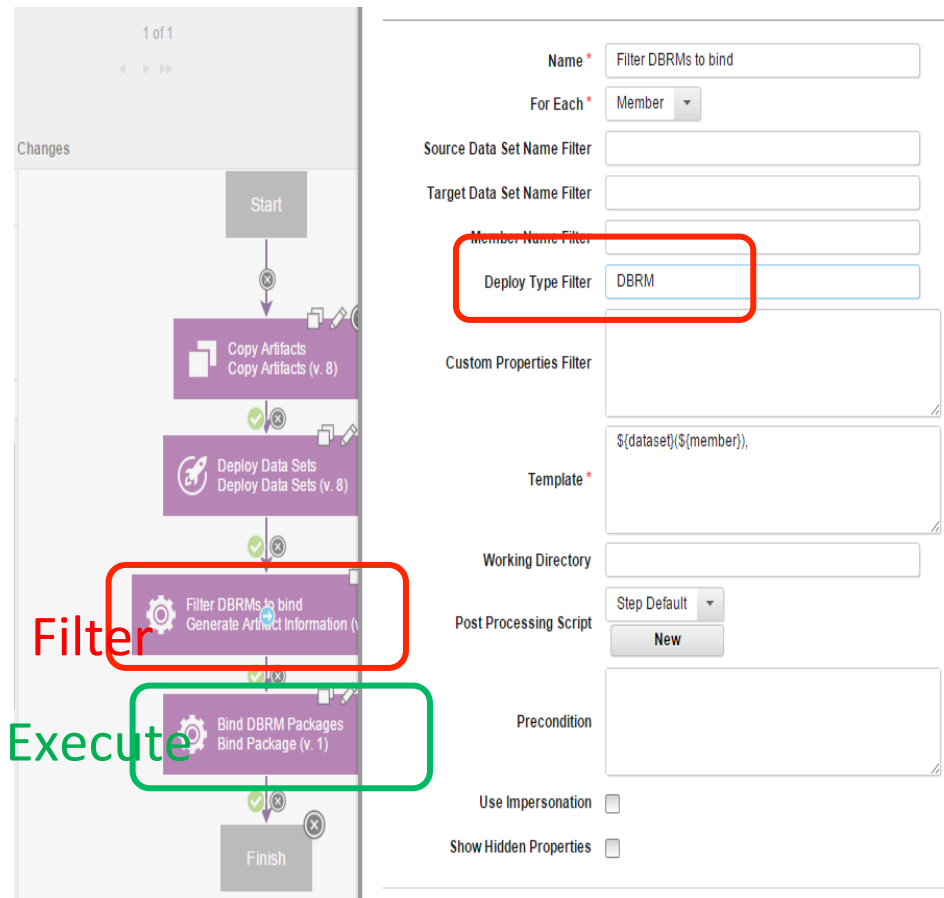
Define variables and values used by this translator.

Name	Value	Add...



## ...and deployTypes can direct UCD actions

- And UrbanCode Deploy processes can use these deploy types to determine and execute special actions at deploy time...

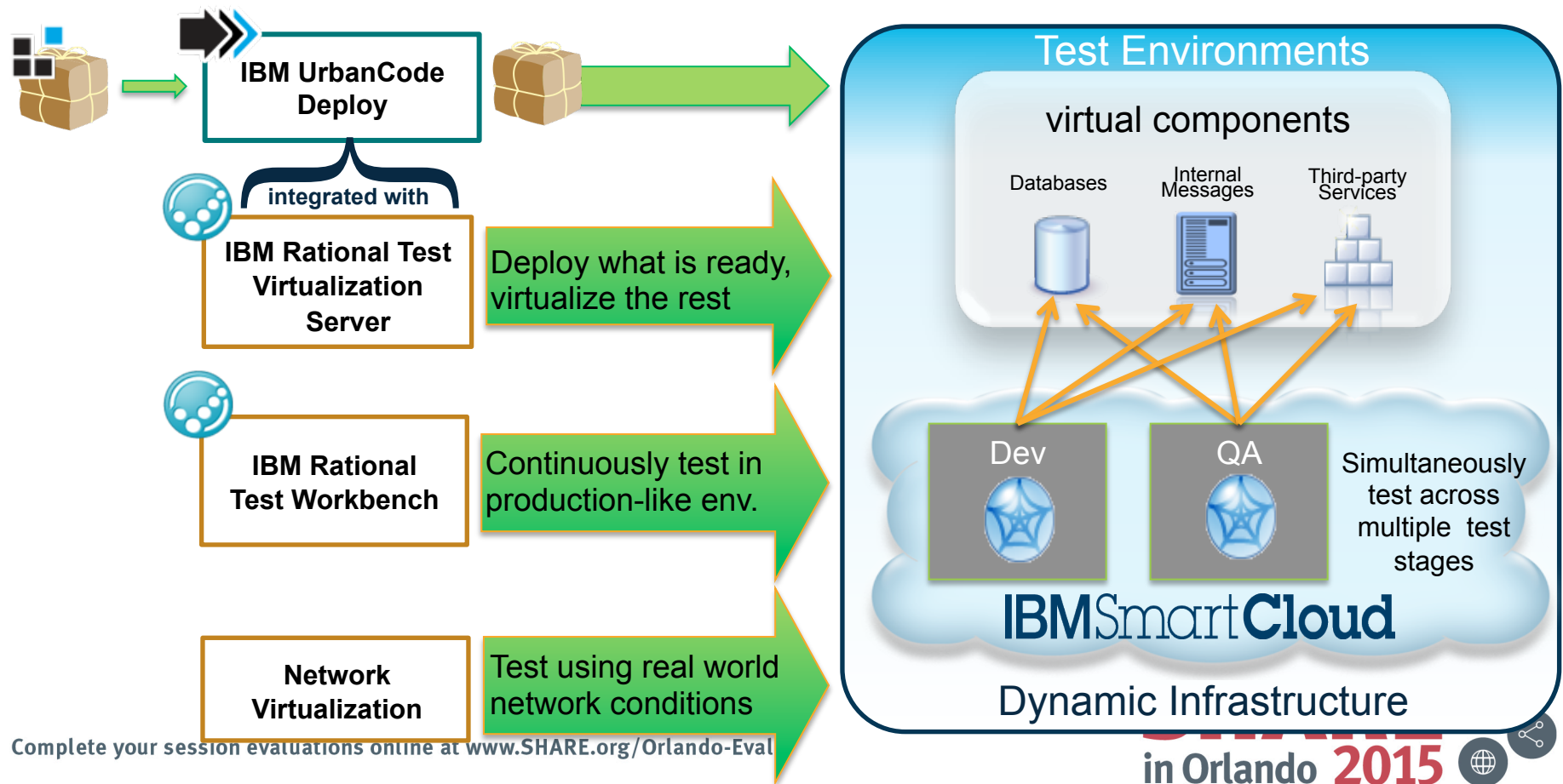


The image shows a screenshot of the UrbanCode Deploy interface. On the left, a process flow diagram is visible with several steps: Start, Copy Artifacts (v. 8), Deploy Data Sets (v. 8), Filter DBRMs to bind (Generate Artifact Information (v. 1)), Bind DBRM Packages (Bind Package (v. 1)), and Finish. The 'Filter DBRMs to bind' step is highlighted with a red box and labeled 'Filter' in red text. The 'Bind DBRM Packages' step is highlighted with a green box and labeled 'Execute' in green text.

On the right, the configuration panel for the 'Filter DBRMs to bind' step is shown. The 'Name' field is 'Filter DBRMs to bind'. The 'For Each' dropdown is set to 'Member'. The 'Deploy Type Filter' field is highlighted with a red box and contains the value 'DBRM'. Other fields include 'Source Data Set Name Filter', 'Target Data Set Name Filter', 'Member Name Filter', 'Custom Properties Filter', 'Template' (with value `\${dataset}(\${member})`), 'Working Directory', 'Post Processing Script' (set to 'Step Default'), 'Precondition', 'Use Impersonation', and 'Show Hidden Properties'.

# DevOps: Continuous Testing

Deployment automation and service virtualization for reducing time to market and improving quality



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in Orlando **2015**



# Mobile to Mainframe DevOps for Dummies Book

Author: Rosalind Radcliffe, IBM Distinguished Engineer

Available as ebook and hard copy

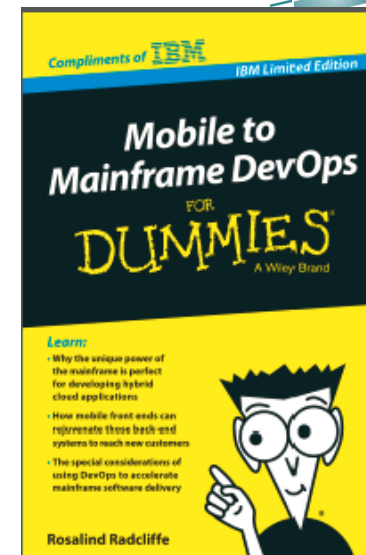


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• *Book signing at the IBM Booth #312  
Atlantic Hall C  
Monday and Tuesday 6-7:30 PM  
First 250 copies*

## 8 Chapters – 72 pages

1. Understanding the Value of the Mainframe
2. Typical Mainframe Application Development Challenges
3. DevOps and Mainframe: Mission Possible?
4. DevOps Best Practices for z Systems
5. Building for the modern omni channel world
6. DevOps Success Stories in the Enterprise
7. Making a DevOps transition
8. Where DevOps can take you



<https://ibm.biz/mmdevops>

Why the unique power of the mainframe is perfect for developing hybrid cloud applications

[www.SHARE.org/Orlando-Eval](http://www.SHARE.org/Orlando-Eval)

How mobile front ends can rejuvenate those back-end systems to reach new customers

The special considerations of using DevOps to accelerate mainframe software delivery





## Thank You

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