

Automatic application deployment to CICS, z/OS and other platforms using UrbanCode Deploy

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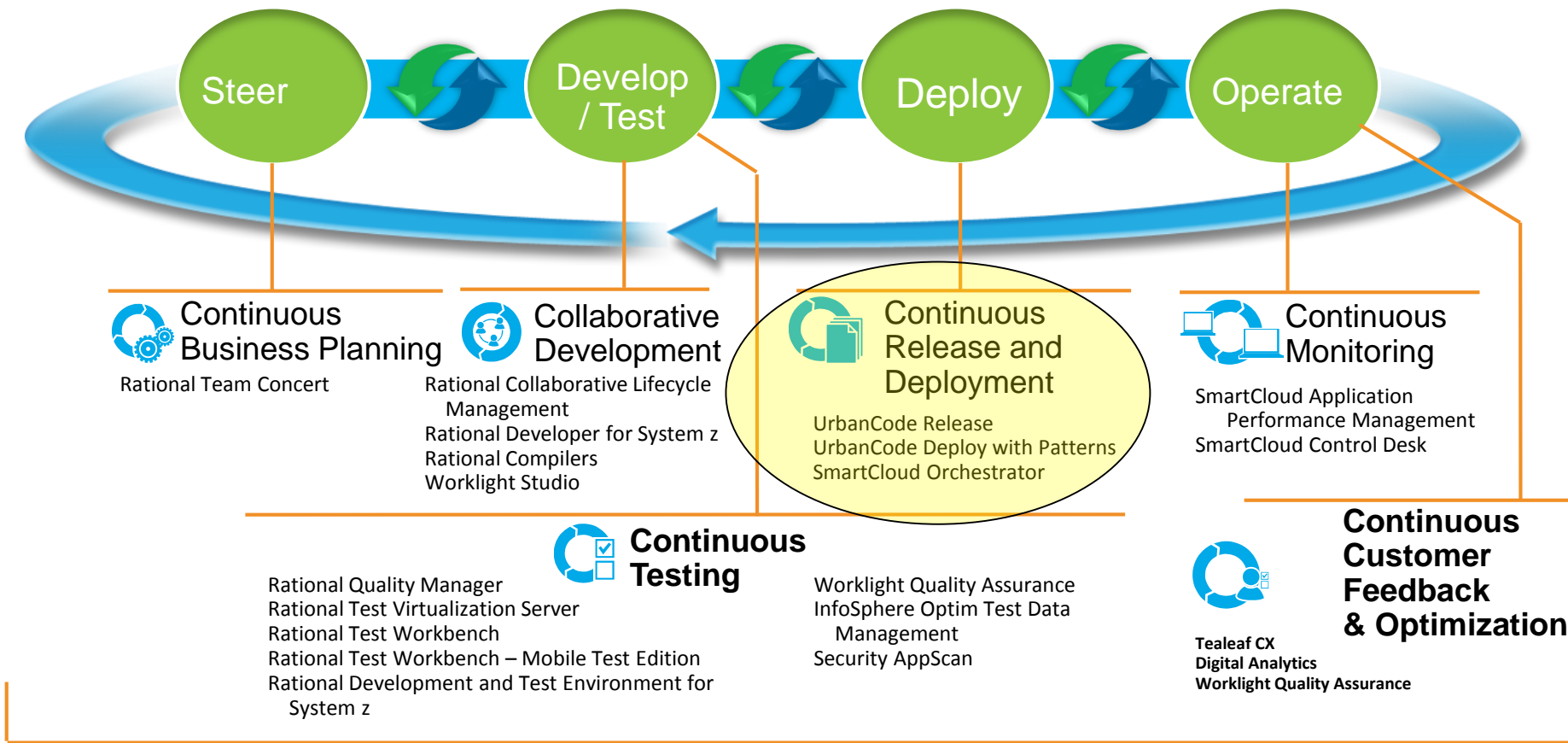
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- **Abstract::**
- IBM UrbanCode Deploy automates and manages Multi-Tier application deployments. Join this webinar to see how your organization can deploy composite application changes to multiple runtime platforms in minutes. Here is the scenario:
- A developer changes an existing COBOL CICS application in a z/OS development environment
- Another developer changes an existing Mobile application (using IBM Worklight) using Windows
- Changes to the composite application are deployed to z/OS and Windows using UrbanCode Deploy

IBM DevOps – Broad set of DevOps capabilities



Address bottlenecks across the application delivery lifecycle



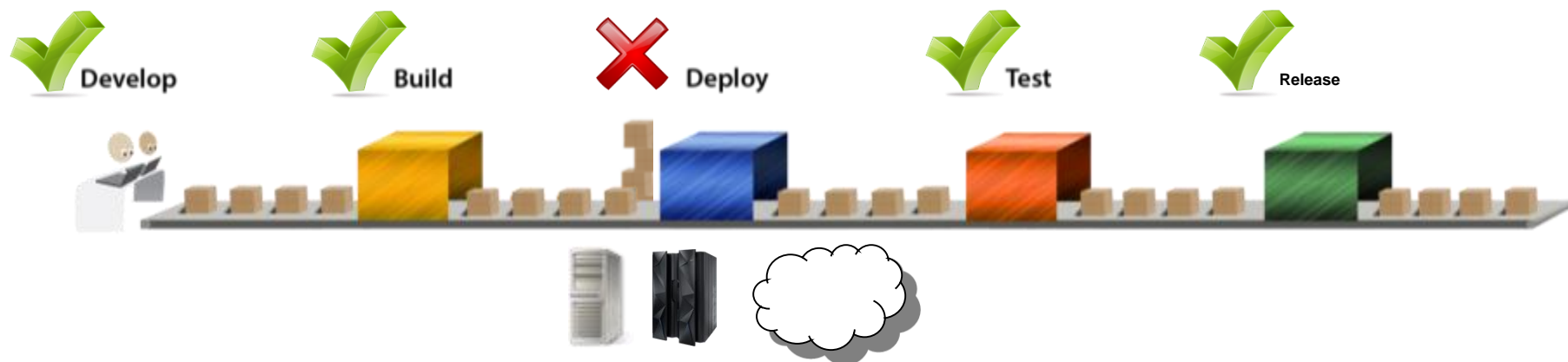
Bluemix DevOps services

Agile planning and tracking
Application auto-scaling
AppScan mobile analyzer
Continuous delivery pipeline
Git hosting

Mobile application security
Mobile data
Mobile quality assurance
Monitor & analytics
Push

RapidApps (beta)
Server-side code
Web IDE

Deploy is a bottle neck



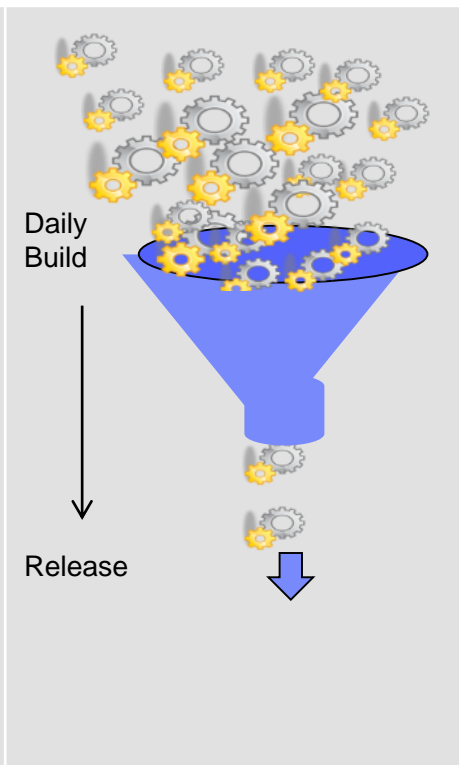
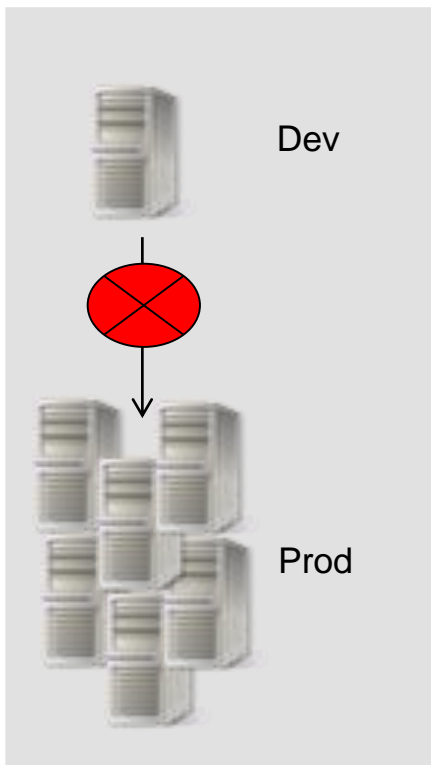
What's going wrong?

Failures due to inconsistent **dev** and **production** environments

Bottlenecks trying to deliver more frequent releases to meet market demands

Complex and manual processes for release lack repeatability and speed

Costly, inefficient releases take days, 100 people and are managed by a spreadsheet



Who did this last time?



Dave...



Dave's not here man...



I'll order breakfast

- 11 Years Build, Release and Deployment Experience
- Global Customers
- Enterprise scalability, security, compliance and automation
- Training, consulting and implementation services
- Based in Cleveland, OH

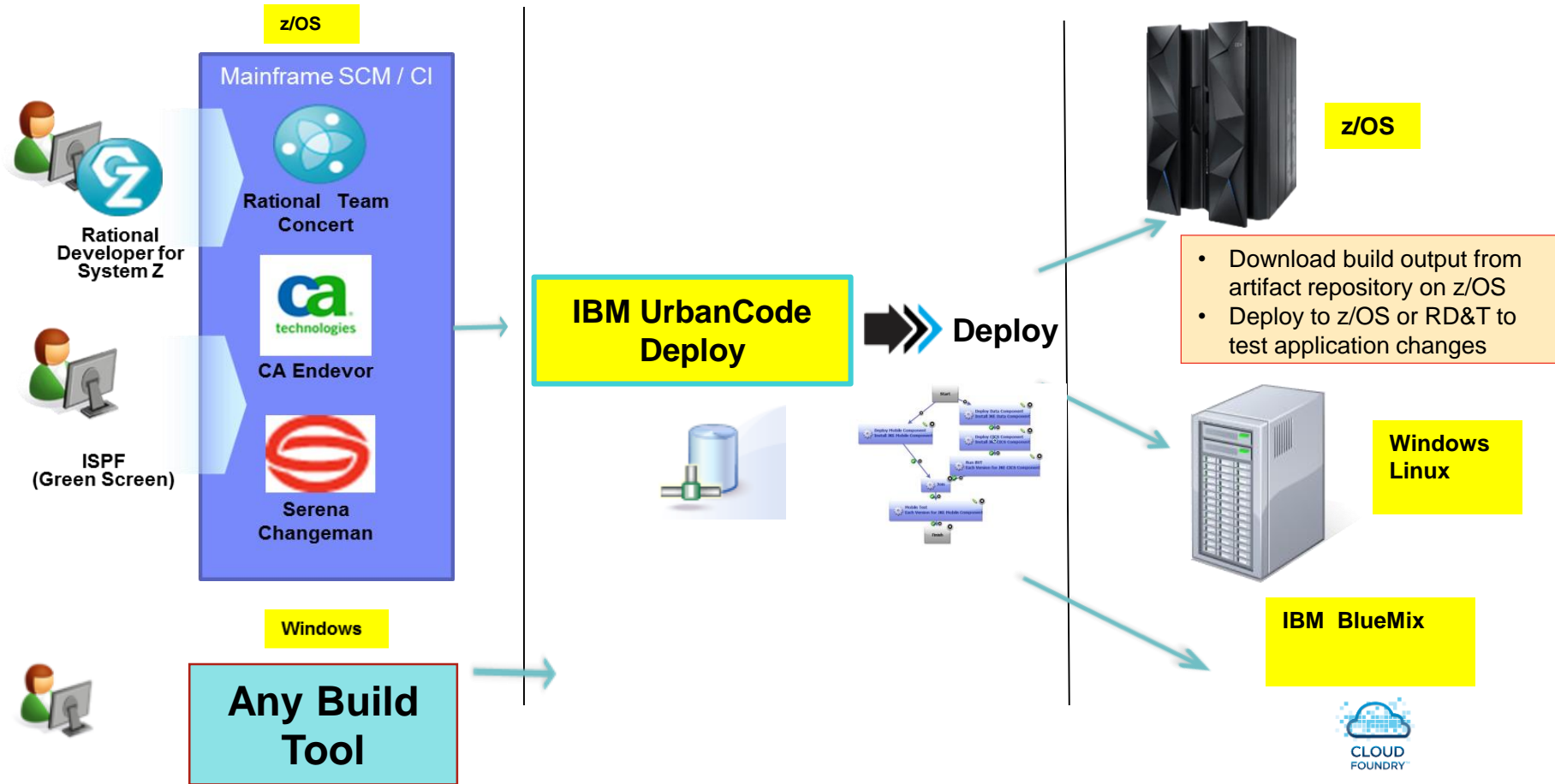
“One key benefit of UrbanCode is how quickly it can be implemented and used for deployments.”

Gartner



Continuous Delivery for the Mainframe and Others

Capabilities to speed delivery of interdependent, multi-platform applications



- Provides a **unified solution** for continuous delivery of heterogeneous enterprise applications
- **Accelerate delivery** and reduces cycle time to develop/test multi-tier applications across heterogeneous environments and platforms
- **Reduce costs** and eliminate delays for delivering mainframe applications
- **Minimize risk** and improve productivity across disparate teams with cross-platform release planning

SCM agnostic artifact packaging

Deploy Partitioned Data Set (PDS)

Incremental deployment and rollback of versions

Artifact repository in z/OS

zLinux

WAS z/OS

CICS TS

IMS

DB2

z/OS Plug-in steps

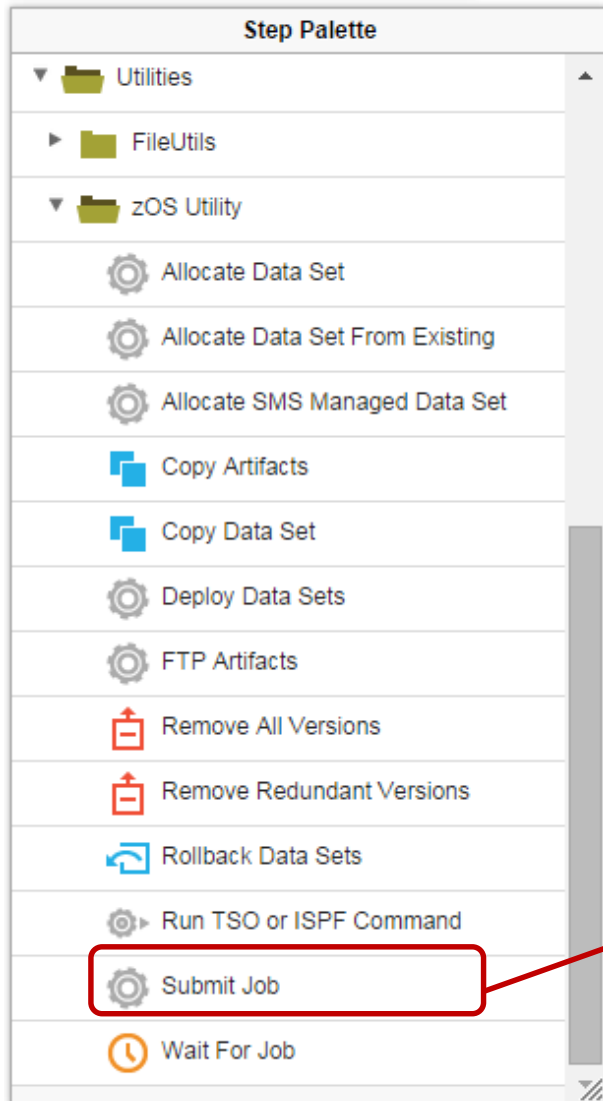
Submit JCL job, Submit job based on template, Check job status

Execute REXX

Run TSO/ISPF Command

FTP, Create PDS, Copy PDS, Replace Token MVS ...

z/OS Plug-ins



Edit Properties

Name * Submit Job

JCL Dataset

JCL File

JCL

Replace Tokens

Wait For Job

Timeout 60

Show Output ALL

Max Lines 1000

Max Return Code * 4

Working Directory

Post Processing Script Step Default
 New

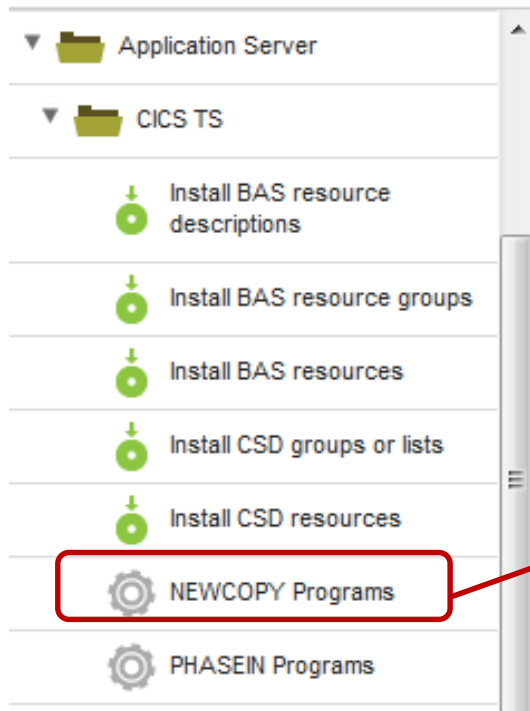
Precondition

Use Impersonation

Show Hidden Properties

Save Cancel

CICS Plug-ins



Edit Properties

Name *

Program List *

Max Retry Times

Retry Interval (s)

Working Directory

Post Processing Script

Precondition

Use Impersonation

Show Hidden Properties

Host *

Port *

CICSplex

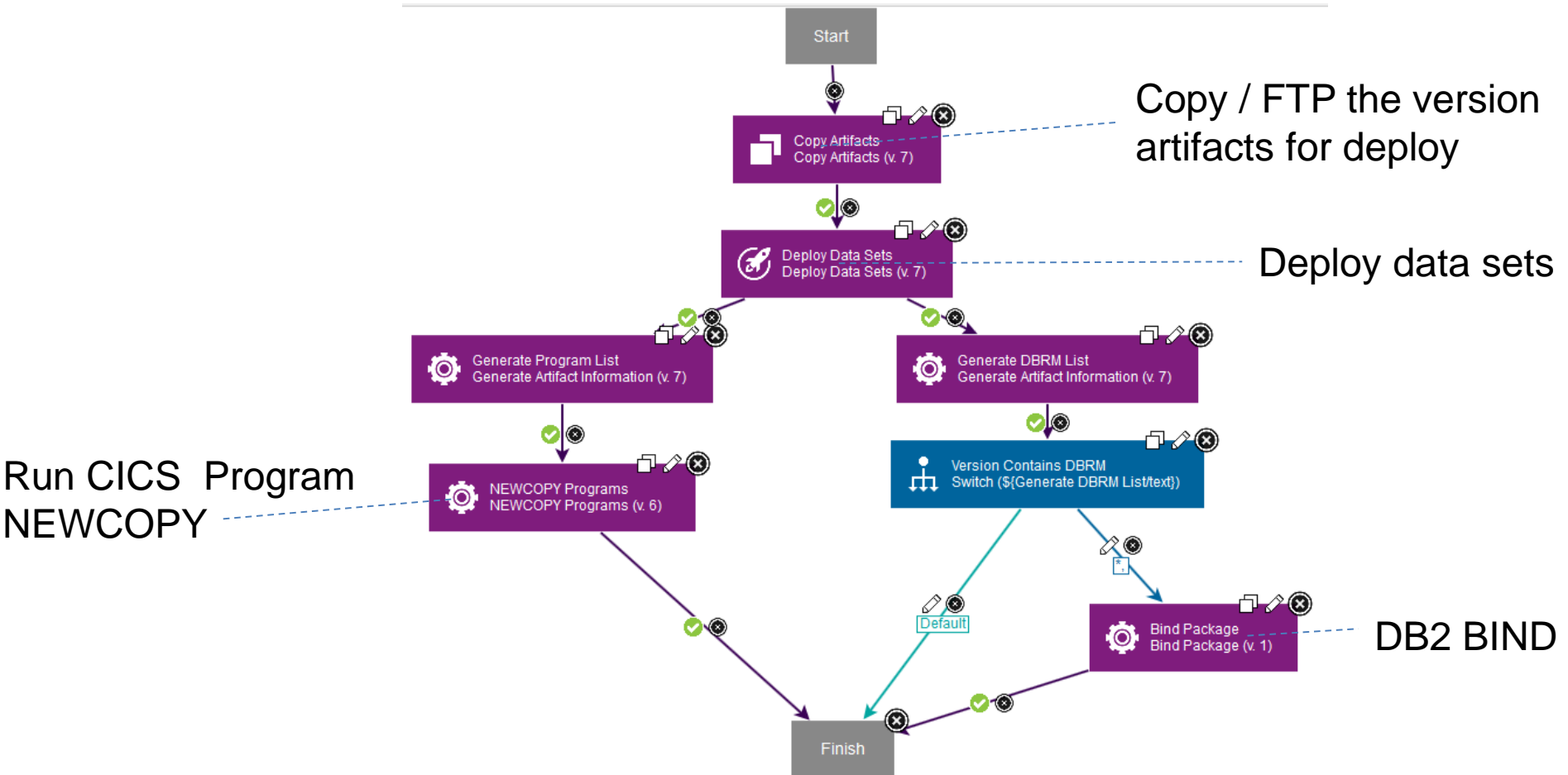
Scope

Username

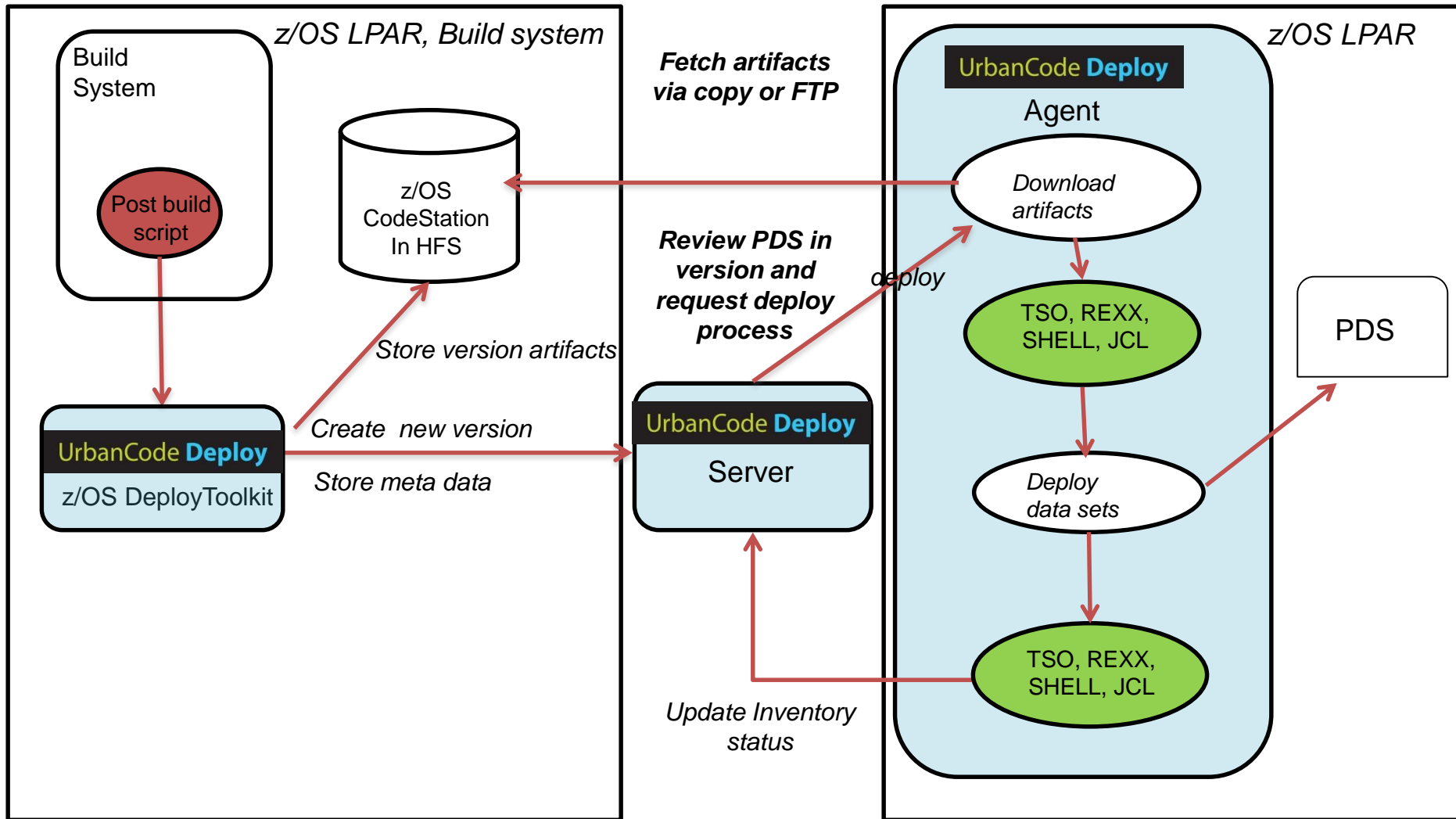
Password

z/OS Plug-ins

A sample CICS/DB2 process



High Level Overview of Deployment Capabilities



Note: LPARs can be the same or different LPARs

Demo Available on CICS Hursley YouTube



CICS and Urban Code Deploy



CICS Hursley

Subscribe 315

59 views



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Published on Apr 21, 2015

27 minute video demonstrating using Urban Code Deploy (UCD) for multi application deployment with CICS at the heart. Russell Bonner is the demonstrator. Audio included.

Initially a simple change is performed, via Rational Developer for System z to a CICS/COBOL/DB2 sample application. The deployment assets resulting from this change are the promoted, via UrbanCode Deploy, to another CICS system.

Category Science & Technology

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https://www.youtube.com/watch?v=7w_yGBmT4mo

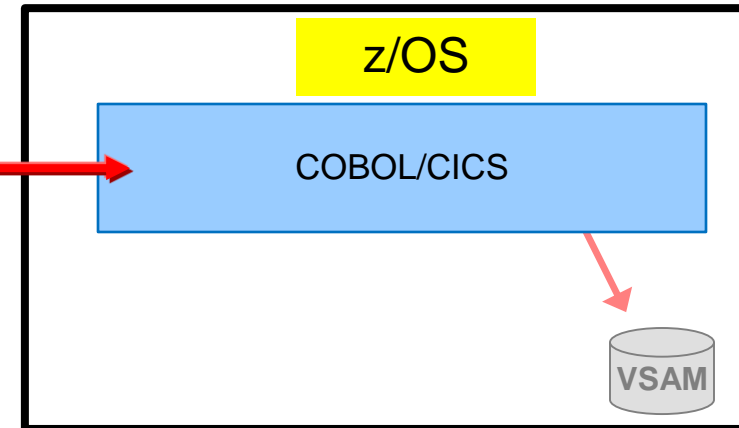
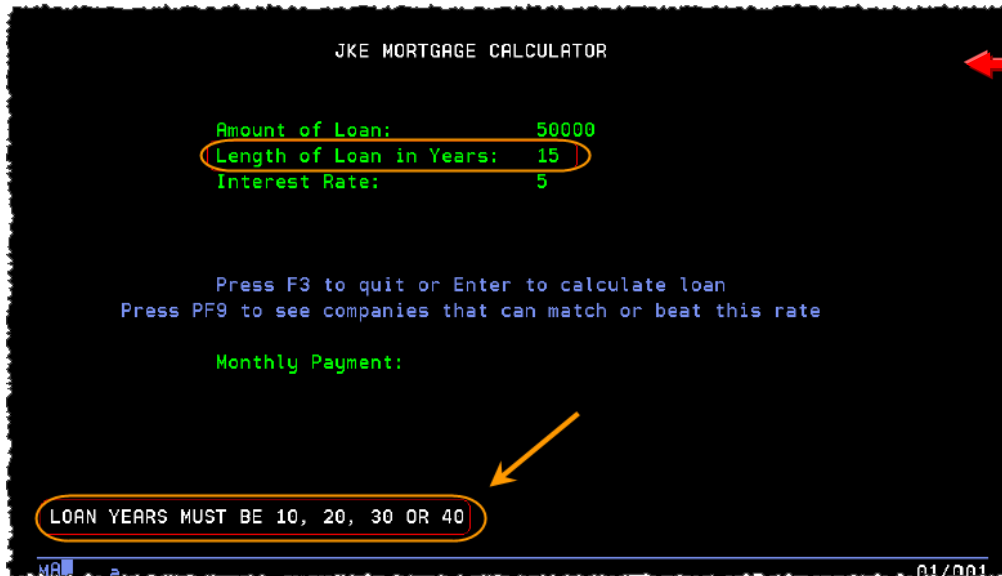


z/OS Application Bug

The Only valid length of loan **must be 10, 20 30 or 40 years.**

Currently the length could be **between 1 and 40 years..**

A message should reflect this new enhancement



•Existing COBOL/CICS/BMS application

Scenario : Application change is required



z/OS COBOL program Bug

The Only valid length of loan **must be 10, 20 30 or 40 years.**

Currently the length could be **between 1 and 40 years..**

Fixes: zOS: A message should reflect this new enhancement

Mobile : A drop down should allow only 10,20,30,40

```
JKE MORTGAGE CALCULATOR - 12/15/2012

Amount of Loan:          180000
Length of Loan in Years: 30
Interest Rate:           8.2

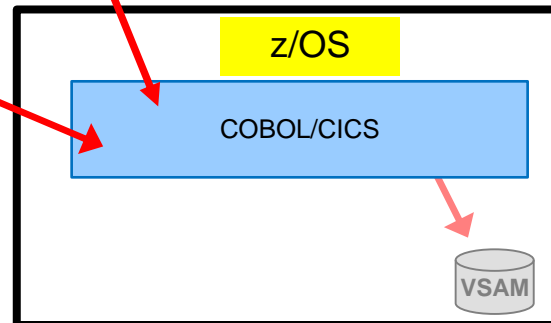
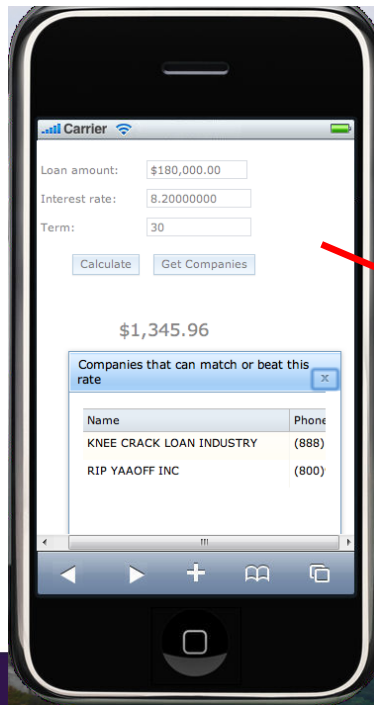
Press F3 to quit or Enter to calculate loan
Press PF9 to see companies that can match or beat this rate

Monthly Payment:                1,345.96
```



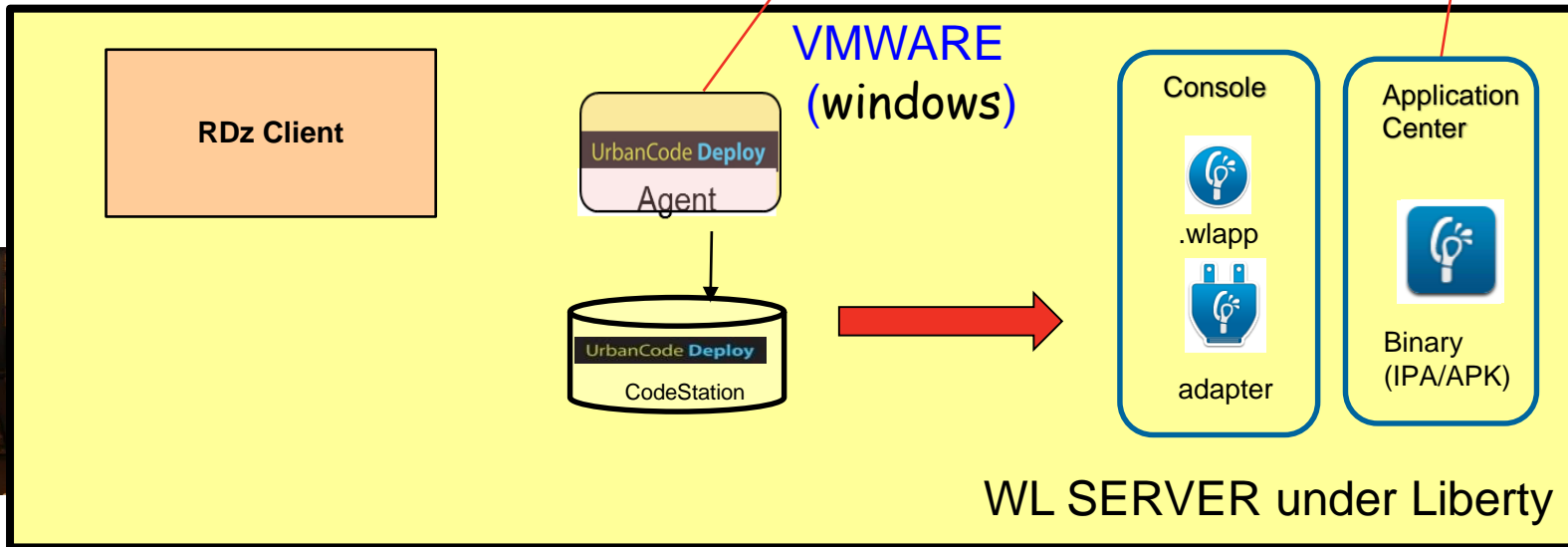
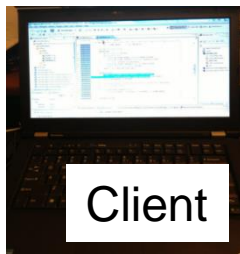
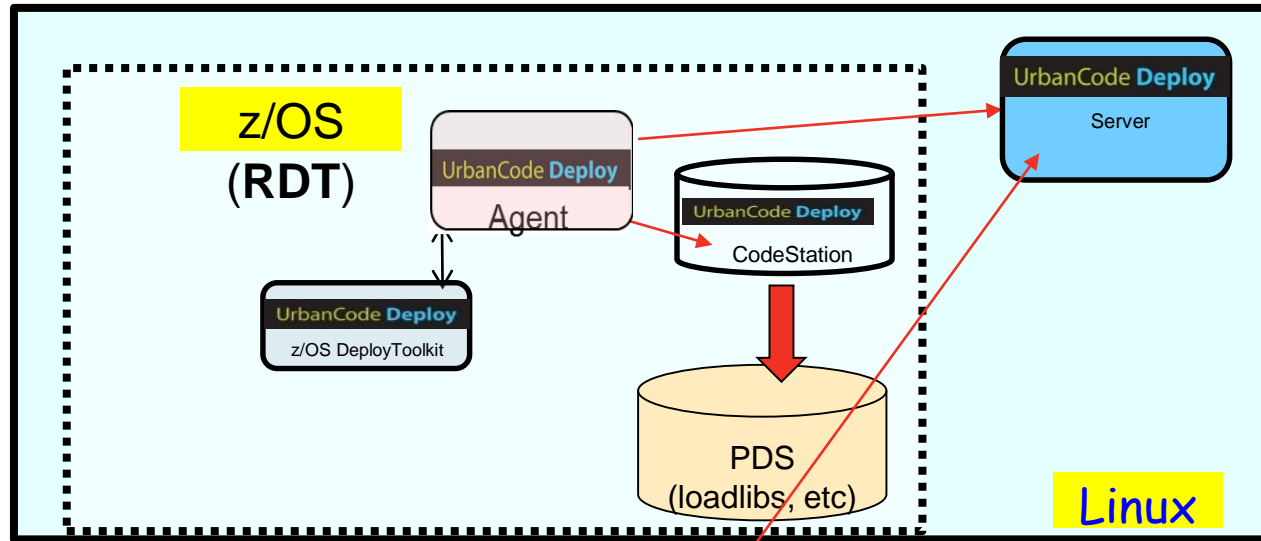
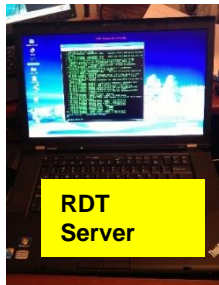
```
Better Mortgage Rates

Company          Phone Number  Interest Rate  Monthly Payment
KNEE CRACK LOAN INDUSTRY (888)123-4444  6.9            1,191.51
RIP YAAOFF INC   (800)968-6933  7.2            1,227.92
```

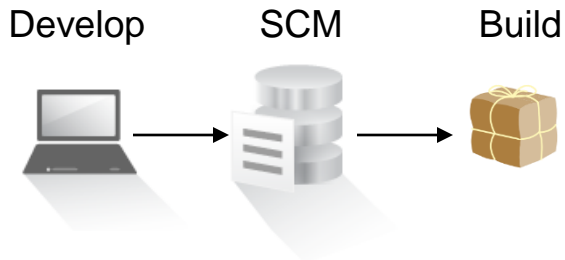


•Existing COBOL/CICS/BMS application

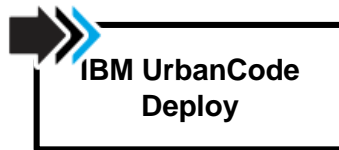
UC Deploy – Demo architecture



Create and Build Application



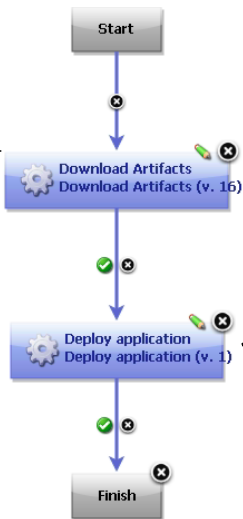
Deploy Application



CodeStation



Process



Use Application



Emulators, Simulators, or Devices



Mobile back-end



Thanks to:
Joel Cayne, MSc
Rational Mobile Tool
IBM Canada Lab

Update Application



Change existing code and deploy DEV environment

1. Use **RDz** to make the COBOL changes on **JKEMPMT** and **JKENBRVL**.
2. Use **RDz** to submit JCL **UCD1CL** that creates loadlib members
3. Verify the Shipping List to see what will be packed for deploy
see at **/u/empot05/shiplistDEMO.xml**

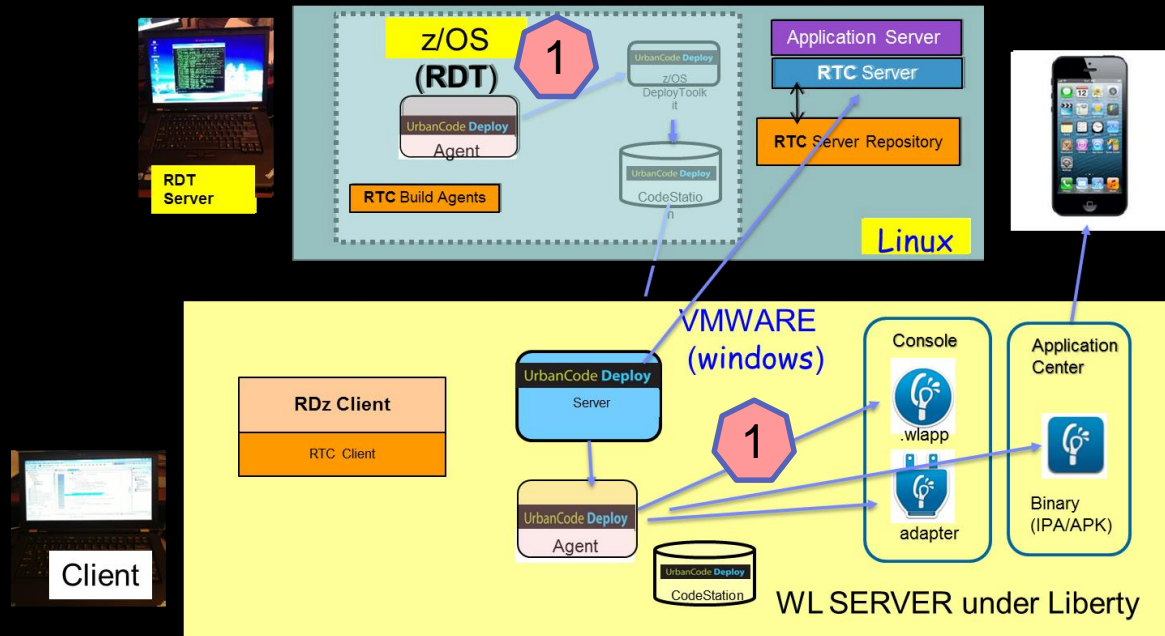
```
<resource name="JKECMORT" type="PDSMember"/>  
<resource name="JKEMPMT" type="PDSMember"/>
```
4. Modify the JCL **UCD2BUZ** with the desired version name and submit

```
//SYSTSIN DD *  
ISPSTART CMD(BUZTOOL "createzosversion" "-c" "MortgageCICS" –  
"-v" "demoxx" "-s" "/u/empot05/shiplistDEMO.xml ")  
/*
```
5. When complete verify the USS version folder is created
see **/var/ucd/agentRDZUTV01/var/repository**
6. Go to **UrbanCode Deploy** Server and run the deploy at **DEV** level

Release Engineer:

Deploy z/OS (CICS) and Windows (Worklight Server) components to the DEV environment

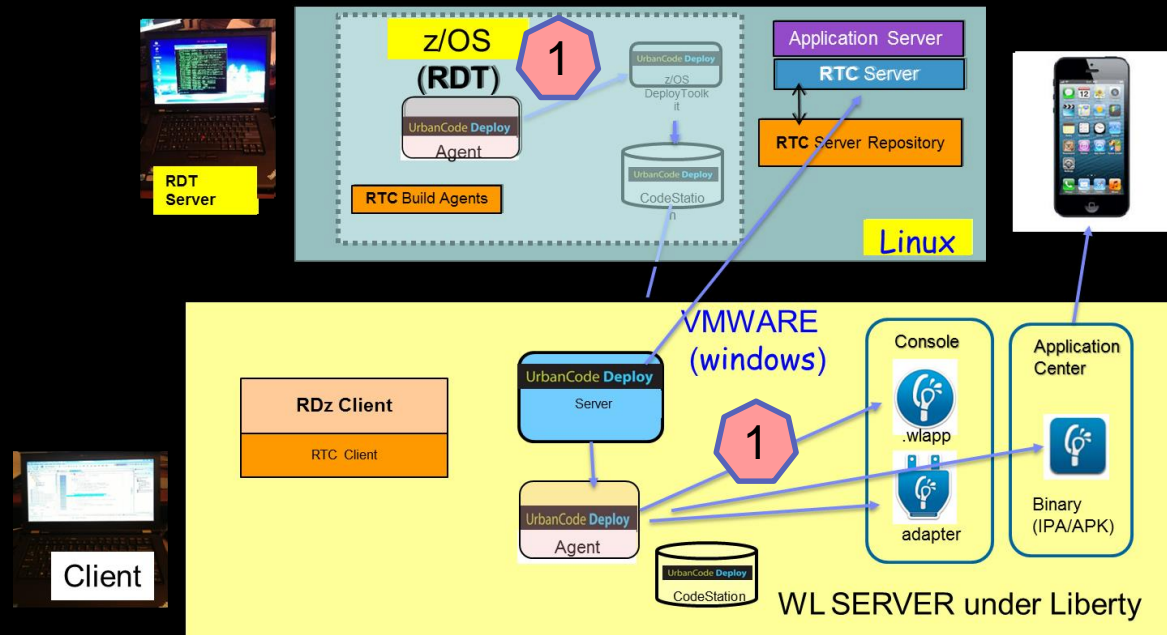
1. Go to **UrbanCode Deploy Server** and run the deploy at DEV level
2. Verify that the change has been made on **CICS** and **Worklight Server**



Release Engineer:

Deploy z/OS (CICS) and Windows (Worklight Server) components to the DEV environment

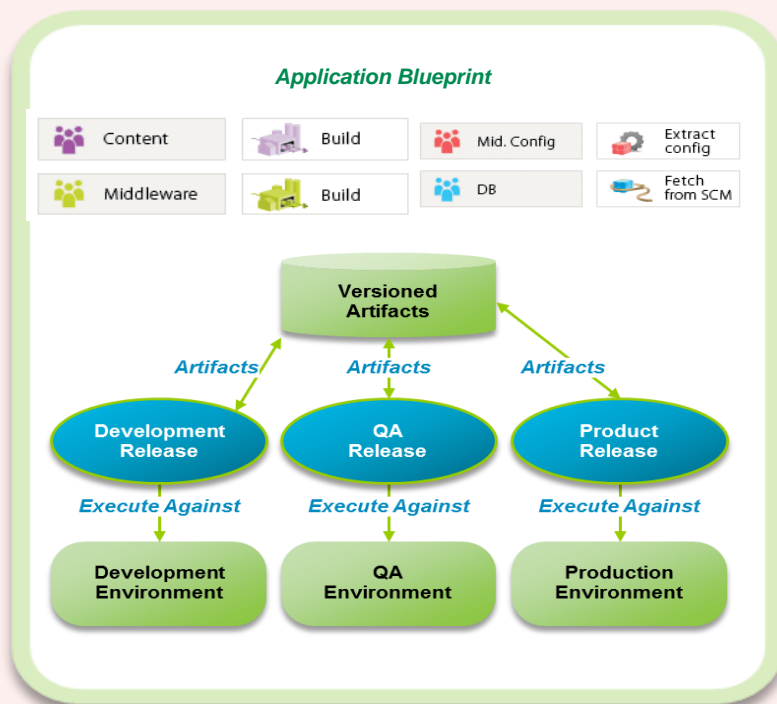
1. Go to **UrbanCode Deploy Server** and run the deploy at DEV level
2. Verify that the change has been made on **CICS** and **Worklight Server**



- Automated software release and deployment **reduces errors**
- Push-button deployments **improves productivity** for developer and operations
- Built-in best practices provides for **faster time-to-market**
- Enforced Security and traceability ensures **compliance and auditability**



Deliver test environments in minutes



urban{code}

An IBM company

IBM UrbanCode Deploy
IBM UrbanCode Release
IBM SmartCloud Orchestrator

Enabling you to...

- Provision consistent images for test environments, reduce rework, and speed redeploy of application changes
- Quickly deploy multiple test instances in minutes versus hours or days
- Support mainframes using zLinux and z/OS applications
- Orchestrate and automate the deployment and management of applications, middleware configuration, and databases, including Bluemix



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