Stay ahead.

Innovate2013

The IBM Technical Summit

開發者大會

軟體持續交付快狠準！
企業開發平台 DevOps 大顯神威

IBM軟體產品處
Rational 資深資訊技術顧問
林裕隆 (Jason Lin)

Innovate2013
The IBM Technical Summit
開發者大會

Stay ahead.

Agenda

- IBM DevOps overview
- UrbanCode 解决方案
- Demo

什麼是 DevOps（\dev-äps\）？

- DevOps（英文Development和Operations的組合）是一組過程、方法與系統的統稱，用於促進開發（應用程序/軟體工程）、技術運營和質量保障（QA）部門之間的**溝通、協作與整合**。
- 它的出現是由於軟體行業日益清晰地認識到：為了**按時交付軟體產品和服務**，開發和運營工作必須**緊密合作**。

(摘自維基百科)

可以把DevOps看作開發（軟體工程）、技術運營和質量保障（QA）三者的交集

什麼是IBM DevOps：通過軟體驅動創新的產品和軟體持續交付方法

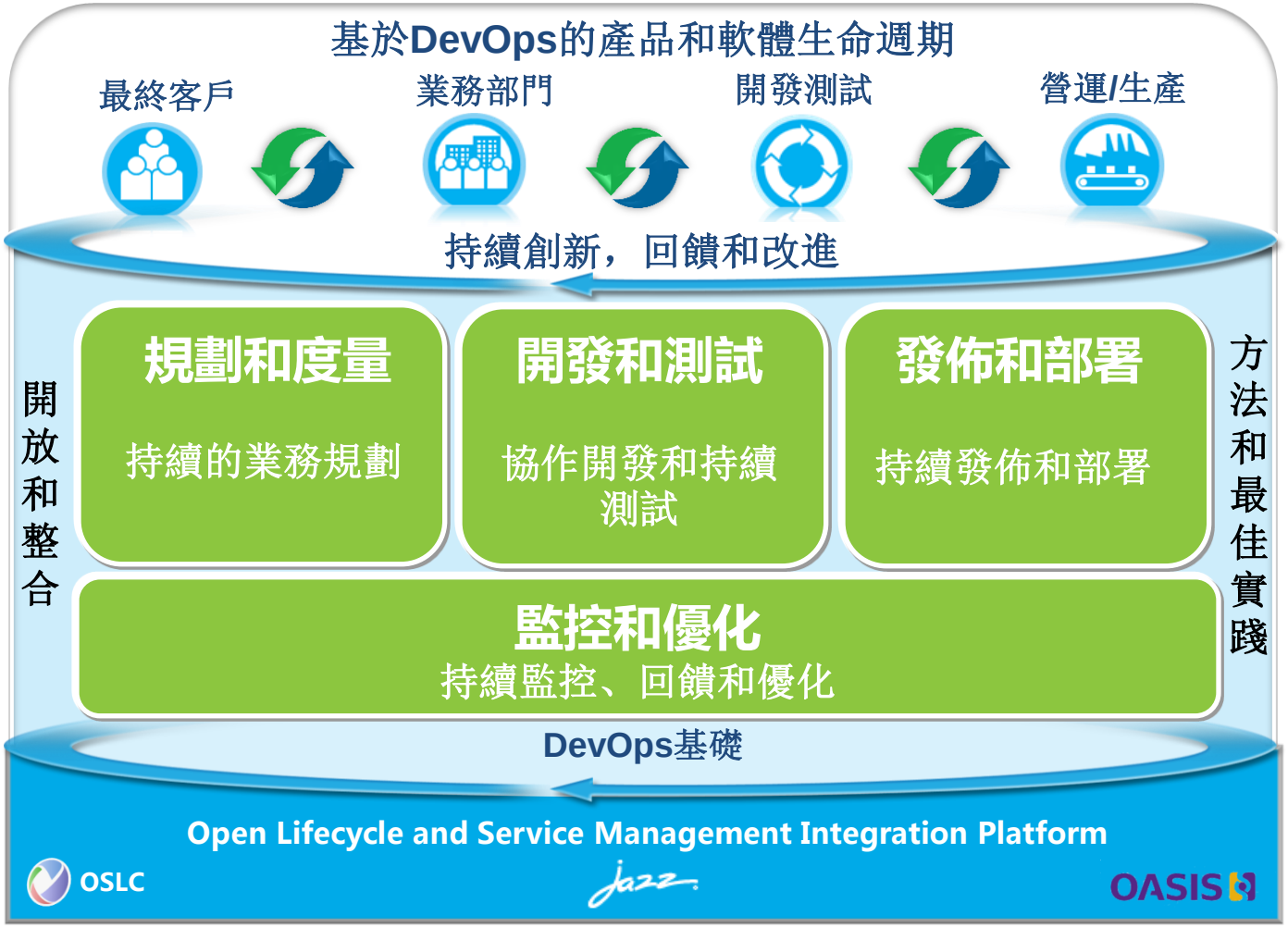
企業通過持續的軟體交付能力，抓住市場機會，縮短獲得客戶回饋的時間。

快速獲得和回應客戶回饋

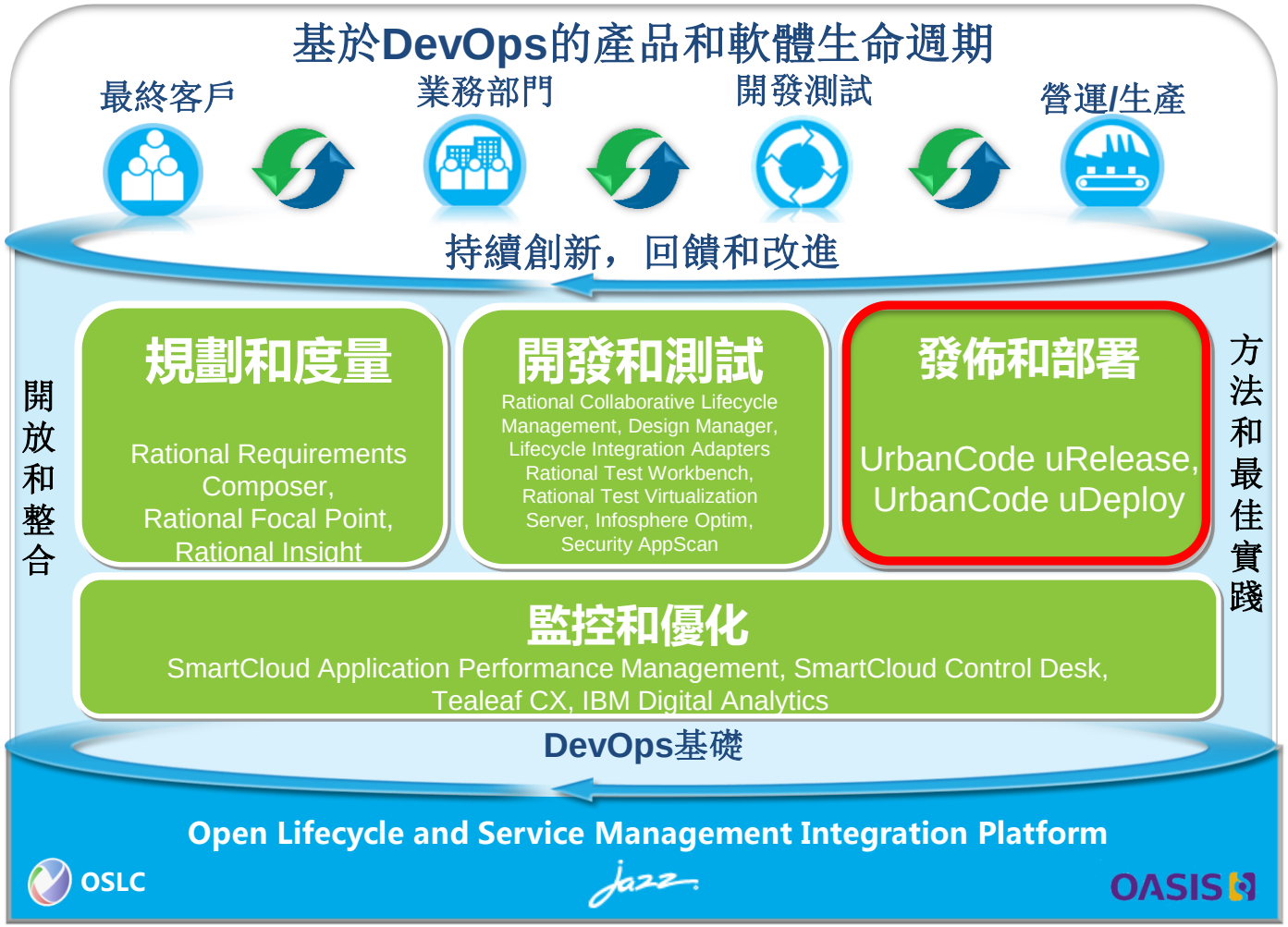
加速軟體交付

平衡速度、成本、品質和風險

基於DevOps的產品和軟體生命週期管理能力模型



基於DevOps的IBM產品家族



IBM DevOps Tool Chain

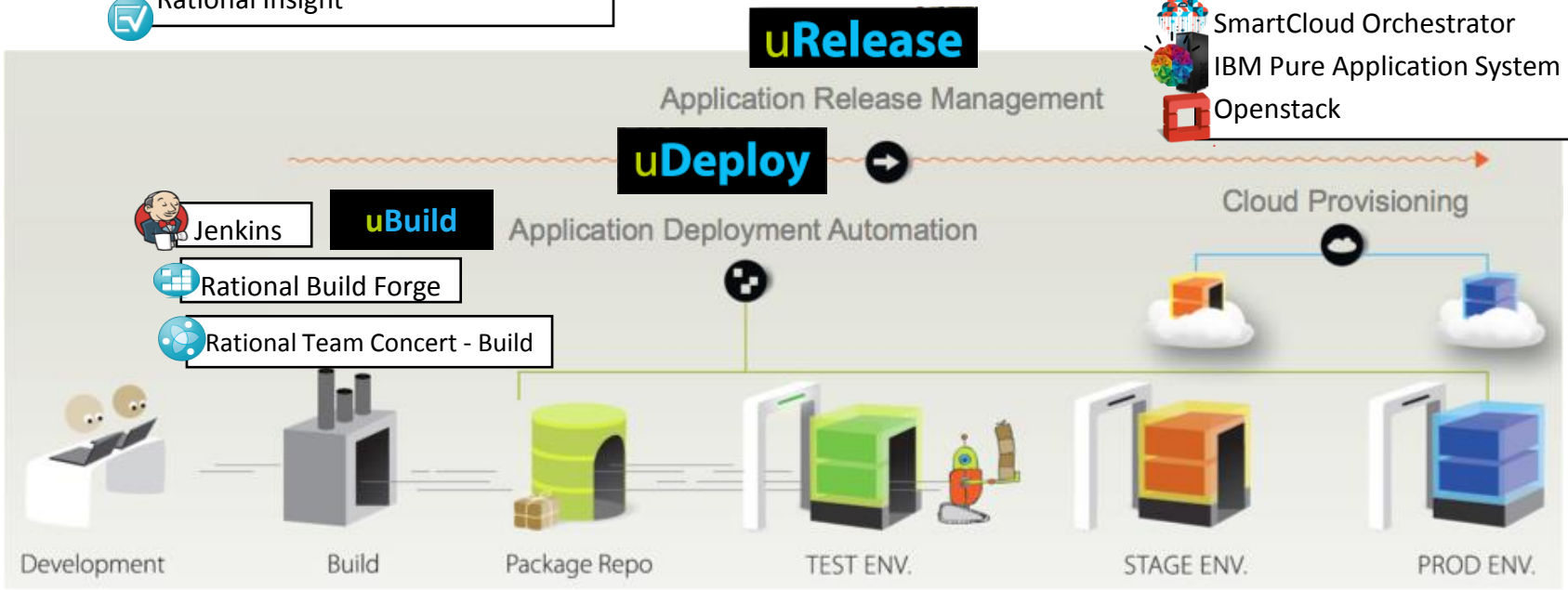
規劃和度量

- Rational Focal Point
- Rational Requirements Composer
- Rational Insight

發佈和部署

IBM SmartCloud

- SmartCloud Orchestrator
- IBM Pure Application System
- Openstack



- Rational Team Concert
- Rational Software Architect

開發和測試

- Rational Quality Manager
- Rational Test Workbench
- Rational Test Virtualization Server

- SmartCloud Control Desk
- SmartCloud Application Performance Management

tealeaf

監控和優化

Agenda

- IBM DevOps overview
- UrbanCode 解决方案
- Demo

Urbancode, an IBM Company

- **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."

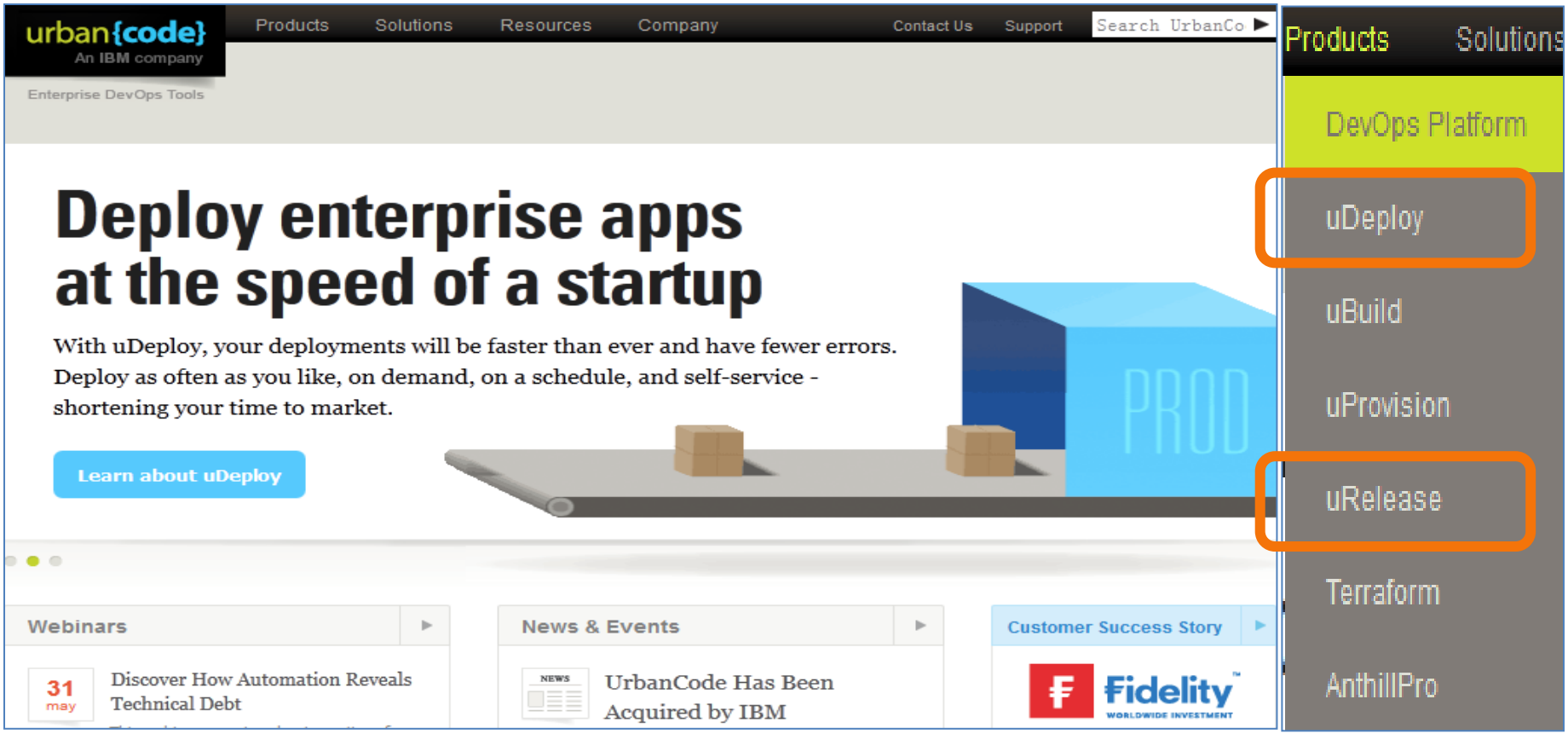
Gartner

SD Times 2010 100 SD Times 2011 100 SD Times 2012 100

Gartner | 2011 COOL VENDOR

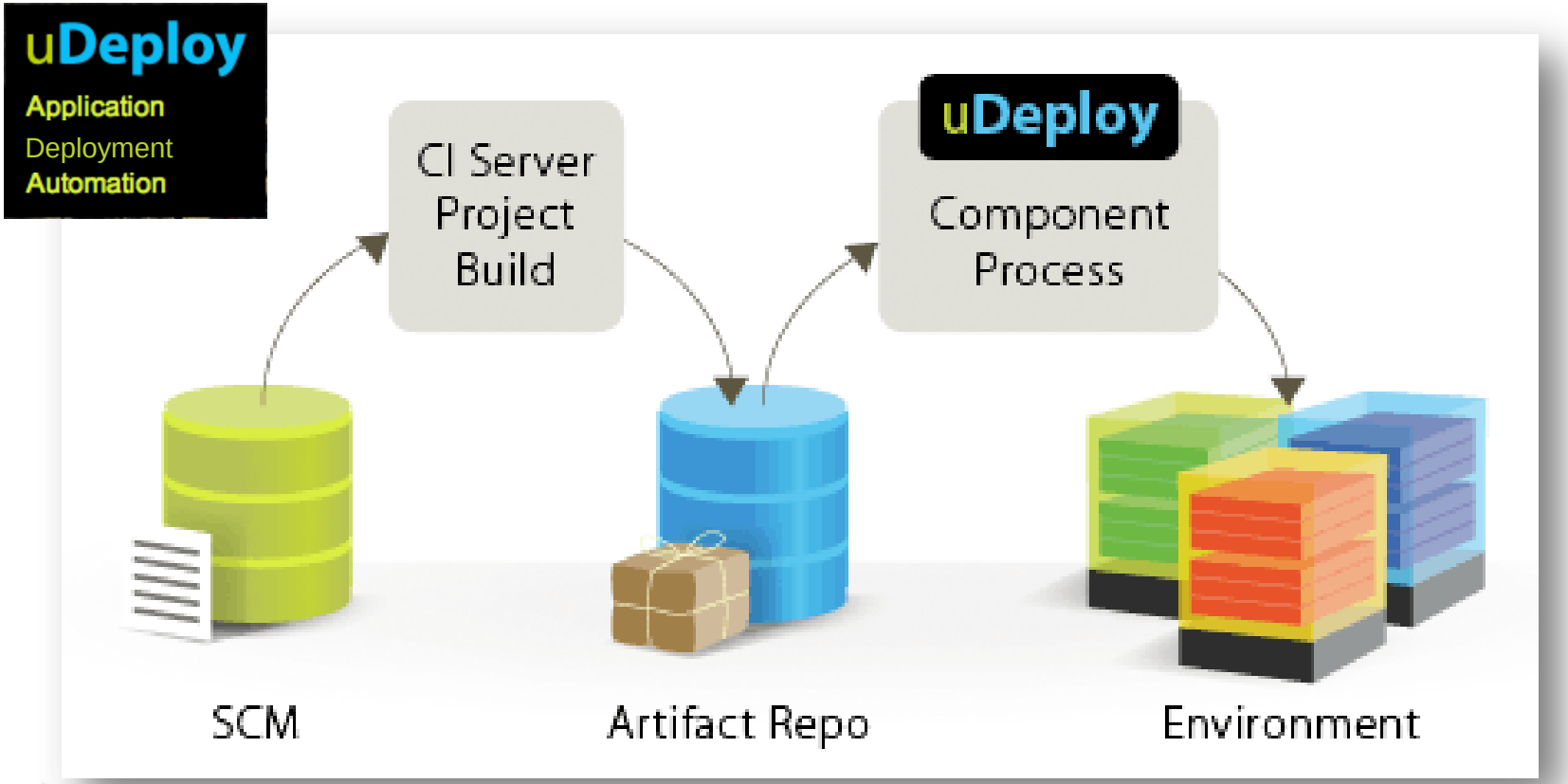
Jolt Productivity Award

UrbanCode是什麼？
幫助快速部署企業應用程式的工具



uDeploy (持續部署解決方案)

Automating deployment of applications across dev, test, and production environments



uDeploy Platform Technology

uDeploy

Core

- Graphical Process Design
- Configuration Management
- Inventory

uDeploy Platform Technology

uDeploy

Core

- Graphical Process Design
- Configuration Management
- Inventory

Supporting

- Artifact Repository
- Calendars & Scheduling
- Intelligent File Transfer
- Compliance & Approvals
- Audits

Application – Component Model

uDeploy

Components

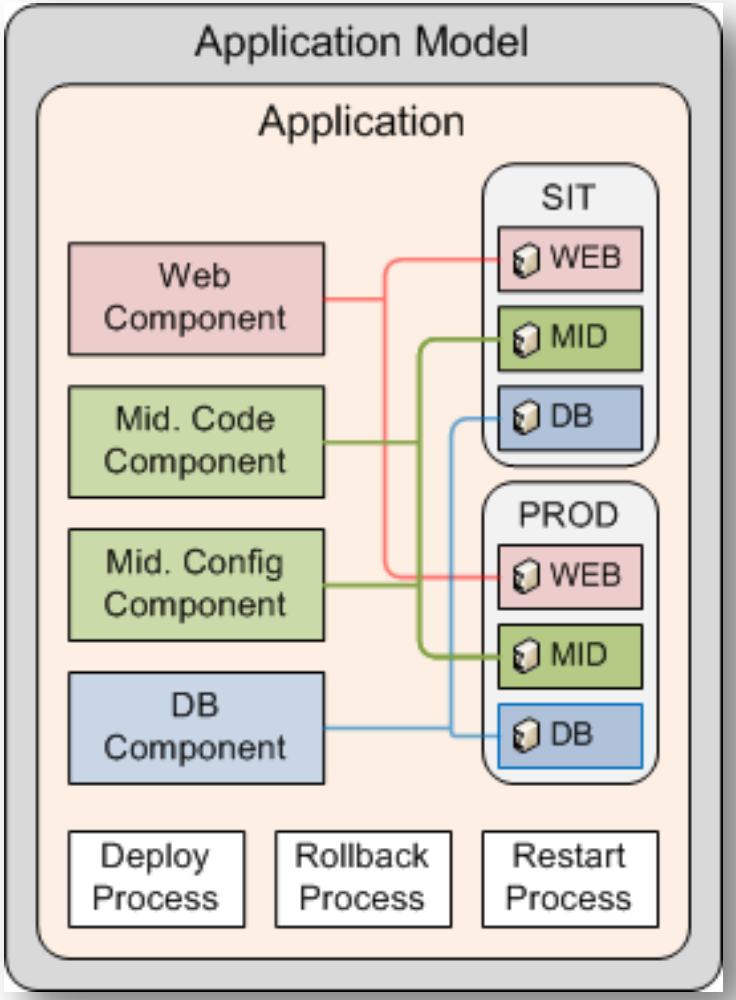
- Tiers or services

Environments

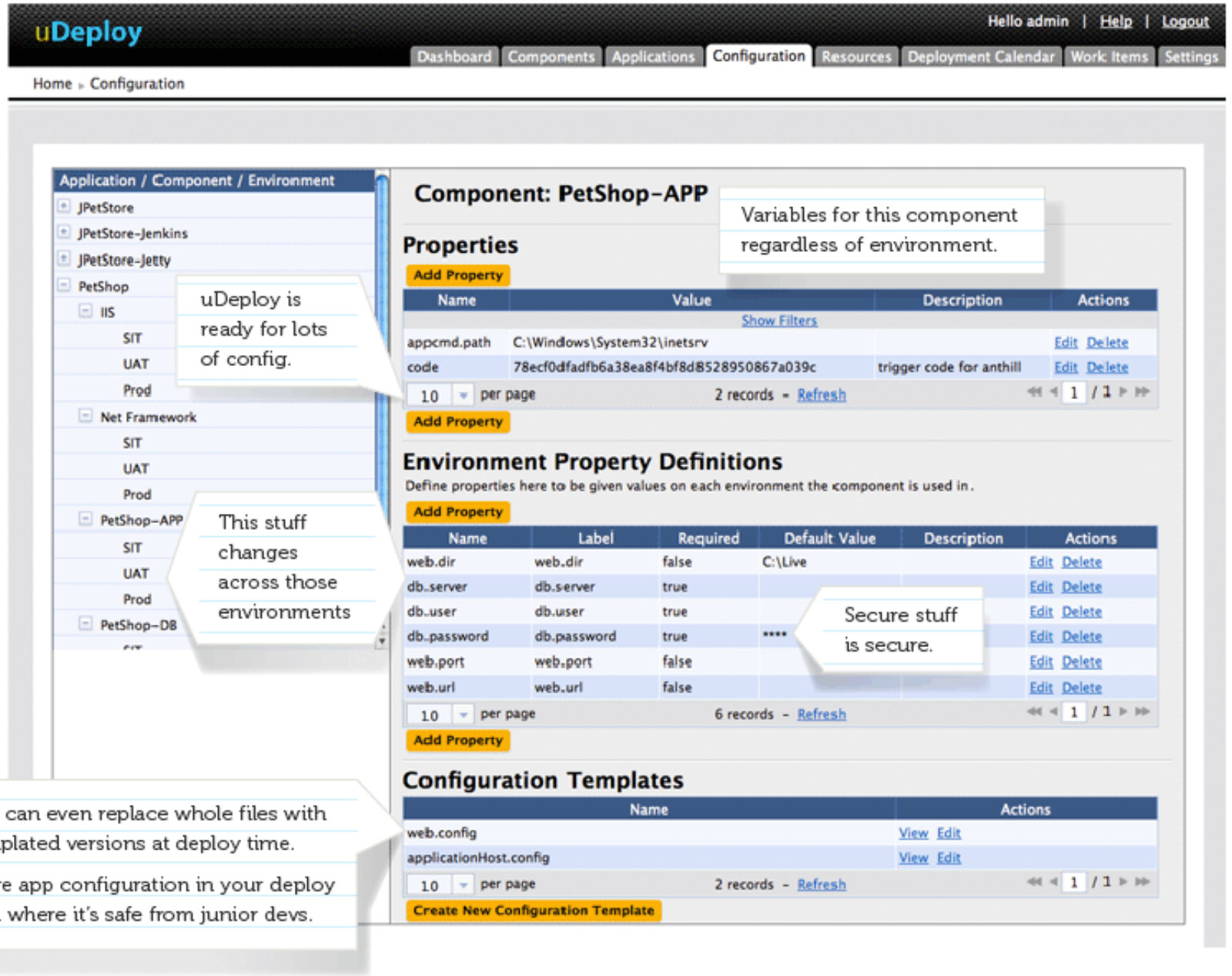
- Target servers
- Servers have roles
- Env. Specific Config

Processes

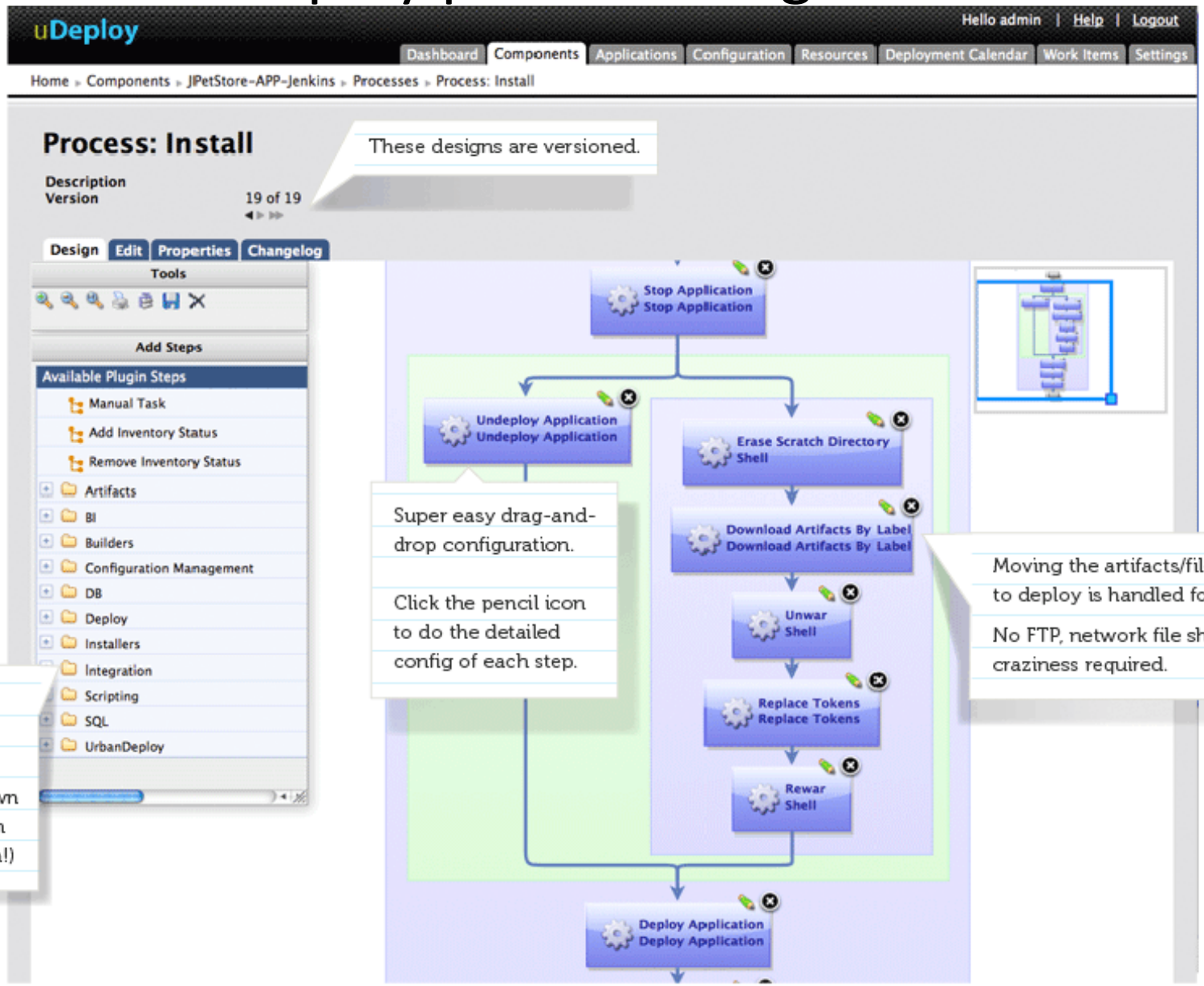
- Coordinates Component processes



uDeploy configuration settings

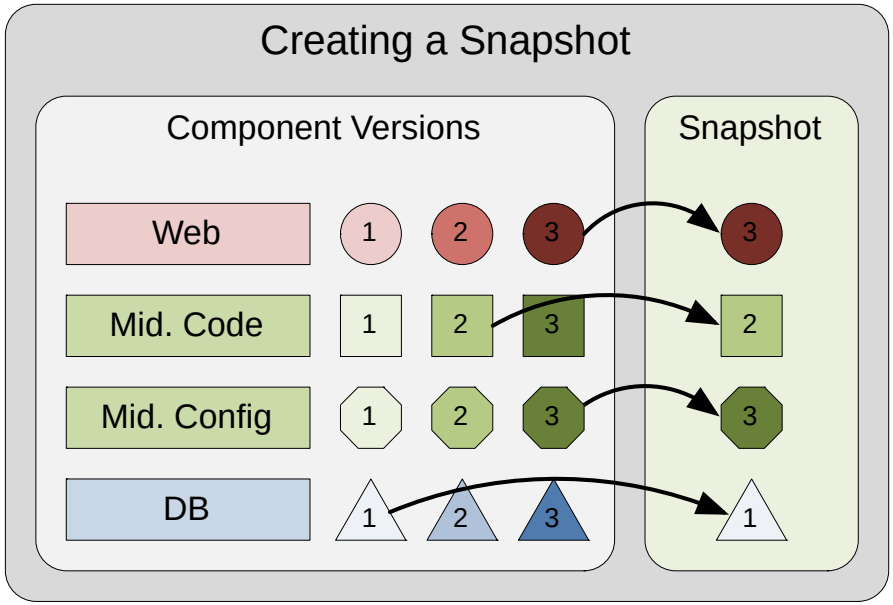


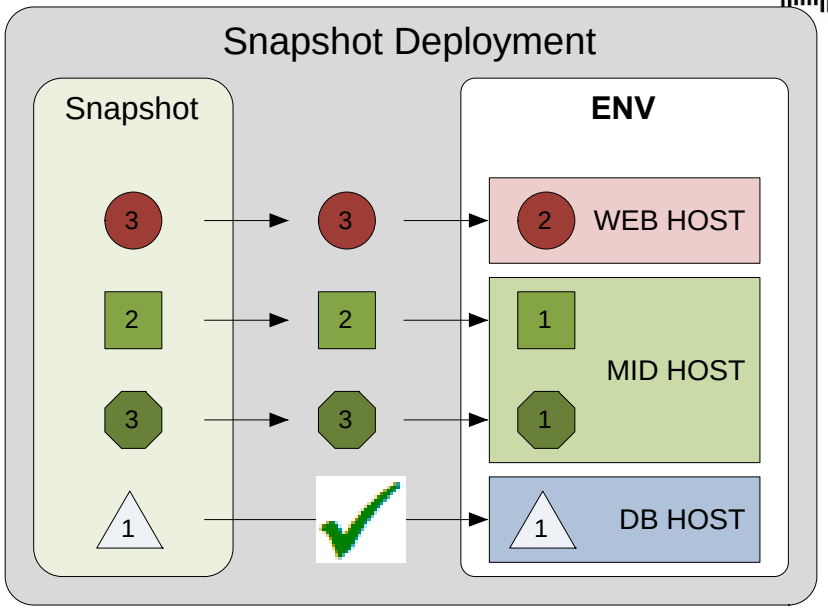
uDeploy process designer



Snapshots – A Version of the App

uDeploy





Contents of environments that pass tests

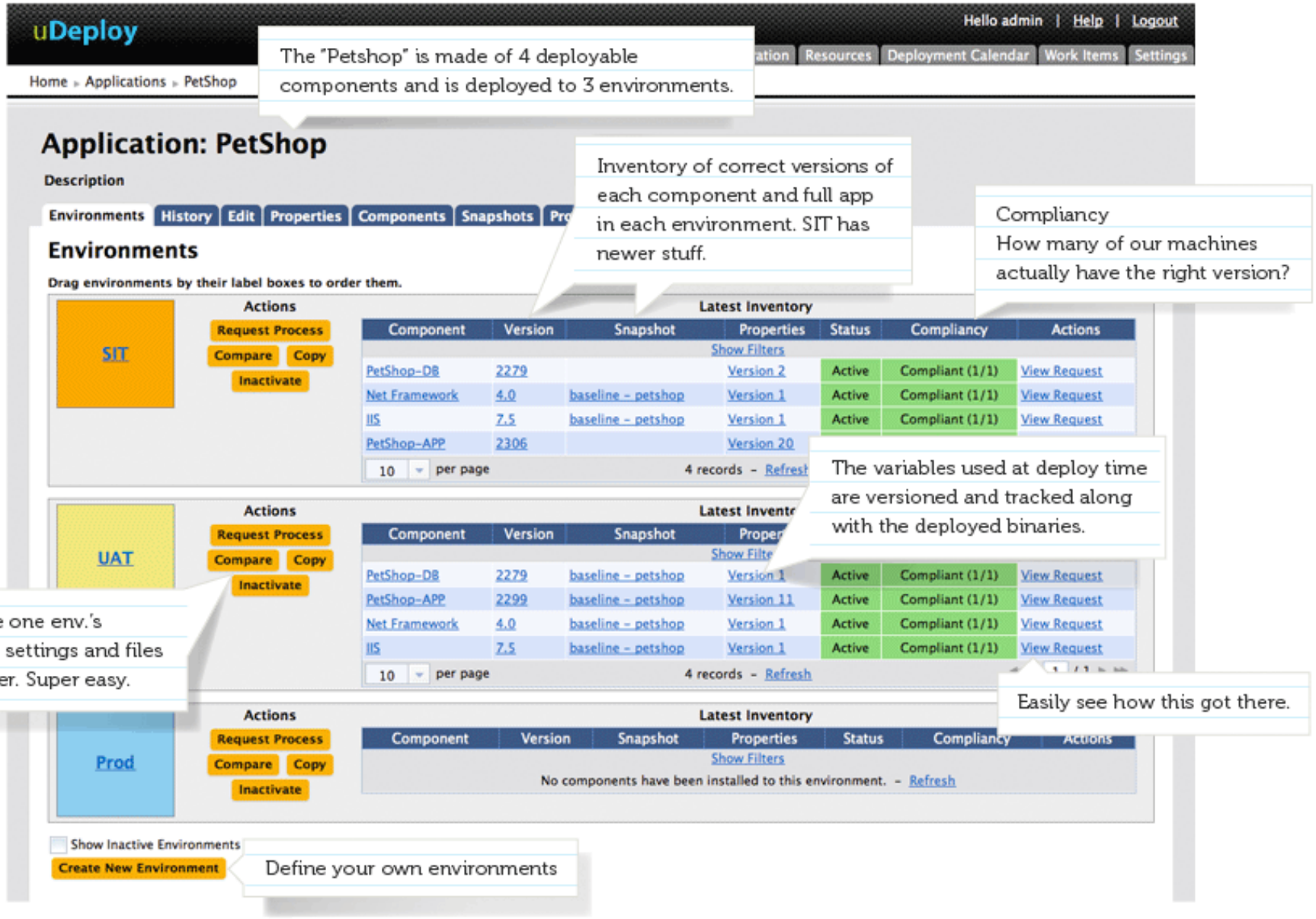
- contain deployables and config

Deployments are based on deltas

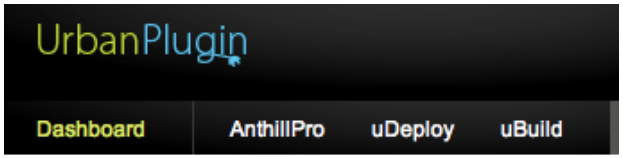
They help with:

✓ Automation, Audit, and Visibility

Application environment inventory



uDeploy works in heterogeneous environments



http://plugins.urbancode.com

Deployment Sources
- Build servers
- Source control tools
- Maven repositories

IBM Integrations
- RTC / ClearCase / Synergy
- WebSphere Application Server
- MQ
- Message Broker

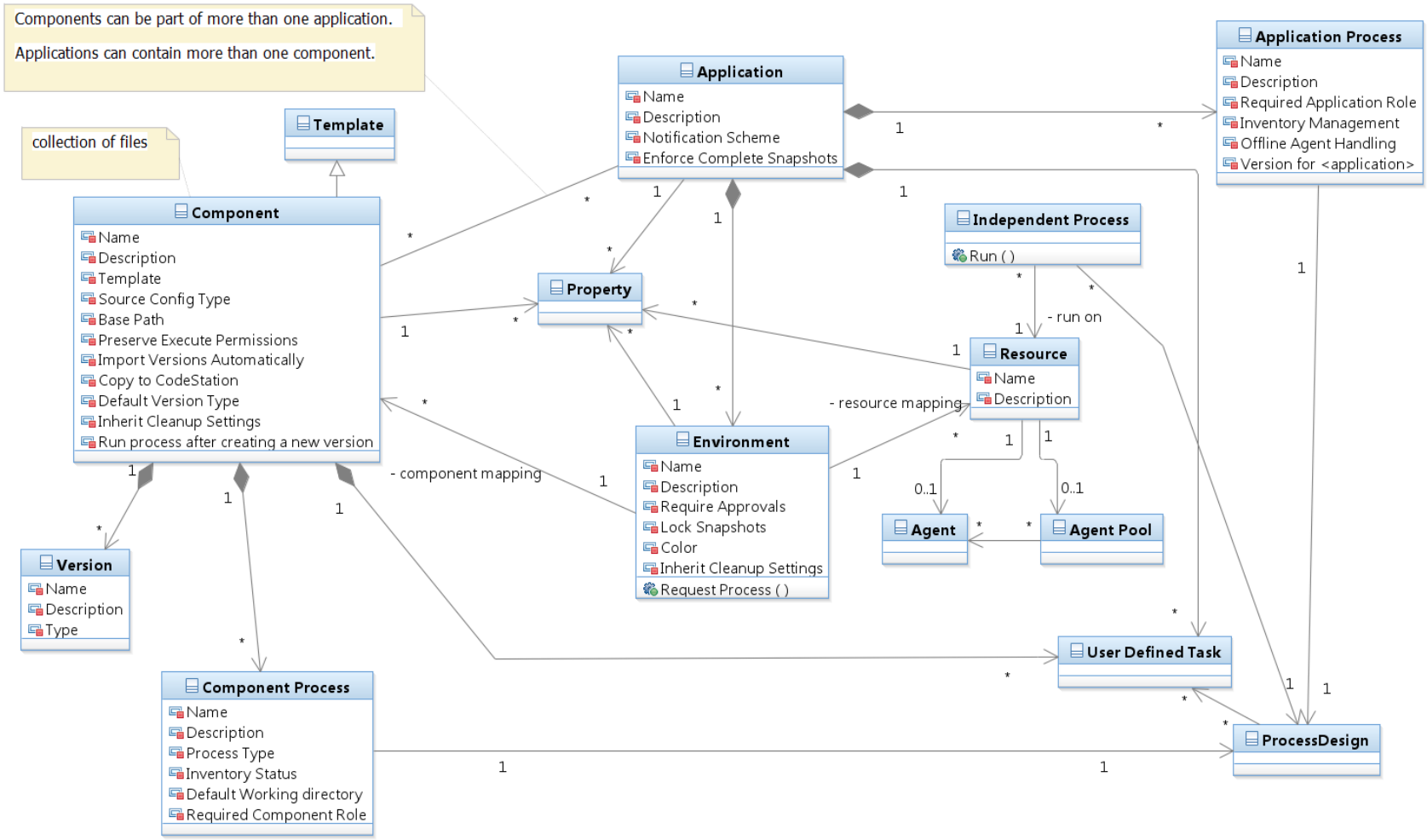
Other Java Platforms
- WebLogic, Tomcat, Jboss, etc

Quality & Change Management
- QualityCenter
- Remedy
- ServiceNow

Microsoft Platform
- IIS
- SharePoint & Biztalk

Infrastructure
- Public / Private Cloud
- Load Balancers
- DataBases

UrbanCode uDeploy Object Model



企業應用部署自動化平臺功能組件和特性

環境管理員

發佈工程師

部署工程師

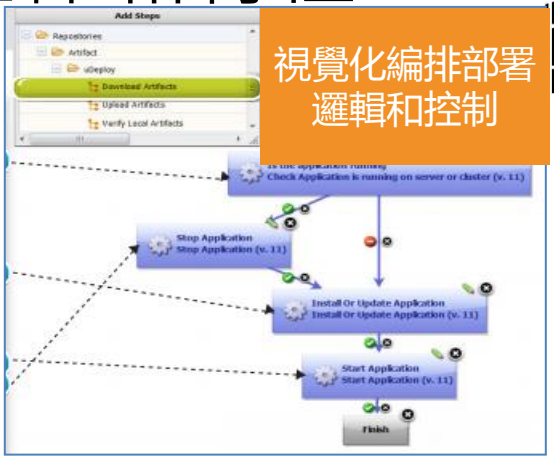
基於urbanCode的企業應用部署管理平臺

- 環境管理
- 組件管理
- 應用管理
- 執行管理
- 儀表板

部署Artifact管理

外掛程式管理

系統管理



視覺化編排部署邏輯和控制

同時支援多套環境自動部署

100 + 餘重開箱即用的外掛程式並可擴展

What troubles operational releases?

Releases encompass more than application deployment

- Examples: Middleware, network, hardware changes in addition to application changes
- Steps known in development and integration, but missed in Prod

Interaction between applications in a release

- Ordering of application deployment steps fails to account for dependencies between applications or deployment steps.
- Required artifacts or applications missed or wrong application versions deployed.

Difficulty coordinating dozens of participants

- Late breaking changes to deployment instructions or targeted artifacts are not communicated.
- Work product quality and process check lists scattered about many tools and not digested for at-a-glance status

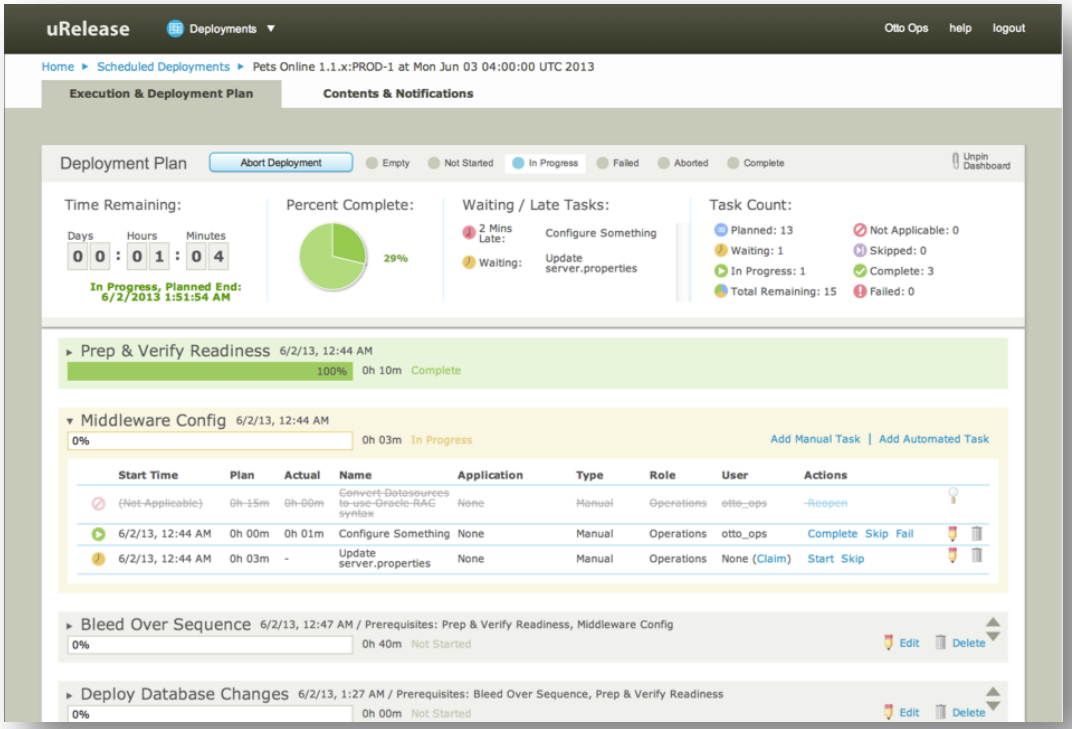
uRelease – (持續發佈解決方案)

Qualify with one question:

Do you have large monthly or quarterly releases that take hours/days and require dozens or that hundreds of people to get on a call?

uRelease delivers

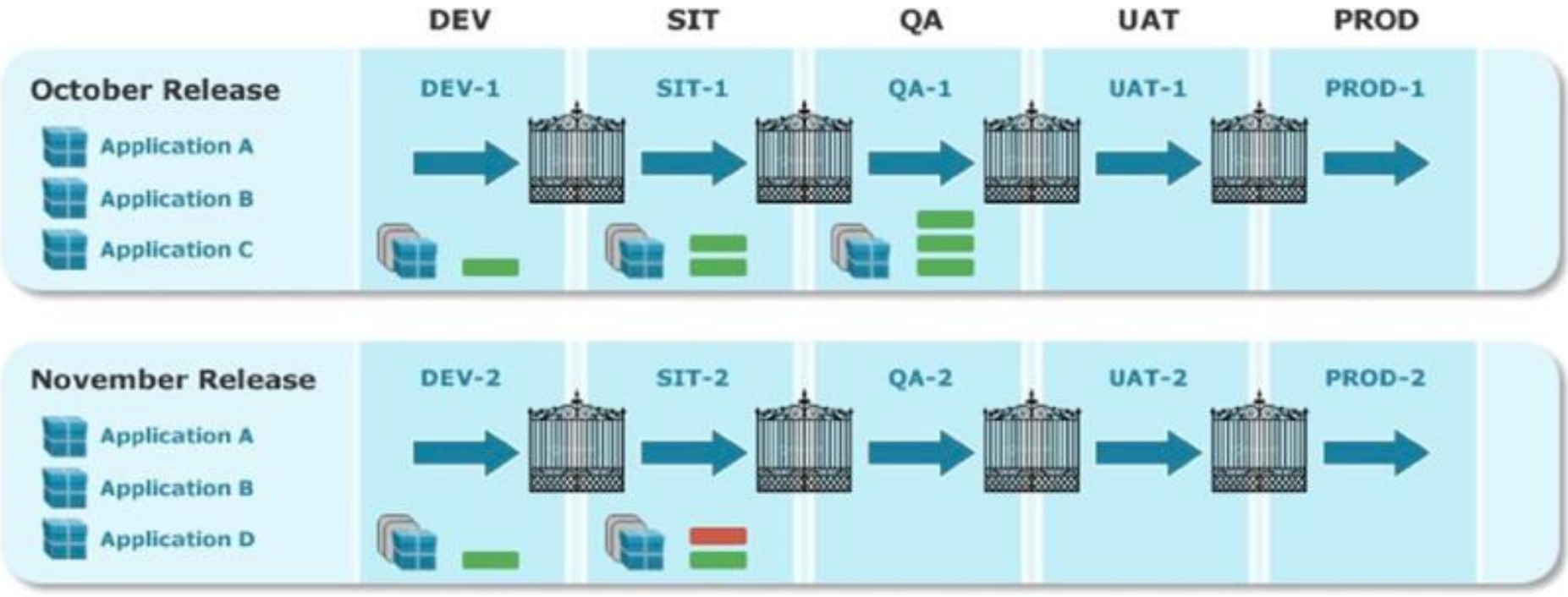
- Plan the release day
- Execute the release
- Communicate what's going on
- Allocate environments to releases
- Tie release back to development



uRelease – (持續發佈解決方案)

uRelease delivers

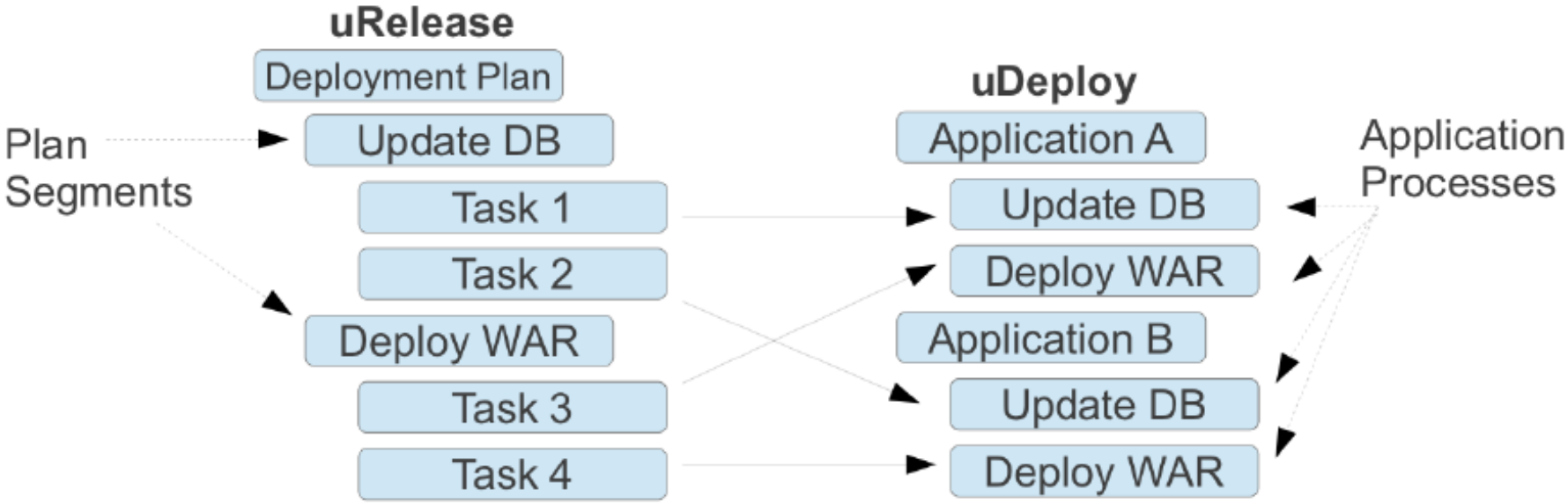
- Plan the release day
- Execute the release
- Communicate what's going on
- Allocate environments to releases



Because spreadsheets are a) terrible and b) normal

Deployment Plan

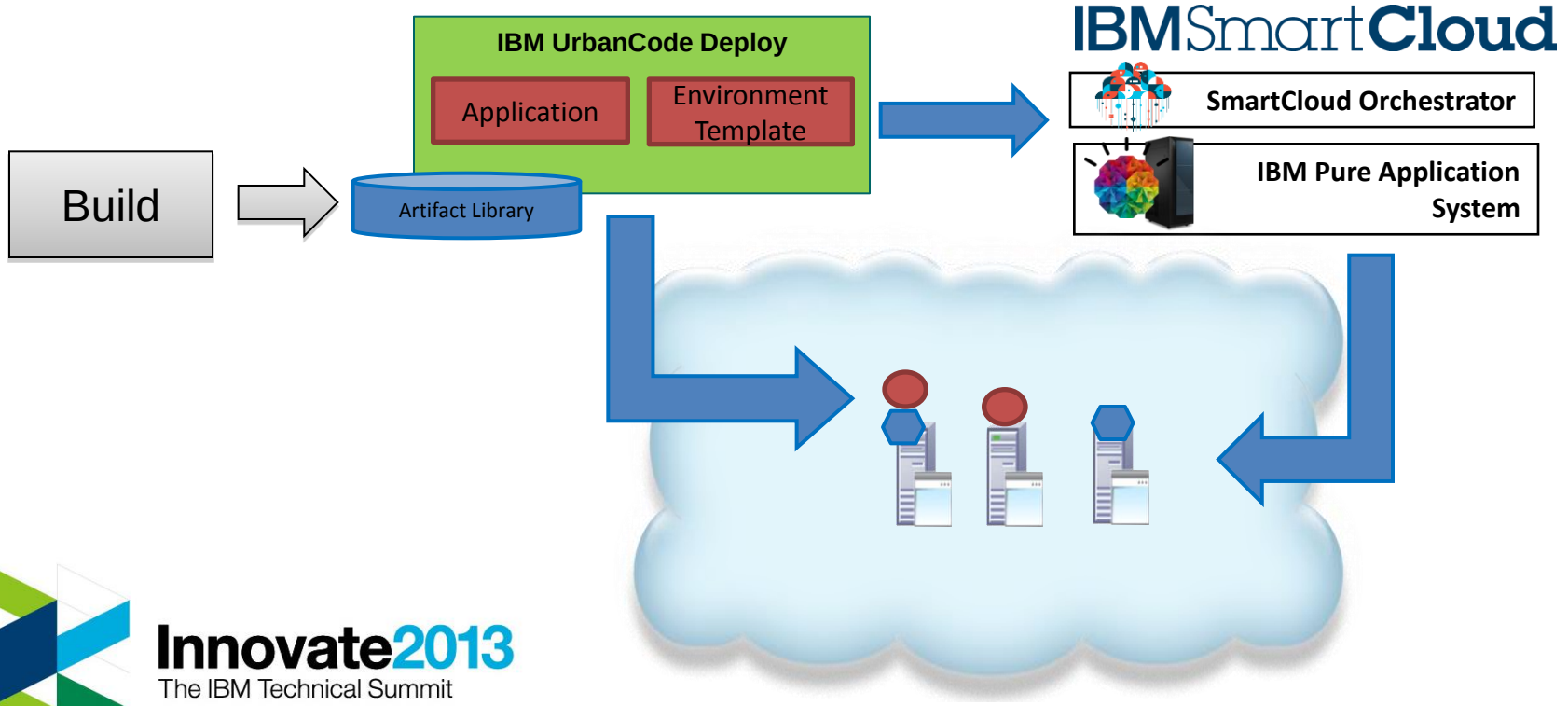
- **Deployment Plan** orchestrates both automated and manual steps across many applications.



- Designed to be used for low-ceremony early integration environments as well highly orchestrated production deployments.
- Master Plan feature ensures that changes are immediately reflected across all scheduled and future deployments.

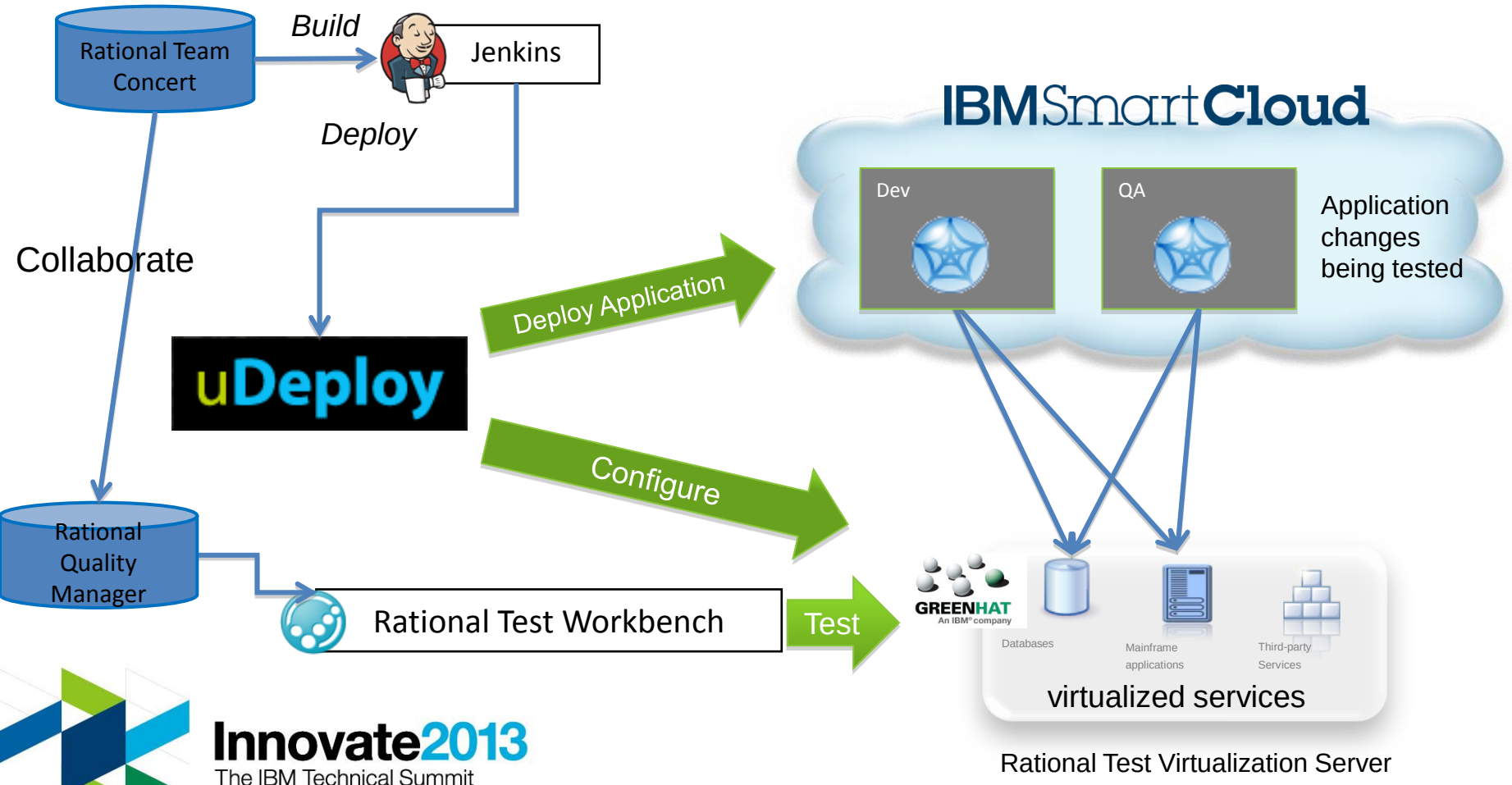
Continuous Delivery with Cloud

- Extend Urbancode Deploy to capture **Environment Templates**
  - Describe desired environment infrastructure/platform
  - Define Application processes to run in scope of Environment Template
- Seamless process flow for incremental, full stack provisioning and application deployment automation
- Track and version artifacts to know what is deployed where



Continuous testing with virtualized services

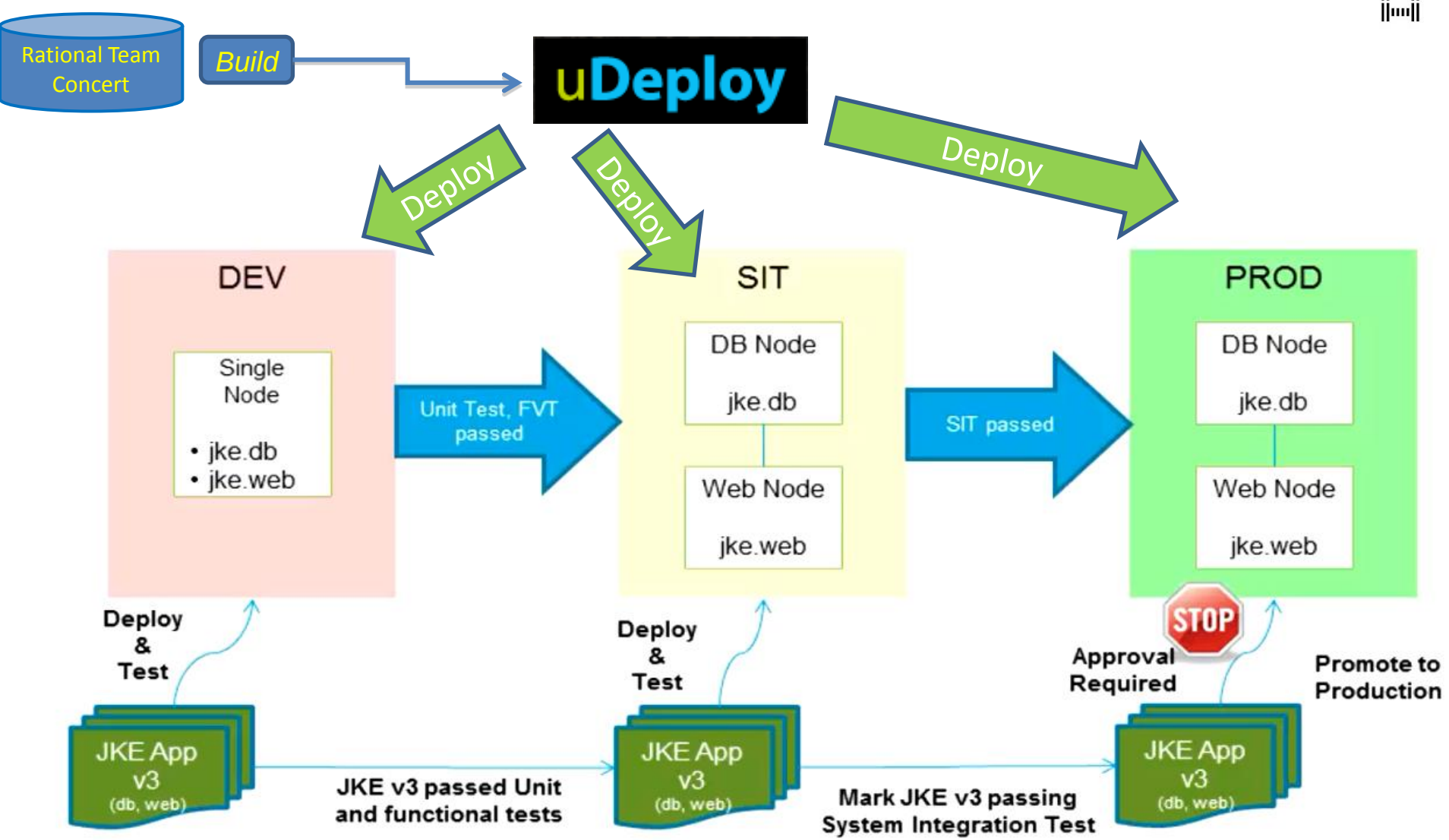
Automating deployment and testing to production-like environments



議程

- IBM DevOps Overview
- UrbanCode解決方案
- Demo

Demo 情境- JKE Deliver Process



UC#1-Deliver Development environment

Description:

- JKE Development team finished developing a new feature or fixing a defect, and wants to do testing of these features on a development environment. Dev sent a request to Ops for provide Dev environment.

Current Pain-point

- Operations not able to keep up with the number of requests coming from development
- Development productivity impacted as a result of wait-times.

uDeploy Value Proposition

- Automated and repeatable process to deploy applications to environments
- Integrations with development build (Cont. Integration) process reduces manual handovers and increases efficiency.

UC#2 – Deliver QA environment

Description:

- JKE development team completed the build and test of latest source code changes. SIT team wants to do testing of this build on a production-like QA environment. Request sent to Ops to update Test environment

Current Pain-point

- Rework resulting from deploying un-tested builds due to lack of visibility into the quality of build.
- Long wait-times to create or update test environments resulting from manual processes and configuration mismatch.

uDeploy Value Proposition

- Improved visibility into the quality of builds – resulting in better governance around the delivery process.
- Automated and repeatable process to deploy applications to environments reduces manual and configuration mismatch errors.

UC#3 – Promote to production

Description:

- JKE IT Operations team has received a build from JKE Development to deploy to production.

Current Pain-point

- Applications don't work in production.
- Long wait-times to create or update test environments resulting from manual processes

uDeploy Value Proposition

- Deployment Gates to enforce quality certified applications to be deployed to Production Environment
- Easy availability of Dev and Test environments matching Production environment reduces problem resolution time.
- Automated and repeatable process to deploy applications to production environments ensures faster deployment of releases to production.

UDeployDemo.mp4

Thank
You