

DDD-6420

InterConnect 2016

The Premier Cloud & Mobile Conference

The Future of DevOps and UrbanCode

Preparing for Hybrid Cloud and Containers

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February 21 – 25
MGM Grand & Mandalay Bay
Las Vegas, Nevada

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DevOps Deploy Track Highlights

- 24 Breakout sessions
- 2 Panel Discussion
- 3 Engagement Center Sessions
- 2 Research Day Sessions
- 2 Customer Feedback Roundtables
- 1 Workshop



Who are these guys?

- Eric is a product manager with IBM where he ensures our continuous delivery offerings rock.
- Eric has been with the UrbanCode team for over a decade living and breathing continuous delivery and DevOps. He's had roles including development, technical sales, and marketing.
- @EricMinick

Eric
Minick



- Steve is product manager focusing on IBM UrbanCode Deploy
- Steve has been with UrbanCode for 8 years. Previously he was apart of the WW DevOps SWAT team.
- @Steve_Boone

Steve
Boone



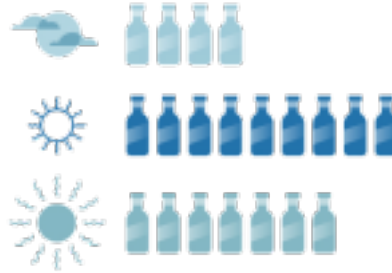
Businesses are experiencing digital transformations

New channels and business models



Engage new
audiences

Real time insight driven processes



Create new
business moments

Digital innovation



Leverage digital
services &
a broad ecosystem

Don't be a **Headline**

- *Failures in deployment and release can cost enterprises **millions of dollars***
- *Manual processes **do not scale** for today's complex applications and environments*



United Airlines to honor free tickets from computer glitch

Lucky fliers were able to pick up airfare for \$0, \$5 and \$10 for a couple hours on Thursday, and the airline said it will allow them to use the tickets.

BY VICTORIA TAYLOR / NEW YORK DAILY NEWS / Saturday, September 14, 2013, 11:17 AM

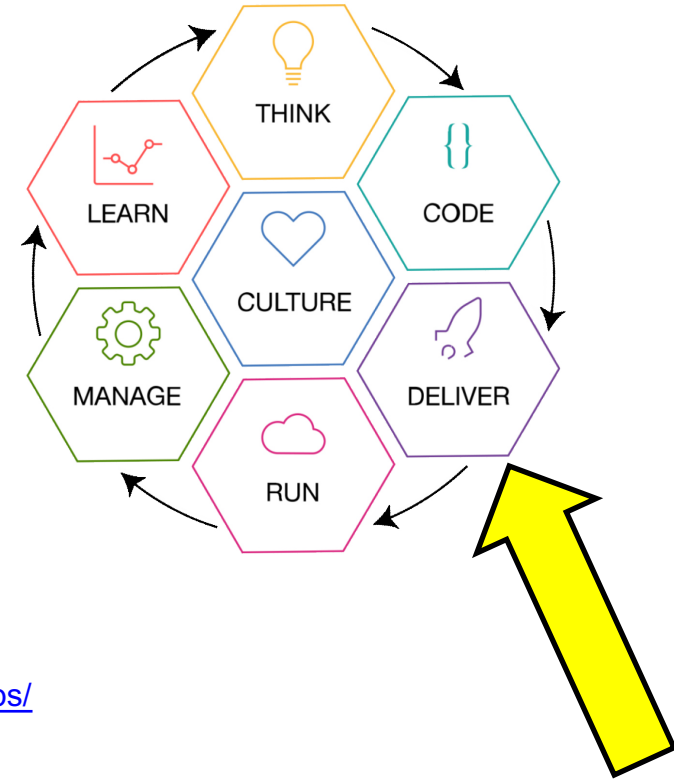
f Share 400 t Tweet e



That's why DevOps is HOT!

In short:

- DevOps exists to help the business win
- The foundations are found in Agile and Lean
- Culture is very important
- Feedback is fuel for innovation
- Automation helps
- The scope is broad, but centered on IT



<http://devops.com/2015/05/13/surprise-broad-agreement-on-the-definition-of-devops/>

IBM UrbanCode Deploy

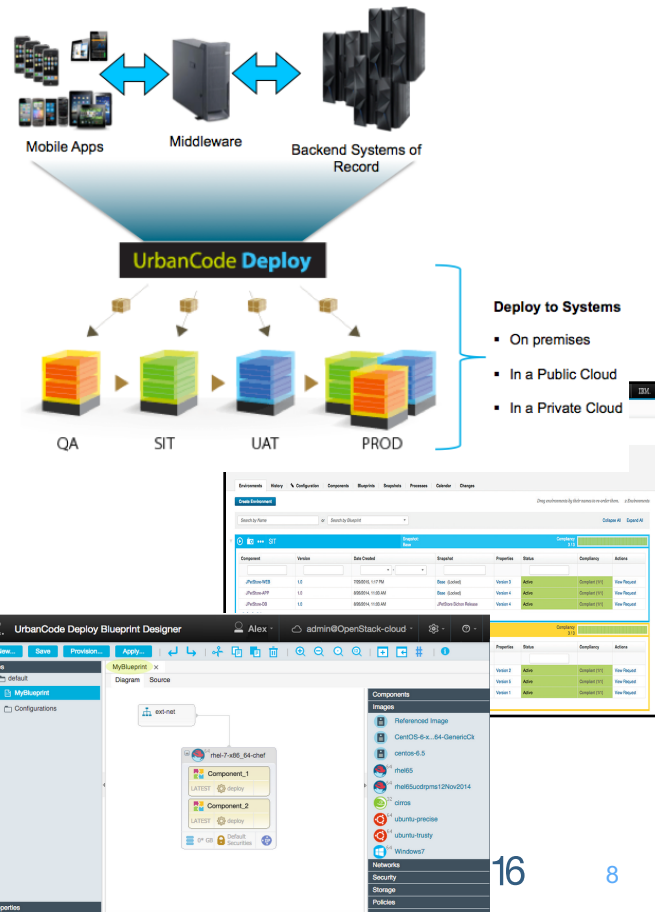
Deploy Applications through environments quickly and correctly, speeding time to market

Orchestrates across tiers and layers of the stack from Mobile to Mainframe including:

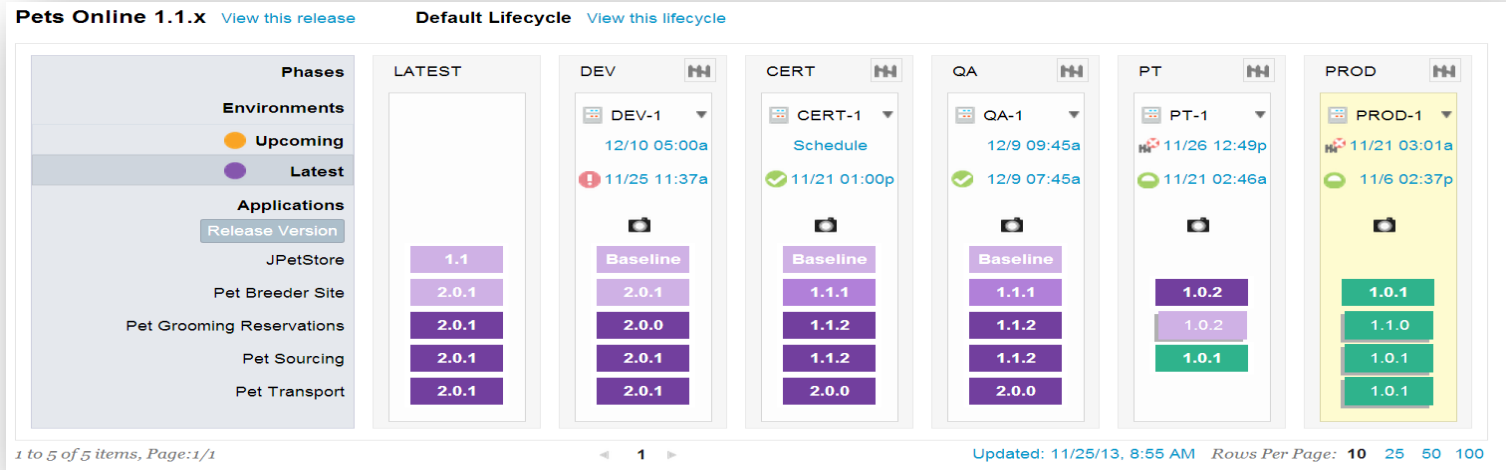
- Deploying web content, database schema and business logic
- Configuring middleware identifying drift
- Deploying to PaaS systems including Bluemix

Ensure governance, controls and visibility consistently from Development to Production

Eliminate environmental inconsistencies with Cloud Blueprints for infrastructure as code



IBM UrbanCode Release



- Facilitate Release Planning
- Track application changes
- Manage release dependencies
- Enforce quality gates
- Accelerate delivery
- Increase visibility
- Better governance and control
- Improve stakeholder engagement

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Last year was great



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IBM is a Strong Performer

The Forrester Wave™: Application Release Automation, Q2, 2015

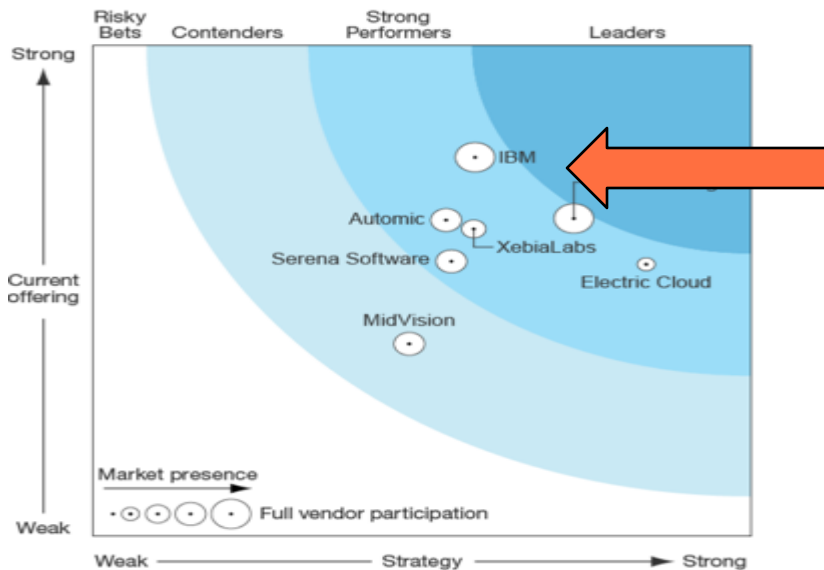
IBM Receives Highest Score in Current Offering in Application Release Automation Evaluation

“IBM UrbanCode Release Automation Solution has strong abstraction in moving releases, release planning and management, and integration with the MSD life cycle.”

Faster Application Release is a Critical Business Differentiator

“Application release automation tools remove errors from manual processes by standardizing and automating the movement of applications between environments. [It] is the critical final step in the delivery pipeline of applications to improve the customer experience.”

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ibm.biz/ForresterWave2015ARA

2015 Highlights: Every Deploy Customer Gets Patterns

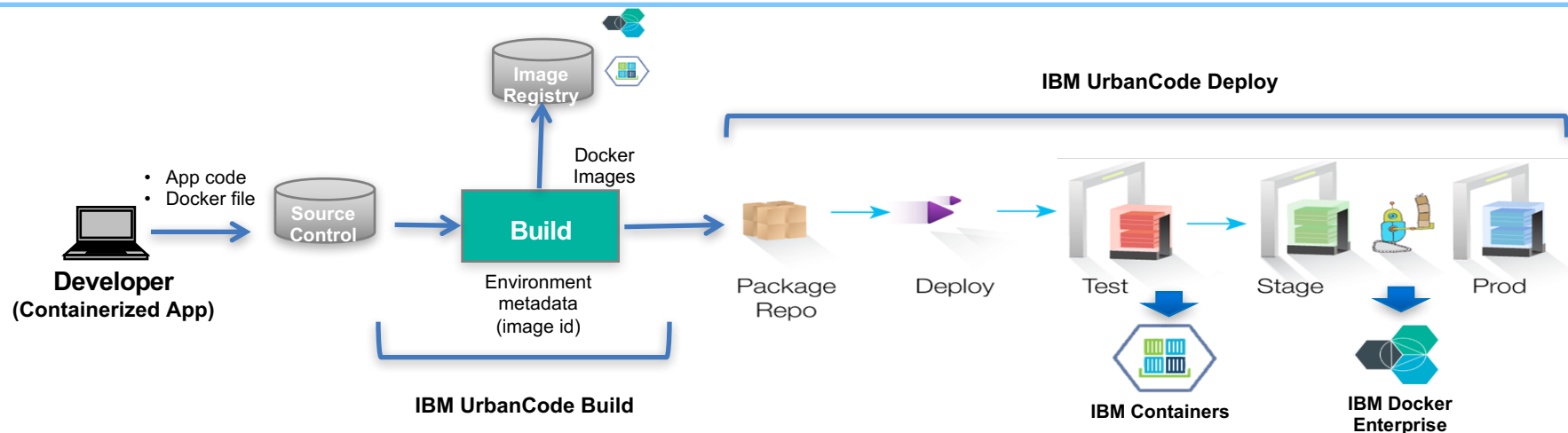
The screenshot displays the IBM UrbanCode Deploy Blueprint Designer interface. The top navigation bar includes the IBM logo, the application name "UrbanCode Deploy Blueprint Designer", and user information "Alex". The right side of the bar shows the user email "admin@OpenStack-cloud" and settings/help icons. Below the navigation bar is a toolbar with buttons for "New...", "Save", "Provision...", and "Apply...", along with various icons for undo, redo, copy, paste, delete, zoom, and other functions.

The main workspace is divided into three panes:

- Files:** A sidebar on the left showing a file tree with "default" and "MyBlueprint" folders. "MyBlueprint" is selected, and its "Configurations" sub-folder is visible.
- Diagram:** The central workspace showing a blueprint diagram. It features a component named "ext-net" connected to a larger component box labeled "rhel-7-x86_64-chef". This box contains two sub-components, "Component_1" and "Component_2", each with a "LATEST" version and a "deploy" action. Below these components are properties: "0* GB", "Default Securities", and an "IP" icon.
- Components and Images:** A sidebar on the right listing available components and images. Under "Images", the following are listed: "Referenced Image", "CentOS-6-x...64-GenericClk", "centos-6.5", "rhel65", "rhel65ucdrpms12Nov2014", "cirros", "ubuntu-precise", "ubuntu-trusty", and "Windows7".

At the bottom of the interface, there is a "Properties" pane.

2015 Highlights: Multi-Container Application Delivery Pipeline for Docker



✓ Delivery Process Automation

- Define, wire and automate complex multiple container deployments

✓ Environment and Configuration Management

- Manage Docker containers through delivery stages (dev, test, prod)
- Orchestrate across multiple hosts (IBM Containers, Private Docker Enterprise) for hybrid scenarios
- Version Management and Snapshots

✓ Security, approvals and notifications

- Customize user permissions, quality gates, and inform stakeholders of deployment actions

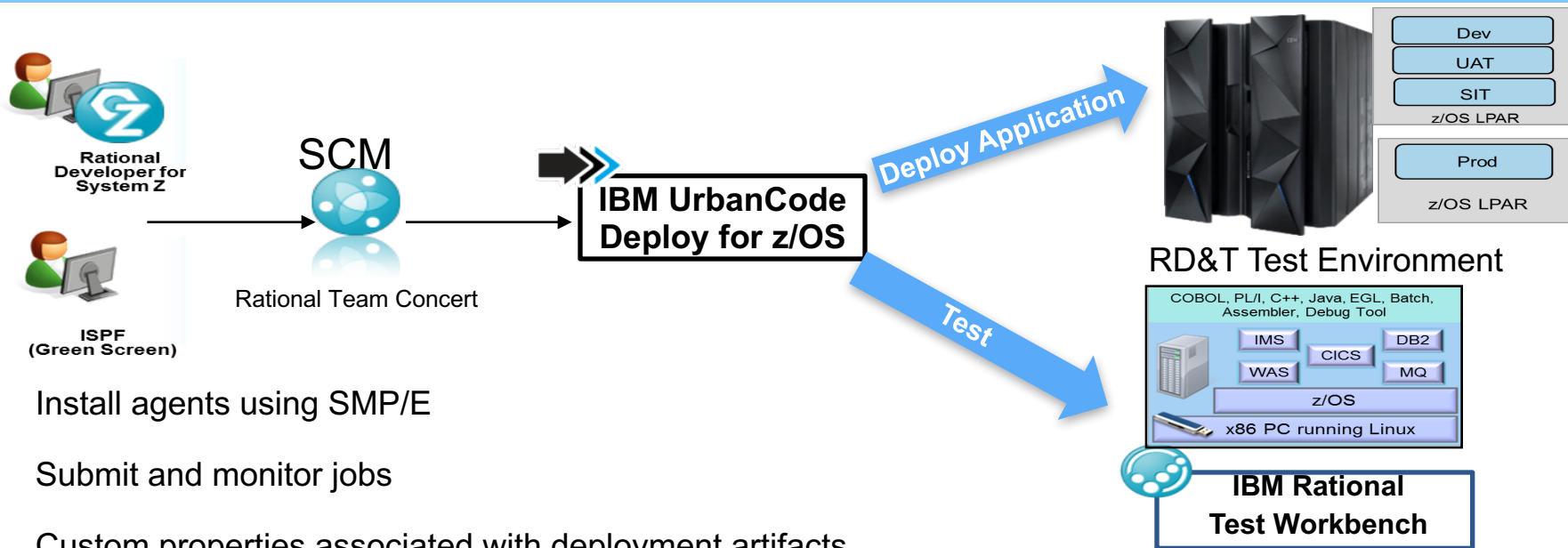
2015 Highlights: New WebSphere Application Server Configure Plugin

- Use JSON to manage/store WAS configuration
- Easily version and compare WAS configuration
- Template WAS configuration for reuse

Name
▼  cell
 Cell.json
 JDBCProvider_amatthewJDBCProvider-DatSource_amatthewDataSource.json
 JDBCProvider_amatthewJDBCProvider.json
▼  dmgr
 dmgr.json

```
{
  "name": "myJDBCProvider",
  "path": "/@websphere.cell@/JDBC Providers/myJDBCProvider",
  "teamMappings": [],
  "inheritTeam": "true",
  "description": "Discovered WebSphereJDBCProvider",
  "roleName": "WebSphereJDBCProvider",
  "roleProperties": {
    "websphere.jdbcprovider.xa": "false",
    "websphere.jdbcprovider.name": "myJDBCProvider",
    "websphere.jdbcprovider.classpath": "${User-defined_JDBC_DRIVER_PATH}/databaseBinary.jar",
    "websphere.jdbcprovider.providertype": "User-defined JDBC Provider",
    "websphere.jdbcprovider.implementationclassname": "something.example.com",
    "websphere.jdbcprovider.nativepath": "",
    "websphere.jdbcprovider.description": "Custom JDBC2.0-compliant Provider configuration",
    "websphere.jdbcprovider.isolatedclassloader": "false"
  }
}
```

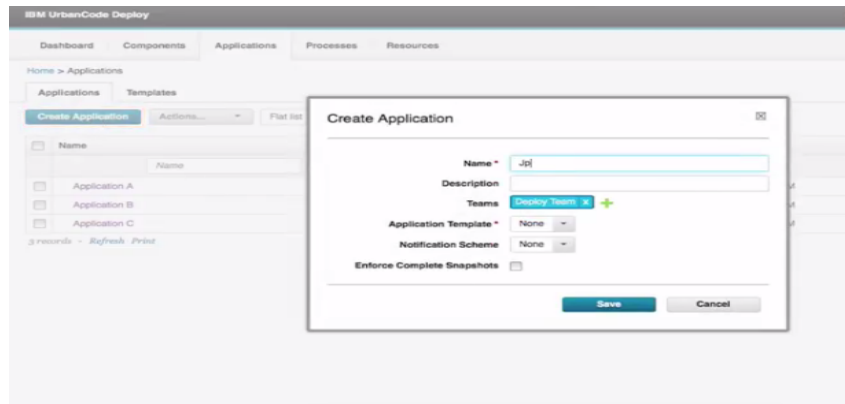
2015 Highlights: Systems of Record Integration Improvements



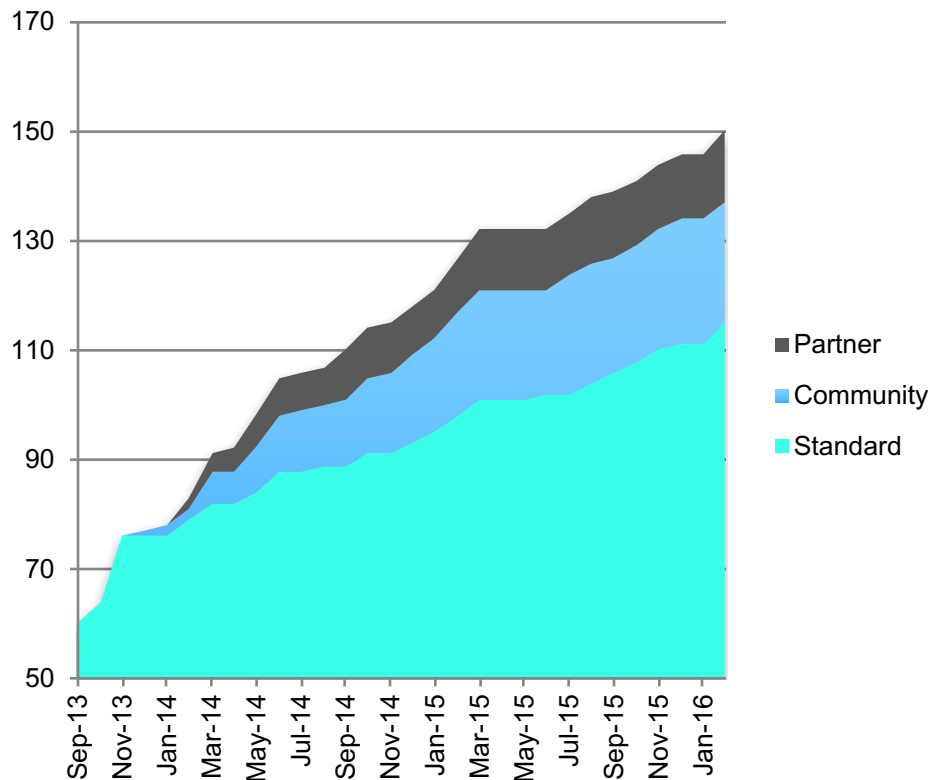
- Install agents using SMP/E
- Submit and monitor jobs
- Custom properties associated with deployment artifacts
- Out-of-the-box template models standard z/OS artifact deployment
- Initial support for deployments to IBM iSeries
- Automate deployment actions using the Integrated File System and execute shell scripts

2015 Highlights: Application Templates for Easy Onboarding

- Predefine what a set of applications and environments will look like
- Allows administrators to do heavy lifting in order to help less familiar users get on-boarded quicker
- Gives administrators a way to ensure groups of environments are consistent in their governance (Dev, UAT, Prod)



Crossed the 150 Plugin Line for Deploy!



**UC Release
moved to a
plugin model in
2015!**

IBM UrbanCode Release

- Enterprise Deployments with cross plan dependencies
- Improved deployment page with Filtering and task level dependencies

The screenshot displays the IBM UrbanCode Release Pipeline Views interface. The top navigation bar includes the product name, a 'Pipeline Views' dropdown, a user profile for 'admin', and the IBM logo. Below the navigation bar, the page title is 'Home > Pipeline View'. The main content area is titled 'Pipeline' and features a 'Select a release:' dropdown menu currently set to 'Pets Online 1.1.x'. A 'Key' legend is located in the top right corner, defining symbols for Gate, Gate Failure, Environment, Snapshot, Pending, Completed, Failure, Upcoming, Selected, Latest, and Compliance. The interface shows a 'Default Lifecycle' view for 'Pets Online 1.1.x'. On the left, a sidebar lists 'Phases' (Environments, Applications) and 'Release Version' (1.3, 2.0.1, 2.0.0, 2.0.1, 2.0.1, 2.0.1). The main area displays a grid of release versions across different environments: LATEST, DEV, CERT, QA, PT, and PROD. Each environment column shows a list of release versions with their status (e.g., Upcoming, Latest, Completed) and a 'Schedule' button. The bottom of the page includes a footer with '1 to 5 of 5 items, Page: 1/1', a navigation bar with 'Updated: 1/27/14, 9:19 AM', and 'Rows Per Page: 10 25 50 100'.

IBM UrbanCode Release Pipeline Views admin IBM

Home > Pipeline View

Pipeline

Select a release:

Pets Online 1.1.x

Pets Online 1.1.x View this release Default Lifecycle View this lifecycle

Key

- Gate
- Gate Failure
- Environment
- Snapshot
- Pending
- Completed
- Failure
- Upcoming
- Selected
- Latest
- Compliance
- Later

Phases

Environments

- Upcoming
- Latest

Applications

Release Version

- JPetStore
- Pet Breeder Site
- Pet Grooming Reservations
- Pet Sourcing
- Pet Transport

LATEST

DEV

CERT

QA

PT

PROD

1 to 5 of 5 items, Page: 1/1

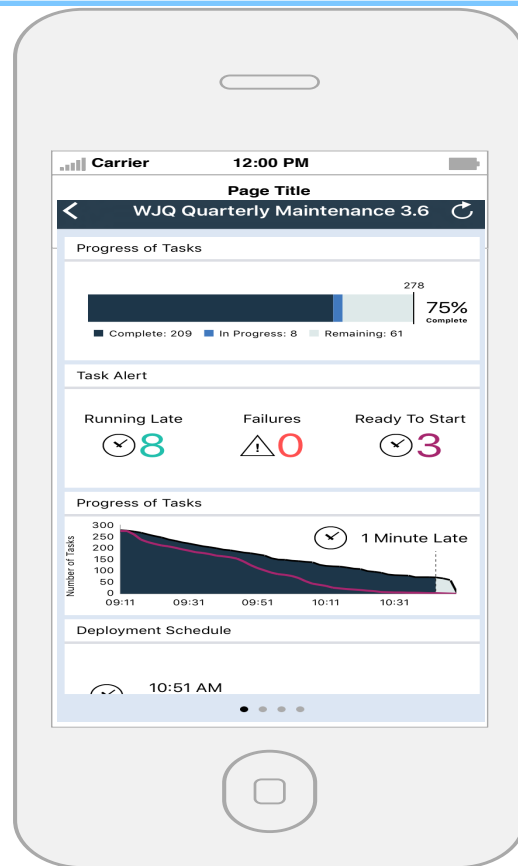
Updated: 1/27/14, 9:19 AM Rows Per Page: 10 25 50 100

New Mobile App

Release dashboard at your fingertips

UC Release integrated today.

Download it today



IBM UrbanCode Build

- Translated into roughly a dozen languages
- Information Radiator
- Hygieia Integration for a DevOps Dashboard

The screenshot displays the IBM UrbanCode Build web application interface. At the top, a dark header bar contains the text "IBM UrbanCode Build". Below this is a navigation bar with tabs: "Projects", "Current Activity", "Search", "Reporting", "CodeStation", "Templates", "Teams", "Agents", and "System". The "Projects" tab is selected, showing a breadcrumb trail: "Projects > store_frontend > Build Docker Image". Below the breadcrumb, there is another set of tabs: "Main", "Changes", "My Activity", "Configuration", "Dependencies", "Triggers", and "Security". The "Main" tab is active.

Under the "Main" tab, the section "Most Recent Status Assignments" is visible, accompanied by a "View All" button. It contains a table with the following data:

Status	Build	Stamp	Job	Date
Success	108	1.0.108	167	6/29/15 4:42 PM

Below this, the "Recent Activity" section is shown, also with a "View All" button. It contains a table with the following data:

Build	Process	Latest Stamp	Status	Date	Duration
109	Build Docker Image		Running		0 s
108	Build Docker Image	1.0.108	Complete	6/29/15 4:42 PM	23 s
107	Build Docker Image	1.0.107	Complete	6/29/15 3:27 PM	24 s

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2016 Will be Exciting

Delivery in DevOps is changing FAST



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2016: Key Trends in Application Release Automation

- After App, Infrastructure
- Everyone looking to Cloud
- Software-defined everything
- Release together what is tested together
- Containers a “Next Big Thing”
- DevOps teams scale further adoption
- Future is Cognitive



Cloud, DevOps, & Architectures for Speed

Architecture, Cultural Transformation

More cloud
Smaller teams
Less Coupling

Less Cloud
Bigger Teams
More Coupling

Slower

Faster

Maintainers
(Traditional IT)

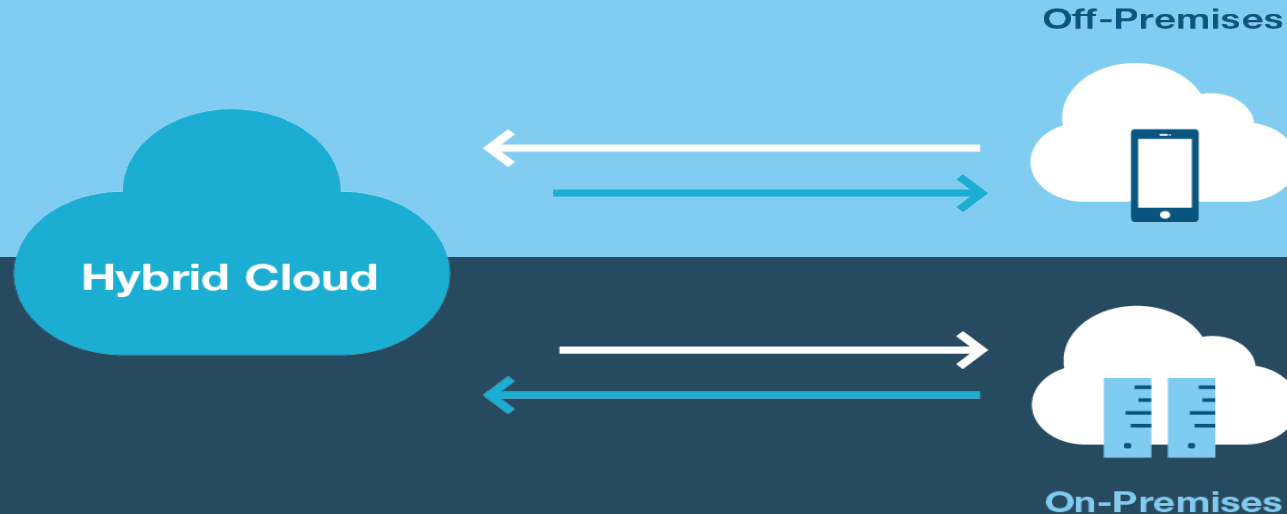
Optimizers
(Cloud Enabled)

Innovators
(Cloud Native)

DevOps Transformation



Digital transformations require hybrid cloud



Select a cloud strategy which delivers...

- **Choice with consistency**
 - Public, Private, Hybrid
- **Industrialized hybrid cloud**
 - Flexible, Reliable, Scalable, Secure
- **DevOps productivity**
 - Seamless and flexible experience across the entire application lifecycle
 - IBM Bluemix Garage Method, Bluemix, DevOps Services for Bluemix
- **Powerful, accessible analytics (with Cognitive)**
 - Data analysis (structured/unstructured) to make better decisions
 - Client accessible cognitive services



*Public: Shared
Off-Premise
Cloud*



*Dedicated:
Off-Premise
Cloud*



*Local: Dedicated
On-Premise
Cloud*



Traditional IT

Hybrid Cloud Deployments through a Single Point of Control

Manage application deployments across dev, test, and production spanning multiple clouds. UrbanCode Deploy with Patterns, available with UrbanCode Deploy.



**UrbanCode
Deploy**

*Enable full stack deployments
(OS, patterns and applications)
across hybrid cloud*



IBM Bluemix



vmware®



On-prem Traditional IT



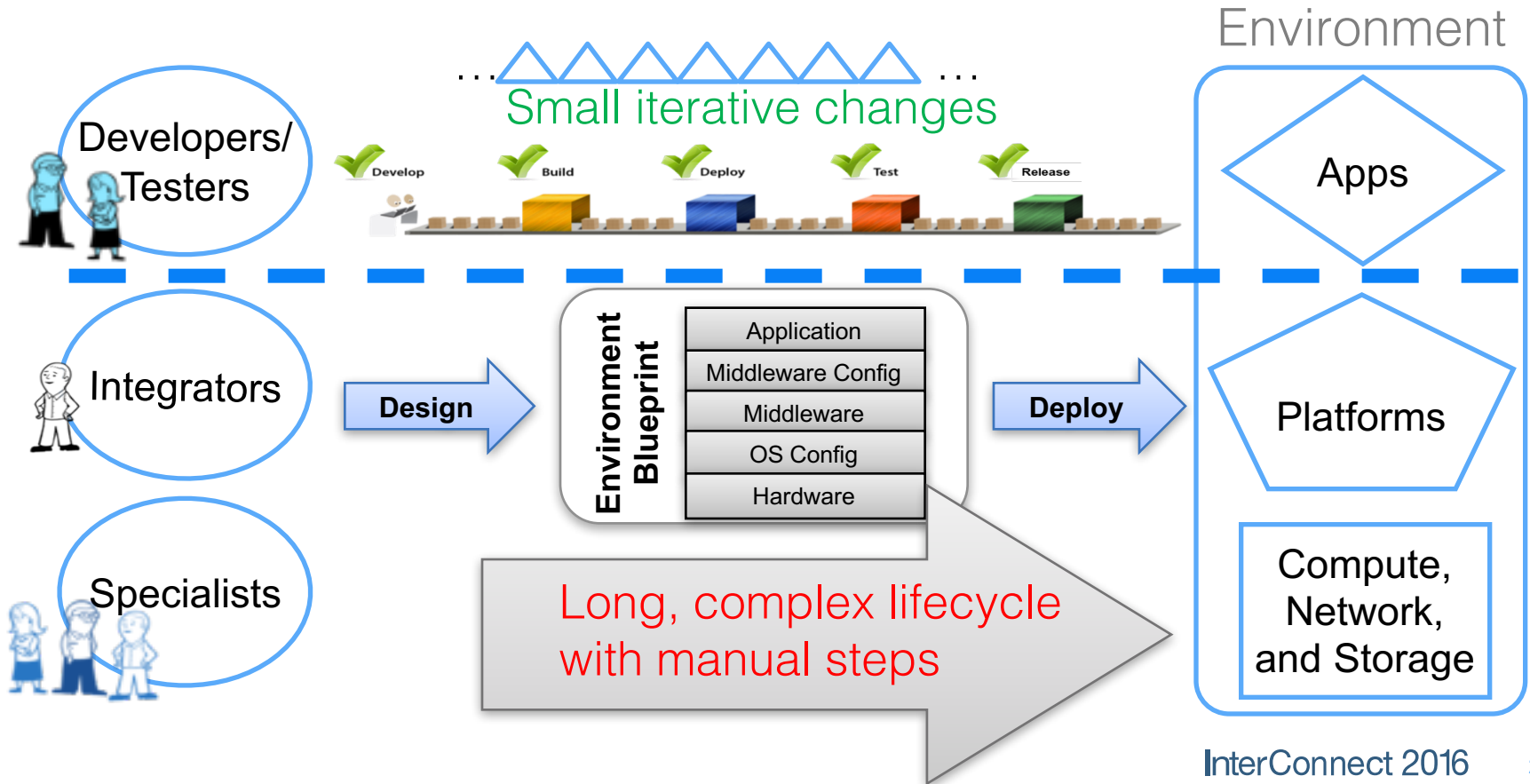
**Cloud
Foundry
Containers
Virtual
Machines**

Other Vendors

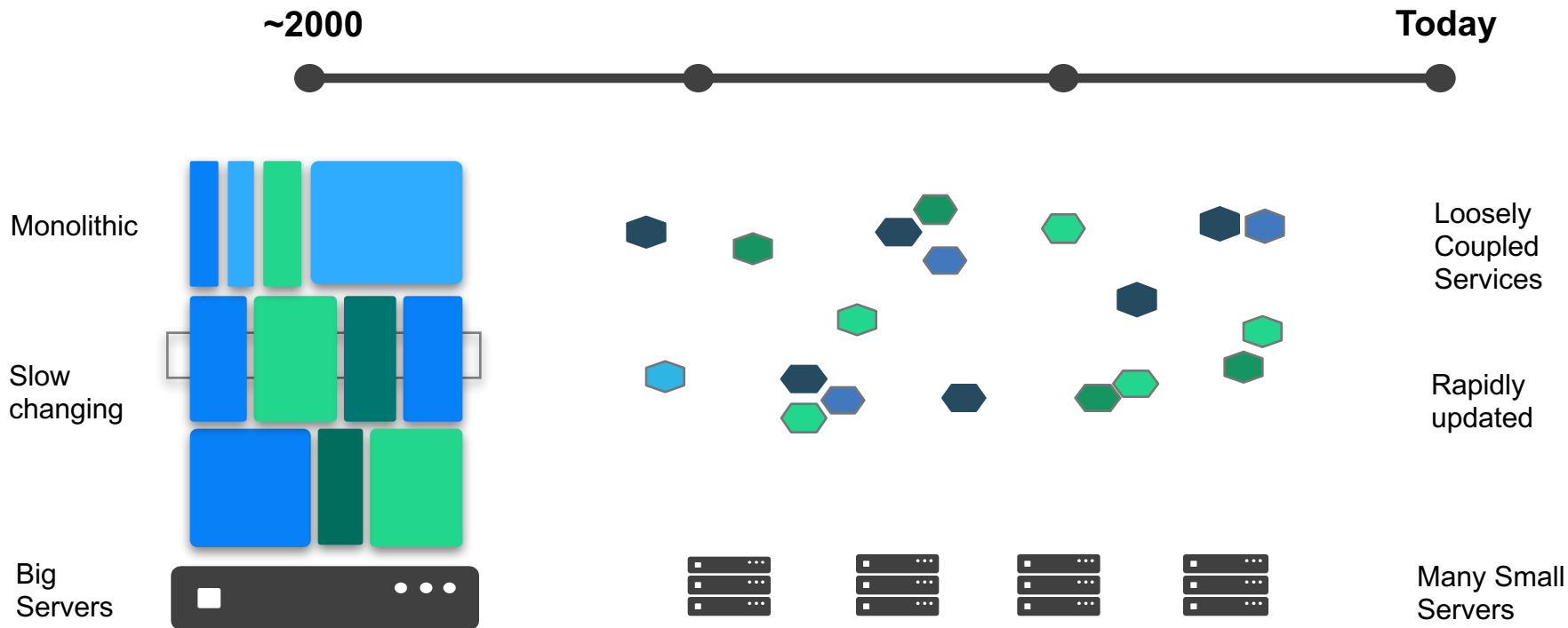
On-prem IaaS



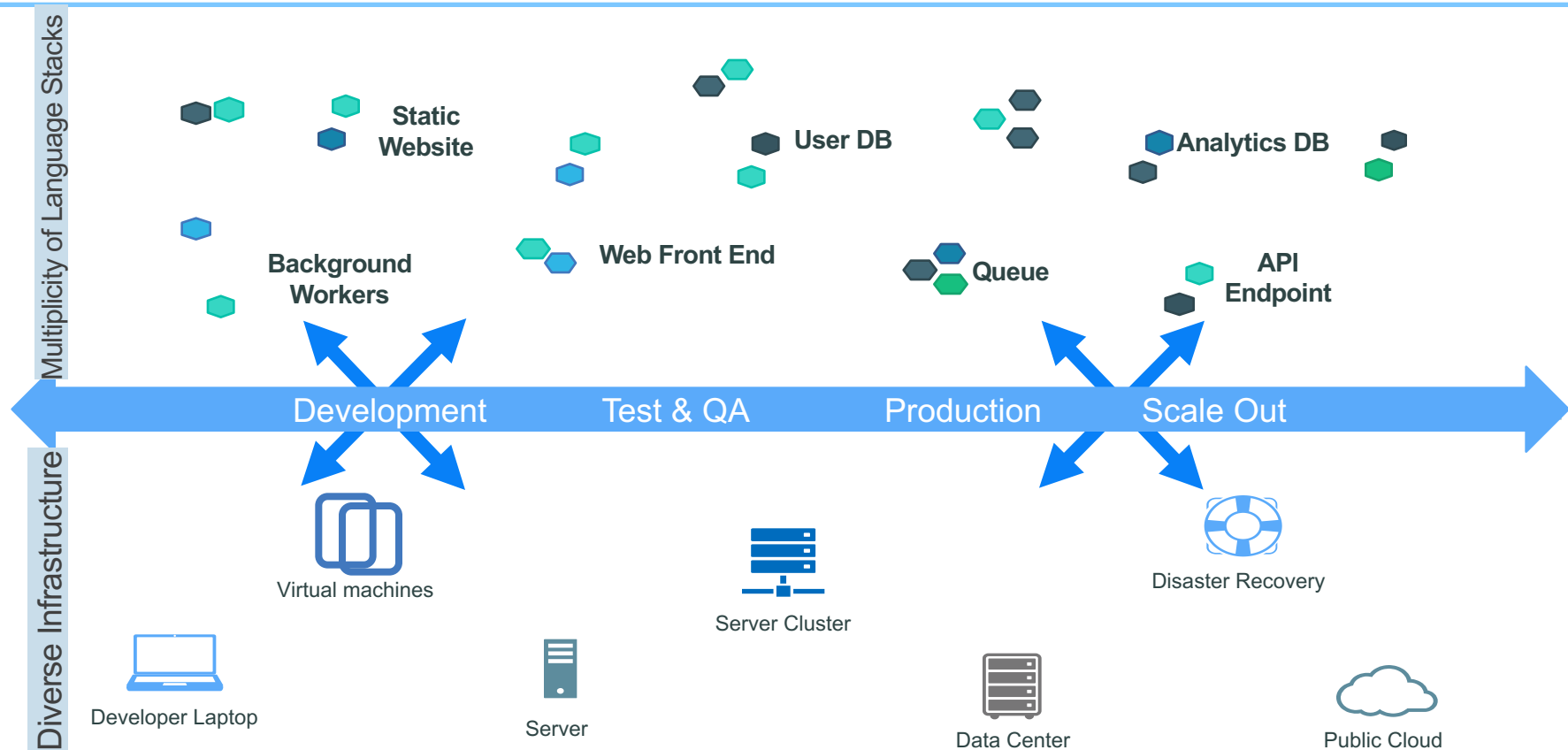
Faster and more consistent application environment deployments



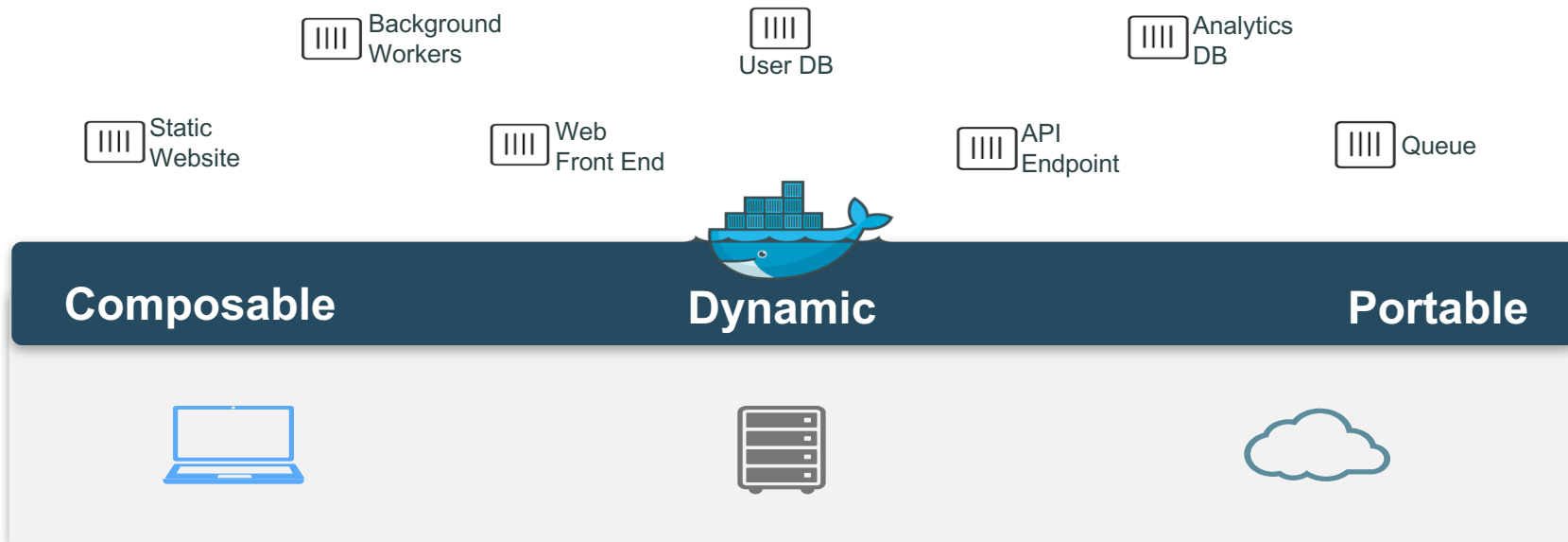
Architectural trend is more components & servers



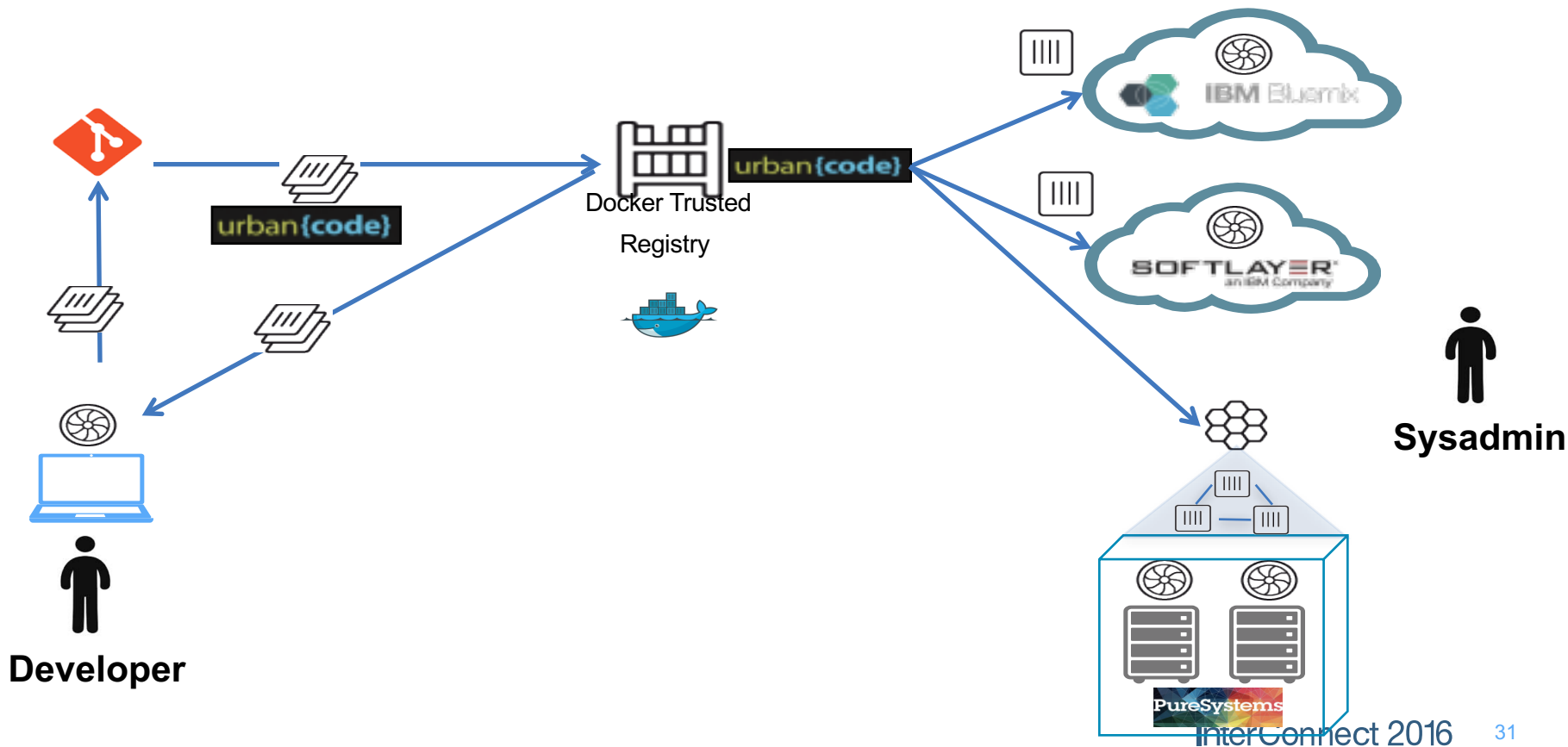
Distributed Applications Make it Harder



Containers for light-weight, low maintenance VMs



Build, Deploy and Keep Track of your Container



Benefits of Distributed Apps in Hybrid Clouds

Ship More Software

Accelerate development, CI and CD pipelines by eliminating headaches of setting up environments and dealing with differences between environments. On average Docker users ship software 7X more frequently

Resource Efficiency

Lightweight containers run on a single machine and share the same OS kernel while images are layered filesystems sharing common files to make efficient use of RAM and disk and start instantly.

Seamless Portability

Isolated containers package the application, dependencies and configurations together. These containers can then seamlessly move across environments and infrastructures.

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Portal to complete your session surveys from your
smartphone,
laptop or conference kiosk.



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to receive a copy of the Forrester
study
*“The Total Economic Impact of
UrbanCode”*

