



Developing in the Cloud Environment

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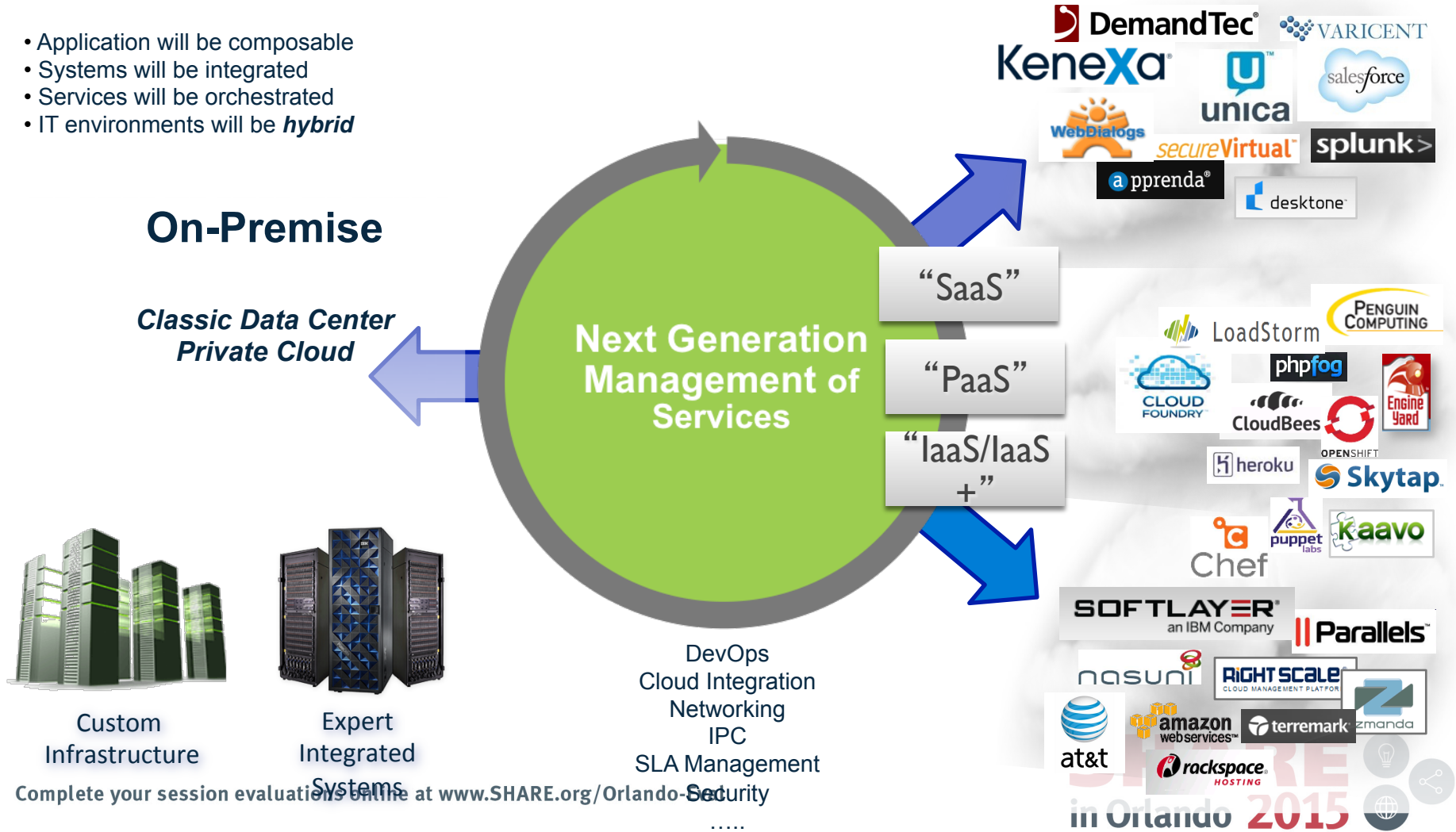
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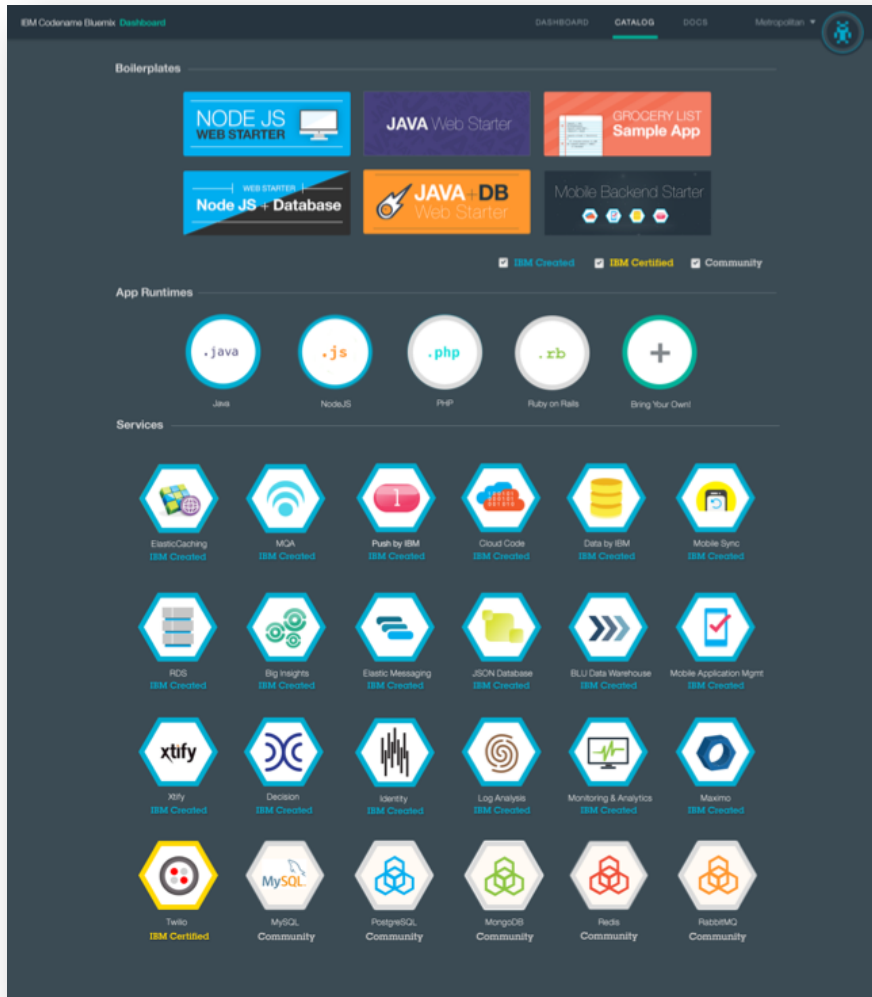
Organizations are combining on-premise, off-premise and public clouds to create the next wave of applications and solutions



- Application will be composable
- Systems will be integrated
- Services will be orchestrated
- IT environments will be *hybrid*



IBM Bluemix



Run Your Apps

The developer can choose any language runtime or bring their own. Just upload your code and go.

DevOps

Development, monitoring, deployment and logging tools allow the developer to run the entire application

APIs and Services

A catalog of open source, IBM and third party APIs services allow a developer to stitch together an application in minutes.

Cloud Integration

Build hybrid environments. Connect to on-premises systems of record plus other public and private clouds. Expose your own APIs to your developers.

Flexible Pricing

Pay as you go and subscription models offer choice and flexibility

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Focused on our users



Bluemix was built from the ground up with a **user-based and design-centric approach**. It addresses these **personas and key needs**.

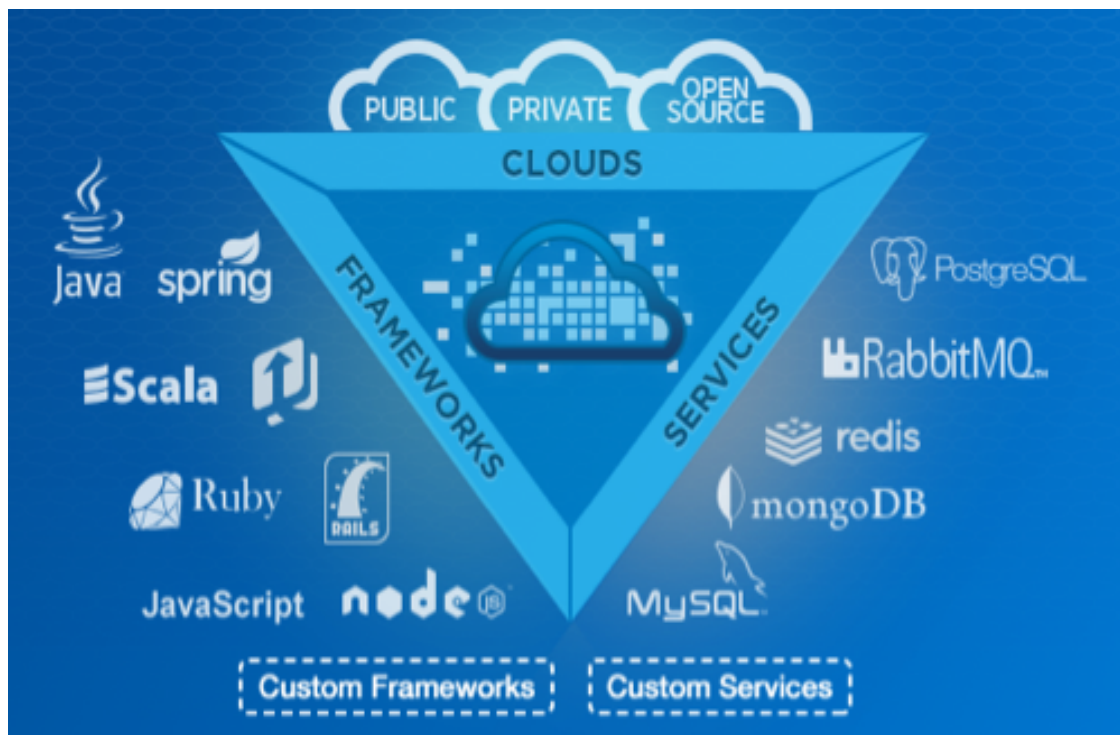


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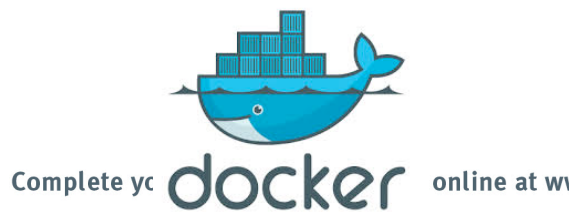


Embracing Cloud Foundry as an open source PaaS

Continuing our history of embracing and extending Open Source




TOTAL CONTRIBUTORS	
1,118	Average per month 2013 average: 133 12mo average: 98 Lifetime average: 58
LINES OF CODE	
646k	
PULL REQUESTS	PUBLIC REPOSITORIES
1025+	133+








List of Cloud Platform Services

IBM, Open Source and Third Party APIs


Runtimes

			
Java Liberty	Node.js	Ruby on Rails	“Bring Your Own Buildpack”






DevOps

				
Monitoring and Analytics	Git Hosting	Deployment Automation	Web IDE	Agile Development

Data Management Services

								
IBM Relational Database	IBM JSON Database	Mongo DB	MySQL	PostgreSQL	Mobile Data	Mobile Sync	BLU Data Warehouse	MapReduce

Mobile Services

				
Push	CloudCode	Mobile App Mgmt	Mobile Quality Assurance	Twilio

Internet Of Things

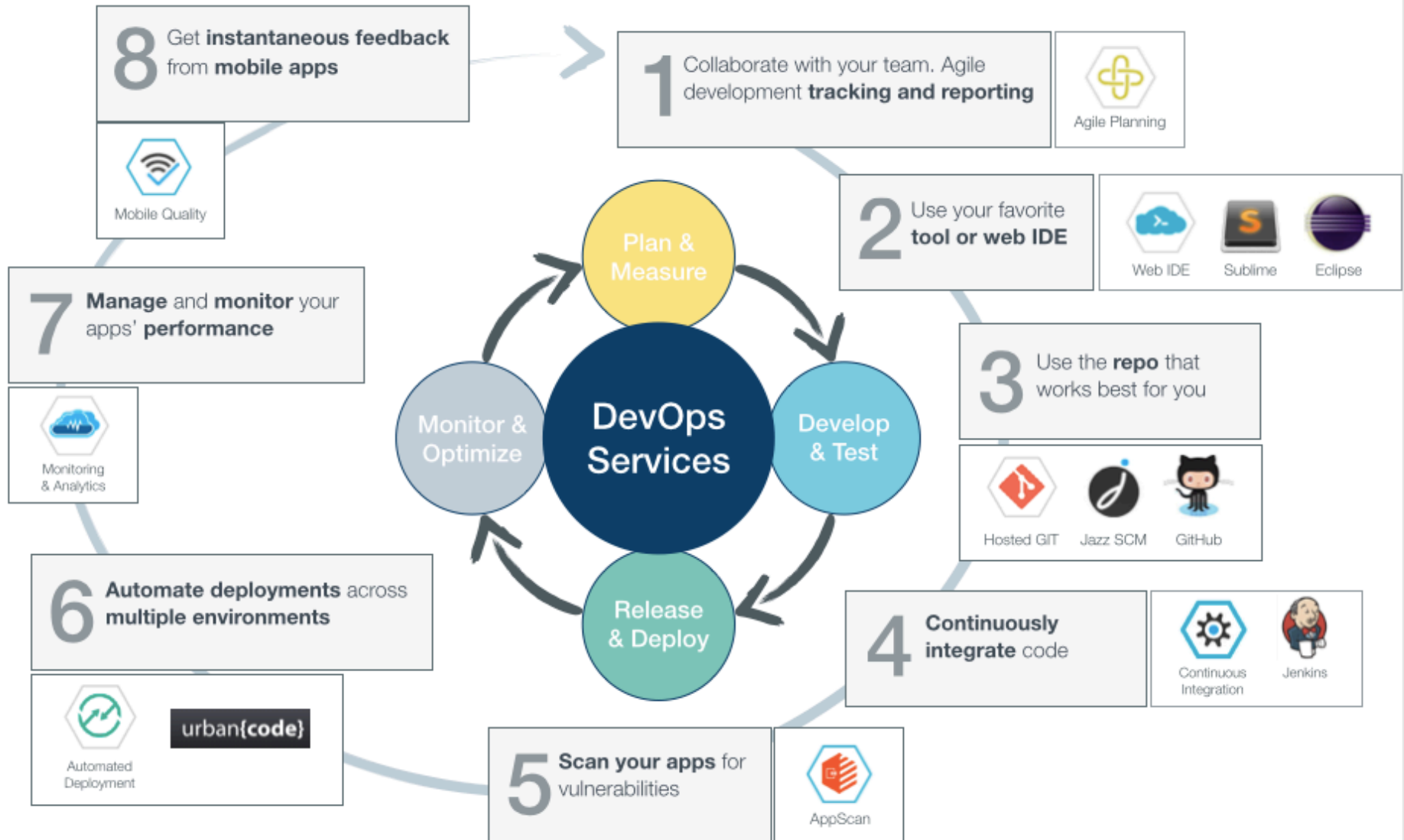
	
Historian	MQTT

Web & App Application

							
Data Cache	Session Cache	Elastic MQ	Decision Engine	SSO	Redis	RabbitMQ	Log Analysis

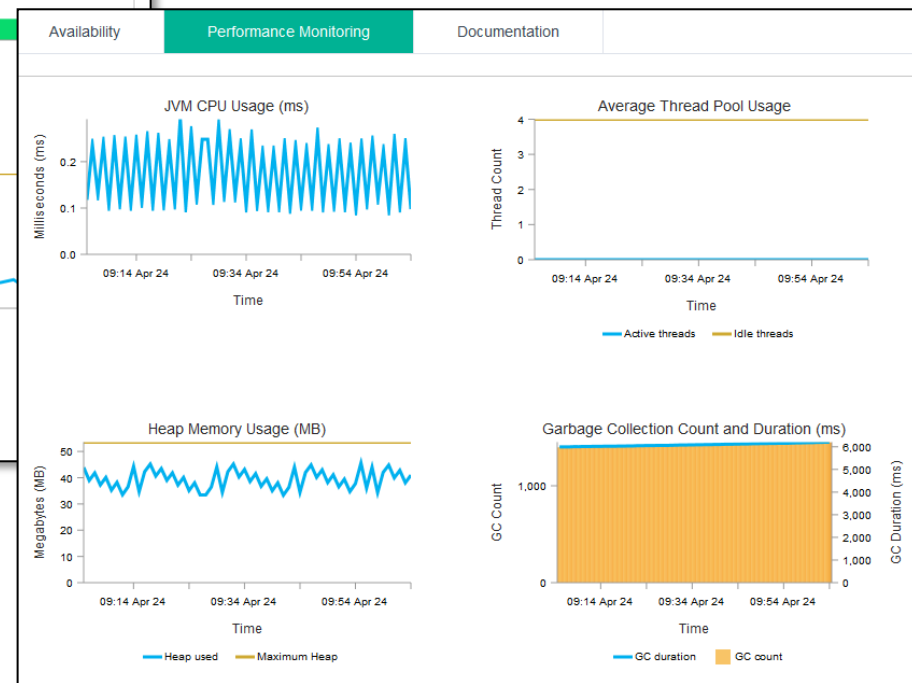
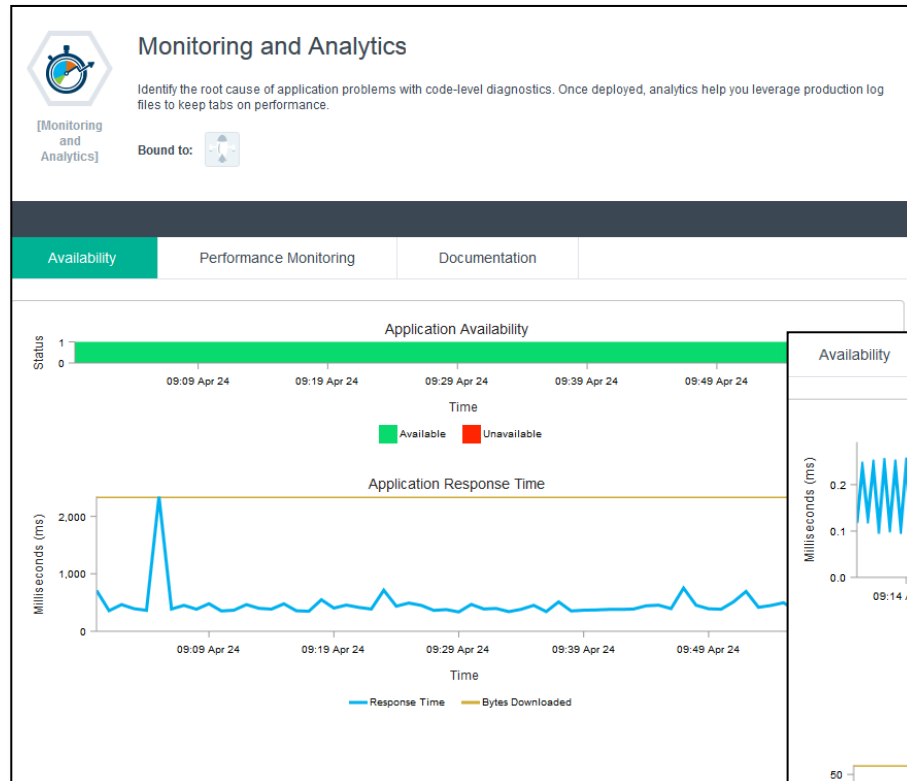
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Unified DevOps experience



Built in monitoring

Integrated diagnostics for detailed application behavior



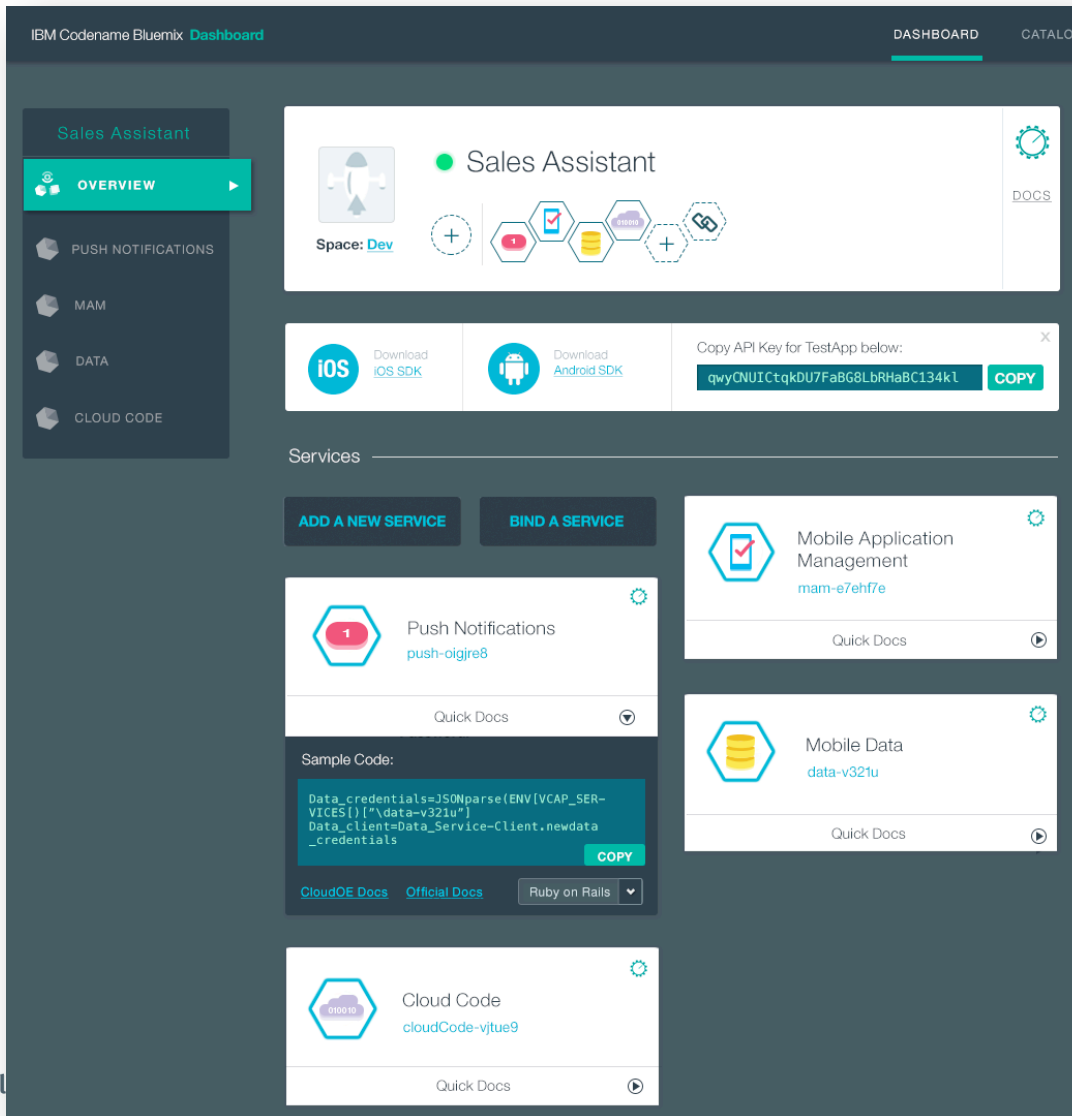
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Scaling



Fully integrated environment for deploying and managing your application



Single Dashboard

Single view of application health, usage and status

Health and Monitoring

Integrated monitoring and diagnostics with the ability to add on features such as code level tracing

Scaling

Ability to scale the application by adding new runtime instances



Compl

Bluemix Security



Exploiting IBM portfolio of capabilities

- Leveraging SoftLayer and IBM hosting experience
- Adheres to rigorous IBM security standards:
- Security in depth
- Intrusion protection / penetration testing
- Data isolation in virtualized components
- Automation of security:

Enable Developers

- SSO service for multiple applications and social logins
- Appscan for web and mobile to detect vulnerabilities



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Integrate Into Existing Applications



Security connect to and leverage data from your existing systems



Get featured tweets and purchase history

← Database — Transformation — Credit Check →

SOURCES **TRANSFORMATIONS** **TARGETS**

Choose the data you need

Add a data source

Field	Type	Sample
birth_day	#	11
birth_month	#	02
birth_year	#	1977
first_name	abc	John
last_name	abc	Smith
soc_sec_num	abc	555-55-1234

Which method do you need to use?

checkCredit




Parameter	Type	Sample
birthDate	abc	02-11-1977
firstName	abc	John
lastName	abc	Smith
ssn	abc	555-55-1234

Canvas Documentation

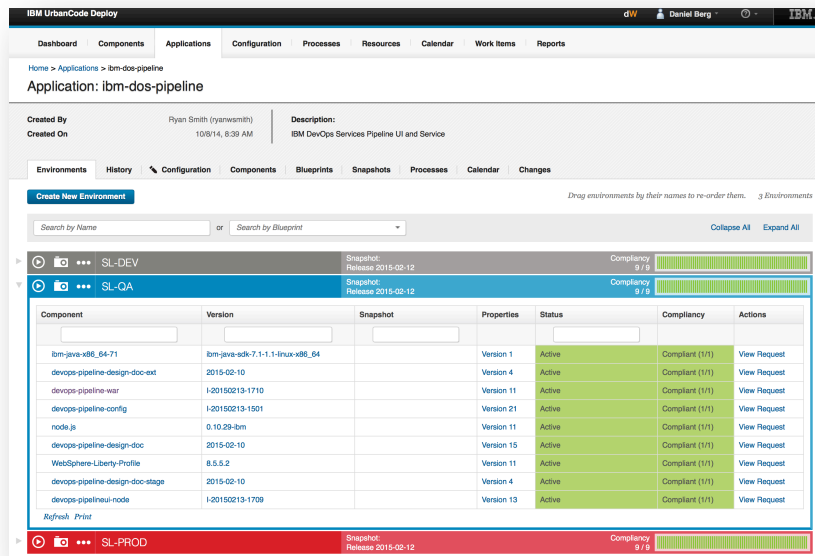
Complete you

100%

RE Orlando 2015



UrbanCode Deploy is how you deploy applications to Hybrid



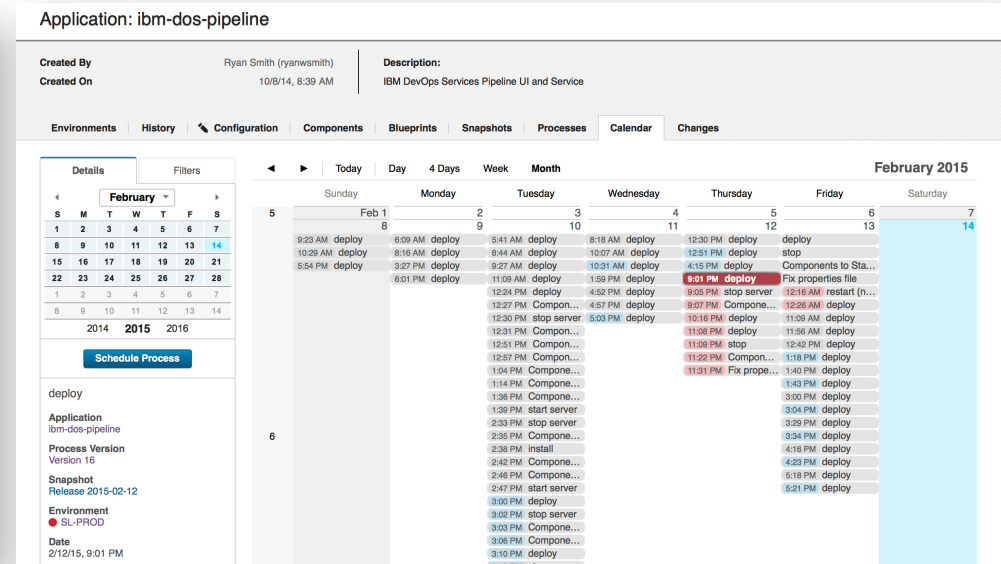
Application: **ibm-dos-pipeline**

Created By: Ryan Smith (ryanwsmith) | Description: IBM DevOps Services Pipeline UI and Service

Created On: 10/8/14, 8:39 AM

Environments: SL-DEV, SL-QA, SL-PROD

Component	Version	Snapshot	Properties	Status	Compliance	Actions
ibm-java-x86_64-71	ibm-java-sdk-7.1-1.1-linux-x86_64		Version 1	Active	Compliant (1/1)	View Request
devops-pipeline-design-doc-east	2015-02-10		Version 4	Active	Compliant (1/1)	View Request
devops-pipeline-war	1-20150213-1710		Version 21	Active	Compliant (1/1)	View Request
devops-pipeline-config	1-20150213-1501		Version 15	Active	Compliant (1/1)	View Request
node.js	0.10.29-bm		Version 11	Active	Compliant (1/1)	View Request
devops-pipeline-design-doc	2015-02-10		Version 11	Active	Compliant (1/1)	View Request
WebSphere-Liberty-Profile	8.5.5.2		Version 4	Active	Compliant (1/1)	View Request
devops-pipeline-design-doc-stage	2015-02-10		Version 13	Active	Compliant (1/1)	View Request
devops-pipelineui-node	1-20150213-1729					



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Calendar: February 2015

Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
5	8:23 AM deploy	6:09 AM deploy	5:41 AM deploy	8:18 AM deploy	12:30 PM deploy	
6	10:29 AM deploy	8:16 AM deploy	8:44 AM deploy	10:07 AM deploy	12:51 PM deploy	
7	5:54 PM deploy	3:27 PM deploy	9:27 AM deploy	10:31 AM deploy	4:15 PM deploy	
8		8:01 PM deploy	11:09 AM deploy	1:59 PM deploy	6:03 PM deploy	
9			12:24 PM deploy	4:52 PM deploy	3:05 PM stop server	
10			12:27 PM Compon...	4:57 PM deploy	9:07 PM Compon...	
11			12:30 PM stop server	5:03 PM deploy	10:16 PM deploy	
12			12:31 PM Compon...		11:08 PM deploy	
13			12:51 PM Compon...		11:09 PM stop	
14			12:57 PM Compon...		11:20 PM Compon...	
15			1:04 PM Compon...		11:31 PM Fix prope...	
16			1:14 PM Compon...			
17			1:38 PM Compon...		3:00 PM deploy	
18			1:39 PM start server		3:04 PM deploy	
19			2:33 PM stop server		3:28 PM deploy	
20			2:35 PM Compon...		3:54 PM deploy	
21			2:38 PM install		4:16 PM deploy	
22			2:42 PM Compon...		4:23 PM deploy	
23			2:48 PM Compon...		5:18 PM deploy	
24			2:47 PM start server		6:21 PM deploy	
25			3:00 PM deploy			
26			3:02 PM stop server			
27			3:03 PM Compon...			
28			3:06 PM Compon...			
29			3:10 PM Compon...			
30			3:12 PM stop server			

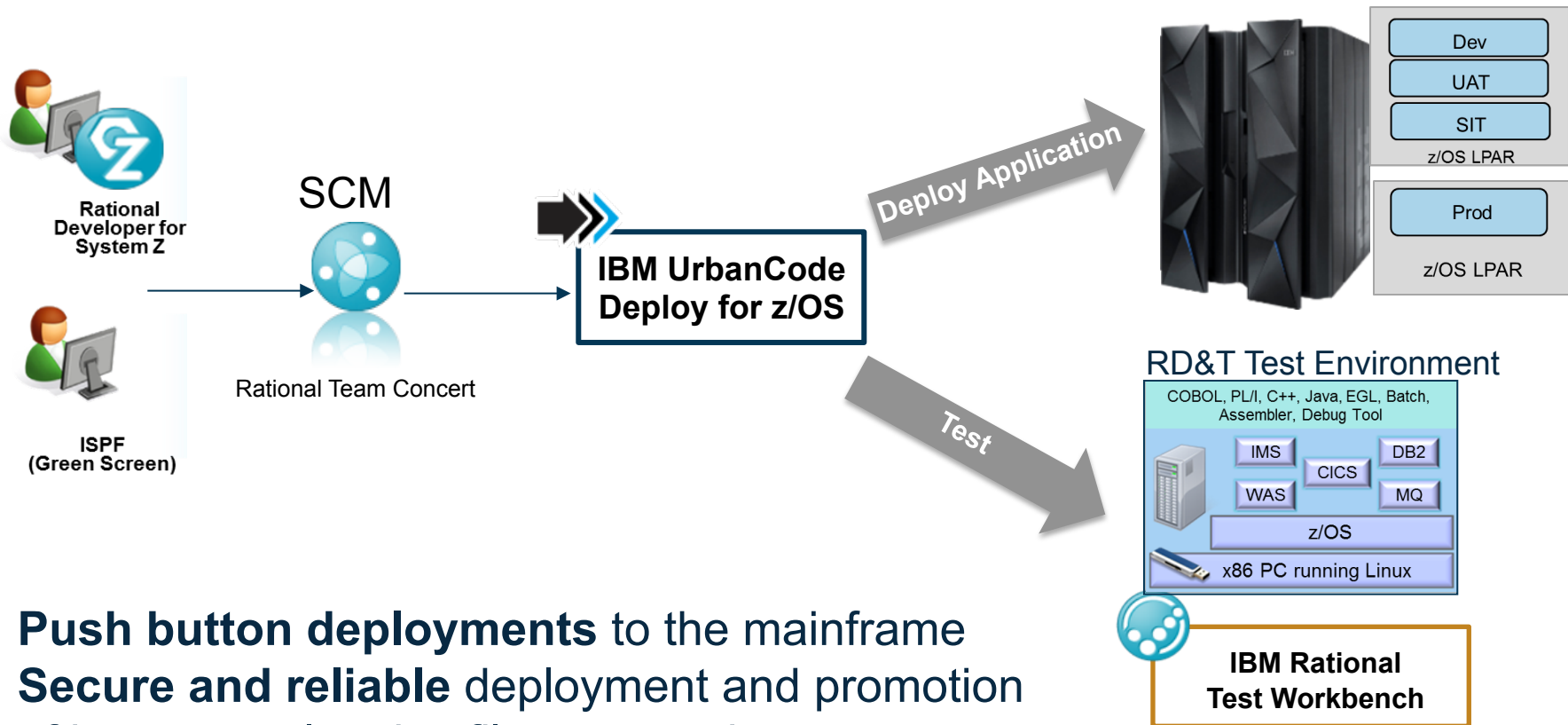
Manage application components and versions

Manage configurations across all environments

- Offer secure 'self-service' capabilities
- Increase transparency
- Ensure governance and compliancy

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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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New integrations for UrbanCode Deploy



developer.ibm.com/urbancode/plugins

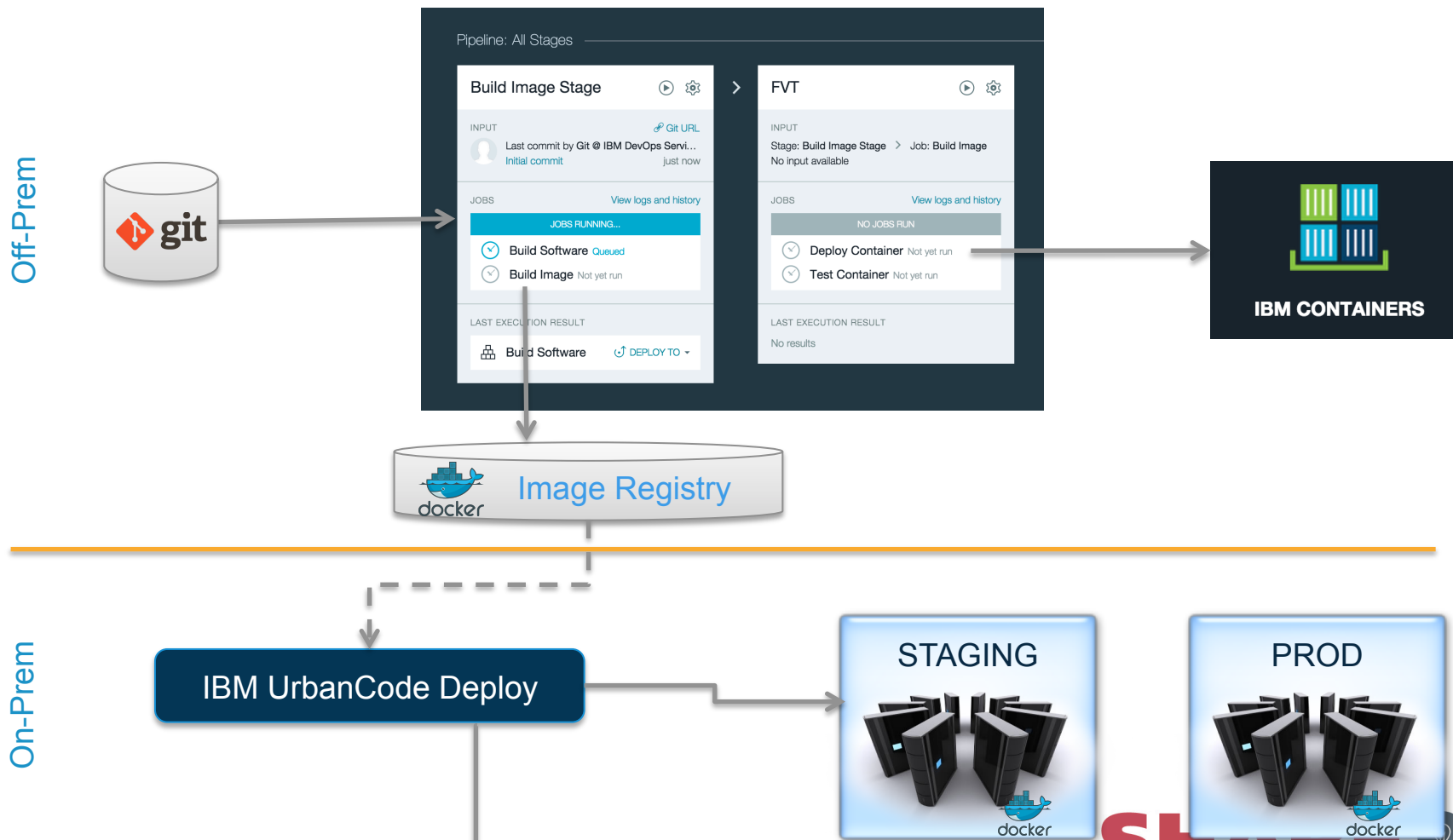


Xcode



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Dev/Test with Hybrid Cloud



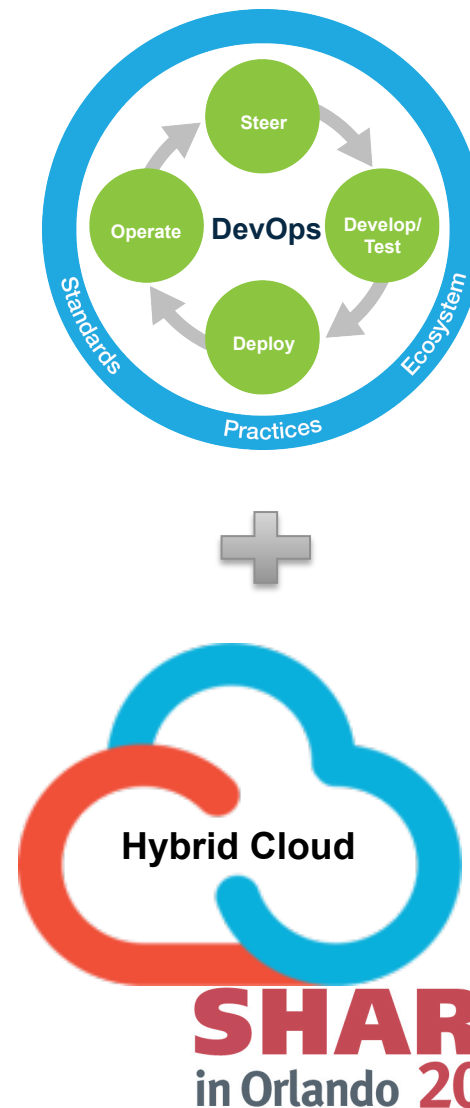
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Summary

- Continuous Delivery supporting DevOps practices is a necessity for Hybrid Cloud
- IBM has a rich set of services to achieve Continuous Delivery
- DevOps toolchain will often include IBM and non-IBM solutions





Mobile to Mainframe DevOps for Dummies Book

Author: Rosalind Radcliffe, IBM Distinguished Engineer

Available as ebook and hard copy



• *Meet the author while at SHARE*

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

8 Chapters – 72 pages

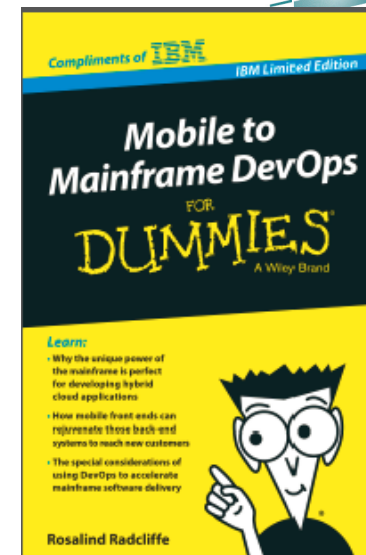
1. Understanding the Value of the Mainframe
2. Typical Mainframe Application Development Challenges
3. DevOps and Mainframe: Mission Possible?
4. DevOps Best Practices for z Systems
5. Building for the modern omni channel world
6. DevOps Success Stories in the Enterprise

7. Making a DevOps transition
8. Where DevOps can take you

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

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



<https://ibm.biz/mmdevops>

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QUESTIONS

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