

Lunch and Learn: BlueMix to Mainframe - making development accessible in the Cloud

Rosalind Radcliffe

IBM Distinguished Engineer, IBM Academy of Technology

rradclif@us.ibm.com

@RosalindRad



SHARE is an independent volunteer-run information technology association that provides **education, professional networking and industry influence.**



Abstract



Cloud capability and technology is changing the way enterprises go to market. DevOps is about bringing the entire organization together, including Development and Operations, to more efficiently deliver business value (be it on premise, off premise, or in a hybrid cloud environment). Explore how IBM's DevOps solutions can transform your enterprise into a high quality application factory by leveraging technology across platforms and exploiting Systems of Record to Systems of Engagement applications. New mainframe developers will be able to use new cloud development environments and services to access critical back end systems and secure transactions. Learn how easy it is to expose your important data and customer applications to drive innovation in a nimble, responsive way, maintaining the logic and integrity of your time tested systems. Rosalind Radcliffe, distinguished engineer and solution architect will help you understand what BlueMix is and how it can be leveraged to work in a multi-platform environment to develop or maintain critical mainframe applications.

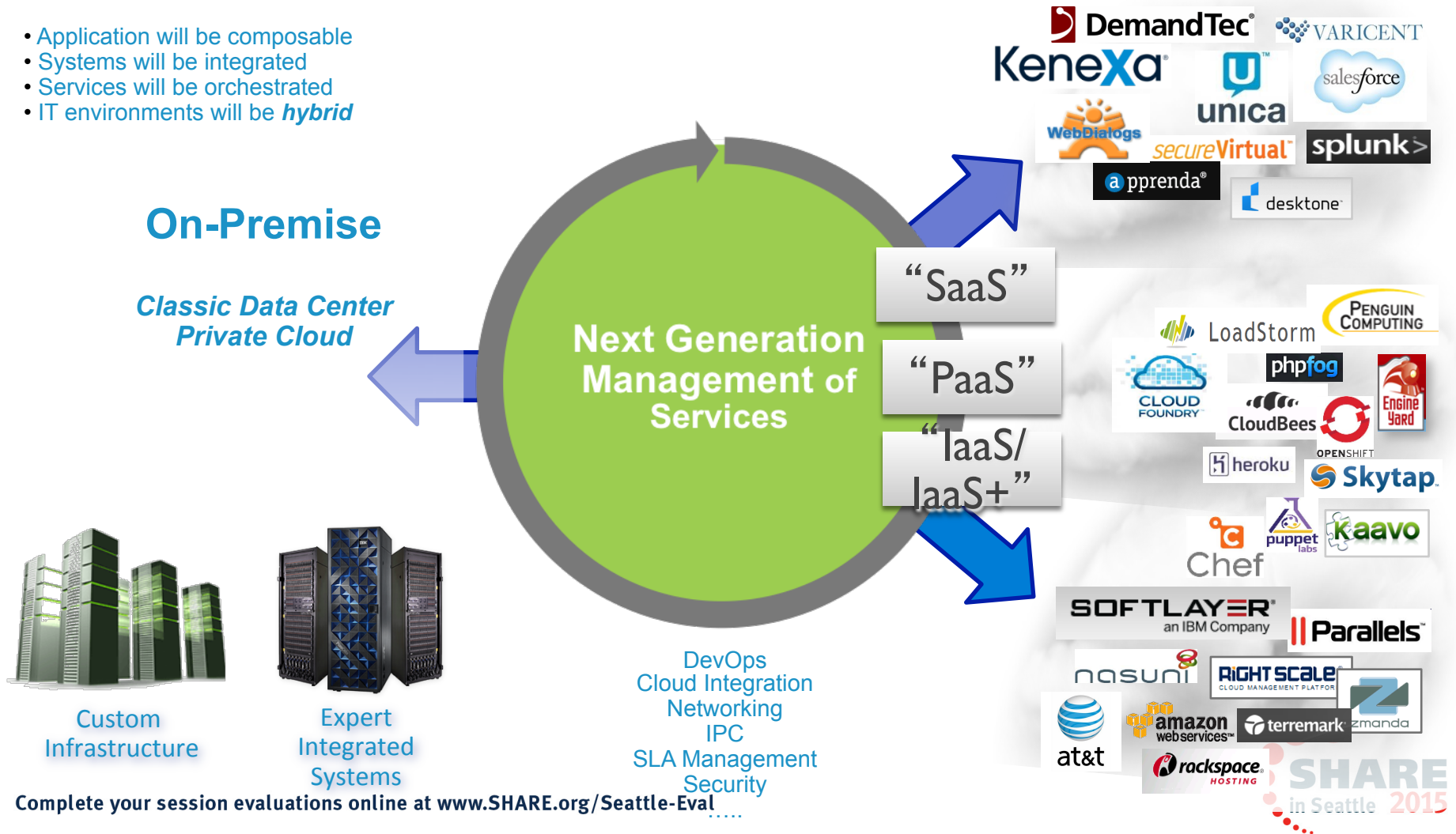
Complete your session evaluations online at www.SHARE.org/Seattle-Eval



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

Complete your session evaluations online at www.SHARE.org/Seattle-Eval



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**.

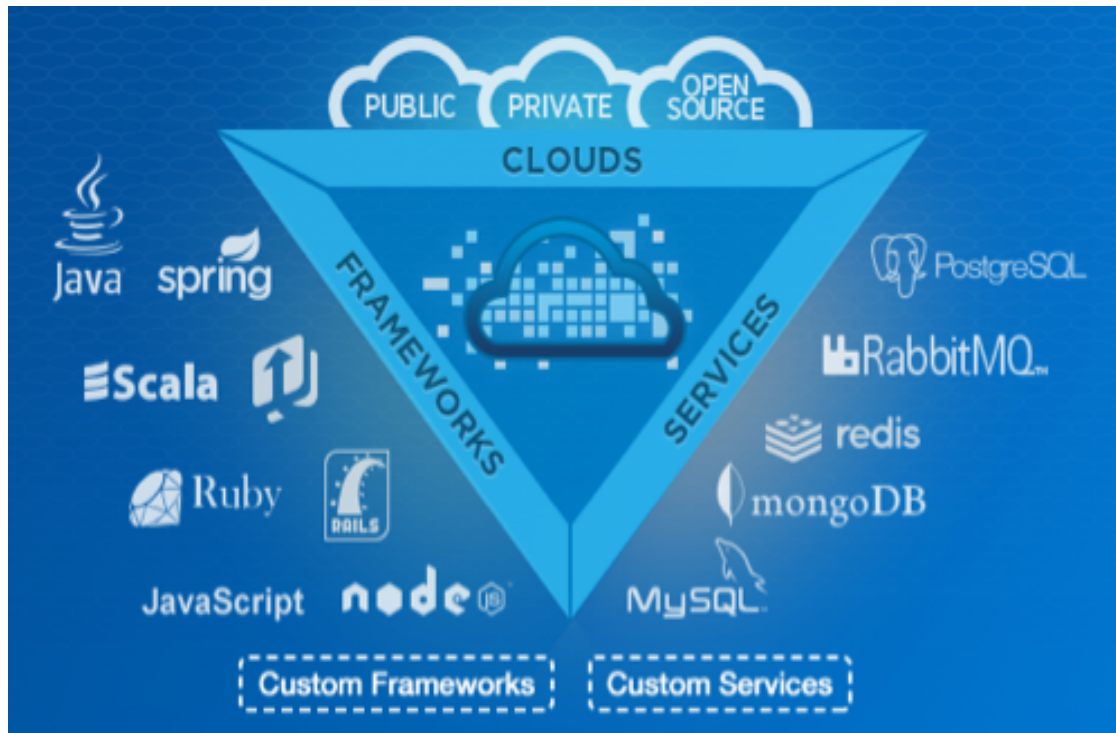


Complete your session evaluations online at www.SHARE.org/Seattle-Eval

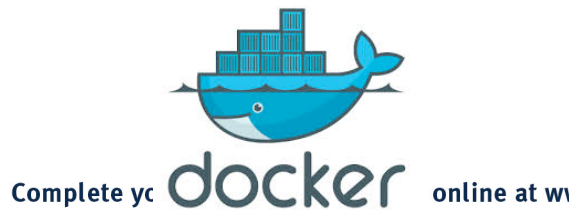


Embracing Cloud Foundry as an open source PaaS

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

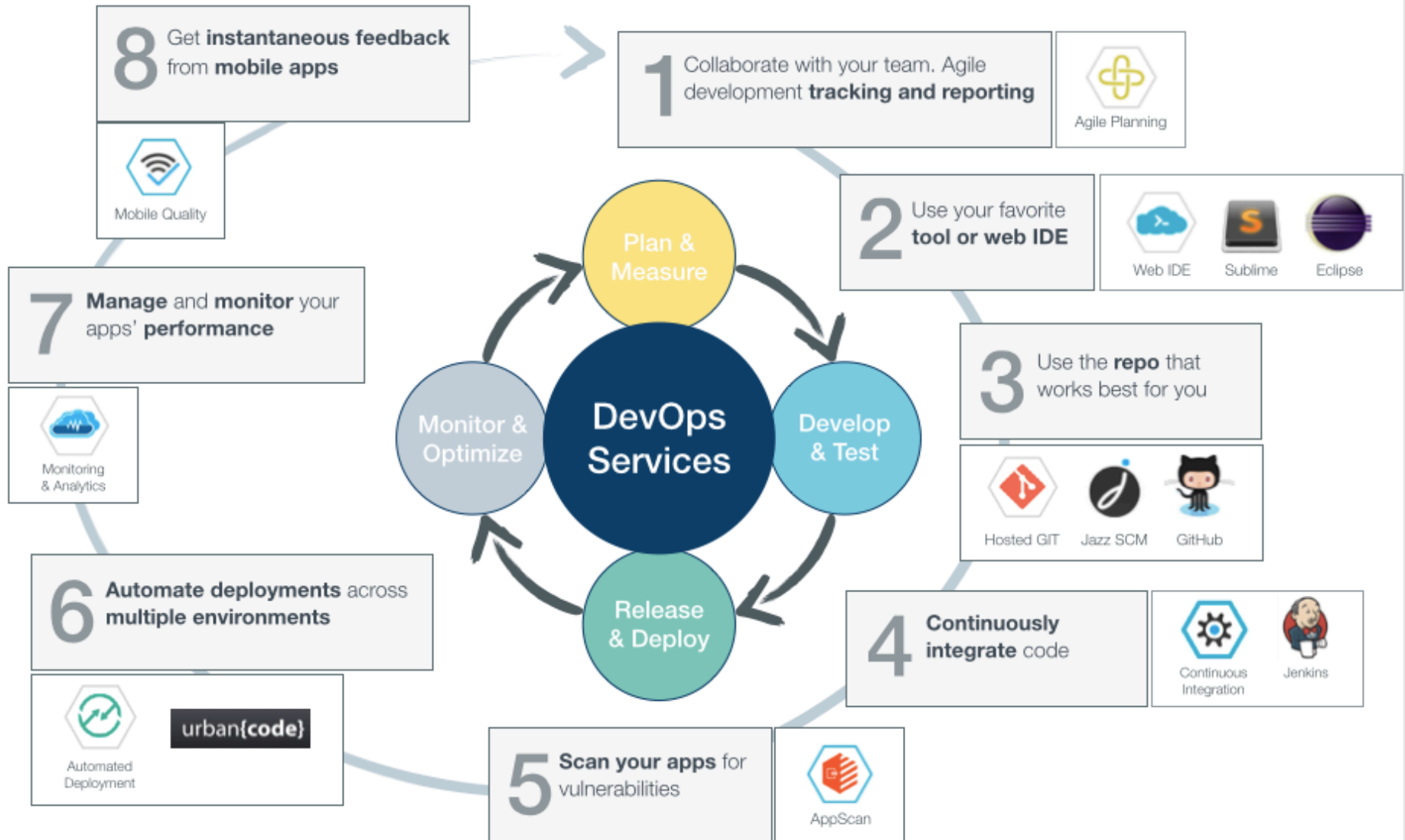
	
Historian	MQTT

Web & App Application

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

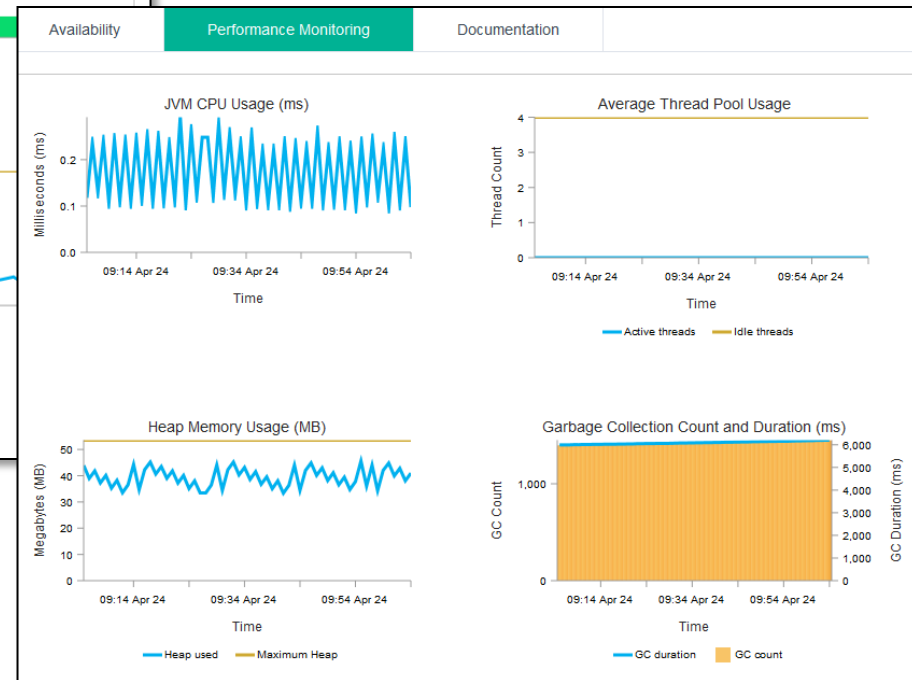
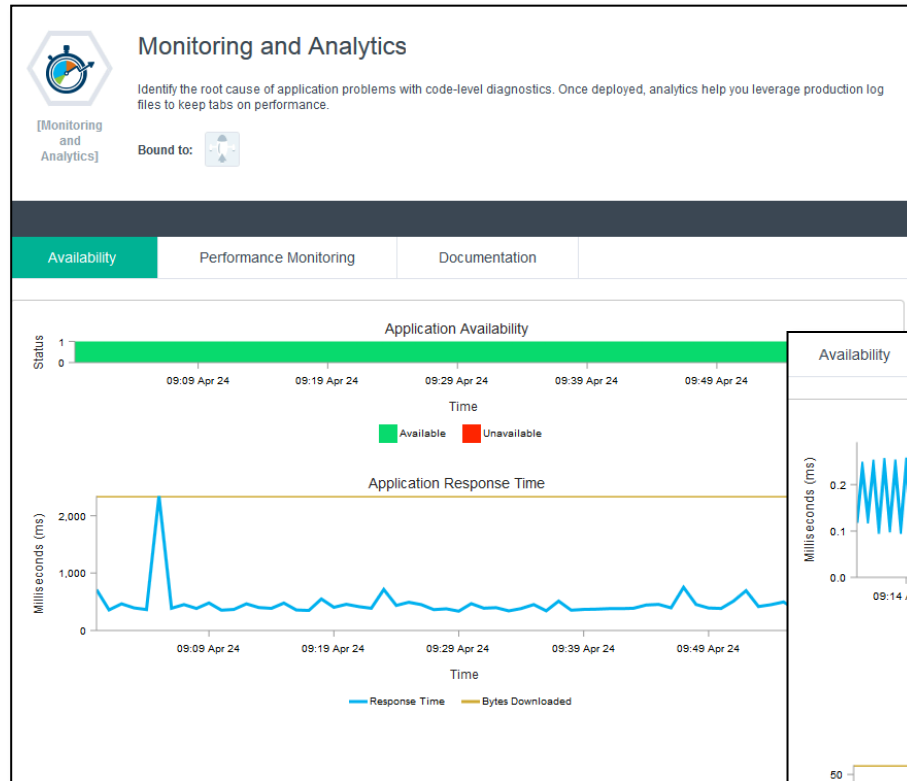
Complete your session evaluations online at www.SHARE.org/Seattle-Eval

Unified DevOps experience



Built in monitoring

Integrated diagnostics for detailed application behavior



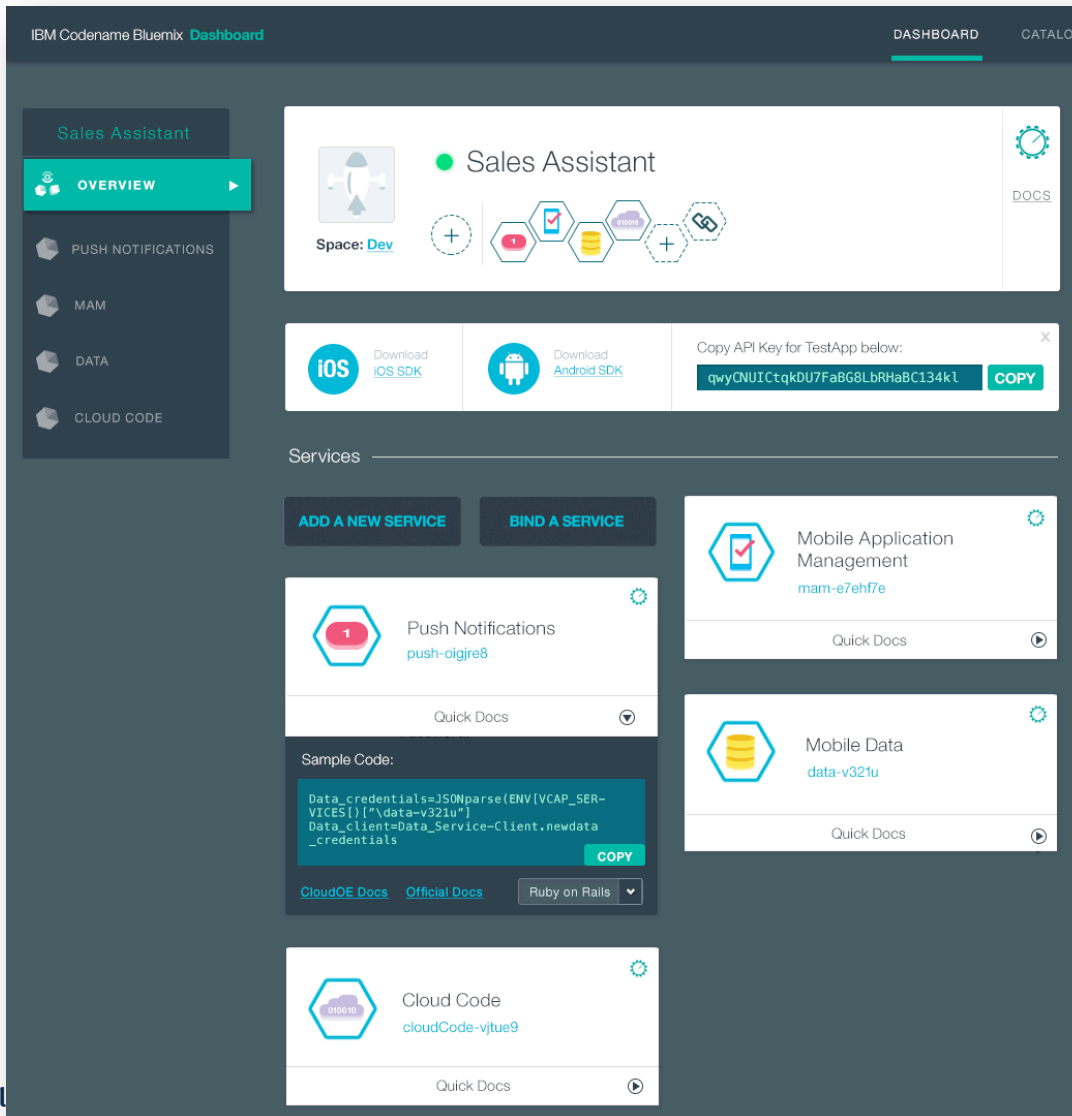
Complete your session evaluations online at www.SHARE.org/Seattle-Eval



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

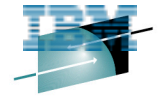
- SSO service for multiple applications and social logins
- Appscan for web and mobile to detect vulnerabilities



Complete your session evaluations online at www.SHARE.org/Seattle-Eval



Integrate Into Existing Applications



SHARE
Educate · Network · Influence

Security connect to and leverage data from your existing systems



**API
Management**



**Cast Iron
Integration**



**Secure
Connector**



**Data
Mapper**



**Private API
Catalog**

Get featured tweets and purchase history

← Database Transformation Credit Check →

End Edit

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

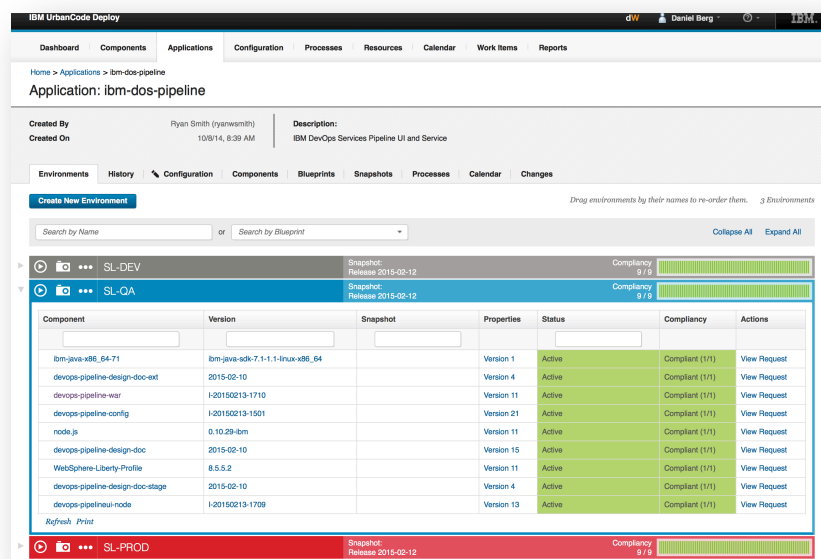
Canvas Documentation

100%

Complete you

SHARE
in Seattle 2015

UrbanCode Deploy is how you deploy applications to Hybrid

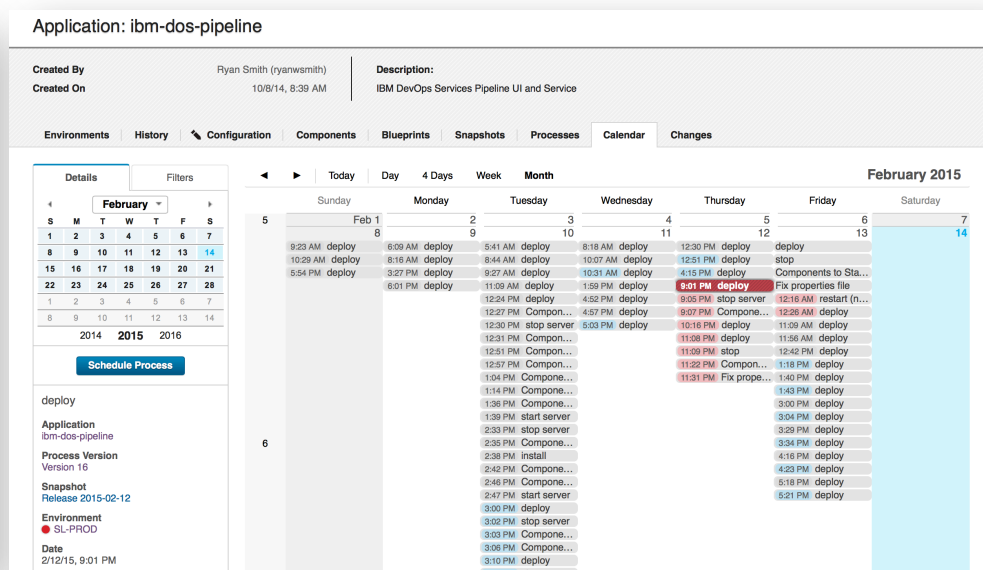


Application: ibm-dos-pipeline

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

Environments: SL-DEV, SL-OA, SL-PROD

Component	Version	Snapshot	Properties	Status	Compliance	Actions
ibm-java-86_64-71	ibm-java-86-7.1.1-1-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	I-20150213-1710		Version 11	Active	Compliant (1/1)	View Request
devops-pipeline-config	I-20150213-1501		Version 21	Active	Compliant (1/1)	View Request
node.js	0.10.29-ibm		Version 11	Active	Compliant (1/1)	View Request
devops-pipeline-design-doc	2015-02-10		Version 15	Active	Compliant (1/1)	View Request
WebSphere-Liberty-Profile	8.5.5.2		Version 11	Active	Compliant (1/1)	View Request
devops-pipeline-design-doc-stage	2015-02-10		Version 4	Active	Compliant (1/1)	View Request
devops-pipeline-ui-node	I-20150213-1729		Version 13	Active	Compliant (1/1)	View Request



Application: ibm-dos-pipeline

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

Environments: SL-DEV, SL-OA, SL-PROD

Calendar: February 2015

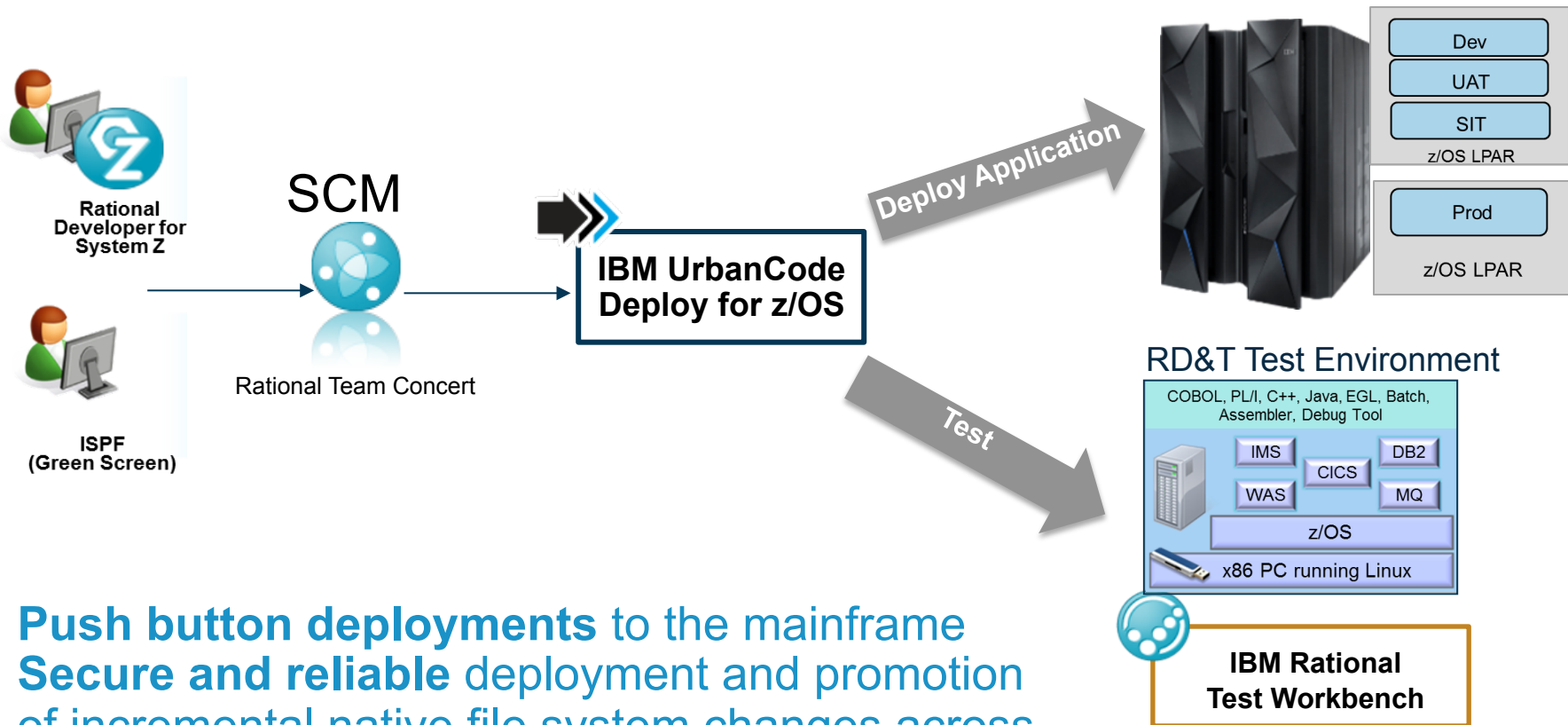
Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
5	8:23 AM deploy	6:09 AM deploy	5:41 AM deploy	8:18 AM deploy	12:30 PM deploy	
6	10:29 AM deploy	8:16 AM deploy	8:44 AM deploy	10:07 AM deploy	12:51 PM deploy	
	5:54 PM deploy	3:27 PM deploy	9:27 AM deploy	10:31 AM deploy	4:15 PM deploy	
		8:01 PM deploy	11:09 AM deploy	1:59 PM deploy	5:03 PM deploy	
			12:24 PM deploy	4:52 PM deploy	3:05 PM stop server	
			12:27 PM Compon...	4:57 PM deploy	9:07 PM Compon...	
			12:30 PM stop server	5:03 PM deploy	10:16 PM deploy	
			12:31 PM Compon...		11:08 PM deploy	
			12:51 PM Compon...		11:09 PM stop	
			1:25:37 PM Compon...		11:29 PM Compon...	
			1:34 PM Compon...		11:31 PM Fix prope...	
			1:14 PM Compon...		1:43 PM deploy	
			1:38 PM Compon...		3:00 PM deploy	
			1:39 PM start server		3:04 PM deploy	
			2:33 PM stop server		3:28 PM deploy	
			2:35 PM Compon...		3:54 PM deploy	
			2:38 PM install		4:18 PM deploy	
			2:42 PM Compon...		4:23 PM deploy	
			2:48 PM Compon...		5:18 PM deploy	
			2:47 PM start server		6:21 PM deploy	
			3:00 PM deploy			
			3:02 PM stop server			
			3:03 PM Compon...			
			3:06 PM Compon...			
			3:10 PM deploy			
			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

Complete your session evaluations online at www.SHARE.org/Seattle-Eval

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

Complete your session evaluations online at www.SHARE.org/Seattle-Eval

New integrations for UrbanCode Deploy



developer.ibm.com/urbancode/plugins

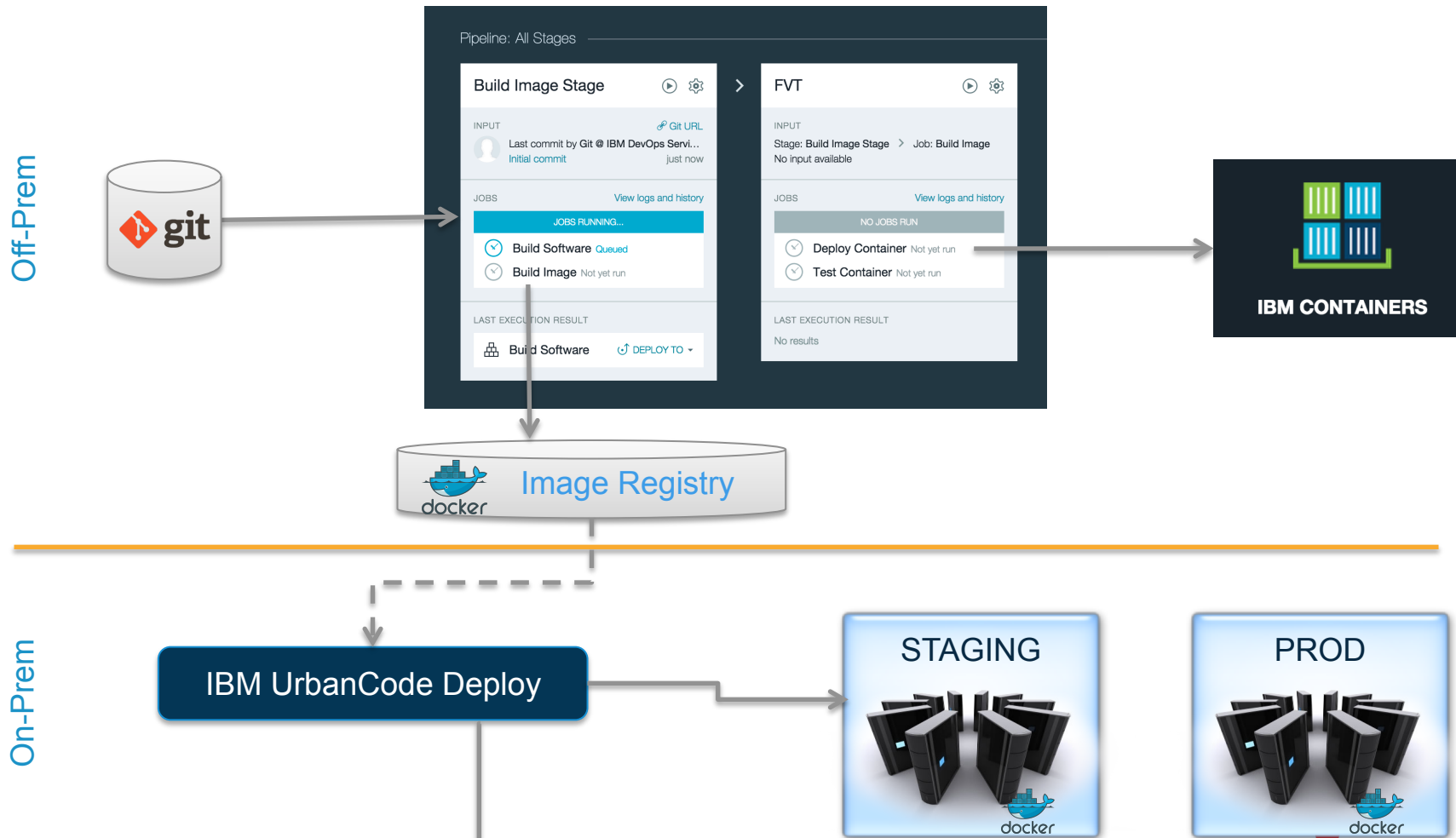


Xcode



Complete your session evaluations online at www.SHARE.org/Seattle-Eval

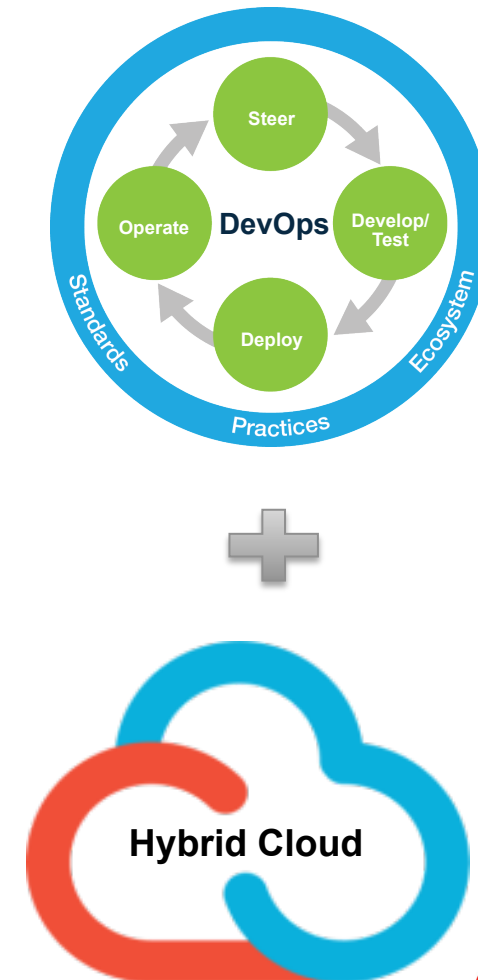
Dev/Test with Hybrid Cloud

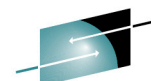


Complete your session evaluations online at www.SHARE.org/Seattle-Eval

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





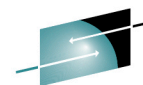
SHARE
Educate • Network • Influence

QUESTIONS

www.ibm.com/devops

Complete your session evaluations online at www.SHARE.org/Seattle-Eval
© 2014 IBM Corporation





SHARE
Educate • Network • Influence



© Copyright IBM Corporation 2012. All rights reserved. The information contained in these materials is provided for informational purposes only, and is provided AS IS without warranty of any kind, express or implied. IBM shall not be responsible for any damages arising out of the use of, or otherwise related to, these materials. Nothing contained in these materials is intended to, nor shall have the effect of, creating any warranties or representations from IBM or its suppliers or licensors, or altering the terms and conditions of the applicable license agreement governing the use of IBM software. References in these materials to IBM products, programs, or services do not imply that they will be available in all countries in which IBM operates. Product release dates and/or capabilities referenced in these materials may change at any time at IBM's sole discretion based on market opportunities or other factors, and are not intended to be a commitment to future product or feature availability in any way. IBM, the IBM logo, Rational, the Rational logo, Telelogic, the Telelogic logo, and other IBM products and services are trademarks of the International Business Machines Corporation, in the United States, other countries or both. Other company, product, or service names may be trademarks or service marks of others.

Complete your session evaluations online at www.SHARE.org/Seattle-Eval

© 2014 IBM Corporation

