



RED HAT  
**FORUM**  
Europe, Middle East & Africa



# DevOps from theory to reality: JBoss EAP OpenShift Enterprise v3

Dr. Arnaud Simon  
Red Hat Solutions Service Manager

# Major French Bank context

- **Challenges**

- Develops and hosts software for customers and advisors
- Huge network of agencies
- Thousands of advisors and Millions of customers
- Strict SLA
- Has to react to a very dynamic market by offering innovative products

- **Pains**

- Monolithic software architecture
- Long development cycles
- Long rollout cycle

# The Red Hat Way

- Agile Transformation Project
- Break down Monolithic Applications into Microservices
- Enable DevOps with OpenShift Enterprise
- Manage Organizational Changes

**RED HAT®**  
CONSULTING

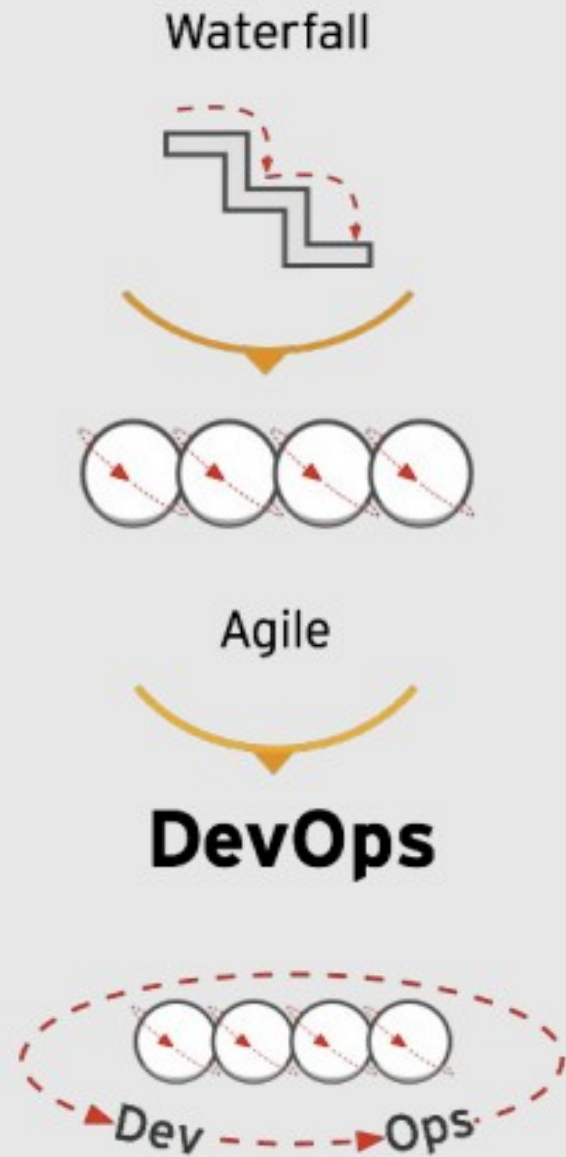
**RED HAT® JBOSS®**  
ENTERPRISE  
APPLICATION PLATFORM



**RED HAT®**  
TRAINING

# Companies Must Evolve to Stay Ahead of Demands

## Development Process



## Monolithic



## N-Tier

## Microservices

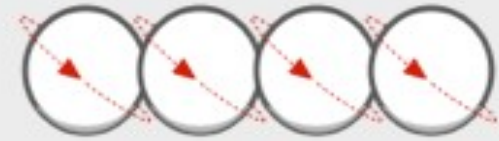


## Application Architecture



# Agile Transformation Project

# Agile Transformation Project



**RED HAT<sup>®</sup>**  
**CONSULTING**

- **Focus on Collaboration**

- Global enterprise requirements: Dev; Build; Network; Security; Ops
- Increase technology adoption

- **Frequent Delivery**

- Acceptation of changes
- Accelerate productivity

- **Experienced Red Hat Team**

- Global Agile Practice
- Technical Project Manager
- Cloud and Middleware Architects
- Cloud and Middleware Consultants
- Training Practice
- Support Team



# Microservices with Red Hat JBoss Enterprise

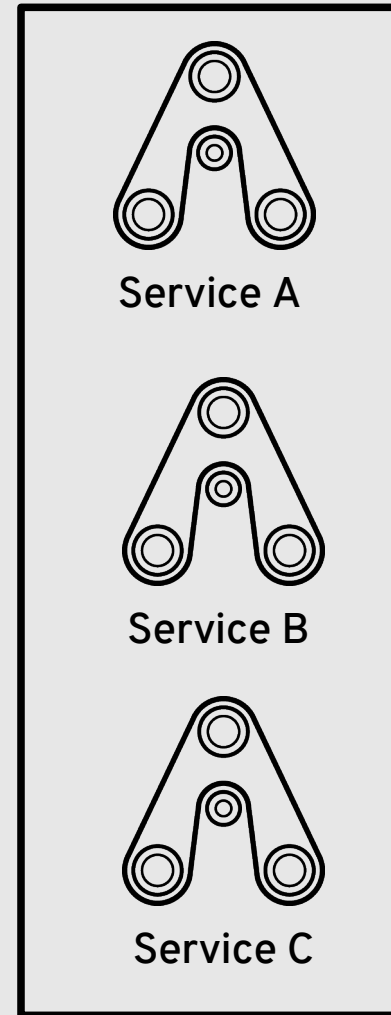
# Microservices



Monolithic application



Refactoring to Microservices



Microservices application

Microservices are :

- Small
- Highly decoupled,
- Focus on doing a small task,
- Communicating with each other using language-agnostic APIs



# Microservices with Red Hat JBoss Middleware



## Application Container Services

- JBoss Enterprise Application Platform
- JBoss Web Server / Tomcat
- JBoss Developer Studio



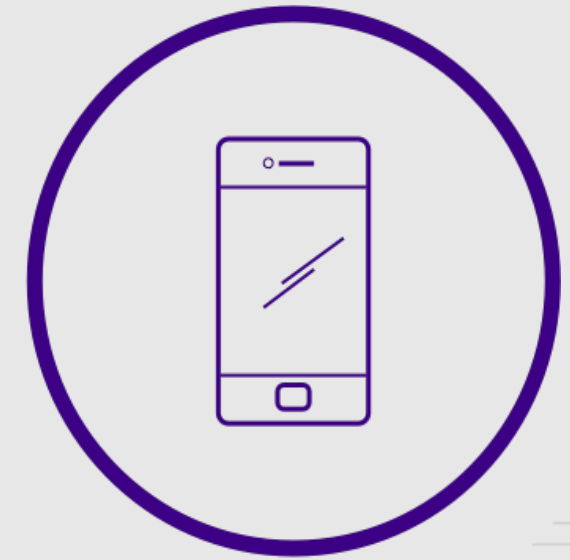
## Business Process Services

- Business Process Management \*
- Business Rules Management System \*



## Integration Services

- Fuse
- A-MQ
- Data Virtualization







## Mobile Services

- Red Hat Mobile / FeedHenry \*
- = Coming Soon

# Enable DevOps with OpenShift Enterprise

# DevOps Experience

## SCM of choice

-  GitHub
-  GitLab
-  Bitbucket
-  Assembla

Step 1

Step 2

Step 3

Step 4

Step 5

Step 6

Step 7

Step 8







Developer provides git repo

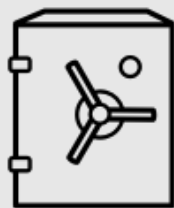


# DevOps Experience

SCM of choice

-  GitHub
-  GitLab
-  Bitbucket
-  Assembla

Registry



Step 1

Step 2

Step 3

Step 4

Step 5

Step 6

Step 7

Step 8



Developer

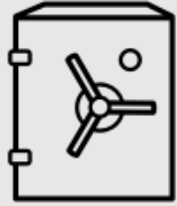
Developer chooses image from registry

# DevOps Experience

SCM of choice

- GitHub
- GitLab
- Bitbucket
- Assembla

Registry



Docker Layer



Step 1

Step 2

Step 3

Step 4

Step 5

Step 6

Step 7

Step 8







Developer

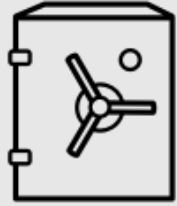
Layer is applied to image

# DevOps Experience

SCM of choice

-  GitHub
-  GitLab
-  Bitbucket
-  Assembla

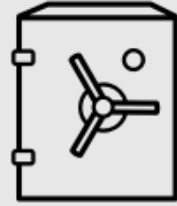
Registry



Docker Layer



Registry



Step 1

Step 2

Step 3

Step 4

Step 5

Step 6

Step 7

Step 8



Developer

Layer is added back to registry

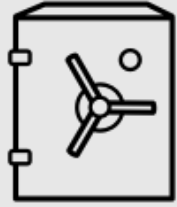


# DevOps Experience

SCM of choice

- GitHub
- GitLab
- Bitbucket
- Assembla

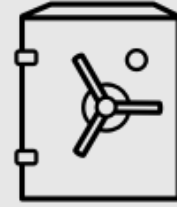
Registry



Docker Layer



Registry



Step 1

Step 2

Step 3

Step 4

Step 5

Step 6

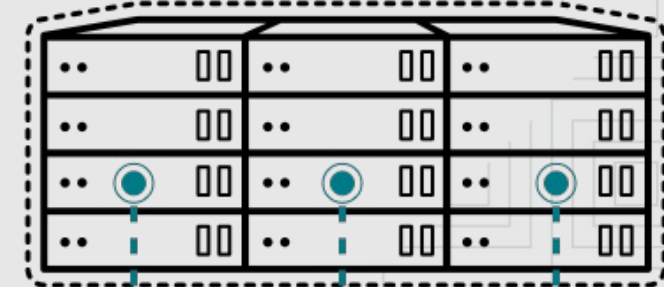
Step 7

Step 8



Developer

Image is scheduled and deployed

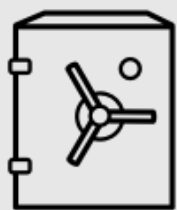


# DevOps Experience

SCM of choice

- GitHub
- GitLab
- Bitbucket
- Assembla

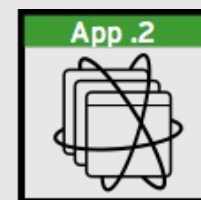
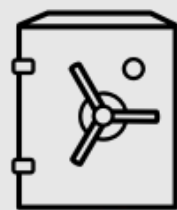
Registry



Docker Layer



Registry



Webhook API

Step 1

Step 2

Step 3

Step 4

Step 5

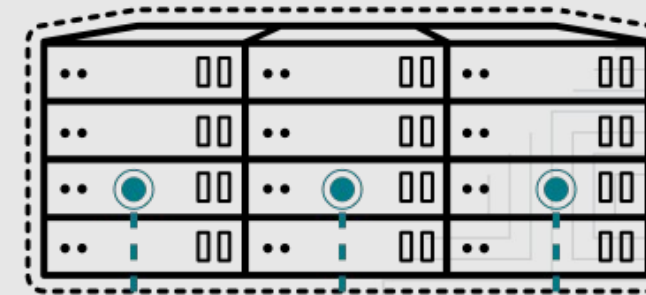
Step 6

Step 7

Step 8



Developer can declare webhooks

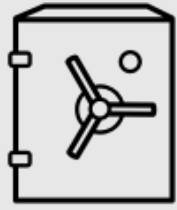


# DevOps Experience

SCM of choice

- GitHub
- GitLab
- Bitbucket
- Assembla

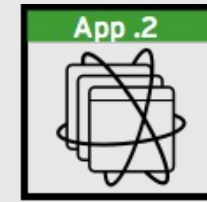
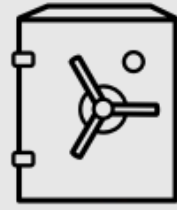
Registry



Docker Layer

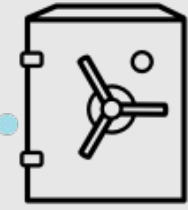


Registry



Webhook API

Registry



Step 1

Step 2

Step 3

Step 4

Step 5

Step 6

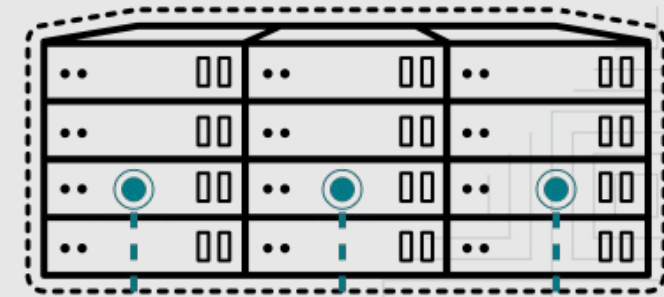
Step 7

Step 8



Developer

Updated image is added back to the registry



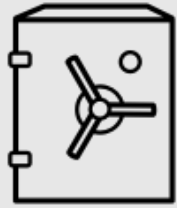


# DevOps Experience

SCM of choice

- GitHub
- GitLab
- Bitbucket
- Assembla

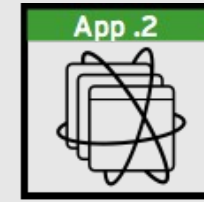
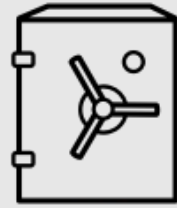
Registry



Docker Layer

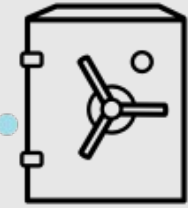


Registry



Webhook API

Registry



Step 1

Step 2

Step 3

Step 4

Step 5

Step 6

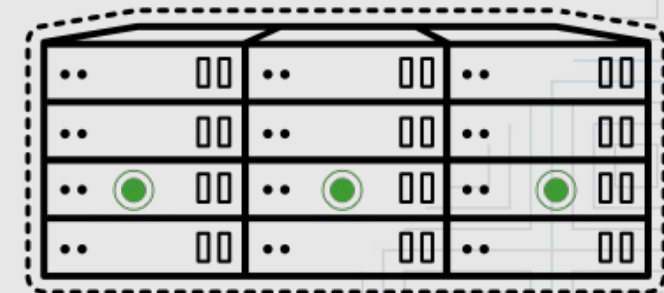
Step 7

Step 8

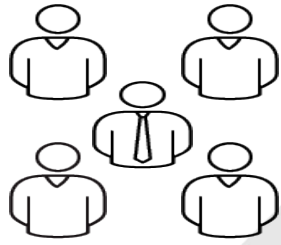


Developer

New image is deployed as rolling update



# Manage Organizational Changes

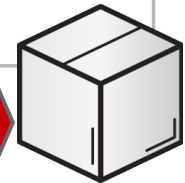


# OSE Project

■ Design      ■ Development  
■ Deployment      ■ Training



Design Sprint(s)	Deployment Sprint(s)	Deployment Sprint(s)	Development Sprint(s)
<ul style="list-style-type: none"> <li>User stories</li> <li>OSE Design</li> <li>Topology Definition</li> <li>Training Op/Admin</li> </ul>	<ul style="list-style-type: none"> <li>Knowledge transfer</li> <li>OSE deployment</li> <li>Access control (IDP)</li> <li>Monitoring</li> <li>Backup policy</li> </ul>	<ul style="list-style-type: none"> <li>Application CI/CD process</li> <li>Software Factory Integration</li> <li>Custom containers build</li> <li>Nodes zoning</li> <li>Training Dev</li> </ul>	<ul style="list-style-type: none"> <li>New Applications</li> <li>Legacy applications migration</li> <li>Micro Services coaching</li> <li>Operations support</li> </ul>
Solution increment	Solution increment	Solution increment	Solution
<ul style="list-style-type: none"> <li>- Defined Use Cases</li> <li>- OSE Architecture Defined</li> <li>- OSE CI/CD initialized</li> <li>- Trained Operations</li> </ul>	<ul style="list-style-type: none"> <li>- Production grade OSE deployed</li> <li>- Operational team ready</li> </ul>	<ul style="list-style-type: none"> <li>- OSE ready for development</li> <li>- Processes and tooling</li> <li>- Trained developers</li> </ul>	<ul style="list-style-type: none"> <li>- PaaS ready</li> <li>- DevOps practice enabled</li> </ul>



# Red Hat Training

## WAYS TO TRAIN

### CLASSROOM TRAINING

Instructor-led training in a classroom environment

### ON-SITE TEAM TRAINING

Flexible, cost-effective team training at the customer's site.

### VIRTUAL CLASSROOM TRAINING

Instructor-led training in an online environment (VT).

### RED HAT ONLINE LEARNING

Self-paced, online learning  
(ROLE).

### LAB-ONLY SESSIONS

Practice what you learned with LABs in the Cloud

## TEST SKILLS & KNOWLEDGE

### CLASSROOM EXAMS

Exams in a classroom environment in Red Hat's schedule.

### ON-SITE EXAMS

Flexible, cost-effective exams at the customer's site.



# Agile Development with OpenShift Enterprise by Red Hat (D0290)

This 3 days course immerses the student in a DevOps environment through the use of agile software development methodology

- Managing an Application with JBoss Developer Studio
- Introduction to Continuous Integration
- Integrating CI into OpenShift Enterprise
- Implementing CI for the Application
- Clustering the Bookstore Application
- Remote Debugging the Bookstore Application
- Deploying Custom Containers
- Creating a Custom Template



redhat.®