Large Scale Migration from WebLogic to JBoss

Steve Millidge
Director, C2B2 Consulting Limited
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Agenda

Setting the Scene
The Approach
The Bad
The Ugly
The Good
The Future
Setting the Scene
Focus on Deployment of Enterprise Middleware

Fast
Reliable
Manageable
Secure

Subcontracted for BEA PS
Subcontracted for RedHat PS

Ideally Placed to Help!
The Customer

Large UK Government Department

Substantial Investment in WebLogic since 6.x

Many many applications in production

Extremely Large Data Volumes

24/7 operations

Many Systems Integrators
Technical Environment

100s of WebLogic 8.1 managed servers
10s of Domains
100's of JEE Developers
RHEL Linux Blades
Custom Built Deployment
Complex N-Tier Systems

Many Discrete Applications
Applications “Talk” to Each Other
EJB<->EJB interactions
JMS integration
Web Services
Separate Domains
Bespoke Security Requirements

Propagation of Principals
  Domain Credentials
  JMS
Authenticators
Identity Asserters
Complex Audit Requirements
Bespoke VPD
Heavy Tuning

Extensive JMS Tuning

Session and Entity Bean tuning

High Availability Configuration

WebLogic Performance Tuning
The Approach
Why Migrate at All?

Money?  
No!
New Architectures
Support
Government Push into Open Source

The Time was Right
Money

NOT the primary reason

“Not the Reason”

According to BEA sales Rep

Cost of change can be great

Re-education

Development Work
New Architectures

Agile Dynamic Infrastructure
  Virtualised Linux
New Frameworks
  Spring, Hibernate
JDK 5
JEE 5
SOA and ESB

Cost of Change Great for WLS 10 and AquaLogic
Support

BEA Support not seen as good value
On-site consultancy support better value
Red Hat support good
RHEL customers
Open Source means rapid problem resolution and fixes
Migration

Incremental Approach

New Applications JBoss

Slow migration of legacy
Interoperability

WebLogic Remains

JBoss needs to talk to WebLogic

SOAP, JMS and EJB

Requirements

Security Propagation

Load Balancing

Fail Over
Tombstones

JBoss Client has the same EJB client interface
Packages up parameters and Security principal
Invokes Servlet in Tombstone
Unpackages Security authenticates to WLS
Invokes EJB in WebLogic Server
Tombstones (2)

IIOP

EJB Spec requirement
Can be made to work
No load balancing or fail over

Tombstone

Provides Load Balancing and Failover
Identity Propagation infrastructure

JMS Still not solved
The Bad
Documentation

JBoss Docs are BAD
  Difficult to get Version
  Difficult to work out what applies
Download the Source
  Ultimate Documentation
JBoss Administration

Easy it is NOT
Too much XML Editing
No Central Configuration
No Rollout to a “Domain”
Each Server Subtly Different
Jmx-console too much crud
JEE 5 Compliance

JBEAP NOT JEE 5 Compliant
No EJB->Servlet injection
Many minor issues
Causes Project Delay
Causes developer confusion
Mind shift

Developers experienced in J2EE 1.3
Large Education Cost to shift to JEE 5
Java 5 upskill
JPA upskill
EJB upskill
ESB new model

Better but different
The Ugly
Ports

How many ports are there in JBoss?

2 in WebLogic
Service Binding a Hack

Many developers per Machine
Nightmare!

NAT

Where is the definitive answer?

Red Hat sort it out Please!
Interoperability

You must address this

What do you rely on now?

  JTA and XA
  Principal Propagation
  Load Balancing
  Failover
  Same JDK version

Nothing works “out of the box”
Operational Management

Consistent Large Scale Deployment difficult

Haven't addressed this yet

Across “Domain” monitoring difficult even with JON

Useful things not available

Active JTA transactions

No Node Manager
Operational Management (JBoss Cluster)

XML files require differences
- Node ID (Web, JMS, XA)
- Ports (if on the same host)
- Edits and deployments manually pushed to ALL
Operational Management (WebLogic Cluster)

- Host 1
  - WebLogic Server 1
  - WebLogic Server 2
  - Node Manager

- Host 2
  - WebLogic Server 3
  - WebLogic Server 4
  - Node Manager

- Admin Host
  - Admin Server
  - XML Config
  - ... x4

Single
Effective Clusterwide Deployment
Start and Stop servers remotely
The Good
Open Source

Saves Huge Amounts of Time
- Solve problems fast
See how things really work
- Security
- Internals
Fix critical issues
Ultimate Documentation
Flexibility

JBoss is SO Flexible
Everything is configurable
Easy to Hook in Code
  EJB Interceptor stack
  AOP
  Security providers
  Many more!
Developer Productivity

Developers Experienced in Eclipse

Poor Integration with WLS

Excellent Eclipse Integration with JBoss

Investigating SEAM
ESB

ESB Great Fit for the Business
Lightweight
Provides BPMS
Heavily Message Oriented
The Future
Major ESB Deployment

Developing a Major ESB infrastructure

20 million messages per day

Orchestrating many data processing systems using JBPM

Large scale deployment

Federated UDDI
Migrate in Earnest

Initial Applications Ported
Custom Security Code Ported
Interoperability proved
Deployment and Management still to solve

Large Scale Migration starting NOW!
QUESTIONS?

TELL US WHAT YOU THINK:
REDHAT.COM/JBOSSWORLD-SURVEY