

FOLLOW US:
[TWITTER.COM/REDHATSUMMIT](https://twitter.com/REDHATSUMMIT)

TWEET ABOUT US:
ADD #SUMMIT AND/OR #JBOSSWORLD TO THE END
OF YOUR EVENT-RELATED TWEET

Large Scale Migration from WebLogic to JBoss

Steve Millidge
Director, C2B2 Consulting Limited
September 3rd 2009

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

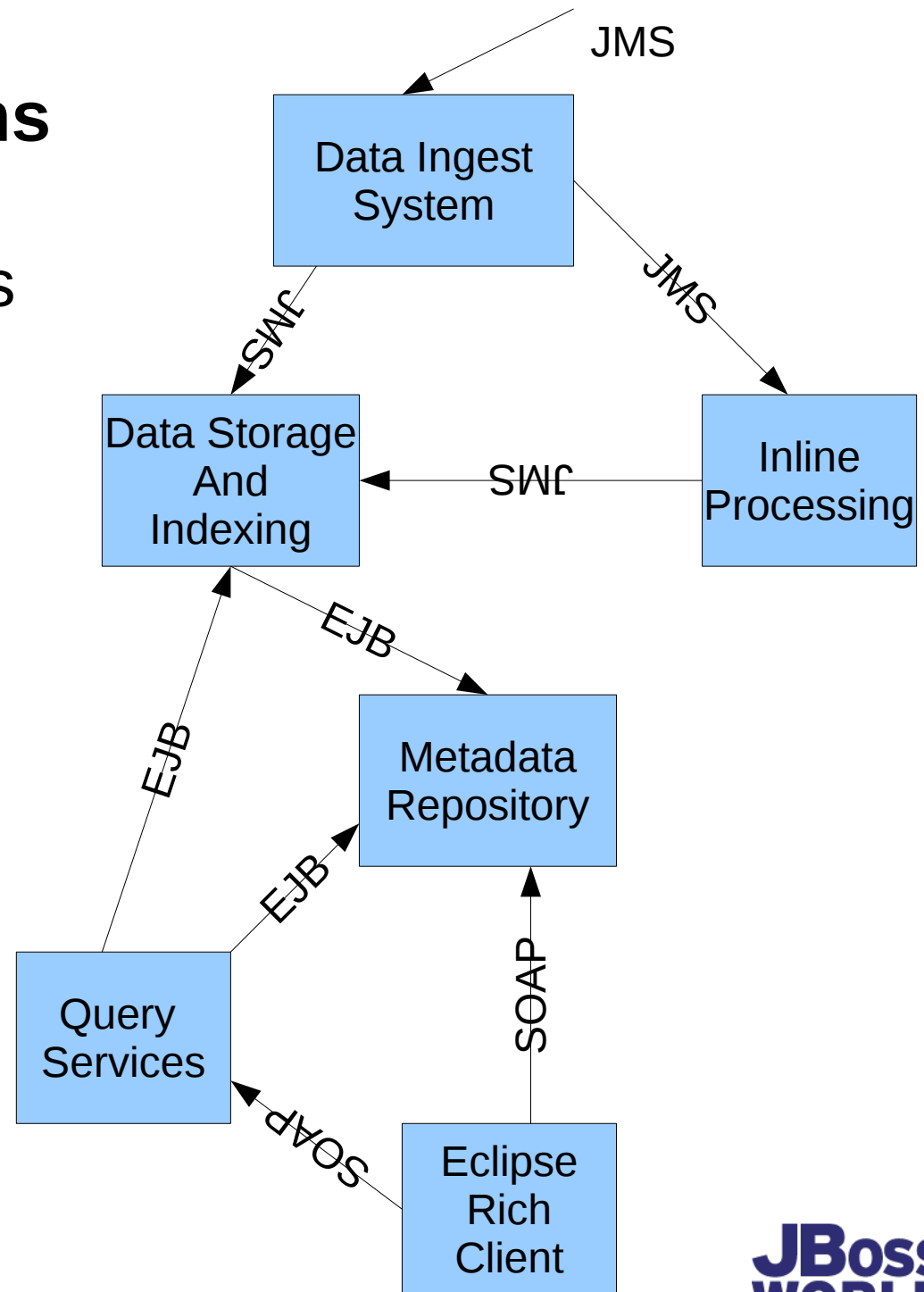
Applications “Talk” to Each Other

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

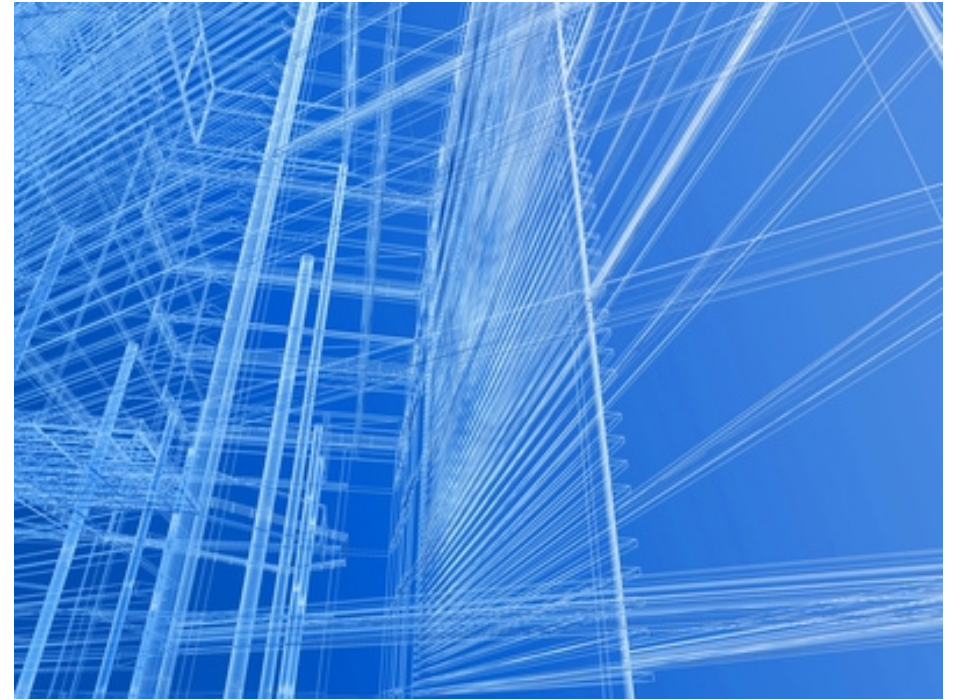
New Frameworks

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

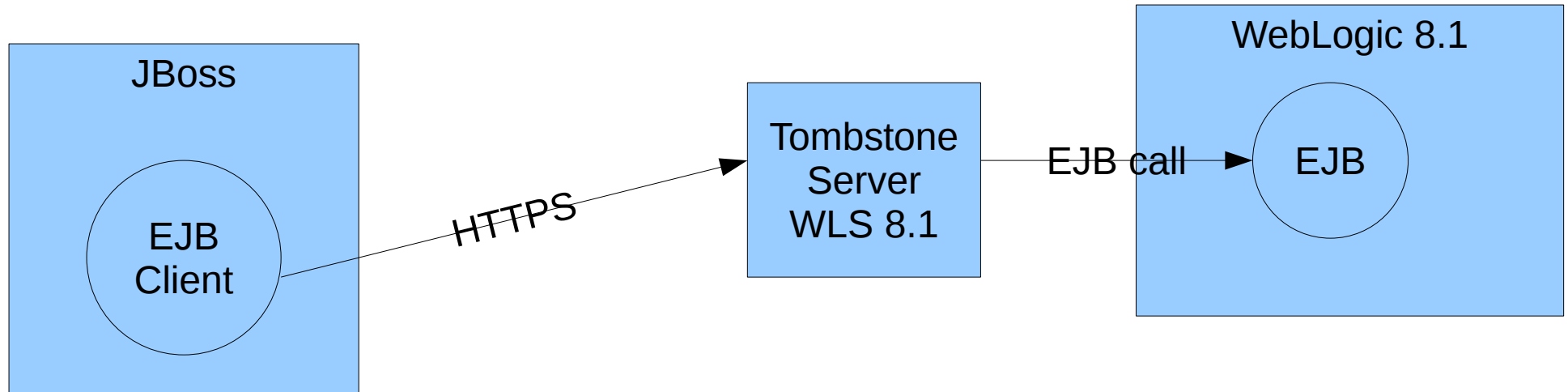
Security Propagation

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

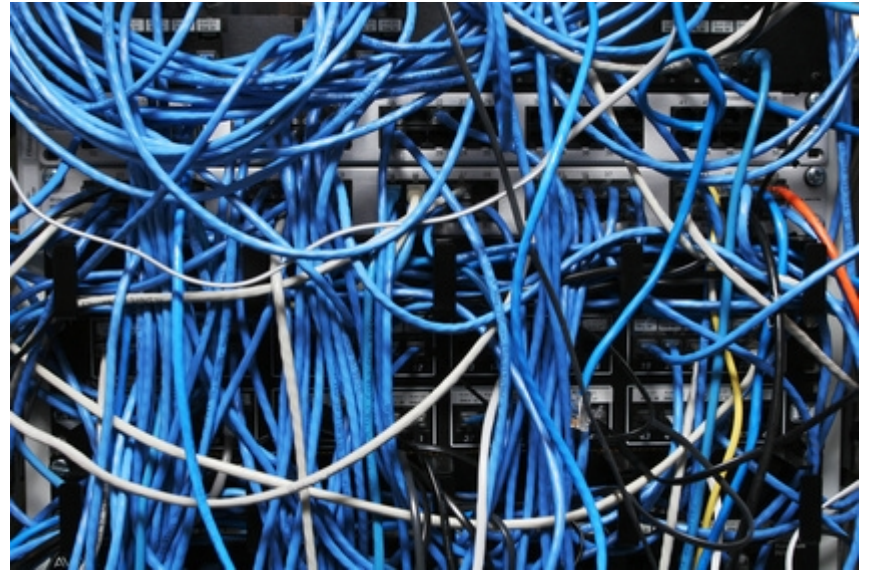
Service Binding a Hack

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

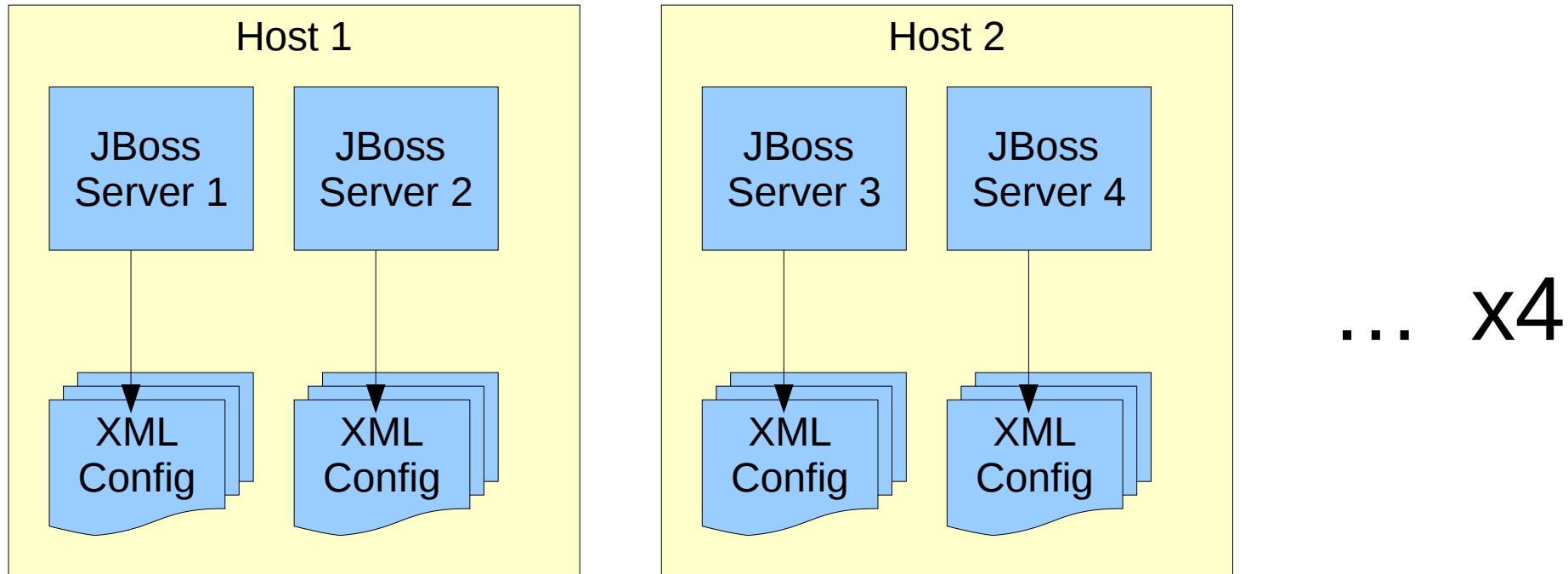
Useful things not available

Active JTA transactions

No Node Manager



Operational Management (JBoss Cluster)



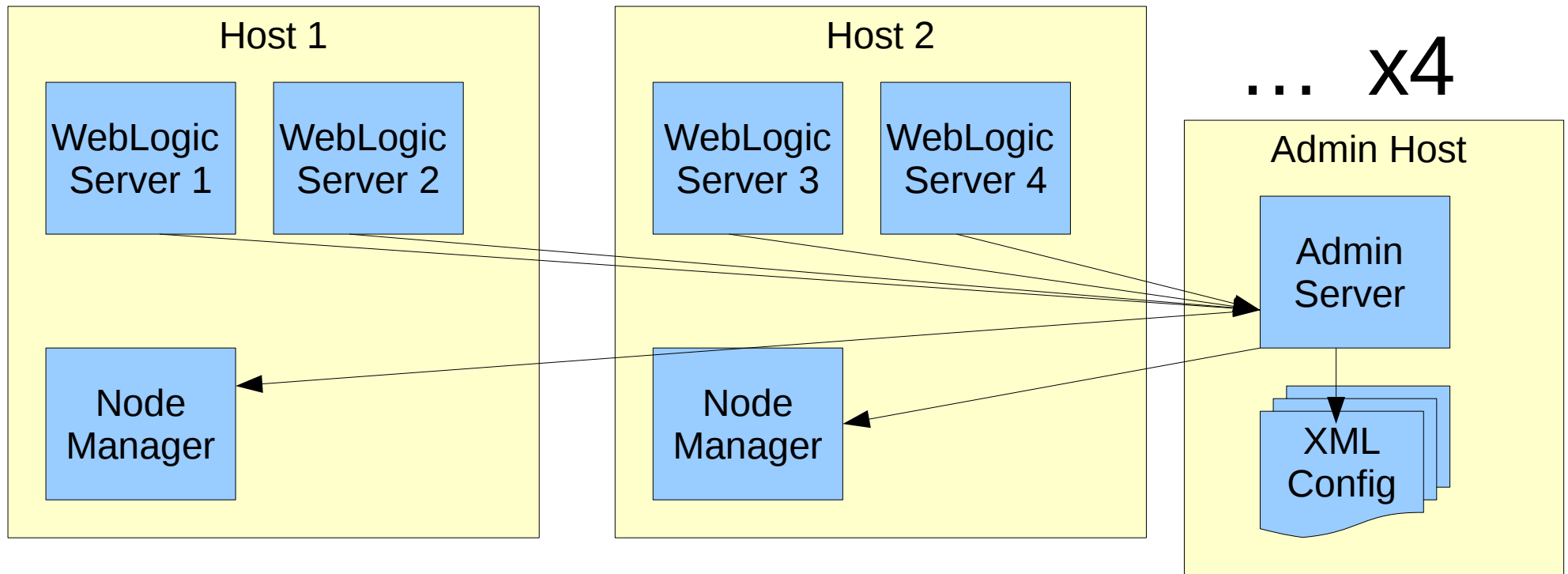
XML files require differences

- Node ID (Web, JMS, XA)

- Ports (if on the same host)

Edits and deployments manually pushed to ALL

Operational Management (WebLogic Cluster)



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!



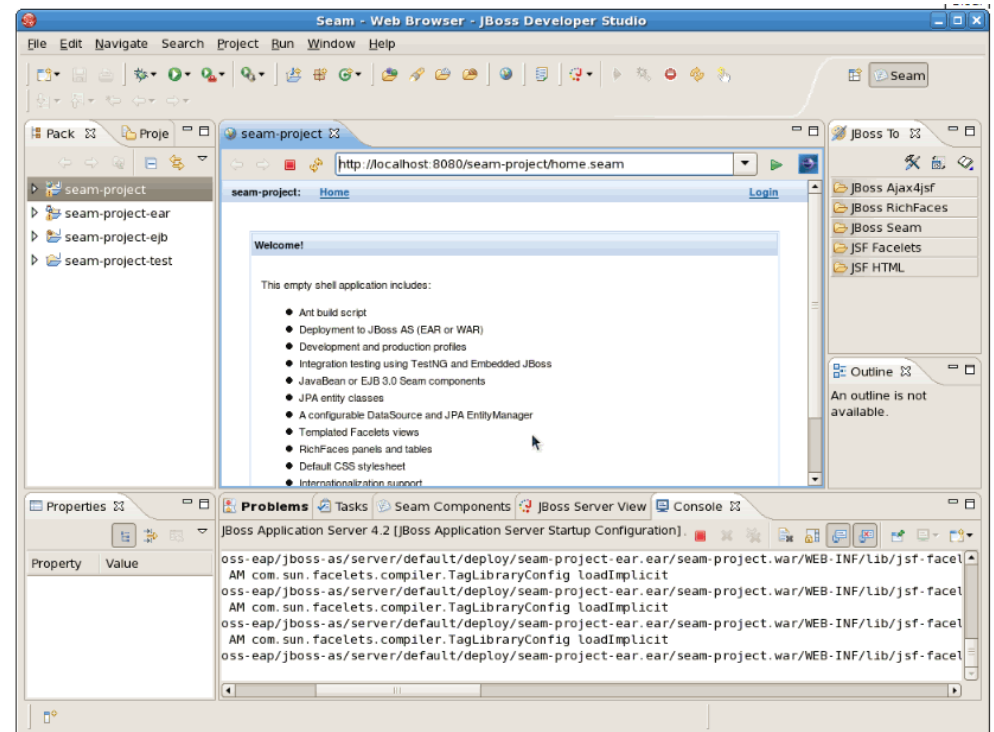
Developer Productivity

Developers Experienced in
Eclipse

Poor Integration with WLS

Excellent Eclipse
Integration with JBoss

Investigating SEAM



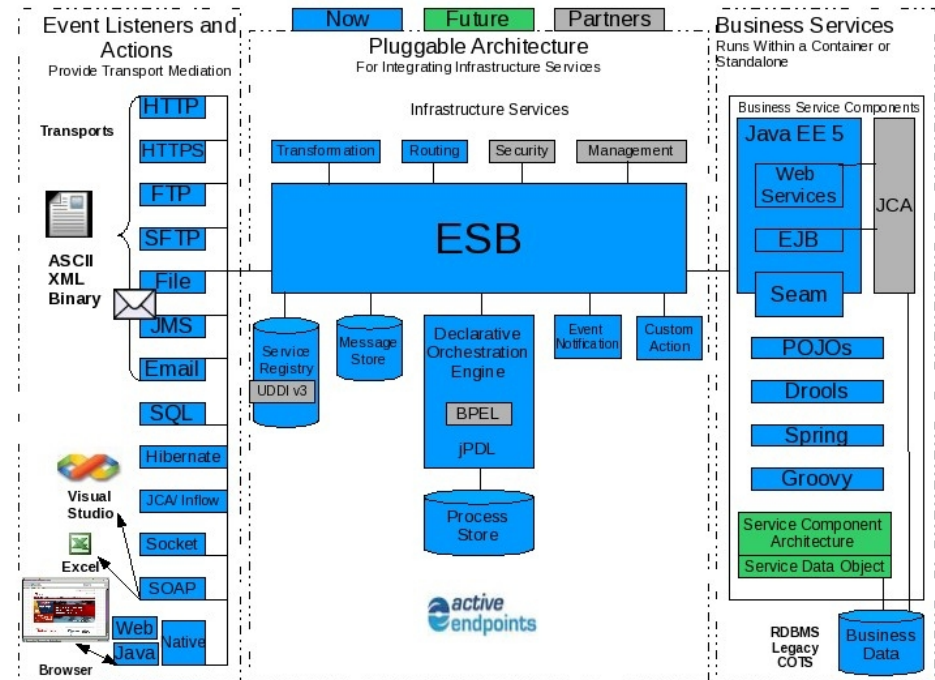
ESB

ESB Great Fit for the
Business

Lightweight

Provides BPMS

Heavily Message Oriented



The Future



Major ESB Deployment

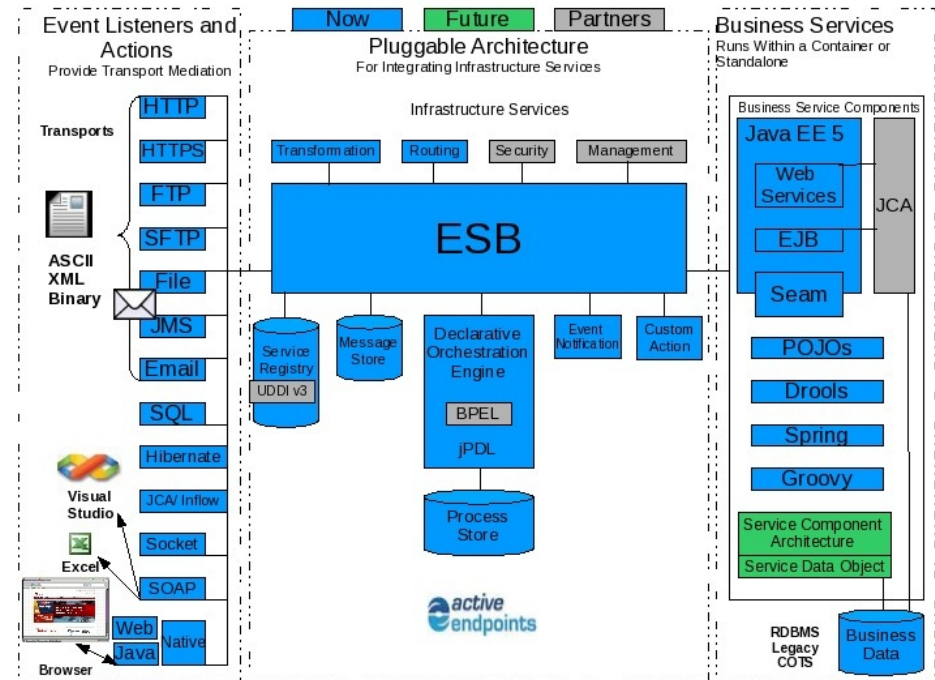
Developing a Major ESB infrastructure

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](https://redhat.com/jboss-world-survey)**