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JBoss State of the Union

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Overview

Projects to Platforms

What have we been doing to improve our products?

Development

Management

Performance

Scalability

Standards

Where are we going next?

Cloud

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Projects

Platforms roll up many different Projects

Not all Projects come from JBoss.org

Community and customers help shape Projects

Most Platform features are baked in the community first

Great way to test the benefits

Feedback is important for community and Platforms



Platforms

Platforms take Projects and productize them

May remove features and capabilities from Projects

Lots of QA effort goes into this process

Between 3 and 6 months

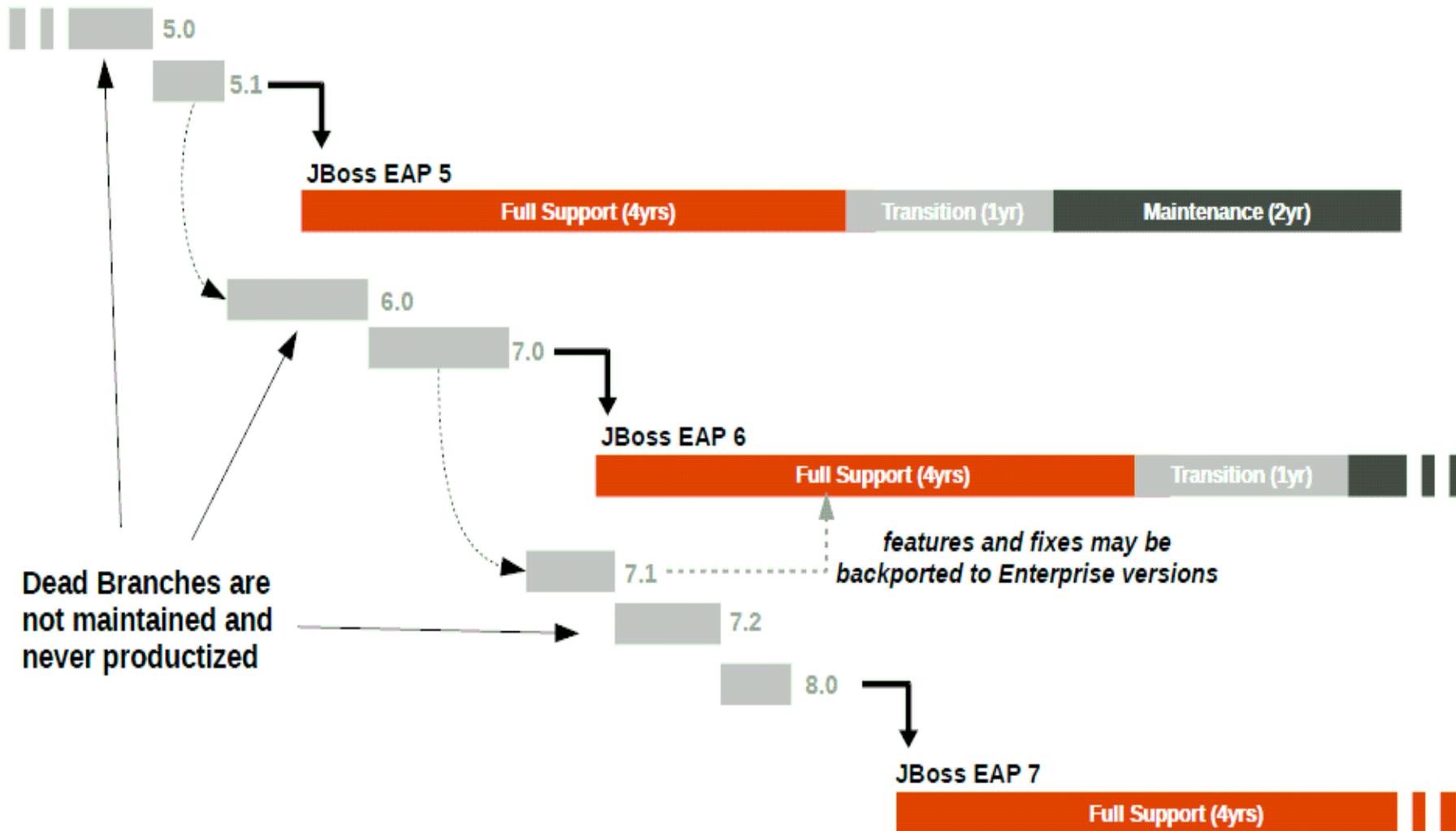
Training material, documentation improvements etc.

Early adopter programs allow for feedback loop

Support readiness



Projects to Platforms



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Summary of benefits

Platforms are slow moving and supported

Interfaces and capabilities are closely managed for many years

No surprises between releases!

Projects are fast moving and unsupported

Interfaces and capabilities may change rapidly as the project evolves

Capabilities may come and go between each release

Both present innovation at different levels in the development lifecycle

Community involvement is critical for projects and platforms

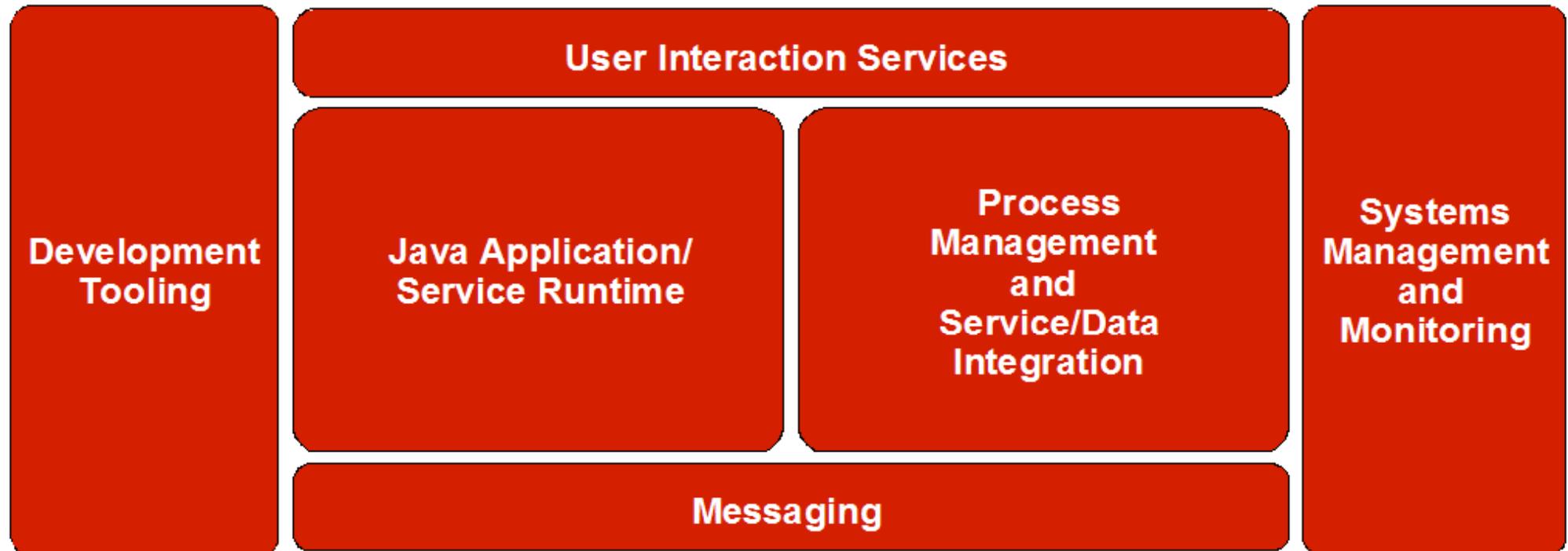
Baking in the community

We are not a closed source company that periodically dumps code into a public repository!



OSS Middleware Reference Architecture

User/Consumer Channels – Browser, Client GUI, Cell, PDA



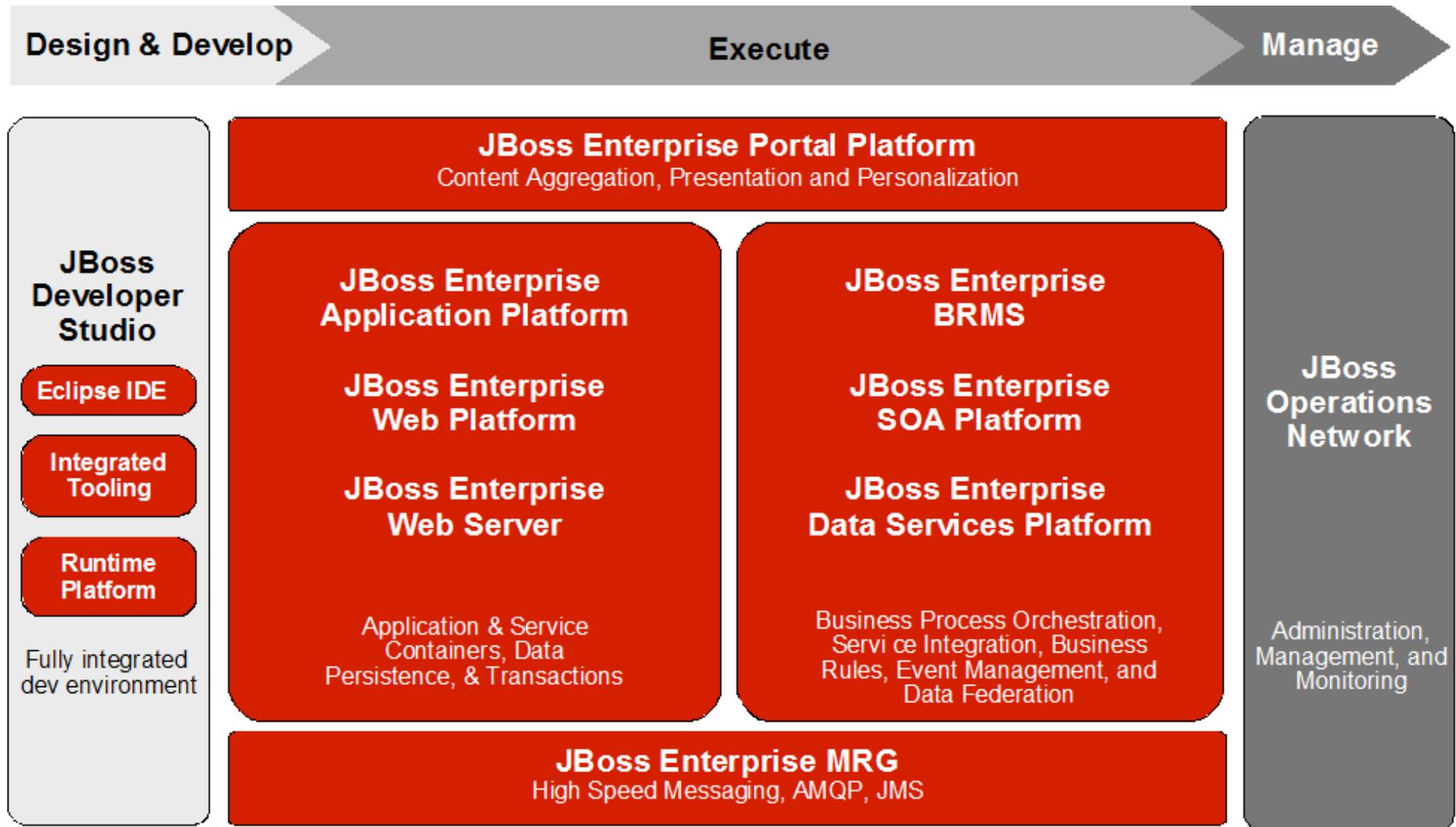
Information Systems (RDBMS, Applications, Content, Legacy, External)

Operating System

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JBoss Enterprise Middleware Portfolio



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Development

Improve the developers experience for all platforms

JBossAS 6 work underway

Several milestones already

Improvements in performance, flexibility, EE6 support, CDI

Testing improvements in the community are very important

Feed directly to the maturity of the platforms

Testing has to be considered during development and not as an afterthought

Relevant projects

Arquillian

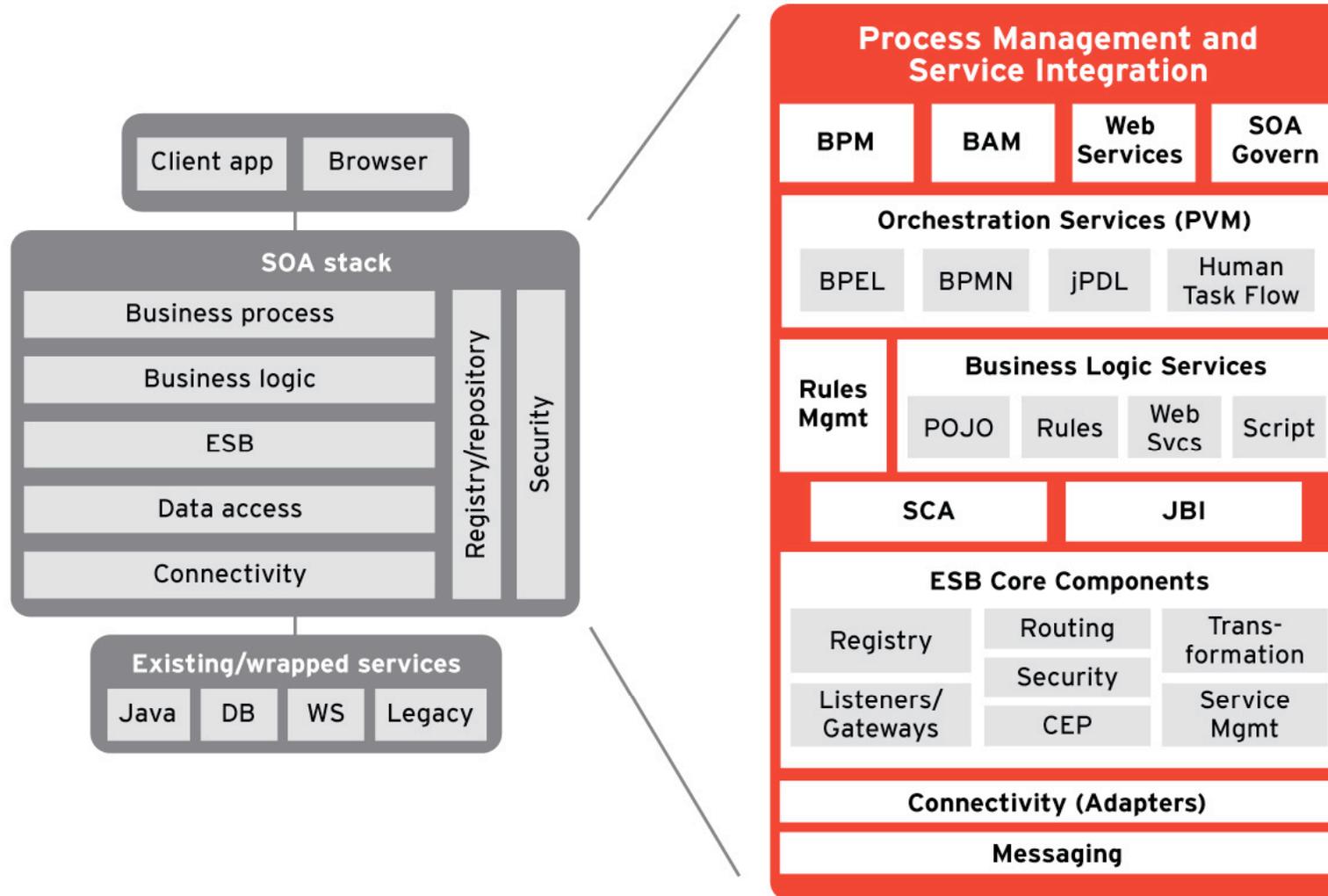
Byteman

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SOA and BPM



BPM futures

Independent BPM no longer viable

SOA+BPM = reality

jBPM and JBoss Rules both offered workflow solutions

jBPM 3 a successful de facto standard for customers

jBPM 4 a community only release

DroolsFlow generating success in its community

BPM future based on jBPM and DroolsFlow

BPMN 2

Testable Architecture (Savara Project)

BPEL, BPEL4People (Riftsaw Project)

SOA-P 5.1 and 6.0

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Tooling

Aim for complete and integrated management and development

Eclipse and GWT

Errai Project

Cover entire software lifecycle

Important part of developer experience

JBoss Developer Studio is #1 way in which to develop with platforms

EAP and SOA-P support

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Management

We need to make our platforms easier to use and manage

Andiamo effort will ensure that Platforms are:

- Easier to manage

- Easier to configure (statically and dynamically)

- Perform better (boot time, memory footprint etc.)

 - JBossAS 6 and JBossAS 7

JBoss Operations Network

- Support for provisioning instances such as EAP and EWS

 - Includes fresh instances, upgrading existing instances

- Support for triggering any operation on resource from an alert

- Authorizing users based on LDAP group membership



Performance

Performance means different things to different people

Boot time

(Re-)configuration time

Response time

TPS

Time to send/receive messages

Even impacts tooling



Performance Improvements

Messaging improvements

HornetQ

JMS with Java implementation

Many times faster than JBM 1.4

Extensive feature set

MRG-M

JMS with C/C++ Broker

Also high performance

Implements the AMQP specification

Cross-vendor adoption



Performance Improvements

Microcontainer

Critical to adaptability, boot time and memory footprint

Improvements in all areas in JBossAS 5 (EAP 5) and 6

Much more in JBossAS 7 (EAP 6)

JBossTS

Transactions are key to a lot of applications

Improvements in logging

Easier recovery

Interoperability

Heterogeneity is a reality

Even within a single vendor

Standards help here

REST

Being pushed throughout everything we do

RESTeasy

WS-*

Continued involvement in W3C and OASIS

Apache CXF and JBossWS

IIOp and XATMI

Blacktie and JBossTS (JTS/OTS)

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JBCP

Implementation of JAIN SLEE 1.1 and 2.0 standards

Leveraging EAP 5 and Microcontainer

Enhanced performance

HA Support

JBoss ON management

JSR 309 (Media Server Control)

Seam Telco Framework for RAD

Torquebox integration



Scalability

There are already more mobile devices than computers

There are 4x more processors on the planet than people

Most have TCP stacks

dsPIC33FJ12GP 16-bit microcontroller has as much horsepower as a VAX (40MIPs), can handle 16+ sensors, and is 1/8 the size of a penny

Ubiquitous computing is here

Multi-core technologies will only increase

Machine-to-Machine communication will dominate all other traffic.

It will also be a primary driver (and receiver) of DBMS/TXP interactions



Cloud

Cloud has beginnings in grid and ubiquitous computing

DeltaCloud effort

- Define Cloud abstraction API

 - Bind to different implementations

 - Isolate users from flux

Of interest ...

- Infinispan

- CoolingTower, BoxGrinder, CirrAS, TorqueBox

- Security

- Fault tolerance

- Adaptation

 - Tie into dynamic monitoring, management and agility of deployments

 - Machine learning as a diagnostic and predictive tool for dynamic scaling, automatic reaction to performance and correctness problems

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Platform?

Cloud-like use will increase and evolve

Already evolved from Grid and ubiquitous computing

But there are major technical and social hurdles to overcome

The Java language will not remain #1 forever

Though the JVM probably will for a lot longer

We need a single platform that caters for a range of devices

Core requirements are the same, just implementations change

Users still want enterprise capabilities

Dynamic adaptability

Migrate between environments opaquely

Single machine deployment should be just a degenerate case

Cloud as a natural byproduct



Data management

There is a movement away from traditional databases

Infinispan-like “durability” approaches

The bandwidth problem still remains

Economic necessity mandates putting the data near the application

The cost of wide-area networking has fallen more slowly than all other IT hardware costs

But how can data be in multiple places at the same time?

Quantum data?

DB 2.0 (?)

Hibernate, Hibernate Search

Teiid

Infinispan

Messaging



Standards and specifications

Standards

OASIS Cloud-Identity

OSGi

Cloud as well

OASIS OpenCSA

W3C WS-Resource Access

OMG BPMN2 and Cloud

JCP with CDI, Bean Validation, JPA

Specifications

REST-* messaging and transactions

AMQP

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FUD

Over the past year we've seen more FUD from our competitors

“Feature X doesn't work.”

“Not enterprise ready.”

“Harder to use.”

Not scientific

“First they ignore you, then they ridicule you, then they fight you, then you win.” -- **Mahatma Gandhi**



Conclusions

Past 12 months have been very prolific

Focus on customer needs

Andiamo, interoperability, performance etc.

Lay groundwork for the future

Cloud, Data Services, BPM

Standards involvement

Growing customer and community bases

Driving open source adoption and acceptance

Next 12 months will be equally prolific



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