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How low can you go! JBoss TCO

- Presentation Perspective
- Who is your Champion?
- The Landscape
- JBoss and the Development Environment
- MetaMatrix
- Red Hat Enterprise Linux
- Cost Considerations
- Where to from here?
- Resources

Presentation Perspective

- Business focus
- Non-Technical!
- Partners, Account Managers, Solution Architects
- Identifying opportunities
 - Customer on public record about costs
 - Mergers and Acquisitions
 - Disenchantment with recent Industry consolidation
 - Low margin competitive environments
 - Government

Who is your Champion?

CIO – Head of IT

- Cost, Risk, Reliability
- Reducing Middleware costs
 - Low cost, open source alternative to proprietary
 - Annual subscription – Annual accountability



IT Development Manager

- Pre-Integrated Middleware works out of the box
- Classroom training to get developers writing code sooner
- Standardise components to speed up Dev, Test & Production
- Remove Database dependencies with OR Mapping & Persistence
- Unlimited Support lets Developers get answers from experts



Who is your Champion?

■ Developer

- Certified Java Application Platform
- Integrates the best in open source middleware
 - Dont need to integrate & configure environment if there is a component change
- Rapidly evolving, bugs are fixed quickly
- Training, phone and online support from Java experts
- Hibernate – dynamically generated SQL – saves time



■ Systems Administrator

- Tested, certified to work together out of the box
- Management tools for start, stop, updates, patches
- Support backed by Service Levels for critical environments



The Landscape

- Application Development Environment
 - Totally Greenfield
 - Redevelopment of existing systems
 - Optimising existing systems
 - Reducing TCO of ongoing existing system – Retrofit
 - Quick and Dirty builds
 - Proof of Concepts
- Organisational Maturity
 - COTS Software with modifications
 - Long track record of software development
 - Architecture, Standards, Vision

Development Team

Staff Skills

- Existing Java Skills
- Cross Skilling from other Java platforms
- Eclipse IDE vs Vendor specific
- Version Control – CVS and Subversion
- Training
- Ongoing Developer Support



Getting Started

Training

- Classroom or On-Site

Developer Support

- Red Hat and JBoss software for Development purposes
- Unlimited support incidents for Developers to experts
- Post Classroom
- SLAs, Nominated Contacts and Developer Subscriptions for project or Enterprise
- MetaMatrix – Additional, Developer subscription.
- Support for Installation, Usage, Configuration and tuning
- Developer Advice for App Architecture, App Design, Best Practices, Tuning, Application Porting

RED HAT TRAINING.
LEADERS TRAINING LEADERS.

▶ Read the IDC vendor analysis study.

Development Timelines

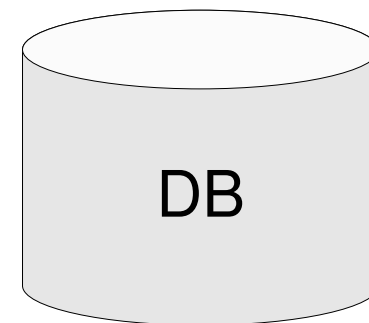
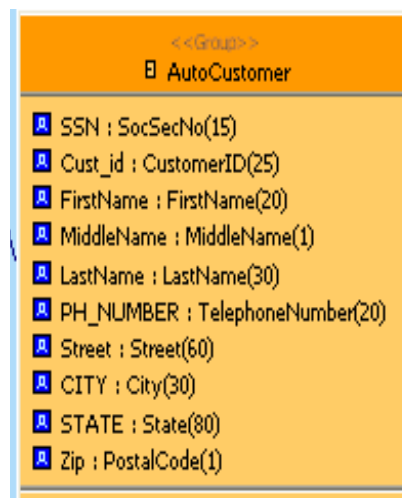


The Development Environment

Presentation

Business Logic

Data



Web

Application

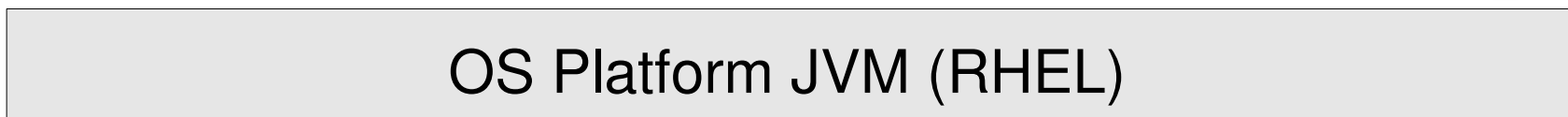
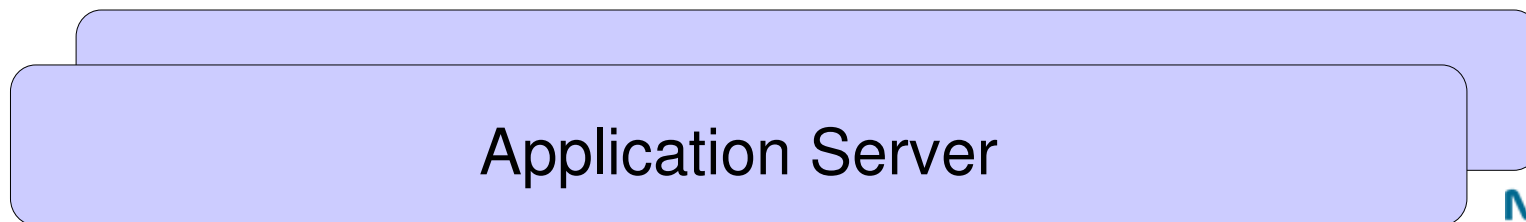
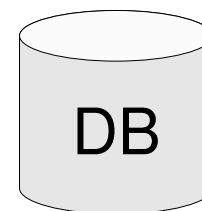
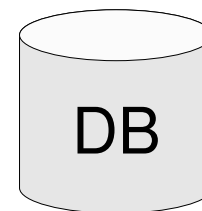
Data

JBoss Enterprise Application Platform

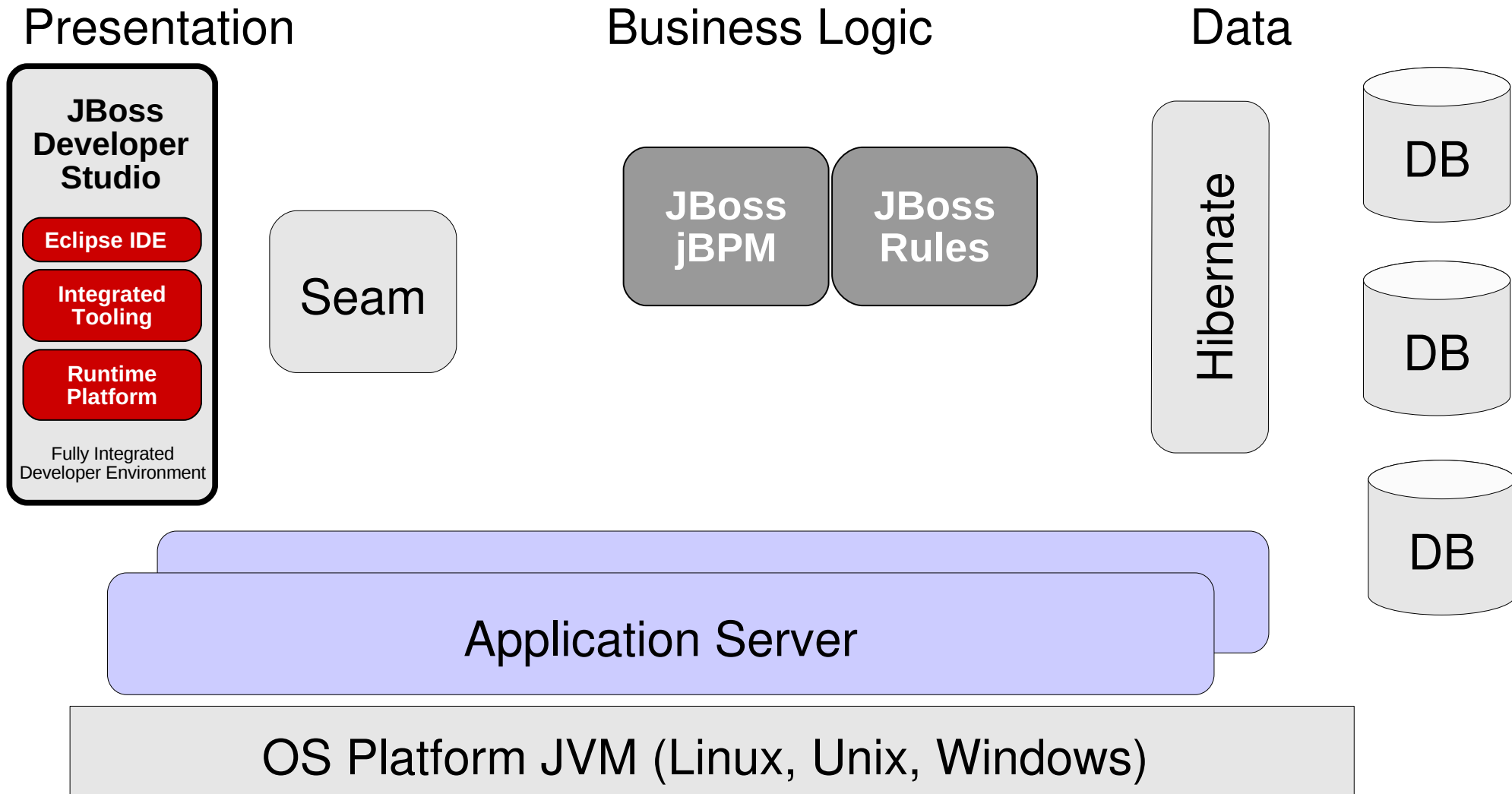
Presentation

Business Logic

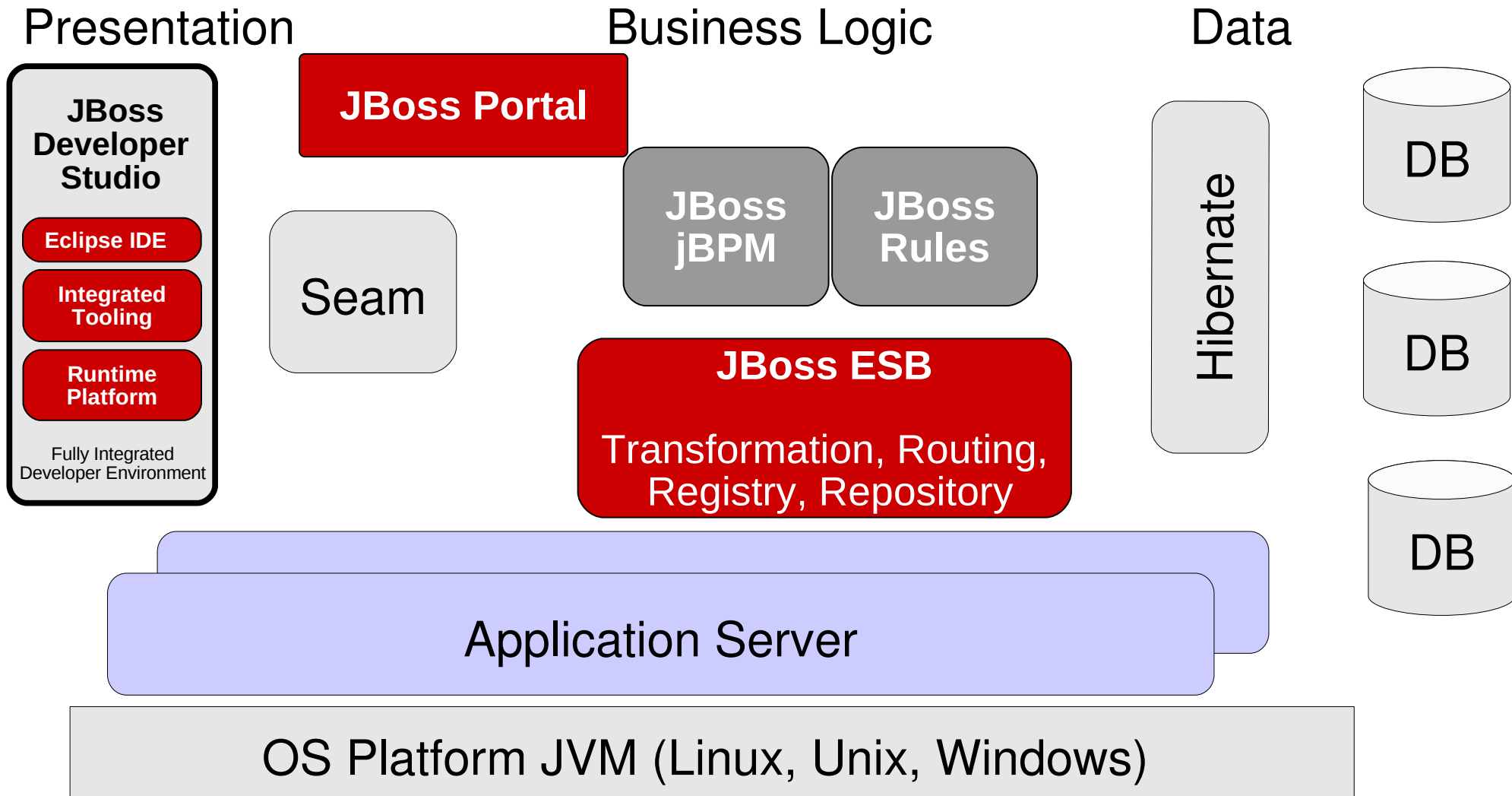
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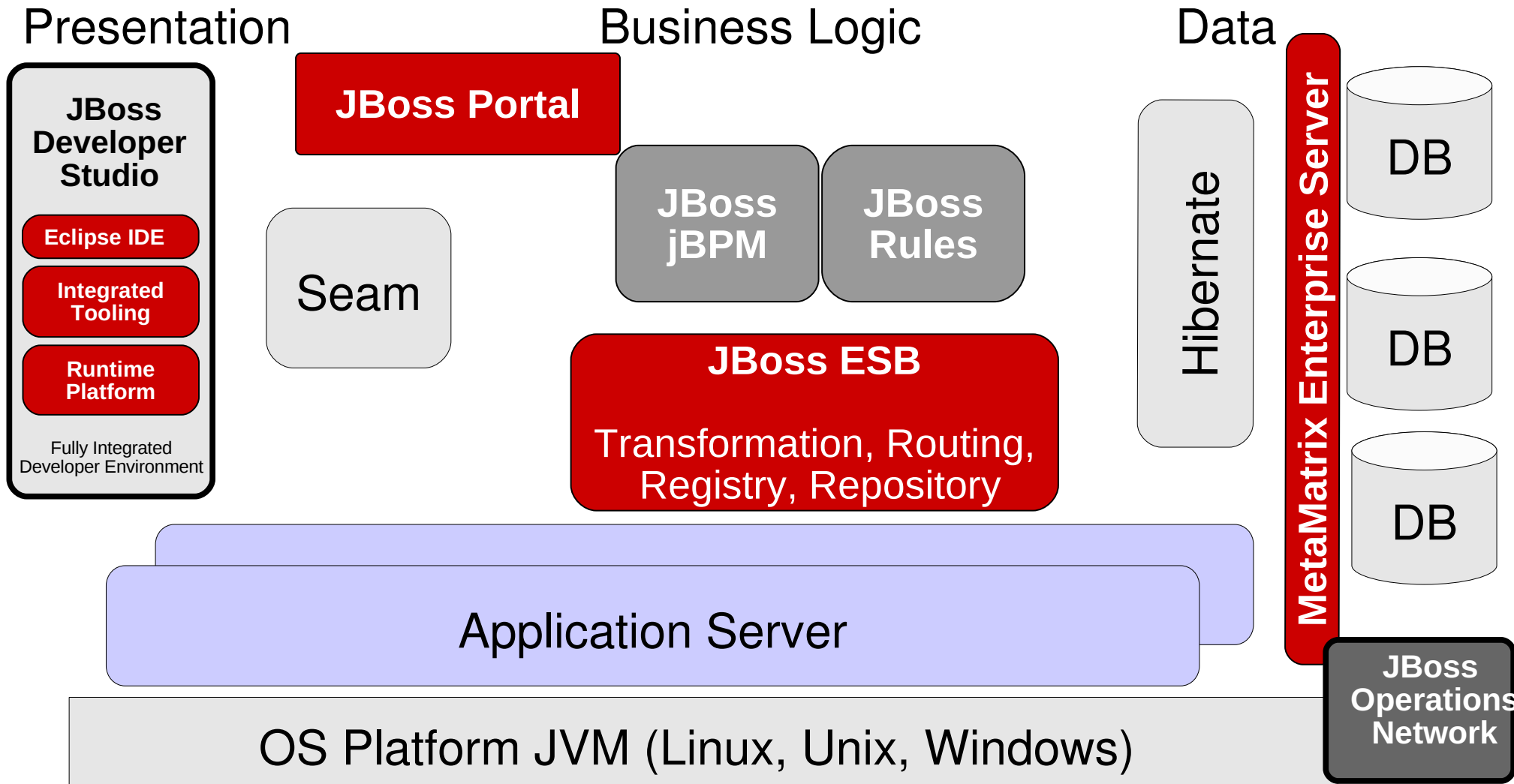
Business Rules and Business Process



JBoss Enterprise Services Bus



MetaMatrix Data Management Service



MetaMatrix – Data Management Service

Liberating data locked in repositories

Data transformation simplifies development

Transforms data format differences

- Vocabulary and Schemas

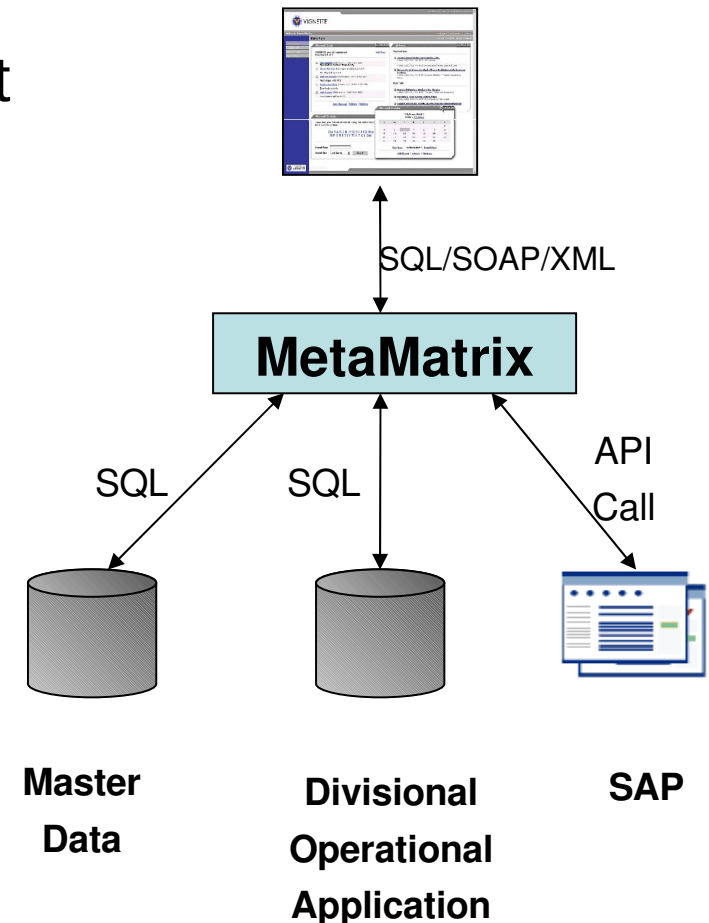
Consolidated view of data

- Federation and real-time access to heterogeneous data sources
- Model and metadata management-driven data transformation

Considerably shorten Apps Development

Standalone or ESB Service, Hibernate

Socket based subscription pricing, unlimited connectors



Cost Considerations

- Hardware - Servers, SANs, Network Fabric, Maintenance
 - Dev, Test, Production
- Software Licenses
 - OS, SOA, Database, Business Intelligence, Version Control
- Support – Developer and Production
- Development
- Professional Services – External, Internal, Availability
- Training
- Testing
- Operations
- Staffing

Hardware

Scale up vs Scale Out

Unix 'traditional' platform for Databases and Enterprise Applications

High CapEx, High OpEx and long term lockin

Moore's Law – Increasing Core density per socket

Development, Test and Production... Virtualise?

- Different locations, Networks, Production vs Development

SLAs to match the Server and Service Criticality

Commodity Scale Out

- Put the right servers in the right places with the right SLAs
- Incremental growth at marginal cost



Software

Operating Systems

- Bundled into Hardware purchase at no cost – Yeah right!
- Base OS & Add-ons
- OS Support – Additional contracts, Incident packs, SLAs
- Annual Subscription – Annual assessment of value

SOA Software

- CapEx License ~ 4-5 times Annual Maintenance
- Sockets vs Cores, Virtualisation vs Native, CPU bands, CPU families, Partial Servers
- Long term lockin, Prerequisite products
- Limited ability to mix and match components from different vendors

Software Continued

Business Intelligence Software

- Alignment with preferred vendors, CapEx & OpEx costs
- Additional licenses, Data sources
- Sockets vs Cores

Database Software

- Enterprise Databases with Enterprise pricetags
- Clustering and Replication double the cost
- Sockets vs Cores

IDEs, Version Control, Source Code IP Checking

- Proprietary vs Eclipse & Plugins
- Source Code IP Check by App size
- CVS and Subversion open source



blackduck™



PALAMIDA™

Application Security for Open Source Software

Databases

Enterprise

- ~\$40-50K per CPU Core
- Sockets vs Cores
- Annual Maintenance - ~20-25% of CapEx cost per CPU
- Primary Data Centre vs DR Data Centre
- Hot Standbys, Warm Standbys
- Development, Test, QA licensing

Open Source

- MySQL, PostgreSQL, Ingres, EnterpriseDB
- Enterprise support with SLAs
- Replication technologies – Slony, MySQL, Daffodil



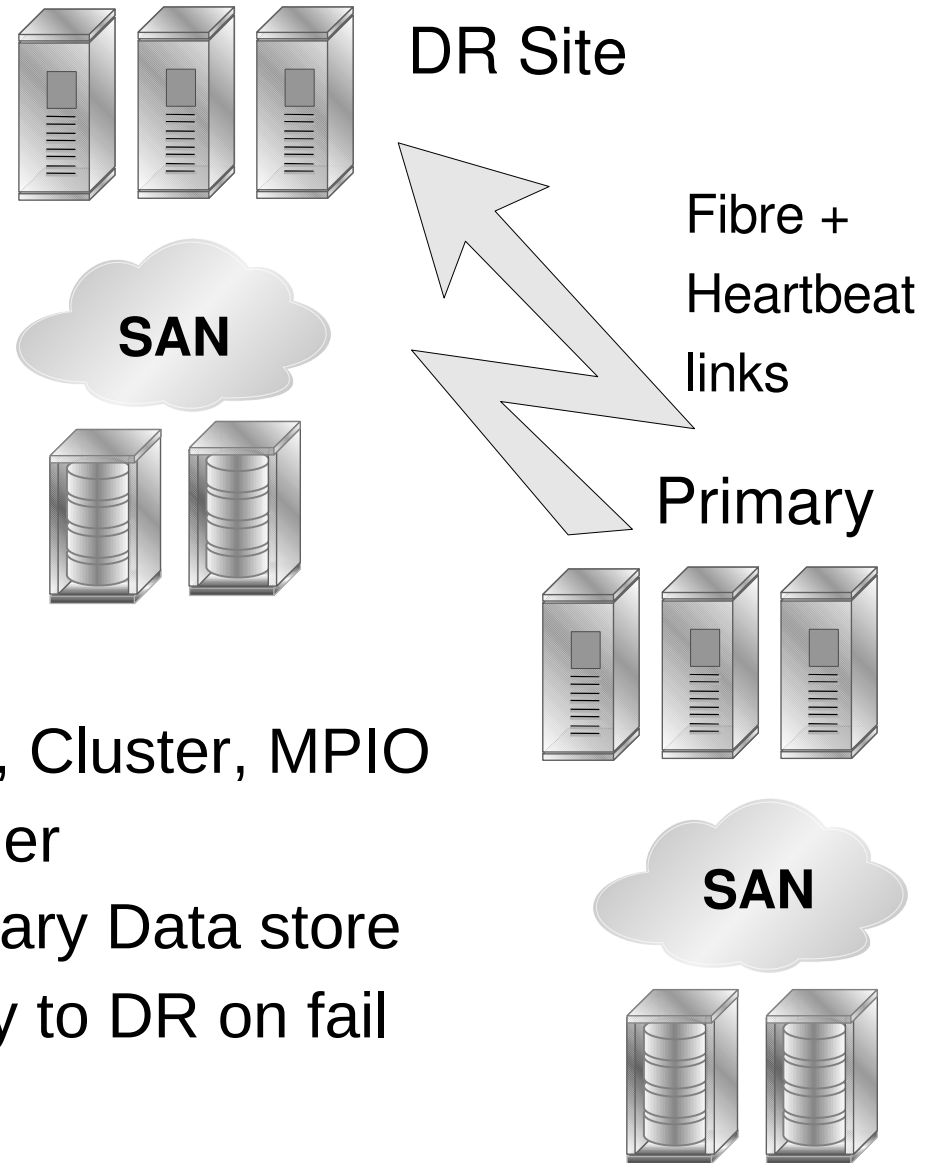
High Availability Data Tier

Data Replication Strategies

- SAN, NAS replication
- Hardware Replication
- Software Replication
- Database Replication

Open source solution

- RHEL Advanced Platform, GFS, Cluster, MPIO
- Mirrored Logical Volume Manager
 - Write to Primary and Secondary Data store
- Migrate DB Engine from Primary to DR on fail
 - Native or Virtualised



Business Intelligence

Build, Buy or Open Source

- Build
 - Cumbersome, costly, time-consuming, maintenance
- Buy
 - Enterprise BI – Enterprise pricetag
 - Market consolidation
 - Preference to particular product sets
 - Additional products to run
- Open Source
 - No Vendor lockin
 - Enterprise Support with SLAs
 - Small footprint



How low can you go?

Commodity Hardware

- Great Price performance
- Development & Test - Virtualisation

Software

- Take Care with Cores!
- SLAs to meet the use case
- Only get the software you need

Training and Support

- Appropriate, Relevant, cost effective
- Support for Development and Production
- Management tools – JBoss ON, RHN

JBoss Executive Resource Centre

<http://www.jboss.com/resources/exec>

Understanding the Financial Benefits of Open Source

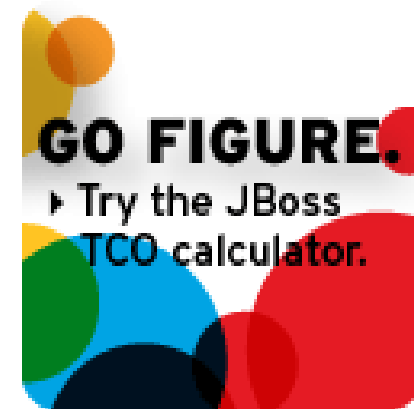
- Raven Zachary



Migrating to JBoss

<http://www.redhat.com/promo/migration/>

Comparison of Software only



TCO Calculator

<http://www.redhat.com/promo/migration/calc.html>

The screenshot shows a Mozilla Firefox browser window displaying the JBoss Cost of Ownership Calculator. The browser's address bar shows the URL <http://www.redhat.com/promo/migration/calc.html>. The page features the JBoss logo and the title "Cost of Ownership Calculator".

Go Figure.
See the difference. Estimate how much you could save with JBoss Enterprise Application Platform over proprietary middleware.

Select your number of CPUs and currency. Then edit costs to get a rough estimate of the savings JBoss offers over proprietary middleware.

Do you have a larger deployment in mind? Let a Red Hat sales representative help you calculate your cost savings.

of CPUs: Currency:

JBoss Middleware*		Proprietary Middleware*	
Initial Investment +Year 1	Years 2 - 4	Initial Investment +Year 1	Years 2 - 4
License <input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="190400"/>	<input type="text" value="0"/>
Support <input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="57120"/>	<input type="text" value="171360"/>
Subscription <input type="text" value="27000"/>	<input type="text" value="81000"/>	<input type="text" value="0"/>	<input type="text" value="0"/>

Estimated JBoss Total* = \$ 108000 **Estimated Proprietary Total* = \$ 418880**

This calculator is provided for estimating purposes only. It does not constitute a quote for JBoss products or services. For a quote, please contact your Red Hat sales representative.

[View Report](#)

Read. Learn. Act.

Learn more about calculating the financial benefits of open source.
> Download whitepaper

JBoss customers report higher overall satisfaction.
> View survey report

See JBoss customer success stories
> See case studies

> Learn more about JBoss

> Contact Red Hat sales

* Proprietary middleware pricing estimates assumes a per-CPU list licensing cost for proprietary Java Application Server of \$17,000 USD, with Premium 24x7 support, and a discount of 30% applied. Annual support/maintenance costs assume an annual fee of 21% of upfront list per-CPU license cost. Actual prices for proprietary options vary.

JBoss Enterprise Application Platform prices are based on the 4-CPU product with premium support, available currently in the redhat.com online store.

Done

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Bibliography

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Understanding the Financial Benefits of Open Source

- Raven Zachery, January 2006