JBoss® a division of Red Hat

RED HAT SERVICE-ORIENTED ARCHITECTURE STRATEGY

In light of IT budget constraints, enterprise executives are challenged to do more with less. They face application and business process development complexity, inefficiency, business process friction, and IT user experiences that sap energy from the business and the bottom line. Red Hat can alleviate these infrastructure problems by moving organizations toward Service-Oriented Architecture (SOA). These high-quality, low-cost solutions allow customers to focus their resources on the SOA-enabled applications and business processes that differentiate their business and give them a competitive advantage.

CIOs can't address other problems unless they have a flexible, scalable, and affordable SOA infrastructure in place. That's what Red Hat delivers – from the operating system through multiple middleware products to rich, dynamic user interfaces, all with the lowest total cost of acquisition and ownership in the industry.

CHALLENGE: DEVELOPMENT COMPLEXITY

Developers face many differing and complex development frameworks that often require new code to bridge the programming models. This complexity slows application development and business process automation, resulting in increased costs and lost opportunities.

RED HAT REDUCES DEVELOPER COMPLEXITY

Red Hat eliminates programming model complexity with a standards-based programming model and development environment. This allows the assembly of SOA components and Web 2.0 applications with dramatically less coding, increasing productivity, accelerating time to market, and reducing development and run-time errors. Bottom line: Lower costs and expended business opportunities.

CHALLENGE: INEFFICIENCY AND RESPONSIVENESS

IT executives struggle to increase the utilization of their dispersed IT assets. Most IT environments require purchasing additional hardware for new applications, while installed hardware runs at 5% to 10% utilization. Low utilization adds hardware costs, team management costs, and complexity to IT operations.

RED HAT INCREASES ASSET UTILIZATION EFFICIENCY AND RESPONSIVENESS

Virtualization optimizes hardware utilization, letting services and multiple business processes use the same resources in an optimal fashion. The Red Hat® Advanced Platform takes advantage of advances in operating system virtualization, helping customers reduce costs and allowing the refocusing of resources to the application and business process automations that differentiate their business. And Red Hat integrated virtualization helps IT assets better respond to peak workloads and peak demand for specific services and business processes.

CHALLENGE: BUSINESS PROCESS FRICTION

Business processes often run much less efficiently than they should, thanks to the friction of unnecessary manual steps, awkward inter-system communication, and the inability to manage rapid change. Business process friction saps a business' ability to differentiate and compete in their market space.

RED HAT RELIEVES BUSINESS PROCESS FRICTION

SOA integrates flexible and reusable services that can be rapidly deployed and modified to relieve business process friction, improve business agility, and accelerate time-to-deliver on business requirements. But despite the potential benefits, moving to SOA can be an expensive and complex transition. Organizations have been forced to either "roll their own" SOA platform, or struggle with heavyweight, complex, and expensive commercial SOA platforms. Red Hat removes the complexity and expense with an integrated, modular, open source SOA platform at a significantly lower total cost of acquisition and ownership than commercial alternatives.

CHALLENGE: INADEQUATE USER EXPERIENCE

Users , whether internal or external customers and partners, deal with presentation of information and response options that are out of context in their everyday work interactions. The lack of context and the absence of personalization drives lower user productivity and increases error and cost.

RED HAT IMPROVES USER PRODUCTIVITY

Rich Web 2.0 interfaces, coupled with personalization technology, improve productivity for users of SOA-based, automated business processes. Businesses that provide the best user experience will have a competitive advantage. The Red Hat SOA platform includes tools and frameworks to easily develop rich interfaces that maximize the user experience.

RED HAT APPLICATION STACK – THE IDEAL SOA SERVICES HOSTING PLATFORM

The Red Hat Application Stack is the first fully integrated open source application platform stack simplified, delivered, and supported by the open source leader. It includes everything you need to run standards-based Web and enterprise applications and host web services and Java-based SOA services.

As shown in Figure 1, the Red Hat Application Stack features Red Hat Enterprise Linux®, JBoss® Enterprise Application Platform with JBoss Application Server, JBoss Seam, Tomcat, Apache™ Web Server, Hibernate, and a choice of open source databases: MySQL or PostgreSQL.

Red Hat Enterprise Linux brings virtualization to SOA deployments, allowing IT to maximize utilization of assets. Virtualization provides the capability to redirect hardware and operating system resources to high-demand SOA services and business process workloads. The JBoss Enterprise Application Platform provides the run-time environment for hosting services.

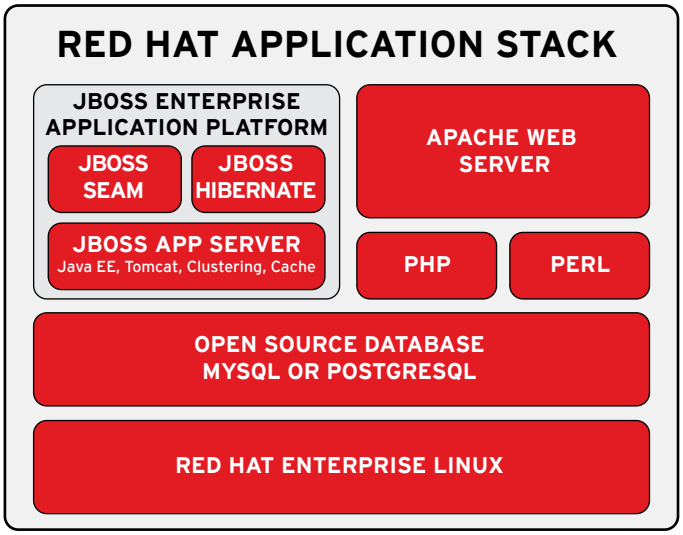

Figure 1: Red Hat Enterprise Linux brings virtualization to SOA deployments, allowing IT to maximize utilization of assets. Virtualization provides the capability to redirect hardware and operating system resources to high-demand SOA services and business process workloads. The JBoss Enterprise Application Platform provides the run-time environment for hosting services.

JBOSS ENTERPRISE MIDDLEWARE – THE OPEN SOURCE PLATFORM FOR SOA

Beyond the Red Hat Application Stack, JBoss Enterprise Middleware is a suite of cross-platform middleware products that enable the development, deployment, and management of SOA-automated business processes and services. In addition to being optimized for Red Hat Enterprise Linux, JBoss Enterprise Middleware supports Microsoft® Windows®, Sun® Solaris®, HP-UX, IBM® AIX, and Novell® SUSE® Linux.

JBoss Enterprise Middleware includes three platforms certified for enterprise deployment:

1. **JBoss Application Platform:** host services, JEE, and web applications
2. **JBoss Enterprise Portal Platform:** highly productive end user interaction with SOA services and business processes
3. **JBoss SOA Platform:** integrate services and applications into automated business processes

These JBoss Enterprise Platforms include category-leading open source projects such as JBoss Application Server, Hibernate, JBoss Portal, and JBoss ESB packaged and certified for enterprise deployments of all sizes.

In addition, JBoss Enterprise Frameworks are certified, enterprise-ready products designed to be embedded in and used to build SOA applications and business processes. These frameworks include:

1. **Hibernate:** relational database persistence for Java and SOA applications
2. **JBoss Seam:** next generation Web 2.0 enterprise applications
3. **JBoss jBPM:** business processes that coordinate people, applications, and services
4. **JBoss Rules:** easy business rules policy access and management

Together, these JBoss Enterprise Middleware Platforms and Frameworks offer the foundation for SOA and a path to greater business agility. JBoss Enterprise Middleware modularity lets enterprises standardize on JBoss Enterprise Middleware at their own pace. Many companies include JBoss Enterprise Middleware Frameworks such as Hibernate, JBoss jBPM, and JBoss Rules to enhance existing application and SOA deployments. As companies discover the benefits of open source middleware, they can add other JBoss Enterprise Middleware products for new workloads or migrate existing work as they choose.

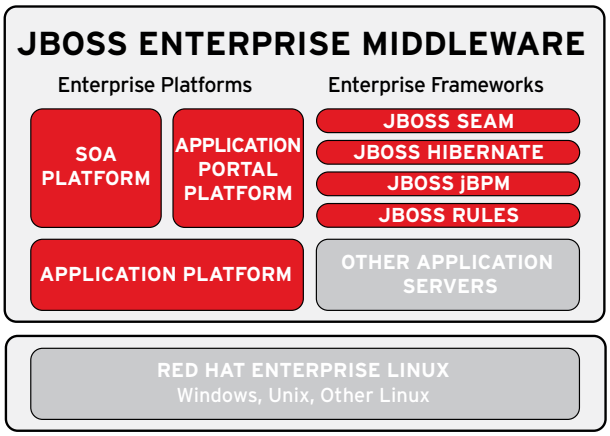

Figure 2: This illustrates JBoss Enterprise Middleware, the open source platform for SOA, and its Platforms and Frameworks. Together these products--along with our large ecosystem of partner offerings-- help enterprises build, certify, deploy, and manage SOA installations.

RED HAT MAKES SOA AFFORDABLE AND EASY TO CONSUME

As the world's leading provider of open source solutions, Red Hat collaborates with the community to deliver enterprise-class software that puts customers in control. The Red Hat Open Source Architecture offers a modular foundation that allows enterprises to use what they need, when they need it. The Red Hat Application Stack is a great place to start. It's a single integrated platform including operating system, application and Web servers, O/R mapping tools, and database. Customers can add portal, business process management, service integration, and other capabilities as they need them.

Whether customers leverage Red Hat for some—or all—of their SOA infrastructure needs, they'll receive industry-leading technical support from the #1 rated software vendor in value for three years running by CIO Insight[1]. Automated patches, updates, and upgrades help reduce maintenance costs and complexity and ensure that customers will consistently meet service level agreements. Red Hat customers have a choice, and they choose to stay with Red Hat for its superior value.

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