JavaOne 2010

Resin: A Light-Footed Java EE 6 Web Profile Platform



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September, 2010

The Resin Application Server

- One of the earliest successful Servlet containers
- Reputation for performance and small footprint
- Supports sites like Salesforce, CNET and Toronto Stock Exchange
- Support for EJB 3 and JPA in Resin 3.1 but not entire Java EE 5 stack
- Resin 4 targeted for Java EE 6 Web Profile certification
- Caucho only vendor focusing on Java EE 6 Web Profile





Java EE 6 Web Profile

Java EE

Web Profile

Servlet 3

JSP

JAX-WS

JAX-RS

JASPIC

JSR 88

JSF 2

CDI

JAX-RPC

JAXB

JACC

JSR 77

EJB 3.1

JTA

JAXR

JMS

JCA

RMI

JPA 2

Bean Validation

SAAJ

JAAS

JavaMail

JNDI





Resin Java EE 6 Implementation

- Caucho implementations for CDI (CanDI), Servlet 3 and EJB 3.1 Lite+
- Integrates reference implementation for JSF 2, JPA2 and bean validation
- CanDI forms basis of Resin
- Use of annotations like @TransactionAttribute,
 @Schedule, @Asynchronous, @RolesAllowed,
 @RunAs, @Lock, @Startup and @Remote outside
 EJB
- High performance JTA transaction manager





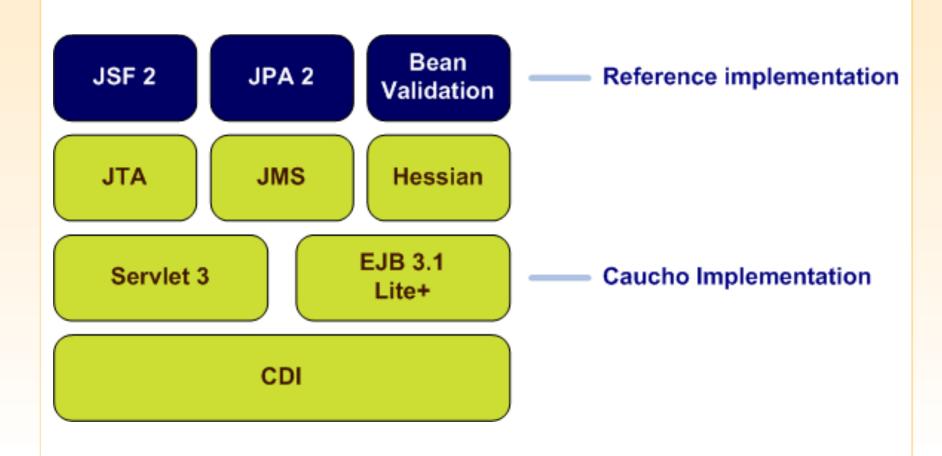
Resin Java EE 6 Implementation

- Scheduling, asynchronous processing, message driven beans, lightweight JMS
- Hessian remoting
- CDI portable extensions for JMS, JDBC, JavaMail, Struts 2, Wicket, iBATIS and Quartz
- Embedded container based unit testing support for JUnit and TestNG
- @TransactionScoped/@ThreadScoped custom scopes





Resin Java EE 6 Implementation







The Application Demo!







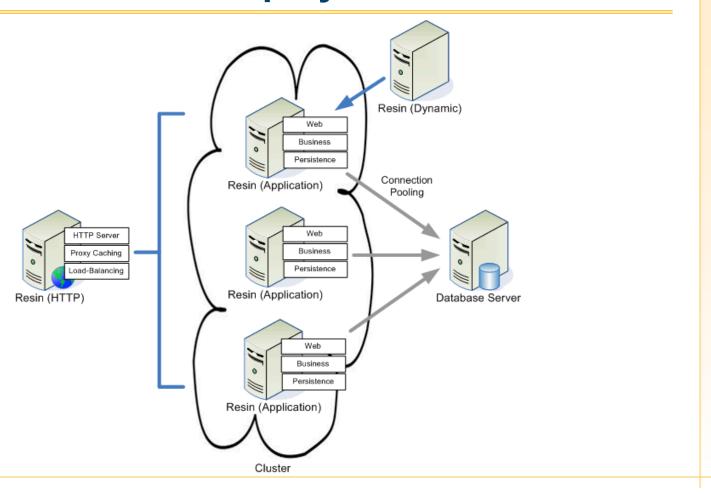
Server Features

- Resource/connection pooling
- HTTP server, load-balancing, clustering, caching
- Thread/process management, bandwidth throttling
- Security/built-in authentication providers
- Administrative console
- IDE integration
- Maven/Ant integration
- OpenSSL support





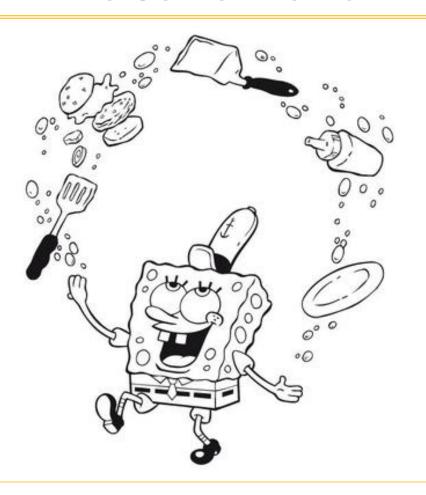
Resin Deployment







The Server Demo!







Summary

- Resin aims to become lightweight Java EE 6 Web Profile application server of choice for Java community
- Use of annotations like @TransactionAttribute,
 @Schedule, @Lock, @RolesAllowed, @RunAs,
 @Startup, @Remote and @Asynchronous outside
 EJB
- Support for Hessian, JUnit 4, Struts 2, Wicket, iBATIS and Quartz
- Connection pooling, load-balancing, clustering, caching, security and administrative console





References

- Introducing Java EE 6
 - http://java.sun.com/developer/technicalArticles/ JavaEE/JavaEE6Overview.html
- Resin
 - http://www.caucho.com/projects/resin/
- Download Resin
 - http://www.caucho.com/download
- Resin RefCard
 - http://refcardz.dzone.com/refcardz/gettingstarted-caucho-resin



