



GlassFish Overview

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What Is Project GlassFish?

- Java EE 5 Reference Implementation
 - > Included in Java EE 5 SDK
- Enterprise Quality Application Server
 - > Sun Java System Application Server 9.x
 - > Use it in production!
- Open Source
 - > OSI license
 - > CDDL (like OpenSolaris, NetBeans)
 - > GPLv2 with ClassPath Exception
- Community at <http://glassfish.java.net>
 - > Sources, bug DBs, discussions at Java.Net
 - > Roadmaps, Architecture Documents

Timeline of Project GlassFish



Tomcat
Jasper
Catalina
JSTL
Struts

Crimson
XSLTC
Xalan
Xerces

JAXB
JAX-RPC
JSF

GlassFish
Launch

V1 final

V1UR1

V2 final (plan)

V2
beta 2

J1'04
June 2004

J1'05
June 2005

J1'06
May 2006

Sept. 2007

(you are here)

Releases in Project GlassFish

- GlassFish v1
 - > Released! – Victory! Java EE 5 Compliance!
 - > December 2006 : UR1 - bug fixes
 - > Growing # of Deployments
- GlassFish v2
 - > New WS stack, performance, startup time
 - > Cluster management, load balancing, failover
 - > Some scripting support
 - > Community, Transparency, Adoption
- GlassFish v3
 - > Modularized kernel
 - > Better scripting support



GlassFish v2

- SJS Application Server 9.1
- Beta 3 in June 2007
- Additions and enhancements
 - > JAX-WS 2.1
 - > JBI support (OpenESB)
 - > Clustering, Load-Balancing, HA
 - > Better user experience
 - > Single, smaller, download
 - > Multiple User Profiles
 - > Update Center
 - > Faster!
 - > New admin console: JSF, AJAX, Charts
- Stable by JavaOne, Final September 2007

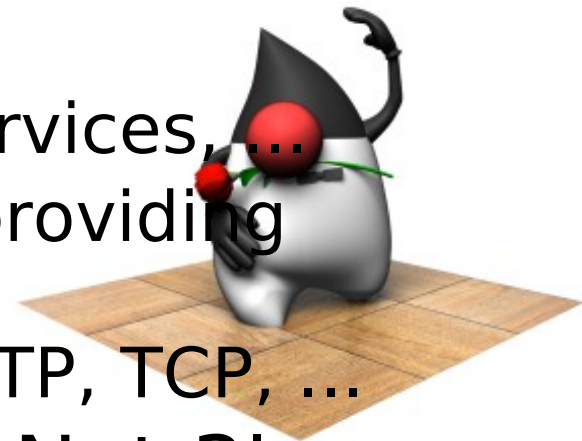


JAX-WS and JAXB Implementations

- Dynamic Runtimes
- Industry-Leading Implementations
 - > JAXB RI is de-facto Industry Standard
 - > JAX-WS is faster than Axis
- WS Separation of Transport and Encoding
 - > HTTP, JMS, SMTP, TCP/IP
 - > Fast Infoset (binary), Textual, Others
- Project Tango (WSIT)
 - > MS Interoperability and Quality of Service
- **Great** Performance so far... & getting better

Project Tango (WSIT)

- WSIT (Web Services Interop technology)
 - > Extension to JAX-WS 2.x
 - > Part of GlassFish v2
 - > Implements WS-Addressing, WS-Security, WS-Secure Conversation, WS-ReliableMessaging, WS-MetaData Exchange, MTOM/XOP, WS-Policy, and more
- POJO programming model from JAX-WS 2.x
 - > Annotations, Asynchronous Web Services, ...
 - > No API, platform is responsible for providing appropriate QoS
 - > Alternate Transports – JMS, SMTP, FTP, TCP, ...



See also : <http://wiki.apache.org/ws/StackComparison>

- Common work with Microsoft (.Net 3's

JBI – Java Business Integration

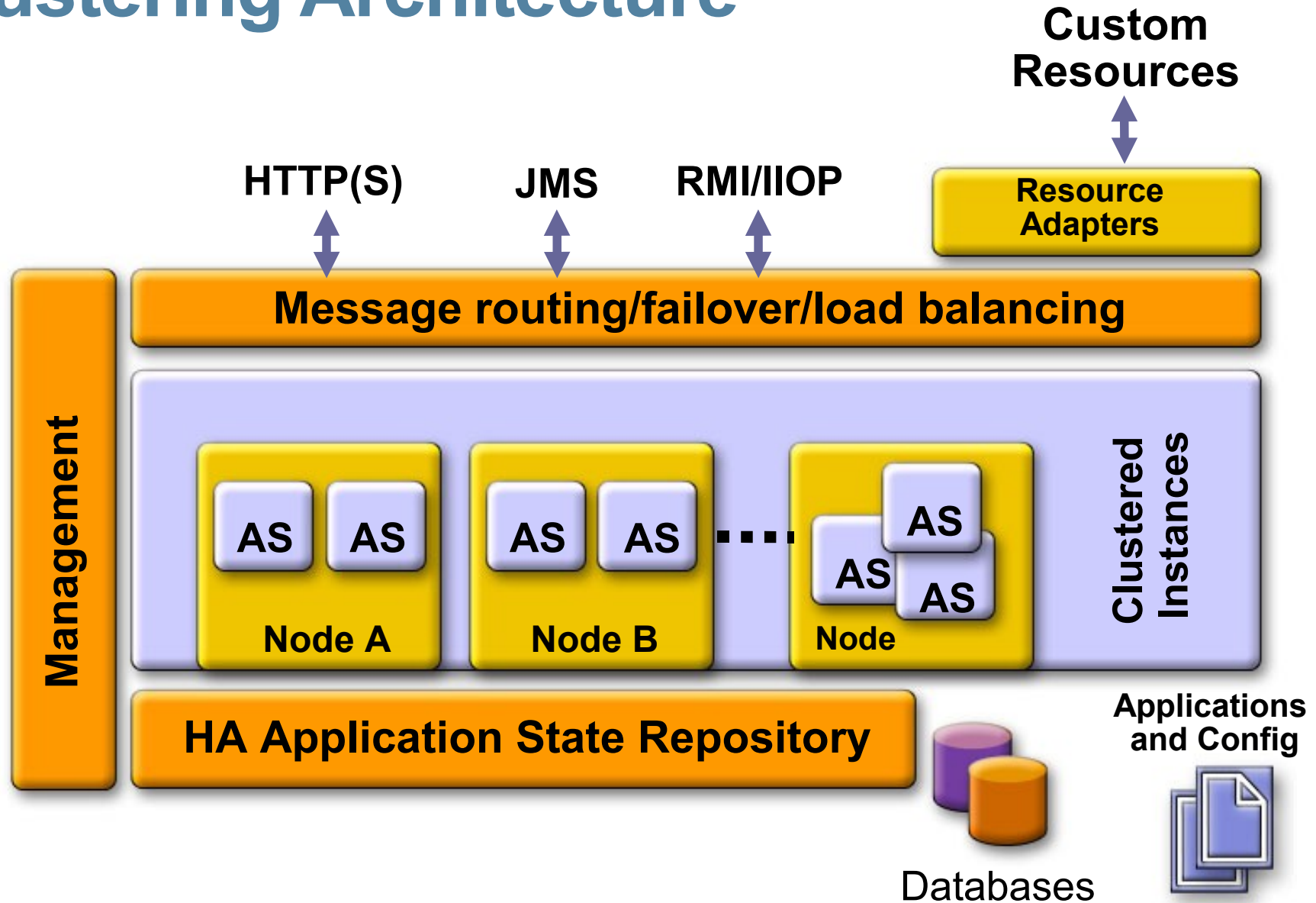
- OpenESB 2.0 implementation
 - > Included in GlassFish v2
 - > Integrated as a life-cycle module
 - > Integrated admin tools (Web and CLI)
- BPEL engine
- Binding components
 - > HTTP, File, FTP, JMS, TCP, ...
- Tools support
 - > NetBeans SOA/Enterprise Pack 5.5.x
- Possible to plug ServiceMix into GlassFish v2
 - > Support wider JBI story
- <http://www.glassfishwiki.org/ibiwiki/Wiki.jsp?page=lbico>

Dynamic Clustering and In-Memory Replication



- Project Shoal
 - > <http://shoal.dev.java.net>
 - > Dynamic clusters
 - > Uses JXTA by default
 - > Extreme ease of use in cluster setup
- In-Memory Replication
- But can still use HADB for 99.999% uptime

Clustering Architecture



GF v2: Grizzly and JSP Containers

- JSP Container
 - > Can use JSR-199 (Javac APIs in Mustang)
 - > **10x performance improvement**
- Grizzly
 - > Improved over GlassFish v1
 - > Very Flexible and Customizable
 - > Non-blocking SSL
 - > Performance and Very Scalable
 - > Support Quality of Service constraints
 - > Supports *Comet* (long HTTP connections)
 - > Used in Jetty, etc...
- Hosting features
 - > Alternate docroots, webcontainer dynamically reconfigurable, ..

Top Link Essentials / JPA

- Oracle Contribution
 - > Fully JPA-compliant
- Very Active Community
 - > Oracle, Sun, TmaxSoft, independents
 - > Mail: persistence@glassfish.dev.java.net
- Pluggable
 - > In GlassFish, JEUS, JOnAS, Tomcat, Geronimo, JBoss, Oracle
- Converse is true also
 - > Hibernate & Kodo / OpenJPA run on GlassFish

Management Features

- Centralized, secure, remote access
 - > Accessible as GUI, CLI, IDEs, Java-based programs
- Off-line configuration
- Industry-standard infrastructure
 - > Java Management Extensions, JMX™ API
- Custom ANT tasks
- Management and Monitoring API
 - > Application Server Management eXtensions, AMX
- Can be monitored through *jConsole* and others

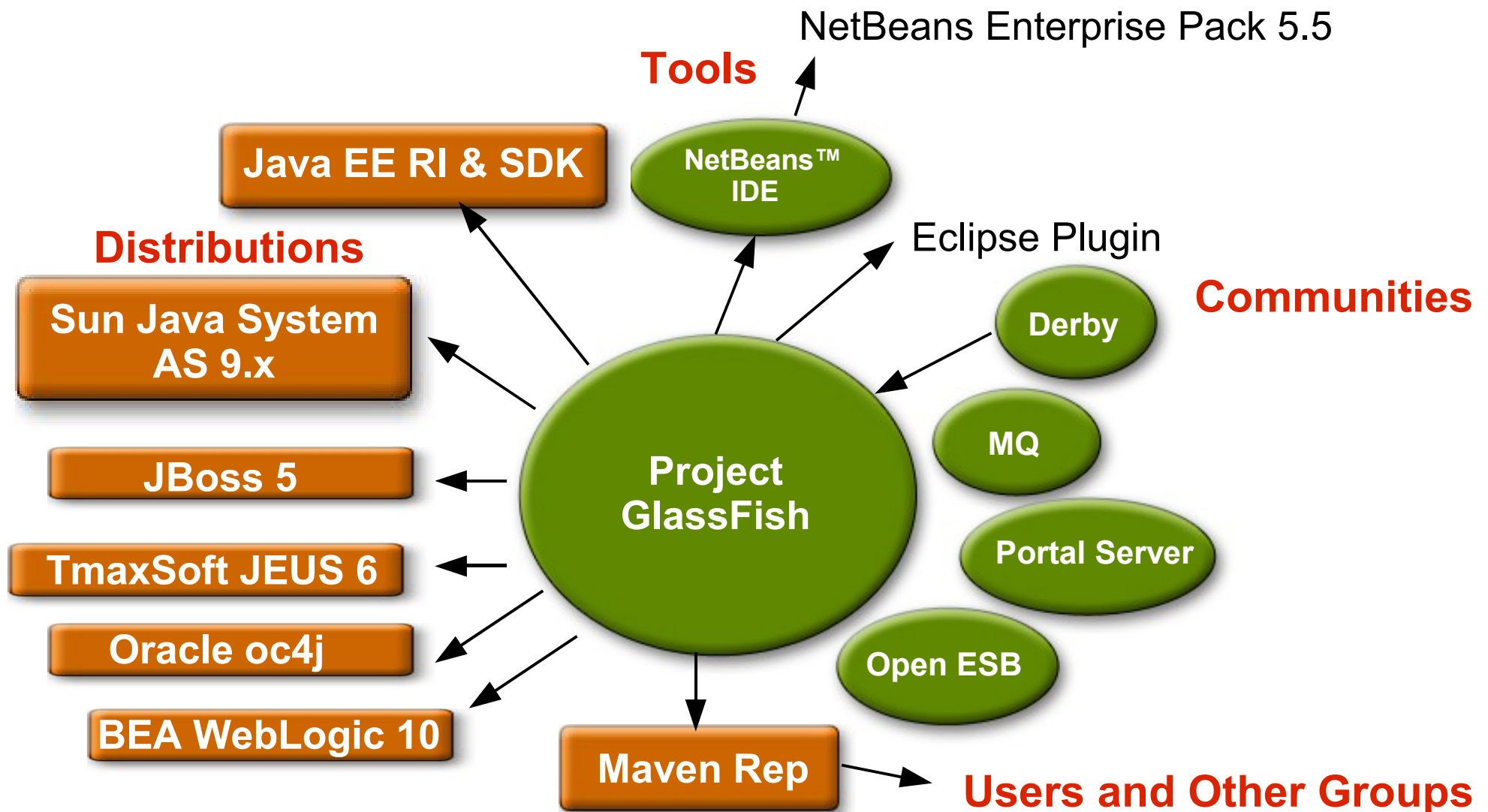
Performance in v2

- Improvements on all areas
- Startup Speed
 - > Start as little as possible (but see also GF v3)
- Front-end: JSP, JSF, Grizzly
- Web Services Stack benchmark numbers
- CORBA optimizations
- EJB container
- Expecting even better SPECjAppServer figures
 - > Stay tuned...

AJAX and Scripting Activities

- AJAX
 - > jMaki - <http://ajax.dev.java.net>
 - > Encapsulates very easily AJAX widgets (JSP taglib)
 - > DynaFaces - <http://jsf-extensions.dev.java.net>
 - > AJAX and full-featured JSF components
 - > WoodStock - <http://woodstock.dev.java.net>
 - > Repository of AJAXyfied JSF components
 - > JSFTemplating <http://jsftemplating.dev.java.net/>
 - > Templating for pages and components
- Phobos - <http://phobos.dev.java.net>
 - > Scripting on the Server
- Comet and Grizzly - <http://grizzly.dev.java.net>
 - > Long-term HTTP connections for push content

(Some) Distributions & Contributors



Tools Support



- NetBeans 5.5.1
- Best integration with full Java EE 5 support, resource creation, remote debug,



NetBeans

- incremental deployment, profiling, wizards, etc...
- Additional features (SOA, UML, jRubyOnRails, ...)

- Eclipse as an annotation-aware Java editor using GlassFish's ANT support



- Genuitec's MyEclipse offers NetBeans-like integration between IDE and AppServer

Recent GlassFish Partners

Open for Business!



Frameworks and Applications



OSWorkflow



AppFuse

Sequoia



Quercus PHP



OSCache



Integration ORB

iBatis

Project Tango

Apache Httpd



CJUG-Classifieds

Struts



BIRT

JBPM

DOJO
Facelets



MyFaces
ADF

OpenSSO
Open Access . Open Federation



Shale Derby

SiteMesh

WebDAV



JSPwiki

SEAM



Tapestry



MC4J



AJAX

Hudson

StringBeans Portal

HIBERNATE

Java WSDP
Dalma

BlogTrader



Wicket

Equinox




WebSphere MQ

EHCache

GlassFish Adoption Stories



- <http://blogs.sun.com/stories>  DocDoku
- PeerFlix
 - > GlassFish v1 on Solaris 10 / x2100 
 - > MySQL, Kodo JDO

- Wotif.com
 - > Large # hits, ehCache / Horizontal Scaling
 - > Spring and Hibernate
 - > 3rd largest commercial site in Australia 



- Harvard University
 - > On-line archive for sharing data within and across universities
 - > Lucene, PostgreSQL, Apache Shale



- More (small and large)
 - > Help us collect these

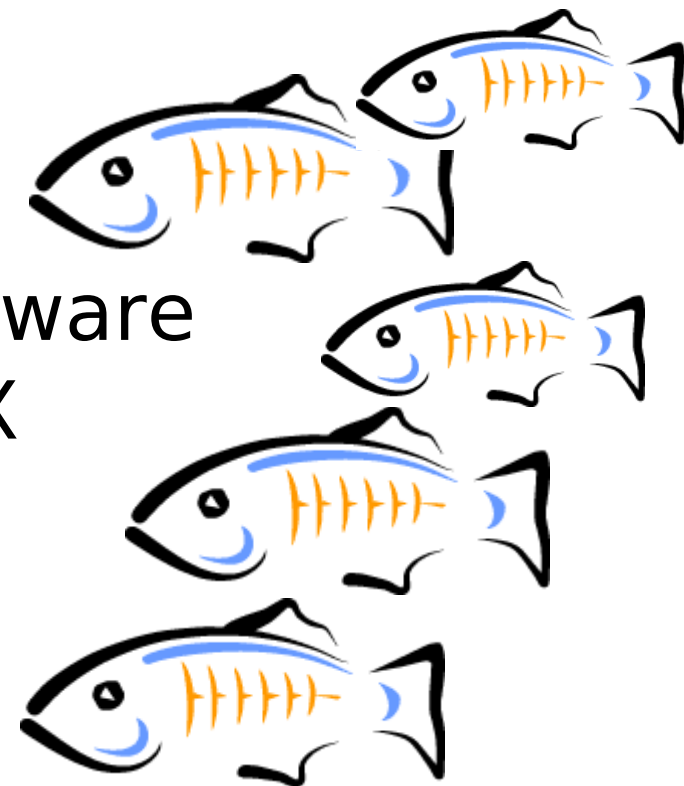


GlassFish v3

- Small, Modular, Fast
 - > Preview available today (<1.0 sec for startup)
- Totally Modular, kernel is <100K
 - > Can run in a phone or a desktop application
- An ideal Container for Web 2.0
 - > Java Web Applications, Phobos, jRuby/RoR, ...
 - > Support for upcoming Java EE 6 profiles
- Don't think of it as a Java EE container
 - > ... rather a container that can do Java EE
- Screencast and code available today
 - > <http://hk2.dev.java.net>
 - > http://blogs.sun.com/dochez/entry/first_glassfish_
- Still early stages... working on schedule

FOSS Middleware Components

- GlassFish – AppServer, JavaPersistence, Web Tier
- OpenPortal – Container, WSRP, Portlet, Portlet Rep
- OpenESB, OpenJBI – JBI, BPEL
- OpenSSO – Access & Fed Mgr
- OpenDS – Directory Server
- Hudson – Continuous build software
- Phobos, jMaki... – Web 2.0/AJAX
- Derby – JavaDB
- Open MQ – MessageQueue
- WoodStock – JSF Components
- OpenInstaller



The SailFin Project

- Ericsson SIP Servlet Contribution is available at:
 - > <http://sailfin.dev.java.net>
- Visit, Download, Try, Join
- Not just for telco operators!
 - > Talking to customers via the web and the phone? This is of interest to you!
 - > Check out *click to dial* demo



<http://sailfin.dev.java.net>



OpenPortal

Open Source. Open Standards. Open Portal Server.

OpenPortal Status portal.dev.java.net

- Enterprise Quality Portal
- Already Released
 - > Portlet Repository (JSR-198)
 - > Portal Container
 - > WSRP Producer and Consumer
- To be Released
 - > Portal Aggregation
 - > Collaboration
 - > Security Access ...
- *Distributed as Sun Java System Portal 7.x*



OpenESB/JBI Status

open-esb.dev.java.net

- Based on JBI (Java Business Integration) Standard
- Already Released
 - > JBI Implementation
 - > BPEL
 - > Many binding components
- More Components to be Released
- Integrated within GlassFish V2
- *Distributed in*
 - > NetBeans SOA Pack
 - > Future of Sun Composite Application Platform Suite (CAPS)

OpenSSO Status

opensso.dev.java.net

- Access Manager, Single Sign-On, Federation
 - > SAML, XACML, Liberty Standards
- Already Released
 - > Access Manager
 - > Many Policy Agents
 - > Federation Manager
- To be Released
 - > More Policy Agents
- *Distributed in*
 - > Sun Java System Access Manager & Federation Manager

OpenDS

opends.dev.java.net

- High-Performance, Standards Based Directory Server
 - > LDAP, DSML
- Brand-new Code Base
 - > Java-based
 - > Very High Performance Goals -
 - > Not Based on DSEE
- Full Fledged
 - > Virtual Directory, Proxies, Caching, etc...
- *Distributed as – yet TBD*

Some GF-related projects @ java.net

- glassfish
- bpcatalog
- javaserverfaces
- blueprints
- glassfishplugins
- jaxb
- jaxp
- jax-rpc
- jax-ws
- fi
- jwsdp
- phobos
- generic resource adapter
- jmaki
- xwss
- sjsxp
- saaj
- istack-commons
- xmlstreambuffer
- petstore
- corba
- glassfish-samples
- tango/WSIT
- shoal
- hk2
- updatecenter



Resources

- <http://glassfish.java.net>
- <http://wiki.glassfish.java.net>
- <http://blogs.sun.com/theaquarium>

