GlassFish v3 "Prelude"

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Timeline of Project GlassFish

Tomcat
Jasper
Catalina
JSTL
Struts

Crimson
XSLTC
Xalan
Xerces

v1

v2

**v3
"Prelude"**

UR1   UR2

*GlassFish
Launch*

v2.1

v3

JAXB
JAX-RPC
JSF

June
2005

May
2006

Sept.
2007

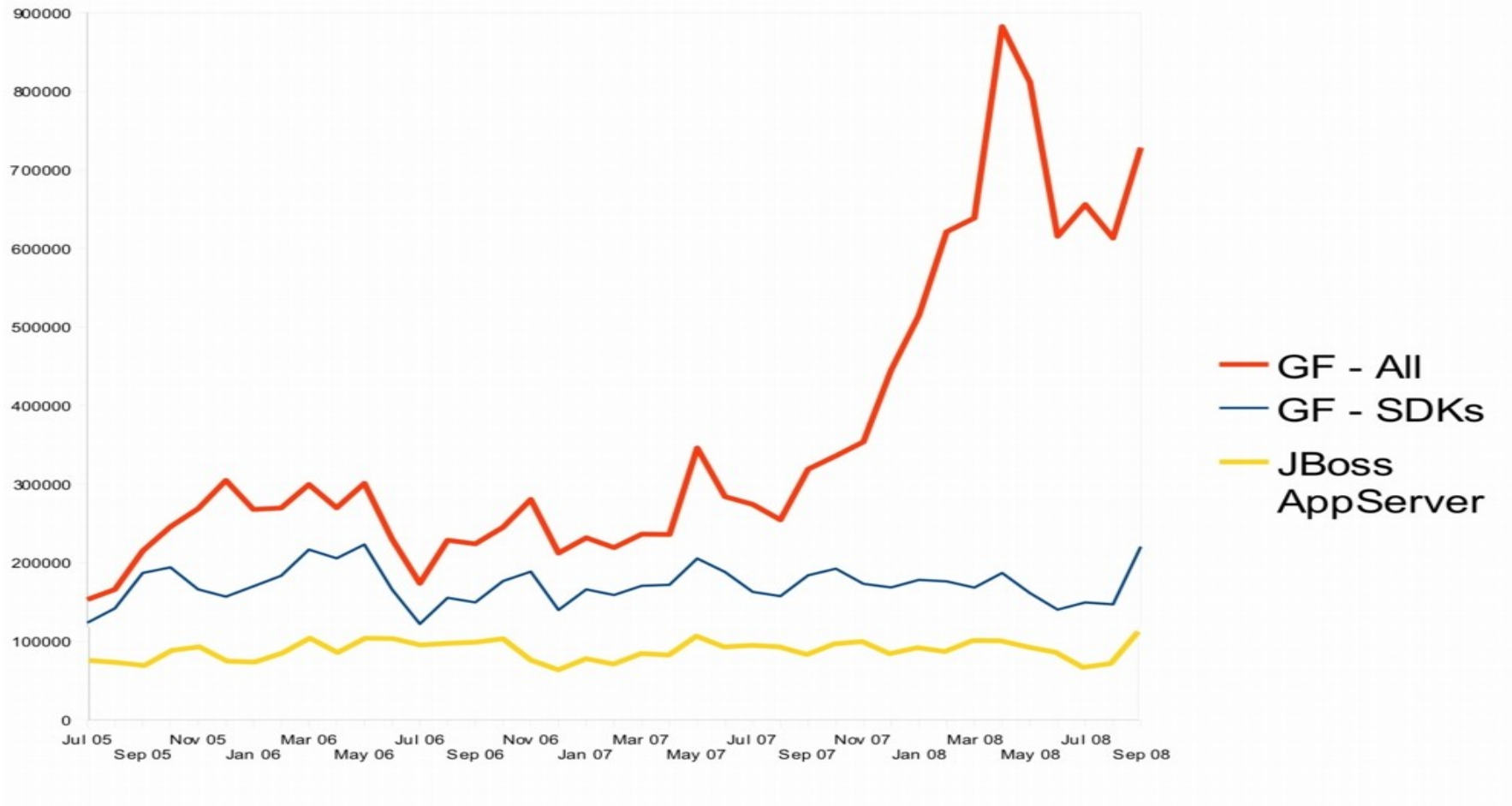Oct/Nov
2008

Feb
2009

Mid-2009

(you are here)

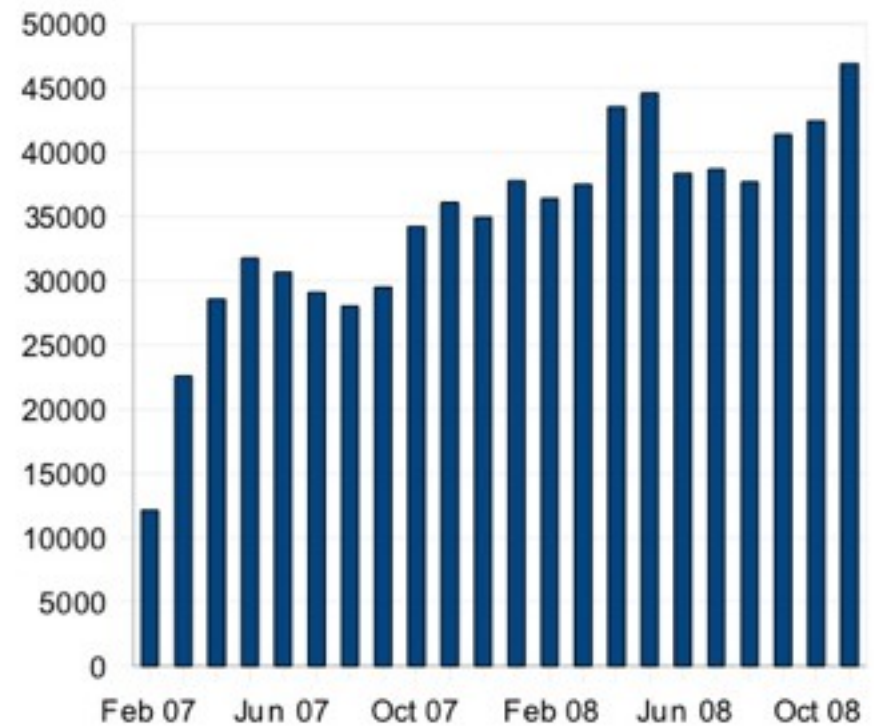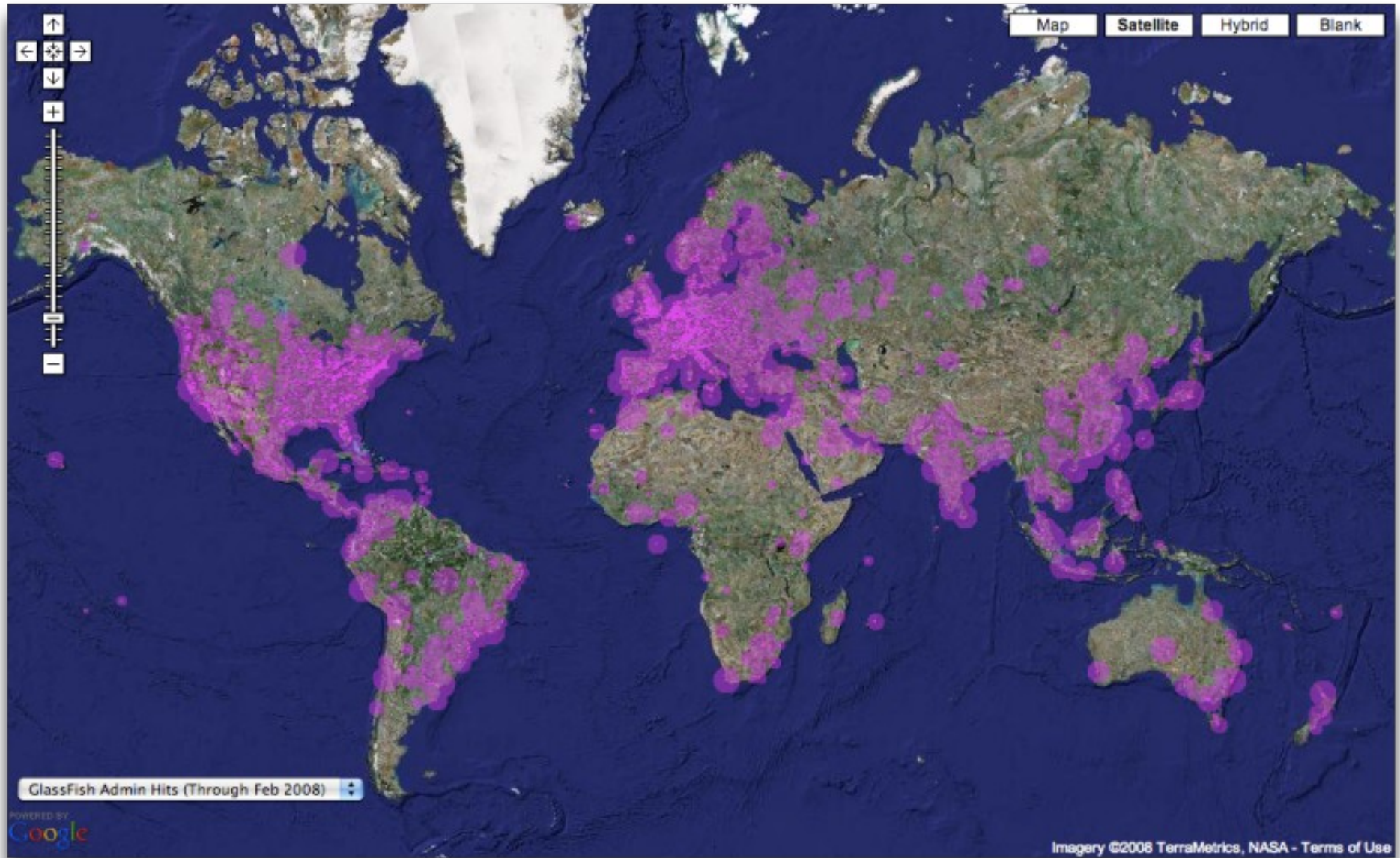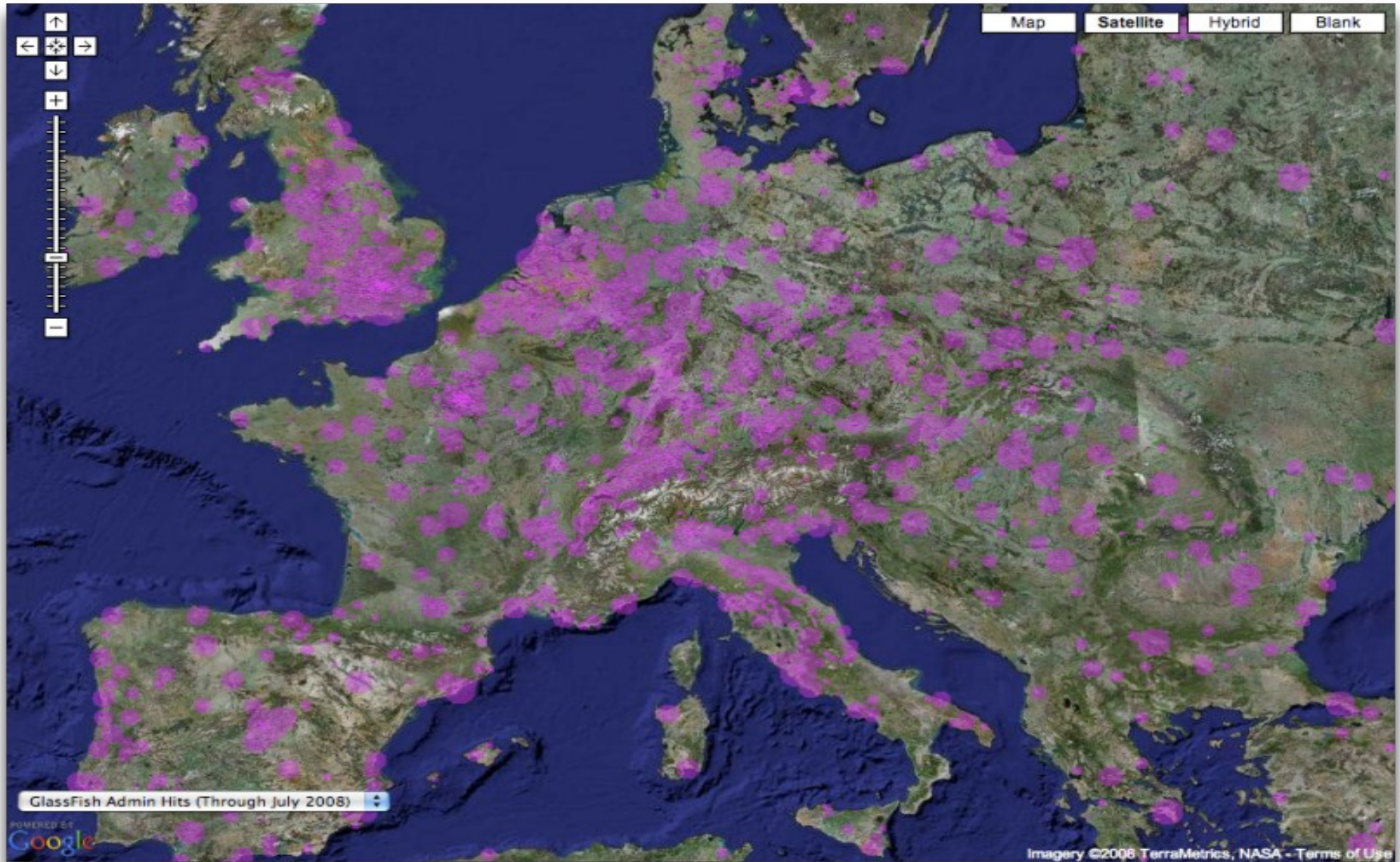# GlassFish Community/Adoption
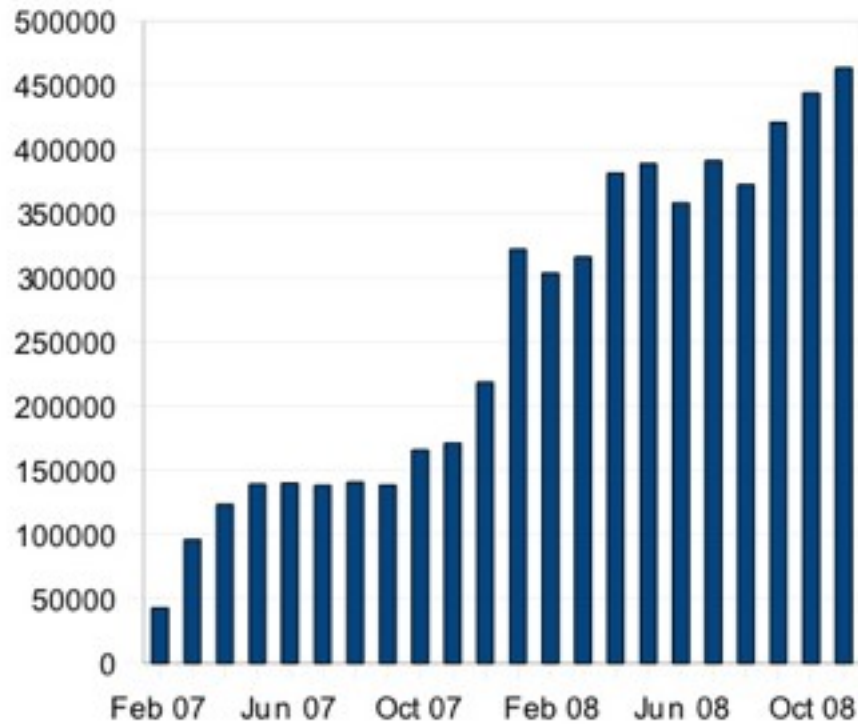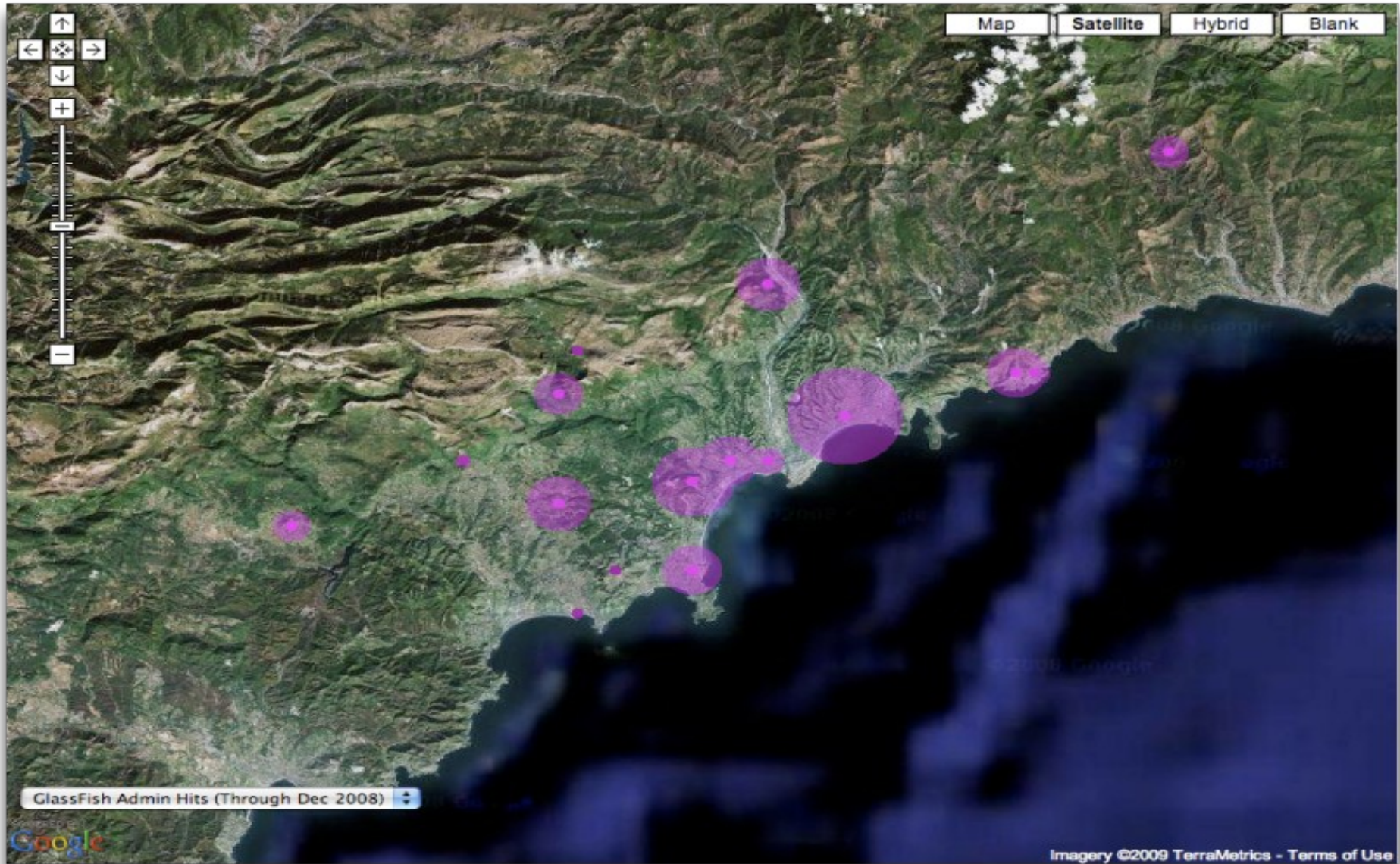
Actual Users

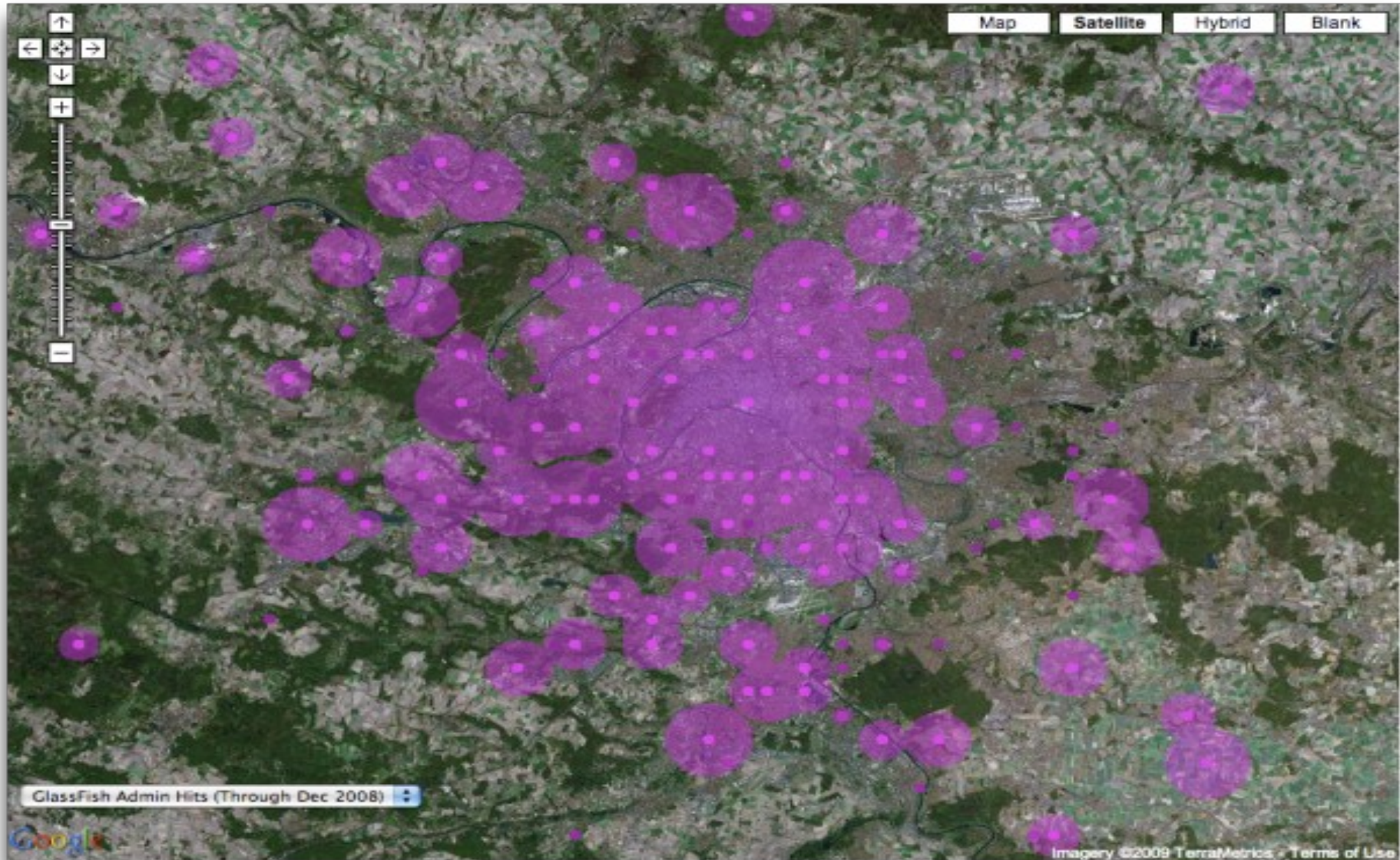# GlassFish around You

GlassFish around You (really)

GlassFish around You (really, really)

GlassFish around You (really, really)

All this ....

... with a boring application server

(albeit with built-in full Web-Services Stack, full clustering, great monitoring tools, record performance, complete documentation, and heavily deployed in production)
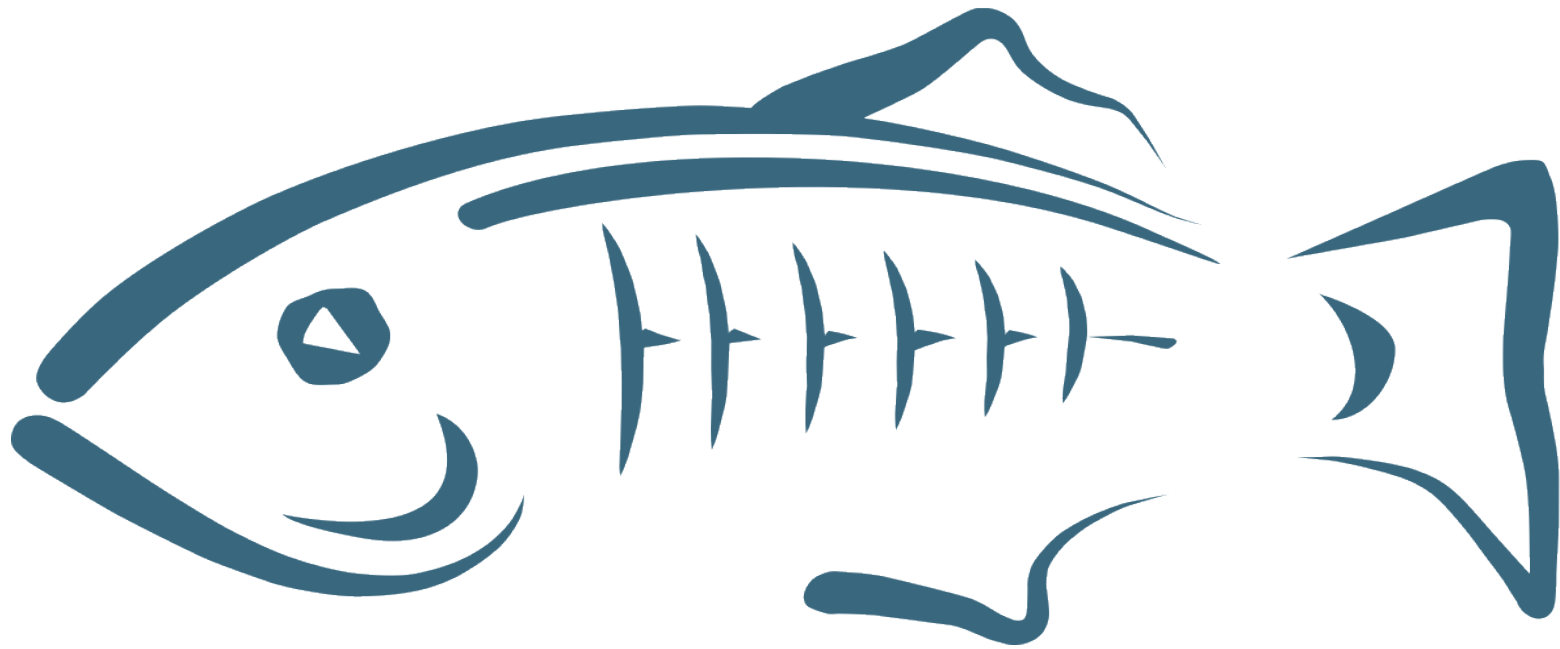
What is a "lightweight" Application Server ?

Tomcat ?

Fast startup ?

Load on-demand ?

Introducing GlassFish v3 Prelude

Admin Console

Modular and Dynamic

- Modular : Apache Felix (OSGi)
- Extensible : HK2
- Yet very Fast !
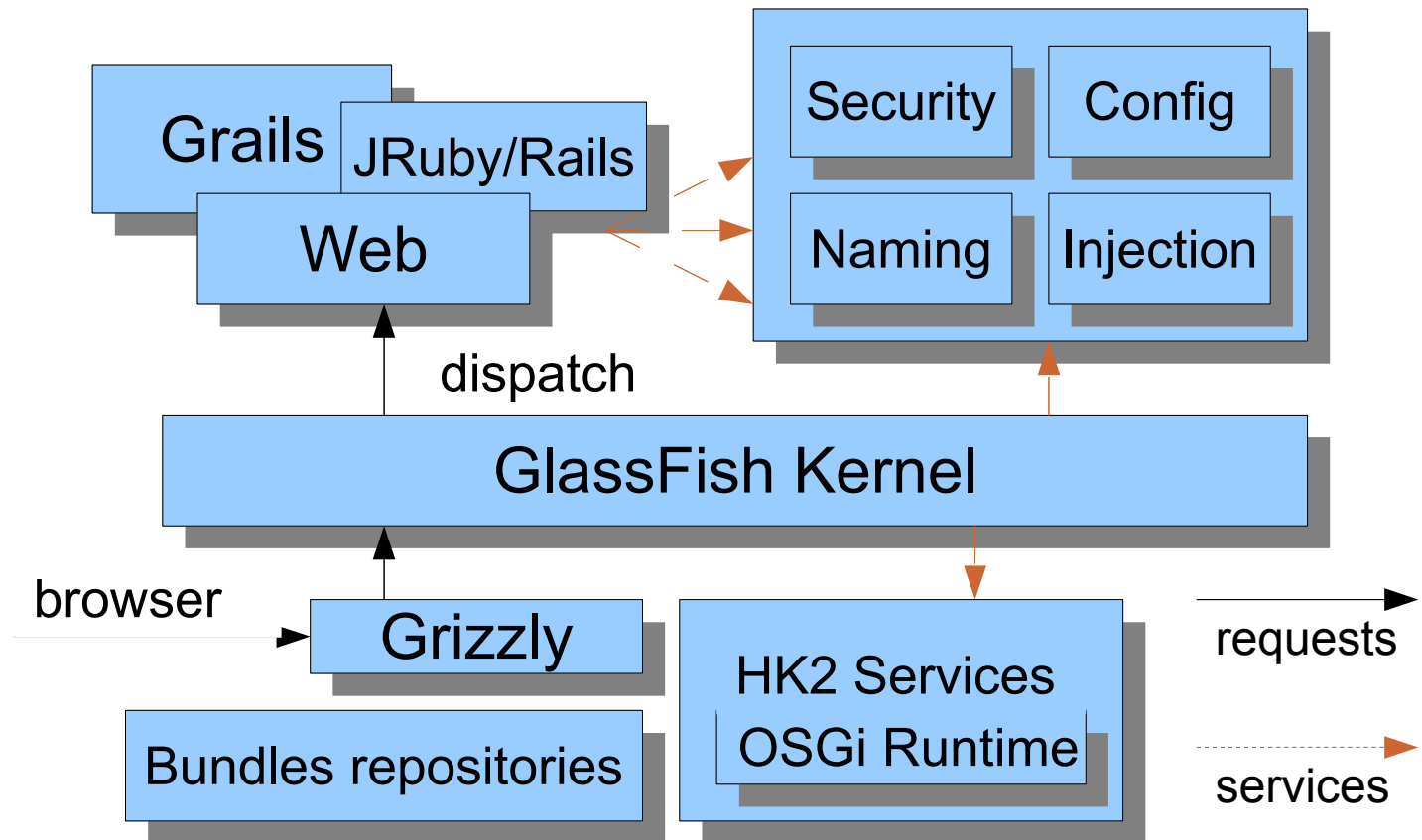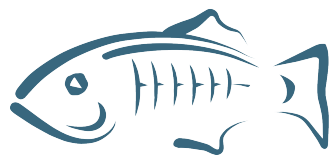
Painless Java EE development !

- Java EE development doesn't have to be painful :)
- Incremental compile of all Java EE artifacts
- Auto-deploy of all Java EE and static artifacts
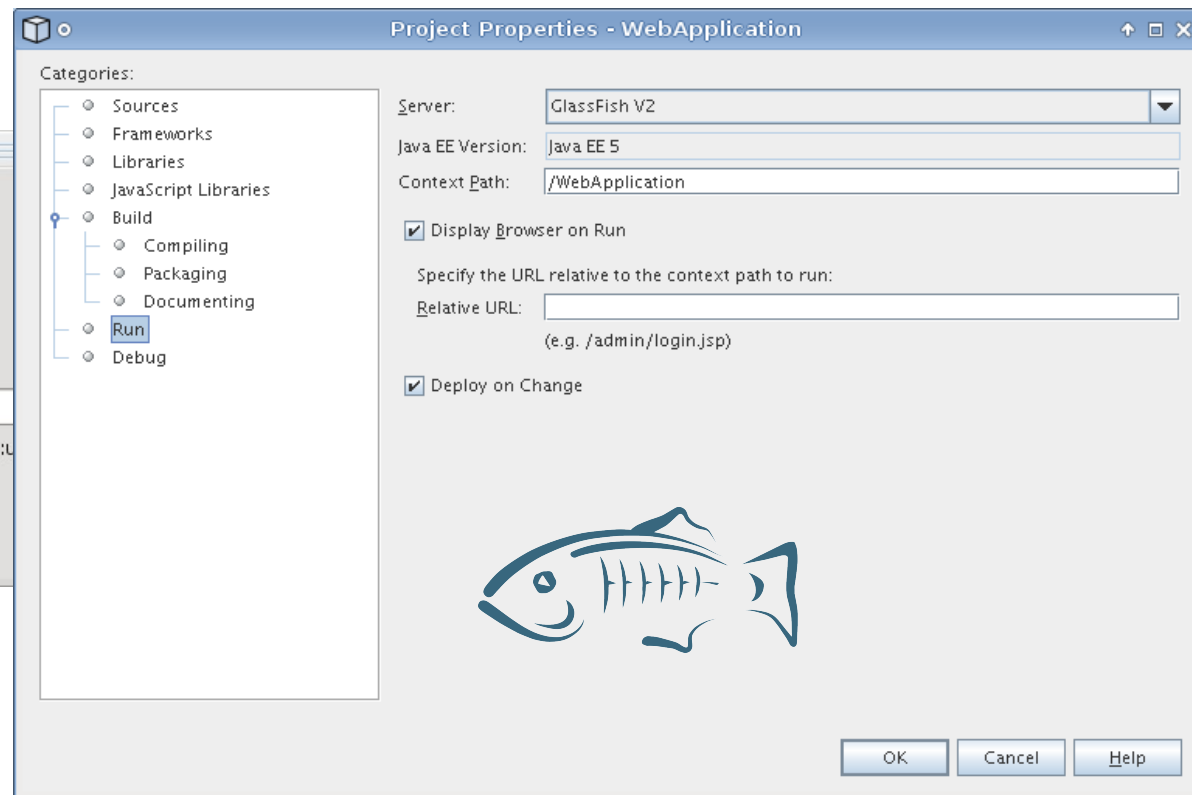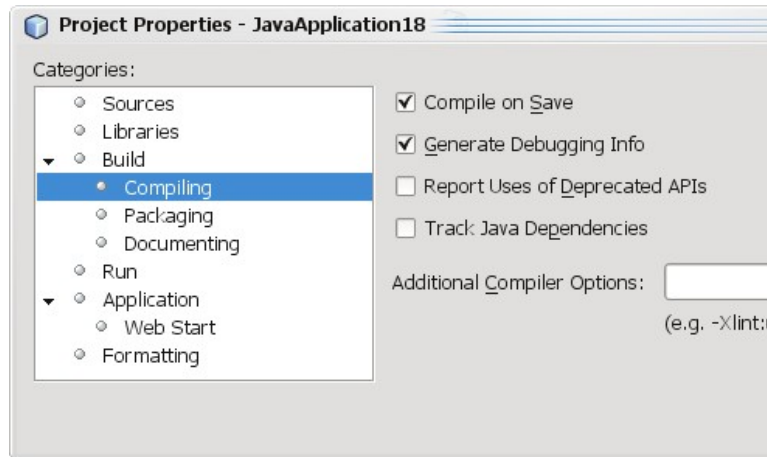
Demo
(Startup
Compile on Save
Deploy on Change
Session)
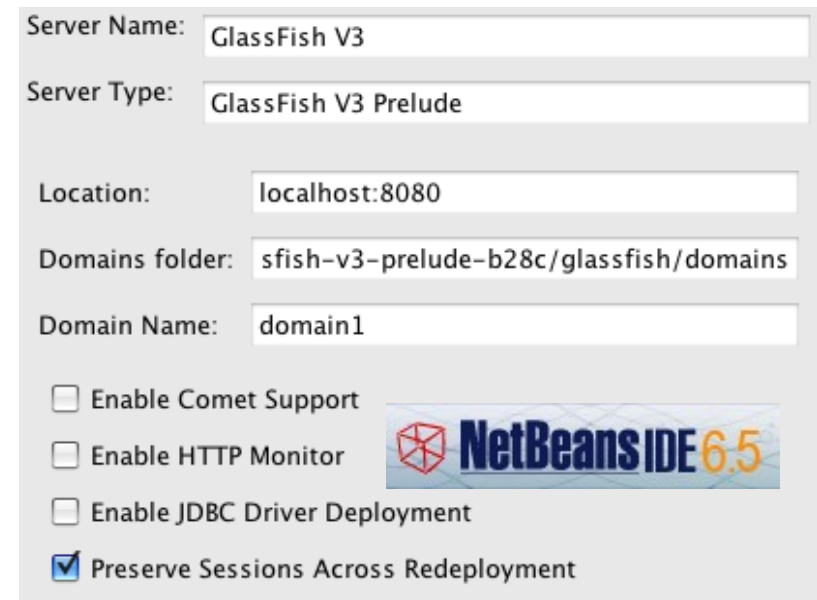
Session Retention

Deployment option to maintain stateful sessions across re-deployments

```
$ asadmin redeploy --properties
  keepSessions=true myapp.war
```

Greatly simplifies the development paradigm.

Integrated in NetBeans 6.5 :

Yes, Eclipse too !

Update Center

Not just Java !
And right from the Update Center

- Groovy / Grails
  - Uses GlassFish Embedded on `%grails run-app`
  - Smaller archives with `%grails shared-war`

- JRuby on Rails
  - > Multiple deploys strategies including "Native" directory-based
  - One command, one instance, one process

- Grizzly, admin, JDBC pooling, Metro, available to all!
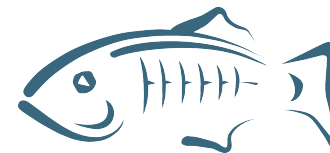
Demo
(Single GlassFish hosting JavaEE, Rails & Grails)

Prelude to Java EE 6
(via GlassFish Update Center)

- ## JSF 2.0 Preview
  - > Integrated Facelets
  - > First-class Ajax support
  - > Pub/Sub Events
  - > Composite components
  - > Better resource handling
  - > Groovy integration

- ## EJB 3.1 Preview
  - > WAR packaging
  - > Singleton
  - > No Interface View
  - > TimerService
  - > Asynchronous operations
  - > ...

- ## Servlet 3.0 soon

JAX-RS (JSR 311) with Jersey

- Making it easy to build RESTful Web services
- Production-quality Reference Implementation

```
@javax.ws.rs.Path("/users/{id}")
public class UserResource {
    @javax.ws.rs.GET
    @javax.ws.rs.Produces("text/xml")
    public String getUser( @PathParam("id")
      String userName) {
        ...
    }
}
```

- Final and supported v1.0
- Fine client API too

EJB 3.1 Sample

```
import javax.ejb.Singleton;             public class SimpleServlet extends HttpServlet {

@Singleton                                  @EJB CounterBean counterBean;

public class Co                                                    , ... resp) {

    private int                                               onse.getWriter();

    public sync

        increm

        return                                               ntAndGetHitCount());

    }

}
                                            }
```
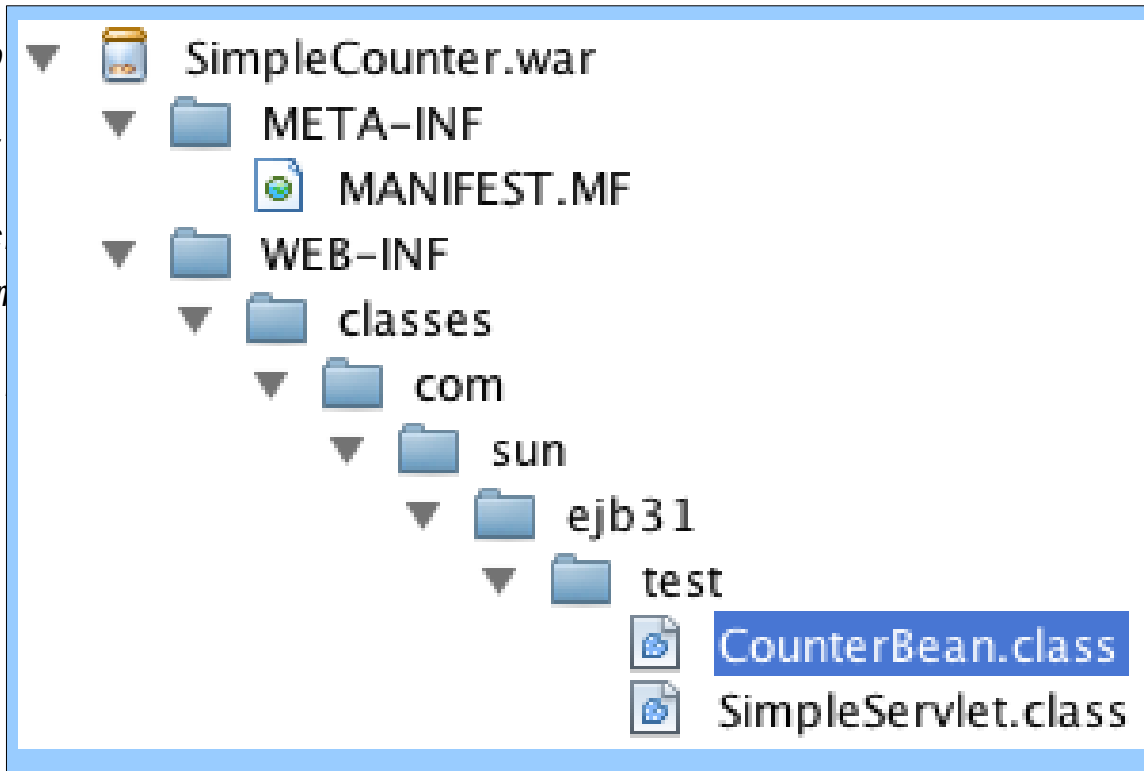
Demo

(simple ejb 3.1
war packaging)

GlassFish Embedded

```
AppServer glassfish = new AppServer(8080);
glassfish.deployWar(warFile);
```

total(1022ms)

INFO: GlassFish V3 Prelude startup time : Embedded(430ms) startup services(592ms) total(1022ms)

GlassFish Embedded

```java
public class Main {
  public static void main (String[] args) {
    AppServer glassfish = new AppServer(8080);
    glassfish.deployWar(warFile);
  }
}
```

GlassFish Embedded

```java
@BeforeClass
public static void setUpClass () {
  AppServer glassfish = new AppServer(8080);
  glassfish.deployWar(warFile);
}

@Test
public void pingApplication () {
  ...
}
```

A lot more ...

- Comet, Cometd/Bayeux
- Full support for mod_jk, WebDAV, CGI, SSI
- Metro 1.4 Web Services (.NET 3.5)
- pkg and IPS
- RESTful admin
- Monitoring
- Extensible
  > Runtime
  > Admin console
  > Config file
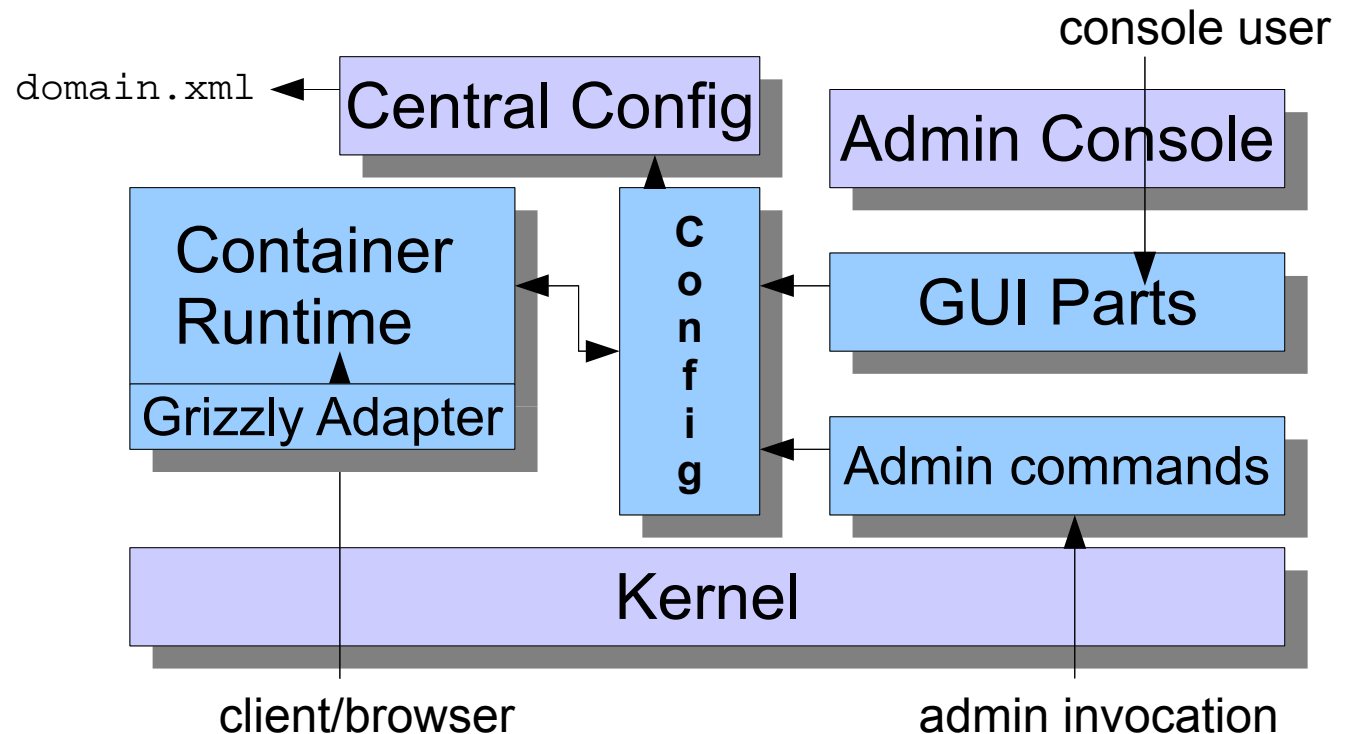
GlassFish v3 Prelude – Practical

- Get it from http://glassfish.org
- Download size: 26MB
  - > Graphical Installer
  - > Zip version
  - > Community-contributed IzPack installer
- Runs on Java 5 and Java 6
- Questions and feedback to :
  USERS@glassfish.dev.java.net or GlassFish forum.
- Supported product, subscriptions available

v3 Prelude vs. GlassFish v2

Feature	GlassFish Server v2	GlassFish v3 Prelude
Java Platform, Enterprise Edition		
Java Compatible, Enterprise Edition (Java EE 5) Certified	X	
Web Application and Service Technologies		
Java Web Technologies (Servlet 2.5, JSP 2.1, JSF 1.2)	X	X
Metro Web Services Stack	X	X [1][4]
.NET 3.0 Web Services Interoperability	X	
.NET 3.5 Web Services Interoperability		X[1][4]
Next Generation Web		
jMaki (Ajax Framework)	X[4]	X[4]
Jersey/JAX-RS 1.0 (RESTful Web Services)	X[4]	X[4]
Administration		
Admin Console and CLI (Centralized Administration)	X	X
JMX	X	X
Node Agent & Cluster Mgmt	X	
Upgrade Tool	X	
Client		
Application Client Container	X	
Java WebStart support	X	
Enterprise Application Technologies		
Java DB, JDBC Connection Pooling	X	X
JTA/JTS	X	X
J2EE Connector Architecture 1.5	X	X[2]
EJB 3.0	X	
JMS	X	
JPA 1.0 (TopLink)	X	

v3 Prelude vs. GlassFish v2 (2)

Feature	GlassFish Server v2	GlassFish v3 Prelude
Scripting		
jRuby/Rails Web Archive (.war) deployment	X[4]	X[4]
"Native" jRuby/Rails deployment – without need for Servlet container		X[4]
Dynamic resizing of jRuby Runtime Pool		X[4]
Groovy/Grails		X[4]
Developer Tools		
Integrated Development Support (Eclipse and NetBeans)	X	X
Rapid Redeployment - Maintain session state on application redeploy		X
Update Center	X	X
Update Center integration with Administration Console		X
Verification Tools	X	
Image Packaging System (IPS) Tools		X
Framework Technologies		
Grizzly (Java NIO)	X	X
Comet (HTTP Push)	X	X
CORBA	X	
Modular Architecture Based on OSGi		X
GlassFish Embedded		X
Extend GlassFish Functionality (Extensibility APIs) (Administration Console, asadmin CLI utility, more)		X
System/Performance Technologies		
Clustering	X	X[3]
Load Balancer Plugin	X	
Centralized Administration of Load Balancer Plugin Configuration	X	
High Availability	X	
Integration		
Integration with Identity Manager, OpenSSO, OpenESB, OpenPortal...	X	

v3 Prelude Usage

SailFin
(Telco AppServer)

Project Fuji
(OpenESB.next)

xWiki
GlassFishV3
JavaDB

WebSynergy
(Portal, Liferay)

EHCache Server
GlassFish v3 Embedded
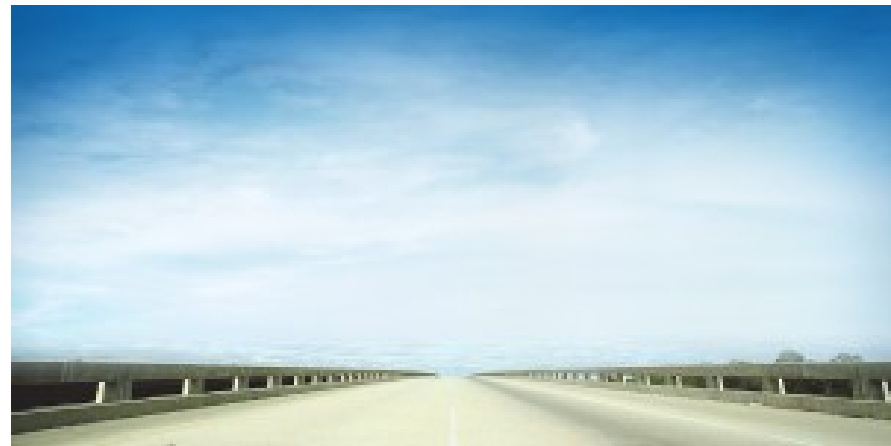Jersey

WebEngine
GlassFish v3 Embedded
Jersey

GlassFish v3 Roadmap

- V3 Final aligned with Java EE 6
  - > Targeted for June 2009
  - > Clustering, central admin likely on the update center
- V3.1 adding clustering
  - > Late in 2009

http://glassfish.org

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