



GlassFish Survival Guide

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Sun Microsystems



Agenda

- Resources
- Release numbering
- Installers
- Profiles
- Config files
- Deployment options
- Update Center
- Useful asadmin commands
- CLI monitoring
- Sustaining branch
- Docs
- Forums
- Bugs!

glassfish.org

Aquarium
Core
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GlassFish » Community

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The GlassFish community is building open source, production-quality, enterprise software.

Announcing [GlassFish Server v2.1!](#) Today, we are releasing GlassFish v2.1. GlassFish v2.1 is an enabler for [SailFin](#) 1.0. In this release, we have fixed around 500 issues since the GlassFish v2 release. In addition to these bug fixes, several quality improvements were done including a newer [Shoal](#) Group Management Service (GMS) and more robust Session Replication. A newer MQ version 4.3 has also been integrated. In addition to platforms tested in earlier releases, we have included Windows 2008, OpenSolaris, RHEL 5 and Apache 2.2.

Announcing Learn to leverage the NetBeans IDE and the JRuby-on-Rails framework to deploy MySQL-backed applications on GlassFish in a FREE and LIVE technical webinar on Tuesday, January 27th. See the [Announcement](#) page for more details.

Announcing [Sun GlassFish Enterprise Server v3 Prelude!](#) Sun GlassFish Enterprise Server v3 Prelude is a [commercially supported](#) offering for GlassFish v3 Prelude, an open-source, lightweight Web 2.0 development and deployment platform. Sun GlassFish Enterprise Server v3 Prelude is ideal for deploying rich Internet applications backed by Java or dynamic languages such as JRuby.

Announcing [GlassFish v3 Prelude!](#) GlassFish v3 Prelude is the next major community release of the GlassFish application server. GlassFish v3 Prelude provides a light weight and extensible core based on OSGi, a web and scripting container, an easy-to-use Admin Console for configuration and management, and Update Center connectivity.

Download **GlassFish v2.1 Final** NOW

Download **GlassFish v3 Prelude** NOW

Download **TopLink Essentials** NOW

Download **OpenMQ v4.3** NOW

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GlassFish Community

- Downloads
- Announcements
- Mailing lists
- Discussion forums
- + Using GlassFish
- + Samples
- + Developing GlassFish
- GlassFish Quality Community
- Documentation Community
- Issue tracker
- Go to Issue #
- 日本語
- 简体中文
- + Other Languages

Migration to GF

- GlassFish v3
- Samples
- Grizzly
- Scripting
- OpenMQ
- SailFin
- Shoal
- HK2
- Governance Document

A [java.net](#) project

wiki.glassfish.java.net

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Glassfish Wiki » GlassFishWiki

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Glassfish Wiki

- GlassFish Wiki
- Grants and Awards Program
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- About this Wiki
- GlassFish FAQs
 - GlassFish User FAQ
 - GlassFish Developer FAQ
 - GlassFish Wiki FAQ
- Product Documentation
- Documentation Community
- How-Tos
- Using GlassFish
 - Schedule for Milestones
 - GlassFish v2.1
 - GlassFish v2 UR1
 - GlassFish v2 UR2
 - GlassFish v2
 - GlassFish v3
 - GlassFish v1 UR1
- Communication Server
- Adoption
- Product Comparisons
- Commercial Products
- Support
- Training and Certification
- Events
- Technology Areas
- GlassFish Extras Catalog

- General**
- [Getting Started](#)
- [Governance](#)
- [Wiki Editors](#)

Welcome to the Community Wiki for Project GlassFish!

[Project GlassFish](#) is an open source community comprising of Users, Developers, Partners, and Evangelists creating an industry leading Java EE 5 compatible enterprise-quality Application Server (see [Principles of Project GlassFish](#)). In the common Open Source tradition, we encourage pluggability and reuse across many other communities and projects

The GlassFish Wiki is a valuable informational resource addressing the requirements of this broad community. The wiki is open for reading to all. Contributors to existing or new wiki topics need to have a registered user id.

Content in the wiki includes information for:

- [Developers Using GlassFish](#)
- [Developers Improving GlassFish](#)
- [General Interest](#)
- [GlassFish Awards Program](#)

General Information

RoadMaps - Upcoming releases

- [GlassFish v3](#) - in planning ([GlassFish v3 Prelude launched!](#))
- [Plan for GlassFish v2.1](#) - Upcoming release of GlassFish for Project SailFin
- [Plan for GlassFish v2UR2](#) - Update release 2 of GlassFish v2
- [Plan for GlassFish v2UR](#) - Update release of GlassFish v2
- [Plan for GlassFish v2](#) - Release of GlassFish with clustering features

GlassFish HowTos - Get Productive

- [GlassFish User FAQ](#)
- [Getting Started With GlassFish](#)

Community News

[The Aquarium \(news from the source\)](#)

- [Today's Webinar - Metro, the GlassFish Web Services Stack](#)

Feb 26, 2009

In today's (Thursday) webinar Harold will present on Metro,...

HERDLINES BY
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Announcements



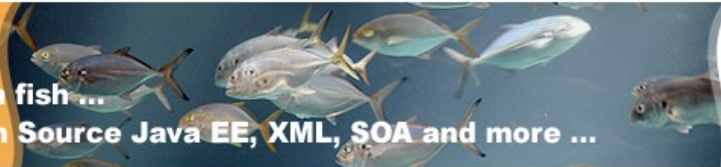
Tomcat and GlassFish Survey

Thanks - The GlassFish Team

blogs.sun.com/theaquarium

The Aquarium

A blog that has nothing to do with fish...
... but everything to do with Open Source Java EE, XML, SOA and more ...



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« Business Trends -... | Main | GlassFish ESB v2.1... »

JUN 09
15 **Jazoon 2009 and GlassFish Day**
Posted by alexismp in GlassFish

JAZOON09 June 22nd
GlassFish Day

GlassFish Day at Jazoon ([register](#)) is only a week away and the (almost final) agenda has been posted (Marek will stand in for Harold for the Metro talk) and is now included in the [GlassFish events iCal feed](#). This is the second year in a row we're running this free event on the first day of the Jazoon conference in beautiful Zurich.

While not an [unconference](#), this is meant to be an informative and pretty laid back day with lots of opportunities to interact with other attendees and the various speakers. Please make sure to [register](#) if you plan on attending (we have some space left in a nice and comfy theater).

Given the energy spent by the organizers and [Christian](#) in particular, visiting literally dozens of JUGs around Europe, I expect Jazoon to be yet another successful Java conference. James Gosling will be the [first keynote speaker](#) (other Sun speakers are listed [here](#)). Get the full agenda [there](#) and a dedicated Google iCal feed [here](#).

TAGS: [conference](#) [glassfish](#) [jazoon](#) [zurich](#)



Trackback URL: http://blogs.sun.com/theaquarium/entry/jazoon_2009_and_glassfish_day

COMMENTS:

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LANGUAGES

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[français](#) [Português](#)

THE AQUARIUM TV



May 14th - Groovy and GroovyBlogs
SPECIAL START TIME: NOON PT
Glen Smith, TBA

WHITE PAPERS



GLASSFISH PODCAST



Episode #035 - GlassFish ESB

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FEEDS AND TWEETS



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Send feedback and leads to
theaquarium@sun.com

The Aquarium TV!

<http://ustream.tv/channel/theaquarium>

<http://wikis.sun.com/display/TheAquarium/GlassFishDotTV>

The screenshot shows the GlassFishDotTV website interface. At the top, there is a navigation bar with the Sun Microsystems logo, the text 'wikis.sun.com', and a 'participate' button. Below this is a breadcrumb trail: Wikis Home > TheAquarium > GlassFishDotTV. A search bar and a 'Tools' menu are also visible.

The main content area is titled 'GlassFishDotTV' and includes a search box for 'TheAquarium'. A sidebar on the left contains a 'Home' section with links to 'GlassFish.TV', 'GlassFish.TV Schedule', 'TheAquarium Channel', and 'TheAquarium Blog'. Below this are links for 'Next Presentation', 'Future Presentations', 'Archived Presentations', and 'Ideas And Suggestions'.

The main content area features three sections:

- The Aquarium Channel**: A search box and a 'Go' button.
- Next Presentation**: A list item for 'Metro — Harold Carr — Feb 26th, 2009, 11:00am PT'.
- Past and Future Presentations**: A paragraph stating that previous presentations are listed in the Archives with multimedia, and future presentations can be found in the Recordings pages and Schedule Calendar. It concludes with 'We welcome your Ideas and Suggestions.'
- Regular Meeting Information**: A box containing details for Thursday meetings:
 - Date**: Thursdays
 - Time**: 11:00am US Pacific (see TimeConverter)
 - Participant URL**: TheAquarium Channel (detailed instructions)
 - Speakers Concall**: (others please mute with *6)
 - Toll-Free**: (866) 545-5227 - Access Code: 3535518
 - Caller Paid**: (215) 446-3648 - Access Code: 3535518

Overlaid on the bottom right is a Ustream TV video player window titled 'TheAquarium'. The video content is titled 'GlassFish Portfolio Launch Sparky Grows Up!' and features Eduardo Pelegrí-Llopart from Sun Microsystems, Inc. on February 10, 2009. The player includes a progress bar at 00:00:03, a 'MENU' button, and social media sharing options for Embed, Email, Digg, Facebook, Twitter, and Stumbleupon. At the bottom of the player, there are links to 'Open in popup window' and 'Go back to LIVE'.

Releases

- Major release
 - > GlassFish v2 == SJS AS 9.1 (Sept. '07)
- Dot release
 - > GlassFish v2.1 == SJS AS 9.1.1 (January '09)
- Update Release
 - > GlassFish v2ur2 == SJS AS 9.1ur2 (April '08)
- Patch releases
 - > Potentially every 6 weeks
 - > For supported customers only

Installers

- “jar” GlassFish v2 installer from java.net
 - > `java -jar glassfish*.jar`
 - > `ant -f setup.xml | setup-cluster.xml`
 - > *developer* and *cluster* profiles
- GlassFish Enterprise Server installers
 - > From <http://www.sun.com/appserver>
 - > Native Package-based (linux and Solaris). Requires “root” privileges
 - > File-based (with HADB and JDK, or without)
 - > Only option for *enterprise* profile (HADB)
 - > Silent install (`-savestate`, `-silent`) and console modes

Installers (cont.)

- Linux distributions
 - > Debian
 - > Ubuntu
 - > Others in the works
- IzPack
 - > Community-contributed (Julien Ponge)
 - > Single archive for all platforms
 - > From <http://izpack.org/showcase-glassfish-v2/>
- GlassFish v3 offers ZIP-install (yeah!), UI-driven, and IPS

Which profile do I use?

- GlassFish v2.x bits
 - > `setup-cluster.xml`
 - > `setup.xml`

	Developer	Cluster	Enterprise
Security KeyStore	JKS	JKS	NSS
Security Manager	Disabled	Disabled	Enabled
JVM™ software	Client	Client	JDK™
HTTP access log	Disabled	Disabled	Enabled
GMS Heartbeat	Disabled	Enabled	Enabled
Cluster creation	Not Allowed	Allowed	Allowed
Session Repl.	Not Allowed	Allowed	Allowed

- GlassFish Enterprise v2.x bits
 - > Set in **AS_ADMIN_PROFILE** in `config/asadminenv.conf`
- Can also upgrade from Developer to Cluster
- Further details:
 - > <http://docs.sun.com/app/docs/doc/820-4335/gelvk>
 - > Example: jms-service EMBEDDED, LOCAL, or REMOTE

Some important config files

- `GLASSFISH_HOME/config/asenv.conf`
 - > Defines Java home and much more
- `GLASSFISH_HOME/config/asadminenv.conf`
 - > Default env for asadmin CLI
- `domains/domain/config/domain.xml`
 - > Single centralized config file for Apps (web, ear, rar), Resources (JNDI) and configuration (log, tuning, ...)
- `domains/domain/config/default-web.xml`
 - > Default behavior for webapps
 - > Context params, session timeout, static and JSP compiler servlets, mime types, welcome files, ...

domain.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE domain ...>
<domain application-root="{ com.sun.aas.instanceRoot} /applications"
  log-root="{ com.sun.aas.instanceRoot} /logs">
  <applications> <!-- Java EE application definitions -->
    </applications>
  <resources> <!-- Java EE resource definitions --> </resources>
  <configs> <!-- Configuration definitions --> </configs>
  <servers> <!-- Server definitions --> </servers>
  <clusters> <!-- Cluster definitions --> <clusters/>
  <node-agents> <!-- Node agent definitions --> </node-agents>
  <lb-configs> <!-- Load balancer configuration definitions --> <lb-
    configs/>
</domain>
```

Deployment

- Web Admin console
 - > Wizard-based
- IDEs
 - > NetBeans, Eclipse, IntelliJ
- `$asadmin deploy [options] myapp.war`
- Dynamic reloading
 - > `domain/applications/j2ee-apps/name`
 - > `domain/applications/j2ee-modules/name`
 - > `$ touch .reload`
 - > Enabled by default

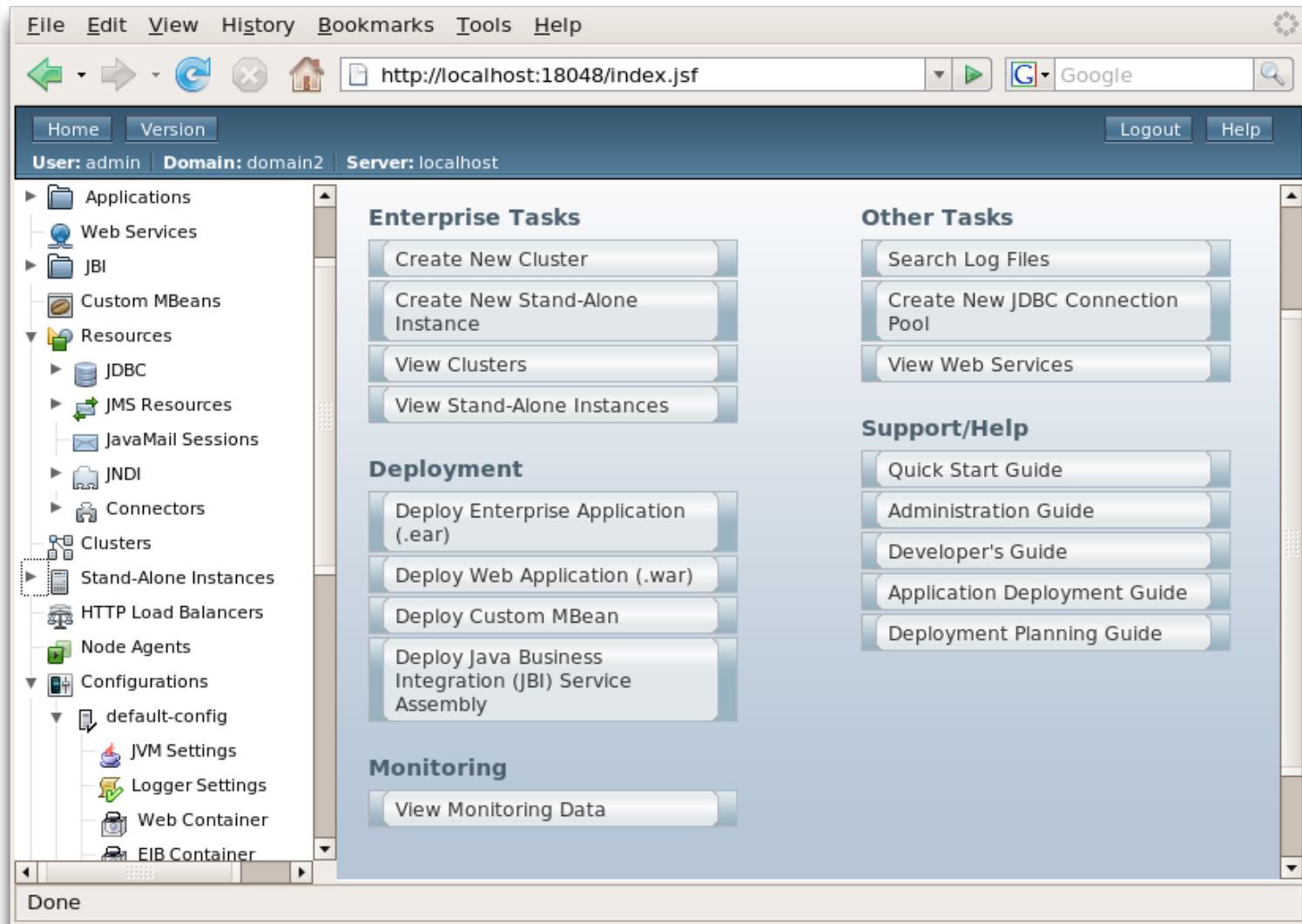
Deployment (cont.)

- Auto-deployment
 - > domains/domain/autodeploy
 - > All Java EE artifacts (jar, war, ear, rar)
 - > Delete archive to undeploy
 - > Enabled by default, available for default instance only
- Directory deployment
 - > `$asadmin deploydir`
 - > available for default instance only (no cluster mode)
 - > Need to adhere to Java EE packaging format

Main default GlassFish ports

- 4848 – admin port (web console)
- 8080 – default HTTP listener
- 8181 – default HTTPS listener
- 8686 – JMX admin port
- 3700, 3820, 3920 – IIOP (plain, SSL, SSL_MUTUALAUTH)
- 7676 – JMS (OpenMQ)

Web Admin Console



The screenshot shows a web browser window displaying the Sun Web Admin Console. The browser's address bar shows the URL `http://localhost:18048/index.jsf`. The console interface includes a navigation menu on the left, a main content area with several task panels, and a status bar at the bottom.

Navigation Menu (Left):

- Applications
- Web Services
- JB1
- Custom MBeans
- Resources
 - JDBC
 - JMS Resources
 - JavaMail Sessions
 - JNDI
 - Connectors
- Clusters
- Stand-Alone Instances
- HTTP Load Balancers
- Node Agents
- Configurations
 - default-config
 - JVM Settings
 - Logger Settings
 - Web Container
 - EJB Container

Main Content Area:

- Enterprise Tasks:**
 - Create New Cluster
 - Create New Stand-Alone Instance
 - View Clusters
 - View Stand-Alone Instances
- Deployment:**
 - Deploy Enterprise Application (.ear)
 - Deploy Web Application (.war)
 - Deploy Custom MBean
 - Deploy Java Business Integration (JB1) Service Assembly
- Monitoring:**
 - View Monitoring Data
- Other Tasks:**
 - Search Log Files
 - Create New JDBC Connection Pool
 - View Web Services
- Support/Help:**
 - Quick Start Guide
 - Administration Guide
 - Developer's Guide
 - Application Deployment Guide
 - Deployment Planning Guide

Header and Footer:

- Header: Home, Version, Logout, Help
- User: admin | Domain: domain2 | Server: localhost
- Status Bar: Done

JDBC Pool Settings

Pool Settings

Initial and Minimum Pool Size: Connections

Minimum and initial number of connections maintained in the pool

Maximum Pool Size: Connections

Maximum number of connections that can be created to satisfy client requests

Pool Resize Quantity: Connections

Number of connections to be removed when pool idle timeout expires

Idle Timeout: Seconds

Maximum time that connection can remain idle in the pool

Max Wait Time: Milliseconds

Amount of time caller waits before connection timeout is sent

Connection Validation

Connection Validation: Required

Validate connections, allow server to reconnect in case of failure

Validation Method:

Table Name:

If table validation is selected, specify table name; name must contain only alphanumeric, underscore, dash, or dot characters

On Any Failure: Close All Connections

Close all connections and reconnect on failure, otherwise reconnect only when used

Allow Non Component Callers: Enabled

Enable the pool to be used by non-component callers such as ServletFilters, Lifecycle modules.

Transaction

Non Transactional Connections: Enabled

Returns non-transactional connections

Transaction Isolation:

If unspecified, use default level for JDBC Driver

Isolation Level: Guaranteed

All connections use same isolation level; requires Transaction Isolation

JDBC connection leak detection

- Connection not returned to pool within a specific time period
- Statistics logged to server log
- Application Server can reclaim a leaking connection

Leak Timeout:

Seconds

0 implies no leak detection.

Leak Reclaim:

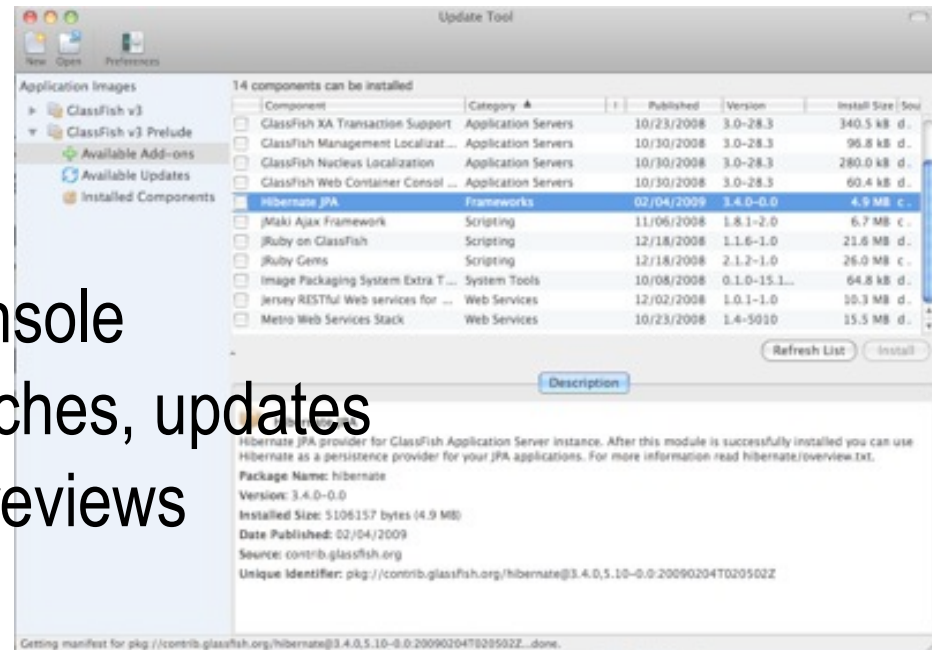
If enabled, connection will be reusable (put back into pool) after connection leak timeout occurs.

Update Center

- GlassFish v2
 - > Not integrated in web admin, single repository
 - > GlassFish add-ons: Jersey, OpenESB, jRuby, ...
 - > Third party: Hibernate JPA, Spring, Grails, IceFaces
 - > `GF_HOME/updatecenter/bin/updatetool`

- GlassFish v3

- > Based on IPS
- > Multiple repositories
- > Integrated in Web Console
- > Used for add-ons, patches, updates
- > Used for Java EE 6 previews
- > Command-line: `pkg`



Useful asadmin commands

```
list-domains                undeploy
list-jndi-entries          backup-domain
create-domain              restore-domain
start-domain               list-backups
stop-domain                generate-diagnostic-report
deploy                     generate-jvm-report
deploydir                  get/set
start-domain --verbose [domain-name]
```

- > All available in: interactive, batch, multimode
- > Closest command
- > Can configure auto-complete* in v2, integrated in v3

*: http://blogs.sun.com/harsha/entry/command_line_completion_in_glassfish

Logging

- GlassFish uses Java logging (not log4j)
- Hierarchy of logger namespaces
- Centralized
- Default is to file, syslog also available
- Log levels can be changed without restart
- Log file rotation support
- `domain/logs/server.log`
- `domain/logs/access` (HTTP)
- `domain/logs/server/tx`

Monitoring with asadmin

- Set monitoring level

- > `$asadmin set server.monitoring-service.module-monitoring-levels.http-service=HIGH|LOW|OFF`

- List dotted names

- > `$asadmin list --monitor server.http-service*`

- > `$asadmin list --monitor server.applications.Hello*`

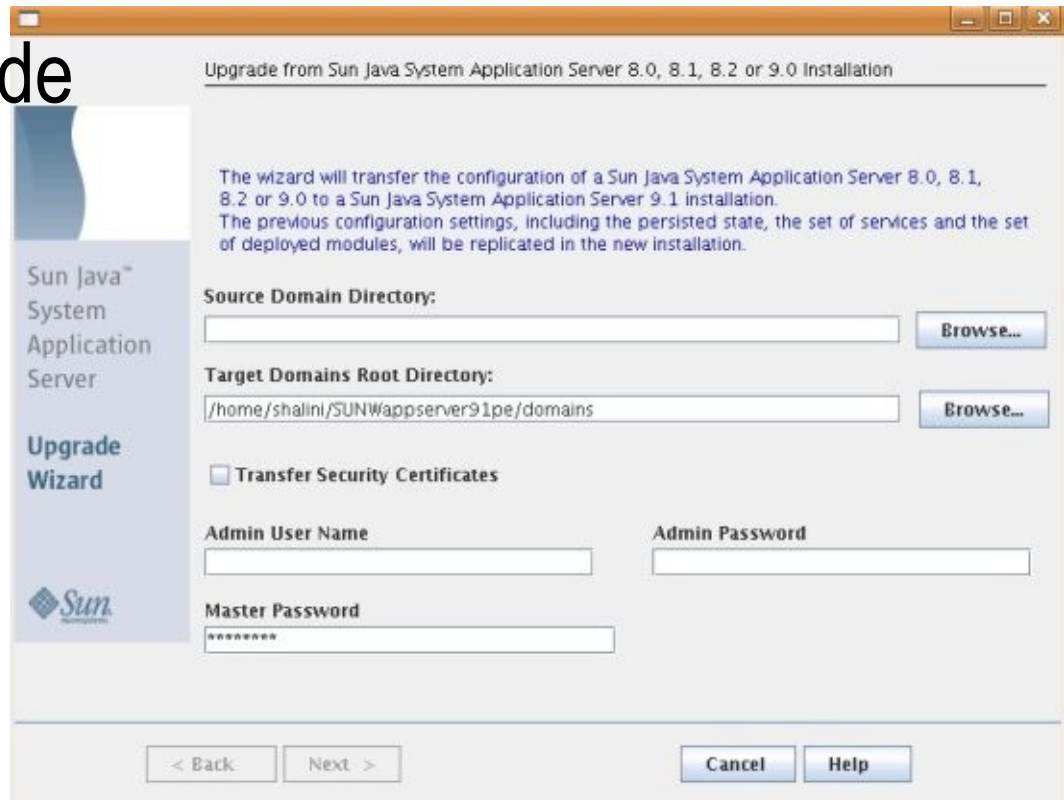
- Get values

- > `$asadmin get --monitor server.http-service.server.request.*`

- > `$asadmin get --monitor server.applications.Hello.server.*`

asupgrade

- Upgrade a domain's applications, resources, and configuration
- Option #1:
Side-by-Side Upgrade
- Option #2:
In-place Upgrade



Upgrade from Sun Java System Application Server 8.0, 8.1, 8.2 or 9.0 Installation

The wizard will transfer the configuration of a Sun Java System Application Server 8.0, 8.1, 8.2 or 9.0 to a Sun Java System Application Server 9.1 installation. The previous configuration settings, including the persisted state, the set of services and the set of deployed modules, will be replicated in the new installation.

Source Domain Directory:

Target Domains Root Directory:

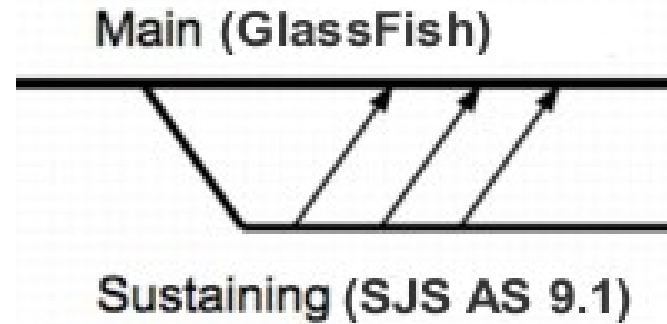
Transfer Security Certificates

Admin User Name Admin Password

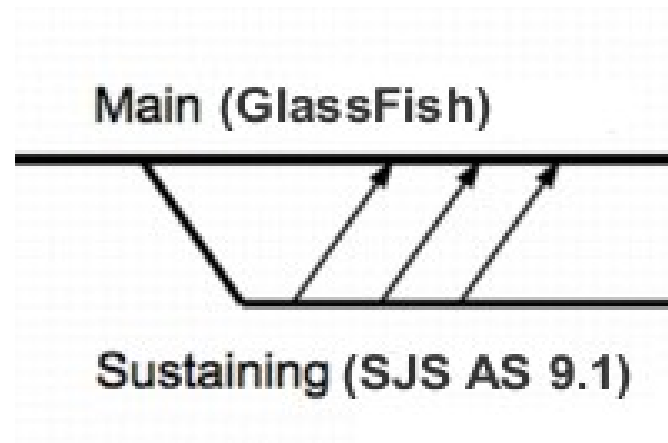
Master Password

< Back Next > Cancel Help

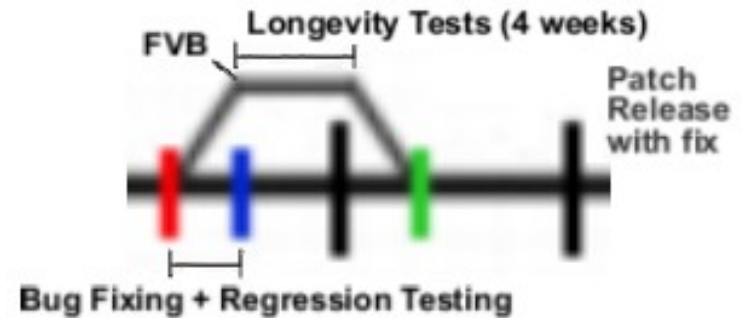
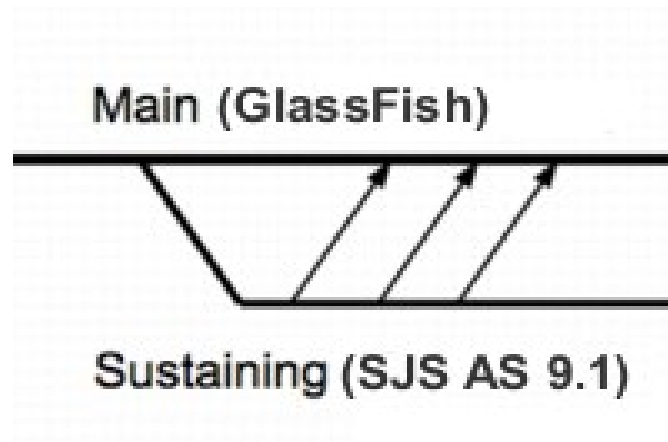
Sustaining branch



Sustaining branch



Sustaining branch



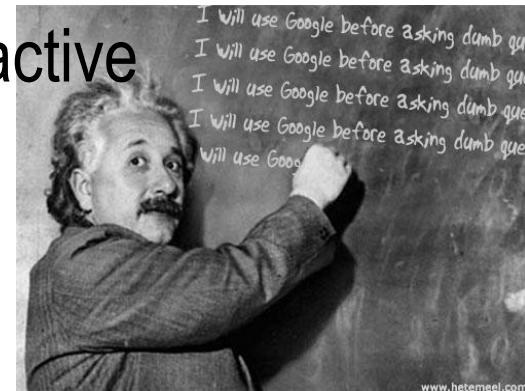
Documentation

- Online contextual help in Web Console
- **asadmin --help**
- Latest stable documentation (v2.1)
 - > <http://docs.sun.com/app/docs/coll/1343.6>
- Documentation drafts
 - > <http://glassfish.dev.java.net/javaee5/docs/DocsIndex.html>
- The Java EE 5 Tutorial
 - > <http://java.sun.com/javaee/5/docs/tutorial/doc/index.html>



Where to ask questions?

- User Forum or Mailing List (cross-posted)
 - > Anything technical
 - > USERS@glassfish.dev.java.net
 - > <http://forums.java.net/jive/forum.jspa?forumID=56>
- theaquarium@sun.com
 - > Anything makerting/partner/community-related
- Your own community/network
 - > developpez.com has a French-speaking active GlassFish forum
 - > Start your own!



Where to file bugs

- We love bug reports! Seriously!
 - > We like patches too...
- java.net Issue Tracker
 - > <https://glassfish.dev.java.net/servlets/ProjectIssues>
 - > Please specify Bug (Defect) or RFE (Enhancement)
 - > The better the report, the more chances of getting a fix
 - > Feel free to discuss (issue tracker or mailing list)
- Using your Sun support contract
 - > Only effective way to escalate a problem
 - > <http://wikis.sun.com/display/SunSolve/Account+Setup>





Questions ?

