

## 1. Introduction

### 1.1. Project/Component Working Name:

GlassFish v3 Prelude File Layout and Packaging

### 1.2. Name(s) and e-mail address of Document Author(s)/Supplier:

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### 1.3. Date of This Document:

07/28/2008

## 2. Project Summary

### 2.1. Project Description:

This project defines product packaging and file layout used to deliver the content of GlassFish v3 Prelude release as standalone product distribution.

### 2.2. Risks and Assumptions:

Project depends on the stability and support for its imported interfaces (mainly IPS).

## 3. Problem Summary

### 3.1. Problem Area:

GlassFish v3 Prelude release has to be delivered as standalone product installation integrated into Update Center 2.0 content delivery mechanism based on Image Packaging System (IPS) Product must have well defined file layout interface which both supports existing product functionality and enables the delivery of additional functional modules.

### 3.2. Justification:

File layout and packaging are essential product interfaces.

## 4. Technical Description:

### 4.1. Details:

Product file layout will be largely based on WSARC 2006/239 (Filesystem Layout for Unbundled Software: Best Practices and Requirements).

Product packages will be organized based on functional component boundaries and will be mapped to OSGi bundles. Package naming and versioning will follow IPS Packaging Best Practices document (see section 5 for link).

Although this document does not cover any other package based distributions of GlassFish v3 Prelude release, following similar file

layout and packaging structure will be strongly recommended for any other distributions based on this release (for instance, eventual RPM package based distribution).

#### 4.2. Bug/RFE Number(s):

N/A

#### 4.3. In Scope:

File layout and packaging for standalone IPS image based distribution of GlassFish v3 Prelude release.

#### 4.4. Out of Scope:

File layout and packaging for any other distributions based on GlassFish v3 Prelude release and file layout and packaging for additional product functionality delivered in subsequent GlassFish v3 releases.

#### 4.5. Interfaces:

##### 4.5.1 Exported Interfaces

Interface: GlassFish v3 Prelude File Layout

Stability: Uncommitted

Former Stability (if changing): N/A

Comments: Described in section 4.5.1.1

Interface: GlassFish v3 Prelude IPS Packages

Stability: Uncommitted

Former Stability (if changing): N/A

Comments: Described in section 4.5.1.2

##### 4.5.1.1 GlassFish v3 Prelude File Layout

File layout for standalone GlassFish v3 Prelude distributions:

<install-dir>

bin/ Wrappers/links to commonly used utilities  
(asadmin, pkg, updatetool)

felix/ Felix OSGi Framework (as shared component)  
bin/  
bundle/  
conf/

glassfish/ GlassFish  
bin/ Public utilities (asadmin, startserv,

stopserv)

config/	Installation-wide configuration files
icons/	Icon files (installer distribution only)
lib/	
appclient/	Standalone client support files
dtds/	DTD files
install/applications/	RA files
registration/	Service tag registry
schemas/	Schema files
templates/	Template files
modules/	Module libraries
docs/	Bundled documentation files
domains/	Domain configurations
domain1/	Default domain configuration
applications/	Deployed applications
autodeploy/	Autodeploy directory
bin/	
config/	Domain configuration files
classes/	Domain specific classes
docroot/	Default docroot
lib/	Domains specific libraries
ext/	
logs/	Log files

pkg/ IPS CLI client

updatetool/ UC 2.0 GUI client

#### 4.5.1.2 GlassFish v3 Prelude IPS Packages

This is package list proposal which includes draft alignment with OSGi bundles. Note that this lists only packages produced by GlassFish v3 build and not those produced and delivered to Update Center repository from other sources (such as Metro).

Package Name/	Description
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OSGi Bundle content	
glassfish-nucleus	Nucleus
org.glassfish.core:glassfish	
com.sun.enterprise:hk2	
org.glassfish.core:kernel	
org.glassfish.core:common-util	

glassfish-api            GlassFish API  
org.glassfish:javax.javaee  
org.glassfish.common:glassfish-api  
org.glassfish.common:internal-api

glassfish-common        Common utilities and components

org.glassfish.common:glassfish-ee-api  
org.glassfish.external:apache-commons  
org.glassfish.external:ldapbp-repackaged  
org.glassfish.common:annotation-framework  
org.glassfish.common:container-common  
org.glassfish.common:glassfish-naming

glassfish-security      Security modules  
org.glassfish.security:securitycommon  
org.glassfish.security:realms  
org.glassfish.core:security

glassfish-jca           Connector modules  
org.glassfish.connectors:work-management  
org.glassfish.connectors:connectors-internal-api  
org.glassfish.connectors:connectors-runtime

glassfish-jta           Transaction modules  
org.glassfish.transaction:transaction-internal-api  
org.glassfish.transaction:jts  
org.glassfish.transaction:jta

glassfish-deployment    Deployment Modules  
org.glassfish.deployment:deployment:common  
org.glassfish.deployment:deployment-client  
org.glassfish.deployment:dol  
org.glassfish.deployment:deployment-javaee-core

glassfish-grizzly        Grizzly  
org.glassfish.external:grizzly-module  
org.glassfish.external:grizzly-optionals

glassfish-management    Base GlassFish Admin and Monitoring  
org.glassfish.admin:config-api  
org.glassfish.admin:monitoring-core  
org.glassfish.admin:server-mgmt  
org.glassfish.admin:admin-core  
org.glassfish.admin:backup  
org.glassfish.external:jmxremote\_optional-repackaged

org.glassfish.admin:launcher  
org.glassfish.admin:admin-util  
org.glassfish.admin:cli-framework

org.glassfish.admin:admin-cli  
org.glassfish.admin:cli-optional

glassfish-amx                    AMX  
org.glassfish.common:amx-impl  
org.glassfish.common:amx-api  
org.glassfish.common:glassfish-mbeanserver

only)                                    glassfish-management-api                    REST management API (UC

glassfish-gui                    Base Admin GUI (UC only)  
org.glassfish.admingui:console-plugin-service  
org.glassfish.admingui:console-web-plugin

glassfish-web                    Web Container Runtime  
org.glassfish.web:web-core  
org.glassfish.security:websecurity  
org.glassfish.web:jstl-impl  
org.glassfish.web:war-util  
org.glassfish.web:web-naming  
org.glassfish.web:web-tier  
org.glassfish.web:jspimpl  
org.glassfish.web:gf-web-connector  
org.glassfish.web:web-common

glassfish-jsf - JSF  
org.glassfish.web:jsf-connector

Monitoring                                    glassfish-web-management                    Web Container Admin/

org.glassfish.web:web-cli

glassfish-web-gui                    Web Container Admin GUI (UC only)

glassfish-jdbc                    JDBC Connection Pooling Runtime  
glassfish-jdbc-management                    JDBC Admin/Monitoring  
glassfish-jdbc-gui                    JDBC Admin GUI (UC only)

glassfish-jpa                    JPA Support (UC only?)  
org.glassfish.persistence:jpa-connect  
org.glassfish.persistence:eclipselink-wrapper

glassfish-ejb                    EJB Runtime (UC only)  
org.glassfish.ejb:ejb-container  
org.glassfish.external:asm-all-repackaged  
org.glassfish.ejb:gf-ejb-connector

Monitoring                                    glassfish-ejb-management                    EJB Container Admin/

glassfish-ejb-gui	EJB Container Admin GUI (UC only)
glassfish-registration	GlassFish Registration
org.glassfish.registration:registration-api	
org.glassfish.external:commons-codec-repackaged	
org.glassfish.registration:registration-impl	
org.glassfish.external:sysnet-registration-repackaged	
glassfish-scripting	Scripting Support
org.glassfish.scripting:grizzly-jruby-module	
org.glassfish.scripting:gf-jruby-connector	
javadb	Java DB (UC only)
felix	Felix OSGi Framework (shared

package)

#### 4.5.2 Imported interfaces

Interface: Image Packaging System (IPS)  
 Stability: Uncommitted  
 Exporting Project:  
<http://opensolaris.org/os/project/pkg/documents/pkgtasks/>  
 Comments: IPS is ported to non-Solaris platforms by Update

Center  
 2.0 project

Interface: Filesystem Layout for Unbundled Software  
 Stability: Committed  
 Exporting Project: WSARC 2006/239  
<http://sac.sfbay.sun.com/Archives/CaseLog/arc/WSARC/2006/239/>

final.m  
 aterials/FSL\_Unbundled\_v1.0.pdf  
 Comments: Only Sun internal link available at this time.

#### 4.6. Doc Impact:

This project impacts all product documentation since it defines product file layout and naming.

#### 4.7. Admin/Config Impact:

Project defines the location of product files, including those used for product configuration.

#### 4.8. HA Impact:

N/A

#### 4.9. I18N/L10N Impact:

Additional localized content will be delivered following Java and OSGi guidelines and locale specific files will be packaged into IPS packages which will be named according to the base package for English version and locale, i.e. <base package name>-<locale>.

#### 4.10. Packaging & Delivery:

The proposal itself defines product packaging and delivery.

#### 4.11. Security Impact:

Security considerations will be taken into account while specifying default file/directory access permissions.

#### 4.12. Compatibility Impact

Several file layout changes compared to previous major release (GlassFish v2):

- \* Standalone distributions contain glassfish subdirectory in order to comply with unbundled software file layout policy and enable integration with Update Center 2.0.

- \* Product libraries are moved from lib to modules subdirectory. This will be mitigated by providing "wrapper" jar files for javaee.jar, j2ee.jar and appserv-rt.jar in glassfish/lib directory in order to retain backward compatibility.

- \* Addition of felix directory as the result of Felix integration.

#### 4.13. Dependencies:

Proposal depends on the delivery of all GlassFish v3 Prelude release product components defined in IPS package interface and it is sensitive to changes in product content and OSGi bundling.

### 5. Reference Documents:

In addition to imported interface documents referenced in section 4.5.2. following documents are of interest:

\* OSGi Integration One-pager  
[http://wiki.glassfish.java.net/attach/V3FunctionalSpecs/  
GFv3Prelude-OSGi  
-onepager-v0.2.txt](http://wiki.glassfish.java.net/attach/V3FunctionalSpecs/GFv3Prelude-OSGi-onepager-v0.2.txt)

\* List of OSGi bundles and dependencies (snapshot)  
[https://glassfish.dev.java.net/servlets/GetAttachment?  
list=dev&msgId=170  
8016&attachId=1](https://glassfish.dev.java.net/servlets/GetAttachment?list=dev&msgId=1708016&attachId=1)

\* IPS Packaging Best Practices - guidelines on IPS package naming  
and  
versioning  
<http://wiki.updatecenter.java.net/Wiki.jsp?page=UC20.Docs.Packaging>

## 6. Schedule:

6.1. Projected Availability:  
October 2008