1. Introduction
    1.1. Project/Component Working Name:
        GlassFish v3 File Layout

    1.2. Name(s) and e-mail address of Document Author(s)/Supplier:
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    1.3. Date of This Document:
        12/01/2009

2. Project Summary
    2.1. Project Description:
        This project defines product file layout used to deliver the
content of
GlassFish v3 release as standalone product distribution.

    2.2. Risks and Assumptions:
        Projects assumes that other product features such as OSGi framework
integration are able to support file layout proposed in this specification
and
are also flexible enough to support file layout changes required for
alternative distributions such as native package based distributions.

3. Problem Summary
    3.1. Problem Area:
        GlassFish v3 release has to be delivered as standalone product
installation integrated into Update Center 2.x 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 is essential product interface.

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).

        Intent is to keep GlassFish implementation flexible enough to
allow for changes in file layout which would enable the delivery of other
distributions (see section 4.4 for more details) but only file layout for
standalone GlassFish distribution will be specified in this document.

4.2. Bug/RFE Number(s):
    N/A

4.3. In Scope:
    File layout for standalone IPS image based distributions of GlassFish
v3 release. This includes web profile distribution, full distribution and RI
distribution.

4.4. Out of Scope:
    File layout for any other distributions based on GlassFish v3 release
and file layout for additional product functionality delivered in subsequent
GlassFish v3 update releases. This includes potential delivery of GlassFish v3
in native package formats such as SVR4, RPM, Debian and bundling of GlassFish
into platform distributions based on such packaging formats. In those scenarios
GlassFish file layout will need to follow specific distribution file layout
rules and will be covered in separate specification documents as needed.

4.5. Interfaces:

    4.5.1 Exported Interfaces

        Interface: GlassFish v3 File Layout
        Stability: Uncommitted
        Former Stability (if changing): N/A
        Comments: Described in section 4.5.1.1

        Interface: asenv.[conf|bat] Configuration File
        Stability: Uncommitted
        Former Stability (if changing): N/A
        Comments: Described in section 4.5.1.2

        4.5.1.1 GlassFish v3 File Layout

        Default installation directories are:

        $HOME/glassfishv3 (non-Windows platforms)
        <system drive>:\glassfishv3 (Windows platforms)

        User can override default installation directories by providing
alternative value to installer or by extracting the zip distribution in
different location. Selected installation directory is referenced as

```
<install-dir> in the remainder of this document.

    File layout for standalone GlassFish v3 distributions:

    <install-dir>
        bin/          Wrappers/links to commonly used utilities
                      (asadmin, pkg, updatetool)

        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
                embedded/       Embedded shell jar files
                endorsed/       Endorsed jar files
                install/applications/   RA files, Admin GUI
                install/templates/ OS service and resource
templates
                monitor/        Monitoring (btrace) client jar
files
                registration/   Service tag registry
                schemas/        Schema files
                templates/      Template files
            modules/    Module libraries
                autostart/      Modules loaded by Felix fileinstall
                endorsed/       Endorsed 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
                    osgi-cache/
                        felix/          Felix cache directory
            legal/      Legal files (licenses, copyright)
            osgi/       OSGi framework files
                felix/              Felix OSGi framework
                    bin/
                    conf/
                equinox/
                    configuration/  Equinox (configuration
```

only)

javadb/   JavaDB

mq/   Message Queue (full distribution only)

pkg/   IPS CLI client

updatetool/   UC 2.x GUI client

.org.opensolaris,pkg/ IPS package database (hidden
directory)

4.5.1.2 asenv.[conf|bat] Configuration File

asenv file is configuration file containing installation locations
of
those components which are either delivered separately of GlassFish
distribution or can be expected to be installed outside of distribution
installation directory in the case of GlassFish distributions delivered in
OS
bundled scenario.

GlassFish should, however, continue to function for the default use
case where asenv file contains default values or relative locations and
GlassFish is delivered as zip archive distribution. In other use cases,
asenv
file will be updated with alternative values either as part of install time
configuration, or asenv file with prepopulated alternative values will be
shipped as part of particular distribution.

asenv file name/location:

<install-dir>/config/asenv.conf (non-Windows platforms)
<install-dir>\config\asenv.bat (Windows platforms)

asenv variables:

AS_INSTALL - defines GlassFish installation directory
AS_CONFIG - defines GlassFish configuration directory
AS_DEF_DOMAINS_PATH - defines GlassFish default domain configuration
directory;
override use case for standalone distribution is to enable proper
functioning
on Windows systems with enabled User Access Control feature
AS_DERBY_INSTALL - defines JavaDB installation directory
AS_IMQ_BIN - defines the location of MQ utilities
AS_IMQ_LIB - defines the location of MQ libraries

AS_JAVA - defines JDK installation directory; if undefined GlassFish falls back
on system environment variable PATH
FELIX_HOME - defines Felix installation directory; if undefined it falls back
on the default location glassfish/osgi/felix

        Default asenv.conf content:

AS_INSTALL=".."
AS_CONFIG="../config"
AS_DEF_DOMAINS_PATH="../domains"
AS_DERBY_INSTALL="../../javadb"
AS_IMQ_LIB="../../mq/lib"
AS_IMQ_BIN="../../mq/bin"

        Default asenv.bat content:

set AS_INSTALL=..
set AS_CONFIG=..\config
set AS_DEF_DOMAINS_PATH=..\domains
set AS_DERBY_INSTALL=..\..\javadb
set AS_IMQ_LIB=..\..\mq\lib
set AS_IMQ_BIN=..\..\mq\bin

        4.5.2 Imported interfaces

            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 its file layout will match the layout of corresponding base content.

4.10. Packaging & Delivery:

This feature will be delivered as part of standalone GlassFish v3 distributions.

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 dedicated legal directory for legal files (previously installed in top level product directory).
* Addition of osgi directory as the result of OSGi integration.
* Message Queue installed in top level director instead of being installed into subdirectory.
* JavaDB installed in top level directory instead of being installed
into subdirectory.

4.13. Dependencies:

Proposal depends on the delivery of all GlassFish v3 release product components and it is sensitive to changes in product content.

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/Wiki.jsp?page=V3FunctionalSpecs

6. Schedule:
    6.1. Projected Availability:
        December 2009