

Oracle WebLogic Server

The #1 Application Server for
Enterprise Java and SOA Developers



ORACLE®

WebLogic Server DEMO *Java EE Shared Libraries*

Jeffrey West
Application Grid Product Management



Agenda

- • Overview of Java EE Shared Libraries & ClassLoaders
- Demo of Configuring and using Shared Libraries
- Conclusion & WebLogic Resources

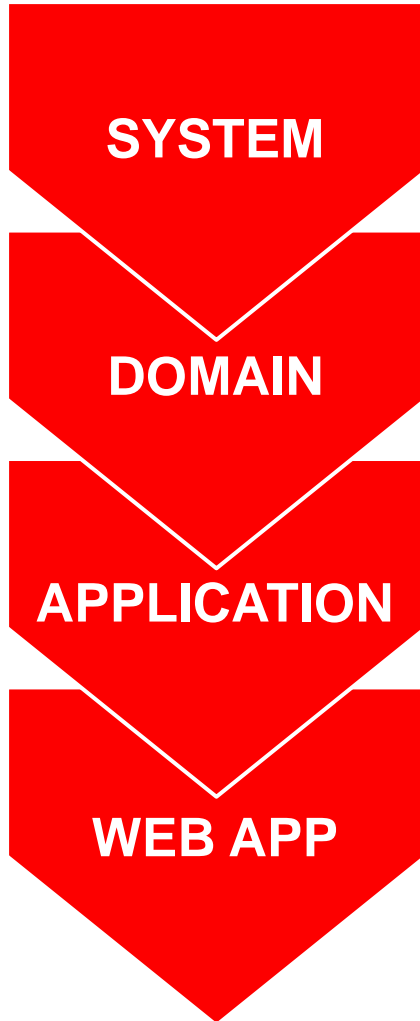
Library Packaging & Referencing/Linking

Enterprise Archives and Shared Libraries

- Packaging:
 - Include JAR files in WEB-INF/lib
 - Include EJB-JAR and WAR files in EAR
 - Include JAR files in APP-INF/lib
 - Or in <library-directory> specified in application.xml
- Referencing / Linking
 - Java EE Shared Libraries

WebLogic ClassLoader Hierarchy

Top-Down Class Loading (Default)



SYSTEM ClassLoader loads:

- WebLogic Implementation classes
- Classes on the System Classpath
- PRE_CLASSPATH and EXT_PRE_CLASSPATH

DOMAIN ClassLoader loads:

- Classes from <domain_dir>/lib

APPLICATION ClassLoader loads:

- Any Modules defined in the application
- Libraries from <EAR>/APP-INF/lib or other <library-directory>
- EE Shared Libraries referenced in weblogic-application.xml

WEB APP ClassLoader loads:

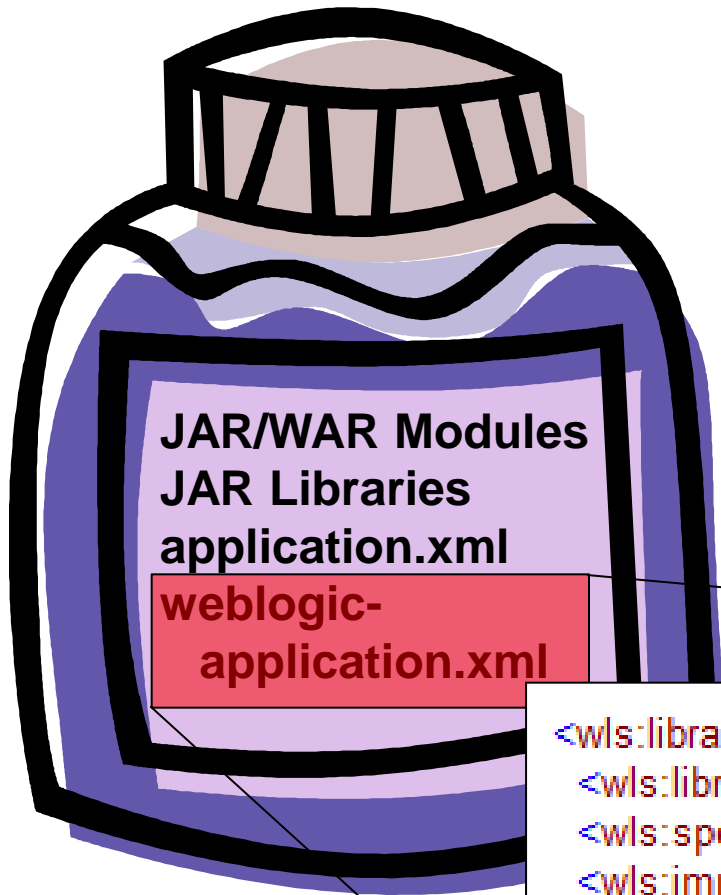
- EE Shared Libraries referenced in weblogic.xml
- WEB-INF/classes
- WEB-INF/lib
- Enables Servlets and JSPs to see EJB classes
- Enables redeployment of Web Apps w/o redeploying EJBs

Java EE Shared Libraries

- Libraries can be packaged as EAR, WAR or JAR files
- META-INF/MANIFEST.MF must contain:
 - Extension-Name
 - Implementation-Version
 - Specification-Version

```
1 Manifest-Version: 1.0
2 Archiver-Version: Plexus Archiver
3 Created-By: Apache Maven
4 Built-By: jeffrey.a.west
5 Build-Jdk: 1.6.0_21
6 Extension-Name: ops-util
7 Implementation-Title: Oracle Parcel Service 2.0 Utils Library
8 Implementation-Vendor: Oracle
9 Implementation-Vendor-Id: com.oracle
10 Implementation-Version: 2.0.2
11 Specification-Title: Oracle Parcel Service 2.0 Utils Library
12 Specification-Vendor: Oracle
13 Specification-Version: 2.0
14
```

Java EE Shared Libraries



Referencing Application uses Deployment Descriptors to link the shared libraries to the application at deployment time

```
<wls:library-ref>  
  <wls:library-name>ops-util</wls:library-name>  
  <wls:specification-version>2.0</wls:specification-version>  
  <wls:implementation-version>2.0.1</wls:implementation-version>  
  <wls:exact-match>>false</wls:exact-match>  
</wls:library-ref>
```

DEMO

Find us Online!



www.oracle.com/technetwork/middleware/weblogic



www.YouTube.com/OracleWebLogic



Give us feedback! [@OracleWebLogic](https://twitter.com/OracleWebLogic)

www.twitter.com/OracleWebLogic



www.facebook.com/OracleWebLogic