

Elements of the GlassFish Server Deployment Descriptors

This appendix describes the elements of the Oracle GlassFish Server deployment descriptors.

activation-config

Specifies an activation configuration, which includes the runtime configuration properties of the message-driven bean in its operational environment. For example, this can include information about the name of a physical JMS destination. Matches and overrides the activation-config element in the ejb-jar.xml file.

Superelements

“[mdb-resource-adapter](#)” on page 197 (glassfish-ejb-jar.xml)

Subelements

The following table describes subelements for the activation-config element.

TABLE C-1 activation-config subelements

Element	Required	Description
“ description ” on page 143	zero or one	Specifies a text description of the activation configuration.
“ activation-config-property ” on page 104	one or more	Specifies an activation configuration property.

activation-config-property

Specifies the name and value of an activation configuration property.

Superelements

[“activation-config” on page 103](#) (glassfish-ejb-jar.xml)

Subelements

The following table describes subelements for the activation-config-property element.

TABLE C-2 activation-config-property subelements

Element	Required	Description
“activation-config-property-name” on page 104	only one	Specifies the name of an activation configuration property.
“activation-config-property-value” on page 105	only one	Specifies the value of an activation configuration property.

activation-config-property-name

Specifies the name of an activation configuration property.

Superelements

[“activation-config-property” on page 104](#) (glassfish-ejb-jar.xml)

Subelements

none - contains data

activation-config-property-value

Specifies the value of an activation configuration property.

Superelements

[“activation-config-property” on page 104](#) (glassfish-ejb-jar.xml)

Subelements

none - contains data

admin-object-resource

Defines an administered object for an inbound resource adapter.

Superelements

[“resources” on page 230](#) (glassfish-resources.xml)

Subelements

The following table describes subelements for the admin-object-resource element.

TABLE C-3 admin-object-resource Subelements

Element	Required	Description
“description” on page 143	zero or one	Contains a text description of this element.
“property (with attributes)” on page 215	zero or more	Specifies a property or a variable.

Attributes

The following table describes attributes for the admin-object-resource element.

TABLE C-4 admin-object-resource Attributes

Attribute	Default	Description
jndi-name	none	Specifies the JNDI name for the resource.
res-type	none	Specifies the fully qualified type of the resource.
res-adapter	none	Specifies the name of the inbound resource adapter.
object-type	user	(optional) Defines the type of the resource. Allowed values are: <ul style="list-style-type: none"> ▪ system-all - A system resource for all server instances and the domain application server. ▪ system-admin - A system resource only for the domain application server. ▪ system-instance - A system resource for all server instances only. ▪ user - A user resource.
enabled	true	(optional) Determines whether this resource is enabled at runtime.

Properties

Properties of the `admin-object-resource` element are the names of setter methods of the class referenced by the `adminobject-class` of the `ra.xml` file. Some of the property names can be specified in the `adminobjectType` element.

as-context

Specifies the authentication mechanism used to authenticate the client.

Superelements

[“ior-security-config” on page 168](#) (`glassfish-ear-jar.xml`)

Subelements

The following table describes subelements for the `as-context` element.

TABLE C-5 as-context Subelements

Element	Required	Description
“auth-method” on page 107	only one	Specifies the authentication method. The only supported value is <code>USERNAME_PASSWORD</code> .
“realm” on page 220	only one	Specifies the realm in which the user is authenticated.

TABLE C-5 as-context Subelements (Continued)

Element	Required	Description
“required” on page 224	only one	Specifies whether the authentication method specified in the auth-method element must be used for client authentication.

archive-name

Specifies the name of the archive file. The value of the archive-name element is used to derive the default application name when display-name is not present in the application.xml file. The default application name is the archive-name value minus the file extension. For example, if archive-name is foo.ear, the default application name is foo.

Superelements

[“glassfish-application” on page 158](#) (glassfish-application.xml)

Subelements

none – contains data

auth-method

Specifies the authentication method.

If the parent element is [“as-context” on page 106](#), the only supported value is USERNAME_PASSWORD.

If the parent element is [“login-config” on page 191](#), specifies the authentication mechanism for the web service endpoint. As a prerequisite to gaining access to any web resources protected by an authorization constraint, a user must be authenticated using the configured mechanism.

Superelements

[“login-config” on page 191](#) (glassfish-web.xml), [“as-context” on page 106](#) (glassfish-ejb-jar.xml)

Subelements

none - contains data

auth-realm

JAAS is available on the ACC. Defines the optional configuration for a JAAS authentication realm. Authentication realms require provider-specific properties, which vary depending on what a particular implementation needs. For more information about how to define realms, see “[Realm Configuration](#)” in *Oracle GlassFish Server 3.0.1 Application Development Guide*.

Superelements

“[client-container](#)” on page 121 (sun-acc.xml)

Subelements

The following table describes subelements for the auth-realm element.

TABLE C-6 auth-realm subelement

Element	Required	Description
“ property (with attributes) ” on page 215	zero or more	Specifies a property, which has a name and a value.

Attributes

The following table describes attributes for the auth-realm element.

TABLE C-7 auth-realm attributes

Attribute	Default	Description
name	none	Defines the name of this realm.
classname	none	Defines the Java class which implements this realm.

Example

Here is an example of the default file realm:

```
<auth-realm name="file"
  classname="com.sun.enterprise.security.auth.realm.file.FileRealm">
  <property name="file" value="domain-dir/config/keyfile"/>
  <property name="jaas-context" value="fileRealm"/>
</auth-realm>
```

Which properties an `auth-realm` element uses depends on the value of the `auth-realm` element's name attribute. The `file` realm uses `file` and `jaas-context` properties. Other realms use different properties. See [“Realm Configuration”](#) in *Oracle GlassFish Server 3.0.1 Application Development Guide*.

backend-principal

Specifies the user name and password required by the Enterprise Information System (EIS).

Superelements

[“security-map”](#) on page 236 (`glassfish-resources.xml`)

Subelements

none

Attributes

The following table describes attributes for the `backend-principal` element.

TABLE C-8 backend-principal Attributes

Attribute	Default	Description
<code>user-name</code>	none	Specifies the user name required by the EIS.
<code>password</code>	none	(optional) Specifies the password required by the EIS, if any.

bean-cache

Specifies the entity bean cache properties. Used for entity beans and stateful session beans.

Superelements

[“ejb”](#) on page 145 (`glassfish-ejb-jar.xml`)

Subelements

The following table describes subelements for the `bean-cache` element.

TABLE C-9 bean-cache Subelements

Element	Required	Description
“max-cache-size” on page 196	zero or one	Specifies the maximum number of beans allowable in cache.
“is-cache-overflow-allowed” on page 169	zero or one	Deprecated.
“cache-idle-timeout-in-seconds” on page 114	zero or one	Specifies the maximum time that a stateful session bean or entity bean is allowed to be idle in cache before being passivated. Default value is 10 minutes (600 seconds).
“removal-timeout-in-seconds” on page 222	zero or one	Specifies the amount of time a bean remains before being removed. If <code>removal-timeout-in-seconds</code> is less than <code>idle-timeout</code> , the bean is removed without being passivated.
“resize-quantity” on page 225	zero or one	Specifies the number of beans to be created if the pool is empty (subject to the <code>max-pool-size</code> limit). Values are from 0 to <code>MAX_INTEGER</code> .
“victim-selection-policy” on page 257	zero or one	Specifies the algorithm that must be used by the container to pick victims. Applies only to stateful session beans.

Example

```
<bean-cache>
  <max-cache-size>100</max-cache-size>
  <cache-resize-quantity>10</cache-resize-quantity>
  <removal-timeout-in-seconds>3600</removal-timeout-in-seconds>
  <victim-selection-policy>LRU</victim-selection-policy>
  <cache-idle-timeout-in-seconds>600</cache-idle-timeout-in-seconds>
  <removal-timeout-in-seconds>5400</removal-timeout-in-seconds>
</bean-cache>
```

bean-pool

Specifies the pool properties of stateless session beans, entity beans, and message-driven bean.

Superelements

[“ejb” on page 145](#) (glassfish-`ejb-jar.xml`)

Subelements

The following table describes subelements for the `bean-pool` element.

TABLE C-10 bean-pool Subelements

Element	Required	Description
“steady-pool-size” on page 245	zero or one	Specifies the initial and minimum number of beans maintained in the pool. Default is 32.
“resize-quantity” on page 225	zero or one	Specifies the number of beans to be created if the pool is empty (subject to the max-pool-size limit). Values are from 0 to MAX_INTEGER.
“max-pool-size” on page 196	zero or one	Specifies the maximum number of beans in the pool. Values are from 0 to MAX_INTEGER. Default is to the EJB container value or 60.
“max-wait-time-in-millis” on page 197	zero or one	Deprecated.
“pool-idle-timeout-in-seconds” on page 211	zero or one	Specifies the maximum time that a bean is allowed to be idle in the pool. After this time, the bean is removed. This is a hint to the server. Default time is 600 seconds (10 minutes).

Example

```
<bean-pool>
  <steady-pool-size>10</steady-pool-size>
  <resize-quantity>10</resize-quantity>
  <max-pool-size>100</max-pool-size>
  <pool-idle-timeout-in-seconds>600</pool-idle-timeout-in-seconds>
</bean-pool>
```

cache

Configures caching for web application components.

Superelements

[“glassfish-web-app” on page 161](#) (glassfish-web.xml)

Subelements

The following table describes subelements for the cache element.

TABLE C-11 cache Subelements

Element	Required	Description
“cache-helper” on page 113	zero or more	Specifies a custom class that implements the CacheHelper interface.

TABLE C-11 cache Subelements *(Continued)*

Element	Required	Description
“default-helper” on page 141	zero or one	Allows you to change the properties of the default, built-in “cache-helper” on page 113 class.
“property (with attributes)” on page 215	zero or more	Specifies a cache property, which has a name and a value.
“cache-mapping” on page 115	zero or more	Maps a URL pattern or a servlet name to its cacheability constraints.

Attributes

The following table describes attributes for the cache element.

TABLE C-12 cache Attributes

Attribute	Default	Description
max-entries	4096	(optional) Specifies the maximum number of entries the cache can contain. Must be a positive integer.
timeout-in-seconds	30	(optional) Specifies the maximum amount of time in seconds that an entry can remain in the cache after it is created or refreshed. Can be overridden by a “timeout” on page 251 element.
enabled	true	(optional) Determines whether servlet and JSP caching is enabled.

Properties

The following table describes properties for the cache element.

TABLE C-13 cache Properties

Property	Default	Description
cacheClassName	com.sun.appserv.web.cache.LruCache	Specifies the fully qualified name of the class that implements the cache functionality. See “Cache Class Names” on page 113 for possible values.
MultiLRUSegmentSize	4096	Specifies the number of entries in a segment of the cache table that should have its own LRU (least recently used) list. Applicable only if cacheClassName is set to com.sun.appserv.web.cache.MultiLruCache.
MaxSize	unlimited; Long.MAX_VALUE	Specifies an upper bound on the cache memory size in bytes (KB or MB units). Example values are 32 KB or 2 MB. Applicable only if cacheClassName is set to com.sun.appserv.web.cache.BoundedMultiLruCache.

Cache Class Names

The following table lists possible values of the `cacheClassName` property.

TABLE C-14 `cacheClassName` Values

Value	Description
<code>com.sun.appserv.web.cache.LruCache</code>	A bounded cache with an LRU (least recently used) cache replacement policy.
<code>com.sun.appserv.web.cache.BaseCache</code>	An unbounded cache suitable if the maximum number of entries is known.
<code>com.sun.appserv.web.cache.MultiLruCache</code>	A cache suitable for a large number of entries (>4096). Uses the <code>MultiLRUSegmentSize</code> property.
<code>com.sun.appserv.web.cache.BoundedMultiLruCache</code>	A cache suitable for limiting the cache size by memory rather than number of entries. Uses the <code>MaxSize</code> property.

cache-helper

Specifies a class that implements the `com.sun.appserv.web.cache.CacheHelper` interface.

Superelements

[“cache” on page 111](#) (`glassfish-web.xml`)

Subelements

The following table describes subelements for the `cache-helper` element.

TABLE C-15 `cache-helper` Subelements

Element	Required	Description
“property (with attributes)” on page 215	zero or more	Specifies a property, which has a name and a value.

Attributes

The following table describes attributes for the `cache-helper` element.

TABLE C-16 cache-helper Attributes

Attribute	Default	Description
name	default	Specifies a unique name for the helper class, which is referenced in the “ cache-mapping ” on page 115 element.
class-name	none	Specifies the fully qualified class name of the cache helper, which must implement the <code>com.sun.appserv.web.CacheHelper</code> interface.

cache-helper-ref

Specifies the name of the “[cache-helper](#)” on [page 113](#) used by the parent “[cache-mapping](#)” on [page 115](#) element.

Superelements

“[cache-mapping](#)” on [page 115](#) (`glassfish-web.xml`)

Subelements

none - contains data

cache-idle-timeout-in-seconds

Specifies the maximum time that a bean can remain idle in the cache. After this amount of time, the container can passivate this bean. A value of 0 specifies that beans never become candidates for passivation. Default is 600.

Applies to stateful session beans and entity beans.

Superelements

“[bean-cache](#)” on [page 109](#) (`glassfish-ejb-jar.xml`)

Subelements

none - contains data

cache-mapping

Maps a URL pattern or a servlet name to its cacheability constraints.

Superelements

[“cache” on page 111](#) (glassfish-web.xml)

Subelements

The following table describes subelements for the cache-mapping element.

TABLE C-17 cache-mapping Subelements

Element	Required	Description
“servlet-name” on page 241	requires one servlet-name or url-pattern	Contains the name of a servlet.
“url-pattern” on page 253	requires one servlet-name or url-pattern	Contains a servlet URL pattern for which caching is enabled.
“cache-helper-ref” on page 114	required if dispatcher, timeout, refresh-field, http-method, key-field, and constraint-field are not used	Contains the name of the “cache-helper” on page 113 used by the parent cache-mapping element.
“dispatcher” on page 144	zero or one if cache-helper-ref is not used	Contains a comma-separated list of RequestDispatcher methods for which caching is enabled.
“timeout” on page 251	zero or one if cache-helper-ref is not used	Contains the “cache-mapping” on page 115 specific maximum amount of time in seconds that an entry can remain in the cache after it is created or refreshed.
“refresh-field” on page 221	zero or one if cache-helper-ref is not used	Specifies a field that gives the application component a programmatic way to refresh a cached entry.
“http-method” on page 167	zero or more if cache-helper-ref is not used	Contains an HTTP method that is eligible for caching.
“key-field” on page 185	zero or more if cache-helper-ref is not used	Specifies a component of the key used to look up and extract cache entries.
“constraint-field” on page 135	zero or more if cache-helper-ref is not used	Specifies a cacheability constraint for the given url-pattern or servlet-name.

call-property

Specifies JAX-RPC property values that can be set on a `javax.xml.rpc.Call` object before it is returned to the web service client. The property names can be any properties supported by the JAX-RPC `Call` implementation.

Superelements

[“port-info” on page 212](#), [“service-ref” on page 239](#) (`glassfish-web.xml`, `glassfish-ejb-jar.xml`, `glassfish-application-client.xml`)

Subelements

The following table describes subelements for the `call-property` element.

TABLE C-18 `call-property` subelements

Element	Required	Description
“name” on page 206	only one	Specifies the name of the entity.
“value” on page 254	only one	Specifies the value of the entity.

caller-propagation

Specifies whether the target accepts propagated caller identities. The values are `NONE`, `SUPPORTED`, or `REQUIRED`.

Superelements

[“sas-context” on page 233](#) (`glassfish-ejb-jar.xml`)

Subelements

none - contains data

cert-db

Not implemented. Included for backward compatibility only. Attribute values are ignored.

Superelements

[“security” on page 236](#) (sun-acc.xml)

Subelements

none

Attributes

The following table describes attributes for the cert - db element.

TABLEC-19 cert-db attributes

Attribute	Default	Description
path	none	Specifies the absolute path of the certificate database.
password	none	Specifies the password to access the certificate database.

check-all-at-commit

This element is not implemented. Do not use.

Superelements

[“consistency” on page 134](#) (sun-cmp-mappings.xml)

check-modified-at-commit

Checks concurrent modification of fields in modified beans at commit time.

Superelements

[“consistency” on page 134](#) (sun-cmp-mappings.xml)

Subelements

none - element is present or absent

check-version-of-accessed-instances

Checks the version column of the modified beans.

Version consistency allows the bean state to be cached between transactions instead of read from a database. The bean state is verified by primary key and version column values. This occurs during a custom query (for dirty instances only) or commit (for both clean and dirty instances).

The version column must be a numeric type, and must be in the primary table. You must provide appropriate update triggers for this column.

Superelements

[“consistency” on page 134](#) (sun-cmp-mappings.xml)

Subelements

The following table describes subelements for the check-version-of-accessed-instances element.

TABLE C-20 check-version-of-accessed-instances Subelements

Element	Required	Description
“column-name” on page 127	only one	Specifies the name of the version column.

checkpoint-at-end-of-method

Specifies that the stateful session bean state is checkpointed, or persisted, after the specified methods are executed. The `availability-enabled` attribute of the parent [“ejb” on page 145](#) element must be set to `true`.

Superelements

[“ejb” on page 145](#) (`glassfish-ejb-jar.xml`)

Subelements

The following table describes subelements for the `checkpoint-at-end-of-method` element.

TABLE C-21 `checkpoint-at-end-of-method` Subelements

Element	Required	Description
“method” on page 203	one or more	Specifies a bean method.

checkpointed-methods

Deprecated. Supported for backward compatibility. Use [“checkpoint-at-end-of-method” on page 119](#) instead.

Superelements

[“ejb” on page 145](#) (`glassfish-ejb-jar.xml`)

class-loader

Configures the class loader for the web module.

Superelements

[“glassfish-web-app” on page 161](#) (`glassfish-web.xml`)

Subelements

The following table describes subelements for the `class-loader` element.

TABLE C-22 class-loader Subelements

Element	Required	Description
“property (with attributes)” on page 215	zero or more	Specifies a property, which has a name and a value.

Attributes

The following table describes attributes for the `class-loader` element.

TABLE C-23 class-loader Attributes

Attribute	Default	Description
<code>extra-class-path</code>	<code>null</code>	(optional) Specifies a colon or semicolon separated list of additional classpaths for this web module. Paths can be absolute or relative to the web module's root, for example: <code>extra-class-path="WEB-INF/lib/extra/extra.jar"</code>
<code>delegate</code>	<code>true</code>	(optional) If <code>true</code> , the web module follows the standard class loader delegation model and delegates to its parent class loader first before looking in the local class loader. You must set this to <code>true</code> for a web module that accesses EJB components or that acts as a web service client or endpoint. If <code>false</code> , the web module follows the delegation model specified in the Servlet specification and looks in its class loader before looking in the parent class loader. It's safe to set this to <code>false</code> only for a web module that does not interact with any other modules. For a number of packages, including <code>java.*</code> and <code>javax.*</code> , symbol resolution is always delegated to the parent class loader regardless of the <code>delegate</code> setting. This prevents applications from overriding core Java runtime classes or changing the API versions of specifications that are part of the Java EE platform.
<code>dynamic-reload-interval</code>		(optional) Not implemented. Included for backward compatibility with previous Oracle Web Server versions.

Note – If the `delegate` attribute is set to `false`, the class loader delegation behavior complies with the Servlet 2.4 specification, section 9.7.2. If set to its default value of `true`, classes and resources residing in container-wide library JAR files are loaded in preference to classes and resources packaged within the WAR file.

Portable programs that use this element should not be packaged with any classes or interfaces that are a part of the Java EE specification. The behavior of a program that includes such classes or interfaces in its WAR file is undefined.

Properties

The following table describes properties for the `class-loader` element.

TABLE C-24 `class-loader` Properties

Property	Default	Description
<code>ignoreHiddenJarFiles</code>	false	If true, specifies that all JAR and ZIP files in the <code>WEB-INF/lib</code> directory that start with a period (.) are ignored by the class loader.

client-container

Defines the GlassFish Server specific configuration for the application client container. This is the root element; there can only be one `client-container` element in a `sun-acc.xml` file. See “The `sun-acc.xml` File” on page 97.

Superelements

none

Subelements

The following table describes subelements for the `client-container` element.

TABLE C-25 `client-container` Subelements

Element	Required	Description
“ <code>target-server</code> ” on page 249	one or more	Specifies the IIOP listener for the target server. Also specifies IIOP endpoints used for load balancing. If the GlassFish Server instance on which the application client is deployed participates in a cluster, GlassFish Server finds all currently active IIOP endpoints in the cluster automatically. However, a client should have at least two endpoints specified for bootstrapping purposes, in case one of the endpoints has failed. A listener or endpoint is in the form <code>host:port</code> , where the <code>host</code> is an IP address or host name, and the <code>port</code> specifies the port number.
“ <code>auth-realm</code> ” on page 108	zero or one	Specifies the optional configuration for JAAS authentication realm.
“ <code>client-credential</code> ” on page 122	zero or one	Specifies the default client credential that is sent to the server.
“ <code>log-service</code> ” on page 190	zero or one	Specifies the default log file and the severity level of the message.
“ <code>message-security-config</code> ” on page 202	zero or more	Specifies configurations for message security providers.

TABLE C-25 client-container Subelements (Continued)

Element	Required	Description
“property (with attributes)” on page 215	zero or more	Specifies a property, which has a name and a value.

Attributes

The following table describes attributes for the `client-container` element.

TABLE C-26 client-container Attributes

Attribute	Default	Description
<code>send-password</code>	<code>true</code>	If <code>true</code> , specifies that client authentication credentials must be sent to the server. Without authentication credentials, all access to protected EJB components results in exceptions.

Properties

The following table describes properties for the `client-container` element.

TABLE C-27 client-container Properties

Property	Default	Description
<code>com.sun.appserv.iiop.endpoints</code>	<code>none</code>	Specifies a comma-separated list of one or more IIOP endpoints used for load balancing. An IIOP endpoint is in the form <code>host:port</code> , where the <code>host</code> is an IP address or host name, and the <code>port</code> specifies the port number. Deprecated. Use “target-server” on page 249 elements instead.

client-credential

Default client credentials that are sent to the server. If this element is present, the credentials are automatically sent to the server, without prompting the user for the user name and password on the client side.

Superelements

[“client-container” on page 121](#) (`sun-acc.xml`)

Subelements

The following table describes subelements for the `client-credential` element.

TABLE C-28 client-credential subelement

Element	Required	Description
“property (with attributes)” on page 215	zero or more	Specifies a property, which has a name and a value.

Attributes

The following table describes attributes for the `client-credential` element.

TABLE C-29 client-credential attributes

Attribute	Default	Description
<code>user-name</code>	none	The user name used to authenticate the Application client container.
<code>password</code>	none	The password used to authenticate the Application client container.
<code>realm</code>	default realm for the domain	(optional) The realm (specified by name) where credentials are to be resolved.

cmp

Describes runtime information for a CMP entity bean object for EJB 1.1 and EJB 2.1 beans.

Superelements

[“ejb” on page 145](#) (`glassfish-ejb-jar.xml`)

Subelements

The following table describes subelements for the `cmp` element.

TABLE C-30 cmp Subelements

Element	Required	Description
“mapping-properties” on page 195	zero or one	This element is not implemented.
“is-one-one-cmp” on page 169	zero or one	This element is not implemented.
“one-one-finders” on page 207	zero or one	Describes the finders for CMP 1.1 beans.
“prefetch-disabled” on page 213	zero or one	Disables prefetching of entity bean states for the specified query methods.

cmp-field-mapping

The `cmp-field-mapping` element associates a field with one or more columns to which it maps. The column can be from a bean's primary table or any defined secondary table. If a field is mapped to multiple columns, the column listed first in this element is used as a source for getting the value from the database. The columns are updated in the order they appear. There is one `cmp-field-mapping` element for each `cmp-field` element defined in the `ejb-jar.xml` file.

Superelements

[“entity-mapping” on page 152](#) (`sun-cmp-mappings.xml`)

Subelements

The following table describes subelements for the `cmp-field-mapping` element.

TABLE C-31 `cmp-field-mapping` Subelements

Element	Required	Description
“field-name” on page 156	only one	Specifies the Java identifier of a field. This identifier must match the value of the <code>field-name</code> subelement of the <code>cmp-field</code> that is being mapped.
“column-name” on page 127	one or more	Specifies the name of a column from the primary table, or the qualified table name (TABLE.COLUMN) of a column from a secondary or related table.
“read-only” on page 220	zero or one	Specifies that a field is read-only.
“fetched-with” on page 154	zero or one	Specifies the fetch group for this CMP field's mapping.

cmp-resource

Specifies the database to be used for storing CMP beans. For more information about this element, see [“Configuring the CMP Resource” in Oracle GlassFish Server 3.0.1 Application Development Guide](#).

Superelements

[“enterprise-beans” on page 151](#) (`glassfish-ejb-jar.xml`)

Subelements

The following table describes subelements for the `cmp-resource` element.

TABLE C-32 cmp-resource Subelements

Element	Required	Description
“jndi-name” on page 180	only one	Specifies the absolute jndi-name of a JDBC resource.
“default-resource-principal” on page 142	zero or one	Specifies the default runtime bindings of a resource reference.
“property (with subelements)” on page 216	zero or more	Specifies a property name and value. Used to configure PersistenceManagerFactory properties.
“create-tables-at-deploy” on page 139	zero or one	If true, specifies that database tables are created for beans that are automatically mapped by the EJB container.
“drop-tables-at-undeploy” on page 144	zero or one	If true, specifies that database tables that were automatically created when the bean(s) were last deployed are dropped when the bean(s) are undeployed.
“database-vendor-name” on page 140	zero or one	Specifies the name of the database vendor for which tables can be created.
“schema-generator-properties” on page 234	zero or one	Specifies field-specific type mappings and allows you to set the use-unique-table-names property.

cmr-field-mapping

A container-managed relationship field has a name and one or more column pairs that define the relationship. There is one `cmr-field-mapping` element for each `cmr-field` element in the `ejb-jar.xml` file. A relationship can also participate in a fetch group.

Superelements

[“entity-mapping” on page 152](#) (`sun-cmp-mappings.xml`)

Subelements

The following table describes subelements for the `cmr-field-mapping` element.

TABLE C-33 cmr-field-mapping Subelements

Element	Required	Description
“cmr-field-name” on page 126	only one	Specifies the Java identifier of a field. Must match the value of the <code>cmr-field-name</code> subelement of the <code>cmr-field</code> that is being mapped.
“column-pair” on page 127	one or more	Specifies the pair of columns that determine the relationship between two database tables.

TABLE C-33 cmr-field-mapping Subelements (Continued)

Element	Required	Description
“fetched-with” on page 154	zero or one	Specifies the fetch group for this CMR field’s relationship.

cmr-field-name

Specifies the Java identifier of a field. Must match the value of the `cmr-field-name` subelement of the `cmr-field` element in the `ejb-jar.xml` file.

Superelements

[“cmr-field-mapping” on page 125](#) (`sun-cmp-mappings.xml`)

Subelements

none - contains data

cmt-timeout-in-seconds

Overrides the Transaction Timeout setting of the Transaction Service for an individual bean. The default value, `0`, specifies that the default Transaction Service timeout is used. If positive, this value is used for all methods in the bean that start a new container-managed transaction. This value is *not* used if the bean joins a client transaction.

Superelements

[“ejb” on page 145](#) (`glassfish-ejb-jar.xml`)

Subelements

none - contains data

column-name

Specifies the name of a column from the primary table, or the qualified table name (TABLE.COLUMN) of a column from a secondary or related table.

Superelements

[“check-version-of-accessed-instances” on page 118](#), [“cmp-field-mapping” on page 124](#), [“column-pair” on page 127](#) (sun-cmp-mappings.xml)

Subelements

none - contains data

column-pair

Specifies the pair of columns that determine the relationship between two database tables. Each column-pair must contain exactly two column-name subelements, which specify the column’s names. The first column-name element names the table that this bean is mapped to, and the second column-name names the column in the related table.

Superelements

[“cmr-field-mapping” on page 125](#), [“secondary-table” on page 235](#) (sun-cmp-mappings.xml)

Subelements

The following table describes subelements for the column-pair element.

TABLE C-34 column-pair Subelements

Element	Required	Description
“column-name” on page 127	two	Specifies the name of a column from the primary table, or the qualified table name (TABLE.COLUMN) of a column from a secondary or related table.

commit-option

Specifies the commit option used on transaction completion. Valid values for GlassFish Server are B or C. Default value is B. Applies to entity beans.

Note – Commit option A is not supported for this GlassFish Server release.

Superelements

[“ejb” on page 145](#) (glassfish-ejb-jar.xml)

Subelements

none - contains data

compatibility

Specifies the GlassFish Server release with which to be backward compatible in terms of JAR visibility requirements for applications. The current allowed value is v2, which refers to GlassFish Server version 2 or GlassFish Server version 9.1 or 9.1.1. The Java EE 6 platform specification imposes stricter requirements than Java EE 5 did on which JAR files can be visible to various modules within an EAR file. Setting this element to v2 removes these Java EE 6 restrictions.

Superelements

[“glassfish-application” on page 158](#) (glassfish-application.xml),
[“glassfish-ejb-jar” on page 160](#) (glassfish-ejb-jar.xml)

Subelements

none – contains data

confidentiality

Specifies if the target supports privacy-protected messages. The values are NONE, SUPPORTED, or REQUIRED.

Superelements

[“transport-config” on page 251](#) (glassfish-ejb-jar.xml)

Subelements

none - contains data

connector-connection-pool

Defines a connector connection pool.

Superelements

[“resources” on page 230](#) (glassfish-resources.xml)

Subelements

The following table describes subelements for the connector-connection-pool element.

TABLE C-35 connector-connection-pool Subelements

Element	Required	Description
“description” on page 143	zero or one	Contains a text description of this element.
“security-map” on page 236	zero or more	Maps the principal received during servlet or EJB authentication to the credentials accepted by the EIS.
“property (with attributes)” on page 215	zero or more	Specifies a property or a variable.

Attributes

The following table describes attributes for the `connector-connection-pool` element. Changing the following attributes requires a server restart: `resource-adapter-name`, `connection-definition-name`, `transaction-support`, `associate-with-thread`, `lazy-connection-association`, and `lazy-connection-enlistment`.

TABLE C-36 `connector-connection-pool` Attributes

Attribute	Default	Description
<code>name</code>	none	Specifies the name of the connection pool. A “ <code>connector-resource</code> ” on page 133 element’s <code>pool-name</code> attribute refers to this name.
<code>resource-adapter-name</code>	none	Specifies the name of the deployed connector module or application. If no name is specified during deployment, the name of the <code>.rar</code> file is used. If the resource adapter is embedded in an application, then it is <code>app_name#rar_name</code> .
<code>connection-definition-name</code>	none	Specifies a unique name, identifying a resource adapter’s <code>connection-definition</code> element in the <code>ra.xml</code> file. This is usually the <code>connectionfactory-interface</code> of the <code>connection-definition</code> element.
<code>steady-pool-size</code>	8	(optional) Specifies the initial and minimum number of connections maintained in the pool.
<code>max-pool-size</code>	32	(optional) Specifies the maximum number of connections that can be created to satisfy client requests.
<code>max-wait-time-in-millis</code>	60000	(optional) Specifies the amount of time, in milliseconds, that the caller is willing to wait for a connection. If 0, the caller is blocked indefinitely until a resource is available or an error occurs.
<code>pool-resize-quantity</code>	2	(optional) Specifies the number of idle connections to be destroyed if the existing number of connections is above the <code>steady-pool-size</code> (subject to the <code>max-pool-size</code> limit). This is enforced periodically at the <code>idle-timeout-in-seconds</code> interval. An idle connection is one that has not been used for a period of <code>idle-timeout-in-seconds</code> . When the pool size reaches <code>steady-pool-size</code> , connection removal stops.
<code>idle-timeout-in-seconds</code>	300	(optional) Specifies the maximum time that a connection can remain idle in the pool. After this amount of time, the pool can close this connection.
<code>fail-all-connections</code>	false	(optional) If true, closes all connections in the pool if a single validation check fails.
<code>transaction-support</code>	none	(optional) Specifies the transaction support for this connection pool. Overrides the transaction support defined in the resource adapter in a downward compatible way: supports a transaction level lower than or equal to the resource adapter’s, but not higher. Allowed values in descending order are: <ul style="list-style-type: none"> ■ <code>XATransaction</code> - Supports distributed transactions. ■ <code>LocalTransaction</code> - Supports local transactions only. ■ <code>NoTransaction</code> - No transaction support.

TABLE C-36 connector-connection-pool Attributes (Continued)

Attribute	Default	Description
is-connection-validation-required	false	(optional) Specifies whether connections have to be validated before being given to the application. If a resource's validation fails, it is destroyed, and a new resource is created and returned.
validate-atmost-once-period-in-seconds	0	Specifies the time interval within which a connection is validated at most once. Minimizes the number of validation calls. A value of zero allows unlimited validation calls.
connection-leak-timeout-in-seconds	0	Detects potential connection leaks by the application. A connection that is not returned back to the pool by the application within the specified period is assumed to be potentially leaking, and a stack trace of the caller is logged. A zero value disables leak detection. A nonzero value enables leak tracing.
connection-leak-reclaim	false	If true, the pool will reclaim a connection after connection-leak-timeout-in-seconds occurs.
connection-creation-retry-attempts	0	Specifies the number of attempts to create a new connection.
connection-creation-retry-interval-in-seconds	10	Specifies the time interval between attempts to create a connection when connection-creation-retry-attempts is greater than 0.
lazy-connection-enlistment	false	If true, a connection is not enlisted in a transaction until it is used. If false, any connection object available to a transaction is enlisted in the transaction.
lazy-connection-association	false	If true, a physical connection is not associated with a logical connection until it is used. If false, a physical connection is associated with a logical connection even before it is used.
associate-with-thread	false	<p>If true, allows connections to be saved as ThreadLocal in the calling thread. Connections get reclaimed only when the calling thread dies or when the calling thread is not in use and the pool has run out of connections. If false, the thread must obtain a connection from the pool each time the thread requires a connection.</p> <p>This attribute associates connections with a thread such that when the same thread is in need of connections, it can reuse the connections already associated with that thread. In this case, the overhead of getting connections from the pool is avoided. However, when this value is set to true, you should verify that the value of the max-pool-size attribute is comparable to the max-thread-pool-size attribute of the associated thread pool. If the max-thread-pool-size value is much higher than the max-pool-size value, a lot of time is spent associating connections with a new thread after dissociating them from an older one. Use this attribute in cases where the thread pool should reuse connections to avoid this overhead.</p>
match-connections	true	If true, enables connection matching. You can set to false if connections are homogeneous.
max-connection-usage-count	0	Specifies the number of times a connections is reused by the pool, after which it is closed. A zero value disables this feature.
ping	false	(optional) Specifies whether to ping the pool during pool creation or reconfiguration to identify and warn of any erroneous attribute values.

TABLE C-36 connector-connection-pool Attributes (Continued)

Attribute	Default	Description
pooling	true	(optional) If false, disables connection pooling.

Properties

Most properties of the `connector-connection-pool` element are the names of setter methods of the `managedconnectionfactory-class` element in the `ra.xml` file. Properties of the `connector-connection-pool` element override the `ManagedConnectionFactory` JavaBean configuration settings.

All but the last four properties in the following table are `connector-connection-pool` properties of `jmsra`, the resource adapter used to communicate with the GlassFish Message Queue software. For a complete list of the available properties (called *administered object attributes* in the Message Queue software), see the [Oracle GlassFish Message Queue 4.4.2 Administration Guide](#).

Changes to `connector-connection-pool` properties require a server restart.

TABLE C-37 connector-connection-pool Properties

Property	Default	Description
AddressList	none	Specifies a list of host/port combinations of the Message Queue software. For JMS resources of the Type <code>javax.jms.TopicConnectionFactory</code> or <code>javax.jms.QueueConnectionFactory</code> .
ClientId	none	Specifies the JMS Client Identifier to be associated with a <code>Connection</code> created using the <code>createTopicConnection</code> method of the <code>TopicConnectionFactory</code> class. For JMS resources of the Type <code>javax.jms.TopicConnectionFactory</code> . Durable subscription names are unique and only valid within the scope of a client identifier. To create or reactivate a durable subscriber, the connection must have a valid client identifier. The JMS specification ensures that client identifiers are unique and that a given client identifier is allowed to be used by only one active connection at a time.
UserName	guest	Specifies the user name for connecting to the Message Queue software. For JMS resources of the Type <code>javax.jms.TopicConnectionFactory</code> or <code>javax.jms.QueueConnectionFactory</code> .
Password	guest	Specifies the password for connecting to the Message Queue software. For JMS resources of the Type <code>javax.jms.TopicConnectionFactory</code> or <code>javax.jms.QueueConnectionFactory</code> .
ReconnectAttempts	6	Specifies the number of attempts to connect (or reconnect) for each address in the <code>imqAddressList</code> before the client runtime moves on to try the next address in the list. A value of -1 indicates that the number of reconnect attempts is unlimited (the client runtime attempts to connect to the first address until it succeeds).

TABLE C-37 connector-connection-pool Properties (Continued)

Property	Default	Description
ReconnectInterval	30000	Specifies the interval between reconnect attempts in milliseconds. This applies to attempts on each address in the <code>imqAddressList</code> and on successive addresses in the list. If too short, this time interval does not give a broker time to recover. If too long, the reconnect might represent an unacceptable delay.
ReconnectEnabled	false	If true, specifies that the client runtime attempts to reconnect to a message server (or the list of addresses in <code>imqAddressList</code>) when a connection is lost.
AddressListBehavior	priority	Specifies whether connection attempts are in the order of addresses in the <code>imqAddressList</code> attribute (<code>priority</code>) or in a random order (<code>random</code>). If many clients are attempting a connection using the same connection factory, use a random order to prevent them from all being connected to the same address.
AddressListIterations	-1	Specifies the number of times the client runtime iterates through the <code>imqAddressList</code> in an effort to establish (or reestablish) a connection. A value of -1 indicates that the number of attempts is unlimited.

Note – All JMS administered object resource properties that worked with version 7 of the GlassFish Server are supported for backward compatibility.

connector - resource

Defines the connection factory object of a specific connection definition in a connector (resource adapter).

Superelements

“resources” on page 230 (`glassfish-resources.xml`)

Subelements

The following table describes subelements for the `connector - resource` element.

TABLE C-38 connector - resource Subelements

Element	Required	Description
“description” on page 143	zero or one	Contains a text description of this element.
“property (with attributes)” on page 215	zero or more	Specifies a property or a variable.

Attributes

The following table describes attributes for the `connector-resource` element.

TABLE C-39 `connector-resource` Attributes

Attribute	Default	Description
<code>jndi-name</code>	none	Specifies the JNDI name for the resource.
<code>pool-name</code>	none	Specifies the name of the associated “connector-connection-pool” on page 129.
<code>object-type</code>	user	(optional) Defines the type of the resource. Allowed values are: <ul style="list-style-type: none"> ▪ <code>system-all</code> - A system resource for all server instances and the domain application server. ▪ <code>system-admin</code> - A system resource only for the domain application server. ▪ <code>system-instance</code> - A system resource for all server instances only. ▪ <code>user</code> - A user resource.
<code>enabled</code>	true	(optional) Determines whether this resource is enabled at runtime.

consistency

Specifies container behavior in guaranteeing transactional consistency of the data in the bean.

Superelements

[“entity-mapping”](#) on page 152 (`sun-cmp-mappings.xml`)

Subelements

The following table describes subelements for the `consistency` element.

TABLE C-40 `consistency` Subelements

Element	Required	Description
“none” on page 207	exactly one subelement is required	No consistency checking occurs.
“check-modified-at-commit” on page 118	exactly one subelement is required	Checks concurrent modification of fields in modified beans at commit time.

TABLE C-40 consistency Subelements (Continued)

Element	Required	Description
“lock-when-loaded” on page 190	exactly one subelement is required	Obtains an exclusive lock when the data is loaded.
“check-all-at-commit” on page 117		This element is not implemented. Do not use.
“lock-when-modified” on page 190		This element is not implemented. Do not use.
“check-version-of-accessed-instances” on page 118	exactly one subelement is required	Checks the version column of the modified beans.

constraint-field

Specifies a cacheability constraint for the given [“url-pattern” on page 253](#) or [“servlet-name” on page 241](#).

All `constraint-field` constraints must pass for a response to be cached. If there are value constraints, at least one of them must pass.

Superelements

[“cache-mapping” on page 115](#) (`glassfish-web.xml`)

Subelements

The following table describes subelements for the `constraint-field` element.

TABLE C-41 constraint-field Subelements

Element	Required	Description
“constraint-field-value” on page 136	zero or more	Contains a value to be matched to the input parameter value.

Attributes

The following table describes attributes for the `constraint-field` element.

TABLE C-42 constraint-field Attributes

Attribute	Default	Description
name	none	Specifies the input parameter name.
scope	request.parameter	(optional) Specifies the scope from which the input parameter is retrieved. Allowed values are context.attribute, request.header, request.parameter, request.cookie, request.attribute, and session.attribute.
cache-on-match	true	(optional) If true, caches the response if matching succeeds. Overrides the same attribute in a “ constraint-field-value ” on page 136 subelement.
cache-on-match-failure	false	(optional) If true, caches the response if matching fails. Overrides the same attribute in a “ constraint-field-value ” on page 136 subelement.

constraint-field-value

Specifies a value to be matched to the input parameter value. The matching is case sensitive. For example:

```
<value match-expr="in-range">1-60</value>
```

Superelements

“[constraint-field](#)” on page 135 (glassfish-web.xml)

Subelements

none - contains data

Attributes

The following table describes attributes for the `constraint-field-value` element.

TABLE C-43 constraint-field-value Attributes

Attribute	Default	Description
match-expr	equals	(optional) Specifies the type of comparison performed with the value. Allowed values are equals, not-equals, greater, lesser, and in-range. If match-expr is greater or lesser, the value must be a number. If match-expr is in-range, the value must be of the form $n1-n2$, where $n1$ and $n2$ are numbers.

TABLE C-43 constraint-field-value Attributes (Continued)

Attribute	Default	Description
cache-on-match	true	(optional) If true, caches the response if matching succeeds.
cache-on-match-failure	false	(optional) If true, caches the response if matching fails.

context-root

Contains the web context root for the application or web application that was packaged as a WAR file. Overrides the corresponding element in the `application.xml` or `web.xml` file.

If the parent element is `java-web-start-access`, this element contains the context root for the Java Web Start enabled application client module. If none is specified, a default is generated; see [“java-web-start-access” on page 170](#).

If you are setting up load balancing, web module context roots must be unique within a server instance. See the *Sun Java System Application Server 9.1 High Availability Administration Guide* for more information about load balancing.

Superelements

[“web” on page 257](#) (`glassfish-application.xml`), [“glassfish-web-app” on page 161](#) (`glassfish-web.xml`), [“java-web-start-access” on page 170](#) (`glassfish-application-client.xml`)

Subelements

none - contains data

cookie-properties

Specifies session cookie properties.

Note – If cookie settings are defined declaratively in the `web.xml` file or programmatically using `javax.servlet.SessionCookieConfig` methods, those cookie settings take precedence over the cookie properties defined here.

Superelements

[“session-config” on page 242](#) (`glassfish-web.xml`)

Subelements

The following table describes subelements for the `cookie-properties` element.

TABLE C-44 `cookie-properties` Subelements

Element	Required	Description
“property (with attributes)” on page 215	zero or more	Specifies a property, which has a name and a value.

Properties

The following table describes properties for the `cookie-properties` element.

TABLE C-45 `cookie-properties` Properties

Property	Default	Description
<code>cookiePath</code>	Context path at which the web module is installed.	Specifies the pathname that is set when the cookie is created. The browser sends the cookie if the pathname for the request contains this pathname. If set to / (slash), the browser sends cookies to all URLs served by GlassFish Server. You can set the path to a narrower mapping to limit the request URLs to which the browser sends cookies.
<code>cookieMaxAgeSeconds</code>	-1	Specifies the expiration time (in seconds) after which the browser expires the cookie.
<code>cookieDomain</code>	(unset)	Specifies the domain for which the cookie is valid.
<code>cookieComment</code>	Sun GlassFish Enterprise Server Session Tracking Cookie	Specifies the comment that identifies the session tracking cookie in the cookie file. Applications can provide a more specific comment for the cookie.
<code>cookieSecure</code>	dynamic	<p>Sets the Secure attribute of any JSESSIONID cookies associated with the web application. Allowed values are as follows:</p> <ul style="list-style-type: none"> ▪ <code>true</code> — Sets Secure to true. ▪ <code>false</code> — Sets Secure to false. ▪ <code>dynamic</code> — The JSESSIONID cookie inherits the Secure setting of the request that initiated the session. <p>To set the Secure attribute of a JSESSIONIDSSO cookie, use the <code>ssoCookieSecure</code> virtual-server property. For details, see create-virtual-server(1).</p>

create-tables-at-deploy

Specifies whether database tables are created for beans that are automatically mapped by the EJB container. If `true`, creates tables in the database. If `false` (the default if this element is not present), does not create tables.

This element can be overridden during deployment. See “[Generation Options for CMP](#)” in *Oracle GlassFish Server 3.0.1 Application Development Guide*.

Superelements

“[cmp-resource](#)” on page 124 (`glassfish-ejb-jar.xml`)

Subelements

none - contains data

custom-resource

Defines a custom resource, which specifies a custom server-wide resource object factory. Such object factories implement the `javax.naming.spi.ObjectFactory` interface.

Superelements

“[resources](#)” on page 230 (`glassfish-resources.xml`)

Subelements

The following table describes subelements for the `custom-resource` element.

TABLE C-46 custom-resource Subelements

Element	Required	Description
“ description ” on page 143	zero or one	Contains a text description of this element.
“ property (with attributes) ” on page 215	zero or more	Specifies a property or a variable.

Attributes

The following table describes attributes for the `custom-resource` element.

TABLE C-47 custom-resource Attributes

Attribute	Default	Description
jndi-name	none	Specifies the JNDI name for the resource.
res-type	none	Specifies the fully qualified type of the resource.
factory-class	none	Specifies the fully qualified name of the user-written factory class, which implements <code>javax.naming.spi.ObjectFactory</code> .
object-type	user	(optional) Defines the type of the resource. Allowed values are: <ul style="list-style-type: none"> ▪ <code>system-all</code> - A system resource for all server instances and the domain application server. ▪ <code>system-admin</code> - A system resource only for the domain application server. ▪ <code>system-instance</code> - A system resource for all server instances only. ▪ <code>user</code> - A user resource.
enabled	true	(optional) Determines whether this resource is enabled at runtime.

database-vendor-name

Specifies the name of the database vendor for which tables can be created. Allowed values are `javadb`, `db2`, `mssql`, `mysql`, `oracle`, `postgresql`, `pointbase`, `derby` (also for CloudScape), and `sybase`, case-insensitive.

If no value is specified, a connection is made to the resource specified by the “[jndi-name](#)” on [page 180](#) subelement of the “[cmp-resource](#)” on [page 124](#) element, and the database vendor name is read. If the connection cannot be established, or if the value is not recognized, SQL-92 compliance is presumed.

This element can be overridden during deployment. See “[Generation Options for CMP](#)” in *Oracle GlassFish Server 3.0.1 Application Development Guide*.

Superelements

“[cmp-resource](#)” on [page 124](#) (`glassfish-ejb-jar.xml`)

Subelements

none - contains data

debugging-enabled

Specifies whether the debugging servlet is enabled for this web service endpoint. Allowed values are `true` (the default) and `false`.

Superelements

[“webservice-endpoint” on page 259](#) (`glassfish-web.xml`, `glassfish-ejb-jar.xml`)

Subelements

none - contains data

default

Specifies that a field belongs to the default hierarchical fetch group, and enables prefetching for a CMR field. To disable prefetching for specific query methods, use a [“prefetch-disabled” on page 213](#) element in the `glassfish-ejb-jar.xml` file.

Superelements

[“fetched-with” on page 154](#) (`sun-cmp-mappings.xml`)

Subelements

none - element is present or absent

default-helper

Passes property values to the built-in default [“cache-helper” on page 113](#) class.

Superelements

[“cache” on page 111](#) (`glassfish-web.xml`)

Subelements

The following table describes subelements for the `default-helper` element.

TABLE C-48 default-helper Subelements

Element	Required	Description
“property (with attributes)” on page 215	zero or more	Specifies a property, which has a name and a value.

Properties

The following table describes properties for the default-helper element.

TABLE C-49 default-helper Properties

Property	Default	Description
cacheKeyGeneratorAttrName	Uses the built-in default “cache-helper” on page 113 key generation, which concatenates the servlet path with “key-field” on page 185 values, if any.	The caching engine looks in the ServletContext for an attribute with a name equal to the value specified for this property to determine whether a customized CacheKeyGenerator implementation is used. An application can provide a customized key generator rather than using the default helper. See “The CacheKeyGenerator Interface” in Oracle GlassFish Server 3.0.1 Application Development Guide .

default-resource-principal

Specifies the default principal (user) for the resource.

If this element is used in conjunction with a JMS Connection Factory resource, the name and password subelements must be valid entries in the GlassFish Message Queue broker user repository. See the *Security Management* chapter in the [Oracle GlassFish Message Queue 4.4.2 Administration Guide](#) for details.

Superelements

[“resource-ref” on page 229](#) (glassfish-web.xml, glassfish-ejb-jar.xml, glassfish-application-client.xml); [“cmp-resource” on page 124](#), [“mdb-connection-factory” on page 197](#) (glassfish-ejb-jar.xml)

Subelements

The following table describes subelements for the default-resource-principal element.

TABLE C-50 default-resource-principal Subelements

Element	Required	Description
“name” on page 206	only one	Specifies the default resource principal name used to sign on to a resource manager.
“password” on page 210	only one	Specifies password of the default resource principal.

description

Specifies a text description of the containing element.

Superelements

[“property \(with attributes\)” on page 215](#), [“valve” on page 254](#) (glassfish-web.xml); [“activation-config” on page 103](#), [“method” on page 203](#) (glassfish-ejb-jar.xml); [“target-server” on page 249](#) (sun-acc.xml); [“admin-object-resource” on page 105](#), [“connector-connection-pool” on page 129](#), [“connector-resource” on page 133](#), [“custom-resource” on page 139](#), [“external-jndi-resource” on page 153](#), [“jdbc-connection-pool” on page 171](#), [“jdbc-resource” on page 178](#), [“mail-resource” on page 192](#), [“property \(with attributes\)” on page 215](#), [“resource-adapter-config” on page 226](#) (glassfish-resources.xml)

Subelements

none - contains data

disable-nonportable-jndi-names

Because the EJB 3.1 specification defines portable EJB JNDI names, there is less need for GlassFish Server specific JNDI names. By default, GlassFish Server specific default JNDI names are applied automatically for backward compatibility. To disable GlassFish Server specific JNDI names for an EJB module, set the value of this element to `true`. The default is `false`.

Superelements

[“glassfish-ejb-jar” on page 160](#) (glassfish-ejb-jar.xml)

Subelements

none - contains data

dispatcher

Specifies a comma-separated list of `RequestDispatcher` methods for which caching is enabled on the target resource. Valid values are `REQUEST`, `FORWARD`, `INCLUDE`, and `ERROR`. If this element is not specified, the default is `REQUEST`. See SRV.6.2.5 of the Servlet 2.4 specification for more information.

Superelements

[“cache-mapping” on page 115](#) (`glassfish-web.xml`)

Subelements

none - contains data

drop-tables-at-undeploy

Specifies whether database tables that were automatically created when the bean(s) were last deployed are dropped when the bean(s) are undeployed. If `true`, drops tables from the database. If `false` (the default if this element is not present), does not drop tables.

This element can be overridden during deployment. See [“Generation Options for CMP” in Oracle GlassFish Server 3.0.1 Application Development Guide](#).

Superelements

[“cmp-resource” on page 124](#) (`glassfish-ejb-jar.xml`)

Subelements

none - contains data

ejb

Defines runtime properties for a single enterprise bean within the application. The subelements listed below apply to particular enterprise beans as follows:

- All types of beans: `ejb-name`, `ejb-ref`, `resource-ref`, `resource-env-ref`, `ior-security-config`, `gen-classes`, `jndi-name`, `use-thread-pool-id`, `message-destination-ref`, `pass-by-reference`, `service-ref`
- Stateless session beans: `bean-pool`, `webservice-endpoint`
- Stateful session beans: `bean-cache`, `webservice-endpoint`, `checkpoint-at-end-of-method`
- Entity beans: `commit-option`, `bean-cache`, `bean-pool`, `cmp`, `is-read-only-bean`, `refresh-period-in-seconds`, `flush-at-end-of-method`
- Message-driven beans: `mdb-resource-adapter`, `mdb-connection-factory`, `jms-durable-subscription-name`, `jms-max-messages-load`, `bean-pool`

Superelements

[“enterprise-beans” on page 151](#) (`glassfish-ejb-jar.xml`)

Subelements

The following table describes subelements for the `ejb` element.

TABLE C-51 `ejb` Subelements

Element	Required	Description
“<code>ejb-name</code>” on page 148	only one	Matches the <code>ejb-name</code> in the corresponding <code>ejb-jar.xml</code> file.
“<code>jndi-name</code>” on page 180	zero or more	Specifies the absolute <code>jndi-name</code> .
“<code>ejb-ref</code>” on page 148	zero or more	Maps the absolute JNDI name to the <code>ejb-ref</code> element in the corresponding Java EE XML file.
“<code>resource-ref</code>” on page 229	zero or more	Maps the absolute JNDI name to the <code>resource-ref</code> in the corresponding Java EE XML file.
“<code>resource-env-ref</code>” on page 228	zero or more	Maps the absolute JNDI name to the <code>resource-env-ref</code> in the corresponding Java EE XML file.
“<code>service-ref</code>” on page 239	zero or more	Specifies runtime settings for a web service reference.
“<code>message-destination-ref</code>” on page 199	zero or more	Specifies the name of a physical message destination.

TABLE C-51 ejb Subelements (Continued)

Element	Required	Description
“pass-by-reference” on page 209	zero or one	Specifies the passing method used by an enterprise bean calling a remote interface method in another bean that is colocated within the same process.
“cmp” on page 123	zero or one	Specifies runtime information for a container-managed persistence (CMP) entity bean for EJB 1.1 and EJB 2.1 beans.
“principal” on page 213	zero or one	Specifies the principal (user) name in an enterprise bean that has the run-as role specified.
“mdb-connection-factory” on page 197	zero or one	Specifies the connection factory associated with a message-driven bean.
“jms-durable-subscription-name” on page 179	zero or one	Specifies the durable subscription associated with a message-driven bean.
“jms-max-messages-load” on page 179	zero or one	Specifies the maximum number of messages to load into a Java Message Service session at one time for a message-driven bean to serve. The default is 1.
“ior-security-config” on page 168	zero or one	Specifies the security information for the IOR.
“is-read-only-bean” on page 169	zero or one	Specifies that this entity bean is read-only.
“refresh-period-in-seconds” on page 221	zero or one	Specifies the rate at which a read-only-bean must be refreshed from the data source.
“commit-option” on page 128	zero or one	Has valid values of B or C. Default value is B.
“cmt-timeout-in-seconds” on page 126	zero or one	Overrides the Transaction Timeout setting of the Transaction Service for an individual bean.
“use-thread-pool-id” on page 254	zero or one	Specifies the thread pool from which threads are selected for remote invocations of this bean.
“gen-classes” on page 157	zero or one	Specifies all the generated class names for a bean.
“bean-pool” on page 110	zero or one	Specifies the bean pool properties. Used for stateless session beans, entity beans, and message-driven beans.
“bean-cache” on page 109	zero or one	Specifies the bean cache properties. Used only for stateful session beans and entity beans.
“mdb-resource-adapter” on page 197	zero or one	Specifies runtime configuration information for a message-driven bean.
“webservice-endpoint” on page 259	zero or more	Specifies information about a web service endpoint.
“flush-at-end-of-method” on page 157	zero or one	Specifies the methods that force a database flush after execution. Used for entity beans.

TABLE C-51 `ejb` Subelements (Continued)

Element	Required	Description
“checkpointed-methods” on page 119	zero or one	Deprecated. Supported for backward compatibility. Use “checkpoint-at-end-of-method” on page 119 instead.
“checkpoint-at-end-of-method” on page 119	zero or one	Specifies that the stateful session bean state is checkpointed, or persisted, after the specified methods are executed. The <code>availability-enabled</code> attribute must be set to <code>true</code> .
“per-request-load-balancing” on page 210	zero or one	Specifies the per-request load balancing behavior of EJB 2.x and 3.x remote client invocations on a stateless session bean.

Attributes

The following table describes attributes for the `ejb` element.

TABLE C-52 `ejb` Attributes

Attribute	Default	Description
<code>availability-enabled</code>	<code>false</code>	(optional) If set to <code>true</code> , and if availability is enabled in the EJB container, high-availability features apply to this bean if it is a stateful session bean.

Example

```
<ejb>
  <ejb-name>CustomerEJB</ejb-name>
  <jndi-name>customer</jndi-name>
  <resource-ref>
    <res-ref-name>jdbc/SimpleBank</res-ref-name>
    <jndi-name>jdbc/__default</jndi-name>
  </resource-ref>
  <is-read-only-bean>false</is-read-only-bean>
  <commit-option>B</commit-option>
  <bean-pool>
    <steady-pool-size>10</steady-pool-size>
    <resize-quantity>10</resize-quantity>
    <max-pool-size>100</max-pool-size>
    <pool-idle-timeout-in-seconds>600</pool-idle-timeout-in-seconds>
  </bean-pool>
  <bean-cache>
    <max-cache-size>100</max-cache-size>
    <resize-quantity>10</resize-quantity>
    <removal-timeout-in-seconds>3600</removal-timeout-in-seconds>
    <victim-selection-policy>LRU</victim-selection-policy>
  </bean-cache>
</ejb>
```

ejb-name

In the `glassfish-ejb-jar.xml` file, matches the `ejb-name` in the corresponding `ejb-jar.xml` file. The name must be unique among the names of the enterprise beans in the same EJB JAR file.

There is no architected relationship between the `ejb-name` in the deployment descriptor and the JNDI name that the deployer assigns to the EJB component's home.

In the `sun-cmp-mappings.xml` file, specifies the `ejb-name` of the entity bean in the `ejb-jar.xml` file to which the container-managed persistence (CMP) bean corresponds.

Superelements

[“ejb” on page 145](#), [“method” on page 203](#) (`glassfish-ejb-jar.xml`); [“entity-mapping” on page 152](#) (`sun-cmp-mappings.xml`)

Subelements

none - contains data

ejb-ref

Maps the `ejb-ref-name` in the corresponding Java EE deployment descriptor file `ejb-ref` entry to the absolute `jndi-name` of a resource.

The `ejb-ref` element is used for the declaration of a reference to an EJB's home. Applies to session beans or entity beans.

Superelements

[“glassfish-web-app” on page 161](#) (`glassfish-web.xml`), [“ejb” on page 145](#) (`glassfish-ejb-jar.xml`), [“glassfish-application-client” on page 159](#) (`glassfish-application-client.xml`)

Subelements

The following table describes subelements for the `ejb-ref` element.

TABLE C-53 `ejb-ref` Subelements

Element	Required	Description
“<code>ejb-ref-name</code>” on page 149	only one	Specifies the <code>ejb-ref-name</code> in the corresponding Java EE deployment descriptor file <code>ejb-ref</code> entry.
“<code>jndi-name</code>” on page 180	only one	Specifies the absolute <code>jndi-name</code> of a resource.

`ejb-ref-name`

Specifies the `ejb-ref-name` in the corresponding Java EE deployment descriptor file `ejb-ref` entry.

Superelements

[“`ejb-ref`” on page 148](#) (`glassfish-web.xml`, `glassfish-ejb-jar.xml`, `glassfish-application-client.xml`)

Subelements

none - contains data

`eligible`

Specifies whether the application client module is eligible to be Java Web Start enabled. Allowed values are `true` (the default) and `false`.

Superelements

[“`java-web-start-access`” on page 170](#) (`glassfish-application-client.xml`)

Subelements

none - contains data

endpoint-address-uri

Specifies the relative path combined with the web server root to form the fully qualified endpoint address for a web service endpoint. This is a required element for EJB endpoints and an optional element for servlet endpoints.

For servlet endpoints, this value is relative to the web application context root. For EJB endpoints, the URI is relative to root of the web server (the first portion of the URI is a context root). The context root portion must not conflict with the context root of any web application deployed to the same web server.

In all cases, this value must be a fixed pattern (no "*" allowed).

If the web service endpoint is a servlet that implements only a single endpoint and has only one `url-pattern`, it is not necessary to set this value, because the web container derives it from the `web.xml` file.

Superelements

[“webservice-endpoint” on page 259](#) (`glassfish-web.xml`, `glassfish-ejb-jar.xml`)

Subelements

none - contains data

Example

If the web server is listening at `http://localhost:8080`, the following `endpoint-address-uri`:

```
<endpoint-address-uri>StockQuoteService/StockQuotePort</endpoint-address-uri>
```

results in the following target endpoint address:

```
http://localhost:8080/StockQuoteService/StockQuotePort
```


enterprise-beans

Specifies all the runtime properties for an EJB JAR file in the application.

Superelements

[“glassfish-ejb-jar” on page 160](#) (glassfish-ejb-jar.xml)

Subelements

The following table describes subelements for the `enterprise-beans` element.

TABLE C-54 enterprise-beans Subelements

Element	Required	Description
“name” on page 206	zero or one	Specifies the name string.
“unique-id” on page 253	zero or one	Specifies a unique system identifier. This data is automatically generated and updated at deployment/redeployment. Do not specify or edit this value.
“ejb” on page 145	zero or more	Defines runtime properties for a single enterprise bean within the application.
“pm-descriptors” on page 211	zero or one	Deprecated.
“cmp-resource” on page 124	zero or one	Specifies the database to be used for storing container-managed persistence (CMP) beans in an EJB JAR file.
“message-destination” on page 198	zero or more	Specifies the name of a logical message destination.
“webservice-description” on page 258	zero or more	Specifies a name and optional publish location for a web service.
“property (with subelements)” on page 216	zero or more	Specifies a property or a variable.

Example

```
<enterprise-beans>
  <ejb>
    <ejb-name>CustomerEJB</ejb-name>
    <jndi-name>customer</jndi-name>
    <resource-ref>
      <res-ref-name>jdbc/SimpleBank</res-ref-name>
      <jndi-name>jdbc/__default</jndi-name>
    </resource-ref>
  </ejb>
</enterprise-beans>
```

```

<is-read-only-bean>false</is-read-only-bean>
<commit-option>B</commit-option>
<bean-pool>
  <steady-pool-size>10</steady-pool-size>
  <resize-quantity>10</resize-quantity>
  <max-pool-size>100</max-pool-size>
  <pool-idle-timeout-in-seconds>600</pool-idle-timeout-in-seconds>
</bean-pool>
<bean-cache>
  <max-cache-size>100</max-cache-size>
  <resize-quantity>10</resize-quantity>
  <removal-timeout-in-seconds>3600</removal-timeout-in-seconds>
  <victim-selection-policy>LRU</victim-selection-policy>
</bean-cache>
</ejb>
</enterprise-beans>

```

entity-mapping

Specifies the mapping a bean to database columns.

Superelements

“[sun-cmp-mapping](#)” on page 248 (`sun-cmp-mappings.xml`)

Subelements

The following table describes subelements for the `entity-mapping` element.

TABLE C-55 `entity-mapping` Subelements

Element	Required	Description
“ ejb-name ” on page 148	only one	Specifies the name of the entity bean in the <code>ejb-jar.xml</code> file to which the CMP bean corresponds.
“ table-name ” on page 249	only one	Specifies the name of a database table. The table must be present in the database schema file.
“ cmp-field-mapping ” on page 124	one or more	Associates a field with one or more columns to which it maps.
“ cmr-field-mapping ” on page 125	zero or more	A container-managed relationship field has a name and one or more column pairs that define the relationship.
“ secondary-table ” on page 235	zero or more	Describes the relationship between a bean’s primary and secondary table.
“ consistency ” on page 134	zero or one	Specifies container behavior in guaranteeing transactional consistency of the data in the bean.

establish-trust-in-client

Specifies if the target is capable of authenticating a client. The values are NONE, SUPPORTED, or REQUIRED.

Superelements

[“transport-config” on page 251](#) (glassfish-ejb-jar.xml)

Subelements

none - contains data

establish-trust-in-target

Specifies if the target is capable of authenticating *to* a client. The values are NONE, SUPPORTED, or REQUIRED.

Superelements

[“transport-config” on page 251](#) (glassfish-ejb-jar.xml)

Subelements

none - contains data

external-jndi-resource

Defines a resource that resides in an external JNDI repository. For example, a generic Java object could be stored in an LDAP server. An external JNDI factory must implement the `javax.naming.spi.InitialContextFactory` interface.

Superelements

[“resources” on page 230](#) (glassfish-resources.xml)

Subelements

The following table describes subelements for the `external-jndi-resource` element.

TABLE C-56 external-jndi-resource Subelements

Element	Required	Description
“description” on page 143	zero or one	Contains a text description of this element.
“property (with attributes)” on page 215	zero or more	Specifies a property or a variable.

Attributes

The following table describes attributes for the external-jndi-resource element.

TABLE C-57 external-jndi-resource Attributes

Attribute	Default	Description
jndi-name	none	Specifies the JNDI name for the resource.
jndi-lookup-name	none	Specifies the JNDI lookup name for the resource.
res-type	none	Specifies the fully qualified type of the resource.
factory-class	none	Specifies the fully qualified name of the factory class, which implements javax.naming.spi.InitialContextFactory. For more information about JNDI, see the Oracle GlassFish Server 3.0.1 Application Development Guide .
object-type	user	(optional) Defines the type of the resource. Allowed values are: <ul style="list-style-type: none"> ▪ system-all - A system resource for all server instances and the domain application server. ▪ system-admin - A system resource only for the domain application server. ▪ system-instance - A system resource for all server instances only. ▪ user - A user resource.
enabled	true	(optional) Determines whether this resource is enabled at runtime.

fetches-with

Specifies the fetch group configuration for fields and relationships. The fetches-with element has different allowed and default subelements based on its parent element and the data types of the fields.

- If there is no fetches-with subelement of a [“cmp-field-mapping” on page 124](#), and the data type is *not* BLOB, CLOB, VARBINARY, LONGVARBINARY, or OTHER, fetches-with can have any valid subelement. The default subelement is as follows:

```
<fetches-with><default/></fetches-with>
```

- If there is no `fetches-with` subelement of a `cmp-field-mapping` on page 124, and the data type is BLOB, CLOB, VARBINARY, LONGVARBINARY, or OTHER, `fetches-with` can have any valid subelement *except* `<default/>`. The default subelement is as follows:

```
<fetches-with><none/></fetches-with>
```

- If there is no `fetches-with` subelement of a `cmr-field-mapping` on page 125, `fetches-with` can have any valid subelement. The default subelement is as follows:

```
<fetches-with><none/></fetches-with>
```

Managed fields are multiple CMP or CMR fields that are mapped to the same column. A managed field can have any `fetches-with` subelement except `<default/>`. For additional information, see *“Managed Fields” in Oracle GlassFish Server 3.0.1 Application Development Guide*.

Superelements

`cmp-field-mapping` on page 124, `cmr-field-mapping` on page 125
(`sun-cmp-mappings.xml`)

Subelements

The following table describes subelements for the `fetches-with` element.

TABLE C-58 `fetches-with` Subelements

Element	Required	Description
<code>“default”</code> on page 141	exactly one subelement is required	Specifies that a CMP field belongs to the default hierarchical fetch group, which means it is fetched any time the bean is loaded from a database. Enables prefetching of a CMR field.
<code>“level”</code> on page 186	exactly one subelement is required	Specifies the level number of a hierarchical fetch group.
<code>“named-group”</code> on page 206	exactly one subelement is required	Specifies the name of an independent fetch group.
<code>“none”</code> on page 207	exactly one subelement is required	Specifies that this field or relationship is placed into its own individual fetch group, which means it is loaded from a database the first time it is accessed in this transaction.

field-name

Specifies the Java identifier of a field. This identifier must match the value of the `field-name` subelement of the `cmp-field` element in the `ejb-jar.xml` file.

Superelements

[“cmp-field-mapping” on page 124](#) (`sun-cmp-mappings.xml`)

Subelements

none - contains data

finder

Describes the finders for CMP 1.1 with a method name and query.

Superelements

[“one-one-finders” on page 207](#) (`glassfish-ejb-jar.xml`)

Subelements

The following table describes subelements for the `finder` element.

TABLE C-59 finder Subelements

Element	Required	Description
“method-name” on page 204	only one	Specifies the method name for the finder.
“query-params” on page 219	zero or one	Specifies the query parameters for the CMP 1.1 finder.
“query-filter” on page 218	zero or one	Specifies the query filter for the CMP 1.1 finder.
“query-variables” on page 220	zero or one	Specifies variables in query expression for the CMP 1.1 finder.
“query-ordering” on page 219	zero or one	Specifies the query ordering for the CMP 1.1 finder.

flush-at-end-of-method

Specifies the methods that force a database flush after execution. Applicable to entity beans.

Superelements

[“ejb” on page 145](#) (glassfish-ejb-jar.xml)

Subelements

The following table describes subelements for the flush-at-end-of-method element.

TABLE C-60 flush-at-end-of-method Subelements

Element	Required	Description
“method” on page 203	one or more	Specifies a bean method.

gen-classes

Specifies all the generated class names for a bean.

Note – This value is automatically generated by the server at deployment or redeployment time. Do not specify it or change it after deployment.

Superelements

[“ejb” on page 145](#) (glassfish-ejb-jar.xml)

Subelements

The following table describes subelements for the gen-classes element.

TABLE C-61 gen-classes Subelements

Element	Required	Description
“remote-impl” on page 223	zero or one	Specifies the fully-qualified class name of the generated EJBObject impl class.

TABLE C-61 gen-classes Subelements (Continued)

Element	Required	Description
“local-impl” on page 187	zero or one	Specifies the fully-qualified class name of the generated EJBLocalObject impl class.
“remote-home-impl” on page 222	zero or one	Specifies the fully-qualified class name of the generated EJBHome impl class.
“local-home-impl” on page 186	zero or one	Specifies the fully-qualified class name of the generated EJBLocalHome impl class.

glassfish-application

Defines the GlassFish Server specific configuration for an application. This is the root element; there can only be one `glassfish-application` element in a `glassfish-application.xml` file. See [“The glassfish-application.xml File” on page 84](#).

Superelements

none

Subelements

The following table describes subelements for the `glassfish-application` element.

TABLE C-62 glassfish-application Subelements

Element	Required	Description
“web” on page 257	zero or more	Specifies the application’s web tier configuration.
“pass-by-reference” on page 209	zero or one	Determines whether EJB modules use pass-by-value or pass-by-reference semantics.
“unique-id” on page 253	zero or one	Contains the unique ID for the application.
“security-role-mapping” on page 237	zero or more	Maps a role in the corresponding Java EE XML file to a user or group.
“realm” on page 220	zero or one	Specifies an authentication realm.
“ejb-ref” on page 148	zero or more	Maps the absolute JNDI name to the <code>ejb-ref</code> in the corresponding Java EE XML file.
“resource-ref” on page 229	zero or more	Maps the absolute JNDI name to the <code>resource-ref</code> in the corresponding Java EE XML file.

TABLE C-62 glassfish-application Subelements (Continued)

Element	Required	Description
“resource-env-ref” on page 228	zero or more	Maps the absolute JNDI name to the resource-env-ref in the corresponding Java EE XML file.
“service-ref” on page 239	zero or more	Specifies runtime settings for a web service reference.
“message-destination-ref” on page 199	zero or more	Specifies the name of a physical message destination.
“message-destination” on page 198	zero or more	Specifies the name of a logical message destination.
“archive-name” on page 107	zero or one	Specifies the name of the archive file.
“compatibility” on page 128	zero or one	Specifies the GlassFish Server release with which to be backward compatible in terms of JAR visibility requirements for applications.
“keep-state” on page 184	zero or one	Retains web sessions, stateful session bean instances, and persistently created EJB timers across redeployments.
“version-identifier” on page 256	zero or one	Contains version information for an application.

glassfish-application-client

Defines the GlassFish Server specific configuration for an application client. This is the root element; there can only be one `glassfish-application-client` element in a `glassfish-application-client.xml` file. See [“The glassfish-application-client.xml file” on page 96](#).

Superelements

none

Subelements

The following table describes subelements for the `glassfish-application-client` element.

TABLE C-63 glassfish-application-client subelements

Element	Required	Description
“ejb-ref” on page 148	zero or more	Maps the absolute JNDI name to the ejb-ref in the corresponding Java EE XML file.

TABLE C-63 glassfish-application-client subelements *(Continued)*

Element	Required	Description
“resource-ref” on page 229	zero or more	Maps the absolute JNDI name to the resource-ref in the corresponding Java EE XML file.
“resource-env-ref” on page 228	zero or more	Maps the absolute JNDI name to the resource-env-ref in the corresponding Java EE XML file.
“service-ref” on page 239	zero or more	Specifies runtime settings for a web service reference.
“message-destination-ref” on page 199	zero or more	Specifies the name of a physical message destination.
“message-destination” on page 198	zero or more	Specifies the name of a logical message destination.
“java-web-start-access” on page 170	zero or one	Specifies changes to default Java Web Start parameters.
“version-identifier” on page 256	zero or one	Contains version information for an application client.

glassfish-ejb-jar

Defines the GlassFish Server specific configuration for an EJB JAR file. This is the root element; there can only be one `glassfish-ejb-jar` element in a `glassfish-ejb-jar.xml` file. See [“The glassfish-ejb-jar.xml File” on page 88](#).

Superelements

none

Subelements

The following table describes subelements for the `glassfish-ejb-jar` element.

TABLE C-64 glassfish-ejb-jar Subelements

Element	Required	Description
“security-role-mapping” on page 237	zero or more	Maps a role in the corresponding Java EE XML file to a user or group.
“enterprise-beans” on page 151	only one	Describes all the runtime properties for an EJB JAR file in the application.
“compatibility” on page 128	zero or one	Specifies the GlassFish Server release with which to be backward compatible in terms of JAR visibility requirements for applications.
“disable-nonportable-jndi-names” on page 143	zero or one	Disables GlassFish Server specific JNDI names.

TABLE C-64 glassfish-ejb-jar Subelements (Continued)

Element	Required	Description
“keep-state” on page 184	zero or one	Retains stateful session bean instances and persistently created EJB timers across redeployments.
“version-identifier” on page 256	zero or one	Contains version information for an EJB module.

glassfish-web-app

Defines GlassFish Server specific configuration for a web module. This is the root element; there can only be one `glassfish-web-app` element in a `glassfish-web.xml` file. See [“The glassfish-web.xml File” on page 86](#).

Superelements

none

Subelements

The following table describes subelements for the `glassfish-web-app` element.

TABLE C-65 glassfish-web-app Subelements

Element	Required	Description
“context-root” on page 137	zero or one	Contains the web context root for the web module.
“security-role-mapping” on page 237	zero or more	Maps roles to users or groups in the currently active realm.
“servlet” on page 240	zero or more	Specifies a principal name for a servlet, which is used for the <code>run-as</code> role defined in <code>web.xml</code> .
“idempotent-url-pattern” on page 167	zero or more	Specifies a URL pattern for idempotent requests.
“session-config” on page 242	zero or one	Specifies session manager, session cookie, and other session-related information.
“ejb-ref” on page 148	zero or more	Maps the absolute JNDI name to the <code>ejb-ref</code> in the corresponding Java EE XML file.
“resource-ref” on page 229	zero or more	Maps the absolute JNDI name to the <code>resource-ref</code> in the corresponding Java EE XML file.
“resource-env-ref” on page 228	zero or more	Maps the absolute JNDI name to the <code>resource-env-ref</code> in the corresponding Java EE XML file.

TABLE C-65 glassfish-web-app Subelements (Continued)

Element	Required	Description
“service-ref” on page 239	zero or more	Specifies runtime settings for a web service reference.
“message-destination-ref” on page 199	zero or more	Specifies the name of a physical message destination.
“cache” on page 111	zero or one	Configures caching for web application components.
“class-loader” on page 119	zero or one	Specifies class loader configuration information.
“jsp-config” on page 181	zero or one	Specifies JSP configuration information.
“locale-charset-info” on page 187	zero or one	Deprecated. Use the parameter-encoding subelement of glassfish-web-app instead.
“parameter-encoding” on page 208	zero or one	Determines the default request character encoding and how the web container decodes parameters from forms according to a hidden field value.
“property (with attributes)” on page 215	zero or more	Specifies a property, which has a name and a value.
“valve” on page 254	zero or more	Specifies a custom valve.
“message-destination” on page 198	zero or more	Specifies the name of a logical message destination.
“webservice-description” on page 258	zero or more	Specifies a name and optional publish location for a web service.
“keep-state” on page 184	zero or one	Retains web sessions across redeployments.
“version-identifier” on page 256	zero or one	Contains version information for a web application.

Attributes

The following table describes attributes for the glassfish-web-app element.

TABLE C-66 glassfish-web-app Attributes

Attribute	Default	Description
error-url	(blank)	(optional) Not implemented. Do not use.
httpServlet-security-provider	none	(optional) Specifies the HttpServlet message layer provider that the web container's servlet auth-constraint processing calls.

Properties

The following table describes properties for the `glassfish-web-app` element.

TABLE C-67 `glassfish-web-app` Properties

Property	Default	Description
<code>allowLinking</code>	<code>false</code>	<p>If <code>true</code>, resources in this web application that are symbolic links are served. You can also define this property for a virtual server. Web applications on the virtual server that do not define this property use the virtual server's value. For details, see create-virtual-server(1).</p> <p>Caution – Setting this property to <code>true</code> on Windows systems exposes JSP source code.</p>

TABLE C-67 glassfish-web-app Properties (Continued)

Property	Default	Description
alternatedocroot_ <i>n</i>	none	<p>Specifies an alternate document root (docroot), where <i>n</i> is a positive integer that allows specification of more than one. Alternate docroots allow web applications to serve requests for certain resources from outside their own docroot, based on whether those requests match one (or more) of the URI patterns of the web application's alternate docroots.</p> <p>If a request matches an alternate docroot's URI pattern, it is mapped to the alternate docroot by appending the request URI (minus the web application's context root) to the alternate docroot's physical location (directory). If a request matches multiple URI patterns, the alternate docroot is determined according to the following precedence order:</p> <ul style="list-style-type: none"> ■ Exact match ■ Longest path match ■ Extension match <p>For example, the following properties specify three alternate docroots. The URI pattern of the first alternate docroot uses an exact match, whereas the URI patterns of the second and third alternate docroots use extension and longest path prefix matches, respectively.</p> <pre><property name="alternatedocroot_1" value="from=/my.jpg dir=/srv/images/jpg"/> <property name="alternatedocroot_2" value="from=*.jpg dir=/srv/images/jpg"/> <property name="alternatedocroot_3" value="from=/jpg/* dir=/src/images"/></pre> <p>The value of each alternate docroot has two components: The first component, <code>from</code>, specifies the alternate docroot's URI pattern, and the second component, <code>dir</code>, specifies the alternate docroot's physical location (directory). Spaces are allowed in the <code>dir</code> component.</p> <p>You can set this property for all the web applications on a specific virtual server. For details, see create-virtual-server(1).</p>

TABLE C-67 glassfish-web-app Properties (Continued)

Property	Default	Description
valve_ <i>n</i>	none	<p>This property is deprecated. Use the “valve” on page 254 subelement instead.</p> <p>Specifies a fully qualified class name of a custom valve, where <i>n</i> is a positive integer that allows specification of more than one. The valve class must implement the <code>org.apache.catalina.Valve</code> interface from Tomcat or previous GlassFish Server releases, or the <code>org.glassfish.web.valve.GlassFishValve</code> interface from the current GlassFish Server release. For example:</p> <pre><property name="valve_1" value="org.glassfish.extension.Valve"/></pre> <p>You can set this property for all the web applications on a specific virtual server. For details, see create-virtual-server(1).</p>
listener_ <i>n</i>	none	<p>Specifies a fully qualified class name of a custom Catalina listener, where <i>n</i> is a positive integer that allows specification of more than one. The listener class must implement the <code>org.apache.catalina.ContainerListener</code>, <code>org.apache.catalina.LifecycleListener</code>, or <code>org.apache.catalina.InstanceListener</code> interface. For example:</p> <pre><property name="listener_1" value="org.glassfish.extension.MyLifecycleListener"/></pre> <p>You can set this property for all the web applications on a specific virtual server. For details, see create-virtual-server(1).</p>
crossContextAllowed	true	<p>If <code>true</code>, allows this web application to access the contexts of other web applications using the <code>ServletContext.getContext()</code> method.</p>
relativeRedirect Allowed	false	<p>If <code>true</code>, allows this web application to send a relative URL to the client using <code>HttpServletResponse.sendRedirect()</code>, and instructs the web container not to translate any relative URLs to fully qualified ones.</p>
reuseSessionID	false	<p>If <code>true</code>, sessions generated for this web application use the session ID specified in the request.</p>
securePagesWithPragma	true	<p>Set this property to <code>false</code> to ensure that for this web application file downloads using SSL work properly in Internet Explorer.</p> <p>You can set this property for all the web applications on a specific virtual server. For details, see create-virtual-server(1).</p>

TABLE C-67 glassfish-web-app Properties (Continued)

Property	Default	Description
singleThreadedServletPoolSize	5	Specifies the maximum number of servlet instances allocated for each SingleThreadModel servlet in the web application.
tempdir	<i>domain-dir/generated/app-name</i> or <i>domain-dir/generated/module-name</i>	Specifies a temporary directory for use by this web module. This value is used to construct the value of the <code>javax.servlet.context.tempdir</code> context attribute. Compiled JSP files are also placed in this directory.
useResponseCTForHeaders	false	If true, response headers are encoded using the response's charset instead of the default (UTF-8).

group-map

Maps an EIS group to a group defined in the GlassFish Server domain.

Superelements

[“work-security-map” on page 260](#) (`glassfish-resources.xml`)

Subelements

none

Attributes

The following table describes attributes for the `group-map` element.

TABLE C-68 group-map Attributes

Attribute	Default	Description
<code>eis-group</code>	none	Specifies an EIS group.
<code>mapped-group</code>	none	Specifies a group defined in the GlassFish Server domain.

group-name

Specifies a group name in the current realm.

Superelements

[“security-role-mapping” on page 237](#) (glassfish-application.xml, glassfish-web.xml, glassfish-ejb-jar.xml)

Subelements

none - contains data

http-method

Specifies an HTTP method that is eligible for caching. The default is GET.

Superelements

[“cache-mapping” on page 115](#) (glassfish-web.xml)

Subelements

none - contains data

idempotent-url-pattern

Specifies a URL pattern for idempotent requests.

Superelements

[“glassfish-web-app” on page 161](#) (glassfish-web.xml)

Subelements

none

Attributes

The following table describes attributes for the `idempotent-url-pattern` element.

TABLE C-69 idempotent-url-pattern Attributes

Attribute	Default	Description
url-pattern	none	Specifies a URL pattern, which can contain wildcards. The URL pattern must conform to the mappings specified in section SRV 11.2 of the Servlet 2.4 specification.
no-of-retries	-1	(optional) Specifies the number of times the load balancer retries an idempotent request. A value of -1 indicates infinite retries.

Example

The following example specifies that all requests for the URI `sun-java/*` are idempotent.

```
<idempotent-url-pattern url-pattern="sun_java/*" no-of-retries="10"/>
```

integrity

Specifies if the target supports integrity-protected messages. The values are NONE, SUPPORTED, or REQUIRED.

Superelements

[“transport-config” on page 251](#) (glassfish-ejb-jar.xml)

Subelements

none - contains data

ior-security-config

Specifies the security information for the interoperable object reference (IOR).

Superelements

[“ejb” on page 145](#) (glassfish-ejb-jar.xml)

Subelements

The following table describes subelements for the `ior-security-config` element.

TABLE C-70 ior-security-config Subelements

Element	Required	Description
“transport-config” on page 251	zero or one	Specifies the security information for transport.
“as-context” on page 106	zero or one	Specifies the authentication mechanism used to authenticate the client. If specified, it is USERNAME_PASSWORD.
“sas-context” on page 233	zero or one	Describes the sas-context fields.

is-cache-overflow-allowed

This element is deprecated. Do not use.

Superelements

[“bean-cache” on page 109](#) (glassfish-ejb-jar.xml)

is-one-one-cmp

This element is not used.

Superelements

[“cmp” on page 123](#) (glassfish-ejb-jar.xml)

is-read-only-bean

Specifies that this entity bean is a read-only bean if `true`. If this element is absent, the default value of `false` is used.

Superelements

[“ejb” on page 145](#) (glassfish-ejb-jar.xml)

Subelements

none - contains data

java-method

Specifies a method.

Superelements

[“message” on page 198](#) (glassfish-web.xml, glassfish-ejb-jar.xml, glassfish-application-client.xml)

Subelements

The following table describes subelements for the java-method element.

TABLE C-71 java-method Subelements

Element	Required	Description
“method-name” on page 204	only one	Specifies a method name.
“method-params” on page 205	zero or one	Specifies fully qualified Java type names of method parameters.

java-web-start-access

Specifies changes to default Java Web Start parameters for an embedded or stand-alone application client module.

Superelements

[“glassfish-application-client” on page 159](#) (glassfish-application-client.xml)

Subelements

The following table describes subelements for the java-web-start-access element.

TABLE C-72 java-web-start-access subelements

Element	Required	Description
“context-root” on page 137	zero or one	Contains the context root for the Java Web Start enabled application client module. If none is specified, a default is generated. The default for a web module is as follows: <code>http://host:port/app-name/relative-URI-to-appclient-jar</code> The default for a stand-alone application client module is as follows: <code>http://host:port/module-name</code> If the <code>module-name</code> is not specified during deployment, the name of the EAR or JAR file without the extension is used. If the web module is not in EAR or JAR file format, a name is generated and written to the server log.
“eligible” on page 149	zero or one	Specifies whether the application client module is eligible to be Java Web Start enabled. Allowed values are <code>true</code> (the default) and <code>false</code> .
“vendor” on page 255	zero or one	Specifies the name of the vendor as it appears in Java Web Start download and launch screens. The default value is <code>Application Client</code> .
“jnlp-doc” on page 180	zero or one	Specifies the name of a custom JNLP file. If none is specified, a default JNLP file is generated.

jdbc-connection-pool

Defines the attributes and properties that are required for creating a JDBC connection pool.

Superelements

[“resources” on page 230](#) (`glassfish-resources.xml`)

Subelements

The following table describes subelements for the `jdbc-connection-pool` element.

TABLE C-73 jdbc-connection-pool Subelements

Element	Required	Description
“description” on page 143	zero or one	Contains a text description of this element.
“property (with attributes)” on page 215	zero or more	Specifies a property or a variable.

Attributes

The following table describes attributes for the `jdbc-connection-pool` element. Changing the following attributes requires a server restart: `datasource-classname`, `associate-with-thread`, `lazy-connection-association`, and `lazy-connection-enlistment`.

TABLE C-74 `jdbc-connection-pool` Attributes

Attribute	Default	Description
<code>name</code>	none	Specifies the name of the connection pool. A “ jdbc-resource ” on page 178 element’s <code>pool-name</code> attribute refers to this name.
<code>datasource-classname</code>	none	(optional) Specifies the class name of the associated vendor-supplied data source. This class must implement <code>javax.sql.DataSource</code> , <code>javax.sql.XADataSource</code> , <code>javax.sql.ConnectionPoolDataSource</code> , or a combination.
<code>res-type</code>	none	(optional) Specifies the interface the data source class implements. The value of this attribute can be <code>javax.sql.DataSource</code> , <code>javax.sql.XADataSource</code> , <code>javax.sql.ConnectionPoolDataSource</code> , or <code>java.sql.Driver</code> . To support configuration of JDBC drivers and applications that use <code>java.sql.Driver</code> implementations, set this attribute to <code>java.sql.Driver</code> . This attribute must be specified to avoid ambiguity when a <code>datasource-classname</code> is specified. An error occurs if this attribute has a legal value and the indicated interface is not implemented by the data source class.
<code>driver-classname</code>	none	(optional) Specifies the vendor-supplied JDBC driver class name. This driver must implement the <code>java.sql.Driver</code> interface.
<code>ping</code>	false	(optional) Specifies whether to ping the pool during pool creation or reconfiguration to identify and warn of any erroneous attribute values.
<code>steady-pool-size</code>	8	(optional) Specifies the initial and minimum number of connections maintained in the pool.
<code>max-pool-size</code>	32	(optional) Specifies the maximum number of connections that can be created to satisfy client requests.
<code>max-wait-time-in-millis</code>	60000	(optional) Specifies the amount of time, in milliseconds, that the caller is willing to wait for a connection. If 0, the caller is blocked indefinitely until a resource is available or an error occurs.
<code>pool-resize-quantity</code>	2	(optional) Specifies the number of idle connections to be destroyed if the existing number of connections is above the <code>steady-pool-size</code> (subject to the <code>max-pool-size</code> limit). This is enforced periodically at the <code>idle-timeout-in-seconds</code> interval. An idle connection is one that has not been used for a period of <code>idle-timeout-in-seconds</code> . When the pool size reaches <code>steady-pool-size</code> , connection removal stops.

TABLE C-74 jdbc-connection-pool Attributes (Continued)

Attribute	Default	Description
idle-timeout-in-seconds	300	(optional) Specifies the maximum time that a connection can remain idle in the pool. After this amount of time, the pool can close this connection. This timeout value must be kept shorter than the server side (database) timeout value to prevent the accumulation of unusable connections in the application.
transaction-isolation-level	default JDBC driver isolation level	(optional) Specifies the transaction isolation level on the pooled database connections. Allowed values are read-uncommitted, read-committed, repeatable-read, or serializable. Applications that change the isolation level on a pooled connection programmatically risk polluting the pool, which can lead to errors. See is-isolation-level-guaranteed for more details.
is-isolation-level-guaranteed	true	(optional) Applicable only when transaction-isolation-level is explicitly set. If true, every connection obtained from the pool is guaranteed to have the desired isolation level. This might impact performance on some JDBC drivers. Only set this attribute to false if you are certain that the hosted applications do not return connections with altered isolation levels.
is-connection-validation-required	false	(optional) Specifies whether connections have to be validated before being given to the application. If a resource's validation fails, it is destroyed, and a new resource is created and returned.
connection-validation-method	table	(optional) Legal values are as follows: <ul style="list-style-type: none"> ▪ auto-commit, which uses <code>Connection.setAutoCommit(Connection.getAutoCommit())</code> ▪ meta-data, which uses <code>Connection.getMetaData()</code> ▪ table, which performs a query on a table specified in the <code>validation-table-name</code> attribute ▪ custom-validation, which uses a user-defined validation mechanism specified by the custom implementation class in <code>validation-classname</code>. <p>Because many JDBC drivers cache the results of <code>auto-commit</code> and <code>meta-data</code> calls, they do not always provide reliable validations. Check with the driver vendor to determine whether these calls are cached or not.</p> <p>The <code>table</code> must exist and be accessible, but it doesn't require any rows. Do not use an existing table that has a large number of rows or a table that is already frequently accessed. More details can be found at Connection Validation in GlassFish JDBC.</p>
validation-table-name	none	(optional) Specifies the table name to be used to perform a query to validate a connection. This parameter is mandatory if and only if <code>connection-validation-method</code> is set to <code>table</code> .

TABLE C-74 jdbc-connection-pool Attributes (Continued)

Attribute	Default	Description
validation-classname	none	<p>(optional) Specifies the custom validation implementation class name. This parameter is mandatory if <code>connection-validation-method</code> is set to <code>custom-validation</code>. The classname provided must be accessible to the GlassFish Server. The specified class must implement the <code>org.glassfish.api.jdbc.ConnectionValidation</code> interface.</p> <p>GlassFish Server provides the following custom validation class templates for MSSQL, DB2, and Sybase databases. All of them implement the <code>org.glassfish.api.jdbc.ConnectionValidation</code> interface.</p> <ul style="list-style-type: none"> ■ <code>org.glassfish.api.jdbc.MSSQLConnectionValidation</code> ■ <code>org.glassfish.api.jdbc.DB2ConnectionValidation</code> ■ <code>org.glassfish.api.jdbc.SybaseConnectionValidation</code>
init-sql	none	(optional) Specifies an SQL string to be executed whenever a connection is created (not reused) in the pool. This initializes the state of the connection.
fail-all-connections	false	(optional) If <code>true</code> , closes all connections in the pool if a single validation check fails. This parameter is mandatory if and only if <code>is-connection-validation-required</code> is set to <code>true</code> .
non-transactional-connections	false	(optional) If <code>true</code> , non-transactional connections can be made to the JDBC connection pool. These connections are not automatically enlisted with the transaction manager.
allow-non-component-callers	false	(optional) If <code>true</code> , non-Java-EE components, such as servlet filters, lifecycle modules, and third party persistence managers, can use this JDBC connection pool. The returned connection is automatically enlisted with the transaction context obtained from the transaction manager. Standard Java EE components can also use such pools. Connections obtained by non-component callers are not automatically closed at the end of a transaction by the container. They must be explicitly closed by the caller.
validate-atmost-once-period-in-seconds	0	<p>(optional) Specifies the time interval within which a connection is validated at most once. Minimizes the number of validation calls.</p> <p>A value of zero implies that GlassFish Server does not attempt to minimize the number of validation requests by a connection. That is, a value of zero disables this attribute. As a result, the same connection is validated every time the application acquires the connection.</p>
connection-leak-timeout-in-seconds	0	<p>(optional) Detects potential connection leaks by the application. A connection that is not returned back to the pool by the application within the specified period is assumed to be potentially leaking, and a stack trace of the caller is logged. A zero value disables leak detection. A nonzero value enables leak tracing.</p> <p>Use this attribute along with <code>connection-leak-reclaim</code> to avoid potential connection leaks from the application. More details are at Connection Leak Tracing.</p>
connection-leak-reclaim	false	(optional) If <code>true</code> , the pool will reclaim a connection after <code>connection-leak-timeout-in-seconds</code> occurs.
connection-creation-retry-attempts	0	(optional) Specifies the number of attempts to create a new connection in case of a failure.

TABLE C-74 jdbc-connection-pool Attributes (Continued)

Attribute	Default	Description
connection-creation-retry-interval-in-seconds	10	(optional) Specifies the time interval between attempts to create a connection when connection-creation-retry-attempts is greater than 0.
statement-leak-timeout-in-seconds	0	(optional) Detects potential statement leaks by the application. A statement that is not closed by the application within the specified period is assumed to be potentially leaking, and a stack trace of the caller is logged. A zero value disables leak detection. A nonzero value enables leak tracing. Use this attribute along with statement-leak-reclaim to avoid potential statement leaks from the application.
statement-leak-reclaim	false	(optional) If true, the reclaim of a statement after statement-leak-timeout-in-seconds occurs.
statement-timeout-in-seconds	-1	(optional) Sets the query timeout property of a statement to enable termination of abnormally long running queries. The default value of -1 disables this feature. An abnormally long running JDBC query executed by an application may leave it in a hanging state unless a timeout is explicitly set on the statement. This attribute guarantees that all queries automatically time out if not completed within the specified period. When statements are created, the queryTimeout is set according to the value specified in this attribute. This works only when the underlying JDBC driver supports queryTimeout for Statement, PreparedStatement, CallableStatement, and ResultSet.
lazy-connection-enlistment	false	(optional) If true, a connection is not enlisted in a transaction until it is used. If false, any connection object available to a transaction is enlisted in the transaction.
lazy-connection-association	false	(optional) If true, a physical connection is not associated with a logical connection until it is used. If false, a physical connection is associated with a logical connection even before it is used.
associate-with-thread	false	(optional) Specifies whether connections are associated with the thread to enable the thread to reuse the connections. If true, allows connections to be saved as ThreadLocal in the calling thread. Connections get reclaimed only when the calling thread dies or when the calling thread is not in use and the pool has run out of connections. If false, the thread must obtain a connection from the pool each time the thread requires a connection. This attribute associates connections with a thread such that when the same thread is in need of connections, it can reuse the connections already associated with that thread. In this case, the overhead of getting connections from the pool is avoided. However, when this value is set to true, you should verify that the value of the max-pool-size attribute is comparable to the max-thread-pool-size attribute of the associated thread pool. If the max-thread-pool-size value is much higher than the max-pool-size value, a lot of time is spent associating connections with a new thread after dissociating them from an older one. Use this attribute in cases where the thread pool should reuse connections to avoid this overhead.

TABLE C-74 jdbc-connection-pool Attributes (Continued)

Attribute	Default	Description
match-connections	false	<p>(optional) Specifies whether a connection that is selected from the pool should be matched with the connections with certain credentials. If <code>true</code>, enables connection matching. You can set to <code>false</code> if connections are homogeneous.</p> <p>If the connection pool is used by applications that have multiple user credentials, <code>match-connections</code> must be <code>true</code>. The connection pool matches the request's credential with the connections in the pool and returns a matched connection for use. For new requests with different credentials, unmatched free connections are automatically purged to provide new connections to satisfy the new requests. This attribute need not be <code>true</code> if it is known that there is only one credential used by the applications and therefore the pool has homogeneous connections.</p>
max-connection-usage-count	0	(optional) Specifies the number of times a connections is reused by the pool, after which it is closed. A zero value disables this feature. By limiting the maximum number of times a connection can be reused, you can avoid statement leaks if the application does not close statements.
sql-trace-listeners	none	(optional) Specifies that SQL statements executed by applications need to be traced. Helps administrators analyze the statements. Expects as a value a comma-separated list of listener implementation class names. Enables easy filtering of log messages for the SQL statements. SQL trace listeners must implement the <code>org.glassfish.api.jdbc.SQLTraceListener</code> interface.
statement-cache-size	0	(optional) Specifies the number of statements to be cached using the <code>lru</code> (Least Recently Used) caching mechanism. The default value of <code>0</code> disables statement caching.
pooling	true	(optional) If <code>false</code> , disables connection pooling.
wrap-jdbc-objects	true	<p>(optional) If <code>true</code>, wrapped JDBC objects are returned for <code>Statement</code>, <code>PreparedStatement</code>, <code>CallableStatement</code>, <code>ResultSet</code>, and <code>DatabaseMetaData</code>.</p> <p>This option ensures that <code>Statement.getConnection()</code> is the same as <code>DataSource.getConnection()</code>. Therefore, this option should be <code>true</code> when both <code>Statement.getConnection()</code> and <code>DataSource.getConnection()</code> are done. The default is <code>false</code> to avoid breaking existing applications.</p>

GlassFish Server Properties

The following table describes properties for the `jdbc-connection-pool` element that are specific to GlassFish Server.

TABLE C-75 jdbc-connection-pool Database Properties

Property	Default	Description
dynamic-reconfiguration-wait-timeout-in-seconds	none	Specifies the timeout for dynamic reconfiguration of the pool. In-progress connection requests must complete before this timeout expires or they must be retried. New connection requests wait for this timeout to expire before acquiring connections to the reconfigured pool. If this property exists and has a positive value, it is enabled. If this property is not set and pool reconfiguration results in pool recreation, in-progress connection requests must be retried.
number-of-top-queries-to-report	10	Specifies the number of most frequently used queries to display. For example, the default value of 10 displays the top ten queries. This property is disabled when jdbc-connection-pool monitoring is set to LOW or OFF. It is enabled when jdbc-connection-pool monitoring is set to HIGH and the sql-trace-listeners attribute is set.
time-to-keep-queries-in-minutes	5	Specifies the time to retain queries in a cache before they are purged. This property is disabled when jdbc-connection-pool monitoring is set to LOW or OFF. It is enabled when jdbc-connection-pool monitoring is set to HIGH and the sql-trace-listeners attribute is set.

Database Properties

Most JDBC drivers allow use of standard property lists to specify the user, password, and other resource configuration information. Although properties are optional with respect to the GlassFish Server, some properties might be necessary for most databases. For details, see the JDBC 4.0 Standard Extension API.

When properties are specified, they are passed to the vendor's data source class (specified by the `datasource-classname` attribute) as is using `setName(value)` methods.

The `user` and `password` properties are used as the default principal if container managed authentication is specified and a `default-resource-principal` is not found in the application deployment descriptors.

The following table describes some common properties for the `jdbc-connection-pool` element.

Changing JDBC driver properties requires a server restart.

TABLE C-76 jdbc-connection-pool Database Properties

Property	Description
user	Specifies the user name for connecting to the database.

TABLE C-76 jdbcc-connection-pool Database Properties (Continued)

Property	Description
password	Specifies the password for connecting to the database.
databaseName	Specifies the database for this connection pool.
serverName	Specifies the database server for this connection pool.
port	Specifies the port on which the database server listens for requests.
networkProtocol	Specifies the communication protocol.
roleName	Specifies the initial SQL role name.
datasourceName	Specifies an underlying XADataSource, or a ConnectionPoolDataSource if connection pooling is done.
description	Specifies a text description.
url	Specifies the URL for this connection pool. Although this is not a standard property, it is commonly used.

jdbcc- resource

Defines a JDBC (javax.sql.DataSource) resource.

Superelements

[“resources” on page 230](#) (glassfish-resources.xml)

Subelements

The following table describes subelements for the jdbcc- resource element.

TABLE C-77 jdbcc- resource Subelements

Element	Required	Description
“description” on page 143	zero or one	Contains a text description of this element.
“property (with attributes)” on page 215	zero or more	Specifies a property or a variable.

Attributes

The following table describes attributes for the jdbcc- resource element.

TABLE C-78 jdbc-resource Attributes

Attribute	Default	Description
jndi-name	none	Specifies the JNDI name for the resource.
description	none	(optional) Specifies a text description of this element.
pool-name	none	Specifies the name of the associated “ jdbc-connection-pool ” on page 171.
object-type	user	(optional) Defines the type of the resource. Allowed values are: <ul style="list-style-type: none"> ▪ system-all - A system resource for all server instances and the domain application server. ▪ system-admin - A system resource only for the domain application server. ▪ system-instance - A system resource for all server instances only. ▪ user - A user resource.
enabled	true	(optional) Determines whether this resource is enabled at runtime.

jms-durable-subscription-name

Specifies the durable subscription associated with a message-driven bean class. Only applies to the Java Message Service Topic Destination type, and only when the message-driven bean deployment descriptor subscription durability is Durable.

Superelements

“[ejb](#)” on page 145 ([glassfish-ejb-jar.xml](#))

Subelements

none - contains data

jms-max-messages-load

Specifies the maximum number of messages to load into a Java Message Service session at one time for a message-driven bean to serve. The default is 1.

Superelements

“[ejb](#)” on page 145 ([glassfish-ejb-jar.xml](#))

Subelements

none - contains data

jndi-name

Specifies the absolute `jndi-name` of a URL resource or a resource.

For entity beans and session beans, this value specifies the global JNDI name of the EJBHome object. It is only needed if the entity or session bean exposes a remote view.

For JMS message-driven beans, this is the JNDI name of the JMS resource from which the message-driven bean consumes JMS messages. This information is alternatively specified within the “[activation-config](#)” on page 103 subelement of the “[mdb-resource-adapter](#)” on page 197 element. For more information about JMS resources, see Chapter 17, “Using the Java Message Service,” in *Oracle GlassFish Server 3.0.1 Application Development Guide*.

Superelements

“[ejb-ref](#)” on page 148, “[message-destination](#)” on page 198, “[resource-env-ref](#)” on page 228, “[resource-ref](#)” on page 229 (`glassfish-web.xml`, `glassfish-ejb-jar.xml`, `glassfish-application-client.xml`); “[cmp-resource](#)” on page 124, “[ejb](#)” on page 145, “[mdb-connection-factory](#)” on page 197 (`glassfish-ejb-jar.xml`)

Subelements

none - contains data

jnlp-doc

Contains the name of a custom JNLP file, which modifies the behavior of a Java Web Start enabled application client module. If none is specified, a default JNLP file is generated.

The value of this element is a relative path with the following format:

```
[path-to-JAR-in-EAR!]path-to-JNLP-in-JAR
```

The default *path-to-JAR-in-EAR* is the current application client JAR file. For example, if the JNLP file is in the application client JAR file at `custom/myInfo.jnlp`, the element value would look like this:

```
<java-web-start-access>  
  <jnlp-doc>custom/myInfo.jnlp</jnlp-doc>  
</java-web-start-access>
```

If the application client is inside an EAR file, you can place the custom JNLP file inside another JAR file in the EAR. For example, if the JNLP file is in a JAR file at `other/myLib.jar`, the element value would look like this, with an exclamation point (!) separating the path to the JAR from the path in the JAR:

```
<java-web-start-access>
  <jnlp-doc>other/myLib.jar!custom/myInfo.jnlp</jnlp-doc>
</java-web-start-access>
```

For information about the allowed contents of a custom JNLP file, see [Chapter 11, “Developing Java Clients,”](#) in *Oracle GlassFish Server 3.0.1 Application Development Guide*.

Superelements

“[java-web-start-access](#)” on page 170 (`glassfish-application-client.xml`)

Subelements

none - contains data

jsp-config

Specifies JSP configuration information.

Superelements

“[glassfish-web-app](#)” on page 161 (`glassfish-web.xml`)

Subelements

The following table describes subelements for the `jsp-config` element.

TABLE C-79 `jsp-config` Subelements

Element	Required	Description
“ property (with attributes) ” on page 215	zero or more	Specifies a property, which has a name and a value.

Properties

The default property values are tuned for development of JSP files at the cost of performance. To maximize performance, set `jsp-config` properties to these non-default values:

- `development` - `false` (as an alternative, set to `true` and give `modificationTestInterval` a large value)
- `mappedfile` - `false`
- `trimSpaces` - `true`
- `suppressSmap` - `true`
- `fork` - `false` (on Solaris)
- `classdebuginfo` - `false`

The following table describes properties for the `jsp-config` element.

TABLE C-80 `jsp-config` Properties

Property	Default	Description
<code>checkInterval</code>	<code>0</code>	If <code>development</code> is set to <code>false</code> and <code>checkInterval</code> is greater than zero, background compilations are enabled. The <code>checkInterval</code> is the time in seconds between checks to see if a JSP file needs to be recompiled.
<code>classdebuginfo</code>	<code>true</code>	Specifies whether the generated Java servlets are compiled with the debug option set (<code>-g</code> for <code>javac</code>).
<code>classpath</code>	created dynamically based on the current web application	Specifies the classpath to use when compiling generated servlets.
<code>compiler</code>	<code>javac</code>	Specifies the compiler Ant uses to compile JSP files. See the Ant documentation for more information: http://antinstaller.sourceforge.net/manual/manual/
<code>compilerSourceVM</code>	Depends on GlassFish Server's Java runtime	Specifies the JDK release with which source compatibility of the generated servlets is provided. Same as the <code>-source</code> <i>release</i> option of <code>javac</code> . For more information, see http://java.sun.com/javase/6/docs/technotes/tools/solaris/javac.html#options .
<code>compilerTargetVM</code>	Depends on GlassFish Server's Java runtime	Specifies the Virtual Machine for the Java platform (JVM software) version for which the servlet class files are generated. Same as the <code>-target</code> <i>release</i> option of <code>javac</code> . For more information, see http://java.sun.com/javase/6/docs/technotes/tools/solaris/javac.html#options .
<code>defaultBufferNone</code>	<code>false</code>	If <code>true</code> , the default for the <code>buffer</code> attribute of the page directive is <code>none</code> .
<code>development</code>	<code>true</code>	If set to <code>true</code> , enables development mode, which allows JSP files to be checked for modification. Specify the frequency at which JSPs are checked using the <code>modificationTestInterval</code> property.

TABLE C-80 jsp-config Properties (Continued)

Property	Default	Description
dumpSmap	false	If set to true, dumps SMAP information for JSR 45 debugging to a file. Set to false if suppressSmap is true.
enablePooling	true	If set to true, tag handler pooling is enabled.
enableTldValidation	false	If set to true, all Tag Library Descriptor (TLD) files referenced by the web application are validated against their underlying schema or DTD file.
errorOnUseBeanInvalidClassAttribute	false	If set to true, issues an error when the value of the class attribute in a useBean action is not a valid bean class.
fork	true	Specifies that Ant forks the compiling of JSP files, using a JVM machine separate from the one in which Tomcat is running.
genStrAsByteArray	true	If true, text strings are generated as bytes (encoded with the page encoding), if the page is not buffered.
genStrAsCharArray	false	If set to true, generates text strings as char arrays, which improves performance in some cases.
httpMethods	* for all methods	Specifies a comma separated list of HTTP methods supported by the JspServlet.
ieClassId	clsid:8AD9C840-044E-11D1-B3E9-00805F499D93	Specifies the Java plug-in COM class ID for Internet Explorer. Used by the <jsp:plugin> tags.
ignoreJspFragmentErrors	false	If set to true, instructs the compiler to ignore any JSP precompilation errors pertaining to statically included JSP segments that, despite not being top level JSP files, use the .jsp or .jspx extension (instead of the recommended .jspxf).
initialCapacity	32	Specifies the initial capacity of the HashMap that maps JSP files to their corresponding servlets.
javaEncoding	UTF8	Specifies the encoding for the generated Java servlet. This encoding is passed to the Java compiler that is used to compile the servlet as well. By default, the web container tries to use UTF8. If that fails, it tries to use the javaEncoding value. For encodings, see: http://java.sun.com/javase/6/docs/technotes/guides/intl/encoding.doc.html
keepgenerated	true with JDK 5 and before and for jspc, otherwise false	If set to true, keeps the generated Java files. If false, deletes the Java files.
mappedfile	true	If set to true, generates static content with one print statement per input line, to ease debugging.

TABLE C-80 jsp-config Properties (Continued)

Property	Default	Description
modification TestInterval	0	Specifies the frequency in seconds at which JSPs are checked for modification. A value of 0 causes the JSP to be checked on every access. Used only if development is set to true.
reload-interval	0	Specifies the frequency in seconds at which JSP files are checked for modifications. Setting this value to 0 checks JSP files for modifications on every request. Setting this value to -1 disables checks for JSP modifications and JSP recompilation.
saveBytecode	true for jspc, otherwise false	If true, generated byte code is saved to .class files? This option is meaningful only when the Java compiler API, JSR 199 (available with and used as the default on Java 6) is used for javac compilations.
scratchdir	The default work directory for the web application	Specifies the working directory created for storing all the generated code.
suppressSmap	false	If set to true, generation of SMAP information for JSR 45 debugging is suppressed.
trimSpaces	false	If set to true, trims white spaces in template text between actions or directives.
usePrecompiled	false	If set to true, an accessed JSP file is not compiled. Its precompiled servlet class is used instead. It is assumed that JSP files have been precompiled, and their corresponding servlet classes have been bundled in the web application's WEB-INF/lib or WEB-INF/classes directory.
xpoweredBy	true	If set to true, the X-Powered-By response header is added by the generated servlet.

keep-state

If set to true, retains web sessions, stateful session bean instances, and persistently created EJB timers across redeployments. The `-keepstate` option of the `redeploy(1)` subcommand takes precedence. The default for both is false.

Some changes to an application between redeployments prevent this feature from working properly. For example, do not change the set of instance variables in the SFSB bean class.

For web applications, this feature is applicable only if in the `glassfish-web-app.xml` file the `persistence-type` attribute of the “[session-manager](#)” on page 242 element is `file`.

For stateful session bean instances, the persistence type without high availability is set in the server (the `sfsb-persistence-type` attribute) and must be set to `file`, which is the default and recommended value.

If any active web session, SFSB instance, or EJB timer fails to be preserved or restored, *none* of these will be available when the redeployment is complete. However, the redeployment continues and a warning is logged.

To preserve active state data, GlassFish Server serializes the data and saves it in memory. To restore the data, the class loader of the newly redeployed application deserializes the data that was previously saved.

Superelements

[“glassfish-application” on page 158](#) (glassfish-application.xml),
[“glassfish-web-app” on page 161](#) (glassfish-web-app.xml), [“glassfish-ejb-jar” on page 160](#) (glassfish-ejb-jar.xml)

Subelements

none - contains data

key-field

Specifies a component of the key used to look up and extract cache entries. The web container looks for the named parameter, or field, in the specified scope.

If this element is not present, the web container uses the Servlet Path (the path section that corresponds to the servlet mapping that activated the current request). See the Servlet 2.4 specification, section SRV 4.4, for details on the Servlet Path.

Superelements

[“cache-mapping” on page 115](#) (glassfish-web.xml)

Subelements

none

Attributes

The following table describes attributes for the `key-field` element.

level

TABLE C-81 key-field Attributes

Attribute	Default	Description
name	none	Specifies the input parameter name.
scope	request.parameter	(optional) Specifies the scope from which the input parameter is retrieved. Allowed values are context.attribute, request.header, request.parameter, request.cookie, session.id, and session.attribute.

level

Specifies the name of a hierarchical fetch group. The name must be an integer. Fields and relationships that belong to a hierarchical fetch group of equal (or lesser) value are fetched at the same time. The value of level must be greater than zero. Only one is allowed.

Superelements

[“fetched-with” on page 154](#) (sun-cmp-mappings.xml)

Subelements

none - contains data

local-home-impl

Specifies the fully-qualified class name of the generated EJBLocalHome impl class.

Note – This value is automatically generated by the server at deployment or redeployment time. Do not specify it or change it after deployment.

Superelements

[“gen-classes” on page 157](#) (glassfish-ejb-jar.xml)

Subelements

none - contains data

local-impl

Specifies the fully-qualified class name of the generated `EJBLocalObjectImpl` class.

Note – This value is automatically generated by the server at deployment or redeployment time. Do not specify it or change it after deployment.

Superelements

[“gen-classes” on page 157](#) (`glassfish-ejb-jar.xml`)

Subelements

none - contains data

locale-charset-info

Deprecated. For backward compatibility only. Use the [“parameter-encoding” on page 208](#) subelement of [“glassfish-web-app” on page 161](#) instead. Specifies information about the application’s internationalization settings.

Superelements

[“glassfish-web-app” on page 161](#) (`glassfish-web.xml`)

Subelements

The following table describes subelements for the `locale-charset-info` element.

TABLE C-82 locale-charset-info Subelements

Element	Required	Description
“locale-charset-map” on page 188	one or more	Maps a locale and an agent to a character encoding. Provided for backward compatibility. Used only for request processing, and only if no <code>parameter-encoding</code> is defined.
“parameter-encoding” on page 208	zero or one	Determines the default request character encoding and how the web container decodes parameters from forms according to a hidden field value.

Attributes

The following table describes attributes for the `locale-charset-info` element.

TABLE C-83 `locale-charset-info` Attributes

Attribute	Default	Description
<code>default-locale</code>	none	Although a value is required, the value is ignored. Use the <code>default-charset</code> attribute of the “ parameter-encoding ” on page 208 element.

locale-charset-map

Maps locales and agents to character encodings. Provided for backward compatibility. Used only for request processing. Used only if the character encoding is not specified in the request and cannot be derived from the optional “[parameter-encoding](#)” on page 208 element. For encodings, see <http://java.sun.com/javase/6/docs/technotes/guides/intl/encoding.doc.html>.

Superelements

“[locale-charset-info](#)” on page 187 (`glassfish-web.xml`)

Subelements

The following table describes subelements for the `locale-charset-map` element.

TABLE C-84 `locale-charset-map` Subelements

Element	Required	Description
“ description ” on page 143	zero or one	Specifies an optional text description of a mapping.

Attributes

The following table describes attributes for the `locale-charset-map` element.

TABLE C-85 `locale-charset-map` Attributes

Attribute	Default	Description
<code>locale</code>	none	Specifies the locale name.

TABLE C-85 locale-charset-map Attributes (Continued)

Attribute	Default	Description
agent	none	(optional) Specifies the type of client that interacts with the GlassFish Server. For a given locale, different agents can have different preferred character encodings. The value of this attribute must exactly match the value of the user-agent HTTP request header sent by the client. See Table C-86 for more information.
charset	none	Specifies the character encoding to which the locale maps.

Example Agents

The following table specifies example agent attribute values.

TABLE C-86 Example agent Attribute Values

Agent	user-agent Header and agent Attribute Value
Internet Explorer 5.00 for Windows 2000	Mozilla/4.0 (compatible; MSIE 5.01; Windows NT 5.0)
Netscape 4.7.7 for Windows 2000	Mozilla/4.77 [en] (Windows NT 5.0; U)
Netscape 4.7 for Solaris	Mozilla/4.7 [en] (X11; u; Sun OS 5.6 sun4u)

localpart

Specifies the local part of a QName.

Superelements

“[service-qname](#)” on page 239, “[wsdl-port](#)” on page 262 (glassfish-web.xml, glassfish-ejb-jar.xml, glassfish-application-client.xml)

Subelements

none - contains data

lock-when-loaded

Places a database update lock on the rows corresponding to the bean whenever the bean is loaded. How the lock is placed is database-dependent. The lock is released when the transaction finishes (commit or rollback). While the lock is in place, other database users have read access to the bean.

Superelements

[“consistency” on page 134](#) (sun-cmp-mappings.xml)

Subelements

none - element is present or absent

lock-when-modified

This element is not implemented. Do not use.

Superelements

[“consistency” on page 134](#) (sun-cmp-mappings.xml)

log-service

Specifies configuration settings for the log file.

Superelements

[“client-container” on page 121](#) (sun-acc.xml)

Subelements

The following table describes subelements for the log-service element.

TABLE C-87 log-service subelement

Element	Required	Description
“property (with attributes)” on page 215	zero or more	Specifies a property, which has a name and a value.

Attributes

The following table describes attributes for the `log-service` element.

TABLE C-88 log-service attributes

Attribute	Default	Description
<code>log-file</code>	<i>your-ACC-dir/logs/client.log</i>	(optional) Specifies the file where the application client container logging information is stored.
<code>level</code>	SEVERE	(optional) Sets the base level of severity. Messages at or above this setting get logged to the log file.

login-config

Specifies the authentication configuration for an EJB web service endpoint. Not needed for servlet web service endpoints. A servlet’s security configuration is contained in the `web.xml` file.

Superelements

[“webservice-endpoint” on page 259](#) (`glassfish-web.xml`, `glassfish-ejb-jar.xml`)

Subelements

The following table describes subelements for the `login-config` element.

TABLE C-89 login-config subelements

Element	Required	Description
“auth-method” on page 107	only one	Specifies the authentication method.
“realm” on page 220	zero or one	Specifies the name of the realm used to process all authentication requests.

mail-resource

Defines a JavaMail (`javax.mail.Session`) resource.

Superelements

[“resources” on page 230](#) (`glassfish-resources.xml`)

Subelements

The following table describes subelements for the `mail-resource` element.

TABLE C-90 mail-resource Subelements

Element	Required	Description
“description” on page 143	zero or one	Contains a text description of this element.
“property (with attributes)” on page 215	zero or more	Specifies a property or a variable.

Attributes

The following table describes attributes for the `mail-resource` element.

TABLE C-91 mail-resource Attributes

Attribute	Default	Description
<code>jndi-name</code>	<code>none</code>	Specifies the JNDI name for the resource.
<code>store-protocol</code>	<code>imap</code>	(optional) Specifies the storage protocol service, which connects to a mail server, retrieves messages, and saves messages in folder(s). Allowed values are <code>imap</code> , <code>pop3</code> , <code>imaps</code> , and <code>pop3s</code> .
<code>store-protocol-class</code>	<code>com.sun.mail.imap.IMAPStore</code>	(optional) Specifies the service provider implementation class for storage. Allowed values are: <code>com.sun.mail.imap.IMAPStore</code> <code>com.sun.mail.pop3.POP3Store</code> <code>com.sun.mail.imap.IMAPSSLStore</code> <code>com.sun.mail.pop3.POP3SSLStore</code>
<code>transport-protocol</code>	<code>smtp</code>	(optional) Specifies the transport protocol service, which sends messages. Allowed values are <code>smtp</code> and <code>smtps</code> .

TABLE C-91 mail-resource Attributes (Continued)

Attribute	Default	Description
transport-protocol-class	com.sun.mail.smtp.SMTPTransport	(optional) Specifies the service provider implementation class for transport. Allowed values are: com.sun.mail.smtp.SMTPTransport com.sun.mail.smtp.SMTPSSLTransport
host	none	The mail server host name.
user	none	The mail server user name.
from	none	The email address the mail server uses to indicate the message sender.
debug	false	(optional) Determines whether debugging for this resource is enabled.
object-type	user	(optional) Defines the type of the resource. Allowed values are: <ul style="list-style-type: none"> ■ system-all - A system resource for all server instances and the domain application server. ■ system-admin - A system resource only for the domain application server. ■ system-instance - A system resource for all server instances only. ■ user - A user resource.
enabled	true	(optional) Determines whether this resource is enabled at runtime.

Properties

You can set properties for the mail-resource element and then get these properties in a JavaMail Session object later. Every property name must start with a mail- prefix. The GlassFish Server changes the dash (-) character to a period (.) in the name of the property, then saves the property to the MailConfiguration and JavaMail Session objects. If the name of the property doesn't start with mail-, the property is ignored.

For example, to define the property mail.password in a JavaMail Session object, first edit glassfish-resources.xml as follows:

```
...
<mail-resource jndi-name="mail/Session" ...>
  <property name="mail-password" value="adminadmin"/>
</mail-resource>
...
```

After getting the JavaMail Session object, get the mail.password property to retrieve the value adminadmin, as follows:

```
String password = session.getProperty("mail.password");
```

For more information about JavaMail properties, see [JavaMail API Documentation](http://java.sun.com/products/javamail/javadocs/index.html) (<http://java.sun.com/products/javamail/javadocs/index.html>).

manager-properties

Specifies session manager properties.

Superelements

“[session-manager](#)” on page 242 ([glassfish-web.xml](#))

Subelements

The following table describes subelements for the `manager-properties` element.

TABLE C-92 manager-properties Subelements

Element	Required	Description
“ property (with attributes) ” on page 215	zero or more	Specifies a property, which has a name and a value.

Properties

The following table describes properties for the `manager-properties` element.

TABLE C-93 manager-properties Properties

Property	Default	Description
<code>reapIntervalSeconds</code>	60	<p>Specifies the number of seconds between checks for expired sessions. This is also the interval at which sessions are passivated if <code>maxSessions</code> is exceeded.</p> <p>If <code>persistenceFrequency</code> is set to <code>time-based</code>, active sessions are stored at this interval.</p> <p>To prevent data inconsistency, set this value lower than the frequency at which session data changes. For example, this value should be as low as possible (1 second) for a hit counter servlet on a frequently accessed web site, or the last few hits might be lost each time the server is restarted.</p> <p>Applicable only if the <code>persistence-type</code> attribute of the parent “session-manager” on page 242 element is <code>file</code> or <code>replicated</code>.</p>

TABLE C-93 manager-properties Properties (Continued)

Property	Default	Description
maxSessions	-1	<p>Specifies the maximum number of sessions that are permitted in the cache, or -1 for no limit. After this, an attempt to create a new session causes an <code>IllegalStateException</code> to be thrown.</p> <p>If the <code>persistence-type</code> attribute of the parent “session-manager” on page 242 element is <code>file</code> or <code>replicated</code>, the session manager passivates sessions to the persistent store when this maximum is reached.</p>
sessionFilename	<p>One of the following:</p> <p><i>domain-dir/generated/jsp/module-name/context-path_SESSIONS.ser</i></p> <p><i>domain-dir/generated/jsp/app-name/module-name/context-path_SESSIONS.ser</i></p>	<p>Specifies the absolute or relative path to the directory in which the session state is preserved between application restarts, if preserving the state is possible. A relative path is relative to the temporary directory for this web module. To disable preservation of the session state, set this property's value to an empty string.</p> <p>Applicable only if the <code>persistence-type</code> attribute of the parent “session-manager” on page 242 element is <code>memory</code>.</p> <p>To disable this behavior and not preserve the session state, specify an empty string as the value of this property.</p>
persistenceFrequency	web-method	<p>Specifies how often the session state is stored. Allowed values are as follows:</p> <ul style="list-style-type: none"> ■ <code>web-method</code> - The session state is stored at the end of each web request prior to sending a response back to the client. This mode provides the best guarantee that the session state is fully updated in case of failure. ■ <code>time-based</code> - The session state is stored in the background at the frequency set by <code>reapIntervalSeconds</code>. This mode provides less of a guarantee that the session state is fully updated. However, it can provide a significant performance improvement because the state is not stored after each request. <p>Applicable only if the <code>persistence-type</code> attribute of the parent “session-manager” on page 242 element is <code>replicated</code>.</p>

mapping-properties

This element is not implemented.

Superelements

“[cmp](#)” on page 123 (`glassfish-ejb-jar.xml`)

max-cache-size

Specifies the maximum number of beans allowable in cache. A value of zero indicates an unbounded cache. In reality, there is no hard limit. The max-cache-size limit is just a hint to the cache implementation. Default is 512.

Applies to stateful session beans and entity beans.

Superelements

[“bean-cache” on page 109](#) (glassfish-ejb-jar.xml)

Subelements

none - contains data

max-pool-size

Specifies the maximum number of bean instances in the pool. Values are from 0 (1 for message-driven bean) to MAX_INTEGER. A value of 0 means the pool is unbounded. Default is 64.

Applies to all beans.

Superelements

[“bean-pool” on page 110](#) (glassfish-ejb-jar.xml)

Subelements

none - contains data

max-wait-time-in-millis

This element is deprecated. Do not use.

Superelements

[“bean-pool” on page 110](#) (glassfish-ejb-jar.xml)

mdb-connection-factory

Specifies the connection factory associated with a message-driven bean. Queue or Topic type must be consistent with the Java Message Service Destination type associated with the message-driven bean class.

Superelements

[“ejb” on page 145](#) (glassfish-ejb-jar.xml)

Subelements

The following table describes subelements for the `mdb-connection-factory` element.

TABLE C-94 `mdb-connection-factory` Subelements

Element	Required	Description
“jndi-name” on page 180	only one	Specifies the absolute <code>jndi-name</code> .
“default-resource-principal” on page 142	zero or one	Specifies the default sign-on (name/password) to the resource manager.

mdb-resource-adapter

Specifies runtime configuration information for a message-driven bean.

Superelements

[“ejb” on page 145](#) (glassfish-ejb-jar.xml)

Subelements

The following table describes subelements for the `mdb-resource-adapter` element.

TABLE C-95 `mdb-resource-adapter` subelements

Element	Required	Description
“resource-adapter-mid” on page 227	zero or one	Specifies a resource adapter module ID.
“activation-config” on page 103	one or more	Specifies an activation configuration.

message

Specifies the methods or operations to which message security requirements apply.

Superelements

[“message-security” on page 200](#) (`glassfish-web.xml`, `glassfish-ejb-jar.xml`, `glassfish-application-client.xml`)

Subelements

The following table describes subelements for the `message` element.

TABLE C-96 `message` Subelements

Element	Required	Description
“java-method” on page 170	zero or one	Specifies the methods or operations to which message security requirements apply.
“operation-name” on page 208	zero or one	Specifies the WSDL name of an operation of a web service.

message-destination

Specifies the name of a logical `message-destination` defined within an application. The `message-destination-name` matches the corresponding `message-destination-name` in the corresponding Java EE deployment descriptor file. Use when the message destination reference in the corresponding Java EE deployment descriptor file specifies a `message-destination-link` to a logical `message-destination`.

Superelements

“[glassfish-web-app](#)” on page 161 (glassfish-web.xml), “[enterprise-beans](#)” on page 151 (glassfish-ejb-jar.xml), “[glassfish-application-client](#)” on page 159 (glassfish-application-client.xml)

Subelements

The following table describes subelements for the message-destination element.

TABLE C-97 message-destination subelements

Element	Required	Description
“ message-destination-name ” on page 199	only one	Specifies the name of a logical message destination defined within the corresponding Java EE deployment descriptor file.
“ jndi-name ” on page 180	only one	Specifies the jndi-name of the associated entity.

message-destination-name

Specifies the name of a logical message destination defined within the corresponding Java EE deployment descriptor file.

Superelements

“[message-destination](#)” on page 198 (glassfish-web.xml, glassfish-ejb-jar.xml, glassfish-application-client.xml)

Subelements

none - contains data

message-destination-ref

Directly binds a message destination reference to the JNDI name of a Queue, Topic, or other physical destination. Use only when the message destination reference in the corresponding Java EE deployment descriptor file does *not* specify a message-destination-link to a logical message-destination.

Superelements

“[glassfish-web-app](#)” on page 161 ([glassfish-web.xml](#)), “[ejb](#)” on page 145 ([glassfish-ejb-jar.xml](#)), “[glassfish-application-client](#)” on page 159 ([glassfish-application-client.xml](#))

Subelements

The following table describes subelements for the `message-destination-ref` element.

TABLE C-98 `message-destination-ref` subelements

Element	Required	Description
“ message-destination-ref-name ” on page 200	only one	Specifies the name of a physical message destination defined within the corresponding Java EE deployment descriptor file.
“ jndi-name ” on page 180	only one	Specifies the <code>jndi-name</code> of the associated entity.

message-destination-ref-name

Specifies the name of a physical message destination defined within the corresponding Java EE deployment descriptor file.

Superelements

“[message-destination-ref](#)” on page 199 ([glassfish-web.xml](#), [glassfish-ejb-jar.xml](#), [glassfish-application-client.xml](#))

Subelements

none - contains data

message-security

Specifies message security requirements.

- If the grandparent element is “[webservice-endpoint](#)” on page 259, these requirements pertain to request and response messages of the endpoint.
- If the grandparent element is “[port-info](#)” on page 212, these requirements pertain to the port of the referenced service.

Superelements

[“message-security-binding” on page 201](#) (glassfish-web.xml, glassfish-ejb-jar.xml, glassfish-application-client.xml)

Subelements

The following table describes subelements for the message-security element.

TABLE C-99 message-security Subelements

Element	Required	Description
“message” on page 198	one or more	Specifies the methods or operations to which message security requirements apply.
“request-protection” on page 224	zero or one	Defines the authentication policy requirements of the application’s request processing.
“response-protection” on page 232	zero or one	Defines the authentication policy requirements of the application’s response processing.

message-security-binding

Specifies a custom authentication provider binding for a parent [“webservice-endpoint” on page 259](#) or [“port-info” on page 212](#) element in one or both of these ways:

- By binding to a specific provider
- By specifying the message security requirements enforced by the provider

Superelements

[“webservice-endpoint” on page 259](#), [“port-info” on page 212](#) (glassfish-web.xml, glassfish-ejb-jar.xml, glassfish-application-client.xml)

Subelements

The following table describes subelements for the message-security-binding element.

TABLE C-100 message-security-binding Subelements

Element	Required	Description
“message-security” on page 200	zero or more	Specifies message security requirements.

Attributes

The following table describes attributes for the `message-security-binding` element.

TABLE C-101 `message-security-binding` Attributes

Attribute	Default	Description
<code>auth-layer</code>	none	Specifies the message layer at which authentication is performed. The value must be SOAP.
<code>provider-id</code>	none	(optional) Specifies the authentication provider used to satisfy application-specific message security requirements. If this attribute is not specified, a default provider is used, if it is defined for the message layer. if no default provider is defined, authentication requirements defined in the <code>message-security-binding</code> are not enforced.

message-security-config

Specifies configurations for message security providers.

Superelements

[“client-container” on page 121](#) (`sun-acc.xml`)

Subelements

The following table describes subelements for the `message-security-config` element.

TABLE C-102 `message-security-config` Subelements

Element	Required	Description
“provider-config” on page 217	one or more	Specifies a configuration for one message security provider.

Attributes

The following table describes attributes for the `message-security-config` element.

TABLE C-103 message-security-config Attributes

Attribute	Default	Description
auth-layer	none	Specifies the message layer at which authentication is performed. The value must be SOAP.
default-provider	none	(optional) Specifies the server provider that is invoked for any application not bound to a specific server provider.
default-client-provider	none	(optional) Specifies the client provider that is invoked for any application not bound to a specific client provider.

method

Specifies a bean method.

Superelements

“[checkpoint-at-end-of-method](#)” on page 119, “[flush-at-end-of-method](#)” on page 157
(glassfish-ejb-jar.xml)

Subelements

The following table describes subelements for the method element.

TABLE C-104 method Subelements

Element	Required	Description
“ description ” on page 143	zero or one	Specifies an optional text description.
“ ejb-name ” on page 148	zero or one	Matches the <code>ejb-name</code> in the corresponding <code>ejb-jar.xml</code> file.
“ method-name ” on page 204	only one	Specifies a method name.
“ method-intf ” on page 204	zero or one	Specifies the method interface to distinguish between methods with the same name in different interfaces.
“ method-params ” on page 205	zero or one	Specifies fully qualified Java type names of method parameters.

method-intf

Specifies the method interface to distinguish between methods with the same name in different interfaces. Allowed values are Home, Remote, LocalHome, and Local.

Superelements

[“method” on page 203](#) (glassfish-ejb-jar.xml)

Subelements

none - contains data

method-name

Specifies a method name or * (an asterisk) for all methods. If a method is overloaded, specifies all methods with the same name.

Superelements

[“java-method” on page 170](#) (glassfish-web.xml, glassfish-ejb-jar.xml, glassfish-application-client.xml); [“finder” on page 156](#), [“query-method” on page 218](#), [“method” on page 203](#) (glassfish-ejb-jar.xml)

Subelements

none - contains data

Examples

```
<method-name>findTeammates</method-name>
```

```
<method-name>*</method-name>
```

method-param

Specifies the fully qualified Java type name of a method parameter.

Superelements

[“method-params” on page 205](#) (glassfish-web.xml, glassfish-ejb-jar.xml, glassfish-application-client.xml)

Subelements

none - contains data

method-params

Specifies fully qualified Java type names of method parameters.

Superelements

[“java-method” on page 170](#) (glassfish-web.xml, glassfish-ejb-jar.xml, glassfish-application-client.xml); [“query-method” on page 218](#), [“method” on page 203](#) (glassfish-ejb-jar.xml)

Subelements

The following table describes subelements for the method-params element.

TABLE C-105 method-params Subelements

Element	Required	Description
“method-param” on page 205	zero or more	Specifies the fully qualified Java type name of a method parameter.

name

Specifies the name of the entity.

Superelements

“[call-property](#)” on page 116, “[default-resource-principal](#)” on page 142, “[stub-property](#)” on page 247 ([glassfish-web.xml](#), [glassfish-ejb-jar.xml](#), [glassfish-application-client.xml](#)); “[enterprise-beans](#)” on page 151, “[principal](#)” on page 213, “[property \(with subelements\)](#)” on page 216 ([glassfish-ejb-jar.xml](#))

Subelements

none - contains data

named-group

Specifies the name of one independent fetch group. All the fields and relationships that are part of a named group are fetched at the same time. A field belongs to only one fetch group, regardless of what type of fetch group is used.

Superelements

“[fetched-with](#)” on page 154 ([sun-cmp-mappings.xml](#))

Subelements

none - contains data

namespaceURI

Specifies the namespace URI.

Superelements

“[service-qname](#)” on page 239, “[wsdl-port](#)” on page 262 ([glassfish-web.xml](#), [glassfish-ejb-jar.xml](#), [glassfish-application-client.xml](#))

Subelements

none - contains data

none

Specifies that this field or relationship is fetched by itself, with no other fields or relationships.

Superelements

[“consistency” on page 134](#), [“fetched-with” on page 154](#) (sun-cmp-mappings.xml)

Subelements

none - element is present or absent

one-one-finders

Describes the finders for CMP 1.1 beans.

Superelements

[“cmp” on page 123](#) (glassfish-ejb-jar.xml)

Subelements

The following table describes subelements for the one-one-finders element.

TABLE C-106 one-one-finders Subelements

Element	Required	Description
“finder” on page 156	one or more	Describes the finders for CMP 1.1 with a method name and query.

operation-name

Specifies the WSDL name of an operation of a web service.

Superelements

“[message](#)” on page 198 ([glassfish-web.xml](#), [glassfish-ejb-jar.xml](#), [glassfish-application-client.xml](#))

Subelements

none - contains data

parameter-encoding

Specifies the default request character encoding and how the web container decodes parameters from forms according to a hidden field value.

If both the “[glassfish-web-app](#)” on page 161 and “[locale-charset-info](#)” on page 187 elements have `parameter-encoding` subelements, the subelement of `glassfish-web-app` takes precedence. For encodings, see <http://java.sun.com/javase/6/docs/technotes/guides/intl/encoding.doc.html>.

Superelements

“[locale-charset-info](#)” on page 187, “[glassfish-web-app](#)” on page 161 ([glassfish-web.xml](#))

Subelements

none

Attributes

The following table describes attributes for the `parameter-encoding` element.

TABLE C-107 parameter-encoding Attributes

Attribute	Default	Description
form-hint-field	none	(optional) The name of the hidden field in the form. This field specifies the character encoding the web container uses for request.getParameter and request.getReader calls when the charset is not set in the request's content-type header.
default-charset	ISO-8859-1	(optional) The default request character encoding.

pass-by-reference

Specifies the passing method used by a servlet or enterprise bean calling a remote interface method in another bean that is colocated within the same process.

- If `false` (the default if this element is not present), this application uses pass-by-value semantics.
- If `true`, this application uses pass-by-reference semantics.

Note – The `pass-by-reference` element only applies to remote calls. As defined in the EJB 2.1 specification, section 5.4, calls to local interfaces use pass-by-reference semantics.

If the `pass-by-reference` element is set to its default value of `false`, the passing semantics for calls to remote interfaces comply with the EJB 2.1 specification, section 5.4. If set to `true`, remote calls involve pass-by-reference semantics instead of pass-by-value semantics, contrary to this specification.

Portable programs cannot assume that a copy of the object is made during such a call, and thus that it's safe to modify the original. Nor can they assume that a copy is not made, and thus that changes to the object are visible to both caller and callee. When this element is set to `true`, parameters and return values should be considered read-only. The behavior of a program that modifies such parameters or return values is undefined.

When a servlet or enterprise bean calls a remote interface method in another bean that is colocated within the same process, by default GlassFish Server makes copies of all the call parameters in order to preserve the pass-by-value semantics. This increases the call overhead and decreases performance.

However, if the calling method does not change the object being passed as a parameter, it is safe to pass the object itself without making a copy of it. To do this, set the `pass-by-reference` value to `true`.

The setting of this element in the `glassfish-application.xml` file applies to all EJB modules in the application. For an individually deployed EJB module, you can set the same element in

the `glassfish-ejb-jar.xml` file. If `pass-by-reference` is used at both the bean and application level, the bean level takes precedence.

Superelements

[“glassfish-application” on page 158](#) (`glassfish-application.xml`), [“ejb” on page 145](#) (`glassfish-ejb-jar.xml`)

Subelements

none - contains data

password

Specifies the password for the principal.

Superelements

[“default-resource-principal” on page 142](#) (`glassfish-web.xml`, `glassfish-ejb-jar.xml`, `glassfish-application-client.xml`)

Subelements

none - contains data

per-request-load-balancing

Specifies the per-request load balancing behavior of EJB 2.x and 3.x remote client invocations on a stateless session bean. If set to `true`, per-request load balancing is enabled for the associated stateless session bean. If set to `false` or not set, per-request load balancing is not enabled. The default is `false`.

Superelements

[“ejb” on page 145](#) (`glassfish-ejb-jar.xml`)

Subelements

none - contains data

pm-descriptors

This element and its subelements are deprecated. Do not use.

Superelements

[“enterprise-beans” on page 151](#) (glassfish-ejb-jar.xml)

pool-idle-timeout-in-seconds

Specifies the maximum time, in seconds, that a bean instance is allowed to remain idle in the pool. When this timeout expires, the bean instance in a pool becomes a candidate for passivation or deletion. This is a hint to the server. A value of 0 specifies that idle beans remain in the pool indefinitely. Default value is 600.

Applies to stateless session beans, entity beans, and message-driven beans.

Note – For a stateless session bean or a message-driven bean, the bean is removed (garbage collected) when the timeout expires.

Superelements

[“bean-pool” on page 110](#) (glassfish-ejb-jar.xml)

Subelements

none - contains data

port-component-name

Specifies a unique name for a port component within a web or EJB module.

Superelements

[“webservice-endpoint” on page 259](#) (glassfish-web.xml, glassfish-ejb-jar.xml)

Subelements

none - contains data

port-info

Specifies information for a port within a web service reference.

Either a `service-endpoint-interface` or a `wsdl-port` or both must be specified. If both are specified, `wsdl-port` specifies the port that the container chooses for container-managed port selection.

The same `wsdl-port` value must not appear in more than one `port-info` element within the same `service-ref`.

If a `service-endpoint-interface` is using container-managed port selection, its value must not appear in more than one `port-info` element within the same `service-ref`.

Superelements

“[service-ref](#)” on page 239 (`glassfish-web.xml`, `glassfish-ejb-jar.xml`, `glassfish-application-client.xml`)

Subelements

The following table describes subelements for the `port-info` element.

TABLE C-108 port-info subelements

Element	Required	Description
“ service-endpoint-interface ” on page 238	zero or one	Specifies the web service reference name relative to <code>java:comp/env</code> .
“ wsdl-port ” on page 262	zero or one	Specifies the WSDL port.
“ stub-property ” on page 247	zero or more	Specifies JAX-RPC property values that are set on a <code>javax.xml.rpc.Stub</code> object before it is returned to the web service client.
“ call-property ” on page 116	zero or more	Specifies JAX-RPC property values that are set on a <code>javax.xml.rpc.Call</code> object before it is returned to the web service client.
“ message-security-binding ” on page 201	zero or one	Specifies a custom authentication provider binding.

prefetch-disabled

Disables prefetching of entity bean states for the specified query methods. Container-managed relationship fields are prefetched if their “[fetched-with](#)” on page 154 element is set to “[default](#)” on page 141.

Superelements

“[cmp](#)” on page 123 (`glassfish-ejb-jar.xml`)

Subelements

The following table describes subelements for the `prefetch-disabled` element.

TABLE C-109 prefetch-disabled Subelements

Element	Required	Description
“ query-method ” on page 218	one or more	Specifies a query method.

principal

Defines a user name on the platform.

Superelements

“[ejb](#)” on page 145 (`glassfish-ejb-jar.xml`); “[security-map](#)” on page 236 (`glassfish-resources.xml`)

Subelements

The following table describes subelements for the `principal` element.

TABLE C-110 principal Subelements

Element	Required	Description
“ name ” on page 206	only one	Specifies the name of the user.

principal-map

Maps an EIS principal to a principal defined in the GlassFish Server domain.

Superelements

[“work-security-map” on page 260 \(glassfish-resources.xml\)](#)

Subelements

none

Attributes

The following table describes attributes for the `principal-map` element.

TABLE C-111 `principal-map` Attributes

Attribute	Default	Description
<code>eis-principal</code>	none	Specifies an EIS principal.
<code>mapped-principal</code>	none	Specifies a principal defined in the GlassFish Server domain.

principal-name

Contains the principal (user) name.

In an enterprise bean, specifies the principal (user) name that has the `run-as` role specified.

Superelements

[“security-role-mapping” on page 237 \(glassfish-application.xml, glassfish-web.xml, glassfish-ejb-jar.xml\)](#), [“servlet” on page 240 \(glassfish-web.xml\)](#)

Subelements

none - contains data

Attributes

The following table describes attributes for the `principal-name` element.

TABLE C-112 `principal-name` Attributes

Attribute	Default	Description
<code>class-name</code>	<code>com.sun.enterprise.deployment.PrincipalImpl</code>	(optional) Specifies the custom principal implementation class corresponding to the named principal.

property (with attributes)

Specifies the name and value of a property. A property adds configuration information to its parent element that is one or both of the following:

- Optional with respect to GlassFish Server
- Needed by a system or object that GlassFish Server doesn't have knowledge of, such as an LDAP server or a Java class

Superelements

[“cache” on page 111](#), [“cache-helper” on page 113](#), [“class-loader” on page 119](#), [“cookie-properties” on page 137](#), [“default-helper” on page 141](#), [“manager-properties” on page 194](#), [“session-properties” on page 243](#), [“store-properties” on page 245](#), [“glassfish-web-app” on page 161](#), [“valve” on page 254](#), [“webservice-endpoint” on page 259](#) (`glassfish-web.xml`); [“auth-realm” on page 108](#), [“client-container” on page 121](#), [“client-credential” on page 122](#), [“log-service” on page 190](#), [“provider-config” on page 217](#) (`sun-acc.xml`); [“admin-object-resource” on page 105](#), [“connector-connection-pool” on page 129](#), [“connector-resource” on page 133](#), [“custom-resource” on page 139](#), [“external-jndi-resource” on page 153](#), [“jdbc-connection-pool” on page 171](#), [“jdbc-resource” on page 178](#), [“mail-resource” on page 192](#), [“resource-adapter-config” on page 226](#) (`glassfish-resources.xml`)

Subelements

The following table describes subelements for the `property` element.

TABLE C-113 `property` Subelements

Element	Required	Description
“description” on page 143	zero or one	Specifies an optional text description of a property.

Note – The property element in the sun-acc.xml file has no subelements.

Attributes

The following table describes attributes for the property element.

TABLE C-114 property Attributes

Attribute	Default	Description
name	none	Specifies the name of the property.
value	none	Specifies the value of the property.

Example

```
<property name="reapIntervalSeconds" value="20" />
```

property (with subelements)

Specifies the name and value of a property. A property adds configuration information to its parent element that is one or both of the following:

- Optional with respect to GlassFish Server
- Needed by a system or object that GlassFish Server doesn't have knowledge of, such as an LDAP server or a Java class

Superelements

“enterprise-beans” on page 151, “cmp-resource” on page 124,
 “schema-generator-properties” on page 234, “webservice-endpoint” on page 259
 (glassfish-ejb-jar.xml)

Subelements

The following table describes subelements for the property element.

TABLEC-115 property subelements

Element	Required	Description
“name” on page 206	only one	Specifies the name of the property.
“value” on page 254	only one	Specifies the value of the property.

Example

```
<property>
  <name>use-unique-table-names</name>
  <value>>true</value>
</property>
```

provider-config

Specifies a configuration for one message security provider.

Although the `request-policy` and `response-policy` subelements are optional, the `provider-config` element does nothing if they are not specified.

Use property subelements to configure provider-specific properties. Property values are passed to the provider when its `initialize` method is called.

Superelements

[“message-security-config” on page 202](#) (`sun-acc.xml`)

Subelements

The following table describes subelements for the `provider-config` element.

TABLEC-116 provider-config Subelements

Element	Required	Description
“request-policy” on page 223	zero or one	Defines the authentication policy requirements of the authentication provider’s request processing.
“response-policy” on page 231	zero or one	Defines the authentication policy requirements of the authentication provider’s response processing.
“property (with attributes)” on page 215	zero or more	Specifies a property, which has a name and a value.

Attributes

The following table describes attributes for the `provider-config` element.

TABLE C-117 `provider-config` Attributes

Attribute	Default	Description
<code>provider-id</code>	none	Specifies the provider ID.
<code>provider-type</code>	none	Specifies whether the provider is a <code>client</code> , <code>server</code> , or <code>client-server</code> authentication provider.
<code>class-name</code>	none	Specifies the Java implementation class of the provider. Client authentication providers must implement the <code>com.sun.enterprise.security.jauth.ClientAuthModule</code> interface. Server authentication providers must implement the <code>com.sun.enterprise.security.jauth.ServerAuthModule</code> interface. Client-server providers must implement both interfaces.

query-filter

Specifies the query filter for the CMP 1.1 finder.

Superelements

[“finder” on page 156](#) (`glassfish-ejb-jar.xml`)

Subelements

none - contains data

query-method

Specifies a query method.

Superelements

[“prefetch-disabled” on page 213](#) (`glassfish-ejb-jar.xml`)

Subelements

The following table describes subelements for the `query-method` element.

TABLE C-118 query-method Subelements

Element	Required	Description
“method-name” on page 204	only one	Specifies a method name.
“method-params” on page 205	only one	Specifies the fully qualified Java type names of method parameters.

query-ordering

Specifies the query ordering for the CMP 1.1 finder.

Superelements

[“finder” on page 156](#) (glassfish-ejb-jar.xml)

Subelements

none - contains data

query-params

Specifies the query parameters for the CMP 1.1 finder.

Superelements

[“finder” on page 156](#) (glassfish-ejb-jar.xml)

Subelements

none - contains data

query-variables

Specifies variables in the query expression for the CMP 1.1 finder.

Superelements

[“finder” on page 156](#) (glassfish-ejb-jar.xml)

Subelements

none - contains data

read-only

Specifies that a field is read-only if `true`. If this element is absent, the default value is `false`.

Superelements

[“cmp-field-mapping” on page 124](#) (sun-cmp-mappings.xml)

Subelements

none - contains data

realm

Specifies the name of the realm used to process all authentication requests associated with this application. If this element is not specified or does not match the name of a configured realm, the default realm is used. For more information about realms, see [“Realm Configuration” in Oracle GlassFish Server 3.0.1 Application Development Guide](#).

Superelements

[“glassfish-application” on page 158](#) (glassfish-application.xml), [“as-context” on page 106](#), [“login-config” on page 191](#) (glassfish-ejb-jar.xml)

Subelements

none - contains data

refresh-field

Specifies a field that gives the application component a programmatic way to refresh a cached entry.

Superelements

[“cache-mapping” on page 115](#) (glassfish-web.xml)

Subelements

none

Attributes

The following table describes attributes for the `refresh-field` element.

TABLE C-119 refresh-field Attributes

Attribute	Default	Description
name	none	Specifies the input parameter name.
scope	request.parameter	(optional) Specifies the scope from which the input parameter is retrieved. Allowed values are <code>context.attribute</code> , <code>request.header</code> , <code>request.parameter</code> , <code>request.cookie</code> , <code>session.id</code> , and <code>session.attribute</code> .

refresh-period-in-seconds

Specifies the rate at which a read-only-bean must be refreshed from the data source. If the value is less than or equal to zero, the bean is never refreshed; if the value is greater than zero, the bean instances are refreshed at the specified interval. This rate is just a hint to the container. Default is 0 (no refresh).

Superelements

[“ejb” on page 145](#) (glassfish-ejb-jar.xml)

Subelements

none - contains data

removal-timeout-in-seconds

Specifies the amount of time a bean instance can remain idle in the container before it is removed (timeout). A value of 0 specifies that the container does not remove inactive beans automatically. The default value is 5400.

If `removal-timeout-in-seconds` is less than or equal to `cache-idle-timeout-in-seconds`, beans are removed immediately without being passivated.

Applies to stateful session beans.

For related information, see [“cache-idle-timeout-in-seconds” on page 114](#).

Superelements

[“bean-cache” on page 109](#) (glassfish-ejb-jar.xml)

Subelements

none - contains data

remote-home-impl

Specifies the fully-qualified class name of the generated EJBHome impl class.

Note – This value is automatically generated by the server at deployment or redeployment time. Do not specify it or change it after deployment.

Superelements

[“gen-classes” on page 157](#) (glassfish-ejb-jar.xml)

Subelements

none - contains data

remote-impl

Specifies the fully-qualified class name of the generated EJBObject impl class.

Note – This value is automatically generated by the server at deployment or redeployment time. Do not specify it or change it after deployment.

Superelements

[“gen-classes” on page 157](#) (glassfish-ejb-jar.xml)

Subelements

none - contains data

request-policy

Defines the authentication policy requirements of the authentication provider’s request processing.

Superelements

[“provider-config” on page 217](#) (sun-acc.xml)

Subelements

none

Attributes

The following table describes attributes for the request-policy element.

TABLE C-120 request-policy Attributes

Attribute	Default	Description
auth-source	none	Specifies the type of required authentication, either sender (user name and password) or content (digital signature).

TABLE C-120 request-policy Attributes (Continued)

Attribute	Default	Description
auth-recipient	none	Specifies whether recipient authentication occurs before or after content authentication. Allowed values are before-content and after-content.

request-protection

Defines the authentication policy requirements of the application's request processing.

Superelements

[“message-security” on page 200](#) (glassfish-web.xml, glassfish-ejb-jar.xml, glassfish-application-client.xml)

Subelements

none

Attributes

The following table describes attributes for the request-protection element.

TABLE C-121 request-protection Attributes

Attribute	Default	Description
auth-source	none	Specifies the type of required authentication, either sender (user name and password) or content (digital signature).
auth-recipient	none	Specifies whether recipient authentication occurs before or after content authentication. Allowed values are before-content and after-content.

required

Specifies whether the authentication method specified in the [“auth-method” on page 107](#) element must be used for client authentication. The value is true or false (the default).

Superelements

[“as-context” on page 106](#) (glassfish-ejb-jar.xml)

Subelements

none - contains data

res-ref-name

Specifies the `res-ref-name` in the corresponding Java EE deployment descriptor file `resource-ref` entry. The `res-ref-name` element specifies the name of a resource manager connection factory reference. The name must be unique within an enterprise bean.

Superelements

[“resource-ref” on page 229](#) (`glassfish-web.xml`, `glassfish-ejb-jar.xml`, `glassfish-application-client.xml`)

Subelements

none - contains data

resize-quantity

Specifies the number of bean instances to be:

- Created, if a request arrives when the pool has less than [“steady-pool-size” on page 245](#) quantity of beans (applies to pools only for creation). If the pool has more than `steady-pool-size` minus [“resize-quantity” on page 225](#) of beans, then `resize-quantity` is still created.
- Removed, when the [“pool-idle-timeout-in-seconds” on page 211](#) timer expires and a cleaner thread removes any unused instances.
 - For caches, when [“max-cache-size” on page 196](#) is reached, `resize-quantity` beans are selected for passivation using the [“victim-selection-policy” on page 257](#). In addition, the [“cache-idle-timeout-in-seconds” on page 114](#) or [“removal-timeout-in-seconds” on page 222](#) timers passivate beans from the cache.
 - For pools, when the [“max-pool-size” on page 196](#) is reached, `resize-quantity` beans are selected for removal. In addition, the [“pool-idle-timeout-in-seconds” on page 211](#) timer removes beans until `steady-pool-size` is reached.

Values are from 0 to `MAX_INTEGER`. The pool is not resized below the `steady-pool-size`. Default is 16.

Applies to stateless session beans, entity beans, and message-driven beans.

For EJB pools, the value can be defined in the EJB container. Default is 16.

For EJB caches, the value can be defined in the EJB container. Default is 32.

For message-driven beans, the value can be defined in the EJB container. Default is 2.

Superelements

[“bean-cache” on page 109](#), [“bean-pool” on page 110](#) (glassfish-ejb-jar.xml)

Subelements

none - contains data

resource-adapter-config

Defines a connector (resource adapter) configuration. Stores configuration information for the resource adapter JavaBean in property subelements.

Superelements

[“resources” on page 230](#) (glassfish-resources.xml)

Subelements

The following table describes subelements for the resource-adapter-config element.

TABLE C-122 resource-adapter-config Subelements

Element	Required	Description
“property (with attributes)” on page 215	zero or more	Specifies a property or a variable.

Attributes

The following table describes attributes for the resource-adapter-config element.

TABLEC-123 resource-adapter-config Attributes

Attribute	Default	Description
name	none	(optional) Not used. See resource-adapter-name.
thread-pool-ids	none	(optional) Specifies a comma-separated list of the names of thread pools.
object-type	user	(optional) Defines the type of the resource. Allowed values are: <ul style="list-style-type: none"> ▪ system-all - A system resource for all server instances and the domain application server. ▪ system-admin - A system resource only for the domain application server. ▪ system-instance - A system resource for all server instances only. ▪ user - A user resource.
resource-adapter-name	none	Specifies the name of a deployed connector module or application. If the resource adapter is embedded in an application, then it is <i>app_name#rar_name</i> .

Properties

Properties of the resource-adapter-config element are the names of setter methods of the resourceadapter-class element in the ra.xml file, which defines the class name of the resource adapter JavaBean. Any properties defined here override the default values present in ra.xml.

resource-adapter-mid

Specifies the module ID of the resource adapter that is responsible for delivering messages to the message-driven bean.

Superelements

[“mdb-resource-adapter” on page 197 \(glassfish-ejb-jar.xml\)](#)

Subelements

none - contains data

resource-env-ref

Maps the `res-ref-name` in the corresponding Java EE deployment descriptor file `resource-env-ref` entry to the absolute `jndi-name` of a resource.

Superelements

“[glassfish-web-app](#)” on page 161 (`glassfish-web.xml`), “[ejb](#)” on page 145 (`glassfish-ejb-jar.xml`), “[glassfish-application-client](#)” on page 159 (`glassfish-application-client.xml`)

Subelements

The following table describes subelements for the `resource-env-ref` element.

TABLE C-124 resource-env-ref Subelements

Element	Required	Description
“ resource-env-ref-name ” on page 228	only one	Specifies the <code>res-ref-name</code> in the corresponding Java EE deployment descriptor file <code>resource-env-ref</code> entry.
“ jndi-name ” on page 180	only one	Specifies the absolute <code>jndi-name</code> of a resource.

Example

```
<resource-env-ref>
  <resource-env-ref-name>jms/StockQueueName</resource-env-ref-name>
  <jndi-name>jms/StockQueue</jndi-name>
</resource-env-ref>
```

resource-env-ref-name

Specifies the `res-ref-name` in the corresponding Java EE deployment descriptor file `resource-env-ref` entry.

Superelements

“[resource-env-ref](#)” on page 228 (`glassfish-web.xml`, `glassfish-ejb-jar.xml`, `glassfish-application-client.xml`)

Subelements

none - contains data

resource-ref

Maps the `res-ref-name` in the corresponding Java EE deployment descriptor file `resource-ref` entry to the absolute `jndi-name` of a resource.

Note – Connections acquired from JMS connection factories are not shareable in the current release of GlassFish Server. The `res-sharing-scope` element in the `ejb-jar.xml` file `resource-ref` element is ignored for JMS connection factories.

When `resource-ref` specifies a JMS connection factory for the GlassFish Message Queue, the `default-resource-principal` (name/password) must exist in the Message Queue user repository. Refer to the *Security Management* chapter in the *Oracle GlassFish Message Queue 4.4.2 Administration Guide* for information on how to manage the Message Queue user repository.

Superelements

“[glassfish-web-app](#)” on page 161 (`glassfish-web.xml`), “[ejb](#)” on page 145 (`glassfish-ejb-jar.xml`), “[glassfish-application-client](#)” on page 159 (`glassfish-application-client.xml`)

Subelements

The following table describes subelements for the `resource-ref` element.

TABLE C-125 resource-ref Subelements

Element	Required	Description
“ res-ref-name ” on page 225	only one	Specifies the <code>res-ref-name</code> in the corresponding Java EE deployment descriptor file <code>resource-ref</code> entry.
“ jndi-name ” on page 180	only one	Specifies the absolute <code>jndi-name</code> of a resource.
“ default-resource-principal ” on page 142	zero or one	Specifies the default principal (user) for the resource.

Example

```
<resource-ref>
  <res-ref-name>jdbc/EmployeeDBName</res-ref-name>
  <jndi-name>jdbc/EmployeeDB</jndi-name>
</resource-ref>
```

resources

Defines application-scoped resources for an enterprise application, web module, EJB module, connector module, or application client module. This is the root element; there can only be one resources element in a `glassfish-resources.xml` file. See [“The glassfish-resources.xml File” on page 98](#).

Note – You must specify a Java Naming and Directory Interface (JNDI) name for each resource. To avoid collisions with names of other enterprise resources in JNDI, and to avoid portability problems, all names in a GlassFish Server application should begin with the string `java:app/`.

Superelements

none

Subelements

The following table describes subelements for the resources element.

TABLE C-126 resources Subelements

Element	Required	Description
“custom-resource” on page 139	zero or more	Defines a custom resource.
“external-jndi-resource” on page 153	zero or more	Defines a resource that resides in an external JNDI repository.
“jdbc-resource” on page 178	zero or more	Defines a JDBC (Java Database Connectivity) resource.
“mail-resource” on page 192	zero or more	Defines a JavaMail resource.
“admin-object-resource” on page 105	zero or more	Defines an administered object for an inbound resource adapter.
“connector-resource” on page 133	zero or more	Defines a connector (resource adapter) resource.
“resource-adapter-config” on page 226	zero or more	Defines a resource adapter configuration.
“jdbc-connection-pool” on page 171	zero or more	Defines the properties that are required for creating a JDBC connection pool.

TABLE C-126 resources Subelements (Continued)

Element	Required	Description
“connector-connection-pool” on page 129	zero or more	Defines the properties that are required for creating a connector connection pool.
“work-security-map” on page 260	zero or more	Defines a work security map.

Note – Subelements of a resources element can occur in any order.

response-policy

Defines the authentication policy requirements of the authentication provider’s response processing.

Superelements

[“provider-config” on page 217](#) (sun-acc.xml)

Subelements

none

Attributes

The following table describes attributes for the response-policy element.

TABLE C-127 response-policy Attributes

Attribute	Default	Description
auth-source	none	Specifies the type of required authentication, either sender (user name and password) or content (digital signature).
auth-recipient	none	Specifies whether recipient authentication occurs before or after content authentication. Allowed values are before-content and after-content.

response-protection

Defines the authentication policy requirements of the application's response processing.

Superelements

[“message-security” on page 200](#) (glassfish-web.xml, glassfish-ejb-jar.xml, glassfish-application-client.xml)

Subelements

none

Attributes

The following table describes attributes for the response-protection element.

TABLE C-128 response-protection Attributes

Attribute	Default	Description
auth-source	none	Specifies the type of required authentication, either sender (user name and password) or content (digital signature).
auth-recipient	none	Specifies whether recipient authentication occurs before or after content authentication. Allowed values are before-content and after-content.

role-name

Contains the role-name in the security-role element of the corresponding Java EE deployment descriptor file.

Superelements

[“security-role-mapping” on page 237](#) (glassfish-application.xml, glassfish-web.xml, glassfish-ejb-jar.xml)

Subelements

none - contains data

sas-context

Describes the sas-context fields.

Superelements

[“ior-security-config” on page 168](#) (glassfish-ejb-jar.xml)

Subelements

The following table describes subelements for the sas-context element.

TABLE C-129 sas-context Subelements

Element	Required	Description
“caller-propagation” on page 116	only one	Specifies whether the target accepts propagated caller identities. The values are NONE, SUPPORTED, or REQUIRED.

schema

Specifies the file that contains a description of the database schema to which the beans in this sun-cmp-mappings.xml file are mapped. If this element is empty, the database schema file is automatically generated at deployment time. Otherwise, the schema element names a .dbschema file with a pathname relative to the directory containing the sun-cmp-mappings.xml file, but without the .dbschema extension. See [“Automatic Database Schema Capture” in Oracle GlassFish Server 3.0.1 Application Development Guide](#).

Superelements

[“sun-cmp-mapping” on page 248](#) (sun-cmp-mappings.xml)

Subelements

none - contains data

Examples

```
<schema/> <!-- use automatic schema generation -->
```

```
<schema>CompanySchema</schema> <!-- use "CompanySchema.dbschema" -->
```

schema-generator-properties

Specifies field-specific column attributes in property subelements.

Superelements

[“cmp-resource” on page 124](#) (glassfish-ejb-jar.xml)

Subelements

The following table describes subelements for the `schema-generator-properties` element.

TABLE C-130 `schema-generator-properties` Subelements

Element	Required	Description
“property (with subelements)” on page 216	zero or more	Specifies a property name and value.

Properties

The following table describes properties for the `schema-generator-properties` element.

TABLE C-131 `schema-generator-properties` Properties

Property	Default	Description
<code>use-unique-table-names</code>	false	Specifies that generated table names are unique within each GlassFish Server domain. This property can be overridden during deployment. See “Generation Options for CMP” in Oracle GlassFish Server 3.0.1 Application Development Guide .
<code>bean-name.field-name.attribute</code>	none	Defines a column attribute. For attribute descriptions, see Table C-132 .

The following table lists the column attributes for properties defined in the `schema-generator-properties` element.

TABLE C-132 `schema-generator-properties` Column Attributes

Attribute	Description
<code>jdbc-type</code>	Specifies the JDBC type of the column created for the CMP field. The actual SQL type generated is based on this JDBC type but is database vendor specific.

TABLE C-132 schema-generator-properties Column Attributes (Continued)

Attribute	Description
jdbc-maximum-length	Specifies the maximum number of characters stored in the column corresponding to the CMP field. Applies only when the actual SQL that is generated for the column requires a length. For example, a jdbc-maximum-length of 32 on a CMP String field such as firstName normally results in a column definition such as VARCHAR(32). But if the jdbc-type is CLOB and you are deploying on Oracle, the resulting column definition is CLOB. No length is given, because in an Oracle database, a CLOB has no length.
jdbc-precision	Specifies the maximum number of digits stored in a column which represents a numeric type.
jdbc-scale	Specifies the number of digits stored to the right of the decimal point in a column that represents a floating point number.
jdbc-nullable	Specifies whether the column generated for the CMP field allows null values.

Example

```
<schema-generator-properties>
  <property>
    <name>Employee.firstName.jdbc-type</name>
    <value>char</value>
  </property>
  <property>
    <name>Employee.firstName.jdbc-maximum-length</name>
    <value>25</value>
  </property>
  <property>
    <name>use-unique-table-names</name>
    <value>true</value>
  </property>
</schema-generator-properties>
```

secondary-table

Specifies a bean's secondary table(s).

Superelements

[“entity-mapping” on page 152](#) (sun-cmp-mappings.xml)

Subelements

The following table describes subelements for the secondary-table element.

TABLE C-133 secondary table Subelements

Element	Required	Description
“table-name” on page 249	only one	Specifies the name of a database table.
“column-pair” on page 127	one or more	Specifies the pair of columns that determine the relationship between two database tables.

security

Defines the SSL security configuration for IIOP/SSL communication with the target server.

Superelements

[“target-server” on page 249](#) (sun-acc.xml)

Subelements

The following table describes subelements for the security element.

TABLE C-134 security Subelements

Element	Required	Description
“ssl” on page 244	only one	Specifies the SSL processing parameters.
“cert-db” on page 117	only one	Not implemented. Included for backward compatibility only.

security-map

Maps the principal received during servlet or EJB authentication to the credentials accepted by the EIS. This mapping is optional. It is possible to map multiple GlassFish Server principals to the same back-end principal.

This is different from a [“work-security-map” on page 260](#), which maps a principal associated with an incoming work instance to a principal in the GlassFish Server's security domain.

Superelements

[“connector-connection-pool” on page 129](#) (glassfish-resources.xml)

Subelements

The following table describes subelements for the `security-map` element.

TABLE C-135 `security-map` Subelements

Element	Required	Description
“principal” on page 213	one or more	Contains the principal of the servlet or EJB client.
“user-group” on page 253	one or more	Contains the group to which the principal belongs.
“backend-principal” on page 109	only one	Specifies the user name and password required by the EIS.

Attributes

The following table describes attributes for the `security-map` element.

TABLE C-136 `security-map` Attributes

Attribute	Default	Description
<code>name</code>	<code>none</code>	Specifies a name for the security mapping.

security-role-mapping

Maps roles to users or groups in the currently active realm. See [“Realm Configuration” in Oracle GlassFish Server 3.0.1 Application Development Guide](#).

The role mapping element maps a role, as specified in the EJB JAR `role-name` entries, to a environment-specific user or group. If it maps to a user, it must be a concrete user which exists in the current realm, who can log into the server using the current authentication method. If it maps to a group, the realm must support groups and the group must be a concrete group which exists in the current realm. To be useful, there must be at least one user in that realm who belongs to that group.

Superelements

[“glassfish-application” on page 158](#) (`glassfish-application.xml`),
[“glassfish-web-app” on page 161](#) (`glassfish-web.xml`), [“glassfish-ejb-jar” on page 160](#) (`glassfish-ejb-jar.xml`)

Subelements

The following table describes subelements for the `security-role-mapping` element.

TABLE C-137 `security-role-mapping` Subelements

Element	Required	Description
“role-name” on page 232	only one	Contains the <code>role-name</code> in the <code>security-role</code> element of the corresponding Java EE deployment descriptor file.
“principal-name” on page 214	one or more if no <code>group-name</code> , otherwise zero or more	Contains a principal (user) name in the current realm. In an enterprise bean, the principal must have the <code>run-as</code> role specified.
“group-name” on page 167	one or more if no <code>principal-name</code> , otherwise zero or more	Contains a group name in the current realm.

service-endpoint-interface

Specifies the web service reference name relative to `java:comp/env`.

Superelements

[“port-info” on page 212](#) (`glassfish-web.xml`, `glassfish-ejb-jar.xml`, `glassfish-application-client.xml`)

Subelements

none - contains data

service-impl-class

Specifies the name of the generated service implementation class.

Superelements

[“service-ref” on page 239](#) (`glassfish-web.xml`, `glassfish-ejb-jar.xml`, `glassfish-application-client.xml`)

Subelements

none - contains data

service-qname

Specifies the WSDL service element that is being referred to.

Superelements

“[service-ref](#)” on page 239 (glassfish-web.xml, glassfish-ejb-jar.xml, glassfish-application-client.xml); “[webservice-endpoint](#)” on page 259 (glassfish-web.xml, glassfish-ejb-jar.xml)

Subelements

The following table describes subelements for the service-qname element.

TABLE C-138 service-qname subelements

Element	Required	Description
“ namespaceURI ” on page 206	only one	Specifies the namespace URI.
“ localpart ” on page 189	only one	Specifies the local part of a QNAME.

service-ref

Specifies runtime settings for a web service reference. Runtime information is only needed in the following cases:

- To define the port used to resolve a container-managed port
- To define the default Stub/Call property settings for Stub objects
- To define the URL of a final WSDL document to be used instead of the one associated with the service-ref in the standard Java EE deployment descriptor

Superelements

“[glassfish-web-app](#)” on page 161 (glassfish-web.xml), “[ejb](#)” on page 145 (glassfish-ejb-jar.xml), “[glassfish-application-client](#)” on page 159 (glassfish-application-client.xml)

Subelements

The following table describes subelements for the service-ref element.

TABLE C-139 service-ref subelements

Element	Required	Description
“service-ref-name” on page 240	only one	Specifies the web service reference name relative to <code>java:comp/env</code> .
“port-info” on page 212	zero or more	Specifies information for a port within a web service reference.
“call-property” on page 116	zero or more	Specifies JAX-RPC property values that can be set on a <code>javax.xml.rpc.Call</code> object before it is returned to the web service client.
“wsdl-override” on page 261	zero or one	Specifies a valid URL pointing to a final WSDL document.
“service-impl-class” on page 238	zero or one	Specifies the name of the generated service implementation class.
“service-qname” on page 239	zero or one	Specifies the WSDL service element that is being referenced.

service-ref-name

Specifies the web service reference name relative to `java:comp/env`.

Superelements

[“service-ref” on page 239](#) (`glassfish-web.xml`, `glassfish-ejb-jar.xml`, `glassfish-application-client.xml`)

Subelements

none - contains data

servlet

Specifies a principal name for a servlet. Used for the `run-as` role defined in `web.xml`.

Superelements

[“glassfish-web-app” on page 161](#) (`glassfish-web.xml`)

Subelements

The following table describes subelements for the `servlet` element.

TABLE C-140 servlet Subelements

Element	Required	Description
“servlet-name” on page 241	only one	Contains the name of a servlet, which is matched to a <code>servlet-name</code> in <code>web.xml</code> .
“principal-name” on page 214	zero or one	Contains a principal (user) name in the current realm.
“webservice-endpoint” on page 259	zero or more	Specifies information about a web service endpoint.

servlet-impl-class

Specifies the automatically generated name of the servlet implementation class.

Superelements

[“webservice-endpoint” on page 259](#) (`glassfish-web.xml`, `glassfish-ejb-jar.xml`)

Subelements

none - contains data

servlet-name

Specifies the name of a servlet, which is matched to a `servlet-name` in `web.xml`. This name must be present in `web.xml`.

Superelements

[“cache-mapping” on page 115](#), [“servlet” on page 240](#) (`glassfish-web.xml`)

Subelements

none - contains data

session-config

Specifies session configuration information. Overrides the web container settings for an individual web module.

Superelements

[“glassfish-web-app” on page 161](#) (glassfish-web.xml)

Subelements

The following table describes subelements for the `session-config` element.

TABLE C-141 session-config Subelements

Element	Required	Description
“session-manager” on page 242	zero or one	Specifies session manager configuration information.
“session-properties” on page 243	zero or one	Specifies session properties.
“cookie-properties” on page 137	zero or one	Specifies session cookie properties.

session-manager

Specifies session manager information.

Superelements

[“session-config” on page 242](#) (glassfish-web.xml)

Subelements

The following table describes subelements for the `session-manager` element.

TABLE C-142 session-manager Subelements

Element	Required	Description
“manager-properties” on page 194	zero or one	Specifies session manager properties.
“store-properties” on page 245	zero or one	Specifies session persistence (storage) properties.

Attributes

The following table describes attributes for the `session-manager` element.

TABLE C-143 `session-manager` Attributes

Attribute	Default	Description
<code>persistence-type</code>	<code>memory</code>	(optional) Specifies the session persistence mechanism. Allowed values are <code>memory</code> , <code>file</code> , and <code>replicated</code> .

session-properties

Specifies session properties.

Superelements

[“session-config” on page 242](#) (`glassfish-web.xml`)

Subelements

The following table describes subelements for the `session-properties` element.

TABLE C-144 `session-properties` Subelements

Element	Required	Description
“property (with attributes)” on page 215	zero or more	Specifies a property, which has a name and a value.

Properties

The following table describes properties for the `session-properties` element.

TABLE C-145 `session-properties` Properties

Property	Default	Description
<code>timeoutSeconds</code>	<code>1800</code>	<p>Specifies the default maximum inactive interval (in seconds) for all sessions created in this web module. If set to <code>0</code> or less, sessions in this web module never expire.</p> <p>If a <code>session-timeout</code> element is specified in the <code>web.xml</code> file, the <code>session-timeout</code> value overrides any <code>timeoutSeconds</code> value. If neither <code>session-timeout</code> nor <code>timeoutSeconds</code> is specified, the <code>timeoutSeconds</code> default is used.</p> <p>Note that the <code>session-timeout</code> element in <code>web.xml</code> is specified in minutes, not seconds.</p>

TABLE C-145 session-properties Properties (Continued)

Property	Default	Description
enableCookies	true	Uses cookies for session tracking if set to true.
enableURLRewriting	true	Enables URL rewriting. This provides session tracking via URL rewriting when the browser does not accept cookies. You must also use an encodeURL or encodeRedirectURL call in the servlet or JSP.

ssl

Defines SSL processing parameters.

Superelements

[“security” on page 236](#) (sun-acc.xml)

Subelements

none

Attributes

The following table describes attributes for the SSL element.

TABLE C-146 ssl attributes

Attribute	Default	Description
cert-nickname	s1as	(optional) The nickname of the server certificate in the certificate database or the PKCS#11 token. In the certificate, the name format is <i>tokenname:nickname</i> . Including the <i>tokenname:</i> part of the name in this attribute is optional.
ssl2-enabled	false	(optional) Determines whether SSL2 is enabled.
ssl2-ciphers	none	(optional) A space-separated list of the SSL2 ciphers used with the prefix + to enable or - to disable. For example, +rc4. Allowed values are rc4, rc4export, rc2, rc2export, idea, des, desede3.
ssl3-enabled	true	(optional) Determines whether SSL3 is enabled.

TABLE C-146 ssl attributes (Continued)

Attribute	Default	Description
ssl3-tls-ciphers	none	(optional) A space-separated list of the SSL3 ciphers used, with the prefix + to enable or - to disable, for example +SSL_RSA_WITH_RC4_128_MD5. Allowed values are SSL_RSA_WITH_RC4_128_MD5, SSL_RSA_WITH_3DES_EDE_CBC_SHA, SSL_RSA_WITH_DES_CBC_SHA, SSL_RSA_EXPORT_WITH_RC4_40_MD5, SSL_RSA_WITH_NULL_MD5, SSL_RSA_WITH_RC4_128_SHA, and SSL_RSA_WITH_NULL_SHA. Values available in previous releases are supported for backward compatibility.
tls-enabled	true	(optional) Determines whether TLS is enabled.
tls-rollback-enabled	true	(optional) Determines whether TLS rollback is enabled. Enable TLS rollback for Microsoft Internet Explorer 5.0 and 5.5.

steady-pool-size

Specifies the initial and minimum number of bean instances that are maintained in the pool. Default is 32. Applies to stateless session beans and message-driven beans.

Superelements

[“bean-pool” on page 110](#) (glassfish-ejb-jar.xml)

Subelements

none - contains data

store-properties

Specifies session persistence (storage) properties.

Superelements

[“session-manager” on page 242](#) (glassfish-web.xml)

Subelements

The following table describes subelements for the store-properties element.

TABLE C-147 store-properties Subelements

Element	Required	Description
“property (with attributes)” on page 215	zero or more	Specifies a property, which has a name and a value.

Properties

The following table describes properties for the `store-properties` element.

TABLE C-148 store-properties Properties

Property	Default	Description
<code>directory</code>	<i>domain-dir/generated/jsp/app-name/module-name_war</i>	Specifies the absolute or relative pathname of the directory into which individual session files are written. A relative path is relative to the temporary work directory for this web module. Applicable only if the <code>persistence-type</code> attribute of the parent “session-manager” on page 242 element is <code>file</code> .
<code>persistenceScope</code>	<code>session</code>	Specifies how much of the session state is stored. Allowed values are as follows: <ul style="list-style-type: none"> ■ <code>session</code> - The entire session state is stored every time. This mode provides the best guarantee that your session data is correctly stored for any distributable web module. ■ <code>modified-session</code> - The entire session state is stored if it has been modified. A session is considered to have been modified if <code>HttpSession.setAttribute()</code> or <code>HttpSession.removeAttribute()</code> was called. You must guarantee that <code>setAttribute</code> is called every time an attribute is changed. This is not a Java EE specification requirement, but it is required for this mode to work properly. ■ <code>modified-attribute</code> - Only modified session attributes are stored. For this mode to work properly, you must follow some guidelines, which are explained immediately following this table. Applicable only if the <code>persistence-type</code> attribute of the parent “session-manager” on page 242 element is <code>replicated</code> .

If the `persistenceScope` store property is set to `modified-attribute`, a web module must follow these guidelines:

- Call `setAttribute` every time the session state is modified.
- Make sure there are no cross-references between attributes. The object graph under each distinct attribute key is serialized and stored separately. If there are any object cross references between the objects under each separate key, they are not serialized and deserialized correctly.

- Distribute the session state across multiple attributes, or at least between a read-only attribute and a modifiable attribute.

stub-property

Specifies JAX-RPC property values that are set on a `javax.xml.rpc.Stub` object before it is returned to the web service client. The property names can be any properties supported by the JAX-RPC Stub implementation.

Superelements

[“port-info” on page 212](#) (`glassfish-web.xml`, `glassfish-ejb-jar.xml`, `glassfish-application-client.xml`)

Subelements

The following table describes subelements for the `stub-property` element.

TABLE C-149 `stub-property` subelements

Element	Required	Description
“name” on page 206	only one	Specifies the name of the entity.
“value” on page 254	only one	Specifies the value of the entity.

Properties

The following table describes properties for the `stub-property` element.

TABLE C-150 `stub-property` properties

Property	Default	Description
<code>jbi-enabled</code>	<code>true</code>	Determines whether the visibility of this endpoint as a Java Business Integration service is enabled or disabled.

Example

```
<service-ref>
<service-ref-name>service/FooProxy</service-ref-name>
  <port-info>
```

```

<service-endpoint-interface>a.FooPort</service-endpoint-interface>
<wsdl-port>
  <namespaceURI>urn:Foo</namespaceURI>
  <localpart>FooPort</localpart>
</wsdl-port>
<stub-property>
  <name>javax.xml.rpc.service.endpoint.address</name>
  <value>http://localhost:8080/a/Foo</value>
</stub-property>
</port-info>
</service-ref>

```

sun-cmp-mapping

Specifies beans mapped to a particular database schema.

Note – A bean cannot be related to a bean that maps to a different database schema, even if the beans are deployed in the same EJB JAR file.

Superelements

“[sun-cmp-mappings](#)” on page 248 ([sun-cmp-mappings.xml](#))

Subelements

The following table describes subelements for the sun-cmp-mapping element.

TABLE C-151 sun-cmp-mapping Subelements

Element	Required	Description
“ schema ” on page 233	only one	Specifies the file that contains a description of the database schema.
“ entity-mapping ” on page 152	one or more	Specifies the mapping of a bean to database columns.

sun-cmp-mappings

Defines the GlassFish Server specific CMP mapping configuration for an EJB JAR file. This is the root element; there can only be one sun-cmp-mappings element in a sun-cmp-mappings.xml file. See “[The sun-cmp-mappings.xml File](#)” on page 93.

Superelements

none

Subelements

The following table describes subelements for the `sun-cmp-mappings` element.

TABLE C-152 `sun-cmp-mappings` Subelements

Element	Required	Description
“sun-cmp-mapping” on page 248	one or more	Specifies beans mapped to a particular database schema.

table-name

Specifies the name of a database table. The table must be present in the database schema file. See [“Automatic Database Schema Capture” in *Oracle GlassFish Server 3.0.1 Application Development Guide*](#).

Superelements

[“entity-mapping” on page 152](#), [“secondary-table” on page 235](#) (`sun-cmp-mappings.xml`)

Subelements

none - contains data

target-server

Specifies the IIOP listener for the target server. Also specifies IIOP endpoints used for load balancing. If the GlassFish Server instance on which the application client is deployed participates in a cluster, GlassFish Server finds all currently active IIOP endpoints in the cluster automatically. However, a client should have at least two endpoints specified for bootstrapping purposes, in case one of the endpoints has failed.

A listener or endpoint is in the form `host:port`, where the *host* is an IP address or host name, and the *port* specifies the port number.

Not used if the deprecated `endpoints` property is defined for load balancing. For more information, see [“client-container” on page 121](#).

Superelements

[“client-container” on page 121](#) (`sun-acc.xml`)

Subelements

The following table describes subelements for the target - server element.

TABLE C-153 target - server subelements

Element	Required	Description
“description” on page 143	zero or one	Specifies the description of the target server.
“security” on page 236	zero or one	Specifies the security configuration for the IIOP/SSL communication with the target server.

Attributes

The following table describes attributes for the target - server element.

TABLE C-154 target - server attributes

Attribute	Default	Description
name	none	Specifies the name of the server instance accessed by the client container.
address	none	Specifies the host name or IP address (resolvable by DNS) of the server to which this client attaches.
port	none	Specifies the naming service port number of the server to which this client attaches. For a new server instance, assign a port number other than 3700. You can change the port number in the Administration Console. Click the Help button in the Administration Console for more information.

tie-class

Specifies the automatically generated name of a tie implementation class for a port component.

Superelements

[“webservice-endpoint” on page 259](#) (glassfish-web.xml, glassfish-ejb-jar.xml)

Subelements

none - contains data

timeout

Specifies the “[cache-mapping](#)” on page 115 specific maximum amount of time in seconds that an entry can remain in the cache after it is created or refreshed. If not specified, the default is the value of the `timeout` attribute of the “[cache](#)” on page 111 element.

Superelements

“[cache-mapping](#)” on page 115 (`glassfish-web.xml`)

Subelements

none - contains data

Attributes

The following table describes attributes for the `timeout` element.

TABLE C-155 timeout Attributes

Attribute	Default	Description
<code>name</code>	<code>none</code>	Specifies the timeout input parameter, whose value is interpreted in seconds. The field's type must be <code>java.lang.Long</code> or <code>java.lang.Integer</code> .
<code>scope</code>	<code>request.attribute</code>	(optional) Specifies the scope from which the input parameter is retrieved. Allowed values are <code>context.attribute</code> , <code>request.header</code> , <code>request.parameter</code> , <code>request.cookie</code> , <code>request.attribute</code> , and <code>session.attribute</code> .

transport-config

Specifies the security transport information.

Superelements

“[ior-security-config](#)” on page 168 (`glassfish-ejb-jar.xml`)

Subelements

The following table describes subelements for the `transport-config` element.

TABLE C-156 transport-config Subelements

Element	Required	Description
“integrity” on page 168	only one	Specifies if the target supports integrity-protected messages. The values are NONE, SUPPORTED, or REQUIRED.
“confidentiality” on page 129	only one	Specifies if the target supports privacy-protected messages. The values are NONE, SUPPORTED, or REQUIRED.
“establish-trust-in-target” on page 153	only one	Specifies if the target is capable of authenticating <i>to</i> a client. The values are NONE, SUPPORTED, or REQUIRED.
“establish-trust-in-client” on page 153	only one	Specifies if the target is capable of authenticating a client. The values are NONE, SUPPORTED, or REQUIRED.

transport-guarantee

Specifies that the communication between client and server is NONE, INTEGRAL, or CONFIDENTIAL.

- NONE means the application does not require any transport guarantees.
- INTEGRAL means the application requires that the data sent between client and server be sent in such a way that it can't be changed in transit.
- CONFIDENTIAL means the application requires that the data be transmitted in a fashion that prevents other entities from observing the contents of the transmission.

In most cases, a value of INTEGRAL or CONFIDENTIAL indicates that the use of SSL is required.

Superelements

[“webservice-endpoint” on page 259](#) (glassfish-web.xml, glassfish-ejb-jar.xml)

Subelements

none - contains data

unique-id

Contains the unique ID for the application. This value is automatically updated each time the application is deployed or redeployed. Do not edit this value.

Superelements

[“glassfish-application” on page 158](#) (glassfish-application.xml), [“enterprise-beans” on page 151](#) (glassfish-ejb-jar.xml)

Subelements

none - contains data

url-pattern

Specifies a servlet URL pattern for which caching is enabled. See the Servlet 2.4 specification section SRV. 11.2 for applicable patterns.

Superelements

[“cache-mapping” on page 115](#) (glassfish-web.xml)

Subelements

none - contains data

user-group

Contains the group to which the principal belongs.

Superelements

[“security-map” on page 236](#) (glassfish-resources.xml)

Subelements

none - contains data

use-thread-pool-id

Specifies the thread pool from which threads are selected for remote invocations of this bean.

Superelements

[“ejb” on page 145](#) (glassfish-ejb-jar.xml)

Subelements

none - contains data

value

Specifies the value of the entity.

Superelements

[“call-property” on page 116](#), [“stub-property” on page 247](#) (glassfish-web.xml, glassfish-ejb-jar.xml, glassfish-application-client.xml); [“property \(with subelements\)” on page 216](#) (glassfish-ejb-jar.xml)

Subelements

none - contains data

valve

Specifies a custom valve for this web application. You can define a valve for all the web applications on a specific virtual server. For details, see [create-virtual-server\(1\)](#).

Superelements

[“glassfish-web-app” on page 161](#) (glassfish-web.xml)

Subelements

The following table describes subelements for the valve element.

TABLE C-157 valve Subelements

Element	Required	Description
“description” on page 143	zero or one	Specifies a text description of this element.
“property (with attributes)” on page 215	zero or more	Specifies a property, which has a name and a value.

Attributes

The following table describes attributes for the `valve` element.

TABLE C-158 valve Attributes

Attribute	Default	Description
<code>name</code>	none	Specifies a unique name for the valve.
<code>class-name</code>	none	Specifies the fully qualified class name of the valve. The valve class must implement the <code>org.apache.catalina.Valve</code> interface from Tomcat or previous GlassFish Server releases, or the <code>org.glassfish.web.valve.GlassFishValve</code> interface from the current GlassFish Server release.

Example

```
><valve name="MyValve" classname="org.glassfish.extension.Valve">
  <property name="MyProperty1" value="MyValue1" />
  <property name="MyProperty2" value="MyValue2" />
</valve>
```

vendor

Specifies a vendor-specific icon, splash screen, text string, or a combination of these for Java Web Start download and launch screens. The complete format of this element's data is as follows:

```
<vendor>icon-image-URI::splash-screen-image-URI::vendor-text</vendor>
```

The following example vendor element contains an icon, a splash screen, and a text string:

```
<vendor>images/icon.jpg::otherDir/splash.jpg::MyCorp, Inc.</vendor>
```

The following example vendor element contains an icon and a text string:

```
<vendor>images/icon.jpg::MyCorp, Inc.</vendor>
```

The following example vendor element contains a splash screen and a text string; note the initial double colon:

```
<vendor>::otherDir/splash.jpg::MyCorp, Inc.</vendor>
```

The following example vendor element contains only a text string:

```
<vendor>MyCorp, Inc.</vendor>
```

The default value is the text string Application Client.

Superelements

[“java-web-start-access” on page 170](#) (glassfish-application-client.xml)

Subelements

none - contains data

version-identifier

Contains version information for an application or module. For more information about application versioning, see [“Module and Application Versions” on page 42](#).

Superelements

[“glassfish-application” on page 158](#) (glassfish-application.xml),
[“glassfish-web-app” on page 161](#) (glassfish-web-app.xml), [“glassfish-ejb-jar” on page 160](#) (glassfish-ejb-jar.xml), [“glassfish-application-client” on page 159](#) (glassfish-application-client.xml)

Subelements

none - contains data

victim-selection-policy

Specifies how stateful session beans are selected for passivation. Possible values are First In, First Out (FIFO), Least Recently Used (LRU), Not Recently Used (NRU). The default value is NRU, which is actually pseudo-LRU.

Note – You cannot plug in your own victim selection algorithm.

The victims are generally passivated into a backup store (typically a file system or database). This store is cleaned during startup, and also by a periodic background process that removes idle entries as specified by `removal-timeout-in-seconds`. The backup store is monitored by a background thread (or sweeper thread) to remove unwanted entries.

Applies to stateful session beans.

Superelements

[“bean-cache” on page 109](#) (`glassfish-ejb-jar.xml`)

Subelements

none - contains data

Example

```
<victim-selection-policy>LRU</victim-selection-policy>
```

If both SSL2 and SSL3 are enabled, the server tries SSL3 encryption first. If that fails, the server tries SSL2 encryption. If both SSL2 and SSL3 are enabled for a virtual server, the server tries SSL3 encryption first. If that fails, the server tries SSL2 encryption.

web

Specifies the application's web tier configuration.

Superelements

[“glassfish-application” on page 158](#) (`glassfish-application.xml`)

Subelements

The following table describes subelements for the web element.

TABLE C-159 web Subelements

Element	Required	Description
“web-uri” on page 258	only one	Contains the web URI for the application.
“context-root” on page 137	only one	Contains the web context root for the web module.

web-uri

Contains the web URI for the application. Must match the corresponding element in the `application.xml` file.

Superelements

[“web” on page 257](#) (`glassfish-application.xml`)

Subelements

none - contains data

webservice-description

Specifies a name and optional publish location for a web service.

Superelements

[“glassfish-web-app” on page 161](#) (`glassfish-web.xml`), [“enterprise-beans” on page 151](#) (`glassfish-ejb-jar.xml`)

Subelements

The following table describes subelements for the webservice-description element.

TABLEC-160 webservice-description subelements

Element	Required	Description
“webservice-description-name” on page 259	only one	Specifies a unique name for the web service within a web or EJB module.
“wsdl-publish-location” on page 262	zero or one	Specifies the URL of a directory to which a web service’s WSDL is published during deployment.

webservice-description-name

Specifies a unique name for the web service within a web or EJB module.

Superelements

[“webservice-description” on page 258](#) (glassfish-web.xml, glassfish-ejb-jar.xml)

Subelements

none - contains data

webservice-endpoint

Specifies information about a web service endpoint.

Superelements

[“servlet” on page 240](#) (glassfish-web.xml), [“ejb” on page 145](#) (glassfish-ejb-jar.xml)

Subelements

The following table describes subelements for the webservice-endpoint element.

TABLEC-161 webservice-endpoint subelements

Element	Required	Description
“port-component-name” on page 211	only one	Specifies a unique name for a port component within a web or EJB module.

TABLE C-161 webservice-endpoint subelements (Continued)

Element	Required	Description
“endpoint-address-uri” on page 150	zero or one	Specifies the automatically generated endpoint address.
“login-config” on page 191	zero or one	Specifies the authentication configuration for an EJB web service endpoint.
“message-security-binding” on page 201	zero or one	Specifies a custom authentication provider binding.
“transport-guarantee” on page 252	zero or one	Specifies that the communication between client and server is NONE, INTEGRAL, or CONFIDENTIAL.
“service-qname” on page 239	zero or one	Specifies the WSDL service element that is being referenced.
“tie-class” on page 250	zero or one	Specifies the automatically generated name of a tie implementation class for a port component.
“servlet-impl-class” on page 241	zero or one	Specifies the automatically generated name of the generated servlet implementation class.
“debugging-enabled” on page 141	zero or one	Specifies whether the debugging servlet is enabled for this web service endpoint. Allowed values are true and false (the default).
“property (with attributes)” on page 215 (glassfish-web.xml) “property (with subelements)” on page 216 (glassfish-ejb-jar.xml)	zero or more	Specifies a property, which has a name and a value.

work-security-map

Defines a work security map, which maps a principal associated with an incoming work instance to a principal in the GlassFish Server's security domain. It is possible to map multiple EIS group or user principals to the same GlassFish Server principal.

This is different from a [“security-map” on page 236](#), which maps the principal received during servlet or EJB authentication to the credentials accepted by the EIS.

Superelements

[“resources” on page 230](#) (glassfish-resources.xml)

Subelements

The following table describes subelements for the work-security-map element.

TABLEC-162 work-security-map Subelements

Element	Required	Description
“description” on page 143	zero or one	Contains a text description of this element.
“principal-map” on page 214	zero or more	Maps an EIS principal to a principal defined in the GlassFish Server domain.
“group-map” on page 166	zero or more	Maps an EIS group to a group defined in the GlassFish Server domain.

Attributes

The following table describes attributes for the work-security-map element.

TABLEC-163 work-security-map Attributes

Attribute	Default	Description
name	none	Specifies a unique name for the work security map.
description	none	Specifies a text description for this element.

wsdl-override

Specifies a valid URL pointing to a final WSDL document. If not specified, the WSDL document associated with the service-ref in the standard Java EE deployment descriptor is used.

Superelements

[“service-ref” on page 239](#) (glassfish-web.xml, glassfish-ejb-jar.xml, glassfish-application-client.xml)

Subelements

none - contains data

Example

```
// available via HTTP
<wsdl-override>http://localhost:8000/myservice/myport?WSDL</wsdl-override>

// in a file
<wsdl-override>file:/home/user1/myfinalwsdl.wsdl</wsdl-override>
```

wsdl-port

Specifies the WSDL port.

Superelements

“[port-info](#)” on page 212 (glassfish-web.xml, glassfish-ejb-jar.xml, glassfish-application-client.xml)

Subelements

The following table describes subelements for the wsdl-port element.

TABLE C-164 wsdl-port subelements

Element	Required	Description
“ namespaceURI ” on page 206	only one	Specifies the namespace URI.
“ localpart ” on page 189	only one	Specifies the local part of a QNAME.

wsdl-publish-location

Specifies the URL of a directory to which a web service’s WSDL is published during deployment. Any required files are published to this directory, preserving their location relative to the module-specific WSDL directory (META-INF/wsdl or WEB-INF/wsdl).

Superelements

“[webservice-description](#)” on page 258 (glassfish-web.xml, glassfish-ejb-jar.xml)

Subelements

none - contains data

Example

Suppose you have an ejb.jar file whose webservices.xml file’s wsdl-file element contains the following reference:

```
META-INF/wsdl/a/Foo.wsdl
```


Suppose your `glassfish-ejb.jar` file contains the following element:

```
<wsdl-publish-location>file:/home/user1/publish</wsdl-publish-location>
```

The final WSDL is stored in `/home/user1/publish/a/Foo.wsdl`.