

For Review Purposes Only

Sun GlassFish Enterprise Server v3 Domain File Format Reference



Sun Microsystems, Inc.
4150 Network Circle
Santa Clara, CA 95054
U.S.A.

Part No: 820-7694-05
June 2009

Copyright 2009 Sun Microsystems, Inc. 4150 Network Circle, Santa Clara, CA 95054 U.S.A. All rights reserved.

Sun Microsystems, Inc. has intellectual property rights relating to technology embodied in the product that is described in this document. In particular, and without limitation, these intellectual property rights may include one or more U.S. patents or pending patent applications in the U.S. and in other countries.

U.S. Government Rights – Commercial software. Government users are subject to the Sun Microsystems, Inc. standard license agreement and applicable provisions of the FAR and its supplements.

This distribution may include materials developed by third parties.

Parts of the product may be derived from Berkeley BSD systems, licensed from the University of California. UNIX is a registered trademark in the U.S. and other countries, exclusively licensed through X/Open Company, Ltd.

Sun, Sun Microsystems, the Sun logo, the Solaris logo, the Java Coffee Cup logo, docs.sun.com, Enterprise JavaBeans, EJB, GlassFish, J2EE, J2SE, Java Naming and Directory Interface, JavaBeans, Javadoc, JDBC, JDK, JavaScript, JavaServer, JavaServer Pages, JMX, JRE, JSP, JVM, MySQL, NetBeans, OpenSolaris, SunSolve, Sun GlassFish, Java, and Solaris are trademarks or registered trademarks of Sun Microsystems, Inc. or its subsidiaries in the U.S. and other countries. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. in the U.S. and other countries. Products bearing SPARC trademarks are based upon an architecture developed by Sun Microsystems, Inc.

The OPEN LOOK and Sun™ Graphical User Interface was developed by Sun Microsystems, Inc. for its users and licensees. Sun acknowledges the pioneering efforts of Xerox in researching and developing the concept of visual or graphical user interfaces for the computer industry. Sun holds a non-exclusive license from Xerox to the Xerox Graphical User Interface, which license also covers Sun's licensees who implement OPEN LOOK GUIs and otherwise comply with Sun's written license agreements.

Products covered by and information contained in this publication are controlled by U.S. Export Control laws and may be subject to the export or import laws in other countries. Nuclear, missile, chemical or biological weapons or nuclear maritime end uses or end users, whether direct or indirect, are strictly prohibited. Export or reexport to countries subject to U.S. embargo or to entities identified on U.S. export exclusion lists, including, but not limited to, the denied persons and specially designated nationals lists is strictly prohibited.

DOCUMENTATION IS PROVIDED "AS IS" AND ALL EXPRESS OR IMPLIED CONDITIONS, REPRESENTATIONS AND WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT, ARE DISCLAIMED, EXCEPT TO THE EXTENT THAT SUCH DISCLAIMERS ARE HELD TO BE LEGALLY INVALID.

Copyright 2009 Sun Microsystems, Inc. 4150 Network Circle, Santa Clara, CA 95054 U.S.A. Tous droits réservés.

Sun Microsystems, Inc. détient les droits de propriété intellectuelle relatifs à la technologie incorporée dans le produit qui est décrit dans ce document. En particulier, et ce sans limitation, ces droits de propriété intellectuelle peuvent inclure un ou plusieurs brevets américains ou des applications de brevet en attente aux Etats-Unis et dans d'autres pays.

Cette distribution peut comprendre des composants développés par des tierces personnes.

Certains composants de ce produit peuvent être dérivées du logiciel Berkeley BSD, licenciés par l'Université de Californie. UNIX est une marque déposée aux Etats-Unis et dans d'autres pays; elle est licenciée exclusivement par X/Open Company, Ltd.

Sun, Sun Microsystems, le logo Sun, le logo Solaris, le logo Java Coffee Cup, docs.sun.com, Enterprise JavaBeans, EJB, GlassFish, J2EE, J2SE, Java Naming and Directory Interface, JavaBeans, Javadoc, JDBC, JDK, JavaScript, JavaServer, JavaServer Pages, JMX, JRE, JSP, JVM, MySQL, NetBeans, OpenSolaris, SunSolve, Sun GlassFish, Java et Solaris sont des marques de fabrique ou des marques déposées de Sun Microsystems, Inc., ou ses filiales, aux Etats-Unis et dans d'autres pays. Toutes les marques SPARC sont utilisées sous licence et sont des marques de fabrique ou des marques déposées de SPARC International, Inc. aux Etats-Unis et dans d'autres pays. Les produits portant les marques SPARC sont basés sur une architecture développée par Sun Microsystems, Inc.

L'interface d'utilisation graphique OPEN LOOK et Sun a été développée par Sun Microsystems, Inc. pour ses utilisateurs et licenciés. Sun reconnaît les efforts de pionniers de Xerox pour la recherche et le développement du concept des interfaces d'utilisation visuelle ou graphique pour l'industrie de l'informatique. Sun détient une licence non exclusive de Xerox sur l'interface d'utilisation graphique Xerox, cette licence couvrant également les licenciés de Sun qui mettent en place l'interface d'utilisation graphique OPEN LOOK et qui, en outre, se conforment aux licences écrites de Sun.

Les produits qui font l'objet de cette publication et les informations qu'il contient sont régis par la législation américaine en matière de contrôle des exportations et peuvent être soumis au droit d'autres pays dans le domaine des exportations et importations. Les utilisations finales, ou utilisateurs finaux, pour des armes nucléaires, des missiles, des armes chimiques ou biologiques ou pour le nucléaire maritime, directement ou indirectement, sont strictement interdites. Les exportations ou réexportations vers des pays sous embargo des Etats-Unis, ou vers des entités figurant sur les listes d'exclusion d'exportation américaines, y compris, mais de manière non exclusive, la liste de personnes qui font objet d'un ordre de ne pas participer, d'une façon directe ou indirecte, aux exportations des produits ou des services qui sont régis par la législation américaine en matière de contrôle des exportations et la liste de ressortissants spécifiquement désignés, sont rigoureusement interdites.

LA DOCUMENTATION EST FOURNIE "EN L'ETAT" ET TOUTES AUTRES CONDITIONS, DECLARATIONS ET GARANTIES EXPRESSES OU TACITES SONT FORMELLEMENT EXCLUES, DANS LA MESURE AUTORISEE PAR LA LOI APPLICABLE, Y COMPRIS NOTAMMENT TOUTE GARANTIE IMPLICITE RELATIVE A LA QUALITE MARCHANDE, A L'APTITUDE A UNE UTILISATION PARTICULIERE OU A L'ABSENCE DE CONTREFACON.

Contents

Preface	9
1 The domain.xml File	15
About the domain.xml File	15
Default Values	16
Variables	16
Element Referencing	17
Element Hierarchy	18
Alphabetical List of Elements	21
A	21
access-log	21
admin-object-resource	22
admin-service	23
applient-module	24
application	25
application-ref	27
applications	28
audit-module	28
auth-realm	29
B	32
backend-principal	32
C	32
config	32
configs	34
connection-pool	34
connector-connection-pool	35
connector-module	39
connector-resource	40

connector-service	41
containers	41
context-param	42
custom-resource	42
D	43
das-config	43
description	45
domain	45
E	46
ejb-container	46
ejb-module	49
ejb-timer-service	50
engine	51
env-entry	52
env-entry-name	53
env-entry-type	53
env-entry-value	53
extension-module	54
external-jndi-resource	55
F	56
file-cache	56
G	57
group-map	57
H	57
http	57
http-access-log	60
http-file-cache	61
http-listener	62
http-protocol	65
http-service	65
I	68
iiop-listener	68
iiop-service	69
J	70
j2ee-application	70
jacc-provider	71

java-config	72
jdbc-connection-pool	73
jdbc-resource	79
jms-host	80
jms-service	81
jmx-connector	83
jvm-options	84
K	85
keep-alive	85
L	86
lifecycle-module	86
log-service	87
M	89
mail-resource	89
manager-properties	91
mbean	92
mdb-container	93
message-security-config	94
module	95
module-log-levels	96
module-monitoring-levels	98
monitoring-service	99
N	99
network-config	99
network-listener	100
network-listeners	101
O	101
orb	101
P	102
param-name	102
param-value	102
port-unification	103
principal	103
principal-map	104
profiler	104
property	105

protocol	106
protocol-chain	107
protocol-chain-instance-handler	108
protocol-filter	108
protocol-finder	109
protocols	109
provider-config	110
R	111
registry-location	111
request-policy	112
request-processing	113
resource-adapter-config	113
resource-ref	114
resources	115
response-policy	116
S	117
security-map	117
security-service	117
server	119
servers	120
session-config	120
session-manager	121
session-properties	121
ssl	122
ssl-client-config	124
store-properties	124
system-applications	125
system-property	126
T	127
thread-pool	127
thread-pools	128
transaction-service	129
transformation-rule	131
transport	132
transports	133
U	134

user-group	134
V	134
virtual-server	134
W	140
web-container	140
web-module	141
web-module-config	142
web-service-endpoint	142
work-security-map	143
Index	145

Preface

This *Administration Reference* provides information about the Sun GlassFish™ Enterprise Server configuration file, `domain.xml`. This file contains most of the Enterprise Server configuration.

Enterprise Server v3 Preview is developed through the GlassFish project open-source community at <https://glassfish.dev.java.net/>. The GlassFish project provides a structured process for developing the Enterprise Server platform that makes the new features of the Java EE platform available faster, while maintaining the most important feature of Java EE: compatibility. It enables Java developers to access the Enterprise Server source code and to contribute to the development of the Enterprise Server. The GlassFish project is designed to encourage communication between Sun engineers and the community.

This preface contains information about and conventions for the entire Sun GlassFish Enterprise Server documentation set.

The following topics are addressed here:

- “Enterprise Server Documentation Set” on page 9
- “Related Documentation” on page 11
- “Typographic Conventions” on page 11
- “Symbol Conventions” on page 12
- “Default Paths and File Names” on page 12
- “Documentation, Support, and Training” on page 13
- “Searching Sun Product Documentation” on page 13
- “Third-Party Web Site References” on page 14
- “Sun Welcomes Your Comments” on page 14

Enterprise Server Documentation Set

The Enterprise Server documentation set describes deployment planning and system installation. The Uniform Resource Locator (URL) for Enterprise Server documentation is <http://docs.sun.com/coll/1343.9>. For an introduction to Enterprise Server, refer to the books in the order in which they are listed in the following table.

TABLE P-1 Books in the Enterprise Server Documentation Set

Book Title	Description
<i>Release Notes</i>	Provides late-breaking information about the software and the documentation. Includes a comprehensive, table-based summary of the supported hardware, operating system, Java™ Development Kit (JDK™), and database drivers.
<i>Quick Start Guide</i>	Explains how to get started with the Enterprise Server product.
<i>Installation Guide</i>	Explains how to install the software and its components.
<i>Administration Guide</i>	Explains how to configure, monitor, and manage Enterprise Server subsystems and components from the command line by using the <code>asadmin(1M)</code> utility. Instructions for performing these tasks from the Administration Console are provided in the Administration Console online help.
<i>Application Deployment Guide</i>	Explains how to assemble and deploy applications to the Enterprise Server and provides information about deployment descriptors.
<i>Your First Cup: An Introduction to the Java EE Platform</i>	Provides a short tutorial for beginning Java EE programmers that explains the entire process for developing a simple enterprise application. The sample application is a web application that consists of a component that is based on the Enterprise JavaBeans™ specification, a JAX-RS web service, and a JavaServer™ Faces component for the web front end.
<i>Application Development Guide</i>	Explains how to create and implement Java Platform, Enterprise Edition (Java EE platform) applications that are intended to run on the Enterprise Server. These applications follow the open Java standards model for Java EE components and APIs. This guide provides information about developer tools, security, and debugging.
<i>Add-On Component Development Guide</i>	Explains how to use published interfaces of Enterprise Server to develop add-on components for Enterprise Server. This document explains how to perform <i>only</i> those tasks that ensure that the add-on component is suitable for Enterprise Server.
<i>Scripting Framework Guide</i>	Explains how to develop scripting applications in languages such as Ruby on Rails and Groovy on Grails for deployment to Enterprise Server.
<i>Troubleshooting Guide</i>	Describes common problems that you might encounter when using Enterprise Server and how to solve them.
<i>Reference Manual</i>	Provides reference information in man page format for Enterprise Server administration commands, utility commands, and related concepts.
<i>Java EE 6 Tutorial, Volume I</i>	Explains how to use Java EE 6 platform technologies and APIs to develop Java EE applications.
<i>Message Queue Release Notes</i>	Describes new features, compatibility issues, and existing bugs for Sun GlassFish Message Queue.

TABLE P-1 Books in the Enterprise Server Documentation Set (Continued)

Book Title	Description
<i>Message Queue Developer's Guide for JMX Clients</i>	Describes the application programming interface in Sun GlassFish Message Queue for programmatically configuring and monitoring Message Queue resources in conformance with the Java Management Extensions (JMX).
<i>System Virtualization Support in Sun Java System Products</i>	Summarizes Sun support for Sun Java System products when used in conjunction with system virtualization products and features.

Related Documentation

A Javadoc™ tool reference for packages that are provided with the Enterprise Server is located at <http://java.sun.com/javaee/6/docs/api/>.

Additionally, the following resources might be useful:

- The Java EE Specifications (<http://java.sun.com/javaee/technologies/index.jsp>)
- The Java EE Blueprints (<http://java.sun.com/reference/blueprints/index.html>)

For information about creating enterprise applications in the NetBeans™ Integrated Development Environment (IDE), see <http://www.netbeans.org/kb/60/index.html>.

For information about the Java DB for use with the Enterprise Server, see <http://developers.sun.com/javadb/>.

The sample applications demonstrate a broad range of Java EE technologies. The samples are bundled with the Java EE Software Development Kit (SDK).

Typographic Conventions

The following table describes the typographic changes that are used in this book.

TABLE P-2 Typographic Conventions

Typeface	Meaning	Example
AaBbCc123	The names of commands, files, and directories, and onscreen computer output	Edit your <code>.login</code> file. Use <code>ls -a</code> to list all files. <code>machine_name% you have mail.</code>
AaBbCc123	What you type, contrasted with onscreen computer output	<code>machine_name% su</code> Password:

TABLE P-2 Typographic Conventions (Continued)

Typeface	Meaning	Example
<i>AaBbCc123</i>	A placeholder to be replaced with a real name or value	The command to remove a file is <code>rm filename</code> .
<i>AaBbCc123</i>	Book titles, new terms, and terms to be emphasized (note that some emphasized items appear bold online)	Read Chapter 6 in the <i>User's Guide</i> . A <i>cache</i> is a copy that is stored locally. Do <i>not</i> save the file.

Symbol Conventions

The following table explains symbols that might be used in this book.

TABLE P-3 Symbol Conventions

Symbol	Description	Example	Meaning
[]	Contains optional arguments and command options.	<code>ls [-l]</code>	The <code>-l</code> option is not required.
{ }	Contains a set of choices for a required command option.	<code>-d {y n}</code>	The <code>-d</code> option requires that you use either the <code>y</code> argument or the <code>n</code> argument.
`\${ }`	Indicates a variable reference.	<code>\${com.sun.javaRoot}</code>	References the value of the <code>com.sun.javaRoot</code> variable.
-	Joins simultaneous multiple keystrokes.	Control-A	Press the Control key while you press the A key.
+	Joins consecutive multiple keystrokes.	Ctrl+A+N	Press the Control key, release it, and then press the subsequent keys.
→	Indicates menu item selection in a graphical user interface.	File → New → Templates	From the File menu, choose New. From the New submenu, choose Templates.

Default Paths and File Names

The following table describes the default paths and file names that are used in this book.

TABLE P-4 Default Paths and File Names

Placeholder	Description	Default Value
<i>as-install</i>	Represents the base installation directory for Enterprise Server. In configuration files, <i>as-install</i> is represented as follows: \${com.sun.aas.installRoot}	Installations on the Solaris™ operating system, Linux operating system, and Mac operating system: <i>user's-home-directory/glassfishv3/glassfish</i> Windows, all installations: <i>SystemDrive:\glassfishv3\glassfish</i>
<i>domain-root-dir</i>	Represents the directory in which a domain is created by default.	<i>as-install/domains/</i>
<i>domain-dir</i>	Represents the directory in which a domain's configuration is stored. In configuration files, <i>domain-dir</i> is represented as follows: \${com.sun.aas.instanceRoot}	<i>domain-root-dir/domain-name</i>

Documentation, Support, and Training

The Sun web site provides information about the following additional resources:

- [Documentation \(http://www.sun.com/documentation/\)](http://www.sun.com/documentation/)
- [Support \(http://www.sun.com/support/\)](http://www.sun.com/support/)
- [Training \(http://www.sun.com/training/\)](http://www.sun.com/training/)

Searching Sun Product Documentation

Besides searching Sun product documentation from the docs.sun.comSM web site, you can use a search engine by typing the following syntax in the search field:

```
search-term site:docs.sun.com
```

For example, to search for “broker,” type the following:

```
broker site:docs.sun.com
```

To include other Sun web sites in your search (for example, java.sun.com, www.sun.com, and developers.sun.com), use `sun.com` in place of `docs.sun.com` in the search field.

Third-Party Web Site References

Third-party URLs are referenced in this document and provide additional, related information.

Note – Sun is not responsible for the availability of third-party web sites mentioned in this document. Sun does not endorse and is not responsible or liable for any content, advertising, products, or other materials that are available on or through such sites or resources. Sun will not be responsible or liable for any actual or alleged damage or loss caused or alleged to be caused by or in connection with use of or reliance on any such content, goods, or services that are available on or through such sites or resources.

Sun Welcomes Your Comments

Sun is interested in improving its documentation and welcomes your comments and suggestions. To share your comments, go to <http://docs.sun.com> and click Send Comments. In the online form, provide the full document title and part number. The part number is a 7-digit or 9-digit number that can be found on the book's title page or in the document's URL. For example, the part number of this book is 820-7694.

The domain.xml File

This chapter describes the `domain.xml` configuration file in these sections:

- “About the `domain.xml` File” on page 15
- “Alphabetical List of Elements” on page 21

Note – Some features are not available if you have installed the Web Profile. Elements related to these features are ignored. For more information on the differences between the Web Profile and the full platform, see [Appendix B, “Enterprise Server Modules,”](#) in *Sun GlassFish Enterprise Server v3 Preview Administration Guide*.

Note – GlassFish v3 does not support clustering or load balancing features. Elements related to these features are ignored.

Note – Subelements must be defined in the order in which they are listed under each **Subelements** heading in this chapter unless otherwise noted.

About the `domain.xml` File

The `domain.xml` file contains most of the Sun Java™ System Enterprise Server configuration. The `domain.xml` file is located in the domain configuration directory, which is typically `domain-dir/config`.

There is no DTD file or schema that determines the format of the `domain.xml` file. The server's configuration is dictated by the Java interfaces with appropriate annotations and `domain.xml` serves as a seed for that configuration. At any point in time, the overall structure of an XML

element present in `domain.xml` is clearer when one sees the Java interface in the package `com.sun.enterprise.config.serverbeans`. Thus these Java interfaces take the place of the DTD file in previous releases.

This file is further described in the following sections:

- [“Default Values” on page 16](#)
- [“Variables” on page 16](#)
- [“Element Referencing” on page 17](#)
- [“Element Hierarchy” on page 18](#)

Note – Settings in the Enterprise Server deployment descriptors override corresponding settings in the `domain.xml` file unless otherwise stated. For more information about the Enterprise Server deployment descriptors, see the [Sun GlassFish Enterprise Server v3 Preview Application Deployment Guide](#).

Default Values

In this manual, the term *default* is used in its broader sense, and not in the specific way it is used in the XML 1.0 standard. A default value is an initial value or the value used if no value is present in the XML file. A default value can be any of the following:

- A value supplied by the XML parser when no value is found in the `domain.xml` file. The relevant element or attribute is optional.
- A value supplied by the Enterprise Server when no value is found in the `domain.xml` file and the XML parser doesn't provide a value. The relevant element or attribute is optional.
- An initial value supplied when the `domain.xml` file is created. The relevant element or attribute might or might not be optional.

Note – Removal of initial values in `domain.xml` is not recommended because attributes may be left without values or values may revert to internal defaults. Explicitly changing values is recommended.

Variables

Variables and variable references are needed for two reasons:

- Parts of the Enterprise Server share much configuration information but differ in specific details.
- Parts of the configuration come from the system environment but must still be captured in the configuration.

Variable references appear in the `domain.xml` file as strings that begin with the characters `{` and end with the character `}`. For example, the string `{com.sun.enterprise.myVar}` is a reference to the variable `com.sun.enterprise.myVar`.

Variables are defined both outside of and within `domain.xml`. Predefined variables that exist outside of `domain.xml` are defined as Java System Properties. Within `domain.xml`, a variable is defined using the “[system-property](#)” on page 126 element or the “[jvm-options](#)” on page 84 element.

The `system-property` element’s `name` attribute is the name of a variable; its `value` attribute is the definition of the variable. For example, the following `system-property` element defines a `port-number` variable with the value `6500`:

```
<system-property name="port-number" value="6500"/>
```

Multiple `system-property` subelements are permitted within “[server](#)” on page 119, “[config](#)” on page 32, and “[domain](#)” on page 45 elements.

A variable defined in the `jvm-options` element is a Java System Property with the `-D` flag. For example, the following `jvm-options` element defines a `port-number` variable with the value `5500`:

```
<jvm-option>-Dport-number=5500</jvm-option>
```

Multiple definitions for the same variable are permitted. The Enterprise Server determines the actual value of a variable by searching for its first definition in a strict hierarchy of the elements within `domain.xml`. The hierarchy is as follows:

```
server → config → jvm-options → domain → System
```

Implicit in this hierarchy is the notion of reference and containment. A variable referenced in a `server` element is only looked up:

- In the `config` element that references that specific `server`
- In the `jvm-options` subelements of the `config` element referenced by that `server`

Element Referencing

One element *references* another when an attribute of the referencing element has the same value as an attribute of the referenced element. For example, the “[application-ref](#)” on page 27 element references an application that is deployed to its parent “[server](#)” on page 119 element. The `application-ref` element’s `ref` attribute has the same value as the `name` attribute of an “[application](#)” on page 25 element.

The referencing `application-ref` element might look like this:

```
<application-ref ref="MyServlet"/>
```



```

. . . . registry-location
. . . . transformation-rule
. . . connector-module      P
. . . appclient-module     P
. . . mbean                 P
. . . extension-module     P
. resources
. . . custom-resource      P
. . . external-jndi-resource  P
. . . jdbc-resource       P
. . . mail-resource       P
. . . admin-object-resource  P
. . . connector-resource   P
. . . resource-adapter-config  P
. . . jdbc-connection-pool  P
. . . connector-connection-pool  P
. . . security-map
. . . . principal
. . . . user-group
. . . . backend-principal
. . . work-security-map
. . . . principal-map
. . . . group-map
. configs
. . . config              P
. . . . http-service      P
. . . . . access-log
. . . . . virtual-server  P
. . . . . . http-access-log
. . . . network-config
. . . . . transports
. . . . . . transport
. . . . . protocols
. . . . . . protocol
. . . . . . . http
. . . . . . . . file-cache
. . . . . . . . port-unification
. . . . . . . . protocol-finder
. . . . . . . . protocol-chain-instance-handler
. . . . . . . . protocol-chain
. . . . . . . . protocol-filter
. . . . . . . . ssl
. . . . . network-listeners
. . . . . . network-listener
. . . . iiop-service
. . . . . orb            P
. . . . . ssl-client-config
. . . . . ssl

```

```

. . . . . iiop-listener      P
. . . . . . . ssl
. . . . . admin-service      P
. . . . . . . jmx-connector    P
. . . . . . . . ssl
. . . . . . . das-config      P
. . . . . connector-service
. . . . . web-container      P
. . . . . . . session-config
. . . . . . . . session-manager
. . . . . . . . . . manager-properties  P
. . . . . . . . . . . store-properties  P
. . . . . . . . . . . session-properties  P
. . . . . ejb-container      P
. . . . . . . ejb-timer-service  P
. . . . . mdb-container      P
. . . . . jms-service      P
. . . . . . . jms-host      P
. . . . . log-service      P
. . . . . . . module-log-levels  P
. . . . . security-service  P
. . . . . . . auth-realm      P
. . . . . . . jacc-provider    P
. . . . . . . audit-module    P
. . . . . . . message-security-config
. . . . . . . . provider-config  P
. . . . . . . . . request-policy
. . . . . . . . . response-policy
. . . . . transaction-service  P
. . . . . monitoring-service  P
. . . . . . . module-monitoring-levels  P
. . . . . java-config      P
. . . . . . . profiler      P
. . . . . . . . jvm-options
. . . . . . . jvm-options
. . . . . thread-pools
. . . . . . . thread-pool      P
. . . . . system-property
. . . . . containers
. servers
. . . server      P
. . . . application-ref
. . . . resource-ref
. . . . system-property
. . system-property

```

Alphabetical List of Elements

- “A” on page 21
- “B” on page 32
- “C” on page 32
- “D” on page 43
- “E” on page 46
- “F” on page 56
- “G” on page 57
- “H” on page 57
- “I” on page 68
- “J” on page 70
- “K” on page 85
- “L” on page 86
- “M” on page 89
- “N” on page 99
- “O” on page 101
- “P” on page 102
- “R” on page 111
- “S” on page 117
- “T” on page 127
- “U” on page 134
- “V” on page 134
- “W” on page 140

A

access-log

Defines access log settings for each “[http-access-log](#)” on page 60 subelement of each “[virtual-server](#)” on page 134.

Superelements

“[http-service](#)” on page 65

Subelements

none

Attributes

The following table describes attributes for the access - log element.

TABLE 1-1 access-log Attributes

Attribute	Default	Description
format	%client.name% %auth-user-name% %datetime% %request% %status% %response.length%	(optional) Specifies the format of the access log. For a complete list of token values you can use in the format, see the online help for the Access Log tab of the HTTP Service page in the Administration Console.
rotation-policy	time	(optional) Specifies the condition that triggers log rotation. The only legal value is <code>time</code> , which rotates log files at the <code>rotation-interval-in-minutes</code> interval.
rotation-interval-in-minutes	15	(optional) Specifies the time interval between log rotations if <code>rotation-policy</code> is set to <code>time</code> .
rotation-suffix	yyyy-MM-dd	(optional) Specifies the format of the timestamp appended to the access log name when log rotation occurs. For supported formats, see http://java.sun.com/javase/6/docs/api/java/text/SimpleDateFormat.html . The following value is supported for backward compatibility. It results in the same format as the default. %YYYY;%MM;%DD;-%hh;h%mm;m%ss;s
rotation-enabled	true	(optional) If <code>true</code> , enables log rotation.

admin-object-resource

Defines an administered object for an inbound resource adapter.

Superelements

“resources” on page 115

Subelements

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

TABLE 1-2 admin-object-resource Subelements

Element	Required	Description
“description” on page 45	zero or one	Contains a text description of this element.
“property” on page 105	zero or more	Specifies a property or a variable.

Attributes

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

TABLE 1-3 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, as specified in the name attribute of a connector “application” on page 25 element.
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 `adminobject-class` specified in the `adminobject` element of the `ra.xml` file. Some of the property names can be specified in the `adminobject` element itself. For example, in `jsra`, the resource adapter used to communicate with the Sun Java System Message Queue software, `jsra`, `Name` and `Description` are valid properties.

For a complete list of the available properties (called *administered object attributes* in the Message Queue software), see the [Sun GlassFish Message Queue 4.4 Administration Guide](#).

admin-service

Contains configuration for JMX connectors, the domain admin server (DAS), and related properties.

Superelements

“config” on page 32

Subelements

The following table describes subelements for the `admin-service` element.

TABLE 1-4 admin-service Subelements

Element	Required	Description
“jmx-connector” on page 83	zero or more	Configures a JSR 160/255 compliant remote JMX connector, which responds to JConsole port 8686.
“das-config” on page 43	only one	Defines a domain administration server configuration.
“property” on page 105	zero or more	Specifies a property or a variable.

Attributes

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

TABLE 1-5 admin-service Attributes

Attribute	Default	Description
<code>type</code>	<code>das-and-server</code>	Specifies whether the server instance is a regular instance (<code>server</code>), a domain administration server (<code>das</code>), or a combination (<code>das-and-server</code>). modifying this value is not recommended.
<code>system-jmx-connector-name</code>	<code>none</code>	Specifies the name of the internal “jmx-connector” on page 83 .

appclient-module

This element is deprecated. Use an [“application” on page 25](#) element instead.

Specifies a deployed application client container (ACC) module.

Superelements

[“applications” on page 28](#)

Subelements

The following table describes subelements for the `appclient-module` element.

TABLE 1-6 appclient-module Subelements

Element	Required	Description
“description” on page 45	zero or one	Contains a text description of this element.
“property” on page 105	zero or more	Specifies a property or a variable.

Attributes

The following table describes attributes for the `applient-module` element.

TABLE 1-7 `applient-module` Attributes

Attribute	Default	Description
<code>name</code>	none	The name of the ACC module.
<code>location</code>	none	A fully qualified or relative path to the directory to which the contents of the <code>client.jar</code> file have been extracted. If relative, it is relative to the following directory: <i>domain-dir/applications/</i>
<code>directory-deployed</code>	false	(optional) Specifies whether the application has been deployed as a directory.
<code>java-web-start-enabled</code>	true	(optional) Specifies whether Java Web Start access is permitted for this application client.

application

Specifies a system application or a Java EE module or application.

The `application` element replaces the `web-module`, `j2ee-application`, `applient-module`, `connector-module`, `mbean`, `lifecycle-module`, `extension-module`, and `ejb-module` elements of previous releases, which are converted to `application` elements during the upgrade process.

Superelements

[“system-applications” on page 125](#), [“applications” on page 28](#)

Subelements

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

TABLE 1-8 `application` Subelements

Element	Required	Description
“module” on page 95	one or more	Specifies a stand-alone module or a component of a Java EE application.
“engine” on page 51	one or more	Specifies an engine.
“property” on page 105	zero or more	Specifies a property or a variable.

Attributes

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

TABLE 1-9 application Attributes

Attribute	Default	Description
name	none	The name of the application.
description	none	(optional) Specifies a text description of this element.
location	none	The location of the application in the Enterprise Server file system. If a relative path is specified, it is relative to the <i>domain-dir/applications/</i> directory. Note – Deployment directories may change between Enterprise Server releases.
libraries	none	(optional) Specifies an absolute or relative path to libraries specific to this module or application. A relative path is relative to <i>domain-dir/lib/applibs</i> . If the path is absolute, the path must be accessible to the domain administration server (DAS), which means it must be under <i>domain-dir</i> . To include more than one path, use a system-specific separator, such as a colon for Solaris or a semicolon for Windows. The libraries are made available to the application in the order in which they are specified.
object-type	system-admin	(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 the application is enabled.
context-root	none	The context root at which the application is deployed. The context root can be the empty string or just /. The context root can start with the / character, but doesn't have to.
directory-deployed	false	(optional) Specifies whether the application has been deployed as a directory.

Properties

The following table describes properties for the application element.

TABLE 1-10 application Properties

Property	Default	Description
default-EE6-app-name	none	The default Java EE 6 name of the application.
class-name	none	The fully qualified name of a lifecycle module or MBean class file. A lifecycle module class must implement the <code>com.sun.appserv.server.LifecycleListener</code> interface.

TABLE 1-10 application Properties (Continued)

Property	Default	Description
classpath	value of application - root attribute of “domain” on page 45 element	The classpath for a lifecycle module. Specifies where the module is located.
load-order	none	Determines the order in which lifecycle modules are loaded at startup. Modules with smaller integer values are loaded sooner. Values can range from 101 to the operating system’s MAXINT. Values from 1 to 100 are reserved.
is-failure-fatal	false	Determines whether the server is shut down if a lifecycle module fails.

application-ref

References an application or module deployed to the server.

Superelements

“server” on page 119

Subelements

none

Attributes

The following table describes attributes for the application-ref element.

TABLE 1-11 application-ref Attributes

Attribute	Default	Description
enabled	true	(optional) Determines whether the application or module is enabled on the server on which it is deployed.
virtual-servers	all virtual servers	(optional) In a comma-separated list, references id attributes of the “virtual-server” on page 134 elements to which the web “application” on page 25 is deployed. If you deploy a web application and don’t specify any assigned virtual servers, the web application is assigned to all currently defined virtual servers. If you then create additional virtual servers and want to assign existing web applications to them, you must redeploy the web applications. For more information about deployment, see the <i>Sun GlassFish Enterprise Server v3 Preview Application Deployment Guide</i> .

TABLE 1-11 application-ref Attributes (Continued)

Attribute	Default	Description
disable-timeout-in-minutes	30	(optional) Specifies the time it takes this application to reach a quiescent state after having been disabled.
ref	none	References the name attribute of an “application” on page 25 element.

applications

Contains deployed Java EE applications, Java EE modules, and Lifecycle modules.

Superelements

[“domain”](#) on page 45

Subelements

The following table describes subelements for the applications element.

TABLE 1-12 applications Subelements

Element	Required	Description
“application” on page 25	zero or more	Specifies an application. The application element replaces the web-module, j2ee-application, applclient-module, connector-module, mbean, lifecycle-module, extension-module, and ejb-module elements of previous releases, which are converted to application elements during the upgrade process.
“lifecycle-module” on page 86	zero or more	Deprecated. Use application instead.
“j2ee-application” on page 70	zero or more	Deprecated. Use application instead.
“ejb-module” on page 49	zero or more	Deprecated. Use application instead.
“web-module” on page 141	zero or more	Deprecated. Use application instead.
“connector-module” on page 39	zero or more	Deprecated. Use application instead.
“applclient-module” on page 24	zero or more	Deprecated. Use application instead.
“mbean” on page 92	zero or more	Deprecated. Use application instead.
“extension-module” on page 54	zero or more	Deprecated. Use application instead.

audit-module

Specifies an optional plug-in module that implements audit capabilities.

Superelements

“security-service” on page 117

Subelements

The following table describes subelements for the `audit-module` element.

TABLE 1-13 `audit-module` Subelements

Element	Required	Description
“property” on page 105	zero or more	Specifies a property or a variable.

Attributes

The following table describes attributes for the `audit-module` element.

TABLE 1-14 `audit-module` Attributes

Attribute	Default	Description
<code>name</code>	<code>default</code>	Specifies the name of this audit module.
<code>classname</code>	<code>com.sun.enterprise.security.Audit</code>	Specifies the Java class that implements this audit module.

auth-realm

Defines a realm for authentication.

Authentication realms require provider-specific properties, which vary depending on what a particular implementation needs.

For more information about how to define realms, see the [Sun GlassFish Enterprise Server v3 Preview Administration Guide](#).

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="{com.sun.aas.instanceRoot}/config/admin-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.

Superelements

[“security-service” on page 117](#)

Subelements

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

TABLE 1-15 `auth-realm` Subelements

Element	Required	Description
“property” on page 105	zero or more	Specifies a property or a variable.

Attributes

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

TABLE 1-16 `auth-realm` Attributes

Attribute	Default	Description
<code>name</code>	<code>none</code>	Specifies the name of this realm.
<code>classname</code>	<code>none</code>	Specifies the Java class that implements this realm.

Properties

The standard realms provided with Enterprise Server have required and optional properties. A custom realm might have different properties.

The following table describes properties for the `auth-realm` element.

TABLE 1-17 `auth-realm` Properties

Property	Realms	Description
<code>jaas-context</code>	<code>all</code>	Specifies the JAAS (Java Authentication and Authorization Service) context.
<code>file</code>	<code>file</code>	Specifies the file that stores user names, passwords, and group names. The default is <code>domain-dir/config/keyfile</code> .
<code>assign-groups</code>	<code>all</code>	(optional) If this property is set, its value is taken to be a comma-separated list of group names. All clients who present valid certificates are assigned membership to these groups for the purposes of authorization decisions in the web and EJB containers.
<code>directory</code>	<code>ldap</code>	Specifies the LDAP URL to your server.

TABLE 1-17 auth-realm Properties (Continued)

Property	Realms	Description
base-dn	ldap	Specifies the LDAP base DN for the location of user data. This base DN can be at any level above the user data, since a tree scope search is performed. The smaller the search tree, the better the performance.
search-filter	ldap	(optional) Specifies the search filter to use to find the user. The default is uid=%s (%s expands to the subject name).
group-base-dn	ldap	(optional) Specifies the base DN for the location of groups data. By default, it is same as the base-dn, but it can be tuned, if necessary.
group-search-filter	ldap	(optional) Specifies the search filter to find group memberships for the user. The default is uniquemember=%d (%d expands to the user element DN).
group-target	ldap	(optional) Specifies the LDAP attribute name that contains group name entries. The default is CN.
search-bind-dn	ldap	(optional) Specifies an optional DN used to authenticate to the directory for performing the search-filter lookup. Only required for directories that do not allow anonymous search.
search-bind-password	ldap	(optional) Specifies the LDAP password for the DN given in search-bind-dn.
datasource-jndi	jdbc	Specifies the jndi-name of the “jdbc-resource” on page 79 for the database.
user-table	jdbc	Specifies the name of the user table in the database.
user-name-column	jdbc	Specifies the name of the user name column in the database's user table.
password-column	jdbc	Specifies the name of the password column in the database's user table.
group-table	jdbc	Specifies the name of the group table in the database.
group-name-column	jdbc	Specifies the name of the group name column in the database's group table.
db-user	jdbc	(optional) Allows you to specify the database user name in the realm instead of the “jdbc-connection-pool” on page 73. This prevents other applications from looking up the database, getting a connection, and browsing the user table. By default, the jdbc-connection-pool configuration is used.
db-password	jdbc	(optional) Allows you to specify the database password in the realm instead of the “jdbc-connection-pool” on page 73. This prevents other applications from looking up the database, getting a connection, and browsing the user table. By default, the jdbc-connection-pool configuration is used.
digest-algorithm	jdbc	(optional) Specifies the digest algorithm. The default is MD5. You can use any algorithm supported in the JDK, or none.
encoding	jdbc	(optional) Specifies the encoding. Allowed values are Hex and Base64. If digest-algorithm is specified, the default is Hex. If digest-algorithm is not specified, by default no encoding is specified.
charset	jdbc	(optional) Specifies the charset for the digest algorithm.

B

backend-principal

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

Superelements

[“security-map” on page 117](#)

Subelements

none

Attributes

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

TABLE 1-18 backend-principal Attributes

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

C

config

Defines a configuration, which is a collection of settings that controls how a server instance functions.

Superelements

[“configs” on page 34](#)

Subelements

The following table describes subelements for the config element.

TABLE 1-19 config Subelements

Element	Required	Description
“http-service” on page 65	only one	Configures the HTTP service.
“network-config” on page 99	only one	Configures the communication network for the Enterprise Server.
“iiop-service” on page 69	only one	Configures the IIOP service.
“admin-service” on page 23	only one	Determines whether the server to which the configuration applies is an administration server.
“connector-service” on page 41	zero or one	Configures the connector service.
“web-container” on page 140	only one	Configures the web container.
“ejb-container” on page 46	only one	Configures the Enterprise JavaBeans™ (EJB™) container.
“mdb-container” on page 93	only one	Configures the message-driven bean (MDB) container.
“jms-service” on page 81	zero or one	Configures the Java Message Service (JMS) provider.
“log-service” on page 87	only one	Configures the system logging service.
“security-service” on page 117	only one	Configures the Java EE security service.
“transaction-service” on page 129	only one	Configures the transaction service.
“monitoring-service” on page 99	only one	Configures the monitoring service.
“java-config” on page 72	only one	Configures the Virtual Machine for the Java platform (JVM™ software).
“thread-pools” on page 128	only one	Configures thread pools.
“system-property” on page 126	zero or more	Specifies a system property.
“property” on page 105	zero or more	Specifies a property or a variable.
“containers” on page 41	zero or more	Specifies additional containers.

Attributes

The following table describes attributes for the config element.

TABLE 1-20 config Attributes

Attribute	Default	Description
name	server-config	Specifies the name of the configuration.
dynamic-reconfiguration-enabled	true	(optional) If true, any changes to the system (for example, applications deployed, resources created) are automatically applied to the affected servers without a restart being required. If false, such changes are only picked up by the affected servers when each server restarts.

configs

Contains configurations.

Superelements

[“domain” on page 45](#)

Subelements

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

TABLE 1-21 `configs` Subelements

Element	Required	Description
“config” on page 32	only one	Defines a configuration.

connection-pool

This element is not supported. If this element is present in the `domain.xml` file, its attributes are remapped to other elements and then it is deleted. For remapping details, see the Attributes table for this element.

Superelements

[“http-service” on page 65](#)

Subelements

none

Attributes

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

TABLE 1-22 `connection-pool` Attributes

Attribute	Default	Description
<code>queue-size-in-bytes</code>	4096	Remapped to the <code>max-queue-size</code> attribute of the “thread-pool” on page 127 element.
<code>max-pending-count</code>	4096	Remapped to the <code>max-connections-count</code> attribute of the “transport” on page 132 element.

TABLE 1-22 connection-pool Attributes (Continued)

Attribute	Default	Description
receive-buffer-size-in-bytes	4096	Remapped to the request-body-buffer-size-bytes attribute of the “http” on page 57 element.
send-buffer-size-in-bytes	8192	Remapped to the send-buffer-size-bytes attribute of the “http” on page 57 element.

connector-connection-pool

Defines a connector connection pool.

Superelements

“resources” on page 115

Subelements

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

TABLE 1-23 connector-connection-pool Subelements

Element	Required	Description
“description” on page 45	zero or one	Contains a text description of this element.
“security-map” on page 117	zero or more	Maps the principal received during servlet or EJB authentication to the credentials accepted by the EIS.
“property” on page 105	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 1-24 connector-connection-pool Attributes

Attribute	Default	Description
name	none	Specifies the name of the connection pool. A “connector-resource” on page 40 element’s pool-name attribute refers to this name.

TABLE 1-24 connector-connection-pool Attributes (Continued)

Attribute	Default	Description
resource-adapter-name	none	Specifies the name attribute of the deployed connector “application” on page 25 element. If no name is specified during deployment, the name of the .rar file is used. If the resource adapter is embedded in an application, then it is <i>app_name#rar_name</i> .
connection-definition-name	none	Specifies a unique name, identifying a resource adapter’s connection-definition element in the ra.xml file. This is usually the connectionfactory-interface of the connection-definition element.
steady-pool-size	8	(optional) Specifies the initial and minimum number of connections maintained in the pool.
max-pool-size	32	(optional) Specifies the maximum number of connections that can be created to satisfy client requests.
max-wait-time-in-millis	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.
pool-resize-quantity	2	(optional) Specifies the number of idle connections to be destroyed if the existing number of connections is above the steady-pool-size (subject to the max-pool-size limit). This is enforced periodically at the idle-timeout-in-seconds interval. An idle connection is one that has not been used for a period of idle-timeout-in-seconds. When the pool size reaches steady-pool-size, connection removal stops.
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.
fail-all-connections	false	(optional) If true, closes all connections in the pool if a single validation check fails.
transaction-support	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"> ■ XATransaction - Supports distributed transactions. ■ LocalTransaction - Supports local transactions only. ■ NoTransaction - No transaction support.
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	60	Specifies the time interval within which a connection is validated at most once. Minimizes the number of 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.

TABLE 1-24 connector-connection-pool Attributes (Continued)

Attribute	Default	Description
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 “thread-pool” on page 127 element. 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>
associate-with-thread-connections-count	1	(optional) Specifies the maximum number of connections to associate with a thread. Takes effect only when associate-with-thread is true.
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. By limiting the maximum number of times a connection can be reused, you can avoid statement leaks if the application does not close statements.
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 Sun GlassFish Message Queue software. For a complete list of the available properties (called *administered object attributes* in the Message Queue software), see the [Sun GlassFish Message Queue 4.4 Administration Guide](#).

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

TABLE 1-25 `connector-connection-pool` Properties

Property	Default	Description
<code>AddressList</code>	<code>none</code>	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> .
<code>ClientId</code>	<code>none</code>	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.
<code>UserName</code>	<code>guest</code>	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> .
<code>Password</code>	<code>guest</code>	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> .
<code>ReconnectAttempts</code>	<code>6</code>	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 <code>-1</code> indicates that the number of reconnect attempts is unlimited (the client runtime attempts to connect to the first address until it succeeds).
<code>ReconnectInterval</code>	<code>30000</code>	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.
<code>ReconnectEnabled</code>	<code>false</code>	If <code>true</code> , 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.
<code>AddressListBehavior</code>	<code>priority</code>	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.
<code>AddressListIterations</code>	<code>-1</code>	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 <code>-1</code> indicates that the number of attempts is unlimited.

TABLE 1-25 connector-connection-pool Properties (Continued)

Property	Default	Description
LazyConnectionEnlistment	false	Deprecated. Use the equivalent attribute.
LazyConnectionAssociation	false	Deprecated. Use the equivalent attribute.
AssociateWithThread	false	Deprecated. Use the equivalent attribute.
MatchConnections	true	Deprecated. Use the equivalent attribute.

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

connector-module

This element is deprecated. Use an [“application” on page 25](#) element instead.

Specifies a deployed connector module.

Superelements

[“applications” on page 28](#)

Subelements

The following table describes subelements for the connector-module element.

TABLE 1-26 connector-module Subelements

Element	Required	Description
“description” on page 45	zero or one	Contains a text description of this element.
“property” on page 105	zero or more	Specifies a property or a variable.

Attributes

The following table describes attributes for the connector-module element.

TABLE 1-27 connector-module Attributes

Attribute	Default	Description
name	none	The name of the connector module.
location	none	A fully qualified or relative path to the directory to which the contents of the .rar file have been extracted. If relative, it is relative to the following directory: <i>domain-dir/applications/</i>
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 the connector module is enabled.
directory-deployed	false	(optional) Specifies whether the application has been deployed as a directory.

connector-resource

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

Superelements

[“resources” on page 115](#)

Subelements

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

TABLE 1-28 connector-resource Subelements

Element	Required	Description
“description” on page 45	zero or one	Contains a text description of this element.
“property” on page 105	zero or more	Specifies a property or a variable.

Attributes

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

TABLE 1–29 connector - resource Attributes

Attribute	Default	Description
jndi-name	none	Specifies the JNDI name for the resource.
pool-name	none	Specifies the name of the associated connector connection pool, defined in a “ connector-connection-pool ” on page 35 element.
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.

connector-service

Configures the connector service.

Superelements

“[config](#)” on page 32

Subelements

none

Attributes

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

TABLE 1–30 connector-service Attributes

Attribute	Default	Description
shutdown-timeout-in-seconds	30	(optional) Specifies the maximum time allowed during application server shutdown for the <code>ResourceAdapter.stop()</code> method of a connector module’s instance to complete. Resource adapters that take longer to shut down are ignored, and Enterprise Server shutdown continues.

containers

Specifies additional containers.

Superelements

[“config” on page 32](#)

Subelements

Subelements depend on whether add-on components install additional containers.

Remark 1–1 *This is an educated guess. How did I do?*

context-param

Configures a context parameter for a web module.

Superelements

[“web-module-config” on page 142](#)

Subelements

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

TABLE 1–31 context-param Subelements

Element	Required	Description
“param-name” on page 102	only one	Contains a context parameter name.
“param-value” on page 102	only one	Contains a context parameter value.
“description” on page 45	zero or one	Contains a text description of this element.

Attributes

The following table describes attributes for the context - param element.

TABLE 1–32 context-param Attributes

Attribute	Default	Description
ignore-descriptor-item	false	(optional) If true, specifies that if the same context parameter occurs in the deployment descriptor it is ignored.

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 115

Subelements

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

TABLE 1-33 custom- resource Subelements

Element	Required	Description
“description” on page 45	zero or one	Contains a text description of this element.
“property” on page 105	zero or more	Specifies a property or a variable.

Attributes

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

TABLE 1-34 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.

D

das-config

Defines a domain administration server configuration. The domain administration server runs the Administration Console.

Superelements

[“admin-service” on page 23](#)

Subelements

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

TABLE 1-35 `das-config` Subelements

Element	Required	Description
“property” on page 105	zero or more	Specifies a property or a variable.

Attributes

The following table describes attributes for the `das-config` element. For more information about deployment topics such as dynamic reloading and autodeployment, see the *Sun GlassFish Enterprise Server v3 Preview Application Development Guide*.

TABLE 1-36 `das-config` Attributes

Attribute	Default	Description
<code>dynamic-reload-enabled</code>	<code>true</code>	(optional) If <code>true</code> , checks the timestamp on a <code>.reload</code> file at every module and application directory level, to trigger dynamic reloading.
<code>dynamic-reload-poll-interval-in-seconds</code>	2	(optional) Controls the polling frequency of dynamic reloading.
<code>autodeploy-enabled</code>	<code>true</code>	(optional) If <code>true</code> , enables autodeployment, which lets you quickly deploy applications and modules to a running Enterprise Server without performing an explicit server instance restart or a separate deployment operation.
<code>autodeploy-polling-interval-in-seconds</code>	2	(optional) Controls the polling frequency of autodeployment.
<code>autodeploy-dir</code>	<code>autodeploy</code>	(optional) Specifies the source directory (absolute or relative to <i>domain-dir</i>) in which autodeployment looks for deployable components.
<code>autodeploy-verifier-enabled</code>	<code>false</code>	(optional) If <code>true</code> , the verifier is run before autodeployment. If verification fails, deployment is not performed.
<code>autodeploy-jsp-precompilation-enabled</code>	<code>false</code>	(optional) If <code>true</code> , JSP pages are precompiled during autodeployment.
<code>auto-deploy-retry-timeout</code>	4	(optional) Specifies the number of autodeployment retry attempts before autodeployment times out.

TABLE 1-36 das-config Attributes (Continued)

Attribute	Default	Description
deploy-xml-validation	full	(optional) Specifies the type of XML validation performed on standard and Enterprise Server deployment descriptors: <ul style="list-style-type: none"> ■ full - If XML validation fails, deployment fails. ■ parsing - XML validation errors are reported but deployment occurs. ■ none - No XML validation is performed.
admin-session-timeout-in-minutes	sun-web.xml timeoutSeconds property value or web.xml session-timeout attribute value	(optional) Specifies the Administration Console timeout.

description

Contains a text description of the parent element.

Superelements

“admin-object-resource” on page 22, “appclient-module” on page 24, “application” on page 25, “connector-connection-pool” on page 35, “connector-module” on page 39, “connector-resource” on page 40, “context-param” on page 42, “custom-resource” on page 42, “ejb-module” on page 49, “env-entry” on page 52, “extension-module” on page 54, “external-jndi-resource” on page 55, “j2ee-application” on page 70, “jdbc-connection-pool” on page 73, “jdbc-resource” on page 79, “lifecycle-module” on page 86, “mail-resource” on page 89, “mbean” on page 92, “property” on page 105, “system-property” on page 126, “transformation-rule” on page 131, “web-module” on page 141

Subelements

none - contains data

domain

Defines a domain. This is the root element; there can only be one domain element in a domain.xml file.

Superelements

none

Subelements

The following table describes subelements for the domain element.

TABLE 1-37 domain Subelements

Element	Required	Description
“system-applications” on page 125	zero or one	Contains system applications.
“applications” on page 28	zero or one	Contains deployed Java EE applications, Java EE modules, and lifecycle modules.
“resources” on page 115	zero or one	Contains configured resources.
“configs” on page 34	only one	Contains configurations.
“servers” on page 120	only one	Contains server instances.
“system-property” on page 126	zero or more	Specifies a system property.
“property” on page 105	zero or more	Specifies a property or a variable.

Attributes

The following table describes attributes for the domain element.

TABLE 1-38 domain Attributes

Attribute	Default	Description
application-root	<i>domain-dir</i> /applications	(optional) Specifies the absolute path where deployed applications reside for this domain.
log-root	<i>domain-dir</i> /logs	(optional) Specifies where the domain’s log files are kept. The directory in which the log is kept must be writable by whatever user account the server runs as. See the “log-service” on page 87 description for details about logs.
locale	operating system default	(optional) Specifies the domain’s language.

E

ejb-container

Configures the EJB container. Stateless session beans are maintained in pools. Stateful session beans have session affinity and are cached. Entity beans associated with a database primary key are also cached. Entity beans not yet associated with a primary key are maintained in pools.

Pooled entity beans are used to run `ejbCreate()` and finder methods.

Superelements

[“config” on page 32](#)

Subelements

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

TABLE 1-39 `ejb-container` Subelements

Element	Required	Description
“ejb-timer-service” on page 50	zero or one	Configures the EJB timer service.
“property” on page 105	zero or more	Specifies a property or a variable.

Attributes

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

TABLE 1-40 `ejb-container` Attributes

Attribute	Default	Description
<code>steady-pool-size</code>	32	(optional) Specifies the initial and minimum number of beans maintained in the pool. Must be 0 or greater and less than <code>max-pool-size</code> . Bean instances are removed from the pool and returned after use. The pool is replenished or cleaned up periodically to maintain this size. Applies to stateless session beans and entity beans.
<code>pool-resize-quantity</code>	16	(optional) Specifies the number of beans to be removed when the <code>pool-idle-timeout-in-seconds</code> timer expires. A cleaner thread removes any unused instances. Must be 0 or greater and less than <code>max-pool-size</code> . The pool is not resized below the <code>steady-pool-size</code> . Applies to stateless session beans and entity beans.
<code>max-pool-size</code>	64	(optional) Specifies the maximum number of beans that can be created to satisfy client requests. A value of 0 indicates an unbounded pool. Applies to stateless session beans and entity beans.

TABLE 1-40 `ejb-container` Attributes (Continued)

Attribute	Default	Description
<code>cache-resize-quantity</code>	32	<p>(optional) Specifies the number of beans to be:</p> <ul style="list-style-type: none"> ■ created if a request arrives when the pool has no available beans (subject to the <code>max-cache-size</code> limit) ■ passivated when the <code>cache-idle-timeout-in-seconds</code> timer expires and a cleaner thread removes any unused instances, or when the cache size exceeds <code>max-cache-size</code>. <p>Must be greater than 1 and less than <code>max-cache-size</code>. Applies to stateful session beans and entity beans.</p>
<code>max-cache-size</code>	512	<p>(optional) Specifies the maximum number of beans in the cache. A value of 0 indicates an unbounded cache.</p> <p>Applies to stateful session beans and entity beans.</p>
<code>pool-idle-timeout-in-seconds</code>	600	<p>(optional) Specifies the maximum time that a bean can remain idle in the pool. After this amount of time, the pool can remove this bean. A value of 0 specifies that idle beans can remain in the pool indefinitely.</p> <p>Applies to stateless session beans and entity beans.</p>
<code>cache-idle-timeout-in-seconds</code>	600	<p>(optional) 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.</p> <p>Applies to stateful session beans and entity beans.</p>
<code>removal-timeout-in-seconds</code>	5400	<p>(optional) Specifies the amount of time that a bean can remain passivated before it is removed from the session store. A value of 0 specifies that the container does not remove inactive beans automatically.</p> <p>If <code>removal-timeout-in-seconds</code> is less than or equal to <code>cache-idle-timeout-in-seconds</code>, beans are removed immediately without being passivated.</p> <p>The <code>session-store</code> attribute of the “server” on page 119 element determines the location of the session store.</p> <p>Applies to stateful session beans.</p>
<code>victim-selection-policy</code>	<code>nru</code>	<p>(optional) Specifies how stateful session beans are selected for passivation. Allowed values are <code>fifo</code>, <code>lru</code>, and <code>nru</code>:</p> <ul style="list-style-type: none"> ■ <code>fifo</code> - Selects the oldest instance. ■ <code>lru</code> - Selects the least recently accessed instance. ■ <code>nru</code> - Selects a not recently used instance.
<code>commit-option</code>	<code>B</code>	<p>(optional) Determines which commit option is used for entity beans. Legal values are <code>B</code> or <code>C</code>.</p>
<code>session-store</code>	<code>domain-dir/session-store</code>	<p>(optional) Specifies the directory where passivated stateful session beans and persisted HTTP sessions are stored in the file system.</p>

ejb-module

This element is deprecated. Use an [“application” on page 25](#) element instead.

Specifies a deployed EJB module.

Superelements

[“applications” on page 28](#)

Subelements

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

TABLE 1-41 `ejb-module` Subelements

Element	Required	Description
“description” on page 45	zero or one	Contains a text description of this element.
“web-service-endpoint” on page 142	zero or more	Configures a web service endpoint.
“property” on page 105	zero or more	Specifies a property or a variable.

Attributes

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

TABLE 1-42 `ejb-module` Attributes

Attribute	Default	Description
<code>name</code>	<code>none</code>	The name of the EJB module.
<code>location</code>	<code>none</code>	A fully qualified or relative path to the directory to which the contents of the EJB .jar file have been extracted. If relative, it is relative to the following directory: <i>domain-dir/applications/</i>
<code>object-type</code>	<code>user</code>	(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>	<code>true</code>	(optional) Determines whether the EJB module is enabled.

TABLE 1-42 `ejb-module` Attributes (Continued)

Attribute	Default	Description
<code>libraries</code>	<code>none</code>	(optional) Specifies an absolute or relative path to libraries specific to this module or application. A relative path is relative to <i>domain-dir/lib/applibs</i> . If the path is absolute, the path must be accessible to the domain administration server (DAS), which means it must be under <i>domain-dir</i> . To include more than one path, use a system-specific separator, such as a colon for Solaris or a semicolon for Windows. The libraries are made available to the application in the order in which they are specified.
<code>directory-deployed</code>	<code>false</code>	(optional) Specifies whether the application has been deployed as a directory.

ejb-timer-service

Configures the EJB timer service.

Superelements

[“ejb-container” on page 46](#)

Subelements

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

TABLE 1-43 `ejb-timer-service` Subelements

Element	Required	Description
“property” on page 105	zero or more	Specifies a property or a variable.

Attributes

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

TABLE 1-44 `ejb-timer-service` Attributes

Attribute	Default	Description
<code>minimum-delivery-interval-in-millis</code>	<code>7000</code>	(optional) Specifies the minimum time before an expiration for a particular timer can occur. This guards against extremely small timer increments that can overload the server.
<code>max-redeliveries</code>	<code>1</code>	(optional) Specifies the maximum number of times the EJB timer service attempts to redeliver a timer expiration due for exception or rollback.

TABLE 1-44 `ejb-timer-service` Attributes (Continued)

Attribute	Default	Description
<code>timer-datasource</code>	<code>jdbc/TimerPool</code>	(optional) Overrides, for the server instance, the <code>cmp-resource</code> value specified in <code>sun-ejb-jar.xml</code> for the timer service system application (<code>__ejb_container_timer_app</code>).
<code>redelivery-interval</code> <code>-internal-in-millis</code>	<code>5000</code>	(optional) Specifies how long the EJB timer service waits after a failed <code>ejbTimeout</code> delivery before attempting a redelivery.

engine

Specifies an engine for an “[application](#)” on page 25 or “[module](#)” on page 95. An engine runs a sniffer during deployment, which is responsible for identifying a type of deployment artifact (such as a WAR file) and setting up the associated container (such as the web container). Multiple engines, each with its own sniffer, can be associated with a given application or module.

Superelements

“[application](#)” on page 25, “[module](#)” on page 95

Subelements

The following table describes subelements for the engine element.

TABLE 1-45 `engine` Subelements

Element	Required	Description
“ web-module-config ” on page 142	zero or one	Configures the parent web module.
“ property ” on page 105	zero or more	Specifies a property or a variable.

Attributes

The following table describes attributes for the engine element.

TABLE 1-46 engine Attributes

Attribute	Default	Description
sniffer	none	Specifies the type of sniffer. Allowed values are as follows: <ul style="list-style-type: none"> ▪ ear — Specifies that the parent application is a Java EE application (EAR file). ▪ web — Specifies that the parent module is a web application. ▪ security — Specifies that security is enabled for the parent module. ▪ jpa — Specifies that the parent module uses the Java Persistence API. ▪ ejb — Specifies that the parent module is an EJB module. The EJB container add-on component must be installed in the Enterprise Server. ▪ webservices — Specifies that the parent module is a web service endpoint. The Metro add-on component must be installed in the Enterprise Server. ▪ jruby — Specifies that the parent module is a JRuby application. The JRuby add-on component must be installed in the Enterprise Server.
description	none	(optional) Specifies a text description for this element.

env-entry

Configures an environment entry for a web module.

Superelements

[“web-module-config” on page 142](#)

Subelements

The following table describes subelements for the env-entry element.

TABLE 1-47 env-entry Subelements

Element	Required	Description
“env-entry-name” on page 53	only one	Contains an environment entry name.
“env-entry-type” on page 53	only one	Contains an environment entry type.
“env-entry-value” on page 53	only one	Contains an environment entry value.
“description” on page 45	zero or one	Contains a text description of this element.

Attributes

The following table describes attributes for the env-entry element.

TABLE 1-48 env-entry Attributes

Attribute	Default	Description
ignore-descriptor-item	false	(optional) If true, specifies that if the same environment entry occurs in the deployment descriptor it is ignored.

env-entry-name

Contains an environment entry name.

Superelements

[“env-entry” on page 52](#)

Subelements

none - contains data

env-entry-type

Contains an environment entry type.

Superelements

[“env-entry” on page 52](#)

Subelements

none - contains data

env-entry-value

Contains an environment entry value.

Superelements

[“env-entry” on page 52](#)

Subelements

none - contains data

extension-module

This element is deprecated. Use an “[application](#)” on page 25 element instead.

Specifies a deployed extension module.

Superelements

“[applications](#)” on page 28

Subelements

The following table describes subelements for the `extension-module` element.

TABLE 1-49 `extension-module` Subelements

Element	Required	Description
“ description ” on page 45	zero or one	Contains a text description of this element.
“ property ” on page 105	zero or more	Specifies a property or a variable.

Attributes

The following table describes attributes for the `extension-module` element.

TABLE 1-50 `extension-module` Attributes

Attribute	Default	Description
<code>name</code>	none	The name of the extension module.
<code>location</code>	none	A fully qualified or relative path to the directory to which the contents of the <code>.jar</code> or <code>.war</code> file have been extracted. If relative, it is relative to the following directory: <i>domain-dir/applications/</i>
<code>module-type</code>	none	Specifies a <code>String</code> that identifies the extension module type, which the runtime uses to find the appropriate add-on container. When an extension module is registered with the Enterprise Server, the Enterprise Server specifies the module type automatically.
<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 the extension module is enabled.

TABLE 1-50 extension-module Attributes (Continued)

Attribute	Default	Description
libraries	none	(optional) Specifies an absolute or relative path to libraries specific to this module or application. A relative path is relative to <i>domain-dir/lib/applibs</i> . If the path is absolute, the path must be accessible to the domain administration server (DAS), which means it must be under <i>domain-dir</i> . To include more than one path, use a system-specific separator, such as a colon for Solaris or a semicolon for Windows. The libraries are made available to the application in the order in which they are specified.
directory-deployed	false	(optional) Specifies whether the application has been deployed as a directory.

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 115](#)

Subelements

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

TABLE 1-51 external-jndi-resource Subelements

Element	Required	Description
“description” on page 45	zero or one	Contains a text description of this element.
“property” on page 105	zero or more	Specifies a property or a variable.

Attributes

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

TABLE 1-52 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.

TABLE 1-52 external-jndi-resource Attributes (Continued)

Attribute	Default	Description
factory-class	none	Specifies the fully qualified name of the factory class, which implements <code>javax.naming.spi.InitialContextFactory</code> . For more information about JNDI, see the Sun GlassFish Enterprise Server v3 Preview Application Development Guide .
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.

F

file-cache

Configures the HTTP file cache.

Superelements

[“http”](#) on page 57

Subelements

none

Attributes

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

TABLE 1-53 file-cache Attributes

Attribute	Default	Description
enabled	false	(optional) If <code>true</code> , enables caching of the file content.
max-age-seconds	30	(optional) Specifies the maximum age of a file cache entry.
max-cache-size-bytes	1048576	(optional) Specifies the total size of all files that are cached as memory mapped files.

TABLE 1-53 file-cache Attributes (Continued)

Attribute	Default	Description
max-files-count	1024	(optional) Specifies the maximum number of files in the file cache.

G

group-map

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

Superelements

[“work-security-map” on page 143](#)

Subelements

none

Attributes

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

TABLE 1-54 group-map Attributes

Attribute	Default	Description
eis-group	none	Specifies an EIS group.
mapped-group	none	Specifies a group defined in the Enterprise Server domain.

H

http

Configures HTTP parameters.

Superelements

[“protocol” on page 106](#)

Subelements

The following table describes subelements for the http element.

TABLE 1-55 http Subelements

Element	Required	Description
“file-cache” on page 56	zero or one	Configures the HTTP file cache.

Attributes

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

TABLE 1-56 http Attributes

Attribute	Default	Description
<code>default-virtual-server</code>	none	(optional) Specifies the <code>id</code> attribute of the default “virtual-server” on page 134 for the “network-listener” on page 100 that references the parent “protocol” on page 106 element.
<code>server-name</code>	none	(optional) Tells the server what to put in the host name section of any URLs it sends to the client. This affects URLs the server automatically generates; it doesn't affect the URLs for directories and files stored in the server. If your server uses an alias, the <code>server-name</code> should be the alias name. If a colon and port number are appended, that port is used in URLs the server sends to the client.
<code>redirect-port</code>	none	(optional) If the “network-listener” on page 100 that references the parent “protocol” on page 106 element is supporting non-SSL requests and a request is received for which a matching <code><security-constraint></code> requires SSL transport, the request is automatically redirected to the port number specified here.
<code>xpowered-by</code>	true	(optional) If true, X-Powered-By headers are used according to the Servlet 2.4 and JSP 2.0 specifications.
<code>request-body-buffer-size-bytes</code>	4096	(optional) Specifies the size of the request buffer for “network-listener” on page 100 elements that reference the parent “protocol” on page 106 element.
<code>send-buffer-size-bytes</code>	8192	(optional) Specifies the size of the send buffer for “network-listener” on page 100 elements that reference the parent “protocol” on page 106 element.
<code>enable-auth-pass-through</code>	false	(optional) If true, indicates that the “network-listener” on page 100 that references the parent “protocol” on page 106 element receives traffic from an SSL-terminating proxy server.
<code>max-connections</code>	250	(optional) Specifies the maximum number of requests that can be pipelined until the connection is closed by the server. Set this property to 1 to disable HTTP/1.0 keep-alive, as well as HTTP/1.1 keep-alive and pipelining. A value of 0 means requests are always rejected. A value of -1 sets no limit to the number of keep-alive connections.

TABLE 1-56 http Attributes (Continued)

Attribute	Default	Description
trace-enabled	true	(optional) If true, enables the TRACE operation. Set this property to false to make the Enterprise Server less susceptible to cross-site scripting attacks.
enable-comet-support	false	(optional) If true, enables Comet support for the “network-listener” on page 100 that references the parent “protocol” on page 106 element. If your servlet or JSP page uses Comet technology, make sure it is initialized when the Enterprise Server starts up by adding the load-on-startup element to your web.xml file. For example: <pre><servlet> <servlet-name>CheckIn</servlet-name> <servlet-class>CheckInServlet</servlet-class> <load-on-startup>0</load-on-startup> </servlet></pre>
compression	off	(optional) Specifies use of HTTP/1.1 GZIP compression to save server bandwidth. Allowed values are: <ul style="list-style-type: none"> ■ off – Disables compression. ■ on – Compresses data. ■ force – Forces data compression in all cases. ■ positive integer – Specifies the minimum amount of data required before the output is compressed. If the content-length is not known, the output is compressed only if compression is set to on or force.
compressable-mime-type	text/html, text/xml, text/plain	(optional) Specifies a comma-separated list of MIME types for which HTTP compression is used.
no-compression-user-agents	empty String (regex matching disabled)	(optional) Specifies a comma-separated list of regular expressions matching user-agents of HTTP clients for which compression should not be used.
compression-min-size-bytes	none	(optional) Specifies the minimum size of a file when compression is applied. Required if compression is set to on or force.
disable-upload-timeout	true	(optional) If false, the connection for a servlet that reads bytes slowly is closed after the connection-upload-timeout-millis is reached.
connection-upload-timeout-millis	5	(optional) Specifies the timeout for uploads. Applicable only if disable-upload-timeout is set to false.
uri-encoding	UTF-8	(optional) Specifies the character set used to decode the request URIs received on the “network-listener” on page 100 that references the parent “protocol” on page 106 element. Must be a valid IANA character set name.

TABLE 1-56 httpAttributes (Continued)

Attribute	Default	Description
restricted-user-agents	none	(optional) Specifies a list of restricted user agents on which HTTP compression is applied. If no user agents are specified (the default), HTTP compression is applied to all user agents.
chunking-disabled	false	(optional) If true, disables HTTP response chunking.
version	HTTP/1.1	(optional) Specifies the version of the HTTP protocol used.
forced-response-type	text/html; charset=iso-8859-1	(optional) Specifies the request type used if no MIME mapping is available that matches the file extension. The format is a semicolon-delimited string consisting of the content-type, encoding, language, and charset.
default-response-type	text/html; charset=iso-8859-1	(optional) Specifies the default response type. The format is a semicolon-delimited string consisting of the content-type, encoding, language, and charset.
timeout-seconds	30	(optional) Specifies the maximum time for which a keep alive connection is kept open. A value of 0 or less means keep alive connections are kept open indefinitely.
header-buffer-length-bytes	8192	(optional) Specifies the size of the buffer used by the request processing threads to read the request data.
adapter	com.sun.grizzly.tcp. StaticResourcesAdapter	(Optional) Specifies the class name of the static resources adapter.
max-post-size-bytes	2097152	(Optional) Specifies the maximum size of POST actions.
request-timeout-seconds	30	(Optional) Specifies the request timeout. If the request is not processed before the timeout is reached, the request is ignored.

http-access-log

Defines an access log file for a [“virtual-server” on page 134](#). The [“access-log” on page 21](#) subelement of the virtual server’s parent [“http-service” on page 65](#) element determines the access log file’s format and rotation settings.

Superelements

[“virtual-server” on page 134](#)

Subelements

none

Attributes

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

TABLE 1-57 http-access-log Attributes

Attribute	Default	Description
log-directory	<code>\${com.sun.aas.instanceRoot}/logs/access</code>	(optional) Specifies the location of the access log file. The <code>\${com.sun.aas.instanceRoot}</code> system property refers to the <i>domain-dir</i> . See “system-property” on page 126.
iponly	true	(optional) If true, specifies that only the IP address of the user agent is listed. If false, performs a DNS lookup.

http-file-cache

This element is not supported. If this element is present in the `domain.xml` file, its attributes are remapped to other elements and then it is deleted. For remapping details, see the Attributes table for this element.

Superelements

“[http-service](#)” on page 65

Subelements

none

Attributes

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

TABLE 1-58 http-file-cache Attributes

Attribute	Default	Description
globally-enabled	false	Not implemented. Do not use.
file-caching-enabled	false	Remapped to the enabled attribute of the “ file-cache ” on page 56 element.
max-age-in-seconds	30	Remapped to the max-age-seconds attribute of the “ file-cache ” on page 56 element.
medium-file-size-limit-in-bytes	537600	Not implemented. Do not use.
medium-file-space-in-bytes	1048576	Remapped to the max-cache-size-bytes attribute of the “ file-cache ” on page 56 element.

TABLE 1-58 http-file-cache Attributes (Continued)

Attribute	Default	Description
small-file-size-limit-in-bytes	2048	Not implemented. Do not use.
small-file-space-in-bytes	1048576	Not implemented. Do not use.
file-transmission-enabled	false	Not implemented. Do not use.
max-files-count	1024	Remapped to the max-files-count attribute of the “file-cache” on page 56 element.
hash-init-size	0	Not implemented. Do not use.

http-listener

This element is not supported. If this element is present in the domain.xml file, its attributes and properties are remapped to other elements and then it is deleted. For remapping details, see the Attributes and Properties tables for this element.

Superelements

“http-service” on page 65

Subelements

The following table describes subelements for the http-listener element.

TABLE 1-59 http-listener Subelements

Element	Required	Description
“ssl” on page 122	zero or one	Defines Secure Socket Layer (SSL) parameters.
“property” on page 105	zero or more	Specifies a property or a variable.

Attributes

The following table describes attributes for the http-listener element.

TABLE 1-60 http-listener Attributes

Attribute	Default	Description
id	none	Remapped to the name attribute of a “network-listener” on page 100 element.

TABLE 1-60 http-listener Attributes (Continued)

Attribute	Default	Description
address	none	Remapped to the address attribute of a “network-listener” on page 100 element.
port	none	Remapped to the port attribute of a “network-listener” on page 100 element.
external-port	none	Not implemented. Do not use.
family		Not implemented. Do not use.
blocking-enabled	false	Not implemented. Do not use.
acceptor-threads	1	Remapped to the acceptor-threads attribute of a “transport” on page 132 element.
security-enabled	false	Remapped to the security-enabled attribute of a “protocol” on page 106 element.
default-virtual-server	none	Remapped to the default-virtual-server attribute of an “http” on page 57 element.
server-name	none	Remapped to the server-name attribute of an “http” on page 57 element.
redirect-port	none	Remapped to the redirect-port attribute of an “http” on page 57 element.
xpowered-by	true	Remapped to the xpowered-by attribute of an “http” on page 57 element.
enabled	true	Remapped to the enabled attribute of a “network-listener” on page 100 element.

Properties

The following table describes properties for the http-listener element.

TABLE 1-61 http-listener Properties

Property	Default	Description
monitoring-cache-enabled	true	Not implemented. Do not use.
monitoring-cache-refresh-in-millis	5000	Not implemented. Do not use.
ssl-cache-entries	10000	Not implemented. Do not use.
ssl3-session-timeout	86400	Not implemented. Do not use.
ssl-session-timeout	100	Not implemented. Do not use.
recycle-objects	true	Not implemented. Do not use.
reader-threads	0	Not implemented. Do not use.
acceptor-queue-length	4096	Not implemented. Do not use.

TABLE 1-61 http-listener Properties (Continued)

Property	Default	Description
reader-queue-length	4096	Not implemented. Do not use.
use-nio-direct-bytebuffer	true	Remapped to the byte-buffer-type attribute of a “transport” on page 132 element.
authPassthrough Enabled	false	Remapped to the enable-auth-pass-through attribute of an “http” on page 57 element.
proxyHandler	com.sun.enterprise.web.ProxyHandlerImpl	Not implemented. Do not use.
proxiedProtocol	none	Not implemented. Do not use.
bufferSize	4096	Remapped to the buffer-size-bytes attribute of a “transport” on page 132 element.
connectionTimeout	30	Not implemented. Do not use.
maxKeepAliveRequests	250	Remapped to the max-connections attribute of an “http” on page 57 element.
traceEnabled	true	Remapped to the trace-enabled attribute of an “http” on page 57 element.
cometSupport	false	Remapped to the enable-comet-support attribute of an “http” on page 57 element.
jkEnabled	false	Not implemented. Do not use.
compression	off	Remapped to the compression attribute of an “http” on page 57 element.
compressableMimeType	text/html, text/xml, text/plain	Remapped to the compressable-mime-type attribute of an “http” on page 57 element.
noCompression UserAgents	empty String (regex matching disabled)	Remapped to the no-compression-user-agents attribute of an “http” on page 57 element.
minCompressionSize or compressionMinSize	none	Remapped to the compression-min-size-bytes attribute of an “http” on page 57 element.
crlFile	none	Remapped to the crl-file attribute of an “ssl” on page 122 element.
trustAlgorithm	none [Remark 1-2: default unknown]	Remapped to the trust-algorithm attribute of an “ssl” on page 122 element.
trustMaxCertLength	5	Remapped to the trust-max-cert-length-bytes attribute of an “ssl” on page 122 element.
disableUploadTimeout	true	Remapped to the disable-upload-timeout attribute of an “http” on page 57 element.
connectionUpload Timeout	5	Remapped to the connection-upload-timeout-millis attribute of an “http” on page 57 element.

TABLE 1-61 http-listener Properties (Continued)

Property	Default	Description
uriEncoding	UTF-8	Remapped to the uri-encoding attribute of an “http” on page 57 element.

http-protocol

This element is not supported. If this element is present in the domain.xml file, its attributes are remapped to other elements and then it is deleted. For remapping details, see the Attributes table for this element.

Superelements

“http-service” on page 65

Subelements

none

Attributes

The following table describes attributes for the http-protocol element.

TABLE 1-62 http-protocol Attributes

Attribute	Default	Description
version	HTTP/1.1	Remapped to the version attribute of an “http” on page 57 element.
dns-lookup-enabled	false	Not implemented. Do not use.
forced-type	text/html; charset=iso-8859-1	Remapped to the forced-response-type attribute of an “http” on page 57 element.
default-type	text/html; charset=iso-8859-1	Remapped to the default-response-type attribute of an “http” on page 57 element.
forced-response-type	text/plain; charset=iso-8859-1	Remapped to the forced-response-type attribute of an “http” on page 57 element.
default-response-type	text/plain; charset=iso-8859-1	Remapped to the default-response-type attribute of an “http” on page 57 element.
ssl-enabled	true	Not implemented. Use ssl subelements of “protocol” on page 106 elements.

http-service

Defines the HTTP service.

Superelements

“config” on page 32

Subelements

The following table describes subelements for the `http-service` element.

TABLE 1-63 `http-service` Subelements

Element	Required	Description
“access-log” on page 21	zero or one	Defines access log settings for each “http-access-log” on page 60 subelement of each “virtual-server” on page 134.
“http-listener” on page 62	one or more	Not implemented. See the element description for attribute and property remapping.
“virtual-server” on page 134	one or more	Defines a virtual server.
“request-processing” on page 113	zero or one	Not implemented. See the element description for attribute remapping.
“keep-alive” on page 85	zero or one	Not implemented. See the element description for attribute remapping.
“connection-pool” on page 34	zero or one	Not implemented. See the element description for attribute remapping.
“http-protocol” on page 65	zero or one	Not implemented. See the element description for attribute remapping.
“http-file-cache” on page 61	zero or one	Not implemented. See the element description for attribute remapping.
“property” on page 105	zero or more	Specifies a property or a variable.

Attributes

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

TABLE 1-64 `http-service` Attributes

Property	Default	Description
<code>access-logging-enabled</code>	<code>false</code>	If <code>true</code> , enables access logging for all <code>virtual-server</code> subelements that do not specify this attribute as <code>false</code> . If <code>false</code> , disables access logging for all <code>virtual-server</code> subelements that do not specify this attribute as <code>true</code> .

TABLE 1-64 http-service Attributes (Continued)

Property	Default	Description
sso-enabled	false	<p>If true, single sign-on is enabled by default for all web applications on all virtual servers on this server instance that are configured for the same realm. If false, single sign-on is disabled by default for all virtual servers, and users must authenticate separately to every application on each virtual server. The sso-enabled property setting of the “virtual-server” on page 134 element overrides this setting for an individual virtual server.</p> <p>At the http-service level, you cannot change the sso-max-inactive-seconds and sso-reap-interval-seconds values from their defaults. However, you can change these values at the virtual-server level.</p>

Properties

Most properties for this element are no longer supported. See “virtual-server” on page 134 for information about the accessLog* properties. For information about how other properties have been remapped, see the Properties table for “http-listener” on page 62.

The following table describes properties for the http-service element that are still supported. These properties apply to all “network-listener” on page 100 elements.

TABLE 1-65 http-service Properties

Property	Default	Description
ssl-cache-entries	10000	Specifies the number of SSL sessions to be cached.
ssl3-session-timeout	86400	Specifies the interval at which SSL3 sessions are cached.
ssl-session-timeout	100	Specifies the interval at which SSL2 sessions are cached.

TABLE 1-65 http-service Properties (Continued)

Property	Default	Description
proxyHandler	com.sun.enterprise.web.ProxyHandlerImpl	<p>Specifies the fully qualified class name of a custom implementation of the <code>com.sun.appserv.ProxyHandler</code> abstract class, which allows a back-end application server instance to retrieve information about the original client request that was intercepted by an SSL-terminating proxy server (for example, a load balancer). An implementation of this abstract class inspects a given request for the custom request headers through which the proxy server communicates the information about the original client request to the Enterprise Server instance, and returns that information to its caller.</p> <p>The default implementation reads the client IP address from an HTTP request header named <code>Proxy-ip</code>, the SSL key size from an HTTP request header named <code>Proxy-keysize</code>, and the SSL client certificate chain from an HTTP request header named <code>Proxy-auth-cert</code>. The <code>Proxy-auth-cert</code> value must contain the BASE-64 encoded client certificate chain without the BEGIN CERTIFICATE and END CERTIFICATE boundaries and with <code>\n</code> replaced with <code>%d%a</code>.</p> <p>Only used if <code>authPassthroughEnabled</code> is set to <code>true</code>. Each “http-listener” on page 62 subelement can override the <code>proxyHandler</code> setting for itself.</p>
connectionTimeout	30	Specifies the number of seconds HTTP listeners wait, after accepting a connection, for the request URI line to be presented.
reader-selectors	none	???TBD
selectorThreadImpl	none	???TBD

iiop-listener

Defines an IIOP listen socket. To enable SSL for this listener, include an `ssl` subelement.

Superelements

“[iiop-service](#)” on page 69

Subelements

The following table describes subelements for the `iiop-listener` element.

TABLE 1-66 `iiop-listener` Subelements

Element	Required	Description
“ssl” on page 122	zero or one	Defines SSL parameters.
“property” on page 105	zero or more	Specifies a property or a variable.

Attributes

The following table describes attributes for the `iiop-listener` element.

TABLE 1-67 `iiop-listener` Attributes

Attribute	Default	Description
<code>id</code>	none	The listener name. An <code>iiop-listener</code> name cannot begin with a number.
<code>address</code>	none	IP address of the listener. Can be in dotted-pair or IPv6 notation, or just a name.
<code>port</code>	1072	(optional) Port number for the listener. Legal values are 1 - 65535. On UNIX, creating sockets that listen on ports 1 - 1024 requires superuser privileges.
<code>security-enabled</code>	false	(optional) Determines whether the listener runs SSL. To turn SSL2 or SSL3 on or off and set ciphers, use an <code>ssl</code> element.
<code>enabled</code>	true	(optional) Determines whether the listener is active.

iiop-service

Defines the IIOP service.

Superelements

[“config” on page 32](#)

Subelements

The following table describes subelements for the `iiop-service` element.

TABLE 1-68 `iiop-service` Subelements

Element	Required	Description
“orb” on page 101	only one	Configures the ORB.
“ssl-client-config” on page 124	zero or one	Defines SSL parameters for the ORB.
“iiop-listener” on page 68	zero or more	Defines an IIOP listen socket.

Attributes

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

TABLE 1-69 `iiop-service` Attributes

Attribute	Default	Description
<code>client-authentication-required</code>	<code>false</code>	(optional) If <code>true</code> , the server rejects unauthenticated requests and inserts an <code>authentication-required</code> bit in IORs sent to clients.

J

`j2ee-application`

This element is deprecated. Use an [“application” on page 25](#) element instead.

Specifies a deployed Java EE application.

Superelements

[“applications” on page 28](#)

Subelements

The following table describes subelements for the `j2ee-application` element.

TABLE 1-70 `j2ee-application` Subelements

Element	Required	Description
“description” on page 45	zero or one	Contains a text description of this element.
“web-service-endpoint” on page 142	zero or more	Configures a web service endpoint.
“property” on page 105	zero or more	Specifies a property or a variable.

Attributes

The following table describes attributes for the `j2ee-application` element.

TABLE 1-71 j2ee-application Attributes

Attribute	Default	Description
name	none	The name of the application.
location	none	A fully qualified or relative path to the directory to which the contents of the .ear file have been extracted. If relative, it is relative to the following directory: <i>domain-dir/applications/</i>
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 the application is enabled.
libraries	none	(optional) Specifies an absolute or relative path to libraries specific to this module or application. A relative path is relative to <i>domain-dir/lib/applibs</i> . If the path is absolute, the path must be accessible to the domain administration server (DAS), which means it must be under <i>domain-dir</i> . To include more than one path, use a system-specific separator, such as a colon for Solaris or a semicolon for Windows. The libraries are made available to the application in the order in which they are specified.
directory-deployed	false	(optional) Specifies whether the application has been deployed as a directory.
java-web-start-enabled	true	(optional) Specifies whether Java Web Start access is permitted for application clients in this application.

jacc-provider

Specifies a Java Authorization Contract for Containers (JACC) provider for pluggable authorization.

Superelements

[“security-service” on page 117](#)

Subelements

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

TABLE 1-72 jacc-provider Subelements

Element	Required	Description
“property” on page 105	zero or more	Specifies a property or a variable.

Attributes

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

TABLE 1-73 jacc-provider Attributes

Attribute	Default	Description
<code>name</code>	<code>default</code>	Specifies the name of the JACC provider.
<code>policy-provider</code>	<code>com.sun.enterprise.security.provider.PolicyWrapper</code>	Corresponds to and can be overridden by the system property <code>javax.security.jacc.policy.provider</code> .
<code>policy-configuration-factory-provider</code>	<code>com.sun.enterprise.security.provider.PolicyConfigurationFactoryImpl</code>	Corresponds to and can be overridden by the system property <code>javax.security.jacc.PolicyConfigurationFactory.provider</code> .

java-config

Specifies the Virtual Machine for the Java platform (JVM software) configuration parameters.

Superelements

[“config” on page 32](#)

Subelements

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

TABLE 1-74 java-config Subelements

Element	Required	Description
“profiler” on page 104	zero or one	Configures a profiler for use with the Enterprise Server.
“jvm-options” on page 84	zero or more	Contains JVM command line options.
“property” on page 105	zero or more	Specifies a property or a variable.

Attributes

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

TABLE 1-75 java-config Attributes

Attribute	Default	Description
java-home	<code>\${com.sun.aas.javaRoot}</code>	The path to the directory where the JDK is installed.
debug-enabled	false	(optional) If true, the server starts up in debug mode ready for attachment with a JPDA-based debugger.
debug-options	<code>-Xdebug -Xrunjdpw: transport=dt_socket, server=y,suspend=n</code>	(optional) Specifies JPDA (Java Platform Debugger Architecture) options. A list of debugging options is available at http://java.sun.com/products/jpda/doc/conninv.html#Invocation . For more information about debugging, see the <i>Sun GlassFish Enterprise Server v3 Preview Application Development Guide</i> .
rmic-options	<code>-iiop -poa -alwaysgenerate -keepgenerated -g</code>	(optional) Specifies options passed to the RMI compiler at application deployment time. The <code>-keepgenerated</code> option saves generated source for stubs and ties. For details about the <code>rmic</code> command, see http://java.sun.com/javase/6/docs/technotes/tools/solaris/rmic.html .
javac-options	<code>-g</code>	(optional) Specifies options passed to the Java compiler at application deployment time.
classpath-suffix	none	Deprecated. Do not use.
system-classpath	none	Deprecated. Do not use.
native-library-path-prefix	none	(optional) Specifies a prefix for the native library path. The native library path is the automatically constructed concatenation of the Enterprise Server installation relative path for its native shared libraries, the standard JRE native library path, the shell environment setting (<code>LD_LIBRARY_PATH</code> on UNIX), and any path specified in the <code>profiler</code> element. Since this is synthesized, it does not appear explicitly in the server configuration.
native-library-path-suffix	none	(optional) Specifies a suffix for the native library path.
bytecode-preprocessors	none	(optional) A comma separated list of class names, each of which must implement the <code>com.sun.appserv.BytecodePreprocessor</code> interface. Each of the specified preprocessor classes is called in the order specified.
env-classpath-ignored	true	Deprecated. Do not use.

jdbc-connection-pool

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

Superelements

[“resources” on page 115](#)

Subelements

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

TABLE 1-76 `jdbc-connection-pool` Subelements

Element	Required	Description
“property” on page 105	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 1-77 `jdbc-connection-pool` Attributes

Attribute	Default	Description
<code>name</code>	none	Specifies the name of the connection pool. A “jdbc-resource” on page 79 element’s <code>pool-name</code> attribute refers to this name.
<code>description</code>	none	(optional) Specifies a text description of this element.
<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 data source class implements two or more of these interfaces or when a <code>driver-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.

TABLE 1-77 jdbc-connection-pool Attributes (Continued)

Attribute	Default	Description
steady-pool-size	8	(optional) Specifies the initial and minimum number of connections maintained in the pool.
max-pool-size	32	(optional) Specifies the maximum number of connections that can be created to satisfy client requests.
max-wait-time-in-millis	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.
pool-resize-quantity	2	(optional) Specifies the number of idle connections to be destroyed if the existing number of connections is above the steady-pool-size (subject to the max-pool-size limit). This is enforced periodically at the idle-timeout-in-seconds interval. An idle connection is one that has not been used for a period of idle-timeout-in-seconds. When the pool size reaches steady-pool-size, connection removal stops.
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.

TABLE 1-77 jdbc-connection-pool Attributes (Continued)

Attribute	Default	Description
connection-validation-method	table	<p>(optional) Legal values are as follows:</p> <ul style="list-style-type: none"> ■ auto-commit (default), 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 the custom implementation class specified 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 table 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> .
validation-classname	none	(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 Enterprise Server.
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	(optional) Specifies the time interval within which a connection is validated at most once. Minimizes the number of validation calls.

TABLE 1-77 jdbc-connection-pool Attributes (Continued)

Attribute	Default	Description
connection-leak-timeout-in-seconds	0	(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. 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 .
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.
connection-creation-retry-interval-in-seconds	10	(optional) Specifies the time interval between attempts to create a connection when <code>connection-creation-retry-attempts</code> is greater than 0.
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 <code>queryTimeout</code> is set according to the value specified in this attribute. This works only when the underlying JDBC driver supports <code>queryTimeout</code> for <code>Statement</code> , <code>PreparedStatement</code> , <code>CallableStatement</code> , and <code>ResultSet</code> .
lazy-connection-enlistment	false	(optional) If <code>true</code> , a connection is not enlisted in a transaction until it is used. If <code>false</code> , any connection object available to a transaction is enlisted in the transaction.
lazy-connection-association	false	(optional) If <code>true</code> , a physical connection is not associated with a logical connection until it is used. If <code>false</code> , 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 <code>true</code> , allows connections to be saved as <code>ThreadLocal</code> 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 <code>false</code> , 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 <code>true</code> , you should verify that the value of the <code>max-pool-size</code> attribute is comparable to the <code>max-thread-pool-size</code> attribute of the “ thread-pool ” on page 127 element. If the <code>max-thread-pool-size</code> value is much higher than the <code>max-pool-size</code> 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 1-77 jdbc-connection-pool Attributes (Continued)

Attribute	Default	Description
associate-with-thread-connections-count	1	(optional) Specifies the maximum number of connections to associate with a thread. Takes effect only when <code>associate-with-thread</code> is <code>true</code> .
match-connections	false	(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. 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.
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.
statement-cache-size	0	(optional) Specifies the number of statements to be cached using the default caching mechanism (<code>True</code> or <code>Least Recently Used</code>). The default value of <code>0</code> disables statement caching.
pooling	true	(optional) If <code>false</code> , disables connection pooling.
wrap-jdbc-objects	true	(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> . 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.

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 Enterprise 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 1-78 `jdbc-connection-pool` Properties

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

jdbc-resource

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

Superelements

[“resources” on page 115](#)

Subelements

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

TABLE 1-79 `jdbc-resource` Subelements

Element	Required	Description
“property” on page 105	zero or more	Specifies a property or a variable.

Attributes

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

TABLE 1-80 `jdbc-resource` Attributes

Attribute	Default	Description
<code>jndi-name</code>	none	Specifies the JNDI name for the resource.
<code>description</code>	none	(optional) Specifies a text description of this element.
<code>pool-name</code>	none	Specifies the name of the associated “jdbc-connection-pool” on page 73 .
<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.

jms-host

Configures the host of the built-in Java Message Service (JMS) that is managed by the Enterprise Server.

Superelements

[“jms-service” on page 81](#)

Subelements

The following table describes subelements for the `jms-host` element.

TABLE 1-81 `.jms-host` Subelements

Element	Required	Description
“property” on page 105	zero or more	Specifies a property or a variable.

Attributes

The following table describes attributes for the `.jms-host` element.

TABLE 1-82 `.jms-host` Attributes

Attribute	Default	Description
<code>name</code>	<code>none</code>	Specifies the name of the JMS host.
<code>host</code>	<i>machine-name</i>	(optional) Specifies the host name of the JMS host.
<code>port</code>	<code>7676</code>	(optional) Specifies the port number used by the JMS provider.
<code>admin-user-name</code>	<code>admin</code>	(optional) Specifies the administrator user name for the JMS provider.
<code>admin-password</code>	<code>admin</code>	(optional) Specifies the administrator password for the JMS provider.

`.jms-service`

Configures the built-in Java Message Service (JMS) that is managed by the Enterprise Server.

Superelements

[“config” on page 32](#)

Subelements

The following table describes subelements for the `.jms-service` element.

TABLE 1-83 `.jms-service` Subelements

Element	Required	Description
“jms-host” on page 80	zero or more	Specifies a host.
“property” on page 105	zero or more	Specifies a property or a variable.

Attributes

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

TABLE 1-84 jms-service Attributes

Attribute	Default	Description
init-timeout-in-seconds	60	(optional) Specifies the amount of time the server instance waits at startup for its configured default JMS host to respond. If there is no response, startup is aborted. If set to 0, the server instance waits indefinitely.
type	EMBEDDED	Specifies the type of JMS service: <ul style="list-style-type: none"> ■ EMBEDDED means the JMS provider is started in the same JVM machine as the Enterprise Server, and the networking stack is bypassed. Lazy initialization starts the default embedded broker on the first access of JMS services rather than at Enterprise Server startup. ■ LOCAL means the JMS provider is started along with the Enterprise Server. The LOCAL setting implicitly sets up a 1:1 relationship between an Enterprise Server instance and a Message Queue broker. ■ REMOTE means the JMS provider is remote and is not started by the Enterprise Server.
start-args	none	(optional) Specifies the string of arguments supplied for startup of the corresponding JMS instance.
default-jms-host	none	Specifies the name of the default “jms-host” on page 80. If type is set to LOCAL, this jms-host is automatically started at Enterprise Server startup.
reconnect-interval-in-seconds	5	(optional) Specifies the interval between reconnect attempts.
reconnect-attempts	3	(optional) Specifies the number of reconnect attempts.
reconnect-enabled	true	(optional) If true, reconnection is enabled. The JMS service automatically tries to reconnect to the JMS provider when the connection is broken. When the connection is broken, depending on the message processing stage, the <code>onMessage()</code> method might not be able to complete successfully or the transaction might be rolled back due to a JMS exception. When the JMS service reestablishes the connection, JMS message redelivery semantics apply.
addresslist-behavior	random	(optional) Specifies whether the reconnection logic selects the broker from the <code>imqAddressList</code> in a random or sequential (priority) fashion.
addresslist-iterations	3	(optional) Specifies the number of times the reconnection logic iterates over the <code>imqAddressList</code> if <code>addresslist-behavior</code> is set to <code>PRIORITY</code> .
mq-scheme	mq	(optional) Specifies the scheme for establishing connection with the broker. For example, specify <code>http</code> for connecting to the broker over HTTP.
mq-service	jms	(optional) Specifies the type of broker service. If a broker supports SSL, the type of service can be <code>ssljms</code> .

Properties

The following table describes properties for the `jms-service` element.

TABLE 1–85 `jms-service` Properties

Property	Default	Description
<code>instance-name</code>	<code>imqbroker</code>	Specifies the full Sun GlassFish Message Queue broker instance name.
<code>instance-name-suffix</code>	<code>none</code>	Specifies a suffix to add to the full Message Queue broker instance name. The suffix is separated from the instance name by an underscore character (<code>_</code>). For example, if the instance name is <code>imqbroker</code> , appending the suffix <code>xyz</code> changes the instance name to <code>imqbroker_xyz</code> .
<code>append-version</code>	<code>false</code>	If <code>true</code> , appends the major and minor version numbers, preceded by underscore characters (<code>_</code>), to the full Message Queue broker instance name. For example, if the instance name is <code>imqbroker</code> , appending the version numbers changes the instance name to <code>imqbroker_8_0</code> .
<code>user-name</code>	<code>guest</code>	Specifies the user name for creating the JMS connection. Needed only if the default username/password of <code>guest/guest</code> is not available in the broker.
<code>password</code>	<code>guest</code>	Specifies the password for creating the JMS connection. Needed only if the default username/password of <code>guest/guest</code> is not available in the broker.

jmx-connector

Configures a JSR 160/255 compliant remote JMX connector, which handles the JMX communication between the domain administration server, the node agents, and the remote server instances. This JMX connector also handles JMX communication between an external management client and the domain administration server.

Only the system JMX connector is started by the server processes at startup. Do not configure additional JMX connectors.

Superelements

[“admin-service” on page 23](#)

Subelements

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

TABLE 1–86 `jmx-connector` Subelements

Element	Required	Description
“ssl” on page 122	zero or one	Defines SSL parameters.

TABLE 1-86 jmx-connector Subelements (Continued)

Element	Required	Description
“property” on page 105	zero or more	Specifies a property or a variable.

Attributes

The following table describes attributes for the jmx-connector element.

TABLE 1-87 jmx-connector Attributes

Attribute	Default	Description
name	none	Specifies the name of the connector used by the designated system JMX connector for JMX communication between server instances. Do not modify this name.
protocol	rmi_jrmp	(optional) Specifies the protocol that this JMX connector supports. The only supported protocol is rmi_jrmp. Do not modify this value.
address	0.0.0.0	Specifies the IP address of the naming service where the JMX connector server stub is registered. This is not the port of the server socket that does the actual JMX communication. This is the address of the network interface where the RMI registry is started. If your system has multiple network interfaces, modify this value so that only a particular interface is selected.
port	8686	Specifies the port number on which the naming service (RMI registry) listens for RMI client connections. The only use of this naming service is to download the RMI stubs. If the default port is occupied, a free port is used. Legal values are 1 - 65535. On UNIX, creating sockets that listen on ports 1 - 1024 requires superuser privileges.
auth-realm-name	admin-realm	Specifies the name of an “auth-realm” on page 29 subelement of the “security-service” on page 117 element for the server instance that is running this JMX connector's server end. Note that this is a dedicated administration security realm.
security-enabled	false	(optional) Determines whether JMX communication is encrypted.
enabled	true	(optional) Enables the JMX connector. Do not modify this value.

jvm-options

Contains JVM command line options, for example:

```
<jvm-options>-Xdebug -Xmx128m</jvm-options>
```

For information about JVM options, see <http://java.sun.com/docs/hotspot/VMOptions.html>.

Superelements

“java-config” on page 72, “profiler” on page 104

Subelements

none - contains data

K

keep-alive

This element is not supported. If this element is present in the `domain.xml` file, its attributes are remapped to other elements and then it is deleted. For remapping details, see the Attributes table for this element.

Superelements

“http-service” on page 65

Subelements

none

Attributes

The following table describes attributes for the `keep-alive` element.

TABLE 1-88 keep-alive Attributes

Attribute	Default	Description
thread-count	1	Not implemented. Do not use.
max-connections	250	Remapped to the <code>max-connections</code> attribute of an “http” on page 57 element.
timeout-in-seconds	30	Remapped to the <code>timeout-seconds</code> attribute of an “http” on page 57 element.

lifecycle-module

This element is deprecated. Use an “[application](#)” on page 25 element instead.

Specifies a deployed lifecycle module. For more information about lifecycle modules, see the *Sun GlassFish Enterprise Server v3 Preview Application Development Guide*.

Superelements

“[applications](#)” on page 28

Subelements

The following table describes subelements for the `lifecycle-module` element.

TABLE 1-89 `lifecycle-module` Subelements

Element	Required	Description
“ description ” on page 45	zero or one	Contains a text description of this element.
“ property ” on page 105	zero or more	Specifies a property or a variable.

Attributes

The following table describes attributes for the `lifecycle-module` element.

TABLE 1-90 `lifecycle-module` Attributes

Attribute	Default	Description
<code>name</code>	none	The name of the lifecycle module.
<code>class-name</code>	none	The fully qualified name of the lifecycle module’s class file, which must implement the <code>com.sun.appserv.server.LifecycleListener</code> interface.
<code>classpath</code>	value of <code>application-root</code> attribute of “ domain ” on page 45 element	(optional) The classpath for the lifecycle module. Specifies where the module is located.
<code>load-order</code>	none	(optional) Determines the order in which lifecycle modules are loaded at startup. Modules with smaller integer values are loaded sooner. Values can range from 101 to the operating system’s MAXINT. Values from 1 to 100 are reserved.

TABLE 1-90 lifecycle-module Attributes (Continued)

Attribute	Default	Description
is-failure-fatal	false	(optional) Determines whether the server is shut down if the lifecycle module fails.
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 the lifecycle module is enabled.

log-service

Configures the *server log* file, which stores messages from the default virtual server. Messages from other configured virtual servers also go here, unless the `log-file` attribute is explicitly specified in the `virtual-server` element. The default name is `server.log`.

Other log files are configured by other elements:

- A *virtual server log* file stores messages from a `virtual-server` element that has an explicitly specified `log-file` attribute. See “[virtual-server](#)” on page 134.
- The *access log* file stores HTTP access messages from the default virtual server. The default name is `access.log`. See “[access-log](#)” on page 21 and “[http-access-log](#)” on page 60.
- The *transaction log* files store transaction messages from the default virtual server. The default name of the directory for these files is `tx`. See “[transaction-service](#)” on page 129.

Superelements

“[config](#)” on page 32

Subelements

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

TABLE 1-91 log-service Subelements

Element	Required	Description
“ module-log-levels ” on page 96	zero or one	Specifies log levels.

TABLE 1-91 log-service Subelements (Continued)

Element	Required	Description
“property” on page 105	zero or more	Specifies a property or a variable.

Attributes

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

TABLE 1-92 log-service Attributes

Attribute	Default	Description
file	server.log in the directory specified by the log-root attribute of the “domain” on page 45 element	(optional) Overrides the name or location of the server log. The file and directory in which the server log is kept must be writable by the user account under which the server runs. An absolute path overrides the log-root attribute of the “domain” on page 45 element. A relative path is relative to the log-root attribute of the “domain” on page 45 element. If no log-root value is specified, it is relative to <i>domain-dir/config</i> .
use-system-logging	false	(optional) If true, uses the UNIX syslog service to produce and manage logs.
log-handler	none	(optional) Specifies a custom log handler to be added to end of the chain of system handlers to log to a different destination.
log-filter	none	(optional) Specifies a log filter to do custom filtering of log records.
log-to-console	false	(optional) Deprecated and ignored.
log-rotation-limit-in-bytes	2000000	(optional) Log files are rotated when the file size reaches the specified limit.
log-rotation-timelimit-in-minutes	0	(optional) Enables time-based log rotation. The valid range is 60 minutes (1 hour) to 14400 minutes (10*24*60 minutes or 10 days). If the value is zero, the files are rotated based on the size specified in log-rotation-limit-in-bytes. If the value is greater than zero, log-rotation-timelimit-in-minutes takes precedence over log-rotation-limit-in-bytes.
alarms	false	(optional) If true, displays alarms for “module-log-levels” on page 96 values of WARNING or SEVERE. [Remark 1-3 : Where or how are alarms displayed? Did I guess right for log levels?]
retain-error-statistics-for-hours	5	(optional) Specifies the number of most recent hours for which error statistics are retained in memory. The default and minimum value is 5 hours. The maximum value allowed is 500 hours. Larger values incur additional memory overhead.

M

mail-resource

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

Superelements

[“resources” on page 115](#)

Subelements

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

TABLE 1-93 mail - resource Subelements

Element	Required	Description
“description” on page 45	zero or one	Contains a text description of this element.
“property” on page 105	zero or more	Specifies a property or a variable.

Attributes

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

TABLE 1-94 mail - resource Attributes

Attribute	Default	Description
<code>jndi-name</code>	none	Specifies the JNDI name for the resource.
<code>store-protocol</code>	imap	(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>

TABLE 1-94 mail-resource Attributes (Continued)

Attribute	Default	Description
transport-protocol	smtp	(optional) Specifies the transport protocol service, which sends messages. Allowed values are smtp and smtps.
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 Enterprise 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 domain.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 121](#)

Subelements

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

TABLE 1–95 `manager-properties` Subelements

Element	Required	Description
“property” on page 105	zero or more	Specifies a property or a variable.

Attributes

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

TABLE 1–96 `manager-properties` Attributes

Attribute	Default	Description
<code>session-file-name</code>	none; state is not preserved across restarts	(optional) 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 application. To disable this behavior and not preserve the session state, specify an empty string as the value of this attribute.
<code>reap-interval-in-seconds</code>	60	(optional) Specifies the time between checks for expired sessions. If the <code>persistence-frequency</code> attribute of the <code>web-container-availability</code> element is set to <code>time-based</code> , active sessions are stored at this interval. 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 you could lose the last few hits each time you restart the server.

TABLE 1-96 manager-properties Attributes (Continued)

Attribute	Default	Description
max-sessions	-1	(optional) Specifies the maximum number of sessions that can be in cache, or -1 for no limit. After this, an attempt to create a new session causes an <code>IllegalStateException</code> to be thrown.
session-id-generator-classname	internal class generator	(optional) Not implemented.

mbean

This element is deprecated. Use an [“application” on page 25](#) element instead.

Specifies an MBean, which implements the `javax.management.NotificationListener` interface.

Superelements

[“applications” on page 28](#)

Subelements

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

TABLE 1-97 mbean Subelements

Element	Required	Description
“description” on page 45	zero or one	Contains a text description of this element.
“property” on page 105	zero or more	Specifies a property. Property subelements of the <code>mbean</code> element store the names and values of attributes defined in the MBean implementation class.

Attributes

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

TABLE 1-98 mbean Attributes

Attribute	Default	Description
name	value of <code>impl-class-name</code>	The name of the MBean. The name must represent a value of a property in the <code>property-list</code> of an MBean <code>ObjectName</code> . The name is a primary key for the MBean. This is read-only.

TABLE 1-98 mbean Attributes (Continued)

Attribute	Default	Description
object-type	user	(optional) Defines the type of the resource. This is read-only. 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.
impl-class-name	none	Defines the fully qualified class name of the MBean implementation. This is read-only.
object-name	none	Defines a system-generated object name for this MBean. This is read-only.
enabled	true	(optional) Determines whether the MBean is enabled. If false, the MBean is not registered in the runtime environment even if the reference is enabled.

mdb-container

Configures the message-driven bean (MDB) container.

Superelements

[“config” on page 32](#)

Subelements

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

TABLE 1-99 mdb-container Subelements

Element	Required	Description
“property” on page 105	zero or more	Specifies a property or a variable.

Attributes

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

TABLE 1-100 mdb-container Attributes

Attribute	Default	Description
steady-pool-size	10	(optional) Specifies the initial and minimum number of beans maintained in the pool.

TABLE 1-100 mdb-container Attributes (Continued)

Attribute	Default	Description
pool-resize-quantity	2	(optional) Specifies the number of beans to be removed when the idle-timeout-in-seconds timer expires. A cleaner thread removes any unused instances. Must be 0 or greater and less than max-pool-size. The pool is not resized below the steady-pool-size.
max-pool-size	60	(optional) Specifies the maximum number of beans that can be created to satisfy client requests.
idle-timeout-in-seconds	600	(optional) Specifies the maximum time that a bean can remain idle in the pool. After this amount of time, the bean is destroyed. A value of 0 means a bean can remain idle indefinitely.

Properties

The following table describes properties for the mdb-container element.

TABLE 1-101 mdb-container Properties

Property	Default	Description
cmt-max-runtime-exceptions	1	Specifies the maximum number of RuntimeException occurrences allowed from a message-driven bean's onMessage() method when container-managed transactions are used. Deprecated.

message-security-config

Specifies configurations for message security providers.

Superelements

[“security-service” on page 117](#)

Subelements

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

TABLE 1-102 message-security-config Subelements

Element	Required	Description
“provider-config” on page 110	one or more	Specifies a configuration for one message security provider.

Attributes

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

TABLE 1-103 message-security-config Attributes

Attribute	Default	Description
auth-layer	HttpServlet	Specifies the message layer at which authentication is performed. The value must be SOAP or HttpServlet.
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.

module

Defines a stand-alone module or a component of a Java EE application.

An “engine” on page 51 runs a sniffer during deployment, which is responsible for identifying a type of deployment artifact (such as a WAR file) and setting up the associated container (such as the web container). Multiple engines, each with its own sniffer, can be associated with a given module.

Superelements

“application” on page 25

Subelements

The following table describes subelements for the module element.

TABLE 1-104 module Subelements

Element	Required	Description
“engine” on page 51	one or more	Specifies an engine.
“property” on page 105	zero or more	Specifies a property or a variable.

Attributes

The following table describes attributes for the module element.

TABLE 1-105 module Attributes

Attribute	Default	Description
name	none	The name of the module.

Properties

The following table describes properties for the module element.

TABLE 1-106 module Properties

Property	Default	Description
java-web-start-enabled	true	(optional) Specifies whether Java Web Start access is permitted for an application client module.
default-EE6-app-name	none	The default Java EE 6 name of the module.

module-log-levels

Controls the level of messages logged by server subsystems to the server log. Allowed values (levels) of each subsystem attribute are, from highest to lowest: `FINEST`, `FINER`, `FINE`, `CONFIG`, `INFO`, `WARNING`, `SEVERE`, and `OFF`. Each value logs all messages for all lower values. The default value is `INFO`, which logs all `INFO`, `SEVERE`, and `WARNING` messages.

Superelements

[“log-service” on page 87](#)

Subelements

The following table describes subelements for the `module-log-levels` element.

TABLE 1-107 module-log-levels Subelements

Element	Required	Description
“property” on page 105	zero or more	Specifies a property or a variable.

Attributes

The following table describes attributes for the `module-log-levels` element. The attribute names are the names of the Enterprise Server system loggers.

TABLE 1-108 module-log-levels Attributes

Attribute	Default	Description
root	INFO	(optional) Specifies the default level of messages logged by the entire Enterprise Server installation.
server	INFO	(optional) Specifies the default level of messages logged by the server instance.

TABLE 1-108 module-log-levels Attributes (Continued)

Attribute	Default	Description
ejb-container	INFO	(optional) Specifies the level of messages logged by the EJB container.
cmp-container	INFO	(optional) Specifies the level of messages logged by the CMP subsystem of the EJB container.
mdb-container	INFO	(optional) Specifies the level of messages logged by the MDB container.
web-container	INFO	(optional) Specifies the level of messages logged by the web container.
classloader	INFO	(optional) Specifies the level of messages logged by the classloader hierarchy.
configuration	INFO	(optional) Specifies the level of messages logged by the configuration subsystem.
naming	INFO	(optional) Specifies the level of messages logged by the naming subsystem.
security	INFO	(optional) Specifies the level of messages logged by the security subsystem.
jts	INFO	(optional) Specifies the level of messages logged by the Java Transaction Service.
jta	INFO	(optional) Specifies the level of messages logged by the Java Transaction API.
admin	INFO	(optional) Specifies the level of messages logged by the Administration Console subsystem.
deployment	INFO	(optional) Specifies the level of messages logged by the deployment subsystem.
verifier	INFO	(optional) Specifies the level of messages logged by the deployment descriptor verifier.
jaxr	INFO	(optional) Specifies the level of messages logged by the XML registry.
jaxrpc	INFO	(optional) Specifies the level of messages logged by the XML RPC module.
saaj	INFO	(optional) Specifies the level of messages logged by the SOAP with Attachments API for Java module.
corba	INFO	(optional) Specifies the level of messages logged by the ORB.
javamail	INFO	(optional) Specifies the level of messages logged by the JavaMail subsystem.
jms	INFO	(optional) Specifies the level of messages logged by the Java Message Service.
connector	INFO	(optional) Specifies the level of messages logged by the connector subsystem.
jdo	INFO	(optional) Specifies the level of messages logged by the Java Data Objects module.
cmp	INFO	(optional) Specifies the level of messages logged by the CMP subsystem.
util	INFO	(optional) Specifies the level of messages logged by the utility subsystem.
resource-adapter	INFO	(optional) Specifies the level of messages logged by the resource adapter subsystem.
synchronization	INFO	(optional) Specifies the level of messages logged by the synchronization subsystem.
node-agent	INFO	(optional) Specifies the level of messages logged by the node agent subsystem.
self-management	INFO	(optional) Specifies the level of messages logged by the self-management (management rules) subsystem.

TABLE 1-108 module-log-levels Attributes (Continued)

Attribute	Default	Description
group-management-service	INFO	(optional) Specifies the level of messages logged by the Group Management Service.
management-event	INFO	(optional) Specifies the level of messages logged by the self-management event subsystem.

module-monitoring-levels

Controls the level of monitoring of server subsystems. Allowed values of each subsystem attribute are LOW, HIGH, and OFF.

Superelements

[“monitoring-service” on page 99](#)

Subelements

The following table describes subelements for the module-monitoring-levels element.

TABLE 1-109 module-monitoring-levels Subelements

Element	Required	Description
“property” on page 105	zero or more	Specifies a property or a variable.

Attributes

TABLE 1-110 module-monitoring-levels Attributes

Attribute	Default	Description
thread-pool	OFF	(optional) Specifies the level of monitoring of the thread pool subsystem.
orb	OFF	(optional) Specifies the level of monitoring of the ORB.
ejb-container	OFF	(optional) Specifies the level of monitoring of the EJB container.
web-container	OFF	(optional) Specifies the level of monitoring of the web container.
transaction-service	OFF	(optional) Specifies the level of monitoring of the transaction service.
http-service	OFF	(optional) Specifies the level of monitoring of the HTTP service.
jdbc-connection-pool	OFF	(optional) Specifies the level of monitoring of the JDBC connection pool subsystem.
connector-connection-pool	OFF	(optional) Specifies the level of monitoring of the connector connection pool subsystem.

TABLE 1-110 module-monitoring-levels Attributes (Continued)

Attribute	Default	Description
connector-service	OFF	(optional) Specifies the level of monitoring of the connector service.
jms-service	OFF	(optional) Specifies the level of monitoring of the JMS service.
jvm	OFF	(optional) Specifies the level of monitoring of the JVM subsystem.

monitoring-service

Configures the monitoring service.

Superelements

[“config” on page 32](#)

Subelements

The following table describes subelements for the `monitoring-service` element.

TABLE 1-111 monitoring-service Subelements

Element	Required	Description
“module-monitoring-levels” on page 98	zero or one	Controls the level of monitoring of server subsystems.
“property” on page 105	zero or more	Specifies a property or a variable.

N

network-config

Configures the communication network for the Enterprise Server. The network configuration includes most of the features that were in the HTTP Service in previous Enterprise Server releases. HTTP Service elements that are no longer supported are converted to network configuration elements. For additional information, see [“http-service” on page 65](#).

Superelements

[“config” on page 32](#)

Subelements

The following table describes subelements for the `network-listeners` element.

TABLE 1-112 network-listeners Subelements

Element	Required	Description
“network-listeners” on page 101	only one	Contains network listeners.
“protocols” on page 109	only one	Contains protocols.
“transports” on page 133	only one	Contains transports.

network-listener

Configures a network listener.

When you first install the Enterprise Server, three `network-listener` elements exist by default, with name values of `admin-listener`, `http-listener1`, and `http-listener2`. The `http-listener2`, which is set up with SSL, is disabled by default.

Note – Network listeners are affected by properties of [“http-service” on page 65](#).

Superelements

[“network-listeners” on page 101](#)

Subelements

none

Attributes

The following table describes attributes for the `network-listener` element.

TABLE 1-113 network-listener Attributes

Attribute	Default	Description
<code>name</code>	none	The unique listener name. A <code>network-listener</code> name cannot begin with a number.
<code>address</code>	none	IP address of the listener. Can be in dotted-pair or IPv6 notation. Can be any (for <code>INADDR_ANY</code>) to listen on all IP addresses. Can be a hostname.
<code>port</code>	none	Port number on which the listener listens. Legal values are 1 - 65535. On UNIX, creating sockets that listen on ports 1 - 1024 requires superuser privileges. Configuring an SSL listener to listen on port 443 is standard.

TABLE 1-113 network-listener Attributes (Continued)

Attribute	Default	Description
enabled	true	(optional) Determines whether the listener is active. If set to false, any attempts to connect to the listener result in a socket exception (<code>java.net.ConnectException</code>). In Enterprise Server versions prior to 9.1, a listener whose enabled attribute was set to false returned a 404 response code for any requests sent to it. To achieve this behavior in the current Enterprise Server version, set the listener's enabled attribute to true, and set every associated virtual server's state to off. A “virtual-server” on page 134 lists its associated listeners in its network-listeners attribute.
protocol	none	Specifies the name of the “protocol” on page 106 associated with this network listener. Although this attribute is required, a protocol is automatically created with the same name as the network listener when you use the <code>asadmin create-http-listener</code> command to create a network listener.
thread-pool	none	(Optional) Specifies the name of the “thread-pool” on page 127 associated with this network listener.
transport	none	Specifies the name of the “transport” on page 132 associated with this network listener. Although this attribute is required, the default transport is used when you use the <code>asadmin create-http-listener</code> command to create a network listener.

network-listeners

Contains network listeners.

Superelements

“network-config” on page 99

Subelements

The following table describes subelements for the network-listeners element.

TABLE 1-114 network-listeners Subelements

Element	Required	Description
“network-listener” on page 100	one or more	Configures a network listener.

0

orb

Configures the ORB.

To enable SSL for outbound connections, include an “ssl-client-config” on page 124 subelement in the parent `iiop-service` element.

Superelements

[“iio-service” on page 69](#)

Subelements

The following table describes subelements for the orb element.

TABLE 1–115 orb Subelements

Element	Required	Description
“property” on page 105	zero or more	Specifies a property or a variable.

Attributes

The following table describes attributes for the orb element.

TABLE 1–116 orb Attributes

Attribute	Default	Description
use-thread-pool-ids	none	Specifies a comma-separated list of name values defined in “thread-pool” on page 127 elements used by the ORB.
message-fragment-size	1024	(optional) GIOPv1.2 messages larger than this number of bytes are fragmented.
max-connections	1024	(optional) The maximum number of incoming connections on all IIOP listeners. Legal values are integers.

P

param-name

Contains a context parameter name.

Superelements

context-param

Subelements

none - contains data

param-value

Contains a context parameter value.

Superelements

context-param

Subelements

none - contains data

port-unification

Configures port unification.

Superelements

[“protocol” on page 106](#)

Subelements

The following table describes subelements for the port-unification element.

TABLE 1-117 port-unification Subelements

Element	Required	Description
“protocol-finder” on page 109	zero or one	Configures the protocol finder.

Attributes

The following table describes attributes for the port-unification element.

TABLE 1-118 port-unification Attributes

Attribute	Default	Description
name	none	Specifies a unique name for the port-unification.
classname	none	Specifies the class name of the port-unification implementation.

principal

Contains the principal of the servlet or EJB client.

Superelements

[“security-map” on page 117](#)

Subelements

none - contains data

principal-map

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

Superelements

[“work-security-map” on page 143](#)

Subelements

none

Attributes

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

TABLE 1-119 `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 Enterprise Server domain.

profiler

Configures a profiler for use with the Enterprise Server. For more information about profilers, see the [Sun GlassFish Enterprise Server v3 Preview Application Development Guide](#).

Superelements

[“java-config” on page 72](#)

Subelements

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

TABLE 1-120 profiler Subelements

Element	Required	Description
“jvm-options” on page 84	zero or more	Contains profiler-specific JVM command line options.
“property” on page 105	zero or more	Specifies a property or a variable.

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

Attributes

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

TABLE 1-121 profiler Attributes

Attribute	Default	Description
<code>name</code>	none	Specifies the name of the profiler.
<code>classpath</code>	none	(optional) Specifies the classpath for the profiler.
<code>native-library-path</code>	none	(optional) Specifies the native library path for the profiler.
<code>enabled</code>	true	(optional) Determines whether the profiler is enabled.

property

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

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

For example, an `auth-realm` element can include `property` subelements:

```
<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.

Superelements

“admin-object-resource” on page 22, “admin-service” on page 23, “application” on page 25, “audit-module” on page 28, “auth-realm” on page 29, “config” on page 32, “connector-connection-pool” on page 35, “connector-resource” on page 40, “custom-resource” on page 42, “das-config” on page 43, “domain” on page 45, “ejb-container” on page 46, “ejb-timer-service” on page 50, “engine” on page 51, “external-jndi-resource” on page 55, “http-service” on page 65, “iiop-listener” on page 68, “jacc-provider” on page 71, “java-config” on page 72, “jdbc-connection-pool” on page 73, “jdbc-resource” on page 79, “jms-host” on page 80, “jms-service” on page 81, “jmx-connector” on page 83, “log-service” on page 87, “mail-resource” on page 89, “manager-properties” on page 91, “mdb-container” on page 93, “module-log-levels” on page 96, “module-monitoring-levels” on page 98, “monitoring-service” on page 99, “orb” on page 101, “profiler” on page 104, “provider-config” on page 110, “resource-adapter-config” on page 113, “security-service” on page 117, “server” on page 119, “session-properties” on page 121, “store-properties” on page 124, “thread-pool” on page 127, “transaction-service” on page 129, “virtual-server” on page 134, “web-container” on page 140,

Subelements

none

Attributes

The following table describes attributes for the property element.

TABLE 1-122 property Attributes

Attribute	Default	Description
name	none	Specifies the name of the property or variable.
value	none	Specifies the value of the property or variable.
description	none	(optional) Specifies a text description of this element.

protocol

Configures a protocol.

Superelements

“protocols” on page 109

Subelements

The following table describes subelements for the protocol element.

TABLE 1-123 protocol Subelements

Element	Required	Description
“http” on page 57	zero or one	Configures HTTP parameters.
“port-unification” on page 103	zero or one	Configures port unification.
“protocol-chain-instance-handler” on page 108	zero or one	Configures a protocol chain instance handler.
“protocol-filter” on page 108	zero or one	Configures a protocol filter.
“ssl” on page 122	zero or one	Defines SSL parameters.

Attributes

The following table describes attributes for the protocol element.

TABLE 1-124 protocol Attributes

Attribute	Default	Description
name	none	Specifies a unique name for the protocol.
security-enabled	false	(optional) Determines whether the “network-listener” on page 100 that references this protocol runs SSL. To turn SSL2 or SSL3 on or off and set ciphers, use an <code>ssl</code> subelement.

protocol-chain

Configures a protocol chain.

Superelements

[“protocol-chain-instance-handler” on page 108](#)

Subelements

none

Attributes

The following table describes attributes for the protocol-chain element.

TABLE 1-125 protocol-chain Attributes

Attribute	Default	Description
name	none	Specifies a unique name for the protocol chain.

TABLE 1-125 protocol-chain Attributes (Continued)

Attribute	Default	Description
classname	none	Specifies the class name of the protocol chain implementation.
type	STATELESS	Specifies the type of protocol chain.

protocol-chain-instance-handler

Configures a protocol chain instance handler.

Superelements

[“protocol” on page 106](#)

Subelements

The following table describes subelements for the protocol-chain-instance-handler element.

TABLE 1-126 protocol-chain-instance-handler Subelements

Element	Required	Description
“protocol-chain” on page 107	one or more	Configures a protocol chain.

Attributes

The following table describes attributes for the protocol-chain-instance-handler element.

TABLE 1-127 protocol-chain-instance-handler Attributes

Attribute	Default	Description
name	none	Specifies a unique name for the protocol chain instance handler.
classname	none	Specifies the class name of the protocol chain instance handler implementation.

protocol-filter

Configures a protocol filter.

Superelements

[“protocol” on page 106](#)

Subelements

none

Attributes

The following table describes attributes for the `protocol-filter` element.

TABLE 1-128 `protocol-filter` Attributes

Attribute	Default	Description
<code>name</code>	none	Specifies a unique name for the protocol filter.
<code>classname</code>	none	Specifies the class name of the protocol filter implementation.

protocol-finder

Configures a protocol finder.

Superelements

[“port-unification” on page 103](#)

Subelements

none

Attributes

The following table describes attributes for the `protocol-finder` element.

TABLE 1-129 `protocol-finder` Attributes

Attribute	Default	Description
<code>name</code>	none	Specifies a unique name for the protocol finder.
<code>classname</code>	none	Specifies the class name of the protocol finder implementation.
<code>protocol</code>	none	Specifies the name of the “protocol” on page 106 associated with this protocol finder. [Remark 1-4: Why is this needed, given that protocol is the grandparent element?]

protocols

Contains protocols.

Superelements

[“network-config” on page 99](#)

Subelements

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

TABLE 1-130 `protocols` Subelements

Element	Required	Description
“protocol” on page 106	one or more	Configures a protocol.

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 94](#)

Subelements

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

TABLE 1-131 `provider-config` Subelements

Element	Required	Description
“request-policy” on page 112	zero or one	Defines the authentication policy requirements of the authentication provider’s request processing.
“response-policy” on page 116	zero or one	Defines the authentication policy requirements of the authentication provider’s response processing.
“property” on page 105	zero or more	Specifies a property or a variable.

Attributes

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

TABLE 1-132 provider-config Attributes

Attribute	Default	Description
provider-id	none	Specifies a unique identifier for this provider-config element.
provider-type	none	Specifies whether the provider is a client, server, or client-server authentication provider.
class-name	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.

Properties

The following table describes properties for the provider-config element.

TABLE 1-133 provider-config Properties

Property	Default	Description
security.config	<i>domain-dir/config/wss-server-config-1.0.xml</i>	Specifies the location of the message security configuration file. To point to a configuration file in the <i>domain-dir/config</i> directory, use the system property <code>\${com.sun.aas.instanceRoot}/config/</code> , for example: <code>\${com.sun.aas.instanceRoot}/config/wss-server-config-1.0.xml</code> See “system-property” on page 126.
debug	false	If true, enables dumping of server provider debug messages to the server log.
dynamic.username.password	false	If true, signals the provider runtime to collect the user name and password from the <code>CallbackHandler</code> for each request. If false, the user name and password for <code>wsse:UsernameToken(s)</code> is collected once, during module initialization. This property is only applicable for a <code>ClientAuthModule</code> .
encryption.key.alias	s1as	Specifies the encryption key used by the provider. The key is identified by its <code>keystore</code> alias.
signature.key.alias	s1as	Specifies the signature key used by the provider. The key is identified by its <code>keystore</code> alias.

R

registry-location

This element is deprecated. Web services are implemented in the “engine” on page 51 element.

Specifies the registry where web service endpoint artifacts are published.

Superelements

“[web-service-endpoint](#)” on page 142

Subelements

none

Attributes

The following table describes attributes for the `registry-location` element.

TABLE 1-134 registry-location Attributes

Attribute	Default	Description
<code>connector-resource-jndi-name</code>	none	Specifies the jndi-name of the “ connector-resource ” on page 40 used as the registry.

request-policy

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

Superelements

“[provider-config](#)” on page 110

Subelements

none

Attributes

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

TABLE 1-135 request-policy Attributes

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

request-processing

This element is not supported. If this element is present in the `domain.xml` file, its attributes are remapped to other elements and then it is deleted. For remapping details, see the Attributes table for this element.

Superelements

[“http-service” on page 65](#)

Subelements

none

Attributes

The following table describes attributes for the `request-processing` element.

TABLE 1-136 request-processing Attributes

Attribute	Default	Description
<code>thread-count</code>	20	Remapped to the <code>max-thread-pool-size</code> attribute of a “thread-pool” on page 127 element.
<code>initial-thread-count</code>	2	Remapped to the <code>min-thread-pool-size</code> attribute of a “thread-pool” on page 127 element.
<code>thread-increment</code>	1	Not implemented. Do not use.
<code>request-timeout-in-seconds</code>	30	Remapped to the <code>request-timeout-seconds</code> attribute of an “http” on page 57 element.
<code>header-buffer-length-in-bytes</code>	8192	Remapped to the <code>header-buffer-length-bytes</code> attribute of an “http” on page 57 element.

resource-adapter-config

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

Superelements

[“resources” on page 115](#)

Subelements

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

TABLE 1-137 resource-adapter-config Subelements

Element	Required	Description
“property” on page 105	zero or more	Specifies a property or a variable.

Attributes

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

TABLE 1-138 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 name attributes of “thread-pool” on page 127 elements.
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 attribute of a deployed connector “application” on page 25 element. 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-ref

References a resource deployed to the server.

Superelements

[“server” on page 119](#)

Subelements

none

Attributes

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

TABLE 1–139 resource-ref Attributes

Attribute	Default	Description
enabled	true	(optional) Determines whether the resource is enabled.
ref	none	References the name attribute of a “custom-resource” on page 42, “external-jndi-resource” on page 55, “jdbc-resource” on page 79, “mail-resource” on page 89, “admin-object-resource” on page 22, “resource-adapter-config” on page 113, “connector-connection-pool” on page 35, or “jdbc-connection-pool” on page 73 element.

resources

Contains configured resources, such as database connections, JavaMail™ sessions, and so on.

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 an Enterprise Server application should begin with the string `java:comp/env`.

Superelements

“domain” on page 45

Subelements

The following table describes subelements for the resources element.

TABLE 1–140 resources Subelements

Element	Required	Description
“custom-resource” on page 42	zero or more	Defines a custom resource.
“external-jndi-resource” on page 55	zero or more	Defines a resource that resides in an external JNDI repository.
“jdbc-resource” on page 79	zero or more	Defines a JDBC (Java Database Connectivity) resource.
“mail-resource” on page 89	zero or more	Defines a JavaMail resource.
“admin-object-resource” on page 22	zero or more	Defines an administered object for an inbound resource adapter.
“connector-resource” on page 40	zero or more	Defines a connector (resource adapter) resource.

TABLE 1-140 resources Subelements (Continued)

Element	Required	Description
“resource-adapter-config” on page 113	zero or more	Defines a resource adapter configuration.
“jdbc-connection-pool” on page 73	zero or more	Defines the properties that are required for creating a JDBC connection pool.
“connector-connection-pool” on page 35	zero or more	Defines the properties that are required for creating a connector connection pool.
“work-security-map” on page 143	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 110](#)

Subelements

none

Attributes

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

TABLE 1-141 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.

S

security-map

Maps the principal received during servlet or EJB authentication to the credentials accepted by the EIS.

This is different from a “[work-security-map](#)” on page 143, which maps an EIS principal or group to an Enterprise Server principal or group.

Superelements

“[connector-connection-pool](#)” on page 35

Subelements

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

TABLE 1-142 `security-map` Subelements

Element	Required	Description
“ principal ” on page 103	one or more	Contains the principal of the servlet or EJB client.
“ user-group ” on page 134	one or more	Contains the group to which the principal belongs.
“ backend-principal ” on page 32	only one	Specifies the user name and password required by the EIS.

Attributes

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

TABLE 1-143 `security-map` Attributes

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

security-service

Defines parameters and configuration information needed by the Java EE security service. For SSL configuration, see “[ssl](#)” on page 122. For connector module security, see “[security-map](#)” on page 117.

Superelements

“[config](#)” on page 32

Subelements

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

TABLE 1-144 `security-service` Subelements

Element	Required	Description
“auth-realm” on page 29	one or more	Defines a realm for authentication.
“jacc-provider” on page 71	one or more	Specifies a Java Authorization Contract for Containers (JACC) provider for pluggable authorization.
“audit-module” on page 28	zero or more	Specifies an optional plug-in module that implements audit capabilities.
“message-security-config” on page 94	zero or more	Specifies configurations for message security providers.
“property” on page 105	zero or more	Specifies a property or a variable.

Attributes

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

TABLE 1-145 `security-service` Attributes

Attribute	Default	Description
<code>default-realm</code>	<code>file</code>	(optional) Specifies the active authentication realm (an “auth-realm” on page 29 name attribute) for this server instance.
<code>default-principal</code>	<code>none</code>	(optional) Used as the identity of the default security context when necessary and when no principal is provided. This attribute need not be set for normal server operation.
<code>default-principal-password</code>	<code>none</code>	(optional) The password of the default principal. This attribute need not be set for normal server operation.
<code>anonymous-role</code>	<code>attribute is deprecated</code>	(optional) Deprecated. Do not use.
<code>audit-enabled</code>	<code>false</code>	(optional) If <code>true</code> , additional access logging is performed to provide audit information. Audit information consists of: <ul style="list-style-type: none"> ■ Authentication success and failure events ■ Servlet and EJB access grants and denials
<code>jacc</code>	<code>default</code>	(optional) Specifies the name of the “jacc-provider” on page 71 element to use for setting up the JACC infrastructure. Do not change the default value unless you are adding a custom JACC provider.

TABLE 1-145 security-service Attributes (Continued)

Attribute	Default	Description
audit-modules	default	(optional) Specifies a space-separated list of audit provider modules used by the audit subsystem. The default value refers to the internal log-based audit module.
activate-default-principal-to-role-mapping	false	(optional) Applies a default principal for role mapping to any application that does not have an application-specific mapping defined. Every role is mapped to an instance of a <code>java.security.Principal</code> implementation class defined by <code>mapped-principal-class</code> . This class has the same name as the role.
mapped-principal-class	none	(optional) Customizes the <code>java.security.Principal</code> implementation class used when <code>activate-default-principal-to-role-mapping</code> is set to true.

server

Defines a server instance, which is a Java EE compliant container. One server instance is specially designated as a domain administration server (DAS). The “[admin-service](#)” on [page 23](#) subelement of the “[config](#)” on [page 32](#) element referenced by a server's `config-ref` attribute determines whether the server is the DAS.

Note – Server instances are not the same thing as virtual servers. Each server instance is a completely separate server that contains one or more virtual servers.

Superelements

“[servers](#)” on [page 120](#)

Subelements

The following table describes subelements for the server element.

TABLE 1-146 server Subelements

Element	Required	Description
“ application-ref ” on page 27	zero or more	References an application or module deployed to the server instance.
“ resource-ref ” on page 114	zero or more	References a resource deployed to the server instance.
“ system-property ” on page 126	zero or more	Specifies a system property.
“ property ” on page 105	zero or more	Specifies a property or a variable.

Attributes

The following table describes attributes for the server element.

TABLE 1-147 server Attributes

Attribute	Default	Description
name	none	Specifies the name of the server instance.
config-ref	default “ config ” on page 32 element’s name, server-config	(optional) References the name of the “ config ” on page 32 used by the server instance.

servers

Contains server instances.

Superelements

“[domain](#)” on [page 45](#)

Subelements

The following table describes subelements for the servers element.

TABLE 1-148 servers Subelements

Element	Required	Description
“ server ” on page 119	only one	Defines a server instance.

session-config

Specifies session configuration information for the entire web container. Individual web applications can override these settings using the corresponding elements in their sun-web.xml files.

Superelements

“[web-container](#)” on [page 140](#)

Subelements

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

TABLE 1-149 session-config Subelements

Element	Required	Description
“session-manager” on page 121	zero or one	Specifies session manager configuration information.
“session-properties” on page 121	zero or one	Specifies session properties.

session-manager

Specifies session manager information.

Note – The session manager interface is unstable. An unstable interface might be experimental or transitional, and hence might change incompatibly, be removed, or be replaced by a more stable interface in the next release.

Superelements

[“session-config” on page 120](#)

Subelements

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

TABLE 1-150 session-manager Subelements

Element	Required	Description
“manager-properties” on page 91	zero or one	Specifies session manager properties.
“store-properties” on page 124	zero or one	Specifies session persistence (storage) properties.

session-properties

Specifies session properties.

Superelements

[“session-config” on page 120](#)

Subelements

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

TABLE 1-151 session-properties Subelements

Element	Required	Description
“property” on page 105	zero or more	Specifies a property or a variable.

Attributes

TABLE 1-152 session-properties Attributes

Attribute	Default	Description
timeout-in-seconds	600	<p>(optional) Specifies the default maximum inactive interval (in seconds) for all sessions created in this web module. If set to 0 or less, sessions in this web module never expire.</p> <p>If a session-timeout element is specified in the web.xml file, the session-timeout value overrides any timeout-in-seconds value. If neither session-timeout nor timeout-in-seconds is specified, the timeout-in-seconds default is used.</p> <p>Note that the session-timeout element in web.xml is specified in minutes, not seconds.</p>

Properties

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

TABLE 1-153 session-properties Properties

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 JavaServer Pages™ (JSP™) page.
idLengthBytes	128	Specifies the number of bytes in this web module’s session ID.

ssl

Defines SSL (Secure Socket Layer) parameters.

An ssl element is required inside an http-listener or iiop-listener element that has its security-enabled attribute set to on.

The grandparent [“http-service” on page 65](#) element has properties that configure global SSL settings.

Superelements

“protocol” on page 106, “http-listener” on page 62, “iiop-listener” on page 68, “jmx-connector” on page 83, “ssl-client-config” on page 124

Subelements

none

Attributes

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

TABLE 1-154 `ssl` Attributes

Attribute	Default	Description
<code>cert-nickname</code>	<code>slas</code>	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.
<code>ssl2-enabled</code>	<code>false</code>	(optional) Determines whether SSL2 is enabled. If both SSL2 and SSL3 are enabled for a “virtual-server” on page 134, the server tries SSL3 encryption first. If that fails, the server tries SSL2 encryption.
<code>ssl2-ciphers</code>	<code>none</code>	(optional) A comma-separated list of the SSL2 ciphers used, with the prefix + to enable or - to disable, for example <code>+rc4</code> . Allowed values are <code>rc4</code> , <code>rc4export</code> , <code>rc2</code> , <code>rc2export</code> , <code>idea</code> , <code>des</code> , <code>desede3</code> .
<code>ssl3-enabled</code>	<code>true</code>	(optional) Determines whether SSL3 is enabled. The default is <code>true</code> . If both SSL2 and SSL3 are enabled for a “virtual-server” on page 134, the server tries SSL3 encryption first. If that fails, the server tries SSL2 encryption.
<code>ssl3-tls-ciphers</code>	<code>none</code>	(optional) A comma-separated list of the SSL3 ciphers used, with the prefix + to enable or - to disable, for example <code>+SSL_RSA_WITH_RC4_128_MD5</code> . Allowed values are <code>SSL_RSA_WITH_RC4_128_MD5</code> , <code>SSL_RSA_WITH_3DES_EDE_CBC_SHA</code> , <code>SSL_RSA_WITH_DES_CBC_SHA</code> , <code>SSL_RSA_EXPORT_WITH_RC4_40_MD5</code> , <code>SSL_RSA_WITH_NULL_MD5</code> , <code>SSL_RSA_WITH_RC4_128_SHA</code> , and <code>SSL_RSA_WITH_NULL_SHA</code> . Values available in previous releases are supported for backward compatibility.
<code>tls-enabled</code>	<code>true</code>	(optional) Determines whether TLS is enabled.
<code>tls-rollback-enabled</code>	<code>true</code>	(optional) Determines whether TLS rollback is enabled. TLS rollback should be enabled for Microsoft Internet Explorer 5.0 and 5.5. For more information, see the Sun GlassFish Enterprise Server v3 Preview Administration Guide .
<code>client-auth-enabled</code>	<code>false</code>	(optional) Determines whether SSL3 client authentication is performed on every request, independent of ACL-based access control.

TABLE 1-154 `ssl` Attributes (Continued)

Attribute	Default	Description
<code>crl-file</code>	none	Specifies the location of the Certificate Revocation List (CRL) file to consult during SSL client authentication. This can be an absolute or relative file path. If relative, it is resolved against <i>domain-dir</i> . If unspecified, CRL checking is disabled.
<code>trust-algorithm</code>	none	Specifies the name of the trust management algorithm (for example, PKIX) to use for certification path validation.
<code>trust-max-cert-length-bytes</code>	5	Specifies the maximum number of non-self-issued intermediate certificates that can exist in a certification path. This property is considered only if <code>trustAlgorithm</code> is set to PKIX. A value of zero implies that the path can only contain a single certificate. A value of -1 implies that the path length is unconstrained (there is no maximum). Setting a value less than -1 causes an exception to be thrown.
<code>key-store</code>	none	(Optional) Specifies a key store.
<code>trust-store</code>	none	(Optional) Specifies a trust store.

ssl-client-config

Defines SSL parameters for the ORB when it makes outbound SSL connections and behaves as a client.

Superelements

[“iio-service” on page 69](#)

Subelements

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

TABLE 1-155 `ssl-client-config` Subelements

Element	Required	Description
“ssl” on page 122	only one	Defines SSL parameters.

store-properties

Specifies session persistence (storage) properties.

Superelements

[“session-manager” on page 121](#)

Subelements

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

TABLE 1-156 `store-properties` Subelements

Element	Required	Description
“property” on page 105	zero or more	Specifies a property or a variable.

Attributes

TABLE 1-157 `store-properties` Attributes

Attribute	Default	Description
<code>directory</code>	<i>domain-dir</i> /generated/jsp /j2ee-apps/ <i>appname</i> / <i>appname_war</i>	(optional) 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 application.
<code>reap-interval-in-seconds</code>	60	(optional) Not implemented. Use the <code>reap-interval-in-seconds</code> attribute of the “manager-properties” on page 91 element instead.

system-applications

Contains system applications. Do not delete or edit these applications.

Superelements

[“domain” on page 45](#)

Subelements

The following table describes subelements for the `system-applications` element.

TABLE 1-158 `system-applications` Subelements

Element	Required	Description
“application” on page 25	zero or more	Specifies an application.

system-property

Specifies a system property. A system property defines a common value for a setting at one of these levels, from highest to lowest: “domain” on page 45, “server” on page 119, or “config” on page 32. A value set at a higher level can be overridden at a lower level. Some system properties are predefined; see “system-property” on page 126. You can also create system properties using this element.

The following example shows the use of a predefined system property:

```
<log-service file="{com.sun.aas.instanceRoot}/logs/server.log">
  <module-log-levels admin=INFO .../>
</log-service>
```

The following example shows the creation and use of a system property:

```
<config name="config1">
  ...
  <http-service>
    ...
    <http-listener id="ls1" host="0.0.0.0" port="{ls1-port}"/>
    ...
  </http-service>
  ...
  <system-property name="ls1-port" value="8080"/>
</config>
```

Superelements

“config” on page 32, “domain” on page 45, “server” on page 119

Subelements

none

Attributes

The following table describes attributes for the system-property element.

TABLE 1-159 system-property Attributes

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

TABLE 1-159 system-property Attributes (Continued)

Attribute	Default	Description
description	none	(optional) Specifies a text description of this element.

Properties

The following table lists predefined system properties.

TABLE 1-160 Predefined System Properties

Property	Default	Description
com.sun.aas.installRoot	depends on operating system	Specifies the directory where the Enterprise Server is installed.
com.sun.aas.instanceRoot	depends on operating system	Specifies the top level directory for a server instance.
com.sun.aas.hostName	none	Specifies the name of the host (machine).
com.sun.aas.javaRoot	depends on operating system	Specifies the installation directory for the Java runtime.
com.sun.aas.imqLib	depends on operating system	Specifies the library directory for the Sun GlassFish Message Queue software.
com.sun.aas.configName	server-config	Specifies the name of the “ config ” on page 32 used by a server instance.
com.sun.aas.instanceName	server1	Specifies the name of the server instance. This property is not used in the default configuration, but can be used to customize configuration.
com.sun.aas.domainName	domain1	Specifies the name of the domain. This property is not used in the default configuration, but can be used to customize configuration.

T

thread-pool

Defines a thread pool.

Superelements

“[thread-pools](#)” on page 128

Subelements

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

TABLE 1-161 thread-pool Subelements

Element	Required	Description
“property” on page 105	zero or more	Specifies a property or a variable.

Attributes

TABLE 1-162 thread-pool Attributes

Attribute	Default	Description
name	none	Specifies the thread pool name.
classname	com.sun.grizzly.http. StatsThreadPool	(Optional) Specifies the class name of the thread pool implementation.
min-thread-pool-size	0	(optional) Specifies the minimum number of threads in the pool. These are created when the thread pool is instantiated.
max-thread-pool-size	200	(optional) Specifies the maximum number of threads the pool can contain.
idle-thread-timeout-in-seconds	120	(optional) Specifies the amount of time after which idle threads are removed from the pool.
num-work-queues	1	Not implemented. Do not use.
max-queue-size	4096	(optional) Specifies the maximum number of messages that can be queued until threads are available to process them for “network-listener” on page 100 elements. A value of - 1 specifies no limit.

thread-pools

Contains thread pools.

Superelements

[“config” on page 32](#)

Subelements

The following table describes subelements for the thread-pools element.

TABLE 1-163 thread-pools Subelements

Element	Required	Description
“thread-pool” on page 127	one or more	Defines a thread pool.

transaction-service

Configures the Java Transaction Service (JTS).

Superelements

[“config” on page 32](#)

Subelements

The following table describes subelements for the `transaction-service` element.

TABLE 1-164 `transaction-service` Subelements

Element	Required	Description
“property” on page 105	zero or more	Specifies a property or a variable.

Attributes

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

TABLE 1-165 `transaction-service` Attributes

Attribute	Default	Description
<code>automatic-recovery</code>	<code>false</code>	(optional) If <code>true</code> , the server instance attempts transaction recovery during startup.
<code>timeout-in-seconds</code>	<code>0</code>	(optional) Specifies the amount of time after which the transaction is aborted. If set to <code>0</code> , the transaction never times out.
<code>tx-log-dir</code>	directory specified by the <code>log-root</code> attribute of the “domain” on page 45 element	(optional) Specifies the parent directory of the transaction log directory <code>instance-name/tx</code> . The directory in which the transaction logs are kept must be writable by the user account under which the server runs. A relative path is relative to the <code>log-root</code> attribute of the “domain” on page 45 element.
<code>heuristic-decision</code>	<code>rollback</code>	(optional) If the outcome of a distributed transaction cannot be determined because other participants are unreachable, this property determines the outcome. Allowed values are <code>rollback</code> and <code>commit</code> .
<code>retry-timeout-in-seconds</code>	<code>600</code>	(optional) Determines the retry time in the following scenarios: <ul style="list-style-type: none"> ■ At the transaction recovery time, if resources are unreachable. ■ If there are any transient exceptions in the second phase of a two phase commit protocol. A negative value specifies infinite retries. A value of <code>0</code> (zero) specifies no retries. A positive value indicates the time after which a retry is attempted.

TABLE 1-165 transaction-service Attributes (Continued)

Attribute	Default	Description
keypoint - interval	65536 (64 K)	(optional) Specifies the number of transactions between keypoint operations in the log. Keypoint operations reduce the size of the transaction log file by compressing it. A larger value for this attribute results in a larger transaction log file, but fewer keypoint operations and potentially better performance. A smaller value results in smaller log files, but slightly reduced performance due to the greater frequency of keypoint operations.

Properties

The following table describes properties for the transaction-service element.

TABLE 1-166 transaction-service Properties

Property	Default	Description
oracle-xa-recovery-workaround	true	If true, the Oracle XA Resource workaround is used in transaction recovery.
disable-distributed-transaction-logging	false	If true, disables transaction logging, which might improve performance. If the automatic-recovery attribute is set to true, this property is ignored.
xaresource-txn-timeout	specific to the XAResource used	Changes the XAResource timeout. In some cases, the XAResource default timeout can cause transactions to be aborted, so it is desirable to change it.
pending-txn-cleanup-interval	none if this property is absent, 60 if this property is present but has no value	Specifies the interval, in seconds, at which an asynchronous thread checks for pending transactions and completes them.
use-last-agent-optimization	true	If true, enables last agent optimization, which improves the throughput of transactions. If one non-XA resource is used with XA resources in the same transaction, the non XA resource is the last agent.

TABLE 1-166 transaction-service Properties (Continued)

Property	Default	Description
delegated-recovery	false	<p>If true, cluster-wide delegated recovery is enabled. You must also facilitate storing of transaction logs in a shared file system in one of these ways:</p> <ul style="list-style-type: none"> Set the “domain” on page 45 element’s log-root attribute to a shared file system base directory and set the tx-log-dir attribute to a relative path. Set tx-log-dir to an absolute path to a shared file system directory, in which case log-root is ignored for transaction logs. Set a “system-property” on page 126 called TX-LOG-DIR to a shared file system directory. For example: <pre><server config-ref="server-config" name="server"> <system-property name="TX-LOG-DIR" value="/net/tulsa/nodeagents/na/instance1/logs"/> </server></pre>
wait-time-before-recovery-insec	60	Specifies the wait time, in seconds, after which an instance starts the recovery for a dead instance.
db-logging-resource	none	Specifies the JNDI name of the JDBC resource for the database to which transactions are logged. For more information, see Chapter 14, “Using the Transaction Service,” in Sun GlassFish Enterprise Server v3 Preview Application Development Guide.
xa-servername	host name on which the Enterprise Server runs	Specifies the host name that the transaction service uses to identify transactions being managed by the installed Enterprise Server. This can sometimes be useful for recovering transactions from the log file that was created on a different host running the Enterprise Server. This should also be used when the Enterprise Server is installed as part of Sun Cluster HA.

transformation-rule

This element is deprecated. Web services are implemented in the “engine” on page 51 element.

Configures an eXtensible Stylesheet Language Transformation (XSLT) rule, which transforms a web service message.

Superelements

“web-service-endpoint” on page 142

Subelements

The following table describes subelements for the transformation-rule element.

TABLE 1-167 transformation-rule Subelements

Element	Required	Description
“description” on page 45	zero or one	Contains a text description of this element.

Attributes

The following table describes attributes for the `transformation-rule` element.

TABLE 1-168 transformation-rule Attributes

Attribute	Default	Description
<code>name</code>	<code>none</code>	The name of the rule.
<code>enabled</code>	<code>true</code>	(optional) Determines whether the rule is enabled.
<code>apply-to</code>	<code>request</code>	(optional) Specifies whether the rule is applied to the request, the response, or both. Allowed values are: <ul style="list-style-type: none"> ▪ <code>request</code> - Transformations are applied to the request in the order specified. ▪ <code>response</code> - Transformations are applied to the response in the order specified. ▪ <code>both</code> - Transformations are applied to both the request and the response. The order is reversed for the response.
<code>rule-file-location</code>	<i>domain-dir/generated/xml/ app-or-module/xslt-file</i>	A fully qualified or relative path to the rule file that performs the transformation. Only XSLT files are allowed.

transport

Configures a transport.

Superelements

[“transports” on page 133](#)

Subelements

`none`

Attributes

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

TABLE 1-169 transport Attributes

Attribute	Default	Description
name	none	Specifies a unique name for the transport.
classname	com.sun.grizzly. TCPSelectorHandler	(Optional) Specifies the class name of the transport implementation.
idle-key-timeout-seconds	30	(Optional) Specifies the idle key timeout.
read-timeout-millis	30000 (30 seconds)	(optional) Specifies the amount of time the Enterprise Server waits during the header and body parsing phase.
write-timeout-millis	30000 (30 seconds)	(optional) Specifies the amount of time the Enterprise Server waits before considering the remote client disconnected when writing the response.
tcp-no-delay	true	(optional) If true, enables TCP_NODELAY (also called Nagle's algorithm).
max-connections-count	4096	(optional) Specifies the maximum number of pending connections on a “network-listener” on page 100 that references this transport.
acceptor-threads	1	(optional) Specifies the number of processors in the machine. To set the number of request processing threads, use the <code>max-thread-pool-size</code> attribute of the “thread-pool” on page 127 element.
buffer-size-bytes	4096	(optional) Specifies the size, in bytes, of the buffer to be provided for input streams created by a “network-listener” on page 100 .

transports

Contains transports.

Superelements

[“network-config” on page 99](#)

Subelements

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

TABLE 1-170 transports Subelements

Element	Required	Description
“transport” on page 132	one or more	Configures a transport.

user-group

Contains the group to which the principal belongs.

Superelements

“security-map” on page 117

Subelements

none - contains data

virtual-server

Defines a virtual server. A virtual server, also called a virtual host, is a virtual web server that serves content targeted for a specific URL. Multiple virtual servers can serve content using the same or different host names, port numbers, or IP addresses. The HTTP service can direct incoming web requests to different virtual servers based on the URL.

When the Enterprise Server is first installed, a default virtual server is created. (You can also assign a default virtual server to each new “[http-listener](#)” on page 62 you create.)

Note – Virtual servers are not the same thing as server instances. Each server instance is a completely separate server that contains one or more virtual servers.

Before the Enterprise Server can process a request, it must accept the request via a listener, then direct the request to the correct virtual server. The virtual server is determined as follows:

- If the listener is configured to only a default virtual server, that virtual server is selected.
- If the listener has more than one virtual server configured to it, the request `Host` header is matched to the `host s` attribute of a virtual server. If no `Host` header is present or no `host s` attribute matches, the default virtual server for the listener is selected.

If a virtual server is configured to an SSL listener, its `host s` attribute is checked against the subject pattern of the certificate at server startup, and a warning is generated and written to the server log if they don't match.

Superelements

[“http-service” on page 65](#)

Subelements

The following table describes subelements for the `virtual-server` element.

TABLE 1-171 `virtual-server` Subelements

Element	Required	Description
“http-access-log” on page 60	zero or one	Defines an access log file.
“property” on page 105	zero or more	Specifies a property or a variable.

Attributes

The following table describes attributes for the `virtual-server` element.

TABLE 1-172 `virtual-server` Attributes

Attribute	Default	Description
<code>id</code>	none	Virtual server ID. This is a unique ID that allows lookup of a specific virtual server. A virtual server ID cannot begin with a number.
<code>network-listeners</code>	none	(optional) In a comma-separated list, references <code>id</code> attributes of “network-listener” on page 100 elements that specify the connection(s) the virtual server uses. Required only for a <code>virtual-server</code> that is not referenced by the <code>default-virtual-server</code> attribute of an “http” on page 57 element.
<code>default-web-module</code>	none	(optional) References the name attribute of the default web “application” on page 25 for this virtual server, which responds to requests that cannot be resolved to other web modules deployed to this virtual server (see the “application-ref” on page 27 element).
<code>hosts</code>	<code>\${com.sun.aas.hostName}</code>	A comma-separated list of values, each of which selects the current virtual server when included in the <code>Host</code> request header. Two or more <code>virtual-server</code> elements that reference or are referenced by the same <code>http-listener</code> cannot have any <code>hosts</code> values in common.
<code>state</code>	on	(optional) Determines whether a <code>virtual-server</code> is active (on) or inactive (off, disabled). The default is on (active). When inactive, a virtual server does not service requests. If a <code>virtual-server</code> is disabled, only the global server administrator can turn it on.
<code>docroot</code>	<code>domain-dir/docroot</code>	(optional) Specifies the document root for this virtual server.

TABLE 1-172 virtual-server Attributes (Continued)

Attribute	Default	Description
log-file	server.log in the directory specified by the log-root attribute of the “domain” on page 45 element	(optional) Writes this virtual server’s log messages to a log file separate from the server log. The file and directory in which the virtual server log is kept must be writable by the user account under which the server runs. See the “log-service” on page 87 description for details about logs.
access-logging-enabled	false	If true, enables access logging for this virtual server. If false, disables access logging for this virtual server.
sso-enabled	false	If true, single sign-on is enabled for web applications on this virtual server that are configured for the same realm. If false, single sign-on is disabled for this virtual server, and users must authenticate separately to every application on the virtual server.

Properties

The following table describes properties for the virtual-server element.

TABLE 1-173 virtual-server Properties

Property	Default	Description
sso-enabled	false	Deprecated. Use the sso-enabled attribute instead.
sso-max-inactive-seconds	300	Specifies the time after which a user’s single sign-on record becomes eligible for purging if no client activity is received. Since single sign-on applies across several applications on the same virtual server, access to any of the applications keeps the single sign-on record active. Higher values provide longer single sign-on persistence for the users at the expense of more memory use on the server.
sso-reap-interval-seconds	60	Specifies the interval between purges of expired single sign-on records.
ssoCookieSecure	dynamic	<p>Sets the Secure attribute of any JSESSIONIDSSO cookies associated with the web applications deployed to this virtual server. Applicable only if the sso-enabled property is set to true. Allowed values are as follows:</p> <ul style="list-style-type: none"> ■ true — Sets Secure to true. ■ false — Sets Secure to false. ■ dynamic — The JSESSIONIDSSO cookie inherits the Secure setting of the first session participating in SSO. <p>To set the Secure attribute of a JSESSIONID cookie, use the cookieSecure cookie-properties property in the sun-web.xml file. For details, see “cookie-properties” in <i>Sun GlassFish Enterprise Server v3 Preview Application Deployment Guide</i>.</p>

TABLE 1-173 virtual-server Properties (Continued)

Property	Default	Description
setCacheControl	none	Specifies a comma-separated list of Cache-Control response directives. For a list of valid directives, see section 14.9 of the document at http://www.ietf.org/rfc/rfc2616.txt .
accessLogging Enabled	false	Deprecated. Use the access-logging-enabled attribute instead.
accessLogBuffer Size	32768	Specifies the size, in bytes, of the buffer where access log calls are stored. If the value is less than 5120, a warning message is issued, and the value is set to 5120.
accessLogWriter Interval	300	Specifies the number of seconds before the log is written to the disk. The access log is written when the buffer is full or when the interval expires. If the value is 0, the buffer is always written even if it is not full. This means that each time the server is accessed, the log message is stored directly to the file.
allowRemoteAddress	none	Specifies a comma-separated list of regular expression patterns that the remote client's IP address is compared to. If this property is specified, the remote address <i>must</i> match for this request to be accepted. If this property is not specified, all requests are accepted <i>unless</i> the remote address matches a denyRemoteAddress pattern.
denyRemoteAddress	none	Specifies a comma-separated list of regular expression patterns that the remote client's IP address is compared to. If this property is specified, the remote address <i>must not</i> match for this request to be accepted. If this property is not specified, request acceptance is governed solely by the allowRemoteAddress property.
allowRemoteHost	none	Specifies a comma-separated list of regular expression patterns that the remote client's hostname (as returned by [java.net.Socket.getInetAddress().getHostName()]) is compared to. If this property is specified, the remote hostname <i>must</i> match for this request to be accepted. If this property is not specified, all requests are accepted <i>unless</i> the remote hostname matches a denyRemoteHost pattern.
denyRemoteHost	none	Specifies a comma-separated list of regular expression patterns that the remote client's hostname (as returned by [java.net.Socket.getInetAddress().getHostName()]) is compared to. If this property is specified, the remote hostname <i>must not</i> match for this request to be accepted. If this property is not specified, request acceptance is governed solely by the allowRemoteHost property.
authRealm	none	Specifies the name attribute of an “auth-realm” on page 29 element, which overrides the server instance's default realm for stand-alone web applications deployed to this virtual server. A realm defined in a stand-alone web application's web.xml file overrides the virtual server's realm.
securePages WithPragma	true	Set this property to false to ensure that for all web applications on this virtual server file downloads using SSL work properly in Internet Explorer. You can set this property for a specific web application. For details, see “sun-web-app” in <i>Sun GlassFish Enterprise Server v3 Preview Application Deployment Guide</i> .

TABLE 1-173 virtual-server 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 a specific web application. For details, see “sun-web-app” in <i>Sun GlassFish Enterprise Server v3 Preview Application Deployment Guide</i>.</p>
contextXmlDefault	none	<p>Specifies the location, relative to <i>domain-dir</i>, of the <code>context.xml</code> file for this virtual server, if one is used. For more information about the <code>context.xml</code> file, see “Using a context.xml File” in <i>Sun GlassFish Enterprise Server v3 Preview Application Deployment Guide</i> and The Context Container (http://tomcat.apache.org/tomcat-5.5-doc/config/context.html). Context parameters, environment entries, and resource definitions in <code>context.xml</code> are supported in the Enterprise Server.</p>
allowLinking	false	<p>If <code>true</code>, resources that are symbolic links in web applications on this virtual server are served. The value of this property in the <code>sun-web.xml</code> file takes precedence if defined. For details, see “sun-web-app” in <i>Sun GlassFish Enterprise Server v3 Preview Application Deployment Guide</i>.</p> <p>Caution – Setting this property to <code>true</code> on Windows systems exposes JSP source code.</p>

TABLE 1-173 virtual-server Properties (Continued)

Property	Default	Description
send-error_ <i>n</i>	none	<p>Specifies custom error page mappings for the virtual server, which are inherited by all web applications deployed on the virtual server. A web application can override these custom error page mappings in its web.xml deployment descriptor. The value of each send-error_<i>n</i> property has three components, which may be specified in any order:</p> <p>The first component, code, specifies the three-digit HTTP response status code for which the custom error page should be returned in the response.</p> <p>The second component, path, specifies the absolute or relative file system path of the custom error page. A relative file system path is interpreted as relative to the <i>domain-dir/config</i> directory.</p> <p>The third component, reason, is optional and specifies the text of the reason string (such as Unauthorized or Forbidden) to be returned.</p> <p>For example:</p> <pre><property name="send-error_1" value="code=401 path=/myhost/401.html reason=MY-401-REASON"/></pre> <p>This example property definition causes the contents of /myhost/401.html to be returned with 401 responses, along with this response line:</p> <pre>HTTP/1.1 401 MY-401-REASON</pre>
redirect_ <i>n</i>	none	<p>Specifies that a request for an old URL is treated as a request for a new URL. These properties are inherited by all web applications deployed on the virtual server. The value of each redirect_<i>n</i> property has two components, which may be specified in any order:</p> <p>The first component, from, specifies the prefix of the requested URI to match.</p> <p>The second component, url-prefix, specifies the new URL prefix to return to the client. The from prefix is simply replaced by this URL prefix.</p> <p>For example:</p> <pre><property name="redirect_1" value="from=/dummy url-prefix=http://etude"/></pre>
valve_ <i>n</i>	none	<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 org.apache.catalina.Valve interface from Tomcat or previous Enterprise Server releases, or the org.glassfish.web.valve.GlassFishValve interface from the current Enterprise Server release. For example:</p> <pre><property name="valve_1" value="org.glassfish.extension.Valve"/></pre> <p>You can set this property for a specific web application. For details, see “sun-web-app” in <i>Sun GlassFish Enterprise Server v3 Preview Application Deployment Guide</i>.</p>

TABLE 1-173 virtual-server Properties (Continued)

Property	Default	Description
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> or <code>org.apache.catalina.LifecycleListener</code> interface. For example:</p> <pre><property name="listener_1" value="org.glassfish.extension.MyLifecycleListener"/></pre> <p>You can set this property for a specific web application. For details, see “sun-web-app” in <i>Sun GlassFish Enterprise Server v3 Preview Application Deployment Guide</i>.</p>

W

web-container

Configures the web container.

Superelements

[“config”](#) on page 32

Subelements

The following table describes subelements for the web-container element.

TABLE 1-174 web-container Subelements

Element	Required	Description
“session-config” on page 120	zero or one	Specifies session configuration information for the web container.
“property” on page 105	zero or more	Specifies a property or a variable.

Properties

The following table describes properties for the web-container element.

TABLE 1-175 web-container Properties

Property	Default	Description
dispatcher-max-depth	20	Prevents recursive include or forward statements from creating an infinite loop by setting a maximum nested dispatch level. If this level is exceeded, the following message is written to the server log: Exceeded maximum depth for nested request dispatches

web-module

This element is deprecated. Use an [“application” on page 25](#) element instead.

Specifies a deployed web module.

Superelements

[“applications” on page 28](#)

Subelements

The following table describes subelements for the web-module element.

TABLE 1-176 web-module Subelements

Element	Required	Description
“description” on page 45	zero or one	Contains a text description of this element.
“web-service-endpoint” on page 142	zero or more	Configures a web service endpoint.
“property” on page 105	zero or more	Specifies a property or a variable.

Attributes

The following table describes attributes for the web-module element.

TABLE 1-177 web-module Attributes

Attribute	Default	Description
name	none	The name of the web module.
context-root	none	The context root at which the web module is deployed. The context root can be the empty string or just /. The context root can start with the / character, but doesn't have to.

TABLE 1-177 web-module Attributes (Continued)

Attribute	Default	Description
location	none	A fully qualified or relative path to the directory to which the contents of the .war file have been extracted. If relative, it is relative to the following directory: <i>domain-dir/applications/</i>
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 the web module is enabled.
libraries	none	(optional) Specifies an absolute or relative path to libraries specific to this module or application. A relative path is relative to <i>domain-dir/lib/applibs</i> . If the path is absolute, the path must be accessible to the domain administration server (DAS), which means it must be under <i>domain-dir</i> . To include more than one path, use a system-specific separator, such as a colon for Solaris or a semicolon for Windows. The libraries are made available to the application in the order in which they are specified.
directory-deployed	false	(optional) Specifies whether the application has been deployed as a directory.

web-module-config

Configures the grandparent web [“module” on page 95](#).

Superelements

[“engine” on page 51](#)

Subelements

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

TABLE 1-178 web-module-config Subelements

Element	Required	Description
“env-entry” on page 52	zero or more	Configures an environment entry for a web module.
“context-param” on page 42	zero or more	Configures a context parameter for a web module.

web-service-endpoint

This element is deprecated. Web services are implemented in the [“engine” on page 51](#) element.

Configures a web service endpoint, which can be a JAX-RPC/JAXWS 2.0 or JSR-109 web service.

Superelements

“[ejb-module](#)” on page 49, “[j2ee-application](#)” on page 70, “[web-module](#)” on page 141

Subelements

The following table describes subelements for the `web-service-endpoint` element.

TABLE 1-179 `web-service-endpoint` Subelements

Element	Required	Description
“ registry-location ” on page 111	zero or more	Specifies the registry where web service endpoint artifacts are published.
“ transformation-rule ” on page 131	zero or more	Configures an eXtensible Stylesheet Language Transformation (XSLT) rule.

Attributes

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

TABLE 1-180 `web-service-endpoint` Attributes

Attribute	Default	Description
<code>name</code>	none	The fully qualified name of the web service. For a web service endpoint within an application, the format is as follows: <i>module-name#endpoint-name</i> For example: <code>jaxrpc-simple.war#HelloIF</code> For a web service endpoint that is a stand-alone module, the name is just the <i>endpoint-name</i> .
<code>monitoring</code>	OFF	(optional) Specifies the monitoring level for this web service. For information about monitoring levels, see “ module-monitoring-levels ” on page 98.
<code>max-history-size</code>	25	(optional) Specifies the maximum number of monitoring records stored for this endpoint.
<code>jbi-enabled</code>	false	(optional) Determines whether the visibility of this endpoint as a Java Business Integration service is enabled or disabled.

work-security-map

Defines a work security map, which maps an EIS principal or group to an Enterprise Server principal or group. The connector runtime converts the incoming work request’s EIS identity to

the server domain's identity. This is different from a “[security-map](#)” on page 117, which maps the server domain's identity to an EIS domain identity.

Superelements

“[resources](#)” on page 115

Subelements

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

TABLE 1-181 `work-security-map` Subelements

Element	Required	Description
“ principal-map ” on page 104	zero or more	Maps an EIS principal to a principal defined in the Enterprise Server domain.
“ group-map ” on page 57	zero or more	Maps an EIS group to a group defined in the Enterprise Server domain.

Attributes

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

TABLE 1-182 `work-security-map` Attributes

Attribute	Default	Description
<code>name</code>	none	Specifies a unique name for the work security map.
<code>description</code>	none	Specifies a text description for this element.

Index

A

acceptor-queue-length property, 63
acceptor-threads attribute, 133
access-logging-enabled attribute, 136
access-log element, 21-22
access log file, 87
access-logging-enabled attribute, 66
accessLogBufferSize property, 137
accessLoggingEnabled property, 137
accessLogWriterInterval property, 137
activate-default-principal-to-role-mapping attribute, 119
adapter attribute, 60
address attribute, 100
addresslist-behavior attribute, 82
addresslist-iterations attribute, 82
AddressList property, 38
admin-object-resource element, 22-23
admin-password attribute, 81
admin-service element, 23-24
admin-session-timeout-in-minutes attribute, 45
admin-user-name attribute, 81
alarms attribute, 88
allow-non-component-callers attribute, 76
allowLinking property, 138
allowRemoteAddress property, 137
allowRemoteHost property, 137
alternatedocroot_*n* property, 138
anonymous-role attribute, 118
applicant-module element, 24-25
append-version property, 83
application element, 25-27

application-ref element, 27-28
application-root attribute, 46
applications element, 28
applications, location, 46
apply-to attribute, 132
assign-groups property, 30
associate-with-thread attribute, 37, 77
associate-with-thread-connections-count attribute, 78
AssociateWithThread property, 39, 79
audit-enabled attribute, 118
audit-module element, 28-29
audit-modules attribute, 119
auth-layer attribute, 95
auth-realm element, 29-32
auth-realm-name attribute, 84
auth-recipient attribute, 112, 116
auth-source attribute, 112, 116
authPassthroughEnabled property, 64
authRealm property, 137
auto-deploy-retry-timeout attribute, 44
autodeploy-dir attribute, 44
autodeploy-enabled attribute, 44
autodeploy-jsp-precompilation-enabled attribute, 44
autodeploy-polling-interval-in-seconds attribute, 44
autodeploy-verifier-enabled attribute, 44
automatic-recovery attribute, 129

B

backend-principal element, 32
base-dn property, 31

blocking-enabled attribute, 63
buffer-size-bytes attribute, 133
bufferSize property, 64
bytecode-preprocessors attribute, 73

C

cache-idle-timeout-in-seconds attribute, 48
cache-resize-quantity attribute, 48
cert-nickname attribute, 123
certificates, 30
charset property, 31
class-name attribute
| lifecycle-module element, 86
| provider-config element, 111
| class-name property, application element, 26
classname attribute
| audit-module element, 29
| auth-realm element, 30
| port-unification element, 103
| protocol-chain element, 108
| protocol-chain-instance-handler element, 108
| protocol-filter element, 109
| protocol-finder element, 109
| thread-pool element, 128
| transport element, 133
classpath attribute, 86, 105
| classpath property, 27
classpath-suffix attribute, 73
client-auth-enabled attribute, 123
client-authentication-required attribute, 70
ClientId property, 38
cmt-max-runtime-exceptions property, 94
cometSupport property, 64
commit-option attribute, 48
| compressable-mime-type attribute, 59
compressableMimeType property, 64
| compression attribute, 59
| compression-min-size-bytes attribute, 59
compression property, 64
compressionMinSize property, 64
config element, 32-34
config-ref attribute, 120
configs element, 34

connection-creation-retry-attempts attribute, 37, 77
connection-creation-retry-interval-in-seconds
| attribute, 37, 77
connection-definition-name attribute, 36
connection-leak-reclaim attribute, 37, 77
connection-leak-timeout-in-seconds attribute, 36, 77
connection-pool element, 34-35
| connection-upload-timeout-millis attribute, 59
connection-validation-method attribute, 76
connectionTimeout property, 64, 68
connectionUploadTimeout property, 64
connector-connection-pool element, 35-39
connector-module element, 39-40
connector-resource element, 40-41
connector-resource-jndi-name attribute, 112
connector-service element, 41
containers element, 41-42
context-param element, 42
context-root attribute, 26, 141
context.xml file, 138
contextXmlDefault property, 138
| crl-file attribute, 124
crlFile property, 64
custom-resource element, 42-43

D

das-config element, 43-45
databaseName property, 79
datasource-classname attribute, 74
datasource-jndi property, 31
datasourceName property, 79
db-logging-resource property, 131
db-password property, 31
db-user property, 31
debug-enabled attribute, 73
debug-options attribute, 73
debug property, 111
default-client-provider attribute, 95
default-EE6-app-name property
| application element, 26
| module element, 96
default-jms-host attribute, 82
default-principal attribute, 118

- default-principal-password attribute, 118
 - default-provider attribute, 95
 - default-realm attribute, 118
 - default-response-type attribute, 60
 - default-type attribute, 65
 - default-virtual-server attribute, 58
 - default virtual server
 - for a network-listener element, 58
 - for the entire server, 134
 - default-web-module attribute, 135
 - delegated-recovery property, 131
 - denyRemoteAddress property, 137
 - denyRemoteHost property, 137
 - deploy-xml-validation attribute, 45
 - description attribute
 - application element, 26
 - jdbc-connection-pool element, 74
 - jdbc-resource element, 80
 - property element, 106
 - system-property element, 127
 - description element, 45
 - description property, 79
 - digest-algorithm property, 31
 - directory attribute, 125
 - directory-deployed attribute
 - appclient-module element, 25
 - application element, 26
 - connector-module element, 40
 - ejb-module element, 50
 - extension-module element, 55
 - j2ee-application element, 71
 - web-module element, 142
 - directory property, 30
 - disable-distributed-transaction-logging property, 130
 - disable-timeout-in-minutes attribute, 28
 - disable-upload-timeout attribute, 59
 - disableUploadTimeout property, 64
 - dispatcher-max-depth property, 141
 - dns-lookup-enabled attribute, 65
 - docroot attribute, 135
 - domain element, 45-46
 - domain.xml file
 - element hierarchy, 18-20
 - elements in, 21
 - domain.xml file (*Continued*)
 - location, 15-20
 - driver-classname attribute, 74
 - dynamic-reconfiguration-enabled attribute, 33
 - dynamic-reload-enabled attribute, 44
 - dynamic-reload-poll-interval-in-seconds attribute, 44
 - dynamic.username.password property, 111
- E**
- eis-group attribute, 57
 - eis-principal attribute, 104
 - ejb-container element, 46-49
 - ejb-module element, 49-50
 - ejb-timer-service element, 50-51
 - elements
 - descriptions of, 21
 - hierarchy, 18-20
 - referencing, 17-18
 - enable-auth-pass-through attribute, 58
 - enable-comet-support attribute, 59
 - enableCookies property, 122
 - enabled attribute, 84
 - enableURLRewriting property, 122
 - encoding property, 31
 - encryption.key.alias property, 111
 - engine element, 51-52
 - env-classpath-ignored attribute, 73
 - env-entry element, 52-53
 - env-entry-name element, 53
 - env-entry-type element, 53
 - extension-module element, 54-55
 - external-jndi-resource element, 55-56
 - external-port attribute, 63
- F**
- factory-class attribute, 43, 56
 - fail-all-connections attribute, 36, 76
 - family attribute, 63
 - file attribute, 88
 - file-cache element, 56-57
 - file-caching-enabled attribute, 61

- file property, 30
- file-transmission-enabled attribute, 62
- | forced-response-type attribute, 60
- forced-type attribute, 65
- format attribute, 22

G

- globally-enabled attribute, 61
- group-base-dn property, 31
- | group-map element, 57
- group-name-column property, 31
- group-search-filter property, 31
- group-table property, 31
- group-target property, 31

H

- hash-init-size attribute, 62
- | header-buffer-length-bytes attribute, 60
- header-buffer-length-in-bytes attribute, 113
- heuristic-decision attribute, 129
- host attribute, 81
- hosts attribute, 135
 - checking against subject pattern, 134
- http-access-log element, 60-61
- | http element, 57-60
- http-file-cache element, 61-62
- HTTP listen socket, 62-65
- http-listener element, 62-65
- http-protocol element, 65
- http-service element, 65-68

I

- id attribute
 - http-listener element, 62
 - iiop-listener element, 69
 - virtual-server element, 135
- | idle-key-timeout-seconds attribute, 133
- idle-thread-timeout-in-seconds attribute, 128
- idle-timeout-in-seconds attribute, 36, 75, 94

- idLengthBytes property, 122
- | ignore-descriptor-item attribute, 42, 53
- iiop-listener element, 68-69
- iiop-service element, 69-70
- impl-class-name attribute, 93
- | init-sql attribute, 76
- init-timeout-in-seconds attribute, 82
- initial-thread-count attribute, 113
- instance-name property, 83
- instance-name-suffix property, 83
- iponly attribute, 61
- is-connection-validation-required attribute, 36, 75
- is-failure-fatal attribute, 87
- | is-failure-fatal property, 27
- is-isolation-level-guaranteed attribute, 75

J

- j2ee-application element, 70-71
- jaas-context property, 30
- jacc attribute, 118
- jacc-provider element, 71-72
- Java Business Integration, 143
- java-config element, 72-73
- Java Database Connectivity, *See* JDBC
- java-home attribute, 73
- Java Naming and Directory Interface, *See* JNDI
- Java Platform Debugger Architecture, *See* JPDA
- Java Transaction Service, *See* JTS
- Java Virtual Machine, *See* JVM
- java-web-start-enabled attribute, 25, 71
- | java-web-start-enabled property, 96
- javac-options attribute, 73
- JavaMail, 89
- jbi-enabled attribute, 143
- JBI, *See* Java Business Integration
- JDBC connection pool, 73-79
- jdbcc-connection-pool element, 73-79
- JDBC resource, 79
- jdbcc-resource element, 79-80
- jkEnabled property, 64
- JMS, 80, 81
- jms-host element, 80-81
- jms-service element, 81-83

jmx-connector element, 83-84
 JNDI, 55
 jndi-lookup-name attribute, 55
 jndi-name attribute
 admin-objectresource element, 23
 custom-resource element, 43
 external-jndi-resource element, 55
 jdbc-resource element, 41, 80
 mail-resource element, 89
 JPDA debugging options, 73
 JTS, 129
 JVM, 72-73
 jvm-options element, 84-85
 JVM, adding options to the server, 84-85

K

keep-alive element, 85
 key-store attribute, 124
 keypoint-interval attribute, 130

L

lazy-connection-association attribute, 37, 77
 lazy-connection-enlistment attribute, 37, 77
 LazyConnectionAssociation property, 39, 79
 LazyConnectionEnlistment property, 39, 79
 libraries attribute, 26, 50, 55, 71, 142
 lifecycle-module element, 86-87
 listen socket, 62-65
 listener_#n property, 140
 load-on-startup element in web.xml, 59
 load-order attribute, 86
 load-order property, 27
 locale attribute, 46
 location attribute
 appclient-module element, 25
 application element, 26
 connector-module element, 40
 ejb-module element, 49
 extension-module element, 54
 j2ee-application element, 71
 web-module element, 142

log-directory attribute, 61
 log-file attribute, 136
 log-filter attribute, 88
 log-handler attribute, 88
 log levels, 96-98
 log-root attribute, 46
 log-rotation-limit-in-bytes attribute, 88
 log-rotation-timelimit-in-minutes attribute, 88
 log-service element, 87-89
 log-to-console attribute, 88
 logger names, 96-98
 logging settings in domain.xml, 87-89

M

mail-resource element, 89-91
 manager-properties element, 91-92
 mapped-group attribute, 57
 mapped-principal attribute, 104
 mapped-principal-class attribute, 119
 match-connections attribute, 37, 78
 MatchConnections property, 39, 79
 max-age-in-seconds attribute, 61
 max-age-seconds attribute, 56
 max-cache-size attribute, 48
 max-cache-size-bytes attribute, 56
 max-connection-usage-count attribute, 37, 78
 max-connections attribute, 58
 max-connections-count attribute, 133
 max-files-count attribute, 57
 max-history-size attribute, 143
 max-pending-count attribute, 34
 max-pool-size attribute, 36, 47, 75, 94
 max-post-size-bytes attribute, 60
 max-queue-size attribute, 128
 max-redeliveries attribute, 50
 max-sessions attribute, 92
 max-thread-pool-size attribute, 128
 max-wait-time-in-millis attribute, 36, 75
 maxKeepAliveRequests property, 64
 mbean element, 92-93
 mdb-container element, 93-94
 medium-file-size-limit-in-bytes attribute, 61
 medium-file-space-in-bytes attribute, 61

- message-driven beans, 93
- message-fragment-size attribute, 102
- message-security-config element, 94-95
- min-thread-pool-size attribute, 128
- minCompressionSize property, 64
- minimum-delivery-interval-in-millis attribute, 50
- module element, 95-96
- module-log-levels element, 96-98
- module-monitoring-levels element, 98-99
- module-type attribute, extension-module element, 54
- monitoring attribute, 143
- monitoring-cache-enabled property, 63
- monitoring-cache-refresh-in-millis property, 63
- monitoring-service element, 99
- mq-scheme attribute, 82
- mq-service attribute, 82

N

- name attribute, 128
- name attribute, 81, 84
 - applcient-module element, 25
 - application element, 26
 - audit-module element, 29
 - auth-realm element, 30
 - config element, 33
 - connector-connection-pool element, 35
 - connector-module element, 40
 - ejb-module element, 49
 - extension-module element, 54
 - j2ee-application element, 71
 - jacc-provider element, 72
 - jdbc-connection-pool element, 74
 - lifecycle-module element, 86
 - mbean element, 92
 - module element, 95
 - network-listener element, 100
 - profiler element, 105
 - property element, 106
 - resource-adapter-config element, 114
 - security-map element, 117
 - server element, 120
 - system-property element, 126
 - transformation-rule element, 132

- name attribute (*Continued*)
 - web-module element, 141
 - web-service-endpoint element, 143
- native-library-path attribute, 105
- native-library-path-prefix attribute, 73
- native-library-path-suffix attribute, 73
- native library path, configuring, 73
- network-config element, 99-100
- network-listener element, 100-101
- network-listeners attribute, 135
- network-listeners element, 101
- networkProtocol property, 79
- no-compression-user-agents attribute, 59
- noCompressionUserAgents property, 64
- non-transactional-connections attribute, 76
- num-work-queues attribute, 128

O

- object-name attribute, 93
- object-type attribute
 - admin-object-resource element, 23
 - application element, 26
 - connector-module element, 40
 - connector-resource element, 41
 - custom-resource element, 43
 - ejb-module element, 49
 - extension-module element, 54
 - external-jndi-resource element, 56
 - j2ee-application element, 71
 - jdbc-resource element, 80, 87
 - mail-resource element, 90
 - mbean element, 93
 - resource-adapter-config element, 114
 - web-module element, 142
- oracle-xa-recovery-workaround property, 130
- orb element, 101-102

P

- param-name element, 102
- param-value element, 53, 102-103
- password attribute, 32

password-column property, 31
 Password property, 38
 password property, 79, 83
 pending-txn-cleanup-interval property, 130
 ping attribute, 74
 policy-configuration-factory-provider attribute, 72
 policy-provider attribute, 72
 pool-idle-timeout-in-seconds attribute, 48
 pool-name attribute, 41, 80
 pool-resize-quantity attribute, 36, 47, 75, 94
 pooling attribute, 78
 port attribute

- http-listener element, 63
- iiop-listener element, 69
- jms-host element, 81
- jmx-connector element, 84
- network-listener element, 100

 port property, 79
 port-unification element, 103
 principal element, 103-104
 principal-map element, 104
 profiler element, 104-105
 properties

- about, 105-106
- system, 126-127, 127

 property element, 105-106
 protocol attribute, 101
 protocol-chain element, 107-108
 protocol-chain-instance-handler element, 108
 protocol element, 106-107
 protocol-filter element, 108-109
 protocol-finder element, 109
 protocols element, 109-110
 provider-config element, 110-111
 provider-id attribute, 111
 provider-type attribute, 111
 proxiedProtocol property, 64
 proxyHandler property, 64, 68

Q

queue-size-in-bytes attribute, 34

R

read-timeout-millis attribute, 133
 reader-queue-length property, 64
 reader-selectors property, 68
 reader-threads property, 63
 reap-interval-in-seconds attribute, 91, 125
 receive-buffer-size-in-bytes attribute, 35
 reconnect-attempts attribute, 82
 reconnect-enabled attribute, 82
 reconnect-interval-in-seconds attribute, 82
 recycle-objects property, 63
 redelivery-interval-internal-in-millis attribute, 51
 redirect_n property, 139
 redirect-port attribute, 58
 ref attribute

- application-ref element, 28
- resource-ref element, 115

 referencing elements, 17-18
 registry-location element, 111-112
 removal-timeout-in-seconds attribute, 48
 request-body-buffer-size-bytes attribute, 58
 request-policy element, 112-113
 request-processing element, 113
 request-timeout-in-seconds attribute, 113
 request-timeout-seconds attribute, 60
 res-adapter attribute, 23
 res-type attribute, 23, 43, 55, 74
 resource-adapter-config element, 113-114
 resource-adapter-name attribute, 36, 114
 resource adapters, 39-40
 resource-ref element, 114-115
 resources element, 115-116
 response-policy element, 116
 retain-error-statistics-for-hours attribute, 88
 retry-timeout-in-seconds attribute, 129
 rmic-options attribute, 73
 roleName property, 79
 rotation-enabled attribute, 22
 rotation-interval-in-minutes attribute, 22
 rotation-policy attribute, 22
 rotation-suffix attribute, 22
 rule-file-location attribute, 132

S

- search-bind-dn property, 31
- search-bind-password property, 31
- search-filter property, 31
- Secure Socket Layer, *See* SSL
- securePagesWithPragma property, 137
- security, 117-119
 - security.config property, 111
 - security-enabled attribute, 107
 - security-map element, 117
 - security-service element, 117-119
- selectorThreadImpl property, 68
- send-buffer-size-bytes attribute, 58
- send-buffer-size-in-bytes attribute, 35
- send-error_#n property, 139
- server element, 119-120
 - server log file, 46, 87-89
- server-name attribute, 58
- serverName property, 79
- servers element, 120
- session-config element, 120-121
- session-file-name attribute, 91
- session-id-generator-classname attribute, 92
- session-manager element, 121
- session-properties element, 121-122
- session-store attribute, 48
- session-timeout element, 122
- setCacheControl property, 137
- shutdown-timeout-in-seconds attribute, 41
- signature.key.alias property, 111
- single sign-on, 67
- small-file-size-limit-in-bytes attribute, 62
- small-file-space-in-bytes attribute, 62
- sniffer attribute, 52
- sql-trace-listeners attribute, 78
- ssl-cache-entries property, 63, 67
- ssl-client-config element, 124
- ssl element, 122-124
 - ssl-enabled attribute, 65
 - ssl-session-timeout property, 63, 67
- ssl2-ciphers attribute, 123
- ssl2-enabled attribute, 123
- SSL3 client authentication, 123
- ssl3-enabled attribute, 123

- ssl3-session-timeout property, 63, 67
- ssl3-tls-ciphers attribute, 123
- SSL, configuring, 122-124
 - sso-enabled attribute, 67
 - sso-enabled attribute, 136
 - sso-enabled property, 136
 - sso-max-inactive-seconds property, 136
 - sso-reap-interval-seconds property, 136
 - ssoCookieSecure property, 136
- start-args attribute, 82
- state attribute, 135
- statement-cache-size attribute, 78
- statement-timeout-in-seconds attribute, 77
- steady-pool-size attribute, 36, 47, 75, 93
- store-properties element, 124-125
- store-protocol attribute, 89
- store-protocol-class attribute, 89
- Sun Java System Message Queue, 83
- system-applications element, 125-126
- system-classpath attribute, 73
- system-jmx-connector-name attribute, 24
- system-property element, 126-127

T

- tcp-no-delay attribute, 133
- thread-count attribute, 85, 113
- thread-increment attribute, 113
- thread-pool attribute, 101
- thread-pool element, 127-128
- thread-pool-ids attribute, 114
- thread-pools element, 128-129
- timeout-in-seconds attribute, 85, 122, 129
- timeout-seconds attribute, 60
- timer-datasource attribute, 51
- tls-enabled attribute, 123
- tls-rollback-enabled attribute, 123
- trace-enabled attribute, 59
- traceEnabled property, 64
- transaction-isolation-level attribute, 75
- transaction log file, 87, 129
- transaction-service element, 129-131
- transaction-support attribute, 36
- transformation-rule element, 131-132

transport attribute, 101
 transport element, 132-133
 transport-protocol attribute, 90
 transport-protocol-class attribute, 90
 transports element, 133-134
 trust-algorithm attribute, 124
 trust-max-cert-length-bytes attribute, 124
 trust-store attribute, 124
 trustAlgorithm property, 64
 trustMaxCertLength property, 64
 tx-log-dir attribute, 129
 type attribute, 108

U

uri-encoding attribute, 59
 uriEncoding property, 65
 url property, 79
 use-last-agent-optimization property, 130
 use-nio-direct-bytebuffer property, 64
 use-system-logging attribute, 88
 use-thread-pool-ids attribute, 102
 user-group element, 134
 user-name attribute, 32
 user-name-column property, 31
 user-name property, 83
 user property, 79
 user-table property, 31
 UserName property, 38

V

validate-atmost-once-period-in-seconds attribute, 36,
 76
 validation-classname attribute, 76
 validation-table-name attribute, 76
 value attribute, 106, 126
 valve_*n* property, 139
 variables, 16-17
 version attribute, 60
 victim-selection-policy attribute, 48
 virtual-server element, 134-140
 virtual-servers attribute, 27

virtual servers, log file for, 87

W

wait-time-before-recovery-insec property, 131
 web-container element, 140-141
 web-module-config element, 142
 web-module element, 141-142
 web module, default, 135
 web-service-endpoint element, 142-143
 web.xml file session-timeout element, 122
 work-security-map element, 143-144
 wrap-jdbc-objects attribute, 78
 write-timeout-millis attribute, 133

X

xa-servername property, 131
 xaresource-txn-timeout property, 130
 xpowered-by attribute, 58
 XSLT, 131-132

