webMethods EntireX

Listener for XML/SOAP

Version 10.1

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WEBMETHODS

This document applies to webMethods EntireX Version 10.1 and all subsequent releases.

Specifications contained herein are subject to change and these changes will be reported in subsequent release notes or new editions.

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Table of Contents

1 About this Documentation 1
Document Conventions 2
Online Information and Support 2
Data Protection 3
2 Listener for XML/SOAP 5
Configuring Web Services 6
Installing Web Services Stack in a Web Server 8
Using Internationalization with the Listener for XML/SOAP 9

1 About this Documentation

- Document Conventions 2
- Online Information and Support 2
- Data Protection 3

Document Conventions

Convention	Description
Bold	Identifies elements on a screen.
`Monospace font`	Identifies service names and locations in the format *`folder.subfolder.service`*, APIs, Java classes, methods, properties.
`Italic`	Identifies: Variables for which you must supply values specific to your own situation or environment. New terms the first time they occur in the text. References to other documentation sources.
`Monospace font`	Identifies: Text you must type in. Messages displayed by the system. Program code.
{ }	Indicates a set of choices from which you must choose one. Type only the information inside the curly braces. Do not type the { } symbols.
|	Separates two mutually exclusive choices in a syntax line. Type one of these choices. Do not type the | symbol.
[ ]	Indicates one or more options. Type only the information inside the square brackets. Do not type the [ ] symbols.
...	Indicates that you can type multiple options of the same type. Type only the information. Do not type the ellipsis (...).

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- Link to external websites that discuss open standards and web technology.

Data Protection

Software AG products provide functionality with respect to processing of personal data according to the EU General Data Protection Regulation (GDPR). Where applicable, appropriate steps are documented in the respective administration documentation.

2 Listener for XML/SOAP

- Configuring Web Services 6
- Installing Web Services Stack in a Web Server 8
- Using Internationalization with the Listener for XML/SOAP 9

The EntireX Listener for XML/SOAP runs in a servlet-enabled Web server with an installation of the Software AG Web Services Stack. It plugs the Web service's archives (EntireX Workbench file with extension .aar) into Web servers. Typically the Web service clients access the Listener for XML/SOAP and send/receive XML/SOAP documents using HTTP/HTTPS. This component was formerly referred to as “XML Servlet”.

See also Web Services Stack documentation in the *Software AG Infrastructure Administrator's Guide*, also available under ***http://documentation.softwareag.com*** > *Guides for Tools Shared by Software AG Products*.

Configuring Web Services

- Configuring inside a Web Service Archive
- Using an External Configuration File

Configuring inside a Web Service Archive

Individual settings for Web services or groups of Web services are contained in the *services.xml* file that is part of a Web service archive (Workbench file with extension .aar). Those settings originate from the Web Services Wrapper (default settings from generation) or from the *Web Services Stack Configuration Editor* (customized settings).

Using an External Configuration File

With an external configuration file you can override settings of the Web service's archive (EntireX Workbench file with extension .aar) without modifying the Web service archive itself. This means you can use the same Web service archive in different Web server environments.

To use an external configuration file

1 Define a name and a location for the external configuration file.

In the parameter section of file *axis2.xml*, define a parameter `"EntireX-XML-Listener"` within a parameter `"services"`. For the attribute `"location"` in parameter `"services"`, specify an absolute or relative path to the external configuration file. File *axis2.xml* can be found in the *conf* directory or folder of the Web Services Stack Web application.

```
<parameter name="EntireX-XML-Listener">
   <parameter name="services" location="<path for file
                    overwriting settings of EntireX services>" />
</parameter>
```

Notes:

1. The path separator is a slash.
2. If you are using the Software AG Web Server based on Apache Tomcat, the location of *axis2.xml* is defined in configuration file *config.ini*, which is located in <SuiteInstallDir>/profiles/CTP/configuration by default. The default location of *axis2.xml* is *<SuiteInstallDir>/profiles/CTP/workspace/wsstack/repository/conf*. See also *Configuration* > *Web Services Stack Runtime* > *Runtime Configuration* in the Web Services Stack documentation in the *Software AG Infrastructure Administrator's Guide*, also available under ***http://documentation.softwareag.com*** > *Guides for Tools Shared by Software AG Products*.
3. The value of the location can contain operating system variables.

2 Define services in the external configuration file.

External configuration files are XML documents with a root element "`serviceGroup`". A service group is defined as a sequence of one or more services.

To identify the service you are defining, specify an identifier for the attribute "name", for instance `<service name= "service100">`.

To make common settings, that is, settings for all services, use an asterisk as identifier (`<service name= "*">`. Note that an individual setting can override a common setting.

EntireX web service parameters that can be set are defined as subelements of "service". See the table below.

Parameter	Description
`<exx-brokerID>`	The broker ID to use.
`<exx-service>`	The service name is the triplet of server class/server name/service.
`<exx-userID>`	The user ID specified here is used for calling the broker.
`<exx-password>`	The user ID specified here is used for calling the broker.
`<exx-password-encryption>`	Specifies how the password is encrypted in the configuration file. Encryption is performed automatically when the configuration file is read for the first time.
`<exx-use-security>`	Possible values: true|false.
`<exx-rpc-userID>`	The RPC user ID specified here is used for Natural Security
`<exx-rpc-password>`	The RPC Password specified here is used for Natural Security.
`<exx-natural-security>`	Enable/Disable the Natural Security (true|false).

Parameter	Description
<exx-natural-library>	The Natural library to use.

Example

```
<?xml version="1.0" encoding="utf-8" ?>
<serviceGroup>
  <service name="*">
    <exx-use-security>true</exx-use-security>
  </service>
  <service name="AService">
    <exx-brokerID>myhost:1977</exx-brokerID>
    <exx-service>RPC/ASERVICE/CALLNAT</exx-service>
    <exx-userID>test</exx-userID>
  </service>
</serviceGroup>
```

Installing Web Services Stack in a Web Server

Deploying Web Services Stack Runtime to Tomcat

If you want to deploy Web Services Stack Web application and EntireX XML runtime to your own Apache Tomcat installation, perform the following steps:

To deploy to your own Apache Tomcat installation

1 Stop Apache Tomcat.

2 Make sure that the attribute `unpackWars` is set to "true" in the server.xml of your Apache Tomcat installation.

3 Copy *wsstack.war* to the *webapps* directory of your Apache Tomcat installation.

4 Start Apache Tomcat. The content of *wsstack.war* will be expanded into a directory *wsstack* under the *webapps* directory of the Apache Tomcat installation.

5 Stop Apache Tomcat.

6 Copy *entirex.jar* from the *classes* directory of your EntireX installation to the *WEB-INF/lib* directory of the expanded Web Services Stack Web application.

7 Start Apache Tomcat.

Now you can deploy generated EntireX Web services (.aar) from the EntireX Workbench.

Using Internationalization with the Listener for XML/SOAP

- RPC Call (Broker Request)
- Outgoing XML Document (Response)

RPC Call (Broker Request)

The encoding for the RPC call (broker request) depends on the setting of following parameters in the given order:

1. HTTP header/parameter `exx-use-codepage` travelling with the XML document incoming to the Listener for XML/SOAP. Valid values:

`true`	The encoding is retrieved from the incoming XML document.
`false`	The encoding of Java system property `file.encoding`.
`<character encoding>`	the given character encoding is used.

   See also *The HTTP Interface* under *Reference - HTTP and Java Interface* in the XML/SOAP Wrapper documentation.

2. Parameter `Use Codepage`, see Generating a Web Service, Step 4, check **Set connection and security parameters in mapping file**.
3. Parameter `Use Codepage`, see EntireX Settings Page under *Web Services Stack Configuration Editor.*

Which encodings are valid depends on the version of your JVM. For a list of valid encodings, see *Supported Encodings* in your Java documentation. The codepage derived after the broker's locale string mapping process must be the same as the one used to encode the data and it must be supported by the broker. See *Locale String Mapping*.

Enable character conversion in the broker by setting the service-specific attribute `CONVERSION` to "`SAGTRPC`". See also *Configuring ICU Conversion* under *Configuring Broker for Internationalization* in the platform-specific Administration documentation. More information can be found under *Internationalization with EntireX*.

Outgoing XML Document (Response)

By default, the incoming XML encoding is used for the outgoing XML document (response). This can be disabled and an encoding defined in the XML mapping file is used. See *Defining the XML Encoding* in the XML Mapping Editor documentation.