# **9** software

## webMethods EntireX

## Software AG IDL Extractor for webMethods Integration Server

Version 9.6

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## webMethods EntireX

This document applies to webMethods EntireX Version 9.6.

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

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## Software AG IDL Extractor for webMethods Integration Server

The Software AG IDL Extractor for webMethods Integration Server is a wizard that reads a package from the Integration Server and generates a Software AG IDL file from all the existing services and nodes. Each service results in a program in the IDL file. All parameters of the services are mapped to an IDL alphanumeric data type, available as variable (AV) or fixed (An) length.

IntroductionIntroduction to the IDL Extractor for Integration Server.UsingUsing the IDL Extractor for Integration Server.PreferencesDescribes the Integration Server preferences.

# 1 Introduction to the IDL Extractor for Integration Server

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## Scope

The Software AG IDL Extractor for webMethods Integration Server is a wizard that reads a package from the Integration Server and generates a Software AG IDL file from all the existing services and nodes. Each service results in a program in the IDL file. All parameters of the services are mapped to an IDL alphanumeric data type, available as variable (AV) or fixed (An) length.



With the Integration Server Wrapper you can generate a server of type "RPC Listener" or "Reliable RPC Listener". See *Using the Integration Server Wrapper*.

#### RPC Listener



- 1. See Using the IDL Extractor for Integration Server.
- 2. See *Step 4b*: *Define Adapter Services for an RPC Listener or a Reliable RPC Listener.*

#### Reliable RPC Listener

		Package
Package	1 2	Reliable RPC Listener Connection
Service	IDL Extractor for Integration Server IDL IDL	Listener
		Notifications
		Triggers
		Document Types

- 1. See Using the IDL Extractor for Integration Server.
- 2. See Step 4b: Define Adapter Services for an RPC Listener or a Reliable RPC Listener.

## Calling an Integration Server Flow from a Mainframe Program

- To call an Integration Server flow from a mainframe program
- Use the plug-in to generate the connection and see *Using the Integration Server Wrapper* with the steps 1 to 3, 4b and 5.

## 

## Using the IDL Extractor for Integration Server

Step 1: Start the IDL Extractor for Integration Server	
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Step 2b: Use an Existing IDL Extractor for Integration Server Connection	
Step 3: Select the Integration Server Package to Extract	
Step 4: Select the Connection Type	
Step 5: Define a Listener	

## Step 1: Start the IDL Extractor for Integration Server

#### To start the IDL Extractor for Integration Server

1 The IDL Extractor is a *New Wizard* in Eclipse. Choose **New** from the file menu, select **IDL Extractor for webMethods IS** in the following page and choose **Next**.



2 If you are using the wizard for the first time without any predefined Integration Server connections, continue with *Step 2a: Create a New Integration Server*.

Or:

If Integration Server connections are already defined (see *Integration Server Connections*), or you want to communicate with an additional Integration Server, continue with *Step 2b: Use an Existing IDL Extractor for Integration Server Connection*.

New Contraction of the Contracti	• X
Select a wizard Extract a new Software AG IDL file from webMethods Integration Server (IS)	
Wizards:	
type filter text	
<ul> <li>Server</li> <li>Software AG</li> <li>Business Services</li> <li>Code Generation</li> <li>EntireX</li> <li>IDL Extractor for COBOL</li> <li>IDL Extractor for Natural</li> <li>IDL Extractor for PL/I</li> <li>IDL Extractor for webMethods IS</li> <li>IDL Extractor for WSDL</li> <li>IDL Extractor for XML Document</li> <li>Show All Wizards.</li> </ul>	T III
? < Back <u>Next &gt; Einish</u>	Cancel

### Step 2a: Create a New Integration Server Connection

IDL Extract	or for webMethods IS
Define Nev	w Integration Server Connection
Add host:po specified, th	ort, user and password for a new Integration Server (If no port is edgeault port 5555 will be used).
Server:	
<u>U</u> ser:	
<u>P</u> assword:	
🔲 Us <u>e</u> secu	re connection
Truststo	re for HTTPS: Browse
√ <u>V</u> erify	y host name
Client	Authentication
<u>K</u> eysto	re: Browse
Pass <u>w</u>	ord:
?	< <u>B</u> ack <u>N</u> ext > <u>F</u> inish Cancel

#### To create a new Integration Server connection

- 1 Define the new Integration Server connection on the following wizard page.
  - Notes:
  - 1. The only required field is **Server**. Enter the hostname of the Integration Server including an optional port number. If no port number is specified, port number defaults to "5555". The **Integration Server Authentication** can be passed with the **User** and **Password** fields.
  - 2. Optional settings are for secure connections. The **Truststore for HTTPS** contains all signed certificates and must be a valid truststore.
  - 3. The check box **Verify host name** checks that the hostname is entered in the stored certificate.

- 4. When the Integration Server has **Client Authentication** enabled, you can specify your **Keystore** file and keystore **Password**.
- 5. For managing Integration Server connections, see *Integration Server Preferences* in the Integration Server Wrapper documentation.
- 2 Choose Next and continue with *Step 3: Select the Integration Server Package to Extract*.

### Step 2b: Use an Existing IDL Extractor for Integration Server Connection

IDL Extractor for webMethods IS	
Extract IDL from the selected Integration Server Connection to localhost:5555 verified.	<b>_</b>
<ul> <li><u>Create a new Integration Server connection</u>.</li> <li>Choose an <u>existing Integration Server Connection</u></li> </ul>	
Iocalhost:5555 - User: Developer	
?       < Back	inish Cancel

#### To use an existing Integration Server connection

1 Select **Choose an existing Integration Server Connection** and an Integration Server connection from the list.

The selected connection is verified by a ping command. If the response is valid, the **Next** button is enabled. If invalid, an error message is displayed.

2 Continue with *Step 3: Select the Integration Server Package to Extract.* 

#### To create an additional Integration Server connection

Select Create a new Integration Server Connection and continue with Step 2a: Create a New Integration Server.

## **Step 3: Select the Integration Server Package to Extract**

DL Extractor fo	m the selected nackage
Select the package the mapping.	ge (source), specify the container and file name (target) and choose
Source (Integrat Packages on Int	tion Server) egration Server localhost:5555
o Defaul Defaul MyCol WmAf WmAs	t nnections RT setPublisher
Target (Eclipse)	Workspace) /Demo Browse
IDL File Name:	Default
Optimize extract Map Integra alphanur alphanur	ed IDL for usage with: COBOL  ation Server data type to IDL meric with variable length meric with fixed length of 256 r Objects in Integration Server
?	< <u>B</u> ack <u>N</u> ext > <u>F</u> inish Cancel

### To extract the IDL from the selected package

1 Select the package to extract (from the field indicated by **Source**), for example the package "Default" in the screen above.

2 Specify the target. By default, the wizard tries to find a valid container based on your position in the Navigator or Package Explorer View.

Or:

Choose Browse... to select a container from your workspace.

Notes:

- 1. The IDL file name is based on the selected Integration Server package from the list below, but this is only a proposal and can be changed.
- 2. If the file name already exists in your container, a warning will be displayed in the title area of the wizard page.
- 3. If the extension "idl" is not specified, it will be added automatically.
- 3 Optimize the extracted IDL for usage with the *COBOL Wrapper*, *Natural Wrapper*, *PL/I Wrapper* or other EntireX Wrapper (see *EntireX Wrappers*). Use the combo-box and select the target programming language:
  - COBOL

Enter the *default length* for IDL type A(*default-length*) fields which map then to COBOL alphanumeric data items PIC X(*default-length*) if in a subsequent step the COBOL Wrapper is used.

Natural

Choose one option indicated by Map Integration Server data type to IDL:

- alphanumeric with variable length: Extract to IDL Type AV fields which map then to Natural DYNAMIC data types if in a subsequent step the Natural Wrapper is used. The interface does not have any length restrictions.
- alphanumeric with fixed length: Extract to IDL Type A(default-length) fields which map then to Natural fixed-length alphanumeric data types if in a subsequent step the Natural Wrapper is used. The interface from a Natural point of view is more legacy-like and easier to program, but there are length restrictions.

Enter the *default length* for IDL Type A(*default-length*) fields which map then to PL/I fixed-length alphanumeric fields CHAR (*default-length*) if in a subsequent step the PL/I Wrapper is used.

Other

If you later use wrappers other than the COBOL Wrapper, Natural Wrapper or PL/I Wrapper no options need to be specified.

4 If **Prefer Alias names to ensure library/program names with a maximum length of eight characters** is checked, IDL library and program names are generated with eight uppercase characters and the original name is used as an alias.

<sup>■</sup> PL/I

- 5 Clear **Create Listener Objects in Integration Server** to only extract the IDL file from the package. The wizard finishes after extracting the IDL.
  - **Tip:** This is useful if you want to modify the IDL (manually) before generating clients. In this case, the connections and listeners have to be created in a separate step. See *Step 4b: Define Adapter Services for an RPC Listener or a Reliable RPC Listener*.
- 6 Choose **Next** to store the IDL file in the selected container in the Eclipse workspace.

Notes:

C

- 1. All Integration Server data types are mapped to "alphanumeric", except for binary data. See *Mapping Software AG IDL to Integration Server Data Types* for details.
- 2. When you go to the next page, the **Back** button is disabled, because the IDL file has already been created and this step cannot be reverted.

### Step 4: Select the Connection Type

IDL Extractor for webMethods IS
Connection type
Please choose the connection type.
EntireX RPC Listener Connection
Entirex Direct RPC Listener Connection
(?) < <u>Back</u> <u>Next</u> > <u>Finish</u> Cancel

#### To select the connection type

As a prerequisite, the IDL file has been stored in the workspace and the **Back** button is now disabled.

■ Select a **Connection type** and click **Next**.

#### Notes:

- 1. An EntireX RPC Listener connection is always available.
- 2. An EntireX Reliable RPC Listener connection is available if all IDL programs contain only IN parameters.
- 3. An EntireX Direct RPC Listener connection is available if it is enabled by the license for the webMethods EntireX Adapter.

## Step 5: Define a Listener

IDL Extractor for w	vebMeth	ods IS	-	- 20	inered in				×
Define Adapter Services for EntireX RPC Listener Connection									
Select a package, name a folder and a connection, and complete the page.									
Packages on Integra	tion Serv	er localho	ost:555	55					
Default									*
WmART	tions								
👸 WmAssetP	ublisher								-
F <u>o</u> lder Name:	MyCor	nections							
Connection Name:	MyCon	nections	Conne	ection					
Listener Na <u>m</u> e:	MyCon	nections	Listen	er					
<u>T</u> able of IDL Program	ns and th	neir relate	d IS Se	ervices:					
RPC Program Nam	ne	IS Servio	e Nan	ne					
ADD		EXAMPL	LE:ADI	0					
MULTIPLY		EXAMPLE:MULTIPLY							
SUBTRACT		EXAMPLE:SUBTRACT							
RPC Listener Conne	ction to l	EntireX						 	
<u>B</u> roker ID:	localho	st:1971							•
Server Address:	RPC/SF	RV1/CALL	NAT						•
<u>U</u> ser ID:									•
<u>P</u> assword:									
<u>E</u> ncoding:									•
?	< E	Back		Next >		Fini	sh	Canc	el
			<u> </u>			_			

#### To define a listener

- 1 Select an Integration Server package where the listener will be stored.
- 2 Specify the names for Folder Name (default: *library name*), Connection Name (default: *library name*Connection) and Listener Name (default: *library name*Listener).

- 3 (This step is not recommended. Only perform it if required.) You can alter the Integration Server services in the table headed by the **RPC Program Name** and **IS Service Name**. Note that a selected service must exist in some package of the Integration Server!
- 4 If necessary, edit the Broker settings for the Listener (**Broker ID**, **Server Address**, **User ID**, **Password**, and **Encoding**).
- 5 The check box **Overwrite existing Objects in Integration Server** can be used to re-generate the objects after you have changed the IDL file.

#### Notes:

- 1. The check box **Overwrite existing Objects in Integration Server** is useful for re-generating objects created previously. However, you cannot overwrite an RPC Listener Connection or a reliable RPC Listener Connection with a connection of a different type. If the connection is deleted with the Adapter Administration UI, it is not possible to overwrite the objects. In this case, you have to delete the adapter services in the Designer.
- 2. When creating a connection, a package dependency is added such that the selected package depends on webMethods EntireX (the package WmEntireX) with the version currently used.
- 6 Choose Finish.

As a result, the following objects will be created:

- one connection of type EntireX RPC Listener, EntireX Reliable RPC Listener or EntireX Direct RPC Listener;
- one listener object.

For a connection of type **EntireX Reliable RPC Listener** the following objects will be created in addition for each IDL program:

- one notification object;
- one trigger object;
- one document type object.

# Integration Server Preferences

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The Integration Server preferences are used to manage Integration Server connections. This chapter applies both to the Integration Server Wrapper and the IDL Extractor for Integration Server.

### **Integration Server Connections**

The Integration Server connections are responsible for the HTTP/HTTPS communication to the Integration Server. They are used in the wizards described in *Using the Integration Server Wrapper* and *Using the IDL Extractor for Integration Server* and are managed in the Integration Server preferences.

An Integration Server connection contains the following information:

- Server name (required, consists of hostname and optional port number, where the default port number is 5555)
- User name
- Password
- optional parameters for SSL (HTTPS):
  - Truststore (name of the file)
  - Verify hostname
  - Optional parameters for client verification:
    - Keystore (name of the file)
    - Password for the Keystore

This information can be specified in the following dialog:

🖨 Inte	gratio	on Server C	onnection 🔀
<b>Integr</b> a Edit an	<b>ation</b> Integr	Server Co ation Server (	ionnection
<u>S</u> erver:		localhost:666	
<u>U</u> ser:		Administrator	
Passwor	rd: secure	connection	
Trus	ststore	for HTTPS:	C:\Program Files\Software AG\EntireX\Etc\ExxJavaAppCert.jks
<b>.</b>	<u>V</u> erify H	nost name	
Cl	lient Au	uthentication -	
<u>K</u> e	eystore	:	B <u>r</u> owse
Pa	ass <u>w</u> or	d:	
			OK Cancel

Notes:

- 1. The only required field is **Server**. Enter the hostname of the Integration Server including an optional port number. If no port number is specified, port number defaults to "5555". The **Integration Server Authentication** can be passed with the **User** and **Password** fields.
- 2. Optional settings are for secure connections. The **Truststore for HTTPS** contains all signed certificates and must be a valid truststore.
- 3. The check box Verify host name checks that the hostname is entered in the stored certificate.
- 4. When the Integration Server has **Client Authentication** enabled, you can specify your **Keystore** file and keystore **Password**.
- 5. For managing Integration Server connections, see *Integration Server Preferences* in the Integration Server Wrapper documentation.

## **Setting Integration Server Preferences**

Preferences				
type filter text		Integration Server		
Software AG	^	Manage the Integration Serv	ver Connections	
C Wrapper		Server	User	<u>A</u> dd
COBOL Wrapper		localhost:5555	Administrator	
- Custom Wrapper		🔒 localhost:6666	Administrator	Edit
DCOM Wrapper				Remove
- Deployment Environments				Eciliere
- EJB Wrapper				
IDL Extractor for COBOL				
- IDL Extractor for Natural				
IDL Extractor for PL/I				
Installation				
Integration Server				
Java Wrapper				
PL/I Wrapper				
RPC Environments				
····· XML Mapping Editor				
Proxy Settings				
UDDI Registries				
H Web Services Stack	~			
0				OK Cancel

#### To add, edit or remove Integration Server connections

• Open the Preferences page and choose **Add...**, **Edit...** or **Remove**.

All changes in the table will be stored permanently after leaving the preferences with **OK**.

Caution: The creation of duplicates is forbidden. A duplicate will be detected if server (including port number, for instance the default "5555"), user and truststore file have the same name.