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

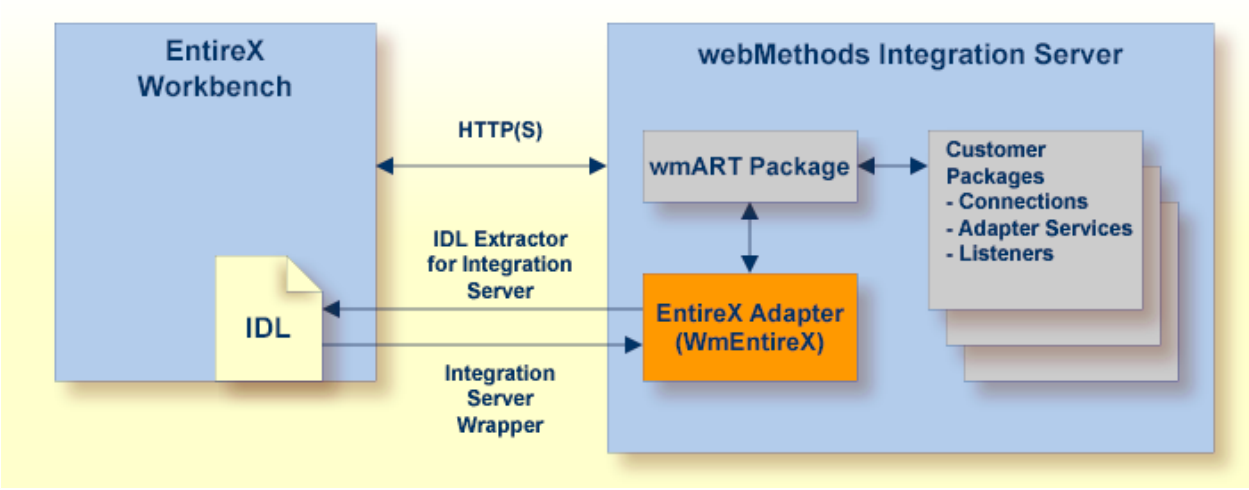
The Software AG IDL Extractor for webMethods Integration Server is a wizard that reads a package from the Integration Server and generates a Software AG IDL file from all the existing services and nodes. Each service results in a program in the IDL file. All parameters of the services are mapped to an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

Introduction	Introduction to the IDL Extractor for Integration Server.
Using	Using the IDL Extractor for Integration Server.
Preferences	Describes the Integration Server preferences.

1 Introduction to the IDL Extractor for Integration Server

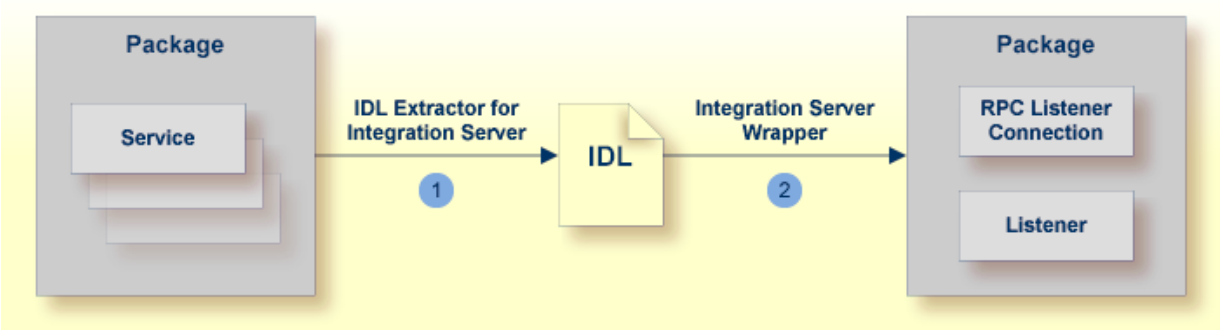
Scope

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 (A*n*) length.



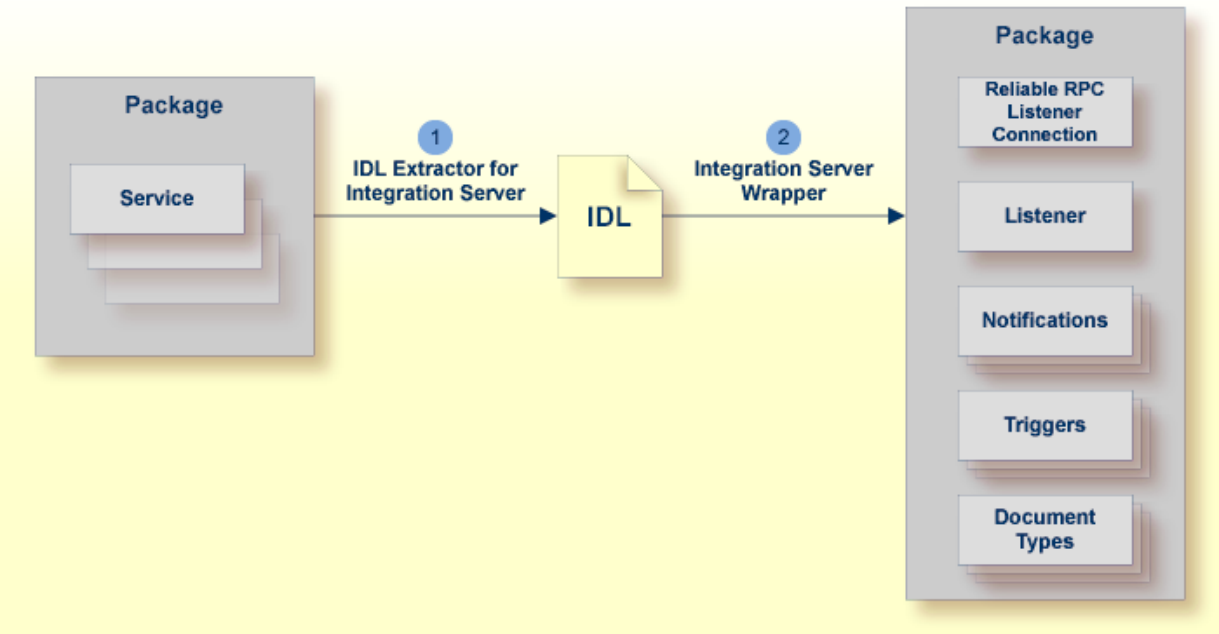
With the Integration Server Wrapper you can generate a server of type "RPC Listener" or "Reliable RPC Listener". See *Using the Integration Server Wrapper*.

- **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**



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.

2 Using the IDL Extractor for Integration Server

Step 1: Start the IDL Extractor for Integration Server

To start the IDL Extractor for Integration Server

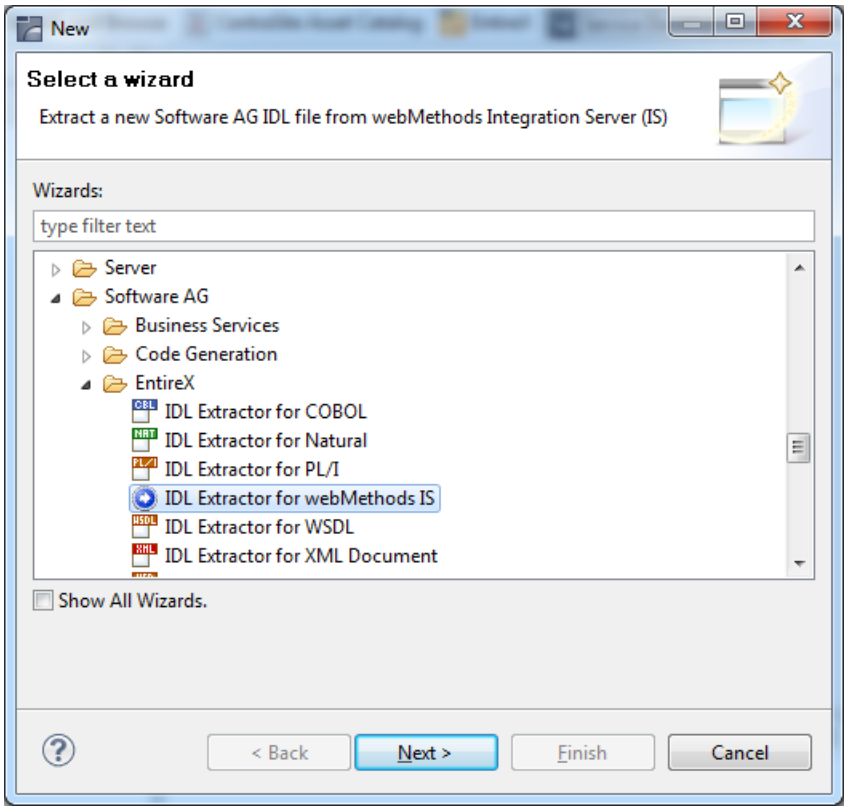
1 The IDL Extractor is a *New Wizard* in Eclipse. Choose **New** from the file menu, select **IDL Extractor for webMethods IS** in the following page and choose **Next**.

> **Note:** You can also chose **New** from the toolbar or context menu of a view showing resources. Also Ctrl-N starts the selection of the *New Wizards*.

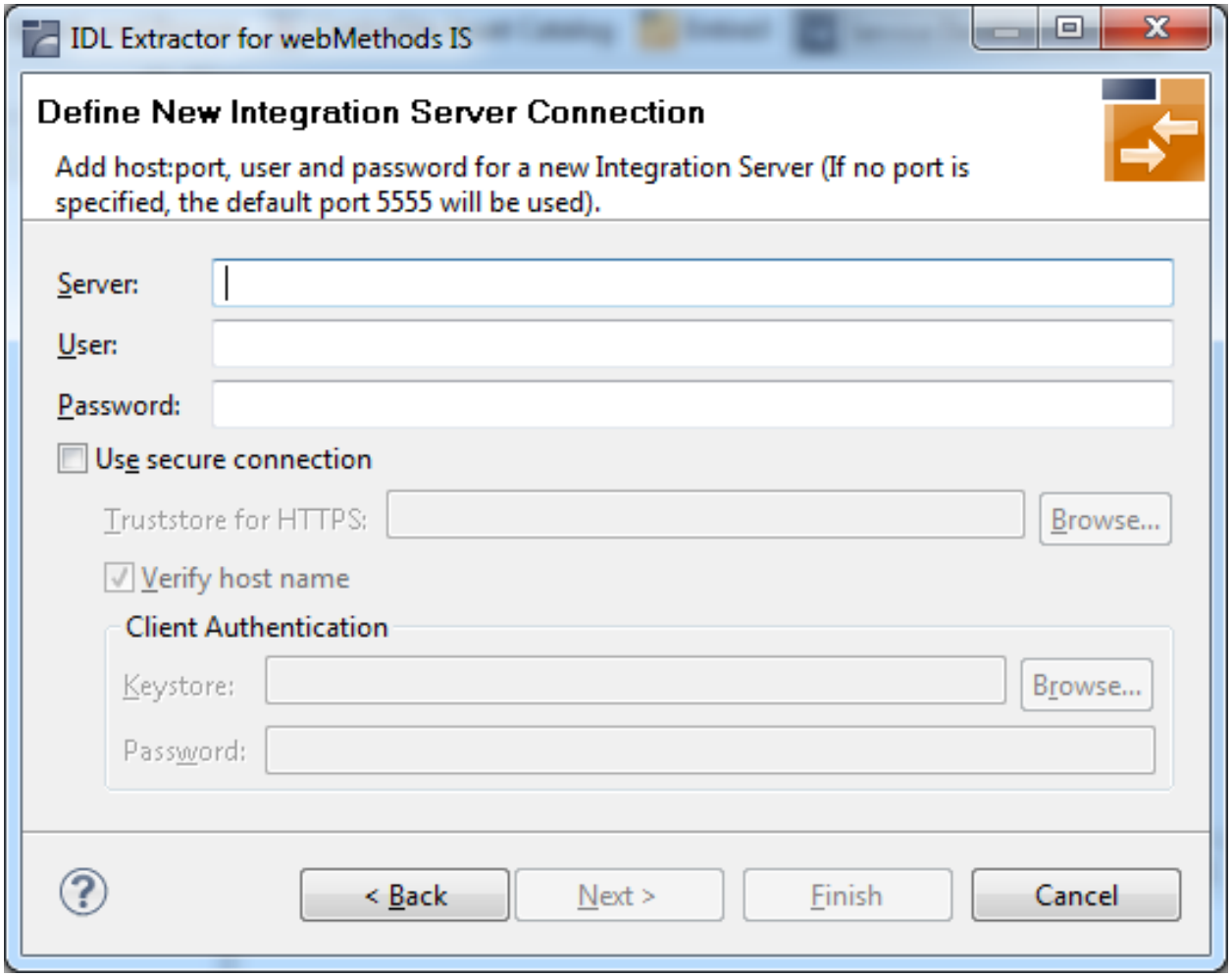
2 If you are using the wizard for the first time without any predefined Integration Server connections, continue with ***Step 2a: Create a New Integration Server***.

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***.



Step 2a: Create a New Integration Server Connection



To create a new Integration Server connection

1 Define the new Integration Server connection on the following wizard page.

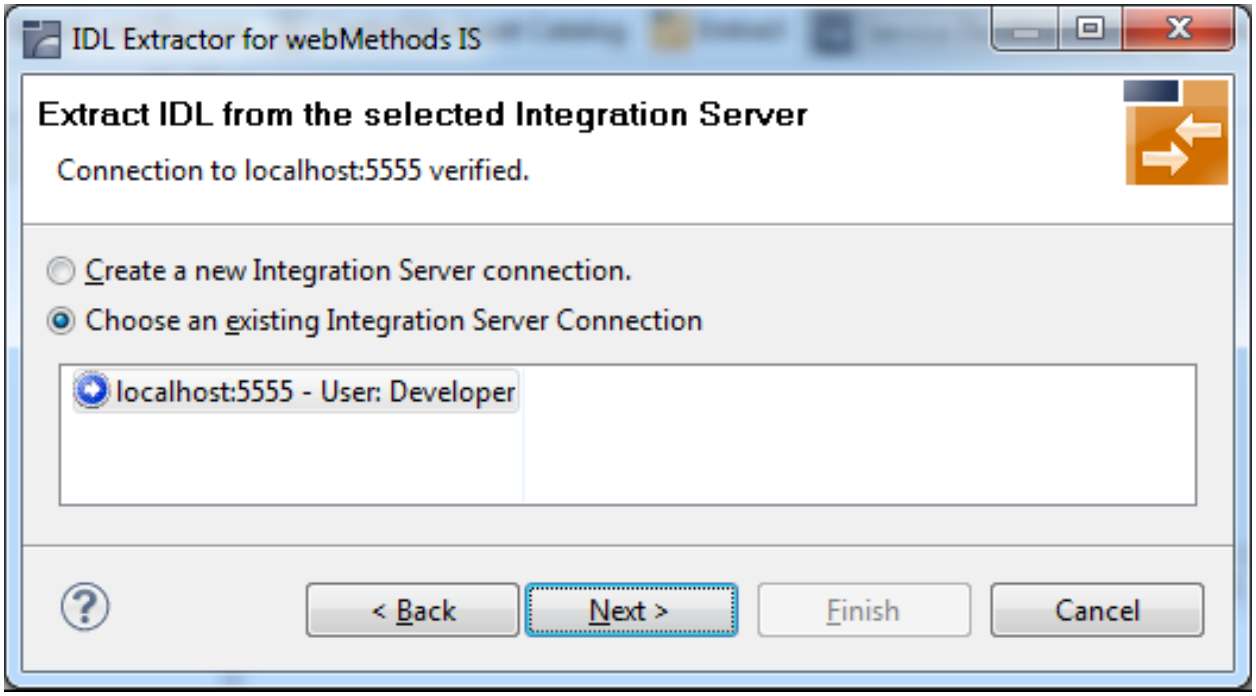
Notes:

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



To use an existing Integration Server connection

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

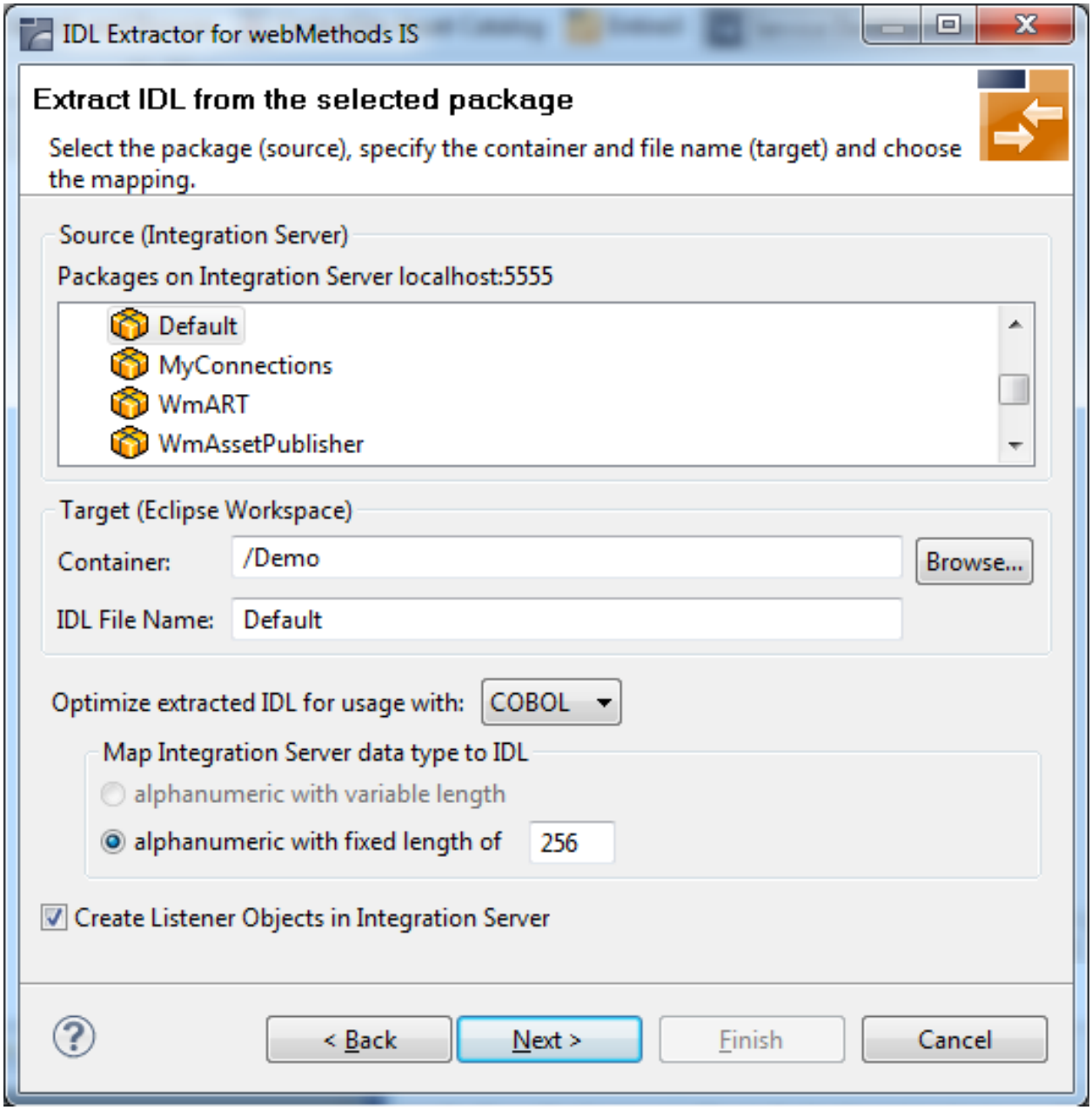
The selected connection is verified by a `ping` command. If the response is valid, the **Next** button is enabled. If invalid, an error message is displayed.

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



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.
- **PL/I**
  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.

5 Clear **Create Listener Objects in Integration Server** to only extract the IDL file from the package. The wizard finishes after extracting the IDL.

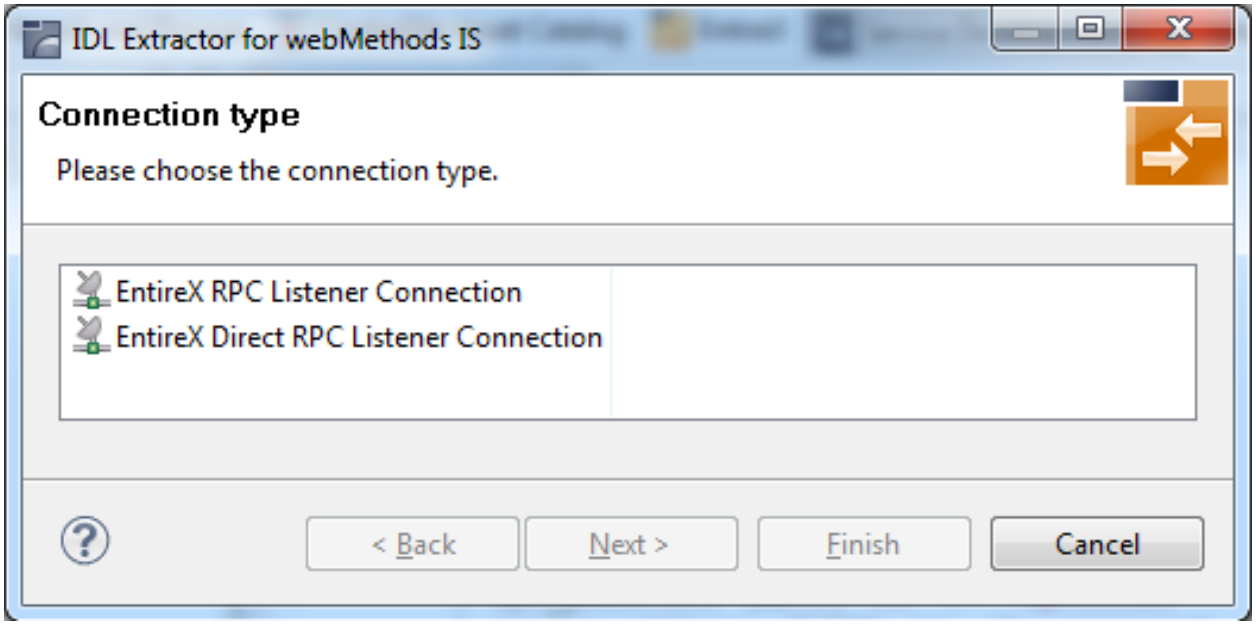
Tip: This is useful if you want to modify the IDL (manually) before generating clients. In this case, the connections and listeners have to be created in a separate step. See *Step 4b: Define Adapter Services for an RPC Listener or a Reliable RPC Listener*.

6 Choose **Next** to store the IDL file in the selected container in the Eclipse workspace.

Notes:

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



To select the connection type

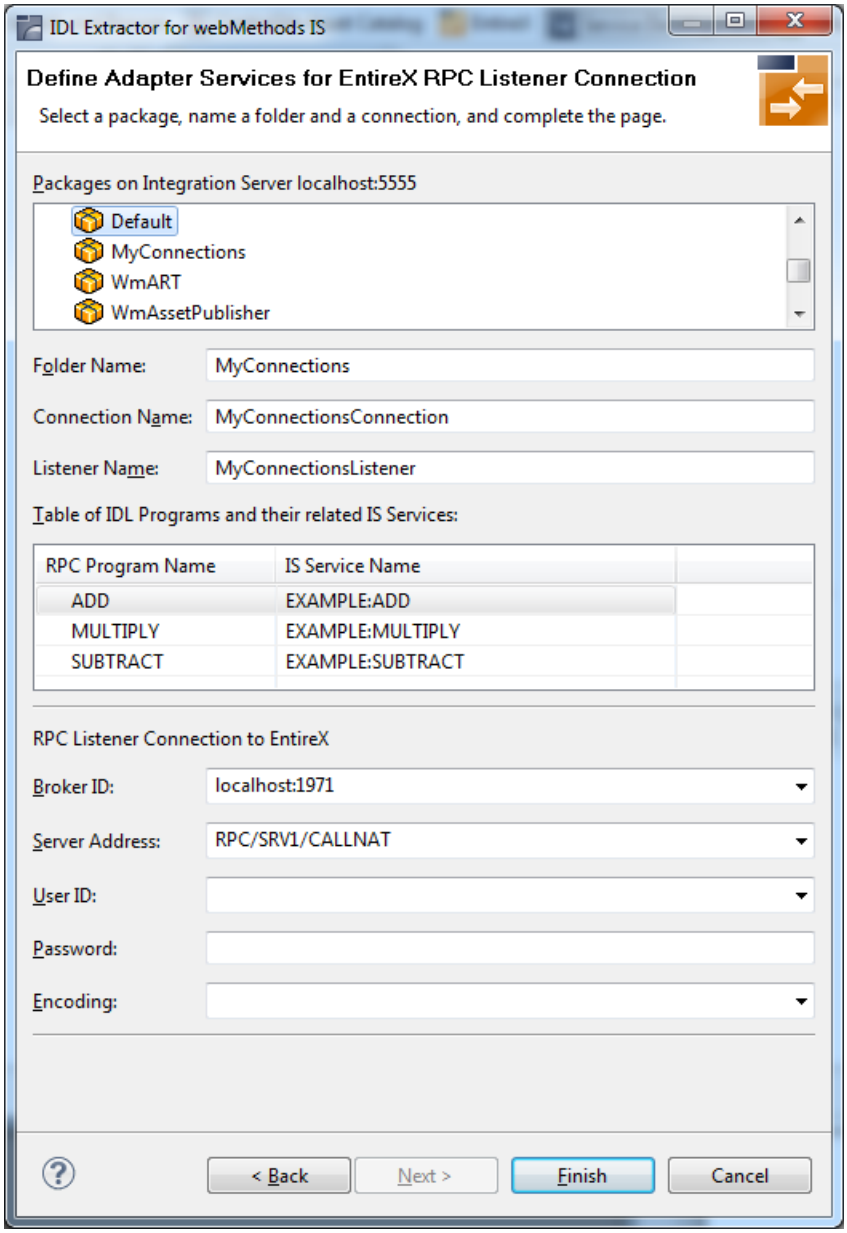
As a prerequisite, the IDL file has been stored in the workspace and the **Back** button is now disabled.

- 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



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.

3 Integration Server Preferences

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.

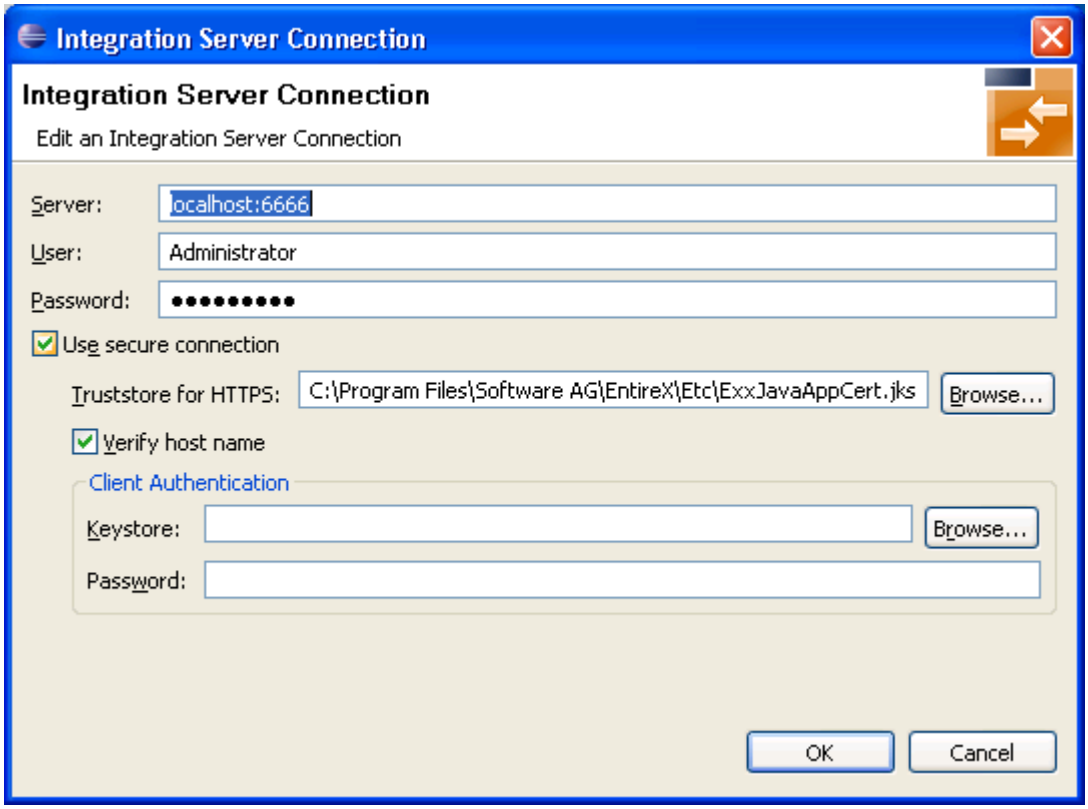
Integration Server Connections

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:



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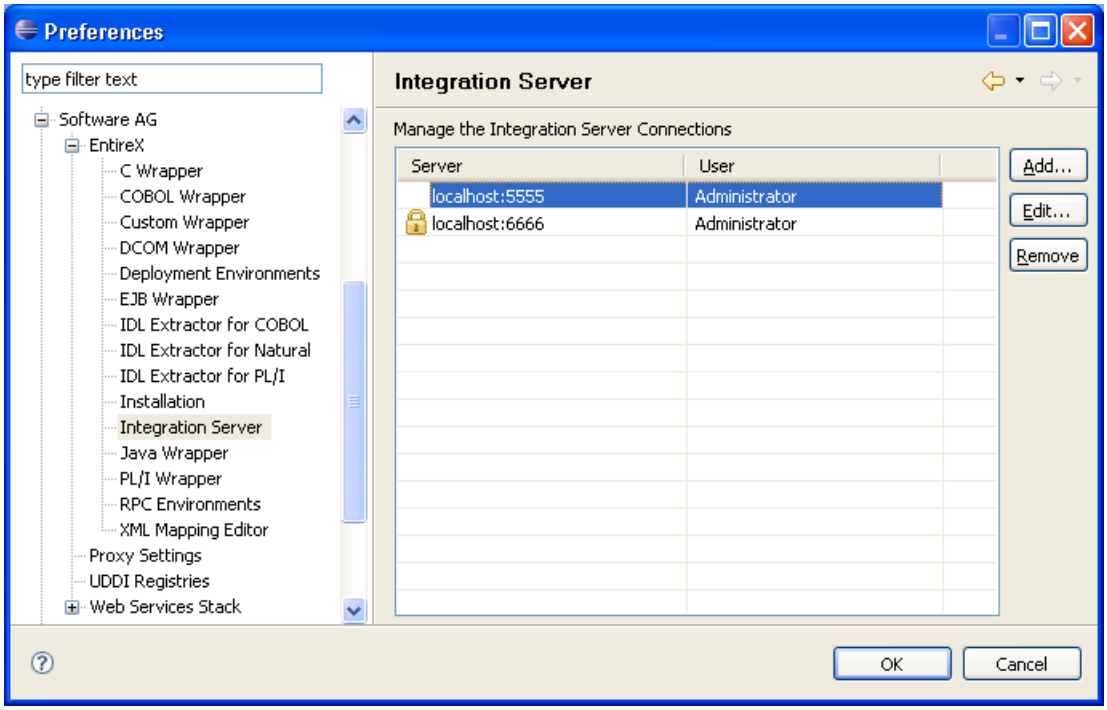
4. When the Integration Server has **Client Authentication** enabled, you can specify your **Keystore** file and keystore **Password**.
5. For managing Integration Server connections, see *Integration Server Preferences* in the Integration Server Wrapper documentation.

Setting Integration Server Preferences



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.