

Artix™

Command Line Reference

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Preface

What is Covered in this Book

The *Artix Command Line Reference* provides a reference guide to the command line tools provided with Artix.

Who Should Read this Book

The Artix Command Line Reference is intended for Artix programmers. This guide assumes that the reader is familiar with the basics of WSDL and XML schemas. A basic knowledge of Artix concepts is presumed.

Finding Your Way Around the Library

The Artix library contains several books that provide assistance for any of the tasks you are trying to perform. The Artix library is listed here, with a short description of each book.

If you are new to Artix

You may be interested in reading:

- Release Notes contains release-specific information about Artix.
- Installation Guide describes the prerequisites for installing Artix and the procedures for installing Artix on supported systems.
- Getting Started with Artix describes basic Artix and WSDL concepts.

To design and develop Artix solutions

Read one or more of the following:

 Designing Artix Solutions provides detailed information about describing services in Artix contracts and using Artix services to solve problems.

- Developing Artix Applications in C++ discusses the technical aspects of programming applications using the C++ API.
- Developing Artix Plug-ins with C++ discusses the technical aspects of implementing plug-ins to the Artix bus using the C++ API.
- Developing Artix Applications in Java discusses the technical aspects of programming applications using the Java API.
- Artix for CORBA provides detailed information on using Artix in a CORBA environment.
- Artix for J2EE provides detailed information on using Artix to integrate with J2EE applications.
- Artix Technical Use Cases provides a number of step-by-step examples
 of building common Artix solutions.

To configure and manage your Artix solution

Read one or more of the following:

- Deploying and Managing Artix Solutions describes how to deploy Artix-enabled systems, and provides detailed examples for a number of typical use cases.
- Artix Configuration Guide explains how to configure your Artix environment. It also provides reference information on Artix configuration variables.
- IONA Tivoli Integration Guide explains how to integrate Artix with IBM Tivoli.
- IONA BMC Patrol Integration Guide explains how to integrate Artix with BMC Patrol.
- Artix Security Guide provides detailed information about using the security features of Artix.

Reference material

In addition to the technical guides, the Artix library includes the following reference manuals:

- Artix Command Line Reference
- Artix C++ API Reference
- Artix Java API Reference

Have you got the latest version?

The latest updates to the Artix documentation can be found at http://www.iona.com/support/docs.

Compare the version dates on the web page for your product version with the date printed on the copyright page of the PDF edition of the book you are reading.

Searching the Artix Library

You can search the online documentation by using the **Search** box at the top right of the documentation home page:

http://www.iona.com/support/docs

To search a particular library version, browse to the required index page, and use the **Search** box at the top right. For example:

http://www.iona.com/support/docs/artix/3.0/index.xml

You can also search within a particular book. To search within an HTML version of a book, use the **Search** box at the top left of the page. To search within a PDF version of a book, in Adobe Acrobat, select **Edit** | **Find**, and enter your search text.

Online Help

Artix Designer includes comprehensive online help, providing:

- Detailed step-by-step instructions on how to perform important tasks.
- A description of each screen.
- A comprehensive index, and glossary.
- A full search feature.
- Context-sensitive help.

There are two ways that you can access the online help:

- Click the Help button on the Artix Designer panel, or
- Select Contents from the Help menu

Additional Resources

The IONA Knowledge Base contains helpful articles written by IONA experts about Artix and other products.

The IONA Update Center contains the latest releases and patches for IONA products.

If you need help with this or any other IONA product, go to IONA Online Support.

Comments, corrections, and suggestions on IONA documentation can be sent to docs-support@iona.com.

Document Conventions

Typographical conventions

This book uses the following typographical conventions:

Fixed width Fixed width (courier font) in normal text represents

portions of code and literal names of items such as classes, functions, variables, and data structures. For example, text might refer to the IT Bus::AnyType

class.

Constant width paragraphs represent code examples or information a system displays on the screen. For

example:

#include <stdio.h>

Fixed width italic Fixed width italic words or characters in code and

commands represent variable values you must supply, such as arguments to commands or path names for your particular system. For example:

% cd /users/YourUserName

Italic Italic words in normal text represent emphasis and

introduce new terms.

Bold Bold words in normal text represent graphical user

interface components such as menu commands and dialog boxes. For example: the **User Preferences**

dialog.

Keying Conventions

This book uses the following keying conventions:

When a command's format is the same for multiple platforms, the command prompt is not shown.
A percent sign represents the UNIX command shell prompt for a command that does not require root privileges.
A number sign represents the UNIX command shell prompt for a command that requires root privileges.
The notation > represents the MS-DOS or Windows command prompt.
Horizontal or vertical ellipses in format and syntax descriptions indicate that material has been eliminated to simplify a discussion.
Brackets enclose optional items in format and syntax descriptions.
Braces enclose a list from which you must choose an item in format and syntax descriptions.
In format and syntax descriptions, a vertical bar separates items in a list of choices enclosed in {} (braces).
In graphical user interface descriptions, a vertical bar separates menu commands (for example, select File Open).

PREFACE

Generating WSDL

Artix provides a number of command line tools for generating WSDL.

In this chapter

This chapter discusses the following topics:

Generating from Java Classes	page 2
Generating from CORBA IDL	page 4
Generating from a COBOL Copybook	page 7
Generating from an XMLSchema Document	page 9

Generating from Java Classes

Overview

Artix supplies a command line tool, <code>javatowsdl</code>, that generates the logical portion of an Artix contract for existing Java class files. <code>javatowsdl</code> uses the mapping rules described in Sun's JAX-RPC 1.1 specification.

JAVATOWSDL

Synopsis

javatowsdl [-t namespace][-x namespace][-i porttype][-o
file][-useTypes][-v][-?][-L file][q][-h][-V] ClassName

Options

The command has the following options:

-t namespace Specifies the target namespace of the generated WSDL

document. By default, the java package name will be used as the target namespace. If no package name is specified, the generated target namespace will be

http:\\www.iona.com\ClassName.

-x namespace Specifies the target namespace of the XMLSchema

information generated to represent the data types inside the WSDL document.By default, the generated target

namespace of the XMLSchema will be

http://www.iona.com/ClassName/xsd.

-i porttype Specifies the name of the generated <portType> in the

WSDL document. By default the name of the class from

which the WSDL is generated is used.

-o file Specifies output file into which the WSDL is written.

-useTypes Specifies that the generated WSDL will use types in the

WSDL message parts. By default, messages are generated using wrapped <code>doc/literal</code> style. A wrapper element with a sequence will be created to hold method

parameters.

-v Prints out the version of the tool.

-? Prints out a help message explaining the command line

lags.

-L file Specifies the location of your Artix license file. The default

behavior is to check IT_PRODUCT_DIR\etc\license.txt.

-q	Specifies that the tool runs in quiet mode. No output will be shown on the console. This includes error messages.
-h	Specifies that the tool will display a usage message.
-V	Specifies that the tool runs in verbose mode.

The generated WSDL will not contain any physical details concerning the payload formats or network transports that will be used when exposing the service. You will need to add this information manually.

Note: When generating contracts, <code>javatowsdl</code> will add newly generated WSDL to an existing contract if a contract of the same name exists. It will not generate a new file or warn you that a previous contract exists.

Generating from CORBA IDL

Overview

IONA's IDL compiler supports several command line flags that specify how to create a WSDL file from an IDL file. The default behavior of the tool is to create WSDL file that uses wrapped doc/literal style messages. Wrapped doc/literal style messages have a single part, defined using an element, that wraps all of the elements in the message.

IDLTOWSDL

Synopsis

idltowsdl [-useypes][-unwrap][-a address][-f file][-o dir][-s
type][-r file][-L file][-P file][-w namespace][-x namespace][-t
namespace][-T file][-n file][-b][-I
idlDir][-qualified][-inline][-3][-fasttrack][-interface
name][-soapaddr port][-q][-h][-V] idlfile

Options

The command has the following options:

-usetypes	Generate rpc style messages. rpc style messages have parts defined using XMLSchema types instead of XML elements.
-unwrap	Generate unwrapped doc/literal messages. Unwrapped messages have parts that represent individual elements. Unlike wrapped messages, unwrapped messages can have multiple parts and are not allowed by the WS-I.
-a <i>address</i>	Specifies an absolute address through which the object reference may be accessed. The <i>address</i> may be a relative or absolute path to a file, or a corbaname URL
-f file	Specifies a file containing a string representation of an object reference. The object reference is placed in the corba:address element in the port definition of the generated service. The file must exist when you run the IDL compiler.
-o dir	Specifies the directory into which the WSDL file is written.

-s type	Specifies the XMLSchema type used to map the IDL sequence <octet> type. Valid values are base64Binary and hexBinary. The default is base64Binary.</octet>
-r file	Specify the pathname of the schema file imported to define the Reference type. If the -r option is not given, the idl compiler gets the schema file pathname from etc/idl.cfg.
-L file	Specifies that the logical portion of the generated WSDL specification into is written to <code>file</code> . <code>file</code> is then imported into the default generated file.
-P file	Specifies that the physical portion of the generated WSDL specification into is written to <code>file</code> . <code>file</code> is then imported into the default generated file.
-w namespace	Specifies the namespace to use for the WSDL targetNamespace. The default is http://schemas.iona.com/idl/idl_name.
-x namespace	Specifies the namespace to use for the Schema targetNamespace. The default is http://schemas.iona.com/idltypes/idl_name.
-t namespace	Specifies the namespace to use for the CORBA TypeMapping targetNamespace. The default is http://schemas.iona.com/typemap/corba/idl_name.
-T file	Specifies that the schema types are to be generated into a separate file. The schema file is included in the generated contract using an import statement. This option cannot be used with the $-n$ option.
-n file	Specifies that a schema file, $file$, is to be included in the generated contract by an import statement. This option cannot be used with the $-T$ option.
-b	Specifies that bounded strings are to be treated as unbounded. This eliminates the generation of the special types for the bounded string.
-I idlDir	Specify a directory to be included in the search path for the IDL preprocessor. You can use this flag multiple times.
-qualified	Generates fully qualified WSDL.

-inline	Generates a contract that includes all imported documents in-line. This overrides all options that specify that a section of the contract is to be imported.
-3	Use relaxed IDL grammar checking semantics to allow IDL used by Orbix 3 to be parsed.
-fasttrack	Use the fasttrack wizard. You must also use the -interface and -soapaddr flags with this option. This option also adds a SOAP port and a route between the generated CORBA port and the generated SOAP port.
-interface name	Specifies the IDL interface for which WSDL will be generated by the fastrack wizard.
-soapaddr <i>port</i>	Specifies the SOAP address to use in the generated ${\tt port}$ element when using the fasttrack wizard.
-q	Specifies that the tool runs in quiet mode. No output will be shown on the console. This includes error messages.
-h	Specifies that the tool will display a usage message.
- ∨	Specifies that the tool runs in verbose mode.

To combine multiple flags in the same command, use a colon delimited list. The colon is only interpreted as a delimiter if it is followed by a dash. Consequently, the colons in a <code>corbaname</code> URL are interpreted as part of the URL syntax and not as delimiters.

Note: The command line flag entries are case sensitive even on Windows. Capitalization in your generated WSDL file must match the capitalization used in the prewritten code.

Generating from a COBOL Copybook

Overview

Artix provides a command line tool, colboltowsdl, that will import COBOL copybook data and generate an Artix contract containing a fixed binding to define the COBOL interface for Artix applications.

COLBOLTOWSDL

Synopsis

coboltowsdl -b binding -op operation -im [inmessage:]incopybook [-om [outmessage:]outcopybook][-fm [faultmessage:]faultbook][-i portType] [-t target] [-x schema name] [-useTypes] [-o file] [-L file][-q][-h][-V]

Parameters

The command has the following required parameters:

Specifies the name for the generated binding. -b binding

Specifies the name for the generated -op operation

operation.

-im Specifies the name of the input message and

[inmessage:]incopybook the copybook file from which the data defining the message is taken. The input message name, inmessage, is optional. However, if the copybook has more than one 01 levels, you will be asked to choose the one

you want to use as the input message.

Options

The command has the following options:

-om

Specifies the name of the output message $[{\it outmessage:}] {\it outcopybook} \ \ \text{and the copybook file from which the data}$ defining the message is taken. The output message name, outmessage, is optional. However, if the copybook has more than one 01 levels, you will be asked to choose the one you want to use as the output message.

-fm [faultmessage:]faultbook	Specifies the name of a fault message and the copybook file from which the data defining the message is taken. The fault message name, <code>faultmessage</code> , is optional. However, if the copybook has more than one <code>01</code> levels, you will be asked to choose the one you want to use as the fault message. You can specify more than one fault message.
-i portType	Specifies the name of the port type in the generated WSDL. Defaults to bindingPortType. a
-t target	Specifies the target namespace for the generated WSDL. Defaults to http://www.iona.com/binding.
-x schema_name	Specifies the namespace for the schema in the generated WSDL. Defaults to http://www.iona.com/binding/types.
-useTypes	Specifies that the generated WSDL will use type elements. Default is to generate element elements for schema types.
-o file	Specifies the name of the generated WSDL file. Defaults to <i>binding</i> .wsdl.
-L file	Specifies the location of your Artix license file. The default behavior is to check IT_PRODUCT_DIR\etc\license.txt.
-q	Specifies that the tool runs in quiet mode. No output will be shown on the console. This includes error messages.
-h	Specifies that the tool will display a usage message.
-V	Specifies that the tool runs in verbose mode.

a. If binding ends in Binding or binding, it is stripped off before being used in any of the default names.

Once the new contract is generated, you will still need to add the port information before you can use the contract to develop an Artix solution.

Generating from an XMLSchema Document

Overview

Artix provides a command line tool, xsdtowsdl, that will import an XMLSchema document and generate an Artix contract containing a types element populated by the types defined in the XMLSchema document. The rest of the contract will be empty.

XDSTOWSDL

Synopsis xsdtowsdl [-t namespace] [-n name] [-d dir] [-o

file][-?][-v][-verbose][-L file][-q][-h][-V] xsdurl

Options The command has the following options:

-t namespace Specifies the target namespace for the

generated contract. The default is to use the

Artix target namespace.

-n name Specifies the name for the generated contract

and is the value of the name attribute in the contract's root definitions element. The default is to use the schema document's file

name.

-d dir Specifies the output directory for the

generated contract.

-o file Specifies the filename for the generated

contract. Defaults to the filename of the imported schema document. For example, if the imported schema document is stored in maxwell.xsd the resulting contract will be

maxwell.wsdl.

-L file Specifies the location of your Artix license

file. The default behavior is to check
IT PRODUCT DIR\etc\license.txt.

-q Specifies that the tool runs in quiet mode. No

output will be shown on the console. This

includes error messages.

CHAPTER 1 | Generating WSDL

-h	Specifies that the tool will display a usage
	message.
-V	Specifies that the tool runs in verbose mode.

Adding Bindings

Artix provides a tools for adding bindings to WSDL.

In this chapter

This chapter discusses the following topics:

Adding a SOAP Binding	page 12
Adding a CORBA Binding	page 14

Adding a SOAP Binding

Overview

Artix provides a tool, wsdltosoap, that will generate a SOAP binding from an existing logical interface defined in a WSDL <portType>. The tool will generate a new contract which includes the generated SOAP binding.

WSDLTOSOAP

Synopsis

wsdltosoap -i portType -n namespace wsdl_file [-b binding][-d
dir][-o file][-style {document|rpc}][-use {literal|encoded}][-L
file][-q][-h][-V]

Parameters

The command has the following required parameters:

-i portType Specifies the name of the port type being mapped to a SOAP binding.

-n namespace Specifies the namespace to use for the SOAP binding.

wsdl_file Specifies the WSDL file in which the logical binding is

defined.

Options

The command has the following options:

-b binding	Specifies the name for the generated SOAP binding. Defaults to <code>portTypeBinding</code> .
-d <i>dir</i>	Specifies the directory into which the new WSDL file is written.
-o file	Specifies the name of the generated WSDL file. Defaults to wsdl_file-soap.wsdl.
-style	Specifies the encoding style to use in the SOAP binding. Defaults to document.
-use	Specifies how the data is encoded. Default is literal.
-L file	Specifies the location of your Artix license file. The default behavior is to check ${\tt IT_PRODUCT_DIR} {\tt license.txt}.$
-q	Specifies that the tool runs in quiet mode. No output will be shown on the console. This includes error messages.
-h	Specifies that the tool will display a usage message.

-v Specifies that the tool runs in verbose mode.

Notes

 ${\tt wsdltosoap}$ does not support the the generatoin of ${\tt document/encoded}$ SOAP bindings.

Adding a CORBA Binding

Overview

The wsdltocorba tool adds CORBA binding information to an existing Artix contract. The generated WSDL file will also contain a CORBA port with no address specified.

WSDLTOCORBA

Synopsis wsdltocorba -corba -i portType [-d dir][-b binding][-o file][-n

 $namespace] \ [-L \ file] \ [-q] \ [-h] \ [-V] \ wsdl_file$

Parameters The command has the following required parameters:

-corba Instructs the tool to generate a CORBA binding for the

specified port type.

-i portType Specifies the name of the port type being mapped to a

CORBA binding.

wsdl file Specifies the name of the WSDL file containing the

logical interface to which the CORBA binding is mapped.

Options

The command has the following options:

-d dir Specifies the directory into which the new WSDL file is

written.

-b binding Specifies the name for the generated CORBA binding.

Defaults to portTypeBinding.

-o file Specifies the name of the generated WSDL file. Defaults

to wsdl file-corba.wsdl.

-n namespace Specifies the namespace to use for the generated CORBA

typemap

-L file Specifies the location of your Artix license file. The default

behavior is to check IT_PRODUCT_DIR\etc\license.txt.

-q Specifies that the tool runs in quiet mode. No output will

be shown on the console. This includes error messages.

-h Specifies that the tool will display a usage message.

-V Specifies that the tool runs in verbose mode.

Notes

By combining the <code>-idl</code> and <code>-corba</code> flags with <code>wsdltocorba</code>, you can generate a CORBA binding for a logical operation and then generate the IDL for the generated CORBA binding. When doing so, you must also use the <code>-i portType</code> flag to specify the port type from which to generate the binding and the <code>-b binding</code> flag to specify the name of the binding to from which to generate the IDL.

CHAPTER 2 | Adding Bindings

Adding Services

Artix provides a tools for adding service definitions to WSDL.

In this chapter

This chapter discusses the following topics:

Adding an HTTP Service	page 18
Adding a CORBA Service	page 23
Adding an IIOP Service	page 24
Adding a WebSphere MQ Service	page 26
Adding a JMS Service	page 31
Adding a Tibco Service	page 33
Adding a Tuxedo Service	page 37

Adding an HTTP Service

Overview

The Artix wsdltoservice tool can generate an HTTP service from an existing logical interface defined in a WSDL portType element.

WSDLTOSERVICE -transport http/soap

Synopsis

wsdltoservice -transport soap/http [-e service] [-t port] [-b binding] [-a address][-hssdt serverSendTimeout][-hscvt serverReceiveTimeout] [-hstrc trustedRootCertificates] [-hsuss useSecureSockets] [-hsct contentType] [-hscc serverCacheControl][-hsscse supressClientSendErrors][-hsscre supressClientReceiveErrors] [-hshka honorKeepAlive] [-hsmps serverMultiplexPoolSize][-hsrurl redirectURL][-hscl contentLocation] [-hsce contentEncoding] [-hsst serverType] [-hssc serverCentificate] [-hsscc serverCentificateChain] [-hsspk serverPrivateKey] [-hsspkp serverPrivateKeyPassword] [-hcst clientSendTimeout][-hccvt clientReceiveTimeout][-hctrc trustedRootCertificates][-hcuss useSecureSockets][-hcct contentType][-hccc clientCacheControl][-hcar autoRedirect][-hcun userName] [-hcp password] [-hcat clientAuthorizationType] [-hca clientAuthorization][-hca accept][-hcal acceptLanguage][-hcae acceptEncoding] [-hch host] [-hccn clientConnection] [-hcck cookie] [-hcbt browserType] [-hcr referer] [-hcps proxyServer] [-hcpun proxyUserName] [-hcpp proxyPassword] [-hcpat proxyAuthorizationType] [-hcpa proxyAuthorization] [-hccce clientCertificate] [-hcccc clientCertificateChain] [-hcpk clientPrivateKey] [-hcpkp clientPrivateKeyPassword][-o file][-d dir][-L file][-q][-h][-V]

Options

The command has the following options:

-transport soap/http	If the payload being sent over the wire is SOAP, use -transport soap. For all other payloads use -transport http.
-e service	Specifies the name of the generated service.
-t port	Specifies the value of the name attribute of the generated port element.
-b binding	Specifies the name of the binding for which the service is generated.

Specifies the value used in the address -a address

element of the port.

-hssdt serverSendTimeout Specifies the number if milliseconds that the

server can continue to try to send a response to the client before the connection is timed

Out

-hscvt

serverReceiveTimeout

Specifies the number of milliseconds that the server can continue to try to receive a request from the client before the connection is timed

Specifies the full path to the X509 certificate

out.

-hstrc

trustedRootCertificates

for the certificate authority. -hsuss useSecureSockets Specifies if the server uses secure sockets.

Valid values are true or false.

-hsct contentType Specifies the media type of the information

being sent in a server response.

-hscc

serverCacheControl

Specifies directives about the behavior that must be adhered to by caches involved in the chain comprising a request from a client to a

server.

-hsscse

supressClientSendErrors

Specifies whether exceptions are thrown when an error is encountered on receiving a client

request. Valid values are true or false.

-hsscre

S

Specifies whether exceptions are thrown when supressClientReceiveError an error is encountered on sending a response to a client. Valid values are true or false.

-hshka honorKeepAlive

Specifies if the server honors client keep-alive requests. Valid values are true or false.

-hsmps

serverMultiplexPoolSize

-hsrurl redirectURL

Specifies the URL to which the client request should be redirected if the URL specified in the client request is no longer appropriate for

the requested resource.

-hscl contentLocation

Specifies the URL where the resource being

sent in a server response is located.

-hsce contentEncoding	Specifies what additional content codings have been applied to the information being sent by the server, and what decoding mechanisms the client therefore needs to retrieve the information.
-hsst serverType	Specifies what type of server is sending the response to the client.
-hssc serverCentificate	Specifies the full path to the X509 certificate issued by the certificate authority for the server.
-hsscc serverCentificateChain	Specifies the full path to the file that contains all the certificates in the chain.
-hsspk serverPrivateKey	Specifies the full path to the private key that corresponds to the X509 certificate specified by <code>serverCertificate</code> .
-hsspkp serverPrivateKeyPassword	Specifies a password that is used to decrypt the private key.
-hcst clientSendTimeout	Specifies the number of milliseconds that the client can continue to try to send a request to the server before the connection is timed out.
-hccvt clientReceiveTimeout	Specifies the number of milliseconds that the client can continue to try to receive a response from the server before the connection is timed out.
-hctrc trustedRootCertificates	Specifies the full path to the X509 certificate for the certificate authority.
-hcuss ueSecureSockets	Specifies if the client uses secure sockets. Valid values are true or false.
-hcct contentType	Specifies the media type of the data being sent in the body of the client request.
-hccc clientCacheControl	Specifies directives about the behavior that must be adhered to by caches involved in the chain comprising a request from a client to a server.
-hcar autoRedirect	Specifies if the server should automatically redirect client requests.
-hcun userName	Specifies the username the client uses to register with servers.

Specifies the password the client uses to -hcp password register with servers. -hcat Specifies the authorization mechanisms the clientAuthorizationType client uses when contacting servers. -hca clientAuthorization Specifies the authorization credentials used to perform the authorization. -hca accept Specifies what media types the client is prepared to handle. Specifies what language the client prefers for -hcal acceptLanguage the purposes of receiving a response -hcae acceptEncoding Specifies what content codings the client is prepared to handle. -hch host Specifies the internet host and port number of the resource on which the client request is being invoked. -hccn clientConnection Specifies if the client will open a new connection for each request or if it will keep the original one open. Valid values are close and Keep-Alive. -hcck cookie Specifies a static cookie to be sent to the server. Specifies information about the browser from -hcbt browserType which the client request originates. -hcr referer Specifies the value for the client's referring entity. Specifies the URL of the proxy server, if one -hcps proxyServer exists along the message path. -hcpun proxyUserName Specifies the username that the client uses to authorize with proxy servers. -hcpp proxyPassword Specifies the password that the client uses to authorize with proxy servers. -hcpat Specifies the authorization mechanism the proxyAuthorizationType client uses with proxy servers.

-hcpa proxyAuthorization

Specifies the actual data that the proxy server

should use to authenticate the client.

-hccce clientCertificate	Specifies the full path to the X509 certificate issued by the certificate authority for the client.
-hcccc clientCertificateChain	Specifies the full path to the file that contains all the certificates in the chain.
-hcpk clientPrivateKey	Specifies the full path to the private key that corresponds to the X509 certificate specified by <code>clientCertificate</code> .
-hcpkp clientPrivateKeyPassword	Specifies a password that is used to decrypt the private key.
-o file	Specifies the filename for the generated contract. The default is to append <code>-service</code> to the name of the imported contract.
-d dir	Specifies the output directory for the generated contract.
-L file	Specifies the location of your Artix license file. The default behavior is to check $\label{eq:license.txt.} \begin{tabular}{llll} IT_PRODUCT_DIR\etc\license.txt. \end{tabular}$
-q	Specifies that the tool runs in quiet mode. No output will be shown on the console. This includes error messages.
-h	Specifies that the tool will display a usage message.
-V	Specifies that the tool runs in verbose mode.

Adding a CORBA Service

Overview

The Artix wsdltoservice tool can generate a CORBA service from an existing logical interface defined in a WSDL portType element.

WSDLTOSERVICE -transport corba

Synopsis wsdltoservice -transport corba [-e service] [-t port] [-b binding] [-a

 ${\it address}] \ [-poa\ poaName] \ [-sid\ serviceId] \ [-pst\ persists] \ [-o\ file] \ [-d]$

dir] [-L file] [-q] [-h] [-V] wsdlurl

Options The command has the following options:

-e *service* Specifies the name of the generated CORBA service.

-t port Specifies the value of the name attribute of the generated

port element.

-b binding Specifies the name of the binding for which the service is

generated.

-a address Specifies the value used in the corba:address element of

the port.

-poa poaName Specifies the value of the POA name policy.

-sid serviceId Specifies the value of the ID assignment policy.

-pst persists Specifies the value of the persistence policy. Valid values

are true and false.

 $\neg \circ$ file Specifies the filename for the generated contract. The

default is to append -service to the name of the

imported contract.

-d *dir* Specifies the output directory for the generated contract.

-L file Specifies the location of your Artix license file. The default

behavior is to check IT PRODUCT DIR\etc\license.txt.

-q Specifies that the tool runs in quiet mode. No output will

be shown on the console. This includes error messages.

-h Specifies that the tool will display a usage message.

-V Specifies that the tool runs in verbose mode.

Adding an IIOP Service

Overview

The Artix wsdltoservice tool can generate an IIOP service from an existing logical interface defined in a WSDL portType element.

WSDLTOSERVICE -transport iiop

Synopsis wsdltoservice -transport iiop [-e service] [-t port] [-b binding] [-a address] [-poa poaName] [-sid serviceId] [-pst persists] [-paytype

 $payload] \ [\neg o \ file] \ [\neg d \ dir] \ [\neg L \ file] \ [\neg q] \ [\neg h] \ [\neg V] \ wsdlurl$

Options The command has the following options:

-e *service* Specifies the name of the generated IIOP service.

-t port Specifies the value of the name attribute of the generated

port element.

-b binding Specifies the name of the binding for which the service is

generated.

-a address Specifies the value used in the <iiop:address> element

of the port.

-poa poaName Specifies the value of the POA name policy.

-sid serviceId Specifies the value of the ID assignment policy.

-pst persists Specifies the value of the persistence policy. Valid values

are true and false.

-paytype payloadSpecifies the type of data being sent in the message

payloads. Valid values are string, octets, imsraw,

imsraw_binary, cicsraw, and cicsraw_binary.

-o file Specifies the filename for the generated contract. The

default is to append -service to the name of the

imported contract.

-d dir Specifies the output directory for the generated contract.

-L file Specifies the location of your Artix license file. The default

behavior is to check IT PRODUCT DIR\etc\license.txt.

-q Specifies that the tool runs in quiet mode. No output will

be shown on the console. This includes error messages.

- -h Specifies that the tool will display a usage message.
- -v Specifies that the tool runs in verbose mode.

Adding a WebSphere MQ Service

Overview

The Artix wsdltoservice tool can generate a WebSphere MQ service from an existing logical interface defined in a WSDL portType element.

WSDLTOSERVICE -transport mq

Synopsis

wsdltoservice -transport mq [-e service] [-t port] [-b binding] [-sqm queueManager][-sqn queue][-srqm queueManager][-srqn queue][-smqn modelQueue] [-sus usageStyle] [-scs correlationStyle] [-sam accessMode] [-sto timeout] [-sme expiry] [-smp priority] [-smi messageId] [-sci correlationId] [-sd delivery] [-st transactional][-sro reportOption][-sf format][-sad applicationData][-sat accountingToken][-scn connectionName][-sc convert] [-scr reusable] [-scfp fastPath] [-said idData] [-saod originData] [-cqm queueManager] [-cqn queue] [-crqm queueManager] [-crqn queue] [-cmqn modelQueue] [-cus usageStyle] [-ccs correlationStyle] [-cam accessMode] [-cto timeout] [-cme expiry] [-cmp priority] [-cmi messageId] [-cci correlationId] [-cd delivery] [-ct transactional] [-cro reportOption] [-cf format] [-cad applicationData] [-cat accountingToken] [-ccn connectionName] [-cc convert][-ccr reusable][-ccfp fastPath][-caid idData][-caod originData] [-caqn queue] [-cui userId] [-o file] [-d dir] [-L file][-q][-h][-V] wsdlurl

Options

The command has the following options:

-e service	Specifies the name of the generated service.
-t port	Specifies the value of the name attribute of the generated port element.
-b binding	Specifies the name of the binding for which the service is generated.
-sqm queueManager	Specifies the name of the server's queue manager.
-sqn queue	Specifies the name of the server's request queue.
-srqm queueManager	Specifies the name of the server's reply queue manager.
-srqn queue	Specifies the name of the server's reply queue.

Specifies the name of the server's model queue. -smgn modelQueue Specifies the value of the server's UsageStyle -sus usageStyle attribute. Valid values are Peer, Requester, or Responder. -scs correlationStyle Specifies the value of the server's CorrelationStyle attribute. Valid values are messageId, correlationId, Of messageId copy. Specifies the value of the server's AccessMode -sam accessMode attribute. Valid values are peek, send, receive, receive exclusive, Of receive shared. -sto timeout Specifies the value of the server's Timeout attribute. Specifies the value of the server's MessageExpiry -sme expiry attribute. -smp priority Specifies the value of the server's MessagePriority attribute. -smi messageId Specifies the value of the server's MessageId attribute. -sci correlationId Specifies the value of the server's CorrelationId attribute. Specifies the value of the server's Delivery -sd delivery attribute. Specifies the value of the server's Transactional -st transactional attribute. Valid values are none, internal, or xa. -sro reportOption Specifies the value of the server's ReportOption attribute. Valid values are none, coa, cod, exception, expiration, Of discard. Specifies the value of the server's Format -sf format attribute. Specifies the value of the server's -sad applicationData ApplicationData attribute. Specifies the value of the server's -sat accountingToken AccountingToken attribute. Specifies the name of the connection by which -scn connectionName the adapter connects to the queue.

-sc convert	Specifies if the messages in the queue need to be converted to the system's native encoding. Valid values are true or false.
-scr reusable	Specifies the value of the server's ConnectionReusable attribute. Valid values are true Or false.
-scfp fastPath	Specifies the value of the server's ConnectionFastPath attribute. Valid values are true Or false.
-said <i>idData</i>	Specifies the value of the server's ApplicationIdData attribute.
-saod <i>originData</i>	Specifies the value of the server's ApplicationOriginData attribute.
-cqm queueManager	Specifies the name of the client's queue manager.
-cqn queue	Specifies the name of the client's request queue.
-crqm queueManager	Specifies the name of the client's reply queue manager.
-crqn queue	Specifies the name of the client's reply queue.
-cmqn modelQueue	Specifies the name of the client's model queue.
-cus <i>usageStyle</i>	Specifies the value of the client's UsageStyle attribute. Valid values are Peer, Requester, or Responder.
-ccs correlationStyle	Specifies the value of the client's CorrelationStyle attribute. Valid values are messageId, correlationId, Of messageId copy.
-cam <i>accessMode</i>	Specifies the value of the client's AccessMode attribute. Valid values are peek, send, receive, receive exclusive, Or receive shared.
-cto timeout	Specifies the value of the client's Timeout attribute.
-cme expiry	Specifies the value of the client's MessageExpiry attribute.
-cmp priority	Specifies the value of the client's MessagePriority attribute.
-cmi messageId	Specifies the value of the client's MessageId attribute.

Specifies the value of the client's CorrelationId -cci correlationId

attribute.

-cd delivery Specifies the value of the client's Delivery

attribute.

-ct transactional Specifies the value of the client's Transactional

attribute. Valid values are none, internal, or xa.

-cro reportOption Specifies the value of the client's ReportOption

attribute. Valid values are none, coa, cod,

exception, expiration, Of discard.

-cf format Specifies the value of the client's Format attribute.

-cad applicationData Specifies the value of the client's

ApplicationData attribute.

Specifies the value of the client's -cat accountingToken

AccountingToken attribute.

-ccn connectionName Specifies the name of the connection by which

the adapter connects to the queue.

-cc convert Specifies if the messages in the queue need to be

converted to the system's native encoding. Valid

values are true or false.

Specifies the value of the client's -ccr reusable

ConnectionReusable attribute. Valid values are

true **Or** false.

Specifies the value of the client's -ccfp fastPath

ConnectionFastPath attribute. Valid values are

true **Or** false.

Specifies the value of the client's -caid idData

ApplicationIdData attribute.

-caod originData Specifies the value of the client's

ApplicationOriginData attribute.

-cagn queue Specifies the remote queue to which a server will

> put replies if its queue manager is not on the same host as the client's local queue manager.

-cui userId Specifies the value of the client's

UserIdentification attribute.

Specifies the filename for the generated contract. -o file

The default is to append -service to the name of

the imported contract.

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-L file	Specifies the location of your Artix license file. The default behavior is to check <pre>IT_PRODUCT_DIR\etc\license.txt.</pre>
-q	Specifies that the tool runs in quiet mode. No output will be shown on the console. This includes error messages.
-h	Specifies that the tool will display a usage message.
-V	Specifies that the tool runs in verbose mode.
-d <i>dir</i>	Specifies the output directory for the generated contract.

Adding a JMS Service

Overview

The Artix wsdltoservice tool can generate a JMS service from an existing logical interface defined in a WSDL portType element.

WSDLTOSERVICE -transport jms

Synopsis wsdltoservice -transport jms [-e service] [-t port] [-b binding] [-jds

 ${\it destionationStyle}] \hbox{ [-jpu } {\it jndiProviderURL}] \hbox{ [-jcf }$

initialContextFactory] [-jfn jndiConnectionFactoryName] [-jdn jndiDestinationName] [-jmt messageType] [-o file] [-d dir] [-L

file][-q][-h][-V] wsdlurl

Options The command has the following options:

-e service Specifies the name of the generated

service.

-t port Specifies the value of the name attribute of

the generated port element.

-b binding Specifies the name of the binding for

which the service is generated.

-jds destinationStyle Specifies if the JMS destination is a JMS

queue or a JMS topic.

-jpu providerURL Specifies the URL of the JNDI service

where the connection information for the

JMS destination is stored.

-jcf initialContextFactory Specifies the name of the

InitialContextFactory class or a list of package prefixes used to construct URL context factory classnames. For more

details on specifying a JNDI InitialContextFactory.

-jfn connectionFactoryName Specifies the JNDI name bound to the

JMS connection factory to use when connecting to the JMS destination.

-jdn destinationName Specifies the JNDI name bound to the

JMS destination to which Artix connects.

-jmt messageType	Specifies how the message data will be packaged as a JMS message. Valid values are text or binary.
-o file	Specifies the filename for the generated contract. The default is to append -service to the name of the imported contract.
-d dir	Specifies the output directory for the generated contract.
-L file	Specifies the location of your Artix license file. The default behavior is to check <pre>IT_PRODUCT_DIR\etc\license.txt.</pre>
-q	Specifies that the tool runs in quiet mode. No output will be shown on the console. This includes error messages.
-h	Specifies that the tool will display a usage message.
-V	Specifies that the tool runs in verbose mode.

Adding a Tibco Service

Overview

The Artix wsdltoservice tool can generate a Tibco service from an existing logical interface defined in a WSDL portType element.

WSDLTOSERVICE -transport tibry

Synopsis

wsdltoservice -transport tibrv [-e service][-t port][-b binding][-tss subject][-tcst subject][-tbt bindingType][-tcl callbackLevel] [-trdt timeout] [-tts transportService] [-ttn transportNetwork][-ttbm batchMode][-tqp priority][-tqlp queueLimitPolicy] [-tqme queueMaxEvents] [-tqda queueDiscardAmount][-tcs cmSupport][-tctsn cmTransportServerName][-tctcn cmTransportClientName][-tctro cmTransportRequestOld][-tctln cmTransportLedgerName][-tctsl cmTransportSyncLedger] [-tctra cmTransportRelayAgent] [-tctdtl cmTransportDefaultTimeLimit] [-tclca cmListenerCancelAgreements] [-tcqtsn cmQueueTransportServerName] [-tcqtcn cmQueueTransportClientName] [-tcqtww cmQueueTransportWorkerWeight] [-tcqtws cmQueueTransportWorkerTasks][-tcqtsw cmQueueTransportSchedulerWeight] [-tcqtsh cmQueueTransportSchedulerHeartbeat][-tcqtsa cmQueueTransportSchedulerActivation] [-tcqtct cmQueueTransportCompleteTime] [-tmnfv messageNameFieldValue] [-tmnfp messageNameFieldPath] [-tbfi bindingFieldId] [-tbfn bindingFieldName] [-o file] [-d dir] [-L file] [-q] [-h] [-V] wsdlurl

Options

The command has the following options:

-e <i>service</i>	Specifies the name of the generated service.
-t port	Specifies the value of the ${\tt name}$ attribute of the generated ${\tt port}$ element.
-b binding	Specifies the name of the binding for which the service is generated.
-tss <i>subject</i>	Specifies the subject to which the server listens.

-tbt bindingType	Specifies the message binding type. Valid vales are msg, xml, opaque, or string.
-tcl callbackLevel	Specifies the server-side callback level when TIB/RV system advisory messages are received. Valid values are INFO, WARN, or ERROR.
-trdt timeout	Specifies the client-side response receive dispatch time-out.
-tts transportService	Specifies the UDP service name or port for TibrvNetTransport.
-ttn transportNetwork	Specifies the binding network addresses for TibrvNetTransport.
-ttbm <i>batchMode</i>	Specifies if the TIB/RV transport uses batch mode to send messages. Valid values are DEFAULT_BATCH and TIMER_BATCH.
-tap priority	
-tqlp queueLimitPolicy	Valid values are DISCARD_NONE, DISCARD_NEW, DISCARD_FIRST, Or DISCARD_LAST.
-tame queueMaxEvents	
-tqda queueDiscardAmount	
-tcs cmSupport	Specifies if Certified Message Delivery support is enabled. Valid values are true or false.
-tctsn cmTransportServerName	Specifies the server's TibrvCmTransport correspondent name.
-tctcn cmTransportClientName	Specifies the client TibrvCmTransport correspondent name.
-tctro cmTransportRequestOld	Specifies if the endpoint can request old messages on start-up. Valid values are true Or false.
-tctln cmTransportLedgerName	$Specifies \ the \ TibrvCmTransport \ ledger \ file.$
-tctsl cmTransportSyncLedger	Specifies if the endpoint uses a synchronous ledger. Valid values are ${\tt true}$ or ${\tt false}.$

 $\hbox{-tctra} \ \textit{cmTransportRelayAgent} \ \ \textbf{Specifies the endpoint's TibrvCmTransport}$

relay agent.

-tctdtl Specifies the default time limit for a cmTransportDefaultTimeLimit Certified Message to be delivered.

-tclca Specifies if Certified Message agree

tclca Specifies if Certified Message agreements cmListenerCancelAgreements are canceled when the endpoint

disconnects. Valid values are true or

false.

-tcqtsn Specifies the server's

 ${\it cmQueueTransportServerName} \quad Tibrv CmQueueTransport\ correspondent$

name.

-tcqtcn Specifies the client's

 ${\it cmQueueTransportClientName} \quad TibrvCmQueueTransport\ correspondent$

name

-tcqtww Specifies the endpoint's

 ${\it cmQueueTransportWorkerWeight} Tibrv CmQueueTransport \ {\it weight}.$

-tcqtws Specifies the endpoint's

 ${\it cmQueueTransportWorkerTasks} \ \, {\it TibrvCmQueueTransport} \ \, {\it worker} \ \, {\it tasks} \\$

parameter.

-tcqtsw Specifies the TibrvCmQueueTransport

 ${\it cmQueueTransportSchedulerWeig} {\it scheduler\ weight\ parameter}.$

ht

-tcqtsh Specifies the endpoint's

cmQueueTransportSchedulerHear TibrvCmQueueTransport scheduler

tbeat heartbeat parameter.

-tcqtsa Specifies the TibrvCmQueueTransport cmQueueTransportSchedulerActischeduler activation parameter.

vation

-tcqtct Specifies the TibrvCmQueueTransport

 ${\it cmQueueTransportCompleteTime} \ \ {\it complete} \ \ {\it time} \ \ {\it parameter}.$

-tmnfv

messageNameFieldValue

-tmnfp messageNameFieldPath

-tbfi bindingFieldId

-tbfn bindingFieldName

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-o file	Specifies the filename for the generated contract. The default is to append -service to the name of the imported contract.
-d <i>dir</i>	Specifies the output directory for the generated contract.
-L file	Specifies the location of your Artix license file. The default behavior is to check <pre>IT_PRODUCT_DIR\etc\license.txt.</pre>
-d	Specifies that the tool runs in quiet mode. No output will be shown on the console. This includes error messages.
-h	Specifies that the tool will display a usage message.
-V	Specifies that the tool runs in verbose mode.

Adding a Tuxedo Service

Overview

The Artix wsdltoservice tool can generate a Tuxedo service from an existing logical interface defined in a WSDL portType element.

WSDLTOSERVICE -transport tuxedo

Synopsis wsdltoservice -transport tuxedo [-e service][-t port][-b

binding][-tsn tuxService][-tfn tuxService:tuxFunction][-ton

tuxService:operation][-o file][-d dir][-L file][-q][-h][-V] wsdlurl

Options The command has the following options:

-e service Specifies the name of the generated

service.

-t port Specifies the value of the name attribute of

the generated port element.

-b binding Specifies the name of the binding for

which the service is generated.

-tsn tuxService Specifies the name of the Tuxedo bulletin

board to which Artix connects.

-tsn tuxService: tuxFunction Specifies the name of the function to be

used on the specified Tuxedo bulletin

board.

-ton tuxService: operation Specifies the WSDL operation that is

handled by the specified Tuxedo endpoint.

-o file Specifies the filename for the generated

contract. The default is to append -service to the name of the imported

contract.

-d dir Specifies the output directory for the

generated contract.

-L file Specifies the location of your Artix license

file. The default behavior is to check IT PRODUCT DIR\etc\license.txt.

CHAPTER 3 | Adding Services

Specifies that the tool runs in quiet mode.
No output will be shown on the console.
This includes error messages.
Specifies that the tool will display a usage
message.
Specifies that the tool runs in verbose mode.

Adding Routes

You can add routes to your Artix contracts from the command line.

Overview

Artix includes a command line tool, wsdltorouting, for adding routes to Artix contracts.

WSDLTOROUTING

Synopsis

 $\label{lem:wsdltorouting [-rn name] [-ssn service] [-spn port] [-dsn service] [-dpn port] [-on operation] [-ta attribute] [-d dir] [-ofile] [-?] [-v] [-verbose] [-L file] [-q] [-h] [-V] wsdlurl$

Options

You can supply the following optional parameters:

-rn name Specifies the name of the generated route. If no name is given a unique name will be generated for the route.

-ssn service Specifies the name of the service to use as the source of

the route.

-spn port Specifies the name of the port to use as the source of the

route. The port must correspond to a port element in the

specified service.

-dsn service Specifies the name of the service to use as the

destination of the route.

-dpn port Specifies the name of the port to use as the destination of

the route. The port must correspond to a port element in

the specified service.

CHAPTER 4 | Adding Routes

-on operation	Specifies the name of the operation to use for the route. If the route is port-based, you do not need to use this flag.
-ta attribute	Specifies a transport attribute to use in defining the route. For details on how to specify the transport attributes.
-d dir	Specifies the output directory for the generated contract.
-o file	Specifies the filename of the generated contract.
-?	Displays the tool's usage statement.
-A	Displays the tool's version.
-verbose	Turns on verbose mode.
-L file	Specifies the location of your Artix license file. The default behavior is to check IT_PRODUCT_DIR\etc\license.txt.
-q	Specifies that the tool runs in quiet mode. No output will be shown on the console. This includes error messages.
-h	Specifies that the tool will display a usage message.
-V	Specifies that the tool runs in verbose mode.

Validating WSDL

Artix can validate your contracts to see if they are well-formed WSDL documents. In addition, Artix can validate your contract against the WS-I Basic Profile.

Overview

Artix includes a command line tool, schemavalidator, for validating Artix contracts.

SCHEMAVALIDATOR

Synopsis

schemavalidator [-d schema-directory]* [-wd wsdl-directory][-s
schema-url]* [-w WSDL XSD URL][-deep][-wsi][-wh

wsi-test-tools.home][-tad

BasicProfileAssertions] [-?] [-v] [-verbose] [-L file] [-q] [-h] [-V]

Parameters

You must specify the location of a WSDL contract file, <code>WSDL_XSD_URL</code>, for the

schema validator to work.

Options

You can supply the following optional parameters:

-d schema-directory Specifies the directory used to search for

schemas. This switch can appear multiple

times.

-wd wsdl-directory Specifies the directory to look for the

specified contract.

-s schema-url Specifies the URL of a user specific

schema to be included in the validation of the contract. This switch can appear

multiple times.

-deep	Specifies that the validator is to check all WSDL imports and all WSDL semantics. When using this switch, the tool will also validate the imported WSDL.
-wsi	Specifies that the tool is to use the wsi-test-tools from wsi.org to validate the contract.
-wh wsi-test-tools.home	Specifies the base directory of wsi-test-tools.
-tad BasicProfileAssertions	Specifies the URL of the of ${\tt BasicProfileTestAssertions.xml}$ used in wsi-test-tools.
-?	Displays detailed information about the tool's options.
-∆	Displays the version of the tool.
-verbose	Displays detailed information on the tools progress as it is validating.
-verbose	Send extra diagnostic messages to the console while wsdltocpp is running.
-L file	Specifies the location of your Artix license file. The default behavior is to check <pre>IT_PRODUCT_DIR\etc\license.txt.</pre>
-q	Specifies that the tool runs in quiet mode. No output will be shown on the console. This includes error messages.
-h	Specifies that the tool will display a usage message.
-V	Specifies that the tool runs in verbose mode.

Generating Code from WSDL

Artix generates stub and skeleton code that provides a developer with a simple model to develop transport-independent applications.

In this chapter

This chapter discusses the following topics:

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C++ Code Generation

Overview

Artix includes a command line tool, wsdltocpp, for generating Artix C++ skeletons for the services defined in an Artix contract. It can also generate starting point code for your server and client applications.

WSDLTOCPP

Synopsis

wsdltocpp [options] { WSDL-URL | SCHEMA-URL } [-e
web_service_name[:port_list]][-b binding_name][-i port_type]* [-d
output-dir][-n URI=C++namespace]* [-nexclude URI[=C++namespace]]*
[-ninclude URI[=C++namespace]]* [-nimport C++namespace][-impl][-m
{NMAKE | UNIX}:[executable|library]][-libv version][-jp
plugin_class][-f][-server][-client][-sample][-plugin[:plugin_name
]][-deployable][-global][-v][-license][-declspec declspec][-all]
[-?][-flags][-upper|-lower|-minimal|-mapper
class][-verbose][-reflect][-L file][-q][-h][-V]

Parameters

You must specify the location of a valid WSDL contract file, $\mbox{\it WSDL-URL}$, for the code generator to work.

Options

You can supply the following optional parameters:

-i port_type	Specifies the name of the port type for which the tool will generate code. The default is to use the first port type listed in the contract. This switch can appear multiple times.
-e web_service_nam [:port_list]	Specifies the name of the service for which the tool will generate code. The default is to use the first service listed in the contract. You can optionally specify a comma separated list of port names to activate. The default is to activate all of the service's ports.
-b binding_name	Specifies the name of the binding to use when generating code. The default is the first binding listed in the contract.
-d output_dir	Specifies the directory to which the generated code is written. The default is the current working directory.

Maps an XML namespace to a C++ namespace. The -n [URI=] C++namespace C++ stub code generated from the XML namespace. URI, is put into the specified C++ namespace, C++namespace. This switch can appear multiple times. -nexclude Do not generate C++ stub code for the specified XML URI [=C++namespace] namespace, URI. You can optionally map the XML namespace, URI, to a C++ namespace, C++namespace. in case it is referenced by the rest of the XML schema/WSDL contract. This switch can appear multiple times. -ninclude Generates C++ stub code for the specified XML URI [=C++namespace] namespace, URI. You can optionally map the XML namespace, URI, to a C++ namespace, C++namespace. This switch can appear multiple times. Specifies the C++ namespace to use for the code -nimport C++namespace generated from imported schema. Generates the skeleton code for implementing the -impl server defined by the contract. -m {NMAKE | UNIX} Used in combination with -impl to generate a : [executable | makefile for the specified platform (NMAKE for library] Windows or UNIX for UNIX). You can specify that the generated makefile builds an executable, by appending :executable, or a library, by appending :library. For example, the options, -impl -m NMAKE: executable, would generate a Windows makefile to build an executable. -libv version Used in combination with either -m NAME:library or -m UNIX: library to specify the version number of the library built by the makefile. This version number is for your own convenience, to help you keep track of your own library versions. -f Deprecated—No longer used (was needed to support routing in earlier versions. Generates code for a sample implementation of a -server server. Generates code for a sample implementation of a -client client.

-sample	Generates code for a sample implementation of a client and a server (equivalent to -server -client).
-plugin [:plugin_name]	Generates servant registration code as a Bus plug-in. You can optionally specify the plug-in name by appending <code>:plugin_name</code> to this option. If no plug-in name is specified, the default name is <code><servicename><porttypename></porttypename></servicename></code> . The service name, <code><servicename></servicename></code> , is specified by the <code>-e</code> option.
-deployable	(Used with -plugin.) Generates a deployment descriptor file, deploy<*ServiceName>.xml, which is needed to deploy a plug-in into the Artix container.
-global	(Used with -plugin.) In the generated plug-in code, instantiate the plug-in using a GlobalBusORBPlugIn object instead of a BusORBPlugIn object.
	A GlobalBusORBPlugIn initializes the plug-in automatically, as soon as it is constructed (suitable approach for plug-ins that are linked directly with application code).
	A BusorbplugIn is not initialized unless the plug-in is either listed in the orb_plugins list or deployed into an Artix container (suitable approach for dynamically loading plug-ins).
- ∆	Displays the version of the tool.
-license	Displays the currently available licenses.
-declspec declspec	Creates Visual C++ declaration specifiers for dllexport and dllimport. This option makes it easier to package Artix stubs in a DLL library.
-all	Generate stub code for all of the port types and the types that they use. This option is useful when multiple port types are defined in a WSDL contract.
-?	Displays help on using the command line tool.
-flags	Displays detailed information about the options.
-verbose	Send extra diagnostic messages to the console while wsdltocpp is running.
-reflect	Enables reflection on generated data classes.

-wrapped	When used with document/literal wrapped style, generates function signatures with wrapped parameters, instead of unwrapping into separate parameters.
-L file	Specifies the location of your Artix license file. The default behavior is to check IT_PRODUCT_DIR\etc\license.txt.
-q	Specifies that the tool runs in quiet mode. No output will be shown on the console. This includes error messages.
-h	Specifies that the tool will display a usage message.
-V	Specifies that the tool runs in verbose mode.

Generated files

The code generator produces a number of stub files from the Artix contract. They are named according to the port type name, *PortTypeName*, specified in the logical portion of the Artix contract. If the contract specifies more than one port type, code will be generated for each one.

The following stub files are generated:

PortTypeName.h defines the superclass from which the client and server are implemented. It represents the API used by the service defined in the contract.

PortTypeNameService.h and PortTypeNameService.cxx are the server-side skeleton code to implement the service defined in the contract.

PortTypeNameClient.h and PortTypeNameClient.cxx are the client-side stubs for implementing a client to use the service defined by the contract.

PortTypeName_wsdlTypes.h and PortTypeName_wsdlTypes.cxx define the complex datatypes defined in the contract (if any).

PortTypeName_wsdlTypesFactory.h and PortTypeName_wsdlTypesFactory.cxx define factory classes for the complex datatypes defined in the contract (if any).

Java Code Generation

Overview

wsdltojava generates JAX-RPC compliant Java code stubs and skeletons for the services defined in the specified Artix contract. It can also generate starting point code for your server and client applications. The default behavior of wsdltojava is to generate all of the java code needed to develop a client and server.

WSDLTOJAVA

Synopsis

wsdltojava [-e service:port][-b binding][-i portType][-d
output dir][-p

[namespace=]package] [-impl] [-server] [-client] [-plugin] [-servlet] [
-types] [-call] [-interface] [-sample] [-all] [-ant] [-datahandlers] [-m
erge] [-deployable] [-nexclude namespace[=package]] [-ninclude
namespace[=package]] [-ser] [-L file] [-q] [-h] [-V] artix-contract

Description

You must specify the location of a valid Artix contract for the code generator to work. The default behavior of wsdltojava is to generate all of the java code needed to develop a client and server.

Options

You can supply the following optional parameters to control the portions of the code generated:

-e service:port

Specifies the name of the service, and optionally the port, for which the tool will generate code. The default is to use the first service listed in the contract. Specifying multiple services results in the generation of code for all the named service/port combinations. If no port is given, all ports defined in a service will be activated.

-b binding

Specifies the name of the binding to use when generating code. The default is to use the first

binding listed in the contract.

-i portType

Specifies the name of a portType for which code will be generated. You can specify this flag for each portType for which you want code

generated. The default is to use the first portType

in the contract.

-d output_dir Specifies the directory to which the generated

code is written. The default is the current working

directory.

-p [namespace=]package Specifies the name of the Java package to use for

the generated code. You can optionally map a WSDL namespace to a particular package name if your contract has more than one namespace.

-impl Generates the skeleton class for implementing the

server defined by the contract.

-server Generates a simple main class for the server.

-client Generates only the Java interface and code

needed to implement the complex types defined by the contract. This flag is equivalent to

specifying -interface -types.

-plugin Generate a bus plug-in with the appropriate

servant registration code for the generated service

implementation.

-servlet Generates a bus plug-in with the additional

information needed to deploy it as a servlet.

-types Generates the code to implement the complex

types defined by the contract.

-call Generates a sample client the uses the Call

interface to invoke on the remote service.

-interface Generates the Java interface for the service.

-sample Generates a sample client that can be used to test

your Java server.

-all Generates code for all portTypes in the contract.

-ant Generate an ant build target for the generated

code.

-datahandlers When a service uses SOAP w/ attachments as its

payload format, generate code that uses

javax..activation.DataHandler instead of the standard Java classes specified in the JAX-RPC

specification.

-merge Merge any user changes into the generated code.

-deployable	Generate a deployment descriptor to deploy the generated plug-in into an Artix container. For more information see Deploying and Managing Artix Solutions.
-nexclude namespace[=package]	Instructs the code generator to skip the specified XMLSchema namespace when generating code. You can optionally specify a package name to use for the types that are not generated.
-ninclude namespace[=package]	Instructs the code generator to generate code for the specified XMLSchema namespace. You can optionally specify a package name to use for the types in the specified namespace.
-ser	Specifies that the generated classes for the types defined in a contract should be serializable.
-L file	Specifies the location of your Artix license file. The default behavior is to check $\label{eq:total_def} \begin{tabular}{ll} $\tt IT_PRODUCT_DIR\etc\license.txt. \end{tabular}$
-q	Specifies that the tool runs in quiet mode. No output will be shown on the console. This includes error messages.
-h	Specifies that the tool will display a usage message.
-V	Specifies that the tool runs in verbose mode.

Generated files

The Artix code generator produces a number of files from the Artix contract. They are named according to the port name specified when the code was generated. The files include:

portTypeName.java defines the Java interface that both the client and server implement.

portTypeNameImpl.java defines the class used to implement the server.

portTypeNameServer.java is a simple main class for the server.

In addition to these files, the code generator also creates a class for each named schema type defined in the Artix contract. These files are named according to the type name they are given in the contract and contain the helper functions needed to use the data types. The naming convention for the helper type functions conforms to the JAX-RPC specification.

Generated type packages

The generated types are generated into a single package which must be imported for any methods using them. By default, the package name will be mapped from the target namespace of the schema describing the types. The default package name is created following the algorithm specified in the JAXB specification. The mapping algorithm follows four basic steps:

- 1. The leading http://or urn://are stripped off the namespace.
- 2. If the first string in the namespace is a valid internet domain, for example it ends in .com or .gov, the leading www. is stripped off the string, and the two remaining components are flipped.
- 3. If the final string in the namespace ends with a file extension of the pattern .xxx or .xx, the extension is stripped.
- 4. The remaining strings in the namespace are appended to the resulting string and separated by dots.
- 5. All letters are made lowercase.

For example, the XML namespace

http://www.widgetVendor.com/types/widgetTypes.xsd would be mapped to the Java package name com.widgetvendor.types.widgettypes.

Exceptions

If you generate code from a WSDL file that contains multiple portTypes, multiple bindings, multiple services, or multiple ports <code>wsdltojava</code> will generate a warning message informing you that it is using the first instance of each to use for generating code. If you use the command line flags to specify which instances to use, the warning message is not displayed.

CHAPTER 6 | Generating Code from WSDL

Tools for Generating Support Files

Artix provides a tools to generate a number of support files that can be used in conjunction with Artix solutions.

In this chapter

This chapter discusses the following topics:

Generating IDL from WSDL	page 54
Generating a Deployment Descriptor	page 56
Generating an ACL File	page 58

Generating IDL from WSDL

Overview

The wsdltocorba tool compiles Artix contracts containing a CORBA binding and generates IDL for the specified binding and port type.

WSDLTOCORBA

Synopsis wsdltocorba -idl -b binding [-corba] [-i portType] [-d dir] [-o

file][-L file][-q][-h][-V] wsdl_file

Parameters The command has the following required parameters:

-idl Instructs the tool to generate an IDL file from the

specified binding.

-b binding Specifies the CORBA binding from which to generate IDL.

wsdl file Specifies the WSDL file to process.

Options The command has the following options:

-h

-corba Instructs the tool to generate a CORBA binding for the

specified port type.

-i portType Specifies the name of the port type being mapped to a

CORBA binding.

-d dir Specifies the directory into which the new WSDL file is

written.

-o file Specifies the name of the generated WSDL file. Defaults

to wsdl file.idl.

-L file Specifies the location of your Artix license file. The default

behavior is to check IT PRODUCT DIR\etc\license.txt.

-q Specifies that the tool runs in quiet mode. No output will

be shown on the console. This includes error messages.

Specifies that the tool will display a usage message.

-V Specifies that the tool runs in verbose mode.

By combining the -idl and -corba flags with wsdltocorba, you can generate

a CORBA binding for a logical operation and then generate the IDL for the

Notes

generated CORBA binding. When doing so, you must also use the -i portType flag to specify the port type from which to generate the binding and the -b binding flag to specify the name of the binding to from which to generate the IDL.

Generating a Deployment Descriptor

Overview

The wsdd tool generates a deployment descriptor that can be used to deploy and Artix plug-in into the Artix container.

WSDD

Synopsis

wsdd -service QName -pluginName name -pluginType {Cxx|Java}
[-pluginImpl name][-pluginDir dir][-wsdlurl URL][-provider
namespace][-file file][-d dir][-L file][-q][-h][-V]

Parameters

The command has the following required parameters:

-service $\textit{QName}\$ Specifies the QName of the plug-in's service as given in

its contract.

-pluginName $\it name$ Specifies the name of the plug-in as specified in the Artix

configuration file.

-pluginType Specifies if the plug-in is implemented in C++ or Java.

{Cxx|Java}

Options

The command has the following options:

-pluginImpl name Specifies the library/class name of the plug-in's

implementation.

-pluginDir *dir* Specifies the directory where the plug-in's

implementation is located.

-wsdlurl URL Specifies the location of the contract defining the

service implemented by the plug-in.

-provider Specifies the namespace under which your plug-in's

namespace ServantProvider is registered with the bus.

-file file Specifies the name of the generated deployment

descriptor.

-d dir Specifies the directory where the generated file will be

written

-L file Specifies the location of your Artix license file. The

default behavior is to check

IT_PRODUCT_DIR\etc\license.txt.

-q	Specifies that the tool runs in quiet mode. No output
	will be shown on the console. This includes error
	messages.
-h	Specifies that the tool will display a usage message.
-V	Specifies that the tool runs in verbose mode.

Generating an ACL File

Overview

The wsdltoacl tool generates an ACL file for the operation for which the default role name is not sufficient. It takes a WSDL file and generates an appropriate ACL file. You will need to add information specific to your deployment to this file.

WSDLTOACL

Synopsis

wsdltoacl -s server WSDL-URL [-i interface][-r default_role][-d
output_dir][-o output_file][-props props_file][-v][-?][-L
file][-q][-h][-V]

Parameters

The command has the following required parameters:

-s server Specifies the name of the server. Typically this is the

ORB name of the server.

WSDL-URL Specifies the name of the WSDL file from which the ACL

file is generated.

Options

The command has the following options:

-i interface Specifies the <portType> for which ACL data will be

generated. The default is to generate information for all

port types defined in the contract.

-r default role Specifies the role name to use in the generated ACL

document. The default is TONAUSETROle.

-d output_dir Specifies the directory where the generated file will be

written.

-o output file Specifies the name of the generated ACL file. The

default is to use the name of the WSDL file with a .acl

extension.

-props props file Specifies the properties file listing the roles for each

operation.

-L file Specifies the location of your Artix license file. The

default behavior is to check

IT PRODUCT DIR\etc\license.txt.

-q	Specifies that the tool runs in quiet mode. No output
	will be shown on the console. This includes error
	messages.
-h	Specifies that the tool will display a usage message.
-A	Specifies that the tool runs in verbose mode.

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