

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.

The Artix Documentation Library

For information on the organization of the Artix library, the document conventions used, and where to find additional resources, see Using the Artix Library.

PREFACE

Generating WSDL

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

In this chapter

This chapter discusses the following topics:

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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][-qualified][-v][-h][-L file][q][-verbose]
ClassName

Options

The command has the following options:

-i porttype

-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.

iicep. / /www.ioiia.com/ciassivame/xsa.

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.

-qualified Specifies that the generated WSDL is fully qualified.

-v Displays the tool's version.

-h Displays the tool's usage statement.

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

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

-quiet Specifies that the tool runs in quiet mode.-verbose 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][-e encoding][-L
file][-quiet][-h][-verbose][-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 $file$. $file$ 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.
-e encoding	Specifies the value for the generated WSDL document's xml encoding attribute. The default is UTF-8.
-L file	Specifies the location of your license file. The default is IT_PRODUCT_DIR\etc\license.txt.
-quiet	Specifies that the tool runs in quiet mode.
-h	Displays the tool's usage message.
-verbose	Specifies that the tool runs in verbose mode.
- ∆	Displays the tool's version.

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][-oneway][-qualified][-o file][-L
file][-quiet][-h][-v][-verbose]

Parameters

The command has the following required parameters:

-b binding Specifies the name for the generated binding.

-op operation Specifies the name for the generated

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 [outmessage:]outcopybook

Specifies the name of the output message and the copybook file from which the data defining the message is taken. The output message name, <code>outmessage</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 output message.

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.
Specifies the name of the port type in the generated WSDL. Defaults to bindingPortType. a
Specifies the target namespace for the generated WSDL. Defaults to http://www.iona.com/binding.
Specifies the namespace for the schema in the generated WSDL. Defaults to http://www.iona.com/binding/types.
Specifies that the generated WSDL will use type elements. Default is to generate element element for schema types.
Specifies that the operation does not have a response message.
Specifies that the schema element in the generated WSDL has its elementFormDefault and attributeFormDefault attributes set to qualified.
Specifies the name of the generated WSDL file. Defaults to <i>binding</i> .wsdl.
Specifies the location of your Artix license file. The default is IT_PRODUCT_DIR\etc\license.txt.
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.
Displays the version of the tool.
Specifies that the tool runs in verbose mode.

a. If $\ensuremath{\textit{binding}}$ 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][-quiet][-h][-verbose][-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.

-quiet Specifies that the tool runs in quiet mode.

-h Displays the tool's usage message.

-verbose Specifies that the tool runs in verbose mode.

-∨

Displays the tool's version.

Generating from an Artix Database Configuration Document

Overview

Artix provides a command line tool, <code>dbconfigtowsdl</code>, that will import an Artix database configuration document and generate an Artix contract defining a service that represents the database operations defined in the document.

DBCONFIGTOWSDL

Synopsis

dbconfigtowsdl [-t bindingAddress][-fasttrack][-plugin][-d
dir][-source dir][-h][-v][-verbose][-quiet] dbconfigurl

Options

The command has the following options:

-t bindingAddress Specifies the address to use in the port

element of the generated WSDL. This flag is only valid when -fasttrack is also used. The

default is

http://localhost:9000/DBConnection.

-fasttrack Specifies that the tool will generate a default

SOAP binding and HTTP endpoint for the database operations. In addition, the tool will generate the code for the intermediary required to expose the operations as a

service.

-plugin Specifies that the intermediary is generated

as an Artix plug-in. This flag is only valid

when -fastttrack is also used.

-d dir Specifies the output directory for the

generated WSDL file. The default is the local directory. When -fasttrack is used, the

default is etc.

-source dir Specifies the output directory for the

generated code. This flag is only valid when -fasttrack is also used. The default is java.

Generating from an Artix Database Configuration Document

-h Displays the tool's usage statement.

-v Displays the tool's version.

-verbose Specifies that the tool runs in verbose mode.

-quiet Specifies that the tool runs in quiet mode.

CHAPTER 1 | Generating WSDL

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 22
Adding a CORBA Binding	page 24

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 [-soapversion

{1.1|1.2}] [-b binding] [-d dir] [-o file] [-style {document|rpc}] [-use

{literal|encoded}][-L file][-quiet][-h][-verbose][-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:

-soapversion {1.1|1.2} Specifies the SOAP version of the generated

binding. Defaults to 1.1.

-b binding Specifies the name for the generated SOAP

binding. Defaults to portTypeBinding.

-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-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

IT PRODUCT DIR\etc\license.txt.

-quiet Specifies that the tool runs in quiet mode.

-h Displays the tool's usage message.

-v Displays the tool's version.

-verbose Specifies that the tool runs in verbose mode.

 $\verb|wsdltosoap| \ does \ not \ support \ the \ the \ generatoin \ of \ \verb|document|/encoded \ SOAP|$

bindings.

Notes

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][-props
namespace][-wrapped][-L file][-quiet][-verbose][-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.

-props namespaceSpecifies the namespace to use for the generated CORBA

typemap

-wrapped Specifies that the generated CORBA binding uses

wrapper types.

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

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

-quiet Specifies that the tool runs in quiet mode.

-verbose Specifies that the tool runs in verbose mode.

-h Displays the tool's usage statement.

√
 Displays the tool's version.

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 Endpoints

Artix provides a tools for adding endpoint definitions to WSDL.

In this chapter

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Adding a WebSphere MQ Endpoint	page 36
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Adding an HTTP Endpoint

Overview

The Artix wsdltoservice tool can generate an HTTP endpoint 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 clientSendTimeoutl[-hccvt clientReceiveTimeoutl[-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] [-quiet] [-verbose] [-h] [-v] wsdlurl

Options

The command has the following options:

-transport soap/http	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. Specifies the number of milliseconds that the -hscvt serverReceiveTimeout server can continue to try to receive a request from the client before the connection is timed out. Specifies the full path to the X509 certificate -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 Specifies directives about the behavior that serverCacheControl must be adhered to by caches involved in the chain comprising a request from a client to a server. -hsscse Specifies whether exceptions are thrown when supressClientSendErrors an error is encountered on receiving a client request. Valid values are true or false. Specifies whether exceptions are thrown when -hsscre supressClientReceiveError an error is encountered on sending a response to a client. Valid values are true or false. Specifies if the server honors client keep-alive -hshka honorKeepAlive 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 register with servers. -hcat Specifies the authorization mechanisms the clientAuthorizationType client uses when contacting servers. Specifies the authorization credentials used to -hca clientAuthorization 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. Specifies a static cookie to be sent to the -hcck cookie 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. Specifies the actual data that the proxy server -hcpa proxyAuthorization

should use to authenticate the client.

-hcp password

-hccce clientCertificate Specifies the full path to the X509 certificate

issued by the certificate authority for the

client.

-hcccc Specifies the full path to the file that contains

clientCertificateChain all the certificates in the chain.

-hcpk clientPrivateKey Specifies the full path to the private key that

corresponds to the X509 certificate specified

by clientCertificate.

-hcpkp Specifies a password that is used to decrypt

clientPrivateKeyPassword the private key.

-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.

-quiet Specifies that the tool runs in quiet mode.

-verbose Specifies that the tool runs in verbose mode.

-h Displays the tool's usage statement.

-v Displays the tool's version.

Adding a CORBA Endpoint

Overview

The Artix wsdltoservice tool can generate a CORBA endpoint 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

address][-poa poaName][-sid serviceId][-pst persists][-o file][-d

dir][-L file][-quiet][-verbose][-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.

-quiet Specifies that the tool runs in quiet mode.

-verbose Specifies that the tool runs in verbose mode.

-h Displays the tool's usage statement.

-v Displays the tool's version.

Adding an IIOP Endpoint

Overview

The Artix wsdltoservice tool can generate an IIOP endpoint 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][-o file][-d dir][-L file][-quiet][-verbose][-h][-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 ${\tt name}$ attribute of the generated ${\tt port}$ element.
-b binding	Specifies the name of the binding for which the service is generated.
-a <i>address</i>	Specifies the value used in the $\verb $ element of the port.
-poa <i>poaName</i>	Specifies the value of the POA name policy.
-sid serviceId	Specifies the value of the ID assignment policy.
-pst <i>persists</i>	Specifies the value of the persistence policy. Valid values are ${\tt true}$ and ${\tt false}.$
-paytype payload	aSpecifies 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 <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 $ \begin{tabular}{ll} \tt TPRODUCT_DIR\etc\license.txt. \end{tabular} $
-quiet	Specifies that the tool runs in quiet mode.

-verbose Specifies that the tool runs in verbose mode.

-h Displays the tool's usage statement.

-v Displays the tool's version.

Adding a WebSphere MQ Endpoint

Overview

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

WSDLTOSERVICE -transport mq

Synopsis

wsdltoservice -transport mg [-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] [-quiet] [-verbose] [-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.
Specifies the value of the server's <code>UsageStyle</code> attribute. Valid values are <code>Peer</code> , <code>Requester</code> , or <code>Responder</code> .
Specifies the value of the server's CorrelationStyle attribute. Valid values are messageId, correlationId, Or messageId copy.
Specifies the value of the server's AccessMode attribute. Valid values are peek, send, receive, receive exclusive, Or receive shared.
Specifies the value of the server's Timeout attribute.
Specifies the value of the server's ${\tt MessageExpiry}$ attribute.
Specifies the value of the server's MessagePriority attribute.
Specifies the value of the server's ${\tt MessageId}$ attribute.
Specifies the value of the server's ${\tt CorrelationId}$ attribute.
Specifies the value of the server's ${\tt Delivery}$ attribute.
Specifies the value of the server's $\tt Transactional$ attribute. Valid values are none, internal, or xa.
Specifies the value of the server's ReportOption attribute. Valid values are none, coa, cod, exception, expiration, Or discard.
Specifies the value of the server's Format attribute.
Specifies the value of the server's ApplicationData attribute.
Specifies the value of the server's AccountingToken attribute.
Specifies the name of the connection by which 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 originData	Specifies the value of the server's ApplicationOriginData attribute.
-cqm queueManager	Specifies the name of the client's queue manager.
-cqn <i>queue</i>	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 usageStyle	Specifies the value of the client's <code>UsageStyle</code> attribute. Valid values are <code>Peer</code> , <code>Requester</code> , or <code>Responder</code> .
-ccs correlationStyle	Specifies the value of the client's CorrelationStyle attribute. Valid values are messageId, correlationId, Or 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 <i>expiry</i>	Specifies the value of the client's ${\tt MessageExpiry}$ 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 Correlation Id.

-cd delivery Specifies the value of the client's Delivery attribute. Specifies the value of the client's Transactional -ct 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. Specifies the value of the client's -cad applicationData ApplicationData attribute. -cat accountingToken Specifies the value of the client's AccountingToken attribute. -ccn connectionName Specifies the name of the connection by which the adapter connects to the queue. Specifies if the messages in the queue need to be -cc convert converted to the system's native encoding. Valid values are true or false. -ccr reusable Specifies the value of the client's Connect i on Reusable attribute. Valid values are true **Or** false.

attribute.

-cci correlationId

-ccfp fastPath

-caid idData

true **or** false.

Specifies the value of the client's

Specifies the value of the client's

ConnectionFastPath attribute. Valid values are

ApplicationIdData attribute.

-caod originData Specifies the value of the client's ApplicationOriginData attribute.

-caqn 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.

-o file Specifies the filename for the generated contract.

The default is to append -service to the name of

ha imported contract

the imported contract.

CHAPTER 3 | Adding Endpoints

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

default behavior is to check

IT_PRODUCT_DIR\etc\license.txt.

-quiet Specifies that the tool runs in quiet mode.-verbose Specifies that the tool runs in verbose mode.

-h Displays the tool's usage statement.

-v Displays the tool's version.

-d dir Specifies the output directory for the generated

contract.

Adding a JMS Endpoint

Overview

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

WSDLTOSERVICE -transport jms

Synopsis

wsdltoservice -transport jms [-e service][-t port][-b binding][-o
file][-d dir][-jnp propName:propVal]*[-jds (queue/topic)][-jnf
connectionFactoryName][-jdn destinationName][-jrdn
replyDesinationName][-jcun username][-jcp password][-jmt
(text/binary)][-jms messageSelector][-jumi (true/false)][-jtr
(true/false)][-jdsn durableSubscriber][-L
file][-quiet][-verbose][-h][-v] wsdlurl

Options

The command has the following options:

-d dir

service
 Specifies the name of the generated service element.
 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.
 o file
 Specifies the filename for the generated contract. The default is to append -service to the name of the imported

contract.

Specifies the output directory for the

generated contract.

-jnp propName:propVal Specifies any optional Java properties to

use in connecting to the JNDI provider. This information is used to populate a JMSNamingProperty element. You can use

this flag multiple times.

-jds (queue/topic) Specifies if the JMS destination is a JMS

queue or a JMS topic.

-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 of the JMS destination to which Artix connects.
-jrdn replyDestinationName	Specifies the JNDI name of the JMS destination used for replies.
-jcun <i>username</i>	Specifies the username used to connect to the JMS broker.
-jcp password	Specifies the password used to connect to the JMS broker.
-jmt (text/binary)	Specifies how the message data will be packaged as a JMS message.
-jms messageSelector	Specifies a message selector to use when pulling messages from the JMS destination.
-jumi (true/false)	Specifies if the JMS message id should be used as the correlation id.
-jtr (true/false)	Specifies if the services uses local JMS transactions when processing requests.
-jdsn durableSubscriber	Specifies the name of the durable subscription to use.
-L file	Specifies the location of your Artix license file. The default behavior is to check IT_PRODUCT_DIR\etc\license.txt.
-quiet	Specifies that the tool runs in quiet mode.
-verbose	Specifies that the tool runs in verbose mode.
-h	Displays the tool's usage statement.
- ∆	Displays the tool's version.

Adding a Tibco Endpoint

Overview

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

WSDLTOSERVICE -transport tibrv

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] [-tcgtsn 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] [-quiet] [verbose] [-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.
-tss subject	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.
-tqp priority	Specifies the queue priority.
-tqlp queueLimitPolicy	Valid values are DISCARD_NONE, DISCARD_NEW, DISCARD_FIRST, Or DISCARD_LAST.
-tqme <i>queueMaxEvents</i>	Specifies the queue max events.
-tqda queueDiscardAmount	Specifies the queue discard amount.
-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

 ${\it cmTransportDefaultTimeLimit} \ \ \textbf{Certified Message to be delivered}.$

-tclca Specifies if Certified Message agreements

cmListenerCancelAgreements are canceled when the endpoint disconnects. Valid values are true or

false.

-tcqtsn Specifies the server's

 ${\it cmQueueTransportServerName}$ TibrvCmQueueTransport correspondent

name.

-tcgtcn Specifies the client's

cmQueueTransportClientName TibrvCmQueueTransport correspondent

name

-tcqtww Specifies the endpoint's

 ${\it cmQueueTransportWorkerWeight} Tibrv CmQueueTransport \verb| worker| weight.$

-tcqtws Specifies the endpoint's

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

parameter.

-tcqtsw Specifies the TibrvCmQueueTransport

 $\textit{cmQueueTransportSchedulerWeig}_{\texttt{Scheduler}} \text{ weight } \textbf{parameter}.$

ht

-tcqtsh Specifies the endpoint's

 ${\it cmQueueTransportSche} duler {\it HearTibrvCmQueueTransport} \ {\it scheduler}$

tbeat heartbeat parameter.

-tcqtsa Specifies the TibrvCmQueueTransport cmQueueTransportSchedulerActischeduler activation parameter.

vation

-tcqtct Specifies the TibrvCmQueueTransport

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

-tmnfv Specifies the message name field value.

messageNameFieldValue

-tmnfp messageNameFieldPath Specifies the message name field path.

-tbfi bindingFieldId Specifies the binding field id.
-tbfn bindingFieldName Specifies the binding field name.

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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>
-quiet	Specifies that the tool runs in quiet mode.
-verbose	Specifies that the tool runs in verbose mode.
-h	Displays the tool's usage statement.
- ∆	Displays the tool's version.

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][-quiet][-verbose][-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 the service uses to

register with the Tuxedo bulletin board.

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

used on the specified Tuxedo bulletin

board.

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 Endpoints

-quiet	Specifies that the tool runs in quiet mode.
-verbose	Specifies that the tool runs in verbose mode.
-h	Displays the tool's usage statement.
-A	Displays the tool's version.

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

wsdltorouting [-rn name][-ssn service][-spn port][-dsn
service][-dpn port][-on operation][-ta attribute] [-d dir][-o
file][-L file][-quiet][-verbose][-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.

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.
-L file	Specifies the location of your Artix license file. The default behavior is to check $\mbox{it_PRODUCT_DIR}{\mbox{txt.}}$
-quiet	Specifies that the tool runs in quiet mode.
-verbose	Specifies that the tool runs in verbose mode.
-h	Displays the tool's usage statement.
-A	Displays the tool's version.

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]* [-s schema-url]* [-w WSDL_XSD_URL] [-deep] [-wsi] [-wh wsi-test-tools.home] [-tad BasicProfileAssertions] [-L file] [-quiet] [-verbose] [-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.

-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

BasicProfileTestAssertions.xml used in

wsi-test-tools.

-L file Specifies the location of your Artix license

file. The default behavior is to check IT_PRODUCT_DIR\etc\license.txt.

-quiet Specifies that the tool runs in quiet mode.

-verbose Specifies that the tool runs in verbose

mode.

-h Displays the tool's usage statement.

-v Displays the tool's version.

Transforming XML

Artix includes a command line driven XSLT processor for transforming XML documents.

Overview

Artix includes a command line tool, xslttransform, for transforming XML documents.

XSLTTRANSFORM

Synopsis

xslttransform -IN inputXMLURL -OUT outputXMLURL -XS XSLTURL [-PARAM

name value]*

Parameters The command has the following parameters:

-IN inputXMLURL Specifies the URL of the source XML

document.

-OUT outputXMLURL Specifies the URL of the transformed XML

document.

-XS XSLTURL Specifies the URL of the XSLT stylesheet.

Options

You can supply any number of optional parameters using the <code>-PARAM</code> flag. Parameters are specified as name value pairs. The parameter's name must correspond to variables in the XSLT stylesheet. The parameter's value is substituted for the variable when the stylesheet is processed.

Examples

To use the transformer to add an ActiveMQ configured JMS endpoint to an Artix contract you would use a command similar to Example 1.

Example 1: Using the Transformer

xsltp -XSL oldjmswsdl_to_newjmswsdl.xsl -IN my_old.wsdl -OUT my_new.wsdl -PARAM updateToActiveMQ true -PARAM userDefDestinationName dynamicQueues/test.artix.myotherjmstransport

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	page 58
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Database Intermediary Generation	page 67

Advanced Code Generation

Overview

The Artix wsdlgen tool is a fully customizable code generator. Using JavaScript templates, you can customize the code generated from a WSDL document to include test implementation classes and randomized data for testing. The tool includes a number of standard templates that generate basic C++ and Java code if you do not require any customization.

WSDLGEN

Synopsis

wsdlgen [-T template]* [-java genOption]* [-cxx genOption]* [-cfg
configFile] [-D name=value]* WSDL-URL

Parameters

You must specify the location of a valid WSDL document, <code>WSDL-URL</code>, for the code generator to work.

Options

You can supply the following optional parameters:

-T template Specifies the location of a template file that governs code generation.

-java genOption Specifies options for the generation of standard Java

code. See "Code generation options".

-cxx genOption Specifies options for the generation of standard C++

code. See "Code generation options".

-cfg configFile Specifies the location of a configuration file to be used

by the code generator.

-D name=value Specifies the value, value, of a JavaScript property,

name. Typically you will use this option to specify a value for the portType property. This instructs the code generator the WSDL portType element for

which code is to be generated.

Code generation options

When using the -java or -cxx flags you must supply one of the following code generation options:

impl	Generate the stub and skeleton code require to implement the interfaced defined by the specified WSDL portType element.
server	Generate a simple main() for a standalone service that will host an implementation of the interface defined by the specified WSDL portType element. Stub code is also generated.
client	Generate a class that invokes all of the operations defined by the specified WSDL portType element. Stub code is also generated.
plugin	Generate all of the code required for implementing the interface defined by the specified WSDL $portType$ element as an Artix plug-in.
all	Equivalent to specifying either -java impl -java server -java client Or -cxx impl -cxx server -cxx client.
ant	Generate an Apache Ant build file for a Java based application.
make	Generate a make file for a C++ based application.

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][-license][-declspec declspec] [-all] [-flags] [-upper|-lower|-minimal|-mapper class][-reflect][-user reserved words word1[:word2...]][-L file] [-quiet] [-verbose] [-h] [-v]

Parameters

You must specify the location of a valid WSDL contract file, 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	Specifies the name of the service for which the tool

[:port list]

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.

-n

[URI=]C++namespace

Maps an XML namespace to a C++ namespace. The 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

URI[=C++namespace]

Do not generate C++ stub code for the specified XML 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

URI[=C++namespace]

Generates C++ stub code for the specified XML namespace, URI . You can optionally map the XML namespace, URI , to a C++ namespace, $\mathit{C++namespace}$. This switch can appear multiple

times.

-nimport C++namespaceSpecifies the C++ namespace to use for the code

generated from imported schema.

-impl

Generates the skeleton code for implementing the server defined by the contract.

-m {NMAKE | UNIX}
:[executable |
library]

Used in combination with <code>-impl</code> to generate a makefile for the specified platform (<code>NMAKE</code> for Windows or <code>UNIX</code> for UNIX). You can specify that the generated makefile builds an executable, by appending <code>:executable</code>, or a library, by appending <code>:library</code>. For example, the options, <code>-impl -m</code> <code>NMAKE:executable</code>, 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.

server.

-client Generates code for a sample implementation of a

client.

-sample Generates code for a sample implementation of a

client and a server (equivalent to -server

-client).

-plugin Generates servant registration code as a Bus [:plugin name] plugin. You can optionally specify the plugin

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></code>. The service name, <code><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 ${\tt GlobalBusORBPlugIn}$ 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).

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).

-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.

-flags Displays detailed information about the options.

-reflect Enables reflection on generated data classes.

-user_reserved_words word1[:word2]	Specifies a colon-separated list of words to be treated as reserved. For example,
	<pre>-user_reserved_words SEC:MILLISEC would generate a header file including 'class_SEC' instead of 'class SEC'.</pre>
-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.
-quiet	Specifies that the tool runs in quiet mode.
-verbose	Specifies that the tool runs in verbose mode.
-h	Displays the tool's usage statement.
-v	Displays the tool's version.

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] [-quiet] [verbose] [-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.

-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 <code>Call</code> 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.

When a service uses SOAP w/ attachments as its -datahandlers payload format, generate code that uses iavax..activation.DataHandler instead of the standard Java classes specified in the JAX-RPC specification. Merge any user changes into the generated code. -merge Generate a deployment descriptor to deploy the -deployable generated plug-in into an Artix container. For more information see Deploying and Managing Artix Solutions. -nexclude Instructs the code generator to skip the specified namespace[=package] XMLSchema namespace when generating code. You can optionally specify a package name to use for the types that are not generated. -ninclude Instructs the code generator to generate code for namespace[=package] the specified XMLSchema namespace. You can optionally specify a package name to use for the types in the specified namespace. Specifies that the generated classes for the types -ser defined in a contract should be serializable. -stub Specifies that the tool will generate the stub code for a client and a server. -T. file Specifies the location of your Artix license file. The default behavior is to check IT PRODUCT DIR\etc\license.txt. Specifies that the tool runs in quiet mode. -quiet Specifies that the tool runs in verbose mode. -verbose -h Displays the tool's usage statement.

Generated files

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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:

Displays the tool's version.

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://orurn://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.

Database Intermediary Generation

Overview

The wsdltodbservice tool takes a WSDL document and an Artix database configuration document and generates the code for the intermediary used expose the database operations. The generated Java code will need to be compiled before it can be deployed.

WSDLTODBSERVICE

Synopsis wsdltodbservice [-d dir][-source

dir][-plugin][-h][-v][-quiet][verbose] dbconfig wsdl

Options The tool has the following options:

-d *dir* Specifies the output directory for the generated DB service.

-source dir Specifies the output directory for the generated source code.

The default is java.

-plugin Specifies that the DB service is to be generated as a plug-in

for deployment into an Artix container.

-h Displays the tool's usage statement.

-v Displays the tool's version.

-quiet Specifies that the tool runs in quiet mode.-verbose Specifies that the tool runs in verbose mode.

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 70
Generating a Deployment Descriptor	page 72
Generating an ACL File	page 74

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][-quiet][-verbose][-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:

-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.

-quiet Specifies that the tool runs in quiet mode.-verbose Specifies that the tool runs in verbose mode.

-h Displays the tool's usage statement.

-v Displays the tool's version.

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 port Type 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

 $\label{local-wsd} $$ wsdd -service $\it QName -pluginName name -pluginType {Cxx|Java} $$ [-pluginImpl name] [-pluginURL $\it dir$] [-wsdlurl $\it URL$] [-provider namespace] [-file $\it file$] [-d $\it dir$] [-verbose] [-q] [-h] [-v] $$$

Parameters

The command has the following required parameters:

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

its contract.

-pluginName nameSpecifies 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.

-pluginURL 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.

-verbose Specifies that the tool runs in verbose mode.

-quiet Specifies that the tool runs in quiet mode.

- -h Displays the tool's usage message.
- -v Displays the tool's version.

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][-L

file] [-quiet] [-verbose] [-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.

-quiet Specifies that the tool runs in quiet mode.-verbose Specifies that the tool runs in verbose mode.

-h Displays the tool's usage statement.

-v Displays the tool's version.

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