AXIS API

In this section I will take a closer look at the AXIS API, I'll firstly scan through the packages describing each one briefly than decide which ones are the most relevant and later pick out and analyse those which are essential to SOAP communication.

1. AXIS Packages.

1. Javax.xml.messaging
Classes: Endpoint, URLEndpoint
A complete SOAP message. Includes both the root part (as a SOAPPart), and zero or more MIME attachments (as AttachementParts).

2. javax.namespace
Classes: Qname
QName class represents the value of a qualified name as specified

3.javax.xml.rpc
Interfaces .....javax.xml.rpc.........
Call: Interface provides for dynamic invocation of a service endpoint.
Service: Acts as a factory of the following: Dynamic proxy for the target service endpoint.
Stub: The common base interface for the stub classes.

Classes: NamespaceConstants, ParameterMode, ServiceFactory
Exceptions: JAXRPCException

4.javax.xml.rpc.encoding
Interface   javax.xml.encoding...................

DeserializationContext:
Implemented by the jax-RPC runtime system in an XML processing mechanism specific manner.

Deserializer
Interface defines a base for interface deserialisers.

SerializationContext
Interface is implemented by the jax-rpc runtime system in an XML processing mechanism specific manner.

Serializer
Interfce defines the base interface for serializers.

SerializerFactory
Factory of the serializers.

TypeMapping
The base interfacefor the representation of a type mapping.

TypeMappingRegistry

Defines a registry of TypeMapping instances for various encodeing styles.

Class:
XML Type Class XML Type

5. javax.xml.rpc.handler

Interfaces: javax.xml.rpc.handler

Handler:	Interface is required to be implemented by a SOAP maessage handler.
HandlerChain:	Represents a list of handlers.
HandlerRegistry	Provides support for the programmatic configuration of handlers in a HandlerRegistry.

Class Summary.

GenericHandler	The javax.xml.rpc.handler.GenericHandler class implements the Handler interface.
HandlerInfo	The javax.xml.rpc.handler.HandlerInfo represents information about a handler in the HandlerChain.

6. javax.xml.rpc.handler.soap

Interface summary

SOAPMessageContext
The interface javax.xml.rpc.soap.DOAPMessageContext provides access to the SOAP message for either RPC request or response.

7. javax.xml.rpc.holders

Interfaces
The javax.xml.rpc.holders.Holder interface represents the base interface for both standard and generated Holder classes.

Class Summary:
BigDecimalHolder, BigIntegerHolder, BooleanHolder, BooleanWrapperHolder, ByteArrayHolder, ByteHolder, ByteWrapperHolder, CalendarHolder, DoubleHolder, DoubleWrapperHolder, FloatHolder, FloatWrapperHolder, integerWrapperHolder, intHolder, LongHolder, LongWrapperHolder, ObjectHolder, ShortHolder, ShortWrapperHolder, StringHolder.

8. javax.xml.rpc.server

Interfaces:
ServiceLifecycle The javax.xml.rpc.server.ServiceLifecycle defines a lifecycle interface for a JAX- RPC service endpoint.

ServletEndpointContext
The ServletEndpointContext provides an endpoint context maintained by the underlying servlet container based JAX- RPC runtime system.

9. javax.xml.rpc.soap

Exceptions :
The SOAPFaultException exception represents a SOAP fault.

10. javax.xml.soap

Detail
A container for DetailEntry objects.

DetailEntry

The content for a detail object, giving details for a SOAPFault object

Name
A representation of an XML name.

Node
A representation of a node (element) in a DOM represenation of an xml document that provides some tree manipulation methods.

SOAPBody
An object that represents the contents in a SOAPBody message

SOAPBodyElement
A SOAPBodyElement object represents the contents in a SOAPBody object

SOAPConstants
The definition of constants pertaining to thr SOAP 1.1 protocol

SOAPElement

An Object representing the contents in a SOAPBody object, the contents in a SOAPHeader object, the content that can follow the SOAPBody objrct in a SOAPEvelope object, or what can follow the detail element in a SOAPFault object.

SOAPEnvelope
The container for the SOAPHeader and SOAPBody portions of a SOAPPart object

SOAPFault
An element in the SOAPBody object that contains error or ststus information.

SOAPFaultElement
A representation of the contents in a SOAPFault object

SOAPHeader
A representation of the SOAP header element.

SOAPHeaderElement
An object representing the contents in the SOAP header part of the SOAP envelope

Text
A representation of a node whose value is text

Class Summary

AttachmentPart
A single attachment to a SOAPMessage object

MessageFactory
A factory for creating SOAPMessage objects

MimeHeader
An object that stores a MIME header name and it's value.

MimeHeaders
A container for MimeHerader objects, which represent the MIME headers present in a MIME part of a message.

SOAPConnection
A point- to- point connexion that a client can use for sending messages directly to a remote party

SOAPConnectionFactory

SOAPElementFactory
Deprecated.- use javax.xml.soap.SOAPFactory for creating SOAPElements

SOAPFactory
SOAPFactory is a factory for creating various objects that exist in the SOAP XML tree.

SOAPMessage
The root class for all SOAP messages

SOAPPart
The container for the SOAP- specific portion of a SOAPMessage object

Exception Summary

SOAPException
An exception that signals that a SOAPexception has occured

11.

Package javax.xml.transform

Interface summary
Source
An object that implements this interface contains the information neeeded to act as source input (XML source or transformation instructions).

12.
Package javax.xml.transform.doc

Class summary
DOMSource
Acts as a holder for a transformation Source tree in the form of a Document Object Model (DOM) tree.

13.
Package javax.xml.transform.sax
SAXSource
Acts as a holder for SAX- style Source.

14.
Package javax.xml.transform.stream
Class Summary
StreamSource
Acts as a holder for a transformation Source in the form of a stream of XML markup.

15.

Package org.apache.axis

Interface Summary

AxisServiceConfig
If a java class which actsas the target for an Axis service implements this interface, it may convey matadata about it's configuration to the Axis engine.

Chain

EngineConfiguaration
EngineConfiguration is an interface used to construct concrete EngineConfiguration instances.

Handler

HandlerIterationStrategy
Base interface for doing an action to Handlers with a MessageContext

Part

TargetedChain

WSDDEngineConfiguration

Extends EngineConfiguration interface to provide hook to internal WSDD deployment info.

Class Summary

AxisEngine
An AxisEngine is the baseclass for AxisClient and AxisServer

AxisProperties
Configuration properties for AXIS

AxisServiceConfigImpl
A simple implementation of AxisServiceConfig

Constants

FaultableHandler
A FaultableHandler is essentially a wrapper for any other Handler which provides flexible fault handling semantics

Message
A complete SOAP (and/or XML- RPC, eventually) message

MessageContext
Some more general docs will go here

SimpleChain
A Simple Chain is a 'composite' Handler in that it aggregates a collection of Handlers and also acts as a Handler which delegates it's opations to the collection

SimpleTargetedChain

SOAPPart
The SOAPPart provides access to the root part of the Message which contains the envelope

Version
Little utility to get the version and build date of the axis.jar

Exception Summary:
AxisFault
An exception which maps cleanly to a SOAP fault

ConfigurationException
ConfigurationException is thrown when an error occurs trying to use an EngineConfiguration

InternalException
Encapsulates exceptions for "should never occur' situations

NoEndPointException

15.
Package org.apache.axis.attachments

Attachements
Access the Attachments of a message

Class Summary
AttachmentPart
Class AttachmentPart

AttachmentsImpl
Implements the Attachment interace, via an actual Hashmap of actual AttachmentParts.

AttachmentUtils
This class allow access to the Jaf data handler in AttachmentPart.

BoundaryDelimitedStream
This class takes the input stream and turns it streams.

DimeBodyPart
Holds one attachment DIME part.

DimeDelimitedInputStream
This class takes the input stream and turns it multiple streams.

DimeMultiPart
This class hold parts of a DIME multipart message
DimeTypeNameFormat
This class is a single psrt for DIME multipart message

ImageDataSource

ManagedMemoryDataSource
This class allows small attachments to be cached in memory, while large ones are cached out.

MimeMultipartDataSource

MimeUtils
This class is defines utilities for mime

MultiPartDimeInputStream
This simulates the multipart stream

MultiPartInputStream
This simulates the multipart stream

MultiPartRelatedInputStream
This simulates the multipart stream

Plain TextDataSource

SourceDataSource

16.
Package org.apache.axis.client

Class Summary

AdminClient
An admin client object that can be used both from the command line programmatically

AxisClient
Provides the equivalent of an "AXIs engine" on the client side

AxisClientProxy
Very simple dynamic proxy invocationHandler class

Call
Axis JAXRPC Dynamic invocatin interface implementation of the Call interface

Service
Axis JAXRPC Dynamic invocatin interface implementation of the Service interface

Service.HandlerRegistryImpl

ServiceFactory
Helper class for obtaining Services from JNDI

Stub
This class is the base for all generated stubs

Transport.

17.

Package org.apache.axis.components.compiler

Interface Summary
Compiler
This interface defines a compiler's functionality for all (java- based) compiled langages

Class Summary

AbstractCompliler
This class implements the functionality comon to all java compilers

CompilerEror
This class encapsulates an error message produced by a programming langage processor (whether interpreted or compiled)

CompilerFactory
This class implements a factroy to instantiate a Compiler

Javac
This class wraps the sun's javac Compiler.

Jikes
This class wraps IBM4s java compiler

18.
Package org.apache.axis.components.image

Interface Summary.

ImageIO
This interface defines a ImageIO module functionality

Class Summary

imageIOFactory
This class implements a factory to instantiate an ImageIO component

JDK1310
JDK1.3 based image I/O

Jimi0
JIMI based image I/O

MerlinIO
JDK1.4 based image I/O NOTE: NEEDS WORK

19.
Package org.apache.axis.components.jms

Class Summary

BeanVendorAdapter
Use ClassUtils.forName and reflection to configure ConnectionFactory.

JMSVendorAdapter
SPI interface that all JMSVendorAdaptors must implement

JMSVendorAdapterFactory
Discovery class used to locate vendor adapters.

JNDIVendorAdapter
Uses JNDI to locate ConnectionFactory and Destinations

SonicMQVendorAdapter
Defines sonicMQ specific constants for connexion factory creation.

20 .0
Package org.apache.axis.components.logger

Class Summary
LogFactory

21.0

Package org.apache.axis.components.net

Interface Summary.
SocketFactroy
TransportClientProperties

Class Summary
BooleanHolder
Hold a boolean value

DefaultHTTPSTransportClientProperties

DefaultHTTPTransportClientProperties

DefaultSocketFactory
Default socket factory

Fake TrustSocketFactory
Hook for Axis sender, allowing unsigned server certs

FakeTrustSocketFactory.FakeX50 9TrustManager
Class FakeX50 9TrustManager

JSSESocketFactory
SSL socket factory.

SocketFactoryFactory
Classs SocketFactoryFactroy

TransportClientPropertiesFactory.

22.0

Package org.apache.axis.configuartion

Class Summary

BasicClientConfig
A SimpleProvider set up with hardcoded basic configuration for a client

BasicServerConfig
A SimpleProvider set up with hardcoded basic configuration for a server

DefaultEngineConfigurationFactory - Deprecated

EngineConfigurationFactoryDefault
This is a default implmentation of EngineConfigurationFactory

EngineConfigurationFactoryFinder
his is a default implmentation of EngineConfigurationFactory

EngineConfigurationFactoryServlet
This is a default implementation of ServletEngineConfigurationFactory

FileProvider
A simple ConfigurationProvider that uses the Admin class to read + write XML files

NullProvider
A do- nothing ConfigurationProvider

ServletEngineConfigurationFactory - - - Deprecated

SimpleProvider

A SimpleProvider is an EngineConfiguration which contains a simple HashMap- based registry of
Handlers, Transports, and Services.

XMLStringProvider
A simple ConfigurationProvider that uses the Admin class to configure the engine from a String
containing XML.

Package org.apache.axis.deployment.wsdd

Interface Summary
WSDDTypeMappingContainer

A common interface for things which contain type mappings.

Class Summary

WSDDBeanMapping
A WSDDBeanMapping is simply a WSDDTypeMapping which has preset values for the serilaiser
and deserilaiser attributes.

WSDDChain
WSDD chain element

WSDDConstants

WSDDDeploymentItem
WSDD Deployment complexType

WSDDDeployment
WSDD deployment element

WSDDDocument
Represents a WSDD Document (this is the top level object in this object model)

WSDDDocumentation

WSDDElement
Abstract class extended by all WSDD Element Classes

WSDDFaultFlow

WSDDGlobalConfiguration
Represents the global configuration of the Axis engine

WSDD handler

WSDDJAXRPCHandlerInfo

WSDDJAXRPCHandlerInfoChain

WSDDOperation
Parse the WSDD operation elements

WSDDParameter

WSDDProvider
WSDD provider element Represents the liaason to the application being exposed as a WEB Service

WSDDRequestFlow

WSDDReponseFlow

WSDDService
A service represented in WSDD

WSDDTargetedChain

WSDDTransport

WSDDTypeMapping

WSDDUndeployment
WSDD deployment element.

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Package org.apache.axis.deployment.wsdd.providers
Class Summary
WSDDBsfProvider

WSDDComProvider

WSDDHandlerProvider
This is a simple provider for using Handler- based services which don'tneed further configuration
(such as java classes, etc)

WSDDJavaEJBProvider
A WSDD EJB provider

WSDDJavaMsgProvider

WSDDJavaRPCProvider

25 .0
Package org.apache.axis.description

Class Summary

AttributeDesc
An AttributeDesc is a FieldDesc for a Java field mapping to an XML attribute

ElementDesc
An AttributeDesc is aFieldDesc for a java field mapping to an xml element

FaultDesc

FieldDesc
FieldDescs are matadata objects which control the mapping of a given java field to/ from XML

OperationDesc
An OperationDesc is an abstract description of an operation on a service

ParameterDesc
A parameter descriptor, collecting the interesting info about an operation parameter

ServiceDesc
A serviceDesc is an abstract decription of a service

TypeDesc
A TypeDesc represents a java <- > XML data binding

26.0

Package org.apache.axis.discovery

Class Summary
DiscoverConstNames
Recover resource name from Managed Properties, using OLD property names

DiscoveryOldNamesIn ManagesProperties
Recover resource name from Managed properties, using OLD property names

27.0
Package org.apache.axis.encoding
Interface summary
Callback

DeserializationContext
This interface describes the AXIS DeserialiszationContext, note that an AXIS compliant
DeserializationContext must extend the org.xml.sax.helpers.DeafultHandler

Deserializer
This interface describes the AXIS Deserializer.

DeserializerFactory
This interface describes the AXIS DeserializerFactory.

SerializatioContext
This interface describes the AXIS serializationContext

Serializer
This interface describes the AXIS Serializer

SerializerFactory
This interface describes the AXIS SerializerFactory

SimpleType
Marker interface to indicate that a bean is "really" a simple type (typically with attributes)

SimpleValueSerializer

Target
A desrializer constructs a value from the xml passed over the wire and sets a target

TypeMapping
The interface describes the AXIS typeMapping

TypeMappingRegistry
This interface describes the AXIS TypeMappingRegistry

27.0
Package org.apache.axis.encoding.der

Class Summary
ArrayDeserializer.

An ArrayDeserializer handles deserialising SOAP arrays

ArrayDeserializerFactory
DeserializerFactory for arrays

ArraySerializer
An ArraySerializer handles serializing of arrays

ArraySerializerFactory
SerializerFactory for Arrays

Base64Deserializer
Deserializer for Base64

Base64DeserializerFactory
DeserializerFactory for hexBinary.

Base64Serializer
Serializer for Base64

Base64SerializerFactory
SerializerFactory for hexBinary

BaseDeserializerFactory
Base class for AXIS Deserialisation Factory classes for code reuse

BaseDeseriali

"The list goes on with various similar classes "

28.0
Package org.apache.axis.enum
Class Summary

Enum
General support for 'enumerated' data types

Enum.Type

Scope

Scope.Type

Style

Style.Type

29.0
Package org.apache.axis.handlers

Class Summary
BasicHandler

BasicHandler is a utility class which implements simple property setting/ getting behaviour, and stubs out a lot of the Handler methods.

DebugHandler

EchoHandler

ErrorHandler

HandlerChainImpl

HandlerInfoChainFactory

JAXRPCHandler
Handles JAXRPC style hnadlers

JWSHandler
A JWSHandler sets the target service and JWS filename in the context depending on the JWS configuration and the target URL.

LogHandler

LogMessage
This handler simply prints a custom message to the debug log.

MD5 AttachHandler

SimpleAuthenticationHandler
Just a simple Authentication Handler to see if the user specified in the bag in the MessageContext is allowed to preform this action.

SimpleSessionHandler
THe handler uses SOAP headers to do simple session management

SOAPMonitorHandler
This handler is used to route SOAP monitor service.

30 .0

Package org.apache.axis.handlers.http
Classes

HTTPActionHandler
An HTTPActionHandler simply sets the context's TargetService property from the HTTPAction property.

HTTPAuthHandler

An HTTPAuthHandler simply sets the context's username and password properties from the HTTP auth headers.

URLMapper
An URLMapper attempts to use the extra path info of this request as the service name.

31.0
Package org.apache.axis.handlers.soap

Class Summary
SOAPService

A SOAPService is a Handler which encapsulates a SOAP invocation.

32.0
Package org.apache.axis.holders
Class Summary

DateHolder
Class DateHolder

DayHolder
Class DatHolder

DurationHolder
Class DurationHolder

HexBinaryHolder
Class HexBinaryHolder

ImageHolder
Class imageHolder

MimeMultipartHolder
Class MimeMultipartHolder

MonthHolder
Class MonthHolder

NegativeIntegerHolder
Class NegativeIntegerHolder

NonNegativeIntegerHolder
Class NonNegativeIntegerHolder

NonPositiveIntegerHolder
Class Non PositiveIntegerHolder

NormalizedStringHolder
Class NomalizedStringHolder

positiveIntegerHolder
Class PositiveIntegerHolder

SourceHolder
Class SourceHolder

TimeHolder
Class TimeHolder

TokenHolder
Class TokenHolder

UnsignedByteHolder
Class UnsignedByteHolder

UnsignedIntHolder
Class UnsignedIntHolder

UnsignedLongHolder
Class UnsignedLongHolder

UnsignedShortHolder
Class UnsignedShortHolder

URIHolder
Class URIHolder

YearHolder
Class YearHolder

YearMonthHolder
Class YearMonthHolder

33.0

Package org.apache.axis.i18n
Class Summary.

MessageBundle
Accept parameters for ProjectResourceBundle, but defer object instantiation (and therefore resource bundle loading) until required

Messages

MessagesConstants

ProjectResourceBundle
Wrapper class for resource bundles

RB
Currently not used keeping for reference

Package org.apache.axis.message

Interface Summary
IDResolver
MessageWithAttachments

Class Summary
BodyBuilder

Detail
Detail Container implementation

DetailEntry
Detail Entry implementation

EnvelopeBuilder
The EnvelopeBuilder is responsible for parsing the top- level SOAP envelope stuff (Envelop, Body, Header), and spawning off HeaderBuilder and BodyBilders

EnvelopeHandler

HeaderBuilder

InputStreamBody

MessageElement

MessageElement.QNameAttr

NullAttributes
Null implementation of the Attributes interface

PrefixedQName

RPCElement

RPCHandler
This SOAPHandler which is called for each RPC parameter as we're deserilaizing the xml for a method call or return.

RPCParam
An RPC parameter

SAX2EventRecorder
This class record SAX2 Events and allows the events to be replayed by start and stop index

SAXOutputter

SOAPBody
Holder for body elements

SOAPBodyElement
A Body element

SOAPEnvelope

SOAPFault
A fault body element

SOAPFaultBuilder
Build a Fault body element

SOAPFaultElement
SOAP Fault implementation

SOAPHandler

SOAPHeader
Holder for header elements

SOAPHeaderElement
A simple header element abstraction

Text
A representation of a node whose value is text

35 .0

Package org.apache.axis.monitor
Class summary

SOAPMonitorConstants
SOAP Monitor Service constants

SOAPMonitorService
This is a SOAP Monitor service class

36 .0
Package org.apache.axis.providers

Class Summary

BasicProvider
This class has one way of keeping track of the operations declared for a particular service provider

BSFProvider
ComProvider

37.0
Package org.apache.axis.providers.java

Class Summary

EJBProvider A basic EJB Provider
JavaProvider
Base class for Java dispatching

JavaProvider
Base class for java dispatching

MsgProvider
Deal with message- style Java services

RPCProvider
Implement message processing by walking over RPCElements of the envelope body, invoking the appropriate methods on the service object.

38.0
Package org.apache.axis.schema

Interface Summary
SchemaVersion
The SchemaVersion interface allows us to abstract out the differences between 1999, 2000, 2001 versions of the xml schema.

Class Summary
SchemaVersion1999
1999 Schema characteristics.

SchemaVersion2000
2000 Schema characteristics.

SchemaVersion2001
2001 Schema characteristics.

39.0
Package org.apache.axis.security

Interface Summary
AuthenticatedUser
A small (mostly marker) interface for wrapping provider- specific user classes

SecurityProvider
The Axis security provider interface as Axis is designed for use in embedded environments, those environements will often contain theit own security databases and potentially authentication managers.

40.0

Package org.apache.axis.security.servlet
Class Summary.

ServletAuthenticatedUser
ServletAuthenticatedUser is a slightly odd implementation of AuthenticatedUser

ServletSecurityprovider

A servletSecurityProvider, combined with the ServletAuthenticatedUser class, allows the standard servlet security mechanisms (isUserInRole(), etc) to integrate with Axis acess control mechanism

41.
Package org.apache.axis.seurity.simple

Class Summary
SimpleAuthenticatedUser
SimpleAuthenticatedUser is a trivialimplementation of thr authenticatedUser interface, for use with a default Axis installation and SimpleSecurityProvider.

SimpleSecurityProvider
SimpleSecurityProvider.

42.0
Package org.apache.axis.server
Interface summary
AxisServerFactory

Class Summary
AxisServer

DefaultAxisServerFactory
Helper class for obtaining AxisServers

JNDIAxisServerFactory
Helper class for obtaining AxisServers, which hides the complexity of JNDI accesses, etc

ParamList

Transport
Transport is a targeted chain that know's it's a transport.

43.0
Package org.apache.axis.session

Class Summary
AxisServer

DefaultAxisServerFactory
Helper class for obtaining AxisServers, which hides the complexity of JNDI accesses, etc

Paramlist

Transport
Transport is a targeted chain that knows it's a transport

44.0
Package org.apache.axis.soap
Interface Summary
SOAPConstants
An interface defining SOAP constants

Class Summary
MessageFactoryImpl
Message Factort implementation

SOAP11Constants
SOAP 1.1 constants

SOAP12Constants
SOAP 1.2 constants

SOAPConnectionFactoryImpl
SOAP connexion Factory implementation

SOAPConnectionImpl
SOAP connexion implmentation

SOAPFactoryImpl
SOAP Element Factory implmentation.

45 .0
Package org.apache.axis.strategies

Class Summary
invocationStrategy
A Strategy which calls invoke() on thr specified Handler, passing it the specified MassageContext

WSDlGenStrategy
A Strategy which calls generateWSDL() on the specified Handler, passing it the specified MessageContext.

46 .0

<u>**Package org.apache.axis.transport.http**</u>
Class Summary
AdminServlet
Proof- of- concept "management" servlet for Axis

AxisHttpSession
An Http/ Servlet implementation of Axis sessions

AxisServlet

AxisServletBase
Base class for servlets used in Axis, has common methods to get and save the engine to a common location, currently the webapp's context, though some amternate persistence mechanism is always possible.

ChunkedInputStream

ChunkedOutputStream.

CommonsHTTPSender

This class uses Jakarta Common's HttpClient to call a SOAP server

HTTPConstants
HTTP protocol and message context constants

HTTPSender
This is ment to be used on a SOAP Client to call a SOAP server.

HTTPTransport
Extends Transport by implementing the setupMessageContext function to set HTTP- specific messsage context fields and transport chains.

NonBlockingBufferingInputStream

ServletEndpointContextImpl

SimpleAxis Server
This is a single threaded implementation of an HTTP server for processing SOAP requests via Apache's xml- axis.

SimpleAxisWorker

SocketInputStream

47.0
Package org.apache.axis.transport.java

Class Summary
Handler
A stub URLStreamHandler, so the system will recogniseour custom URL's as valid

JavaSender

JavaTransport
A Transport which will cause an invocation via "java"

48.0

Package org.apache.axis.transport.jms

Interface Summary
JMSConstants
JMSConstants contains constants that apply to all JMS providers

Class Summary

JMSConnector
JMSConnector is an abstract class that encapsulates the work of connecting to JMS destinations

JMSConnectorFactory

JMSConnectorFactory is a factory class for creating JMSConnectors

JMSEndpoint
JMSEndpoint encapsulates interactions w/ a JMS destination

JMSSender
This is ment to be used on a SOAP Client to call a SOAP server.

JMSTransport
JMSTransport is the JMS- specific implementation of org.apache.axis.client.Transport

MapUtils
MapUtils provides convenience methods for accessing a java.util.Map

QueueConnector
QueueConnector is a concrete JMSConnector subclass that specifically handles connections to queues (ptp domain)

SimpleJMSListener
SimpleJMSListener implements the javax.jms.MessageListener interface

SimpleJMSWorker
SimpleJMSWorker is a worker thread that processes messages that are received by SimpleJMSListener

subscription

TopicConnector
TopicConnector is a concrete JMSConnector subclass that specifically handles connections to topics (pub- sub domain).

Exception Summary
InvokeException
The InvokeException is thrown when a method encounters a general exception in the course of processing.

InvokeTimeoutException
The InvokeTimeoutException is thrown when a method cannot complete processing within the time alloted.

49.0

Package

org.apache.axis.transport.local
Class Summary
Handler
A stub URLStreamHandler, so the system will recognise our custom URLs as valid

LocalResponder
Tiny Handler which just makes sure to Stringise the outgoing message to appropriately use serialiseres on the server side.

LocalSender
This is ment to be used on a SOAP Client to call a SOAP server

LocalTransport
A Transport which will cause an invocation via "local" AxisServer

5 0 .0

Package org.apache.axis.types

Class Summary
Day
Implementation of the XML Schema type gDay

Duration
Implementation of the XML Schema type duration

HexBinary
Custom class for supporting primitive XSD data type hexBinary

Month
Implementation of XML Schema type gMonth

MonthDay
Implementation of the XML Schema type gMonthDau

Name
Custom class for supporting XSD data type Name Name represents XML Names.

NCName
Custom class for supporting XSD data type NCName, NCName represents XML "non- colonised'
Names the base type of NCName is Name.

NegativeInteger
Custom class for supporting primitive XSD data type negativeinteger is derived from
nonPositiveInteger by setting the value of maxInclusive to be - 1.

NMToken
Custom class for supporting XSD data type NMToken NMTOKEN represents the NMTOKEN attribute
type from [XML 1.0 (Second Edition)].

NonNegativeInteger
Custom class for supporting primitive XSD data type nonNegativeInteger

NonPositiveInteger
Custom class for supporting primitive XSD data type nonPositiveInteger nonPositiveInteger is
derived from integer by setting the value of maxInclusive to be 0 .

NormalisedString
Custom class for supporting XSD data type NormailisedString

PositiveInteger
Custom class for supporting primitive XSD data type positiveInteger, positiveInteger is derived from
nonNegativeInteger by setting the value of minInclusive to be 1.

Time
Class that represents the xsd:time XML Schema type

Token
Custom class for supporting primitive XSD data type Token

UnsignedByte
Custom class for supporting primitive XSDdata type UnsignedByte

UnsignedInt
Custom class for supporting primitive XSD data type UnsignedInt

UnsignedLong
Custom class for supporting primitive XSD data type UnsignedLong

UnsignedShort
Custom class for supporting primitive XSD data type UnsignedShort

URI
Axis NOTE: This class was "borrowed form Xerces 2.0 .2

Year
Implementation of the XML Schema type gYear

YearMonth
Implmentation of the XML Schema type gYearMonth

Exception Summary

URI.MalformedURIException
MalformedURIExceptions are thrown in the process of builing a URI or setting fileds on a URI when an operation would result in an invalid URI specification.

5 1.0

Package org.apache.axis.utils

Interface Summary
JavaUtils.ConvertCache
It the argument to the concert(....) method implements the ConvertCache interface, the concert(...) method will use the set/ get methods to store and retrieve converted values.

ParserControl
ParserControl is used to control particular behaviour of the parser

Class Summary
Admin
Handy static utility functions for turning XML into AXIS deployment operations

BeanPropertyDescriptor
This class represents a field/ property in a value type (a class with either bean- style getters/ setters or public fields).

BeanUtils

CLArgsParser
Parser for command line arguments

ClassUtils
utility methods for Class Loading

CLOption
Basic class describing an instance of option

CLOptionDescriptor
Basic class describing a type of option

CLUtil
CLUtil offers basic utility operations for use both internal and external to package

DefaultAuthenticator
This class is used by WSDL2javaAntTask and WSDL2

DOM2Writer
This class is a utility to serialise a DOM node as XML

FieldPropertyDescriptor

JavaUtils
Utility class to deal with Java langage related issues, such as type conversions.

JWSClassLoader
Class loader for JWS files

LockableHashtable
This subclass of the java Hashtable allows individual entries to be "locked" so that their values
cannot be overwritten or removed.

Mapping

Messages

NSStack
The abstraction this class provides is a push down stack of variable length frames of prefix to
namespace mappings.

Options

SessionsUtils
Code borrowed from AuthenticatorBase.java for generating a secure id's

tcpmon

URLHashSet
Class URLHashSet

WSDLUtils

XMLChar
This class defines the basic XML character properties.

XMLUtils

XMLUtils.ParserErrorHandler

Exception Summary
javaUtils.HolderException

5 2.0
Package org.apache.axis.utils.bytecode
Class Summary
ClassReader
This is the class file reader for obtaining the parameter names for declared methods in a class.

ParamNameExtractor
This class retrieves function parameter names from bytecode built with debugging symbols.

ParamReader
This is the class file reader for obtaining the parameter names for declared methods in a class.

5 3.0
Package org.apache.axis.utils.cache

Class Summary
ClassCache
A cache class for JavaClass objects, which enables us to quickly reference methods.

JavaClass
A simple cache of previously loadedclasses, and their methods.

JavaMethod
A simple cache of previously loaded methods

5 40

Package org.apache.axis.wsdl

interface Summary
Skeleton
interface for WSDL2java generated skeletons

Class Summary
Java2WSDL
Command line interface to the java2wsdl utility

SkeletonImpl
Provides Basic function implmentation for the Skeleton interface

WSDL2Java
Command line interface to the WSDL2java utility

5 5.0
Package org.apache.axis.wsdl.fromJava

Class Summary
Emmiter
This class emits WSDL from Java Classes

Namespaces
DEscription: A HashMap of packageNames and namespaces with some helper methods

Types

5 6 .0
Package org.apache.axis.wsdl.gen
Interface Summary
Generator
This is the interface for all writers

GeneratorFactory
Generator and GeneratorFactory are part of the generator framework.

Class Summary
NoopFactory
This factory returns a bunch of NoopGenerators

NoopGenerator
This generator doesn't do anything

Parser
This is a class with no documentation

WSDL2

5 7.0

Package org.apache.axis.wsdl.symbolTable

Interface Summary
CollectionTE

Undefined
This Undefined interface is implmented by UndefinedType and UndefinedElement

Class Summary
BaseType
This type is for a QName represents a Base type

BaseTypeMapping
Get the base langage name for a qname

BindingEntry
This class represents a WSDL binding

BindingEntry.Operation Attr
Contains attributes for operations _ Body type: encoded or literal

CollectionElement
This type is for a QName that is a 'collection'

Collection Type
This Type is for a QName that is a 'collection'

DefinedElement
This type is for a QName that is an element, these types are only emitted if referenced by a ref= or an element=

DefinedType
This Type is for a Qname that is a complex or simple type, these types are always emitted.

Element
This class represents a TypeEntry that is a type (complexType, simpleType, etc

ElementDecl
Simple utility struct for holding element declarations

MessageEntry
This class represents a WSDL message

Parameter
This class simply collects

Parameters
This class simply collects all the parameter or message data for an operation into one place.

PortTypeEntry
This class represents a WSDL portType

SchemaUtils
This class contains ststic utility methods specifically for schema type queries

ServiceEntry
This class represents a WSDL service

SymbolTable
This class represents a table of all of the top- level symbols from a set of WSDL Definitions and DOM Documebts: XML types; WSDL messages, portTypes, bindings, and services.

SymTabEntry
SymTabEntry is the base class for all symbol table entries.

Type
This class represents a TypeEntry that is a type (complexType, simpleType)

TypeEntry
This class represents a wsdl types entry that is supported by the WSDL2java emitter.

UndefinedDelegate
This UndefinedDelegate class implements the common functions of UndefinedType and UndefinedElement

UndefinedElement
This represents a QName found in a reference but is not defined.

UndefinedType
This represents a QName found in a reference but is not defined.

Utils
This class contains stsyic utility methods fot the emitter.

5 8.0

Package.
org.apache.axis.wsdl.toJava

Class Summary
Emitter
This class Produces java files for stubs, skeletons, and types from a WSDL document

GeneratedFileInfo
File info available after emit to describe what exactly was created by the Emitter.

JavaBeanFaultWriter
This is Wsdl2java's complex Fault Writer

JavaBeanHelperWriter
This is Wsdl2java's Helper Type Writer.

JavaBeanWriter
This is Wsdl2java's Complex Type Writer.

JavaBindingWriter
This is Wsdl2java's Binding Writer.

JavaClassWriter
Emitter knows about WSDL writers, one each for portType, Binding, Service, Definition, Type

JavadefinitionWriter
This is Wsdl2java's Definition Writer.

JavaDeployWriter
This is Wsdl2java's deploy writer

JavaEnumTypeWriter
This is Wsdl2java's Complex Type writer.

JavaFaultWriter
This is Wsdl2java's Fault Writer

JavaGeneratorFactory
This is Wsdl2java's implmentation of the GeneratorFactory

JavaHolderWriter
This is Wsdl2java's Holder writer

JavaImplWriter
This is Wsdl2java's implmentation template writer.

JavaInterfaceWriter
This is Wsdl2java's PortType writer

JavaServiceIfaceWriter
This is Wsdl2java's service writer

JavaServiceImplWriter.

JavaServiceWriter
This is Wsdl2java's Service writer

JavaSkelWriter
This is Wsdl2java's Service Writer

javaStubWriter
This is Wsdl2java's stub writer.

javaTestCaseWriter
This is Wsdl2java's TestCase writer

JavaTypeWriter
This is Wsdl2java's Type writer

JavaUndeployWriter
This is Wsdljava's deploy writer

javaWriter
Emitter knows about WSDL writers, one each for PortType, Binding, Service, Definition, Type

Namespaces
This class is essentially a HashMap of pairs with a few extra wizzbangs.

Utils.

Conclusion:

As the above brief glance at Axis shows Axis is a huge and very intricate and complitcated piece of software. I will look at other soap libraries now and try and pick out the common elements then analysising these in closer detail to give an idea of what is basically needed in oder to communicate with soap messages.