Artix™

Release Notes

Version 4.2, March 2007

Making Software Work Together™

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Artix 4.2

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This document contains the following sections:

New Features

The following features have been added in IONA Artix 4.2:

- WSDLGen
- WS-RM Management
- SOAP 1.2 Security
- HP-UX Classic Runtime Support
- Artix Designer

WSDLGen

Artix 4.2 includes a new tool for generating code from WSDL.

WSDLGen is a template-driven code generation engine that can create full client and server code from even the most complex WSDL documents. See the Artix WSDLGen Guide for details.

WS-RM Management

Artix 4.2 supports the management of Web Services Reliable Messaging (WS-RM) using any Java Management Extensions (JMX) console. See the Managing Artix Solutions with JMX guide for details.

SOAP 1.2 Security

Support has been added for sending WS-Security headers over the SOAP 1.2 binding. See the Artix Security Guide for details.

HP-UX Classic Runtime Support

Artix runtime libraries now support applications built with the HP-UX Classic C++ runtime, as well as the already supported Standard runtime. For a full list of supported platforms and compilers, see the Artix Installation Guide.

Artix Designer

The following features are new in Artix Designer. See the online help for details:

WSDLGen support WSDLGen is the code generation engine used in Artix Designer 4.2.

Quick code generation You can now generate code quickly by right-clicking a WSDL file and choosing a generation option from the Artix Designer item on the pop-up menu.

Easier configuration of Artix services Configuring services such as Artix Security, the locator, and session manager has been simplified through the use of policies.

Documentation Updates

The following changes have been made to the Artix library in version 4.2.

- Artix Infocenter
- Using Artix Designer
- Artix Technical Use Cases
- Building Service Oriented Architectures with Artix
- Artix WSDLGen Guide
- Artix Security Guide
- Artix for CORBA

Artix Infocenter

The Artix Designer online help is now available from the IONA web site in Eclipse infocenter format at http://infocenter.iona.com:8100.

Using Artix Designer

This book is now deprecated in favor of the Artix Infocenter.

Artix Technical Use Cases

This book now includes details on generating code using WSDLGen.

Building Service Oriented Architectures with Artix

This book has been reworked for greater clarity.

Artix WSDLGen Guide

This is a new book describing the WSDLGen code generation tool.

Artix Security Guide

The following changes have been made to the Artix Security Guide:

- In the "Partial Message Protection" chapter, the "Action Definitions" section includes a description of a new signature validation
- New support for transmitting security credentials in SOAP 1.2 headers is described in the "Overview of SOAP Security" section of the "Security for SOAP Bindings" chapter
- The "Managing Access Control Lists" chapter now describes the use of the wildcard character, *, in Access Control List (ACL) files

Artix for CORBA

The "Exposing a Web Service as a CORBA Service" now includes a description of how to enable the Java/CORBA binding in an Artix container.

Known Issues

The following are known issues in Artix 4.2:

- Artix Designer
- JRE on 64-bit Platforms
- Missing Classic Runtime Libraries on HP-UX
- No Uninstallation Script on AIX

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Artix Designer

The following are known issues with Artix Designer.

Installation directory on Windows Artix Designer fails to launch on Windows if Artix is installed in a directory beginning with the letter "u". This is an issue with Eclipse, which sees the `\u` character combination as indicating a Unicode character.

Empty start_eclipse script The Artix installer adds an empty `start_eclipse.bat` file to the `InstallDir`\artix\4.2\bin directory on Windows. You can ignore this file, as Artix Designer no longer requires a start script. You launch it by running the Eclipse executable in the `InstallDir`\artix\4.2\eclipse directory or from the Windows Start menu.

Generating a client in a database project fails When creating a database Web services project, you cannot use Artix Designer to generate a client to run against the database service, as described in the *Exposing a database as a Web service* cheat sheet. Use the `wsdltojava` command to generate the client instead.

Launching a secure client as a Java application fails When you create a Java client using a basic Web services project with security enabled, launching the client as a Java application from the Run window fails. Launch the client by selecting **Run | External Tools | External Tools** instead.

Preferences problem When editing or viewing settings in the Preferences window, selecting **Artix Repository | Connection Settings** throws an error that prevents you from applying any unsaved changes. The Artix Repository preferences are not relevant to Artix Designer.

Makefile problems Certain Artix-specific Makefile settings are generated the first time you run the `artix_env` script. Thus, even though it is not required to run `artix_env` before starting Artix Designer, you must run the script at least once before trying to build any Artix C++ code.

Running imported demos After importing a basic Artix demo into Artix Designer, you should run the start scripts by selecting **Run | External Tools | External Tools**, as described in the online help. To run the scripts from the *ProjectFolder*/bin directory, first add the following to the top of each script:

```
set SCRIPT_DIR=%~dp0
cd /d %SCRIPT_DIR%
```

Generated scripts on UNIX not executable The scripts that the Artix Designer code generator creates on UNIX platforms are not executable. You need to change their permissions using the chmod command.

Windows-style environment variable in UNIX start_client script When generating a client on UNIX platforms, the start_client script includes a Windows-style %SCRIPT_DIR% environment variable. You must change this to the correct UNIX format, $SCRIPT_DIR, for the script to run.

start_container for a database service fails on UNIX Before launching a container for a database service from the External Tools window, you must change the following line in the start_container script in *ProjectDir*/.artix/containers/*CodeGenDir*:

```
export CLASSPATH=PathToJdbcDriver;$CLASSPATH
```

to

```
CLASSPATH=PathToJdbcDriver;$CLASSPATH
export CLASSPATH
```

Alternatively, leave the script as is and launch it from a terminal window.

start_client fails where WSDL path contains spaces A start_client script that references a WSDL path containing spaces throws an error. In Java, you can work around this issue by launching the client as a Java application from the Run window. In C++, edit the start_client script in *ProjectDir*/.artix/containers/*CodeGenDir* by replacing all instances of %20 with %%20 in the WSDL URL.

Problem applying policy changes In the Policy Editor, if you delete or add policies, the **Save** option remains grayed out in the **File** menu and you cannot save your changes. The only way to apply policy changes is edit some of the policy's properties and then save.

Generating code from bindings or portTypes fails In Artix Tools, generating code based on bindings or portTypes causes code generation to fail.

JRE on 64-bit Platforms

The following are known Java Runtime Environment (JRE) issues on 64-bit platforms:

Linux and Solaris The Solaris and Linux versions of the Artix installer include a 32-bit JRE only. Users working on 64-bit versions of these platforms should download and install a 64-bit JRE.

Artix Security on Linux On 64-bit Linux, the Artix Security Service runs only with JRE 1.4.2_06. No other JRE is supported for this platform.

Missing Classic Runtime Libraries on HP-UX

Support for the HP-UX Classic C++ runtime is broken due to the absence of a number of libraries from the Artix 4.2 kit.

No Uninstallation Script on AIX

The Artix 4.2 installer does not create an uninstallation script when installing on AIX. As a workaround, you can uninstall Artix from AIX by removing its top-level directory, since Artix installation does not make changes to the PATH or global environment.

Daylight Savings Time

The new daylight savings time schedule in the US and Canada has no effect on how Artix behaves. For details of the OS, compiler and JVM versions on which Artix is certified to run, see the following Knowledge Base article:

http://www.iona.com/support/kb/entry.jspa?entryID=2532

Fixed Bugs

The following bugs have been closed in Artix 4.2:

Table 1: *Bugs Fixed in Artix 4.2*

Bug #	Description
70562	Supporting `useMessageIDasCorrelationID` on the client side
70654	HTTP GET and POST support not properly implemented in Artix
70685	Artix IDL to WSDL mapping does not deal with null EPRs correctly
70803	`mustUnderstand=1` always added to `soap:header` coming from WSDL
70815	Revisit of feature request to log JMS header information to Artix log file
70827	Artix does not support multiple HTTP cookies
70867	WS-AT prepare/commit messages stop flowing after a Transformer crash
70880	Artix is core dumping when processing a sequence type
70885	Artix 4.x router silently modifies message before sending to destination
70895	Java DLL cannot handle renamed JAX-RPC operations
70898	Artix Security Guide refers to variables `check.kdc.running` and `check.kdc.principal` instead of `com.iona.isp.adapter.krb5.param.check.kdc.running` and `com.iona.isp.adapter.krb5.param.check.kdc.principal`
70902	Baltimore JCE provider conflict with Sun's JCE provider caused kerberos adapter not working
70903	If `check.kdc.running=true` in `is2.properties` and connection attempt to Kerberos server fails, then no information about the error cause is logged

Table 1: *Bugs Fixed in Artix 4.2 (Continued)*

Bug #	Description
70910	Strange behavior of router with a WSDL exposing two operations
70938	Artix incorrectly converts user exceptions to SOAPFaultExceptions when a custom handler is in the interceptor list
70939	Artix throws WSDL exception for valid WSDL containing `corba:const`
70942	Artix 4.1 server crashes when continuously receiving TCP handshakes with no data sent
70948	The operation `com.iona.jbus.messaging.ClientProxy.create` throws a NullPointer exception for certain EPRs
70952	Artix process hangs on Linux when initializing Java plug-ins
70955	Memory leak when routing requests from MQ series to, or from, another protocol
70964	Artix for Java does not have a way of getting the URL that a client posted a message to
70972	CORBA type mapping cannot reference types from another namespace
70981	Serializations symptoms (using HTTP) causing bottleneck in router Multi Instance threading model is leaky when called from the router Artix router leaks memory when handling custom Java transport
70984	`ws_coloc` will cause a VM crash for operations with more than one parameter
70996	Memory leak when routing one-way requests to/from MQ series from/to another protocol.
71013	Artix bus fails to initialize in multithreaded applications

Table 1: *Bugs Fixed in Artix 4.2 (Continued)*

Bug #	Description
71023	`XMUtils.toXML()` drops root element's namespace
71024	Artix C++ fails to unmarshal request using tagged binding and `minOccurs="1"` set for the message part
71026	Memory leak in Artix Java observed when `getRequestContext` called repeatedly
71046	Artix container crashes when attempting to use log4j log stream
71047	`CORBA::UNKNOWN` exception thrown without even dispatching the incoming request to the application-level code
71050	Crash when running inside JCA container and passing complex type
71052	Core dump due to unhandled JNI exception
71061	Artix J2EE will only register the last port in the `ejb_servants.properties` file when ports share a common service
71064	Latest Artix 4.1 cumulative patch breaks `MessageID/CorrelationID` pattern
71065	Artix 4.1: error in `oldjmswsdl_to_newjmswsdl.xsl` file
71066	Artix JVM core marshaling enum/union types
71075	In the router, implement a round-robin load balancer that can work in passthrough mode
71086	`close()` on socket returns EINVAL
71089	Need a solution to set the serviceID of a CORBA object for the CORBA binding programmatically in Artix Java
71091	Server getting write exception when using XML binding
SR 282042	Performance spike issue

Reporting Problems

Contact customer support at http://www.iona.com/support/contact/

Other Resources

If you need further help please use the following resources:

- Artix TechZone (`http://www.iona.com/devcenter/artix`) is a free online forum where IONA developers, your peers and other professionals come to share tips on Artix Web Services development. Visit the Artix TechZone today to start making the most of your Artix development experience.
- IONA University (`http://www.iona.com/info/services/ps/`) delivers practical and insightful courses that cover technical and product issues as well as standards-based best practices gleaned from real-world projects.
- IONA Professional Services (`http://www.iona.com/info/services/consulting/`) provide product expertise and consulting solutions that empower end-users, system integrators and software vendors with the knowledge to fully leverage IONA products. Together, IONA consultants and products equip you with a single platform for integrating and developing extremely reliable, scalable, and secure e-Business systems.
- IONA Security Mailing List (`security-alert@iona.com`): The mailing list provides security updates assocaited with all IONA products. To recieve security updates from IONA send mail to listserver@iona.com with no subject and the body text `subscribe security-alert` *youremail*.

> **Note:** Please do not post queries to this e-mail alias; it has been set up only to notify you of security alerts.

- Online Documentation (`http://www.iona.com/support/docs/index.xml`): The latest updates to the Artix documentation are posted on-line.
- Knowledge base articles (`http://www.iona.com/support/index.xml`): A database that contains practical advice on specific development issues, contributed by IONA developers, support specialists, and customers.