Artix™

Installation Guide

Version 4.1, September 2006

Making Software Work Together™

Contents

Preface

What is Covered in This Book

This book describes the prerequisites for installing Artix and the procedures for installing Artix on supported systems.

Who Should Read This Book

This guide is intended for all users of Artix.

How to Use This Book

This guide is divided into the following chapters:

- Chapter 1, Installation Prerequisites, which details the supported operating systems, compilers, and required patches.
- Chapter 2, Installing Artix, which provides the steps to install Artix and describes the installation options.
- Chapter 3, Uninstalling Artix, describes how to uninstall Artix.

The Artix Library

The Artix documentation library is organized in the following sections:

- Getting Started
- Designing Artix Solutions
- Configuring and Managing Artix Solutions
- Using Artix Services
- Integrating Artix Solutions
- Integrating with Management Systems
- Reference
- Artix Orchestration

Getting Started

The books in this section provide you with a background for working with Artix. They describe many of the concepts and technologies used by Artix. They include:

- Release Notes contains release-specific information about Artix.
- Installation Guide describes the prerequisites for installing Artix and the procedures for installing Artix on supported systems.
- Getting Started with Artix describes basic Artix and WSDL concepts.
- Using Artix Designer describes how to use Artix Designer to build Artix solutions.
- Artix Technical Use Cases provides a number of step-by-step examples of building common Artix solutions.

Designing Artix Solutions

The books in this section go into greater depth about using Artix to solve real-world problems. They describe how to build service-oriented architectures with Artix and how Artix uses WSDL to define services:

- Building Service-Oriented Infrastructures with Artix provides an overview of service-oriented architectures and describes how they can be implemented using Artix.
- Writing Artix Contracts describes the components of an Artix contract. Special attention is paid to the WSDL extensions used to define Artix-specific payload formats and transports.

Developing Artix Solutions

The books in this section how to use the Artix APIs to build new services:

- Developing Artix Applications in C++ discusses the technical aspects of programming applications using the C++ API.
- Developing Advanced Artix Plug-ins in C++ discusses the technical aspects of implementing advanced plug-ins (for example, interceptors) using the C++ API.
- Developing Artix Applications in Java discusses the technical aspects of programming applications using the Java API.

Configuring and Managing Artix Solutions

This section includes:

- Configuring and Deploying Artix Solutions explains how to set up your Artix environment and how to configure and deploy Artix services.
- Managing Artix Solutions with JMX explains how to monitor and manage an Artix runtime using Java Management Extensions.

Using Artix Services

The books in this section describe how to use the services provided with Artix:

- Artix Router Guide explains how to integrate services using the Artix router.
- Artix Locator Guide explains how clients can find services using the Artix locator.
- Artix Session Manager Guide explains how to manage client sessions using the Artix session manager.
- Artix Transactions Guide, C++ explains how to enable Artix C++ applications to participate in transacted operations.
- Artix Transactions Guide, Java explains how to enable Artix Java applications to participate in transacted operations.
- Artix Security Guide explains how to use the security features in Artix.

Integrating Artix Solutions

The books in this section describe how to integrate Artix solutions with other middleware technologies.

- Artix for CORBA provides information on using Artix in a CORBA environment.
- Artix for J2EE provides information on using Artix to integrate with J2EE applications.

For details on integrating with Microsoft's .NET technology, see the documentation for Artix Connect.

Integrating with Management Systems

The books in this section describe how to integrate Artix solutions with a range of enterprise and SOA management systems. They include:

- IBM Tivoli Integration Guide explains how to integrate Artix with the IBM Tivoli enterprise management system.
- BMC Patrol Integration Guide explains how to integrate Artix with the BMC Patrol enterprise management system.

- CA-WSDM Integration Guide explains how to integrate Artix with the CA-WSDM SOA management system.
- AmberPoint Integration Guide explains how to integrate Artix with the AmberPoint SOA management system.

Reference

These books provide detailed reference information about specific Artix APIs, WSDL extensions, configuration variables, command-line tools, and terms. The reference documentation includes:

- Artix Command Line Reference
- Artix Configuration Reference
- Artix WSDL Extension Reference
- Artix Java API Reference
- Artix C++ API Reference
- Artix .NET API Reference
- Artix Glossary

Artix Orchestration

These books describe the Artix support for Business Process Execution Language (BPEL), which is available as an add-on to Artix. These books include:

- Artix Orchestration Release Notes
- Artix Orchestration Installation Guide
- Understanding Artix Orchestration
- Artix Orchestration Administration Console Help.

Getting the Latest Version

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

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

Searching the Artix Library

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

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

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

http://www.iona.com/support/docs/artix/4.1/index.xml

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

Artix Online Help

Artix Designer and Artix Orchestration Designer include comprehensive online help, providing:

- Step-by-step instructions on how to perform important tasks
- A full search feature
- Context-sensitive help for each screen

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

- Select **Help|Help Contents** from the menu bar. The help appears in the contents panel of the Eclipse help browser.
- Press **F1** for context-sensitive help.

In addition, there are a number of cheat sheets that guide you through the most important functionality in Artix Designer and Artix Orchestration Designer. To access these, select **Help|Cheat Sheets**.

Artix Glossary

The Artix Glossary is a comprehensive reference of Artix terms. It provides quick definitions of the main Artix components and concepts. All terms are defined in the context of the development and deployment of Web services using Artix.

Additional Resources

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

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

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

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

Document Conventions

Typographical conventions

This book uses the following typographical conventions:

`Fixed width`	Fixed width (Courier font) in normal text represents portions of code and literal names of items such as classes, functions, variables, and data structures. For example, text might refer to the `IT_Bus::AnyType` class.
	Constant width paragraphs represent code examples or information a system displays on the screen. For example:
	`#include <stdio.h>`
`Fixed width italic`	Fixed width italic words or characters in code and commands represent variable values you must supply, such as arguments to commands or path names for your particular system. For example:
	`% cd /users/YourUserName`
Italic	Italic words in normal text represent *emphasis* and introduce *new terms*.
Bold	Bold words in normal text represent graphical user interface components such as menu commands and dialog boxes. For example: the **User Preferences** dialog.

Keying Conventions

This book uses the following keying conventions:

No prompt	When a command's format is the same for multiple platforms, the command prompt is not shown.
%	A percent sign represents the UNIX command shell prompt for a command that does not require root privileges.
#	A number sign represents the UNIX command shell prompt for a command that requires root privileges.
>	The notation > represents the MS-DOS or Windows command prompt.
... . . .	Horizontal or vertical ellipses in format and syntax descriptions indicate that material has been eliminated to simplify a discussion.
[]	Brackets enclose optional items in format and syntax descriptions.
{}	Braces enclose a list from which you must choose an item in format and syntax descriptions.
|	In format and syntax descriptions, a vertical bar separates items in a list of choices enclosed in {} (braces).
	In graphical user interface descriptions, a vertical bar separates menu commands (for example, select **File|Open**).

Installation Prerequisites

Before you install Artix, check the system requirements and familiarize yourself with the steps involved in installing the product.

In this chapter

This chapter discusses the following topics:

Before You Begin

Read the release notes

Before installing Artix:

- Visit the IONA Product Documentation web page at:

  http://www.iona.com/support/docs/artix/4.1/index.xml

- Read the *Artix Release Notes* for late-breaking information on new features, known problems, and other release-specific information.

There may also be updates to this *Installation Guide* available at the Web address above.

Saving your license

You will receive your Artix license file by e-mail. When the e-mail arrives, save the attached license file to a safe, accessible location on your hard drive. During installation, the Artix installer prompts for the location of the license file.

Supported Systems and Compilers

Platforms and patches

Artix 4.1 is supported on both Windows and UNIX. Table 1 shows the supported platforms and compilers.

As of release 4.1, Artix supports Java runtimes and compilers from both the Java 1.4 series and Java 5.0 (1.5) series. Table 1 shows the minimum supported version for each series.

For the latest information on supported platforms and compilers, see http://www.iona.com/products/artix/platforms.htm.

Table 1: *Supported Platforms and Compilers*

Operating System[1]	Hardware[2]	C++ Compilers	JDK
Windows 2000	x86	Visual C++ 6.0 SP3 Visual C++ .NET 2003 (7.1)	1.4.2_04 or 1.5.0
Windows XP	x86		
Windows Server 2003	x86		
Red Hat Enterprise Linux AS 3.0	x86	GCC 3.2.3	1.4.2_04 or 1.5.0 (32-bit)
Red Hat Enterprise Linux AS 3.0 (32-bit)	x86_64		1.4.2_04 or 1.5.0_03 (32-bit)
Red Hat Enterprise Linux AS 3.0 (64-bit)	x86_64		1.4.2_04 (32-bit) **and** 1.5.0_03 (64-bit) [3]
SUSE Linux Enterprise Server 9 (32-bit)	x86_64	GCC 3.3.3	1.4.2_04 or 1.5.0_03 (32-bit)
SUSE Linux Enterprise Server 9 (64-bit)	x86_64		1.4.2_04 (32-bit) **and** 1.5.0_03 (64-bit) [3]
Solaris 8 (32-bit)	SPARC	Sun C++ 5.8 (part of Sun ONE Studio 11)	1.4.2_04 or 1.5.0 (32-bit)
Solaris 9 (32-bit)	SPARC		
Solaris 10 (32-bit)	SPARC		

Table 1:   *Supported Platforms and Compilers*

Operating System[1]	Hardware[2]	C++ Compilers	JDK
Solaris 8 (64-bit)	SPARC	Sun C++ 5.8 (part of Sun ONE Studio 11)	1.4.2_04 or 1.5.0 (64-bit)
Solaris 9 (64-bit)	SPARC		
Solaris 10 (64-bit)	SPARC		
AIX 5.2	POWER, PowerPC	Visual Age 6.0.2 (32-bit)	IBM JDK 1.4.2 or 1.5.0
HP-UX 11, HP-UX 11i [4]	PA-RISC	aCC 3.56	HP JDK 1.4.2.05 or 5.0.05

1. In the Operating System column, "32-bit" refers to an installation of the 32-bit version of Linux or Solaris onto 64-bit capable hardware. "64-bit" refers to an installation of the 64-bit version of Linux or Solaris onto 64-bit hardware.

2. In the Hardware column, X86 refers to the 32-bit Pentium architecture, while X86_64 includes both AMD64 (Opteron) and Intel EMT64 (Xeon) architectures.

3. Both JDKs are required for 64-bit Linux. See the Note below for additional requirements.

4. Artix runtime libraries support applications built with the HP-UX Standard C++ runtime. To be compatible, you must build your Artix applications with `aCC`, the HP-UX C++ compiler, using its `-AA` option. See HP's support site for more information on the HP-UX Standard versus Classic runtimes.

> **Note:** Unless you plan to use the JVM that ships with Artix, set your system's `JAVA_HOME` environment variable to point to your Java JDK installation.
>
> Since 64-bit Linux requires both 32-bit and 64-bit Java compilers, you must set `JAVA_HOME_32` and `JAVA_HOME_64` environment variables and point each to its correct JDK.

Operating System Patch Requirements

Table 2 shows the operating system patches and runtime components for C++ and Java required to run Artix for the supported platforms.

Table 2:   *Required OS Patches*

Operating System[1]	Hardware[2]	OS Patches; C++/Java Runtime Environment
Windows 2000	x86	SP4
Windows XP	x86	SP2
Windows Server 2003	x86	No patches required.
Red Hat Enterprise Linux Advanced Server 3.0	x86	GCC 3.2 runtime (`libstdc++.so.5` and `libgcc_s.so[.1]`)
Red Hat Enterprise Linux Advanced Server 3.0	x86_64	No patches required.
SUSE Linux Enterprise Server 9	x86_64	SP1
Solaris 8 (32-bit)	SPARC	108827-12; 108434-09 (32-bit C++ runtime); 108827-12 (libthread patch); 111685-01 patch
Solaris 9 (32-bit)	SPARC	111685-01 patch
Solaris 10 (32-bit)	SPARC	
Solaris 8 (64-bit)	SPARC	No patches required.
Solaris 9 (64-bit)	SPARC	
Solaris 10 (64-bit)	SPARC	
AIX 5.2	POWER, PowerPC	Fix for IY57576

Table 2: *Required OS Patches (Continued)*

Operating System[1]	Hardware[2]	OS Patches; C++/Java Runtime Environment
HP-UX 11	PA-RISC	PHSS_25170 (aCC runtime); PHSS_24627 (aCC runtime); PHSS_21075 (`varargs.h` and +DA2.0W); PHSS_23699 (`libcl`); PHSS_24303 (`dld`); PHCO_24148 (`libc`); PHSS_26559
HP-UX 11i	PA-RISC	PHSS_24638 (aCC runtime); PHCO_24402 (1.0 libc cumulative header file patch 60); PHCO_25452 (1.0 libc cumulative patch 23632); PHSS_24304 (1.0 ld(1) and linker tools cumulative patch 21234)

1. In the Operating System column, "32-bit" refers to an installation of the 32-bit version of Linux or Solaris onto 64-bit capable hardware. "64-bit" refers to an installation of the 64-bit version of Linux or Solaris onto 64-bit hardware.

2. In the Hardware column, X86 refers to the 32-bit Pentium architecture, while X86_64 includes both AMD64 (Opteron) and Intel EMT64 (Xeon) architectures.

Java, Compiler, and Artix Designer Requirements

Java requirements

The Artix installer offers to install a Java virtual machine for exclusive use by Artix, or allows you to specify the use of a previously installed system JVM. If you elect to use an existing JVM, make sure it is at the required release level for your operating system, as specified in Table 1.

A JVM is required in order to run Artix Designer. You can install the JVM as part of a Java Runtime Environment (JRE) or as part of a Java Development Kit (JDK).

> **Note:** If you plan to develop Artix applications in Java, or if you want to compile and run any of the Artix Java demos, you must install a JDK.
>
> If you will develop only in C++ (or in a language supported by Artix for z/OS), you can install a JRE, such as the one installed with Artix.

Licensing restrictions from Sun Microsystems prevent IONA from including a JDK with the Artix installation. To compile Java code, you must download and install a JDK from Sun Microsystems. This is true even if you allow the Artix installer to install a dedicated JRE. For more information, see Sun Microsystems' Java site at http://java.sun.com/j2se.

C++ development requirements

If you plan to develop Artix applications in C++ or if you want to compile and run any of the Artix C++ demos, you must have a C++ compiler installed on the target machine. Table 1 shows the C++ compilers supported by Artix.

Artix Designer requirements

The Artix Designer development tool ships as a set of plug-ins for the Eclipse open source development environment.

> **Note:** Artix Designer is shipped with the Windows, Linux, and Solaris versions of Artix.
>
> Other users can install Artix Designer into an existing Eclipse installation, as described in "Configuring Eclipse for Artix Designer" on page 41.

Solaris and Linux requirements for Artix Designer

To run Artix Designer on Solaris, you must have GTK 2.0 or later installed, as well as the prerequisites of GTK, which are ATK, glib, libgcc (or GCC), libiconv, libintl, and Pango. Install GTK and its prerequisites using the method defined by Sun Microsystems for your version of Solaris.

Running Artix Designer on Linux has the same requirement for GTK 2.0 or later and its prerequisites. For the supported versions of Linux, these subsystems are already installed in the default configuration.

Using Artix Designer in your existing Eclipse

The Artix installer installs the Eclipse platform, the Artix Designer plug-ins, and all necessary supporting plug-ins into the following directory:

```
ArtixInstallDir\artix\version\eclipse
```

If you are already an Eclipse user, you can add the Artix Designer plug-ins to your existing Eclipse installation, as described in "Configuring Eclipse for Artix Designer" on page 41.

Disk Space Requirements

Overview

This section lists the amount of permanent and temporary disk space required for different installations of Artix 4.1.

Artix installation disk space

The disk space requirements for Artix depend on the installation options selected. Table 3 shows the approximate disk space in megabytes for full, minimum, and runtime only installations. These entries include a dedicated JRE installed with Artix.

Table 3:   *Disk space used by Artix installations in megabytes*

Installation Type	Windows	Linux	Solaris	AIX	HP-UX
Artix full installation	459	595	625	906	733
Artix custom installation with minimum options selected	349	454	482	755	700
Artix runtime only installation	224	395	458	834	609

Artix installer disk space

The temporary disk space used after unpacking the Artix installer package is shown in Table 4. This table also shows the disk space used by the Java runtime environment installed with Artix. The JRE numbers are included in the totals in Table 3.

Table 4:   *Disk space used by the unpacked Artix installer and JRE*

Installation Type	Windows	Linux	Solaris	AIX	HP-UX
Unpacked Artix installer files	233	288	284	271	256
Dedicated JRE installed with Artix	42	59	56	49	151

Temporary disk space

In addition to the requirements in Table 3 and Table 4, you will need 30 to 50 megabytes of temporary work space for the installer. By default, this work space is the Windows `TEMP` directory or the UNIX `/tmp` directory.

On UNIX, if the required temporary space is not available on `/tmp`, you can specify a different partition for the Artix installer by setting the `IATEMPDIR` environment variable. For example:

```
IATEMPDIR=/local2/tmp
export IATEMPDIR
```

Using Artix with Other Products

This section outlines the Artix support for third-party products and protocols. This information helps you plan for running some of the Artix demos and examples.

This section includes important information on installing Artix on a machine that hosts other IONA products.

Messaging

Artix supports the following messaging product versions:

- IBM WebSphere MQ 5.3
- BEA Tuxedo
    - 6.5 on Windows and HP-UX
    - 8.1 on all supported platforms except AIX
- TIBCO Rendezvous 7.2
- SonicMQ 5.x, 6.x

Transports

Artix supports these transports:

- SOAP 1.1 and 1.2 (MTOM is not supported for SOAP 1.2)
- IIOP 1.1 and 1.2
- HTTP
- RMI

Application servers

The Artix J2EE Connector supports the following application servers:

- JBoss 4.0.1
- BEA WebLogic 8.1 SP3
- IBM WebSphere 5.1

Security

Artix supports the following security products and protocols:

- SiteMinder 4.6.1, 5.5
- Kerberos 5
- LDAP 3.0

Web services

Artix supports these Web services products and protocols:

- Apache Axis 1.3
- jUDDI 0.9rc3

Artix and Microsoft .NET

Artix ships with an assembly that developers can use to build interactions between Artix and Microsoft .NET. The assembly provides a set of helper libraries that facilitate interaction between the Artix session manager and locator services, and an IS2 Kerberos adapter, using Microsoft Active Directory.

The Microsoft environments supported for .NET integration are:

- Development environment: Visual Studio .NET 2003
- Runtime environment: .NET Framework 1.1
- Operating systems: Windows 2000, Windows XP, and Windows Server 2003

For further information, see the *Artix and .NET* technical note on the Artix Tech Zone at http://www.iona.com/devcenter/artix/notes.htm.

Installing Artix with other IONA products

If you have another IONA product installed on the machine where you are installing Artix 4.1, remember the following:

- Do not install Artix 4.1 under the same directory tree as an existing Artix installation. Either uninstall the existing version, or install Artix 4.1 under a separate directory structure.
- Do not install Artix 4.1 under the same directory tree as any other IONA product, except Orbix 6.3.1.
- Do not allow the Artix installer to set or update the IT_PRODUCT_DIR or PATH environment variables.
- If you are installing Artix 4.1 on the same machine as Orbix 6.3.1, first read .

Installing Artix

This chapter describes how to install Artix.

In this chapter   This chapter discusses the following topics:

Running the Artix Installer

Downloading the installation package

The Artix 4.1 installation package is available for download from the IONA Product Download Center at http://www.iona.com/downloads/.

The following installation packages are available:

Table 5: *Artix Installation Packages*

Platform	Installation Package
Windows	`artix_version_Windows.zip`
Linux	`artix_version_Linux.tar`
Solaris	`artix_version_SunOS.tar`
AIX	`artix_version_AIX.tar`
HP-UX	`artix_version_HP-UX.tar`

In this table's installation package names, *version* is replaced by the currently shipping version number. For example: `artix_4.1_SunOS.tar`

Download the package for your platform and extract its contents to a temporary directory on your hard drive.

Installation issues

The following are known issues with the installation of Artix 4.1:

- Artix 4.1 cannot be installed in the same directory tree as Artix 1.x or 2.x. IONA recommends that you remove any 1.x or 2.x installations from your system before installing Artix 4.1.
- When installing Artix 4.1 on Windows Server 2003, you must run the installer in Windows XP compatibility mode.
- When installing Artix 4.1 on Windows platforms, do not install into a top-level folder whose pathname contains a space. For example, do <u>not</u> install into `C:\Program Files\IONA`. If you do, the settings of `PATH` and `CLASSPATH` in the `artix_env.bat` file, and the demo build scripts will be incorrect.

• When using the console installation for UNIX systems, only Full and Runtime-only installation options are available.

Installation modes

You can run the Artix installer in three modes, as described in the following topics:

Installing in GUI Mode

Overview
You can run the Artix installer in graphical user interface mode on all supported platforms.

Running the installer
To install Artix in GUI mode:

1.   Go to the directory into which you extracted the installation package and run the installer:

Windows

```
artix.exe
```

UNIX

```
./artix.bin
```

2.   Follow the onscreen instructions and respond to each prompt.

Use the information in Table 6 as a guide when selecting installation options as the installation proceeds.

Table 6:   *Artix installation options*

Platform	Installation Option	Default	Notes
All	Top-level directory for your Artix installation	Windows: C:\IONA UNIX: /opt/iona	On Windows, do *not* specify a directory whose pathname contains spaces. For example, do not specify a directory under C:\Program Files. On UNIX, specify a directory in which your current login name has full read and write permissions. **Note:** If other IONA products are already installed on your machine, refer to "Installing Artix with other IONA products" on page 24.

Table 6:   *Artix installation options*

Platform	Installation Option	Default	Notes
Windows only	Location for program shortcuts	The Start | Programs | IONA menu for all users	You can select only one location. Some of the location options also allow you to check the "Set for all system users" checkbox. The default is to set up the shortcuts for the current user only.
Windows only	Allow the Artix installer to set environment variables	For all users on the system	This option sets certain Artix environment variables for the whole system so that they will be available after each reboot. For Artix to run, these environment variables do NOT need to be permanently set using this option; it is a convenience option to be set according to your preference. Independent of this installation option, the Artix environment will be set up when you run the artix_env.bat or start_eclipse.bat scripts. See "Setting up the Artix Environment" on page 39 for more information. This option sets variables such as IT_PRODUCT_DIR, and appends the Artix *bin* directory to the PATH. To allow these settings for all users, you must be logged in as an administrator. **WARNING:** Do not allow the installer to set these variables if you have other IONA products already installed on your machine.
All	Development versus runtime only	Development	Specify the runtime-only option when deploying an Artix service on a system other than your development system.

Table 6: *Artix installation options*

Platform	Installation Option	Default	Notes
All	Install or select a JVM	Install an Artix-specific JRE	The Artix installer can install an Artix-specific JRE, but does not install a JDK. If you want to compile Java applications, you must still install a separate JDK, as described in "Java requirements" on page 19.
			The installer may fail to list all JVMs on your system. If you know the exact location of your JRE or JDK, it is faster to navigate to that location than to let the installer search the entire disk.
			Note: If you are running 64-bit Linux and plan to do 64-bit development, do not allow the Artix installer to install its JRE. Instead, select your locally installed 64-bit JRE or JDK. After Artix is installed, set the `JAVA_HOME_32` environment variable to point to your 32-bit JRE or JDK.
All	Save installation options?	No	Allows you to save a properties file containing entries for the installation you just completed. This properties file can be used with future automated or silent installations of Artix as described in "Installing in Silent Mode" on page 32.

3. When the installer finishes installing the Artix files, it launches the license installer. Click **Browse** to locate the license file you saved on your system, as described in "Saving your license" on page 14. The installer copies your license information into the file `ArtixInstallDir\etc\licenses.txt`.

    If you prefer to install the license later, click **Cancel**. For more information see "Installing Artix License Keys" on page 37.

4. Click **Done** to finish the installer.

Installing in Console Mode

Overview

UNIX users can run the Artix installer in console mode if no windowing environment is available.

Running the installer

To run the Artix installer in console mode:

1. Go to the directory into which you extracted the installation package and run the installer as follows:

    ```
    ./artix.bin -i console
    ```

2. Follow the onscreen instructions and respond to option prompts. Use the information in Table 6 on page 28 as a guide when selecting installation options as the installation proceeds.

Note: When using the console installation for UNIX systems, only Full and Runtime-only installation options are available.

WARNING: Console installation is only for UNIX systems. Do not use `-i console` when installing for Windows.

The Windows installer inadvertently run with `-i console` behaves like a silent installation with default options. In this case, the contents of C:\IONA, if any, are silently overwritten with a full installation of Artix.

Installing in Silent Mode

Overview

Silent installations are installations that run without user intervention. Their main advantage is that they allow you to automate the process of installing Artix on more than one machine.

In an interactive installation, the installer receives necessary user input in response to questions posed in a GUI or console. In a silent installation, you must provide the same information in a properties file.

Creating the properties file

First, create a properties file to contain the response values for the silent installation. You can use any name for your properties file and invoke it with the -f option when running the installer. Or you can use the reserved file name installer.properties, which is automatically used by the installer.

The easiest way to create a properties file is to go through the steps of an Artix installation, then save the properties of that installation to a file when so prompted at the end of the installation. You can then edit the saved properties file to adjust the way you want your silent installation to proceed.

You can also create a properties file with any text editor.

Contents of properties file

The properties file must contain entries for the variables listed in Table 7:

Table 7: *Properties File Variables*

Variable	Description
USER_INSTALL_DIR	The directory where Artix will be installed on the user's machine
SET_PATH	Allows you to set the system environment variables IT_PRODUCT_DIR and PATH for all users on this destination machine, for only the current user, or not at all. Takes the following values: • Do not set now • All users • Current user

Table 7: *Properties File Variables (Continued)*

Variable	Description
SILENT_ACCEPT_LICENSE_AGREEMENT	Set to true to accept the Artix license agreement.
JAVA_HOME	The path to the root of a JDK or JRE installation. If this variable is set, the installation uses the JDK or JRE specified. If unset, the installation installs a dedicated JRE.
INSTALLER_UI	Set to silent for a silent installation
USER_INPUT_SAVE_PROPERTIES_YES_NO	Set to No for a silent installation.
USER_INPUT_INSTALL_TYPE	Takes one of the following values: • Full Installation • Custom Installation • Runtime Installation
OPTIONAL_COMPONENT_LIST	Entries for this variable are only used when USER_INPUT_INSTALL_TYPE is set to Custom Installation. This variable is ignored otherwise. If used, this entry must be one long string containing a comma-separated list of values, with no spaces between entries. The valid values for this variable are shown in Table 8.

Note: When including directory paths in the properties file, you can represent path separators in the format $/$. This is read by the Artix installer as the correct path separator independent of operating system convention. For example: C:$/$IONA

If you instead use backslashes in a properties file targeted for Windows systems, you must escape the backslashes by doubling them, and escape the colon in drive letters with a backslash. For example: C\:\\IONA

The valid values for the OPTIONAL_COMPONENT_LIST variable are shown in Table 8.

Table 8:   *Valid values for OPTIONAL_COMPONENT_LIST*

Value	Description
`artix.development.optional.eclipse`	Installs an instance of the Eclipse framework with Artix plug-ins that enable Artix Designer.
`artix.development.optional.ha`	Installs support for high availability service replication, which allows services to remain operational despite hardware or communication failures.
`artix.development.optional.locator`	Installs the Artix locator service, which allows clients to locate registered services independent of their deployed location.
`artix.development.optional.management`	Installs support for integrating Artix with Enterprise Management Systems from several vendors.
`artix.development.optional.mq`	Installs support for interoperability with WebSphere MQ message queues.
`artix.development.optional.routing`	Installs the Artix router service, which can be used as a bridge between different communication protocols.
`artix.development.optional.security`	Installs the IONA Security Framework, which includes: • Support for the WS-Security SOAP header format • Support for single sign on and mutual authentication • IONA Security Service (role based access control and authentication) • Plug-ins to support File Adapter, Netegrity, LDAP

Table 8: *Valid values for OPTIONAL_COMPONENT_LIST*

Value	Description
`artix.development.optional.sm`	Installs the Artix session manager, which can be used to control the number of clients that can access a group of services concurrently.
`artix.development.optional.tibrv`	Installs support for interoperability with the TIBCO Rendezvous messaging transport.
`artix.development.optional.tm`	Installs the Artix transaction manager, which supports interoperation with a CORBA OTS transaction system.
`artix.development.optional.tuxedo`	Installs support for interoperability with BEA Tuxedo middleware.

Example properties file

An example of a properties file is shown below:

```
USER_INSTALL_DIR=C:$/$IONA
USER_INPUT_INSTALL_TYPE=Custom Installation
OPTIONAL_COMPONENT_LIST=artix.development.optional.eclipse,artix
    .development.optional.locator,artix.development.optional.secu
    rity,artix.development.optional.ha,artix.development.optional
    .routing,artix.development.optional.tm,artix.development.opti
    onal.sm
JAVA_HOME=C\:\\Progra~1\\Java\\j2sdk1.4.2_04
SET_PATH=Do not set now
SILENT_ACCEPT_LICENSE_AGREEMENT=true
USER_INPUT_SAVE_PROPERTIES_YES_NO=No
INSTALLER_UI=silent
```

Running the installer

To run the Artix installer in silent mode:

1. Save the properties file to the folder into which you extracted the installation package.

2. From the same folder, run the Artix installer with its -f option:

   Windows

   ```
   artix.exe -f your_properties_file
   ```

UNIX

```
./artix.bin -f your_properties_file
```

As an alternative, if you used the reserved file name
`installer.properties`, you do not need to use the `-f` option:

Windows

```
artix.exe
```

UNIX

```
./artix.bin
```

When the Artix installation is complete, you need to install the Artix license
file. For more information see "Installing Artix License Keys" on page 37.

Uninstalling a Silent Installation   After a silent installation, the next uninstallation also runs silently.

Note: When running a silent uninstallation in Windows, the Add/Remove
Control Panel's dialog box may appear to be hung. In fact, the silent
uninstallation is proceeding silently. Control is returned to the dialog box
when the uninstallation completes.

Installing Artix License Keys

Overview

Before you can begin using Artix, you must install a valid product license.

The license is a text file containing keys for the individual components that you have purchased.

Typically, you receive your Artix license from IONA by e-mail. Save it to a location on your hard drive and then install it in one of the following ways:

- Automatically from the Artix installer (See "Installing in GUI Mode" on page 28)
- By running the License Installer script (See below)
- By manually copying the license file to the default location (See "Installing the license file manually" on page 38
- By appending the Artix license to an existing IONA product license (See "Merging Artix and Orbix licenses" on page 48)

Running the License Installer

If you did not install your license keys during Artix installation, you can use the license installer script:

To install a license using the license installer:

1. Run the license installer as follows:

   Windows
   From the Windows **Start** menu, select **(All) Programs|IONA|Artix 4.1|License Installer**.

   UNIX
   Run the following script:

   ```
   ArtixInstallDir/artix/4.1/bin/license_installer
   ```

2. In the Install Artix Licenses dialog box, click the **Browse** button.
3. Browse to the directory where you saved your license file.
4. Select the license file and then click **Select**.
5. The license file is added to the default license location. Click **OK** to close the license installer.

Installing the license file manually   You can install your license manually by copying the license file to the default location:

```
ArtixInstallDir\etc
```

If you want to save the license file to an alternative location on your hard drive, you must set the IT_LICENSE_FILE environment variable to point to the alternate location.

Windows

```
set IT_LICENSE_FILE=license_file_path
```

UNIX

```
export IT_LICENSE_FILE=license_file_path
```

WARNING: If you have other licensed IONA products installed, setting IT_LICENSE_FILE may cause your existing products to stop working. See "Merging Artix and Orbix licenses" on page 48.

Setting up the Artix Environment

Setting the runtime environment

Before you can run any Artix-based processes you must set up the runtime environment. To set the runtime environment do the following:

Windows

```
> cd ArtixInstallDir\artix\4.1\bin
> artix_env
```

UNIX

```
% cd ArtixInstallDir/artix/4.1/bin
% . ./artix_env
```

This script sets up several Artix-specific environment variables, appends the Artix `bin` directory to the system search path, and appends the Artix shared library directory to the shared library path.

Setting the environment for Visual C++ 7.1

The default Artix for Windows installation presumes the compiler in use is Visual C++ 6.0. If you are using Visual C++ 7.1 (Visual C++ .NET 2003) as your compiler, you must run a one-time setup command to configure the runtime environment.

To set the runtime environment to use Visual C++ 7.1, open a new command prompt session (that is, one in which you have not already run the `artix_env` script) and run the following:

```
> cd ArtixInstallDir\artix\4.1\bin
> artix_env -compiler vc71
```

Note: You only need to use the `-compiler` switch one time to specify compiler version. Once the compiler version is set, you can run the `artix_env` script normally, without the switch.

Resetting the environment for Visual C++ 6.0

To reset the Artix runtime environment for Visual C++ 6.0, run the following from a new command prompt:

```
> cd ArtixInstallDir\artix\4.1\bin
> artix_env -compiler vc60
```

Setting the environment for Linux 64-bit development

If you are running 64-bit Linux and plan to do 64-bit development you must set the Artix environment accordingly.

To set the runtime environment for 64-bit development, open a command prompt in which you have not already run the artix_env script and run the following:

```
> cd ArtixInstallDir\artix\4.1\bin
> ./artix_env -bits 64
```

Note: You only need to use the -bits switch one time to set specify 64-bit development. Once the bit level is set, you can run the artix_env script normally, without the switch.

Verifying the environment

To verify that the Artix environment is correctly set up, open a command prompt and run the following:

Windows

```
cd %IT_ARTIX_BASE_DIR%
```

UNIX

```
cd $IT_ARTIX_BASE_DIR
```

Your working directory should change to the directory where you installed Artix.

Configuring Eclipse for Artix Designer

In this section

Depending on how you have set up your development environment, you may need to do some further Eclipse configuration.

This section contains the following topic:

Installing Artix Plug-ins into an Existing Eclipse Platform

Overview

By default, the Artix installer installs a new Eclipse framework, including the Artix Designer plug-ins, onto your machine. However, you may want to use Artix Designer with an existing Eclipse platform.

> **Note:** Artix Designer 4.1 must be used with Eclipse 3.2.

Eclipse prerequisites

To install and use the Artix plug-ins in your own instance of Eclipse, you must have:

- Eclipse 3.1 or 3.2.
- The Java Development Tools (JDT) plug-in.
- The C/C++ Development Tools (CDT) plug-in, if you plan to develop with C++.
- Eclipse Modeling Framework (EMF).
- EMF Service Data Objects (SDO).
- XML Schema Infoset Model (XSD).
- A licensed installation of Artix 4.1 on the same machine.

For each Eclipse plug-in listed above, no particular version number is required. Use the latest version appropriate for your Eclipse version.

Use Eclipse's **Help** | **About Eclipse SDK** | **Feature Details** button to confirm that you have the necessary Eclipse prerequisites.

Using the Eclipse update mechanism

Use the Eclipse update mechanism to download and install the Artix plug-ins. This method ensures that the Artix plug-ins you use are the most up-to-date versions.

To add the Artix plug-ins to Eclipse, follow these steps:

1. In Eclipse, select **Help|Software Updates|Find and Install**. The Install/Update wizard launches.

Figure 1: *The Feature Updates Panel of the Install/Update Wizard*
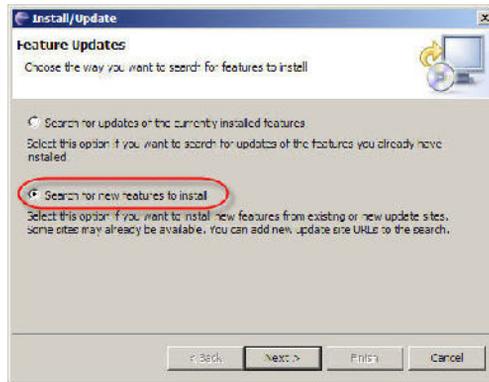

2. In the Feature Updates panel, select **Search for new features to install,** then click **Next**.

3. In the **Update Sites to Visit** panel, click the **New Remote Site** button.

4. Enter the following details in the New Update Site dialog box:
    *   Name: `IONA Artix Plug-ins`
    *   URL: `http://www.iona.com/downloads/artix/eclipse`

5. Click **OK**.

Figure 2: *Edit Remote Site dialog*
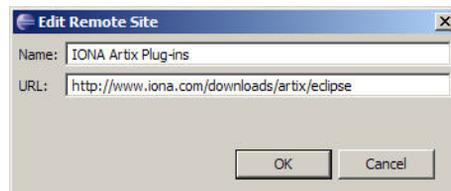
6.   Select the **IONA Artix Plug-ins** check box and unselect all other boxes in the **Sites to Include** section.

7.   Check the **Ignore Features** checkbox and click **Finish**.

Figure 3:   *The Update Sites to Visit Panel*
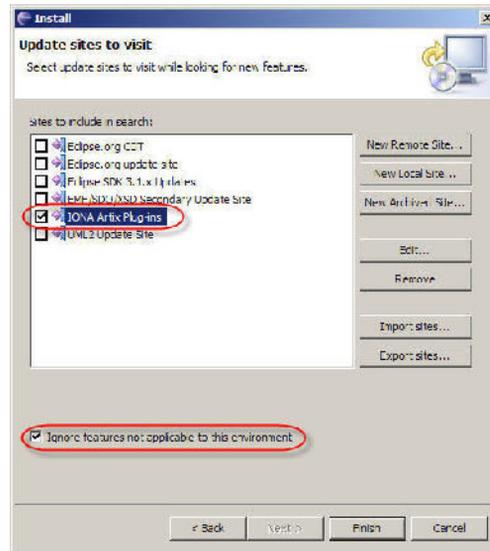
8.   Eclipse contacts the specified URL and returns with a list of available Eclipse plug-ins at that site.

9.   In the **Search Results** panel, check the **Show the latest version** checkbox. Select the check boxes beside all **IONA Artix Plug-ins** entries, then click **Next**.

10.   Accept the license agreement and click **Next**.

11.   In the **Installation** panel, confirm the target installation location and click **Finish** to begin the installation.

Post-download steps

After downloading and installing the Artix plug-ins to your separate Eclipse installation, you must create startup scripts. In the steps that follow, the top level of your non-IONA separate Eclipse directory is abbreviated as *YourEclipseDir*.

1. Copy the `start_eclipse[.bat]` file to *YourEclipseDir.*

2. Copy the `log4j.properties` file to *YourEclipseDir.*

3. In the copied script file, remove or comment out the line that changes directory to the Artix-installed version of Eclipse.

4. In the copied script file, change the path in the `-Dlog4j.configuration` parameter to point to *YourEclipseDir*`\log4j.configuration`.

Running self-installed Artix Designer

To run the Artix Designer plug-ins in your own copy of Eclipse, you must have a licensed installation of Artix 4.1 on the same machine. Your edited `start_eclipse[.bat]` script calls the environment setting script from the Artix installation. The Artix libraries and demo files are used from the Artix installation.

You can have two or more instances of Eclipse on the same machine without conflict. There is no need to remove the Artix-installed instance of Eclipse if you prefer to use Artix Designer integrated in your own instance of Eclipse.

When you use Artix Designer in your own Eclipse instance, the same features are present as in the versions installed by the Artix installer. This includes the Artix perspectives, the Artix Designer menu, and the Artix additions to the help system, tutorials, and cheat sheets.

Configuring Windows Eclipse for C++ Development

Overview

This step applies if you are running Artix Designer on Windows and you plan to create C++ applications. This step applies equally when running Artix Designer:

* within the Eclipse platform installed by the Artix installer
* within a separately installed instance of Eclipse

Sourcing Visual C++ in the start_eclipse script

The start_eclipse.bat script contains additional parameters needed to launch Eclipse with the Artix Designer plug-ins loaded.

You must call your Visual C++ startup script in the start_eclipse.bat script before you perform any C++ development with Artix Designer.

To edit the start_eclipse script:

1. Open the start_eclipse.bat file with a text editor.

2. Add the following line before the call to artix_env.bat:

    Visual C++ 6.0

    ```
    call "C:\Program Files\Microsoft Visual
        Studio\vc98\bin\vcvars32.bat"
    ```

    Visual C++ 7.1

    ```
    call "C:\Program Files\Microsoft Visual Studio .NET
        2003\Common7\Tools\vsvars32.bat"
    ```

If you installed Visual C++ in a non-default location, then adjust the call line as appropriate for your machine.

Once you have edited the start_eclipse.bat script, shut down Eclipse and run the start_eclipse again to relaunch Artix Designer.

Installing Artix with Orbix

Overview

There are two possible reasons for installing Artix on the same machine as Orbix:

- To allow Orbix applications to use Artix functionality. For example, you may want to embed the Artix routing plug-in into an Orbix application.
- To enable Artix applications to use Orbix enterprise features, such as the Name Service.

Choosing an installation directory

There are two ways of installing Artix and Orbix on the same machine:

- Install both products in a common *ArtixInstallDir* directory, such as C:\IONA
- Install the products in separate directories

There are advantages and disadvantages to both approaches, as described in Table 9.

Table 9: *Installation directory comparison*

Destination	Advantages	Disadvantages
Common directory	Merges license files in the *ArtixInstallDir*/etc directory. Overwrites and updates Orbix library files in the *ArtixInstallDir*/bin directory. Allows you to set the IT_PRODUCT_DIR and PATH environment variables at install time.	Restricted to Artix 4.x and Orbix 6.3.1. Orbix must be installed first.

Table 9: *Installation directory (Continued)comparison*

Destination	Advantages	Disadvantages
Separate directories	Can be used with Orbix 6.2 and earlier.	No merging of license files.
		Duplicates some libraries in each product's *ArtixInstallDir*/bin directory.
		IT_PRODUCT_DIR and PATH environment variables cannot be set at install time.

Merging Artix and Orbix licenses

If you install Artix into the same top-level directory as Orbix 6.3.1, the Artix installer automatically appends the Artix license to the existing Orbix license in the *ArtixInstallDir*/etc directory.

However, if you choose to install Artix and Orbix into separate directories, and you want your Orbix applications to access Artix functionality, you must merge the two license files using a text editor.

IONA recommends that you preserve your existing Artix and Orbix license files, and save the merged license file in a new location.

You then need to point to the location of the merged license in a

```
SET IT_LICENSE_FILE=
```

command in the *DomainName*_env file for your Orbix application.

Combining Artix and Orbix configuration files

By default, the Artix configuration file is installed in:

```
ArtixInstallDir/artix/version/etc/domains/artix.cfg
```

Once you have Artix and Orbix installed on the same machine, you need to reference the Artix configuration file from within the Orbix configuration file: You can do this in one of the following ways:

1. By adding the following `include` statement to the bottom of the Orbix configuration file:

```
artix {
  include "ArtixInstallDir/artix/version/etc/domains/
   artix.cfg";
};
```

2. By adding a new scope containing the entire contents of the `artix.cfg` file to the bottom of the Orbix configuration file, as follows:

```
artix {
  ContentsOfArtixConfigFile
};
```

3. By adding the following `include` statement to the bottom of the Orbix configuration file:

```
include "ArtixInstallDir/artix/version/etc/domains/
   artix.cfg";
```

Then open the `artix.cfg` file and add an `artix` scope around the entire contents of the file, as follows:

```
artix {
  ContentsOfArtixConfigFile
};
```

Running Orbix and Artix applications

Overview

If you combine your Artix and Orbix configuration files, take into account the implications described in this section when running Orbix or Artix applications.

Running an Orbix application in a pure Orbix environment

To run an Orbix application under a pure Orbix environment, use the *DomainName*_env file, which references the Orbix *DomainName*.cfg file.

As long as your application's ORBname does not include artix as the initial scope name, the Artix configuration information is ignored.

Running an Artix application in a pure Artix environment

To run an Artix application under a pure Artix environment, use the artix_env file, which references the artix.cfg file.

If you used the third approach to combining the Artix and Orbix configuration files, all Artix applications will need to run under a scope that starts with artix.

Running Artix/Orbix applications that use the other product's functionality

To run either an Artix or an Orbix application that references the other product's functionality, create an application-specific environment file that:

- References the location of the Orbix *DomainName*.cfg file
- Includes artix as the initial scope of the application's ORBname
- Sets the location of the merged license file (IT_LICENSE_FILE)
- Sets the PATH environment variable, including the Artix directories first, then the Orbix directories

The application reads all the Orbix configuration information first and then reads all of the Artix configuration information.

If the same configuration entry is encountered twice, the Artix value takes precedence because it is contained in the nested scope. (All the Orbix entries are at global scope, whereas all the Artix entries are within the artix scope.)

Uninstalling Artix

This chapter describes how to uninstall Artix.

In this chapter

This chapter contains the following sections:

Uninstalling Artix Designer

Uninstalling from the Artix Eclipse platform

If you are running Artix Designer from the Eclipse platform that was installed along with Artix, Eclipse is removed when you uninstall Artix.

Uninstalling from an existing Eclipse platform

If you added the Artix Designer plug-ins to an existing Eclipse installation, you must delete the plug-ins manually to uninstall them.

To delete the Artix Designer plug-ins that you manually installed into Eclipse:

1. Shut down Eclipse.

2. Go to your *EclipseInstallDir*/plugins directory.

3. Delete all the plug-in folders whose names begin with com.iona.bus.

4. Restart Eclipse.

Uninstalling on Windows

Uninstalling Artix

To uninstall Artix on Windows:

1. From the Windows **Start** menu, select **(All) Programs|IONA|Artix 4.1|Uninstall Artix**.

2. Click **Uninstall**.

As an alternative, you can run the following from a command prompt:

```
ArtixInstallDir\artix\version\uninstall\uninstall_artix_version.exe
```

Note: Remember that after a silent installation, the next uninstallation is also run silently.

Uninstalling on UNIX

Uninstalling Artix

To uninstall Artix on UNIX, run the following script:

```
ArtixInstallDir/artix/version/uninstall/Uninstall_artix_version
```

Note: Remember that after a silent installation, the next uninstallation is also run silently.

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