Artix™

Artix Orchestration Installation Guide

Version 4.2, March 2007

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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 configurations.
- Chapter 2, Installing Artix Orchestration, which provides the steps to install Artix Orchestration in your existing Artix installation.

The Artix Documentation Library

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

CHAPTER 1

Installation Prerequisites

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

In this chapter

This chapter discusses the following topics:

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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/4.2/index.xml
- Read the Artix Orchestration 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 file

You will receive your Artix Orchestration 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 Orchestration installer prompts for the location of the Artix Orchestration license file, and appends it to your Artix license file.

WARNING: The Artix Orchestration license file may be e-mailed to you with the file name `licenses.txt`.

Take care to not overwrite your Artix license file, which may also be named `licenses.txt`.

System Requirements

Supported platforms

Artix 4.2 Orchestration is an add-on to Artix 4.2. Artix Orchestration *only* installs into an existing installation of Artix 4.2.

An Artix 4.2 Orchestration add-on package can be installed for the same platforms supported by Artix 4.2. The supported Orchestration features differ by platform, as follows:

- Artix 4.2 Orchestration for all Artix-supported platforms includes the Orchestration BPEL engine runtime and its supporting files.
- Artix 4.2 Orchestration for Windows, Linux, and Solaris includes the Eclipse-based Artix Orchestration Designer.

Supported platform details

Because Artix Orchestration is an add-on package for Artix 4.2, its requirements for operating system versions, operating system patch levels, and compiler versions and patch levels are the same as for Artix 4.2. These versions are described in detail in the Artix Installation Guide.

Mixing Artix versions is not supported

Artix Orchestration 4.2 must be installed into an existing installation of Artix 4.2.

Orchestration 4.2 will *not* work with Artix 4.0 or 4.1, and Orchestration 4.0 or 4.1 will *not* work with Artix 4.2.

Java compiler requirements

Artix Orchestration requires access to a Java compiler, not just a Java runtime. If you configured your Artix installation to use a Java runtime (JRE) instead of a Java Development Kit (JDK), including the JRE installed by default by the Artix installer, you must:

- Install a supported JDK.
- Change the environment variable JAVA_HOME to point to the `bin` directory of your JDK installation. The setting in the global JAVA_HOME variable overrides the setting of JAVA_HOME in the `artix_env[.bat]` environment-setting script.

Artix Orchestration Designer requires a 1.5.x JDK. You can run the Orchestration BPEL Engine server using a 1.4.2 or 1.5.x JDK.

See the Artix Installation Guide for the JDK versions supported for each platform.

Licensing restrictions from Sun Microsystems prevent IONA from including a JDK with the Artix installation. You must download and install a JDK from Sun Microsystems. For more information, see Sun Microsystems' Java site at http://java.sun.com.

Artix Designer requirements

Artix Orchestration 4.2 Designer installs into the same instance of Eclipse as installed by Artix. Artix Orchestration 4.2 Designer appears as a set of Artix Orchestration persepctives in Artix Designer 4.2.

An installation of Artix Orchestration for Windows, Linux, and Solaris always installs the Orchestration Designer. By contrast, the Artix 4.2 installer offers a **Custom Installation** option, which allows you to opt out of installing Artix Designer. Make sure you have installed Artix Designer as part of your Artix installation before installing Artix Orchestration.

Disk space requirements

Artix Orchestration adds about 27-58 MB to your Artix installation directory, depending on your operating system.

Another 73-163 MB is consumed by the uncompressed Artix Orchestration installation files. You can delete these files after Artix Orchestration is installed.

The installer requires another 30 to 50 MB of temporary work space. 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 use by the Artix Orchestration installer by first setting the `IATEMPDIR` environment variable. For example:

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

Persistence Installation Option

Overview

After installing Artix Orchestration, the installer prompts for permission to run the Artix Orchestration Database Configuration Tool.

One of this tool's configuration options is to set up persistent storage for the Artix Orchestration BPEL engine. This allows your BPEL deployments to be redeployed automatically after a restart of the Artix Orchestration BPEL server.

The persistent storage option requires a supported database management system (DBMS) to be installed and running before running the Artix Orchestration configuration. You can either:

- Install a supported DBMS before installing Artix Orchestration.
- Install Artix Orchestration without the persistent storage option, then re-run Artix Orchestration configuration later, after installing a supported DBMS.

Supported DBMS for persistent storage option

The database management system supported by the Artix Orchestration persistent storage option is:

- MySQL 5.1.x

MySQL requirements

You can download the community edition of MySQL at no cost from http://dev.mysql.com/downloads.

You need only the Essentials package for Windows, or the Standard package for Linux or UNIX.

You must also download the latest JDBC driver from the **Connector/J** link at http://dev.mysql.com/downloads/connector. The Artix Orchestration configuration script prompts for the location of the MySQL JDBC driver's JAR file.

CHAPTER 2

Installing Artix Orchestration

This chapter describes how to install Artix Orchestration into an existing Artix installation.

In this chapter

This chapter discusses the following topics:

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Running the Artix Orchestration Installer

Downloading the installation package

The Artix 4.2 Orchestration installation package is available for download from the IONA Product Download Center at http://www.iona.com/downloads/.

Installation packages are available for all platforms supported by Artix 4.2.

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

Installation prerequisites

Artix 4.2 Orchestration is an add-on package that *only* installs into an existing installation of Artix 4.2.

See "System Requirements" on page 9 for the Artix versions supported.

See "Persistence Installation Option" on page 11 for the DBMS requirements if you plan to enable the persistent storage option.

Runtime only option

The Artix Orchestration installer offers an option to install the Artix Orchestration runtime. Select this option to install only an Orchestration BPEL Engine server on a deployment host, as part of deploying your developed BPEL processes.

The procedure to install a deployment-only Artix Orchestration server is:

- Install Artix 4.2 with its runtime-only installation option.
- Install Artix Orchestration 4.2 with its runtime-only option.
- Install a supported DBMS and configure the Orchestration server for the persistent storage option.
- Start the Orchestration server and deploy your BPEL processes to it.

Installing in GUI Mode

Overview

This section describes how to install Artix Orchestration with the GUI installer and discusses how to respond to installation option prompts.

Running the installer

To install Artix Orchestration:

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

   Windows

   ```
   install.exe
   ```

   UNIX

   ```
   ./install.bin
   ```

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

Use the information in Table 1 as a guide when selecting installation options as the installation proceeds.

Table 1: *Artix Orchestration installation options*

Platform	Installation Option	Default	Notes
Windows, Linux, UNIX	Locate Artix Installation directory.	Windows: `C:\IONA` Linux, UNIX: `/opt/iona`	The directory you specify must contain an installation of Artix 4.2. For UNIX, specify the full absolute path to the Artix directory, such as `/home/artixuser/iona`. Do not use the tilde (~) abbreviation.
Windows only	Location of product icons	Existing Start menu program group IONA	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.

Table 1: *Artix Orchestration installation options*

Platform	Installation Option	Default	Notes
Windows, Linux, UNIX	Developer versus runtime	Developer	Specify the runtime-only option if you are installing only the Artix Orchestration BPEL engine on a deployment host. In this case, the underlying Artix installation should also be installed with its deployment only option.

3. When the installer finishes installing the Artix Orchestration files, it prompts for the location of a license file. The default entry is **<skip>**.

   Your Artix license may already include a license for the Artix Orchestration add-on. In this case, click **Next** to skip the license installation.

   If you have received an Artix Orchestration add-on license file from IONA, navigate to the location of this saved license file and click **Next**.

   See "Artix Orchestration Licenses" on page 22 for more information.

4. After license installation, the installation of Artix Orchestration files is complete.

   If you leave the **Run Database Configuration Tool** checkbox unchecked, the installer exits when you click **Done**.

   Check the box to run the database configuration tool, as described in "Database Configuration Tool" on page 24.

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:

```
./install.bin -i console
```

2. Follow the onscreen instructions and respond to option prompts. Use the information in Table 1 on page 15 as a guide when selecting installation options as the installation proceeds.

Note: Console installation is only for UNIX systems. Using `-i console` on Windows will fail silently.

Installing in Silent Mode

Overview

Silent installations are installations that run without user intervention. Their advantage is that they allow you to automate the process of installing Artix Orchestration 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 2:

Table 2: *Properties File Variables*

Variable	Description
`USER_INSTALL_DIR`	The directory where Artix Orchestration will be installed on the user's machine. This must be an existing Artix 4.2 installation.
`SILENT_ACCEPT_LICENSE_AGREEMENT`	Set to `true` to accept the Artix Orchestration license agreement.
`INSTALLER_UI`	Set to `silent` for a silent installation

Table 2: *Properties File Variables (Continued)*

Variable	Description
PERMIT_DIR_RENAME	If set to 1, allows the directory *ArtixInstallDir*/artix/4.2/etc/bpel to be renamed to bpel.old and any existing bpel.old directory to be removed. If not set to 1, the installation will not proceed if *ArtixInstallDir*/artix/4.2/etc/bpel already exists.
CHOSEN_INSTALL_SET	Allows you to select whether to select a development or runtime-only installation. This can be set to one of the following values: • development • runtime

Note: When including directory paths in the properties file, you can represent path separators in the format $/$. This is read by the Artix Orchestration 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

Example properties file

An example of a properties file is shown below:

```
USER_INSTALL_DIR=C:$/$IONA
SILENT_ACCEPT_LICENSE_AGREEMENT=true
INSTALLER_UI=silent
PERMIT_DIR_RENAME=1
CHOSEN_INSTALL_SET=development
```

Running the installer

To run the Artix Orchestration installer in silent mode:

1. Save the properties file to the directory into which you extracted the installation package.
2. From the same directory, run the Artix installer with its `-f` option:

   Windows

   ```
   install.exe -f your_properties_file
   ```

   UNIX

   ```
   ./install.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

   ```
   install.exe
   ```

   UNIX

   ```
   ./install.bin
   ```

When the installation is complete, you need to install or append the Artix Orchestration license file. For more information, see "Artix Orchestration Licenses" on page 22.

Uninstalling a Silent Installation

After performing 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.

Artix Orchestration Licenses

Overview

Licensing for Artix Orchestration may already exist as part of your Artix license or may need to be added.

Licensing included

Your Artix license may already include a license for the Artix Orchestration add-on, especially if you are using a 30-day evaluation license.

In this case, when the Artix Orchestration installer prompts for the location of your license, accept the default **<skip>** entry.

Separate licensing

If you have received a separate Artix Orchestration license file from IONA, this license must be appended to your existing Artix license.

Note: The Artix Orchestration installer does all the work of appending your separate Artix Orchestration license to your Artix license.

There is no need to edit your license file manually. Doing so could damage your Artix license and inadvertently disable Artix features.

When the Artix Orchestration installer prompts for the location of your separate license, navigate to the location of your newly saved Artix Orchestration license file as received from IONA.

WARNING: The Artix Orchestration license file may be e-mailed to you with the file name `licenses.txt`.

Take care to not overwrite your original Artix license file, which may also be named `licenses.txt`.

Adding the license later

If your Artix Orchestration installation is interrupted or you otherwise exit without installing the Artix Orchestration license, you can add it later by running:

Windows:

```
ArtixInstallDir\artix\version\bin\license_installer.bat
```

UNIX

```
ArtixInstallDir/artix/version/in/license_installer
```

Database Configuration Tool

Overview

This section describes how to run the Artix Orchestration configuration tool, either as part of the initial installation of Artix Orchestration or afterwards.

Configuration tool overview

The database configuration tool can be run:

- As part of the Artix Orchestration installation
- At any time after installation, from the command prompt or from the **Start** menu.

To run the Artix Orchestration configuration tool from the command prompt, run:

Windows

```
ArtixInstallDir\artix\version\bin\bpel_config.bat
```

UNIX

```
ArtixInstallDir/artix/version/bin/bpel_config
```

Windows users can also run the configuration tool from the **Start** menu, by selecting **(All) Programs|IONA| Artix 4.2 | Artix Orchestration Database Configuration**.

Purpose of the tool

The database configuration tool is used to configure the Artix Orchestration server to use a database management system to store information about deployed BPEL configurations. This allows your deployed configurations to automatically redeploy and restart after the Artix Orchestration server is restarted.

The supported database management systems are discussed in "Supported DBMS for persistent storage option" on page 11.

Non-persistent server is the default

The Artix Orchestration installer sets up a non-persistent Orchestration server by default. If you do not intend to use the persistent server option, you do not need to run the database configuration tool.

Before running the configuration tool

Before running the Artix Orchestration configuration tool, you must have:

- A supported DBMS installed and running
- The administrative login name and password for your DBMS
- A JDBC driver in JAR format that allows access to your DBMS from Java programs

Configuration tool always overwrites

The configuration tool warns that it always overwrites the current configuration of the Artix Orchestration server, and removes any deployed BPEL processes. For an initial installation, you can proceed at will.

You might also be running the configuration tool to add or remove persistence from an existing server, or to change the configured DBMS.

DBMS selection

The next panel of the configuration tool prompts you to specify the database management system to hold configuration information for the Artix Orchestration server.

If you select **None**, the configuration tool proceeds to configure a non-persistent server.

If you select a supported DBMS, that database must be running and listening for connections.

Locate JDBC JAR

The next panel of the configuration tool prompts for the location of a JAR file containing a JDBC driver for the specified DBMS. The configuration cannot proceed without a valid JAR file.

Database configuration settings

The configuration tool's **Database Configuration** panel requests information it will use to connect to the specified database. The tool draws most of the information from the specified JDBC driver.

Note: Do not change the default-entered information on the **Database Configuration** panel unless you know exactly what you are doing.

The only fields for you to enter are the Username and Password fields. Specify the name and password for an administrator login for the specified DBMS.

Note: You are specifying the DBMS's administrator login only for purposes of creating the ArtixBPEL database. The configuration script adds a database username, *bpeluser*, for interaction with the configured database by the orchestration server.

Final steps

The configuration tool displays a summary of the configuration you have specified and prompts for permission to proceed. Click **Next**.

The configuration tool adds a database named ArtixBPEL to the DBMS, sets up its table structure, and loads certain tables with initial data.

The Artix Orchestration server is then configured to automatically store records of deployed BPEL processes in this database.

The configuration tool then reports success and prompts you to click **Done**.

Artix Orchestration Server and Port Conflicts

Overview

This section discusses how to eliminate potential TCP/IP port conflicts between the Artix Orchestration server and other products.

Artix Orchestration Server and port 8080

Artix Orchestration includes support for an orchestration server, and includes the infrastructure of an Apache Tomcat servlet engine on which to host the orchestration server's Admin Console. By default, this instance of the Tomcat server runs on port 8080.

If your development or deployment host already has another server running on port 8080, you can either:

- Disable the other server before starting the Artix Orchestration server.
- Change the port on which the Artix Orchestration server runs.

To change the Artix Orchestration server's default port, edit the `server.xml` file, which is installed as:

ArtixInstallDir\artix*version*\etc\bpel\conf\server.xml

Look for the string "Connector port" around line 92 of this file. Change the "8080" setting to an available port for your host.

WSDL publish port 8081

The Artix Orchestration server by default runs with the Artix WSDL Publish plug-in running on port 8081.

If your development or deployment host has another server running on port 8081, you can change the default WSDL Publish port by editing the `bpel.cfg` file, which is installed as:

ArtixInstallDir\artix*version*\etc\bpel\domains\bpel.cfg

Uninstalling Artix Orchestration

Overview

The Artix Orchestration add-on package can be uninstallled independently of your Artix installation. Uninstalling Artix Orchestration leaves your Artix installation intact.

Uninstalling from Windows

To uninstall Artix Orchestration from Windows, there are three options:

From the Start menu

1. From the Windows **Start** menu, select **(All) Programs|IONA|Uninstall Artix 4.2 Orchestration**.
2. Click **Uninstall**.

From the command prompt

Run the following from a command prompt:

```
ArtixInstallDir\artix\version\uninstall_orchestration\Uninstall_artix_orchestration_4.2.exe
```

From the control panel

Use the Windows Control Panel's **Add/Remove Programs** item. Select the entry **Artix Orchestration** and click **Remove**.

Uninstalling from Linux or UNIX

To uninstall Artix Orchestration from Linux or UNIX, run the following script:

```
ArtixInstallDir/artix/version/uninstall_orchestration/Uninstall_artix_orchestration_4.2
```

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