

Artix 5.6.3



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2015-02-19

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Preface

What This Book Covers

This book discusses the prerequisites for installing Artix and the procedures for installing, configuring, updating, and uninstalling Artix.

Who Should Read This Book

This book is written for those responsible for installing Artix and assumes familiarity with:

- The hardware and software Artix interacts with.
- The user interfaces, graphical and character, used by Artix and by the hardware and software Artix interacts with.

How to Use This Book

This book contains the following chapters:

- Prerequisites discusses the things you should do and think about before installing Artix.
- Installing Artix describes various ways of installing Artix.
- Configuring Artix discusses the things you might have to do or think about after installing Artix.
- Uninstalling Artix describes how to uninstall Artix.

Artix Documentation Library

For information on the entire Artix Documentation Library, including organization, contents, conventions, and reading paths, see *Using the Artix Library* available with the Artix documentation at https://supportline.microfocus.com/productdoc.aspx.

Prerequisites

This chapter discusses what you should do and think about before installing Artix.

Pre-Installation Tasks

This section discusses what you should do before installing Artix.

Read the release notes

Before installing Artix:

- See the Artix documentation at https://supportline.microfocus.com/productdoc.aspx.
- Read the Artix Release Notes, C++ 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 Artix 5.x Product Documentation Web page.

Pre-Installation Considerations

This section discusses what you should think about before installing Artix.It discusses the following topics:

- Supported Platforms, C++ Compilers, JREs, and JDKs
- C++ Compiler Requirements
- Java JRE and JDK Requirements
- Interoperability
- Virtualization Support Requirements
- RAM requirements for development tools
- Temporary disk space

Supported Platforms, C++ Compilers, JREs, and JDKs

Platforms and compilers

For the latest information on supported platforms and compilers, see the Artix Supported Platforms Web page.

C++ Compiler Requirements

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++ samples, you must have a C++ compiler installed on the target machine. See the Artix Supported Platforms Web page for details of the C++ compilers supported by Artix.

Java JRE and JDK Requirements

JRE bundled with Artix installer (and alternatives)

A 1.6.x Java Runtime Environment (JRE) is bundled with Artix for optional installation. Alternatively, the installer also allows you to specify the location of a previously installed system JRE or JDK.

If you do not install the bundled JRE, you must specify the location of an existing JRE or JDK during Artix installation. Make sure the one you specify is at the required release level for your operating system.

If you specify the location of an existing JRE or JDK, you might also need to specify its location in the JAVA_HOME environment variable. See "Setting the JAVA_HOME Environment Variable" on page 17.

Specific Java suppliers supported

Artix supports the specific JRE and JDK versions listed on the Artix Supported Platforms Web page, where the Java supplier and corresponding operating systems are as follows:

Java supplier	Operating system
Oracle	Windows, Linux, Solaris
IBM	AIX
HP	HP-UX

Override default JRE for Red Hat systems

Red Hat Enterprise Linux ships with a GCC-based Java compiler, gcj, which is set up by default to provide the system default java and javac commands. Artix command-line tools do not support the gcj compiler, so you must install an Oracle JDK, and take steps to ensure that its java and javac commands are used by Artix.

The simplest override method is to install a supported Oracle JDK in its installer's default location, and then specify the location of the Oracle JDK during Artix installation.

You can also manage your Oracle JDK installation with one or more of the following methods:

- Specify the Oracle JDK location in a global JAVA_HOME environment variable, as described in "Setting the JAVA_HOME Environment Variable" on page 17.
- Replace the default Java-related symbolic links in /etc/alternatives.
- Integrate the Oracle JDK into Red Hat's alternatives system, as described in the alternatives(1) man page.

Interoperability

This section describes how Artix C++ components interoperate with other Artix components and with third-party products.

Artix JAX-WS runtime

The Artix C++ runtime interoperates with the Artix JAX-WS runtime.

Messaging

Artix C++ supports the following messaging products:

- IBM WebSphere MQ 6.0, 7.0, and 8.0
- BEA Tuxedo
 - 6.5 on Windows and HP-UX
 - 8.1 on all supported platforms except AIX
- SonicMQ 5.x, 6.x

Transports

Artix C++ supports the following transports:

- SOAP 1.1 and 1.2
- IIOP 1.1 and 1.2
- HTTP

Security

Artix C++ supports the following security products and protocols:

- SiteMinder 4.6.1, 5.6
- Kerberos 5
- LDAP 3.0

Virtualization Support Requirements

Virtualization is the process of sharing the resources of a single computer across multiple environments, and thereby enabling one computer to do the job of many. Artix 5.x provides virtualization support on selected platforms.

Supported platforms for virtualization

Artix 5.x includes support for virtualization on the following supported platforms:

- Windows
- Red Hat Enterprise Linux
- Solaris x86-64

Note: Each of the above platforms is supported on VMware ESX/ESXi 3.5.0.

RAM requirements for development tools

Artix is a development environment that is used in conjunction with other development tools, such as compilers. As such, the Artix tools do not consume more RAM than the associated toolset.

Check with the vendor of the compiler and JDK for your operating system for their minimum RAM requirements. A typical minimum RAM requirement for compilers and JDKs is 512 MB.

Temporary disk space

In addition to the disk space used for the Artix installation itself, you will need 300 to 500 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 directory on a filesystem with sufficient available space for the Artix installer by setting the IATEMPDIR environment variable. For example:

IATEMPDIR=/local2/tmp
export IATEMPDIR

If IATEMPDIR is not set, the installer uses the user's home directory.

Installing Artix

This chapter describes various ways of installing Artix.

Running the Artix Installer

Downloading an installation package

The Artix 5.6.3 installation package is available for download from Micro Focus.

The following installation packages are available:

 Table 1:
 Artix Installation Packages

Description	FileName
Artix ESB 5.6.3 for C++ for Windows VS2012	MICROFOCUS_ARTIX_CXX_5.6.3_WIN_VC11.exe
Artix ESB 5.6.3 for C++ for Windows VS2008	MICROFOCUS_ARTIX_CXX_5.6.3_WIN_VC9.exe
Artix ESB 5.6.3 for C++ for AIX	MICROFOCUS_ARTIX_CXX_5.6.3_AIX.bin
Artix ESB 5.6.3 for C++ for HP-UX PA-RISC	MICROFOCUS_ARTIX_CXX_5.6.3_HPUX.bin
Artix ESB 5.6.3 for C++ for HP-UX Itanium	MICROFOCUS_ARTIX_CXX_5.6.3_HPUX_64_IA.bin
Artix ESB 5.6.3 for C++ for Linux (64-bit)	MICROFOCUS_ARTIX_CXX_5.6.3_LNX_32.bin
Artix ESB 5.6.3 for C++ for Linux (32-bit)	MICROFOCUS_ARTIX_CXX_5.6.3_LNX_64.bin
Artix ESB 5.6.3 for C++ for Solaris SPARC	MICROFOCUS_ARTIX_CXX_5.6.3_SOL.bin
Artix ESB 5.6.3 for C++ for Solaris x86	MICROFOCUS_ARTIX_CXX_5.6.3_SOL_X86.bin
Artix ESB 5.6.3 for C++ for Windows VS2010	MICROFOCUS_ARTIX_CXX_5.6.3_WIN_VC10.exe
Artix 5.6.3 Getting Started with Artix: C++	getting_started.pdf
Artix 5.6.3 Installation Guide: C++	cpp_install_guide.pdf
Artix 5.6.3 Release Notes: C++	release_notes.pdf

Installer restrictions

The Artix 5.6.3 installer has the following restrictions:

• You must not install Artix 5.6.3 and any other Micro Focus product in the same directory.

Note: Although you could install particular pre-5.6 versions of Artix and particular versions of other products in the same directory, this is *not* true of Artix 5.6.3.

 You must not load Artix libraries and Orbix libraries into the same process space, unless such usage is explicitly supported and documented.

Installation modes

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

- "Installing in GUI Mode" on page 8.
- "Installing in Console Mode" on page 10.
- "Installing in Silent Mode" on page 11.

Installing in GUI Mode

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

Running the installer

To install Artix in GUI mode:

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

Windows

MICROFOCUS_ARTIX_CXX_5.6.3_<platform>.exe

UNIX

Please ensure that the DISPLAY environment variable is correctly set

```
./MICROFOCUS_ARTIX_CXX_5.6.3_<platform>.bin
```

Follow the on-screen instructions and respond to each prompt. Use the information in Table 2 as a guide when selecting installation options as the installation proceeds.

 Table 2:
 Artix Installation Options

Platform	Installation Option	Default	Notes
All	The Choose Install Folder panel lets you select the top-level directory for your Artix installation.	Windows: C:\Program Files\Microfocus\a rtix_cxx_5.6.3 UNIX: \$HOME/MicroFocus/ artix_cxx_5.6	On UNIX, specify the absolute path to a directory in which your current login name has full read and write permissions. Do not use the ~ abbreviation for home directory.
All	The Choose Install Set panel lets you select the components you wish to install.	Full	Specify the runtime-only option when deploying an Artix service for testing or production on a system other than your development system. See Table 4 on page 12 for help in deciding which options to install.
All	The Choose Java Virtual Machine panel lets you install or select a JVM.	Install a bundled JRE.	Java JRE and JDK issues are discussed in "C++ Compiler Requirements" on page 4. The installer might not identify 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.
Windows only	The Choose Shortcut Location panel lets you specify a location for product icons.	The Start (All) Programs MicroFocus Artix menu for all users	You can select only one location. Some of the location options also allow you to select the Set for all system users checkbox. The default is to set up the shortcuts for the current user only.
All	The Save Installation Properties panel lets you save a properties file containing your 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 11.

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

Note: A full Artix license file, licenses.txt, is automatically installed by default in the ArtixInstallDir/etc folder of your product installation. A 30-day evaluation installation will also automatically install a license file.

Installing in Console Mode

UNIX users can run the Artix installer in console mode if no graphical-interface 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:

```
./MICROFOCUS_ARTIX_CXX_5.6.3_<platform>.bin -i console
```

- Follow the on-screen instructions and respond to option prompts. Use the information in Table 2 on page 9 as a guide when selecting installation options as the installation proceeds.
- 3. The installer prompts you to specify the options to install using a table like the one in Example 1. By default, all options are specified, which is the same as a Full installation. To customize your installation, enter a list of numbers representing the group or feature you want to *exclude* from the installation. Use Table 4 on page 12 as a guide when deciding which group or feature options to install.

Example 1: Installation options menu in console installation mode

```
[X] C++
1-
2.-
     -[X] Runtime
     |-[X] Development libraries and samples
3 –
     |-[X] Artix Locator
     |-[X] Security Framework
     |-[X] Artix Router
6-
     |-[X] Transaction Manager
7-
8 –
     |-[X] High Availability
9 –
     -[X] Session Manager
10- [X] Development Tools
11-
     |-[X] Command-line Tools
12- [X] Third-party Integrations
13- |-[X] EMS Integration
14- |-[X] Amberpoint
15- - [X] CA-WSDM
```

WARNING: Console installation only works on UNIX systems. Using -i console when installing on Windows simply runs a silent installation with default options.

Installing in Silent Mode

Silent installations are installations that run without user intervention. Their 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. Alternatively, 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 3:

Table 3: Properties File Variables

Variable	Description
SILENT_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 it is unset, the JRE bundled with Artix (which is always installed) is used.
SILENT_ACCEPT_LICENSE_AGREEMENT	Set to true to accept the Artix license agreement
USER_INSTALL_DIR	Absolute path to the directory where Artix will be installed on the user's machine
INSTALLER_UI	Set to silent for a silent installation
USER_INPUT_SAVE_PROPERTIES_YES_NO	Set to No for a silent installation
CHOSEN_INSTALL_FEATURE_LIST	This entry must be one long string containing a comma-separated list of feature codes, with no spaces between entries. The valid feature codes for this variable, shown in Table 4, specify the Artix components you want to install. To specify a Full installation, you must list all group components in Table 4.

The valid values for the ${\tt CHOSEN_INSTALL_FEATURE_LIST}$ variable are shown in Table 4.

Note: The codes in Table 4 are either group codes or individual feature codes. If you specify a group code, you specify all features in that group.

 Table 4:
 CHOSEN_INSTALL_FEATURE_LIST Feature Codes

Feature Code	Group	Feature	Description
CXXCore	C++		Specify options in the C++ category to develop C++ services.
CXXRT		Runtime	The infrastructure based on the C++ runtime that allows services and service consumers to interact in a distributed environment. This includes a bus, which handles the delivery of messages between different middleware systems; support for Artix containers; and support for the transports and payload formats supported by this version of Artix.
CXXDev		Development libraries and samples	The standard foundation classes, XML Schema-based type system, WSDL API, and sample code that allow you to build Web service applications or to service-enable existing applications, based on the C++ runtime.
CXXLocator		Artix Locator	An Artix service that allows clients to locate registered services independent of their deployed location.
CXXSecurity		Security Framework	The Security Framework, which includes support for the WS-Security SOAP header format; support for single sign-on and mutual authentication; the Security Service, which provides role-based access control and authentication; and plug-ins to support File Adapter, Netegrity, and LDAP.

 Table 4:
 CHOSEN_INSTALL_FEATURE_LIST Feature Codes (Continued)

Feature Code	Group	Feature	Description
CXXRouter		Artix Router	An Artix intermediary service that redirects messages based on rules defined in the router's contract. An Artix router can be used as a bridge between different communication protocols.
CXXTX		Transaction Manager	An Artix plug-in that supports interoperability with a CORBA OTS transaction system.
СХХНА		High Availability	Support for service replication, which allows services to remain operational despite hardware or communication failures.
CXXSM		Session Manager	A group of Artix plug-ins that work together to control the number of clients that can access a group of services concurrently. The session manager can be used to ensure a given instance is used by only one client at a time, which is useful for service-enabling single-threaded applications.
Develop	Development Tools		Tools and utilities for developers of Artix applications.
Command		Command-line Tools	Tools used at the shell prompt to generate code from WSDL contracts, and to generate WSDL from code.
Third-p	Third-party Integrations		Support for integrating Artix with Enterprise Management Systems from several vendors. (Support for SNMP traps is already included in the base installation.)
EMS		EMS Integration	Support for the following separately licensed components: Operational logging; integration with IBM Tivoli and BMC Patrol.
Amber		AmberPoint Integration	Support for integrating Artix with the AmberPoint SOA Management System.
CAWSDM		CA-WSDM Integration	Support for integrating Artix with the Computer Associates Web Services Distributed Management system (CA WSDM).

Example properties file

An example of a properties file is shown below:

```
SILENT_ACCEPT_LICENSE_AGREEMENT=true
SET_PATH=
INSTALLER_UI=silent
USER_INSTALL_DIR=C\:\\Microfocus\\artix_5.6.3
USER_INPUT_SAVE_PROPERTIES_YES_NO=No
CHOSEN_INSTALL_FEATURE_LIST=CXXCore,CXXLocator,CXXSecurity,CXXH
    A,CXXRouter,CXXTX,CXXSM,EMS,Amber,CAWSDM,Third-p,CXXRT,CXXDe
    v,Develop,Command
JDK_HOME=
```

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:\$/Microfocus

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\:\\Microfocus.

Running the installer

To run the Artix 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 -i silent and -f options:

Windows

```
MICROFOCUS_ARTIX_CXX_5.6.3_<platform>.exe -i silent -f your_properties_file
```

UNIX

```
./MICROFOCUS_ARTIX_CXX_5.6.3_<platform>.bin -i silent -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

```
MICROFOCUS_ARTIX_CXX_5.6.3_<platform>.exe -i silent
```

UNIX

```
./MICROFOCUS_ARTIX_CXX_5.6.3_<platform>.bin -i silent
```

Note: A full Artix license file, licenses.txt, is automatically installed by default in the ArtixInstallDir/etc folder of your product installation. A 30-day evaluation installation will also automatically install a license file.

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 might appear to be hung. In fact, the silent uninstallation is proceeding silently. Control is returned to the dialog box when the uninstallation completes.

Configuring Artix

This chapter discusses the things you might have to do or think about after installing Artix.

Setting the JAVA_HOME Environment Variable

Windows and JAVA_HOME

Set the JAVA_HOME environment variable before running the artix_env.bat script to set up your command-line development environment.

If you opted to use the bundled JRE, the JAVA_HOME variable in the artix_env.bat file points to the bundled JRE, not to a JDK. You must set the global environment variable JAVA_HOME to point to your JDK installation.

To set the JAVA_HOME environment variable globally for your Windows system, use the **System** Control Panel, **Advanced** tab, **Environment Variables** button. It is not enough to set the variable at the Windows command prompt. Use the 8.3 version of space-containing directory names.

For example:

JAVA_HOME=C:\Progra~1\Java\jdk1.5.0_11

To determine the 8.3 version of a file or directory name, use the \dim /x command at a Windows command prompt.

Note: The JRE and JDK installers from Oracle do not set the JAVA_HOME environment variable.

UNIX/Linux and JAVA_HOME

The Artix installer sets a value for the JAVA_HOME environment variable near the top of the <code>artix_env</code> environment-setting script. The path value set is either the path to the bundled JRE, or the path to the alternate JRE or JDK you specified to the installer. Any setting of JAVA_HOME in the shell's global environment takes precedence over the setting in the <code>artix_env</code> script.

Red Hat Linux systems ship with a non-Oracle Java JRE and JDK based on GCC gcj. To avoid using the Red Hat default java and javac commands, you must specify the path to an Oracle JRE or JDK during Artix installation, or you must override the path set by the installer by using the JAVA_HOME environment variable. See "Override default JRE for Red Hat systems" on page 5 for further information.

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Configuring the Artix Command-Line Environment

Setting the Artix development environment for the C++ runtime

Before running command-line development tools for the C++ runtime, and before running any Artix container, service, or service consumer, you must set up the command-line environment. To do so, use the following commands:

Windows

- > cd ArtixInstallDir\bin
 > artix_env
- UNIX
- % cd ArtixInstallDir/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.

Configuring the Artix Visual C++ Environment

Windows C++ environment

You must set up Visual C++ environment variables and paths before running any Artix tools. There are two cases:

- You allowed the Visual C++ installer to configure the global Windows environment.
 - In this case, you are ready for Artix development with Visual C++ with no further configuration:
 - For Artix command-line development, run artix_env at the command prompt.
- 2. You did not allow the Visual C++ installer to configure the global Windows environment (for example, if your PC has more than one C++ development environment).
 - In this case, you must set the paths and environment variables for Visual C++ from a batch file, vcvars32.bat or vcvars64.bat as appropriate, which is supplied by the Visual C++ installer:
 - For Artix command-line development, run vcvars32.bat or vcvars64.bat at the command prompt, and then run artix env.bat.

More Memory for Java Components on AIX

On AIX, Java components within the Artix C++ runtime might need additional heap space to function correctly. To increase the default heap space available to these components, set the following environment variable:

LDR CNTRL=MAXDATA=0x80000000@USERREGS

For more information on this issue, visit the following Web site:

http://www.ibm.com/developerworks/eserver/articles/aix4java1.html

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Uninstalling Artix

This chapter describes how to uninstall Artix.

Uninstalling on Windows

Uninstalling Artix

To uninstall Artix from Windows, you can do either of:

 From the Windows Start menu, select All Programs | Micro Focus Artix | Artix ESB 5.6.3 for C++ | Uninstall Artix ESB 5.6.3 for C++;

In the resulting dialog, click Uninstall.

• Select Control Panel | Programs | Uninstall a Program and proceed as prompted.

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

ArtixInstallDir\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/uninstall/Uninstall artix version

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

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