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# Installation Guide

Version 6.1, May 2004

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# Installation Prerequisites

*Before you install Orbix 6.1, check the system requirements, and familiarize yourself with the steps involved in installing the product.*

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**In this chapter**

This chapter contains the following sections:

<a href="#">Before You Begin</a>	<a href="#">page 2</a>
<a href="#">General Requirements</a>	<a href="#">page 3</a>
<a href="#">C++ Development Environment Requirements</a>	<a href="#">page 6</a>
<a href="#">Java Development Environment Requirements</a>	<a href="#">page 8</a>
<a href="#">Disk Space Requirements</a>	<a href="#">page 10</a>

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# Before You Begin

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## See the Release Notes

Before installing, visit the Documentation web page at: <http://www.iona.com/support/docs/orbix/6.1/> and read the *Release Notes* to check for updates to this *Installation Guide*.

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## Migrating

For detailed information on migrating from Orbix E2A Application Server Platform 6.0, 5.1, 5.0, Orbix 2000, and Orbix 3.3 to Orbix 6.1, please refer to the *Migration Guide* on the Documentation web page at: <http://www.iona.com/support/docs/orbix/6.1/>

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## Feature restrictions

- Orbix Enterprise is not available on IRIX.
- The Web services container is not available on IRIX.
- Then IONA Central GUI tool and the Medic tool are not available on IRIX.
- .NET remoting support is available on Windows XP and Windows 2003 only and requires Visual Studio .NET 2003.

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## OS/compiler patch levels

Customers can use the stated minimum base levels for OS/compiler vendor patches that work with Orbix. It is the usual practice of the OS/compiler vendors that later patches will be binary compatible with earlier patches. If for any reason you need to use higher patch levels, please confirm with the OS/compiler vendor that the patches are fully backward compatible with the set required by the IONA product.

# General Requirements

## Operating Systems

[Table 1](#) shows the required patches and C++ and Java runtimes for all supported Operating Systems (OS).

**Note:** All patch numbers listed in [Table 1](#) are the minimum patch levels supported for that version. Any patch that supersedes a patch listed below will also work, but new versions are not supported.

**Table 1:** *Supported Operating Systems*

Operating System	Required OS Patches; C++/Java Runtime Environment
x86/Windows NT 4.0	SP6a; C++ runtime <code>msvcrt.dll</code> , <code>msvcirt.dll</code> , and <code>msvcp60.dll</code> ; Java (JRE or SDK) 1.3.1_03, 1.4.1 and 1.4.2 on Orbix 6.1 SP 1.
x86/Windows 2000	C++ runtime <code>msvcrt.dll</code> , <code>msvcirt.dll</code> , and <code>msvcp60.dll</code> ; Java (JRE or SDK) 1.3.1_03, 1.4.1 and 1.4.2 on Orbix 6.1 SP 1.
x86/Windows XP	C++ runtime <code>msvcrt.dll</code> , <code>msvcirt.dll</code> , and <code>msvcp60.dll</code> ; Java (JRE or SDK) 1.3.1_03, 1.4.1 and 1.4.2 on Orbix 6.1 SP 1.
x86/Windows Server 2003	C++ runtime <code>msvcrt.dll</code> , <code>msvcirt.dll</code> , and <code>msvcp60.dll</code> ; Java (JRE or SDK) 1.3.1_03, 1.4.1 and 1.4.2 on Orbix 6.1 SP 1.

**Table 1:** *Supported Operating Systems*

Operating System	Required OS Patches; C++/Java Runtime Environment
SPARC/Solaris 9	111711-05: (32-bit C++ runtime); 111712-05: (64-bit C++ runtime); 112963-05: (linker);  Java (JRE or SDK) 1.3.1_03, 1.4.1 and 1.4.2 on Orbix 6.1 SP 1, and their recommended OS patches.
SPARC/Solaris 8	108827-12 (libthread); 108434-12: (32-bit C++ runtime); 108435-12: (64-bit C++ runtime); 109147-21 (linker);  Java (JRE or SDK) 1.3.1_03, 1.4.1 and 1.4.2 on Orbix 6.1 SP 1, and their recommended OS patches.
PA-RISC/HP-UX 11.0	PHSS_25170: aCC runtime; PHSS_24627: aCC runtime; PHSS_21075: varargs.h and +DA2.0W; PHSS_23699: libcl; PHSS_24303: dld; PHCO_24148: libc;  Java (JRE or SDK) 1.3.1_10, 1.4.1 and 1.4.2 on Orbix 6.1 SP 1, and their recommended OS patches.
PA-RISC/HP-UX 11.i and PA-RISC/HP-UX 11.11	PHCO_27434: s700_800 11.11 libc cumulative patch; PHCO_28427: s700_800 11.11 libc cumulative patch;  Java (JRE or SDK) 1.3.1_10, 1.4.1 and 1.4.2 on Orbix 6.1 SP 1, and their recommended OS patches.
PowerPC/AIX 5L v.5.2	Java (JRE or SDK) 1.3.1_03 and 1.4.1 on Orbix 6.1 SP 1, and their recommended OS patches.
MIPS/SGI IRIX 6.5.19 (or higher 6.5 patch levels)	Java (JRE or SDK) 1.3.1 and 1.4.1 on Orbix 6.1 SP 1. <b>Note:</b> Orbix Enterprise is not available on IRIX.
x86/RedHat Linux 7.2 and AS 3.0	GCC 3.2 runtime (libstdc++.so.5 and libgcc_s.so[.1]); GCC 3.2 development;  Java (JRE or SDK) 1.3.1_06, 1.4.1 and 1.4.2 on Orbix 6.1 SP 1, and their recommended OS patches.

**Table 1:** *Supported Operating Systems*

Operating System	Required OS Patches; C++/Java Runtime Environment
x86/SuSE Linux Enterprise Server 8	SP 3; GCC 3.2.3. Java (JRE or SDK) 1.3.1_06, 1.4.1 and 1.4.2 on Orbix 6.1 SP 1, and their recommended OS patches.
Tru64 UNIX 5.1B	Java (JRE or SDK) 1.3.1_06, and 1.4.2 on Orbix 6.1 SP 1.

**Windows Note:** The following system32 Visual C++ runtime DLLs must be installed or upgraded:

`msvcrt.dll; msvcirt.dll; msvcp60.dll`

These DLLs are available in a directory called `msvcrt_update` on the Product CD. To update the Visual C++ runtime DLLs, run the `msvcrt_update\setup.exe` from the CD.

A window will indicate whether any DLLs were updated or not. If any of the DLLs are updated, you must reboot before launching the installer.

# C++ Development Environment Requirements

## C++ compiler support

The C++ development environment requires the compilers shown in [Table 2](#), depending on your operating system.

**WARNING:** Only the compiler versions listed in [Table 2](#) are supported. You must ensure that the compiler version you use matches one of the listed compiler versions.

**Note:** All service pack and patch numbers listed in [Table 2](#) are the minimum patch levels supported for that version. Any patch that supersedes a patch listed below will also work, but new compiler versions are not supported. Contact IONA if you have a query on a specific patch level.

**Table 2:** C++ Development Requirements

Operating System	C++ Compiler
x86/Windows NT 4.0	Microsoft Visual C++ 6.0 (Service Pack 3) or Visual Studio .NET (VC7.0)
x86/Windows 2000	Microsoft Visual C++ 6.0 (Service Pack 3), Visual Studio .NET (VC7.0), or Visual Studio .NET 2003 (VC7.1)
x86/Windows XP	Microsoft Visual C++ 6.0 (Service Pack 3), Visual Studio .NET (VC7.0), or Visual Studio .NET 2003 (VC7.1)
x86/Windows Server 2003	Microsoft Visual C++ 6.0 (Service Pack 3), Visual Studio .NET (VC7.0), or Visual Studio .NET 2003 (VC7.1)

**Table 2:** C++ Development Requirements

Operating System	C++ Compiler
SPARC/Solaris 8	Sun C++ 5.3 (part of Forte 6 Update 2) with patch 111685-01. Sun Studio 8 (C++ compiler 5.5)
SPARC/Solaris 9	Sun C++ 5.3 (part of Forte 6 Update 2) with patch 111685-01. Sun Studio 8 (C++ compiler 5.5)
HP PA-RISC/HP-UX 11.0	aC++ A.03.31.
HP PA-RISC/HP-UX 11.11	aC++ A.03.31.
MIPS/SGI IRIX 6.5.19 (or higher 6.5 patch levels)	MIPSpro 7.4
x86/RedHat Linux 7.2 and AS 3.0	Binutils package 2.13[.9].
x86/SuSE Linux Enterprise Server 8	Binutils package 2.14.
Tru64 UNIX 5.1B	Tru64 6.5-033.
IBM AIX 5.2	Visual Age 6.0.

**Note:** Customer applications built using Visual Studio .NET (VC7.0) should use the Microsoft Visual C++ 6.0 header files and link against V6.0 libraries—these are the default lib and include folders.

**Note:** Customer applications built using Visual Studio .NET 2003 (VC7.1) should use the V7.1 header files and link against the V7.1 libraries—these are in the versioned lib and include folders.

# Java Development Environment Requirements

## Java 2 Platform, Standard Edition (J2SE) support

The Java 2 Platform, Standard Edition (J2SE), previously called the Java Development Kit (JDK), contains the basic development kit and runtime for building and running Java applications. [Table 3](#) shows the J2SE supported by Orbix 6.1 and Orbix 6.1 SP 1.

**Table 3:** *Supported J2SE*

Operating System	Supported J2SE: Orbix 6.1	Supported J2SE: Orbix 6.1 SP1
x86/Windows NT 4.0	1.3.1_03, 1.4.1	1.4.2
x86/Windows 2000	1.3.1_03, 1.4.1	1.4.2
x86/Windows XP	1.3.1_03, 1.4.1	1.4.2
x86/Windows Server 2003	1.3.1_03, 1.4.1	1.4.2
SPARC/Solaris 9	1.3.1_03, 1.4.1	1.4.2
SPARC/Solaris 8	1.3.1_03, 1.4.1	1.4.2
HP PA-RISC/HP-UX 11.0	1.3.1_10, 1.4.1	1.4.2
HP PA-RISC/HP-UX 11.i and 11.11	1.3.1_10, 1.4.1	1.4.2
PowerPC/AIX 5L v5.2	1.3.1_03	1.4.1
MIPS/SGI IRIX 6.5.19	1.3.1_06	1.4.1
x86/RedHat Linux 7.2 and AS 3.0	1.3.1_06, 1.4.1	1.4.2
x86/SuSE Linux Enterprise Server 8	1.3.1_06, 1.4.1	1.4.2
Tru64 UNIX 5.1B	1.3.1_06	1.4.2

**Note:** The J2SE patch numbers mentioned in [Table 3](#) are the minimum patch levels supported for that version. Any patch that supersedes a patch listed will also work, but new J2SE versions are not supported.

### Tru64 UNIX and JDK 1.4.2

When deploying on Tru64 (OSF1) using JDK 1.4.2, you require 256 MB of minimum memory. This extra memory is not required for previous JDK versions, or for other operating systems.

If you want to use a domain created previously using Orbix 6.1 and JDK 1.3.1, and run the services with JDK 1.4.2, you must edit the configuration and change the following variable for all Java-based services.

```
plugins:java_server:X_options = ["rs"];
```

should now be

```
plugins:java_server:X_options = ["rs", "ms128M", "mx256M"];
```

# Disk Space Requirements

## Disk space

[Table 4](#) lists the approximate amount of disk space (in MB) required to install Orbix 6.1.

**Table 4:** *Disk Space Requirements*

Installation type	Win	Sol 9	Sol 8	HP-UX	AIX	Linux	IRIX
Orbix Standard Runtime	128	192	191	270	265	169	108
Orbix Standard Development and Runtime	215	349	374	507	374	253	259
Orbix Enterprise Runtime	133	192	201	296	281	n/a	n/a
Orbix Enterprise Development and Runtime	215	349	378	522	374	n/a	n/a

**Note:** You will also need an extra 10 MB for temporary work space in %TEMP% on Windows, and an extra 5 MB in /tmp on UNIX.

If the required space is not available on /tmp, you can set a different partition for use by InstallAnywhere by setting the environment variable IATEMPDIR to point to this partition, for example:

```
IATEMPDIR=/local2;export IATEMPDIR.
```

For disk space requirements for service packs, see [“Installing Silently” on page 22](#).

# Installing Orbix

*Before you install Orbix 6.1, check the system requirements and familiarize yourself with the steps involved in installing the product.*

**In this chapter**

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This chapter contains the following sections:

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# Before you Begin

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## Overview

Before you launch the installer, see the following:

- [“Installing on UNIX”](#).
  - [“Downloading the installer”](#).
  - [“Installation directory”](#).
  - [“Screen resolution”](#).
- 

## Installing on UNIX

The following considerations apply to UNIX operating systems:

- The installer is a Java application that can be run in GUI or console mode. By default the installer runs in console mode. To run the installer in GUI mode, run the `asp` script as follows:  

```
./asp -i gui
```
- If you are installing the product from a location other than the install CD-ROM, copy the following items from the CD-ROM to the same directory level:
  - ◆ The installer binary (`asp`) for your operating system, which is located in `/cdrom`.
  - ◆ The channels directory for your operating system, which is located in `/cdrom/channels`.
  - ◆ The following files: `channels.list`, `install.xml`, `installer-options.xml`, `installer-platforms.xml`, `install.properties`, `ASP-6.1.xpd`, and the `/images` directory for your operating system, which is located in `/cdrom`.

**Note:** The directory structure of the CD-ROM must be preserved when copying the files. If it is not, the installer will fail.

---

**Downloading the installer**

If you are downloading Orbix 6.1 installer rather than installing from the CD-ROM, complete the following steps:

1. Download `orbix_6.1._platform.zip` or for UNIX `orbix_6.1._platform.tar`.
  2. Extract the zip or tar file into a temporary directory (for example, `\temp` on Windows, or `/tmp` on UNIX).
  3. Run the `asp.exe` or `asp` to launch InstallAnywhere.
  4. Follow the instructions in [“Installing with the GUI” on page 19](#).
- 

**Installation directory**

When entering the pathname for your Orbix 6.1 installation, be sure to enter an absolute pathname, without wildcards. Do not use the `~` character in a UNIX pathname.

**Note:** Spaces in directory paths are supported on Windows only. Spaces are not supported on UNIX platforms.

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**Screen resolution**

To use the Orbix 6.1 GUI, you should set your screen resolution to at least 256 colors.

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# Launching the Installer

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## Overview

To start the Orbix 6.1 installer, follow the appropriate steps for your operating system:

- [“Windows” on page 14.](#)
  - [“Solaris” on page 14.](#)
  - [“HP-UX” on page 15.](#)
  - [“AIX” on page 15.](#)
  - [“IRIX” on page 16.](#)
  - [“Linux” on page 16.](#)
  - [“Tru64 UNIX” on page 18.](#)
- 

## Windows

If autorun is enabled, the installer program launches automatically. If it does not launch, select the CD-ROM drive and run the following program:

```
asp.exe
```

---

## Solaris

If the automounter opens a File Manager window displaying the contents of the CD-ROM, only complete step 3. Otherwise, complete all of the following steps:

1. Mount the CD-ROM by typing:  

```
mount -F hsfs -o nomaplace <device name> /cdrom
```
2. Type `cd /cdrom`
3. Run the following program:  

```
./asp [-i gui]
```
4. Follow the steps in [“Installing with the GUI” on page 19.](#)
5. When the installation completes, unmount the CD-ROM by typing:  

```
umount /cdrom
```

## HP-UX

Complete the following steps:

1. If `pfs_mountd` is not running, start it by typing the following commands:
 

```
pfs_mountd &
pfsd &
```
2. Mount the CD-ROM by typing:
 

```
pfs_mount <device name> /cdrom
```
3. Type `cd /cdrom`
4. Run the following program:
 

```
./asp [-i gui]
```
5. Follow the steps in [“Installing with the GUI” on page 19](#).
6. When the installation finishes, unmount the CD-ROM by typing:
 

```
pfs_umount /cdrom
```

## AIX

If the automounter opens a File Manager window displaying the contents of the CD-ROM, only complete step 4. Otherwise, complete all of the following steps:

1. Make sure the mount point `/cdrom` exists. If it does not exist, create it by typing:
 

```
mkdir /cdrom
```
2. Mount the CD-ROM with the `mount` command. For example, type:
 

```
mount -r -v cdrfs /dev/cd0 /cdrom
```
3. Type `cd /cdrom`
4. Run the following program:
 

```
./asp [-i gui]
```
5. Follow the steps in [“Installing with the GUI” on page 19](#).
6. When installation finishes, unmount the CD-ROM by typing:
 

```
umount /cdrom
```

**Note:** To use OTS/Encina on AIX 5L v. 5.2, you must ensure that the synchronous I/O subsystem is enabled. To check that it is enabled, use the following command:

```
lsdev -C -H | grep aio
```

If synchronous I/O is enabled, it will return the following:

```
aio0    Available    Asynchronous I/O
```

If it is not enabled, it will return the following:

```
aio0    Defined      Asynchronous I/O
```

---

## IRIX

Complete the following steps:

1. Make sure the mount point `/cdrom` exists. If it does not exist, create it by typing:

```
mkdir /cdrom
```

2. Mount the CD-ROM with the `mount` command. For example, type:

```
mount -r /dev/disk/cdrom0c /cdrom
```

3. Type `cd /cdrom`
4. Run the following program from a shell:

```
./asp [-i gui]
```

5. Follow the steps in [“Installing with the GUI” on page 19](#).
6. When the installation finishes, unmount the CD-ROM by typing:

```
umount /cdrom
```

---

## Linux

Complete all of the following steps (these apply to Redhat Linux 7.2, AS 3.0, and SuSE Linux Enterprise 8):

1. Ensure that Linux is installed and configured correctly with users and permissions.
2. Install JDK 1.4 and note the location of the installation (for example, `/opt/j2sdk1.4.1_02`). It is recommended that you use a JDK either equal to, or greater than, 1.4.1.

**Note:** When using JDK 1.4.1 or 1.4.2, before installing Orbix, ensure that the `DISPLAY` variable is unset.

3. Export the `JAVA_HOME` environment variable to point to the correct installation folder for the JDK. For example:
 

```
export JAVA_HOME=/opt/j2sdk1.4.1_02
```
4. Install Orbix 6.1 as follows:
  - (i) Make sure that the mount point `/cdrom` exists. If it does not exist, create it by typing:
 

```
mkdir /cdrom
```
  - (ii) Mount the CD-ROM with the `mount` command. The following example assumes an IDE CD-ROM drive named `/dev/hdc`:
 

```
mount -t iso9660 /dev/hdc /cdrom
```
  - (iii) Type `cd /cdrom`.
  - (iv) Run the following program:
 

```
./asp [-i gui]
```
  - (v) Follow the steps in [“Installing with the GUI” on page 19](#). Use the default parameters when prompted. This should create an installation into the `/opt/iona` directory.
  - (vi) When the installation finishes, unmount the CD-ROM by typing:
 

```
cd /  
umount /cdrom
```
5. Export the `IT_PRODUCT_DIR` environment variable to point to this Orbix installation. If you have used the defaults, this is as follows:
 

```
export IT_PRODUCT_DIR=/opt/iona
```
6. It is not recommended to perform any domain configuration using the root account. Therefore, it may be necessary to change the permissions of the installation to allow certain users or groups read/write access to the Orbix installation folder.

**Note:** Before proceeding to use the `itconfigure` tool to configure your Orbix installation, see [“Configuring on Linux” on page 26](#).

## Tru64 UNIX

---

Complete the following steps:

1. Make sure the mount point `/cdrom` exists. If it does not exist, create it by typing:

```
mkdir /cdrom
```

2. Mount the CD-ROM with the mount command. For example, type:

```
mount -r /dev/disk/cdrom0c /cdrom
```

3. Type `cd /cdrom`

4. Run the following program from a shell:

```
./asp.bin [-i gui]
```

5. Follow the steps in [“Installing with the GUI” on page 19](#).

6. When the installation finishes, unmount the CD-ROM by typing:

```
umount /cdrom
```

---

# Installing with the GUI

---

## Overview

This section guides you through the Orbix 6.1 GUI installation. To install Orbix 6.1 on your system, run through the following screens.

## Accept License Agreement

When the installer starts, an introduction screen displays information about the product. Click **Next** to continue to the license agreement.

When you have read through the License Agreement, select the “**I accept the terms of the License Agreement**” radio button, and click **Next** to proceed.

## Choose Install Folder

Choose an install folder for Orbix 6.1. Click **Next** when finished. The default install locations are:

### Windows

C:\Program Files\IONA

### UNIX

/opt/iona/

**Note:** You must have root privileges to install to the default location on UNIX.

## Choose Shortcut Location (Windows Only)

Choose a location where you want to create the Orbix 6.1 product icons. Click **Next** to proceed.

## Choose Product Edition

Choose the Product Edition for which you have a license. Click **Next** to proceed.

- Standard Edition
- Enterprise Edition

---

## Environment Settings

With Standard and Enterprise you have the following options:

- **Development and Runtime** installs all Orbix 6.1 development and runtime components.
- **Runtime Only** installs Orbix 6.1 runtime components only.
- **Customize Runtime** installs Orbix 6.1 runtime components that you select.

Click **Next** to proceed.

---

## Custom Runtime Environment Options

This option only applies when you chose the Customize Runtime option.

- For Standard you can choose the runtime environment you want to install along with the Standard services you want to run.
- For Enterprise you can choose the runtime environment you want to install along with the Standard and Enterprise services you want to run.

Click **Next** to proceed.

---

## Environment Variables

This option only applies to Standard and Enterprise on Windows.

You can choose one of the following options:

- Set the variables for all users.
- Set the variables only for the current user.
- I will set them manually later.

**Note:** You must have administrator privileges to set variables for all users on Windows.

Click **Next** to proceed.

---

## Pre-Installation Summary

Review the Pre-Installation Summary

- If you are satisfied with the details, click **Install**.
- If you want to change any of the details, click **Previous**.

---

**After installing**

A browser is required when the installation completes. If the installer cannot find one it times out eventually with an error. However, the installation has completed. When the installation completes and a browser is available, a Welcome Page is automatically launched. This page contains links to the Release Notes, Tutorials and Demos, and Documentation to help you get up and running quickly. To view the Welcome Page in future, open the `index.html` file located in the `install-dir\asp\6.1\doc` directory in a browser.

---

**Documentation**

Orbix 6.1 documentation is provided on a separate CD. Follow the instructions provided in the `welcome.html` file on the Documentation CD to install the documentation.

Orbix 6.1 documentation is also available on the IONA Documentation web page at:

<http://www.iona.com/support/docs/orbix/6.1/>

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**Tivoli Enterprise Management System**

A copy of the Tivoli Enterprise Management System tar file, `tivoli_integration.tar` is included in your installation. See the *IONA Tivoli Integration Guide* on the Documentation web page at:

<http://www.iona.com/support/docs/orbix/6.1/> for details on Tivoli integration.

---

# Installing Silently

---

## Overview

Silent installations are installations that run without user interaction. The main advantage of this type of installation is that it allows you to automate the process of installing on more than one machine. In a normal (non-silent) installation, the installer receives necessary user input in the form of responses to questions posed in a GUI or on a console. In the case of a silent installation, you must provide this information in an `installer.properties` file. This section outlines how to install Orbix 6.1 silently and provides you with a sample `installer.properties` file. It is divided into the following subsections:

- [Installing silently on UNIX](#)
- [Installing silently on Windows](#)

---

## Installing silently on UNIX

To install Orbix 6.1 silently on UNIX, complete the following steps:

1. Download `orbix_6.1_platform.tar`. For download details, contact [support@iona.com](mailto:support@iona.com).
2. Extract the tar file into a temporary directory; for example, `/tmp`.
3. Create an `installer.properties` file as follows:

```
USER_INSTALL_DIR=${opt}/${siona}
SHORTCUT_NAME=IONA Orbix
CHOSEN_INSTALL_SET=Enterprise Edition
CHOSEN_ENV=Development and Runtime
JDK_HOME=${usr}/${bin}/${jdk1.3.1_10}
SET_ENV_VARS=I will set them manually later
INSTALLER_UI=silent
```

**Note:** The values shown for `SHORTCUT_NAME`, `CHOSEN_INSTALL_SET`, `CHOSEN_ENV`, `SET_ENV_VARS`, and `INSTALLER_UI` must appear exactly as shown. You set the values of `USER_INSTALL_DIR` and `JDK_HOME`.

4. Save the `installer.properties` file in the same directory as the `asp` shell script.
5. Run the following command from that directory:  
`asp -i silent`

## Installing silently on Windows

To install Orbix 6.1 silently on Windows, complete the following steps:

1. Download `orbix_6.1_platform.zip`. For download details, contact [support@iona.com](mailto:support@iona.com).
2. Extract the zip file to a temporary directory; for example, `\temp`.
3. Create an `installer.properties` file as follows:

```
USER_INSTALL_DIR=c:/$orbix6.1
SHORTCUT_NAME=IONA Orbix
CHOSEN_INSTALL_SET=Enterprise Edition
CHOSEN_ENV=Development and Runtime
JDK_HOME=c:/$jdk1.3.1
SET_ENV_VARS=I will set them manually later
INSTALLER_UI=silent
```

**Note:** The values shown for `CHOSEN_INSTALL_SET`, `CHOSEN_ENV`, `SET_ENV_VARS`, and `INSTALLER_UI` must appear exactly as shown. You set the values of `USER_INSTALL_DIR`, `SHORTCUT_NAME`, and `JDK_HOME`.

4. Save the `installer.properties` file in the same directory as the `asp.exe` file.
5. Run the following command from that directory:  
`asp.exe -i silent`

---

# Installing Service Packs

---

## Overview

Orbix 6.1 service packs are released periodically. These service packs provide bug fixes and enhancements for existing installations. This section includes the following topics:

- [“Installation instructions”](#).
- [“Rolling back a service pack installation”](#).
- [“Disabling rollback”](#).

---

## Installation instructions

To install an Orbix service pack you require, complete the following steps:

Step	Action
1	Download the service pack <code>.tar</code> file or <code>.zip</code> file that corresponds to your operating system from the IONA FTP site. The exact location and login details are available from your Customer Services representative.
2	Set the environment variable <code>IT_PRODUCT_DIR</code> to point to the location where you installed Orbix 6.1.
3	Unzip/untar the service pack <code>.zip/.tar</code> to a <code>temp</code> directory. <b>Note:</b> This <code>temp</code> directory should not be part of the existing Orbix 6.1 installation directory structure.
4	Run the <code>updater</code> command from the <code>temp</code> directory.

---

**Rolling back a service pack installation**

After installing a service pack, you can rollback the service pack installation without using installation CDs.

**Note:** You must first stop all services before rolling back an installation.

To rollback an installation, enter the following command:

```
install-dir\asp\6.1\bin\xt rollback
```

This rollbacks to your previous Orbix installation.

---

**Disabling rollback**

When applying the service pack, you can disable rollback by passing the `-nr` parameter to the service pack updater on the command line, for example:

```
temp\updater -nr
```

Disabling rollback reduces the amount of disk space required for installation (for example, about 100 MB on Windows). Rollback backs up the files affected by the updater. These backup files are stored in the installation registry. If rollback is disabled, it will not back up these files.

---

# Configuring your Environment

---

## Overview

To start using Orbix 6.1, you need to configure a domain and set up the environment for Orbix 6.1. This section provides a brief overview of how to use the Orbix Configuration (`itconfigure`) tool to do this. It includes the following:

- “Configuring on Linux”.
- “Orbix 6.1 license”.
- “Using the Orbix configuration tool”.

For more detail on configuring your Orbix 6.1 environment, see the *Orbix Administrator's Guide*.

---

## Configuring on Linux

Before running `itconfigure`, you must perform some preliminary steps on the following platforms:

- “Redhat Linux Advanced Server 3.0”.
- “Redhat Linux 7.2”.

### Redhat Linux Advanced Server 3.0

Before you can configure a domain and set up the environment for Orbix 6.1 or Orbix 6.1 SP 1 on Linux Advanced Server 3.0, you must download and install a patch. Please contact your IONA representative or [support@iona.com](mailto:support@iona.com) for download details.

### Redhat Linux 7.2

On Redhat Linux 7.2, perform the following steps:

1. Orbix 6.1 requires a recompile of the GCC libraries, so you need to download the GCC 3.2.3 sources. When downloaded (and untarred), these must be configured correctly. Change to the folder where the GCC sources were unzipped and run the following command:

```
./configure --prefix=/opt/gcc-3.2.3 --enable-shared \  
--enable-threads=posix --enable-languages=c,c++ \  
--enable-__cxa_atexit
```

The prefix argument specifies the installation folder where it should install the final copy of the GCC when compiled. This can be any folder you wish.

- When configured, GCC must be then compiled. Use the following commands:

```
make bootstrap
make install (as root)
```

- Copy the following shared libraries from `/opt/gcc-3.2.3/lib` to `IT_PRODUCT_DIR/shlib`:

```
libstdc++.so.5.0.0
```

```
libgcc_s.so
```

```
libgcc_s.so.1
```

- Alternatively, you can edit your `ld.so.conf` file to point to the newly compiled GCC libraries (`/opt/gcc-3.2.3`) and run `ldconfig`.

Change directory to the `$IT_PRODUCT_DIR/shlib` folder and create symbolic links for this new library as:

```
ln -s libstdc++.so.5.0.3 libstdc++.so.5
```

```
ln -s libstdc++.so.5.0.3 libstdc++.so
```

Alternatively, you can create the links in the `/opt/gcc-3.2.3` directory.

## Orbix 6.1 license

You need a valid license file to start using Orbix 6.1. An e-mail with a `licenses.txt` file attached is sent to you when you receive the product. You should copy this `licenses.txt` file to a desired location, and set the environment variable `IT_LICENSE_FILE` to point to the location of your `licenses.txt` file.

Alternatively, launch the Orbix Configuration tool and you will be prompted for the location of your license file. See [“Using the Orbix configuration tool” on page 27](#).

## Using the Orbix configuration tool

To configure Orbix 6.1 using the Orbix Configuration tool, complete the following steps:

- Set the environment variable `IT_PRODUCT_DIR` to point to the location where you installed the product.
- Change directory to the following location:

### Windows

```
install-dir\asp\6.1\bin
```

### UNIX

```
install-dir/asp/6.1/bin
```

3. Run `itconfigure` (Linux users see “Configuring on Linux” on page 26). This launches the Orbix Configuration tool.
4. If you have not set the environment variable `IT_LICENSE_FILE` before running `itconfigure`, the Orbix Configuration tool prompts you for the location where you saved your `licenses.txt` file. Click the **Browse** button and enter the location where you saved your `licenses.txt` file. Then click **OK**. The Orbix Configuration tool will install your `license.txt` file into the default license location; that is:

```
install-dir/etc/licenses.txt.
```

If you do not want to install the license file into the default license location, click **Cancel**, and set the environment variable `IT_LICENSE_FILE` to point to the location where your `licenses.txt` file is saved. Then run `itconfigure` again.

5. The Orbix Configuration tool prompts you for a unique domain name, a base port number to allocate the TCP/IP ports required by the services, the services you want to run, the communication protocol, as well as the number of replica servers (if any) you want to run.

**Note:** When creating a new configuration domain, ensure that your base port number selection does not conflict with other users on your system.

6. When you have worked through all the screens, the Orbix Configuration tool creates a domain configuration file and domain environment scripts. Change directory to the location in which these scripts are created; that is:

#### **Windows**

```
install-dir\etc\bin
```

#### **UNIX**

Your domain configuration scripts are created in one of the following locations, in this order:

- i. `etc/opt/iona/bin` if it is writable.
- ii. `install-dir/etc/bin` if it is writable.
- iii. `$HOME/etc/bin`

7. Set the environment variables necessary for Orbix 6.1 as follows:

**Windows**

Run the following environment script:

```
domain-name_env.bat
```

**UNIX**

Source the following environment script:

```
domain-name_env
```

8. Start the Orbix Services in one of the following ways:
  - ◆ Using the command `start_domain-name_services` located in `install-dir/etc/bin/`.
  - ◆ By clicking on the “Start Domain Services” button on the **IONA Central** toolbar.

See [“IONA Central GUI tool” on page 29](#) for instructions on how to launch this tool.

---

**IONA Central GUI tool**

The **IONA Central** GUI tool enables you to start up Orbix 6.1 tools in your environment. It also enables you to run demo applications. **IONA Central** detects the currently configured domain when it starts up.

To use the **IONA Central** GUI tool, launch **IONA Central** as follows:

1. Change directory to `install-dir\asp\6.1\bin`.
2. Run `itcentral`.

Windows users can also launch **IONA Central** from the Start Menu.

---

# Verifying the Installation

## Code examples

---

Orbix 6.1 is installed with a number of code examples that demonstrate the use of specific features of the product. Each code example comes with documentation that explains what the code example does and how to run it. This documentation can be accessed via the `index.html` file in the  `demos` directory of your installation.

---

## In this section

This section discusses the following topics:

<a href="#">Running the Medic Tool</a>	<a href="#">page 31</a>
<a href="#">Testing a CORBA Development Installation</a>	<a href="#">page 32</a>

---

## Running the Medic Tool

---

### Overview

The Medic tool provides a simple, GUI-driven verification tool that can be used to validate both the IONA software installation and the environment in which it is running. It verifies that your operating system meets the criteria required by IONA's products, validates that IONA's software is configured correctly, and ensures that external dependencies, such as databases and their drivers, are present and functioning.

---

### Features

The Medic tool provides the following features:

- Basic operating system, environment, and configuration health checks.
  - Advanced diagnostic tests for each supported IONA product.
  - Ability to write, store, and execute customized tests.
  - Ability to upload and download these customized tests from a shared pool of tests.
  - Ability to mail your support supplier with results of all tests and diagnostics.
  - Easy access to IONA's Knowledge Base.
  - Regular updates with the optional Power Update feature.
- 

### Running Medic

To run the Medic tool, it is recommended that you configure a domain and run the environment scripts because some of the tests check that the environment variables are set. To do this, follow the instructions in [“Configuring your Environment” on page 26](#).

You can launch the Medic tool in two ways:

1. Change directory to the `install-dir/asp/6.1/bin` directory and run the launcher script `itmedic`.
2. By clicking on the **Medic—ASP Diagnostics** button on the **IONA Central** toolbar.

Once Medic is launched, select the tests you want to perform and click on the **Run** button.

## Testing a CORBA Development Installation

### Overview

To ensure that your Orbix 6.1 development installation is fully operational, run the Simple demo located in the `install-dir/asp/6.1/demos/corba` directory. Further details on running the Simple demo can be found in the `README_CXX.txt` and `README_JAVA.txt` files in the `install-dir/asp/6.1/demos/corba` directory.

### Running the CORBA C++ Simple demo

To run the CORBA C++ Simple demo, complete the following steps:

1. In a command prompt (with the Orbix 6.1 environment set), change directory to the `demos/corba/orb/simple` directory as follows:

OS	Type this:
UNIX	<code>cd install-dir/asp/6.1/demos/corba/orb/simple</code>
Windows	<code>cd install-dir\asp\6.1\demos\corba\orb\simple</code>

2. Build the C++ programs:

OS	Type this:
UNIX	<code>make -e</code>
Windows	<code>nmake -e</code>

**Note:** The makefile assumes the default installation path. If you install the product elsewhere, you need to set the `IT_PRODUCT_DIR` environment variable to point to your installation, then use `make -e` (or its equivalent) to override make variables with the corresponding environment variables.

3. Start the server:
 

```
cd cxx_server
server
```
4. Open another command prompt and start the client:
 

```
cd cxx_client
client
```
5. The client should return `Done` and then stop. The server must be stopped manually.

## Running the CORBA Java Simple demo

To run the CORBA Java Simple demo, complete the following steps:

1. Set `JAVA_HOME` to point to your JDK.
2. In a command prompt (with the Orbix 6.1 environment set), change directory to the `demos\corba\orb\simple` directory as follows:

OS	Type this:
UNIX	<code>cd install-dir/asp/6.1/demos/corba/orb/simple</code>
Windows	<code>cd install-dir\asp\6.1\demos\corba\orb\simple</code>

3. Build the Java programs as follows:

**itant**

**Note:** If running Java SDK 1.4 add the following to your Java command line:

```
-Djava.endorsed.dirs="<IT_PRODUCT_DIR>\lib\art\omg\5"
```

4. Start the server as follows:

### Windows

```
java -classpath .\java\classes;%CLASSPATH% simple.Server
```

### UNIX

```
java -classpath ./java/classes:$CLASSPATH simple.Server
```

5. Open another command prompt and start the client as follows:

### Windows

```
java -classpath .\java\classes;%CLASSPATH% simple.Client
```

### UNIX

```
java -classpath ./java/classes:$CLASSPATH simple.Client
```

6. The client should return `Done` and then stop. The server must be stopped manually.

The Orbix 6.1 ORB classes are used instead of the Sun classes, by setting the following properties in the demo code:

```
org.omg.CORBA.ORBClass=com.ionacorba.art.artimpl.ORBImpl
org.omg.CORBA.ORBSingletonClass=com.ionacorba.art.artimpl.ORBSingleton
```

---

# Troubleshooting

---

## Debug window

To view debug output from an installer:

### Windows

Hold down the CTRL key immediately after launching the installer until a console window appears.

### UNIX

1. Change directory to the directory where you copied the `asp` installer.
2. Run the following command:

```
touch ia_debug
```

---

## Disk space

On UNIX, InstallAnywhere might incorrectly calculate the amount of free space on a shared NFS drive, indicating that there is not enough free space. To work around this problem, install on a local drive. Alternatively, you can disable InstallAnywhere from checking for the amount of free space available by setting the environmental variable: `CHECK_DISK_SPACE` to `OFF`, for example:

```
CHECK_DISK_SPACE=OFF;export CHECK_DISK_SPACE
```

---

## Installing the Orbix Visual Studio Wizards

In some cases, the Orbix Visual Studio wizards will not be installed automatically by the installer. The following are the instructions to manually install the various Orbix Visual Studio wizards.

---

### Orbix Client/Server Wizard for Visual C++ 6.0

1. Open a command prompt.
  2. Change directory to %IT\_PRODUCT\_DIR%\asp\6.1\etc\wizard.
  3. Run setup.exe.
- 

### Orbix Client/Server Wizard for Visual C++ 7.0

1. Open a command prompt.
2. Change directory to %IT\_PRODUCT\_DIR%\asp\6.1\etc\wizard\vc7.
3. Run installvc7wiz.bat supplying the current directory "." as the first parameter, and the location of your VC++ 7 installation as the second parameter, for example:

```
>installvc7wiz . "C:\Program Files\Microsoft Visual Studio .NET\Vc7"
```

---

### Orbix Client/Server Wizard for Visual C++ 7.1

1. Open a command prompt
2. Change directory to %IT\_PRODUCT\_DIR%\asp\6.1\etc\wizard\vc7.
3. Run installvc7wiz.bat supplying the current directory "." as the first parameter, and the location of your VC++ 7.1 installation as the second parameter, for example:

```
>installvc7wiz . "C:\Program Files\Microsoft Visual Studio .NET 2003\Vc7"
```

---

4. Open the following file in an editor:

```
C:\Program Files\Microsoft Visual Studio .NET 2003\vc7\VCWizards\Orbix Wizard\Scripts\1033\default.js
```

5. Change lines 202 and 238 from:

```
CLTool.AdditionalIncludeDirectories = strOldIncs + "\"" +  
g_strArtIncludeDir + "\"";
```

to:

```
CLTool.AdditionalIncludeDirectories = strOldIncs + "\"" +  
g_strArtIncludeDir + "\\vc71\"";
```

6. Change lines 222 and 258 from:

```
LinkTool.AdditionalLibraryDirectories = strOldLibPath + "\"" +  
g_strArtLibDir + "\"";
```

to:

```
LinkTool.AdditionalLibraryDirectories = strOldLibPath + "\"" +  
g_strArtLibDir + "\\vc71\"";
```

---

# Further Information

---

## Documentation CD-ROM

Orbix 6.1 documentation is provided on a separate Documentation CD-ROM. Follow the instructions provided in the `welcome.html` file on the Documentation CD-ROM for installing the documentation.

---

## Documentation web

Orbix6.1 documentation is available to download on the IONA documentation web page at:

<http://www.iona.com/support/docs/orbix/6.1/>

This documentation is frequently updated, so check here for the latest version of the documentation.

---

## Release Notes

See the Release Notes at:

<http://www.iona.com/support/docs/orbix/6.1/>

---

## Internationalization

If you plan to deploy a CORBA ORB in C or C++ to handle characters other than Latin-1 (English, French, German, and other Western European languages), then some further configuration is required. Please refer to the *Orbix Internationalization Guide* for more information.

---

## IONA Knowledge Base

Review IONA Knowledge Base entries for Orbix 6.1 at:

[http://www.iona.com/support/knowledge\\_base](http://www.iona.com/support/knowledge_base)

E-mail technical support with questions and suggestions at:

[support@iona.com](mailto:support@iona.com).



# Uninstalling Orbix

*Orbix comes with an automatic uninstaller tool. Before uninstalling Orbix 6.1, you should remove any domains created.*

---

## In this chapter

This chapter contains the following sections:

<a href="#">Uninstalling on Windows</a>	<a href="#">page 40</a>
<a href="#">Uninstalling on UNIX</a>	<a href="#">page 41</a>

---

# Uninstalling on Windows

---

## Overview

To uninstall Orbix 6.1 on Windows:

1. Go to Select **Start | Settings | Control Panel | Add/Remove Programs**
2. Select Orbix 6.1.

Alternatively, from a command prompt, run the following:

```
install-dir\asp\6.1\etc\installer\uninstaller\asp.exe
```

This will usually leave some files behind in the IONA directory. These must be removed manually.

3. Remove any environment variables that might still be set, such as `IT_LICENSE_FILE`, `IT_PRODUCT_DIR`, `IT_CONFIG_DIR`, and any CORBA entries in your `PATH`. For details of all CORBA environment variables, see the *Orbix Administrator's Guide*.

---

# Uninstalling on UNIX

---

## Overview

To uninstall the Orbix 6.1 on UNIX:

1. Run the uninstall script:

```
install-dir/asp/6.1/etc/installer/uninstaller/uninstall
```

You must manually remove the directory:

```
install-dir/asp/6.1/etc/installer/uninstaller/
```

2. Remove:
  - ◆ Any environment variables that you set, such as `IT_LICENSE_FILE`, `IT_PRODUCT_DIR`, `IT_CONFIG_DIR`,
  - ◆ Any CORBA entries in your `PATH` and `CLASSPATH` and associated library variables (`SHLIB_PATH`, `LD_LIBRARY_PATH`, and so on).
  - ◆ Any configuration domains, especially those with “start on boot” services.

For details of all CORBA environment variables, see the *Orbix Administrator's Guide*.

