VisiBroker RT 7.0 Installation Guide

Table of Contents

About This Guide

VisiBroker RT for C++ allows you to develop and deploy distributed object-based applications, as defined in the Common Object Request Broker Architecture (CORBA) specification.

This guide describes how to install VisiBroker RT for C++ and its associated components for application development and deployment environments. It includes installation instructions for VisiBroker RT. It is written for system administrators who are familiar with Linux operating systems.

About VisiBroker RT for C++

VisiBroker RT for C++ is a CORBA 3 compliant Object Request Broker (ORB) that supports the development, deployment, and management of distributed object applications across a variety of hardware platforms that support VxWorks 7.

In addition to VisiBroker RT for C++ (the ORB), two other components are available with this product. They include:

Naming Service

> The Naming Service allows you to associate one or more logical names with an object implementation and store those names in a namespace. It also lets client applications use this service to obtain an object reference using the logical name assigned to that object.

Event Service

> The Event Service provides a facility that decouples the communication between objects. It provides a supplier-consumer communications model that allows multiple supplier objects to send data asynchronously to multiple consumer objects through an event channel.

Included with VisiBroker RT for C++

VisiBroker RT is used in both the development and deployment phases.

The VisiBroker RT for C++ product includes the following components:

- Administration and Development tools
- VisiBroker Smart Agent (Available as a binary executable for the development host as well as a binary executable and runtime library for the target Operating System)
- Java Runtime Environment
- C++ header files

• VisiBroker RT libraries (built for target operating system)

• Sample applications

Platform conventions

This guide uses the following conventions, where necessary, to indicate that information is platform-specific:

Convention	Used for
Linux	Linux development host platforms, including Red Hat, SuSE
C++	VisiBroker RT for C++

Installation Planning

This guide describes installation and related tasks for VisiBroker RT for C++ on Linux development hosts.

System Requirements

The VisiBroker RT for C++ development host system requirements are listed in the following sections.

Platforms and Compilers

VisiBroker RT for C++ supports the following development host operating systems:

• Red Hat Enterprise Linux 5.x, 6.x, 7.x, 8.x, 9.x

The platform requirements for Wind River Workbench 4 should be sourced from Wind River. As Workbench 4 is based on Eclipse, it will require an appropriate version of the Java runtime.

In addition to platform-specific requirements, VisiBroker RT for C++ uses TCP and UDP Broadcast services to communicate. Even if you are running the Visibroker RT application components on a single machine you must have TCP and UDP services available.

JDK

The VisiBroker RT development host tools for this release are made available for Linux, requiring a JDK at one of the following LTS versions:

• Java 8 • Java 11 • Java 17

The VisiBroker for Java ORB, on which many of the development host tools are based, was built using Java 8. This release of VisiBroker RT therefore does not support Java 7 (or lower) versions of the JDK.

Please also note the following points about this release:

• A JDK is no longer redistributed with VisiBroker RT. • A JRE is not sufficient for installing VisiBroker RT.

If your VisiBroker installation binary is 64-bit, then your JDK must be 64-bit as well.

> 💡 **Note**
>
> If you choose a 32-bit version of VisiBroker 8.5.n, then you would normally need a 32-bit JDK. If however you wish to use a 32-bit VisiBroker installer (because for example you need to compile and run 32-bit C++ CORBA applications) but you wish to use a 64-bit JDK then you can do so.
>
> Run the 32-bit installer but select your 64-bit JDK during the installation process. After installation has completed you will need to patch your installation with a VisiBroker 64-bit Service Overlay.

HTML Browser

In addition to the platform-specific requirements listed below, VisiBroker RT for C++ also requires a web browser to view HTML files.

Linux

To install the VisiBroker RT for C++ development tools on Linux, Rocket Software recommends the following:

- Red Hat Enterprise Linux, version 9 (or greater).
- Wind River Workbench 4.0, VxWorks 7 SR0640 (or later).

Checking the Release Notes

Make sure that you read the *Release Notes*. This document contains important product information relevant to the particular development host and deployment target systems which are supported.

Installing VisiBroker RT

This section explains how to install VisiBroker RT for C++ on Linux platforms.

By following the instructions in this section you will be able to install or uninstall VisiBroker RT for C++. However, before you begin the installation, make sure that you read the instructions in this section.

You should also review the *Release Notes*, which contain the latest information about product installation.

Go to the Micro Focus web site for documentation updates and more information.

Installing VisiBroker RT for C++

The following instructions tell you how to install VisiBroker RT for C++ on your specific platform.

Using the installation wizard

Follow the installation wizard's onscreen instructions. For most options, defaults offered by the installation wizard are acceptable. You can use the **Previous** button to return to earlier screens and change any information that is incorrect.

1. **Introduction:** Read the Introduction and click **Next**.

2. **License agreement:** Read the licensing agreement carefully and accept it to install and use VisiBroker.

3. **Choose Install Folder:** This creates a new installation of VisiBroker, or adds components to an existing installation. Either accept the default `/opt/RocketSoftware/VisiBrokerRT` or choose another location. Ensure that the user name you are using has write access to the chosen folder.

> 💡 **Note**
>
> You cannot install this version of VisiBroker on top of previous releases. However, you can specify an existing location to add components.

4. **Choose Product Components:** > depending on the VisiBroker product you are installing, you can select from the following product components.

5. **Choose VisiBroker Services**: Displays if you chose the option to install **VisiBroker Services** in . Select the services you have purchased. By default, no services are selected:

   a. **VisiNotify:** An industrial strength, ORB-level implementation of the OMG Event/Notification Service.

   b. **VisiSecure:** A framework for establishing secure connections between clients and servers.

   c. **VisiTransact:** A complete implementation of the OMG transaction management solution for transactions with CORBA applications over the Internet or intranets.

   Important: Once you select which product you are installing and click **Next**, if you want to select a different product you must cancel the current installation and restart the installation process.

6. **Choose Install Type:** Choose:

   a. **Typical**: an express install using default settings, including:

      a. **Smart Agent port:** Also known as the `osagent`. Client-side ORBs use this port to locate server objects before invoking their services. The default is `14000`.

      b. **VisiBroker bin folder**: Typical install does not add this to your `PATH`. If you select the default, you may have to add certain components to your environment path manually.

      c. **VisiBroker environment variables:** Typical install does not add these variables to your system environment.

   b. **Custom** to customize your installation. If you select this, you can:

      a. Set the Smart Agent port (`osagent`) to a value other than its default.

      b. You can choose the default JDK. If you don't want to use the default JDK, select the JDK home path by clicking **Choose**. See JDK for details of the JDK versions that you can use.

      c. Specify whether to include the VisiBroker `bin` folder in your PATH. The default is **No**. To add the directory to your `PATH`, choose **Yes**.

      d. Specify whether to include the VisiBroker environment variables. The default is **No**. To add the VisiBroker environment variables to your system environment, choose **Yes**. The installation sets the variable `BES_LIC_DIR` to `<install_dir>/var` and `BES_LIC_DEFAULT_DIR` to `<install_dir>/license`.

7. **Pre-Installation Summary:** Review the displayed information before proceeding with the installation. Verify in particular the install folder location and the product features that you have specified. To confirm your choices and start installing, click **Install**.

The status bar provides information about the installation process. After the installation is complete, the **Registration** page appears.

The install log

The installer generates an install log that is written to the root of the installation directory if you installed VisiBroker from DVD, or to the folder where the installer file resides if you used a downloaded file to install VisiBroker.

The VisiBroker install log file is:

```
<install_dir>/VisiBroker_InstallLog.xml
```

The file is an XML formatted log with installation-specific information, such as errors.

Using the VisiBroker documentation

The VisiBroker complete library of online documentation can be access online.

Running the installer without a GUI

The installer is capable of running in a text only mode (console mode) for UNIX systems. You can invoke the installer with a parameter which specifies that mode. You can run the installer in text-only mode as follows:

Using a downloaded installer:

```
vb85-<release number>-linux-<platform>-<arch>.bin -i console
```

where `<platform>` is either `rh5` or `suse10` and `<arch>` is either `x86` or `x86_64`.

Then see Installing VisiBroker in console mode for further information.

Using the installer

> 💡 **Note**
>
> The installer writes to stdout and reads from stdin. This allows you to Telnet from one system to another and run the installer remotely.

Follow the installer's onscreen instructions. For most options, defaults offered by the installer are acceptable.

1. **License agreement:** Read the licensing agreement carefully and enter `Y` to accept it to install and use VisiBroker.

2. **Choose Install Folder:** This creates a new installation of VisiBroker, or adds components to an existing installation. Either enter `Y` to accept the default `/opt/RocketSoftware/VisiBrokerRT`, or enter another location and enter `Y` to confirm. Ensure that the user name you are using has write access to the chosen folder.

> 💡 **Note**
>
> You cannot install this version of VisiBroker on top of previous releases. However, you can specify an existing location to add components.

3. **Choose Product Components:** Depending on the VisiBroker product you are installing, you can select from the following product components.

> 💡 **Note**
>
> By default, the components are all selected. You can choose to de-select any components which you do not need. For example, you could de-select the *Examples* option. The options are:
>
> 1. **VisiBroker Core:** The development tools and server components for VisiBroker for Java and C++.
>
> 2. **Examples:** Example applications for VisiBroker.
>
> 3. **VisiBroker Services:** Optional components that you can purchase for extended VisiBroker functionality. You can select the specific services you have purchased later in the installation procedure.

4. **Choose VisiBroker Services:** Select the services you have purchased. For example, enter 1,2 to select VisiNotify and VisiSecure:

   a. **- VisiNotify:** An industrial strength, ORB-level implementation of the OMG Event/Notification Service.

   b. **- VisiSecure:** A framework for establishing secure connections between clients and servers.

   c. **- VisiTransact:** A complete implementation of the OMG transaction management solution for transactions with CORBA applications over the Internet or intranets.

5. **Choose Installation Type:** Choose:

   a. **- Typical**: an express install using default settings, including:

   Smart Agent port: Also known as the `osagent`. Client-side ORBs use this port to locate server objects before invoking their services. The default is `14000`.

b. - **Custom** to customize your installation. If you select this, you can: Set the Smart Agent port (`osagent`) to a value other than its default. Enter `1` or `2` as required.

6. **Configuration Settings**: If you selected a **Custom** installation, specify the `osagent` port you require.

7. **Java Development Kit:** Specify the path of the JDK to be used for this installation (see JDK).

8. **Pre-Installation Summary:** Review the displayed information before proceeding with the installation. Verify in particular the install folder location and the product features that you have specified. To confirm your choices and start installing, press **Enter**.

Using Silent Installation

Ensure that you have the prerequisites described in System requirements).

> 💡 **Note**
>
> You cannot install this version of VisiBroker in the same location as a previous version. Either:
>
> - Uninstall the previous version
>
>   or:
>
> - Install the new version in a different location from any other existing versions
>
>   Before invoking the silent installation process, you must first create a text file that contains the properties for configuration settings, such as the install directory, server name, and JDK home. Each property must be listed on its own line, terminated by a carriage return, with no blank spaces at the end of each line and no blank lines at the end of the file. See Properties File for Silent Installation for more information.
>
>   After creating the text properties file, save it as `<propertiesfile>.txt`, where `<propertiesfile>` is the file name prefix for your properties file. Now you can invoke the silent installation process using the values specified in the properties file.

All properties and values are case-sensitive. When specifying directory and file paths, always use a forward slash.

To invoke the silent installation process on Linux:

1. Open a UNIX shell.

2. Go to the directory where you downloaded the installer and obtain all permissions, or `chmod` all, where `777` indicates all, to run the installer.

3. Invoke the silent installation process by entering the following command. Make sure to specify the full path name of the `<propertiesfile>` file:

```
<installer_file> -f <path to properties file>
```

where `<installer_file>` is the name of the VisiBroker installer and `<path to properties file>` is the full path of the `<propertiesfile>` file.

For example:

```
vb85-<release number>-linux-<platform>-<arch>.bin -f /usr/ home/myname/silentproperties.txt
```

or:

```
vb85-<release number>-linux-<platform>-<arch>.bin -f /opt/ myname/silentproperties.txt
```

Properties File for Silent Installation

This properties file applies to silent installation of VisiBroker. It is a plain text file, with each property listed on its own line, terminated by a carriage return, with no blank spaces at the end of each line and no blank lines at the end of the file. Properties can appear in any order in the file.

Variable	Value
`INSTALLER_UI`	`silent` (required). The mode of installation.
`USER_INSTALL_DIR`	`<install_dir>` (required). The full path name for the VisiBroker product directory of your choice. - For Linux systems, the default installation directory is `/opt/ RocketSoftware/VisiBrokerRT`.
`INSTALL_TYPE`	The following type is required: - VisiBroker Installs VisiBroker.
`USER_SHORTCUTS`	**Windows (optional)**—The full path name for the product shortcuts directory. For Windows, the default for VisiBroker is `Start Menu/All Programs/VisiBroker`. - **UNIX (required)**—The required value for UNIX is `/dev/null`.
`JVM_JDK_HOME`	(optional) Sets the JDK path for VisiBroker components that host user application code.
`OSAGENT_PORT`	(optional). Default is `14000`.
`INSTALL_VISI CORE`	(optional). Installs the VisiBroker for Java and C++ development tools and server components. Default is `YES`.

Variable	Value
`INSTALL_EXAMPLES`	(optional). Installs the example applications for VisiBroker. Default is `YES`.
`VISI_SERVICES`	(optional) When `INSTALL_TYPE` is `VisiBroker`, installs any optional VisiBroker Services you purchased. The value is a comma-delimited list that contains one or more of the following entries: - VisiNotify - VisiSecure - VisiTransact For example, if you purchased VisiBroker with VisiNotify and VisiTransact, include the following line in your silent installation `<properties>` file to install those additional services: `VISI_SERVICES=VisiNotify,VisiTransact`
`CONFIGURATION_ SETUP`	(optional). Installs the VisiBroker example configuration. Default is `YES`.
`VBROKER_SETUP` (optional).	**Windows only**. If you select `YES`, the system variable `BES_LIC_DIR` is set to `<install_dir>/var` and `BES_LIC_DEFAULT_DIR` is set to `<install_dir>/license`. The default is `NO`.

Sample Silent Installation Properties

This example installs VisiBroker Edition on non-default management and agent ports, and installs several VisiBroker Extended Services:

```
INSTALLER_UI=silent

USER_INSTALL_DIR=/opt/RocketSoftware/VisiBrokerRT

USER_SHORTCUTS=/dev/null

OSAGENT_PORT=14925

INSTALL_TYPE=VisiBroker VISI_SERVICES=VisiNotify,VisiSecure,VisiTransact
```

Notices

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Corporate information

Rocket Software, Inc. develops enterprise infrastructure products in four key areas: storage, networks, and compliance; database servers and tools; business information and analytics; and application development, integration, and modernization.

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Contacting Technical Support

The Rocket Community is the primary method of obtaining support. If you have current support and maintenance agreements with Rocket Software, you can access the Rocket Community and report a problem, download an update, or read answers to FAQs. To log in to the Rocket Community or to request a Rocket Community account, go to www.rocketsoftware.com/support. In addition to using the Rocket Community to obtain support, you can use one of the telephone numbers that are listed above or send an email to support@rocketsoftware.com.

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Country and Toll-free telephone number

To contact Rocket Software by telephone for any reason, including obtaining pre-sales information and technical support, use one of the following telephone numbers.

- United States: 1-855-577-4323
- Australia: 1-800-823-405
- Belgium: 0800-266-65
- Canada: 1-855-577-4323
- China: 400-120-9242
- France: 08-05-08-05-62
- Germany: 0800-180-0882
- Italy: 800-878-295
- Japan: 0800-170-5464
- Netherlands: 0-800-022-2961
- New Zealand: 0800-003210
- South Africa: 0-800-980-818
- United Kingdom: 0800-520-0439