

eVision

eVe 3 Professional Installation Guide



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Preface

Company Positioning

Locating images is not an easy task, and when there are many files to search through, sometimes the only way to search through them is visually. Now the remarkable eVision technology can do just that - match images visually.

eVision's solution revolutionizes the visual search experience by giving customers direct access to the information within images. eVe™ (eVision Visual engine) is an advanced Visual Search engine that includes analysis, storage, indexing, and search/retrieval of images. Unlike a classical keyword-based search, eVision software retrieves images by analyzing their perceptual content. *Images do not need to be viewed or interpreted and keyworded by people beforehand.*

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Conventions

Some or all of the following conventions appear in this guide:

Symbol or Type Style	Represents	Example
Bold	what a user presses (either a key on the keyboard or a button on the screen)	...press EnterClick Modify .
	what a user types	type RUN APP.EXE in the Application field
<i>Alternate color</i>	hotlinked cross-references to other sections in this guide; if you are viewing this guide online in PDF format, you can click the cross-reference to jump to its location	...see <i>Chapter 1, eVe High-Level API</i> .
<i>Italic</i>	words that are emphasized	...the entry <i>after</i> the current entry...
	the titles of other documents	<i>API Reference Guide</i>
	syntax variables	COPY <i>filename</i>
Monospace	directories, file names, syntax, SQL	&HIGHLVL.SRCLIB
	screen text, system responses, command line commands	Copy file? Y/N

Related Publications

As you use this *eVe 3 Professional Installation Guide*, you might find it helpful to have these additional books available for reference:

- *eVe 3 Professional Getting Started Guide*
- *eVe 3 Professional API Reference Guide*
- *eVe General FAQ*
<http://www.evisionglobal.com/tech/faq.html>
- *eVe Getting Started as a Developer FAQ*
http://www.evisionglobal.com/developers/faq/developer_faq.html
- *eVe Technical FAQ and TroubleShooting Guide*
http://www.evisionglobal.com/developers/faq/technical_faq.html



Installing the eVe SDK

This guide describes the steps for installing the eVe SDK. It contains instructions on installing the SDK under Windows 98/ME/NT/2000, Solaris, IRIX, Mac OS X, and Linux, storing eVe information, verifying your installation, and configuring the installation.

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Overview

The core technology within the eVe engine distills images into their key visual elements to generate and index visual signatures. eVe serves as a building block (i.e., SDK) for software engineers to use when developing imaging applications, and is not an end-user application or user interface. The eVe SDK consists of a set of Java classes which provide access to methods for managing and processing image data.

Before you start programming with the eVe APIs, there are several things you need to do:

- 1 Check system requirements.** See the *System Requirements* section to ensure that your environment meets the minimum standards for working with eVe.
- 2 Install the SDK.** Follow the instructions in the *Install the eVe SDK* section to install the SDK and sample data under the Windows, Solaris, Linux, IRIX, or Mac OS X operating systems.
- 3 Configure the Database** (if necessary). If you choose to store the information used by eVe within Oracle, you must perform the configuration steps included in this section. If you plan to store image information in flat files or ObjectStore, you can skip this section.
- 4 Verify the Installation.** Run the included sample application to ensure a successful eVe installation.
- 5 Perform Additional Configuration** as needed.
- 6 Familiarize yourself with the core concepts and data structures in eVe.** We strongly suggest that you read *Chapter 3 - eVe High-Level API* and *Chapter 4 - eVe Low-Level API* in the *eVe 3 Professional API Reference Guide*. Additionally, understanding the sample code provided in the *Code Samples* chapter in the *Getting Started Guide* will help give you a better understanding of how things “fit together” in eVe.

System Requirements

Windows 98/ME/NT/2000

This section provides a list of *minimum* hardware and software requirements for using eVe under Windows 98/ME/NT/2000.

Hardware

- 400 MHZ Pentium-compatible
- 256 MB RAM
- 100 MB of Hard Disk Space (installation includes run-time files, documentation, and a test database)

Software

- Microsoft NT Server 4.0, service pack 6 or later
- Sun Java 2 Standard Edition (1.3) (available at <http://www.java.sun.com/j2se/1.3/>)

Sun Solaris, IRIX

This section provides a list of *minimum* hardware and software requirements for using eVe under Sun Solaris and IRIX.

Hardware

- Solaris: Sun Workstation or Server
- IRIX: SGI Workstation or Server
- 256 MB RAM
- 100 MB of Hard Disk Space (installation includes run-time files, documentation, and a test database)

Software

- Solaris: Solaris 2.7 or later
- IRIX: IRIX 6.5
- Sun Java 2 Standard Edition (1.3) (available at <http://www.java.sun.com/j2se/1.3/>)

Mac OS X

This section provides a list of *minimum* hardware and software requirements for using eVe under Mac OS X.

Hardware

If your Mac can run Mac OS X and Sun Java 2 Standard Edition (1.3), you can run eVe. See <http://www.apple.com/macosx/> to learn about the Mac hardware on which Mac OS X can run. See <http://developer.apple.com/java/> to learn about the Sun Java 2 Standard Edition included with Mac OS X.

- 128 MB RAM
- 100 MB of Hard Disk Space (installation includes run-time files, documentation, and a test database)

Software

- Mac OS X
- Sun Java 2 Standard Edition (1.3) (included with Mac OS X)

Linux

This section provides a list of *minimum* hardware and software requirements for using eVe under Linux.

Hardware

- 400 MHZ Pentium-compatible
- 256 MB RAM
- 100 MB of Hard Disk Space (installation includes run-time files, documentation, and a test database)

Software

- redhat 7.0 (Linux Kernel 2.2.16)
- Sun Java 2 Standard Edition (1.3) (available at <http://www.java.sun.com/j2se/1.3/>)

Database Support

eVe supports storing index information within Oracle v8.1.6.

Note • You are not required to store eVe index information with a relational database--you can also use flat files or ObjectStore.

Install the eVe SDK

You can install the eVe SDK API under Windows 98/ME/NT/2000, Solaris, IRIX, Mac OS X, or Linux.

Install the eVe SDK Under Windows

Perform the steps in the section if you are installing the eVe SDK under Windows 98/ME/NT/2000.

The eVe SDK includes a Java runtime environment (JRE). If your installed JRE is not the same version as the one supplied, we suggest you allow the installation program to install the included JRE to ensure proper functionality. The SDK also includes a set of sample data.

To install the eVe SDK:

- 1 Insert the eVe SDK installation CD into the machine on which you are installing.
- 2 Start Windows Explorer and navigate to the `\installs\Windows` directory on the installation CD.
- 3 Double-click the `install.exe` program icon. The installer displays a progress bar and the Introduction window appears.
- 4 Click **Next** to continue. The License Agreement window appears.
- 5 Read the terms of the license agreement. If you agree to the terms, continue to the next step. If you do not agree to the terms, click **Cancel** to exit the installation program.
- 6 Select the radio button next to the **I accept the terms of the License Agreement** and click **Next**. A window containing important installation information appears.
- 7 Click **Next**. The Choose Install Folder window appears.
- 8 Enter the path to the directory where you want to install eVe in the **Where Would You Like to Install** text box. Click **Choose...** to visually select the installation directory.
- 9 Click **Next**. The Choose Product Features window appears. Use this window to determine what eVe components to install:
 - **Typical Install**. Click this option to install the most common features of eVe. This is the default selection. If you use this option, continue to the next step.
 - **Minimal Install**. Click this option to install the eVe SDK and sample application only. No documentation or support for non-native file formats will be installed. If you select this option, continue to the next step.
- 10 Click **Next**. The Choose Shortcut Folder appears.
- 11 Click the button next to the option that indicates where you want to create application icons (shortcuts).
- 12 Click **Next**. The Important Information window appears.
- 13 Read the information in this window.

- 14 Click **Next**. The Choose Java Virtual Machine window appears.
- 15 Select the Java Virtual Machine (JVM) you wish to use.
 - Click **Install a Java VM specifically for this application** to install the JVM supplied with the eVe installation.
- Or**
- Click **Choose a Java VM already installed on this system** and select a previously installed JVM from the list box. If there are no Java VMs listed, or you want to perform a search for Java VMs, perform either of the following:
 - Click **Search for Others** to have the installation program automatically scan your system for a Java VM.
 - Click **Choose Another...** to manually locate a Java VM on your system.
- 16 Click **Next** to confirm your selection and install the SDK and JVM. The installer copies the necessary files to your computer and performs some configuration operations. When the install procedure is complete, the Install Complete windows appear.
- 17 Click **Next**. The System Environment Changed window appears.
- 18 Click **Done** to exit the installer. After the installation has completed, you might need to edit the `Eve.properties` file to finish configuring your system. See *The eve.properties File* section for information about this file.
- 19 To complete the installation, restart your computer or log off and log back in.

Install the eVe SDK Under Solaris

Perform the steps in the section if you are installing the eVe SDK under Sun Solaris.

The eVe SDK includes a Java runtime environment (JRE). If your installed JRE is not the same version as the one supplied, we suggest you allow the installation program to install the included JRE to ensure proper functionality. The SDK also includes a set of sample data.

To install the eVe SDK:

- 1 Insert the eVe SDK installation CD into the machine on which you are installing.
- 2 From the root of the installation CD, issue the following command (including the quotation marks):

```
sh "/installs/Solaris/install.bin"
```

The installer displays a progress bar and displays the Introduction window.
- 3 Click **Next** to continue. The License Agreement window appears.
- 4 Read the terms of the license agreement. If you agree to the terms, continue to the next step. If you do not agree to the terms, click **Cancel** to exit the installation program.
- 5 Select the radio button next to the **I accept the terms of the License Agreement** and click **Next**. A window containing important installation information appears.

- 6 Click **Next**. The Choose Install Folder window appears.
 - 7 Enter the path to the directory where you want to install eVe in the **Where Would You Like to Install** text box. Click **Choose...** to visually select the installation directory.
 - 8 Click **Next**. The Choose Product Features window appears. Use this window to determine what eVe components to install:
 - **Typical Install**. Click this option to install the most common features of eVe. This is the default selection. If you use this option, continue to the next step.
 - **Minimal Install**. Click this option to install the eVe SDK and sample application. No documentation or support for non-native file formats will be installed. If you select this option, continue to the next step.
 - 9 Click **Next**. The Choose Link Location appears.
 - 10 Click the option button that indicates where you want to create application icons (links).
 - 11 Click **Next**. The Important Information window appears.
 - 12 Read the information in this window.
 - 13 Click **Next**. The Choose Java Virtual Machine window appears.
 - 14 Select the Java Virtual Machine (JVM) you wish to use.
 - Click **Install a Java VM specifically for this application** to install the JVM supplied with the eVe installation.
- Or**
- Click **Choose a Java VM already installed on this system** and select a previously installed JVM from the list box. If there are no Java VMs listed, or you want to perform a search for Java VMs, perform either of the following:
 - Click **Search for Others** to have the installation program automatically scan your system for a Java VM.
 - Click **Choose Another...** to manually locate a Java VM on your system.
- 15 Click **Install** to confirm your selection and install the SDK and JVM. The installer copies the necessary files to your computer and performs some configuration operations. When the install procedure is complete, the Install Complete windows appear.
 - 16 Click **Next**. The System Environment Changed window appears.
 - 17 Click **Done** to exit the installer. After the installation has completed, you might need to edit the `Eve.properties` file to finish configuring your system. See *The eve.properties File* section for information about this file.
 - 18 Restart your computer or log off and log back in to complete the installation.

Install the eVe SDK Under Linux

Perform the steps in this section if you are installing the eVe SDK under Linux.

The eVe SDK includes a Java runtime environment (JRE). If your installed JRE is not the same version as the one supplied, we suggest you allow the installation program to install the included JRE to ensure proper functionality. The SDK also includes a set of sample data.

To install the eVe SDK:

- 1 Insert the eVe SDK installation CD into the machine on which you are installing.
- 2 Start a command line session and change your current directory to `install/Linux` on the CD or to the location where you downloaded eVe.
- 3 While in the `/Linux` directory, issue the following command:

```
java -cp install.zip install
```

The installer displays a progress bar and displays the Introduction window.
- 4 Click **Next** to continue. The License Agreement window appears.
- 5 Read the terms of the license agreement. If you agree to the terms, continue to the next step. If you do not agree to the terms, click **Cancel** to exit the installation program.
- 6 Select the radio button next to the **I accept the terms of the License Agreement** and click **Next**. A window containing important installation information appears.
- 7 Click **Next**. The Choose Install Folder window appears.
- 8 Enter the path to the directory where you want to install eVe in the **Where Would You Like to Install** text box. Click **Choose...** to visually select the installation directory.
- 9 Click **Next**. The Choose Product Features window appears. Use this window to determine what eVe components to install:
 - **Typical Install**. Click this option to install the most common features of eVe. This is the default selection. If you use this option, continue to the next step.
 - **Minimal Install**. Click this option to install the eVe SDK and sample application. No documentation or support for non-native file formats will be installed. If you select this option, continue to the next step.
- 10 Click **Next**. The Choose Shortcut Folder appears.
- 11 Click the option button that indicates where you want to create application icons (shortcuts).
- 12 Click **Next**. The Important Information window appears.
- 13 Read the information in this window.
- 14 Click **Next**. The Choose Java Virtual Machine window appears.
- 15 Select the Java Virtual Machine (JVM) you wish to use.

- Click **Install a Java VM specifically for this application** to install the JVM supplied with the eVe installation.

Or

- Click **Choose a Java VM already installed on this system** and select a previously installed JVM from the list box. If there are no Java VMs listed, or you want to perform a search for Java VMs, perform either of the following:
 - Click **Search for Others** to have the installation program automatically scan your system for a Java VM.
 - Click **Choose Another...** to manually locate a Java VM on your system.
- 16 Click **Install** to confirm your selection and install the SDK and JVM. The installer copies the necessary files to your computer and performs some configuration operations. When the install procedure is complete, the Install Complete windows appear.
 - 17 Click **Next**. The System Environment Changed window appears.
 - 18 Click **Done** to exit the installer. After the installation has completed, you might need to edit the `Eve.properties` file to finish configuring your system. See *The eve.properties File* section for information about this file.
 - 19 To complete the installation, restart your computer or log off and log back in.

Install the eVe SDK Under Mac OS X

Perform the steps in the section if you are installing the eVe SDK under Mac OS X.

To install the eVe SDK:

- 1 Insert the eVe SDK installation CD into the machine on which you are installing. If you downloaded the eVe SDK from the eVision web site, continue to the next step.
- 2 Start a command line session and change your current directory to `installs/Mac_OS_X` on the CD or to the location where you downloaded eVe.
- 3 While in the `/Mac_OS_X` directory, issue the following command:

```
java -cp install.zip install
```

The installer displays a progress bar and displays the Introduction window.
- 4 Click **Next** to continue. The License Agreement window appears.
- 5 Read the terms of the license agreement. If you agree to the terms, continue to the next step. If you do not agree to the terms, click **Cancel** to exit the installation program.
- 6 Select the radio button next to the **I accept the terms of the License Agreement** and click **Next**. A window containing important installation information appears.
- 7 Click **Next**. The Choose Install Folder window appears.
- 8 Enter the path to the directory where you want to install eVe in the **Where Would You Like to Install** text box. Click **Choose...** to visually select the installation directory.

- 9 Click **Next**. The Choose Product Features window appears. Use this window to determine what eVe components to install:
 - **Typical Install**. Click this option to install the most common features of eVe. This is the default selection. If you select this option, continue to the next step.
 - **Minimal Install**. Click this option to install the eVe SDK and sample application. No documentation or support for non-native file formats will be installed. If you select this option, continue to the next step.
- 10 Click **Next**. The Choose Aliases window appears.
- 11 Click the option button that indicates where you want to create aliases for eVe.

Note • The installation program does not create aliases for eVe programs on the Mac OS X desktop. See the following section, *To add aliases for eVe to the Mac OS X desktop, for instructions on how to do this*.

- 12 Click **Next**. The Important Information window appears.
 - 13 Read the information in this window.
 - 14 Click **Next**. The Choose Java Virtual Machine window appears.
 - 15 Select the Java Virtual Machine (JVM) you wish to use.
 - Click **Install a Java VM specifically for this application** to install the JVM supplied with the eVe installation.
- Or**
- Click **Choose a Java VM already installed on this system** and select a previously installed JVM from the list box. If there are no Java VMs listed, or you want to perform a search for Java VMs, perform either of the following:
 - Click **Search for Others** to have the installation program automatically scan your system for a Java VM.
 - Click **Choose Another...** to manually locate a Java VM on your system.
- 16 Click **Install** to confirm your selection and install the SDK and JVM. The installer copies the necessary files to your computer and performs some configuration operations. When the install procedure is complete, the Install Complete windows appear.
 - 17 Click **Next**. The System Environment Changed window appears.
 - 18 Click **Done** to exit the installer. After the installation has completed, you might need to edit the `Eve.properties` file to finish configuring your system. See *The eve.properties File* section for information about this file.
 - 19 To complete the installation, restart your computer or log off and log back in.

To add aliases for eVe to the Mac OS X desktop

Perform the following steps to add aliases on your desktop for the eVe sample application and uninstall program.

- 1 Start a command line session.
- 2 To create an alias on your desktop for the sample application, type the following in the command line and press **Enter**:

```
ln path/sample/SampleApp.sh name_of_alias
```

where

- *path* represents the path to the location where you installed eVe
- *name_of_alias* represents the name you want to assign to the desktop icon for the sample application

An example command line for creating a desktop icon for the sample application might read:

```
ln /usr/local/com/evisiogloba1/eve/sample/SampleApp.sh eVeSampleApp
```

- 3 To create an icon on your desktop for the uninstall program, type the following in the command line and press **Enter**:

```
ln path/Uninstall/Uninstall_eVe3_[eVe_version_info] name_of_shortcut_icon
```

where:

- *path* represents the path to the location where you installed eVe
- *eVe_version_info* represents the version of eVe that comprises the path to the uninstall program (for example, Source_36_Installer_0901).
- *name_of_alias* represents the name you want to assign to the desktop icon for the uninstall program.

An example command line for creating a desktop icon for the uninstall program might read:

```
ln usr/local/com/UninstallerData_eVe3_[Source_36_Installer_0901] eVeUninstall
```


Install the eVe SDK Under IRIX

Perform the steps in the section if you are installing the eVe SDK under IRIX.

To install the eVe SDK under IRIX:

- 1 Insert the eVe SDK installation CD into the machine on which you are installing. If you downloaded the eVe SDK from the eVision web site, continue to the next step.
- 2 Start a command line session and change your current directory to `installs/IRIX` on the CD or to the location where you downloaded eVe.
- 3 While in the `/IRIX` directory, issue the following command:

```
java -cp install.zip install
```

The installer displays a progress bar and displays the Introduction window.
- 4 Click **Next** to continue. The License Agreement window appears.
- 5 Read the terms of the license agreement. If you agree to the terms, continue to the next step. If you do not agree to the terms, click **Cancel** to exit the installation program.
- 6 Select the radio button next to the **I accept the terms of the License Agreement** and click **Next**. A window containing important installation information appears.
- 7 Click **Next**. The Choose Install Folder window appears.
- 8 Enter the path to the directory where you want to install eVe in the **Where Would You Like to Install** text box. Click **Choose...** to visually select the installation directory.
- 9 Click **Next**. The Choose Product Features window appears. Use this window to determine what eVe components to install:
 - **Typical Install**. Click this option to install the most common features of eVe. This is the default selection. If you select this option, continue to the next step.
 - **Minimal Install**. Click this option to install the eVe SDK and sample application. No documentation or support for non-native file formats will be installed. If you select this option, continue to the next step.
- 10 Click **Next**. The Choose Shortcut Folder appears.
- 11 Click the option button that indicates where you want to create application icons (link locations).

Note • The installation program does not create link location icons for eVe programs on the desktop. See the following section, *To add aliases for eVe to the Mac OS X desktop*, for instructions on how to do this.

- 12 Click **Next**. The Important Information window appears.
- 13 Read the information in this window.
- 14 Click **Next**. The Choose Java Virtual Machine window appears.

- 15 Select the Java Virtual Machine (JVM) you wish to use.
 - Click **Install a Java VM specifically for this application** to install the JVM supplied with the eVe installation.
- Or**
- Click **Choose a Java VM already installed on this system** and select a previously installed JVM from the list box. If there are no Java VMs listed, or you want to perform a search for Java VMs, perform either of the following:
 - Click **Search for Others** to have the installation program automatically scan your system for a Java VM.
 - Click **Choose Another...** to manually locate a Java VM on your system.
- 16 Click **Install** to confirm your selection and install the SDK and JVM. The installer copies the necessary files to your computer and performs some configuration operations. When the install procedure is complete, the Install Complete windows appear.
- 17 Click **Next**. The System Environment Changed window appears.
- 18 Click **Done** to exit the installer. After the installation has completed, you might need to edit the `Eve.properties` file to finish configuring your system. See [The *eve.properties* File](#) section for information about this file.
- 19 To complete the installation, restart your computer or log off and log back in.

To add link location icons for eVe to the IRIX desktop

Perform the following steps to add link locations on your desktop for the eVe sample application and uninstall program.

- 1 Start a command line session.
- 2 To create a link location on your desktop for the sample application, type the following in the command line and press **Enter**:

```
In path/sample/SampleApp.sh name_of_link_location
```

where

- *path* represents the path to the location where you installed eVe
- *name_of_link_location* represents the name you want to assign to the desktop icon for the sample application

An example command line for creating a desktop icon for the sample application might read:

```
In /usr/local/com/evisiogloba1/eve/sample/SampleApp.sh eVeSampleApp
```

- 3 To create a link location on your desktop for the unintsall program, type the following in the command line and press **Enter**:

```
In path/Uninstall/Uninstall_eVe3_[eVe_version_info] name_of_link_location
```

where:

- *path* represents the path to the location where you installed eVe
- *eVe_version_info* represents the version of eVe that comprises the path to the uninstall program (for example, `Source_36_Installer_0901`).
- *name_of_link_location* represents the name you want to assign to the desktop icon for the uninstall program.

An example command line for creating a desktop icon for the uninstall program might read:

```
In usr/local/com/UninstallerData_eVe3_[Source_36_Installer_0901] eVeUninstall
```

Store eVe Information

eVe provides you with three options for storing its index and image information: flat files (default), ObjectStore, and Oracle.

Using Flat Files

Flat files are the default storage location for eVe index and image information. If you accept this default, you do not need to perform any further configuration.

Using Object Store

If you want to store eVe index and image information in ObjectStore, perform the following steps:

- 1 Purchase ObjectStore from Object Design (<http://www.objectdesign.com/index2.html>).
- 2 Inform eVision that you will use ObjectStore to store eVe index and image information. You can contact eVision at support@evision.com.
- 3 Edit the `eve.properties` file appropriately. See the *The eve.properties File* section for configuration instructions.

Using Oracle

Read this section if you plan to store eVe's index information within Oracle.

Note • You need to be an administrator of the database to perform these steps. If you do not have sufficient access rights to create tables in the database to which you wish to connect, have your database administrator perform the following steps.

Compatibility Note • The eVe system has been tested to be compatible with Oracle 8.1.6.

To set up your database, you must create five tables:

- **EVEPROPERTIES**. Contains the metadata properties associated with MediaCollections.
- **EVECLUSTER**. Contains index information.
- **EVEENTRY**. Contains index information.
- **EVEDATA**. Contains the MediaObjects for multiple MediaCollections.
- **EVEMETADATA**. Contains the metadata for the MediaObjects in the MediaCollections.

More information about how to configure your database will be available in an upcoming version of this guide.

Verify the Installation

The eVe SDK comes with a sample GUI application that allows you to create and manipulate MediaCollections, analyze images, and perform searches. The application and its source code are located in the `\sample` folder where you installed the eVe SDK.

Please note that the sample application included with the SDK is **not a supported product**. It is intended only to give you a working model from which you might build an actual product. For instance, not all buttons work in the sample application. The application is included simply to give you ideas of what might be done.

Once you have installed the SDK and optionally configured your database, you can run the sample application to verify the SDK is installed and configured correctly.

To run the sample application:

- 1 Depending on your operating system, perform the following:
 - **Windows** — Select **Start ▶ Programs ▶ eVe 3 Professional ▶ SampleApp.bat**. The eVe sample application
 - **Solaris** — Issue the following command from the root of your eVe installation (for example, `/usr/local/com/evision/global/eve`):

```
sample/SampleApp.sh
```
 - **Mac OS X, Linux, IRIX** — Execute `SampleApp.sh` located in the `Sample` folder of your eVe installation.

The sample application's GUI window appears.

- 2 Use the functions of the sample application to familiarize yourself with eVe's functionality.
- 3 To exit the sample application, close its window or select **File ▶ Exit**.

The *eve.properties* File

The *eve.properties* file defines the system default values read by the program at runtime. Using the values in this file, you can set up your database connection information, set maximum values for search options, and more.

eve.properties is located in the folder where you installed the eVe SDK (for example, `\com\evisionglobal\eve\Eve.properties`).

Note • You can override the values in the *eve.properties* file with *EveContext* objects. See the *EveContext* section in *Chapter 3 — eVe Low-Level API of the eVe SDK API Reference Guide* for more information.

The following explains the different sections within the *eve.properties* file.

```
# version information
version=snapshot36
```

where *version* indicates the name of the version of eVe you are using. **Do not** change this entry unless an eVision representative instructs you to do so.

```
# module definitions
colorDistanceClass=com.evisionglobal.eve.kernel.ColorDistanceV01
regionDistanceClass=com.evisionglobal.eve.kernel.RegionDistanceV01
shapeDistanceClass=com.evisionglobal.eve.kernel.ShapeDistanceV01
textureDistanceClass=com.evisionglobal.eve.kernel.TextureDistanceV01

mediaObjectClass=com.evisionglobal.eve.kernel.MOV01
mediaCollectionClass=com.evisionglobal.eve.kernel.MCV01
analyzeClass=com.evisionglobal.eve.kernel.AnalyzeV01
segmentationClass=com.evisionglobal.eve.kernel.SegmentationV01
metadataClass=com.evisionglobal.eve.kernel.MDV01

searchResultsClass=com.evisionglobal.eve.kernel.SRV01

searchParametersClass=com.evisionglobal.eve.kernel.SPV01
searchClass=com.evisionglobal.eve.kernel.SearchV02

imageManagerClass=com.evisionglobal.eve.kernel.IMV01
frameGrabberClass=com.evisionglobal.eve.kernel.FrameGrabberV01
vocabularyClass=com.evisionglobal.eve.kernel.VocabularyV01
commandListClass=com.evisionglobal.eve.commands.CommandListV01
```

where all of the *Class* entries are for eVision use only. **Do not** change any of these entries unless an eVision representative instructs you to do so.

```
# system stuff
tempDirectory=\\temp
directorySeparator=\\
testDirectory = \\com\\evisiogloba\\eve\\tests

segmentationMaskPath=\\com\\evisiogloba\\eve\\kernel\\segmentationMask.gif
```

where:

- eVe's tempDirectory can be different from your operating system's temporary directory, such as C:\TEMP or /tmp. The system uses this directory to hold temporary files created during various operations.

Note • Backslashes (\) are escape characters in this file. Use two backslashes (\\) to represent a single backslash in a path or filename.

- Your system's directorySeparator is critical. Set this to a backslash (\) for Windows, a slash (/) for Solaris and other Unixes, and a colon (:) for Macintosh.
- testDirectory is the directory which holds a number of test scripts designed to verify that your installation of eVe is functioning correctly.
- segmentationMaskPath is the path to a blank segmentation mask which eVe uses to create new masks.

```
# max values
maxResolution=128
maxRegions=3
maxIterations=999
maxBinSize=128
maxSearchEntries=512
maxSearchResults=32
maxClusterIterations=50
maxClusterAccuracy=0.02
```

where the items in the max values section define various system limits. All of these values are for eVision internal use only. **Do not** change any of these entries unless an eVision representative instructs you to do so.

- maxResolution represents the threshold at which eVe will resize an image before analysis occurs. For example, if the dimension(s) of an image exceed the value set in this parameter (128 by default), then eVe will resize the dimension(s) in that image to correspond to this value. The aspect ratio of an image is maintained.
- maxRegions is the maximum number of regions into which an image should be segmented. See the *Code Samples* chapter in the *Getting Started Guide* for more information about partial image searching.

- `maxIterations` is the maximum number of iterations the algorithm executes to generate the segmentation map and the signatures (the higher the better, but that takes more time).
- `maxNodes` is the maximum number of retrieval results to be returned by the search.
- `maxBinSize` is the maximum number of signature vectors per cluster.
- `maxSearchBins` is the maximum number of image-storage units, or "bins", in which to search. The higher this value, the longer a search will take, but the more accurate the result set will be.

Note • To set the system to perform linear searches, set `maxSearchBins` to an extremely high number. This is not recommended, however. Normally, it is preferable to have your system tuned for higher performance and slightly less accuracy. If you need to make linear searches available as an option, use `EveContext` and leave the system default at a higher-performance setting. See the *Using EveContext* section in the *Getting Started Guide* for more information.

- `maxClusterIterations` is the maximum number of iterations the clustering algorithm executes to generate the bins.
- `maxClusterAccuracy` is the percentage of overall data moved during an iteration of the clustering algorithm. This is another termination criterion.

```
# frame grabber
frameGrabberStep=20
frameGrabberMinimumDistance=60
frameGrabberAlpha=-0.01
```

where:

- the items in the `frame grabber` values section define parameters related to extracting keyframes from video files.
- `frameGrabberStep` indicates how often eVe will examine frames in a video file to determine if there is a new keyframe. For example, if the value for `frameGrabberStep` is 20, then eVe will examine every 20th frame in a video file to determine if there is a new keyframe.
- `frameGrabberMinimumDistance` indicates the minimum percentage of visual difference between video frames that determines if the current frame is a new keyframe. For example, if the visual difference between frames is greater than 60% (`frameGrabberMinimumDistance=60`), eVe will consider the current frame to be a keyframe.
- `frameGrabberAlpha` is for eVision internal use only. **Do not** change this entry unless an eVision representative instructs you to do so.

```
# error logging support
logErrors = true
errorLogPath=\\temp\\eve.error.log.txt
```

- Set `logErrors` to `true` to enable error logging. When logging is enabled, the system logs any exceptions, with their stack traces, to the file you specify in `errorLogPath`.

Note • Make sure that there is plenty of space available in the `errorLogPath` directory. You should periodically clean out this directory, as the number of files can become quite large.

```
# database stuff

#
# flavor 1 - file based
#
relationalDatabase=false
databaseStoreMediaObjects=false
databaseConnectionClass=com.evisionglobal.eve.kernel.DatabaseFileConnectionV01
databaseIndexClass=com.evisionglobal.eve.kernel.DatabaseIndexV01

#
# flavor 2 - object store based
#
# relationalDatabase=false
# databaseConnectionClass=com.evisionglobal.eve.kernel.DatabaseObjectConnectionV01
# databaseIndexClass=com.evisionglobal.eve.kernel.DatabaseObjectIndexV01
#

#
# flavor 3 - relational based
#
# relationalDatabase=true
# relationalDatabaseCollectionName=padmini
# databaseConnectionClass=com.evisionglobal.eve.kernel.DatabaseRelationalConnectionV01
# databaseIndexClass=com.evisionglobal.eve.kernel.DatabaseRelationalIndexV01
#

databaseDriverString=oracle.jdbc.driver.OracleDriver
databaseConnectionString=jdbc:oracle:thin:@127.0.0.1:1521:EVE
databaseUser=system
databasePassword=manager
databasePropertiesTableName=eveproperties

databaseClusterTableName=evecluster
databaseEntryTableName=eveentry
databaseMediaObjectTableName=evedata
databaseMetadataTableName=evemetadata
```


where the database section contains all of the information that eVe needs to be able to connect to the location where it stores index information. There are three places where you can store eVe index information: flat files, object store, and a relational database.

- the # flavor 1 - file bases section contains information used by eVe when you store index information within flat files. If you intend to store eVe index information within flat files, make sure to uncomment the parameters in this section.

eVe uses flat files as the default storage location for index information.

- the # flavor 2 - object store based section contains information used by eVe when you store index information within ObjectStore. If you intend to store eVe index information within ObjectStore, make sure to uncomment the parameters in this section.

Note • You can purchase ObjectStore from Object Design’s web site located at: <http://www.objectstore.net/index2.html>. See the *Store eVe Information* section for more information about configuring eVe with ObjectStore.

- the # flavor 3 - relational based section contains information used by eVe when you store index information within a relational database. Currently, eVe supports Oracle v8.1.6 through JDBC. If you intend to store eVe index information within a relational database, make sure to uncomment the parameters in this section. See the *Store eVe Information* section for more information about setting up eVe for use with a relational database.
- `databaseDriverString` is the Java JDBC class of the database driver.
- `databaseConnectionString` is the information the driver needs to be able to communicate with the database. This includes the database’s network address, the port on which the database server listens, and the name of the database table.
- `databaseUser` and `databasePassword` contain the username and password authorized to access the eVe tables within the database.
- `databaseMediaObjectName` is the name of the database table containing the `MediaObjects`.
- `databaseMetadataTableName` is the name of the database table containing all of the metadata associated with the `MediaObjects`.

```
# caching  
useCache=true
```

where `useCache` controls whether or not eVe caches database entries for faster retrieval. In general, you should set this to `TRUE` in a server environment. Turning caching off can greatly decrease retrieval performance, especially on large collections, but generally does not have a large performance impact on small databases.

```
# tracing  
traceIndexSearch=0
```

where `traceIndexSearch` is for eVision internal use only. **Do not** change this entry unless an eVision representative instructs you to do so.

```
# searching  
exhaustiveSearch=false
```

where `exhaustiveSearch` determines the extent to which you want eVe to perform an image search. If this value is set to `false` (default), eVe performs a standard search of the images in your database. If you this value is set to `true`, then eVe will perform a more extensive search of the images within your database.

Tip • Due to performance considerations, we recommend you set this value to `false` when searching through a large number of images.

Additional Configuration

This section describes some additional configuration changes you must perform on the eVe SDK installation.

Setting Up Flexlm

Flexlm is a license manager that allows software licenses for eVe 3 Professional to be available (or float) anywhere on a network, instead of being tied to specific machines. Floating licensing benefits both users and license administrators. Users can make more efficient use of fewer licenses by sharing them on the network.

Note • You do not need to set up Flexlm if you downloaded the evaluation version of eVe from the eVision web site. The evaluation version of eVe limits analysis and search to 500 images.

To enable the use of eVe and Flexlm on your network, perform the following steps:

- 1 Install Flexlm on the machine you designate to act as the license manager for eVe.
- 2 Generate a license request file from the machine where you installed Flexlm.
- 3 Attach the generated license request file to an email and send that email to: license@evisionglobal.com. The staff at eVision will process your license request file and send you a permanent license key.
- 4 Until you receive the permanent license key, run eVe under the temporary license you received from your eVision sales representative. When you receive the permanent license key from eVision, continue to the next step.
- 5 Replace the current, temporary license file (license.dat) for Flexlm with the one you received in the email from eVision.
- 6 Run the lmtools utility to refresh the Flexlm server to read the new, permanent license file.

Please see the *Flexlm End Users Guide* for complete information on how to use Flexlm to manage your eVe license. This guide (enduser.pdf) is available on the eVe 3 Professional installation CD in the \docs\ directory.

Preparing Images for Analysis - Converting File Formats

The eVe analysis engine supports the following image types: GIF, JPEG, and PNG. If the images you want to analyze with eVe are stored as a different file type than these supported types, you must convert them to one of these types. For example, if your image library consists of BMP files, you might convert them to the GIF format before you run them through analysis.

To help you with any image conversions, the eVe SDK includes a third-party program called ImageMagick™. This program allows you to resize, rotate, sharpen, color, reduce, and convert images. ImageMagick is available on the eVe installation CD in the following locations:

- **Windows** — \extras\im\ImageMagick-win2k.zip
- **Solaris 2.7** — \extras\im\ImageMagick-sparc-sun-solaris2.7.tar.gz
- **Solaris 2.8** — \extras\im\ImageMagick-sparc-sun-solaris2.8.tar.gz
- **IRIX** — \extras\im\ImageMagick-mips-sgi-irix6.5.tar.gz
- **Linux** — \extras\im\ImageMagick-i686-pc-linux-gnu.tar.gz

Note • You can also download ImageMagick from the following URL:
<http://www.ImageMagick.org/>

Preparing Images for Analysis - Resizing Images

The `maxResolution` parameter in the `eve.properties` file represents the threshold at which eVe will resize an image before analysis occurs. For example, if the dimension(s) of an image exceed the value set in this parameter (128 by default), then eVe will resize the dimension(s) in that image to correspond to this value.

Before an image is run through the eVe analysis engine, that image will be automatically resized (if needed) to match the value set in the `maxResolution` parameter. However, if you first used ImageMagick to convert an image to a GIF, JPEG, or PNG format (see the previous section), we recommend you use ImageMagick to perform the resize, rather than allowing the automatic resize mechanism to perform the resize.

- Under Windows, you could issue the following command to resize all the JPEG images in the current directory to a maximum of 128X128 pixels:

```
for %f in (*.jpg) mogrify -geom 128x128! %f
```

- Under Solaris, the same command would be:

```
for f in *.jpg
do mogrify -geom 128x128 $f
done
```

Note • You must first install ImageMagick (provided on the eVe CD) before attempting to resize images. See the previous section, *Preparing Images for Analysis - Converting File Formats*, for information on where the ImageMagick installation files are located.

FrameGrabber

To enable video keyframe extraction using the FrameGrabber interface, eVe includes a wrapper for the latest cross-platform version of the Java™ Media Framework (JMF). To ensure that the video files from which you want to extract keyframes are supported, point your web browser to <http://java.sun.com/products/java-media/jmf/2.1.1/formats.html> and view the supported media types for the cross-platform version JMF 2.1.1.

If using Windows or Solaris, you can download and install the appropriate JMF 2.1.1 performance pack to improve your media support. You can download the corresponding performance pack from <http://java.sun.com/products/java-media/jmf/2.1.1/download.html>.

Configuration Note • If you install the Windows or Solaris performance packs, check your user variable **CLASSPATH** to ensure that the entry `...\\JMF21~1.1\\lib\\jmf.jar` appears before the `\\com\\evision\\global\\eve\\jar-files\\jmf.jar` entry. View the [readme.html](#) included with the JMF performance pack installation for more information about **CLASSPATH** settings.

Uninstalling the eVe SDK

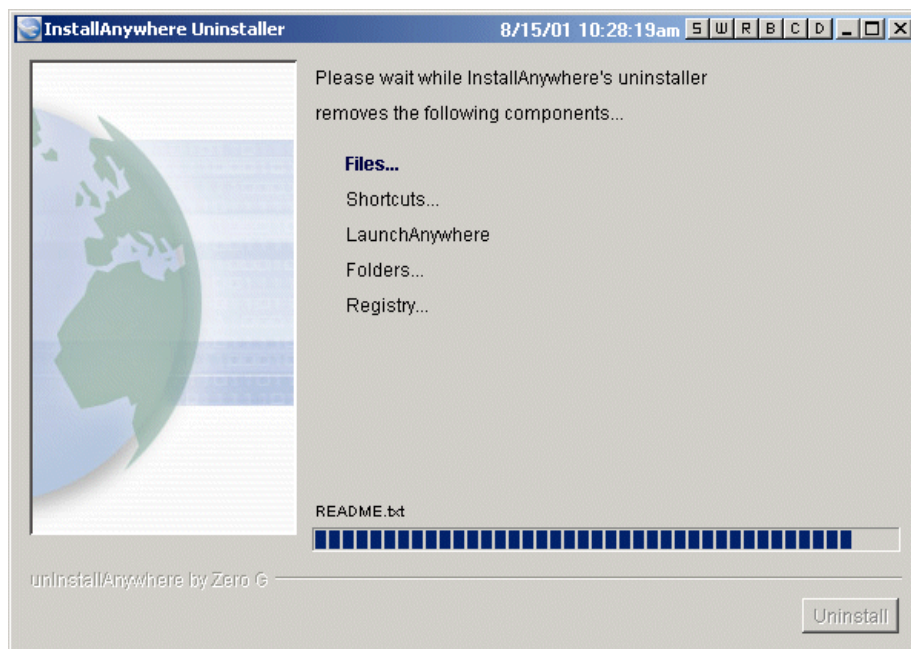
This section describes how to uninstall eVe from your system.

Uninstall the eVe SDK Under Windows

Perform the steps in the section if you are uninstalling the eVe SDK under Windows 98/ME/NT/2000.

To uninstall the eVe SDK:

- 1 Select **Start ▶ Settings ▶ Control Panel ▶ Add/Remove Programs**. The Add/Remove Programs dialog box appears.
- 2 Select the entry for eVe (for example, **eVe 3 Professional**).
- 3 Click **Change/Remove**. The InstallAnywhere Uninstaller dialog box appears.
- 4 Click **Uninstall**. A dialog box appears and displays the progress of the uninstallation.



The Uninstall Complete dialog box appears.

- 5 Click **Quit**.

Uninstall the eVe SDK under Solaris, Linux, IRIX, and Mac OS X

Perform the steps in the section if you are uninstalling the eVe SDK under Solaris, IRIX, Linux, or Mac OS X.

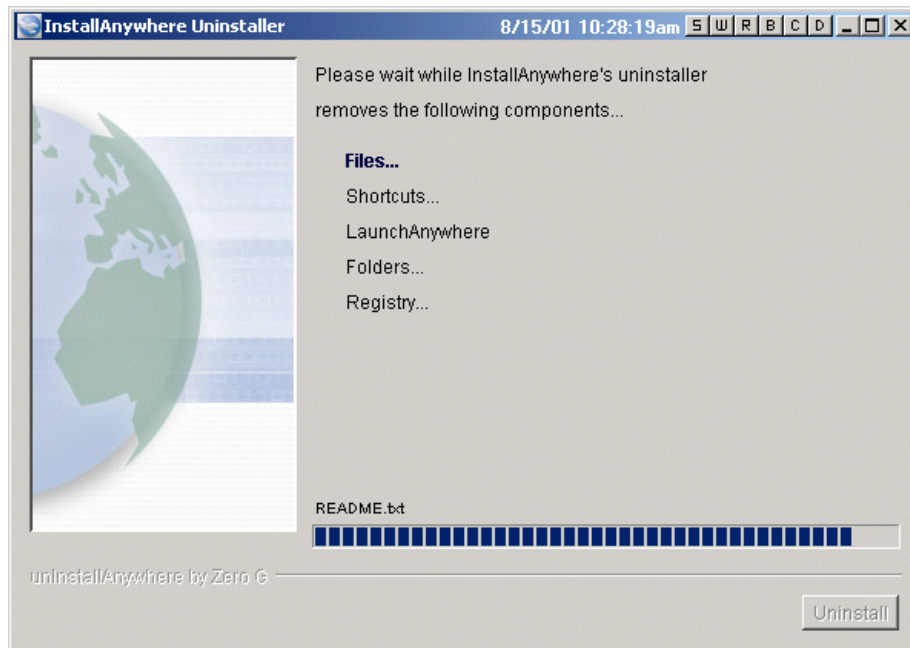
To uninstall the eVe SDK:

- 1 Start a command line session.

- 2 Type “usr/local/com/UninstallerData_eVe3_[eVe_version_info]/Uninstall_eVe3_[eVe_version_info]” and press **Enter**.

where *eVe_version_info* represents the version of eVe that comprises the path to the uninstall program (for example, Source_36_Installer_0901).

A dialog box appears and displays the progress of the uninstallation.



The Uninstall Complete dialog box appears.

- 3 Click **Quit**.

