SeeBeyond ICAN Suite

# SeeBeyond ICAN Suite Installation Guide

Release 5.0.1



SeeBeyond Proprietary and Confidential

The information contained in this document is subject to change and is updated periodically to reflect changes to the applicable software. Although every effort has been made to ensure the accuracy of this document, SeeBeyond Technology Corporation (SeeBeyond) assumes no responsibility for any errors that may appear herein. The software described in this document is furnished under a License Agreement and may be used or copied only in accordance with the terms of such License Agreement. Printing, copying, or reproducing this document in any fashion is prohibited except in accordance with the License Agreement. The contents of this document are designated as being confidential and proprietary; are considered to be trade secrets of SeeBeyond; and may be used only in accordance with the License Agreement, as protected and enforceable by law. SeeBeyond assumes no responsibility for the use or reliability of its software on platforms that are not supported by SeeBeyond.

SeeBeyond, e\*Gate, and e\*Way are the registered trademarks of SeeBeyond Technology Corporation in the United States and select foreign countries; the SeeBeyond logo, e\*Insight, and e\*Xchange are trademarks of SeeBeyond Technology Corporation. The absence of a trademark from this list does not constitute a waiver of SeeBeyond Technology Corporation's intellectual property rights concerning that trademark. This document may contain references to other company, brand, and product names. These company, brand, and product names are used herein for identification purposes only and may be the trademarks of their respective owners.

© 2003 by SeeBeyond Technology Corporation. All Rights Reserved. This work is protected as an unpublished work under the copyright laws.

This work is confidential and proprietary information of SeeBeyond and must be maintained in strict confidence. Version 20031124150040.

# Contents

List of Figures	7
List of Tables	8
Chapter 1	
Introduction	9
Installation Guide Purpose and Scope	9
Intended Audience	9
Organization of Information	10
Writing Conventions Additional Conventions	<b>10</b> 11
Supporting Documents	11
Online Documents	12
About eGate 5.0.1 eGate Basics eGate Integrator Components Resource Considerations	12 12 12 13
The SeeBeyond Web Site	14

## Chapter 2

Overview of Installation	15
Overview	15
System Requirements	16
Internet Explorer Version	16
Windows System Requirements	16
UNIX System Requirements	17
Pre-Installation	18
Windows Pre-Installation	18
Default User Names and Passwords	18
About the Installation	19
Overview of the Installation Process	19

Installation Flexibility	22
eGate Repository Names and User Names	22
Default "Administrator" User Name	22
Environment Names	22
Preparing for Installation	23
What Must Be Determined Prior to Installing eGate	23
Information Required Before Installing eGate	23
Upgrading from 5.0.0 to 5.0.1	23
Environment Names Preparing for Installation What Must Be Determined Prior to Installing eGate Information Required Before Installing eGate	2 2 2 2 2

#### Chapter 3

Installation Instructions for Repository	24
Installing the Repository	24
Windows Installation of Repository	24
Starting the Repository as a Windows Service	31
UNIX Installation of Repository	32
Starting the Repository as a UNIX Daemon	34

## Chapter 4

Installation Instructions for Uploading Files to the Repository	35
Overview	35
Uploading Files to the eGate Repository	36
Installing the Schema Runtime Environment (SRE) Monitor	43
Chapter 5	
Installation Instructions for Enterprise Designer	<b>46</b>
Overview	46
Installation of Enterprise Designer	47
Starting Enterprise Designer and Installing Required eGate Modules Starting Enterprise Designer GUI After Initial Logon	48 54
Chapter 6	
Installation Instructions for Logical Host	56
Overview	56
Windows Installation of Logical Host	56
Starting the Logical Host on a Windows System	57
UNIX Installation of Logical Host	58
Starting the Logical Host on a UNIX System	59

Chapter 7	
-----------	--

Installation Instructions for ESRs	60
Overview	60
Uploading ESRs to the Repository	61
Installing Repository ESRs Manually for Verification	62
Installing Enterprise Designer ESRs	63
Installing Logical Host ESRs	68
Chapter 8	
Upgrading from 5.0.0 to 5.0.1	70
Overview	70
Migrating the Repository	71
Chapter 9	
Troubleshooting	74
ICAN Suite Product Dependencies	74
Adding a New License File	74
Improving Upload Performance	75
Adobe SVG Viewer 3.0 plug-in for Windows	75
Configuring SSL and HTTPS Support	76
Appendix A	
UNIX Patches	79
HP Tru64 UNIX V5.1A Patches	79
Certified HP Tru64 UNIX V5.1A Patches	79
HP-UX System Parameter Changes HP-UX Operating System Patches	80 80
HP-UX 11.0 Patches	81
HP-UX 11i Patches	81
IBM AIX 5.1L and 5.2 Patches	82
Certified AIX 5.1L Patches Certified AIX 5.2 Patches	82 82
Red Hat Linux Patches	82
Certified Red Hat Enterprise Linux AS 2.1 Patches	82

Certified Red Hat Linux 8 Patches	83
Solaris 8 and 9 Patches	83
nscd must be running on Solaris to install eGate successfully	83
Required Solaris Patches	83
Certified Solaris 8 and 9 Patches	83
Glossary	84
e*Gate 4.x Terms in eGate 5.0	90
Index	92

# **List of Figures**

Figure 1	Overview of eGate Installation	21
Figure 2	License Agreement	25
Figure 3	Select Repository Location	26
Figure 4	Repository Configuration	27
Figure 5	Installation	28
Figure 6	Completion	29
Figure 7	SeeBeyond Customer Login window	37
Figure 8	License File Selection	38
Figure 9	Completed License Upload	38
Figure 10	Upload eGate.sar	39
Figure 11	Product Manifest Selection	40
Figure 12	Starting the Control Broker	45
Figure 13	SeeBeyond Customer Login window	47
Figure 14	Products available to download from <repository_name> window</repository_name>	48
Figure 15	Update Center Wizard - Select location of modules	49
Figure 16	Property Editor: Update Center	50
Figure 17	Update Center Wizard - Select modules to install	51
Figure 18	Update Center Wizard - Download modules and check digital signatures	52
Figure 19	Update Center Wizard - View certificates and install modules	53
Figure 20	Restart the IDE dialog box	53
Figure 21	Enterprise Designer Login dialog box	54
Figure 22	Products available to download from <repository_name> window</repository_name>	57
Figure 23	Example of Selected ESRs	62
Figure 24	Update Center Wizard - Select location of modules	64
Figure 25	Update Center Wizard - Select modules to install	65
Figure 26	Update Center Wizard - Download modules and check digital signatures	66
Figure 27	Update Center Wizard - View certificates and install modules	66
Figure 28	Remove Installed ESR Dialog Box	67
Figure 29	Logical Host ESR Setup	69

# **List of Tables**

Table 1	Writing Conventions	10
Table 2	Windows GUI System Requirements	16
Table 4	HP Tru64 System Requirements	17
Table 5	HP-UX System Requirements	17
Table 3	Windows Repository and Logical Host System Requirements	17
Table 6	IBM AIX System Requirements	18
Table 7	Red Hat Linux System Requirements	18
Table 8	Sun Solaris System Requirements	18
Table 9	Mounting a CD-ROM Drive Locally	32
Table 10	Logical Host .sar files	42
Table 11	eGate Values on an HP-UX 11 System	80
Table 12	Certified HP-UX 11.0 Patches	81
Table 13	Certified HP-UX 11i Patches	81
Table 14	eGate 5.0 Terms	90

## Chapter 1

## Introduction

This chapter introduces you to the *SeeBeyond ICAN Suite Installation Guide*, its general purpose and scope, and its organization. It also provides sources of related documentation and information.

## **Installation Guide Purpose and Scope**

This installation guide describes the procedures necessary to install the SeeBeyond<sup>®</sup> Technology Corporation (SeeBeyond) eGate Integrator (eGate) product.

After the product is installed, you must customize it to execute your site-specific business logic and to interact with your other systems as required. The steps necessary to perform those operations are discussed in the eGate documentation set and online Help systems.

## **1.2** Intended Audience

This guide is intended for experienced PC users who have the responsibility of helping to set up and maintain a fully functioning ICAN Suite system. This person must also understand any operating systems on which eGate will be installed (Windows and UNIX) must be thoroughly familiar with Windows-style GUI operations.

## **1.3** Organization of Information

This document is organized topically as follows:

- **Chapter 1 "Introduction"** gives a general preview of this document, its purpose, scope, and organization.
- Chapter 2 "Overview of Installation" gives you an overview of the installation process.
- **Chapter 3 "Installation Instructions for Repository"** provides instructions on how to upload and install an eGate Repository.
- Chapter 4 "Installation Instructions for Uploading Files to the Repository" provides instructions on how to upload product files to the eGate Repository.
- Chapter 5 "Installation Instructions for Enterprise Designer" provides instructions on how to install the Enterprise Designer on a Windows computer. The Enterprise Designer GUI can only be installed on Windows.
- **Chapter 6 "Installation Instructions for Logical Host"** provides instructions on how to download and install the Logical Host.
- **Chapter 7 "Installation Instructions for ESRs"** provides instructions on how to install ESRs.
- **Chapter 8 "Upgrading from 5.0.0 to 5.0.1"** provides instructions on how to run ICAN 5.0.1 components on eGate 5.0.0.
- **Chapter 9 "Troubleshooting"** describes issues that may arise during the installation process and provides tips and solutions to resolve these issues.
- Appendix A lists the recommended and certified patches for UNIX systems.
- "Glossary" lists eGate 5.0.1 terminology. It also cross-references 4.5.x terms with 5.0.1 terms.

## **1.4 Writing Conventions**

The following writing conventions are observed throughout this document.

Text	Convention	Example
Button, file, icon, parameter, variable, method, menu, and object names.	Bold text	<ul> <li>Click OK to save and close.</li> <li>From the File menu, select Exit.</li> <li>Select the logicalhost.exe file.</li> <li>Enter the timeout value.</li> <li>Use the getClassName() method.</li> <li>Configure the Inbound File eWay.</li> </ul>

#### Table 1 Writing Conventions

Text	Convention	Example
Command line arguments and code samples	Fixed font. Variables are shown in <b>bold</b> italic.	bootstrap -p <b>password</b>
Hypertext links	Blue text	For more information, see "Writing Conventions" on page 10.

#### Table 1 Writing Conventions (Continued)

## **Additional Conventions**

#### Windows Systems

For the purposes of this guide, references to "Windows" will apply to Microsoft Windows Server 2003, Windows XP, and Windows 2000.

#### Path Name Separator

This guide uses the backslash ("") as the separator within path names. If you are working on a UNIX system, please make the appropriate substitutions.

## **1.5** Supporting Documents

The following SeeBeyond documents provide additional information about the eGate Integrator system as explained in this guide:

- eGate Integrator JMS Reference Guide
- eGate Integrator Release Notes
- eGate Integrator User's Guide
- eGate Tutorial
- SeeBeyond ICAN Suite Deployment Guide
- SeeBeyond ICAN Suite Primer
- SeeBeyond ICAN Suite Upgrade Guide

See the *SeeBeyond ICAN Suite Primer* for a complete list of eGate-related documentation. You can also refer to the appropriate Microsoft Windows or UNIX documents, if necessary.

*Note:* For information on how to use a specific add-on product (for example, an eWay Intelligent Adapter), see the user's guide for that product.

## **1.6 Online Documents**

The documentation for the SeeBeyond ICAN Suite is distributed as a collection of online documents. These documents are viewable with the Acrobat Reader application from Adobe Systems. Acrobat Reader can be downloaded from:

http://www.adobe.com

## 1.7 About eGate 5.0.1

This section provides an overview of the operation, structure, architecture, and components of the eGate system.

## 1.7.1. eGate Basics

The purpose of the eGate system is to translate, transform, and route data between multiple external systems, and translate that data from one-to-many formats. eGate offers the following features:

#### Client/server Architecture

eGate leverages a Java-based client/server architecture that is open and flexible.

#### Effective Communication

eGate uses protocols and adapters that you select, allowing it to communicate with, and link together, multiple applications and databases across different operating systems.

#### Versatile Performance

eGate can interact with a large number of hardware systems, operating systems, message standards, communication protocols, and databases.

Multi-mode Operation

eGate operates in both real-time and batch/scheduled integration modes.

Convenient Bridges

eGate can bridge between older and newer systems, resulting in a centrally managed and unified enterprise.

## 1.7.2. eGate Integrator Components

The eGate system consists of the following:

- A Java 2 Platform Enterprise Edition (J2EE)-compatible transactional server (SeeBeyond Integration Server)
- A messaging service (JMS)
- Data repositories
- Repository Server

- Enterprise Manager
- Enterprise Designer GUI
- Logical Host

For an in depth description of the eGate components and how they function, see the *eGate Integrator User's Guide*.

## 1.7.3. Resource Considerations

eGate 5.0.1 functions can be distributed across various types of computers, as described below. Although the same computer can act in two or all three capacities simultaneously, the expectation is that all machines may be distributed and communicating via TCP/IP.

The roles for computers in an eGate environment are:

• **Repository Server**: The Repository Server stores the setup, components, and configuration information for the elements of an eGate Project (see the Enterprise Designer note, below). It also stores the product binary files that are required at runtime by the Logical Hosts. The components and configurations are downloaded to the Logical Host during the initial bootstrap process and as needed after design-time configuration changes are made. A Repository Server must have maximal reliability and fast reliable access to long-term storage, in order to serve requests for configuration and security.

A Repository Server can run on any of the operating system platforms supported by eGate.

- Enterprise Manager: A Web-enabled application used for uploading ICAN Suite products into the Repository, downloading and installing products from the Repository, and accessing other Web-based ICAN Suite products. It also monitors eGate components.
- *Note:* An online Help system and ICAN Suite documentation are accessible through *Enterprise Manager.* 
  - Enterprise Designer: A graphical user interface (GUI) that is used to design and configure the logical components and physical resources of an eGate Project. Through this GUI, you develop Projects to process and route data through an eGate system. The major features of the Enterprise Designer are the Enterprise Explorer, which displays two views of the system in a typical Windows Explorer tree structure format, and the Project Editor, which displays various editors as you proceed through the development process of an eGate Project.

Enterprise Designer runs on Windows only.

*Note:* A Project organizes the files and packages and maintains the settings that comprise an eGate system. For instructions on how to set up a simple eGate Project, see the eGate Tutorial.

• Logical Host: An instance of the eGate runtime environment that is installed on a host hardware platform, it contains one or more Integration Servers. Logical Hosts handle routing, translation, and transformation of data. Most sites should tune their Logical Hosts to maximize throughput; this usually translates to plenty of RAM, fast cache, and fast I/O.

A Logical Host can run on any of the operating system platforms supported by eGate.

For hardware/software resource requirements, see **"System Requirements" on** page 16.

## 1.8 The SeeBeyond Web Site

The SeeBeyond Web site is your best source for up-to-the-minute product news and technical support information. The site's URL is:

http://www.seebeyond.com

# **Overview of Installation**

This chapter gives you an overview of system requirements and the installation process.

This chapter contains

- "Overview" on page 15
- "System Requirements" on page 16
- "Pre-Installation" on page 18
- "About the Installation" on page 19
- "Preparing for Installation" on page 23

### 2.1 **Overview**

The major components of the eGate installation are:

- Repository Server
- Enterprise Manager
- Enterprise Designer GUI
- Logical Host

Although you can install the Repository and Logical Host on any supported platform, you must install the Enterprise Designer GUI on a Windows computer. After installing and starting the Repository, use your browser to connect to the Enterprise Manager. From the Enterprise Manager you can:

- Upload products to the Repository
- Download components (including Enterprise Designer and Logical Host)
- View product information home pages

Once the Enterprise Manager is installed, use it to download other components required to run eGate, such as the Enterprise Designer and the Logical Host.

Before installing the Repository, Enterprise Designer, and Logical Host on your system, please read the following sections to ensure a smooth and error-free installation.

## 2.2 System Requirements

This section lists the system requirements for each platform. The **Readme.txt** file (located in the root directory of the Repository CD-ROM) contains the most up-to-date operating system requirements for the supported platforms. The requirements listed in the following sections are in addition to the operating system requirements.

eGate Integrator is available on the following operating systems:

- Windows Server 2003, Windows XP SP1a, and Windows 2000 SP3
- HP Tru64 V5.1A with required patches
- HP-UX 11.0 and 11i with required patches and parameter changes
- *Note:* SeeBeyond only supports HP-UX running on 9000/8xx machines. 9000/8xx is 64 bits, but can also run in 32 bits mode. To determine if the system is 32 or 64 bits, type: getconf KERNEL\_BITS. This returns either 32 or 64. Only 64 bits mode is supported.
  - IBM AIX 5.1L and 5.2 with required Maintenance level patches
- *Note:* On IBM AIX, SeeBeyond ICAN 5.0.1 is a 64-bit application that can run on either a 64-bit AIX kernel or on a 32-bit AIX kernel with the 64-bit extension enabled. To determine if the system is 32 or 64 bits, type **bootinfo** -y. This returns either 32 or 64. To run ICAN products on a 32-bit AIX kernel, you must enable the 64-bit extension.
  - Red Hat Enterprise Linux AS 2.1 (Intel Version
  - Red Hat Linux 8 (Intel Version)
  - Sun Solaris 8 and 9 with required patch (if Solaris 8)

## 2.2.1. Internet Explorer Version

You must use Internet Explorer 6 with Service Pack 1 to access Enterprise Manager.

## 2.2.2. Windows System Requirements

The following tables list the minimum requirements for installing each of the eGate components on a Windows system. For the best performance, you should install these components on different computers. However, if you choose to install some or all of these components on the same machine (for example, in a test environment), keep in mind that the requirements for each of these components is cumulative.

Component	СРИ	RAM	Disk Space
Enterprise Designer	1.2 GHz Pentium class	512 MB	250 MB

Table 2	Windows C	GUI System	Requirements
---------	-----------	------------	--------------

Component	СРИ	RAM	Disk Space
Enterprise Manager	600 MHz Pentium class	128 MB	5 MB

#### Table 2 Windows GUI System Requirements

 Table 3
 Windows Repository and Logical Host System Requirements

Component	CPU	RAM	Disk Space
Repository	1.2 GHz Pentium class	512 MB	1.2 GB
Logical Host	1.2 GHz Pentium class	512 MB	250 MB

Additionally, to use eGate on Windows, you will need the following:

- A TCP/IP network connection.
- Internet Explorer 6.0 with Service Pack 1.

#### Additional considerations

- The disk space requirement listed for the Logical Host does not include space for the queues and log files that are created by the user as Integration and Message Services are executed.
- For additional information regarding sizing of a test or production system, consult the *SeeBeyond ICAN Suite Deployment Guide*.
- eGate GUI is supported when using Microsoft Terminal Services<sup>®</sup>, but not with other "remote" Windows tools.

## 2.2.3. UNIX System Requirements

The following tables list the minimum requirements for installing the Repository and Logical Host on various UNIX systems. For the best performance, you should install these components on different computers. However, if you choose to install both of these components on the same machine (for example, in a test environment), keep in mind that the requirements for each of these components is cumulative.

Dual (or multi) CPUs are recommended for best performance of the Logical Host, especially if you run the Repository and the Logical Host on the same computer.

Component	CPU	RAM	Disk Space
Repository	667 MHz	512 MB	1000 MB
Logical Host	667 MHz	512 MB	350 MB

Table 4	HP Tru64 System Requirements
---------	------------------------------

Component	CPU	RAM	Disk Space
Repository	540 MHz	512 MB	1150 MB
Logical Host	540 MHz	1.5 GB	500 MB

Component	CPU	RAM	Disk Space
Repository	450 MHz	256 MB	900 MB
Logical Host	450 MHz	512 MB	450 MB

#### Table 6 IBM AIX System Requirements

#### **Table 7** Red Hat Linux System Requirements

Component	СРИ	RAM	Disk Space
Repository	1200 MHz	256 MB	900 MB
Logical Host	1200 MHz	512 MB	350 MB

#### Table 8 Sun Solaris System Requirements

Component	CPU	RAM	Disk Space
Repository	400 MHz	256 MB	850 MB
Logical Host	400 MHz	512 MB	400 MB

The Enterprise Designer can only be installed on Windows systems.

Additionally, to use eGate on UNIX, you will need the following:

- A TCP/IP network connection.
- FTP and Telnet capabilities.

#### Additional considerations

- The disk space requirement listed for the Logical Host does not include space for the queues and log files that are created by the user as Integration and Message Services are executed.
- For additional information regarding sizing of a test or production system, consult the *SeeBeyond ICAN Suite Deployment Guide*.

## 2.3 **Pre-Installation**

The following sections explain issues to consider before you begin your eGate installation.

## 2.3.1. Windows Pre-Installation

Exit from all Windows programs prior to running the setup.

You need Administrator privileges to install eGate.

#### **Default User Names and Passwords**

For eGate's default user name and password, see the Readme.txt file.

## 2.4 About the Installation

*Note:* If you are installing eGate components on the same computer (including installing upgrades to existing installations), you must install the Repository *first*, followed by the Enterprise Designer and the Logical Host.

The installation is a multi-stage process that includes the following:

- 1 Installing the eGate Repository.
- 2 Uploading the product files to the Repository.
- 3 Installing the Enterprise Designer GUI via the Enterprise Manager.

The Enterprise Designer installation procedure consists of downloading an archive file from a Web site and extracting it to a folder within your local machine.

*Important:* The eGate GUIs must be installed on a Windows systems. See **Chapter 5** for more information.

4 Installing the eGate Logical Host(s) from the Repository, via Enterprise Manager.

## 2.4.1. Overview of the Installation Process

The installation process is divided into phases (see Figure 1 on page 21).

- Step 1 installs the **Repository**, **Enterprise Manager**, and **Enterprise Monitor** from CD-ROM. The Repository stores and manages the setup, component, and configuration information for eGate Projects. Enterprise Manager is the tool from which you upload files to the Repository and download products to your computer.
- Step 2 starts the Repository.
- Step 3 uploads the license and eGate files to the Repository from CD-ROM via Enterprise Manager.
- *Note:* Before downloading and installing the Logical Host, add-on applications, and ESRs from the Repository (Steps 6, 8, and 9 respectively), they must first be uploaded to the Repository (Step 3).
  - Step 4 downloads the eGate Enterprise Designer GUI, which enables you to configure the eGate system.
  - Step 5 launches the Enterprise Designer, creates a Project, creates a Logical Host, and deploys a Project. See the *eGate Tutorial* and *eGate Integrator User's Guide* for detailed information on how to complete these tasks.
  - Step 6 downloads the **Logical Host** to your system via Enterprise Manager and then installs it (you must first upload it to the Repository, see **Step 3**).

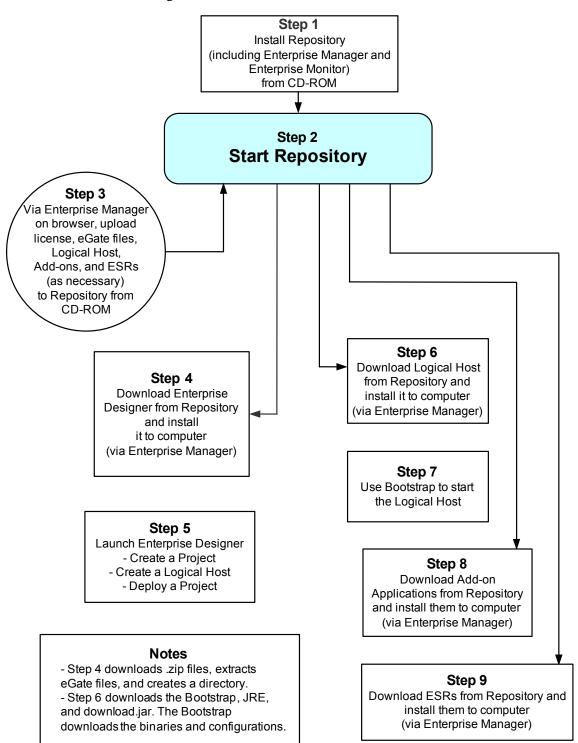
*Note:* The Windows Logical Host is uploaded "by default" with eGate.sar.

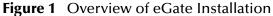
The Logical Host is an instance of the eGate runtime environment that contains the software and other installed components that are required at run time, such as:

- The **SeeBeyond Integration Server**, which provides middleware services for security and state maintenance, data access and persistence, and transactions.
- The **System Management Service**, which manages and monitors eGate deployments that may comprise other application servers in addition to the SeeBeyond Integration Server.
- The **SeeBeyond JMS IQ Manager**, which exchanges and tracks JMS messages.

Although the Logical Host installation also includes the components necessary for basic communication between the eGate system and files, communications with databases and other products will require you to add-on components.

- Step 7 starts the Logical Host from the Bootstrap.
- Step 8 downloads and installs the add-on components from the Repository to your computer via Enterprise Manager (you must first upload them to the Repository, see Step 3). Depending on your installation, the add-ons include eWay adapters for communication with specific external systems.
- Step 9 downloads and installs **Emergency Software Releases** (ESRs) from the Repository to your computer via Enterprise Manager (you must first upload them to the Repository; see **Step 3**). ESRs are updates that resolve known issues.





## **Installation Flexibility**

eGate Integrator 5.0.1 allows you to:

- Install more than one Logical Host on a single computer.
- Manage multiple Projects on a single environment.
  - The separation of design from deployment makes it possible to use the same components in more than one Project.
- Centralize your software distribution.
  - After uploading software (including ESRs—Emergency Software Releases) into "software packages," Administrators select which physical server or groups of physical servers receive the software.
  - HTTP connections are used to upload and download the software to and from the Repository.

## 2.4.2. eGate Repository Names and User Names

eGate maintains its own list of Repository names and user names; it does not poll the operating system or network to obtain or validate user names or Repository names. To simplify system administration, SeeBeyond recommends that you use your current naming conventions for Repository and user names.

eGate Repository and user names (as well as passwords) are case sensitive, even on Windows systems. Although there is no limitation on the length of the names, SeeBeyond recommends that you limit them to 12 characters. Valid characters include all letters and numbers, dashes, and underscores.

## Default "Administrator" User Name

For eGate's default user name and password, see the Readme.txt file.

## 2.4.3. Environment Names

After you complete a Project, you must set up an Environment and deploy it. An Environment is a collection of Logical Hosts that house Project components and information about external systems. You set up an Environment and deploy it after completing a Project. A deployment Environment includes:

- Logical Host (an instance of the eGate runtime environment)
- SeeBeyond Integration Server
- SeeBeyond JMS IQ Manager

Environment names can contain letters, numbers, dashes, and underscores. There is no character limit. Spaces and punctuation marks are not valid characters for Project names.

*Important:* Periods, spaces, and other punctuation are not valid characters for any eGate user name, password, or component name.

## 2.5 **Preparing for Installation**

The following sections list important information that you must decide upon prior to installing eGate.

## 2.5.1. What Must Be Determined Prior to Installing eGate

Before you install eGate, you must determine the following:

- 1 Select the computer that will host the Repository.
- 2 Select the computers that will serve as Logical Hosts. It is possible for the same system to serve both as a Repository and a Logical Host. Whether you decide to do this depends on the requirements of your installation. Contact SeeBeyond Support if you need assistance making this determination.
- 3 Select the Window(s) computers that will host the eGate Enterprise Designer.
- 4 Determine which add-on applications you will require.
- 5 Ensure that each system that you select meets the system requirements for eGate. See the resource requirements in each of the following chapters for more information.

## 2.5.2. Information Required Before Installing eGate

You must have the following information at hand before you start the installation process:

- 1 The default eGate "Administrator" password for Windows installations (see "Default "Administrator" User Name" on page 22).
- 2 The name of each system where a Repository or Logical Host will be installed (see "eGate Repository Names and User Names" on page 22).

The installation process will prompt you for the directory in which to install each eGate component.

## 2.5.3. Upgrading from 5.0.0 to 5.0.1

If you are upgrading from 5.0.0 to 5.0.1, see **Chapter 8** for instructions on how to complete a successful upgrade.

*Note:* The *Migration ToolReadme.txt* file is located in the *Utilities* directory on both of the Repository installation discs ("SeeBeyond ICAN Suite Repository Disc 1 for Windows/Solaris/AIX/Linux" and "SeeBeyond ICAN Suite Repository Disc-2 for HP-UX/Tru64"), as are the *MigrationTool.zip* and *MigrationTool.tar* files.

# Installation Instructions for Repository

This chapter provides instructions on how to install the eGate Repository. If you have any questions or problems, see the SeeBeyond Support Web site at <a href="http://www.seebeyond.com">http://www.seebeyond.com</a> and select SERVICES and then SUPPORT SERVICES.

#### This chapter contains

- "Installing the Repository" on page 24
- "Windows Installation of Repository" on page 24
- "UNIX Installation of Repository" on page 32

## 3.1 Installing the Repository

This section leads you through the steps to successfully install the Repository on the various platforms.

You can install the Repository on any eGate supported platform using one of two CD-ROMs mounted on the system on which the Repository is to be installed.

*Important:* Underscores are not supported as the host name of the computer running the Repository per specification RFC-1123.

## 3.2 Windows Installation of Repository

This section provides instructions for uploading and installing the Repository from a CD-ROM. There are two ways to install the Repository on a Windows computer: using the GUI and using command line prompts.

*Important:* For your Repository Server running on Windows XP to receive incoming information from the Web, configure your Windows XP Firewall so that the port to the Repository is open. See your Windows XP documentation for instructions on configuring the Windows XP Firewall.

*There are two firewalls on Windows XP that can be disabled. If you think this option may be right for you, contact SeeBeyond Support.* 

*Note:* For instructions how to set up failover support for the Repository using Microsoft Windows 2000 and Windows Server 2003 clustering technologies, see "Deploying eGate in a Windows Clustering Environment" in the SeeBeyond ICAN Suite Deployment Guide.

#### To install the Repository on Windows using the GUI

- 1 Exit from all Windows programs.
- 2 Insert "Repository Disc 1 for Windows/Solaris/AIX/Linux" CD-ROM in the CD-ROM drive.
- <sup>3</sup> If you do not have Autorun enabled, double-click **install.bat** at the top level of the CD-ROM, otherwise the install wizard will appear shortly after inserting the CD-ROM.
- 4 The **License Agreement** dialog box appears (see Figure 2). After reading the license and agreeing to its conditions, click **Next**.

	SeeBeyond Repository Installation	<b>K</b> 3X
Steps 1. License Agreement 2. Select Repository Location 3. Repository Configuration 4. Installation 5. Completion	License Agreement	8 6 9
	Except as provided for in a separate license     agreement, this program may only be duplicated, used,     or disclosed with the written consent of an authorized     signatory of SeeBeyond Technology Corporation.     SeeBeyond, e*Gate, and e*Way are the registered     trademarks of SeeBeyond Technology Corporation in the     United States and select foreign countries; the     SeeBeyond logo, e*Insight, and e*Xchange are     trademarks of SeeBeyond Technology Corporation.	
SEEBEYOND	Back     Next <u>Finish</u> Exit In	stallation

#### Figure 2 License Agreement

5 The Select Repository Location dialog box appears (see Figure 3). The location that you specify here will be used as the "root" for the eGate installation. For example, if you accept the default (C:\ican50), the Repository installation will create the C:\ican50 directory and install the Repository to C:\ican50\repository.

- *Note:* If you attempt to install the Repository Server to a directory where it already exists, the dialog box informs you that the installation will perform an upgrade. Before proceeding, stop the Repository Server.
- *Important:* If you are upgrading, make sure you change the default path to another path. *For example, change:*

C:\ican50 to: C:\ican501

If you want to enter another location, click Browse.

*Note:* This must be a full path, including the drive letter. Also note that there can be no spaces in ICAN path names.

When ready, click **Next**.

	SeeBeyond Repository Installation	K 9 8
Steps	Select Repository Location	
<ol> <li>License Agreement</li> <li>Select Repository Location</li> <li>Repository Configuration</li> <li>Installation</li> <li>Completion</li> </ol>	Where would you like to install your Repository? Directory: C:\ican50	Browse
	<u>B</u> ack Next ▷ Einish	Exit Installation

#### Figure 3 Select Repository Location

- 6 The **Repository Configuration** dialog box appears (see Figure 4). Enter the following information:
  - A A name for the Repository in the **Name** box. The Repository name is the identifier for your eGate installation.

*Note: Record the name that you select. You will need it later.* 

- B The **Port Number** box automatically lists 10 consecutive available ports (12000–12009 is the default). You will need the base port number later when you connect to the Repository.
- **Note:** Make sure that the port number is not in use. To determine which ports are in use, type "**netstat** -a" at a command prompt. During the installation, the system selects nine additional port numbers which are sequentially above the port number you entered (for example: **12001** through **12009**). Be aware that the port checking performed at the time of the installation only detects ports that are in use at the time of the installation. This means that the installation will not detect ports that are configured to be used by other applications which are currently not running.
  - C Select the **Run repository as Windows Service** check box if you want the server to start automatically upon system reboot. If you do not select this option at this time, you can enable it later (see **"Starting the Repository as a Windows Service" on page 31**), but must otherwise start the Repository manually.
- *Note: After installing, you must either reboot or go to the Control Panel and select Administrative Tools and Services to start the Repository for the first time.* 
  - **D** When ready, click **Next**.

	SeeBeyond Repo	ository Installation	<b>K</b> 3 <b>X</b>
Steps	Repository Configuration	Î.	
1. License Agreement 2. Select Repository Location <b>3. Repository Configuration</b> 4. Installation	What would you like	e to name your Repository?	
5. Completion	Name:	MyRepository	
SEEBEYOND	Port Number:	0 port numbers available for use by the Repository 12000 - 12009 as Windows Service	
	<u>B</u> ack	Next D Einish Exit In	stallation

Figure 4 Repository Configuration

7 The **Installation** dialog box appears (see Figure 5). A progress bar indicates the approximate time remaining. When the installation is complete, click **Next**.

	SeeBeyond Repository Installation	K 3 8
Steps	Installing	
<ol> <li>License Agreement</li> <li>Select Repository Location</li> <li>Repository Configuration</li> <li>Installation</li> <li>Completion</li> </ol>	Products InstallingEnterprise Monitor Time Remaining (Approx): 1 minute 24 seconds	
	■ <u>Back</u> Next ■ <u>F</u> inish <b>Exit Ins</b>	tallation

Figure 5 Installation

- 8 The **Completion** dialog box appears and informs you that the Repository installed successfully (see Figure 6), listing your selections during the installation:
  - Repository location
  - Repository Name
  - Server Ports
  - Install as Service
  - User Login ID

*Note:* SeeBeyond recommends you record the contents of this screen for future reference.

When ready, click **Finish**.

	SeeBeyond Repository Installation	K 3 8
Steps	Repository installed successfully.	
1. License Agreement 2. Select Repository Location 3. Repository Configuration 4. Installation 5. Completion	Repository Configuration Summary: Repository location : C:tican50 Repository Name : MyRepository Server Ports : 12000 - 12009 Install as Service : No User Login ID : Administrator Please start the Repository server.	
	Back Next Mext Exit Insta	lation

#### Figure 6 Completion

An installation log (**install.log**) is created in *<directory\_path>\repository\logs*. Use this log file to view details about any problems you may encounter during the installation process.

#### To install the Repository on Windows using command line prompts

- 1 Insert the Repository Disk 1 (Windows/Solaris/AIX/Linux) CD-ROM in the CD-ROM drive.
- 2 At the command prompt, navigate to the top level of the CD-ROM and enter: **install.bat -text**. The following prompt appears:

Please enter the base directory to install the Repository:

Type the full drive and path location (for example, C:\ican50) and press Enter.

The location that you specify here will be used as the "root" for the eGate installation. For example, if you specify **C:\ican50**, the Repository installation will create the **C:\ican50** directory and install the Repository to **C:\ican50\repository**.

- *Note:* This must be a full path, including the drive letter. Also note that there can be no spaces in ICAN path names.
  - 3 The next prompt displays the following message:

Please enter name of the Repository:

Type the name to be used for your Repository and press **Enter**. The Repository name is the identifier for your eGate installation.

4 The next prompt displays the following message:

The Repository needs a range of 10 consecutive topip ports for http and related services. Please enter the starting port number:

Enter a Repository port number such as 12000. You will need the port number later when you connect to the Repository.

**Note:** Make sure that the port number is not in use. To determine which ports are in use, type "**netstat** -a" at a command prompt. During the installation, the system selects nine additional port numbers which are sequentially above the port number you entered (for example: **12001** through **12009**). Be aware that the port checking performed at the time of the installation only detects ports that are in use at the time of the installation. This means that the installation will not detect ports that are configured to be used by other applications which are currently not running.

5 The next prompt displays the following message:

Would you like to run the Repository as a Windows service? If you decline, you can always install the Windows service later. (y/n) [n]:

Answer **n** so the Repository server does not start automatically after system reboot.

- *Note:* If you select *y*, see "Starting the Repository as a Windows Service" on page 31 to perform the steps necessary to start the Repository as a Windows service.
  - 6 The next prompt displays the following message:

Enter the full machine name or IP address under which the Repository Server will be accessible from other machines. [10.18.73.68]:

The system automatically lists your host name or IP address. If you specify an IP address, this address must be a static IP address; a dynamic address (assigned by a DHCP server) will not be available for future sessions.

*Important:* Underscores are not supported as the host name of the computer running the Repository per specification RFC-1123.

The Repository installs to the directory you specified in step 2 and an installation log (**install.log**) is created in *<directory\_path>*\**repository**\**logs**. Use this log file to view details about any problems you may encounter during the installation process.

#### To start and stop the Repository on Windows

- 1 Navigate to the directory where you installed the Repository (for example: C:\ican50\repository).
- 2 Double-click **startserver.bat**. The Repository starts on the port that you specified during installation.

You can redirect Repository Server console messages to a text file by using the following command:

startserver.bat > ServerLog.txt 2>&1

3 To stop the Repository, double-click **stopserver.bat**.

You are now ready to upload product files to the Repository. Continue to **Chapter 4** "Installation Instructions for Uploading Files to the Repository" on page 35.

## 3.2.1. Starting the Repository as a Windows Service

Installing the Repository as a Windows service configures the Repository to automatically start up at system startup. This makes it possible for the Repository to automatically restart after an abnormal system shutdown.

You must have Administrator rights to the local Windows machine in order to configure the Repository to start as a service. The installation script writes to the Windows Registry; this cannot be done without Administrator rights.

#### To start the Repository as a Windows Service

- 1 Use Windows Explorer to navigate to the Repository directory (for example, C:\ican50\repository).
- 2 Double-click installwinsvc.bat.

This runs the script that configures the Windows service to automatically run the Repository at system startup. The service will have the same name as the installed Repository.

- 3 The first time that you use the service, and prior to running Enterprise Manager, you must manually start it.
  - A Open the Windows **Control Panel**.
  - **B** Select Administrative Tools.
  - C Select **Services**, and then locate *<name\_of\_repository>* where:

*<name\_of\_repository>* is the name of the Repository that you want to start as a service.

- **D** Right-click *<name\_of\_repository>* and select **Properties**.
- **E** Ensure that the **Startup type** is **Automatic**, and then click **Start**.
- *Note: From this time forward, the Repository will start automatically at system startup or whenever the computer is rebooted.*

#### To remove the Repository Windows Service

- 1 Use Windows Explorer to navigate to the Repository directory (for example, C:\ican50\repository).
- 2 Double-click **uninstwinsvc.bat**.

This runs the script that removes the Windows service that automatically starts the Repository at system startup.

You are now ready to upload product files to the Repository. Continue to **Chapter 4** "Installation Instructions for Uploading Files to the Repository" on page 35.

## 3.3 UNIX Installation of Repository

This section explains how to install the eGate Repository on your UNIX system. You can mount the CD-ROM on your UNIX computer or FTP the installation files to your UNIX computer via a Windows computer. See **"UNIX System Requirements" on** page 17 for additional information and installation requirements before proceeding.

#### To install the Repository on UNIX

- 1 If it is a UNIX computer, log in as either a non-root or root user on the workstation containing the CD-ROM drive, and insert the SeeBeyond ICAN Suite Repository Disk 1 or SeeBeyond ICAN Suite Repository -Disk 2 CD-ROM (depending on which UNIX platform you are using) into the drive.
- *Note:* To mount the CD-ROM, you must have root privileges. If the directory that you want to mount over does not exist, you must create it. Once this directory is created, mount the CD-ROM, using the appropriate command. The correct arguments for the mount command vary for each operating platform. See the following table for the recommended mounting commands.

Platform	Mount Command	
AIX	mount -V cdrfs -r /dev/cd <extension>/cdrom</extension>	
Solaris 8 and 9	mount -F hsfs -o ro /dev/dsk/c0t <extension> /cdrom (On Sun Solaris systems, the CD-ROM drive mounts automatically if the volume manager is running.)</extension>	
HP Tru64	mount -t cdfs -r -o noversion -o rrip /dev/rz <extension>/cdrom</extension>	
Red Hat Linux	<b>mount -t iso9660 /dev/cdrom /cdrom</b> (On Linux systems, you may have to change the CD-ROM drive configuration from read-only to execute. By default, on Linux systems, CD-ROM drives have read-only permission.)	
HP-UX	<pre>pfs_mount -t rrip -r /dev/dsk/c0t<extension> /cdrom where /cdrom is the mount point.</extension></pre>	

 Table 9
 Mounting a CD-ROM Drive Locally

2 Navigate to the root directory of the CD-ROM on your UNIX computer.

3 To install the Repository, type **./install.sh** and press **Enter**. The following prompt appears:

Please enter the base directory to install the Repository:

Type the full drive and path location (for example, *<install\_path>/ican50*) and press **Enter**.

*Important:* If you are upgrading, make sure you do not use the same path where you installed 5.0.0.

For example, if you installed 5.0.0 to: <install\_path>/ican50 change the path to another path, such as: <install\_path>/ican501

The location that you specify here will be used as the "root" for the eGate installation. For example, if you specify *<install\_path>/ican50*, the Repository installation will create the *<install\_path>/ican50* directory and install the Repository to *<install\_path>/ican50/repository*.

- *Note: This must be an absolute path.* 
  - 4 The next prompt displays the following message:

Please enter name of the Repository:

Type the name to be used for your Repository and press **Enter**. The Repository name is the identifier for your eGate installation.

5 The next prompt displays the following message:

The Repository needs a range of 10 consecutive topip ports for http and related services. Please enter the starting port number:

Enter a Repository port number such as 12000. You will need the port number later when you connect to the Repository.

- **Note:** Make sure that the port number is not in use. To determine whether a port is available, type "netstat -a | grep <port\_number>" at a command prompt; this will return the name of any process using that port number. During the installation, the system selects nine additional port numbers which are sequentially above the port number you entered (for example: 12001 through 12009). Be aware that the port checking performed at the time of the installation only detects ports that are in use at the time of the installation. This means that the installation will not detect ports that are configured to be used by other applications which are currently not running.
  - 6 After the installation completes, change the directory to the location where you installed the Repository. For example:

#### cd <install\_path>/ican50/repository

7 If you installed on HP Tru64 and the shell is **csh**, you must run the following command *before* starting the Repository:

unlimit

If you installed on HP Tru64 and the shell is **bash**, you must run the following command *before* starting the Repository:

ulimit -Sd 1048576

8 To start the Repository, type **./startserver.sh**. The Repository Server starts in the background. To confirm that the Repository Server has started, use your Web browser to type the URL and port number, for example:

http://<server\_name>:<port\_number>

where:

<server\_name> is name of the UNIX server where you installed the Repository and

*<port\_number>* is the port you specified previously.

To see the Repository Server console messages, use a text editor such as vi to view the contents of *<install\_path>/ican50/repository/server/logs/catalina.out*. This is a useful way to view the progress of the Repository Server startup process.

You can redirect Repository Server console messages to a text file by using the following command:

startserver.sh > ServerLog.txt 2>&1

*Important:* The Repository is a separate process from your shell; unlike Windows, it continues to run after you log off from your UNIX account. To stop the Repository, you must run *.lstopserver.sh*.

## 3.3.1. Starting the Repository as a UNIX Daemon

You can have the Repository start automatically upon startup of the UNIX system. To do this, create an init script that calls the **nohup** command with the **startserver.sh** script. For example:

nohup /home/jsmith/ican50/repository/startserver.sh &

The procedure for adding the init script to the init process depends on which UNIX platform you are using. For detailed instructions, see the system administration documentation for the UNIX platform.

You are now ready to upload product files to the Repository. Continue to **Chapter 4** "Installation Instructions for Uploading Files to the Repository" on page 35.

# Installation Instructions for Uploading Files to the Repository

This chapter provides instructions on how to upload files to the eGate Repository. If you have any questions or problems, see the SeeBeyond Support Web site at <u>http://www.seebeyond.com</u> and select **SERVICES** and then **SUPPORT SERVICES**.

This chapter contains

- "Overview" on page 35
- "Uploading Files to the eGate Repository" on page 36
- "Installing the Schema Runtime Environment (SRE) Monitor" on page 43

## 4.1 **Overview**

Before SeeBeyond ICAN Suite products can be installed on client systems, the product installation files must be uploaded from the Products CD-ROMs to the eGate Repository. This step only needs to be performed one time for each product.

Regardless of what operating system your Repository is running on, you must upload the product installation files from a Windows PC to your Repository.

After you upload the product installation files to the Repository, the products will be available for downloading to the client computers.

## 4.2 Uploading Files to the eGate Repository

In the following procedures, you will use the Enterprise Manager, a Web-based application, to upload files from the Products CD-ROMs to the Repository.

The product **.sar** files must be uploaded to the Repository in the proper sequence. The following procedures indicate which order to upload the product **.sar** files.

*Note:* Before uploading product .sar files to the eGate Repository, see "Improving Upload Performance" on page 75 for a tip on how to improve upload performance.

These .sar files are required for all Repositories:

- license.sar
- eGate.sar
- One or more of the following Logical Host **.sar** files:
  - logicalhost\_aix.sar (required if the Logical Host is running on IBM AIX)
  - **logicalhost\_hpux.sar** (required if the Logical Host is running on HP-UX)
  - **logicalhost\_linux.sar** (required if the Logical Host is running on Red Hat Linux)
  - logicalhost\_sparc64.sar (required if the Logical Host is running on Sun Solaris)
  - logicalhost\_tru64.sar (required if the Logical Host is running on HP Tru64)
- *Note:* The *logicalhost\_win32.sar* file for Windows is automatically installed in the Repository by default.
  - Any product .sar files for which you have a valid license (optional)
- *Note:* The optional .sar file stcmessageserver45x.sar provides backward compatibility for e\*Gate 4.5.x JMS.
  - EnterpriseManagerPlugin-Win98ToXP.sar (required for the Adobe SVG Viewer plug-in for Windows)
- *Note:* Before you can begin this procedure, your SeeBeyond Repository Server must be running. See Chapter 3 "Installation Instructions for Repository" on page 24 for instructions on starting your Repository Server.

#### To start the Enterprise Manager

- 1 Start Internet Explorer.
- 2 In the **Address** line, type **http://**<*hostname*>:<*port\_number*> where:

*hostname* is the TCP/IP host name of the server where you installed the Repository—not the name of the Repository itself.

*port\_number* is the port number that you specified during the installation of the Repository.

*Note: The host name must be valid.* 

When ready, press Enter.

The **SeeBeyond Customer Login** window of the Enterprise Manager appears (see Figure 7). The Enterprise Manager serves as an update center, management center, and a dashboard to gain access to available applications. In addition, system administrators use the Enterprise Manager to upload components to the Repository Server.

Figure 7 SeeBeyond Customer Login window

Enterprise Manager	
SeeBeyond Customer Login	
:· username:	
:** password:	
Login	

3 Enter your **username** and **password** and click **Login**. Note that this is your ICAN administrator username and password, not your operating system/network username and password. See the **Readme.txt** file on the root directory of the Repository CD-ROM for the default username and password.

The Enterprise Manager appears with the **HOME** tab active.

#### To upload products to the Repository

1 Click the **ADMIN** tab to begin the process of selecting and uploading files to the Repository.

The License file selection screen appears.

# Figure 8 License File Selection

	HELP ABOUT LOGOUT
Enterprise Manager	
HOME ADMIN DOWNLOADS DOCUMENTATION	
Select the license file (license.sar) provided by SeeBeyond. If you do not available, please contact SeeBeyond Support	t have a license file
License File: Browse	Submit

- 2 Click **Browse** to navigate to **license.sar**. After selecting it, click **Submit**.
- *Note:* The *license.sar* file is uniquely created for each customer. This file is provided by *e-mail*. If you do not have this file, contact SeeBeyond Support.
  - 3 After the license upload finishes, the Upload System Component Manifest screen indicates that the upload has completed (see Figure 9). Click **Back to component installation** to continue.



	HELP ABOUT LOGOUT
Enterprise Manager	
HOME ADMIN DOWNLOADS DOCUMENTATION	
Upload System Component Manifest	
Upload Finished	
Back to component installation	
© SeeBeyond Technology Corporation, Inc. 2003, <u>All Rights Reserved</u> .	

4 The next file to upload is eGate.sar. This file is located on the "SeeBeyond ICAN Suite Products - Disc 1" CD-ROM. Click Browse to navigate to eGate.sar. After selecting it, click Submit. eGate or elnsightESB SAR File:

Submit

Browse.

# Figure 10 Upload eGate.sar

			HELP ABOUT LOGOUT
Enterprise M	lanager		
HOME ADMIN	DOWNLOADS		
Product Name	Product Version	Uploaded By	Date of Upload
license	5.0.1	Administrator	Wed Nov 19 14:58:47 PST 2003
Select the eGa	te SAR (eGate.sar) or elnsightE	SB SAR file (elnsightES	B.sar) from the CDROM

- **5 eGate.sar** is a large file. Uploading **eGate.sar** may take several minutes.

As product .sar files are uploaded to the Repository, two actions take place:

- The product **.sar** file is uploaded to the Repository Server from your installation media. The length of time required for the file transfer depends on the size of the file and the speed of your network.
- The product .sar file is decompressed and installed into the Repository.
- 6 After the eGate.sar upload finishes, the Upload System Component Manifest screen indicates that the upload has completed (as previously seen in Figure 9 on page 38). Click Back to component installation to continue.

The Admin page displays a list of the files that have been uploaded to the Repository so far (see Figure 11).

			HELP ABOUT LOGOUT
Enterprise Manager			
	DOCUMENTATION		
Product Name	Product Version	Uploaded By	Date of Upload
license	5.0.1	Administrator	Wed Nov 19 14:58:47 PST 2003
eGate	5.0.1	Administrator	Wed Nov 19 15:11:09 PST 2003
Select the manifest file (Pr	oductsManifest.xml) from the C	DROM	
Manifest File:		Browse Submit	
products available to upload to My	yRepository		
upload now 🔛			

Figure 11 Product Manifest Selection

7 The next file to upload is ProductsManifest.xml. There are two versions of this file. The version for non-eWay products is located on the "SeeBeyond ICAN Suite Products - Disc 1" CD-ROM. The version for eWay products is located on the "SeeBeyond ICAN Suite Products - Disc 2" CD-ROM. Click Browse to navigate to ProductsManifest.xml. After selecting it, click Submit.

The Admin page now displays a list of all the ICAN products based on the contents of the Products Manifest file.

# To upload additional products to the Repository

Each ICAN product requires one or more product **.sar** files to be uploaded to the Repository. For example, to install the File eWay, you must upload **FileeWay.sar**. Follow these steps to upload and install your product **.sar** files.

The product **.sar** files for non-eWay products are located on the "SeeBeyond ICAN Suite Products - Disc 1" CD-ROM. The product **.sar** files for eWay products are located on the "SeeBeyond ICAN Suite Products - Disc 2" CD-ROM.

If you switch from one CD-ROM to the other, you can reload the **ProductsManifest.xml** to display the correct list of products.

- 1 Click the **Browse** button next to the product that you want to install. For example, to install the File eWay, click the **Browse** button next to the File eWay field.
- Note: You might want to upload the .sar files for the ICAN documentation first.
  - 2 Navigate to the location where the product **.sar** file resides and select the file that you want to install.
- *Note:* The *.sar* files for non-eWay documentation are located in the **\Documentation** directory on the "SeeBeyond ICAN Suite Products - Disc 1" CD-ROM (the *.sar* file for eGate documentation is *eGateDocs.sar*). The *.sar* files for eWay documentation are located in the **\Documentation** directory on the "SeeBeyond ICAN Suite Products - Disc 2" CD-ROM.
- *Important:* The *EnterpriseManagerPlugin-Win98ToXP.sar* file is required for the Adobe SVG Viewer plug-in for Windows. It is located on the "SeeBeyond ICAN Suite Products Disc 1" and "SeeBeyond ICAN Suite Products Disc 1 eInsight ESB" CD-ROMs.
  - 3 Click **upload now** to upload the product **.sar** file to the Repository.

The Upload System Component page displays. The status bar indicates the progress of the file upload.

4 After the upload finishes, the Upload System Component Manifest screen indicates that the upload has completed (as previously seen in Figure 9 on page 38). Click **Back to component installation** to continue.

The Admin page now displays a list of all the ICAN products based on the contents of the Products Manifest file.

5 Repeat steps 1 through 4 to install additional products.

Refer to the product documentation for the product or Add-on **.sar** file names. If you uploaded the documentation, you can access the manuals from the **DOCUMENTATION** tab of the Enterprise Manager.

# To upload the Logical Host files

- Repeat the steps in the previous procedure to upload the appropriate Logical Host .sar file. See Table 10 to determine the correct Logical Host file(s) for your environment. The Logical Host .sar files are located on the Logical Host CD-ROM. Like the Products CD-ROMs, the Logical Host CD-ROM contains a ProductsManifest.xml file.
- *Note:* You can use the *Browse* button next to any product text box to place UNIX Logical Host *.sar* files prior to uploading them.

SeeBeyond recommends that you upload the Logical Host **.sar** file at this time so that you do not have to return to the uploading process when you are downloading the Logical Host (see **Chapter 6**).

Logical Host Platform	Logical Host .sar file
Windows	No <b>.sar</b> file is required for Windows; it is automatically uploaded with eGate.sar.
IBM AIX	logicalhost_aix.sar
HP-UX	logicalhost_hpux.sar
Red Hat Linux	logicalhost_linux.sar
Sun Solaris	logicalhost_sparc64.sar
HP Tru64	logicalhost_tru64.sar

 Table 10
 Logical Host .sar files

Continue to **Chapter 5 "Installation Instructions for Enterprise Designer" on page 46** for instructions for installing the Enterprise Designer GUI on your development PCs.

# 4.3 Installing the Schema Runtime Environment (SRE) Monitor

The Schema Runtime Environment (SRE) Monitor enables you to manage an existing e\*Gate 4.x system that has been upgraded to the SRE from the eGate 5.0.1 Schema Designer.

**Note:** The SRE installation is similar to the 4.x installation process, and like requirements and caveats apply (for example: On Windows you have to consider the Windows Registry if you want to install multiple versions of e\*Gate). Before attempting the installation, see the appropriate SRE eGate\_Install\_Guide.pdf details.

This section describes how to install the SRE Monitor. The procedure involves installing the Tomcat Servlet/JSP container (any servlet that complies to the 2.3 specification) and the Java Development Kit (JDK), and then copying files provided by SeeBeyond to the Tomcat installation.

## To install the SRE Monitor

- 1 Follow the installation instructions for the SRE as described in the installation guide for the SRE products (such as **eGate\_Install\_Guide.pdf**).
- 2 Install the Tomcat Servlet/JSP container on a computer located anywhere on the network where the SRE system is installed. Tomcat is available from:

## http://jakarta.apache.org/

Under **Downloads**, select **Binaries**, and then scroll to the current version of Tomcat that is available to download.

SeeBeyond supports Tomcat version 4.1.24 or higher. Copy the **.zip** file to the appropriate directory and unzip it.

- *Note:* The default port number for Tomcat is 8080. Because this is a commonly used port number, you might want to change the port number to avoid a conflict. To change the port number, edit the **server.xml** file that is stored under the Tomcat **conf** folder.
  - 3 If the computer does not contain Java<sup>™</sup> 2 SDK (sometimes referred to as JDK 2), download and install it from:

http://java.sun.com/j2se/

*Note:* For additional information about JDK 2, see the SRE *eGate\_Install\_Guide.pdf*.

The JAVA\_HOME environment variable must be set to the location for the JDK 2 directory. For example, set the user variable to:

#### JAVA\_HOME=c:\<jdk2\_version>

where:

*<jdk2\_version>* is the version of the of the JDK 2 you installed.

- 4 Start the Repository; navigate to the directory where you installed the Repository (for example: C:\ican50\repository) and double-click startserver.bat.
- 5 Start Internet Explorer and Log in to Schema Designer by typing http://<hostname>:<port\_number> in the Address line

where:

*hostname* is the TCP/IP host name of the server where you installed the Repository—not the name of the Repository itself.

*port\_number* is the port number that you specified during the installation of the Repository.

*Note:* The system must be able to resolve the host name to an IP address using DHCP or any other name resolution protocol.

When ready, press Enter.

- 6 When the **SeeBeyond Customer Login** window of the Schema Designer appears (see Figure 13 on page 47), enter your username and password (see the Readme.txt file for the default username and password), and click Login.
- 7 Schema Designer appears with the **HOME** tab active. Click the **ADMIN** tab.
- 8 Insert the "SeeBeyond ICAN Suite Products Disc 1" CD-ROM into the CD-ROM drive.
- 9 Upload **ProductsManifest.xml** by clicking **Browse** to navigate to the file. After selecting it, click **Open** and then **Submit**.

*Note:* This assumes that you have already installed *license.sar* and *eGate.sar*.

- 10 Next to a box in the SeeBeyond Products Suite list click **Browse**, and navigate to the **sreMonitor.sar** file. After selecting it, click **Open**, and then click **upload now** to upload it to the Repository.
- 11 Click **Back to component installation** to continue.
- 12 Click the **DOWNLOADS** tab.
- 13 Click Schema Runtime Environment Monitor.
- 14 When the **File Download** dialog box appears, click **Open**. The **sreMonitor.zip** file (which contains three **.zip** files) is opened by an extraction program (such as WinZip).
- 15 Extract the following from the three .*zip* files in *sreMonitor.zip*:
  - A All the .war files to the **\$CATALINA\_HOME/webapps** directory.
  - **B** All of the .jar files to the **\$CATALINA\_HOME/shared/lib** directory.
  - C The **msg** directory and its contents to the **\$CATALINA\_HOME/shared/ classes** directory.
- **16** Restart Tomcat (or start Tomcat if not already started).

*Note: This is the SRE Tomcat and not the ICAN Repository Tomcat.* 

17 Start the SRE Monitor; the URL of the SRE Monitor is:

# http://<hostname>:<port\_number>/SREMonitor

where:

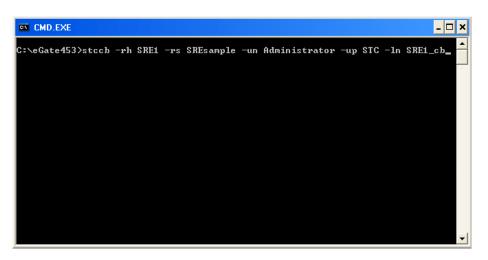
*<hostname>* is the host name of the computer where Tomcat is installed.

*<port\_number>* is the port number of the computer where Tomcat is installed.

*Note:* The initial SRE Monitor screen contains two buttons in the Environment Explorer. The left button enables you to add a Registry, and the right button enables you to refresh the Registry.

*If you find that your session timeouts are too fast, increase the value of the <session-timeout> element in Tomcat. The default value is 30 minutes.* 

18 Start the Control Broker (see Figure 12 for an example).



# Figure 12 Starting the Control Broker

Running the SRE is similar to 4.x and includes the same processes and executables (see the appropriate SRE e\*Gate documentation).

# Installation Instructions for Enterprise Designer

This chapter provides instructions on how to install the Enterprise Designer GUI on a Windows system. If you have any questions or problems, see the SeeBeyond Support Web site at <u>http://www.seebeyond.com</u> and select **SERVICES** and then **SUPPORT SERVICES**.

Note: The Enterprise Designer GUI can only be installed on Windows systems.

This chapter contains

- "Overview" on page 46
- "Installation of Enterprise Designer" on page 47

# 5.1 **Overview**

The Enterprise Designer must be installed on a Windows computer. After uploading the product files to the Repository (see **Chapter 4**), you can download the Enterprise Designer from the Repository and install it on all Windows clients that will be used to build and configure eGate Projects. Although the Enterprise Designer must be installed on Windows PCs, the Enterprise Designer can connect to Repositories on any supported platform.

*Note:* An extraction program, such as WinZip, must be installed on the Windows client prior to beginning the installation of the Enterprise Designer.

# 5.2 Installation of Enterprise Designer

This section provides the steps to download the Enterprise Designer from the Repository via the Enterprise Manager.

*Note:* Before you can begin this procedure, your SeeBeyond Repository Server must be running. See Chapter 3 "Installation Instructions for Repository" on page 24 for instructions for starting your Repository Server.

## To log on to the Enterprise Manager

- 1 Start Internet Explorer.
- 2 In the Address line, type http://<hostname>:<port\_number>

where:

*hostname* is the TCP/IP host name of the server where you installed the Repository—not the name of the Repository itself.

*port\_number* is the port number that you specified during the installation of the Repository.

*Note: The host name must be valid.* 

When ready, press Enter.

The **SeeBeyond Customer Login** window of the Enterprise Manager appears (see Figure 13).

Enterprise Manager	
	1//
SeeBeyond Customer Login	
:• username:	
i: password:	
Login	
Login	

**Figure 13** SeeBeyond Customer Login window

3 Enter your **username** and **password**. See the **Readme.txt** file for the default username and password.

4 Click Login. Enterprise Manager appears with the HOME tab active.

#### To install the Enterprise Designer GUI

1 Click the **DOWNLOADS** tab. The **products available to download from** <*repository\_name>* window appears (see Figure 14).

Figure 14 Products available to download from <repository\_name> window

	HELP ABOUT LOGOUT
Enterprise Manager	
HOME ADMIN DOWNLOADS DOCUMENTATION	
:- products available to download from MyRepository	
Component	
Enterprise Designer	
Logical Host - for win32	

- 2 Click **Enterprise Designer**. When the **File Download** dialog box appears, click **Open**. The **edesigner.zip** file is opened by an extraction program (such as WinZip).
- 3 Extract all the files to the client directory (such as **C:\ican50**). The **\edesigner** subdirectory is created when the file is unzipped.
- 4 Close the extraction program and Internet Explorer.

# 5.2.1. Starting Enterprise Designer and Installing Required eGate Modules

After you start the Enterprise Designer for the first time, you must install all the modules required to run the program.

#### To start the Enterprise Designer and install required modules

1 Navigate to *<C*:\*ican50*>\**edesigner**\**bin** and double-click **runed.bat**.

*Note:* You may want to create a shortcut to Enterprise Designer on the desktop.

2 You must update the eGate settings for your system. On the Tools menu, click Update Center. The Update Center Wizard - Select location of modules dialog box appears (see Figure 15).

	Update Center Wizard 🛛 😵
Steps	Select Location of Modules
<ol> <li>Select location of modules</li> <li>Select modules to install</li> <li>Download modules and check digital signatures</li> <li>View certificates and install modules</li> </ol>	Check the Web for Available Updates and New Modules.   Select Update Center(s) to connect:     Update Center     STC Update Center     Proxy Configuration   To initiate connection to the Update Center server, click Next.
1 2 2	Ellipsis button
SEEBEYOND"	O Install Manually Downloaded Modules (.nbm Files).
	< Back Next > Finish Cancel Help

# Figure 15 Update Center Wizard - Select location of modules

<sup>3</sup> If you are installing the Enterprise Designer on the same computer where the Repository Server is running, click **Next**. The **Update Center Wizard - Select modules to install** dialog box appears (see Figure 17).

However, if you are installing the Enterprise Designer on a different computer than the computer where the Repository Server is running:

- A Click the **ellipsis** button (...) to the right of "STC Update Center." The **Property Editor: Update Center** dialog box appears (see Figure 16).
- **B** Edit the **Server URL** box to specify a valid URL that points to the host where the Repository is installed.

F	PropertyEditor: Up	odate Center	8
Choose and Configure Ser	vice Type		
STC Update Center	* 12 10 1/=		
	Enabled	True	1
	Server URL	http://MyServer:12000/repository/MyR	j
	Properties		2
		OK Cancel	

# Figure 16 Property Editor: Update Center

- C After specifying the URL of the Repository Server, click **OK**.
- D When the **Update Center Wizard Select location of modules** dialog box reappears, click **Next**. The **Update Center Wizard Select modules to install** dialog box appears (see Figure 17).
- 4 Click the **Add All** button (double-arrow button that is the third arrow button from top). All of the modules are moved to the **Include in Install** list.

	Update Center Wizard	8
Steps         1. Select location of modules         2. Select modules to install         3. Download modules and check digital signatures         4. View certificates and install modules	Select Modules to Install Available Updates and New Modules:	_Include in Install:
	Refresh List     Applied ESR       Available Version:     Installed Version:	Total Size: 0 KB
SEEBEYOND	To view any license agreements and then proceed with downloa	ad, click Next. nish Cancel <u>H</u> elp

# Figure 17 Update Center Wizard - Select modules to install

- 5 Click Next.
- 6 When the License Agreement appears, click Accept. The Update Center Wizard -Download modules and check digital signatures dialog box appears (see Figure 18).

# Figure 18 Update Center Wizard - Download modules and check digital signatures

	Update Center Wizard 🛛 🗙
Steps         1. Select location of modules         2. Select modules to install         3. Download modules and check digital signatures         4. View certificates and install modules	Update Center Wizard         Download Modules         The Update Center is now downloading modules and/or checking digital signatures.         UDDI Client [7/58]         Downloaded 3,692 of 24,765 KBytes.         Download In Progress
SEEBEYOND	
	< <u>Back</u> Next > <u>Finish</u> Cancel <u>H</u> elp

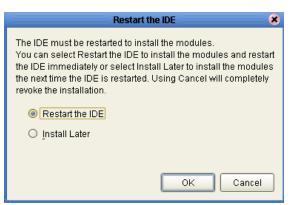
7 When the progress bar reaches 100 percent, "Done" appears below the bar. Click **Next**.

The **Update Center Wizard - View certificates and install modules** dialog box appears (see Figure 19). All of the modules must be installed for Enterprise Designer to fully function.

Figure 19 Update Center Wizard - View certificates and install modules
------------------------------------------------------------------------

		Update Center Wizard	8
Ste	ps	View Certificates and Install Modules	_
1. 2.	Select location of modules Select modules to install	The following modules will be installed.	
3.	Download modules and	Module Name	
	check digital signatures	Enterprise Designer Component Cookies - version 1.0	
4.	View certificates and	Trusted	
100	install modules	Database Model API - version 1.0	
- 10		Trusted	
-111		Enterprise Manager Model - version 1.0	
- 112		Trusted	
- 1410	/	Java Debugger - version 1.0	
11111		Trusted	
		JMS Topic - version 1.0.2	
1		Trusted	
		Java Collaboration Editor - version 1.0.2	
126.16		Trusted	
all the		UDDI Client - version 1.0	
		Trusted	
		JMS Code Generator - version 1.0	
1111		Trusted	
1111		Web Services Server - version 1.0	
4444		Trusted	
1111		XSLT Collaboration - version 1.0	
100		Trusted	
		Connectivity Map Editor Plugin - version 1.0	
	SEEBEYOND	Trusted	
1			'
		< <u>Back</u> Next > <u>Finish</u> Cancel <u>H</u> elp	)

8 Click **Finish** to accept the certificates and install the modules. The **Restart the IDE** dialog box appears (see Figure 20).



**Figure 20** Restart the IDE dialog box

- 9 The modules that were installed in **step 8** must be reloaded before Enterprise Designer functions properly. To restart the IDE and install the modules, ensure that the **Restart the IDE** option is selected and then click **OK**.
- 10 The Enterprise Designer Login dialog box appears (see Figure 21). Enter your Login ID and Password, and then click Login. The Login ID is the same as the username.

SeeBeyond recommends that you log in as "Administrator" the first time you log in; the Administrator can then create additional Login IDs (usernames).

The **SeeBeyond Enterprise Designer** window appears. You can now begin using the Enterprise Designer.

*Note:* See the *eGate Tutorial* and the *eGate Integrator User's Guide* for detailed instructions on using *eGate*.

# 5.2.2. Starting Enterprise Designer GUI After Initial Logon

This section provides instructions for logging in for subsequent sessions of eGate.

Before logging in for subsequent sessions of eGate, the SeeBeyond Repository Server must be running.

# To start Enterprise Designer GUI

1 Navigate to *<C*:\*ican50*>\**edesigner**\**bin** and double-click **runed.bat**.

The Enterprise Designer Login dialog box appears (see Figure 21).

		Login	8
			SEEBEYOND
	Welcome to	Enterprise Designer v5.0.1	
	Login ID:		
	Password:		
	Repository URL:	http://MyServerName:12000/MyReposito	
T BE			
		Login	Cancel

Figure 21 Enterprise Designer Login dialog box

2 Enter your **Login ID** and **Password**, and then click **Login**.

Or, if you specified a URL for the Repository Server (see **Figure 16 on page 50**) on the **Property Editor: Update Center** dialog box, you must enter this URL in the **Repository URL** box before clicking Login.

The SeeBeyond Enterprise Designer 5.0.1 window appears.

# To exit Enterprise Designer

• Click the "X" in the upper right corner of the window.

or

• On the File menu, click Exit.

# **Installation Instructions for Logical Host**

This chapter provides instructions on how to install the Logical Host. If you have any questions or problems, see the SeeBeyond Support Web site at <a href="http://www.seebeyond.com">http://www.seebeyond.com</a> and select SERVICES and then SUPPORT SERVICES.

#### This chapter contains

- "Overview" on page 56
- "Windows Installation of Logical Host" on page 56
- "UNIX Installation of Logical Host" on page 58

*Note:* See the *eGate Tutorial* before beginning the Logical Host installation.

# 6.1 **Overview**

The Logical Host can be installed on any eGate supported platform. The Logical Host is installed after you have installed the Repository and the Enterprise Designer.

*Note:* The Logical Host download and install is via Enterprise Manager, which only runs on Windows systems.

# 6.2 Windows Installation of Logical Host

Before deploying a Project created in the Enterprise Designer, you must install a Logical Host. This section provides instructions for downloading and installing the Logical Host from the Repository.

*Note:* Before you can begin this procedure, your SeeBeyond Repository Server must be running. See Chapter 3 for instructions on how to start your Repository Server.

#### To install the Logical Host

- *Note:* If your browser is running and Enterprise Manager is open, skip to step 5.
  - 1 Start Internet Explorer.

2 In the Address line, type http://<hostname>:<port\_number>

where:

*<hostname>* is the TCP/IP host name of the server where you installed the Repository—not the name of the Repository itself.

*<port\_number>* is the port number that you gave during the installation of the Repository.

When ready, press Enter.

The **SeeBeyond Customer Login** window of Enterprise Manager appears (see **Figure 13 on page 47**).

- 3 Enter your **username** and **password**. See the **Readme.txt** file for the default username and password.
- 4 When ready, click **Login**. Enterprise Manager appears with the **HOME** tab active.
- 5 Click the DOWNLOADS tab. The products available to download from <repository\_name> window appears (see Figure 22). Use this window to download and install a Logical Host from your Repository.

Figure 22 Products available to download from <repository\_name> window

	HELP ABOUT LOGOUT
Enterprise Manager	
:- products available to download from MyRepository	
♥ <sup>(1)</sup> eGate ♥ <sup>(2)</sup> Version5.0	
Component	
Enterprise Designer	
Logical Host - for win32	

- 6 Click Logical Host for win32. When the File Download dialog box appears, click **Open**. The logicalhost-win32.zip file is opened by an extraction program (such as WinZip).
- 7 Extract all the files to the client directory (such as C:\ican50). The \logicalhost subdirectory is created when the file is unzipped.
- 8 Close the extraction program and Internet Explorer.

# 6.2.1. Starting the Logical Host on a Windows System

For information on the following, see the *eGate Integrator User's Guide*:

• "Starting the Logical Host Manually on a Windows System"

- "Starting the Logical Host as a Windows Service"
- *Note:* If you set the Logical Host to start as a Windows service, it automatically starts each time your computer is rebooted. If the Logical Host is set to start manually, you will have to start it each time your computer is rebooted.

# 6.3 UNIX Installation of Logical Host

Before deploying a Project created in the Enterprise Designer, you must install a Logical Host. This section provides instructions for downloading and installing the Logical Host from the Repository.

*Note:* Before downloading a specific Logical Host for any UNIX platform, that Logical Host must first be uploaded from the "SeeBeyond ICAN Suite Logical Host" CD-ROM to the Repository.

#### To install the Logical Host

Use the FTP feature of the Repository to download the Logical Host **.tar** file for a particular UNIX platform.

- 1 TELNET into the UNIX system and change to the directory where you want to install the Logical Host.
- 2 Connect to the Repository FTP server by typing: ftp <repository\_hostname> <ftp\_port\_number>

where:

<*repository\_hostname*> is the TCP/IP host name of the server where you installed the Repository—not the name of the Repository itself.

<*ftp\_port\_number*> is the base port number that you entered during the installation of the Repository plus 8. That is, if the base port number is **12000**, then the FTP server port number would be **12008**.

When ready, press Enter.

- 3 Log in using your ICAN administrator username and password.
  - A At the prompt, type: *<username>* and press Enter.
- *Note:* This is your ICAN administrator username, not your operating system/network username. See the *Readme.txt* file on the root directory of the Repository CD-ROM for the default username.
  - **B** At the prompt, type: *<password>* and press **Enter**.
- *Note:* This is your ICAN administrator password, not your operating system/network password. See the *Readme.txt* file on the root directory of the Repository CD-ROM for the default password.

- 4 Type: **bin** and press **Enter** to enter binary mode, otherwise you will download in ASCII.
- 5 To browse for the downloadable Logical Hosts, type: ls and press Enter.
- 6 To begin the download, type: get <tar-file-name>

where:

*<tar-file-name>* is the name of the **tar** file name that contains the Logical Host that you want to install (for example: **logicalhost-sparc64.tar**).

- 7 Quit the FTP session by typing: **quit** and then pressing **Enter**.
- 8 Un-compress the .tar file by typing: tar -xvf <tar-file-name>

where:

<*tar-file-name*> is the name of the .*tar* file name that contains the Logical Host that you want to install (for example: *logicalhost-sparc64.tar*).

When ready, press **Enter**. This creates a directory named "logicalhost" inside the directory where the **tar** command was executed.

# 6.3.1. Starting the Logical Host on a UNIX System

See "Starting the Logical Host on a UNIX System" in the *eGate Integrator User's Guide* for information on starting a Logical Host.

In addition, be aware of the following:

• If you installed the Logical Host on HP Tru64 and the shell is **csh**, you must run the following command *before* starting the Logical Host:

unlimit

• If you installed the Logical Host on HP Tru64 and the shell is **bash**, you must run the following command *before* starting the Logical Host:

ulimit -Sd 512000

*Note:* The Logical Host, unlike the Repository, will exit when you quit the current TELNET session.

# Chapter 7

# Installation Instructions for ESRs

This chapter provides instructions on how to install Emergency Software Releases (ESRs), which are updates that resolve known issues. If you have any questions or problems, see the SeeBeyond Support Web site at <u>http://www.seebeyond.com</u> and select **SERVICES** and then **SUPPORT SERVICES**.

This chapter contains

- "Overview" on page 60
- "Uploading ESRs to the Repository" on page 61
- "Installing Enterprise Designer ESRs" on page 63
- "Installing Logical Host ESRs" on page 68

# 7.1 **Overview**

The Enterprise Designer has an Update Center that allows you to check for ESRs, which are updates that resolve known issues. Currently there are two interfaces that allow you to install ESRs:

Enterprise Designer

You install ESRs on each computer that has Enterprise Designer installed.

Logical Host

You install ESRs on each Logical Host within a Project, and must decide which ESRs you want to install on each Logical Host.

Before beginning the installation of ESRs, SeeBeyond recommends that you create a directory to store the ESRs. Also store the Manifest file you used during the initial installation in this directory—as this allows you to easily access the Manifest file when installing ESRs.

The following are packaged with each ESR:

- ESR<number>.sar
- Readme.txt for the ESR
- ProductsManifest.xml for the ESR

# 7.2 Uploading ESRs to the Repository

Before you can install an ESR, you must upload the ESR to the Repository. ESRs are distributed as **.sar** files.

# To upload ESRs to the Repository

- 1 If your Repository is not running, start it.
- 2 Start Enterprise Manager by starting Internet Explorer and typing <a href="http://chostname>:http://chostname>:

where:

*hostname* is the TCP/IP host name of the server where you installed the Repository—not the name of the Repository itself.

*port\_number* is the port number that you specified during the installation of the Repository.

*Note:* The system must be able to resolve the host name to an IP address using DHCP or any other name resolution protocol.

When ready, press Enter.

The **SeeBeyond Customer Login** window of the Enterprise Manager appears (see **Figure 7 on page 37**).

3 Enter your **username** and **password** and click **Login**. See the **Readme.txt** file for the default username and password.

Enterprise Manager appears with the **HOME** tab active.

- 4 Click the **ADMIN** tab.
- 5 You must now upload **ProductsManifest.xml**. This file is packaged with the ESR. Click **Browse** to navigate to the directory where you stored **ProductsManifest.xml**, select it, and then click **Open**.
- *Note:* It is not mandatory that you use the same Manifest file that you received with the ESR or you used when you first installed eGate (although it can be). You can save a *ProductsManifest.xml* file to a directory of your choice and then select it as opposed to selecting the *ProductsManifest.xml* file that came with the ESR or from the "SeeBeyond ICAN Suite Products Disc 1" CD-ROM.
  - 6 When the **Manifest File** box shows the **ProductsManifest.xml** file, click **Submit**.

The Admin page now displays a list of all the ICAN products based on the contents of the Products Manifest file.

- 7 For each ESR that you want to upload, click **Browse** next to any product, navigate to the ESR **.sar** file (for example, **ESR0000001.sar**), and click **Open**.
- *Important:* Before you can roll back Enterprise Designer ESRs, you must upload a special ESR called BaseESR (*BaseESR.sar*) to the Repository and then install the BaseESR (see

**"To install Enterprise Designer ESRs" on page 63**). You only need to upload this file once. The Base ESR is not required for rolling back Logical Host ESRs.

Figure 23 shows an example of four selected ESRs.

Figure 23	Example of Selected ESRs
-----------	--------------------------

Products	Version		
eGate	5.0	C:\ESRs\Enterprise Designer\ESR0000001.sar	Browse
eVision	5.0	C:\ESRs\Enterprise Designer\ESR0000002.sar	Browse
elnsight	5.0	C:\ESRs\Enterprise Designer\ESR0000003.sar	Browse
eView	5.0	C:\ESRs\Enterprise Designer\ESR0000004.sar	Browse
elndex	5.0		Browse
eTL	5.0		Browse
eXchange	5.0		Browse

8 When finished selecting ESRs, click **upload now**. The ESRs are uploaded.

# Installing Repository ESRs Manually for Verification

You can install a Repository ESR manually, however, this feature is for verification purposes only. After installing and verifying that a Repository ESR has been applied, roll back the ESR.

## To manually install ESRs to the Repository

- 1 Shut down the Repository.
- 2 Make a backup of the logs/**repository.log** file.
- 3 Copy the ESR .*zip* file to the ESRs directory, which is a directory above the repository directory.
- 4 Open a Command window and run ESRInstall <ESR\_number> where:

<**ESR\_number>** is the name of the ESR you want to apply.

The ESR is applied.

#### To ensure Repository ESRs are applied

- 1 Restart the Repository.
- 2 Connect to the Repository using Enterprise Designer.
- 3 Shut down the Repository.
- 4 Check the logs/repository.log file; you will see APPLIED <ESR\_number> where:

**<ESR\_number>** is the name of the ESR you applied.

#### To roll back applied Repository ESRs

1 Open a Command window and navigate to the ESRs folder.

- 2 To roll back the last applied ESR, run **ESRRollback**.
- *Note:* Before doing a roll back you might want to back up the logs/*repository.log* file for verification purposes.
  - 3 Restart the Repository and connect to it using Enterprise Designer.

# 7.3 Installing Enterprise Designer ESRs

This section describes how to install ESRs for Enterprise Designer components, as well as how to view and roll back installed Enterprise Designer ESRs.

Before you can perform the following procedure, you must have uploaded the ESRs to the Repository. See **"Uploading ESRs to the Repository" on page 61**.

*Important:* Before you can roll back Enterprise Designer ESRs, you must upload a special ESR called BaseESR (*BaseESR.sar*) to the Repository (see **"To upload ESRs to the Repository" on page 61**) and then install the BaseESR (described in this section). You only need to upload this file once. The BaseESR is not required for rolling back Logical Host ESRs.

## To install Enterprise Designer ESRs

- 1 Start Enterprise Designer (see "Starting Enterprise Designer GUI After Initial Logon" on page 54).
- 2 On the Tools menu, click Update Center. The Update Center Wizard Select location of modules dialog box appears (see Figure 24). Ensure that the Check the Web for Available Updates and New Modules option is active. When ready, click Next.

	Update Center Wizard
Steps	Select Location of Modules
<ol> <li>Select location of modules</li> <li>Select modules to install</li> <li>Download modules and check digital signatures</li> <li>View certificates and install modules</li> </ol>	<ul> <li>Check the Web for Available Updates and New Modules.</li> <li>Select Update Center(s) to connect:         <ul> <li>Update Center</li> <li>STC Update Center</li> <li>STC Update Center</li> </ul> </li> <li>Proxy Configuration</li> <li>To initiate connection to the Update Center server, click Next.</li> <li>Install Manually Downloaded Modules (.nbm Files).</li> </ul>
	< <u>Back</u> Next > <u>Finish</u> Cancel <u>H</u> elp

# Figure 24 Update Center Wizard - Select location of modules

- 3 The **Update Center Wizard Select modules to install** dialog box appears (see Figure 25). The available ESRs are listed in the **Available Updates and New Modules** box.
- 4 You can select an individual ESR by highlighting it and then clicking the singleright-arrow button to move the ESR to the **Include in Install** box. Repeat this procedure to move all the ESRs that you want to install.

or

Click the double-right-arrow button to move all the listed ESRs to the **Include in Install** box.

	Update Center Wizard	×
Steps	Select Modules to Install	
<ol> <li>Select location of modules</li> <li>Select modules to install</li> <li>Download modules and check digital signatures</li> <li>View certificates and install modules</li> </ol>	Available Updates and New Modules: STC Update Center Cate 5.0.1 BaseESR Structure Cate 5.0.1 Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure Structure	Include in Install:
	Refresh List Applied ESR	Total Size: 0 KB
	Availabl <u>e</u> Version: I <u>n</u> stalled Vers	ion: Module Size:
SEEBEYOND	To view any license agreements and then proceed	with download, click Next.
	< <u>B</u> ack Nex	t> <u>Finish</u> Cancel <u>H</u> elp

# Figure 25 Update Center Wizard - Select modules to install

5 If you move an ESR that has dependencies on other ESRs, the other ESRs are automatically moved to the **Include in Install** area.

If you move an ESR that conflicts with another ESR, a message informs you of this situation.

If you move an ESR that supercedes another ESR, a message informs you of this situation.

- 6 When ready, click **Next**.
- 7 The **Update Center Wizard Download modules and check digital signatures** dialog box appears (see Figure 26). When the progress bar reaches 100 percent, "Done" appears below the bar. Click **Next**.

Figure 26 Update Center Wizard - Download modules and check digital signatures

Update Center Wizard 🗙				
Steps	Download Modules			
Select location of modules     Select modules to install     Download modules and     check digital signatures     View certificates and install	The Update Center is now downloading modules and/or checking digital signatures. ESR0055501 [1/1]			
modules	Verified 178 of 178 KBytes.			
1. Ke	Done.			
AF DA				
HAZZ				
JEEDETUND				
	< Back Next > Finish Cancel Help			

8 The **Update Center Wizard - View certificates and install modules** dialog box appears (see Figure 27). "Trusted" means that the file is a sanctioned SeeBeyond file and not a rogue file. Click **Finish**.

Figure 27 Update Center Wizard - View certificates and install modules

	Update Center Wizard	8	
Steps	View Certificates and Install Modules		
1. Select location of modules 2. Select modules to install	The following modules will be installed.		
3. Download modules and	Module Name		
check digital signatures	ESR0055501 - version 1.0		
4. View certificates and	Trusted		
install modules	BaseESR - version 1.0		
	Trusted		
SEE BEYOND"			
	< <u>B</u> ack Next > <u>F</u> inish Cancel	<u>H</u> elp	

- 9 The **Restart the IDE** dialog box appears. Make sure that **Restart the IDE** is selected and click **OK**.
- 10 The Enterprise Designer Login dialog box appears (see Figure 21 on page 54). Enter your Login ID and Password, and then click Login. The Login ID is the same as the username. Enterprise Designer restarts.

To view and roll back applied Enterprise Designer ESRs

- Important: Before you can roll back Enterprise Designer ESRs, you must upload a special ESR called BaseESR (BaseESR.sar) to the Repository (see "To upload ESRs to the Repository" on page 61) and then install the BaseESR (see "To install Enterprise Designer ESRs" on page 63). You only need to upload this file once. The BaseESR is not required for rolling back Logical Host ESRs.
  - 1 On the **Tools** menu of Enterprise Designer, click **Update Center**. The **Update Center Wizard - Select location of modules** dialog box appears. Click **Next**.
  - 2 The **Update Center Wizard Select modules to install** dialog box appears. Click **Applied ESR** (see Figure 25 on page 65).

The **Remove Installed ESR** dialog box shows which ESRs have been applied (see Figure 28).

Remove Installed ESR	
_Applied ESR(s):	
ESR0055501	
Remove Cancel	

Figure 28 Remove Installed ESR Dialog Box

- 3 If you do not want to roll back ESRs, click **Cancel**.
- 4 If you do want to roll back ESRs, select the ESRs and click **Remove**.
- 5 The **Applied ESR(s)** dialog box appears; it lists the ESRs you have marked for removal. Click **OK**.
- *Note:* If you have not yet installed the BaseESR, an error message appears: "No *BaseESR.nbm* found. Please upload this file before removing the ESR."
  - 6 The Enterprise Designer Login dialog box appears (see Figure 21 on page 54). Enter your Login ID and Password, and then click Login. The Login ID is the same as the username. Enterprise Designer restarts.

# 7.4 Installing Logical Host ESRs

This section describes how to install ESRs for the Logical Host and its components (the Management Agent, SeeBeyond Integration Server, and SeeBeyond JMS IQ Manager), as well as how to roll back installed Logical Host ESRs.

Before you can perform the following procedure, you must have uploaded one or more ESRs to the Repository. See **"Uploading ESRs to the Repository" on page 61**.

# To install Logical Host ESRs

- 1 Start Enterprise Designer (see "Starting Enterprise Designer GUI After Initial Logon" on page 54).
- 2 Click the **Environment Explorer** tab from the Enterprise Explorer.
- 3 Right-click the Logical Host that you want to update, and then click **ESR Setup**.

The **Logical Host ESR Setup** dialog box appears (see Figure 29). The ESRs that were uploaded to the Repository and that can be applied to this Logical Host appear in the **Available ESR(s)** area.

You can click on an ESR to display a brief description of that ESR. For a detailed description of the ESR, click **Detail Description**.

**Note:** If you cannot get to a Logical Host, this is because the Logical Host must first be checked out. Right-click the Logical Host, and then click **Check Out**. Version control only affects personal Environments; shared Environments will not see your edits until you check them in (see the eGate Integrator User's Guide).

Log	jical Host ESR Setup	8
Logical Host Name : Logical Host Major Release Version:	LogicalHost1 5.0	
Available ESR(s):		Installed ESR(s):
0001 0002 0003 0004 0005 Description :	> < <<	
		Detail Description
	Concel	
ОК	Cancel Help	

# Figure 29 Logical Host ESR Setup

- 4 Move the ESRs that you want to install from the **Available ESR(s)** area to the **Installed ESR(s)** area. Only one ESR at a time can be moved.
- 5 If you move an ESR that has dependencies on other ESRs, the other ESRs are automatically moved to the **Installed ESR(s)** area.

If you move an ESR that conflicts with another ESR, a message informs you of this situation and suggests that you remove the other ESR.

If you move an ESR that supercedes another ESR, a message informs you of this situation and suggests that you remove the other ESR.

- 6 Click OK.
- 7 The ESRs will take effect when you reactivate the Deployment Profile or rerun the Logical Host bootstrap script.

# To roll back applied Logical Host ESRs

1 Right-click the Logical Host that you want to update, and then click **ESR Setup**.

The Logical Host ESR Setup dialog box appears.

- 2 Move the ESRs that you want to roll back from the **Installed ESR(s)** area to the **Available ESR(s)** area.
- 3 Click OK.
- 4 The rollback will take effect when you reactivate the Deployment Profile or rerun the Logical Host bootstrap script.

# **Chapter 8**

# Upgrading from 5.0.0 to 5.0.1

This chapter describes how to update your 5.0.0 ICAN Repository to version 5.0.1. If you have any questions or problems, see the SeeBeyond Support Web site at <a href="http://www.seebeyond.com">http://www.seebeyond.com</a> and select **SERVICES** and then **SUPPORT SERVICES**.

#### This chapter contains

- "Overview" on page 70
- "Migrating the Repository" on page 71
- "Post migration steps" on page 73

# 8.1 **Overview**

The ICAN 5.0.1 Project migration utility creates an archive file that can be restored into a newly-installed 5.0.1 Repository. The 5.0.1 upgrade process is as follows:

- Install ICAN 5.0.1 to a unique location.
- Install the same product **.sar** files into the 5.0.1 Repository as were installed in the 5.0.0 Repository.
- Shut down all Logical Hosts.
- Use the Project migration utility to export the 5.0.0 Repository to a file.

*Note:* Make sure that all objects are checked in before creating an export.

• Use the Project migration utility to import the archive file into the 5.0.1 Repository.

*Note:* Do not install ICAN 5.0.1 to the same location where ICAN 5.0.0 is installed.

#### **Optional migration sequence**

The instructions in this chapter assume that you want to keep your 5.0.0 Repository up and running as long as possible. With this in mind, these pages instruct you to install your 5.0.1 Repository to a unique location—which requires you to use a unique set of ports for the 5.0.1 Repository server. If this is not practical for your environment, you may choose to follow a different migration sequence.

An alternative migration sequence is as follows:

Shut down all Logical Hosts

• Use the upgrade utility to export the 5.0.0 Repository to a file.

*Note:* Make sure that all objects are checked in before creating an export.

- Shut down and delete the 5.0.0 Repository.
- Install the 5.0.1 Repository to the same location where the 5.0.0 Repository was installed—using the same installation directory and port assignments.
- Install the same product **.sar** files into the 5.0.1 Repository as were installed in the 5.0.0 Repository.
- Use the Project migration utility to import the archive file into the 5.0.1 Repository.

This sequence of steps would permit you to install ICAN 5.0.1 to the same location and use the same ports as 5.0.0. The drawback to this procedure is the additional down-time involved in installing the 5.0.1 Repository *after* removing the 5.0.0.

# 8.2 Migrating the Repository

Migrating your ICAN Repository from version 5.0.0 to version 5.0.1 involves installing ICAN 5.0.1, installing all of the desired product files, exporting the 5.0.0 Repository to an archive file, and importing the archive file into the 5.0.1 Repository.

*Note:* The *Migration ToolReadme.txt* file is located in the *Utilities* directory on both of the Repository installation discs ("SeeBeyond ICAN Suite Repository Disc 1 for Windows/Solaris/AIX/Linux" and "SeeBeyond ICAN Suite Repository Disc-2 for HP-UX/Tru64"), as are the *MigrationTool.zip* and *MigrationTool.tar* files.

# To install ICAN 5.0.1

- Follow the steps in Chapter 3 "Installation Instructions for Repository" on page 24.
- Note: Do not install ICAN 5.0.1 to the same location where ICAN 5.0.0 is installed.

#### To install the 5.0.1 product .sar files

- 1 Refer to the **Admin** page in the Enterprise Manager to determine which product **.sar** files have been installed in the 5.0.0 Repository.
- 2 Follow the steps in Chapter 4 "Installation Instructions for Uploading Files to the Repository" on page 35 to upload the necessary product .sar files.
- 3 Do not create any Projects in this 5.0.1 Repository until after importing the archive file as described in the "import" **procedure on page 72**.

#### To create the 5.0.0 Repository archive file

1 Before creating the Repository archive file, ensure that the 5.0.0 Repository server is running. If the Repository server is not running, follow the instructions in **Chapter 4** to start the Repository server.

2 Create the following environment variable to be used by the import and export utility:

JAVA\_HOME=**ICAN\_INSTALL\_DIR**/repository/jre/1.4.2

where *ICAN\_INSTALL\_DIR* is the location of your ICAN installation.

Consult the documentation for your operating system for instructions on creating an environment variable.

- *Note:* This environment variable is used by the export and import processes. You can remove the environment variable after you have finished the import and export processes.
  - 3 Shut down all Logical Hosts for all of the 5.0.0 Projects.
  - 4 With the Repository server running, type the following command to create the export file:

export repository\_url user\_ID password file\_name

where

repository\_url is the root URL for the 5.0.0 Repository to be exported,

*user\_ID* is the user ID used for accessing the Repository (must have Administrator privileges),

password is the password used for accessing the Repository, and

*file\_name* is the name of the export file to be created.

After creating the export file, you can optionally shut down the 5.0.0 Repository server to prevent users from attempting to connect to the old Repository.

*Note:* Make sure that all objects are checked in before creating an export.

#### To import the archive file into the 5.0.1 Repository

- 1 Follow the instructions in **Chapter 4** to start the 5.0.1 Repository server.
- 2 With the Repository server running, type the following command to import the archive file into the 5.0.1 Repository:

import repository\_url user\_ID password path\_file\_name

where

*repository\_url* is the root URL for the 5.0.1 Repository to where the archive file is to be imported,

*user\_ID* is the user ID used for accessing the Repository (must have Administrator privileges),

*password* is the password used for accessing the Repository, and

*path\_file\_name* is the name of the archive file that contains the 5.0.0 Repository information, including the directory path.

*Note:* The 5.0.1 Repository must not contain any Projects or user-created data before importing the archive file.

#### Post migration steps

- 1 From the Enterprise Manager, download and install the Enterprise Designer. For complete instructions, see Chapter 5 "Installation Instructions for Enterprise Designer" on page 46.
- 2 In the Enterprise Designer, re-create the following items:
  - Environments
  - Deployment Profiles
  - Logical Hosts
- 3 You can optionally delete the ICAN 5.0.0 installation.

## **Chapter 9**

# Troubleshooting

This chapter describes issues that may arise during the installation process and provides tips and solutions to resolve these issues. If you have any questions or problems, see the SeeBeyond Support Web site at <u>http://www.seebeyond.com</u> and select **SERVICES** and then **SUPPORT SERVICES**.

#### This chapter contains

- "ICAN Suite Product Dependencies" on page 74
- "Adding a New License File" on page 74
- "Adobe SVG Viewer 3.0 plug-in for Windows" on page 75

## 9.1 ICAN Suite Product Dependencies

ICAN Suite products have dependencies, and you must install these dependencies before attempting to upload the **.sar** file for a particular product. This includes installing and running a Repository where you intend to upload the product files. If there are prerequisite **.sar** files, these files must be uploaded to the Repository before attempting to upload the product **.sar** file.

Using eXchange Integrator as an example, it has dependencies that must be installed, running, and uploaded prior to uploading **eXchange.sar**: If you attempt to install eXchange without first installing and uploading its dependencies, the **eXchange.sar** upload may fail.

*Important:* See the ICAN Suite product documentation for dependencies specific to a particular product.

# 9.2 Adding a New License File

If, after first installing ICAN products, you purchase additional products, you must upload a new **license.sar** file prior to installing the products. Simply upload the new **license.sar**, using any products manifest file (**ProductsManifest.xml**).

# 9.3 Improving Upload Performance

To improve the upload performance when uploading product **.sar** files to the eGate Repository, see Microsoft Knowledge Base article 329781. Increasing the buffer size to 64 KB will improve the speed of uploading files to the Repository via Internet Explorer.

# 9.4 Adobe SVG Viewer 3.0 plug-in for Windows

Some Windows machines, if they have "orphan" files left behind from a previous installation of SVG that is unknown to the Windows Registry, are unable to install the Adobe SVG Viewer 3.0 plug-in via the normal Enterprise Manager download procedure. This component is required for viewing certain graphics over the Web, using the Monitor. The problem manifests itself by displaying an error dialog resembling the following:

```
Setup Details
Registry error:
   The system cannot find the file specified.
   <filename> [...]
File Error: Remove file
   C:\WINNT\system32\Adobe\SVGInstallTemp\SVG3.reg
Merge registry file:
   C:\WINNT\TEMP\SVGInstallTemp\SVG3.reg
```

This problem is known to Adobe, and a discussion of it can be found within the <u>www.adobe.com</u> Web site. Click **Search**, then click the link to **User to User Forums**, and then search on the thread "SVG Viewer Installation problems."

### If this problem occurs, take the following steps

1 Leave the error message dialog box open and copy the entire extracted folder:

c:\WINNT\TEMP\SVGInstallTemp

as listed above to a new location.

- 2 Exit the installer by closing the open dialog boxes.
- 3 In the new location, edit the file **Setup.inf** to comment out the **SVG3.ref** entry by making the following change.

Change the line:

SVG3.reg=%SourceDir%

To (notice the added semicolon):

;SVG3.reg=%SourceDir%

- 4 Save your changes and exit the editor.
- 5 In this same location, run **winstall.exe**.

The plug-in should now install correctly.

#### EnterpriseManagerPlugin-Win98ToXP.sar file

The EnterpriseManagerPlugin-Win98ToXP.sar file is required for the Adobe SVG Viewer plug-in for Windows. It is located on the "SeeBeyond ICAN Suite Products - Disc 1" and "SeeBeyond ICAN Suite Products - Disc 1 eInsight ESB" CD-ROMs.

# 9.5 **Configuring SSL and HTTPS Support**

Secure Socket Layer (SSL) is a technology that allows Web browsers and Web servers to communicate over a secured connection. The HTTPS service of the ICAN Repository server will not run unless a server certificate has been installed. For more information about using SSL and HTTPS in ICAN, see the *eGate Integrator Installation Guide*.

To install and configure SSL support, you need to perform the following steps:

- 1 Generate a key pair and a self-signed signature.
- 2 Obtain a digitally-signed certificate from a Certificate Authority.
- 3 Import/install the certificate.
- 4 Configure the SERVER.XML file.
- 5 Test the new SSL connection.

The following procedures employ the keytool utility.

#### To generate a key pair and a self-signed signature

1 From the command prompt, enter:

```
JAVA_HOME\bin\keytool -genkey -keyalg RSA -alias ICAN -keystore
    keystore_filename
```

Where, for example:

```
keystore_filename =
    ICAN_HOME\repository\server\conf\ssl\mykeystore
```

- 2 Enter your keystore password: (for example, seebeyond)
- 3 The keytool program will ask some questions, such as the following, which you need to answer appropriately:
  - A What is your first and last name?
  - **B** What is the name of your organizational unit?
  - C What is the name of your organization?
  - D What is the name of your City or Locality?
  - **E** What is the name of your State or Province?
  - **F** What is the two-letter country code for this unit?
  - G Is CN=your\_first\_and\_last\_name, OU=your\_organizational\_unit, O=your\_organization\_name, L=your\_city, ST=your\_state\_or\_province, C=your\_two\_letter\_country\_code correct?

4 Enter key password for *ICAN*: (RETURN, if same as keystore password)

```
Note: The example used the following name for the keystore file to be generated: ICAN-root\repository\server\conf\ssl\mykeystore. You can use this name or another, as long as you use the same name throughout the configuration process.
```

#### To obtain a digitally-signed certificate

1 From the command prompt, enter the following to generate a Certificate Signing Request (CSR):

```
JAVA_HOME\bin\keytool -certreq -alias ICAN -keyalg RSA -file
    csr_filename -keystore keystore_filename
```

- 2 Send the CSR for signing.
  - For example, if you are using Verisign CA, go to **http://digitalid.verisign.com**/. Verisign will send the signed certificate in E-mail.
- 3 Store the signed certificate in a file.
- *Note:* You may skip the following step if you are using only the self-signed certificate. If you are using a self-signed certificate or a certificate signed by a CA that your browser does not recognize, a dialog will be triggered the first time you try to access the server. You can then choose to trust the certificate for this session only, or permanently.

#### To import the certificate

From the command prompt, enter the following to install the CA certificate:

```
JAVA_HOME\bin\keytool -import -trustcacerts -alias ICAN -file ca-
cert-filename -keystore keystore_filename
```

*Note:* You must have the required permissions to modify the *JAVA\_HOME\jre\lib\security\cacerts* file.

An example Connector element for an SSL connector is included in the default server.xml file. This Connector element is commented out by default. To enable the SSL Connector for the ICAN repository, remove the comment tags around the SSL Connector element. Changes to the server.xml file are read by the ICAN repository server when it is started.

#### To configure SERVER.XML

- 1 Shut down the ICAN repository server if it is running.
- 2 Open the file *ICAN\_HOME*/repository/conf/server.xml using a text editor.
- <sup>3</sup> Find the following section of code in the file (try searching for *Connector*). The following snippet can be put before the first instance of *Connector* in the server.xml file.

```
<Connector
className="org.apache.catalina.connector.http.HttpConnector"
port="8443"
minProcessors="5"
maxProcessors="75"
```

- 4 Save and close the file.
- 5 Start the ICAN repository server.

#### Step 5: Test the new SSL connection

1 For testing purposes, and to verify that SSL support has been correctly installed on the ICAN repository server, load the default ICAN repository server introduction page with the following URL:

```
https://localhost:8443/
```

The *https* in this URL indicates that the browser should be using the SSL protocol. The port of 8443 is where the SSL Connector was created in the previous step.

- 2 The first time you load this application, the New Site Certificate dialog displays. Select **Next** to move through the series of New Site Certificate dialogs, and select **Finish** when you reach the last dialog.
- *Important:* You should still have the option to use HTTP to connect to the Enterprise Designer—system administrators should **not** block the HTTP port.

# Appendix A

# **UNIX** Patches

This appendix lists the required and certified UNIX patches for eGate 5.0.1.

# A.1 HP Tru64 UNIX V5.1A Patches

SeeBeyond has tested the system against the following patches:

#### "Certified HP Tru64 UNIX V5.1A Patches" on page 79

Even though applications that are developed using the HP C++ compiler are shipped with the Tru64 UNIX operating system, they must be updated. This is because they require functionality that is provided in the C++ Run-Time Library, and newer versions of the run-time library are released with each new version of the compiler. These updates of the libraries provide bug fixes and support for new features in the compiler, and must be installed on Tru64.

If you do not have a compiler installed, SeeBeyond recommends that you download and install the correct libraries for your system from the following location:

ftp://ftp.compaq.com/pub/products/C-CXX/tru64/

*Note:* A specialized FTP browser is required to access an FTP site from this document.

### Certified HP Tru64 UNIX V5.1A Patches

There is one certified patch for HP Tru64 UNIX V5.1A:

- T64V51AB23AS0005-20030723 OSF520
- *Note:* There is a known threading problem with HP Tru64 UNIX V5.1A, in which you may occasionally see components hang. HP is currently working on the problem. If you encounter this problem, contact HP (problem reference number: NA020731023095).

### For HP Tru64 UNIX V5.1A patches only

After installing the patches for HP Tru64 UNIX V5.1A, reconfigure the memory allocation from immediate to deferred mode by performing the following:

```
/etc/sysconfigtab
```

vm: vm-swap-eager=0

*Note:* HP Tru64 UNIX used to be called Compaq Tru64 UNIX.

# A.2 HP-UX System Parameter Changes

If you are installing eGate on an HP-UX 11.0 or an HP-UX 11i system (see Table 11), make the following changes to system parameters:

Parameter	Value
semmni	1024
semmns	16384
semmnu	2048
semume	256
shmmni	1024
shmseg	1024

 Table 11
 eGate Values on an HP-UX 11 System

*Note:* Services installed are not autostarted on system boot for non-root users. Startup scripts for services installed will be stored in a directory **rc3.d** under your home directory. It is not recommended to run as root.

# A.2.1 HP-UX Operating System Patches

If you encounter a problem with an HP-UX OS patch while installing eGate, remove the following HP-UX patch:

PHNE\_22397 (cumulative ARPA Transport patch)

and replace it with PHNE\_21767.

*Caution:* If you do not have a problem with the installation of the patches, do not replace the above patch.

# A.3 HP-UX 11.0 Patches

Table 12 lists the certified patches for HP-UX 11.0.

### **Table 12**Certified HP-UX 11.0 Patches

Patch	Version	Explanation
HWE1100	B.11.00.0209.5	Hardware Enablement Patches for HP-UX 11.00, September 2003
QPK1100	B.11.00.60.4	Quality Pack for HP-UX 11.00, September 2003
JDK 1.4	PHCO_23117, PHCO_23651, PHCO_24189, PHCO_26017, PHCO_26089, PHCO_26111, PHCO_27375, PHCO_28425, PHCO_29108, PHKL_18543, PHKL_20016, PHKL_23409, PHKL_24064, PHKL_25613, PHKL_2707, PHKL_27813, PHKL_27980, PHKL_28172 PHKL_28180, PHNE_28102, PHNE_28538, PHNE_28102, PHNE_28538, PHSS_26495, PHSS_26559, PHSS_26637, PHSS_26945, PHSS_27869, PHSS_28368, PHSS_28469, PHSS_28874	Patches with corresponding pre-requisites

For the HP-UX 11 Java patches, go to the following URL:

http://www.hp.com/products1/unix/java/infolibrary/patches.html

# A.4 HP-UX 11i Patches

Table 13 lists the certified patches for HP-UX 11i.

Table 13         Certified HP-UX 11i Patches	3
----------------------------------------------	---

Patch	Version	Explanation
GOLDAPPS11i	B.11.11.0306.4	Gold Applications Patches for HP-UX 11i, June 2003
GOLDBASE11i	B.11.11.0306.4	Gold Base Patches for HP-UX 11i, June 2003
HWEnable11i	B.11.11.0209.5	Hardware Enablement Patches for HP-UX 11i, September 2003

Patch	Version	Explanation
JDK 1.4	PHCO_24402, PHCO_27740,	Patches with corresponding
	PHCO_27958, PHCO_29109,	pre-requisites
	PHKL_25233, PHKL_25468	
	PHKL_25871, PHKL_25993,	
	PHKL_25994, PHKL_27091,	
	PHKL_27094, PHKL_27096,	
	PHKL_27316, PHKL_27317,	
	PHKL_27686, PHKL_28122,	
	PHNE_28089, PHNE_28103,	
	PHNE_28476, PHSS_26560,	
	PHSS_26971, PHSS_26973,	
	PHSS_26975, PHSS_26977,	
	PHSS_28370, PHSS_28470	

### Table 13 Certified HP-UX 11i Patches

For the HP-UX 11i Java patches, go to the following URL:

http://www.hp.com/products1/unix/java/infolibrary/patches.html

# A.5 IBM AIX 5.1L and 5.2 Patches

The following patches are certified patches for AIX:

## **Certified AIX 5.1L Patches**

There is one certified patch for AIX 5.1L:

5100-05\_AIX\_ML (Maintenance Level 5)

## **Certified AIX 5.2 Patches**

There is one certified patch for AIX 5.2:

5200-02\_AIX\_ML (Maintenance Level 2)

# A.6 Red Hat Linux Patches

## Certified Red Hat Enterprise Linux AS 2.1 Patches

There is one certified patch for Red Hat AS 2.1:

2.4.9-e.16smp

## Certified Red Hat Linux 8 Patches

There is one certified patch for Red Hat Linux 8:

2.4.20-20.8

# A.7 Solaris 8 and 9 Patches

### nscd must be running on Solaris to install eGate successfully

Solaris must have **nscd** running. If it is not running, the default Project fails to import properly during installation, and eGate cannot be installed.

## **Required Solaris Patches**

Solaris 8 requires the following patch before eGate can be installed. If the patch is not installed, the setup program will detect it.

```
108435-13
```

This patch is available from Sun, either from a current operating system CD-ROM or downloaded from:

http://sunsolve.sun.com

### Certified Solaris 8 and 9 Patches

There are two certified patches for Solaris 8 and 9:

```
Solaris 8 Maintenance Update 7 2-2002
Solaris 9 Maintenance Update 3 4-2003
```

A complete list of the patches included in these Clusters is available from SeeBeyond Support.

*Note:* These patches are recommended but not required.

# Glossary

#### BI

Business integration (also Business Intelligence).

#### Collaboration

See "Service" and "Collaboration Definition".

#### **Collaboration Definition**

The encoding of business rules, in Java or XSLT format. Typically, the encoding consists of operations on OTDs (see **"OTD" on page 87**). Several Collaborations can have the same Collaboration Definition.

#### Connection

Consists of the configuration information that enables an eWay to connect to an external system.

#### **Connectivity Map**

Contains business logic and routing information about the data transmission. A Connectivity Map usually includes one or more Collaborations, Passthrough Collaborations, topics, queues, and eWays. A Connectivity Map is created under a Project. A Project may have multiple Connectivity Maps.

#### Constants

A name or value pair that is visible across a Project.

#### CRM

**Customer Relations Management** 

#### **Data Cleansing**

Data must be cleansed of errors in structure and content before it is useful in data warehousing and integration; this means transforming data for accurate and effective use in a database or data management system by cleansing "dirty" or redundant data.

#### **Data Dictionary**

Defines the organization of a database and lists all files in the database, the number of records in each file, and the names and types of each field. The data dictionary is often hidden from end users. Although the dictionary doesn't contain actual data, it does contain essential information for managing the database.

#### **Data Integrity**

Refers to the accuracy and validity of data. Data integrity can be compromised in many ways, including human error through data entry, or through faulty logic in

programming. Computer viruses, software bugs and many other factors can also compromise data integrity.

#### **Data Mapping**

In relational databases (RDBMSs) data mapping is the relationship and data flow between source and target objects. Mapping involves structuring the relationship between source and target objects.

#### Data Mart

A smaller, focused, database designed to help managers make business decisions. (A data warehouse is a larger, enterprise, database(s).)

#### **Data Mining**

Used to synthesize or isolate unique data patterns to predict future behaviors or to filter data to select patterns that help discover previously unknown relationships among data. Commonly used by marketers who acquire and distill consumer information.

#### **Data Transformation**

Data transformation is necessary after extracting data from legacy data formats, or any format that requires cleansing. Data is transformed for efficient use for Business-to-Business Enterprise Data Integration.

#### **Data Warehouse**

A copy or view of enterprise transaction data (sometimes non-transaction data) that is used for reporting. The data is often summarized and always structured for queries and analysis.

#### **Deployment Profile**

Contains the information about how the Project components will be deployed in an Environment. A Project can have multiple Deployment Profiles, but only one Deployment Profile can be activated for a Project in any one Environment.

#### **Derived Collaboration**

Collaboration that inherits operations from another, according to standard object-oriented practice.

#### **Dimension Table**

Dimension tables describe the business entities of an enterprise; also called lookup or reference tables.

#### **Dirty Data**

Dirty data contains, but is not limited to, incorrect data including spelling errors, punctuation errors, incorrect data referencing, incomplete, inconsistent, outdated, and redundant data.

#### **Drill Down**

To move from summary to more detailed data by "drilling down" to get it. In database terminology this might mean starting with a general category and drilling down to a specific field in a record.

#### eGate System

See "Project".

#### Environment

A collection of physical resources and their configurations that are used to host Project components. An Environment contains logical hosts and external systems.

#### EPR

Enterprise Resource Management

#### ETL

Extract, Transform, Load. Extract is the process of reading data from a source database and extracting the desired subset of data. Transform is the process of converting the extracted data from its previous form into the desired form. Load is the process of writing the data into a larger database.

#### eWay

A link between a Collaboration and an external connection including the message server connection (topic or queue) or external application.

#### **External Application**

A logical representation in an eGate Project of an external application.

#### **External System**

A representation in an eGate Project of an external application system.

#### Extraction

Data are extracted from a source using software tools. This first step in ETL initially "gets" the data.

#### **Fact Table**

A fact table typically contains two types of columns: those containing facts and those that contain foreign keys to dimension tables. Fact tables contain detail facts and/or summary facts.

#### **ICAN Suite**

The SeeBeyond Integrated Composite Application Network Suite.

#### **Integration Server**

J2EE software platform that houses the business logic container used to run Collaborations and JCA connectors (eWays). Provides transaction services, persistence, and external connectivity.

#### JMS IQ Manager

JMS-compliant, guaranteed delivery store, forwarding, and queueing service.

#### Join

Matches records, which are joined by a common field, in two tables in a relational database. Often part of a Select query.

#### Link

The JMS Connection between a Collaboration and a topic or queue in a JMS-compliant message server.

#### Linked Message Destination

A reference to a Message Destination defined in another Connectivity Map.

#### Logical Host

An instance of the eGate runtime Environment that is installed on a machine. A Logical Host contains the software and other installed components that are required at runtime, such as application and message servers.

#### **Management Agent**

Uses J2EE technology to manage and monitor an eGate 5.0 deployment that may contain other application servers in addition to the SeeBeyond Integration Server. Defines management interfaces and services designed for distributed environments, focusing on providing functionality for managing networks, systems, and applications.

#### **Message Destination**

A general term for a topic or queue. Two or more Projects can share a message destination that has the same name and is deployed on the same message server. A single Project may also have a single message destination referenced in multiple Connectivity Maps.

#### Metadata

"Data about data." Metadata describes "how," "when," and "who" about structure and format, of a particular set of data. ETL tools are used to generate and maintain a central metadata repository.

#### Non-normalized Data

Non-normalized data cannot be cross-referenced accurately, if at all, and causes manageability issues. Non-normalized data may be converted to normalized data.

#### Normalized Data

Normalization is a common database design process used to remove redundant or incorrect organization and data. The design and normalization of the database will create a maintainable data set that can be cross-referenced.

Normalized data is not only easier to analyze but also easier to expand. Normalization involves removing redundancy and correcting incorrect data structure and organization.

#### OLAP

Online analytical processing.

#### OTD

An acronym for Object Type Definition. OTDs contain the data structure and rules that define an object. An OTD is used in Java Collaboration Definitions for creating data transformations and interfacing with external systems.

#### Project

Contains a collection of logical components, configurations, and files that are used to solve business problems. A Project organizes the files and packages and maintains the settings that comprise an eGate system in SeeBeyond's Enterprise Designer.

#### Query

A request for information from a database. There are three query methods:

Choose – With this easy-to-use method, the database system presents a list of parameters from which you can choose. This method is not as flexible as other methods.

Query by example (QBE) – With this method, the system lets you specify fields and values to define a query.

Query language – With this method, you have the flexibility and power to make requests for information in the form of a stylized query using a query language. This is the most complex and powerful method.

#### Queue

A JMS queue is a shareable object that conforms to the *point-to-point* (p2p, or PTP) messaging domain, where one sender delivers a message to exactly one receiver. When the SeeBeyond JMS IQ Manager sends a message to a queue, it ensures it is received once and only once, even though there may be many receivers "listening" to the queue. This is equivalent to the subscriber pooling in other queue implementations. You can reference a queue that exists in another Connectivity Map or Project.

#### **Raw Data**

Data that has not been turned into "information," through processing. Although factual and "real," raw data is unorganized.

#### **Relational Database (RDBMS)**

Short for Relational Database Management System, most often referred to as RDBMS. Data is stored in related tables. Relational databases can be viewed in many different ways.

In this system a single database can be spread across several tables. (RDBMS differs from flat-file databases where each database is self-contained as a single file or table.)

#### Repository

Stores and manages the setup, component, and configuration information for eGate Projects. The Repository also provides monitoring services for Projects, which include version control and impact analysis.

#### Schema Runtime Environment

An add-on in eGate 5.0 that provides the upgrade path for e\*Gate 4.x users to upgrade to eGate 5.0. Also known as the SRE.

#### Service

Contains the information about executing a set of business rules. These business rules can be defined in a Java Collaboration Definition, XSLT Collaboration Definition, Business Process, eTL Definition, or other service. A Service also contains binding information for connecting to JMS Topics, Queues, eWays, and other services.

#### **Staging Data**

Data that is to be processed before entering the warehouse.

#### Subproject

An independent Project that is included as part of another Project and listed on the Enterprise Explorer tree beneath the main Project icon.

#### Table

Refers to data arranged in rows and columns, like a spreadsheet. In relational database management systems, all information is stored in tables.

#### Topic

A JMS topic is a shareable object that conforms to the *publish-and-subscribe* (pub/sub) messaging domain, where one publisher broadcasts messages to potentially many subscribers. When the SeeBeyond JMS IQ Manager publishes a message on a topic, it ensures that all subscribers receive the message.

#### Transformation

Data that are extracted from databases are transformed into a desired form, using various tools that cleanse, merge, purge, aggregate, calculate, audit, remove redundancy, standardize, etc.

#### XSLT

An acronym for Extensible Stylesheet Language Transformations. A file format used in eGate to generate Collaboration Definitions.

#### Warehouse

See "Data Warehouse".

## e\*Gate 4.x Terms in eGate 5.0

Table 14 provides definitions for the terms that are new with eGate release 5.0, as well as equivalent terms from eGate release 4.x.

5.0 Term	4.x Equivalent Term
Collaboration	Collaboration
Collaboration Definition	Collaboration Definition
Connection	eWay Connection
Connectivity Map	Closest: Network View of an entire Schema
Deploy	Run the Control Broker
Deployment	<none></none>
Deployment Profile	Closest: Schema
Enterprise Designer	Enterprise Manager
Enterprise Manager	Enterprise Monitor
Environment	Schema (except only includes physical information, not business logic)
eWay	eWay Connection eWay
eWay Configuration	eWay Connection Configuration
External Application	eWay Connection
External System	eWay Connection
JMS Connection	eWay Connection
Integration Server	<none></none>
Link	JMS eWay Connection
Linked Message Destination	<none></none>
Logical Host	Participating Host
Message Destination	Topic or queue
Message Server	JMS IQ Manager
Object Type Definition (OTD)	Event Type Definition (ETD)
Process Manager	Control Broker
Project	Schema (except not including physical layer)
Queue	JMS queue
Repository	Registry
Subproject	Schema

Table 14eGate 5.0 Terms

5.0 Term	4.x Equivalent Term
Торіс	JMS topic
XSLT	<none></none>

### Table 14 eGate 5.0 Terms (Continued)

# Index

## A

add-ons when installed 20 "Administrator" password 18 username 18 AIX CPU requirements 18 disk space requirements 18 RAM requirements 18 AIX 5.1L patches, certified 82

## B

Base ESR **61** BaseESR **63**, **67** BI **84** 

## C

CD-ROM drive mounting on UNIX 32 Collaboration 84, 90 derived 85 Collaboration definition 84, 90 Connection 90 connection 84, 90 Connectivity Map 84, 90 constants 84 Control Broker 90 conventions path name separator 11 Windows 11 **CPU** requirements AIX 18 HP Tru64 18 **HP-UX 17** Red Hat Linux 18 Solaris 17 Windows 16 CRM 84

## D

daemon starting Repository as 34 data cleansing 84 data dictionary 84 data integrity 84 data mapping 85 data mart 85 data mining 85 data transformation 85 data warehouse 85, 89 deploy 90 Deployment 90 Deployment Profile 85, 90 derived Collaboration 85 dimension table 85 dirty data 85 disk space requirements AIX 18 HP Tru64 18 HP-UX 17 Red Hat Linux 18 Solaris 17 Windows 16 document conventions 10 documentation installing 41 drill down 85

# E

eGate modules installing 48 eGate system 86 eGate.sar 36 Emergency Software Releases See ESRs Enterprise Designer 90 Enterprise Designer GUI exiting 55 installing from Enterprise Manager 48 starting 54 starting first time installing required modules 48 Enterprise Manager 90 Internet Explorer version 16 Enterprise Monitor 90 Environment 86, 90 EPR 86 **ESRs** Base ESR 61 BaseESR 63, 67 Enterprise Designer 63

Logical Host 68 overview 60 uploading to Repository 61 ETD 90 ETL 86 Event Type Definition 90 eWay Configuration 90 eWay Connection 90 eWay Connection 90 eway Connection S0 external application 86, 90 extraction 86

#### F

fact table **86** firewall Windows XP **24** 

### Η

HP Tru64 CPU requirements 18 disk space requirements 18 patches, certified 79 RAM requirements 18 unlimit/ulimit setting 33, 59 HP-UX CPU requirements 17 disk space requirements 17 patches, operating system 80 patches, recommended 81 RAM requirements 17 system parameter changes 80

### 

ICAN Suite 86 product dependencies 74 install.bat 25 install.log 29, 30 installation SVG Viewer 75 installing documentation 41 SRE Monitor 43 Integration Server 86, 90 Internet Explorer supported version 16

### J

Java 2 SDK also known as JDK 2 43 JAVA\_HOME environment variable for SRE 43 JDK 2 see Java 2 SDK 43 JMS connection 90 e\*Way Connection 90 IQ Manager 90 queue 90 topic 91 JMS IQ Manager 86 join 86

### L

license.sar 36 uploading new license file 74 link 87, 90 linked message destination 87, 90 Logical Host 87, 90 installing on UNIX 58 installing on Windows 56 resource considerations 14 logicalhost\_aix.sar 36 logicalhost\_hpux.sar 36 logicalhost\_linux.sar 36 logicalhost\_sparc64.sar 36 logicalhost\_tru64.sar 36

### Μ

Management Agent 87 message destination 87, 90 server 90 metadata 87 mount commands (UNIX) 32

### Ν

network view nohup command non-normalized data normalized data nscd required when installing eGate on Solaris

## Ο

Object Type Definition 87, 90

OLAP 87 online support 24, 46, 56, 60, 74 organization of information, document 10 OTD 87, 90

### P

Participating Host 90 password installation default 18 patches, certified AIX 5.1L 82 HP Tru64 79 Red Hat Linux 82 Solaris 83 patches, recommended HP-UX 81 patches, required Solaris 83 port number specifying 27, 30, 33 pre-installation Windows 18 Process Manager 90 product .sar files eGate.sar 36 license.sar 36 stcmessageserver45x.sar 36 product dependencies 74 ProductsManifest.xml uploading 40, 44 Project 88, 90

## Q

query **88** queue **88**, **90** 

### R

RAM requirements AIX 18 HP Tru64 18 HP-UX 17 Red Hat Linux 18 Solaris 17 Windows 16 raw data 88 rdbm 88 Readme.txt file location of 16 Red Hat Linux CPU requirements 18 disk space requirements 18 patches, certified 82 RAM requirements 18 Registry 90 relational database 88 Repository 88, 90 installing on UNIX 32 installing on Windows 25, 29 resource considerations 13 starting and stopping on UNIX 34 starting and stopping on Windows 31 UNIX daemon 34 Windows service 31 Repository names 22

### S

Schema 90 Schema Designer 43 Schema Runtime Environment 88 Schema Runtime Environment Monitor (SRE Monitor) 43 Security Server 89 Solaris **CPU** requirements 17 disk space requirements 17 patches, certified 83 patches, required 83 RAM requirements 17 requires nscd to install eGate properly 83 SRE 88 SRE Monitor installing 43 sreMonitor.sar 44 staging data 89 startserver.bat 31, 44 startserver.sh 34 stcmessageserver45x.sar 36 stopserver.bat 31 stopserver.sh 34 subproject 89, 90 supporting documents 11 SVG Viewer installation 75 system requirements 16 UNIX 17 Windows 16

### Т

table **89** topic **89**, **90**, **91** transformation **89** troubleshooting HP Tru64 unlimit/ulimit setting 33, 59

### U

UNIX installing Repository 32 mounting CD-ROM drive 32 starting Repository as daemon 34 Update Center Wizard installing Enterprise Designer 48, 50 installing ESRs 63 user names 22 user's guide purpose and scope 9

### W

warehouse 89 Windows CPU requirements 16 disk space requirements 16 installing Logical Host 56 installing Repository 25, 29 pre-installation issues 18 RAM requirements 16 Windows XP firewall 24 writing conventions 10

## Χ

XSLT 89, 91