SeeBeyond ICAN Suite

SNMP Agent User's Guide

Release 5.0.2

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Contents

Chapter 1

About This Guide 5

Contents of This Guide 5

Writing Conventions 5

Additional Conventions 6

Supporting Documents 6

SeeBeyond Web Site 6

Chapter 2

Using SNMP to Monitor eGate Projects 7

The SNMP Agent Model 7

About eGate SNMP Model Configurations 8

About the SNMP Agent MIB 8

About SNMP Agent Traps 9

ICAN Message Codes 10

SNMP Agent Trap Examples 11

Example 1: Starting the SeeBeyond JMS IQ Manager 11

Example 2: User-generated Trap 11

Chapter 3

Installing and Configuring the SNMP Agent 12

Supported Operating Systems 12

System Requirements 13

Installing the SNMP Agent 13

Configuring SNMP Agents 13

Configuring Third-Party SNMP Management Systems 14

Chapter 4

Managing SNMP Agents 15

Starting and Stopping SNMP Agents 15

Viewing SNMP Agent Status and Alerts 16

Reconfiguring SNMP Agents 18

Index 19

Chapter 1

About This Guide

This guide describes how to configure and manage the SNMP (Simple Network Management Protocol) Agent.

This guide is intended for system administrators who are familiar with SNMP technology.

In This Chapter

- **"Contents of This Guide" on page 5**
- **"Writing Conventions" on page 5**
- **"Supporting Documents" on page 6**
- **"SeeBeyond Web Site" on page 6**

1.1 Contents of This Guide

This document includes the following information:

- **Chapter 1 "About This Guide"** introduces this user's guide, including its purpose, scope, and contents.
- **Chapter 2 "Using SNMP to Monitor eGate Projects"** provides an overview the SNMP Agent, its system requirements, and its Management Information Base (MIB).
- **Chapter 3 "Installing and Configuring the SNMP Agent"** describes how to install and configure the SNMP Agent.
- **Chapter 4 "Managing SNMP Agents"** describes how you start, stop, and reconfigure SNMP Agents.

1.2 Writing Conventions

The following writing conventions are observed throughout this document.

Table 1 Writing Conventions

Text	Convention	Example
Button, file, icon, parameter, variable, method, menu, and object names.	**Bold** text	▪ Click **OK** to save and close. ▪ From the **File** menu, select **Exit**. ▪ Select the **logicalhost.exe** file. ▪ Enter the **timeout** value. ▪ Use the **getClassName()** method. ▪ Configure the **Inbound** File eWay.
Command line arguments and code samples	`Fixed` font. Variables are shown in ***bold italic***.	`bootstrap -p` ***`password`***
Hypertext links	**Blue** text	**http://www.seebeyond.com**

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 or HP NonStop system, please make the appropriate substitutions.

1.3 Supporting Documents

The following SeeBeyond documents provide additional information about the Integrated Composite Application Network (ICAN) Suite:

- *SeeBeyond ICAN Suite Primer*
- *SeeBeyond ICAN Suite Installation Guide*
- *eGate Integrator User's Guide*
- *eGate Integrator Tutorial*

1.4 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

Chapter 2

Using SNMP to Monitor eGate Projects

The SNMP Agent enables you to monitor eGate projects alerts using third-party SNMP management systems.

This chapter provides an architectural overview of the SNMP Agent and its MIB.

In This Chapter

- **The SNMP Agent Model** on page 7
- **About eGate SNMP Model Configurations** on page 8
- **About the SNMP Agent MIB** on page 8

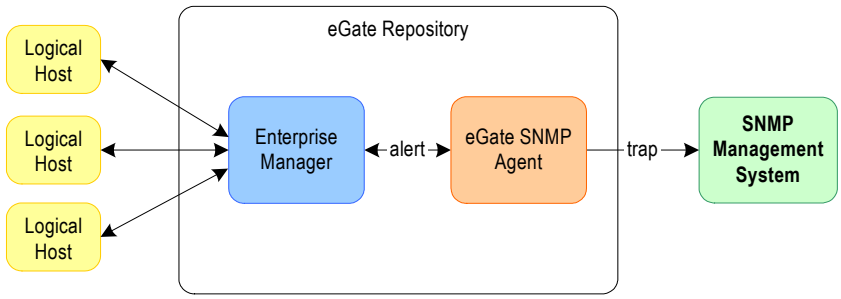
2.1 The SNMP Agent Model

The SNMP Agent enables you to forward eGate alerts as SNMP version 2 traps to a third-party SNMP management system. The Enterprise Manager monitors the Logical Hosts running in an eGate Repository, and the SNMP Agent in turn listens to the Enterprise Monitor for alert information, and forwards the alerts as SNMP traps to the trap port. The SNMP Agent also sends its start/stop status to the Enterprise Manager.

The figure below provides an overview of the SNMP Agent model.

Figure 1 The SNMP Agent Model

0



By default, the SNMP Agent creates a trap for each eGate alert received. To filter for which alerts a trap is sent, you can use the eGate Integrator Alert Agent, which is a separate product offering of the ICAN Suite. For information about using the Alert Agent with the SNMP Agent, refer to the *eGate Integrator Alert Agent User's Guide*. Note that once filtering with the Alert Agent is enabled, it cannot be disabled.

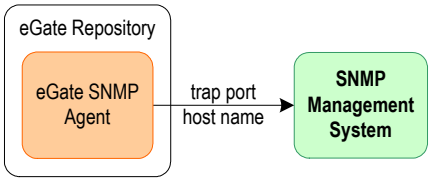
2.2 About eGate SNMP Model Configurations

The components in the eGate SNMP model communicate with each other via the following configurations:

- Trap host name
- Trap port number

The figure below shows where the configurations are set.

Figure 2 SNMP Agent Model Configurations



The figure above shows the two components that are used for the SNMP Agent to communicate with components in the eGate SNMP model:

- **Trap host name**
  This is the host name of the third-party management system.
- **Trap port**
  This is the port where the SNMP Agent forwards trap notifications. On the initial SNMP Agent Configuration dialog box, this port is set to 16200.

For more information about SNMP Agent configurations, refer to **"Configuring SNMP Agents" on page 13**.

2.3 About the SNMP Agent MIB

The SNMP Agent provides an SNMPv2 MIB which defines the trap notifications as well as the objects that can be managed in eGate Projects. The SNMP Agent MIB uses Abstract Syntax Notation One (ANS.1), which is industry standard for MIBs.

The SNMP Agent MIB, **EGATE50-SNMP-V2-MIB.txt**, is located in the ***<ICANsuite*\monitor\config\snmpagent** directory, where *<ICANSuite>* is the directory where you installed eGate Integrator.

The SNMP Agent MIB objects can be found under the following node:

```
1.3.6.9.4.1.1351.1.1.1.1.2
```

2.4 About SNMP Agent Traps

The table below shows the information provided when an eGate trap occurs.

Table 2 SNMP Agent Traps

Notification	Description
(1) mPhycalHostName	Physical host name where the event occurred
(2) mEnvironmentName	ICAN Environment name where the event occurred
(3) mLogicalHostName	Logical Host name where the event occurred
(4) mServerType	Type of server where the event occurred; Integration Server ("INTEGRATION") or JMS IQ Manager ("MESSAGE")
(5) mServerName	Name of the server where the event occurred
(6) mComponentType	Type of ICAN component where the event occurred
(7) mComponentProjectPathName	Full path name of the ICAN Project where the event occurred
(8) mComponenentName	Name of the ICAN Component where the event occurred
(9) mTimeStamp	Date and time when the event occurred
(10) mType	Type of event that occurred; alert, TCA, Event
(11) mSeverity	Severity of the event that occurred; critical, major, minor, warning, information
(12) mOperationalState	State of the operation; unknown, started, suspending, suspended, stopping, stopped, running
(13) mObservationalState	State of the observation; unobserved, observed, resolved
(14) mMessageDetails	Details of the event, alerter.info of user-generated alert
(15) mMessageCode	Message code of the event (for information, refer to **"ICAN Message Codes" on page 10**)
(16) mMessageCodeArg1	Argument 1 of the message code
(17) mMessageCodeArg2	Argument 2 of the message code
(18) mMessageCodeArg3	Argument 3 of the message code
(19) mMessageCodeArg4	Argument 4 of the message code

2.4.1 ICAN Message Codes

Some trap notifications include ICAN message codes. The table below describes those codes.

Table 3 Predefined Alerts

Code	Description
COL-00001	Collaboration *name* is running.
COL-00002	Collaboration *name* is stopped.
COL-00003	Collaboration *name* user-defined alert.
DEFAULT-NOTSPECIFIED	Message code is not specified.
IS-00001	Integration Server *name* has exited.
IS-00002	Integration Server *name* is running.
IS-00003/IS-00004	Integration Server *name* has stopped.
IS-00005	Integration Server *name* is not running (possibly crashed).
IS-00006	Integration Server *name* killed.
IS-00007	Integration Server *name* is starting.
IS-00008	Integration Server *name* is already running.
LH-00001	Logical Host *name* exited.
LH-00002	Logical Host *name* is running.
LH-00003	Logical Host *name* starting.
LH-00004/LH-00005	Logical Host *name* stopped.
LH-00006	Logical Host *name* killed.
LH-00007	Logical Host *name* is not responding.
LH-00008	Logical Host *name* is already running.
MS-00001	Message Server *name* has exited.
MS-00002	Message Server *name* is running.
MS-00003	Message Server *name* is starting.
MS-00004/MS-00005	Message Server *name* stopped.
MS-00006	Message Server *name* killed.
MS-00007	Message Server *name* is not responding.
MS-00008	Message Server *name* is already running.
SNMP-00001	SNMP Agent has been configured.
SNMP-00002	SNMP Agent has not been configured.
SNMP-00003	SNMP Agent is running.
SNMP-00004	SNMP Agent has stopped.
SNMP-00005	SNMP Agent is not installed.

In addition, certain eWays have a set of message codes. For eWay message codes, refer to the eWay documentation.

2.4.2 SNMP Agent Trap Examples

This section provides examples of trap information. The first example shows the trap information provided by the SNMP Agent when the SeeBeyond JMS IQ Manager is started. The second example shows the trap information for a user-generated trap.

Example 1: Starting the SeeBeyond JMS IQ Manager

```
Trap
V2 Trap
Community: public
sysUpTime.0: 1 minute 44 seconds
snmpTrapOID.0: .1.3.6.1.4.1.1351.1.1.1.3.6
.1.3.6.1.4.1.1351.1.1.1.2.1.0: jsmith-d600xp
.1.3.6.1.4.1.1351.1.1.1.2.2.0: FiletoFileEnv
.1.3.6.1.4.1.1351.1.1.1.2.3.0: LogicalHost1
.1.3.6.1.4.1.1351.1.1.1.2.4.0: MESSAGE
.1.3.6.1.4.1.1351.1.1.1.2.5.0: SBJmsIQMgr1
.1.3.6.1.4.1.1351.1.1.1.2.9.0: 2004-01-15 13:23:40.278
.1.3.6.1.4.1.1351.1.1.1.2.10.0: Alert
.1.3.6.1.4.1.1351.1.1.1.2.11.0: Warning
.1.3.6.1.4.1.1351.1.1.1.2.12.0: Started
.1.3.6.1.4.1.1351.1.1.1.2.13.0: Unobserved
.1.3.6.1.4.1.1351.1.1.1.2.14.0: SBJmsIQMgr1 process started
.1.3.6.1.4.1.1351.1.1.1.2.15.0: MS-00003
.1.3.6.1.4.1.1351.1.1.1.2.16.0: jsmith-d600xp
.1.3.6.1.4.1.1351.1.1.1.2.17.0: FiletoFileEnv
.1.3.6.1.4.1.1351.1.1.1.2.18.0: LogicalHost1
```

Example 2: User-generated Trap

The example below shows the trap information for a user-generated trap by the following statement in a Java Collaboration: alerter.info(“hello!”)

```
Trap
V2 Trap
Community: public
sysUpTime.0: 6 minutes 22 seconds
snmpTrapOID.0: .1.3.6.1.4.1.1351.1.1.1.3.6
.1.3.6.1.4.1.1351.1.1.1.2.1.0: jsmith-d600xp
.1.3.6.1.4.1.1351.1.1.1.2.2.0: FiletoFileEnv
.1.3.6.1.4.1.1351.1.1.1.2.3.0: LogicalHost1
.1.3.6.1.4.1.1351.1.1.1.2.4.0: INTEGRATION
.1.3.6.1.4.1.1351.1.1.1.2.5.0: IntegrationSvr1
.1.3.6.1.4.1.1351.1.1.1.2.6.0: COLLABORATION
.1.3.6.1.4.1.1351.1.1.1.2.7.0: File2File
.1.3.6.1.4.1.1351.1.1.1.2.8.0: Service1
.1.3.6.1.4.1.1351.1.1.1.2.9.0: 2004-01-15 13:28:18.315
.1.3.6.1.4.1.1351.1.1.1.2.10.0: Alert
.1.3.6.1.4.1.1351.1.1.1.2.11.0: Information
.1.3.6.1.4.1.1351.1.1.1.2.12.0: Running
.1.3.6.1.4.1.1351.1.1.1.2.13.0: Unobserved
.1.3.6.1.4.1.1351.1.1.1.2.14.0: hello!
.1.3.6.1.4.1.1351.1.1.1.2.15.0: COL-00003
.1.3.6.1.4.1.1351.1.1.1.2.16.0: jsmith-d600xp
.1.3.6.1.4.1.1351.1.1.1.2.17.0: FiletoFileEnv
.1.3.6.1.4.1.1351.1.1.1.2.18.0: LogicalHost1
.1.3.6.1.4.1.1351.1.1.1.2.19.0: IntegrationSvr1
```

Chapter 3

Installing and Configuring the SNMP Agent

This chapter describes how to install and configure SNMP Agents.

In This Chapter

- **Supported Operating Systems** on page 12
- **System Requirements** on page 13
- **Installing the SNMP Agent** on page 13
- **Configuring SNMP Agents** on page 13
- **Configuring Third-Party SNMP Management Systems** on page 14

3.1 Supported Operating Systems

The SNMP Agent is available for the following operating systems:

- Windows 2000, Windows XP, Windows Server 2003
- HP Tru64 V5.1A
- HP-UX 11.0, 11i (PA-RISC), and 11i v2.0 (11.23)
- IBM AIX 5.1L and 5.2
- Sun Solaris 8 and 9
- Japanese Windows 2000, Windows XP, Windows Server 2003
- Japanese HP-UX 11.0, HP-UX 11i (PA-RISC), and 11i v2.0(11.23)
- Japanese IBM AIX 5.1L and 5.2
- Japanese Sun Solaris 8 and 9
- Korean Windows 2000, Windows XP, Windows Server 2003
- Korean IBM AIX 5.1L and 5.2
- Korean HP-UX 11.0 and 11i v2.0 (11.23)
- Korean Sun Solaris 8 and 9

Note: *For Japanese and Korean SNMP Agents, all ICAN Project component names must be ASCII.*

3.2 System Requirements

The system requirements for the SNMP Agent are the same as for eGate Integrator. For information, refer to the *SeeBeyond ICAN Suite Installation Guide*.

3.3 Installing the SNMP Agent

During the eGate Integrator installation process, the Enterprise Manager, a web-based application, is used to select and upload products as .sar files from the eGate installation CD-ROM to the Repository.

Before you install the SNMP Agent, you must already have eGate Integrator installed, or you can install it simultaneously with eGate Integrator as follows:

- Installing the Repository
- Uploading products to the Repository, including
- Downloading components (such as Enterprise Designer and Logical Host)
- Viewing product information home pages

Follow the instructions for installing the eGate Integrator in the *SeeBeyond ICAN Suite Installation Guide*, and include the following step:

- During the procedures for uploading files to the eGate Repository using the Enterprise Manager, after uploading the **eGate.sar** file, select and upload the following file:
  - **SNMPAgent.sar**

Once you install the SNMP Agent, you must configure the SNMP agent as described below. The SNMP Agent does not have a default configuration.

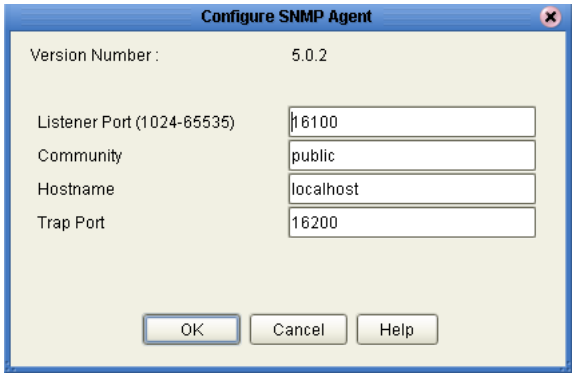
3.4 Configuring SNMP Agents

After installing the SNMP Agent, you must configure the SNMP Agent. The SNMP Agent does not provide a default configuration. To configure SNMP Agents, follow the procedure below. You can specify one SNMP Agent per Repository.

To configure SNMP Agents

1. In the Environment Explorer tab of the Enterprise Designer, right-click the Repository for which you want to configure an SNMP agent.
2. Click **Configure SNMP Agent**. The **Configure SNMP Agent** dialog box appears as shown below.

Figure 3 Configure SNMP Agent Dialog Box



3 Enter the following configurations:

For This Setting	Enter
Listener Port	This option is currently unavailable.
Community	The trap receiver's community name, for example, public.
Hostname	The host name or IP address of the third-party management system.
Port	The number for the trap port where the SNMP Agent forwards trap notifications.

4 Click **OK**.

5 On the **File** menu, click **Save All**.

This configures the SNMP Agent. You do not need to deploy or active the SNMP Agent, but you must start the SNMP Agent as described in **"Starting and Stopping SNMP Agents" on page 15**.

3.5 Configuring Third-Party SNMP Management Systems

For a third-party management system to receive the eGate Integrator SNMP trap notifications, you must load the SNMP MIB into your management system.

The SNMP Agent MIB, **EGATE50-SNMP-V2-MIB.txt**, is located in the ***<ICANSuite>*\monitor\config\snmpagent** directory, where *<ICANSuite>* is the directory where you installed eGate Integrator.

For more information about the SNMP Agent MIB, refer to **"About the SNMP Agent MIB" on page 8**.

Chapter 4

Managing SNMP Agents

You can start and stop SNMP Agents in the Enterprise Manager. You can also view alerts for the SNMP Agents. Reconfiguring SNMP Agents is part of the Enterprise Designer. This chapter provides instructions for managing SNMP Agents.

In This Chapter:

- **Starting and Stopping SNMP Agents** on page 15
- **Viewing SNMP Agent Status and Alerts** on page 16
- **Reconfiguring SNMP Agents** on page 18

4.1 Starting and Stopping SNMP Agents

After installing the SNMP Agent, you must have configured the agent as described in **"Configuring SNMP Agents" on page 13**. You then must start the SNMP Agent to start forwarding SNMP trap notification as described below.

To start and stop SNMP Agents

1. In Internet Explorer, start the Enterprise Manager by entering the following URL:

   http://*hostname*:*portnumber*

   where *hostname* is the name or IP address of the host where the Repository runs and *portnumber* is the number of the port for the Repository.
2. Enter the user name and password and click **Login**. The Enterprise Manager **Home** page appears.
3. Click the **ICAN Monitor** icon. The **Monitor** page appears.

   If the SNMP Agent icon is not displayed, click **Repository Update** .
4. To start the SNMP Agent, right-click the SNMP Agent and click **Start**. The "command 'start' sent" message appears.
5. To stop the SNMP Agent, right-click the SNMP Agent and click **Stop**.

4.2 Viewing SNMP Agent Status and Alerts

Follow the procdure below to verify the status of the SNMP Agent, and to view alerts for the SNMP Agent if it does not start.

To view SNMP Agent status and alerts

1. In Internet Explorer, start the Enterprise Manager by entering the following URL:

   http://*hostname*:*portnumber*

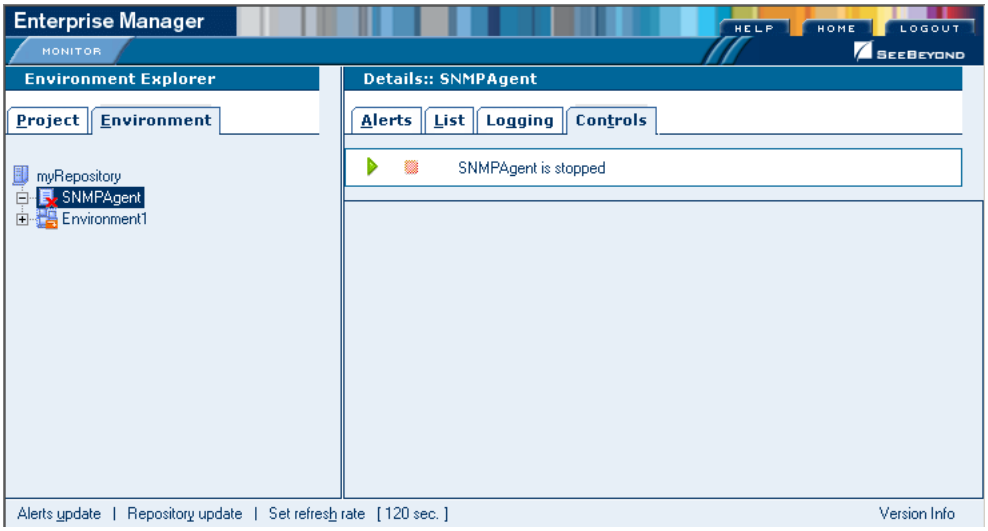
   where *hostname* is the name or IP address of the host where the Repository runs and *portnumber* is the number of the port for the Repository.

2. Enter the user name and password and click **Login**.

   The Enterprise Manager **Home** page appears.

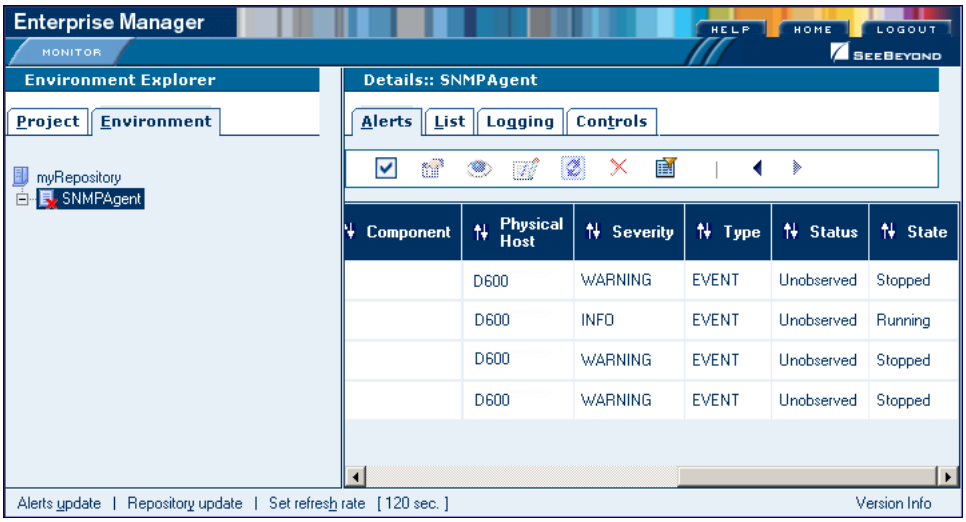
3. Click the **ICAN Monitor** icon. The **Monitor** page appears, showing whether the SNMP is currently running. In the **Monitor** page below, the SNMP Agent is stopped.

Figure 4 The ICAN Monitor



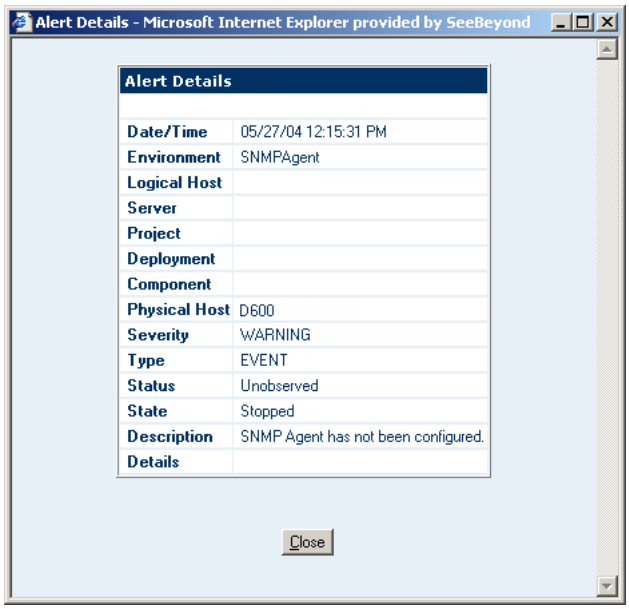
4. Click **Alerts**. The **Alerts** page shows the alerts for the SNMP Agent as shown below.

Figure 5 Viewing SNMP Agent Alerts



5 Double-click the alert. The **Alert Details** window shows the details for the alert as shown below.

Figure 6 Viewing SNMP Agent Alert Details



As the details window shows, the SNMP Agent was not able to start because it has not been configured. After installing the SNMP Agent is installed, it must be configured before it can be enabled. For information, refer to **"Configuring SNMP Agents" on page 13**.

4.3 Reconfiguring SNMP Agents

To reconfigure an SNMP Agent for an eGate Project that has already been deployed, follow the procedure below:

To reconfigure SNMP agents

1. Stop the SNMP Agent as described in the section above.
2. Configure the SNMP Agent as described in **"Configuring SNMP Agents" on page 13**.
3. Restart the SNMP Agent as described in the section above.

Index

A

alerter.info **11**

C

configurations, SNMP Agent **8**
configuring
  SNMP Agents **13**
  third-party SNMP management systems **14**
conventions
  path name separator **6**
  Windows **6**

D

document
  conventions **5**

E

EGATE50-SNMP-V2-MIB.txt **8**

G

generating user traps **11**

H

host name **8**

I

installing, SNMP Agent **13**

M

managing SNMP Agents **15**
message codes **10**
MIB **8**
model, SNMP Agent **7**

O

organization of information, document **5**

P

platforms, supported **12**
port, trap **8**

R

reconfiguring SNMP Agents **18**
requirements, system **13**

S

SeeBeyond Website **6**
SNMP Agents
  configurations **8**
  configuring **13**
  installing **13**
  managing **15**
  MIB **8**
  model **7**
  reconfiguring **18**
  starting **15**, **16**
  stopping **15**, **16**
SNMP management systems, configuring **14**
starting SNMP Agents **15**, **16**
stopping SNMP Agents **15**, **16**
supported platforms **12**
system requirements **13**

T

Trap host name **8**
trap port **8**
Traps
  information **9**
  message codes **10**
traps
  user-generated **11**

U

user-generated traps **11**

W

writing conventions **5**