SeeBeyond ICAN Suite

UCCnet ETD Library User's Guide

Release 5.0.5 for Schema Run-time Environment (SRE)

Version April 5, 2005 8:25 pm.

Contents

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Chapter 1

Introduction

This guide explains the SeeBeyond™ Technology Corporation's (SeeBeyond™) UCCnet Event Type Definition (ETD) Library. This chapter provides an introduction to the guide and the library.

1.1 Intended Reader

The reader of this guide is presumed:

- To be a developer or system administrator with the responsibility for maintaining the e*Gate system
- To have expert-level knowledge of Windows operations and administration
- To be thoroughly familiar with Windows-style operations
- To have an understanding of the UCCnet system

1.2 UCCnet Overview

The UCCnet organization that created UCCnet is a wholly owned, not-for-profit subsidiary of the Uniform Code Council, Inc. (UCC). This organization is a virtual alliance of member companies in several industries engaged in the electronic exchange of information and services. Industry-leading companies are using the UCCnet to transform their industries by establishing common standards and practices.

The UCCnet system is used to communicate industry-compliant synchronized data throughout an industry's supply chain. Each data element of this industry-defined solution is clearly defined, including the processes of item introduction, change, and authorization. The UCCnet is a cost-effective means of transmitting information using standard Extensible Markup Language (XML) messaging schemas.

Note: *The UCCnet does not replace the Electronic Data Interchange (EDI) standards, but it supports all the EDI data elements.*

UCCnet provides the following services for member businesses:

- **Certification**: Transactions are certified, as well as dates and transaction levels (database of capabilities).
- **Business Data Pointers**: The UCCnet contains pointers to specialized business data via XML.
- **Base Addresses for Commerce**: There is a Domain Name System (DNS) entry for each supported transaction.
- **Subscription Options**: A business can subscribe at the corporate level by commerce type or business relationship, for example, a retailer subscribing to manufacturer promotions.

Once members are certified and incorporated into the UCCnet, they can access and use any of the provided services, as desired. The UCCnet provides a registry of core industry data including:

- Items
- Members

Also, as a service for its members, the UCCnet creates and supervises standardized messages for:

- UCCnet registry maintenance
- Commerce (between trading partners)
- Member interface processes

For certification and security purposes, the UCCnet has a database of capabilities that keeps track of the following information:

- Permissions to update the UCCnet registry
- Core information about business units, including commerce authority
- Data transmission security

For data transmission over its networks, the UCCnet uses a set of standardized XML message formats. The UCCnet ETD Library provides a corresponding set of Java programming language-based e*Gate ETD (**.xsc**) files.

ETD Library Components

The UCCnet ETD Library is made up of the individual **.xsc** files that comprise the library. See **"UCCnet ETD Library Files" on page 16** for a comprehensive list of the files.

Implementation Schema Sample

Installation of the UCCnet ETD Library includes a sample schema you can use to help you in implementing this library. See **Chapter 4** for details.

1.3 UCCnet Certification

This UCCnet ETD Library has been created and structured according to the certification guidelines provided in the UCCnet *Certification Program Guide for UCCnet Alliance Partners* (© 2001 UCCnet, Inc.; all rights are reserved). See this document for details on the UCCnet version 2.1 certification standards and process.

1.4 HTTP(S) Interface

The HTTP(S) interface for the UCCnet ETD Library and e*Gate is provided by the SeeBeyond HTTP(S) e*Way Intelligent Adapter. You must install this e*Way before you can use the library. For more information on how to use the e*Way, see the *HTTP(S) e*Way Intelligent Adapter User's Guide*.

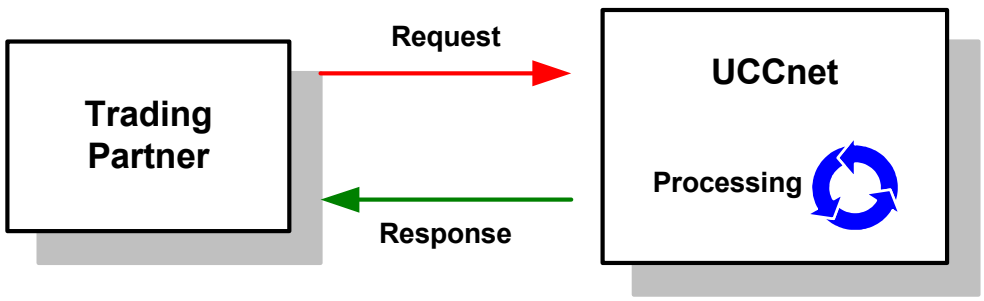
1.4.1 UCCnet and HTTP: Overview

Communication between a trading partner and UCCnet using HTTP is based on the asynchronous *pull* communication model with respect to a trading partner. In this communication model, the trading partner always initiates the asynchronous communication.

HTTP is used to submit a particular request message from a trading partner to the UCCnet system and return the response message after UCCnet processes the message. The response message from UCCnet to a trading partner corresponding to a particular request message is retrieved by the trading partner in a different HTTP request-response than the HTTP request-response used to submit the request message.

Figure 1 shows a diagram of this model.

Figure 1 Request/response Communication Model



1.5 Supported Operating Systems

The UCCnet ETD Library is available on the following operating systems:

- Windows 2000, Windows XP, and Windows Server 2003
- HP Tru64 V5.1A
- HP-UX 11.0 and HP-UX 11i (PA-RISC)
- IBM AIX 5.1L and AIX 5.2
- Red Hat Linux Advanced Server 2.1 (Intel *x*86)
- Sun Solaris 8 and Solaris 9

1.6 System Requirements

To use the UCCnet ETD Library, you need to meet the following requirements:

- An e*Gate Participating Host
- A TCP/IP network connection
- A machine running Windows, to allow you to use the e*Gate Schema Manager and ETD Editor
- Java SDK version 1.3.1_02
- SeeBeyond HTTP(S) e*Way™ Intelligent Adapter
- SeeBeyond XML Toolkit

The ETD Library and HTTP(S) e*Way must be administered using the Schema Manager.

1.7 External System Requirements

To use this ETD Library, you must

- Have access to the UCCnet system (version 2.1)
- Have an active UCCnet account
- Have a valid user name and password

For complete information on how to access and use this system, visit the following Web site:

http://www.uc-council.org/

Chapter 2

Installation

This chapter explains how to install the UCCnet Event Type Definition (ETD) Library.

2.1 Installation on Windows Systems

Pre-installation

- Exit all Windows programs before running the setup program, including any antivirus applications.
- You must have Administrator privileges to install this ETD library.

Note: *See* **Chapter 3** *for a list of the installed files that make up the ETD library.*

2.1.1 ETD Library Installation Procedure

To install the UCCnet ETD Library on Windows systems

1. Log in as an Administrator on the workstation where you want to install the ETD library.
2. Insert the ETD library installation CD-ROM into the CD-ROM drive.
3. If the CD-ROM drive's **Auto-run** feature is enabled, the setup application should launch automatically; skip ahead to step 4. Otherwise, use the Windows Explorer or the Control Panel's **Add/Remove Applications** feature to launch the **setup.exe** file on the CD-ROM drive.
4. After the **InstallShield** setup application launches, follow the on-screen instructions to install the ETD library.

Be sure to install the ETD library files in the suggested **client** installation directory. The installation utility detects and suggests the appropriate installation directory.

Caution: *Unless you are directed to do so by SeeBeyond support personnel, do not change the suggested installation directory setting.*

2.1.2 After Installation

Once you have installed this ETD library, you must incorporate it into a schema by defining and associating the appropriate Collaborations, Collaboration Rules, Intelligent Queues (IQs), Event Types, and e*Ways before you can use the library to perform its intended functions.

2.2 UNIX Installation

Pre-installation

You do not require root privileges to install this ETD library. Log in under your name with which you wish to own the ETD library files. Be sure that this user has sufficient privileges to create files in the e*Gate directory tree.

2.2.1 ETD Library Installation Procedure

To install the UCCnet ETD Library on a UNIX system

1. Log in on the workstation containing the CD-ROM drive, and insert the CD-ROM into the drive.
2. If necessary, mount the CD-ROM drive.
3. At the shell prompt, type:

   cd /cdrom/setup
4. Start the installation script by typing:

   setup.sh
5. A menu of options appears. Select the **e*Gate Add-on Applications** option. Then, follow any additional on-screen directions.

Be sure to install the ETD library files in the suggested **client** installation directory. The installation utility detects and suggests the appropriate installation directory.

Caution: *Unless you are directed to do so by SeeBeyond support personnel, do not change the suggested installation directory setting.*

2.2.2 After Installation

Once you have installed this ETD library, you must incorporate it into a schema by defining and associating the appropriate Collaborations, Collaboration Rules, IQs, Event Types, and e*Ways before you can use the library to perform its intended functions.

Chapter 3

ETD Library

This chapter describes, and provides a reference for, the UCCnet Event Type Definition (ETD) Library, including a list of its component files.

3.1 UCCnet Messaging

The UCCnet defines a set of message conventions for the following purposes:

- To format its own messages
- To contain rules for carrying a UCCnet message within or on top of another protocol
- To process UCCnet messages along the UCCnet message path

Complete UCCnet specifications can be found at the Uniform Code Council (UCC) Web site as follows:

http://www.uc-council.org/

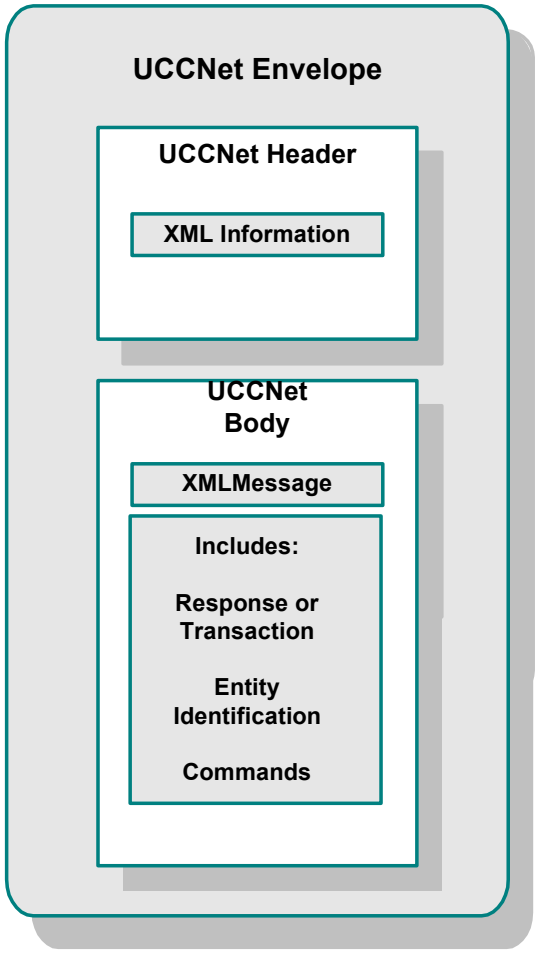
The UCCnet ETD Library follows the UCCnet standards and conventions, allowing you to use them to transmit and process, through e*Gate Integrator, any UCCnet message data.

Note: *The UCCnet ETD Library is compatible with UCCnet version 2.1.*

3.1.1 UCCnet Message Structure

Figure 2 shows a diagram of a UCCnet message and its components.

Figure 2 UCCnet Message Components



UCCnet messages consist of the following major parts:

- A UCCnet envelope that marks the start and end of the UCCnet message, as well as defining a framework for describing what is in a message and how to process it
- A UCCnet header encoded in the Extensible Markup Language (XML), which carries general information about the UCCnet message
- A UCCnet body that carries the actual message payload

Note: *For complete information on UCCnet messaging, see the UCCnet* ***Technical User's Guide****.*

3.1.2 Message Elements

The UCCnet message envelope contains the header and body, and the body in turn contains *either* a response or a transaction. Each transaction contains an identification and one or more commands.

UCCnet messages can have any of the following basic elements:

- **envelope:** Contains the header and message body.
- **messageHeader:** An XML header.
- **body:** Contains the message and can be either a response or a transaction.
- **Response:** A response to an earlier message.
- **transaction:** Contains an identification and a command.
- **entityIdentification:** An identification for the message.
- **command:** Can be one or more of the following commands:
  - **CheckComplianceCommand**
  - **DocumentCommand**
  - **DocumentIdentificationCommand**
  - **NotificationStateCommand**
  - **QueryCommand**
  - **LinkCommand**
  - **PublishCommand**

Note: *See* **"UCCnet Message Files" on page 13** *for an explanation of the commands.*

Of all the elements shown in the previous list, only **response** and the seven commands are valid UCCnet messages, and there is a corresponding ETD file for each in the library. If your message contains more than one command, you must use the **UCCnet21.xsc** ETD file, which contains all the commands (see **Table 1 on page 17**).

3.1.3 UCCnet Message Files

The UCCnet message files can be either a response or a command. The files are:

- **Response**: Contains a response to a previously sent message.
- **CheckComplianceCommand**: Allows a trading partner to check the validity of a document or command before actually sending the command anywhere to be executed.

- **DocumentCommand**: Used to update the status of notifications contained in a user's work list. This command is also used to provide information to other users and to possibly fit into a normal cycle of work-list maintenance. It requires that one of the following actions are taken:
  - **ADD**: Instructs the receiving application to store documents.
  - **CHANGE_BY_REFRESH**: Instructs the receiving application to update existing documents. This action is meant to update documents by total replacement. This means that users must transmit complete images of documents to be changed, and not simply the elements to be changed.
  - **INITIAL_LOAD**: A type of publication designed to either assist a new supply side Trading Partner to initially publish their items to existing UCCnet demand side users, or to assist new demand side users in requesting publication of information from existing supply side UCCnet participants.
  - **CORRECT**: Instructs the receiving application to correct the specified document. When the document is an item, this command does not create a new version of the item. Users must transmit complete images of the documents to be corrected.
- **DocumentIdentificationCommand**: Can only be used with documents according to the UCCnet specifications (see the UCCnet documentation for details) and requires the following information:
  - **DocumentIdentificationCommandType**: Type of command to execute, that is, DELETE, WITHDRAW, DELIST, REQUEST_PUBLICATION, and REQUEST_INITIAL_LOAD_PUBLICATION.
  - **entityIdentification**: Command identifier to be used in acknowledgement response.
  - **documentIdentificationList**: List of document identifiers to be affected.
- **NotificationStateCommand**: Used to update the status of notification contained in a user's work list. This command is also used to provide information to other users, and to possibly fit into a normal cycle of work-list maintenance. The command is set to following values:
  - **UNREAD**: Notification has not been read. This is the default state when the notification is first inserted into the work list.
  - **READ**: Notification has been read via the user interface or through XML. This state is applied to all notifications automatically.
  - **ACKNOWLEDGED**: Notification state used to convey information.
  - **PROCESSED**: Notification state used to convey that the contents have been processed.
  - **DELETE**: Remove the notification from the work list.

- **QueryCommand**: Used to pull information from the application. Types of documents that can be pulled include, for example, notifications, items, and parties. A query command returns an acknowledgement that contains a results list with the appropriately selected results.
- **LinkCommand**: Establishes parent-child or peer relationships between two or more documents. When this command is received, a link between the two entities is created. This link is visible the next time the parent or the first peer is queried or viewed.
- **PublishCommand**: Publishes (sends) information to other trading partners utilizing UCCnet. This command can publish content registered with the UCCnet service (item or party). It can publish documents stored externally to the system (price or bracket). It can also be used to publish acknowledgements of receipt and be processed after a document is received by a trading partner.

The UCCnet ETD Library contains ETDs that correspond to and enable each of these message types and/or commands.

UCCnet Commands

UCCnet commands are used to send a request to the UCCnet service, to perform a task. All commands are transient and only last until the execution of the command.

Each command defines an action to be done by the receiving system. Sometimes the action is defined by the command itself. At other times, the action is defined as an attribute of the command. A command can consist of any one of the command types, which are also message types, as explained under **"UCCnet Message Files" on page 13**.

UCCnet Documents

UCCnet employs 29 documents as part of its messaging. These documents are contained in the **UCCnet21.xsc** file of the ETD Library (see **Table 1 on page 17**). The document names are:

- Access Point
- Acknowledgement
- Allowance Or Charge
- Authorization
- Authorization Item Group
- Authorization Document
- Bracket List
- Capability

- Category
- Certificate
- Filter
- Item
- Item Group
- Market Group
- Notification
- Party
- Payment Term
- Price
- Pricing Lead Time
- Publication
- Publication Receipt Notification
- Query Document
- Role
- Subscription
- Trading Partner
- User
- User Authorization Permission Group
- Extended Data Definition
- Extended Data

Note: *For complete information on these documents, see the UCCnet* ***Technical User's Guide****.*

3.2 UCCnet ETD Library Files

All the files listed in **Table 1 on page 17** are installed in the **eGate\server\registry\repository\default\templates\UCCnet\UCCnet21** directory, where **eGate** is the e*Gate installation directory. In addition, there is a .**jar** file installed for each .**xsc** file.

Table 1 lists the .**xsc** files contained in the UCCnet ETD Library, along with a description of the file and/or the file's corresponding UCCnet message type.

Table 1 UCCnet ETD Library Files

ETD File Name	Description and/or UCCnet Message Type
UCCnet21.xsc	Container for entire library, including commands and documents.
Response_E.xsc	Corresponds to response message type only.
CheckComplianceCommand_E.xsc	Corresponds to CheckComplianceCommand message type and envelope.
LinkCommand_E.xsc	Corresponds to DocumentCommand message type and envelope.
DocumentIdentificationCommand_E.xsc	Corresponds to DocumentIdentificationCommand message type and envelope.
NotificationStateCommand_E.xsc	Corresponds to NotificationStateCommand message type and envelope.
QueryCommand_E.xsc	Corresponds to QueryCommand message type and envelope.
LinkCommand_E.xsc	Corresponds to LinkCommand message type and envelope.
PublishCommand_E.xsc	Corresponds to PublishCommand message type and envelope.

Chapter 4

Implementation

This chapter explains how to implement the UCCnet Event Type Definition (ETD) Library, using a sample schema.

4.1 Implementation Overview

This section explains how to use the UCCnet ETD Library, including an e*Gate Integrator sample schema included on your installation CD-ROM. Find this sample on the CD-ROM at the following path location:

\samples\uccnet

This sample allows you to observe and/or create an end-to-end data-exchange scenario involving e*Gate, the library files, and the HTTP(S) e*Way Intelligent Adapter. This chapter explains how to implement this sample schema that uses the UCCnet ETD Library.

4.2 Sample Schema

You can use the sample schema to help you learn how to implement the UCCnet ETD Library. To use this schema, you must first import it into e*Gate.

Caution: *A control block* ***.dtd*** *file is required in order to use UCCnet. You can download this file from the UCCnet Web site. This file is* ***not*** *contained in the ETD Library or sample schema. You can also create your own control block file, if desired. Use the XML Toolkit's DTD Wizard to convert the* ***.dtd*** *file to an* ***.xsc*** *file, which must be accessible to e*Gate. The UCCnet Web site is:*

http://www.uc-council.org/

Before Importing the Sample Schema

To import the schema, the UCCnet ETD Library must be installed, as well as the HTTP(S) e*Way. All of the necessary files and scripts must be located in the default location, and you must also have access to the UCCnet.

Import the sample schema as follows:

1. Copy the desired **.zip** file from the **\Samples\uccnet** directory in the install CD-ROM to your desktop or to a temporary directory, then unzip the file.
2. Start the e*Gate Schema Manager.
3. On the **Open Schema from Registry Host** dialog box, click **New**.
4. On the **New Schema** dialog box, click **Create from export**, and then click **Find**.
5. On the **Import from File** dialog box, browse to the directory that contains the sample schema.
6. Click the **.zip** file then click **Open**.

   The schema is installed.

4.3 Schema Implementation

This section explains how to implement a sample schema for the UCCnet ETD Library. The schema demonstrates how to configure the essential features of the library in a typical e*Gate environment, including connectivity with the SeeBeyond HTTP(S) e*Way Intelligent Adapter.

4.3.1 UCCnet ETD Library Schema: Overview

This section provides an overview of how to configure the sample schema and how it operates. The name of this schema is UCCnetSampleSchema, and it is contained in the import file **UCCnetSampleSchema.zip**.

Schema Operation

This sample schema has the following input/output setup:

- **Input**: Request HTTP message via UCCnet.
- **Output**: Response HTTP message via UCCnet.

Each of the major steps in schema operation happens via an e*Way component. The schema passes data through e*Gate using ETDs based on those found in the UCCnet ETD Library.

The UCCnetSampleSchema processes the request and reply messages using the following general steps:

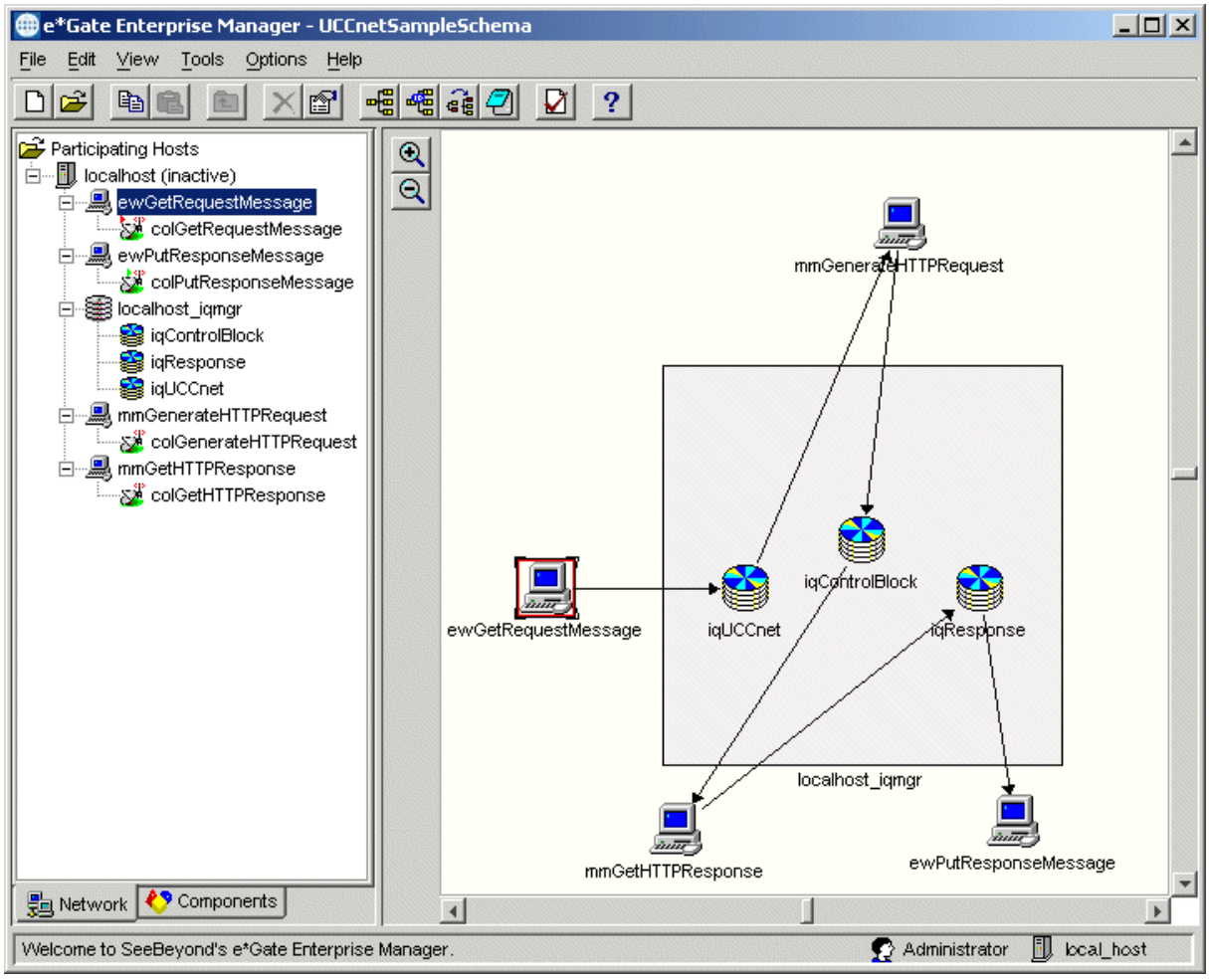
- The schema gets a UCCnet HTTP *request* message from an external system.
- The schema processes the request message as follows:
  - Attaches a unique message identifier
  - Creates a control block
  - Generates an HTTP request message
  - Sends the HTTP request message to UCCnet via the HTTP(S) e*Way
- The schema picks up the control block and sends it to the UCCnet response handle, to get the *response* message in return.
- The schema sends the HTTP response message to the desired location.

Note: *For complete information on UCCnet and its messaging protocols, see the appropriate UCCnet documentation.*

Schema Setup

Figure 3 on page 21 shows the schema's general architecture, using the e*Gate Schema Manager's Network View.

Figure 3 UCCnetSampleSchema Schema in Network View



Schema Components

This sample schema implementation consists of the following basic components:

- **ewGetRequestMessage**: Inbound file e*Way that brings the UCCnet request message into e*Gate.
- **mmGenerateHTTPRequest**: HTTP(S) e*Way (Multi-Mode) that processes the request message, including adding an identifier and creating a control block; the e*Way then sends the processed request message to the UCCnet.
- **mmGetHTTPResponse**: HTTP(S) e*Way (Multi-Mode) that picks up the control block and sends it to the UCCnet response handle, to get the response message in return.
- **ewPutResponseMessage**: Outbound file e*Way that sends the HTTP response message to the desired location.
- **colGetRequestMessage**, **colGenerateHTTPRequest, colGetHTTPResponse,** and **colPutResponseMessage**: Collaborations for their respective e*Ways.

- **iqUCCnet, iqControlBlock,** and **iqResponse:** Intelligent Queues (IQs) that queue data as it is sent through the e*Gate system.
- **localhost_iqmgr**: SeeBeyond Java Messaging Service (JMS) IQ Manager that manages the IQs.
- **ecToUCCnet**: e*Way Connection for the **GenerateHTTPRequest** e*Way.
- **ecFromUCCnet**: e*Way Connection for the **GetHTTPResponse** e*Way.

4.4 Creating the Sample Schema

This section explains the basic steps for how to create the sample schema UCCnetSampleSchema.

Note: *For complete information on how to set up an e*Gate schema, see the* ***e*Gate Integrator User's Guide*** *and* ***Creating and End-to-end Scenario with e*Gate Integrator****.*

4.4.1 Creating the New Schema

The first task in deploying the schema example is to create a new schema name. While it is possible to use the default schema for this example implementation, it is recommended that you create a separate schema for testing purposes.

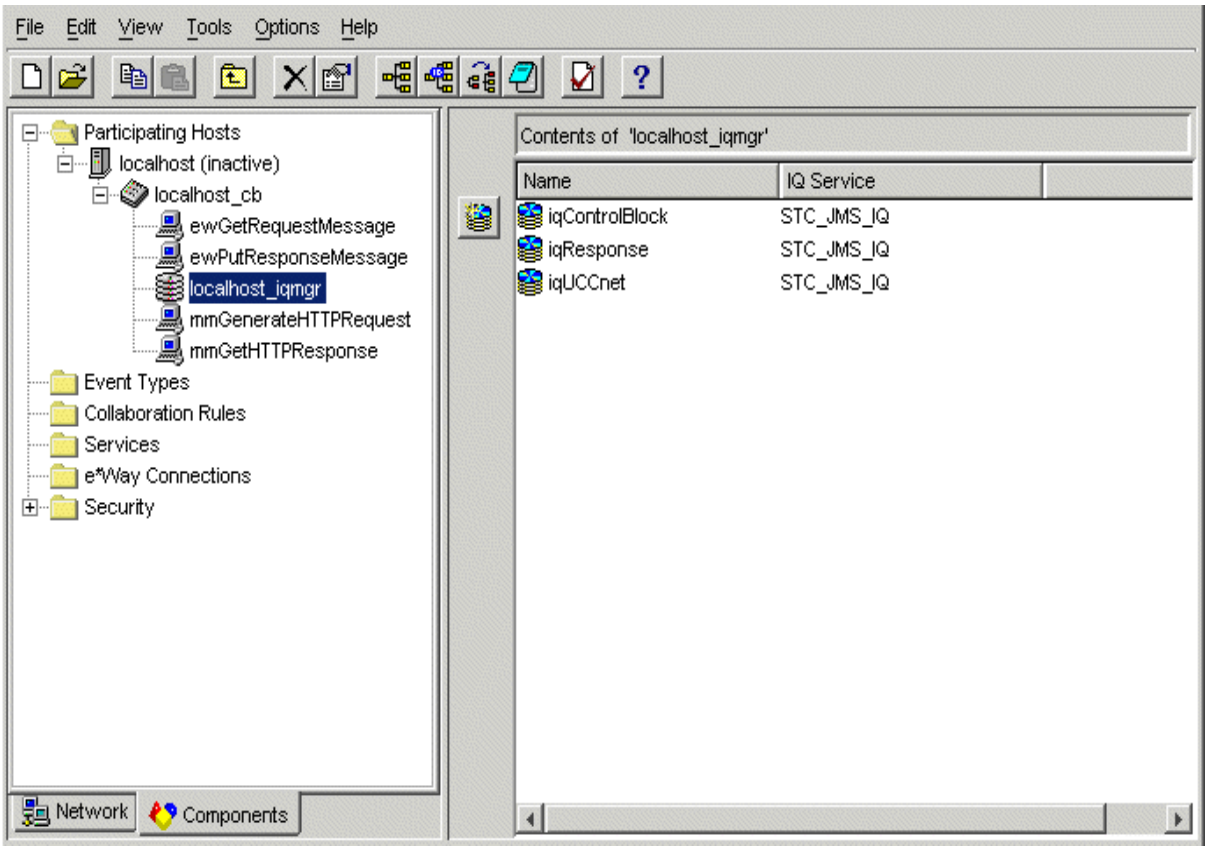
After you install the HTTP(S) e*Way, do the following steps:

1. Start the e*Gate Schema Manager.
2. When the Schema Manager prompts you to log in, select the host that you specified during installation, and enter your password.
3. You are then be prompted to select a schema. Click on **New**.
4. Enter a name for the new Schema. In this case, enter **UCCnetSampleSchema**, or any name as desired.

The Schema Manager opens under your new schema. You can access the ETD Editor and Collaboration Rules Editor features via the Schema Manager. You are now ready to begin creating the necessary components for this sample schema.

Figure 4 on page 23 shows an example of the Schema Manager window for this schema.

Figure 4 Schema Manager Main Window for UCCnetSampleSchema



4.4.2 Creating Event Types and ETDs

The HTTP(S) e*Way installation includes the file **httpclient.xsc**, which represents an HTTP(S) ETD template.

Creating Event Types

Using the Schema Manager, create the following Event Types:

- **HTTPClient**
- **UCCnet**

Using the ETDs

In this sample schema, you use the **httpclient.xsc** ETD file and installed UCCnet ETD Library files.

Note: *You must create a control block* ***.xsc*** *file by importing the control block from UCCnet. Through the use of the XML Toolkit, use this file to create and compile an* ***xsc*** *file.*

4.4.3 Creating and Configuring e*Ways

The first components to be created are the following e*Ways:

- Inbound: **ewGetRequestMessage**
- Outbound: **ewPutResponseMessage**
- Multi-Mode e*Ways:
  - **mmGenerateHTTPRequest**
  - **mmGetHTTPResponse**

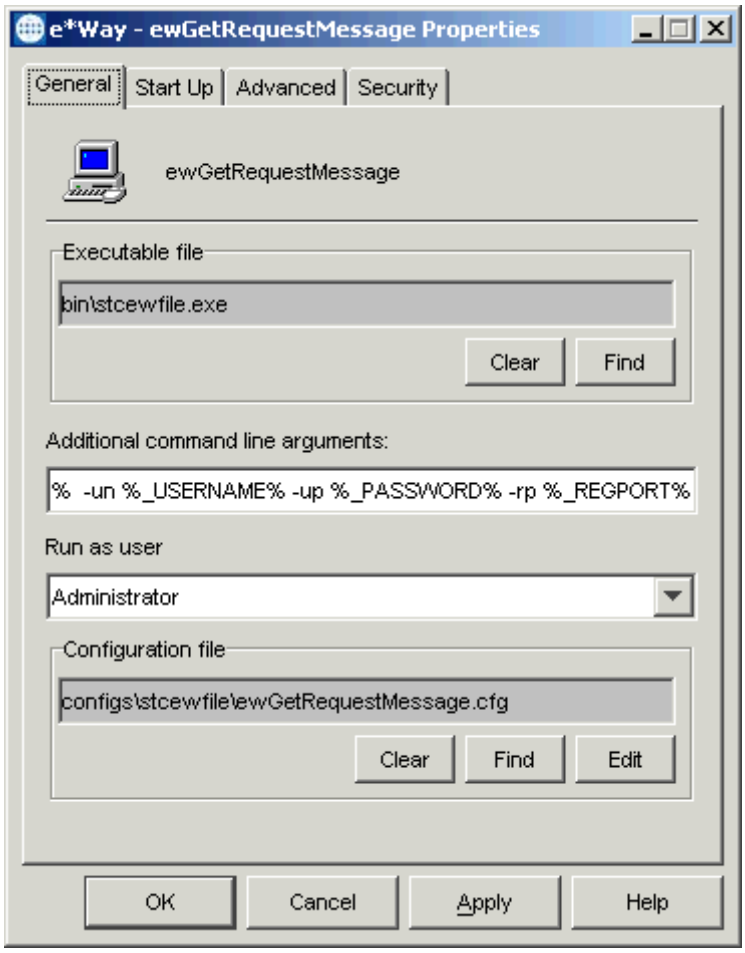
This section provides instructions for creating the e*Ways.

Inbound and Outbound e*Ways

To create the e*Ways

1. Select the e*Gate Schema Manager's **Components** tab.
2. Open the host on which you want to create the e*Ways.
3. Select the **Control Broker** that manages the new e*Ways.
4. On the palette, click the e*Way icon.
5. Enter the name of the new e*Way (in this case, **ewGetRequestMessage)**, then click **OK**.
6. Select **ewGetRequestMessage**, then double-click to edit its properties.
7. When the **e*Way Properties** dialog box appears, click on the **Find** button beneath the **Executable File** field, and select **stcewfile.exe** for the executable file (see **Figure 5 on page 25**).

Figure 5 ewGetRequestMessage e*Way Properties Dialog Box



Configure the e*Way properties as shown in the previous figure.

8 Under the **Configuration File** text box, click on the **New** button. When the **Settings** configurations of the e*Way Editor appear, set the parameters for **Settings** as shown in Table 2.

Table 2 Configuration Parameters for ewGetRequestMessage e*Way

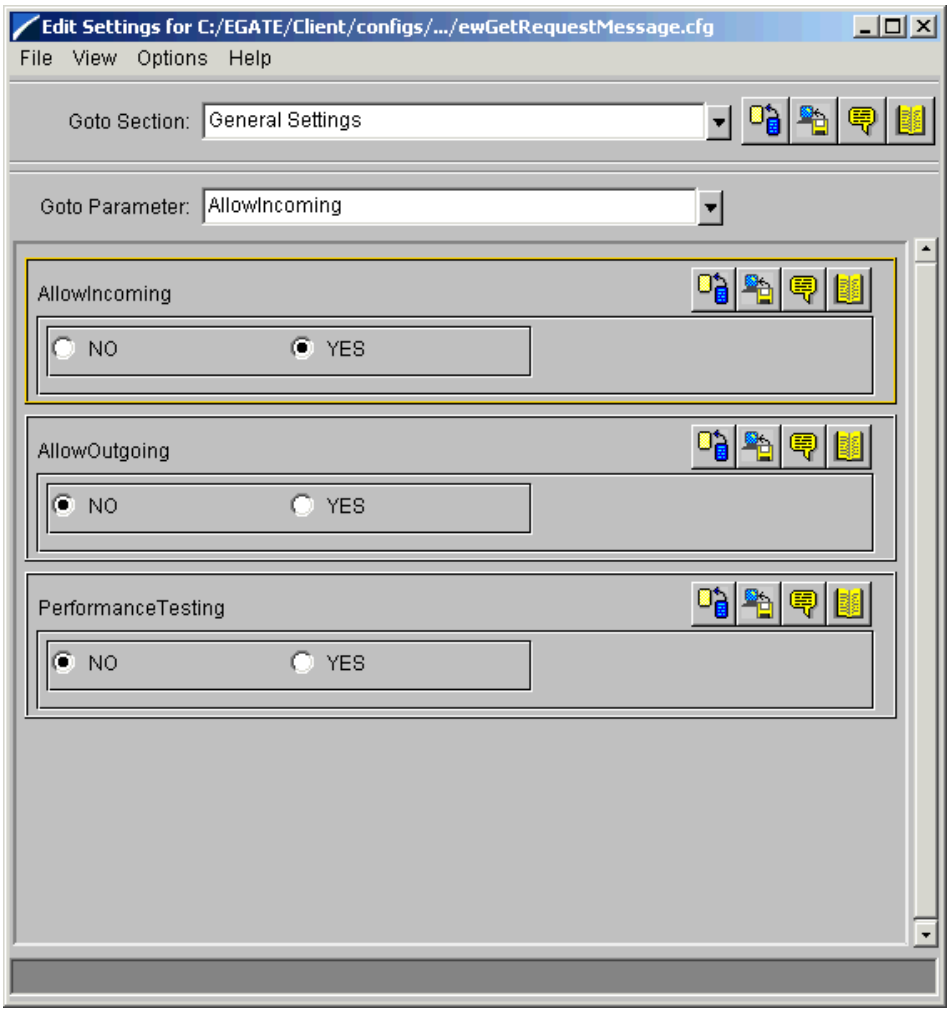
Parameter	Value
General Settings	
AllowIncoming	Yes
AllowOutgoing	No
Outbound Settings	Default
Poller Inbound Settings	
PollDirectory	C:\Indata (input file folder)
InputFileExtension	*.fin (input file extension)
PollMilliseconds	Default

Table 2 Configuration Parameters for ewGetRequestMessage e*Way (Continued)

Parameter	Value
Remove EOL	Default
MultipleRecordsPerFile	Default
MaxBytesPerLine	Default
BytesPerLineIsFixed	Default

Figure 6 shows an example of the e*Way Editor Window.

Figure 6 e*Way Editor Window for ewGetRequestMessage



9 Save the **.cfg** file, and exit from **Settings**.

10 After selecting the desired parameters, save the configuration file and promote the file to run time. Close e*Way Editor and the **.cfg** file.

11 Use the **Startup**, **Advanced**, and **Security** tabs to modify the default settings for each e*Way you configure as follows:

A Use the **Startup** tab to specify whether the e*Way starts automatically, or restarts after abnormal termination or due to scheduling, and so on.

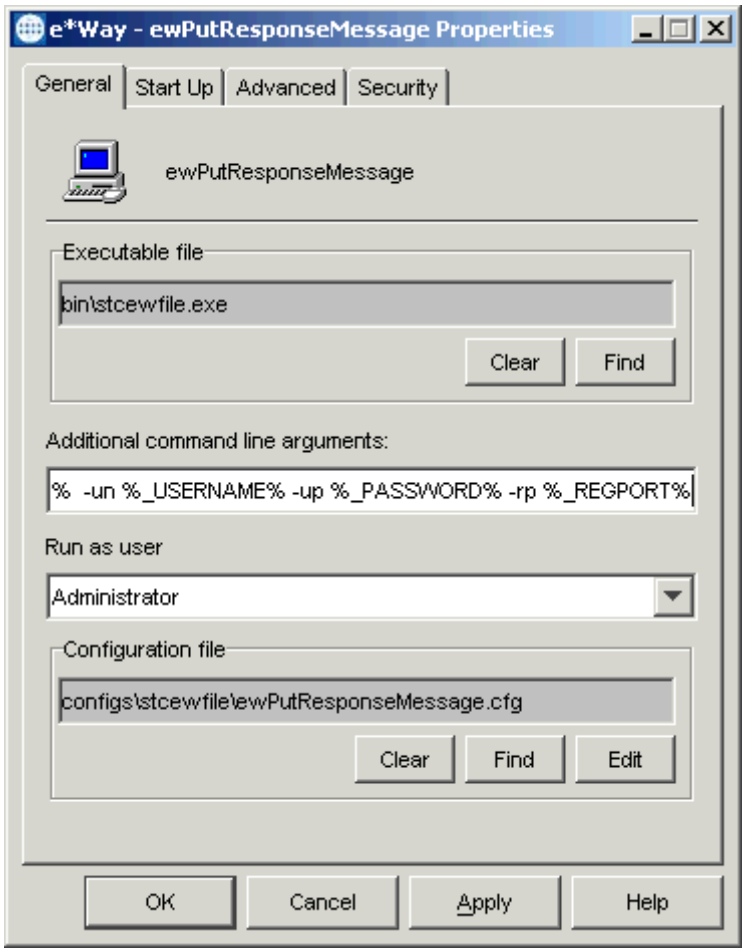
B Use the **Advanced** tab to specify or view the activity and error logging levels, as well as the Event threshold information.

C Use **Security** to view or set privilege assignments.

12 Click **OK** to close the **e*Way Properties** dialog box.

13 Repeat steps 4 through 10 for the **ewPutResponseMessage** e*Way (see Figure 7).

Figure 7 ewPutResponseMessage e*Way Properties Dialog Box



Configure the e*Way properties as shown in the previous figure. Use the configuration parameters shown in **Table 3 on page 28**.

:

Table 3 Configuration Parameters for ewPutResponseMessage e*Way

Parameter	Value
General Settings	
AllowIncoming	No
AllowOutgoing	Yes
Outbound Settings	
OutputDirectory	C:\DATA\HTTP
OutputFileName	output%d.dat
MultipleRecordsPerFile	Yes
MaxRecordsPerFile	10000
AddEOL	Yes
Poller Inbound Settings	Default
Performance Testing	Default

14 Repeat step 11 for the new e*Way. When you are finished click **OK**.

Multi-Mode e*Ways

To create the Multi-Mode e*Ways

1 Select the e*Gate Schema Manager's **Components** tab.

2 Open the host on which you want to create the e*Way.

3 Select the Control Broker that manages the new e*Way.

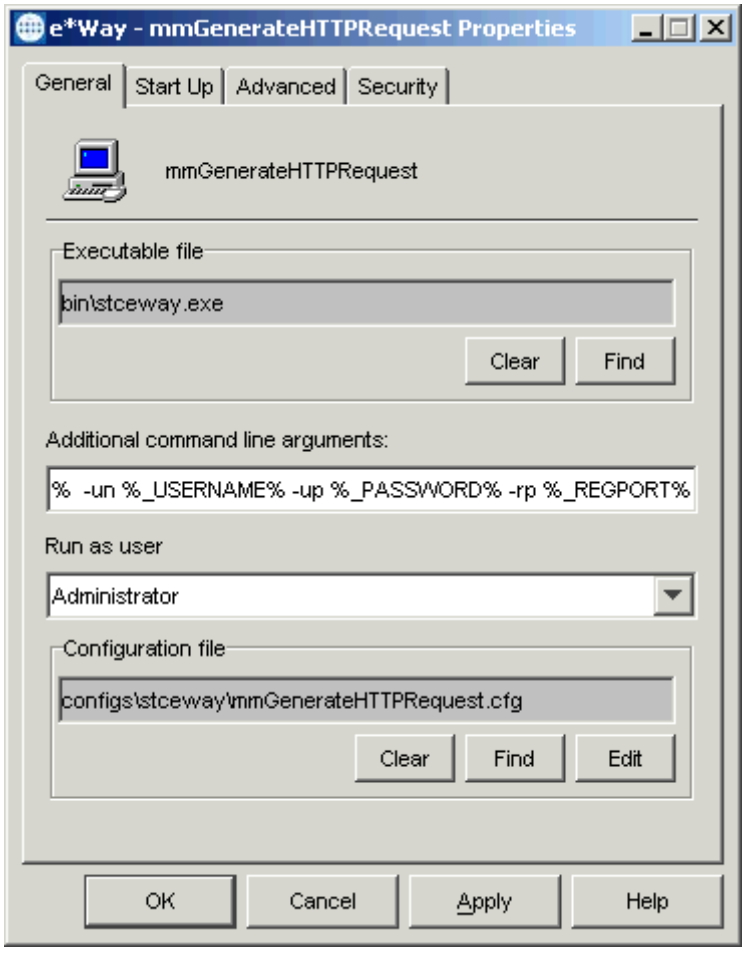
4 On the palette, click the icon to create a new e*Way.

5 Enter the name of the new e*Way (**mmGenerateHTTPRequest**), then click **OK**.

6 Select the new component, then double-click to edit its properties.

7 When the **e*Way Properties** dialog box appears, use the default executable file, **stceway.exe** (see **Figure 8 on page 29**).

Figure 8 mmGenerateHTTPRequest e*Way Properties Dialog Box



Configure the e*Way properties as shown in the previous figure.

8 To edit the JVM Settings, select **New** under the **Configuration File** text box. Use the default configuration parameters.

Note: *See the **HTTP(S) e*Way Intelligent Adapter User's Guide** for details on the parameters associated with the Multi-Mode e*Way for the HTTP(S) e*Way.*

9 Save the **.cfg** file, and exit from **Settings**.

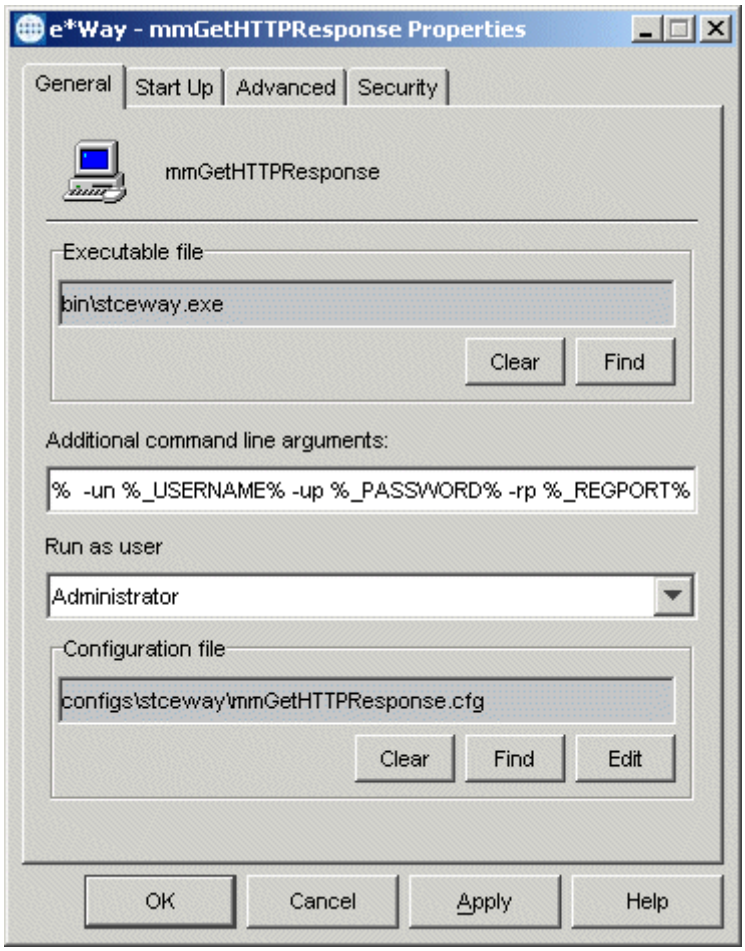
10 Use the **Startup**, **Advanced**, and **Security** tabs to modify the default settings for each.

- A Use the **Startup** tab to specify whether the Multi-Mode e*Way starts automatically, restarts after abnormal termination or due to scheduling, etc.
- B Use the **Advanced** tab to specify or view the activity and error logging levels, as well as the Event threshold information.
- C Use **Security** to view or set privilege assignments.

11 Select **OK** to close the **e*Way Properties** dialog box.

12 Repeat steps 4 through 11 for the **mmGetHTTPResponse** e*Way (see Figure 9).

Figure 9 mmGetHTTPResponse e*Way Properties Dialog Box



Configure the e*Way properties as shown in the previous figure. Use the default configuration parameters.

4.4.4 Creating the e*Way Connections

The e*Way Connection configuration file contains the connection information, along with the information needed to communicate via HTTP(S).

To create and configure new e*Way Connections

1 Highlight the **e*Way Connection** folder on the **Components** tab of the e*Gate Schema Manager.

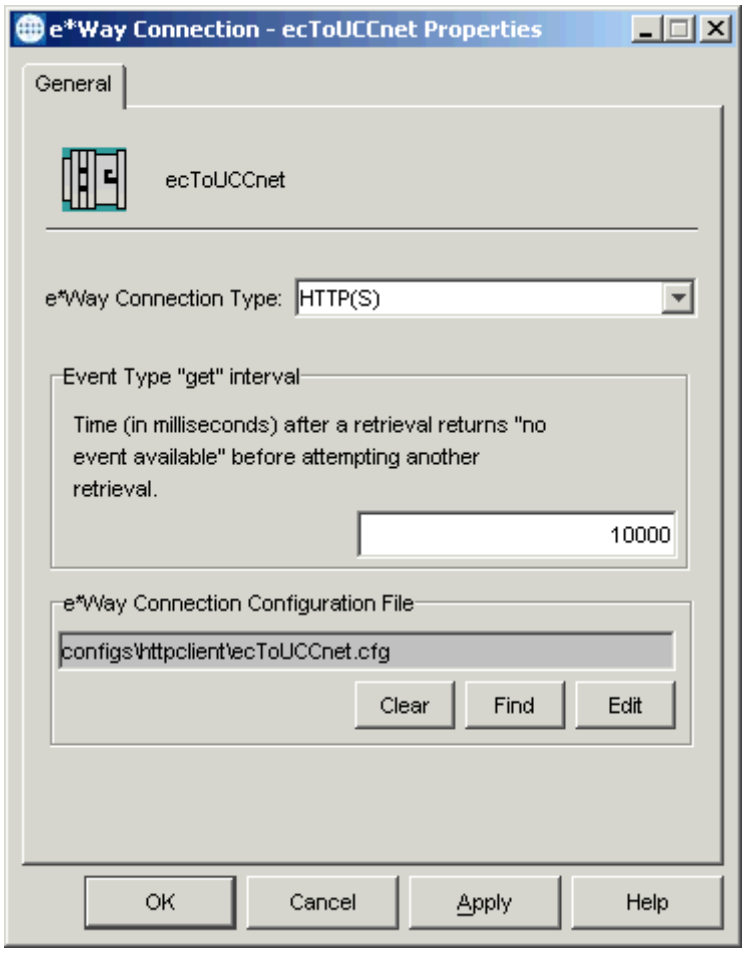
2 On the palette, click the icon to create a new e*Way Connection.

3 Enter the name of the e*Way Connection (**ecToUCCnet**), then click **OK**.

4 Select the new **e*Way Connection**, then right-click to edit its properties.

5 When the **Properties** dialog box opens, select **HTTP/HTTP(S)** from the **e*Way Connection Type** drop-down menu (see Figure 10).

Figure 10 ecToUCCnet e*Way Connection Properties Dialog Box



Configure the e*Way Connection properties as shown in the previous figure.

6 Under **e*Way Connection Configuration File**, click **New**.

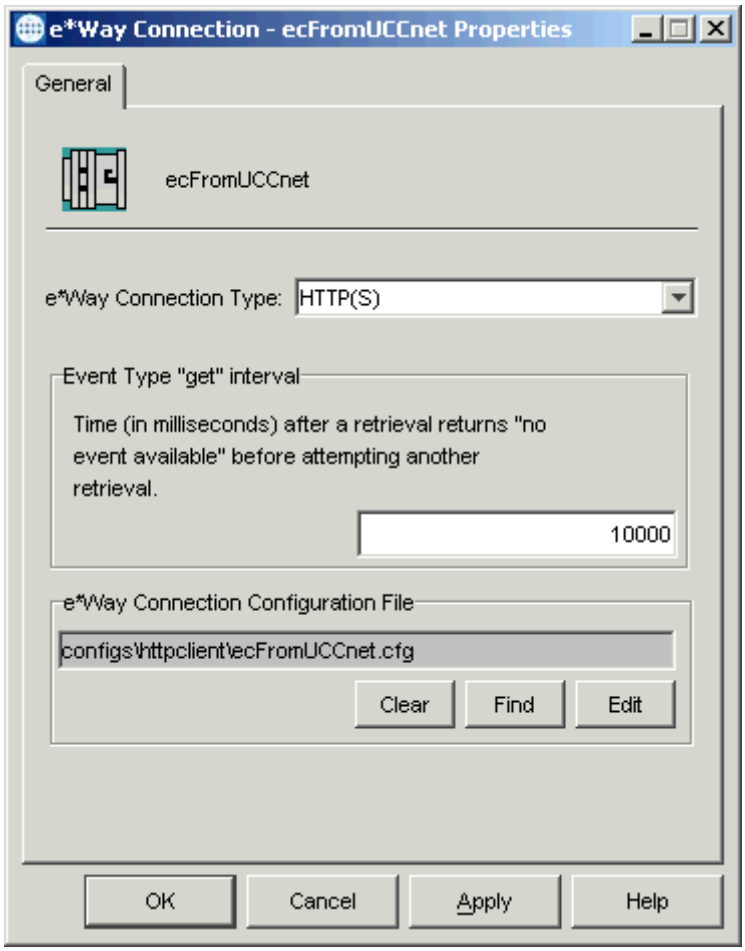
7 After the e*Way Editor opens, select the desired parameters.

Note: *For more information on the e*Way's* ***Connection Type*** *parameters, see the* ***HTTP(S) e*Way Intelligent Adapter User's Guide****.*

8 Save the **.cfg** file and promote it to run time.

9 Repeat steps 2 through 8 for the **ecFromUCCNet** e*Way Connection (see Figure 11).

Figure 11 ecFromUCCnet e*Way Connection Properties Dialog Box



Configure the e*Way Connection properties as shown in the previous figure.

4.4.5 Configuring the IQ Manager

You must configure the IQ Manager in your schema to use the SeeBeyond Java Messaging Service (JMS) IQ Service. The system has already named the IQ Manager **localhost_iqmgr** for you.

IQs use IQ Services to transport data. IQ Services provide the mechanism for moving Events between IQs, handling the low-level implementation of data exchange (such as system calls to initialize or reorganize a database).

To configure the IQ Manager

1 Select the e*Gate Schema Manager's **Components** tab.

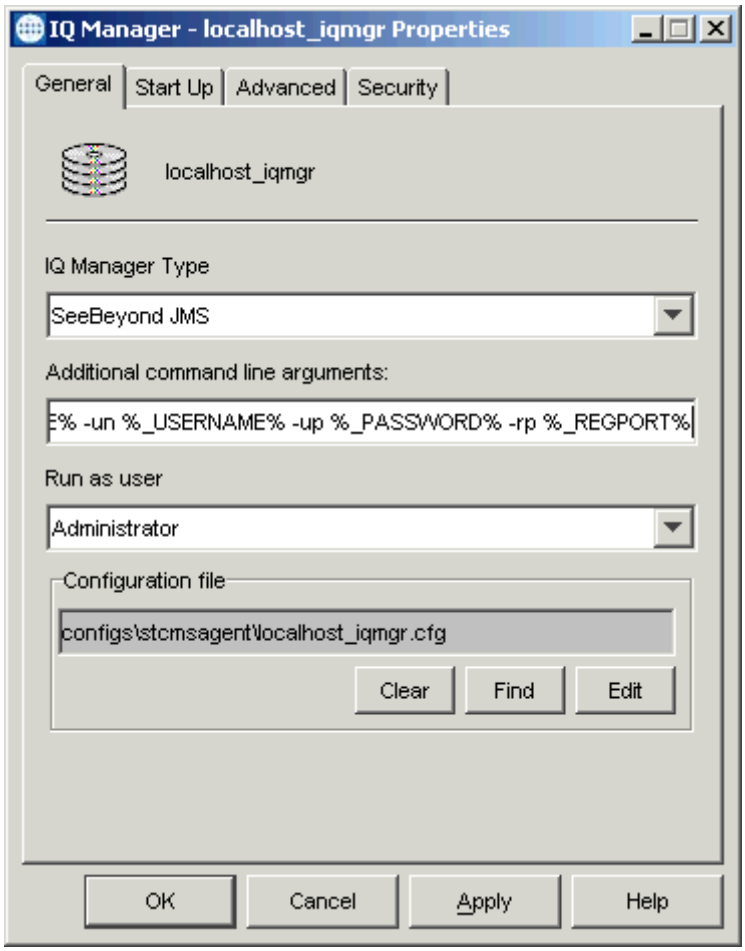
2 Open the host for the IQ Manager.

3 Select the Control Broker that manages the IQ Manager.

4 Double-click on the **IQ Manager** icon.

5 For the **IQ Manager Type**, select **SeeBeyond JMS** (see Figure 12).

Figure 12 localhost_iqmgr IQ Manager Properties Dialog Box



Configure the IQ Manager properties as shown in the previous figure.

6 Click **OK**.

4.4.6 Creating the IQs

The next step is to create and associate the schema's IQs. These components manage the exchange of information within the e*Gate system, providing non-volatile storage for data as it passes from one component to another.

To create the IQs

1 Select the Navigation pane's **Components** tab.

2 Open the host on which you want to create the IQ.

3 Open a Control Broker.

4 Select the **IQ Manager** icon.

5 On the palette, click the **IQ** icon.

6 Enter the name of the new IQ (**iqUCCnet**), then click **OK**.

7 Select the new IQ, then double-click to edit its properties.

The **IQ Properties** dialog box appears.

8 On the **General** tab, specify the **Service** and the **Event Type Get Interval**.

Use the default **Event Type Get Interval** of 100 ms for this implementation.

9 On the **Advanced** tab, be sure that **Simple publish/subscribe** is checked under the **IQ Behavior** section.

10 Close the **IQ Properties** dialog box.

11 Repeat steps 5 through 10 for the **iqControlBlock** and **iqResponse** IQs.

Figure 13 through **Figure 15 on page 36** show the **IQ Properties** dialog boxes for all three IQs.

Figure 13 iqUCCnet IQ Properties Dialog Box

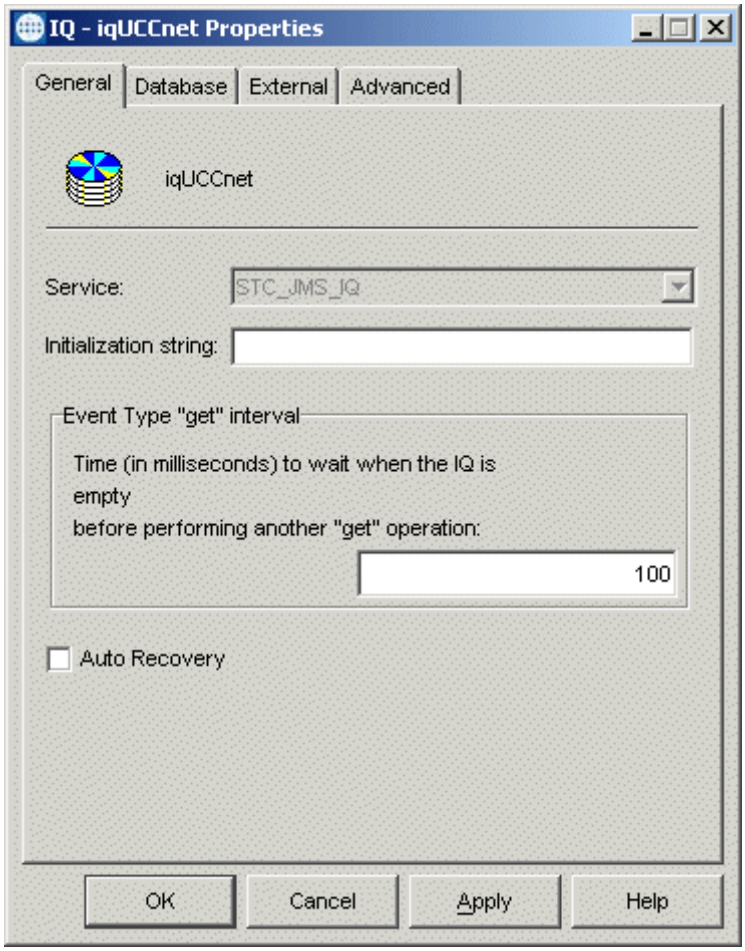


Figure 14 iqControlBlock IQ Properties Dialog Box

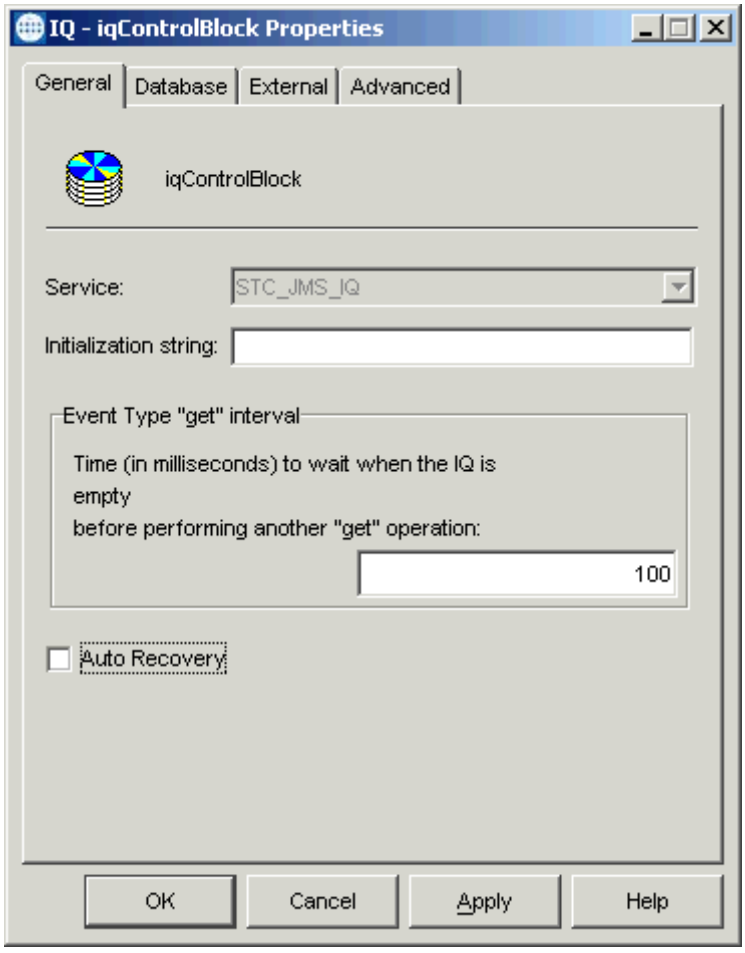
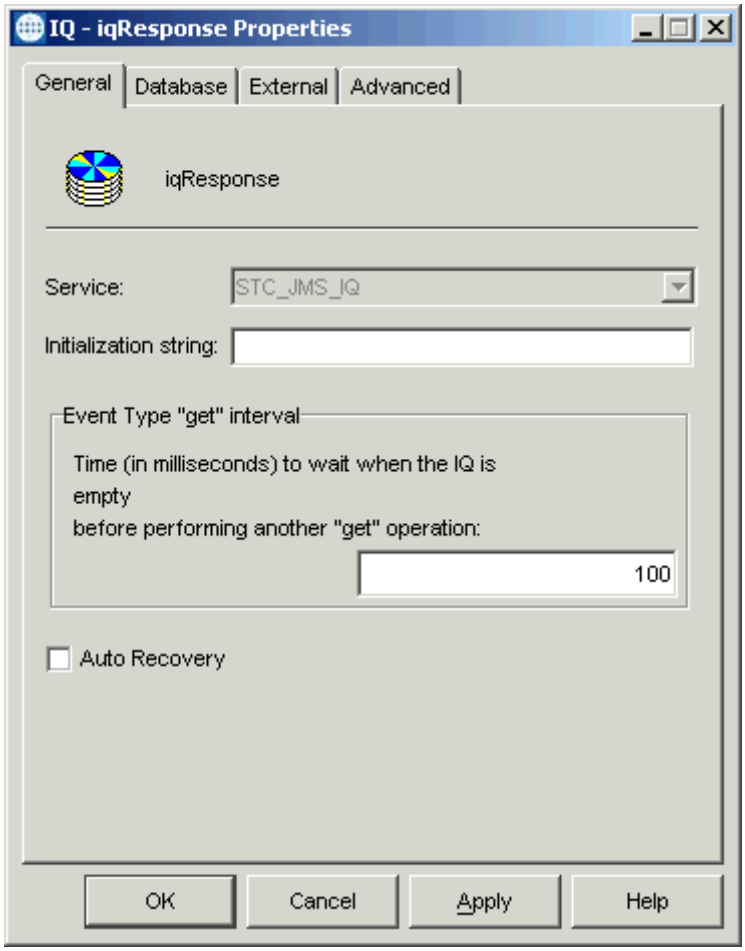


Figure 15 iqResponse IQ Properties Dialog Box



Configure the IQ properties as shown in the previous figures. Be sure all the IQ **Start Up** tab settings are set to **Start automatically**.

4.4.7 Creating Collaboration Rules

The next step is to create the Collaboration Rules that extract and process selected information from the source Event Type defined previously, according to its associated Collaboration Service. The **Default Editor** can be set to either the Monk or Java programming language.

From the **Schema Manager Task Bar,** select **Options** and click **Default Editor**. For this example, set the default to Java.

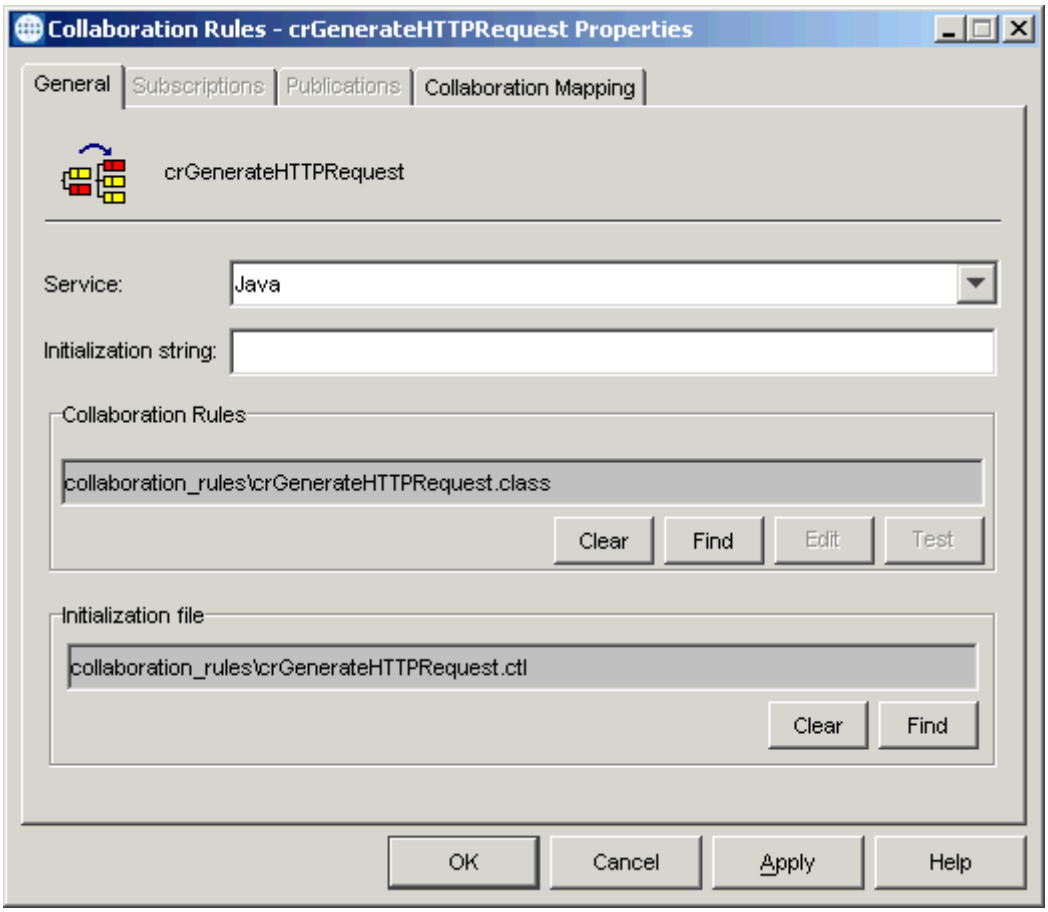
To create a Collaboration Rules file

1. Select the **Components** tab in the e*Gate Schema Manager.
2. In the Navigation pane, select the **Collaboration Rules** folder.
3. On the palette, click the **Collaboration Rules** icon.
4. Enter the name of the new Collaboration Rule, then click **OK.** **crGenerateHTTPRequest** is used for this example.

5 Select the new **Collaboration Rule**, then right-click to edit its properties.

6 The **Collaboration Rules — crGenerateHTTPRequest Properties** dialog box appears (see Figure 16).

Figure 16 crGenerateHTTPRequest Properties Dialog Box: General Tab



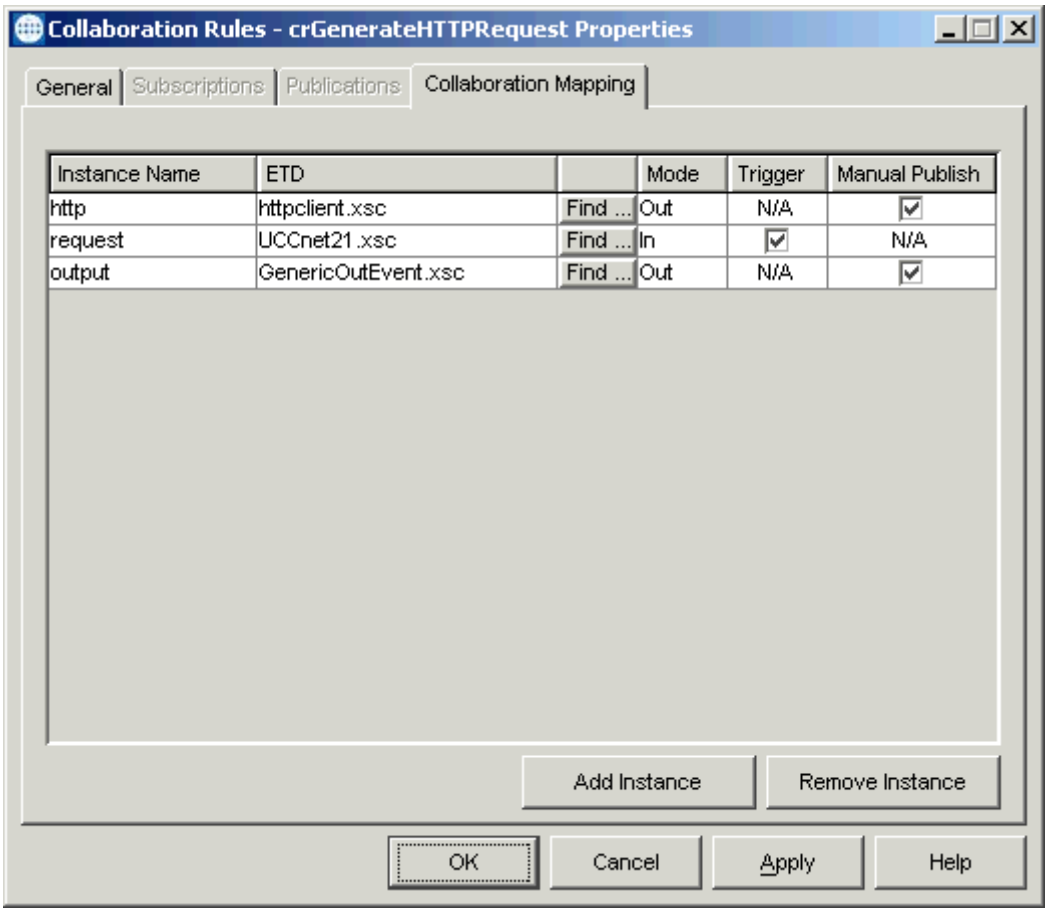
On the **General** tab in the dialog box select the **Java Collaboration Service**. The Collaboration Rules use the e*Gate Java Collaboration Service to manipulate Events or Event data.

7 In the **Initialization String** text box, enter any required initialization string that the Collaboration Service may require. This field can be left blank.

8 Click the **Collaboration Mapping** tab.

9 Using the **Add Instance** button, create instances to coincide with the Event Types (see Figure 17).

Figure 17 crGenerateHTTPRequest Properties: Collaboration Mapping Tab



Configure the rest of the Collaboration Rule as shown in the previous figure.

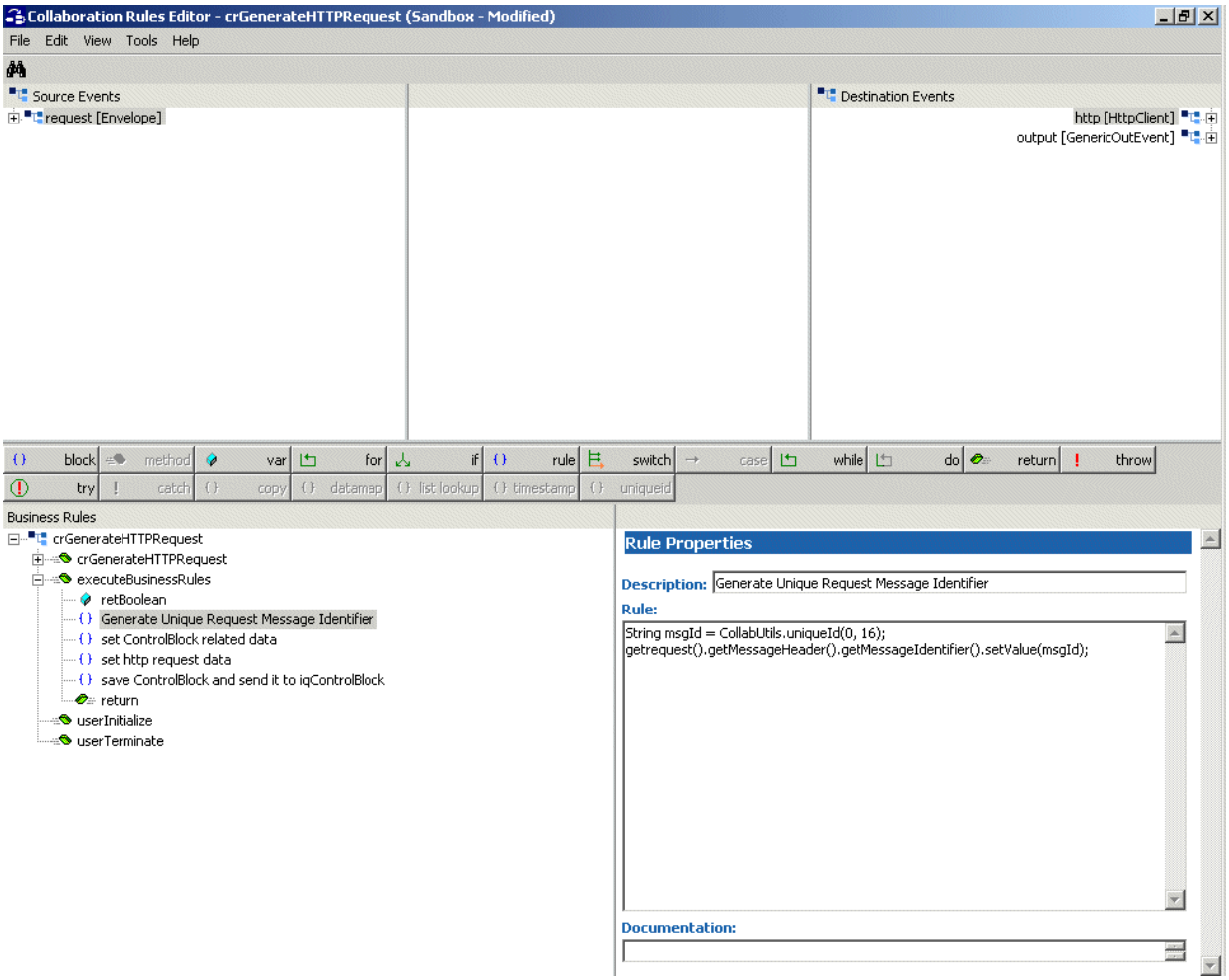
Note: *The input is the control block* ***.xsc*** *file you create by importing the control block from UCCnet. Through the use of the XML Toolkit, use this file to create and compile an* ***xsc*** *file.*

10 Select the **General** tab again, then click **New**.

The Collaboration Rules Editor Main window opens.

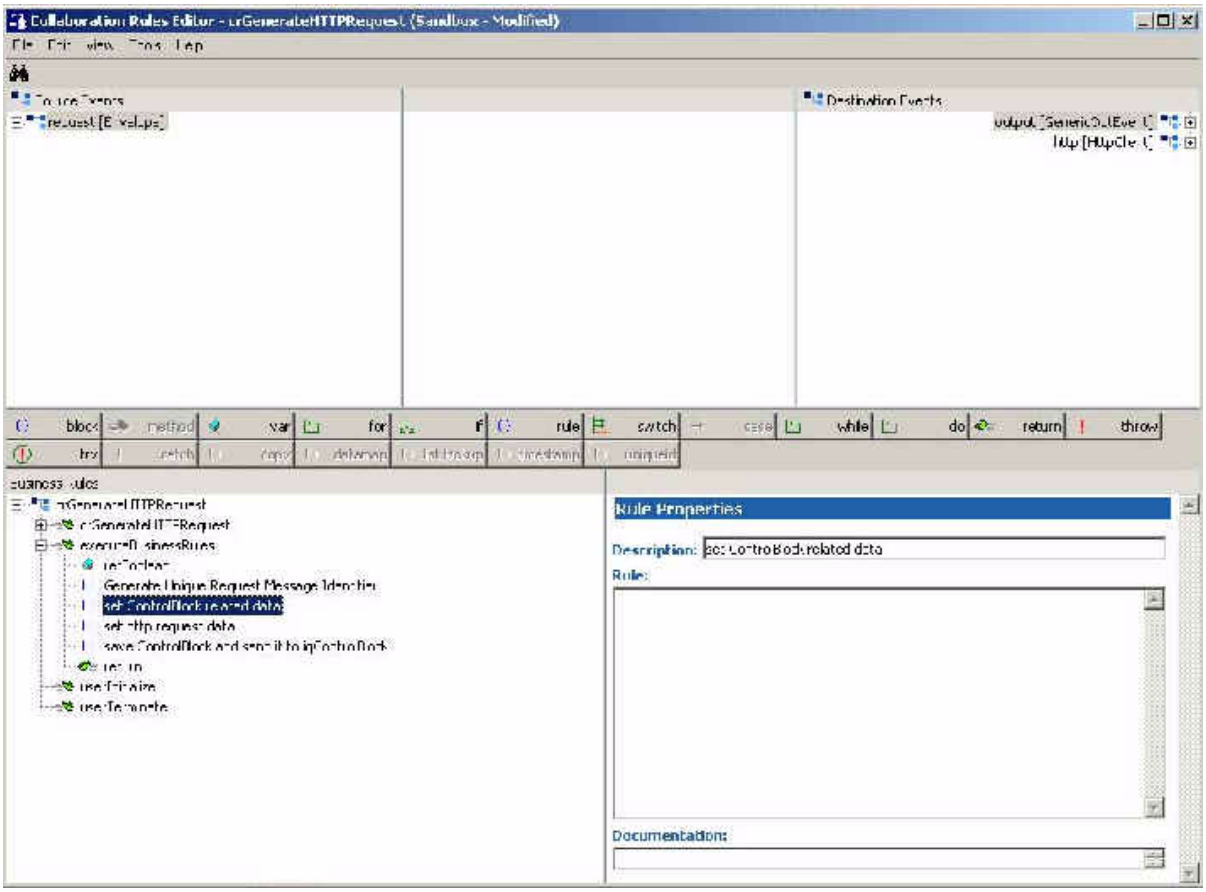
11 Expand the window to full size for optimum viewing, expanding the source and destination Events also (see Figure 18).

Figure 18 Collaboration Rules Editor: Generate Unique Request Message Rule



The previous figure shows the properties of the Generate Unique Request Message Identifier Rule properties. **Figure 19 on page 40** shows the Set Control Block Related Data Rule properties.

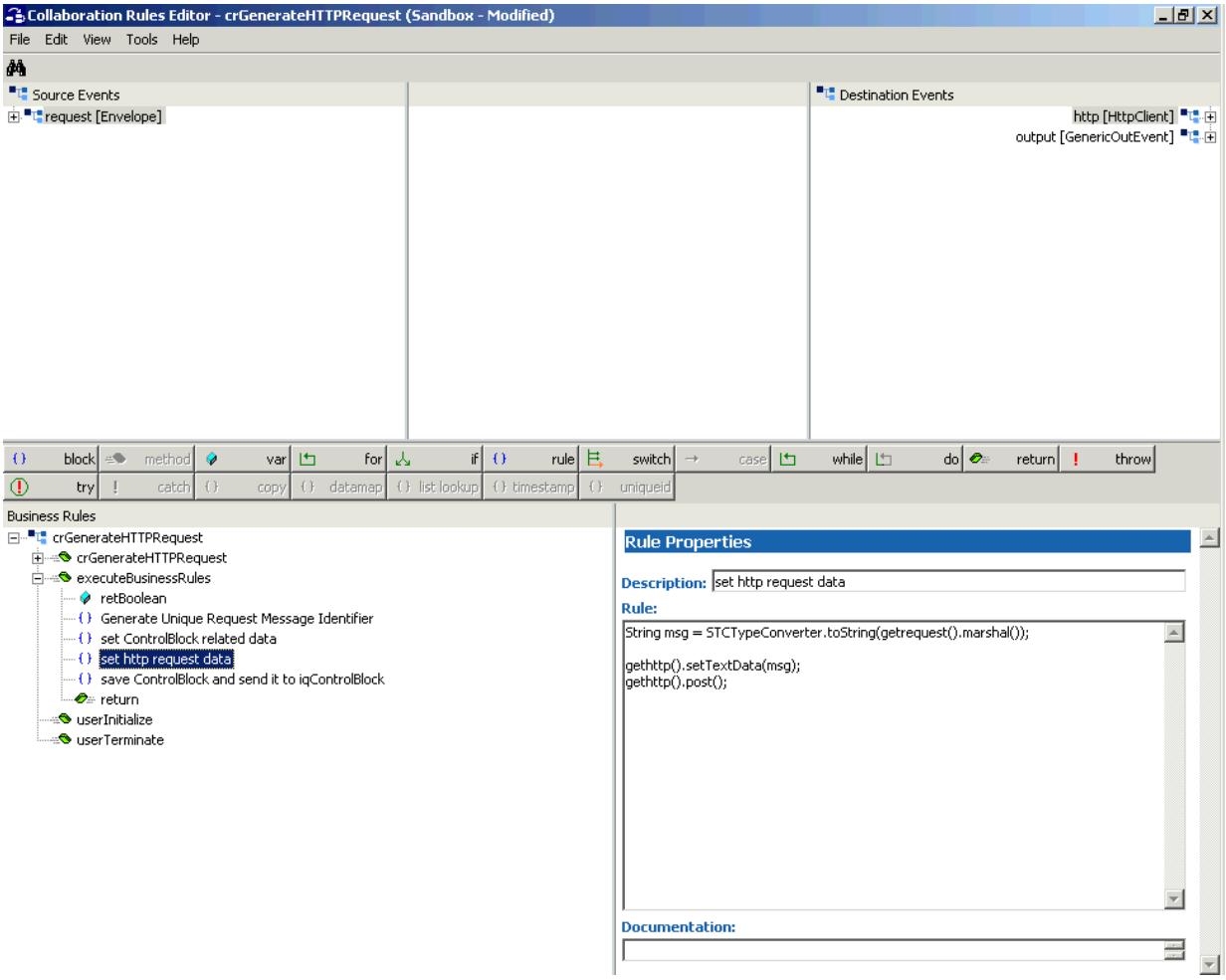
Figure 19 Collaboration Rules Editor: Set Control Block Related Data Rule



Note: *Be sure to configure the control block code for this Collaboration Rule. Also, be sure to include the user name and password.*

Figure 20 on page 41 shows the set http request data Rule properties.

Figure 20 Collaboration Rules Editor: http request data Rule



12 You must create the Collaboration Rules class.

Note: *See the* ***e*Gate Integrator User's Guide*** *for details on this procedure.*

You can create this class as desired or use the previous figures as a model.

13 Before compiling the code, on the **Tools** menu, click **Options**.

14 Verify that all necessary **.jar** files are included. For clear HTTP (SSL not enabled), ensure that the **stchttp.jar** and **stcutils.jar** file are added.

15 For a Collaboration that uses SSL, ensure that the **jcert.jar**, **jnet.jar**, and **jsse.jar** files are included.

16 When you have finished defining all the desired business logic, compile the Java code by selecting **Compile** from the **File** menu.

If the code compiles successfully, the message **Compile Completed** appears. If the outcome is unsuccessful, a Java Compiler error message appears. If there are any Java errors, be sure to correct them.

The **Save** menu opens.

17 Provide a name for the **.xpr** file. For this example, use **crGenerateHTTPRequest.xpr**.

18 Once the compilation is complete, save the Collaboration Rules file and exit the Collaboration Rules Editor.

19 Repeat steps 3 through 18 to create the **crGetHTTPResponse** Collaboration Rule. See Figure 21 through **Figure 24 on page 45** for the Collaboration Rule properties details, or you can create your own Business Rules.

Figure 21 crGetHTTPResponse Properties Dialog Box: General Tab

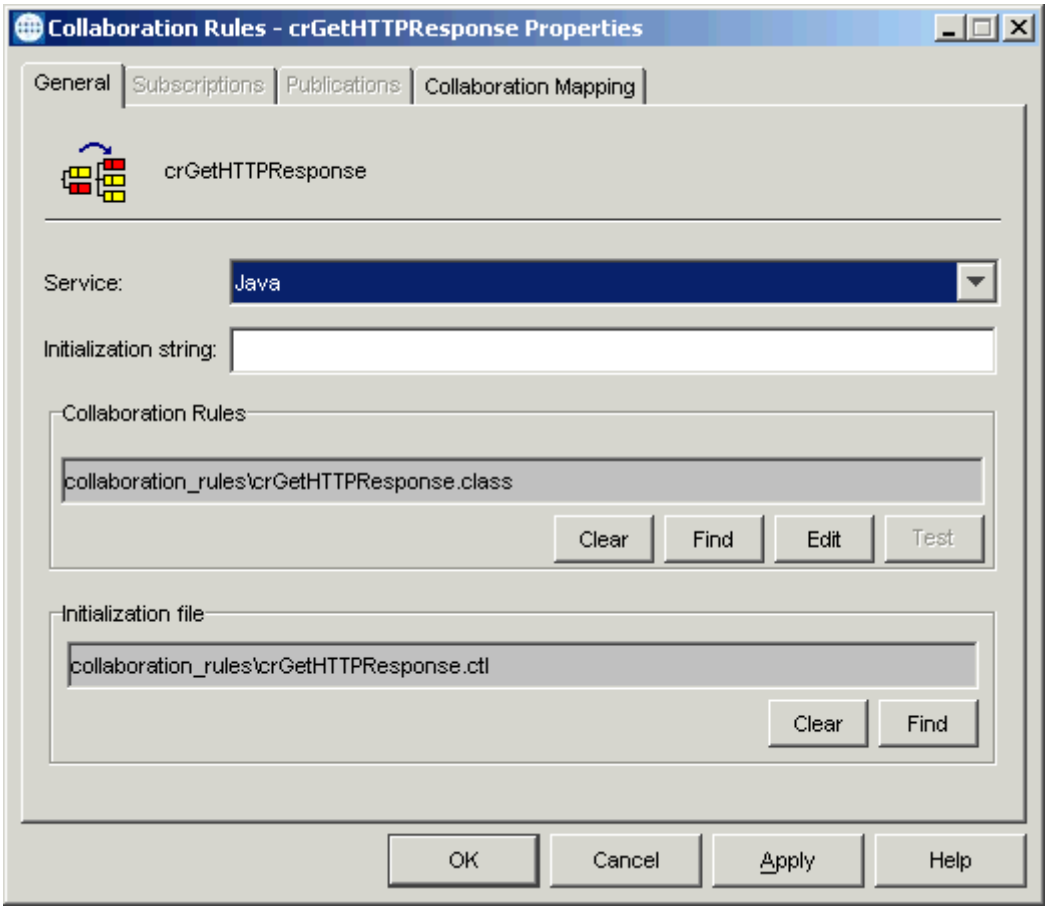


Figure 22 crGetHTTPResponse Properties: Collaboration Mapping Tab

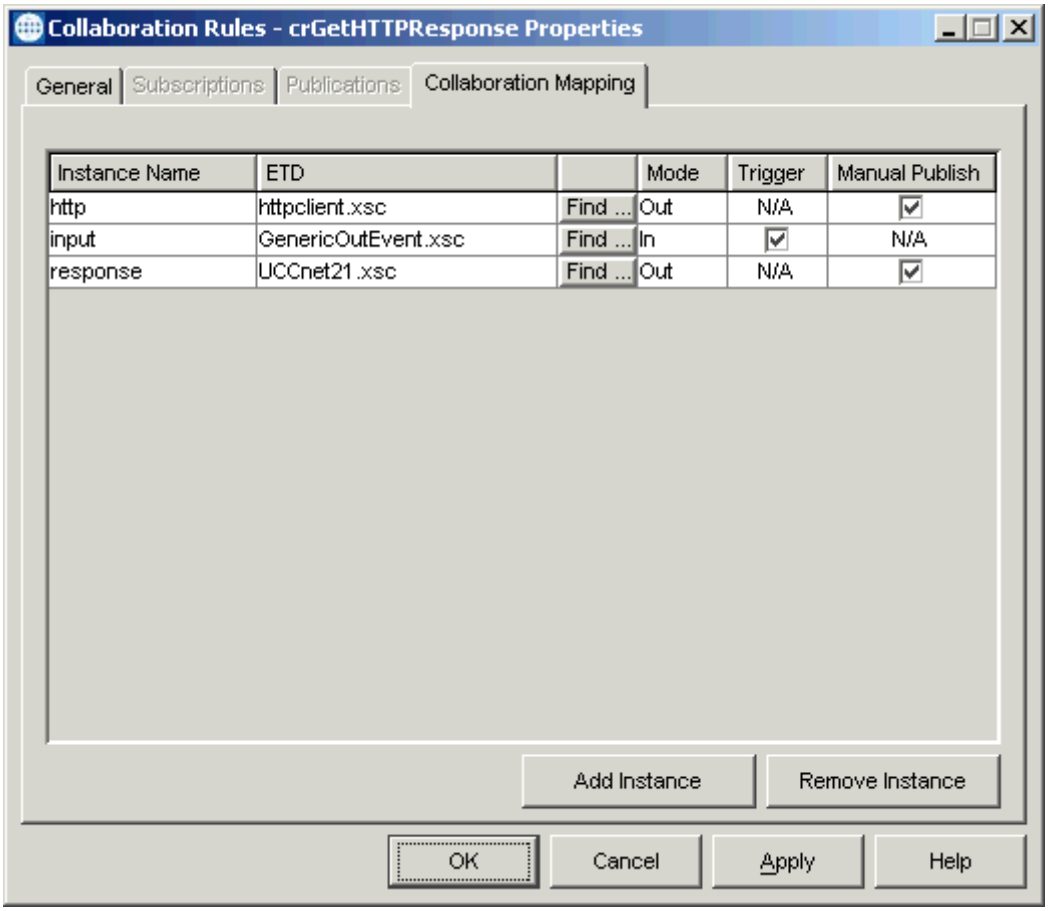


Figure 23 Collaboration Rules Editor: set HttpClient TextData to be the input Rule

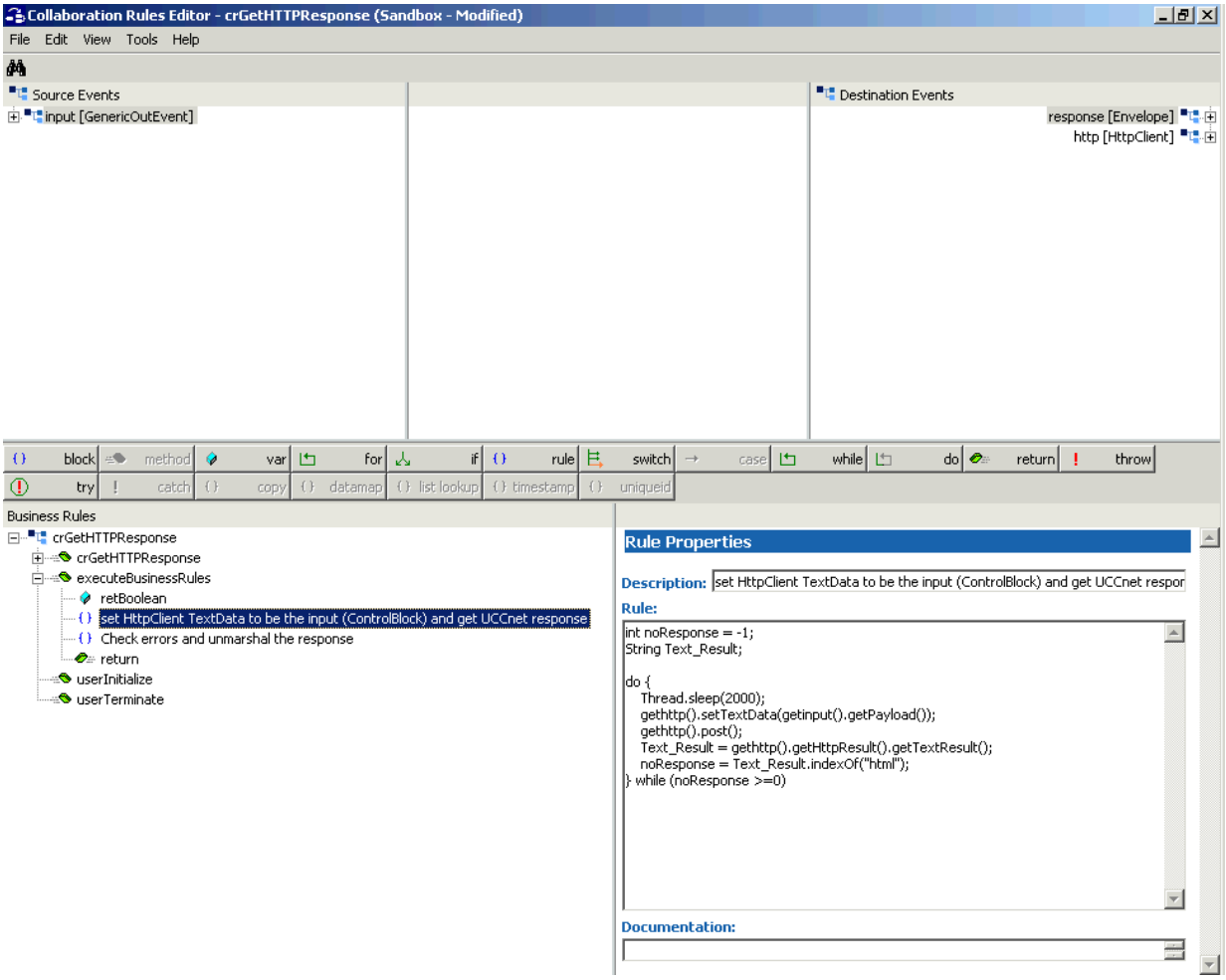
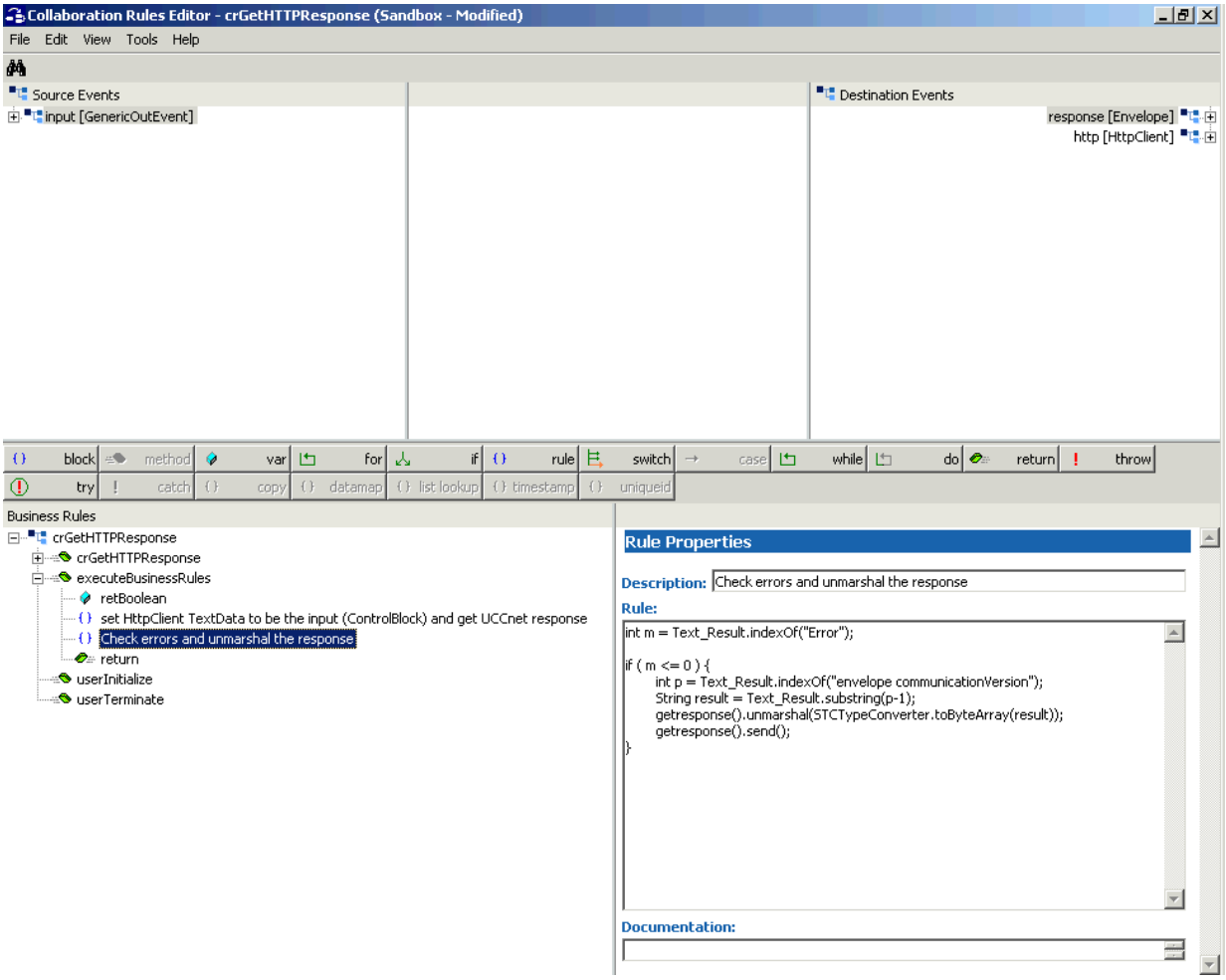


Figure 24 Collaboration Rules Editor: Check errors and unmarshal the response Rule



20 For the **crGetRequestMessage** and **crPutResponseMessage** Collaboration Rules, all you need to do is select the **Pass Through** Service in the **Collaboration Properties** dialog box (**General** tab). No further configuration is required.

21 You need to create the **crGetRequestMessage** and **crPutResponseMessage** Collaboration Rules. To do so:

- Create and name each Collaboration Rules component (**crGetRequestMessage** and **crPutResponseMessage)**.
- Open the **Collaboration Properties** dialog box (**General** tab) and select the **Pass Through** Service for both Collaboration Rules.
- On the **Collaboration Properties** dialog box click **OK** to save both Collaboration Rules.

No further configuration is required.

4.4.8 Creating Collaborations

Collaborations are the components that receive and process Event Types, then forward the output to other e*Gate components or an external system.

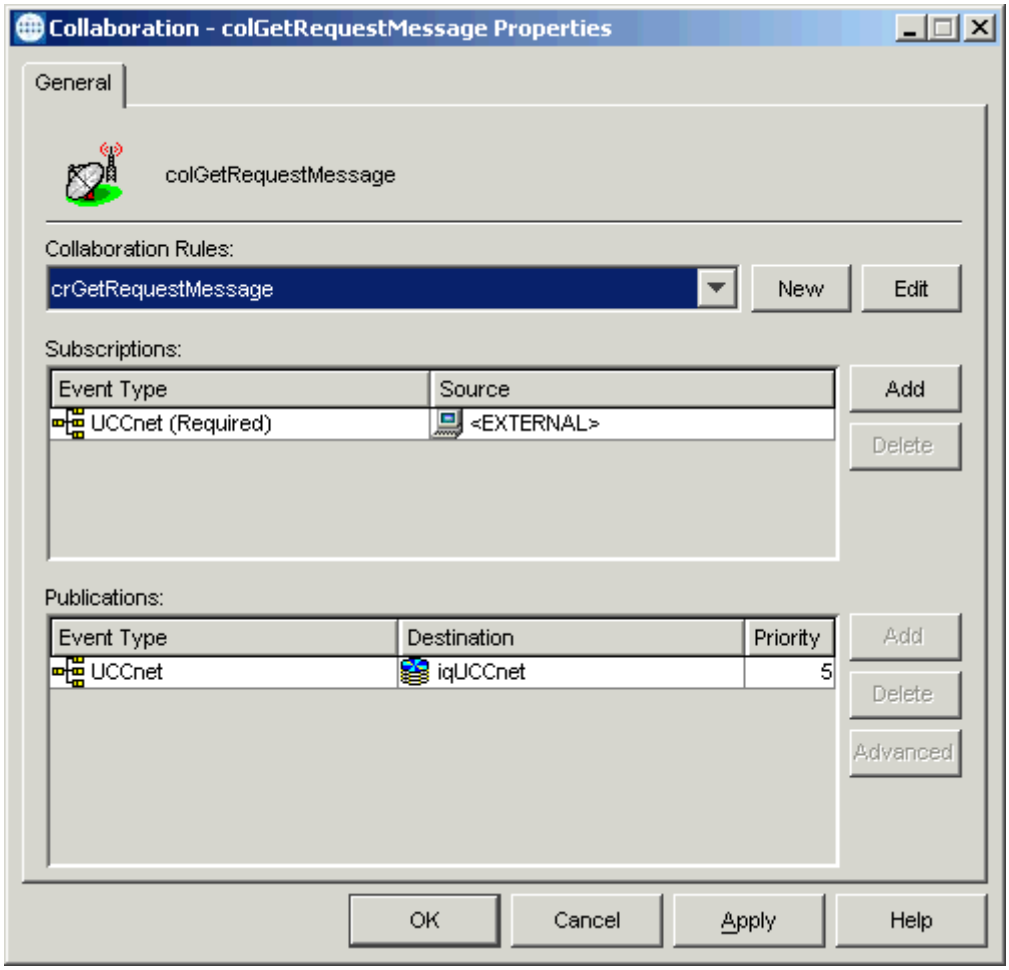
Collaborations consist of the subscriber, which receives Events of a known type (sometimes from a given source), and the publisher, which distributes transformed Events to a specified recipient.

To create the Collaborations

1. In the e*Gate Schema Manager, select the Navigator's **Components** tab.
2. Open the host on which you want to create the Collaboration.
3. Select the Control Broker for this schema.
4. Select the **ewGetRequestMessage** e*Way to assign the Collaboration.
5. On the palette, click the **Collaboration** icon.
6. Enter the name (**colGetRequestMessage**) of the new Collaboration, then click **OK**.
7. Select the new Collaboration, then right-click to edit its properties.

8 The **Collaboration Properties** dialog box appears (see Figure 25).

Figure 25 colGetRequestMessage Properties Dialog Box



Configure the appropriate Collaboration properties as shown in the previous figure.

9 From the **Collaboration Rules** list, select the Pass Through **Collaboration Rule** that you created previously (**crGetRequestMessage**) for this Collaboration.

10 In the **Subscriptions** area, click **Add** to define the input Event Type to which this Collaboration subscribes to (**UCCnet**). Check **Triggering**.

11 In the **Publications** area, click **Add** to define the output Event Type that this Collaboration publishes to (**UCCnet**). Select **Default**.

12 Click **OK** to close the dialog box.

13 Select the **ewPutResponseMessage** e*Way to assign the Collaboration.

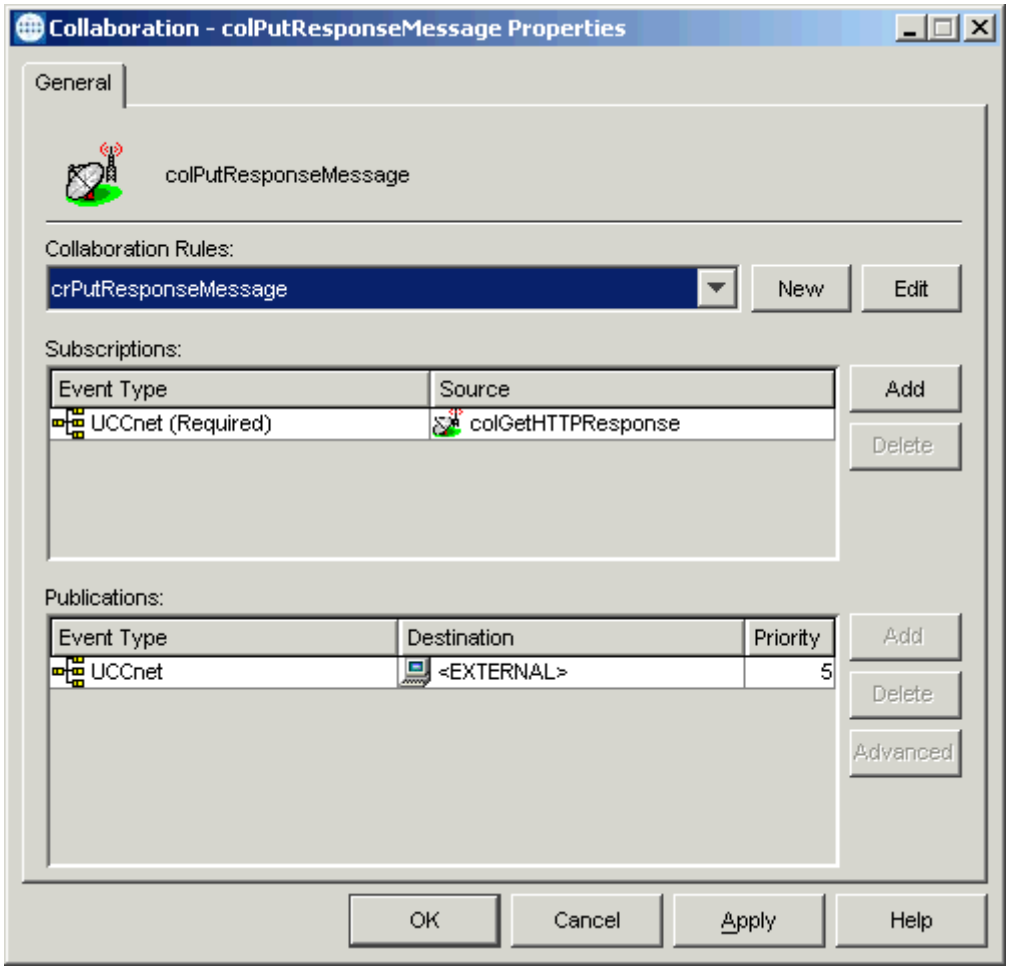
14 On the palette, click the **Collaboration** icon.

15 Enter the name (**colPutResponseMessage**) of the new Collaboration, then click **OK**.

16 Select the new Collaboration, then right-click to edit its properties.

17 The **Collaboration Properties** dialog box appears (see Figure 26).

Figure 26 colPutResponseMessage Properties Dialog Box



Configure the appropriate Collaboration properties as shown in the previous figure.

18 From the **Collaboration Rules** list, select the Pass Through **Collaboration Rule** that you created previously (**crPutResponseMessage**) for this Collaboration.

19 In the **Subscriptions** area, click **Add** to define the input Event Type to which this Collaboration subscribes to (**UCCnet**). Check **Triggering**.

20 In the **Publications** area, click **Add** to define the output Event Type that this Collaboration publishes to (**UCCnet**). Select **Default**.

21 Click **OK** to close the dialog box.

22 Select the **mmGenerateHTTPRequest** e*Way to assign the Collaboration.

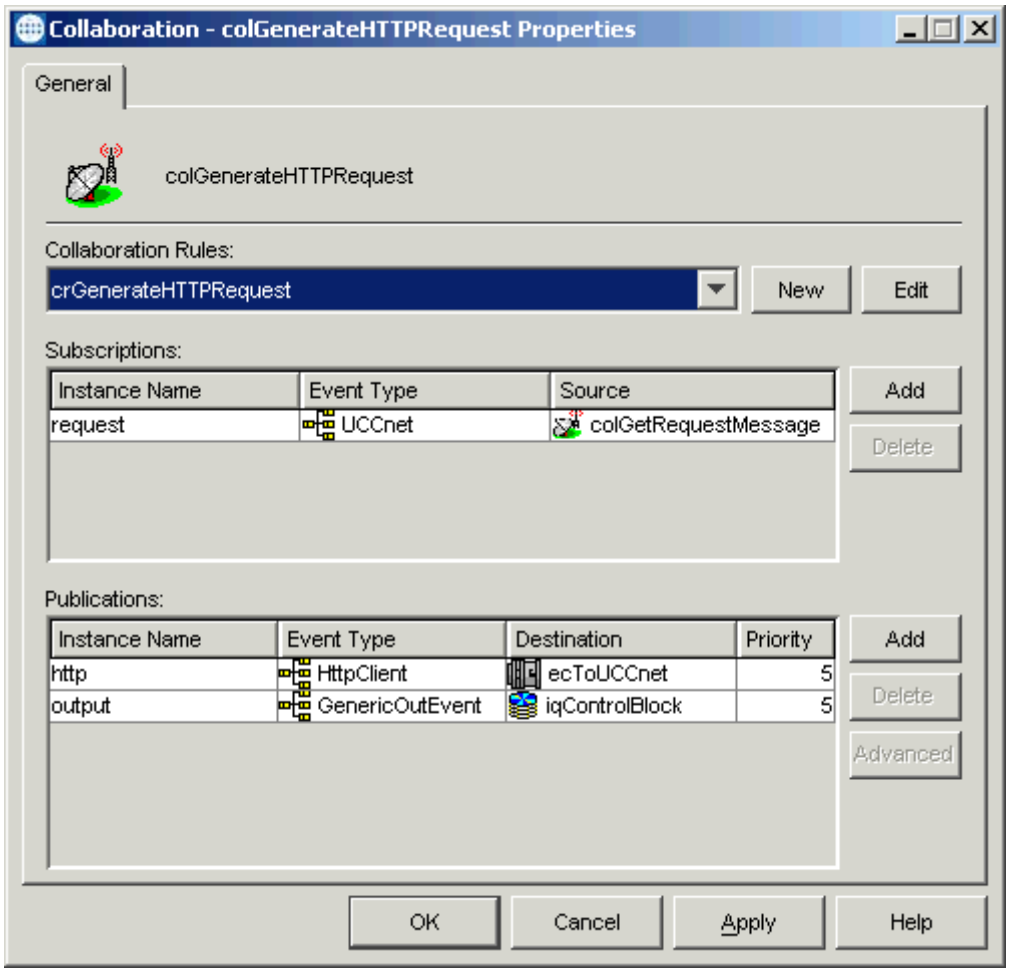
23 On the palette, click the **Collaboration** icon.

24 Enter the name (**colGenerateHTTPRequest**) of the new Collaboration, then click **OK**.

25 Select the new Collaboration, then right-click to edit its properties.

26 The **Collaboration Properties** dialog box appears (see Figure 27).

Figure 27 GenerateHTTPRequest Properties Dialog Box



Configure the appropriate Collaboration properties as shown in the previous figure.

27 From the **Collaboration Rules** list, select the Java **Collaboration Rule** that you created previously (**crGenerateHTTPRequest**) for this Collaboration.

28 In the **Subscriptions** area, click **Add** to enter the **request** instance name, select the **UCCnet** Event Type, and select the Collaboration **colGetRequestMessage** as the source.

29 In the **Publications** area, click **Add** to enter the **http** and **output** instance names, select the **HTTPClient** and **GenericOutEvent** Event Types, and select **ecToUCCnet** and **iqControlBlock** as the destinations.

30 Click **OK** to close the dialog box.

31 Select the **mmGetHTTPResponse** e*Way to assign the Collaboration.

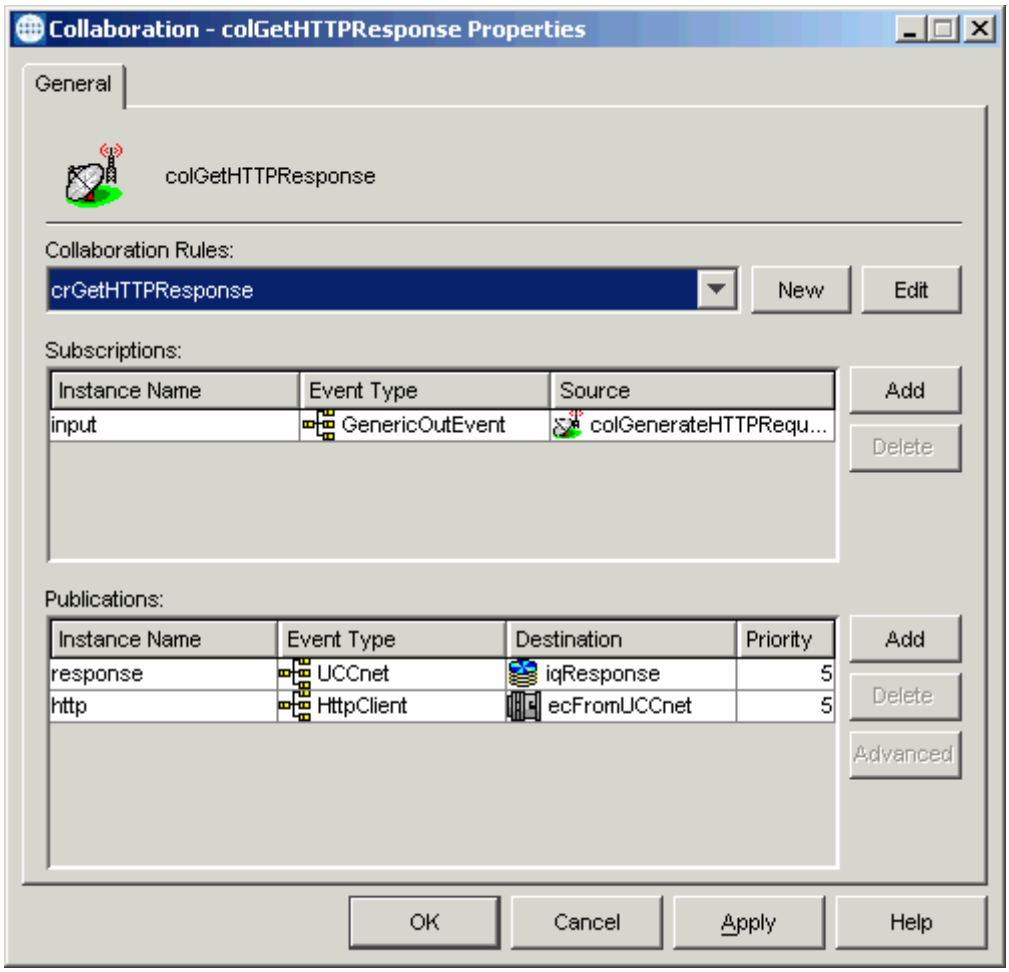
32 On the palette, click the **Collaboration** icon.

33 Enter the name (**colGetHTTPResponse**) of the new Collaboration, then click **OK**.

34 Select the new Collaboration, then right-click to edit its properties.

35 The **Collaboration Properties** dialog box appears (see Figure 28).

Figure 28 colGetHTTPResponse Properties Dialog Box



Configure the appropriate Collaboration properties as shown in the previous figure.

36 From the **Collaboration Rules** list, select the Java **Collaboration Rule** that you created previously (**crGetHTTPResponse**) for this Collaboration.

37 In the **Subscriptions** area, click **Add** to enter the **input** instance name, select the **GenericOutEvent** Event Type, and select the Collaboration **colGenerateHTTPRequest** as the source.

38 In the **Publications** area, click **Add** to enter the **response** and **http** instance names, select the **UCCnet** and **HttpClient** Event Types, and select **iqResponse** and **ecFromUCCnet** as the destinations.

39 Click **OK** to close the dialog box.

4.4.9 Running the Schema

To run the schema

- From the command line prompt, enter on a single line:

```
stccb -rh hostname -rs schemaname -un username
    -up user_password -ln localhost_cb
```

  Substitute the appropriate names for ***hostname***, ***username***, ***schemaname***, and ***user_password*** as appropriate.

The schema components start automatically. When there are no more run-time messages, check the output file. If the schema is operating correctly, the final output directory contains the payload data.

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