SYBASE®

TIBCO Rendezvous® Adapter Guide

Sybase CEP Option

DOCUMENT ID: DC01156-01-0400-01
LAST REVISED: March 2010

Sybase, Inc., One Sybase Drive, Dublin, CA 94568.

Contents

Introduction

TIBCO Rendezvous® is an enterprise messaging system. The Sybase® CEP TIBCO Rendezvous input adapters read messages from the TIBCO Rendezvous message bus, and the output adapters feed CEP message data into the message bus.

Running the Sybase CEP adapters for TIBCO Rendezvous to integrate or communicate with TIBCO Rendezvous requires a valid license for TIBCO Rendezvous. Acquire your license directly from TIBCO or from an authorized TIBCO channel.

In addition to a license for TIBCO Rendezvous, all TIBCO adapters require a CEP server package license. The certified mode adapters also require a license for the guaranteed delivery feature. Before installing the adapters, ensure that you have licensed the Sybase CEP server. For information, see Licensing Sybase CEP in the *Administrators Guide*.

This documentation assumes you have licensed and installed TIBCO Rendezvous. For information on the installation and configuration of TIBCO Rendezvous software, please consult the documentation provided by TIBCO. This document deals exclusively with the installation and usage of the Sybase CEP TIBCO Rendezvous adapters.

Supported Platforms

The Sybase CEP adapters for TIBCO Rendezvous are available on platforms and operating systems supported by the CEP R3 server.

Supported platforms and operating systems include:

Platform	Supported OS	Compiler	JDK Version
Linux-64	Red Hat 5.0 (AMD), Red Hat 5.0 (Intel), SUSE 10 (AMD)	gcc 3.4.6	5.0 Update 12
Sun-64 (Sparc)	Solaris 10	gcc 3.4.6	5.0 Update 12
Sun-64 (AMD)	Solaris 10	gcc 3.4.6	5.0 Update 12
Windows (32-bit, 64-bit)	Windows 2003 Server (64-bit), XP Professional (32-bit, 64-bit)	MSDEV 2005 SP1	5.0 Update 12

Installation

Installing the Sybase CEP adapters involves unzipping or untarring the installation package and running an installation command.

The installation files for the Sybase CEP TIBCO Rendezvous adapters are provided on the adapter CD.

1. Ensure you have installed Sybase CEP server and Studio and the TIBCO Rendezvous software.
2. Locate the installation package, located at the root of the adapter CD, and copy this package to a temporary directory. Installation packages are named based on operating system. All packages begin with either **c8-server-tibco-rv** or **c8-studio-tibco-rv** and end in either **.tar.gz** or **.zip**. Ensure you select the appropriate package for your platform.
3. Run the appropriate command (depending on your operating system) to unpackage the installation files.
4. Locate and run the installation scripts to perform the installation. The scripts are located in the target directory you selected when unpackaging the installation files, under `SybaseC8/addon-installers/tibco-rv`.
   - For UNIX, run **install-server.sh** and **install-studio.sh**.
   - For Windows, run **install-server.bat** and **install-studio.bat**.

Input Adapters

There are two TIBCO Rendezvous input adapters: the standard adapter and the certified mode adapter. The standard input adapter takes data from a TIBCO Rendezvous source and sends the rows to the Sybase CEP stream. The certified mode input adapter takes data from a TIBCO Rendezvous source in certified mode and sends the rows to the Sybase CEP stream.

The certified mode input adapter uses both the TIBCO certified mode delivery feature and the Sybase CEP guaranteed delivery (GD) feature, also referred to as guaranteed processing. Guaranteed processing ensures that all messages from your message source are received and processed without error or duplication, even in situations such as server crashes or lost network connections.

For information on TIBCO certified mode delivery, see your TIBCO documentation. For information on Sybase CEP guaranteed processing, see the *Sybase CEP Integration Guide > Implementing Guaranteed Processing*.

Properties

The standard and certified mode input adapters provide several configuration properties.

These include:

Property Name (Screen)	Type	Description
Service	String	The Service property specifies the Operating System network UDP service that should be used to send/receive messages (for example, "rendezvous:5238"). If it is left blank, the service named "rendezvous" is used by default, with default port number 7500.
Network	String	If the Rendezvous daemon host computer has multiple Operating System network interfaces, the Network property must be used to specify which one should be used for Rendezvous message traffic (for example, "lan0"). Otherwise, this property may be left blank.
Daemon	String	The Daemon property specifies the name of the Rendezvous daemon host computer and the port number that should be used to communicate with it (for example, "myHost1:7675"). If this is left blank, the Rendezvous default port is used.

Subject	String	The Subject property specifies the Rendezvous Subject name to be associated with the incoming messages (for example, "Trades.Live"). Tibco wildcards are allowed in the subject if you want to listen for messages with different subjects; for example, you may specify "Trades.>" if you want to list all messages that contain subjects that start with "Trades.".

The certified mode input adapter also requires the following properties:

Property Name (Screen)	Type	Description
TransportName	String	(Required). The CM Correspondent Name. The value must conform to the Rendezvous identifier rules and must be unique across all connections to the Rendezvous daemon.
Ledger	String	(Required). The path and name of a file to use as the Rendezvous persistent ledger. The adapter stores Rendezvous-specific information in this file and allows the adapter to recover from disconnects and crashes/restarts. The file can exist anywhere within the file system, not just within the Sybase CEP directories. However, Rendezvous requires that it must exist within the local file system.

Note: Each input stream has a property (see the stream's Properties tab in Studio) that can specify whether to use the current server timestamp value instead of the row timestamp set by the adapter. If this stream property is set to true, it overrides any row timestamp set by the adapter.

The properties are more fully described in the TIBCO Rendezvous documentation.

Conversions

Each incoming Rendezvous message must contain nothing but flat data fields (in other words, no submessages or repeated fields), each named precisely the same as a column in the Sybase CEP schema for the associated input stream (text case is significant). If there is not a TIBCO data field with the same name as a given Sybase CEP schema column, the Sybase CEP row produced will have a NULL value for that column. Thus, an empty Rendezvous message would yield a row with all columns NULL.

Rendezvous fields are converted to Sybase CEP values based on the data type of the Sybase CEP column. The acceptable conversions are shown below:

Tibco Rendezvous Data Type	Sybase CEP Data Type

String IPPort16 IPAddr32	String
Boolean	Boolean
Boolean (0= false, 1= true) Signed/unsigned 8-bit integer Signed/unsigned 16-bit integer Signed/unsigned 32-bit integer Signed/unsigned 64-bit integer (overflow results in NULL) IPPort16 IPAddr32	Integer (32-bit)
Boolean (0= false, 1= true) Signed/unsigned 8-bit integer Signed/unsigned 16-bit integer Signed/unsigned 32-bit integer Signed/unsigned 64-bit integer IPAddr32	Long (64-bit)
Signed/unsigned 8-bit integer Signed/unsigned 16-bit integer Signed/unsigned 32-bit integer Signed/unsigned 64-bit integer	Interval (64-bit)
DateTime	Timestamp (64-bit)
32-bit Float 64-bit Float	Float (64-bit)
XML	XML
Opaque IPPort16 IPAddr32 ENCRYPTED	BLOB

I8Array	Unsupported
U8Array	
I16Array	
U16Array	
I32Array	
U32Array	
I64Array	
U64Array	
F32Array	
F64Array	
StringArray	

For any Sybase CEP schema column of type Interval, the corresponding Rendezvous field should be of type Signed 64-bit Integer (or a smaller signed/unsigned Rendezvous integer data type), which will contain a value representing the number of microseconds in the interval.

It is the responsibility of the user to properly interpret the BLOB data that results from converting TIBCO datatypes to BLOB. Users will probably write User-Defined Functions (UDFs) to interpret this input.

Output Adapters

There are two TIBCO Rendezvous output adapters: the standard adapter and the certified mode adapter. The standard adapter takes data from a Sybase CEP stream and sends it to a TIBCO Rendezvous destination. The certified mode output adapter takes data from a Sybase CEP stream and sends it to a TIBCO Rendezvous destination in certified mode.

The certified mode output adapter uses both the TIBCO certified mode delivery feature and the Sybase CEP guaranteed delivery (GD) feature, also referred to as guaranteed processing. Guaranteed processing ensures that all messages from your message source are sent and processed without error or duplication, even in situations such as server crashes or lost network connections.

For information on TIBCO certified mode delivery, see your TIBCO documentation. For information on Sybase CEP guaranteed processing, see the *Sybase CEP Integration Guide* > *Implementing Guaranteed Processing*.

Properties

The standard and certified mode output adapters provide several configuration properties.

These include:

Property Name	Type	Description
Service	String	The Service property specifies the Operating System network UDP service that should be used to send/receive messages (for example, "rendezvous:5238"). If it is left blank, the service named "rendezvous" is used by default, with default port number 7500.
Network	String	If the Rendezvous daemon host computer has multiple Operating System network interfaces, the Network property must be used to specify which one should be used for Rendezvous message traffic (for example, "lan0"). Otherwise, this property may be left blank.
Daemon	String	The Daemon property specifies the name of the Rendezvous daemon host computer and the port number that should be used to communicate with it (for example, "myHost1:7675"). If this is left blank, the Rendezvous default port is used.
Subject	String	The Subject property specifies the Rendezvous Subject name to be associated with the outgoing messages (such as "Trades.Live"). Specify either Subject or SubjectColumn, but not both.

SubjectColumn	String	The name of a String column. The value of the specified column becomes the Rendezvous Subject name to be associated with the outgoing messages. Specify either Subject or SubjectColumn, but not both.

The certified mode output adapter also requires the following properties:

Property Name	Type	Description
TransportName	String	(Required). The CM Correspondent Name. The value must conform to the Rendezvous identifier rules and must be unique across all connections to the Rendezvous daemon.
Ledger	String	(Required). The path and name of a file to use as the Rendezvous persistent ledger. The adapter stores Rendezvous-specific information in this file and allows the adapter to recover from disconnects and crashes/restarts. The file can exist anywhere within the file system, not just within the Sybase CEP directories. However, Rendezvous requires that it must exist within the local file system.

The properties are described in the TIBCO Rendezvous documentation.

Conversions

Outgoing Rendezvous messages will be generated with fields from the values in the Sybase CEP stream. The name of each field will be precisely that of the schema column (text case is preserved). Any columns with NULL values will not be converted to Rendezvous fields. Thus, a row with all NULL values should yield an empty Rendezvous message.

Sybase CEP data columns will be translated to Rendezvous fields as follows:

Sybase CEP Data Type	Tibco Rendezvous Data Type
Integer	32-bit Signed Integer
Long	64-bit Signed Integer
Float	64-bit Floating-point
String	String
Timestamp	64-bit Signed Integer
Interval	64-bit Signed Integer
Boolean	Boolean
XML	XML
BLOB	Opaque

For any Sybase CEP schema column of type Interval, the corresponding Rendezvous field should be of type Signed 64-bit Integer (or a smaller signed/unsigned Rendezvous integer data type), which will contain a value representing the number of microseconds in the interval.

Known Issues

Some issues may affect the use of the TIBCO Rendezvous adapters. Being aware of these issues and their potential work-arounds will help your testing and troubleshooting efforts.

Issues with the TIBCO Rendezvous software may prevent the first message from being received after a Certified Message Delivery agreement is established. This issue affects inital messages sent when using the TIBCO certified mode input adapter.

This is a known issue with the TIBCO certified mode delivery feature. For more information, see the *TIBCO Rendezvous Concepts Guide*.