

RTView Datasource - TIBCO EMS Administration

TIBCO EMS Administration

RTView allows direct monitoring of the health and performance of the TIBCO EMS servers. It communicates with the servers via the Admin API (tcp or ssl connection). The metrics for each EMS server includes a table named ServerTable that contains information (e.g. Name, URL, Agent Name, etc.) for each server being monitored, in addition to a table for each of the following `com.tibco.tibjms.admin` classes:

Table Name	TibjmsAdmin Class
ServerInfo	<code>com.tibco.tibjms.admin.ServerInfo</code>
Users	<code>com.tibco.tibjms.admin.UserInfo</code>
ListenPorts	<code>com.tibco.tibjms.admin.ServerInfo</code> <code>getListenPorts()</code> method
Connections	<code>com.tibco.tibjms.admin.ConnectionInfo</code>
Consumers	<code>com.tibco.tibjms.admin.ConsumerInfo</code>
Producers	<code>com.tibco.tibjms.admin.ProducerInfo</code>
Durables	<code>com.tibco.tibjms.admin.DurableInfo</code>
Queues	<code>com.tibco.tibjms.admin.QueueInfo</code>
Topics	<code>com.tibco.tibjms.admin.TopicInfo</code>
Routes	<code>com.tibco.tibjms.admin.RouteInfo</code>

TIBCO EMS Administration - Setup

Proper setup of RTView for EMS Administration requires that the following environmental variables are defined:

TIBJMS_ROOT: TIBCO EMS install directory (e.g., C:/TIBCO/EMS/5.0)
RTV_USERPATH (if using SSL): TIBCO EMS SSL support jars

Example:

```
C:\TIBCO\ems\clients\java\tibcrypt.jar;C:\TIBCO\ems\clients\java\jnet.jar;  
C:\TIBCO\ems\clients\java\jcert.jar;C:\TIBCO\ems\clients\java\jsse.jar
```

TIBCO EMS Administration - Configuration

To configure, select Tools>Options>TIBCO EMS Administration>TIBCO EMS Administration

EMS Manager can display a number of EMS Servers based on

- Autodiscovery
 - TIBCO Hawk JMS_Controller microagent installed on each host machine and/or
 - Route information (no Hawk required)
- Manual
 - Servers.xml – used to provide a list of known EMS Servers

All EMS Admin related settings are saved under JMSADMINOPTIONS.ini

Syntax of servers.xml

```
<tr name="">  
  <td value="Server Name"/>  
  <td value="Server URL"/>  
  <td value="Agent Name (leave blank if not running TIBCO Hawk)"/>  
  <td value="UserName"/>  
  <td value="Password"/>  
</tr>
```

TIBCO EMS Administration – Example of servers.xml

```
<?xml version="1.0"?>
<dataset xmlns="www.sl.com" version="1.0">
<table key="Servers">
  <tc name="Name"
    type="string"
    index="false"/>
  <tc name="URL"
    type="string"
    index="false"/>
  <tc name="Agent"
    type="string"
    index="false"/>
  <tc name="User"
    type="string"
    index="false"/>
  <tc name="Password"
    type="string"
    index="false"/>
  <tr name="">
    <td>EMS-SERVER</td>
    <td>tcp://localhost:7222</td>
    <td></td>
    <td>admin</td>
    <td></td>
  </tr>
</table>
</dataset>
```

TIBCO EMS Administration – Configuration

- **Enable Server Monitoring:** Enables the maintenance of TIBCO EMS Administration metrics for each server listed in the specified Servers File.
- **Discover Servers using Routes:** Uses the Routes server metrics table to enable automatic discovery of EMS servers. A new server is added to the table only if the route to that server is active and connected.
- **Discover Servers using TIBCO Hawk:** Uses the TIBCO Hawk JMS_Controller microagent to enable automatic discovery of EMS servers.
- **Enable Monitor Messages:** Enables message monitoring.
- **Default Admin User Name:** Specify a user name to connect to TIBCO EMS servers. Default is admin.
- **Default Admin Password:** Specify a password to connect to TIBCO EMS servers. Default is no password.
- **Servers File Name:** Enter the name of the file (including path, if necessary) that the EMS Manager will read to determine which servers to monitor. Default file name is servers.xml, located in the directory where you started RTView.
- **Metrics Update Period:** Enter the time in milliseconds to control how often EMS Server metrics will be queried. Default is 0, which queries according to the update period specified on the Application Options General tab.

TIBCO EMS Administration – Debugging

Debugging flags

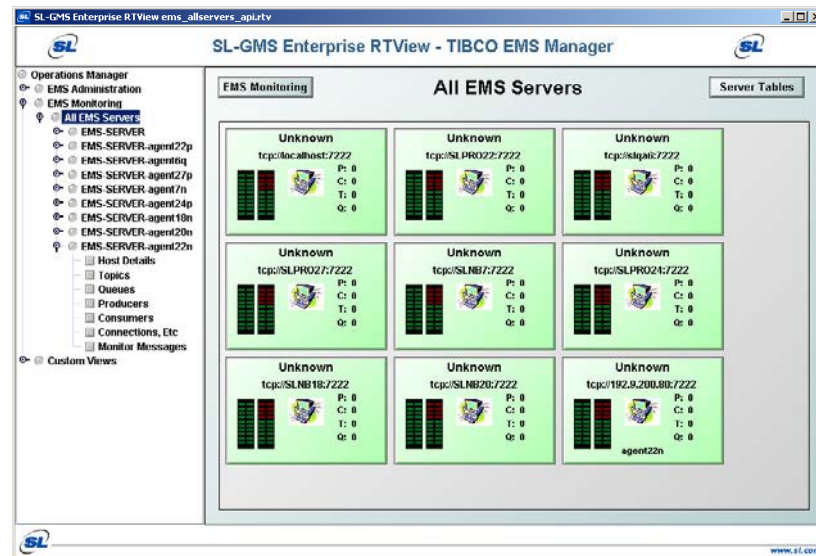
-jmsadmverbose: shows initial connection information and error messages
-jmsadmdstrace:N shows debug info from various jmsadm tables
where N = 1,...,5

TIBCO EMS Manager

RTView TIBCO EMS Manager Application is a prebuilt demo application that

- allows you to monitor and administer your TIBCO EMS Servers.
- provides prepackaged displays for out-of-the-box use
- can be configured to auto-discover EMS Servers or to show predetermined list of Servers
- can be customized to include user-specific displays

Located in RTV_HOME/demos/emsdemo



TIBCO EMS Manager - Features

- EMS Manager: Configured to receive all data sources including TIBCO Hawk, JMS, and metrics from JMS Servers, via Admin API.
- EMS Manager also allow administrative commands, such as create/delete topics and queues, to be sent to JMS Servers.
- Can automatically discover servers by
 - Routes
 - Hawk agents (if using Hawk JMS microagent)
 - Servers.xml (manual configuration)
- Browsing of queues and topics, with pattern matching
- Dynamic creation of EMS Server network topology
- Can be deployed as application or as an applet
- Fully customizable

Exercise

Ex 1: Create a connection to the EMS Server

1. Select Tools>Options>TIBCO EMS Administration>TIBCO EMS Servers
2. Add Server
3. Fill in the Server URL, username and password fields. Server Name and Agent Name are optional.
4. Select "OK"
5. Select "Apply and Save Servers File" to save the entry.

It will be saved as servers.xml in your current working directory.

A screenshot of a Windows-style dialog box titled "Add EMS Server". The dialog has a blue title bar with the SL logo and a close button. It contains five input fields: "Server URL" with the text "tcp://localhost:7222", "Server Name" (empty), "Agent Name" (empty), "User Name" with the text "admin", and "Password" (empty). At the bottom, there are three buttons: "OK", "Cancel", and "Help".

Server URL:	tcp://localhost:7222
Server Name:	
Agent Name:	
User Name:	admin
Password:	

OK Cancel Help

Exercise

Ex 2: Create a data attachment to the EMS Server metrics

1. In the builder, select Edit>Add to bring up the palettes
2. Select a table object and drop it in the main drawing area
3. Right-mouse click on the table object to bring up the Object Properties
4. Right-mouse click on the Data:valueTable property
5. Attach to Data>JMSADM
6. Select the URL
7. Select ServerInfo table
8. Select * for columns
9. Repeat steps 3-8 for a few of the other ems tables (e.g., queues, users)

Ex 3: Invoke the EMS Manager demo

1. Copy the servers.xml from Ex 1 to RTV_HOME/demos/emsdemo
2. cd to emsdemo directory
3. Type

```
run_emsmgr.bat
```