BEA JRockit® Mission Control™

Introduction to the JVM Browser

Mission Control 3.0.1
Document Revised: October, 2007

Contents

Welcome to the JVM Browser

Getting Familiar with the JVM Browser 1-1

Customizing the JVM Browser 1-2

About JVM Browser Preferences 1-3

Adding a Connector 1-3

Launching other JRockit Mission Control Plug-ins 1-5

Discovering Oracle JRockit JVMs

About the JRockit Discovery Protocol (JDP) 1-1

About Locally Discovered JRockit JVMs 1-3

CHAPTER 1

Welcome to the JVM Browser

The JVM Browser is a configurable tree view that you can use to manage your Oracle JRockit JVM connections. It will automatically discover locally running JRockit JVMs as well as JRockit JVMs on the network that have been started using the `-Xmanagement:autodiscovery=true` option. Other plug-ins, for example, the JRA tool, uses the JVM Browser to access the connection(s) on which to operate.

When you launch Oracle JRockit Mission Control, the JVM Browser is automatically opened.

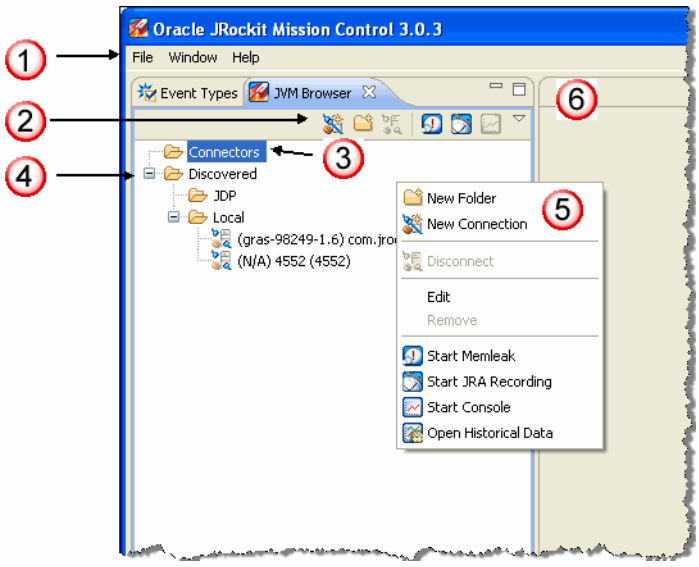
This section is divided into the following topics:

- Getting Familiar with the JVM Browser
- Customizing the JVM Browser
- Adding a Connector
- Launching other JRockit Mission Control Plug-ins
- Discovering Oracle JRockit JVMs

Getting Familiar with the JVM Browser

The JVM Browser automatically launches when you open JRockit Mission Control (see Figure 1-1). In the JVM Browser you set up all your connections to both JVMs that are local on your machine and JVMs that are discovered on the network (through JDP).

Figure 1-1 Overview of the JVM Browser



1. Menu items for JRockit Mission Control. These menus are available for all JRockit Mission Control plug-ins.
2. Buttons to create connections and connector folders as well as launching the JRockit Mission Control plug-ins.
3. List of connected Oracle JRockit JVMs that you have defined yourself.
4. List of discovered (through JDP and locally) JVMs. A JVM discovered by JDP, can be dragged and dropped to the Connectors folder.
5. Menu to create connections and connector folders as well as launching the JRockit Mission Control plug-ins.
6. Window where the different JRockit Mission Control plug-ins launch.

Customizing the JVM Browser

Under the Preference settings for the JVM Browser, you find settings for the JVM Browser itself and plug-ins that plug-in to the Browser, such as JDP (see About the JRockit Discovery Protocol (JDP)) and local attach (see About Locally Discovered JRockit JVMs).

About JVM Browser Preferences

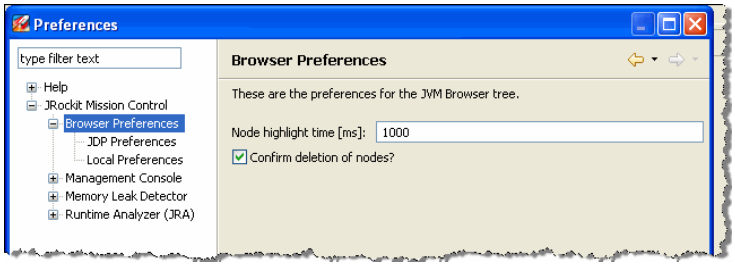
The JVM Browser Preferences consist of setting the node highlight time and setting whether or not to get a confirmation message when removing a connection. Every time a JVM node is moved or automatically discovered for the first time, it is highlighted in the JVM Browser tree.

To set JVM Browser preferences

1. Click **Window > Preferences**.
2. Click **JRockit Mission Control > Browser Preferences**.

   The **Browser Preferences** dialog box appears (see Figure 1-2).

Figure 1-2 JVM Browser Preferences



3. Change the highlight time, the confirmation of removal question, or restore to the default settings.
4. Click **Apply** if you want to change something else in the **Preference** window.
5. Click **OK** when you are done.

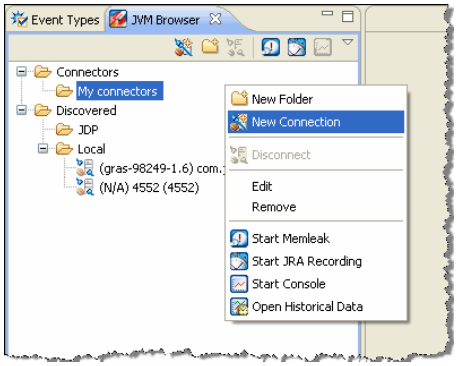
Adding a Connector

You can add your favorite JVM connectors to the Connectors folder, so that you always have them readily at hand.

To add a connector

1. Right-click in the JVM Browser (see Figure 1-3).

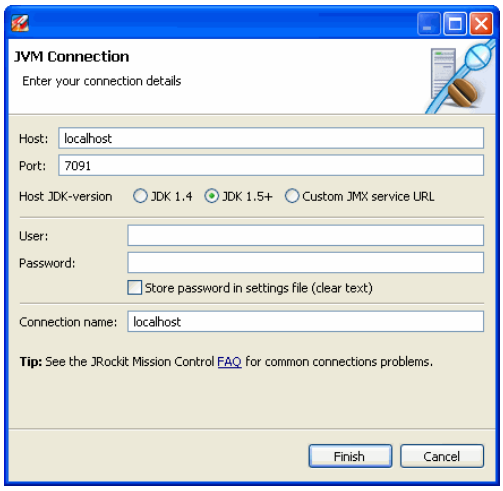
Figure 1-3 Right-click menu



2. Select **New Connection**.

   The **JVM Connection** window appears (see Figure 1-4).

Figure 1-4 JVM Connection window



3. Select which JDK version you are running.

   If you select the **Custom JMX services URL** option, you need to know the exact syntax for the JMX service URL.

4. Type in a **Host**, **Port**, and a **Connection name**.

5. Click **Finish**.

The new connection is added to the **Connectors** folder.

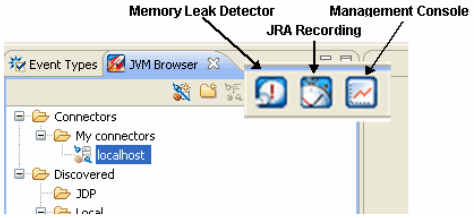
Launching other JRockit Mission Control Plug-ins

From the JVM Browser, you start any other JRockit Mission Control application you have installed in the JRockit Mission Control Client.

To start JRockit Mission Control applications

1. Select a connector.
2. Click on the button for the application that corresponds to what you wan to do (Figure 1-5).

Figure 1-5 Starting other JRockit Mission Control applications



3. The application launches in the main JRockit Mission Control Client window.

CHAPTER 1

Discovering Oracle JRockit JVMs

The JVM Browser contains folders for automatically discovered Oracle JRockit JVMs. There are two ways that JVMs can be discovered: through JDP and local attach.

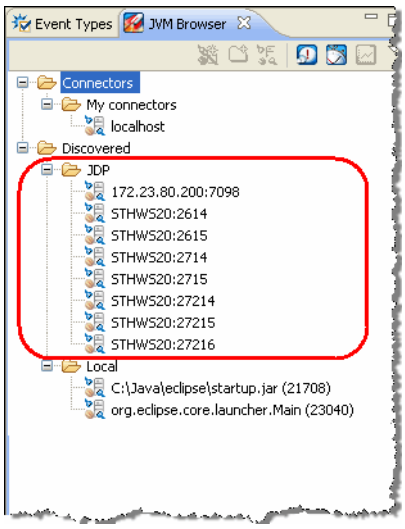
This section is divided into the following topics:

- About the JRockit Discovery Protocol (JDP)
- About Locally Discovered JRockit JVMs

About the JRockit Discovery Protocol (JDP)

The JRockit Discovery Protocol (JDP) allows you to have the JVM Browser look for additional JRockit JVM instances in your network. The JVMs that are found will appear in the **Discovered > JDP** folder in the JVM Browser (see Figure 1-1).

Figure 1-1 Many JVMs Discovered through JDP



JRockit JVMs are discovered automatically through JDP since the `autodiscovery` parameter is set to true (`-Xmanagement:autodiscovery=true`). You might need to send more parameters to the option, for example, `port=<number>`.

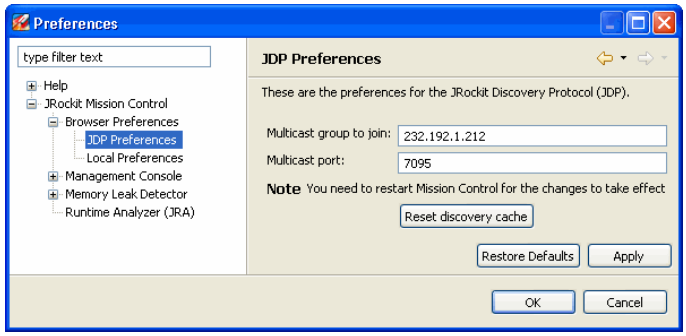
You can change the preferences for JDP, i.e. set which multicast group to join and which port to listen to.

To set JDP preferences

1. Click **Window** > **Preferences**.
2. Click JRockit Mission Control > **Browser Preferences** > **JDP Preferences**.

   The **JDP Preferences** opens (see Figure 1-2).

Figure 1-2 JDP preferences



3. Set an address for the multicast group to join.
4. Set a port to listen to.
5. Click **Apply** if you want to change something else in the **Preference** window.

   Note: You need to restart JRockit Mission Control for the changes to take effect.
6. Click **OK** when you are done.

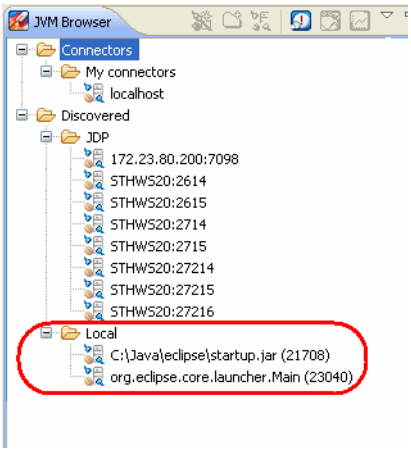
About Locally Discovered JRockit JVMs

In the **Discovered > Local** folder in the JVM Browser, you will see locally discovered JVMs, i.e. JRockit JVMs that are running on your computer. Through the JRockit Mission Control tools, you are able to connect to these JVMs, even though they have not been started with the `-Xmanagement` option.

Note: You can connect to locally discovered JRockit JVMs if the discovered JRockit JVM is R27.1 or later and runs Java SE 5.0 or later.

Figure 1-3 shows how the JVM Browser looks with many locally discovered JVMs.

Figure 1-3 Locally Discovered JRockit JVMs



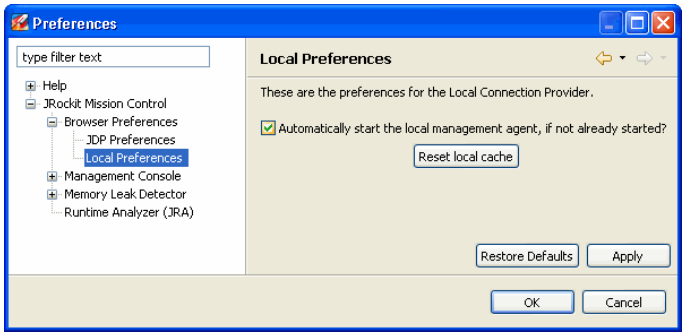
If you cannot connect to a locally discovered JRockit JVM, it probably means that the JVM is a version older than R27.1 or not Java SE 5.0 or later. It can also mean that it was not started with the `-Xmanagment` option and the preference setting does not allow the management agent to be started (see To change preferences for locally discovered JRockit JVM).

To change preferences for locally discovered JRockit JVM

1. Click **Window > Preferences**.
2. Click **JRockit Mission Control > Browser Preferences > Local Preferences**.

   The **Local Preferences** opens (see Figure 1-4).

Figure 1-4 Local Preferences



3. Select **Automatically start the local management agent, if not already started?**.

   If the option **Automatically start the local management agent, if not already started?** is turned off (unchecked), then JRockit Mission Control is not able to connect to the JRockit JVMs that are locally discovered, unless they were started with the `-Xmanagement` option.

4. Click **Apply** if you want to change something else in the **Preference** window.

5. Click **OK** when you are done.