

# Oracle® Rdb Connectivity Manager

## User Guide

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## Preface

### Purpose of This Manual

The Oracle Rdb Connectivity Manager 7.3 User Guide describes concepts, features and usage of the Oracle Rdb Connectivity Manager interface.

### Intended Audience

This document is intended for users responsible for:

- System management
- Database administration
- Application programming

### Access to Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For information, visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

### Document Structure

This document consists of twenty-one (21) chapters:

<a href="#">Chapter 1</a>	Introduction to ORCM.
<a href="#">Chapter 2</a>	Describes the ORCM Explorers.
<a href="#">Chapter 3</a>	Describes how to use ORCM menu options.
<a href="#">Chapter 4</a>	Describes details on how to Process Passwords.
<a href="#">Chapter 5</a>	Describes details the Remote File Popup menu.
<a href="#">Chapter 6</a>	Describes how ORCM displays SQL/Services Server information.
<a href="#">Chapter 7</a>	Describes how ORCM displays SQL/Services Dispatcher information.
<a href="#">Chapter 8</a>	Describes how ORCM displays SQL/Services Service information.
<a href="#">Chapter 9</a>	Describes how ORCM displays SQL/Services Client information.
<a href="#">Chapter 10</a>	Describes how ORCM displays JDBC Server information.
<a href="#">Chapter 11</a>	Describes how to maintain connections.
<a href="#">Chapter 12</a>	Describes how ORCM displays Known database information.
<a href="#">Chapter 13</a>	Describes how ORCM displays Event Trigger information.

<a href="#">Chapter 14</a>	Describes ORCM Wizards.
<a href="#">Chapter 15</a>	Describes how ORCM Remote View.
<a href="#">Chapter 16</a>	Describes how ORCM SQL Worksheet.
<a href="#">Chapter 17</a>	Describes how ORCM Command Line.
<a href="#">Chapter 18</a>	Describes how ORCM Controller Command Line.
<a href="#">Chapter 19</a>	Describes how ORCM RMU Command Line.
<a href="#">Chapter 20</a>	Describes how ORCM Server Scan operation
<a href="#">Chapter 21</a>	Describes how to maintain ORCM Preferences

## Conventions

Oracle Rdb Connectivity Manager is often referred to as ORCM.

Oracle Rdb is often referred to as Rdb.

Hewlett-Packard Company is often referred to as HP.

The following conventions are used in this document:

word	A lowercase word in a format example indicates a syntax element that you supply.
[ ]	Brackets enclose optional clauses from which you can choose one or none.
{ }	Braces enclose clauses from which you must choose one alternative.
...	A horizontal ellipsis means you can repeat the previous item.
· · ·	A vertical ellipsis in an example means that information not directly related to the example has been omitted.

### Conventions in Code Examples

Code examples illustrate SQL or other command-line statements. They are displayed in a monospace (fixed-width) font and separated from normal text as shown in this example:

```
SELECT last_name FROM employees WHERE last_name = 'TOLIVER';
```

[Contents](#)



---

# Chapter 1

## Introduction

Oracle Rdb Connectivity Manager (ORCM) is a graphical user interface (GUI) that provides a server management utility from any platform where Java is available, to manage SQL/Service and JDBC servers running on OpenVMS server systems.

General information on Java may be found at  
<http://www.oracle.com/technetwork/java/index.html>

General information on JDBC may be found at  
<http://www.oracle.com/technetwork/java/index-142838.html>

Documentation for HP's Java for OpenVMS system may be found at  
<http://h18012.www1.hp.com/java/>

General information and documentation for Oracle Rdb may be found at  
<http://www.oracle.com/technetwork/products/rdb/overview/index.html>

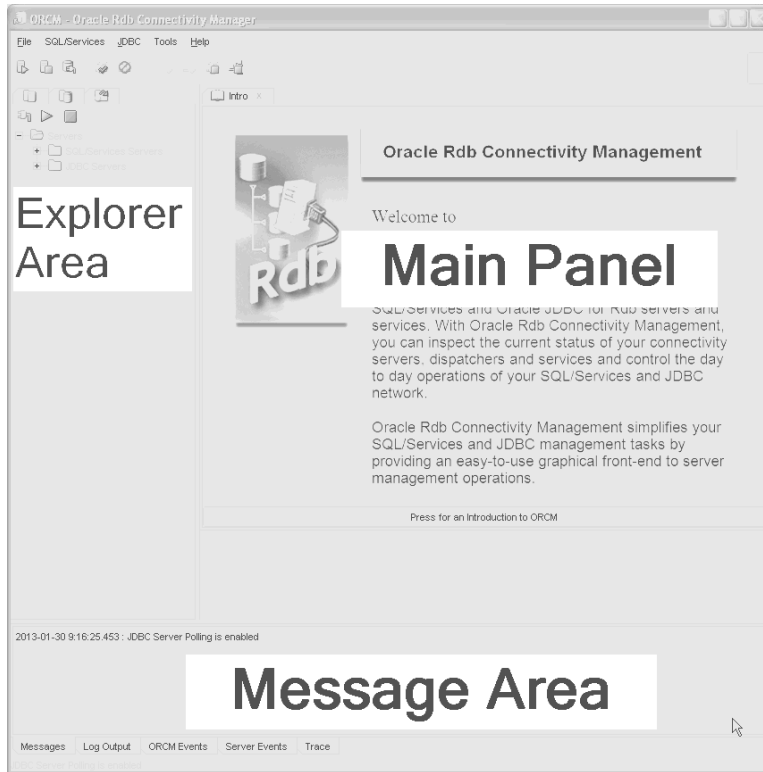
Documentation for Oracle SQL/Services and Oracle JDBC for Rdb may be found at  
<http://www.oracle.com/technetwork/products/rdb/documentation/rdb-doc-rlp-523618.html>

### 1.1 Overview of ORCM user interface

The following sections describe the layout and operation of the ORCM user interface:

- [Layout](#)
- [Main Menu](#)
- [Explorer Area](#)
- [Main Panel](#)
- [Tabbed Panel Navigation](#)
- [Message Area](#)
- [Working with ORCM Entities](#)

### 1.2 Layout



**Figure 1 - Layout**

The ORCM user interface consists of a [main menu bar](#) situated at the top of the display, a panel consisting of an [explorer area](#) on the left and the [main multi-tabbed panel](#), also called the [work area](#), on the right and a tabbed [message area](#) on the bottom of the display.

## 1.3 Main Menu



**Figure 2 - Main Menu**

The main menu consists of two menu areas. On top is a text-based menu strip, and below an icon-based button menu strip. Use these menus to navigate around ORCM and carry out various operations on SQL/Services and JDBC.



**Figure 3 - Network Busy Icon**

To the right of the main menu is a network busy icon. When this icon is spinning, a network operation is currently in progress.

See [Using Menu Options](#) for information on the operations that may be carried out from these menu options.

## 1.4 Explorer Area

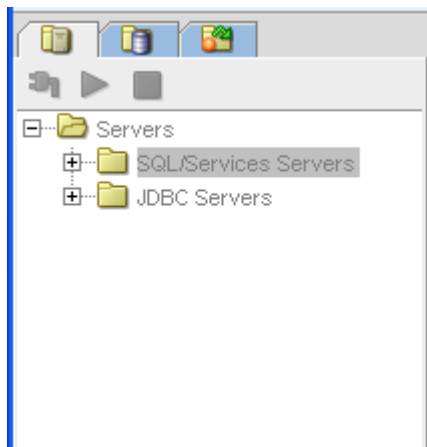


Figure 4 - Explorer area

The explorer area consists of multiple explorer or object trees.

Click on one of the tabs in this area to select the explorer you are interested in. ORCM has three explorer trees, [Server](#), [Databases](#) and [Event Triggers](#). When you start ORCM the Server explorer will be active. See the following sections for more information on the explorers.

### 1.4.1 Server Explorer

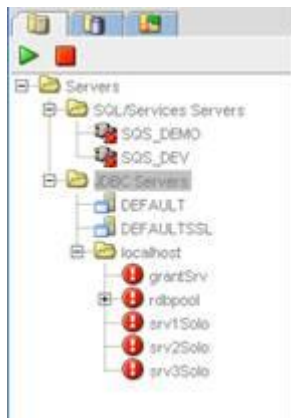


Figure 5 - Server explorer

The server explorer allows you to see and navigate the various entities that ORCM maintains and controls.

There are two main branches of this server explorer tree, the SQL/Services sub-tree containing the [SQL/Services servers](#) that ORCM knows about, and the JDBC sub-tree that shows known [JDBC servers](#).

ORCM uses its configuration file to load up the explorer with SQL/Services and JDBC server definitions. If JDBC server poll is enabled, the server tree may also contain JDBC servers that responded to the POLL request, even if they are not described in the configuration file.

Click on a server node in the Servers tree to display information about that server. ORCM will display information about the server in the main panel and a sub-tree of subordinate entities may be displayed under the server node in the server tree.

Depending on the type of server, you may see the following server children in the sub-tree:

- [SQL/Services dispatchers](#)
- [SQL/Services services](#)
- [SQL/Services clients](#)
- JDBC Pooled Servers
- JDBC Clients

Click on a child node in the server sub-tree to display information about that entity. This information will be shown as a new tabbed panel within the main panel.

Right clicking on a Servers tree node will display a popup menu of operations that may be carried out on that selected entity.

**Note:**

**1/. SQL/Services Servers.**

Before you can use ORCM to maintain SQL/Services servers you will need to create control connection definitions for each server you will be controlling. You can either modify the ORCM configuration file, or use one of the ORCM main menu options to add a new [SQL/Services control connection](#) definition.

**2/. JDBC Servers.**

The ORCM configuration file that is created during installation only contains definitions for the default JDBC servers. If you wish to startup and control JDBC servers using ORCM you will have to provide server definitions for each server you wish to control. You can either modify the ORCM configuration file to add JDBC Server definitions or use one of the ORCM main menu options to [create a new server](#) definition.

See [Server Explorer: SQL/Services Servers](#) and [Server Explorer: JDBC Servers](#) for more information on the Server Explorers.

## 1.4.2 Database Explorer

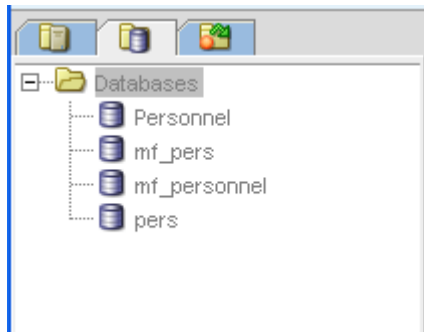


Figure 6 - Database explorer

The database explorer displays each database that ORCM knows about. Known database definitions are maintained in the ORCM configuration file and specify connection details that will allow ORCM to connect to the database using JDBC thin connections.

You can either modify the ORCM configuration file to add known database definitions or use an ORCM menu option to [create a new known database](#) definition.

Click on a database node in the databases tree to display information about that [known database](#). This information will be shown as a new tabbed panel within the main panel.

Right clicking on a database tree node will display a popup menu of operations that may be carried out on that selected entity.

See [Database Explorer: Known Databases](#) for more information about the Database Explorer.

### 1.4.3 Event Trigger Explorer



The event trigger explorer displays each JDBC server event trigger that ORCM knows about.

You can either modify the ORCM configuration file to add event trigger definitions or use an ORCM menu option to [create a new event trigger](#) definition.

**Figure 7 - Event Trigger explorer**

Click on an Event Trigger node in the EventTriggers tree to display information about that [Event Trigger](#). This information will be shown as a new tabbed panel within the main panel.

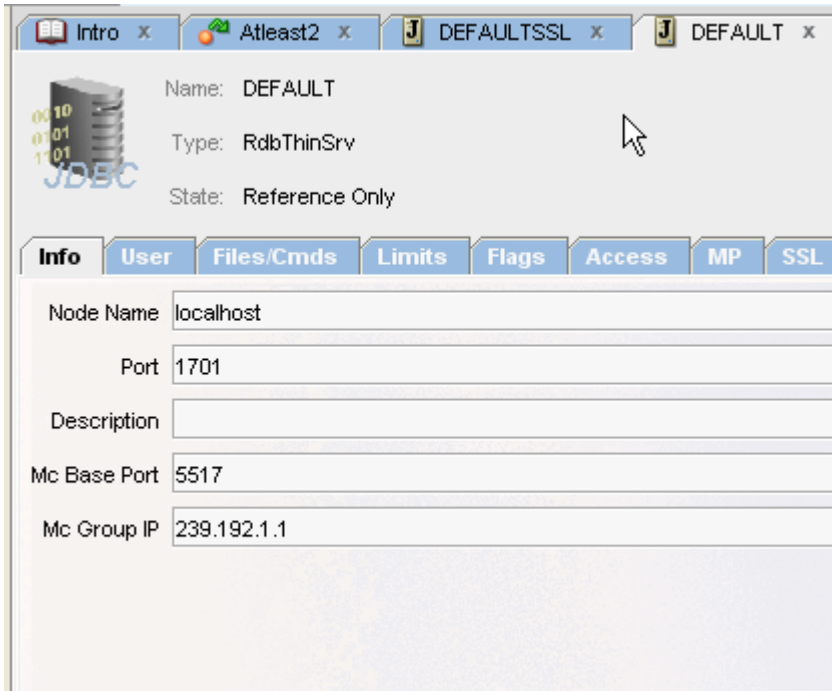
Right clicking on an Event Trigger tree node will display a popup menu of operations that may be carried out on that selected entity.

See [Event Triggers Explorer: Event Triggers](#) for more information about the Event Trigger Explorer.

## 1.5 Main Panel

The main panel, called the Work Area, is where the majority of ORCM display and entry panes will be displayed.

When you click on an entity in one of the explorer trees, a panel showing details of the highlighted entity will be displayed in main panel area as a separate tabbed pane. The panel's tab will indicate the name and type of the entity:

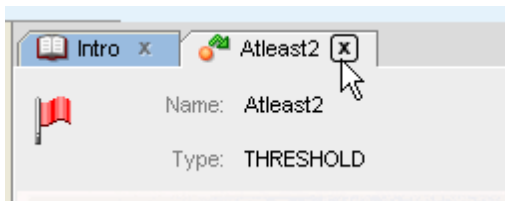


**Figure 8 - Tabs**

The following ORCM entities may be displayed in the main panel:

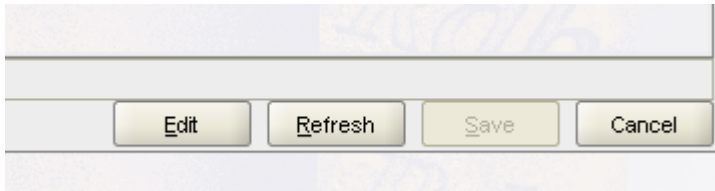
- [SQL/Services servers](#)
- [SQL/Services dispatchers](#)
- [SQL/Services services](#)
- [SQL/Services clients](#)
- [JDBC servers](#)
- [Known databases](#)
- [Event triggers](#)

## 1.6 Tabbed Panel Navigation



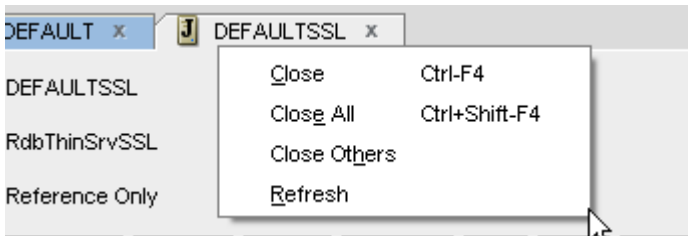
**Figure 9 - Tab Close**

You can navigate through these tabs to select the displayed entity you are interested in. A panel may be closed by clicking **x** on the entity's tab.



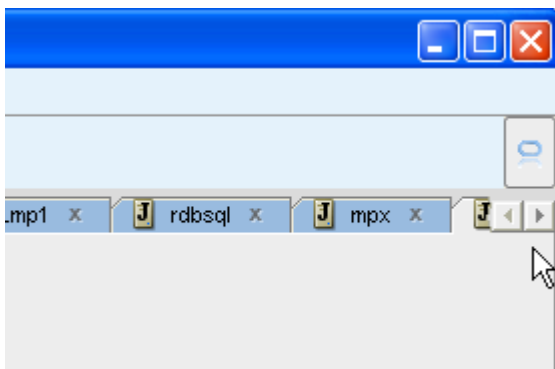
**Figure 10 - Cancel button**

The panel may also be closed by clicking the CANCEL button on the displayed panel.



**Figure 11 - Tab popup menu**

Right-click on a tab in the main panel to bring up a popup menu. The panel may also be closed by choosing the Close menu option on the displayed menu.



**Figure 12 - Tab scroll**

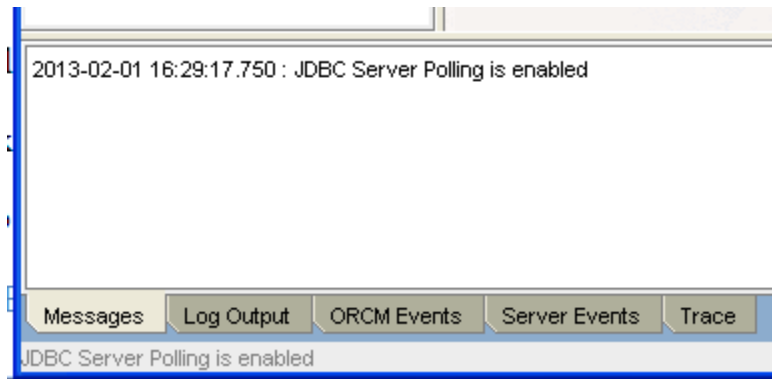
It is possible that there may be too many tabs to display on the current screen. If this is the case, the left and right arrow buttons at the end of the tab bar may be used to scroll across to see hidden tabs.

## 1.7 Message Area

Various status and information messages are displayed in the message area.

The message area contains multiple sub-panels that display different types of messages including:

- General messages
- Log Output
- ORCM Events
- Server Events
- Trace

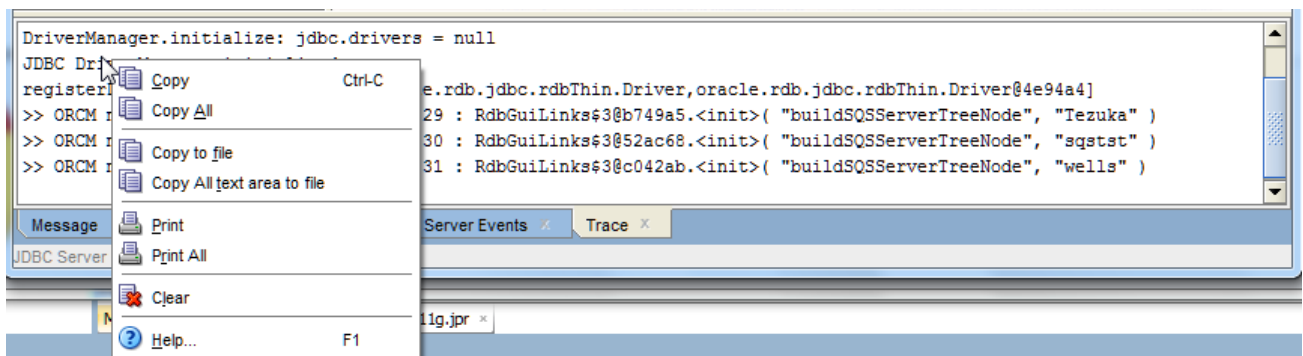


**Figure 13 - Message area**

You can view messages of a particular type by selecting the appropriate tab in this message area.

### 1.7.1 Message Area Popup Menu

Right-click within the message area to bring up a popup menu of options:



**Figure 14 - Message area popup menu**

The following menu options are available:

- **Copy** - Copy the selected text from the selected message area sub-panel to the global paste buffer.
- **Copy All** - Copy all the text within the selected message area sub-panel to the global paste buffer.
- **Copy to file** - Copy the selected text from the selected message area sub-panel to the designated file. You will be prompted for a recipient filename.
- **Copy All text area to file** - Copy all the text within the selected message area sub-panel to the global designated file. You will be prompted for a recipient filename.
- **Print** - Print the selected text from the selected message area sub-panel. A print dialog will be displayed where you may specify where the information is to be printed.
- **Print All** - Print all the text within the selected message area sub-panel. A print dialog will be displayed where you may specify where the information is to be printed.



- **Clear** - Clear all text from the selected message area sub-panel.
- **Help** - Display help on popup menu options

## 1.8 Working with ORCM Entities

ORCM allows you to display and maintain various entities relating to your active SQL/Services and JDBC environment.

### 1.8.1 SQL/Services Entities

You may view and maintain the following SQL/Services entities or objects:

- SQL/Services Servers
- SQL/Services Dispatchers
- SQL/Services Services
- SQL/Services Clients

To display the SQL/Services entities that a SQL/Services server controls, you will first have to make a control connection to that server.

To connect to a SQL/Services server you may:

- click the [Connect button](#) on the SQL/Services server panel, or
- choose the [SQL/Services > Connect to SQL/Services Server Control](#) Main Menu option, or
- right-click the server name in the server explorer and select the [Connect to SQL/Services Server Control](#) menu option.

If you choose one of the options as shown above, a [SQL/Services server control connection dialog](#) will be displayed. Connection details will be prefilled for you if you have selected a pre-existing connection.

If you need to connect to a SQL/Services server that is not already displayed in the server explorer, you will have to create a new control connection definition:

- choose [SQL/Services Control Connection Wizard ...](#) from the **File > Wizard** option of the Main Menu or,
- choose [SQL/Services Control Connection ...](#) from the **File > New** option of the Main Menu or,
- right-click the SQL/Services Servers node of the server explorer to bring up the SQL/Services Servers popup menu and choose the [Modify SQL/Services Server Control](#) option .

Once connected, the various dispatchers and services that the server has control over will be displayed. To view details of a SQL/Services entity, click on the entity name displayed in the [server explorer](#).

You may use a main menu option or a popup menu option to create a new dispatcher or services. See [Main Menu > File > New option](#) and [SQL/Services server popup menu](#) for more details.

You may also select options from the [SQL/Services menu](#) to carry out maintenance of the SQL/Services environment.

---

See also:

*Managing a Server* section of the **Oracle SQL/Services Server Configuration Guide**.

## 1.8.2 JDBC Entities

JDBC servers known to ORCM are displayed in the [server explorer](#) under the JDBC Servers sub-tree.

To view details of a JDBC server, click on the server name displayed in the server explorer. If you wish to create a new JDBC server definition you may:

- add a new server definition directly to the ORCM configuration file ( See *the Oracle JDBC for Rdb User Guide* for information on JDBC server configuration properties and the XML-formatted configuration file) , or,
- choose [JDBC Server Definition Wizard ...](#) from the **File > Wizards** option of the Main Menu or,
- choose [JDBC Server](#) from the **File > New** option of the Main Menu or,
- right-click the JDBC Servers node of the server explorer to bring up the JDBC Servers popup menu and choose the [New JDBC Server...](#) option.

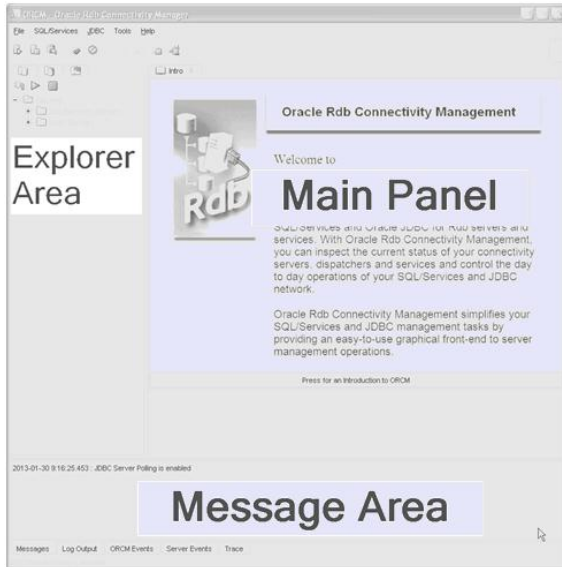
You may also select options from the [JDBC main menu](#) to carry out maintenance of the JDBC environment.

---

See also:

*Server Operations* section of the **Oracle JDBC for Rdb User Guide**.

# Chapter 2 The Explorers

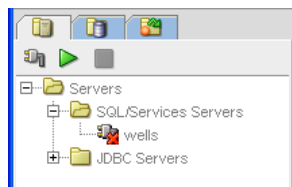


**Figure 15 - Explorers**

The following tree-structured explorers are available within the Explorer Area of ORCM to navigate to and maintain ORCM entities:

- [Server Explorer: SQL/Services Servers](#)
- [Server Explorer: JDBC Servers](#)
- [Database Explorer: Known Databases](#)
- [Event Triggers Explorer: Event Triggers](#)

## 2.1 Server Explorer: SQL/Services Servers



**Figure 16 - Server Explorer showing SQL/Services Servers**

The server explorer may be used to navigate through the SQL/Services servers known to ORCM.

SQL/Services servers may be defined in the ORCM configuration file. Each SQL/Services server known to ORCM will be displayed in the server explorer under the SQL/Services Servers sub-tree.

## 2.1.1 Operations

To carry out operations on a predefined server, you must first select that server within the SQL/Services Servers sub-tree by clicking on it. When clicked, a [SQL/Services server panel](#) representing that server will be displayed in the Main panel.

If the server has *autoconnect* enabled, or ORCM has already connected to that server, the details of the server will be displayed in the Main panel and the server tree will be updated with the SQL/Services objects or entities that the server is maintaining.

If ORCM has not already connected to the server, a basic definition of the server as found in the ORCM configuration file will be displayed in the Main panel. ORCM cannot display any more details until you have successfully established a control connection to that server.

## 2.1.2 Connecting to a SQL/Services Server

If the server does not have *autoconnect* enabled, you will have to connect to it by either:

- Pressing the connect button on the server panel

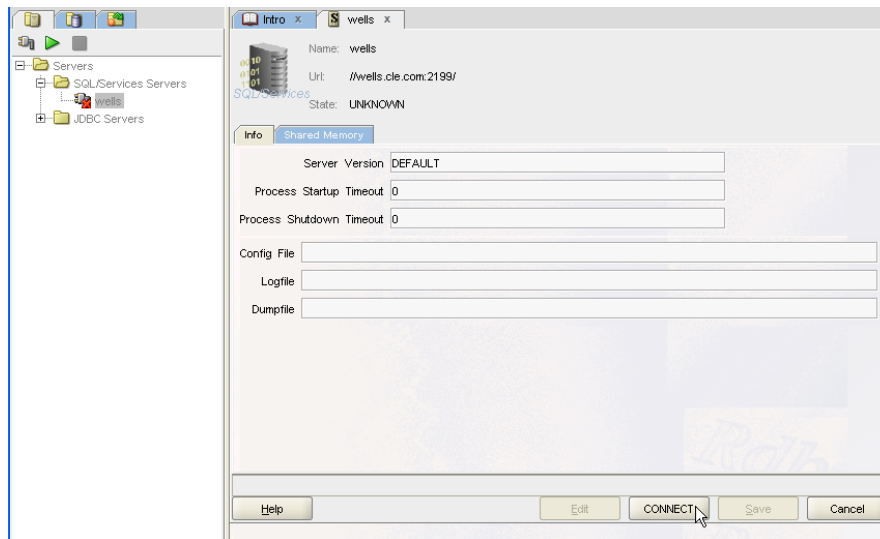


Figure 17 - The connect button

or

- Right clicking the server node in the Servers tree and selecting the Connect option from the [popup menu](#) that is displayed.

Once connected, maintenance and other operations may be carried out on that server. These operations may be invoked from either the [Main menu](#), or by using the [SQL/Services server popup menu](#) which may be displayed by right-clicking the server name within the server tree, or by actions within the [SQL/Services server panel](#) directly. The current status of SQL/Services entities is indicated by the icons next to the name of the entity on the server tree:

- ❗ An exclamation icon against the entity name indicates that the entity is known but its status is currently unknown. This usually indicates that the entity is not currently running.
- ✅ Entities that are known to be running are indicated by a green tick icon.

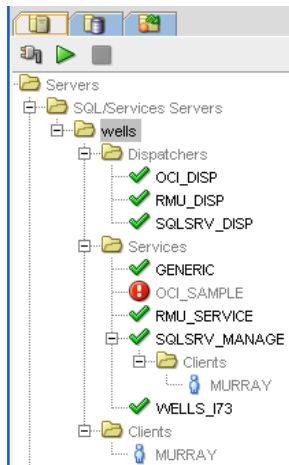


Figure 18 - Server Explorer showing different SQL/Services Server status icons

### 2.1.3 SQL/Services server popup menu

The SQL/Services server popup menu may be invoked by right-clicking the server name within the server tree:

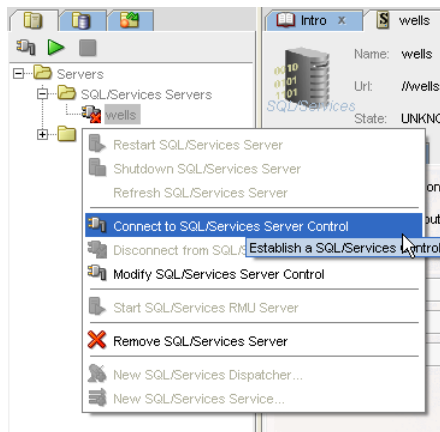


Figure 19 - SQL/Services Server popup menu

Various server operations may be invoked using this popup menu; some operations may not be available due to the current state of the server.

## 2.1.4 SQL/Services server popup menu options

The following menu options may be found on the SQL/Services server popup menu:

- Restart SQL/Services Server - stop and then restart the selected server.
- Shutdown SQL/Services Server - stop the selected server.
- Refresh SQL/Services Server - request ORCM to get the server current status and configuration from the server.
- [Connect to SQL/Services Server Control](#) - display a SQL/Services Server connect panel allowing connection to this server.
- Disconnect from SQL/Services Server Control - disconnect from the server and clear the current server details.
- [Modify SQL/Services Server Control](#) - display a SQL/Services Server connect panel for this server allowing you to change the connection details.
- Start SQL/Services RMU server - request the server to start the RMU dispatcher and associated RMU service.
- Remove SQL/Services Server - remove the definition of this server from the ORCM configuration file.
- [New SQL/Services Dispatcher ...](#) - allow the creation of a new dispatcher on the connected server.
- [New SQL/Services Service ...](#) - allow the creation of a new service on the connected server.

---

See also:

*Managing a Server* section of the **Oracle SQL/Services Server Configuration Guide**.

## 2.2 Server Explorer: JDBC Servers

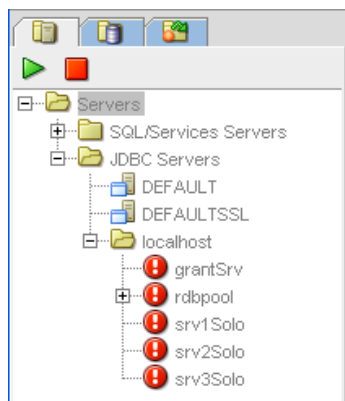


Figure 20 - Server Explorer showing JDBC Servers

The server explorer may be used to navigate through the JDBC servers known to ORCM. JDBC servers may be defined in the ORCM configuration file, or may be discovered by ORCM when it carries out JDBC server polling. Each JDBC server known to ORCM will be displayed in the server explorer under the JDBC Servers sub-tree.





JDBC Servers are grouped under the computer node or host they are either defined to run on or were discovered on.

In addition, default JDBC server definitions found within the configuration file are displayed at the top of the JDBC server sub-tree.

**Note:**

The default server definitions specify default characteristics that other servers defined in the same configuration file may inherit. They do not represent active JDBC servers and as such, standard operations such as START and STOP may not be carried out on these server definitions.

The current status of a server is indicated by the icon that is next to the name on the server tree:

-  This icon indicates that the server is a reference-only server definition. Such server definitions may be inherited by other server definitions but standard server operations such as START and SHUTDOWN cannot be carried out on these entities.
-  An exclamation icon against the server indicates that the server is known but its status is currently unknown. This usually indicates that the server is not currently running.
-  Servers that are known to be running are indicated by a green tick icon.
-  Servers that are neither in the configuration file, nor have responded to the poll request, are designated as unknown using this **no access** icon.

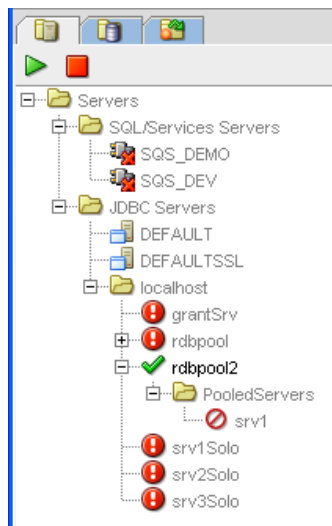


Figure 21 - Server Explorer showing different JDBC Server status icons

## 2.2.1 JDBC Pool Servers

JDBC Servers taking part in a server pool will also be displayed in sub-trees under the JDBC Pool server they are participating in:

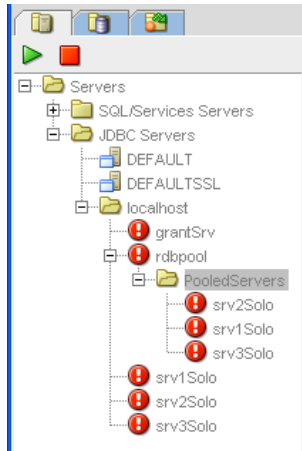


Figure 22 - Server Explorer showing JDBC Pool Server

As servers may participate in more than one pool, the same server name may be displayed multiple times within the server explorer, once in each pool that it participates and additionally, it will be shown directly under the node within which it is defined or running.

As pool servers may regulate servers running on remote computer nodes, it is also possible that the same server name may be shown under multiple computer node sub-trees.

## 2.2.2 Operations

To carry out operations on a predefined or discovered server, you must first select that server within the JDBC Servers sub-tree by clicking on it.

When clicked, a [JDBC server panel](#) representing that server will be displayed in the Main panel.



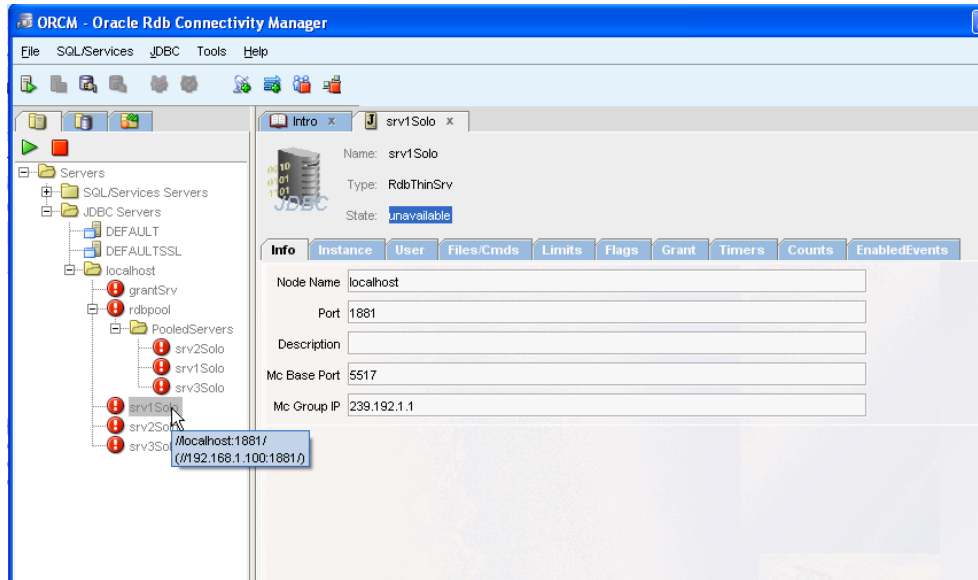


Figure 23 - JDBC Server panel

Once selected, maintenance and other operations may be carried out on that server.

These operations may be invoked from either the [Main menu](#), or by using the [JDBC host popup menu](#) which may be displayed by right-clicking a node or host within the server tree, or by using the [JDBC server popup menu](#) which may be displayed by right-clicking the server name within the server tree, or by actions within the [JDBC server panel](#) directly.

### 2.2.3 JDBC host popup menu

The JDBC host popup menu may be invoked by right-clicking a host name or IP under the JDBC Servers sub-tree of the server tree:

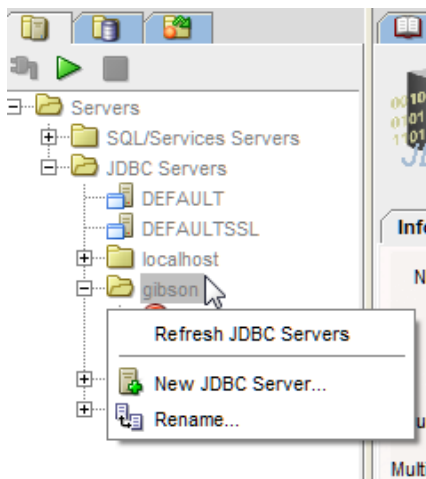


Figure 24 - JDBC Host popup menu

## 2.2.4 JDBC host popup menu options

The following menu options may be found on the JDBC host popup menu:

- Refresh JDBC Servers - request a refresh of the host servers' data.
- New JDBC Server... - create a new server definition, see [JDBC Server Information](#).
- Rename - create an alias for this host to be used in the server tree.

## 2.2.5 JDBC server popup menu

The JDBC server popup menu may be invoked by right-clicking the server name within the server tree:

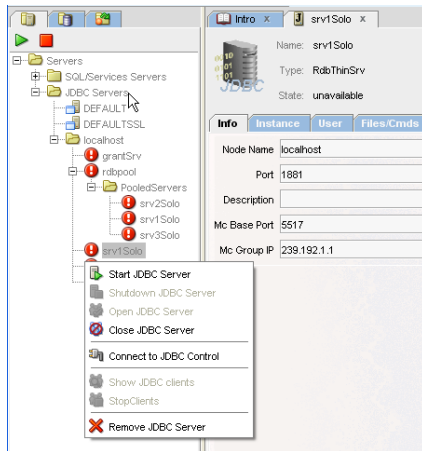


Figure 25 - JDBC Server popup menu

Various server operations may be invoked using this popup menu; some operations may not be available due to the current state of the server.

## 2.2.6 JDBC server popup menu options

The following menu options may be found on the JDBC server popup menu:

- Start JDBC Server - start the selected server.
- Shutdown JDBC Server - stop the selected server.
- Open JDBC Server - open the server allowing clients to access it.
- Close JDBC Server - close the server disabling any further client access to it.
- [Connect to JDBC Control](#) - display a Thin Controller panel allowing controller operations to be sent to this server.
- Show JDBC clients - request a list of clients currently using this server and display as a sub-tree under the server.

- Stop Clients - stop all clients currently using this server.
- Remove JDBC Server - remove the definition of this server from the ORCM configuration file.

---

See also:

*Server Operations* section of the *Oracle JDBC for Rdb User Guide*.

## 2.3 Database Explorer: Known Databases



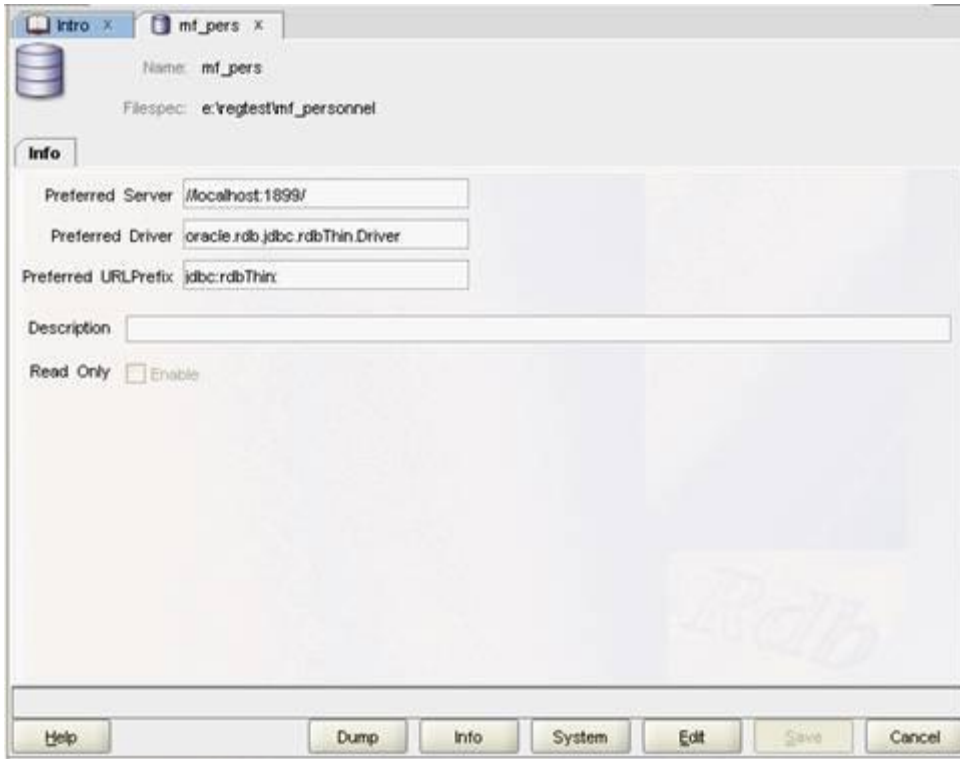
**Figure 26 - Database Explorer showing Known Databases**

The database explorer may be used to navigate through the databases known to ORCM.

Known Databases may be defined in the ORCM configuration file. Each database known to ORCM will be displayed in the database explorer under the Databases tree.

### 2.3.1 Operations

To carry out operations on a Known Database, you must first select that database within the Databases tree by clicking on it. When clicked, a Known Database panel representing that database will be displayed in the Main panel.

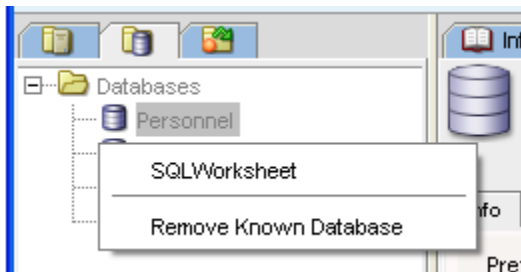


**Figure 27 - Known Database panel**

Once selected, operations may be carried out on that database.  
See [Known Databases](#) for more information.

### 2.3.2 Known Database popup menu

The Known Database popup menu may be invoked by right-clicking the database name within the Databases tree:



**Figure 28 - Known database popup menu**

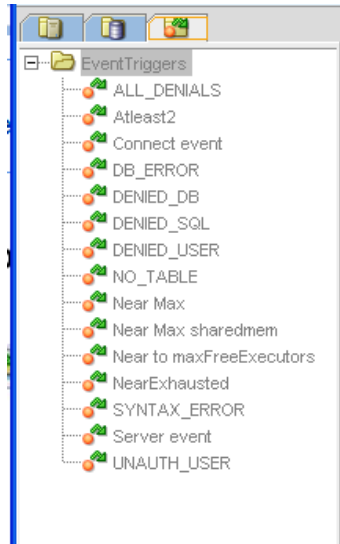
### 2.3.3 Known Database popup menu options

The following menu options may be found on the Known Database popup menu:

- [SQLWorksheet](#) - Invoke the SQL worksheet.
  - [Remove Known Database](#) - remove the definition of this database from the ORCM configuration file.
- 

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## 2.4 Event Triggers Explorer: Event Triggers



**Figure 29 - Event Triggers Explorer showing Event Triggers**

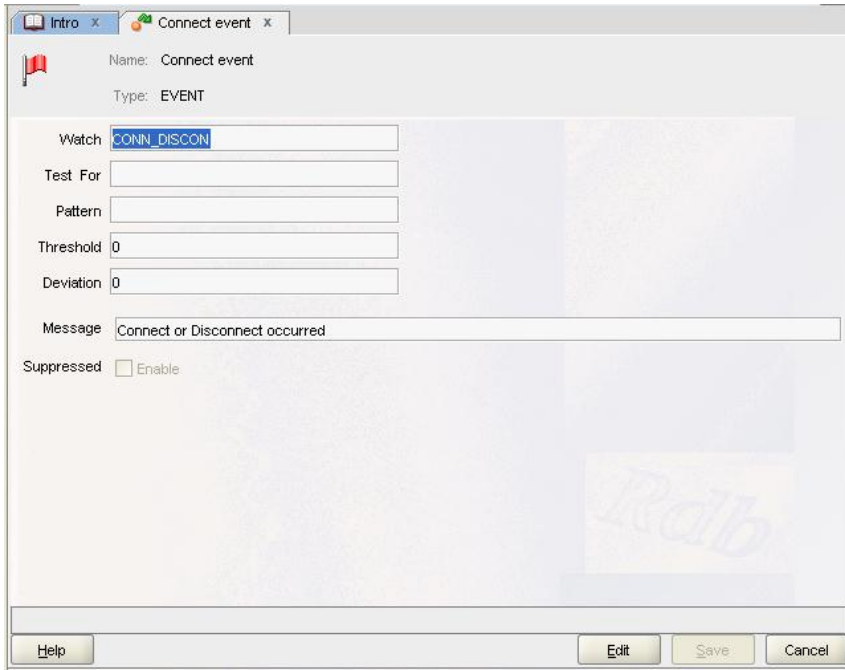
The event triggers explorer may be used to navigate through the event triggers known to ORCM.

Event Triggers may be defined in the ORCM configuration file. Each event trigger known to ORCM will be displayed in the event triggers explorer under the EventTriggers tree.

### 2.4.1 Operations

To carry out operations on an event trigger, you must first select that event trigger within the EventTriggers tree by clicking on it.

When clicked, an EventTrigger panel representing that event will be displayed in the Main panel.



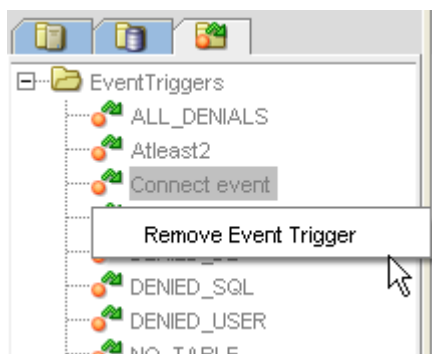
**Figure 30 - Event Trigger panel**

Once selected, operations may be carried out on that event trigger.

See [Event Triggers](#) for more information.

## 2.4.2 Event Trigger popup menu

The Event Trigger popup menu may be invoked by right-clicking the event trigger name within the EventTriggers tree:



**Figure 31 - Event Trigger popup menu**

### 2.4.3 Event Trigger popup menu options

The following menu options may be found on the event trigger popup menu:

*Remove Event Trigger* - remove the definition of this event trigger from the ORCM configuration file.

---

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# Chapter 3

## Using Menu options

ORCM has a number of menus that may be used to choose various options or operations to be carried out.

### *Main Menu*

The ORCM user interface has a main menu bar at the top of the application window that allows access to ORCM management functionality.

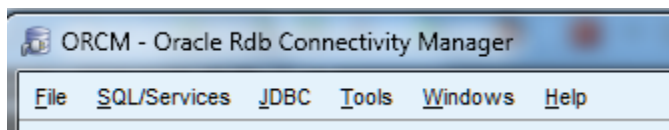


Figure 32 - Main Menu

This chapter describes the features that may be invoked from the main menu:

- [File](#)
- [SQL/Services](#)
- [JDBC](#)
- [Tools](#)
- [Windows](#)
- [Help](#)



### *Main Menu Button Strip*

Immediately below the main menu bar at the top of the application window is the Main Menu Button strip.







Figure 33 - Main Menu Button Strip

These buttons are context-sensitive and the operation invoked by pressing the button may depend on the currently selected server or ORCM panel on display:

-  - Starts the selected JDBC server. See [Start JDBC Server](#).
-  - Stops the selected JDBC server. See [Stop JDBC Server](#).



-  - Invoke connection management. See [Connection Maintenance](#).
-  - Open the selected JDBC server. See [Open JDBC Server](#).
-  - Close the selected JDBC server. See [Close JDBC Server](#)
-  - Create a new SQL/Services dispatcher on the current SQL/Services server. See [New - SQL/Services Dispatcher](#).
-  - Create a new SQL/Services service on the current SQL/Services server. See [New - SQL/Services Dispatcher](#)
-  - Stop all clients on all JDBC servers. See [Stop All Clients on all JDBC Servers](#).
-  - Stop all JDBC servers. See [Stop All JDBC Servers](#).

### ***Popup Menus***

Several popup menus may be invoked by Right-clicking on a field, text area or entity within the explorer area. This chapter also contains information about the following popup menus:

- [Server Explorer - SQL/Services server popup menu](#)
- [Servers Explorer - JDBC server popup menu](#)
- [Database Explorer - Known Database popup menu](#)
- [Event Trigger Explorer - Event Trigger popup menu](#)
- [Remote File popup menu](#)
- [SQL/Services Servers popup menu](#)
- [JDBC Servers popup menu](#)
- [Message Area popup menu](#)
- [Copy/Print popup menu](#)

## **3.1 File**

### **3.1.1 New**

Selecting the *New* option will display a submenu of choices:

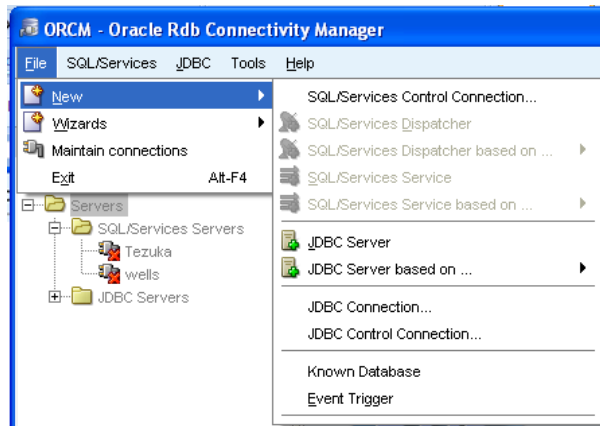


Figure 34 - Menu Option File \ New

### 3.1.1.1 [SQL/Services Control Connection ...](#)

Selecting this option will bring up a SQL/Services control connection form allowing you to create a new control connection for an existing SQL/Services server.

Once you have successfully created the connection definition, you may use this connection to connect to the SQL/Services server to carry out exploration and maintenance on the SQL/Services objects controlled by the server.

### 3.1.1.2 [SQL/Services Dispatcher](#)

Selecting this option will bring up a dispatcher creation form. This option will only be enabled if you have currently selected and connected to a SQL/Services server.

### 3.1.1.3 [SQL/Services Dispatcher based on ...](#)

Selecting this option will bring up a submenu of existing SQL/Services dispatchers that may be used as prototypes for the new dispatcher. Select one of the existing dispatchers from the list and a dispatcher creation form will display already filled with details taken from the selected dispatcher definition.

This option will only be enabled if you have currently selected and connected to a SQL/Services server.

### 3.1.1.4 [SQL/Services Service](#)

Selecting this option will bring up a service creation form. This option will only be enabled if you have currently selected and connected to a SQL/Services server.

### 3.1.1.5 [SQL/Services Service based on ...](#)

Selecting this option will bring up a submenu of existing SQL/Services services that may be used as prototypes for the new service. Select one of the existing services from the list and a service creation form will display already filled with details taken from the selected service definition.

This option will only be enabled if you have currently selected and connected to a SQL/Services server.

### 3.1.1.6 [JDBC Server](#)

Selecting this option will bring up a JDBC server creation form.

### 3.1.1.7 [JDBC Server based on ...](#)

Selecting this option will bring up a submenu of existing JDBC servers that may be used as prototypes for the new JDBC server definition. Select one of the existing servers from the list and a server creation form will display already filled with details taken from the selected server definition.

### 3.1.1.8 [JDBC Connection ...](#)

Selecting this option will bring up a JDBC database connection form allowing you to choose the server and the database you wish to connect. Once you have successfully made the database connection the SQL Worksheet will display allowing you to access data and metadata from the connected database.

### 3.1.1.9 [JDBC Control Connection ...](#)

Selecting this option will bring up a JDBC control connection form allowing you to choose the server you wish to connect to as a control user. Once you have successfully made the connection the Thin Control Command Line form will display allowing you to carry out control commands on the server.

### 3.1.1.10 [Known Database](#)

Selecting this option will bring up a Known Database creation form.

### 3.1.1.11 [Event Trigger](#)

Selecting this option will bring up an Event Trigger creation form.

## 3.1.2 Wizards

The Wizards option allows you to choose from a set of wizards that will help you define things like connections and server definitions.

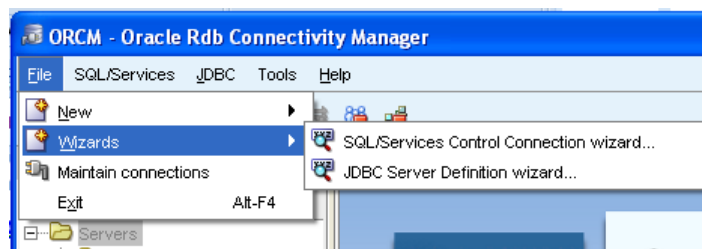


Figure 35 - Menu Option File \ Wizards

### 3.1.2.1 [SQL/Services Control Connection Wizard ...](#)

This option will bring up a wizard that will help you create a connection to an existing SQL/Services server so that you may interrogate or maintain that server.

### 3.1.2.2 [JDBC Server Definition Wizard ...](#)

This option will bring up a wizard that will help you create a new JDBC server definition that will be added to the ORCM configuration file.

## 3.1.3 Maintain Connections

Selecting the option will invoke the [Connection dialog](#) which will allow you to create or maintain [SQL/Services](#), [JDBC control](#) or [Database](#) connections.

## 3.1.4 Exit

Exits the application.

---

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## 3.2 SQL/Services

Selecting the SQL/Services option will display a submenu of choices (many of which will not be enabled unless you have already connected to a SQL/Services Server Control connection):

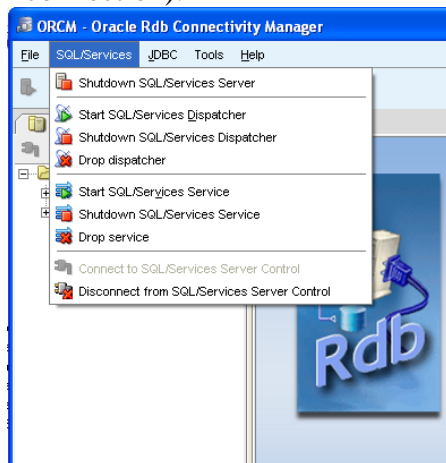


Figure 36 - Menu Option SQL/Services

### 3.2.1 Shutdown SQL/Services Server

Use to shut down the SQL/Services server you have selected in the server tree. This option will only be enabled if you have currently selected and connected to a SQL/Services server.

### 3.2.2 Start SQL/Services Dispatcher

Use to start a dispatcher you have already selected in the server tree. This option will only be enabled if you have currently selected and connected to a SQL/Services server.

### 3.2.3 Shutdown SQL/Services Dispatcher

Use to shut down a dispatcher you have already selected in the server tree. This option will only be enabled if you have currently selected and connected to a SQL/Services server.

### 3.2.4 Drop Dispatcher

Use to remove the selected dispatcher definition from the SQL/Services server's configuration database. This option will only be enabled if you have currently selected and connected to a SQL/Services server.

### 3.2.5 Start SQL/Services Service

Use to start a service you have already selected in the server tree. This option will only be enabled if you have currently selected and connected to a SQL/Services server.

### 3.2.6 Shutdown SQL/Services Service

Use to shut down a service you have already selected in the server tree. This option will only be enabled if you have currently selected and connected to a SQL/Services server.

### 3.2.7 Drop Service

Use to remove the selected service definition from the SQL/Services server's configuration database. This option will only be enabled if you have currently selected and connected to a SQL/Services server.

### 3.2.8 [Connect to SQL/Services Server Control](#)

Make a control connection to the selected SQL/Services server. You must connect to a SQL/Services server before you can change its active or configured environment. Once a connection has been made a list of known SQL/Services objects will be displayed in the server tree for that server.

### 3.2.9 Disconnect From SQL/Services Server Control

Disconnect from the selected connected SQL/Services server. Once disconnected, you will not be able to view or maintain the server's SQL/Services objects unless you connect once more.

---

See also:

*Managing Server Components* section of the **Oracle SQL/Services Server Configuration Guide**.

### 3.3 JDBC

Selecting the JDBC option will display a submenu of operations that may be carried out on your JDBC system:

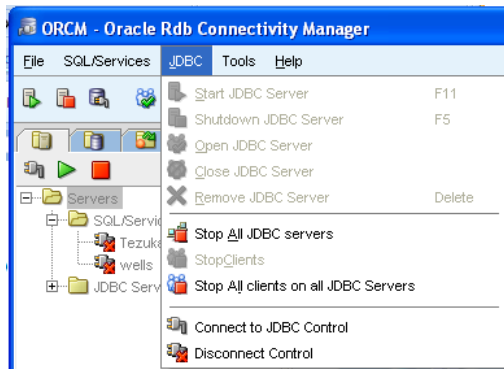


Figure 37 - Menu Option JDBC

#### 3.3.1 Start JDBC Server

Use to start the selected JDBC server. This option will only be enabled if you have selected a JDBC server that is not a reference-only server and is not currently running.

Note:

If the server should be running on a node that is not the same host that the ORCP application is running on, you must have a JDBC manager server running on that remote node. See [Utilizing a Manager Server](#) for details.

#### 3.3.2 Stop JDBC Server

Use to shut down the selected JDBC server. This option will only be enabled if you have selected a JDBC server that is not a reference-only server and is currently running.

#### 3.3.3 Open JDBC Server

Use to open a JDBC server to allow new client connections to be made to it. This option will only be enabled if you have selected a JDBC server that is not a reference-only server and is currently running.

### 3.3.4 Close JDBC Server

Use to close a JDBC server to prevent any further new client connections being made to it until it is re-opened. This option will only be enabled if you have selected a JDBC server that is not a reference-only server and is currently running.

### 3.3.5 Remove JDBC Server

Remove the selected server definition from the current configuration file.

### 3.3.6 Stop All JDBC Servers

Stop all active JDBC servers.

### 3.3.7 Stop Clients

Stop all clients on the selected JDBC server. This option will only be enabled if you have selected a JDBC server that is not a reference-only server and is currently running.

### 3.3.8 Stop All Clients on all JDBC Servers

Stop all clients on all the JDBC servers.

### 3.3.9 [Connect to JDBC Control](#)

Connect to the selected JDBC server as a control user. If you have selected a JDBC server that is not a reference-only server and is currently running, a connection will be made to that server and the Controller panel will be displayed.

If the selected server is not running, you will be prompted for control connection information.

### 3.3.10 Disconnect Control

Disconnect the control connection that is currently connected to the selected server.

---

See also:

*Server Operations* section of the **Oracle JDBC for Rdb User Guide**.

---

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## 3.4 Tools

Selecting the Tools option will display a submenu of ORCM tools that may be used:

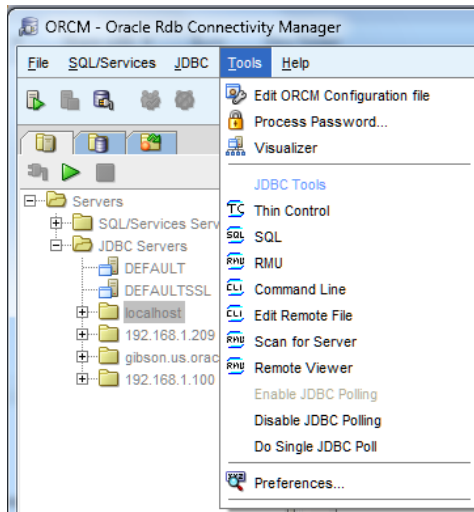


Figure 38 - Menu Option Tools

### 3.4.1 Edit ORCM Configuration File

Select this option to bring up an editor window with the contents of the ORCM configuration file.

### 3.4.2 [Process Password ...](#)

Use to obfuscate passwords. A Password dialog will be displayed allowing you to enter a password to be obfuscated.

### 3.4.3 Visualizer

Bring up a visual display of the SQL/Services and JDBC servers on your network.

### 3.4.4 [Thin Control](#)

Bring up a JDBC controller panel allowing you to execute controller commands on a running JDBC server.

### 3.4.5 [SQL](#)

Invoke the SQL worksheet.

### 3.4.6 [RMU](#)

Bring up a control panel allowing you to execute RMU commands using a running JDBC server.

### 3.4.7 [Command Line](#)

Bring up a control panel allowing you to execute Command Line commands using a running JDBC server.



### 3.4.8 [Scan for Server](#)

Use to scan for running JDBC servers on your network.

### 3.4.9 [Remote Viewer](#)

Display the contents of remote files.

### 3.4.10 **Enable JDBC Polling**

Enable polling for running JDBC servers.

### 3.4.11 **Disable JDBC Polling**

Disable polling for running JDBC servers.

### 3.4.12 **Do Single JDBC Poll**

Execute a single POLL request to locate running JDBC servers.

### 3.4.13 [Preferences](#)

Display the preference panel allowing you to view and make changes to ORCM configuration criteria.

---

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## 3.5 Windows

Selecting the Windows option will display a submenu of options:

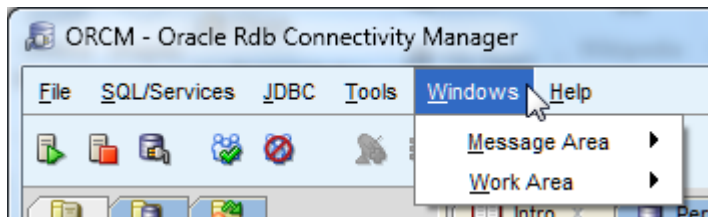


Figure 39 - Menu Option Windows

### 3.5.1 Message Area Option

Selecting **Message Area** will display a submenu of message areas. Selecting one of the displayed area names will highlight that area in the ORCM Message Area.

You may use this to re-open a previously closed message area panel.

### 3.5.2 Work Area Option

Selecting **Work Area** will display a submenu of work panels. Selecting one of the displayed panel names will focus on that panel in the ORCM main panel (Work Area).

---

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## 3.6 Help

Selecting the Help option will display a submenu of Help topics:

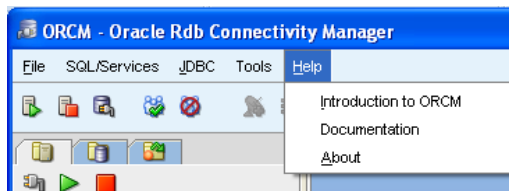


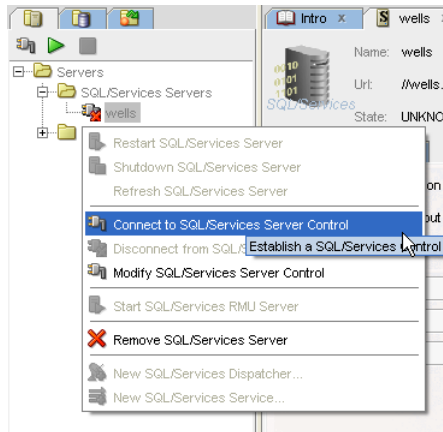
Figure 40 - Menu Option Help

---

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## 3.7 Server Explorer - SQL/Services Server Popup Menu

The SQL/Services server popup menu may be invoked by right-clicking a SQL/Services server name within the Servers tree of the server explorer:



**Figure 41 - SQL/Services Server popup menu**

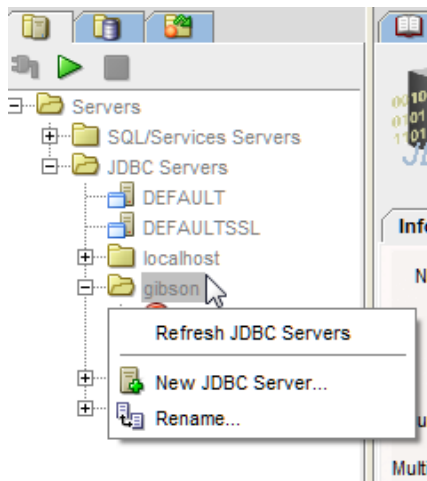
See [SQL/Services server popup menu](#) for more details.

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### 3.8 Servers Explorer - JDBC Host Popup Menu

The JDBC host popup menu may be invoked by right-clicking a host name or IP under the JDBC Servers sub-tree of the server tree:



**Figure 42 - JDBC Host popup menu**

See [JDBC host popup menu](#) for more details.

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### 3.9 Servers Explorer - JDBC Server Popup Menu

The JDBC server popup menu may be invoked by right-clicking a JDBC server name within the Servers tree of the server explorer:



Figure 43 - JDBC Server popup menu

See [JDBC server popup menu](#) for more details.

---

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### 3.10 Database Explorer - Known Database Popup Menu

The Known Database popup menu may be invoked by right-clicking a database name within the Databases tree of the database explorer:

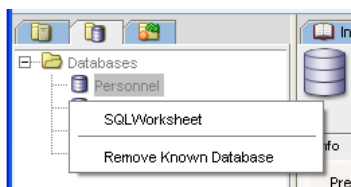


Figure 44 - Known Database popup menu

See [Known Database popup menu](#) for more details.

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### 3.11 Event Trigger Explorer - Event Trigger Popup Menu

The Event Trigger popup menu may be invoked by right-clicking an event trigger name within the EventTriggers tree of the event trigger explorer:

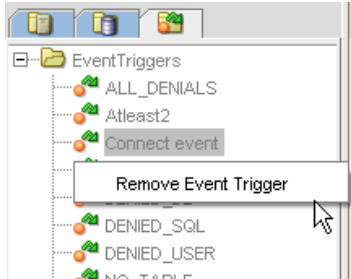


Figure 45 - Event Trigger popup menu

See [Event Trigger popup menu](#) for more details.

---

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### 3.12 Remote File Popup Menu

Right-click on any field containing a file specification of a remote file to bring up the remote file popup menu.

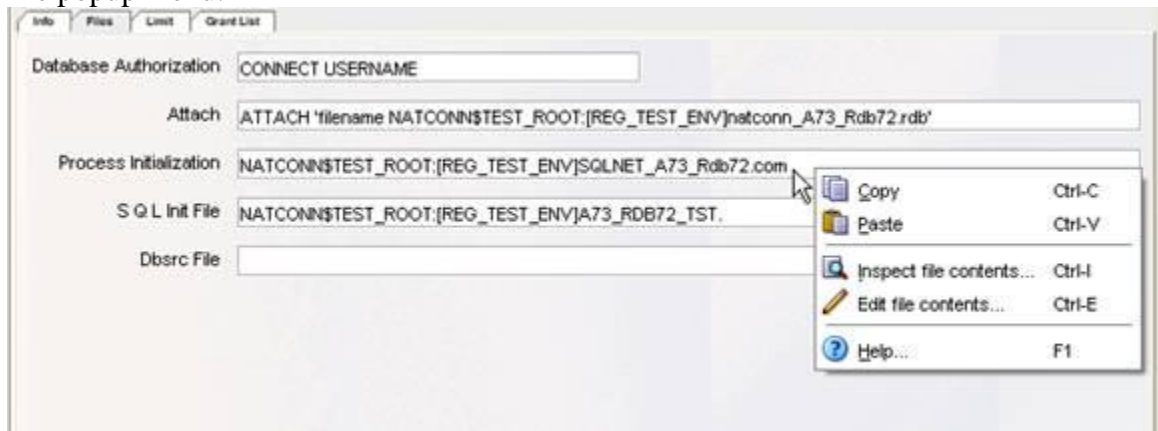


Figure 46 - Remote File Popup

See [Popup menu - Remote File](#) for more details.

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## 3.13 SQL/Services Servers Popup Menu

Right-click on the SQL/Services Servers node of the server explorer to bring up the SQL/Services Servers popup menu.

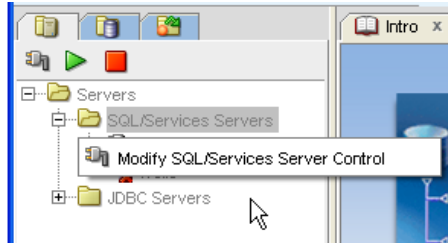


Figure 47 - SQL/Services Servers Popup

The following sections describe the options under the **SQL/Services Servers Popup** menu:

- [Modify SQL/Services Server Control](#)

### 3.13.1 Modify SQL/Services Server Control

Selecting this option will bring up the [control connection dialog](#) allowing you to create or maintain SQL/Services control connection definitions.

---

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## 3.14 JDBC Servers Popup Menu

Right-click on the JDBC Servers node of the server explorer to bring up the JDBC Servers popup menu.

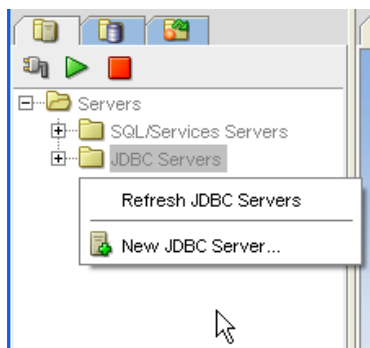


Figure 48 - JDBC Servers Popup

The following sections describe the options under the **JDBC Server Popup** menu:

- [Refresh JDBC Servers](#)
- [New JDBC Server...](#)

### 3.14.1 Refresh JDBC Servers

Selecting this option will cause ORCM to send a new JDBC poll request to the network to discover JDBC servers and to display these servers in the JDBC Servers sub-tree.

### 3.14.2 New JDBC Server...

Selecting this option will display a new [JDBC server definition](#) dialog.

---

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## 3.15 Message Area Popup Menu

Right-click within the message area to bring up a popup menu of options:

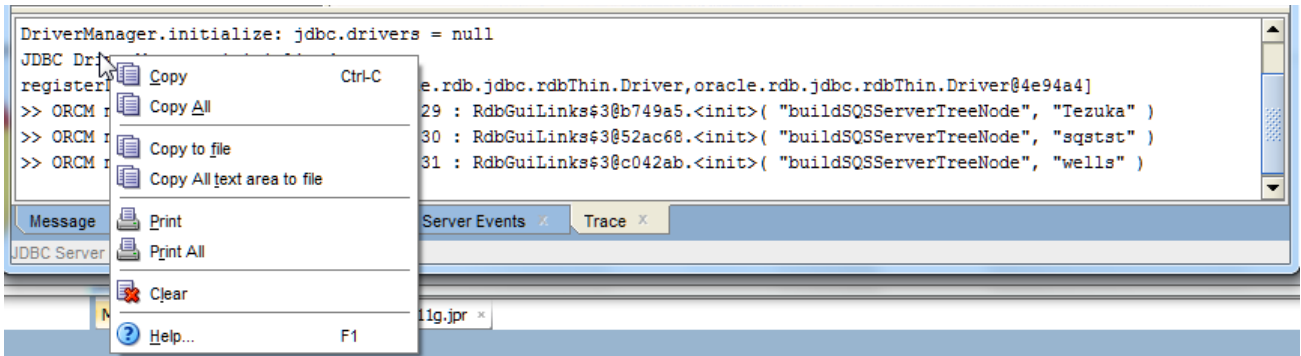


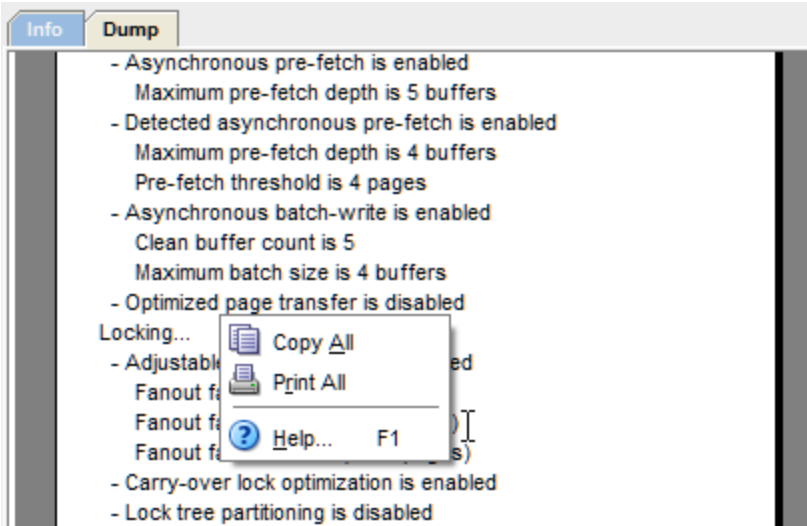
Figure 49 - Message area Popup

See [Message Area Popup Menu](#) for more details.

---

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## 3.16 Copy/Print Popup Menu



**Figure 50 - Copy print Popup**

Right-click within any of the following panels to bring up the copy/print popup menu:

- Known Database Dump panel

The copy/print popup menu allows you to copy or print the contents of a text area.

The following copy/print popup menu options are available:

- [Copy All](#)
- [Print All](#)
- [Help](#)

### **3.16.1 Copy All**

Copy the contents of the current text area into the clipboard.

### **3.16.2 Print All**

Print the contents of the current text area. A Print Dialog will be displayed to allow you to choose your print options.

### **3.16.3 Help**

Display this help text.



# Chapter 4

## Process Password

Create obfuscated and digested passwords for use in your configuration files.



Figure 51 - Process Password Panel

---

**Note:**

Passwords obfuscated using *digest* or *obfuscate* are not considered by Oracle to be strong encryption; rather they provide a mechanism to obfuscate the value of a password when used in situations where the password may be visible to a casual observer. Oracle recommends that you consider your organization's security policy when storing passwords in your configuration file.

---

### 4.1 Process Password Panel

The Process Password panel consists of the following fields and buttons:

- [Password](#)
- [Verify Password](#)
- [Obfuscate button \(optional\)](#)
- [Digest button \(optional\)](#)
- [Proceed button](#)
- [Digested Password](#)
- [Obfuscated Password](#)
- [Cancel button](#)

## 4.2 Password

Enter the password that you wish to process.

## 4.3 Verify Password

Enter the password again for verification.

## 4.4 Obfuscate button (optional)

If visible and selected an Obfuscated Password will be produced.

## 4.5 Digest button (optional)

If visible and selected a Digested Password will be produced.

## 4.6 Proceed button

Process the provided password to produce a Digested Password and/or an Obfuscated Password.

---

**Note:**

If neither the [Obfuscate](#) nor the [Digest](#) button is visible then both a Digested and an Obfuscated password will be created.

---

## 4.7 Digested Password

The password in its digested form that may be used as a Server password within the Server configuration or a control Password within your session configuration file.

**Note:**

This value cannot be used as a User password or a Control password within a session section of the configuration file.

## 4.8 Obfuscated Password

The password in its obfuscated form that may be used as a User, Server or Control password.

## 4.9 Cancel button

Cancel this operation.

---

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# Chapter 5

## Popup menu - Remote File

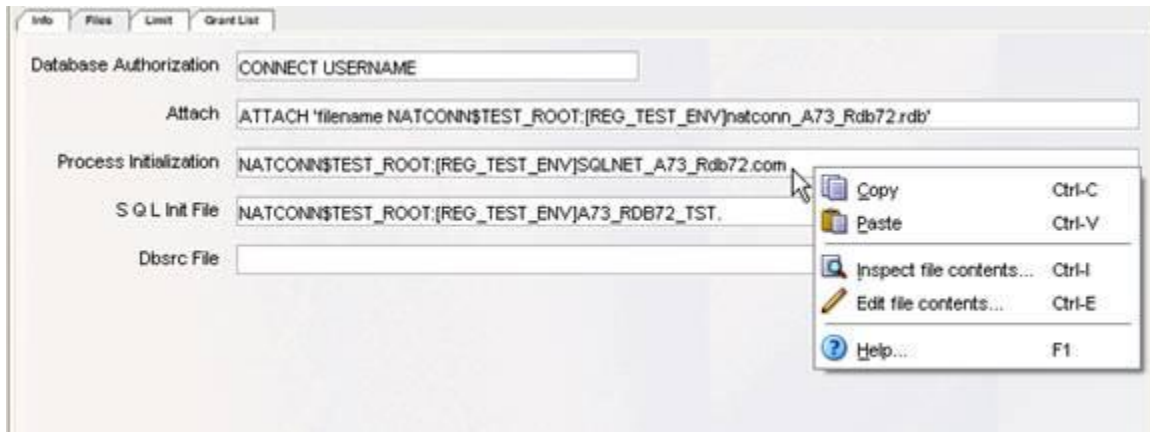


Figure 52 - Remote File Popup

### 5.1 Remote File Popup

Right-click on a field containing a file specification of a remote file to bring up the **remote file popup menu**.

The remote file popup menu allows you to display and/or modify the contents of remote files. In addition you can **Copy** the file specification from the selected field into the clipboard or **Paste** the contents of the clipboard back into the field.

The following remote file popup menu options are available:

- [Copy](#)
- [Paste](#)
- [Inspect the contents ...](#)
- [Edit file contents ...](#)
- [Help](#)

#### 5.1.1 Copy

Copy the contents of the selected field into the clipboard.

#### 5.1.2 Paste

Paste the contents of the clipboard into the selected field.

### 5.1.3 Inspect the contents ...

Display the contents of the remote file. A new popup frame will display with the contents of the remote file.

### 5.1.4 Edit file contents ...

Bring up a simple editor that will allow the contents of the remote file to be modified and optionally saved back to the remote site.

### 5.1.5 Help

Display this help text.

## 5.2 Remote File Access

Remote file access is carried out by the remote server on your behalf. The contents of the file are copied to your desktop for display and/or modification.

If the contents are modified and then saved using the editor frame invoked by using the **Edit file contents** menu option, the contents are sent back to the remote server and the file will be updated accordingly.

In-order for remote file access to work, certain conditions must be met which are discussed in the following sections.

### 5.2.1 SQL/Services

If the remote file specification is displayed as part of the information of a SQL/Services object such as a dispatcher or the server, then the following conditions must be met:

- As a remote user you have authority to inspect or modify the file contents.
- The SQL/Services server used has a **RMU Dispatcher** and associated **RMU Service** currently running.
- The SQL/Services control connection used to connect to the SQL/Services server has a **RMU Dispatcher port** specified and that port matches the port the running RMU dispatcher is listening on. See [RMU Dispatcher port](#) .

See sections *Managing a Dispatcher* and *Managing a Service* in the *SQL/Services Server Configuration Guide* for more information on RMU dispatchers and RMU services.

### 5.2.2 JDBC

If the remote file specification is displayed as part of the information of a JDBC object such as a JDBC server, then the following conditions must be met:

- As a remote user you have authority to inspect or modify the file contents.
- The remote server must be enabled to allow access to the command line.

---

See also:

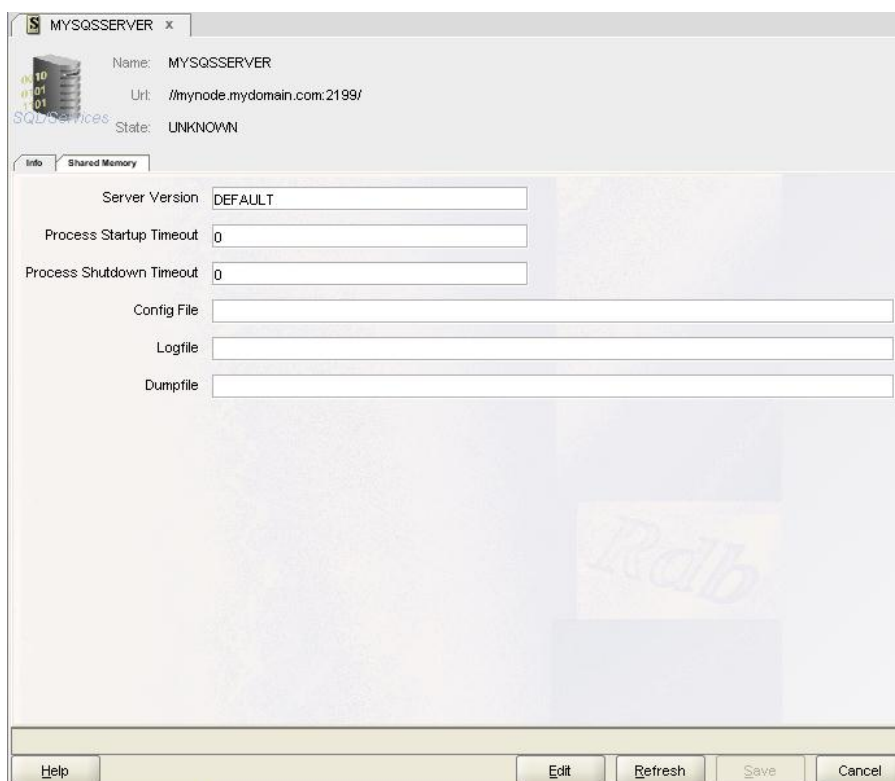
The *Access to the Command Line* section in the *Oracle JDBC for Rdb User Guide*.

---

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## Chapter 6

# SQL/Services Server Information



**Figure 53 - SQL/Services Server Information Pane**

The SQL/Services Server Information pane allows you to configure a new SQL/Services server or to modify or display information about an existing SQL/Services Server. The server pane is comprised of a number of sub-panels or tabs containing related server information:

- [Main](#) – the main identifying information for this server.
- [Info](#) – describes general information about the server.
- [Shared Memory](#) – describes information about the shared memory of this server

- [Port](#) – information about the port used by this server. There may be zero, one or more of these tabs.

## 6.1 Server Message Area

At the bottom of the main pane, above the button bar, is the server message area that will display when the server information was last updated.



Figure 54 - Server Message Area

## 6.2 Connect and Refresh Button

Depending on the connection state of the server the button bar at the bottom of the server display area may contain either a Connect button if the server is not currently connected or a Refresh button if the server is currently connected.

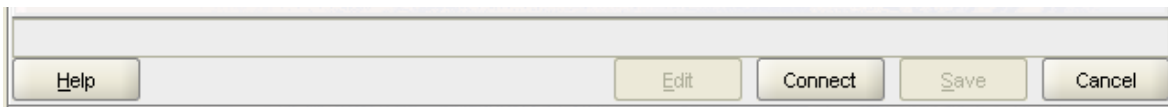


Figure 55 - Server option Buttons with Refresh visible

## 6.3 SQL/Services Server Main Pane

The main pane consists of the following fields:

- [Name](#)
- [URL](#)
- [State](#)

### 6.3.1 Name

An alias for using this SQL/services server. This name need not be unique; however the name may be used to lookup server information within the start-up configuration file. The value of this name is not case-sensitive.

### 6.3.2 URL

The URL the server may be accessed on. The URL comprises both the IP address of the node the server is running on and the TCP/IP socket that the SQL/Services server is using for management access.

### 6.3.3 State

Current state of the server:

- Unknown – server is not responding to requests
- Running – server is running and responding to requests

## 6.4 Options

The SQL/Services Server pane has the following button-based options:

### *Help*

Displays help information for this window.

### *Edit*

Places the information pane in *edit mode* allowing the entry and/or modification of server characteristics.

### *Refresh*

Refreshes the server information. This button will be displayed once you have made a control connection to the server.

### *Connect*

Connects to the server as a control user. This button will be displayed if you have not already connected to, or have disconnected from the server.

### *Save*

Saves the information entered for the fields. Once saved, the information about the connection will be displayed in left panel table.

### *Cancel*

Cancels the operation and closes the window.

---

See also:

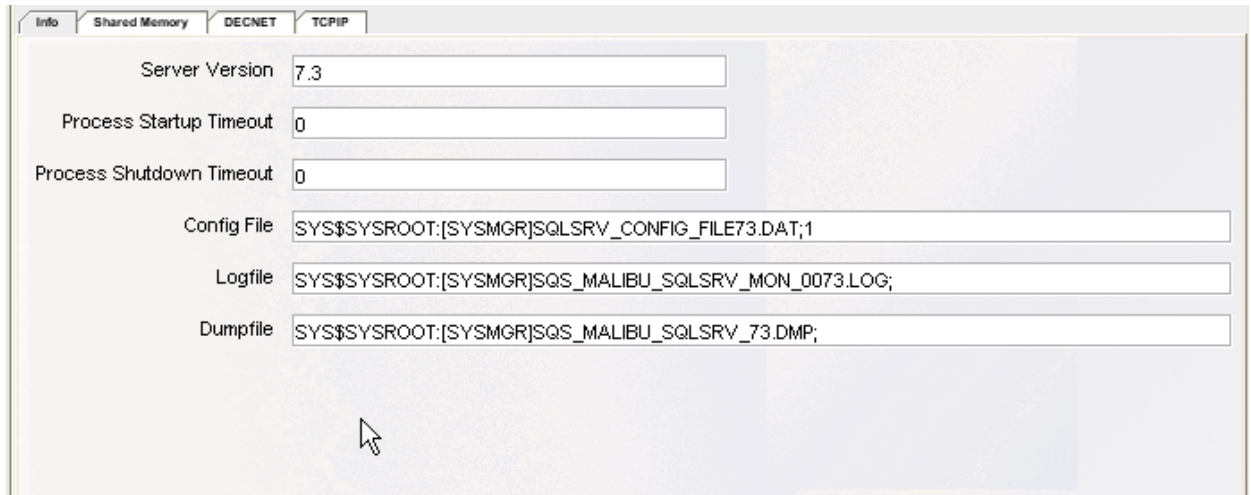
*Managing a Server* section of the **Oracle SQL/Services Server Configuration Guide**.

---

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## 6.5 SQL/Services Server – General Information

General information about the SQL/Services server.



**Figure 56 - Info Tab**

The info tab consists of the following fields:

- [Server Version](#)
- [Process Startup Timeout](#)
- [Process Shutdown Timeout](#)
- [Config File](#)
- [Logfile](#)
- [Dumpfile](#)

### 6.5.1 Server Version

The version of SQL/Services that this server is running under.

### 6.5.2 Process Startup Timeout

Specifies the length of time (in seconds) to wait before deciding that a dispatcher or executor process is not going to start up before the monitor takes action and terminates the process.

The default value is 0 seconds, which means that no process startup timer value is set.

### 6.5.3 Process Shutdown Timeout

Specifies the length of time to wait (in seconds) before deciding that a dispatcher or executor process is not going to shut down before the monitor takes action and terminates the process

The default value is 0 seconds, which means that no process shutdown timer value is set; the process shutdown timer value is infinite.



## 6.5.4 Config File

The filespec of the configuration file that contains the characteristics of this server.

## 6.5.5 Logfile

The file specification of the log file this server will log events and messages to. This file specification is relative to the node on which this server is running.

## 6.5.6 Dumpfile

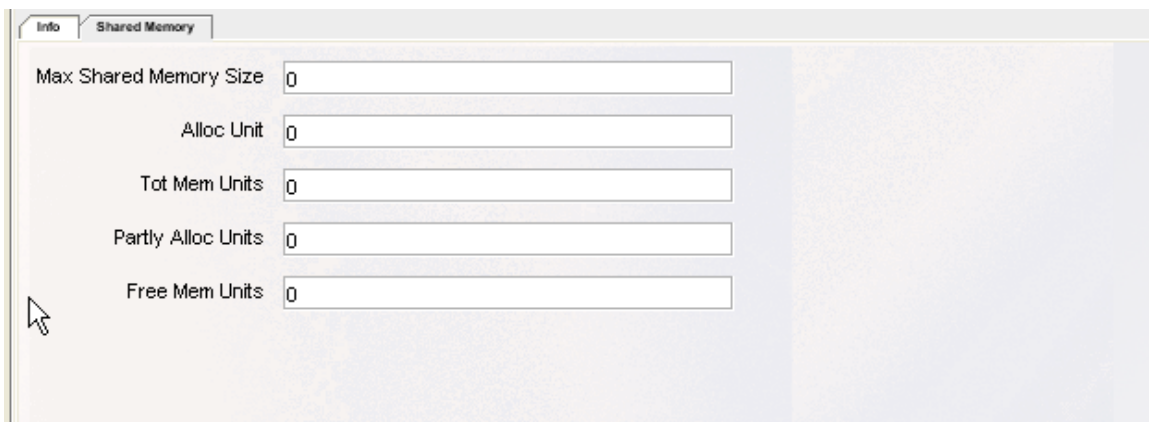
The file specification of the dump file this server will use to dump debug information whenever a problem is found. This file specification is relative to the node on which this server is running.

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## 6.6 SQL/Services Server – Memory Information

Memory information about the SQL/Services server.

The image shows a screenshot of a software interface with a tabbed window. The active tab is labeled "Shared Memory". Below the tab, there are five rows of text labels followed by input fields, all containing the number "0". The labels are: "Max Shared Memory Size", "Alloc Unit", "Tot Mem Units", "Partly Alloc Units", and "Free Mem Units". A mouse cursor is visible on the left side of the input fields.

**Figure 57 - Memory Tab**

The Memory tab consists of the following fields:

- [Max Shared Memory Size](#)
- [Alloc Unit](#)
- [Tot Mem Units](#)
- [Partly Alloc Units](#)

- [Free Mem Units](#)

### **6.6.1 Max Shared Memory Size**

Max Shared memory Size is the size of shared memory that the server uses.

The minimum value for `MAX_SHARED_MEMORY_SIZE` is 132 KB, which provides two shared memory units. This is sufficient to start the monitor, connect to it from the `SQLSRV_MANAGE` application, and run one or two executors serving one or two clients.

The maximum value for `MAX_SHARED_MEMORY_SIZE` is 2,000,000 KB. Lower values should suffice for most applications.

You can alter the `MAX_SHARED_MEMORY_SIZE` argument for a server, and it takes effect when you issue a `RESTART SERVER` command.

### **6.6.2 Alloc Unit**

The size (in bytes) of a memory allocation unit.

### **6.6.3 Tot Mem Units**

Total Memory Units is the number of shared memory units mapped by the server. This number is static for a given run of the server.

### **6.6.4 Partly Alloc Units**

Partly Allocated Memory Units.

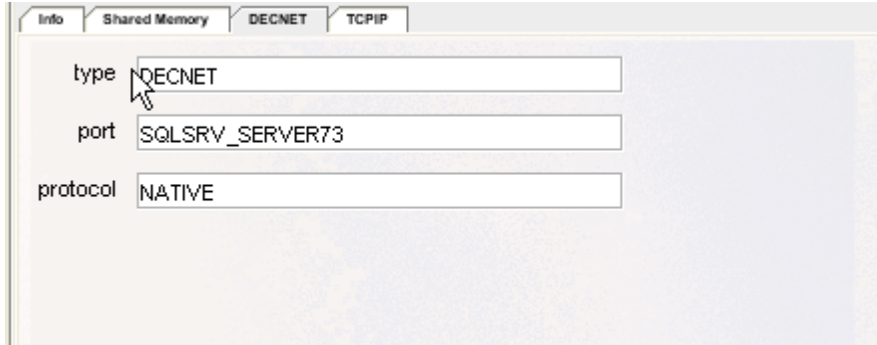
A shared memory unit may not be completely used in one piece. It is often subdivided into smaller pieces. Shared memory units that are subdivided and partly used are reported as partly allocated memory.

### **6.6.5 Free Mem Units**

Free Memory is the number of shared memory units that are completely unused by the SQL/Services server.

## 6.7 SQL/Services Server Information – Port Information

Information about ports used by the SQL/Services server.



**Figure 58 - Port Tab**

A SQL/Services server may have up to 5 network ports associated with it. Each port will have a separate Port tab in the SQL/Service server information pane.

This panel contains details on single instance of a port that the SQL/Services server monitor should use for communications with Oracle SQL/Services management clients such as the ORCM and the SQLSRV\_MANAGE utility. For TCP/IP, the default port ID is 2199 and the default DECnet object name is SQLSRV\_SERVER. If no network ports are specified, the monitor of the server uses the default ports.

On a node where there are multiple servers, each connection to a server must use a unique port ID.

The Ports tab consists of the following fields:

- [Type](#)
- [Port](#)
- [Protocol](#)

### 6.7.1 Type

The transport type that the server can use for communications with Oracle SQL/Services management clients on this port.

The network transport may be one of the following:

- TCP/IP,
- DECnet

If the Server info pane is in *edit mode* then you can pull down the Type list and select the transport type you want the server to support.

## 6.7.2 Port

The port designation or ID.

Depending on the transport type, the TCP/IP port ID or DECnet object is specified in this field.

The following defaults are used:

- default port ID for TCP/IP is 2199,
- default DECnet object is SQLSRV\_SERVER

If the network port is not specified, the server will use the default ports.

## 6.7.3 Protocol

The protocol used for transportation across this port. The only available option for server ports is NATIVE.

---

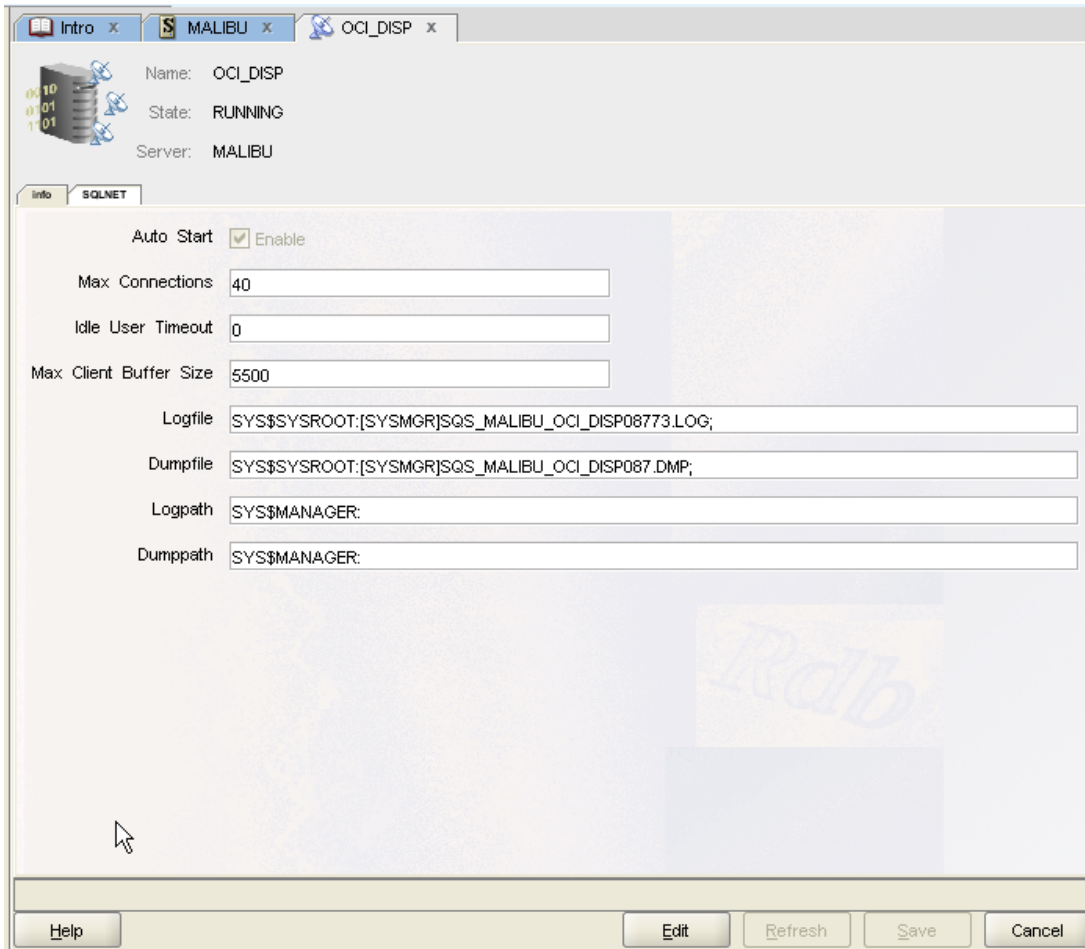
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# Chapter 7

## SQL/Services Dispatcher Information

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Edit/Display SQL/Services dispatcher information.



**Figure 1 - SQL\*services Dispatcher Information Panel**

The SQL/Services dispatcher Information pane allows you to configure a new SQL/Services dispatcher or to modify or display information about an existing SQL/Services dispatcher.

The dispatcher pane is comprised of a number of sub-panels containing related dispatcher information.

- [Main](#) – the main identifying information for this dispatcher.
- [Info](#) – describes general information about the dispatcher.
- [Port](#) – describes a port associated with this dispatcher. There may be 1 or more port tabs displayed.

## 7.1 Main Pane

The main pane consists of the following fields:

- [Name](#)
- [State](#)
- [Server](#)

### 7.1.1 Name

The name of this SQL/Services dispatcher.

### 7.1.2 State

Current state of the dispatcher:

- Inactive – dispatcher is not currently running.
- Running – dispatcher is running and responding to requests.

### 7.1.3 Server

The server this dispatcher is running under.

## 7.2 Options

The SQL/Services dispatcher pane has the following button-based options:

#### *Help*

Displays help information for this window.

#### *Edit*

Places the information pane in *edit mode* allowing the entry and/or modification of dispatcher characteristics.

#### *Add Port*

Adds a new port to this dispatcher. This button will be enabled only when the information pane is in *edit mode*.

#### *Remove Port*

Removes the current selected port from this dispatcher. This button will be enabled only when the information pane is in *edit mode*.

#### *Refresh*

Refreshes the information for this dispatcher.

#### *Save*

Saves the information entered for the fields. This is only enabled when the information pane is in *edit mode*.

#### *Cancel*

Cancels the operation and closes the window.

See also:

*Managing a Dispatcher* section of the **Oracle SQL/Services Server Configuration Guide**.

## 7.3 SQL/Services Dispatcher – General Information

General information about the SQS/Services dispatcher.

The screenshot shows the 'Info' tab of the SQL/Services Dispatcher configuration window. The window has a title bar with 'info' and 'SQLNET' tabs. The configuration fields are as follows:

Auto Start	<input checked="" type="checkbox"/> Enable
Max Connections	40
Idle User Timeout	0
Max Client Buffer Size	5500
Logfile	SYS\$SYSROOT:[SYSMGR]SQS_MALIBU_OCI_DISP08773.LOG;
Dumpfile	SYS\$SYSROOT:[SYSMGR]SQS_MALIBU_OCI_DISP087.DMP;
Logpath	SYS\$MANAGER:
Dumppath	SYS\$MANAGER:

**Figure 2 - Info Tab**

The info tab consists of the following fields:

- [Auto Start](#)
- [Max Connections](#)
- [Idle User Timeout](#)
- [Max Client Buffer Size](#)
- [Logfile](#)
- [Dumpfile](#)
- [LogPath](#)
- [DumpPath](#)

### 7.3.1 Auto Start

Determines whether or not the dispatcher object automatically starts up when you issue a Restart command. If the attribute is ENABLED, the dispatcher object automatically starts when you issue a Restart command. The default is ENABLED. This is non-editable field.

### **7.3.2 Max Connections**

Specifies the maximum number of network connections from clients that the dispatcher accepts. The default is 100. There is no upper limit other than the operating system configuration, the network configuration, and shared server memory. This is editable field.

### **7.3.3 Idle User Timeout**

Specifies the amount of time in seconds that a client (user) can remain idle before the dispatcher disconnects the client. The default value is 0 and means that the idle timeout value is infinite. A value specified other than 0 is rounded to the next higher multiple of 90 seconds. This is a dynamic attribute that, when changed, takes effect immediately. This is editable field.

### **7.3.4 Max Client Buffer Size**

Specifies the size of the maximum client buffer size permitted. The maximum allowed client buffer size is 32,000 bytes. If a client application specifies a buffer size larger than the maximum, then the Oracle SQL/Services client API adjusts the buffer size to the maximum size specified for the dispatcher. The default and minimum value allowed for the maximum client buffer size is 5000 bytes.

This is editable field.

### **7.3.5 Logfile**

Defines the complete file specification for the dispatcher log file. This is a read only field.

### **7.3.6 Dumpfile**

Defines the complete file specification for the dispatcher dump file should one be created. This is a read only field.

### **7.3.7 LogPath**

Specifies a directory name for log files. The default directory is SYSS\$MANAGER.

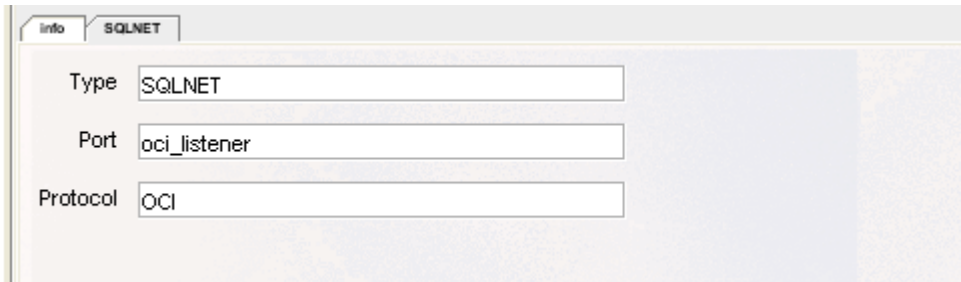
### **7.3.8 DumpPath**

Specifies a directory name for bug check dump files. The default directory is SYSS\$MANAGER.



## 7.4 SQL/Services Dispatcher – Port Information

Information about ports used by the SQL/Services dispatcher.



**Figure 3 - Port tab**

A SQL/Services dispatcher may have one or more network ports associated with it. Each port will have a separate Port tab in the SQL/Service Dispatcher information pane. This panel contains details on single instance of a port used by the SQL/Services dispatcher.

Each dispatcher defined must be listening on unique network port names or IDs; ORCM lets you create two or more dispatchers listening on the same port, but only the first dispatcher with a unique port name or ID is allowed to start. If you attempt to start a second dispatcher listening on the same port name or ID, it fails to start if it cannot listen on any of the specified network ports.

The Ports tab consists of the following fields:

- [Type](#)
- [Port](#)
- [Protocol](#)

### 7.4.1 Type

The transport type that the dispatcher can use for communications with Oracle SQL/Services clients and the Oracle ODBC Driver for Rdb clients on this port.

The network transport may be one of the following:

- TCP/IP,
- DECnet,, and
- SQL\*Net.

If you are creating a new dispatcher or the Dispatcher info pane is in *edit mode* then you can pull down the Type list and select the transport you want the dispatcher to support.

## 7.4.2 Port

The port designation or ID.

Depending on the transport type, the TCP/IP port ID, DECnet object, or the SQL\*Net Listener Name is specified in this field.

The following defaults are used:

- default port ID for TCP/IP is 118,
- default DECnet object is 81.

If the network port is not specified, the dispatcher will use the default ports.

## 7.4.3 Protocol

The protocol used for transportation across this port. A dispatcher network port can only support one message protocol.

If the Dispatcher info Pane is in *edit mode*, select a message protocol that matches the type of client you want a dispatcher network port to support:

- **Native** - Oracle RMU clients (ORCM)
- **OCI** - Oracle clients using the Oracle Call Interface (OCI) and the SQL\*Net listener (Oracle Enterprise clients).
- **SQLSRV** - Oracle SQL/Services clients (Oracle ODBC Driver for Rdb, Oracle SQL/Services).

Pull down the selection list and select the message protocol that you want the dispatcher network port to use.

Ensure that you have a dispatcher network port defined with a dispatcher message protocol that supports each service API protocol you want to use. For example, if you define a service that supports the OCI API protocol and another service that supports the SQLSRV API protocol, you must define at least one dispatcher network port that supports the OCI dispatcher message protocol and the SQL\*Net transport and another dispatcher network port that supports the SQLSRV dispatcher message protocol and any available transport, respectively.

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# Chapter 8

## SQL/Services Service Information

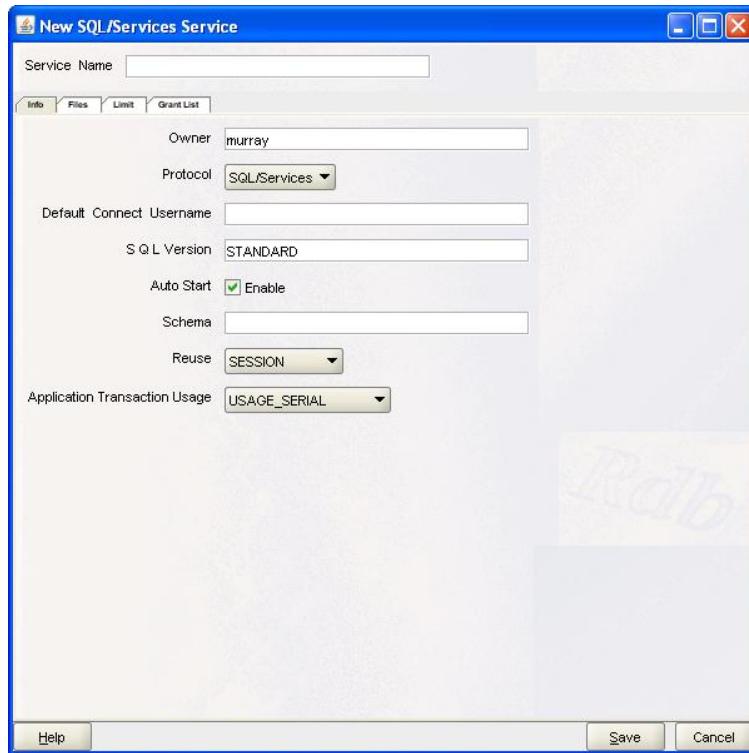


Figure 4 - SQL/Services service Information Pane

The service pane is comprised of a number of sub-panels containing related service information:

- [Main](#) – describes the identifying information for this service
- [Info](#) – describes general information about the service.
- [Files](#) – describe startup and log files used by the service.
- [Limit](#) – describes limits imposed on this service.
- [Grant List](#) – describes identifiers that have been granted access to the service.

### 8.1 SQL/Services Service Main Pane

The Main pane contains the following field:

- [Service Name](#)

#### 8.1.1 Service Name

Identifies the service using this server. The service name must be unique. The service name must be alphanumeric characters (a-z, A-Z, 0-9), underscores (\_), or hyphens (-), and the first character must be an alphabetic character.

## 8.2 Options

The SQL/Services service pane has the following button-based options:

### *Help*

Displays help information for this window.

### *Edit*

Places the information pane in *edit mode* allowing the entry and/or modification of service characteristics.

### *Refresh*

Refreshes the information for this service.

### *Save*

Saves the information entered for the fields.

### *Cancel*

Cancels the operation and closes the window.

See also:

*Managing a Service* section of the **Oracle SQL/Services Server Configuration Guide**.

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## 8.3 SQL/Services Service – General Information

The screenshot shows the 'Info' tab of the Oracle SQL/Services configuration window. The fields are as follows:

Field Name	Value
Owner	murray
Protocol	SQL/Services
Default Connect Username	
SQL Version	STANDARD
Auto Start	<input checked="" type="checkbox"/> Enable
Schema	
Reuse	SESSION
Application Transaction Usage	USAGE_SERIAL

**Figure 5 - Info tab**

The info tab consists of the following fields:

- [Owner](#)
- [Protocol](#)
- [Default Connect Username](#)
- [SQL Version](#)
- [Schema](#)
- [Reuse](#)
- [Application Transaction Usage](#)

### 8.3.1 Owner

Specify the user name of the owner of the service. Every service has an owner user name.

The service Owner attribute must be specified; otherwise, an error message is returned.

If the service is a database service, then the service owner's user name privileges are used for access checks when an executor attaches to the specified database. See *Setting Up Services and Types of Reuse* in the *Oracle SQL/Services Server Configuration Guide* for more information on database services.

If database access authorization is set to the service owner, then the service owner user name's privileges are used for all database access operations. See *Database Access Authorization* in the *Oracle SQL/Services Server Configuration Guide* for more information on database access authorization.

On OpenVMS, executors are created with the privileges and quotas from the service owner's account. See *Considering Security for Selecting the Service Owner User Name* in the *Oracle SQL/Services Server Configuration Guide* for more information.

### 8.3.2 Protocol

Lists an application programming interface (API) protocol that each service can support. A service can only support one API protocol. Select an API protocol that matches the type of client you want a service to support:

- OCI - Oracle clients using the Oracle Call Interface (OCI) (Oracle Enterprise clients).
- RMU - Oracle RMU clients (ORCM)
- SQL/Services - Oracle SQL/Services clients (Oracle ODBC Driver for Rdb, Oracle SQL/Services).

Pull down the menu and select the API protocol that you want a service to use.

Ensure that you have a dispatcher network port defined with a dispatcher message protocol that supports each service API protocol you want to use.

For example, if you define a service that supports the OCI API protocol and another service that supports the SQLSRV API protocol, you must define at least one dispatcher network port that supports the OCI dispatcher message protocol and the SQL\*Net transport and another dispatcher network port that supports the SQLSRV dispatcher message protocol and any available transport, respectively.

### 8.3.3 Default Connect Username

The default connect user name is the user ID under which unknown users are allowed to access this service. See *Oracle SQL/Services Server Security* and *Specify a Default Connect User Name for the SQL/Services Protocol* in the *Oracle SQL/Services Server Configuration Guide* for more information about using this attribute.

### 8.3.4 SQL Version

Specifies the version of SQL to use for that service. It is expressed a version number, for example, 7.2.

When no value is specified, ORCM will default the SQL Version to 7.2.

### 8.3.5 AutoStart

Determines whether or not the service object automatically starts up when you issue a Start command. If the attribute is enabled (checked), the service object automatically starts when you issue a Start command. The default is **Enabled**.

### 8.3.6 Schema

Provides a way to specify the default schema that you want to use when an executor is attached to a multischema database.

The default schema name is set as follows (for all service types) as shown in the following table:

**Table 1 - Default Schema Name Used When an Executor Is Bound to a Multischema Database**

<b>Schema Name Specified in Service Definition</b>	<b>Database Access Authorization</b>	<b>Default Schema Name Set by Using</b>
Yes	Service Owner	Name specified in service definition
	Connect User Name	Name specified in service definition
No	Service Owner	Service owner account name
	Connect User Name	Connect user name

### 8.3.7 Reuse

The reuse scope is either session or transaction.

- **SESSION** - An executor for a session reusable service processes requests for one client session at a time. A session begins when a client connects to the service and the connection is bound to an executor process. A session ends when a client disconnects from the service and the connection is unbound from the executor process.
- **TRANSACTION** - An executor for a transaction reusable service processes requests for one transaction at a time; however, it supports many concurrent client sessions. A transaction begins when a client issues an SQL statement that either implicitly or explicitly starts a transaction. A transaction ends when a client issues a successful SQL COMMIT or ROLLBACK statement. The Transaction switch for the Reuse Scope attribute can be applied only to database services.

### 8.3.8 Application Transaction Usage

---

**Note:**

This attribute applies only to transaction reusable database services.

---

Some applications make only a single connection to a service to perform their work, while other applications make multiple connections to the same service. Connections created to transaction reusable database services are tied to the same executor for the life of the session.

If a client application makes multiple connections to a service and these are assigned to the same executor, a deadlock occurs if the client application attempts to start a new transaction on one connection before ending an existing transaction on another connection.

The drop-down list provides two options:

- **USAGE\_SERIAL** - When selected, Oracle SQL/Services assumes that client applications do not start concurrent transactions on multiple connections.
- **USAGE\_CONCURRENT** - When selected, Oracle SQL/Services ensures that multiple connections from the same client application on the same node are never assigned to the same executor process.

The default for this attribute is serial. This is a dynamic attribute that, when changed, takes effect immediately.

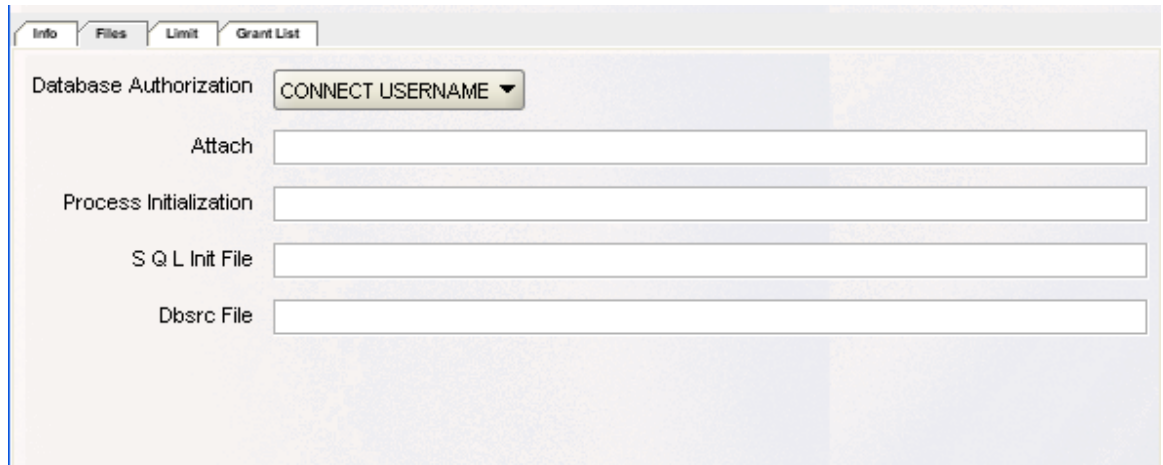
Some applications, such as Microsoft Access, make multiple connections to the same service to perform their work and require that you set the Concurrent button. If set to concurrent, Oracle SQL/Services considers the node, user name, and application name of the client when choosing an executor to which to tie the connect and ensures that multiple connections from the same client application are never assigned to the same executor process.

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## 8.4 SQL/Services Service – File information





**Figure 6 - Files tab**

The files tab consists of the following fields:

- [Database Authorization](#)
- [Attach](#)
- [Process Initialization](#)
- [SQL Init File](#)
- [SQL/Services Service : Dbsrc File](#)

### 8.4.1 Database Authorization

Determines the user name under which access to the database is made. The default is Connect Username.

The drop-down list contains valid authorizations:

- **SERVICE OWNER** - For a database service, all access to the database is made by using the service owner user name. This option is not supported by OCI Services for Oracle Rdb.
- **CONNECT USERNAME** - Access to the database is made by using the client-specified user name, the DECnet proxy user name, or the user name specified by the Default Connect Username attribute.

### 8.4.2 Attach

The SQL ATTACH statement. If you do not specify an SQL ATTACH statement, you create a universal service that is not pre-attached to a specific database.

If you specify an SQL ATTACH statement, you create a database service that is pre-attached to the specified database. The Attach statement is a single quoted string and is exactly the same format as the attach-string-literal used in dynamic SQL.

See the Oracle Rdb SQL Reference Manual for more information on the ATTACH statement.

### 8.4.3 Process Initialization

The process initialization file can be either a special process initialization file or the keyword Login which resolves to the OpenVMS default login in the user authorization file (UAF).

The process initialization or login file is used to help define some of the attributes of the executor process for this service. If no attribute is specified, the default is to not run any initialization file.

You may optionally display or modify the contents of this file by right-clicking on this field. See [Remote file popup menu](#) .

### 8.4.4 SQL Init File

Specifies a file containing SQL statements that tailors the SQL environment for a client connection. For example, you can set the SQL dialect and default character set by using an SQL initialization file. The statements in an SQL initialization file are executed every time a client connects to the service.

You may optionally display or modify the contents of this file by right-clicking on this field. See [Remote file popup menu](#) .

### 8.4.5 Dbsrc File

Currently not used.

---

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## 8.5 SQL/Services Service – Limits Information

Field	Value
Idle User Timeout	0
Idle Executor Timeout	1800
Min Executors	2
Max Executors	10
Clients Per Executor	1
Active Clients	0
Running Executors	2

**Figure 7 - Limit tab**

The limit tab consists of the following fields:

- [Idle User Timeout](#)
- [Idle Executor Timeout](#)
- [Min Executors](#)
- [Max Executors](#)
- [Clients Per Executor](#)
- [Active Clients](#)
- [Running Executors](#)

### 8.5.1 Idle User Timeout

Specifies the amount of time in seconds that a client (user) can remain idle before the server disconnects the client. The default value is 0 and means that the idle timeout value is infinite.

A specified value other than 0 is rounded to the next higher multiple of 90 seconds.

### 8.5.2 Idle Executor Timeout

Specifies the amount of time in seconds that an executor process for a session reusable service can remain inactive (not bound to a client connection) before being deleted. The default timeout value is 1800 seconds (30 minutes).

### 8.5.3 Min Executors

Sets the minimum value to which the number of executor processes is allowed to decrease. This is also the number of executor processes started at startup using a Start Service or Restart command. The default minimum number of executors for a session reusable service is 0. A service with min executors set to 0 never shows the 'Starting' state when the service starts up. The state either displays as 'Running' or 'Failed'.

To use transaction reusable executors, the value for the minimum number of executors must equal the value for the maximum number of executors. The default value is 1 for a transaction reusable service.

If you use the default minimum number of executors of 0, the default maximum number of executors must be 1 or greater. If the minimum number of executors defined is greater than 0, the default maximum number of executors must be equal to or greater than the defined minimum value. For example, if the defined minimum number of executors is 5, the default maximum number of executors must be 5 or greater.

#### **8.5.4 Max Executors**

Sets the maximum value to which the number of executor processes is allowed to increase. The default maximum number of executors is 1.

To use transaction reusable executors, the value for the minimum number of executors must equal the value for the maximum number of executors. The default value is 1 for a transaction reusable service.

#### **8.5.5 Clients Per Executor**

Specifies the number of clients allowed per executor. The number of clients allowed is dependent upon whether the service is session reusable or transaction reusable. The default number of clients per executor for session reusability is 1 and cannot be greater than 1. The default number of clients per executor for transaction reusability is 1 but can be greater than 1.

#### **8.5.6 Active Clients**

Specifies the number of clients currently active on this service. This is a read-only field.

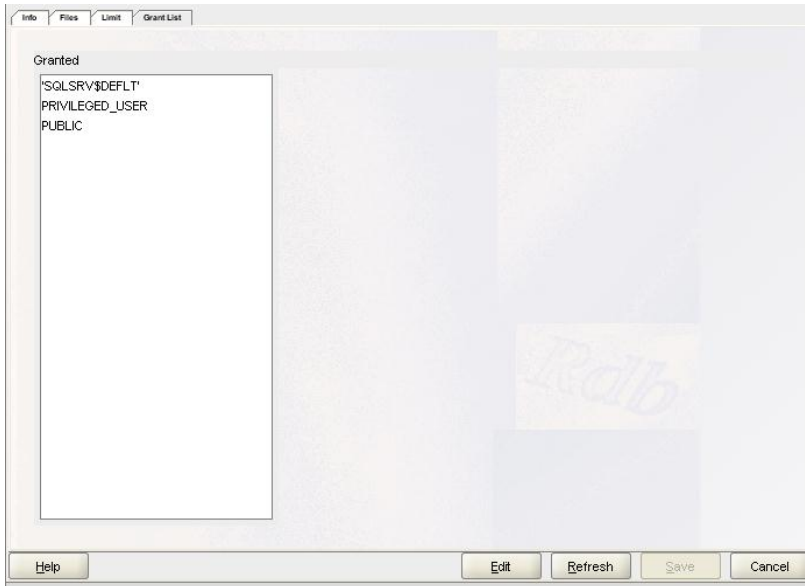
#### **8.5.7 Running Executors**

Specifies the number of executors currently active on this service. This is a read-only field.

---

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## **8.6 SQL/Services Service – Grant List Information**



**Figure 8 - Grant List tab**

When a service other than an OCI service is created, only a privileged user with SYSPRV privilege is authorized to use the service. You must grant privileges to any other users.

If an unauthorized user attempts to connect to a system management service of a server, then the connection is rejected and an error message is returned to the system management application.

## 8.6.1 Grant List Tab Operations

The grant list tab may be displayed in two modes, **display** and **edit**.

By default when service details are being displayed as a SQL/Services Service information tab in the main ORCM window the grant list tab is in *display mode* as shown in [Figure - Grant List tab](#) above.

When the **Edit** button is pressed in SQL/Services Service information tab, the pane will be set to *edit mode* as shown in [Figure - Edit mode](#) below.

When the grant tab is displayed within the Create SQL/Services Service dialog, the grant list tab will be in *edit mode*.

In *display mode*, information about the current grant attributes is displayed. This is a read-only mode.

In *edit mode* two regions will be displayed, the granted list and the denied list. In this mode identifiers may be added to or removed from the granted list.

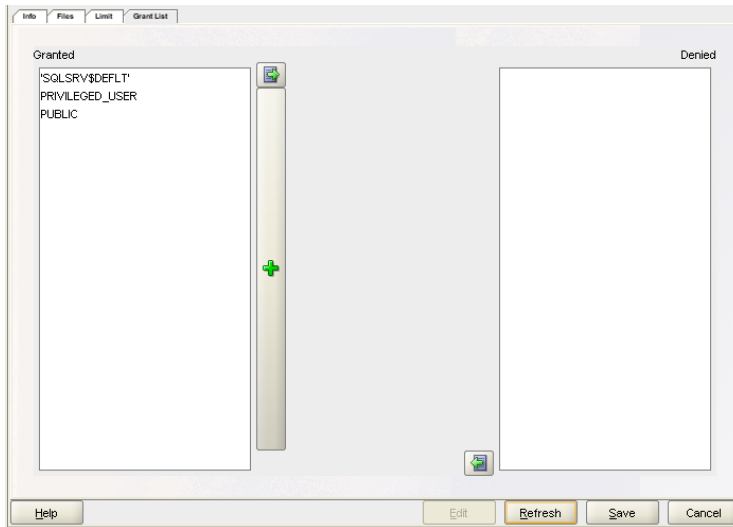


Figure 9 - Edit mode

## 8.6.2 Granted List

The granted list is a list of identifiers that are granted access to the service. When the pane is in *edit mode*, new identifiers may be added to the list using the add button



Existing granted identifiers may be removed from the list by [denying access](#).

Any identifier in the granted list will be added to the service configuration information when you press the **Save** button.

## 8.6.3 Deny

To deny a previously granted identifier:

- Drag the identifier from the Granted list to the Denied list or
- Double-click on the identifier within the Granted list or
- Select the identifier within the Granted list by clicking on it and pressing the deny

button (  ).

## 8.6.4 Denied List

The denied list is a temporary list of identifiers that were removed from the granted list during the edit session. When you save the changes using the **Save** button, the denied list will be cleared. Its function is to maintain a list of previously granted identifiers that have been denied during the edit session that may be restored to granted status.

## 8.6.5 Restore Grant

An identifier that has been moved to the Denied list may be re-instated to the Granted list. To re-instate a denied identifier:

- Drag the identifier from the Denied list to the Granted list or
- Double-click on the identifier within the Denied list or
- Select the identifier within the Denied list by clicking on it and pressing the grant

button (  )

### 8.6.6 Save

When you save the changes using the **Save** button, changes made to server details will be saved to SQL/Services server's configuration database.

When the **Save** button is pressed, the Denied list will be cleared.

### 8.6.7 Cancel

When the **Cancel** button is pressed any unsaved changes will be undone and the Denied list will be cleared.

### 8.6.8 Refresh

When the **Refresh** button is pressed any unsaved changes will be undone and the server will be requested to send current service characteristics to ORCM. In addition the Denied list will be cleared.


---

**Note:**

The Refresh button is only available when the grant tab is displayed as part of a SQL/Services service information pane and not during SQL/Services service creation.

---

### 8.6.9 New Grant

To create a new grant press the add (  ) button. You will be prompted for identifier information.

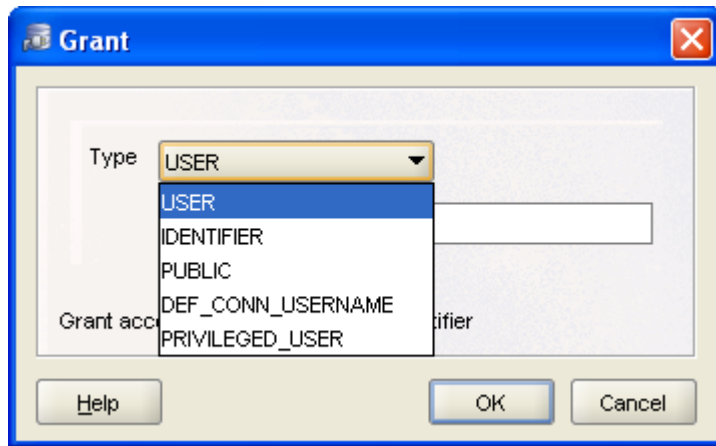


Figure 10 - Grant user dialog

A grant user dialog will be display allowing you to enter grant information.

The grant user dialog consists of:

- a drop-down box allowing you to choose from a selection of grant types, and
- a name/identifier entry field which may be enabled depending on the type of grant chosen. This entry field allows you to enter a specific username or Identifier. This field may de disabled depending on the grant type selected.

The drop-down type list provides the following grant choices:

*USER:*

Specify a connect user name to grant access to use this service by entering the username in the name/identifier entry field.

Connect user names that are granted access to use this service are added to the **Granted List**. Once you accept this change by clicking the OK button in the grant user dialog, and then clicking the **Save** button, the change takes effect upon the user's next attempt to use this service. For example, a user, once granted access, can use this service.

*IDENTIFIER:*

Specify an identifier name to grant users who hold these identifiers access to use this service by entering an identifier in the name/identifier entry field.

Identifiers that are granted access to use this service are added to the **Granted List**. Once you accept this change by clicking the OK button in the grant user dialog, and then clicking the **Save** button, the change takes effect upon the user's next attempt to use this service. For example, an identifier, once granted, allows users who hold that identifier access to use this service.

*PUBLIC:*

Use this type to specify that access will be granted to everyone. The name/identifier entry field will be disabled as no further information is required.



**PUBLIC** will be added to the **Granted List**. Once you accept this change by clicking the **OK** button in the grant user dialog, and then clicking the **Save** button, the change takes effect upon the next attempt to use this service.

*DEF\_CON\_USERNAME:*

Use this type to specify that access will be granted to the user designated in the [Default Connect Username](#) field of the [SQL/Services Service Info tab](#) for this service. The name/identifier entry field will be disabled as no further information is required.

**DEF\_CON\_USERNAME** will be added to the **Granted List**. Once you accept this change by clicking the **OK** button in the grant user dialog, and then clicking the **Save** button, the change takes effect upon the next attempt to use this service.

*PRIVILEGED\_USER:*

Use this type to specify that access will be granted to users that have SYSPRV privilege. The name/identifier entry field will be disabled as no further information is required.

**PRIVILEGED\_USER** will be added to the **Granted List**. Once you accept this change by clicking the **OK** button in the grant user dialog, and then clicking the **Save** button, the change takes effect upon the next attempt to use this service.

**Note:**

By default, when a service is created, access is granted only to privileged users that have SYSPRV privilege.

## 8.6.10 Options

This information pane has the following button-based options:

*Help*

Displays help information for this window.

*Save*

Saves the information entered for the fields. Once saved, the information about the connection will be displayed in left panel table.

*Clear*

Clears the information entered for the fields.

*Cancel*

Cancels the operation and closes the window.

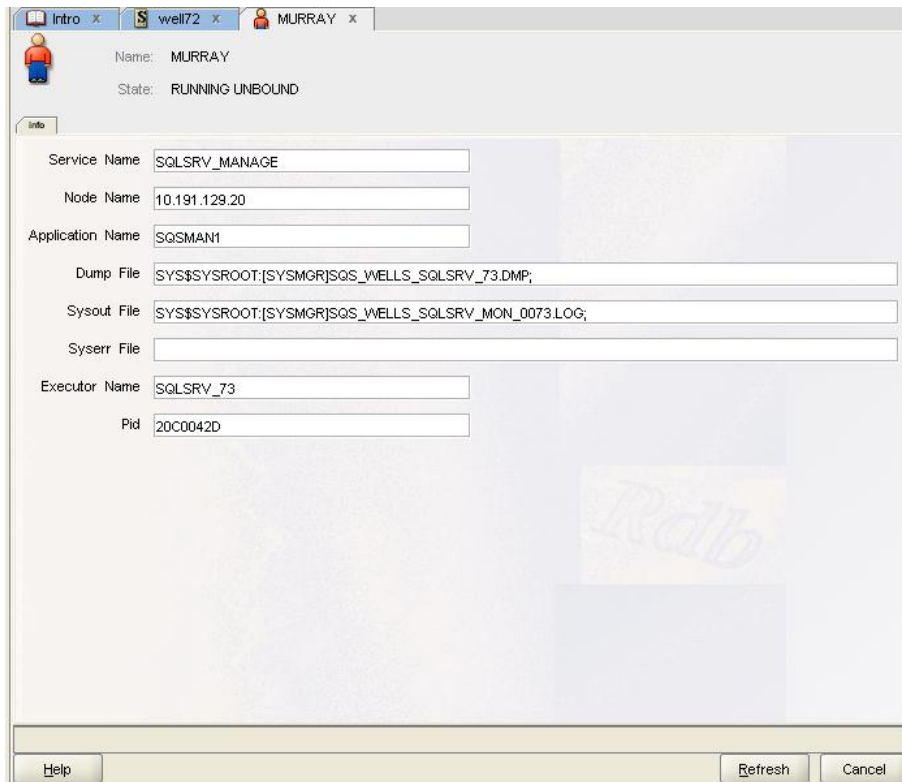
---

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# Chapter 9

## SQL/Services User

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**Figure 11 - Client pane**

The client pane is comprised of the main pane and one sub-panel containing related service information:

- [Main](#) – describes the identifying information for this client
- [Info](#) – describes general information about the client.

This pane is for displaying data only and is non-editable.

### 9.1 Main Pane

The main pane consists of the following fields:

- [Name](#)
- [State](#)

#### 9.1.1 Name

Specifies the account name that the user (client) is using to gain access to the system.

## 9.1.2 State

Specifies the state of the client. The client state can be one of seven possible states:

- Running Unbound - the client is running but is not bound to an executor.
- Running Bound - the client is running and is bound to an executor.
- Running Binding - the client is running and in the process of binding to an executor.
- Canceling - the client connect is in the process of being disconnected.
- Canceling Binding - the client is in the process of informing the executor that the bound connect is going away (this operation precedes the Canceling operation.
- Write Ready Canceling - the executor wrote an error message to the client and is waiting for the write operation to complete before continuing the cancel operation.
- Canceled - the cancel process is complete and the client connect is ready to be deleted.

## 9.2 Info Tab

The info tab consists of the following fields:

- [Service Name](#)
- [Node Name](#)
- [Application Name](#)
- [Dump File](#)
- [Sysout File](#)
- [Syserr File](#)
- [Executor Name](#)
- [Pid](#)

### 9.2.1 Service Name

Specifies the name of the service that the client is using on this server.

### 9.2.2 Node Name

Specifies the name (address) of the node from which the user (client) is gaining access to the system.

### 9.2.3 Application Name

Specifies the name of the client application.

### 9.2.4 Dump File

Defines the complete file specification for the executor dump file should one be created.

You may optionally display or modify the contents of this file by right-clicking on this field. See [Remote file popup menu](#) .

### 9.2.5 Sysout File

Defines the complete file specification for the executor log file.

You may optionally display or modify the contents of this file by right-clicking on this field. See [Remote file popup menu](#) .

### 9.2.6 Syserr File

Unsupported field on Oracle Rdb.

### 9.2.7 Executor Name

Specifies the name of the executor in use for this service.

### 9.2.8 Pid

Specifies the executor process ID.

## 9.3 Options

The SQL/Services client panel has the following button-based options:

#### *Help*

Displays help information for this window.

#### *Refresh*

Refreshes the client information.

#### *Cancel*

Cancels the operation and closes the window.

---

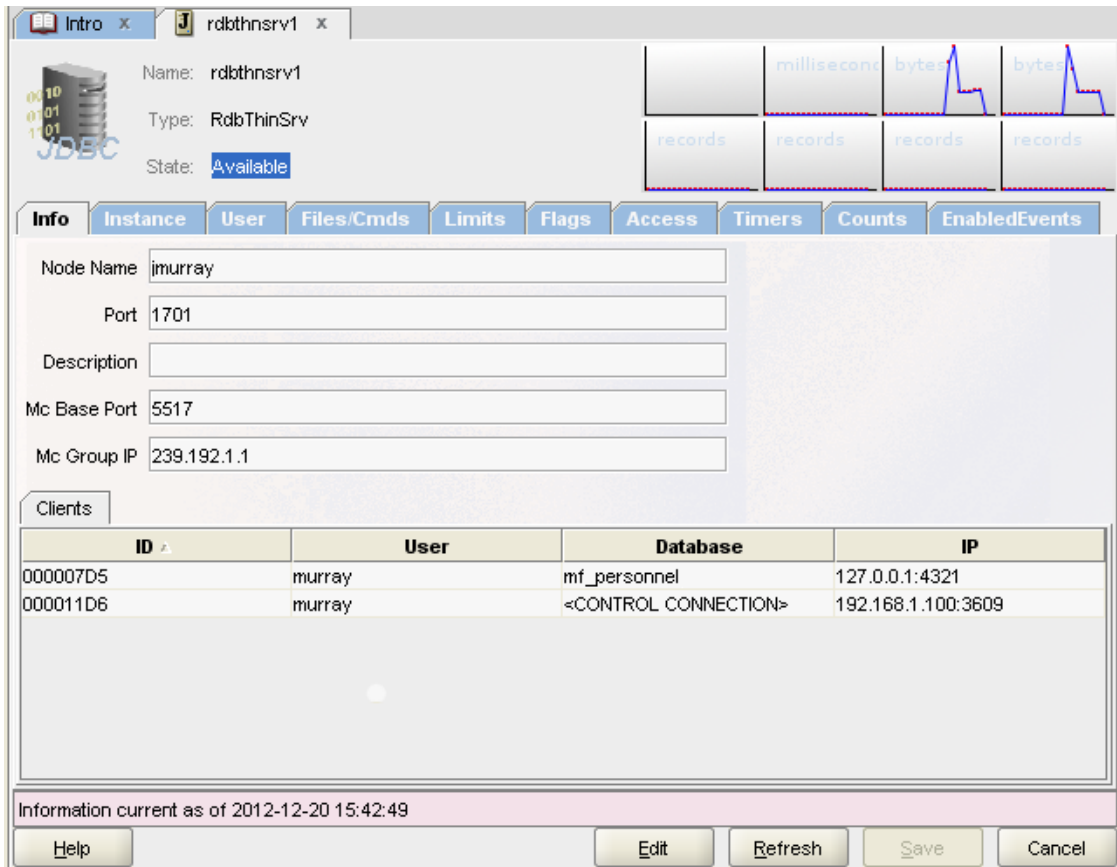
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# Chapter 10

## JDBC Server Information

Edit/Display JDBC server information.



**Figure 12 - JDBC Server Information Pane**

The JDBC Server Information pane allows you to configure a new JDBC server or to modify or display information about an existing JDBC Server.

The server pane is comprised of a number of sub-panels containing related server information:

- [Main](#) – the main identifying information for the server.
- [Info](#) – describes general information about the server.
- [Instance](#) – describes information about the running instance of this server
- [User](#) – describes user information for the server.
- [Files/CommandProcs](#) – Describe startup files and commands used by the server.
- [Limits](#) – describes limits placed on the server
- [Flags](#) – describes flags set for the server.

- [Grant](#) – describes access information for the server.
- [Timers](#) – describes timestamp information – This is a Read-Only panel
- [Counts](#) – describes statistics for this server – This is a Read-Only panel.
- [EnableEvents](#) – describes enabled Events information.
- [MP](#) – describes access information for a Multi-process server. This is only displayed if the server is one of the Multi-Process types.
- [Pool](#) – describes pool information for Pool server. This is only displayed if the server is one of the Pool server types.
- [SSL](#) – describes SSL security access information for the server. This is only displayed if the server is one of the SSL server types.

The pane is displayed in two forms; the first as shown above when an existing server is being displayed, or in the [Create JDBC Server format](#).

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### 10.1 JDBC Server Main Pane

The main pane consists of the following fields:

- [Name](#)
- [Type](#)
- [State](#)

#### 10.1.1 Name

An alias for using the JDBC server. This name need not be unique, however the name may be used to lookup server information within the start-up configuration file. The value of this name is not case-sensitive.

#### 10.1.2 Type

The type of this server:

- RdbThinSrv - standard thin server
- RdbThinSrvSSL - thin server using SSL for communication
- RdbThinSrvMP - multi-process server
- RdbThinSrvMPSSL - multi-process server using SSL
- RdbThinSrvPool - pool server
- RdbThinSrvPoolSSL - pool server using SSL

#### 10.1.3 State

Current state of the server:

- Idle – server is running with no current connections
- Unavailable – server is not currently running or not responding to poll requests on your session's GroupIP

## 10.2 Options

The JDBC Server Information pane has the following button-based options:

### *Help*

Displays help information for this window.

### *Edit*

Places the information pane in *edit mode* allowing the entry and/or modification of server characteristics.

### *Refresh*

Refreshes the information for this server.

### *Save*

Saves the information entered for the fields. Once saved, the information about the connection will be displayed in left panel table.

### *Cancel*

Cancels the operation and closes the window.

---

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## 10.3 JDBC Server – Info Panel

General information about the JDBC server.

Info	Instance	User	Files/Cmds	Limits	Flags	Access	Timers	Counts	EnabledEvents
Node Name	jmurray								
Port	1701								
Description									
Mc Base Port	5517								
Mc Group IP	239.192.1.1								
Clients									
ID	User	Database	IP						
000007D5	murray	mf_personnel	127.0.0.1:4321						
0000116F	murray	<CONTROL CONNECTION>	192.168.1.100:3427						

**Figure 13 - Info Panel**

The info panel consists of the following fields:

- [Node](#)
- [Port](#)
- [Description](#)
- [Mc Base Port](#)
- [Mc Group IP](#)

### 10.3.1 Node

Node or host on which this server should, or is currently, running.

### 10.3.2 Port

Port on which the server is listening. It is important to ensure that the use of the PORT\_ID is unique within any one node as within a node only one JDBC server at a time may listen on a specific TCP/IP port. The port must also be a valid TCP/IP port specification and should be select from the range 1024 - 65536. **Ports** 0 to 1023 are "well known" or **reserved** ports and should not be used.

Your organization may have other restrictions on what port numbers may be used.

### 10.3.3 Description

Comment describing this specific server.

### 10.3.4 MC Base Port

The base port used by the server to listen for multicast messages. Multicasting is a style of efficiently broadcasting data over a network connection to many connected servers. Any server listening in to the multicast IP address will receive the data packets that are



broadcast, such as poll requests made by ORCM and the Oracle JDBC for Rdb Controller. By default, Oracle JDBC for Rdb servers use the multicast base port of 5517.

If this value is zero (0) the server will not respond to any multicast requests. This means that ORCM and the Controller will not be able to discover the server using multicast Polls.

### 10.3.5 MC Group IP

The IP group the server is listening on for multicast messages. Oracle JDBC for Rdb servers use the Administrative Scoping range of addresses that allow easy limiting of multicast transmission to well defined boundaries within your network., Administrative Scoping is the restriction of multicast transport based on the address range of the multicast group. It is defined by [RFC 2365](#) "Administratively Scoped IP Multicast." and is restricted to the address range:

**239.0.0.0 to 239.255.255.255**

The IP address for server multicast polling should be chosen from within the following range:

**239.192.0.0 to 239.192.255.255**

This range is known as the IPv4 Organization Local Scope and has a subnet mask of 255.252.0.0. It is intended for use by an entire organization setting multicast scopes privately for its own internal or organizational use and allows up to 262,144 group addresses.

By default, Oracle JDBC for Rdb servers use the multicast IP 239.192.1.1. If this value is empty or invalid the server will not respond to any multicast requests. This means that ORCM and the Controller will not be able to discover the server using multicast Polls.

### 10.3.6 Sub-panes

In addition, the info panel may display one or more sub-panels containing information about the currently attached clients, and if the server is multi-process, information about the executor processes that are running:

- [Clients Sub-panel](#)
- [Executors Sub-panel](#)

## 10.4 Clients Sub-panel



ID	User	Database	IP
000000F	Control	<CONTROL CONNECTION>	192.168.1.100.2091

Figure 14 - Clients Sub-Pane

The Clients sub-pane is a read-only pane that displays a table of information about clients currently using the server:

- [ID](#)
- [User](#)
- [Database](#)
- [IP](#)

This table may be sorted by any column by clicking on the column header. Clicking again will reverse the order of the sorted rows; clicking a third time will remove this column from the sorting key.

Holding the CTRL key while clicking the column header will add that column to the sorting key. This allows you to specify a sorting key that is a combination of multiple column values.

Double-clicking on a row within the client table will display more information about that client.

### 10.4.1 ID

The unique identifier given to this client by the server.

### 10.4.2 User

The user name used by this client when attaching to the server.

### 10.4.3 Database

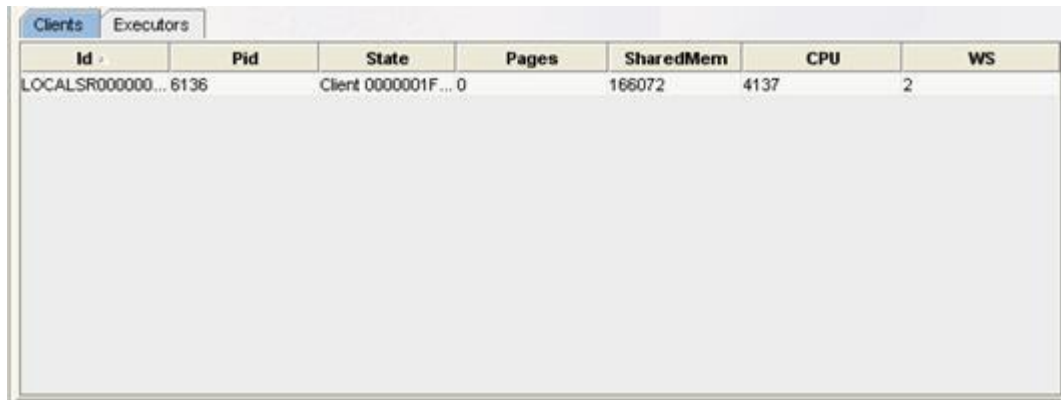
The database this client is attached to. If the client is a control user the text <CONTROL CONNECTION> will be displayed.

## 10.4.4 IP

The IP and port number from which the client has connected.

## 10.5 Executors sub-panel

If the server is one of the multi-process types, information about executors is displayed in the read-only Executors sub-panel.



Id	Pid	State	Pages	SharedMem	CPU	WS
LOCALSR000000... 6136		Client 0000001F... 0		166072	4137	2

**Figure 15 - Executors Sub-Pane**

The Executors sub-panel contains a table consisting of the following columns:

- [ID](#)
- [Pid](#)
- [State](#)
- [Pages](#)
- [SharedMem](#)
- [CPU](#)
- [WS](#)

This table may be sorted by any column by clicking on the column header. Clicking again will reverse the order of the sorted columns; clicking a third time will remove this column from the sorting key.

Holding the CTRL key while clicking the column header will add that column to the sorting key. This allows you to specify a sorting key that is a combination of multiple column values.

### 10.5.1 ID

The unique identifier given to this executor by the server.

### **10.5.2 Pid**

The process id of the executor.

### **10.5.3 State**

The current state of the executor.

### **10.5.4 Pages**

The number of pages of standard memory currently used by the executor process.

### **10.5.5 SharedMem**

The number of bytes of global shared memory currently allocated to this executor process.

### **10.5.6 CPU**

The amount of CPU time in milliseconds used by this executor.

### **10.5.7 WS**

The working set (in pages) currently used by this executor.

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## **10.6 JDBC Server – Instance Information**

Information about the JDBC server instance.

Info	Instance	User	Files/Cmds	Limits	Flags	Access	Timers	Counts	EnabledEvents
Num Clients	1								
Node IP	192.168.1.100				Node OS				
PID	0x111C(4380)				Proc Name				
Version	73111				Instance	20121220			
Shr Version	73111				Shr Instance	20120903			
Control Url									

**Figure 16 - Instance Information**

The JDBC Server Instance panel displays information about the instance of the JDBC server. Instance information such as the Process id and the process name may help you locate the running server process in the system information of the node it is running on.

This process information may be used in conjunction with Open VMS diagnostic tools to provide more process level information about the running server.

The Instance Information tab consists of the following fields:

- [Num Clients](#)
- [Node IP](#)
- [Node OS](#)
- [PID](#)
- [Proc Name](#)
- [Version](#)
- [Instance](#)
- [Shr Version](#)
- [Shr Instance](#)
- [Control Url](#)

### 10.6.1 Num Clients

The number of clients current connected to this server. This is a read-only field.

### 10.6.2 Node IP

The IP of the node the server is running on. This is a read-only field.

### **10.6.3 Node OS**

The operating system on which the server is running. If the server is not currently running or is not responding to polls this will be blank. This is a read-only field.

### **10.6.4 PID**

The process ID of the running server on the node with the IP shown in NodeIP. If the server is not currently running or is not responding to polls this will be zero (0). This is a read-only field.

### **10.6.5 Proc Name**

The process name the server is running under. If the server is not currently running or is not responding to polls this will be blank. This is a read-only field.

### **10.6.6 Version**

The version of the running server. This is a read-only field.

### **10.6.7 Instance**

The instance number of the specified version. This is a read-only field.

### **10.6.8 Shr Version**

The version of the JDBC shared images/libraries used by the server. This is a read-only field.

### **10.6.9 Shr Instance**

The instance number of the specified Shr Version. This is a read-only field.

### **10.6.10 Control Url**

The URL used by the process that started this server. This is a proprietary URL specific to Oracle JDBC for Rdb and used for internal operations. This is a read-only field.

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## **10.7 JDBC Server Information – User Information**

Information related the JDBC server users.

**Figure 17 - User Information**

The JDBC Server User information panel displays information related to use of the JDBC server by normal and control users in the following fields:

- [Show Passwords](#)
- [Persona](#)
- [Max Clients](#)
- [Default User](#)
- [Control User](#)
- [Default Pass](#)
- [Control Pass](#)
- [Server Pass](#)

### 10.7.1 Show Passwords

If checked the passwords will be visible on the screen. These passwords may be plain text or in obfuscated form. The default state of the checkbox is uncheck, which will force ORCM to display asterisks instead of the password contents.

### 10.7.2 Persona

The default Persona to be used when this server is executing.

This value is held as the `persona` configuration setting within the server section of the [XML-based server configuration file](#).

### 10.7.3 Max Clients

The maximum number of clients that may be connected to this server at any one time. The default value of -1 indicates that there is no limit placed on the number of clients.

This value is held as the `maxClients` configuration setting within the server section of the [XML-based server configuration file](#).

### 10.7.4 Default *User*

The default username to use on database connections for clients that have not specified a username.

This value is held as the `user` configuration setting within the server section of the [XML-based server configuration file](#).

### 10.7.5 Control *User*

The username to be used when establishing a control user.

### 10.7.6 Default *Pass*

The default password to be used when connecting to a database as the default user. This should be either a plain-text or obfuscated password using the `obfuscate` Thin Controller function.

This value is held as the `password` configuration setting within the server section of the [XML-based server configuration file](#).

See [Password fields](#) for more information.

### 10.7.7 Control *Pass*

The control password for this server. Any control user connection attempt must provide this password before the server will allow the control connection to progress. This should be either a plain-text or obfuscated password using the `obfuscate` or `digest` Thin Controller functions.

This value is held as the `controlpass` configuration setting within the server section of the [XML-based server configuration file](#).

See [Password fields](#) for more information.

### 10.7.8 Server *Pass*

The server password for this server. This is an additional password that clients need to provide before they may use the server for database connections. If left blank clients do not have to supply an additional server password during connection.

This value is held as the `srv.password` configuration setting within the server section of the [XML-based server configuration file](#).

See [Password fields](#) for more information.

In addition see [Further server access protection](#) for more details on server passwords.



## 10.8 Password fields

Oracle recommends not to store password in your configuration file, however if you choose to store them then an obfuscated form should be used. You may use the `digest` or the `obfuscate` functions within the Thin Controller application to generate an obfuscated password that is suitable to use in the configuration file.

Alternatively, you may use the Set Password feature of the popup menu displayed when you right-click on a password field:

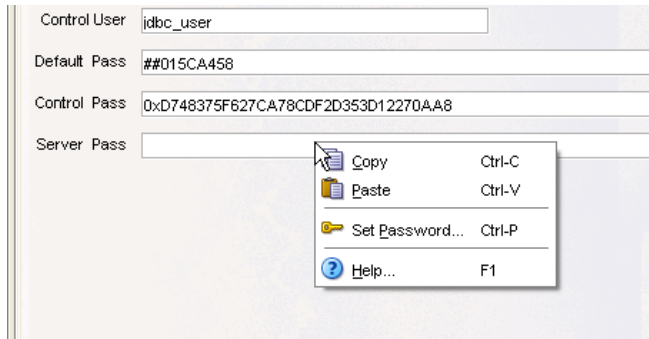


Figure 18 - Set Password

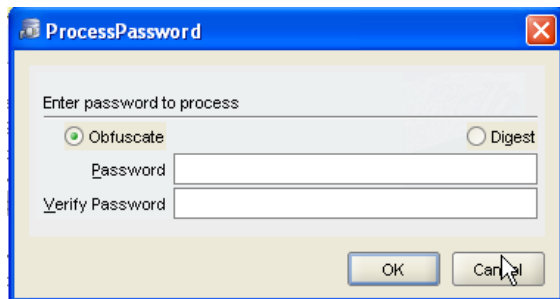


Figure 19 - Process Password

See [Password Obfuscation in Server Configuration Files](#) for more details.

**Note:** the Default Password should not be obfuscated using the `digest` function as this password does need to be clarified for use with the Rdb Server.

---

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## 10.9 JDBC Server – Files/Cmds Information

Information about files and commands for the JDBC server.



The screenshot shows a web-based configuration interface for the JDBC server. At the top, there is a navigation bar with tabs for 'Info', 'Instance', 'User', 'Files/Cmds', 'Limits', 'Flags', 'Access', 'Timers', 'Counts', and 'EnabledEvents'. The 'Files/Cmds' tab is currently selected. Below the navigation bar, there are several input fields for configuration:

- Log File Pattern:
- Current Log file:
- Cfg File:
- Startup File:
- Cli Start File:
- On Start Cmd:
- On Cli Start Cmd:

Figure 20 - Files/Cmds Panel

This panel contains details on the various startup command files and OpenVMS DCL commands used by JDBC. It also details which configuration file was used to set the server attributes as well as where the server log file will be written.

The Files/Cmds panel consists of the following fields:

- [Log File Pattern](#)
- [Current Log File](#)
- [Cfg File](#)
- [Startup File](#)
- [Cli Startup File](#)
- [On Start Cmd](#)
- [On Cli Start Cmd](#)

### 10.9.1 Log File Pattern

The pattern for the file specification of the server log file. This may be a standard file specification or may contain special pattern character sequences that may be used to generate the log file specification. See the *Logging and Tracing* section of your *JDBC User Guide* for more details.

This value is held as the `logfile` configuration setting within the server section of the configuration file.

## 10.9.2 Current Log File

The file specification of the current server log file. This is a read-only field.

## 10.9.3 Cfg File

The file specification for the server's configuration file.

This value is held as the `configfile` configuration setting within the server section of the XML-based server configuration file.

## 10.9.4 Startup File

The file specification for the startup command procedure to use to start this server up. This is used only when the server is started by this GUI, the Controller command line or a POOL server.

During the driver kit installation the command procedure `RDBJDBC_STARTSRV.COM` is placed in the `RDB$JDBC_HOME` directory. This file will be used by default for server start up using the controller and pool servers.

You can choose to change this default command procedure to customize for your system settings, or you can create a new customized procedure and change the configuration file so that servers use this new file. However Oracle recommends that you use the [On Start Cmd](#) in this panel or the `srv.onStartCmd` server attribute in the configuration file instead. See [srv.onStartCmd](#) for more information on using the `srv.onStartCmd` attribute.

This value is held as the `srv.startup` configuration setting within the server section of the XML-based server configuration file.

## 10.9.5 Cli Startup File

The file specification for the startup command procedure to use when the server executes a CLI command in behalf of the client. If not specified the default CLI startup command procedure will be executed. The default CLI startup file is `RDB$JDBC_COM:RDBJDBC_EXECCLI.COM`

This value is held as the `srv.cliStartup` configuration setting within the server section of the XML-based server configuration file.

## 10.9.6 On Start Cmd

A OpenVMS DCL command to be executed prior to the invocation of the server. It must be a valid OpenVMS DCL command and must be valid within the context of the server process created by the GUI, controller or pool server.

If multiple DCL commands are required then they should be placed within a DCL command procedure, which in turn should be made available to the environment under

which the controller or pool server runs. Oracle recommends that these command procedures be placed within the `RDB$JDBC_COM` directory and the file protection set to allow the GUI, controller or pool server execute access. There is no default value for this field.

This value is held as the `srv.onStartCmd` configuration setting within the server section of the XML-based server configuration file.

### 10.9.7 On Cli Start Cmd

A DCL command to be executed prior to the execution of a CLI command. It must be a valid OpenVMS DCL command and must be valid within the context of the server process created by the GUI, controller or pool server.

If multiple DCL commands are required then they should be placed within a DCL command procedure, which in turn should be made available to the environment under which the controller or pool server runs. Oracle recommends that these command procedures be placed within the `RDB$JDBC_COM` directory and the file protection set to allow the GUI, controller or pool server execute access.

This value is held as the `srv.onCliStartCmd` configuration setting within the server section of the XML-based server configuration file.

#### *Caution when using Startup command procedures:*

Do not use the `SET VERIFY` command within these command procedures. As the method `Runtime.exec()` may be used by the servers to create processes, the use of the `SET VERIFY` command within the command procedure may hang the server. This is a documented limitation of using `Runtime.exec()` on Open VMS Java. The logical name `JAVA$EXEC_TRACE` is available to help debug `Runtime.exec()` calls on OpenVMS. Refer to the OpenVMS Java documentation for more details.

---

#### **Note:**

The **On Start Cmd**, **On Exec Start Cmd** and the **On Cli Start Cmd** should point to a valid DCL command that will be executed on the start up of the server, executor or execution of a CLI command. If you wish to invoke a DCL command procedure you must also include the DCL invocation symbol `@` at the start of the command.

---

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## 10.10 JDBC Server – Limits Information

Limits information about the JDBC server.

Info	Instance	User	Files/Cmds	Limits	Flags	Access	Timers	Counts	EnabledEvents
Fetch Size	<input type="text" value="100"/>			Bind Timeout	<input type="text" value="0"/>				
Idle Timeout	<input type="text" value="0"/>			Client Idle Timeout	<input type="text" value="0"/>				
Lock Wait	<input type="text" value="-1"/>			Try Wait	<input type="text" value="100"/>				
Max Tries	<input type="text" value="10"/>								

**Figure 21 - Limits Tab**

The limit tab consists of the following fields:

- [Fetch Size](#)
- [Bind Timeout](#)
- [Idle Timeout](#)
- [Client Idle Timeout](#)
- [Lock Wait](#)
- [Try Wait](#)
- [Max Tries](#)

### 10.10.1 Fetch Size

The default record Fetch Size for connections made to this server.

This value is held as the `fetchsize` configuration setting within the server section of the XML-based server configuration file.

### 10.10.2 Bind Timeout

The time, in milliseconds, the server will wait for a database connection to complete. If the database fails to connect within this time an exception will be raised. A value of zero (0) means unlimited timeout.

This value is held as the `srv.bindTimeout` configuration setting within the server section of the XML-based server configuration file.

### 10.10.3 Idle Timeout

The maximum time, in milliseconds, the server will wait for a new client connection request. If no new connection is made within the timeout period the server will be closed down due to inactivity. A value of zero (0) means unlimited idle time allowed.

This value is held as the `srv.idleTimeout` configuration setting within the server section of the XML-based server configuration file.

### 10.10.4 Client Idle Timeout

The time, in milliseconds, that a client connection may be idle. If no operation is carried out using the connection within the time specified, the connection will be forcibly disconnected. A value of zero (0) means unlimited idle time allowed, i.e. the connection will not timeout.

This value is held as the `cli.idleTimeout` configuration setting within the server section of the XML-based server configuration file.

### 10.10.5 Lock Wait

The maximum number of seconds to wait on getting a record lock. This switch, used in conjunction with [Max Tries](#) and [Try Wait](#), specifies how often and how long to try to get a lock on a locked object before issuing a locked object Exception. A default value of minus one (-1) means wait indefinitely.

This value is held as the `lockwait` configuration setting within the server section of the XML-based server configuration file.

### 10.10.6 Try Wait

The time, in milliseconds, to wait between lock tries. This value, used in conjunction with [Max Tries](#) and [Lock Wait](#), specifies how often and how long to try to get a lock on a locked object before issuing a locked object Exception. A value of zero (0) or a negative value, indicates not to wait between lock tries.

This value is held as the `trywait` configuration setting within the server section of the XML-based server configuration file.

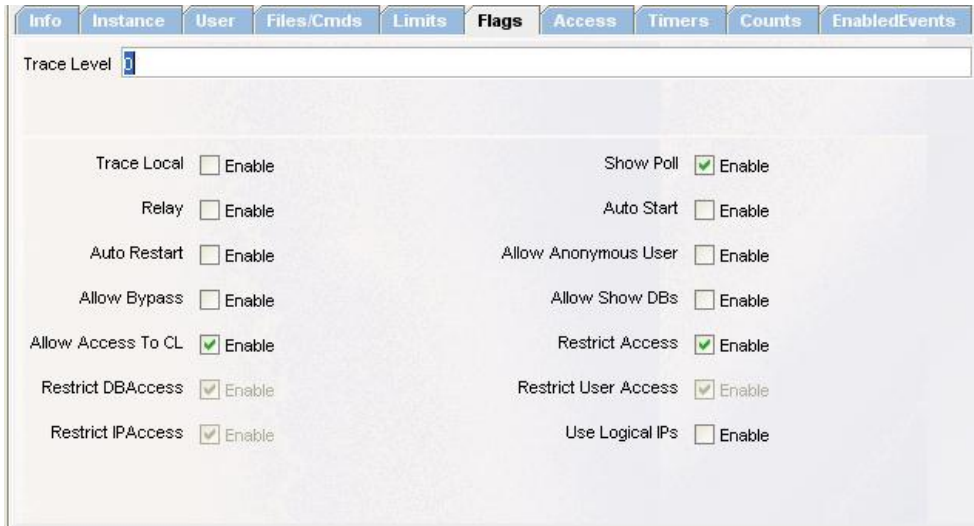
### 10.10.7 Max Tries

The maximum number of times to try to get a record lock. This value used in conjunction with [Try Wait](#) and [Lock Wait](#), specifies how long to keep trying to get a lock on a locked object before issuing a locked object Exception. The default value is 10;

This value is held as the `maxtries` configuration setting within the server section of the XML-based server configuration file.

## 10.11 JDBC Server – Flags Information

Information about various trace and other flags set for the JDBC server.



**Figure 22 - Flags Panel**

The flags panel consists of the following fields:

- [Trace Level](#)
- [Trace Local](#)
- [Show Poll](#)
- [Relay](#)
- [Auto Start](#)
- [Auto Restart](#)
- [Use Logical IPs](#)
- [Allow Anonymous User](#)
- [Allow Bypass](#)
- [Allow Show DBs](#)
- [Allow Access to CL](#)
- [Restrict Access](#)
- [Restrict DB Access](#)
- [Restrict User Access](#)
- [Restrict IP Access](#)

### **10.11.1 Trace Level**

The current TraceLevel set for the server.

### **10.11.2 Trace Local**

If true then any JDBC tracelevel flags set by user applications will be ignored by the server.

### **10.11.3 Show Poll**

If true then responses to POLL requests will be logged by the server.

### **10.11.4 Relay**

If true then this server may act as a Relay server. (This functionality is not currently available).

### **10.11.5 Auto Start**

If true, indicates to any pool server that may include this server in its pool of servers to automatically start up this pooled server.

See [Pool Server Operation](#) for more details

### **10.11.6 Auto Restart**

If true, indicates to any pool server that may include this server in its pool of servers to check for unexpected server terminations and automatically restart this pooled server.

See [Pool Server Operation](#) for more details

### **10.11.7 Use Logical IPs**

This is only valid for POOL servers. If true then the server should not translate named IP values to IP addresses prior to redirecting connection request.

### **10.11.8 Allow Anonymous User**

If true, tells the server to allow anonymous connections, that is, connections where the user and password are not specified.

Depending on how the Oracle Rdb database has been set up, Oracle Rdb may allow connection to the database without a username being explicitly specified, in which case the characteristics of the authorization account of the server invoker will be used by Oracle Rdb to determine database access.

This switch may be used in conjunction with the Default Password and the Default User fields to specify the default username/password to use on connections.

By default, anonymous connections are disabled and the client must specify a valid username and password combination to access the Rdb database.



### **10.11.9 Allow Bypass**

If true, specifies that if the privilege is available, bypass will be an allowable privilege for the server process. Rdb checks for this privilege to determine the access rights to databases and database objects. If enabled, all validated users connected to databases via this server instance will be considered to have bypass privilege.

The default is false where the bypass privilege is disabled for the server by default. Validated users who already possess the bypass privilege will still have bypass available.

See [BYPASS Privileges](#) for more details.

### **10.11.10 Allow Show DBs**

If true, indicates that the server will respond to user requests for a list of databases that are known to the server. The list of known named databases is specified in the Database section of the configuration file.

See [Named Databases](#) for more details.

### **10.11.11 Allow Access to CL**

If true, indicates that users may be allowed access to Command Line operations on the system that the server is executing on.

See [Access to the Command Line](#) for more details.

### **10.11.12 Restrict Access**

Used in conjunction with the `allowDatabase` and `allowUser` options to restrict access to designated databases and users.

See [Restricting Database Access](#) for more details.

### **10.11.13 Restrict DB Access**

Used in conjunction with the Allowed Database list, if true then the server will enable database restrictions on client connections. This is a Read-only Field.

### **10.11.14 Restrict User Access**

Used in conjunction with the Allowed Users list, if true then the server will enable user restrictions on client connections. This is a Read-only Field.

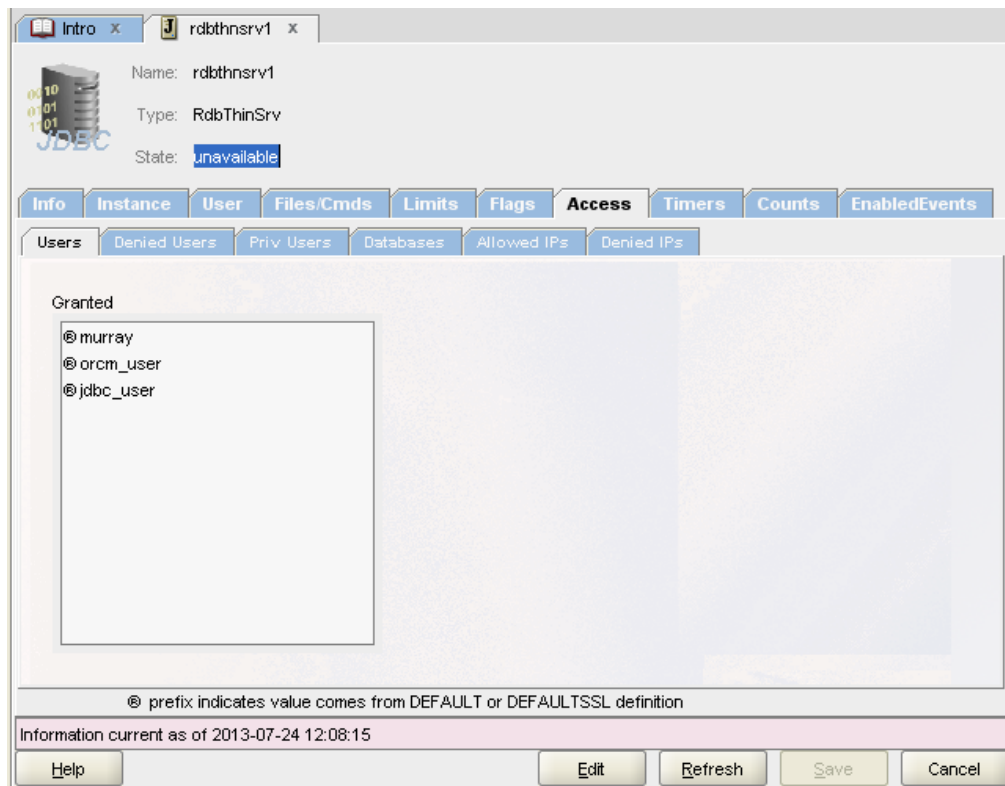
### **10.11.15 Restrict IP Access**

Used in conjunction with the Allowed IPs list, if true then the server will enable IP restrictions on client connections. This is a Read-only Field.

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## 10.12 JDBC Server - Access Information

Access information about the JDBC server.



**Figure 23 - Access Tab**

The Access tab shows the identity of users and IPs that are allowed access to this server as well as any databases restrictions that the server may have. In addition certain users may be granted **privileged** status allowing access to server functionality not normally given to non-control users.

By restricting access to a server the system or database administrator controls how the server may be used.

There are six main types of Access controls:

- Users - grant certain user or user groups access to the server.

- Denied Users - specify restrictions on the usernames of the clients that will be denied access to this server.
- Priv Users - specify specific users that may carry out 'privileged' operations on this server.
- Databases - specify restrictions on the database connections that will be allowed when using this server.
- Allowed IPs - specify restrictions on the IP of the clients that will be allowed access to this server.
- Denied IPs - specify restrictions on the IP of the clients that will be denied access to this server.

### 10.12.1 Access Tab Operations

The access tab may be displayed in two modes, *display* and *edit*.

By default when server details are being displayed as a JDBC Server information tab in the main ORCM window the access tab is in *display mode* as shown in [Figure - Access Tab](#) above.

When the **Edit** button is pressed in JDBC Server information tab, the pane will be set to *edit mode* as shown in [Figure - Edit Mode](#) below.

When the access tab is displayed within the Create JDBC Server dialog, the access tab will be in *edit mode*.

In *display mode*, information about the current access attributes is displayed. This is a read-only mode.

In *edit mode* two regions will be displayed. The first region will be either a granted list or a denied list, and the second region is the removed list. In this mode, identifiers may be added to or removed from the granted list.

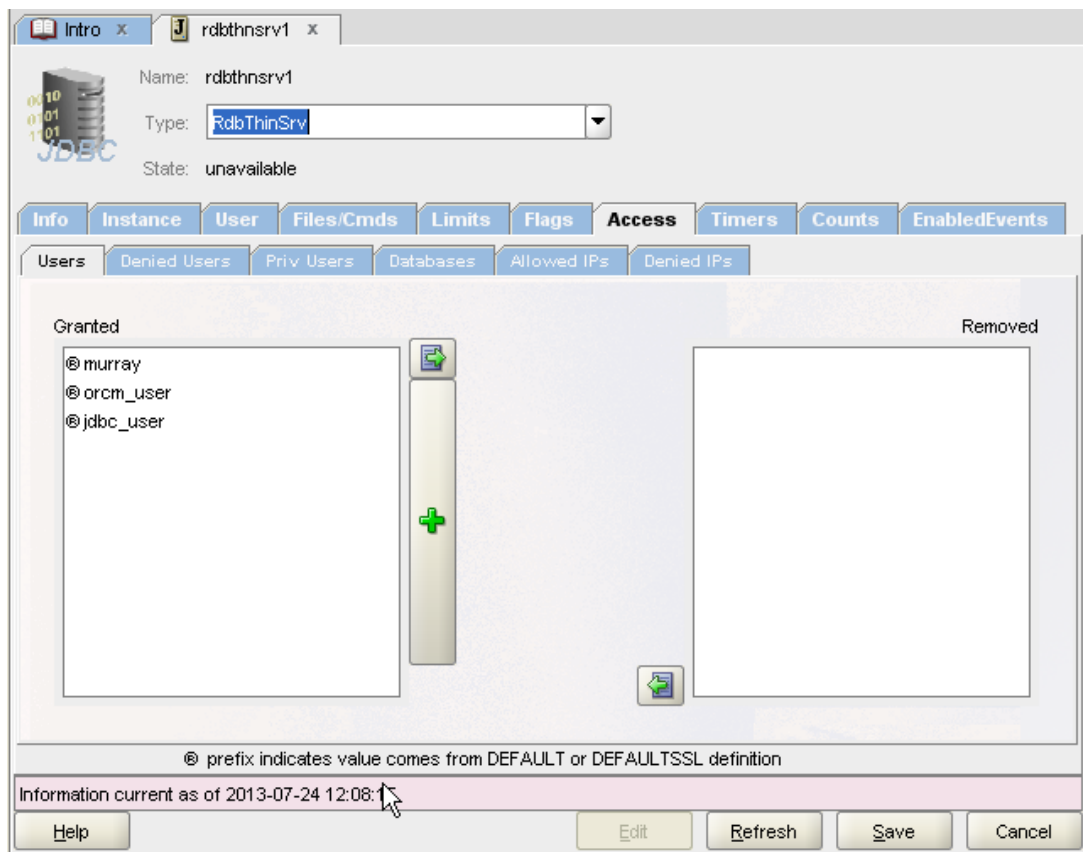


Figure 24 - edit mode

## 10.12.2 Granted List

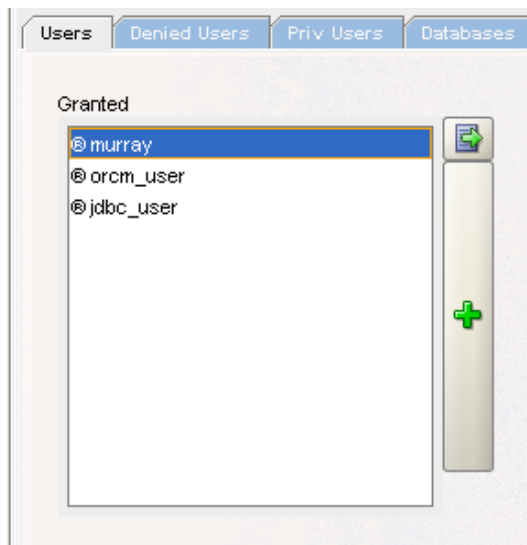



Figure 25 - Granted list

The granted list is a list of identifiers that are granted access to the server. This list will be displayed when you select one of the following tabs:

- Users
- Priv Users
- Databases
- Allowed IPs

When the panel is in *edit mode*, new identifiers may be added to the list using the **Add**

button (  ). Existing granted identifiers may be removed from the list by [removing access](#). Any identifier in the granted list will be added to the server configuration information when you press the **Save** button.

### 10.12.3 Remove Granted

To remove a previously granted identifier:

1. Drag the identifier from the Granted list to the Removed list or
2. Double-click on the identifier within the Granted list or
3. Select the identifier within the Granted list by clicking on it and pressing the

**Remove** button (  )

---

**Note:**

If the access identifier is inherited from the DEFAULT or DEFAULTSSL server definitions, as indicated by a @ prefix, you will not be able to remove it. Inherited access identifiers can only be removed from the server definition they were inherited from.

---

### 10.12.4 Denied List

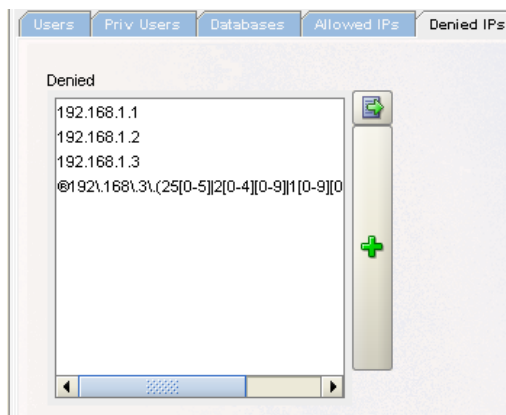



Figure 26 - Denied list

The denied list is a list of identifiers that have been denied access to the server. This list will be displayed when you select one of the following tabs:

- Denied Users
- Denied IPs

When the panel is in *edit mode*, new identifiers may be added to the denied list using the

**Add** button (). Existing denied identifiers may be removed from the list by [removing denial](#). Any identifier in the denied list will be added to the server configuration information when you press the **Save** button.

### 10.12.5 Remove Denied

To remove a previously denied identifier:

1. Drag the identifier from the Denied list to the Removed list or
2. Double-click on the identifier within the Denied list or
3. Select the identifier within the Denied list by clicking on it and pressing the

**Remove** button ()

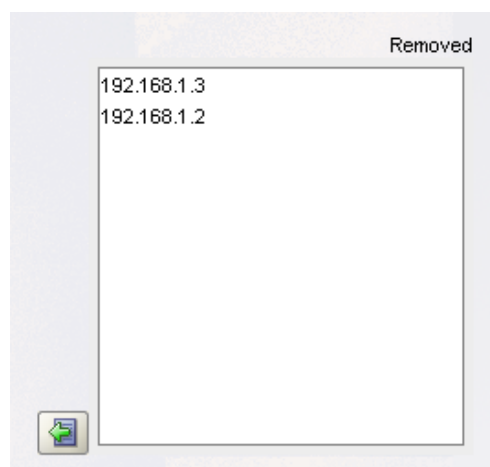
---

**Note:**

If the access identifier is inherited from the DEFAULT or DEFAULTSSL server definitions, as indicated by a ® prefix, you will not be able to remove it. Inherited access identifiers can only be removed from the server definition they were inherited from.

---

### 10.12.6 Removed List



**Figure 27 - Removed list**


The removed list is a temporary list of identifiers that were removed from the granted or denied list during the edit session.

When you save the changes using the **Save** button, the removed list will be cleared. Its function is to maintain a list of previously granted or denied identifiers that have been removed during the edit session that may be restored to granted or denied status.

### 10.12.7 Restore Grant

An identifier that has been moved to the Removed list may be re-instated to the Granted list. To re-instate a removed identifier:


1. Drag the identifier from the Removed list to the Granted list or
2. Double-click on the identifier within the Removed list or
3. Select the identifier within the Removed list by clicking on it and pressing the

**Reinstate** button (  )

### 10.12.8 Restore Denied

An identifier that has been moved to the Removed list may be re-instated to the Denied list. To re-instate a removed identifier:

1. Drag the identifier from the Removed list to the Denied list or
2. Double-click on the identifier within the Removed list or
3. Select the identifier within the Removed list by clicking on it and pressing the

**Reinstate** button (  )

### 10.12.9 Save

When you save the changes using the **Save** button, changes made to server details will be saved to the configuration file.

In addition identifiers found in the various Granted lists will be added to the server specification within the configuration file:

- **Granted Users** identifiers will be stored as <allow user ... >
- **Denied Users** identifiers will be stored as <deny user ... >
- **Granted Priv Users** identifiers will be stored as <allowPrivUser ... >
- **Granted Database** identifiers will be stored as <allowDatabase ... >
- **Granted IP** identifiers will be stored as <allow IP ... >
- **Denied IP** identifiers will be stored as <deny IP ... >

When the **Save** button is pressed, the Removed list will be cleared.

### 10.12.10 Cancel

When the **Cancel** button is pressed any unsaved changes will be undone and the Removed list will be cleared.

## 10.12.11 Refresh

When the **Refresh** button is pressed any unsaved changes will be undone and the server will be requested to send current server characteristics to ORCM. In addition the Removed list will be cleared.


---

### Note:

The **Refresh** button is only available when the access tab is displayed as part of a JDBC Server information pane and not during JDBC Server creation.

---

## 10.12.12 New Grant/Deny

To create a new identifier press the **Add** () button. You will be prompted for identifier information. Details of adding a new identifier may be found in:

- [Grant User](#)
- [Deny User](#)
- [Grant Priv User](#)
- [Grant Database](#)
- [Grant IP](#)
- [Deny IP](#)

### 10.12.12.1 Grant User

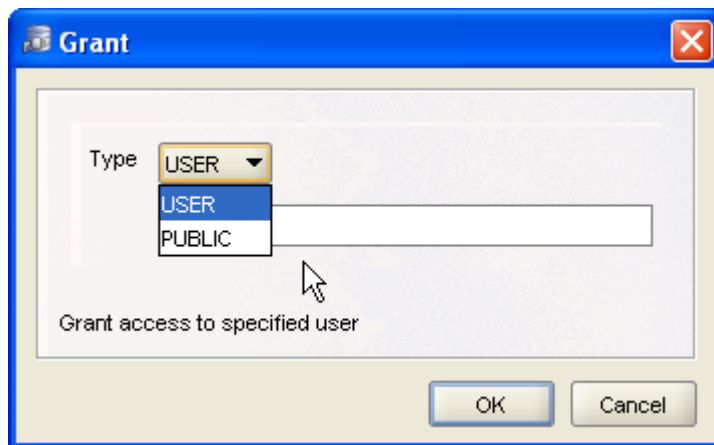



Figure 28 - grant user

When the **Add** () button is pressed when the **Users** grant list is displayed, a new user identifier may be added to the grant list.

A drop-down list provides grant choices, select **USER** to enter in a valid username or select **PUBLIC** to grant access to all users.



### 10.12.12.2 Deny User

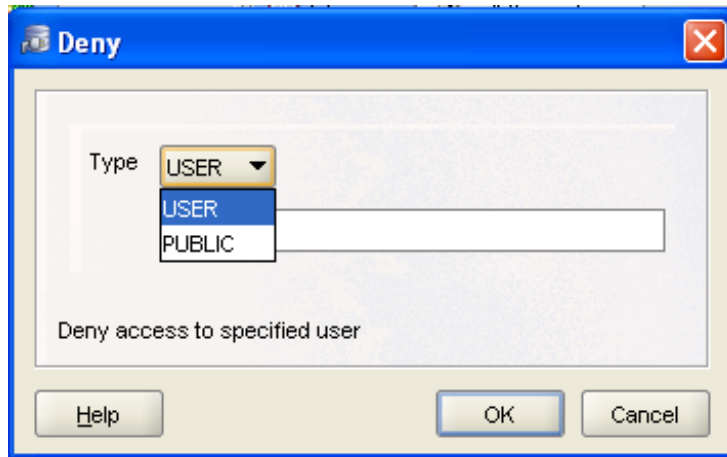


Figure 29 - deny User

When the **Add** (+) button is pressed when the **Users** denied list is displayed, a new username may be added to the denied list.

A drop-down list provides denial choices, select **USER** to enter in a valid username or select **PUBLIC** to deny access to all users.

### 10.12.12.3 Grant Priv User

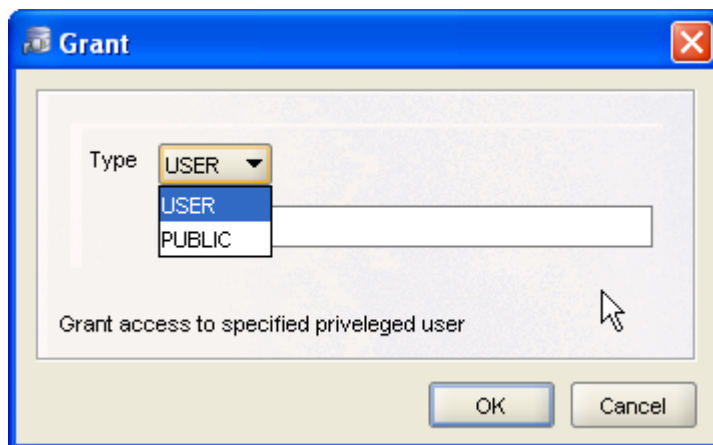


Figure 30 - grant privileged user

When the **Add** (+) button is pressed when the **Priv Users** grant list is displayed, a new user identifier may be added to the privileged users list.

A drop-down list provides grant choices, select the **USER** to enter in a valid username or select **PUBLIC** to grant privileged access to all users.

#### 10.12.12.4 Grant Database

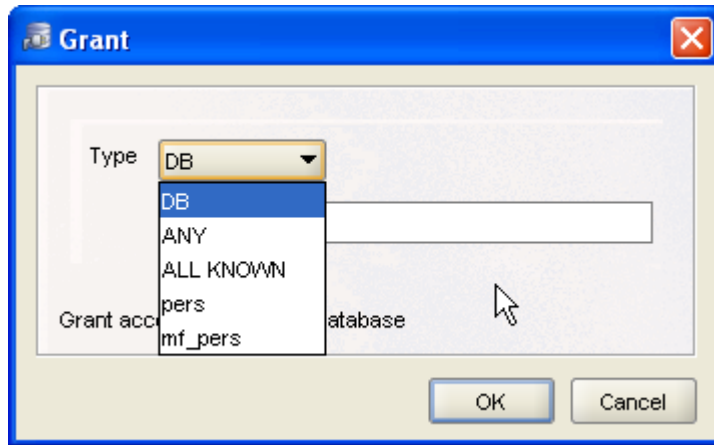



Figure 31 - grant database

When the **Add** () button is pressed when the **Databases** grant list is displayed, a new database identifier may be added to the grant list.

A drop-down list provides grant choices:

- Select the DB to enter in a valid database specification.
- Select ANY to allow access to all databases, i.e. no database restrictions will be made.
- Select ALL KNOWN to allow access to all databases that are known to the server. A database is known to the server if it exists in the list of databases found in the Databases section of the server's XML-based configuration file.
- A list of known databases that were found in the Database section of the ORCM configuration file.

#### 10.12.12.5 Grant IP

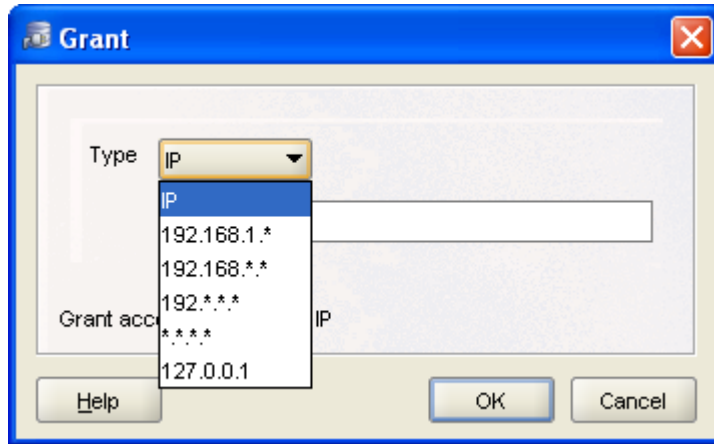


Figure 32 - grant IP

When the **Add** (+) button is pressed when the **IPs** grant list is displayed, a new IP identifier may be added to the grant list.

A drop-down list provides grant choices:

- Select **IP** to enter in a valid host IP specification, or a Java regular expression. The declared IP must be a valid IPv4 *dot-decimal* formatted IP string, or a Java regular expression based on the same standard IPv4 *dot-decimal* notation.
- Select **\*.\*.\*.\*** to allow access to all IPs, i.e. no IP restrictions will be made.
- A list of IP masks that may be used based on the IP of the host on which the ORCM application is running.

### 10.12.12.6 Deny IP

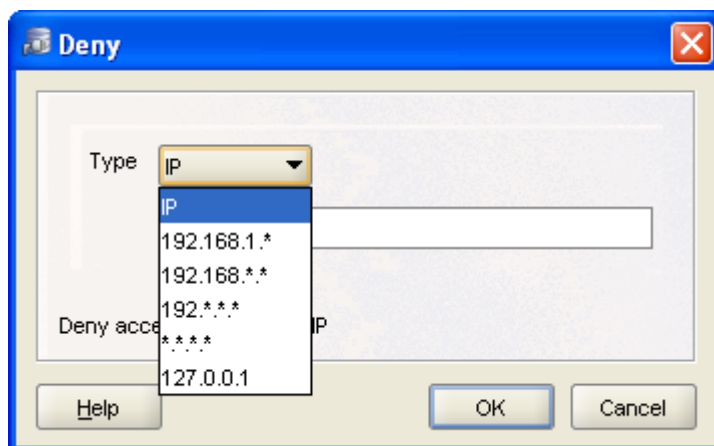


Figure 33 - deny IP

When the **Add** (+) button is pressed when the **IPs** denied list is displayed, a new IP identifier may be added to the denied list.

A drop-down list provides deny choices:

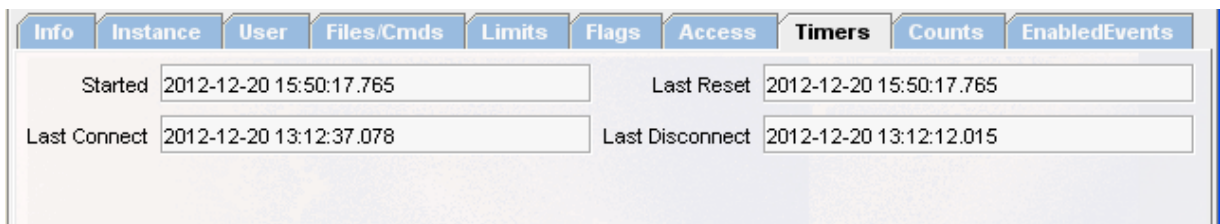
- Select **IP** to enter in a valid host IP specification, or a Java regular expression. The declared IP must be a valid IPv4 *dot-decimal* formatted IP string, or a Java regular expression based on the same standard IPv4 *dot-decimal* notation.
- Select **\*.\*.\*.\*** to deny access to all IPs, i.e. full IP restrictions will be made.
- A list of IP masks that may be used based on the IP of the host on which the ORCM application is running.

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## 10.13 JDBC Server – Timer Information

Timestamps for the JDBC server.



Info	Instance	User	Files/Cmds	Limits	Flags	Access	Timers	Counts	EnabledEvents
Started	2012-12-20 15:50:17.765			Last Reset	2012-12-20 15:50:17.765				
Last Connect	2012-12-20 13:12:37.078			Last Disconnect	2012-12-20 13:12:12.015				

**Figure 34 - Timers Panel**

The timer panel shows some timestamp information about the server such as the time the server was last started.

The timer panel consists of the following fields:

- [Started](#)
- [Last Reset](#)
- [Last Connect](#)
- [Last Disconnect](#)

### 10.13.1 Started

Timestamp of the last time the server was started. This is a Read-Only field.

### 10.13.2 Last Reset

Timestamp of the last time the server was reset. This is a Read-Only field.

### 10.13.3 Last Connect

Timestamp of the last time a user connection was made to the server. This is a Read-Only field.

### 10.13.4 Last Disconnect

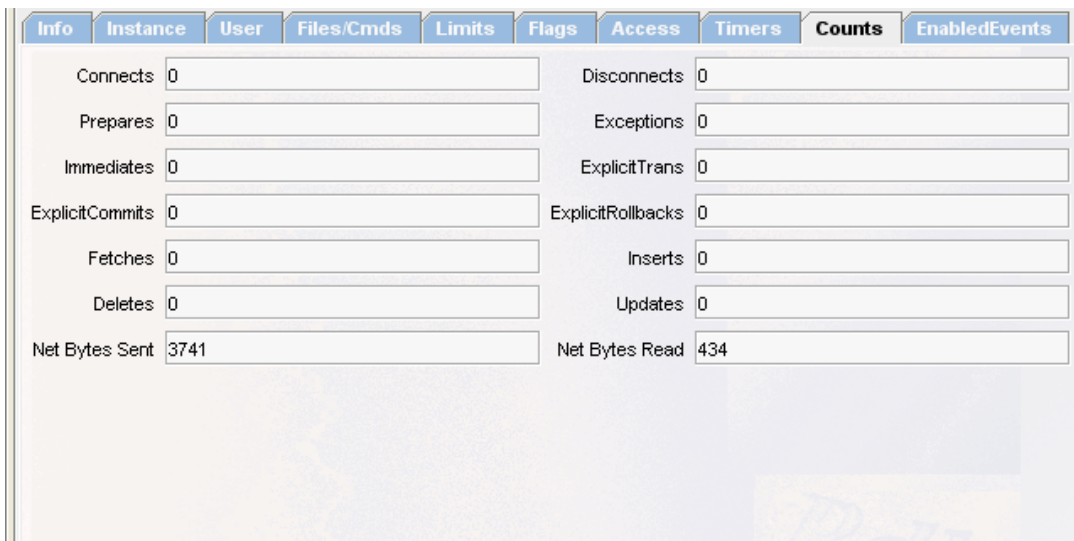
Timestamp of the last time a user disconnected from the server. This is a Read-Only field.

---

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## 10.14 JDBC Server – Counts Information

Usage counts information for the JDBC server.



The screenshot shows a web-based interface for monitoring JDBC server statistics. It features a tabbed menu at the top with the following tabs: Info, Instance, User, Files/Cmds, Limits, Flags, Access, Timers, Counts (selected), and EnabledEvents. The main content area displays a grid of statistics, each with a label and a corresponding input field showing a numerical value. The statistics are as follows:

Statistical Category	Value
Connects	0
Disconnects	0
Prepares	0
Exceptions	0
Immediates	0
ExplicitTrans	0
ExplicitCommits	0
ExplicitRollbacks	0
Fetches	0
Inserts	0
Deletes	0
Updates	0
Net Bytes Sent	3741
Net Bytes Read	434

**Figure 35 - Counts Panel**

The counts panel display information about certain statistics associated with the server operation.

**Note :** The details of this panel may change in future versions.

The counts panel consists of the following fields:

- [Connects](#)
- [Disconnects](#)
- [Prepares](#)
- [Exceptions](#)
- [Immediates](#)

- [Explicit Trans](#)
- [Explicit Commits](#)
- [Explicit Rollbacks](#)
- [Fetches](#)
- [Inserts](#)
- [Deletes](#)
- [Updates](#)
- [Net Bytes Sent](#)
- [Net Bytes Read](#)

### **10.14.1 Connects**

The number of connections made since the last time server was started. This is a Read-Only field.

### **10.14.2 Disconnects**

The number of disconnections made since the last time server was started. This is a Read-Only field.

### **10.14.3 Prepares**

The number of statement prepares made since the last time server was started. This is a Read-Only field.

### **10.14.4 Exceptions**

The number of exceptions raised since the last time server was started. This is a Read-Only field.

### **10.14.5 Immediates**

The number of Immediate Statements executed since the last time server was started. This is a Read-Only field.

### **10.14.6 Explicit *Trans***

The number of transactions started explicitly by users since the last time server was started. This is a Read-Only field.

### **10.14.7 Explicit *Commits***

The number of Commit operations issued explicitly by users since the last time server was started. This is a Read-Only field.

### **10.14.8 Explicit *Rollbacks***

The number of Rollback operations issued explicitly by users since the last time server was started. This is a Read-Only field.

### 10.14.9 Fetches

The number of record fetches made since the last time server was started. This is a Read-Only field.

### 10.14.10 Inserts

The number of record inserts done since the last time server was started. This is a Read-Only field.

### 10.14.11 Deletes

The number of record deletes done since the last time server was started. This is a Read-Only field.

### 10.14.12 Updates

The number of record deletes done since the last time server was started. This is a Read-Only field.

### 10.14.13 *Net Bytes Sent*

The number of network bytes sent back to client applications since the last time server was started. This is a Read-Only field.

### 10.14.14 *Net Bytes Read*

The number of network bytes read from client applications since the last time server was started. This is a Read-Only field.

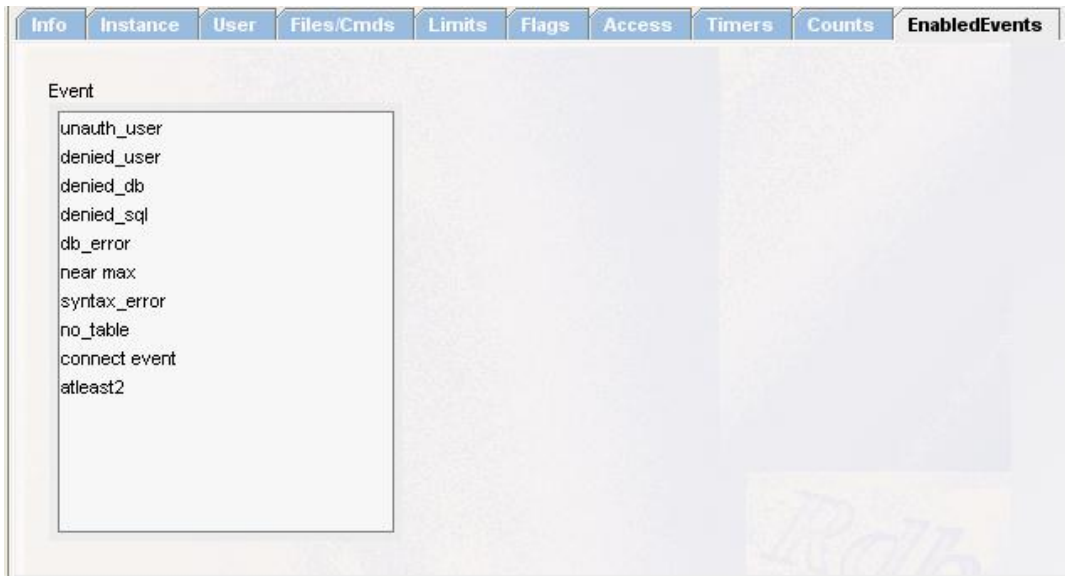
**Note: The counts panel is NOT automatically updated. To see the current values of these counters you must use the Refresh button.**

---

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## 10.15 JDBC Server - Enabled Events Information

Enabled Events information for the JDBC server.



**Figure 36 - Enable Events Tab**

The enabled events tab shows the events that have been enabled for logging on this server.

### 10.15.1 Enabled Events Tab Operations

The enabled events tab may be displayed in two modes, **display** and **edit**.

By default when server details are being displayed as a JDBC Server information tab in the main ORCM window the enabled events tab is in display mode as shown in [Figure Enable events Tab](#) above.

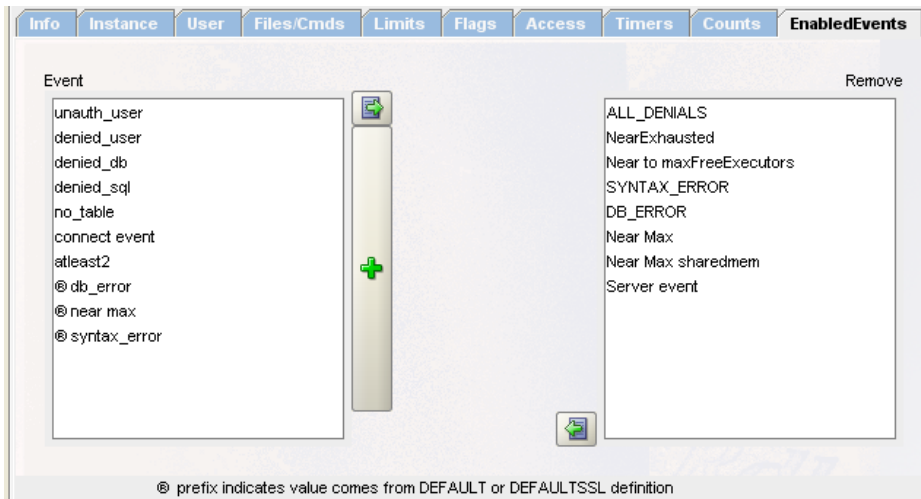
When the **Edit** button is pressed in JDBC Server information tab, the pane will be set to edit mode as shown in [Figure Enabled events Edit Mode](#) below.

When the enabled events tab is displayed within the Create JDBC Server dialog, the enabled events tab will be in edit mode.

In display mode, information about the current enabled events is displayed. This is a read-only mode.

In edit mode two regions will be displayed, the event list and the remove list. In this mode identifiers may be added to or removed from the enabled events list.






**Figure 37 - Enabled events Edit Mode**

## 10.15.2 Enabled Events List


The enabled events list is a list of event names that are enabled on the server.

When the panel is in edit mode, new events may be added to the list using the add button

(). Existing enabled events may be removed from the list by Remove. Any event in the event list will be added to the server configuration information when you press the **Save** button.

## 10.15.3 Remove

To disable a previously enabled event:

1. Drag the identifier from the Event list to the Remove list or
2. Double-click on the identifier within the Event list or
3. Select the identifier within the Event list by clicking on it and pressing the remove button ()

---

### Note:

If the event is inherited from the DEFAULT or DEFAULTSSL server definitions, as indicated by a @ prefix, you will not be able to remove it. Inherited events can only be removed from the server definition they were inherited from.

---

## 10.15.4 Remove List

The remove list is a list of events that are not currently enabled for this server.

## 10.15.5 Enable Event

An identifier that exists in the Remove list may be enabled by:

1. Dragging the identifier from the Remove list to the Event list or
2. Double-clicking on the identifier within the Remove list or
3. Select the identifier within the Remove list by clicking on it and pressing the enable button



( ) or



4. Using the add ( ) button. See [Add Enabled Event](#).

## 10.15.6 Options

The following button-base options are available:

### *Help*

Displays help information for this window.

### *Save*

When you save the changes using the **Save** button, changes made to server details will be saved to the configuration file.

### *Cancel*

When the **Cancel** button is pressed any unsaved changes will be undone.

### *Refresh*

When the **Refresh** button is pressed any unsaved changes will be undone and the server will be requested to send current server characteristics to ORCM.

---

#### **Note:**

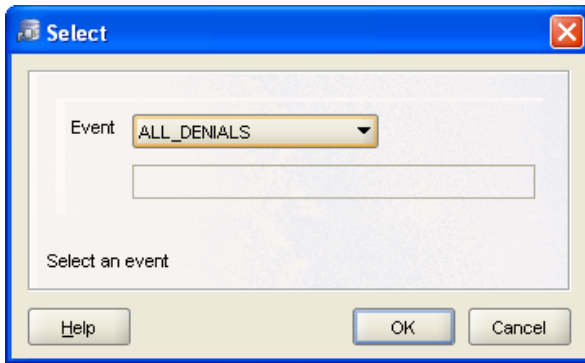
The Refresh button is only available when the enabled events tab is displayed as part of a JDBC Server information pane and not during JDBC Server creation.

---

## 10.15.7 Add Enabled Event




To enable an existing event press the add ( ) button. You may then select an existing event to enable it.



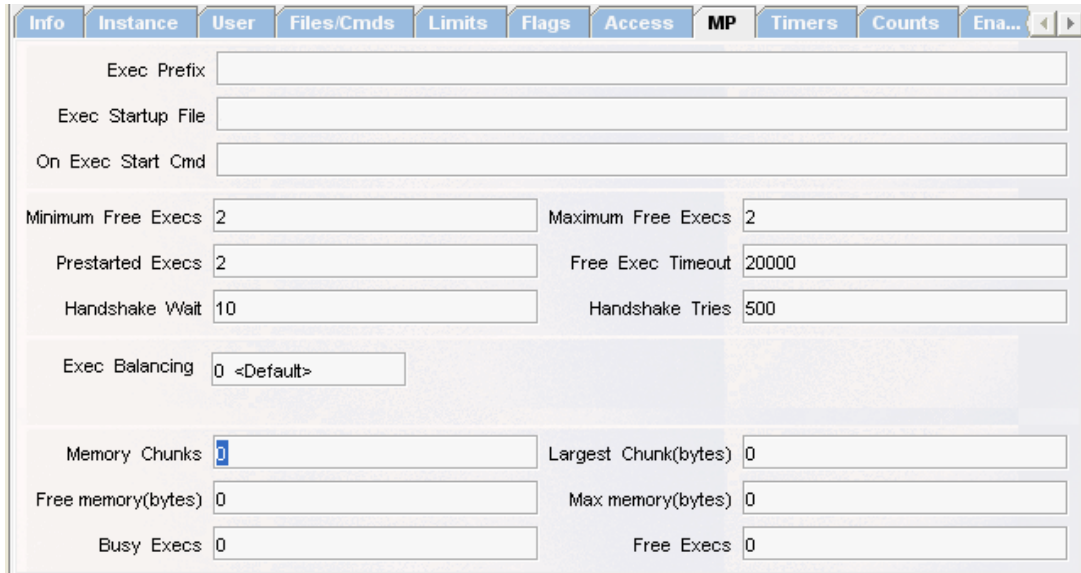
**Figure 38 - Enable event**



When the add (  ) button is pressed, a drop-down list will present event choices. Select one of the events from the list and press OK.

## 10.16 JDBC Server – MP Information

Information about the JDBC Multi-Process server.



Info	Instance	User	Files/Cmds	Limits	Flags	Access	MP	Timers	Counts	Ena...
Exec Prefix										
Exec Startup File										
On Exec Start Cmd										
Minimum Free Execs	2		Maximum Free Execs	2						
Prestarted Execs	2		Free Exec Timeout	20000						
Handshake Wait	10		Handshake Tries	500						
Exec Balancing	0 <Default>									
Memory Chunks	0		Largest Chunk(bytes)	0						
Free memory(bytes)	0		Max memory(bytes)	0						
Busy Execs	0		Free Execs	0						

**Figure 39 - MP Tab**

---

**Note:**

This pane is applicable to Multi-Process servers only.

---

A Multi-Process server is a server-side component that processes requests from the Oracle JDBC for Rdb thin driver using small memory footprint subprocesses to carry out the requested operations on the Oracle Rdb database.

Additional configuration data is required for Multi-Process servers.

The MP tab consists of the following fields:

- [Exec Prefix](#)
- [Exec Startup File](#)
- [On Exec Start Cmd](#)
- [Maximum Free Execs](#)
- [Prestarted Execs](#)
- [Free Exec Timeout](#)
- [Handshake Wait](#)
- [Handshake Tries](#)
- [Exec Balancing](#)
- [MultiProcess Active Environment](#)

*Caution when using Startup command procedures:*

Do not use the `SET VERIFY` command within these command procedures. As the method `Runtime.exec()` may be used by the servers to create processes, the use of the `SET VERIFY` command within the command procedure may hang the server. This is a documented limitation of using `Runtime.exec()` on Open VMS Java. The logical name `JAVA$EXEC_TRACE` is available to help debug `Runtime.exec()` calls on OpenVMS. Refer to the OpenVMS Java documentation for more details.

---

**Note:**

The **On Exec Start Cmd** should point to a valid DCL command that will be executed on the start up of the server, executor or execution of a CLI command. If you wish to invoke a DCL command procedure you must also include the DCL invocation symbol `@` at the start of the command.

---

### 10.16.1 Exec Prefix

Specifies the prefix to use for executor names. If not specified a standard prefix based on the server name will be used.

Each executor started up on a single system requires a unique process name on that system. By default a name will be created for the executor based on the name of the server that started it and a hexadecimal value that represents the instance of the executor process with relation to the server.

### 10.16.2 Exec Startup File

The file specification for the startup command procedure to use when the Multi-Process server creates a new executor process. If not specified the default Exec startup command procedure will be executed. The default CLI startup file is `RDB$JDBC_HOME:RDBJDBC_STARTEXEC.COM`.

You can choose to change this default command procedure to customize for your system settings, or you can create a new customized procedure and change the configuration file so that servers use this new file. However Oracle recommends that you use the [On Exec Start Cmd](#) in this panel or the `srv.onExecStartCmd` server attribute in the configuration file instead. See [srv.onExecStartCmd](#) for more information on using the `srv.onExecStartCmd` attribute.

This value is held as the `srv.execStartup` configuration setting within the server section of the XML-based server configuration file.

### 10.16.3 On Exec Start Cmd

A DCL command to be executed by the executor process during its start. It must be a valid OpenVMS DCL command and must be valid within the context of the server process created by the GUI, controller or pool server.

If multiple DCL commands are required then they should be placed within a DCL command procedure, which in turn should be made available to the environment under which the controller or pool server runs. Oracle recommends that these command procedures be placed within the `RDB$JDBC_COM` directory and the file protection set to allow the GUI, controller or pool server execute access.

This value is held as the `srv.onExecStartCmd` configuration setting within the server section of the XML-based server configuration file.

### 10.16.4 Maximum Free Execs

Specifies the maximum number of free (unused) executor processes that may be maintained while the server is running. The default is 0 which means that executor process will not be kept after they have been freed.

This value is held as the `maxFreeExecutors` configuration setting within the server section of the XML-based server configuration file.

### 10.16.5 Prestarted Execs

Specifies the number of executor process to start up when the Multi-process server starts. The default is 0 which means that no executor processes will be pre-started.

This value is held as the `prestartedExecutors` configuration setting within the server section of the XML-based server configuration file.

### 10.16.6 Free Exec Timeout

The time, in milliseconds, that an unused executor process can remain idle in the free executor queue before being terminated. A value of zero (0) means unlimited timeout. This feature is only applicable to Multi-process servers.

This value is held as the `srv.execTimeout` configuration setting within the server section of the XML-based server configuration file.

### 10.16.7 Handshake Wait

The time in milliseconds to wait between server/executor handshake synchronization tries. The default value is 10.

This value is held as the `srv.mpTryWait` configuration setting within the server section of the XML-based server configuration file.

### 10.16.8 Handshake Tries

The number of times the server should try to synchronize handshake with executor before giving up. The default value is 500;

This value is held as the `srv.mpMaxTries` configuration setting within the server section of the XML-based server configuration file.

### 10.16.9 Exec Balancing

Specifies the executor balancing to use. Executor balancing specifies the order in which the MP server should select the next candidate from the free executor list.

The default is FIFO( 0 ).

If the pane is in **edit** mode, a drop-down list will be displayed with the valid values that may be used with this field.



*Figure 1 - Exec balancing*

See the section [Executor Balancing](#) within the [Oracle JDBC for Rdb User Guide](#) for more details.

This value is held as the `srv.execBalancing` configuration setting within the server section of the configuration file.

## 10.16.10 MultiProcess Active Environment

At the bottom of the pane is a set of read-only fields that provide some statistics about the active server's multi-process environment.

This information is only available for active servers that can be connected to by your ORCM session as a control user. If the server is not active, or the control password used to connect to it was incorrect, these fields will be left blank.

### 10.16.10.1 Memory Chunks

Specifies the number of chunks of global shared memory the server has in its memory queue. MP Servers will try to consolidate memory chunks to allow better utilization of global memory.

The greater the number of chunks, the more fragmented the global memory is and the more likely that a single request of a large amount of memory may not be able to be serviced. If the number of chunks increase above about 20 it might be advisable to stop and restart the server.

### 10.16.10.2 Largest Chunk

The size in bytes of the largest contiguous chunk of global shared memory available to the server.

### 10.16.10.3 Free Memory

The total size in bytes of the all free global shared memory currently available to the server.

### 10.16.10.4 Max Memory

The size in bytes of the maximum amount of global shared memory made available to the server at server start up. This amount is determined by the server configuration attribute *sharedmem*.

### 10.16.10.5 Busy Execs

Specifies the number of executor processes currently busy with connected clients.

### 10.16.10.6 Free Execs

Specifies the number of executor processes currently free and available to be allocated to new client connections.

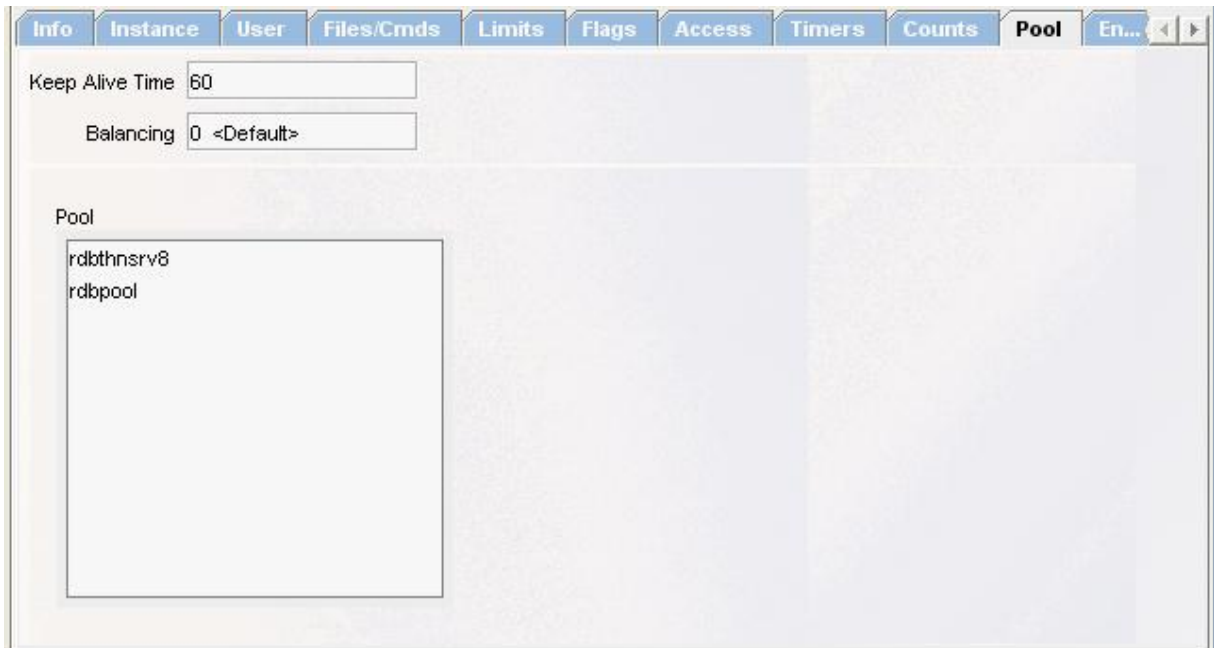
---

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## 10.17 JDBC Server – Pool Information

Pool information for a JDBC Pool server.



**Figure 40 - Pool Panel**

The pool panel shows the JDBC servers that make up the pool of servers this Pool server will manage.

The pool panel is comprised of the following fields and areas:

- [Keep Alive Time](#)
- [Balancing](#)
- [Pool](#)

### 10.17.1 Keep Alive Time

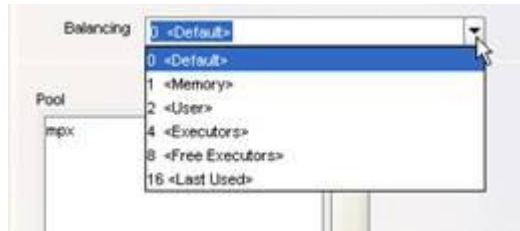
The Keep Alive Time is the amount of time in seconds that the pool server will wait before checking that each of its running pooled servers is still viable.

This value is held as the `srv.keepAliveTimer` configuration setting within the server section of the XML-based server configuration file.

### 10.17.2 Balancing

The balancing attribute specifies how the server should balance the allocation of pooled servers when a client requests a new connection.

If the pane is in *edit mode*, this field will be a drop-down list of balancing mode choices:



**Figure 41 - Balancing**

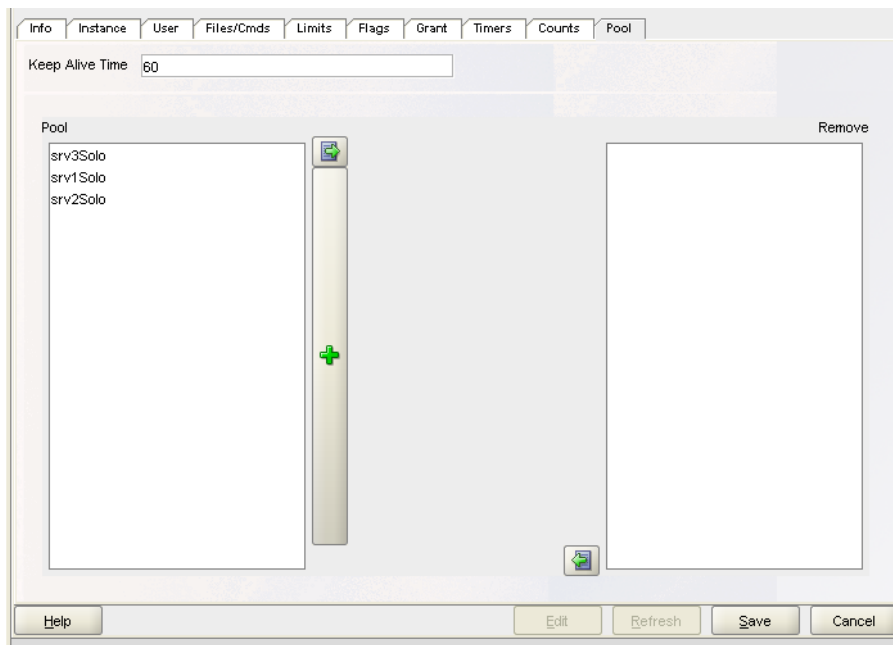
This value is held as the `srv.balance` configuration setting within the server section of the configuration file.

### 10.17.3 Pool Panel Operations

The pool panel may be displayed in two modes, *display* and *edit*. By default when server details are being displayed the pool panel is in *display mode* as shown in [Figure 36 - Pool Panel](#) above.

In *display mode*, the [Pool list](#) containing information about the server pool is displayed. This is a read-only mode.


When the **Edit** button is pressed, the panel will be set to *edit mode* and two regions will be displayed, the [Pool list](#) and the [Remove list](#). In *edit mode*, servers may be added to or removed from the Pool list.



**Figure 42 - Edit mode**

## 10.17.4 Pool List

The Pool list is a list of servers that this Pool server will manage. A server that is managed by a Pool server is called a pooled server.

When the panel is in *edit mode*, new servers may be [added](#) to the Pool list using the add button (). In *edit mode*, existing pooled servers may also be [removed](#) from the Pool list.

Any server in the Pool list will be added to the server configuration information when you press the [Save](#) button.

### 10.17.4.1 Remove Server

To remove a pooled server from the pool:

- Drag the identifier from the Pool list to the Remove list or
- Double-click on the identifier within the Pool list or
- Select the identifier within the Pool list by clicking on it and pressing the remove

button ()

## 10.17.5 Remove List

The Remove list is a list of identifiers built from the available server names found in the ORCM configuration file. Servers in the Remove list will not take part in the Pool.

To add a server to the pool, see the following section, *Add to Pool*.

## 10.17.6 Add to Pool

An identifier within the Remove list may be added to the Pool list. To add a server:

- Drag the identifier from the Remove list to the Pool list or
- Double-click on the identifier within the Remove list or
- Select the identifier within the Remove list by clicking on it and pressing the

**Restore** button ()

## 10.17.7 Save

When you save the changes using the **Save** button, changes made to server details will be saved to the configuration file.

In addition servers found in the Pool lists will be added as `<pooledServer ...>` entries to the server specification within the configuration file.

### 10.17.8 Cancel

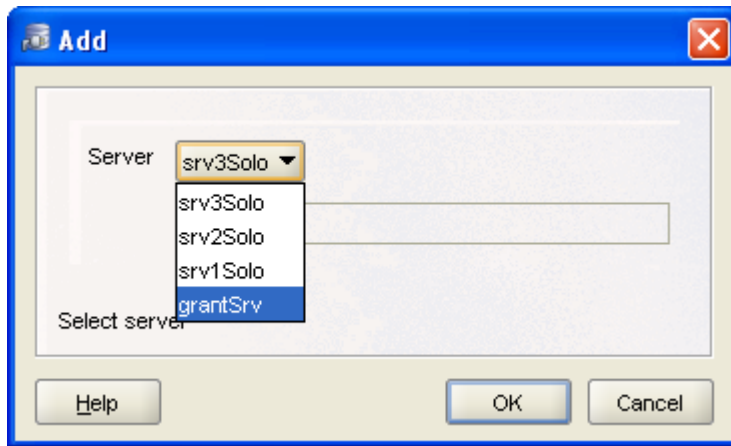
When the **Cancel** button is pressed any unsaved changes will be undone.

### 10.17.9 Refresh

When the **Refresh** button is pressed any unsaved changes will be undone and the server will be requested to send current server characteristics to ORCM.

### 10.17.10 Add Server

To add a new pooled server press the add (+) button. You will be prompted for the server name.



**Figure 43 - Add server**

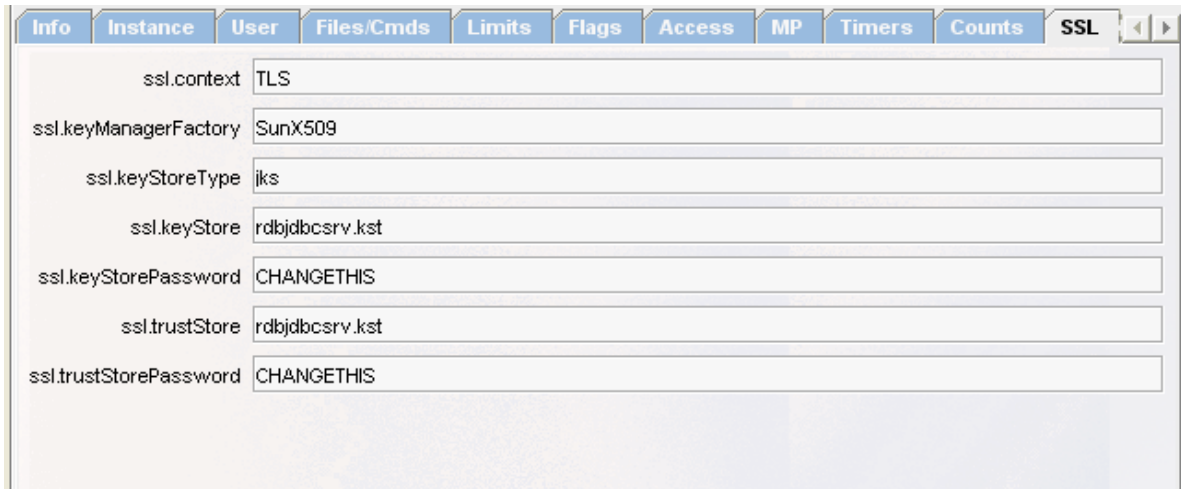
A drop-down list provides server choices, select one of the available servers from the list.

---

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## 10.18 JDBC Server – SSL Information

SSL information about the JDBC server.



**Figure 44 - SSL Tab**

---

**Note:**

This panel is applicable to SSL servers only.

---

A SSL server is a server-side component that processes requests from the Oracle JDBC for Rdb thin driver using SSL socket connections form improved security.

Additional configuration data is required for SSL servers.

The SSL tab consists of the following fields:

- [ssl.context](#)
- [ssl.keyManagerFactory](#)
- [ssl.keyStoreType](#)
- [ssl.keyStore](#)
- [ssl.keyStorePassword](#)
- [ssl.trustStore](#)
- [ssl.trustStorePassword](#)

### 10.18.1 ssl.context

Indicates the SSL context to use, for example "TLS".

This value is held as the `ssl.context` configuration setting within the server section of the XML-based server configuration file.

### 10.18.2 ssl.keyManagerFactory

Indicates the key manager factory to use, for example "SunX509".

This value is held as the `ssl.keyManagerFactor` configuration setting within the server section of the XML-based server configuration file.

### 10.18.3 `ssl.keyStoreType`

Indicates the type of the key store, for example "jks".

This value is held as the `ssl.keyStoreType` configuration setting within the server section of the XML-based server configuration file.

### 10.18.4 `ssl.keyStore`

Indicates the filename of the keystore.

This value is held as the `ssl.keyStore` configuration setting within the server section of the XML-based server configuration file.

### 10.18.5 `ssl.keyStorePassword`

Indicates the password for the keystore.

This value is held as the `ssl.keyStorePassword` configuration setting within the server section of the XML-based server configuration file.

### 10.18.6 `ssl.trustStore`

Indicates the filename of the trust store.

This value is held as the `ssl.trustStore` configuration setting within the server section of the XML-based server configuration file.

### 10.18.7 `ssl.trustStorePassword`

Indicates the password of the trust store.

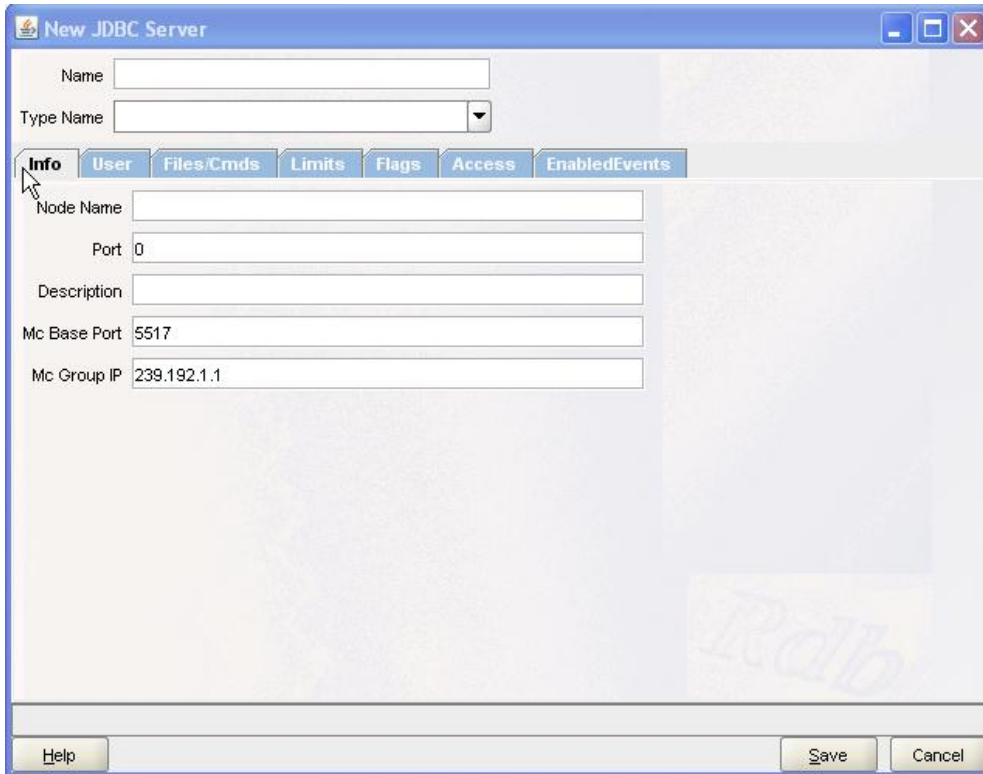
This value is held as the `ssl.trustStorePassword` configuration setting within the server section of the XML-based server configuration file.

---

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## 10.19 Create New JDBC Server

Create new JDBC server.



**Figure 45 - Create New JDBC Server dialog**

The Create New JDBC Server dialog allows you to configure a new JDBC server.

The server dialog is comprised of a main pane and a number of tabs containing server information:

- [Main](#) – the main identifying information for the server.
- [Info](#) – describes general information about the server.
- [User](#) – describes user information for the server.
- [Files/CmdProcs](#) – Describe startup files and commands used by the server.
- [Limits](#) – describes limits placed on the server
- [Flags](#) – describes flags set for the server.
- [Access](#) – describes access information for the server.
- [EnabledEvents](#) – describes enabled events information for this server.
- [MP](#) – describes access information for a Multi-process server. This is only displayed if the server is one of the Multi-Process types.
- [Pool](#) – describes pool information for Pool server. This is only displayed if the server is one of the Pool server types.
- [SSL](#) – describes SSL security access information for the server. This is only displayed if the server is one of the SSL server types.

## 10.20 Main Pane

The main pane consists of the following fields:

- [Name](#)
- [Type Name](#)

### 10.20.1 Name

An alias for using the JDBC server. This name need not be unique, however the name may be used to lookup server information within the start-up configuration file. The value of this name is not case-sensitive.

### 10.20.2 Type Name

The type of this server:

- `RdbThinSrv` - standard thin server
- `RdbThinSrvSSL` - thin server using SSL for communication
- `RdbThinSrvMP` - multi-process server
- `RdbThinSrvMPSSL` - multi-process server using SSL
- `RdbThinSrvPool` - pool server
- `RdbThinSrvPoolSSL` - pool server using SSL

## 10.21 Options

The Create New JDBC Server pane has the following button-based options:

#### *Help*

Displays help information for this window.

#### *Save*

Saves the information entered for the fields. Once saved, the information about the server will be saved to the configuration file.

#### *Cancel*

Cancels the operation and closes the window.

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# Chapter 11

## Connection Maintenance



In order to connect to SQL/Services or JDBC servers as a control operator, you must provide ORCM with connection information.

There are three types of connections supported by ORCM:

- Database – allowing the connection to an Rdb Database using JDBC,
- SQL/Services Control – allowing the control connection to a running SQL/Services server, and
- JDBC Control – allowing the connection to a running JDBC server to carry out server control operations.

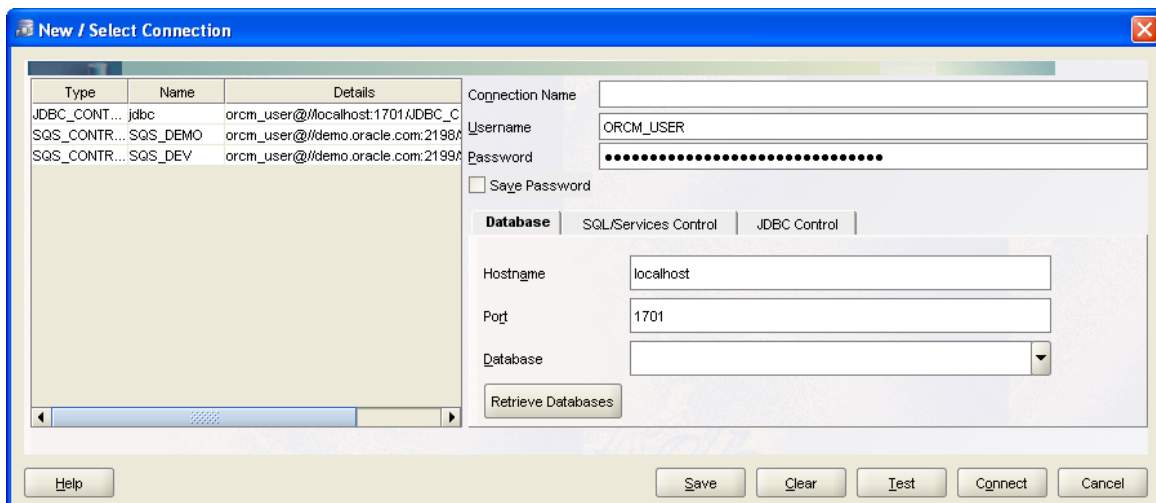
All three connection types utilize a common Connection Panel that allows you to provide connection information such connection URL and username authorization to use.

The following sections provide information on the:

- Connection Panel – general common connection information,
- [Database](#) connections
- SQL/Services Control connections
- JDBC Control connections

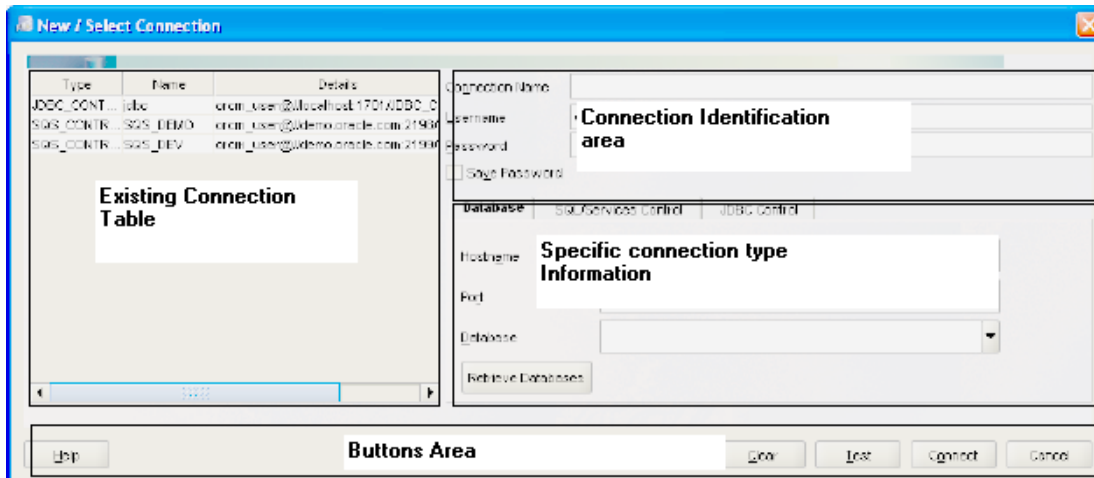
## 11.1 Connection Panel

The Connection Maintenance pane allows you to enter information such as the host and port and appropriate username/password that can be used to connected to existing SQL/Services or JDBC servers.



**Figure 46 - Connection maintenance panel**

The Connection Maintenance panel is comprised of the following components:



**Figure 47 - Connection maintenance pane components**

- Existing Connection Table - a table of connections already defined in the ORCM configuration file.
- Connection Identification Area - how the connection is uniquely identified and provides common data such as username/password.
- Specific Connection Type Information Area - data fields that will depend on the connection type selected.
- Buttons Area - contains action buttons.

## 11.2 Creating New Connections

A new connection can be created by entering a unique name for the connection and selecting the connection type.

The connection type is selected by selecting one of the three sub-panels:

- [Database](#)
- [SQL/Services Control](#)
- [JDBC Control](#)

A panel is selected by clicking its tab which will display field information pertinent to connection type selected.

You can pre-fill fields by selecting an existing connection from the Existing Connections table on the left of dialog. Information from that connection will be filled in the fields to the right of the table. Change the Connection Name field to create a new connection similar to the selected connection.

Once the information has been entered press the **Save** button to save a copy of this connection to the ORCM configuration file.

## 11.3 Modifying Existing Connection

Select an existing connection from the Existing Connections table on the left of dialog.

Information from that connection will be filled in the fields to the right of the table. Make your changes and press the **Save** button. If you change the connection name a new connection will be created, otherwise the existing connection will be modified.

## 11.4 Deleting an Existing Connection

To delete an existing connection right click the connection you wish to remove in the Existing Connections table. A popup menu will be displayed allowing you the option to delete the selected connection.

## 11.5 Buttons Area

The buttons area contains the dialog action buttons:

### *Save*

Press **Save** to save the entered data to the ORCM configuration file.

### *Cancel*

Press **Cancel** to leave this dialog without saving the entered data.

### *Test*

Press the **Test** button to test that the connection can be made successfully to the underlying server or database. If it cannot a message will be displayed indicating the problem.

### *Connect*

Press the **Connect** button to make a connection to the server or database.

### *Clear*

Press the **Clear** button to remove existing data from the fields in the Connection Identification and Specific Connection Type Information areas.

## 11.6 Database Connection

See [Connection Maintenance](#) for general information about using connection dialogs.

Type	Name	Detail
------	------	--------

Connection Name: Pers

Username: orcm\_user

Password: .....

Save Password

Hostname: demo.oracle.com

Port: 1701

Database: disk1:[dbs]mf\_personnel

Retrieve Databases

Help Save Clear Test Connect Cancel

Figure 48 - Database Connect Panel

Before you can access data and make database changes you must first connect to the database. ORCM uses JDBC connections to attach to Rdb databases.

On the Database Connection dialog, enter values for the fields that display in order to connect to a particular database using JDBC.

The dialog is split into two main areas, a scrollable table of existing connection definitions and connection details area where the connection attributes are displayed or entered.

Selecting an existing connection within the connections table will display the connection attributes for that connection in the detail fields.

A connection can then be made to that database by pressing **Connect**.

To create a connection to a database that is not already configured, enter the appropriate details in the detail fields. Use **Test** to check that the details are correct.

Pressing **Connect** on a new connection will automatically save this connection information to the configuration file once the connection has been successfully established.

To save a new connection to the configuration file without carrying out an actual connection press **Save**.

To change attributes of an existing connection select the connection in the connection table and modify the fields appropriately. Press either **Connect** or **Save** to replace the configured connection information. Press **Cancel** to cancel any changes made.

The Database Connection dialog has following fields:

- [Connection Name](#)
- [Username](#)
- [Password](#)
- [Save Password](#)
- [Hostname](#)
- [Port](#)
- [Database](#)
- [Database Connection Options](#)

### 11.6.1 Connection Name

Specify the identifier that uniquely identifies the connection to a database using a particular JDBC server on a particular node. This is useful when connecting to more than one database at a time.

### 11.6.2 Username

Specify the user name of an account that is authorized to access the database.

### 11.6.3 Password

Specify the password of an account used in conjunction with the user name that is authorized to access the database.

### 11.6.4 Save Password

Check this if the password should be saved to the configuration file.

### 11.6.5 Hostname

Specify the name of the local or remote node on which a JDBC server is running and has access to the required database.

### 11.6.6 Port

Specify the network port that the JDBC server will be listening on. For JDBC, the default port ID is 1701. On a node where there are multiple servers, each connection to a server must use a unique port ID.

### 11.6.7 Database

The OpenVMS file specification of a database that may be accessed by the JDBC server listening on the node/port specified. Enter a valid database specification or select from the drop-down list.

Click the **Retrieve Databases** button to load the database drop-down list with databases known to the server listening on the **Hostname** and **Port** specified.

### 11.6.8 Database Connection Options

In addition to the [standard Connection button-based options](#), the Database Connection dialog has the following button-based option:

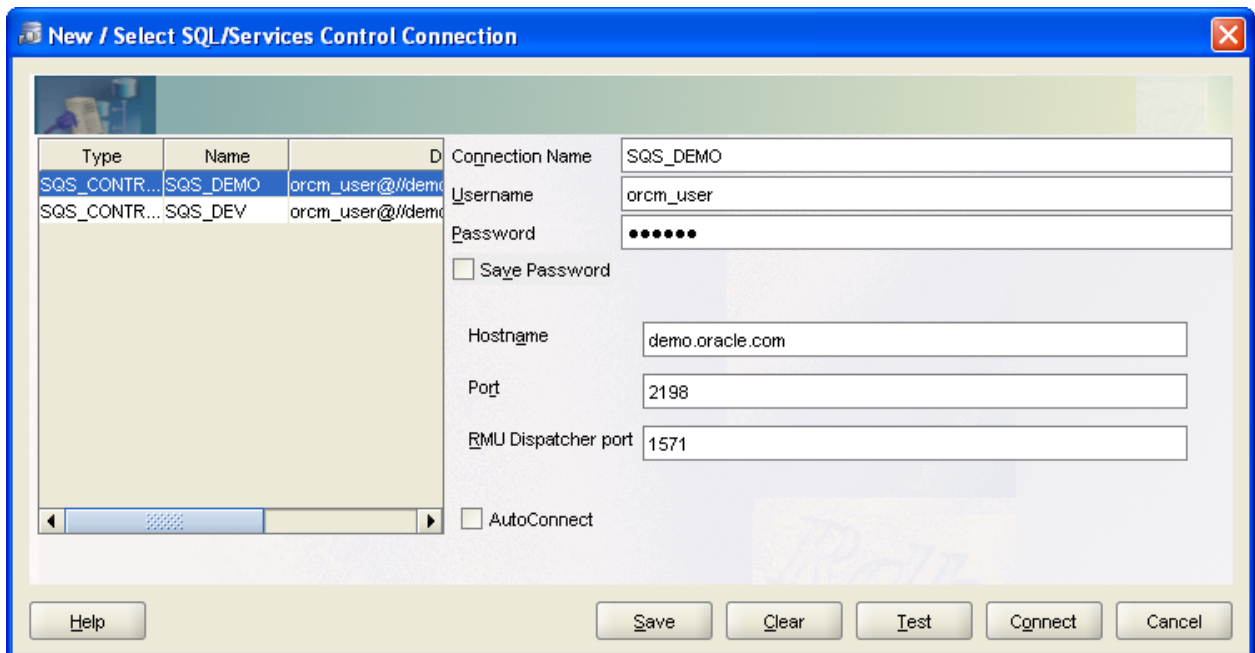
#### *Retrieve Databases*

Displays a drop-down list of databases that are known to the specified JDBC server. When used the server is contacted to provide a list of databases that it knows about. This list is derived from the Database section of the XML-based configuration file that was used when the server was started.

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## 11.7 SQL/Services Connect Panel

See [Connection Maintenance](#) for general information about using connection dialogs.



**Figure 49 - SQL/Services Connect Panel**

To manage a SQL/Services server you must first connect to it. This is called an online management connection. On the Connection attributes window, enter values for the fields that display in order to connect to a particular server.

The Panel is split into two main areas, a scrollable table of existing connection definitions and connection details area where the connection attributes are displayed or entered.

Selecting an existing connection within the connections table will display the connection attributes for that connection in the detail fields.

A connection can then be made to that server by pressing **Connect**.

To create a connection to a server that is not already configured, enter the appropriate details in the detail fields. Use **Test** to check that the details are correct. Pressing **Connect** on a new connection will automatically save this connection information to the configuration file once the connection has been successfully established.

To save a new connection to the configuration file without carrying out an actual connection press **Save**.

To change attributes of an existing connection select the connection in the connection table and modify the fields appropriately. Press either **Connect** or **Save** to replace the configured connection information. Press **Cancel** to cancel any changes made.

The SQL/Services Connect panel consists of the following fields:

- [Connection Name](#)
- [Username](#)
- [Password](#)
- [Hostname](#)
- [Port](#)
- [RMU Dispatcher Port](#)
- [Check Options](#)
- [SQL/Services Connect Options](#)

### **11.7.1 Connection Name**

Specify the identifier that uniquely identifies the connection to a server on a particular node. This is useful when connecting to more than one server at a time.

### **11.7.2 Username**

Specify the user name of an account that is authorized to manage the server.

To make modifications to a SQL/Services server using ORCM, you must use an account that has been granted use of the SQLSRV\_MANAGE system management service for that server; however, you are not required to use an account that has been granted elevated privileges. See the Oracle SQL/Services Server Configuration Guide for more details on required privileges.

### **11.7.3 Password**

Specify the password of an account used in conjunction with the user name that is authorized to manage the server.

### **11.7.4 Hostname**

Specify the name of the local or remote node to which you want to establish a management connection to a server.

### **11.7.5 Port**

Specify the network port that the server's monitor should use for communications with Oracle SQL/Services management clients such as the SQLSRV\_MANAGE utility and ORCM. For TCP/IP, the default port ID is 2199. On a node where there are multiple servers, each connection to a server must use a unique port ID.

### **11.7.6 RMU Dispatcher Port**

Specify the network TCP/IP port that the associated SQL/Services RMU Dispatcher is using for communication. SQL/Services default RMU dispatcher is named RMU\_DISP and has an associated service called RMU\_SERVICE.

The default RMU Dispatcher TCP/IP port ID is 1571.

---

**Note:**

Currently, SQL/Services always communicates with the RMU Dispatcher using TCP/IP port ID 1571. This port ID should not be altered.

SQL/Services may have several RMU Dispatchers configured, which may or may not be currently running, but only one RMU Dispatcher may be running at any one time.

---

You should ensure that the RMU Dispatcher and associated RMU Service are running before carrying out operations such as viewing SQL/Services log files using the ORCM interface.

### 11.7.7 Check Options

The SQL/Services Connect panel has the following checkbox-based options:

#### 11.7.7.1 Save Password

Check this if the password should be saved to the configuration file.

#### 11.7.7.2 Autoconnect

Check this if the server should be automatically connected to the next time ORCM is invoked.

### 11.7.8 SQL/Services Connect Options

The SQL/Services Connect dialog uses the [standard Connection button-based options](#).

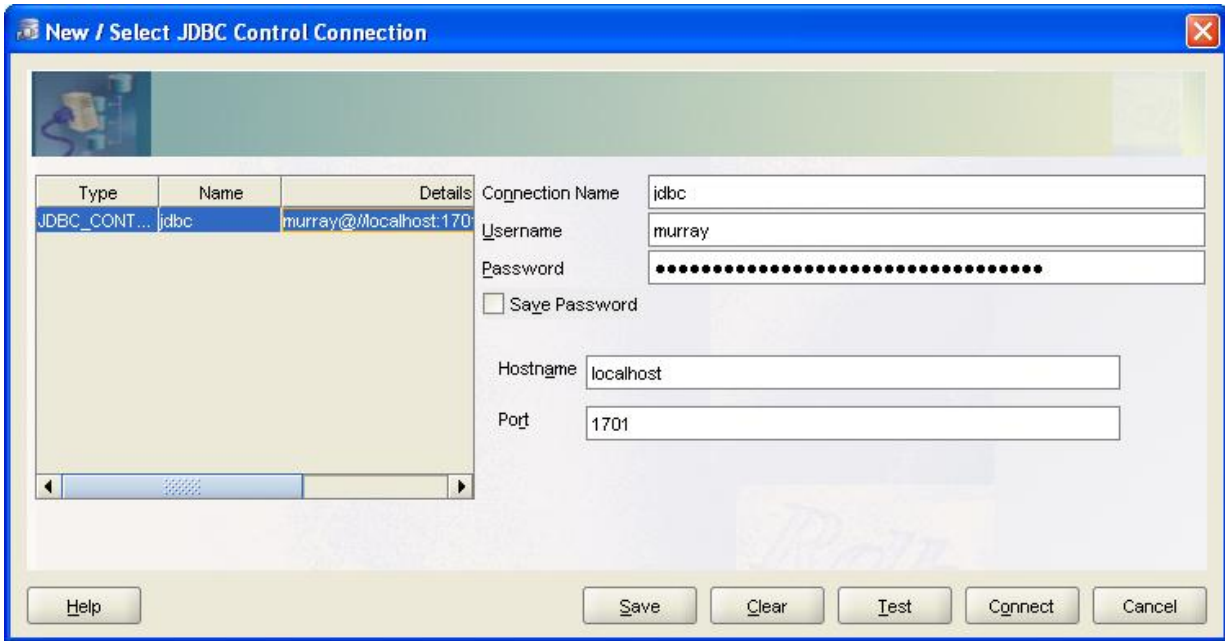
---

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## 11.8 JDBC Control Connection

See [Connection Maintenance](#) for general information about using connection dialogs.





**Figure 50 - JDBC Control Connection**

To manage a JDBC server you must first connect to it. This is called an online management connection. On the connection dialog, enter values for the fields that display in order to connect to a particular server.

The connection dialog is split into two main areas, a scrollable table of existing connection definitions and connection details area where the connection attributes are displayed or entered.

Selecting an existing connection within the connections table will display the connection attributes for that connection in the detail fields.

A connection can then be made to that server by pressing **Connect**.

To create a connection to a server that is not already configured, enter the appropriate details in the detail fields. Use **Test** to check that the details are correct.

Pressing **Connect** on a new connection will automatically save this connection information to the configuration file once the connection has been successfully established.

To save a new connection to the configuration file without carrying out an actual connection press **Save**.

To change attributes of an existing connection select the connection in the connection table and modify the fields appropriately. Press either **Connect** or **Save** to replace the configured connection information. Press **Cancel** to cancel any changes made.

The JDBC Control Connection dialog has the following fields:

- [Connection Name](#)
- [Username](#)
- [Password](#)
- [Save Password](#)
- [Hostname](#)
- [Port](#)
- [JDBC Control Connection Options](#)

### **11.8.1 Connection Name**

Specify the identifier that uniquely identifies the connection to a server on a particular node. This is useful when connecting to more than one server at a time.

### **11.8.2 Username**

Specify the user name of an account that is authorized to manage the server.

### **11.8.3 Password**

Specify the password of an account used in conjunction with the user name that is authorized to manage the server.

### **11.8.4 Save Password**

Check this if the password should be saved to the configuration file.

### **11.8.5 Hostname**

Specify the name of the local or remote node to which you want to establish a management connection to a server.

### **11.8.6 Port**

Specify the network port that the server uses for communications with JDBC thin clients. For JDBC the default port ID is 1701. On a node where there are multiple servers, each connection to a server must use a unique port ID.

### **11.8.7 JDBC Control Connection Options**

The JDBC Control Connection dialog uses the [standard Connection button-based options](#).

# Chapter 12

## Utilizing a Manager Server

Before you can use ORCM to start a JDBC server that is on a remote node, that is, a node that is not the same host that the instance of ORCM application is running on, you must have a JDBC manager server running on that remote node.

The manager server can also be used to automatically start servers on its local host and to periodically check to ensure each server is operational. If the manager server finds a failed server it can attempt to restart that server.

Although any JDBC server running on your network may be stopped by ORCM as long as the ORCM has the appropriate server control password for that server in its configuration file, and has network access to that node, the invocation or start up of a JDBC server using ORCM is limited to the local node on which the ORCM application is running.

This is because an OpenVMS process has to be started for the server to run within, which is more difficult when the node on which the process is to be started is remote to the invoking application.

Oracle JDBC for Rdb does not use features such as Java RMI to invoke remote events as this may introduce greater security risks on your network. Thus, without any additional components, the controller can only start server processes locally.

In order to provide a controlled mechanism to start remote server processes, Oracle JDBC for Rdb introduced the manager server.

Although the manager server itself needs to be started on the remote node, which is a necessary bootstrapping step, once it is started it can service requests from remote ORCM application to start up new JDBC server instances.

The manager server will only respond to management requests made from application that have connected as control users, that is, the application must know the manager server's control password to connect successfully to it.

A manager server must be started on each remote node you wish to use ORCM to start other JDBC servers on.

To utilize a manager server for remote server start up, the following steps are required:

1. Start an instance of a manager server on the remote node you wish to later start JDBC servers on.
2. Add a manager server entry to the ORCM configuration file.
3. Use ORCM to start the remote JDBC server.

See also:

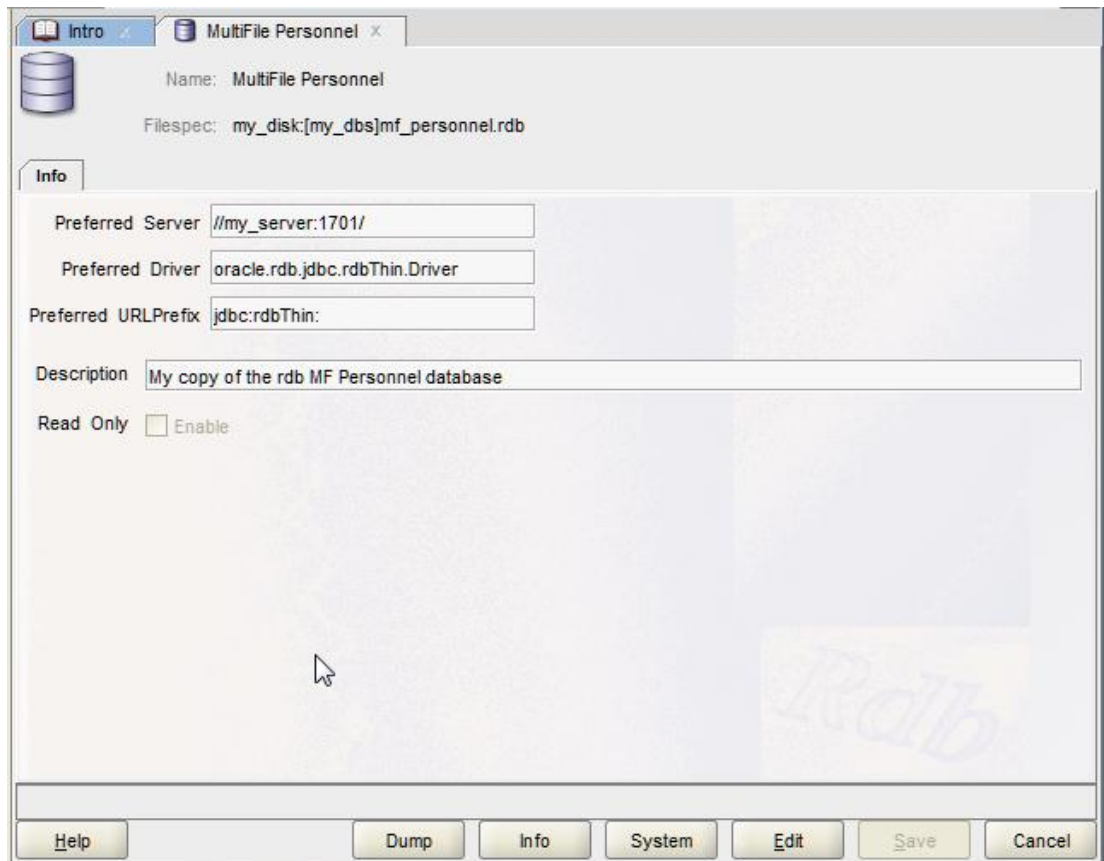
*Starting a Manager Server, Starting Servers, and Add Remote Manager Server* sections in the *Oracle JDBC for Rdb User Guide*.

---

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# Chapter 13

## Known Databases



**Figure 51 - Known Database Pane**

The Known Database panel contains information about Known Database definition stored in the ORCM configuration file.

A Known Database definition allows you to describe how to connect to a specific database using JDBC. This definition may also be used by JDBC servers to describe a database that may be accessed by that server, and may provide a means to obfuscate the identity of the real database being connected to by the client.

In addition, if the database and the JDBC server associated are available, the Known Database pane allows you to retrieve database information.

The pane is comprised of a number of sub-panels containing related Known Database information:

[Main](#) - the main identifying information for this Known Database.

[Info](#) - describes general information about the Known Database.

## 13.1 Main Panel

The Main panel contains the database name, the database file specification and an [info tab](#).

The Main panel consists of the following fields:

- [Name](#)
- [Filespec](#)

### 13.1.1 Name

The name of this Known Database.  
Specify a unique database name.

### 13.1.2 Filespec

The file specification for this Known Database.  
Specify a valid OpenVMS file specification. Relative file specification and logical names can be used. To access this database using the preferred server, any relative paths or logical names used must be valid within the process environment of the running server.  
Relative paths should be relative to the default directory used by the running server.

## 13.2 Options

The Known Database panel has the following button-based options:

### *Help*

Displays help information for this window.

### *Dump*

Uses RMU/Dump to dump out the database. This button will function only when access is available to the database using the preferred server.

### *Info*

Displays metadata information about the user defined objects in the database. This button will function only when access is available to the database using the preferred server.  
See [Known Database - Database Info](#).

### *System*

Displays metadata information about the system defined objects in the database. This button will function only when access is available to the database using the preferred server.

### *Edit*

Places the information pane in *edit mode* allowing the entry and/or modification of known database definition.

### *Save*

Saves the information entered for the fields.

### *Cancel*

Cancels the operation and closes the window.

---

**Note:**

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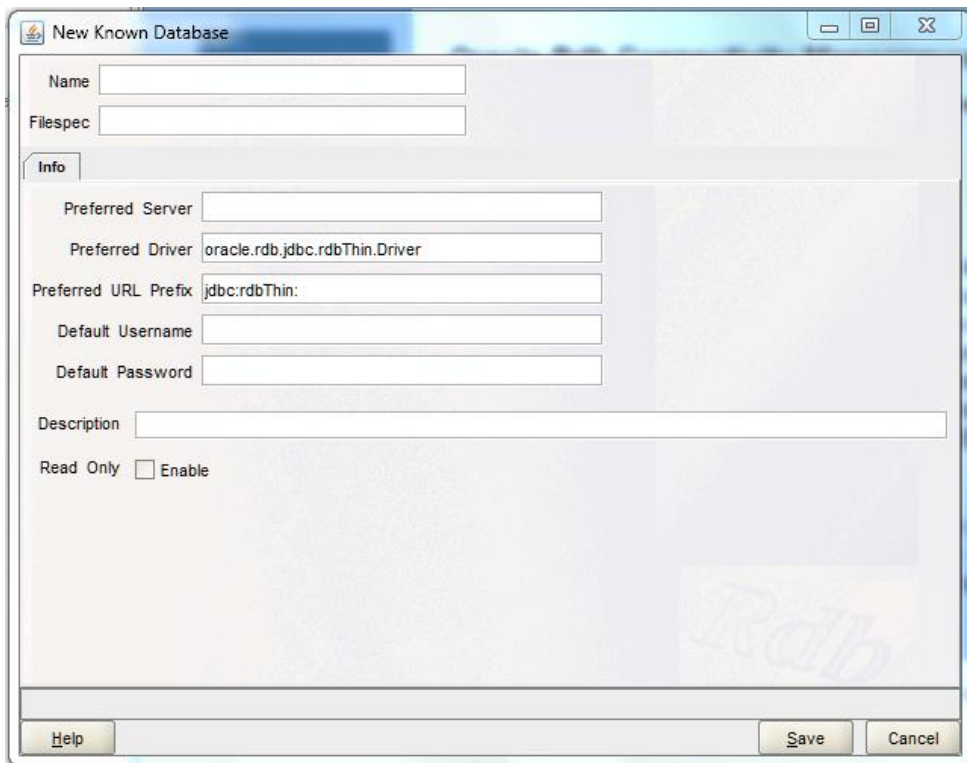
To remove a saved Known Database, right-click on the database name in the Known Databases explorer and select the “Remove Known Database” option from the popup menu.

Alternatively, you may remove an existing Known Database by editing the ORCM configuration file to remove the Database entry under the Databases section.

---

## 13.3 Known Database - General Information

General information about the Known Database.



The screenshot shows a dialog box titled "New Known Database" with an "Info" tab selected. The dialog contains several input fields and a checkbox. The fields are: "Name" (empty), "Filespec" (empty), "Preferred Server" (empty), "Preferred Driver" (oracle.rdb.jdbc.rdbThin.Driver), "Preferred URL Prefix" (jdbc:rdbThin:), "Default Username" (empty), "Default Password" (empty), and "Description" (empty). There is a "Read Only" checkbox with the label "Enable" next to it. At the bottom of the dialog, there are three buttons: "Help", "Save", and "Cancel".

**Figure 52 - Known Database Info tab**

The info tab consists of the following fields:

- [Preferred Server](#)
- [Preferred Driver](#)
- [Preferred URL Prefix](#)
- [Default Username](#)
- [Default Password](#)
- [Description](#)

- [ReadOnly](#)

### **13.3.1 Preferred Server**

Specifies the host and port URL of the server that may be used to connect to this database.

### **13.3.2 Preferred Driver**

The class name of the JDBC driver to use.

### **13.3.3 Preferred URL Prefix**

The prefix to use on the URL for a connection to the preferred server.

### **13.3.4 Default Username**

Default username to use when connecting to this database.

This must be a valid OpenVMS username of an account that has been granted access to the database. The username must have the appropriate privileges and access control authority to extract information from the database system relations.

### **13.3.5 Default Password**

Default password to use when connecting to this database.

Right-click on this field to bring up a popup menu allowing you to Cut/Paste and create obfuscated passwords.

### **13.3.6 Description**

Description of this database.

### **13.3.7 ReadOnly**

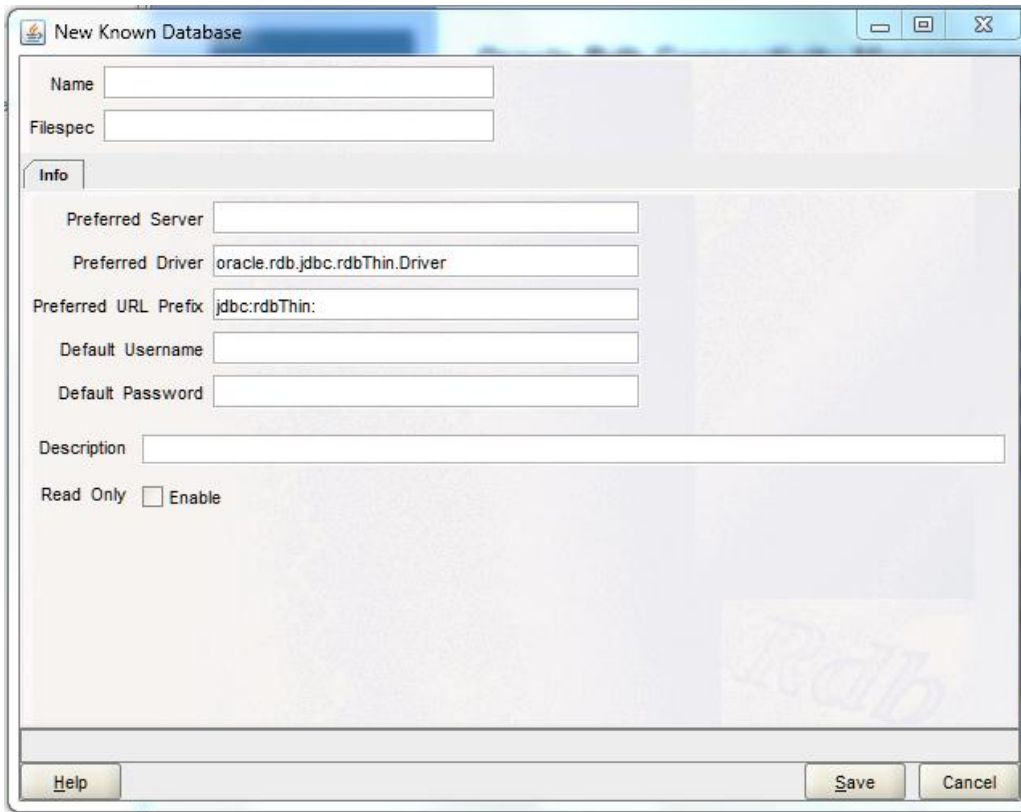
Check this box if you wish to make a read-only connection.

---

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## **13.4 New Known Database**





**Figure 53 - New Known Database Pane**

The New Known Database panel allows you to configure a new Known Database definition to be stored in the ORCM configuration file.

A Known Database definition allows you to describe how to connect to a specific database using JDBC. This definition may also be used by JDBC servers to describe a database that may be accessed by that server, and may provide a means to obfuscate the identity of the real database being connected to by the client.

The panel is comprised of a number of sub-panels containing related Known Database information. Information about these sub-panels may be seen above in the sections [Main Panel](#) and [Known Database - General Information](#).

---

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## 13.5 Remove Known Database

To remove a saved Known Database, right-click on the database name in the Known Databases explorer and select the “Remove Known Database” option from the popup menu.

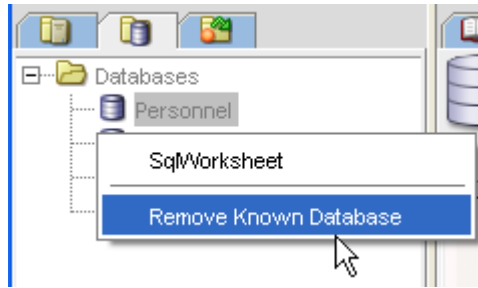


Figure 54 - Remove Known Database menu option

Alternatively, you may remove an existing Known Database by editing the ORCM configuration file to remove the Database entry under the Databases section

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## 13.6 Known Database - Database Info

When you press the **Info** button on the database panel, if the database does not have a Default Username and Default Password associated with it, or if the provided username/passwords fails authorization checks, you will be prompted for a valid username and password that may be used to connect to the database to extract metadata information from it:

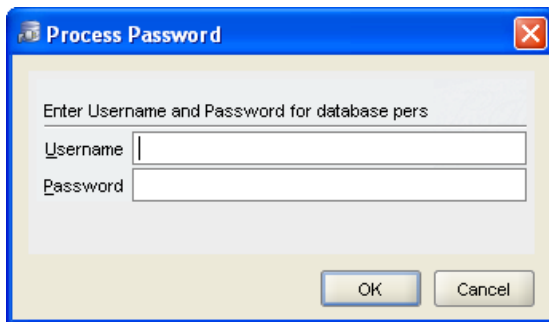


Figure 55 - Password dialog

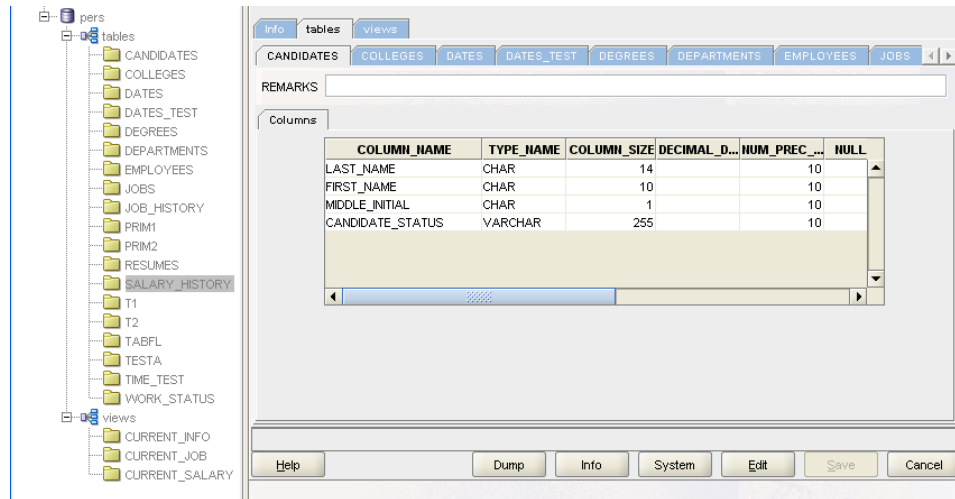
You must enter a valid username and password that Rdb will accept for a database connection. The username must have the appropriate privileges and access control authority to extract information from the database system relations.

Press **Cancel** if you no longer wish to proceed.

When ORCM successfully connects to the database, it will attempt to retrieve information about the user defined tables and views it finds in the database. As this may require a number of SQL queries being processed including some BLOB retrievals, this operation

may take some minutes to complete. While ORCM is working on the retrieval of the metadata a busy message will be displayed showing the progress of the operation.

Once complete, a list of tables and views will be displayed in the database explorer area and a tab panel for each table and view will be created.



**Figure 56 - Results of the metadata retrieval**

You may select a table or view by either clicking on the name in the database explorer or by selecting the appropriate tab in the main display area.

## 13.7 Tabbed subpanel Navigation



**Figure 57 - Tabbed subpanel navigation**

Use the tabs in the main display area to view the table or view you are interested in.

Depending on the number of tables or views, it is possible that there may be too many tabs to display on the current screen. If this is the case, the left and right arrow buttons at the end of the tab bar may be used to scroll across to see hidden tabs.

## 13.8 Table/View Information sub-panels

COLUMN_NAME	TYPE_NAME	COLUMN_SIZE	DECIMAL_D...	NUM_PREC_...	NULL
LAST_NAME	CHAR	14		10	
FIRST_NAME	CHAR	10		10	
MIDDLE_INITIAL	CHAR	1		10	
CANDIDATE_STATUS	VARCHAR	255		10	

Figure 58 - Table subpanel

The table/view panel consists of the following fields:

- [Remarks](#)

In addition a set of one or more subpanels will be displayed:

- [Columns](#)
- [Indices](#)
- [Triggers](#)
- [Table Constraints](#)
- [Referencing Table Constraints](#)
- [Referencing Other Constraints](#)
- [View Source](#)

### 13.8.1 Remarks

Any comments held in the database for this table/view.

### 13.8.2 Columns

A table displaying the columns defined for the table/view:

COLUMN_NAME	TYPE_NAME	COLUMN_SIZE	DECIMAL_D...	NUM_PREC_...	NULL
EMPLOYEE_ID	CHAR	5		10	
LAST_NAME	CHAR	14		10	
FIRST_NAME	CHAR	10		10	
MIDDLE_INITIAL	CHAR	1		10	
ADDRESS_DATA_1	CHAR	25		10	
ADDRESS_DATA_2	CHAR	25		10	
CITY	CHAR	20		10	

Figure 59 - Columns subpanel

### 13.8.3 Indices

A set of one or more sub-panels will be displayed describing each index found for that table:

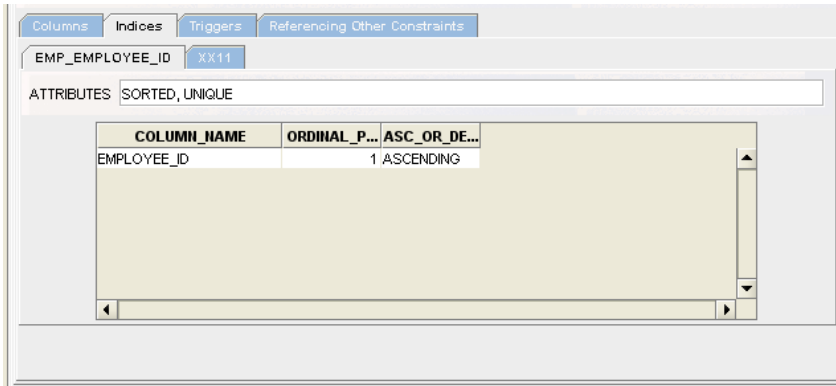


Figure 60 - Indices subpanel

Each sub-panel will display:

*Attributes* - A set of attributes for this index, such as type, for example , HASHED or SORTED RANKED, and if this is a unique index.

*Columns* - A table showing the columns that make up this index.

### 13.8.4 Triggers

A set of one or more sub-panels will be displayed describing each trigger found for that table:

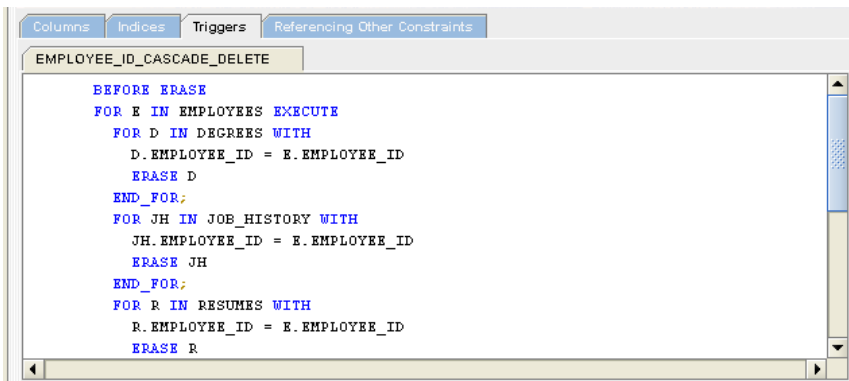


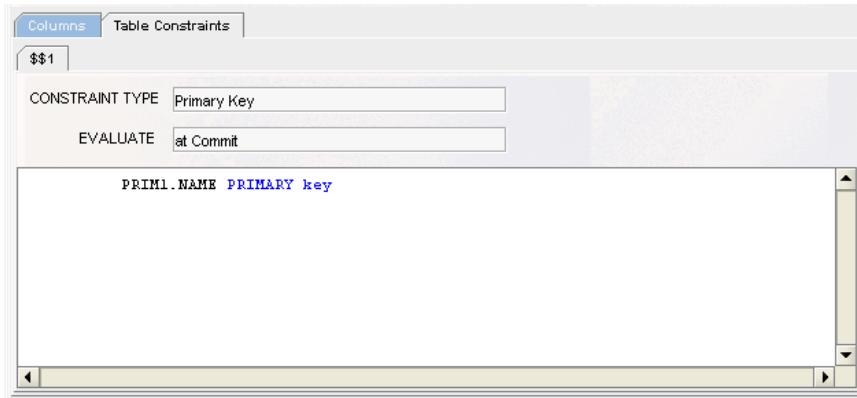
Figure 61 - Triggers subpanel

Each sub-panel will display:

*Source* - The source the trigger was generated from.

### 13.8.5 Table Constraints

A set of one or more sub-panels will be displayed describing each table constraint:



**Figure 62 - Table Constraints subpanel**

Each sub-panel will display:

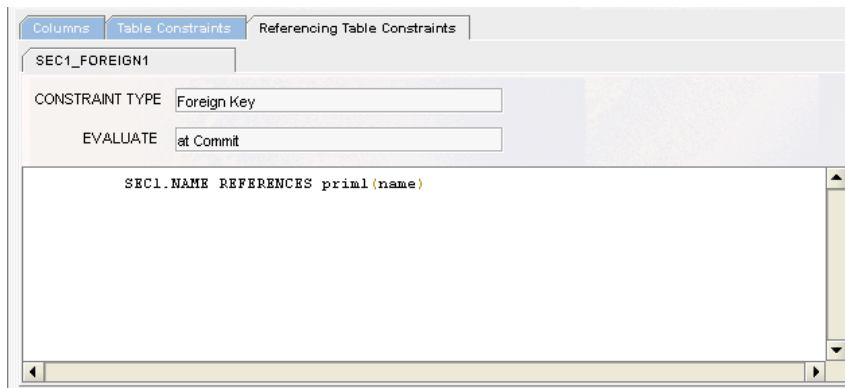
*Constraint Type* - The type of constraint.

*Evaluate* - The constraint evaluation time.

*Source* - The source the constraint was generated from.

### 13.8.6 Referencing Table Constraints

A set of one or more sub-panels will be displayed describing each table constraint that references this table:



**Figure 63 - Referencing Table Constraints subpanel**

Each sub-panel will display:

*Constraint Type* - The type of constraint.

*Evaluate* - The constraint evaluation time.

*Source* - The source the constraint was generated from.

### 13.8.7 Referencing Other Constraints

A set of one or more sub-panels will be displayed describing each constraint that is not a table constraint that references this table:

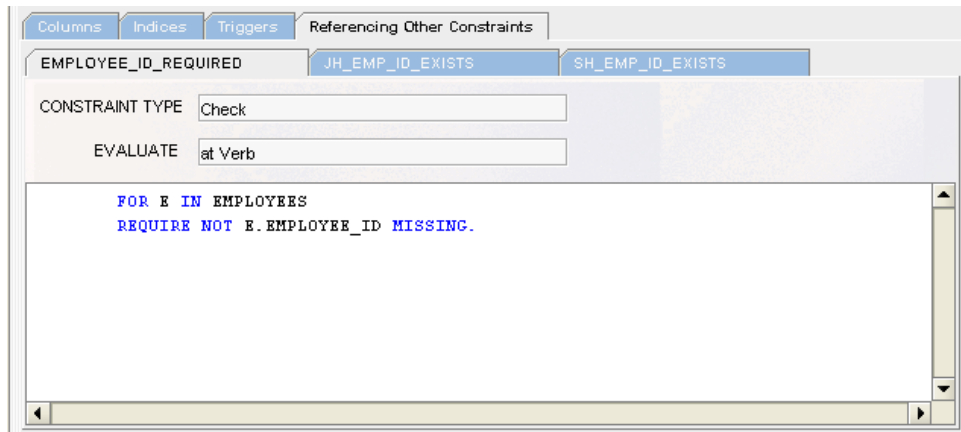


Figure 64 - Referencing Other Constraints subpanel

Each sub-panel will display:

*Constraint Type* - The type of constraint.

*Evaluate* - The constraint evaluation time.

*Source* - The source the constraint was generated from.

### 13.8.8 View Source

The source used to generate the view:

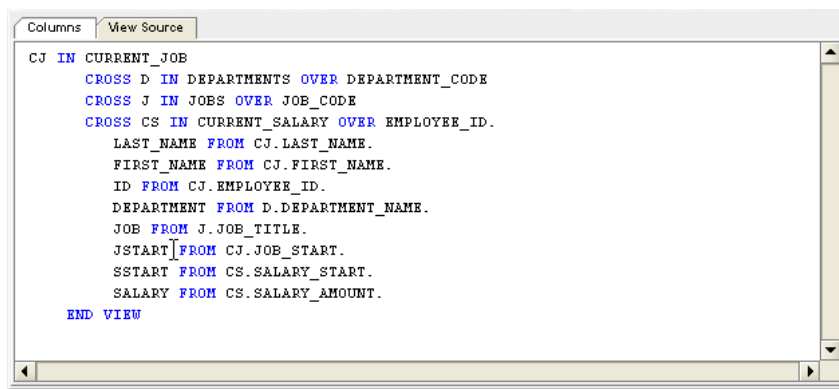


Figure 65 - View Source subpanel

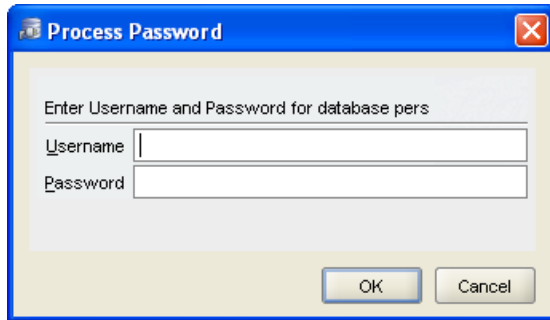
---

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## 13.9 Known database - Database System Info

Displays some system level metadata information from the database.

When you press the System Info button on the database panel, if the database does not have a Default Username and Default Password associated with it, or if the provided username/passwords fails authorization checks, you will be prompted for an appropriate username and password that may be used to connect to the database to extract metadata information from it:

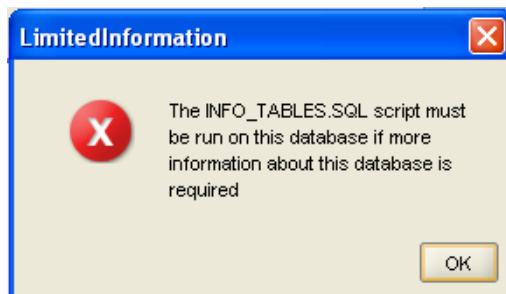


**Figure 66 - Password dialog**

You must enter a valid username and password that Rdb will accept for a database connection. The username must have the appropriate privileges and access control authority to extract information from the database system relations.

Press **Cancel** if you no longer wish to proceed.

If you have never applied the *INFO\_TABLES.SQL* script to the database (a script file copied to your system when Rdb was installed), some of the information tables that ORCM requires to use to get system data from the database may not exist. If this is the case, some of the database system information will not be available for display. If ORCM finds that the information tables are missing the following message will be displayed:



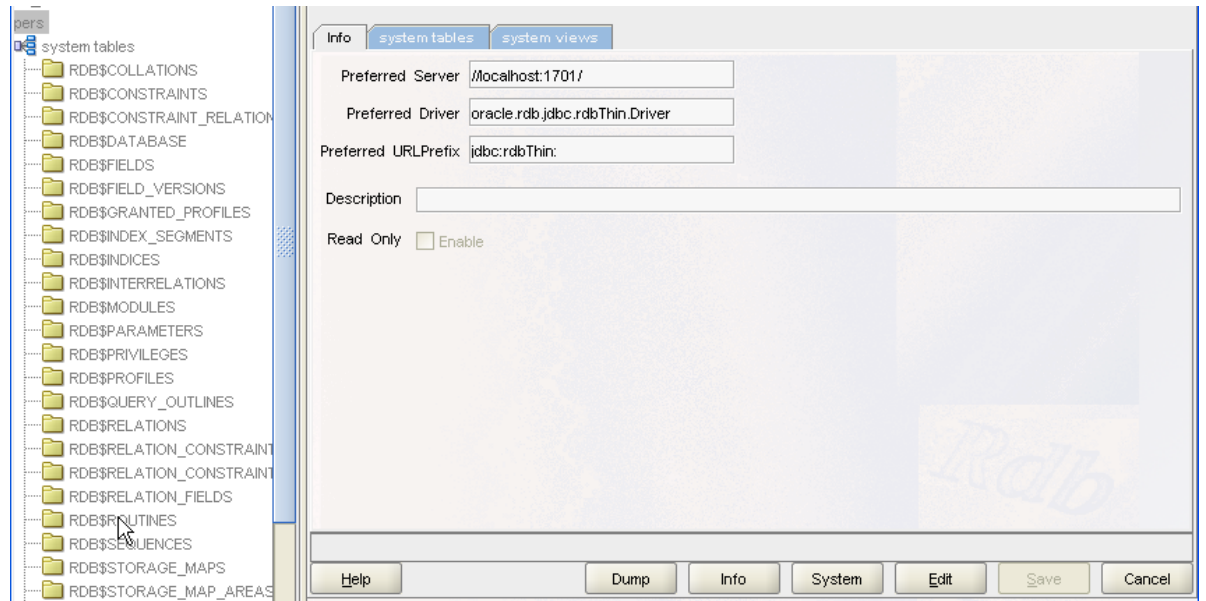
**Figure 67 - Limited Information message**

When ORCM successfully connects to the database, it will attempt to retrieve information about the system level tables and views it finds in the database. As this may require a number of SQL queries being processed including some BLOB retrievals, this operation may take some minutes to complete.

While ORCM is working on the retrieval of the metadata a busy message will be displayed showing the progress of the operation.



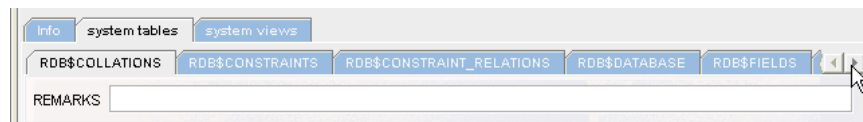
Once complete, a list of tables and views will be displayed in the database explorer area and a tab panel for each table and view will be created.



**Figure 68 - Results of the metadata retrieval**

You may select a table or view by either clicking on the name in the database explorer or by selecting the appropriate tab in the main display area.

## 13.10 Tabbed subpanel Navigation

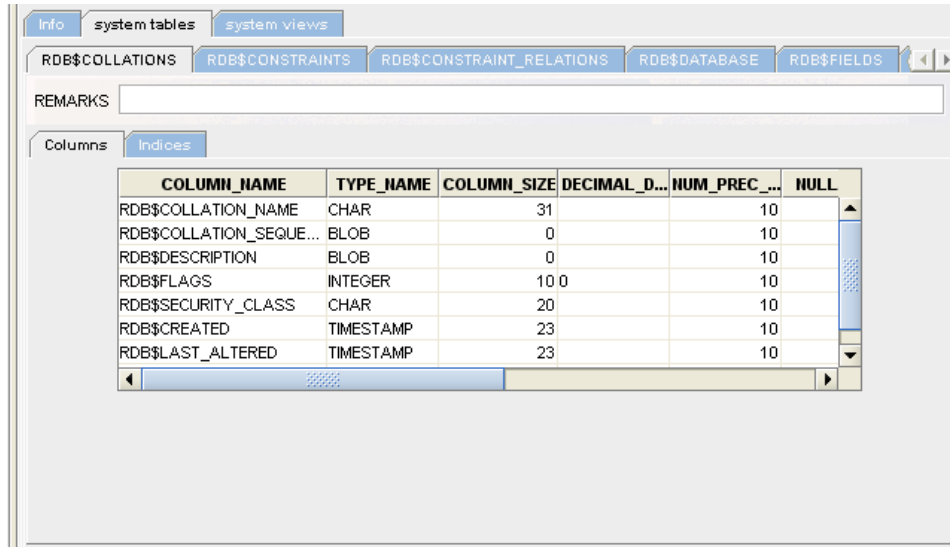


**Figure 69 - Tabbed subpanel navigation**

Use the tabs in the main display area to view the system table or view you are interested in.

Depending on the number of system tables or views, it is possible that there may be too many tabs to display on the current screen. If this is the case, the left and right arrow buttons at the end of the tab bar may be used to scroll across to see hidden tabs.

## 13.11 Table/View Information sub-panels



**Figure 70 - Table subpanel**

The table/view panel consists of the following fields:

- [Remarks](#)

In addition a set of one or more subpanels will be displayed:

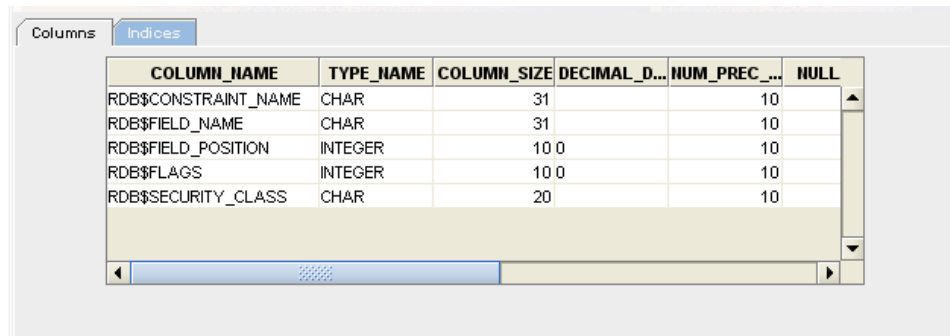
- [Columns](#)
- [Indices](#)

### 13.11.1 Remarks

Any comments held in the database for this system table/view.

### 13.11.2 Columns

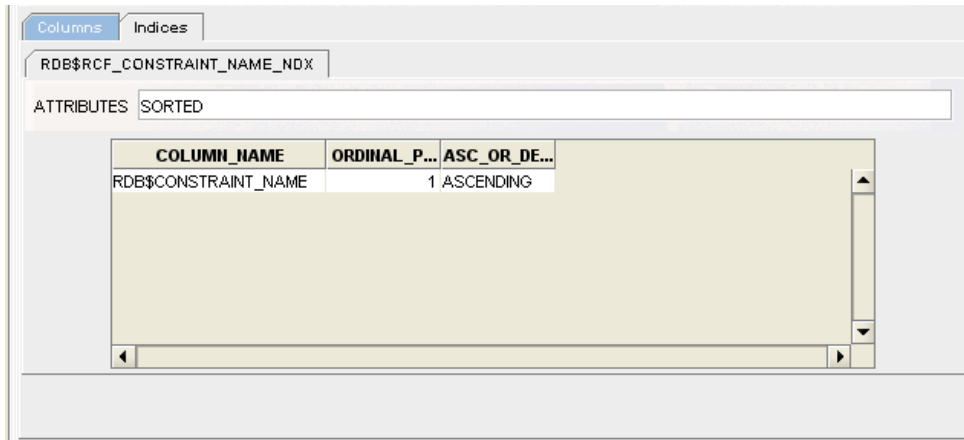
A table displaying the columns defined for the system table/view:



**Figure 71 - Columns subpanel**

### 13.11.3 Indices

A set of one or more sub-panels will be displayed describing each index found for that system table:



**Figure 72 - Indices subpanel**

Each sub-panel will display:

*Attributes* - A set of attributes for this index, such as type, for example, HASHED or SORTED RANKED, and if this is a unique index.

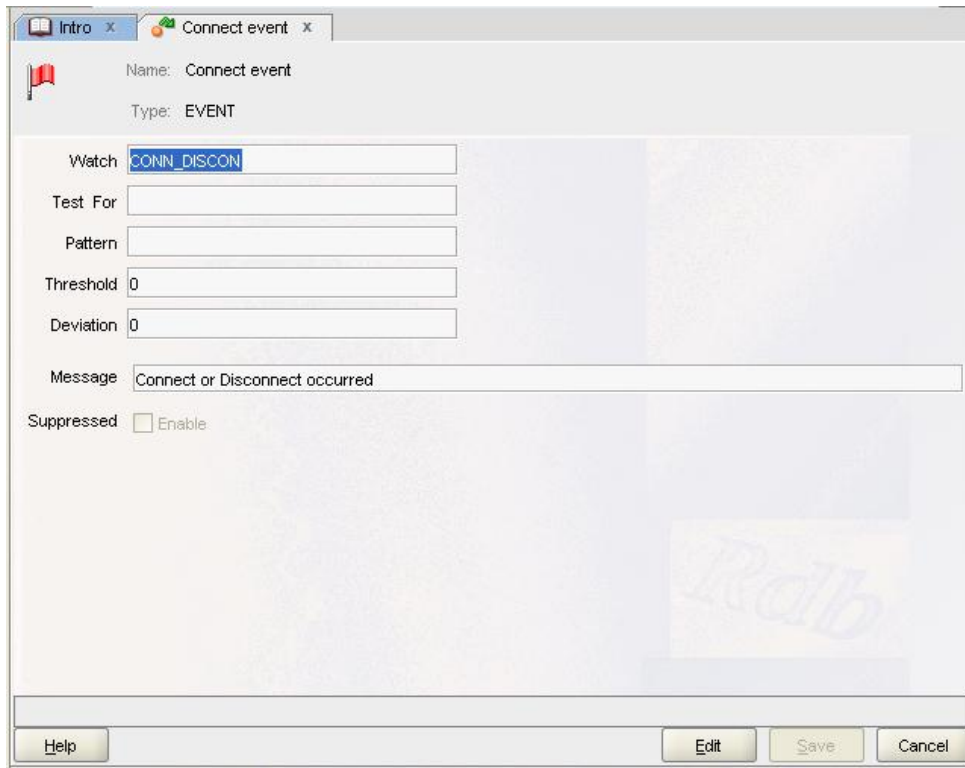
*Columns* - A table showing the columns that make up this index.

---

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# Chapter 14

## Event Triggers



**Figure 73 - Event Trigger Pane**

The Event Trigger pane allows you to display Event Trigger definition to be stored in the **Events** section of the ORCM configuration file.

Event Trigger definitions allow you to describe what events may be watched for by JDBC Servers. This definition may be used by JDBC servers to determine when to notify that a particular event has occurred. The event trigger will raise an Event that will be notified to any event listeners currently watching for JDBC events.

### 14.1 Event Trigger Pane

The pane consists of the following fields:

- [Name](#)
- [Type](#)
- [Watch](#)
- [Test For](#)
- [Pattern](#)
- [Threshold](#)

- [Deviation](#)
- [Message](#)
- [Suppressed](#)

### 14.1.1 Name

The name of this event trigger.  
Specify a unique event trigger name.

### 14.1.2 Type

The type of this event trigger.  
Specify the type or category of event. You may enter a valid type value or select from the drop-down list associated with this field. Events fall into the following categories or types:

- **DENIAL** - triggered when an operation is denied by the server.
- **EXCEPTION** - triggered when an exception is raised by the server or the underlying database system.
- **THRESHOLD** - triggered when some threshold has been reached or about to be reached.
- **EVENT** - general purpose event notification.

### 14.1.3 Watch

The operation or condition to watch for.  
Specify the operation to monitor. You may enter a valid watch value or select from the drop-down list associated with this field:

- **USER** - will be triggered when the server raises a denied user exception when the user attempting to use the server is not found in the server's allowedUser list.
- **DB** - will be triggered when the server raises a denied database exception when the user attempts to connect to a database that is not found in the server's allowedDB list.
- **IP** - will be triggered when the server raises a denied IP exception when the user attempts to connect to a database from an IP that is not found in the server's allowed IP list.
- **AUTH** - will be triggered if the username/password provided is refused by the underlying database system.
- **SQL** - will be triggered if an attempt to use a SQL statement that is either not in the restrictSQL list of the server or is found to match the deny SQL attribute of the server configuration.

If no WATCH attribute is provided then the event will be triggered on the occurrence of any of the denial events listed above.

### 14.1.4 Test For

What this event trigger should test for.

You may enter a valid watch value or select from the drop-down list associated with this field:

testFor	Alternatives	Trigger when watch is
EQL	=, ==, EQUAL	Equal to threshold.
NEQ	!=, <>, NOT EQUAL	Not Equal to threshold.
LSS	<, LESS	Less than threshold.
GTR	>, GREATER	Greater than threshold.
LEQ	<=, LESS OR EQUAL	Less than or equal to threshold.
GEQ	>=, GREATER OR EQUAL	Greater than or equal to threshold.
WITHIN		Within the deviation of threshold.
NOT WITHIN		Not within the deviation of threshold.

### 14.1.5 Pattern

The pattern that should be matched.

The pattern value should be in the form of a Java regular expression.

Currently, patterns are only used in conjunction with Events that have the type **Exception**.

The pattern is used to filter the exceptions to only those that match the given regular expression pattern.

### 14.1.6 Threshold

The threshold of this event trigger.

This attribute is used in conjunction with Events that have the type **Threshold**.

The `value` can be an integer value or may be the literal **Min** or may start with the text literal **Max**.

If a text literal with the value **Min** or starting with **Max** is used then the threshold value is predetermined by the server attribute that is appropriate. Check the *Threshold Event Threshold Attribute* section of the *Oracle JDBC for Rdb User Guide* for more information on the use of the threshold value.

### 14.1.7 Deviation

Specify the deviation criteria allowed. This attribute is only valid for *threshold* events.

### 14.1.8 Message

The message to use with this event trigger.

Specify a customized message to display in the event log when this event occurs. This attribute is valid for all event types

### 14.1.9 Suppressed

A checkbox indicating if this event should be suppressed.

If true, this event will not be triggered even if it occurs.

Events may be defined in the configuration file, but may be suppressed at any particular time by setting the suppressed attribute to true.

## 14.2 Options

The event trigger pane has the following button-based options:

#### *Help*

Displays help information for this window.

#### *Edit*

Places the information pane in *edit mode* allowing the entry and/or modification of event trigger characteristics.

#### *Save*

Saves the information entered for the fields.

#### *Cancel*

Cancels the operation and closes the window; changes will not be saved.

---

#### **Note:**

To remove a saved event trigger, right-click on the event trigger name in the Event Triggers explorer and select the **Remove Event Trigger** option from the popup menu.

Alternatively, you may remove an existing event trigger by editing the ORCM configuration file to remove the Event entry within the Events section.

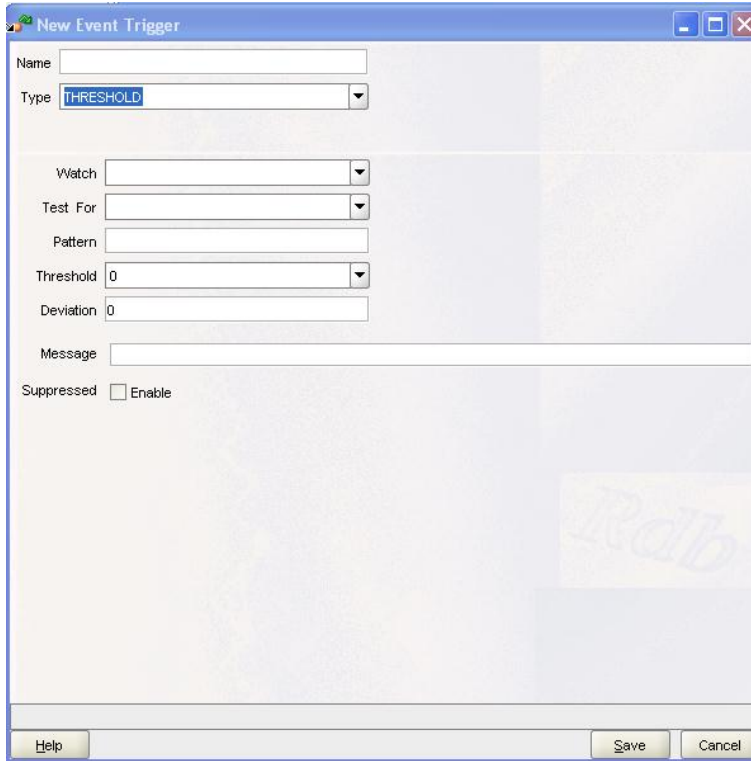
---

See also:

*Event Logging and Notification* and *Server Configuration* sections of the *Oracle JDBC for Rdb User Guide*.

---

## 14.3 New Event Trigger



**Figure 74 - New Event Trigger Pane**

The New Event Trigger pane allows you to configure a new Event Trigger definition to be stored in the **Events** section of the ORCM configuration file.

Event Trigger definitions allow you to describe what events may be watched for by JDBC Servers. This definition may be used by JDBC servers to determine when to notify that a particular event has occurred. The event trigger will raise an Event that will be notified to any event listeners currently watching for JDBC events.

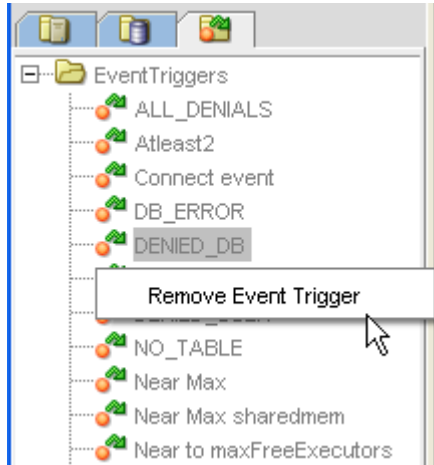
On this pane enter values for the attributes of a new event trigger. You must enter a unique name for this event trigger.

The pane consists of the same fields show above, under the section [Event Trigger Pane](#).



## 14.4 Remove Event Trigger

To remove a saved event trigger, right-click on the event trigger name in the Event Triggers explorer and select the “Remove Event Trigger” option from the popup menu.



**Figure 75 - Remove Event Trigger menu option**

Alternatively, you may remove an existing event trigger by editing the ORCM configuration file to remove the Event entry within the Events section.

---

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# Chapter 15

## Wizards

To help you carry out some of the standard maintenance tasks within ORCM, you may choose use an appropriate Wizard.

The following wizards are available within ORCM:

- [First Use Wizard](#)
- [SQL/Services Control Connection Wizard](#)
- [JDBC Server Definition Wizard](#)

### 15.1 First Use Wizard

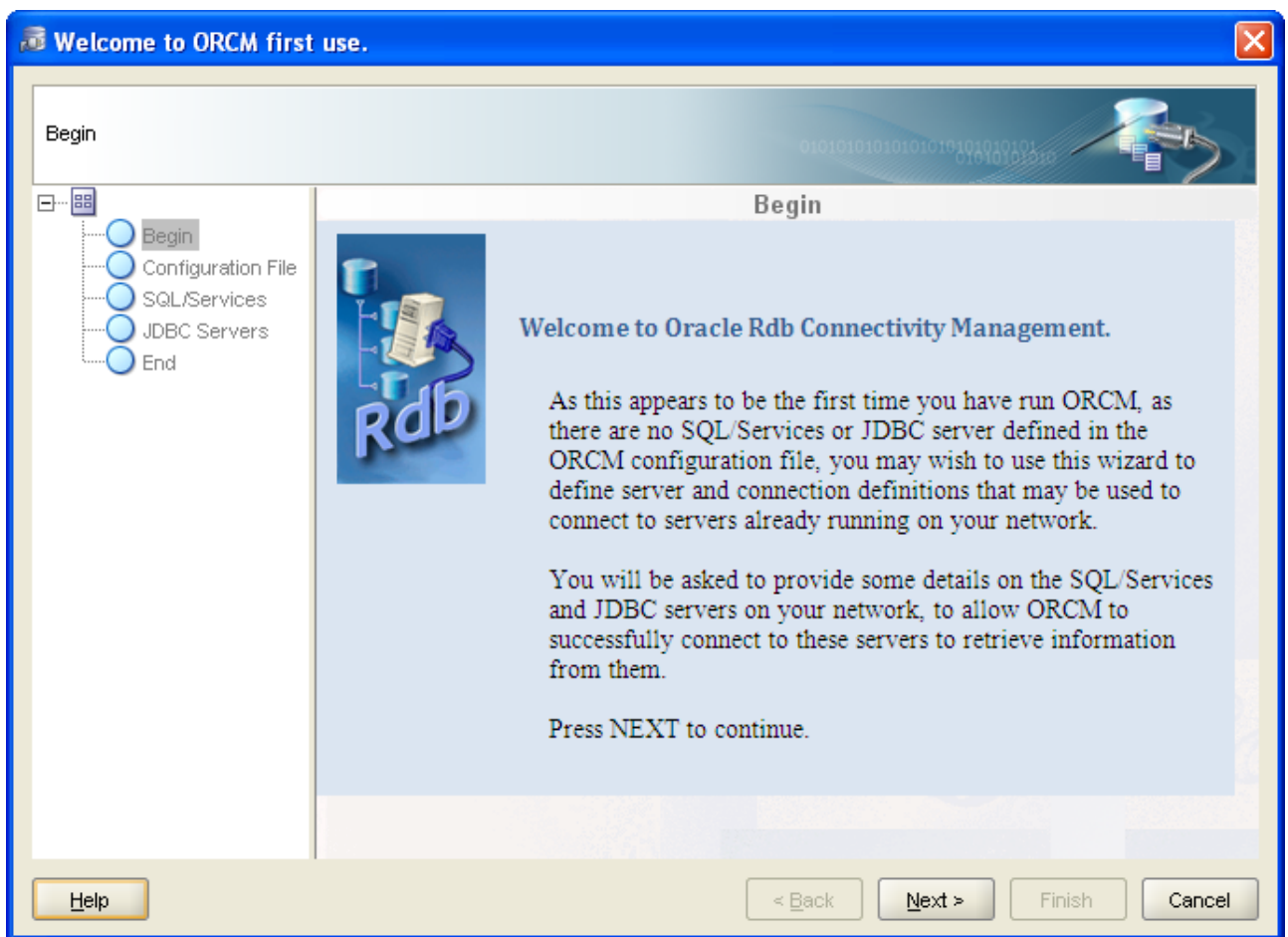


Figure 76 - First Use Wizard Pane

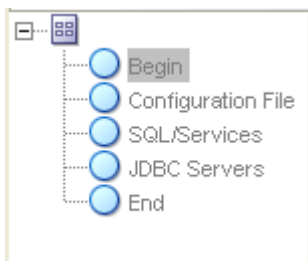
The First Use Wizard is displayed when you start ORCM for the first time and have no SQL/Services or JDBC servers configured in your ORCM configuration file.

The First Use Wizard takes you through the steps required to provide information to help setup your initial ORCM configuration.

To navigate the wizard either, select a step in the navigation tree that is to the left of the pane, or click the **Next** and **Back** buttons to go forward and back one step in the procedure.

### 15.1.1 Navigation Tree

To the left of the pane, is a navigation tree of the steps you will have to carry out in order to create a new JDBC Server definition.



**Figure 77 - Navigation tree**

Click on a node in the tree to select the step you wish to carry out.

### 15.1.2 Information Requested

The wizard will prompt for the following information:

#### *Select Different Configuration File*

A checkbox where you may indicate if you wish to use a different configuration file. If selected, you will be presented with a configuration dialog that will allow you to select an existing configuration file to use.

#### [SQL/Service connection information](#)

A Wizard will take you through the steps required to define a new SQL/Services server control connection.

#### [JDBC Server connection information](#)

A Wizard will take you through the steps required to define a new JDBC server control connection.

## 15.2 Options

The First Use Wizard has the following button-based options:

#### *Help*

Displays help information for this window.

*Next*

Proceeds to the next step in the wizard.

*Back*

Returns to the previous step in the wizard.

*Finish*

Saves the information entered for the fields. Once saved, the information saved to the ORCM configuration file.

*Cancel*

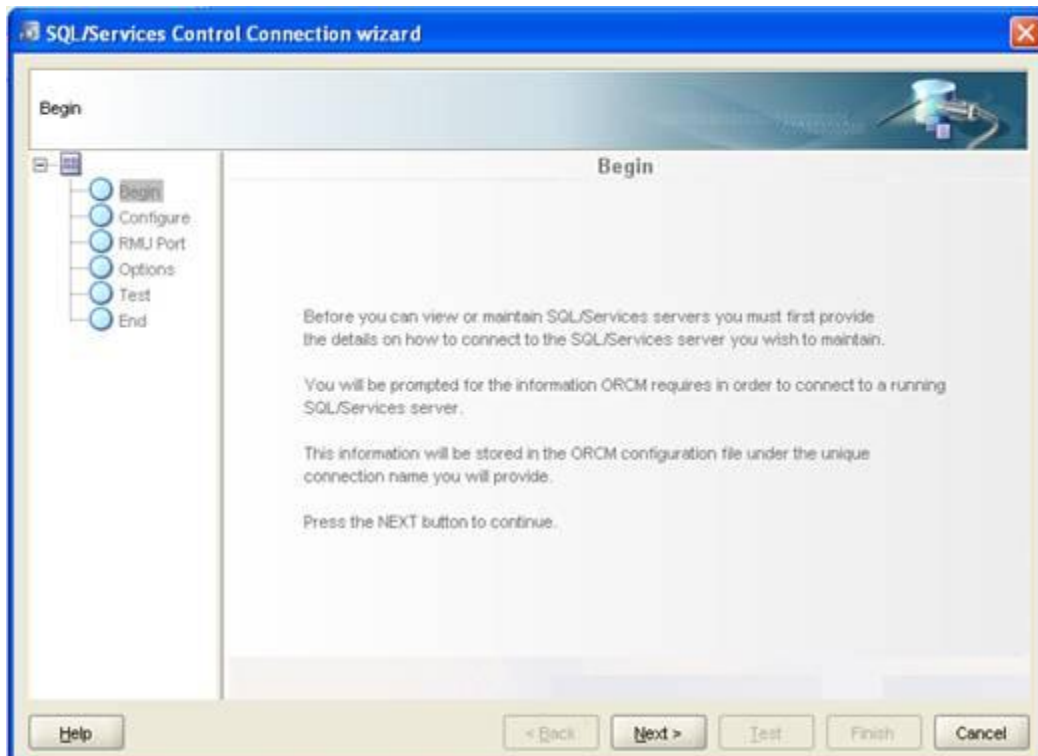
Cancels the operation and closes the window.

---

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## 15.3 SQL/Services Control Connection Wizard

SQL/Services control connection wizard.



**Figure 78 - SQL/Services Control Connection Wizard Pane**

The SQL/Services Control Connection Wizard allows you to configure a new SQL/Services server connection. Before ORCM can access SQL/Services services to download server information you will need to provide information on how to make a connection to the server.

The SQL/Services Control Connection Wizard helps you through the steps required to provide connection information to a server.

To navigate the wizard either select a step in the navigation tree that is to the left of the pane or click the **Next** and **Back** buttons to go forward and back one step in the procedure.

### 15.3.1 Navigation Tree

To the left of the pane, is a navigation tree of the steps you will have to carry out in order to create a new SQL/Services server connection definition.

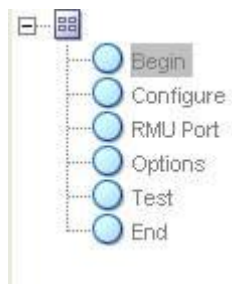


Figure 79 - Navigation tree

Click on a node in the tree to select the step you wish to carry out.

### 15.3.2 Information Requested

The wizard will prompt for the following information:

- [Name](#)
- [Host](#)
- [Port](#)
- [Username](#)
- [Password](#)
- [RMU Port](#)
- [Save Password](#)
- [Autoconnect](#)

#### 15.3.2.1 Name

An alias for using this SQL/Services server. This name need not be unique, however the name may be used to lookup server information within the start-up configuration file. The value of this name is not case-sensitive.

### 15.3.2.2 Host

The IP address of the node the server is running on.

### 15.3.2.3 Port

The port number of the TCP/IP socket that the SQL/Services server is using for management access.

### 15.3.2.4 Username

The username to use when ORCM connects to the server. This must be a valid OpenVMS username of an account that has been granted use of the SQLSRV\_MANAGE system management service for that server; however, you are not required to use an account that has been granted elevated privileges. See the Oracle SQL/Services Server Configuration Guide for more details on required privileges.

### 15.3.2.5 Password

The password associated with the username provided.

### 15.3.2.6 RMU Port

The TCP/IP port that the RMU Dispatcher is listening on.  
The default RMU Dispatcher TCP/IP port ID is 1571.

---

**Note:**

Currently, SQL/Services always communicates with the RMU Dispatcher using TCP/IP port ID 1571. This port ID should not be altered.

SQL/Services may have several RMU Dispatchers configured, which may or may not be currently running, but only one RMU Dispatcher may be running at any one time.

---

You should ensure that the RMU Dispatcher and associated RMU Service are running before carrying out operations such as viewing SQL/Services log files using the ORCM interface.

### 15.3.2.7 Save Password

A checkbox where you may indicate if the password should be saved to the configuration file.

### 15.3.2.8 Autoconnect

A checkbox where you may indicate if ORCM should automatically connect to this server when the application starts up.

## 15.3.3 Options

The SQL/Services Connection Wizard has the following button-based options:

*Help*

Displays help information for this window.

*Next*

Proceeds to the next step in the wizard.

*Back*

Returns to the previous step in the wizard.

*Test*

Tests the connection information you have provided.

*Finish*

Saves the information entered for the fields. Once saved, the information about the connection will be displayed in main ORCM window and saved to the ORCM configuration file.

*Cancel*

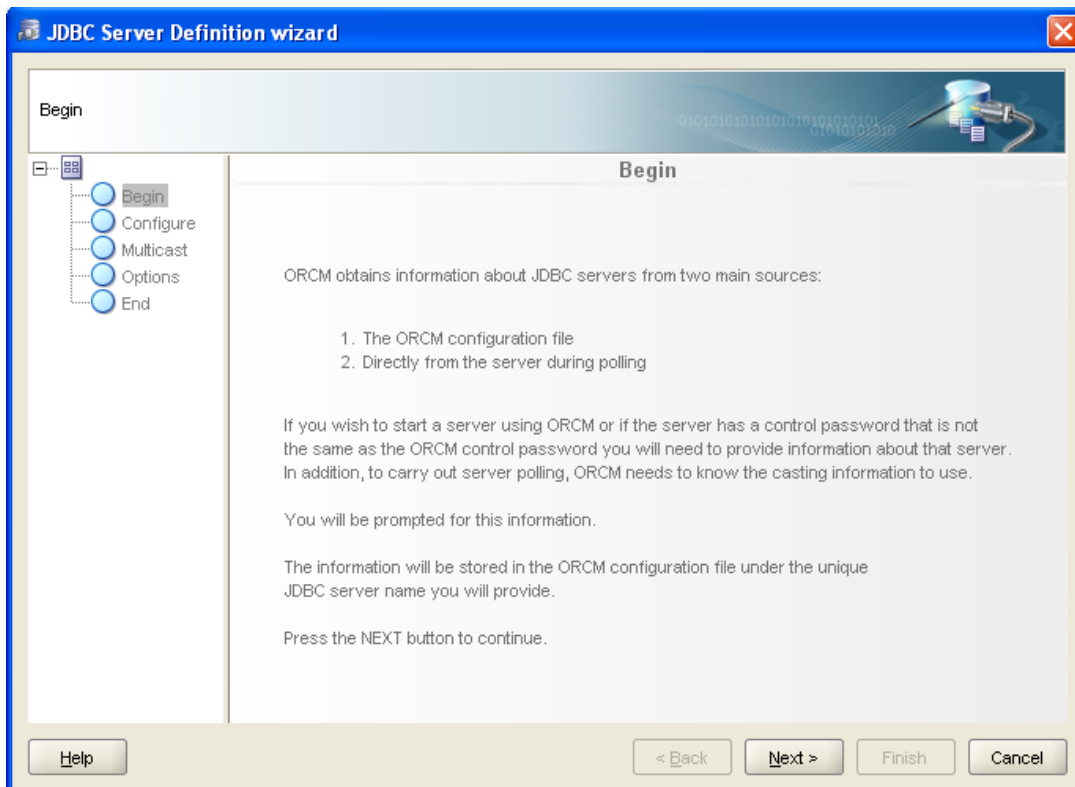
Cancels the operation and closes the window.

---

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## 15.4 JDBC Server Definition Wizard

JDBC Server Definition wizard.



**Figure 80 - JDBC Server Definition Wizard Pane**

The JDBC Server Definition Wizard allows you to configure a new JDBC Server definition. Before ORCM can connect to JDBC servers that are listening on different multicast groups to that of the default ORCM group you will need to provide information on how to make a connection to the server.

The JDBC Server Definition Wizard takes you through the steps required to provide information for a server.

To navigate the wizard either, select a step in the navigation tree that is to the left of the pane, or click the **Next** and **Back** buttons to go forward and back one step in the procedure.

### 15.4.1 Navigation Tree

To the left of the pane, is a navigation tree of the steps you will have to carry out in order to create a new JDBC Server definition.



**Figure 81 - Navigation tree**

Click on a node in the tree to select the step you wish to carry out.

### 15.4.2 Information Requested

The wizard will prompt for the following information:

- [Name](#)
- [Host](#)
- [Port](#)
- [Control Username](#)
- [Control Password](#)
- [Multicast Group](#)
- [Multicast Port](#)
- [Save Password](#)

#### 15.4.2.1 Name

An alias for using this JDBC server. This name need not be unique, however the name may be used to lookup server information within the start-up configuration file. The value of this name is not case-sensitive.

#### 15.4.2.2 Host

The IP address of the node the server is running on.



#### **15.4.2.3 Port**

The port number of the TCP/IP socket that the server is using for management access.

#### **15.4.2.4 Control Username**

The username to use when ORCM connects to the server as control user.

#### **15.4.2.5 Control Password**

The password associated with the username provided.

#### **15.4.2.6 Multicast Group**

The multicast group IP on which the server will be listening.

#### **15.4.2.7 Multicast Port**

The TCP/IP port on which the server will be listening.

#### **15.4.2.8 Save Password**

A checkbox where you may indicate if the password should be saved to the configuration file.

### **15.4.3 Options**

The JDBC Server Definition Wizard has the following button-based options:

*Help*

Displays help information for this window.

*Next*

Proceeds to the next step in the wizard.

*Back*

Returns to the previous step in the wizard.

*Finish*

Saves the information entered for the fields. Once saved, the information about the server will be displayed in main ORCM window and saved to the ORCM configuration file.

*Cancel*

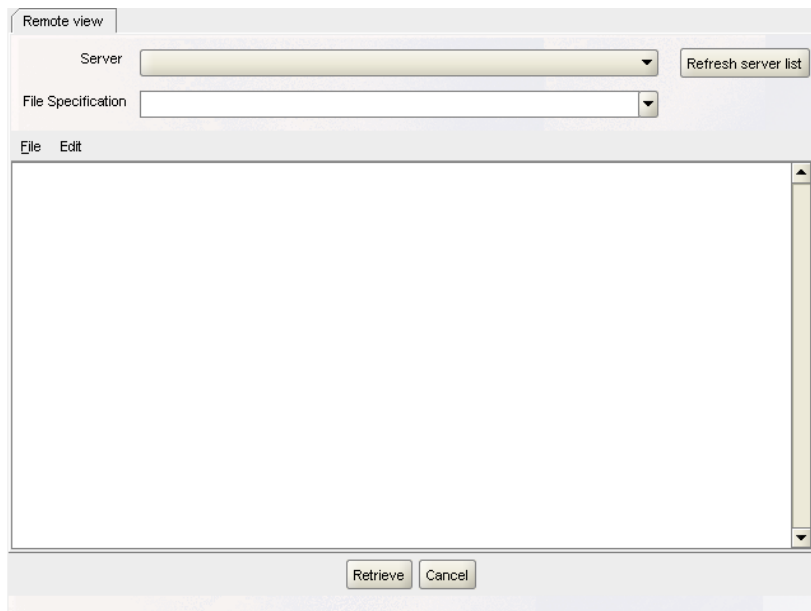
Cancels the operation and closes the window.

---

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# Chapter 16

## Remote View



**Figure 82 - Remote View panel**

The Remote View panel allows you to connect to a JDBC server and retrieve the contents of remote files.

ORCM will use the session control user/password to attempt to connect to the specified server as a control user.

The JDBC server will execute the retrieval by passing a request to the command procedure pointed to by the server option `srv.cliStartup`, found in the configuration file that the server used during startup.

**Note:**

The designated server must have command line (CL) access enabled, indicated by the server option *allowAccessToCL* for that server being set to *true* within the configuration file that the server used during startup. See the *CL Access* section of the *Oracle JDBC for Rdb User Guide* for more information.

The command to retrieve the file contents will be executed in the context of the process within which the attached server was started. OpenVMS protection and authorization checking will be based on the OpenVMS user account that started the attached server.

The Remote View panel contains the following:

- [Server field](#)

- [File Specification](#)
- [Refresh server list button](#)
- [Results Display area](#)

## 16.1 Server

This is a drop-down list of the JDBC servers that are known to be currently available. Use this drop-down list to select the appropriate JDBC server.

## 16.2 File Specification

Enter the file specification of the file you wish to display here. You may enter a new specification or select from file specifications previously entered within this same connection session by using the drop-down list.

The file specification may use absolute or relative directories and may use OpenVMS logical names.

The file retrieval request will be executed in the context of the process within which the attached server was started. Relative directory specifications and logical name translation will be based on the server's process environment.

The command will be sent to the server when you:

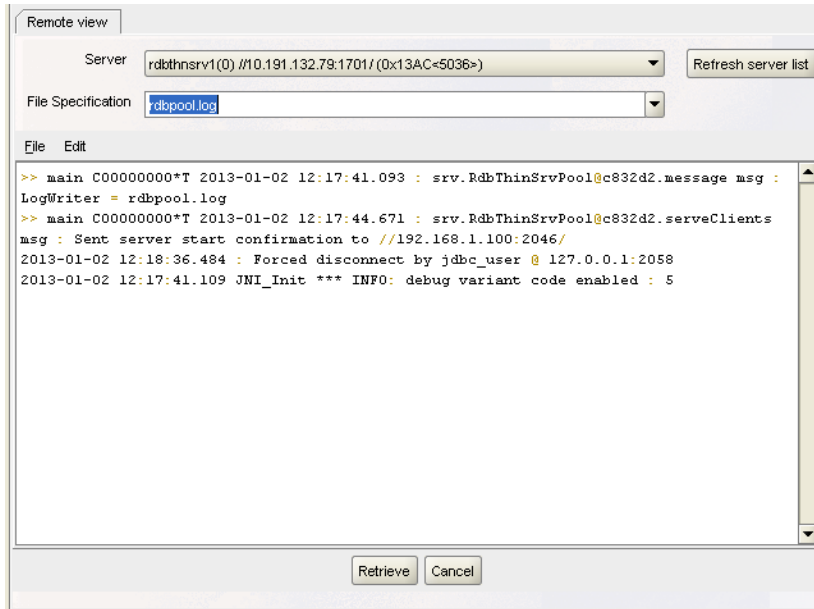
- Press **return** when the cursor is in the Command field or
- Press the **Retrieve** button at the bottom of the panel

## 16.3 Refresh server list button

Press this button to refresh the list of available servers shown in the Server drop-down list.

## 16.4 Results Display area

The contents of the file will be displayed here.

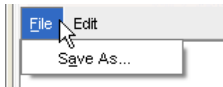


**Figure 83 - Results display area**

The results display area has the following menu-based options:

- [File menu options](#)
- [Edit menu options](#)

### 16.4.1.1 File menu options

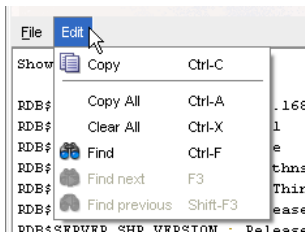


**Figure 84 - File Menu**

*File / Save As ...*

Save the entire contents of the display area to the designated file.

### 16.4.1.2 Edit menu options



**Figure 85 - Edit menu**

*Edit / Copy*

Copy the selected text to the global paste buffer.

*Edit / Copy All*

Copy the entire contents of the display area to the global paste buffer.

*Find*

Search for specified text.

*Find next*

Search for the next occurrence of the specified text.

*Find previous*

Search for the previous occurrence of the specified text.

## 16.5 Options

*Retrieve*

Press this button to retrieve the contents of the file you have entered.

*Cancel*

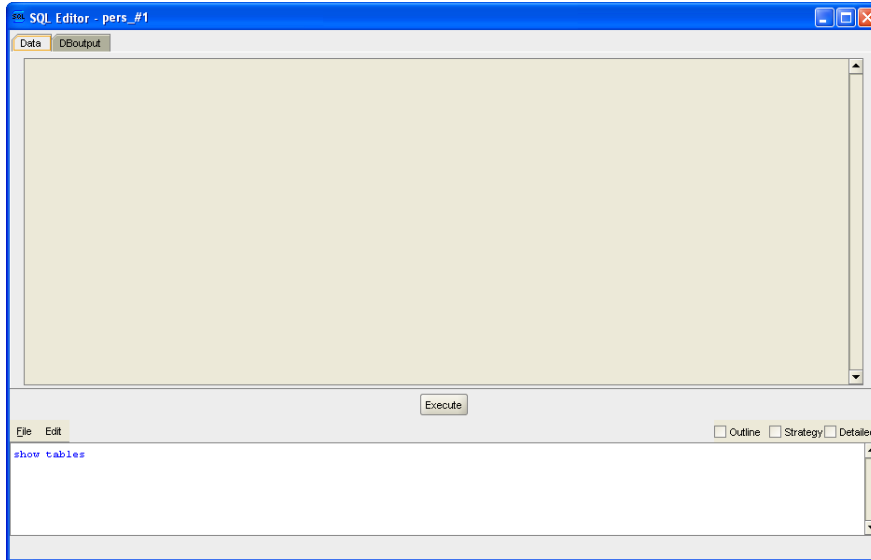
Press this button to end the Remote View session.

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# Chapter 17

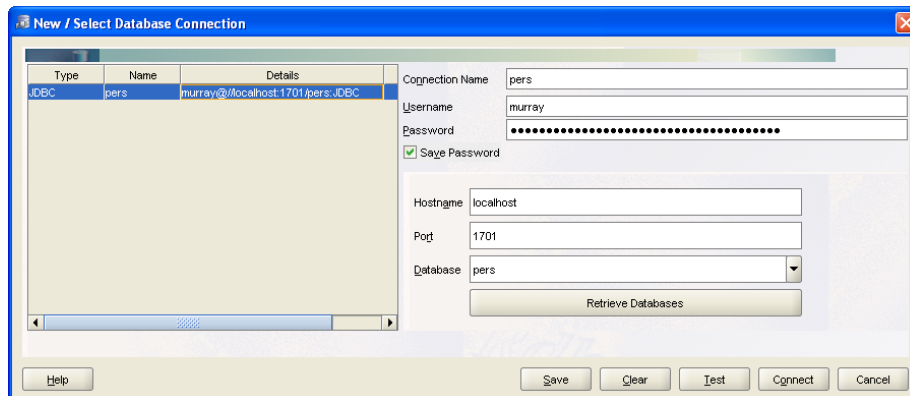
## SQL worksheet



**Figure 86 - SQL Worksheet**

The SQL Worksheet allows you to connect to make a JDBC thin connection to any Rdb database you have access to on your network that is currently being served by a JDBC server. Once connected you may execute SQL statements on that database, the results of the execution being displayed in the results area.

When first invoked, you will be prompted for connection details for ORCM to use.



**Figure 87 - Connection Details**

You may select a connection definition from the connection table on the left of the panel or enter a new connection by filling in the fields on the right of the panel.

See [Database Connections](#) for more details on database connections.

Once the details have been entered press Connect to connect to the database using the JDBC thin driver.

The SQL Worksheet contains the following:

- [Results Display area](#)
- [SQL statement area](#)

## 17.1 Results Display area

The results of your command will be displayed here.

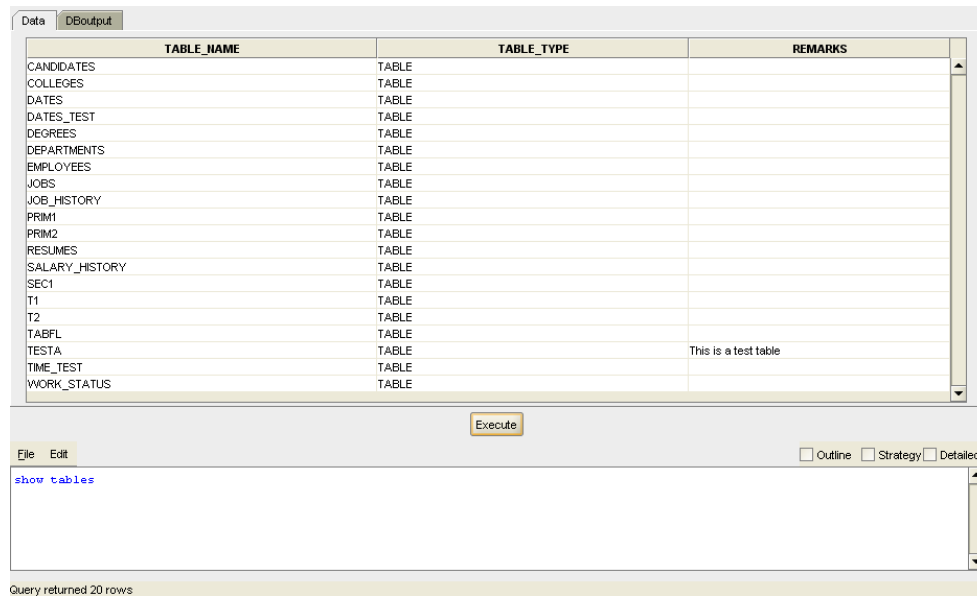


Figure 88 - Results display area

## 17.2 SQL Statement area

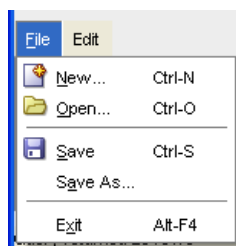
The SQL statement area is where you can enter single-line or multi-line SQL statements.

To execute the statement you have entered, press the **Execute** button.

The SQL statement area has the following menu-based options:

- [File menu options](#)
- [Edit menu options](#)

### 17.2.1.1 File menu options



**Figure 89 - File Menu**

*New ...*

Create a new file on your local host.

*Open ...*

Open an existing file on your local host.

*Save*

Save the entire contents of the SQL Statement area to the current file.

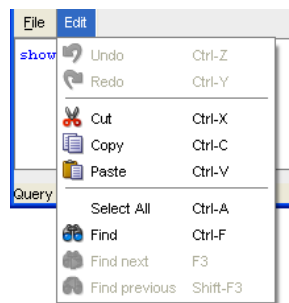
*Save As ...*

Save the entire contents of the SQL Statement area to the designated new file.

*Exit*

Exit the SQL Worksheet.

### 17.2.1.2 Edit menu options



**Figure 90 - Edit menu**

*Undo*

Undo the last edit change.

*Redo*

Redo the last edit change.

*Cut*

Copy the selected text area to the global paste buffer and remove from the SQL Statement area.

*Copy*

Copy the selected text area to the global paste buffer.

*Paste*

Paste the contents of the global paste buffer into the SQL Statement area.

*Select all*

Select all the text in the SQL Statement area.

*Find*

Search for specified text.

*Find next*

Search for the next occurrence of the specified text.

*Find previous*

Search for the previous occurrence of the specified text.

## 17.3 Options



*Execute*

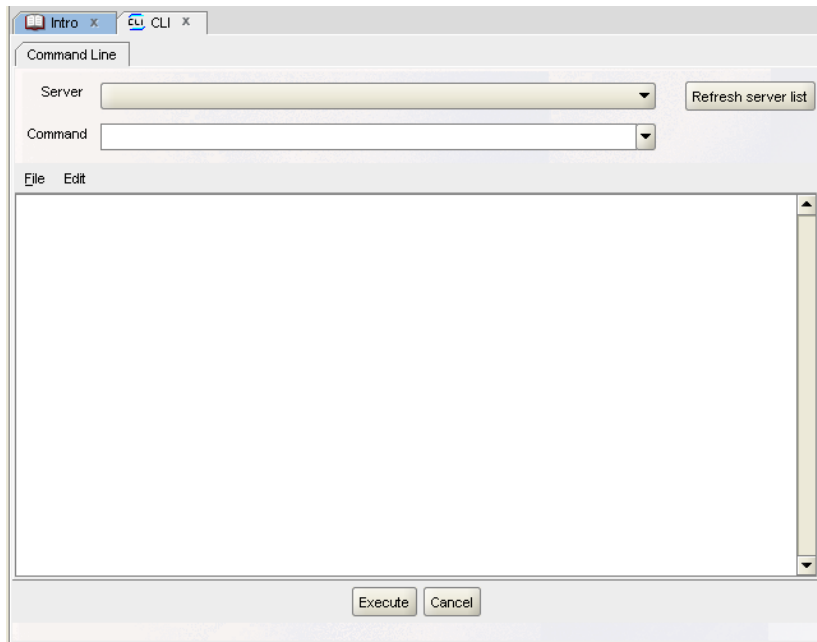
Press this button to execute the SQL statement you have entered.

---

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# Chapter 18

## Command line



**Figure 91 - Command Line**

The Command line panel allows you to connect to a JDBC server and issue CLI commands to it.

On Open VMS systems, CLI commands are DCL commands that will be issued by the recipient server using a subprocess created specifically for CLI access.

ORCM will use the session control user/password to attempt to connect to the specified server as a control user.

The JDBC server will execute the CLI command by passing it to the command procedure pointed to by the server option `srv.cliStartup`, found in the configuration file that the server used during startup.

The command will be executed in the context of the process within which the attached server was started. OpenVMS protection and authorization checking will be based on the OpenVMS user account that started the attached server.

**Note:**

The designated server must have command line (CL) access enabled, indicated by the server option ***allowAccessToCL*** for that server being set to ***true*** within the configuration

file that the server used during startup. See the *CL Access* section of the *Oracle JDBC for Rdb User Guide* for more information.

The Command line panel contains the following:

- [Server field](#)
- [Command field](#)
- [Refresh server list button](#)
- [Results Display area](#)

## 18.1 Server

This is a drop-down list of the JDBC servers that are known to be currently available. Use this drop-down list to select the appropriate JDBC server.

## 18.2 Command

Enter your CLI command here. You may enter a new command or select from commands previously executed within this same connection session by using the drop-down list.

The command will be sent to the server when you:

- Press **return** when the cursor is in the Command field or
- Press the **Execute** button at the bottom of the panel

## 18.3 Refresh server list button

Press this button to refresh the list of available servers shown in the Server drop-down list.

## 18.4 Results Display area

The results of your command will be displayed here.

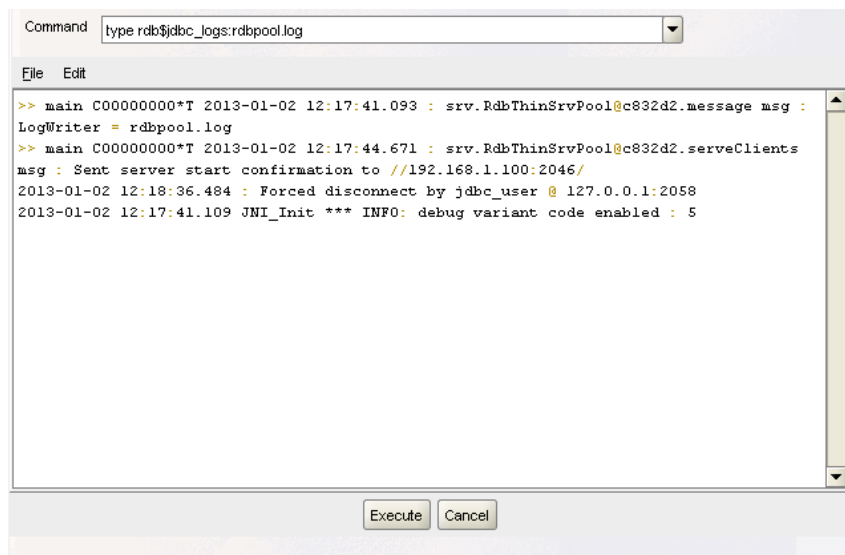
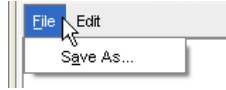


Figure 92 - Results display area

The results display area has the following menu-based options:

- [File menu options](#)
- [Edit menu options](#)

### 18.4.1.1 File menu options

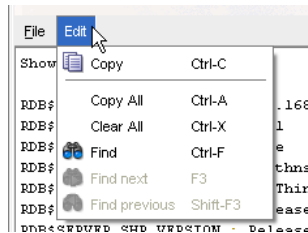


**Figure 93 - File Menu**

*File / Save As...*

Save the entire contents of the display area to the designated file.

### 18.4.1.2 Edit menu options



**Figure 94 - Edit menu**

*Edit / Copy*

Copy the selected text to the global paste buffer.

*Edit / Copy All*

Copy the entire contents of the display area to the global paste buffer.

*Find*

Search for specified text.

*Find next*

Search for the next occurrence of the specified text.

*Find previous*

Search for the previous occurrence of the specified text.

## 18.5 Options

*Execute*

Press this button to execute the command you have entered.

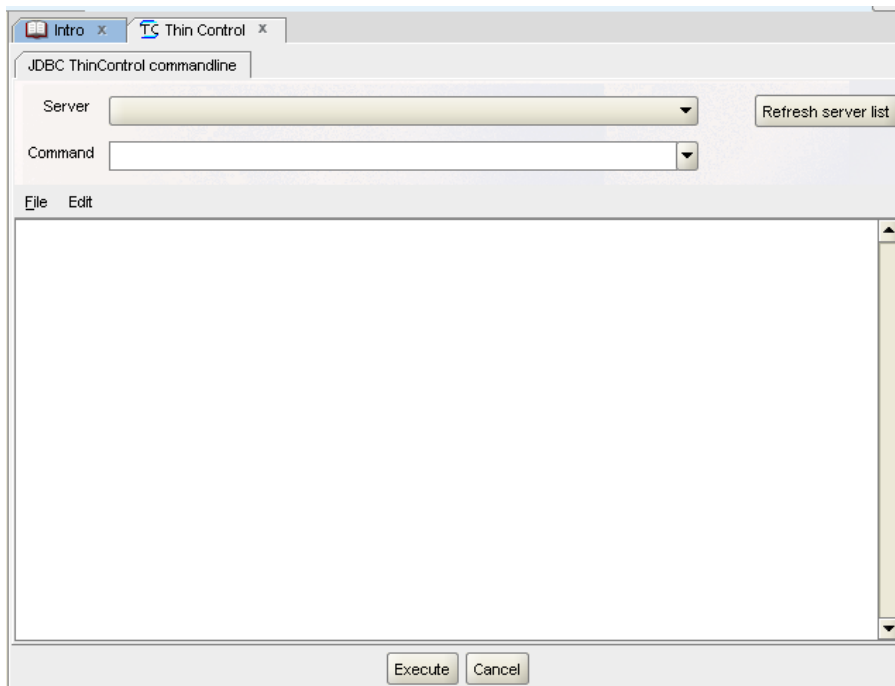
*Cancel*

Press this button to end the Command line session.

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# Chapter 19

## Controller command line



**Figure 95 - Controller Command Line**

The Controller command line panel allows you to connect to a JDBC server and issue controller commands to it.

These commands are identical to the command line commands you may use when using the [JDBC Controller](#) application.

ORCM will use the session control user/password to attempt to connect to the specified server as a control user.

Controller command line panel contains the following:

- Server field
- Command field
- Refresh server list button
- Results Display area

### 19.1 Server

A drop-down list of the JDBC servers that are known to be currently available. Use this drop-down list to select the appropriate JDBC server.

## 19.2 Command

Enter your controller command here. You may enter a new command or select from Controller commands previously executed within this same connection session by using the drop-down list.

The command will be sent to the server when you:

- Press **return** when the cursor is in the Command field or
- Press the **Execute** button at the bottom of the panel.

## 19.3 Refresh server list button

Press this button to refresh the list of available servers shown in the Server drop-down list.

## 19.4 Results Display area

The results of your command will be displayed here.

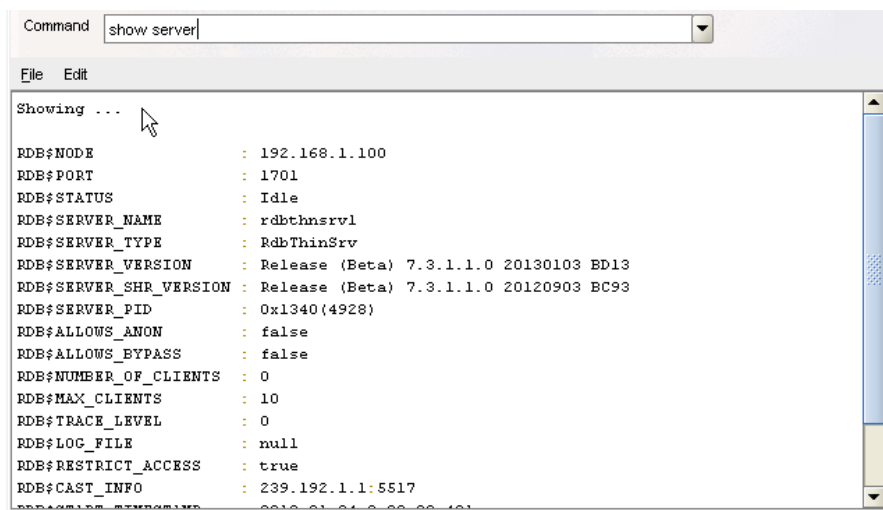


Figure 96 - Results display area

The results display area has the following menu-based options:

- [File menu options](#)
- [Edit menu options](#)

### 19.4.1.1 File menu options

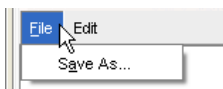


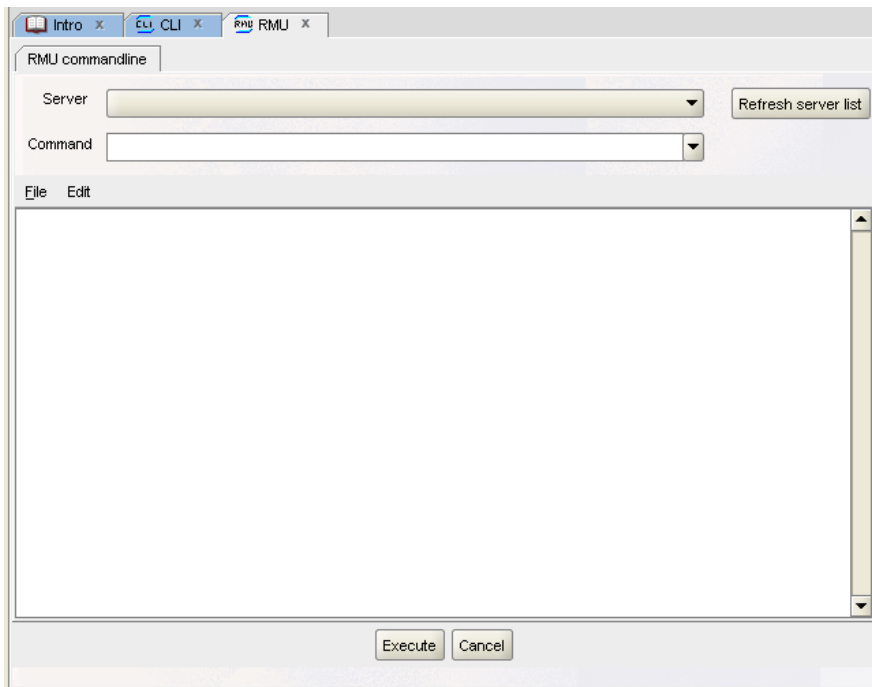
Figure 97 - File Menu

*File / Save As ...*



# Chapter 20

## RMU Command line



**Figure 99 - RMU Command Line**

The RMU Command line panel allows you to connect to a JDBC server and issue RMU commands to it.

On Open VMS systems, RMU commands will be executed by the recipient server using a subprocess created specifically for RMU access.

ORCM will use the session control user/password to attempt to connect to the specified server as a control user.

The JDBC server will execute the RMU command by passing it to the command procedure pointed to by the server option `srv.cliStartup`, found in the configuration file that the server used during startup. The command procedure will in turn invoke RMU on the host server node and carry out the operation requested.

**Note:**

The designated server must have command line (CL) access enabled, indicated by the server option *allowAccessToCL* for that server being set to *true* within the configuration file that the server used during startup.



See the [CL Access](#) section of the *Oracle JDBC for Rdb User Guide* for more information.

RMU will be executed in the context of the process within which the attached server was started. OpenVMS protection and authorization checking will be based on the OpenVMS user account that started the attached server.

The RMU command line panel contains the following:

- [Server field](#)
- [Command field](#)
- [Refresh server list button](#)
- [Results Display area](#)

## 20.1 Server

This is a drop-down list of the JDBC servers that are known to be currently available. Use this drop-down list to select the appropriate JDBC server.

## 20.2 Command

Enter your RMU command here. You may enter a new command or select from commands previously executed within this same connection session by using the drop-down list.

The command will be sent to the server when you:

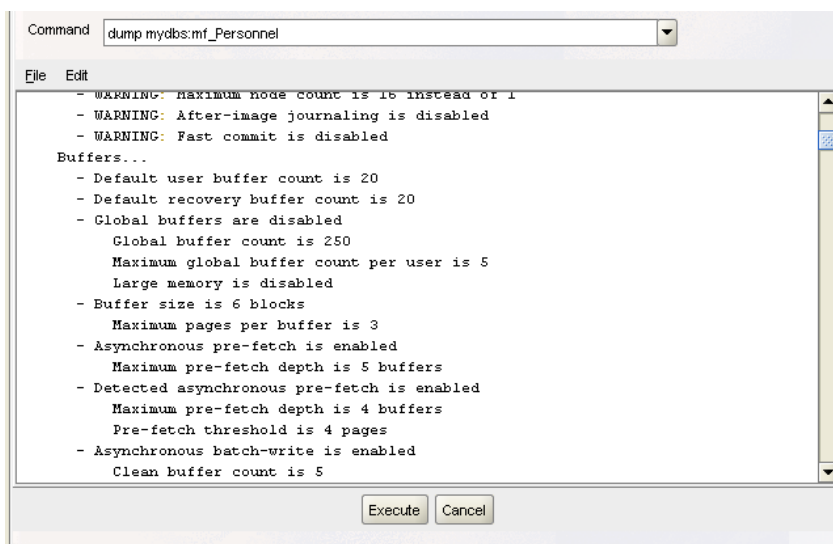
- Press **return** when the cursor is in the Command field or
- Press the **Execute** button at the bottom of the pane

## 20.3 Refresh server list button

Press this button to refresh the list of available servers shown in the Server drop-down list.

## 20.4 Results Display area

The results of your command will be displayed here.

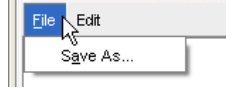


**Figure 100 - Results display area**

The results display area has the following menu-based options:

- [File menu options](#)
- [Edit menu options](#)

### 20.4.1.1 File menu options

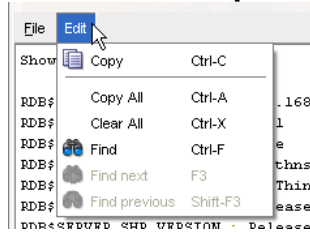


**Figure 101 - File Menu**

*File / Save As ...*

Save the entire contents of the display area to the designated file.

### 20.4.1.2 Edit menu options



**Figure 102 - Edit menu**

*Edit / Copy*

Copy the selected text to the global paste buffer.

*Edit / Copy All*

Copy the entire contents of the display area to the global paste buffer.

*Find*

Search for specified text.

*Find next*

Search for the next occurrence of the specified text.

*Find previous*

Search for the previous occurrence of the specified text.

## 20.5 Options

*Execute*

Press this button to execute the command you have entered.

*Cancel*

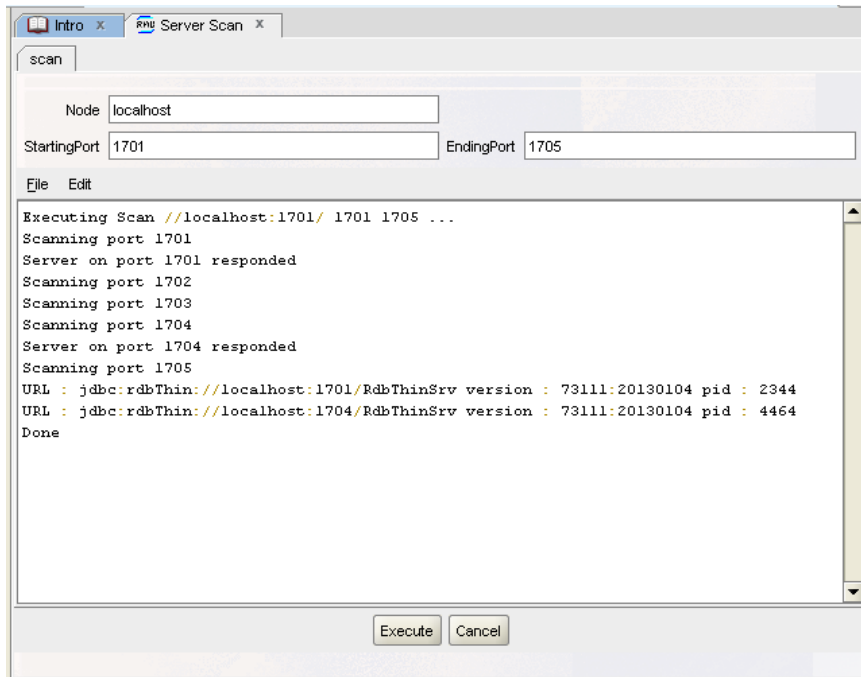
Press this button to end the RMU session.

---

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# Chapter 21

## Server Scan



**Figure 103 - Server Scan**

The Server scan panel allows you to scan for JDBC servers on a particular host.

After providing the node you wish to scan and the range of ports, ORCM will scan the range to determine if any JDBC servers respond to connection requests within that port range.

The server scan may be used to check on the presence of JDBC servers that are not responding to POLL requests on the multicast groups you have tried.

The Server scan panel contains the following:

- [Node field](#)
- [StartingPort field](#)
- [EndingPort field](#)
- [Results Display area](#)

### 21.1 Node

The node to scan, this may be a node name or IP.

## 21.2 StartingPort

The port number to start scanning from.

## 21.3 EndingPort

The port number to scan to.

The scan will commence when you press the **Execute** button at the bottom of the panel

## 21.4 Results Display area

The results of your scan will be displayed here.



```
File Edit
Executing Scan //localhost:1701/ 1701 1705 ...
Scanning port 1701
Server on port 1701 responded
Scanning port 1702
Scanning port 1703
Scanning port 1704
Server on port 1704 responded
Scanning port 1705
URL : jdbc:rdbThin://localhost:1701/RdbThinSrv version : 73111:20130104 pid : 2344
URL : jdbc:rdbThin://localhost:1704/RdbThinSrv version : 73111:20130104 pid : 4464
Done
```

*Results display area*

The results display area has the following menu-based options:

- [File menu options](#)
- [Edit menu options](#)

### 21.4.1.1 File menu options

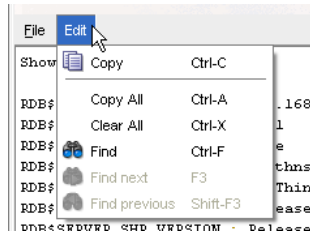


*File Menu*

*File / Save As ...*

Save the entire contents of the display area to the designated file.

### 21.4.1.2 Edit menu options



### *Edit menu*

#### *Edit / Copy*

Copy the selected text to the global paste buffer.

#### *Edit / Copy All*

Copy the entire contents of the display area to the global paste buffer.

#### *Find*

Search for specified text.

#### *Find next*

Search for the next occurrence of the specified text.

#### *Find previous*

Search for the previous occurrence of the specified text.

## 21.5 Options

#### *Execute*

Press this button to scan the node and port range you have entered.

#### *Cancel*

Press this button to end the Server Scan session.

---

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# Chapter 22

## Preference Panel

Edit/Display ORCM configuration information.

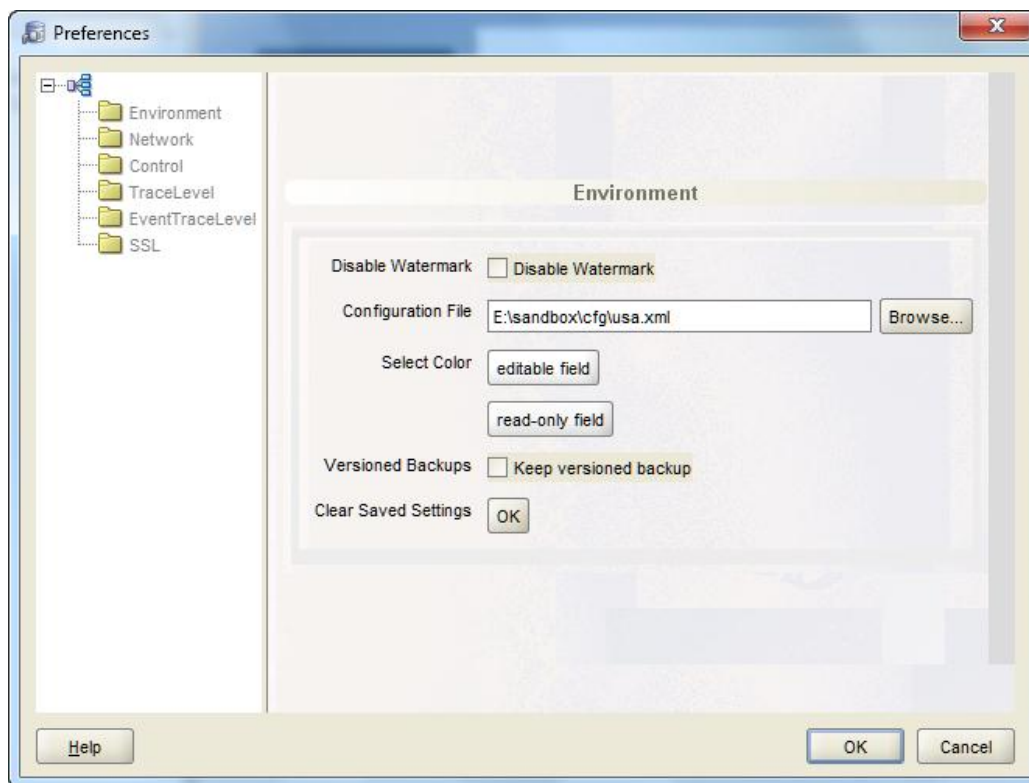


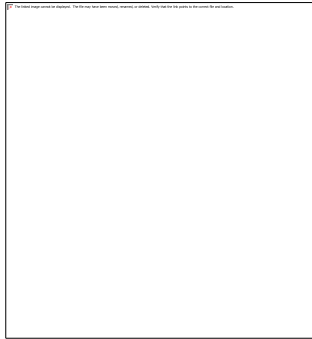
Figure 104 - ORCM Preference Pane

The ORCM Preference panel allows you to modify or display configuration information about ORCM.

The Preference panel is comprised of a Preference Tree, containing broad groups of preference topics, and number of sub-panels containing related configuration information.

- [Environment](#) - information such as the configuration file ORCM is loaded from.
- [Network](#) - describes network information pertinent to ORCM.
- [Control](#) - describes the default session controlUser and password
- [TraceLevel](#) - describes ORCM tracing.
- [Event Trace Level](#) - Describe ORCM Event tracing.
- [SSL](#) - describes SSL security access information for the ORCM session.

## 22.1 Preferences Tree



**Figure 105 - Preferences Tree**

To the left of the panel is the Preferences tree. Click on a node in this tree to display a panel of related configuration information.

## 22.2 Options

The ORCM Preference panel has the following button-based options:

*OK*

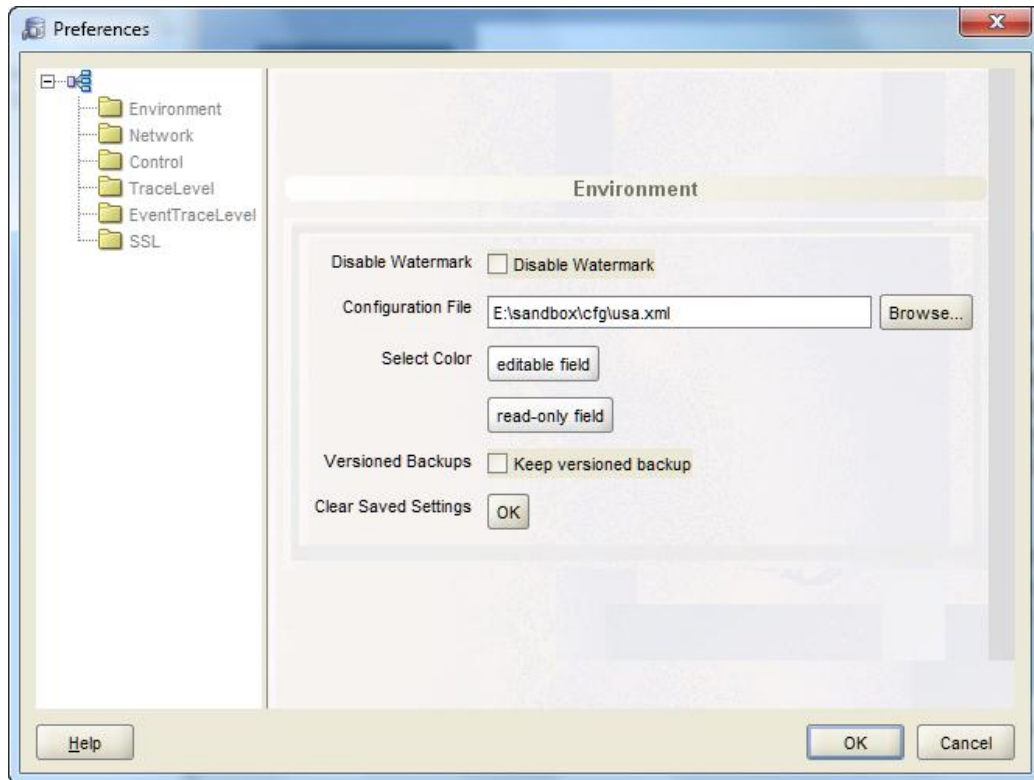
Accepts the changes made and updates the ORCM session and if needed, the ORCM configuration file.

*Cancel*

Cancel the operation and closes the window.

## 22.3 Environment Information

Information about the general ORCM environment.



**Figure 106 - Environment Panel**

This panel consists of the following:

- [Disable Watermark check box](#)
- [Configuration file field](#)
- [Browse button](#)
- [Select Color – editable field button](#)
- [Select Color – read-only field button](#)
- [Versioned Backups check box](#)
- [Clear Saved Settings button](#)

### **22.3.1 Disable Watermark**

Check this box to disable the Rdb watermark seen on the ORCM panels.

### **22.3.2 Configuration File**

Enter the file name of the configuration file to use for this ORCM session. Alternatively use the Browse button to search for and select a suitable configuration file.

### **22.3.3 Browse Button**

Press the **Browse** button to browse your local system for possible ORCM configuration files.



### 22.3.4 Select Color Editable Field Button

Press the **editable field** button to bring up a color chooser panel from which you may choose the background color of editable fields on the various panels displayed within ORCM.

### 22.3.5 Select Color Read-only Field Button

Press the **read-only field** button to bring up a color chooser panel from which you may choose the background color of read-only fields on the various panels displayed within ORCM.

### 22.3.6 Versioned Backups

Check this box to request ORCM to use versioned backup files when saving the configuration file during editing sessions. If clear, ORCM will only save a single backup version of the configuration file.

The backup files will be stored in the same directory the configuration file was loaded from. Each time you change the configuration file a copy of the configuration details prior to the changes will be saved.

If versioned backups is enabled, multiple version of the backup configuration file will be saved, if this feature is not selected, only one version will be saved, and overwritten each time a backup of the file is made.

If backup versions is enabled, files with the following filename pattern will be saved to the configuration file directory:

`<cfg file name>~<number>`

For example:

`orcmcfg.xml~8`

If versioned backup is not enabled the backup file pattern is:

`<cfg file name>~`

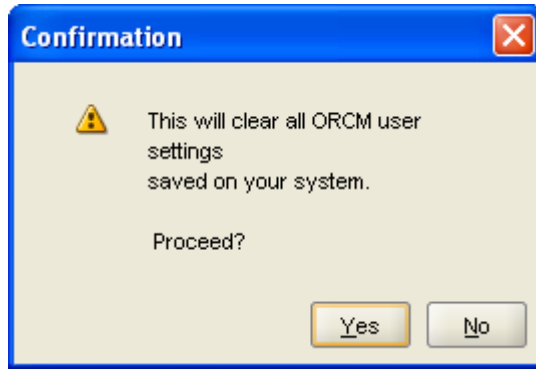
For example:

`orcmcfg.xml~`

### 22.3.7 Clear Saved Settings Button

Press the **Clear Saved Settings** button to clear any configuration information saved to your system by ORCM. This information is comprised of configuration attributes that are not stored in the ORCM configuration file, for example, the name of last configuration file used is saved by ORCM so that it can be used the next time you invoke ORCM.

You will be prompted to confirm the removal of the current ORCM saved settings.



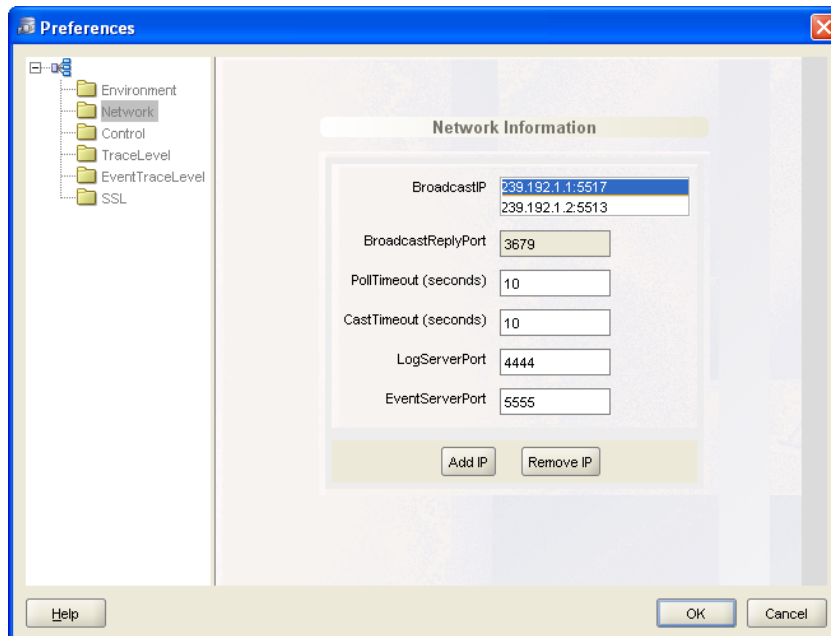
**Figure 107 - Clear setting confirmation**

If you press **Yes** the settings will be removed.

Configuration settings found in the configuration file are not affected.

## 22.4 Network Information

Information about the ORCM network configuration.



**Figure 108 - Network Panel**

This panel consists of the following fields:

- [Broadcast IP](#)
- [Broadcast Reply Port](#)
- [Poll Timeout](#)
- [Cast Timeout](#)
- [LogServerPort](#)
- [EventServerPort](#)

### **22.4.1 BroadcastIP**

The IP/Port value to use for multicast polling. This IP consists of both the Group IP and the base port for multicasting. There may be multiple values in this field. To insert another IP press the **AddIP** button to open up a space in the list to add the new IP.

To remove an existing IP, select the IP from the list and press the **RemoveIP** button.

### **22.4.2 Broadcast Reply Port**

The Port ORCM is using to listen for replies from multicast poll requests. This is a read-only field.

### **22.4.3 Poll Timeout**

The amount of time in seconds ORCM should wait before deciding that all poll replies have been received. If your network traffic is very busy and replies are taking longer than normal, you should consider increasing this value.

### **22.4.4 Cast Timeout**

The amount of time, in seconds, ORCM should wait before deciding that the server that has been sent a cast request is not responding. If your network traffic is very busy and replies are taking longer than normal, you should consider increasing this value.

### **22.4.5 Log Server Port**

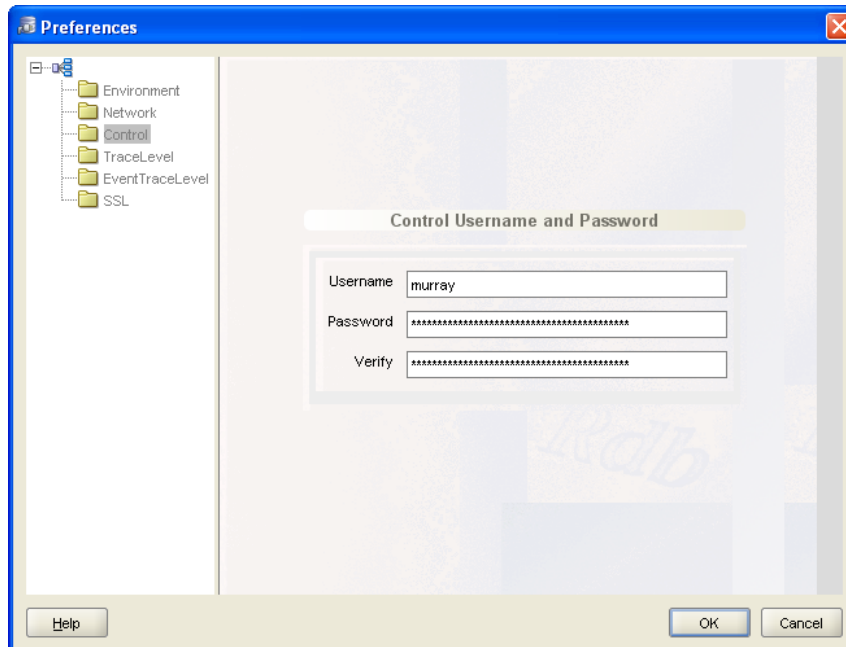
The port ORCM will listen on to receive Java Logger message from participating JDBC servers.

### **22.4.6 Event Server Port**

The port ORCM will listen on to receive Rdb Event notifications from participating JDBC servers.

## **22.5 Control Information**

Information about the ORCM control configuration.



**Figure 109 - Control Panel**

This panel consists of the following fields:

- [Username](#)
- [Password](#)
- [Verify](#)

### **22.5.1 Username**

Enter the control username that ORCM should use when attempting to create control connections to JDBC servers.

### **22.5.2 Password**

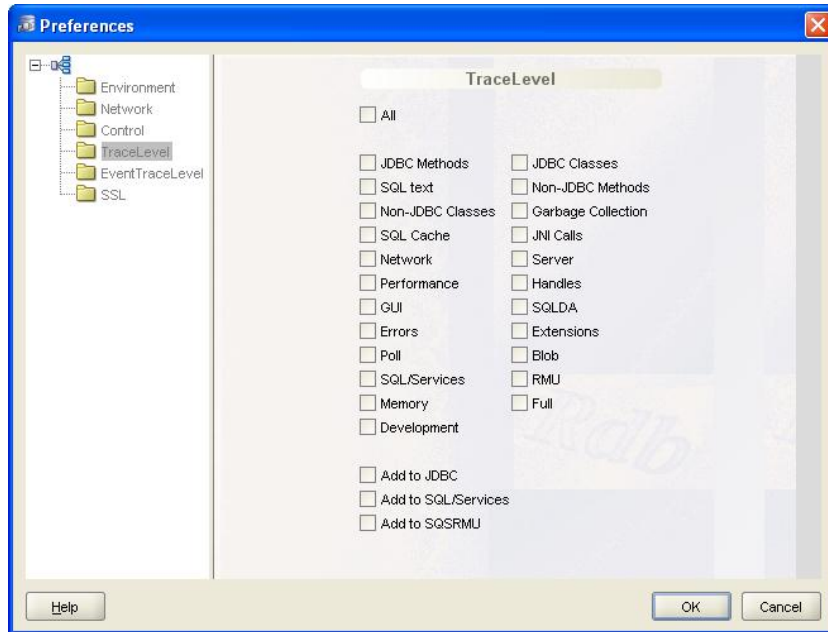
Enter the control user's password.

### **22.5.3 Verify**

Enter the control user's password again to verify it.

## **22.6 Trace Level Information**

Information about the trace flags set for ORCM.



**Figure 110 - Trace Level flags Panel**

The flags panel consists of a series of check boxes, each box representing the state of a particular trace level flag.

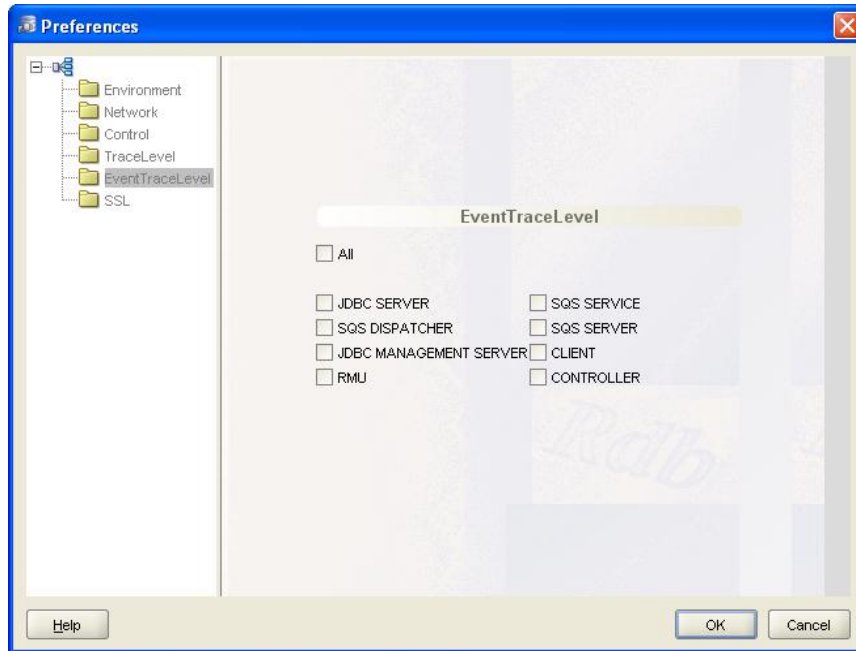
Click on a box to set or clear that flag.

Click on the *All* box to set or clear all flags.

See the *Oracle JDBC for Rdb User Guide* for information on how trace flags are used.

## 22.7 Event Trace level Information

Information about the ORCM event trace level configuration.



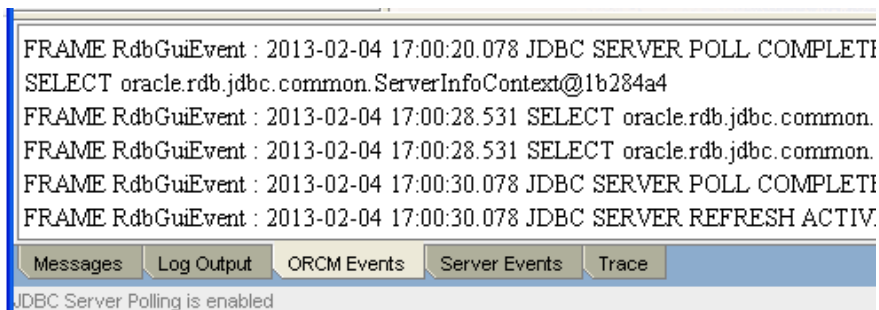
**Figure 111 - Event Trace Level Panel**

The flags panel consists of a series of check boxes, each box representing the state of a particular trace level flag.

Click on a box to set or clear that flag.

Click on the **All** box to set or clear all flags.

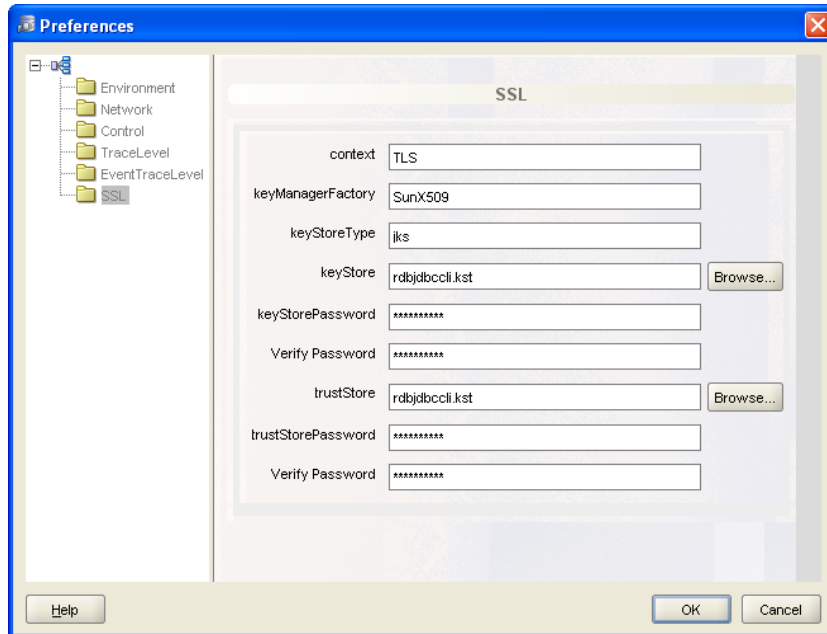
Enabling an event trace flag will allow events for that entity type to be displayed in the ORCM Events message display area on the ORCM Main panel.



**Figure 112 - ORCM Event Trace Level Panel**

## 22.8 SSL Information

Information about the ORCM SSL configuration.



**Figure 113 - SSL Panel**

The SSL Panel contains the SSL information that the ORCM session will use if it has to connect to a SSL enabled JDBC server.

The SSL panel consists of the following fields:

- [context](#)
- [keyManagerFactory](#)
- [keyStoreType](#)
- [keyStore](#)
- [keyStorePassword](#)
- [keyStorePassword verify](#)
- [trustStore](#)
- [trustStorePassword](#)
- [trustStorePassword verify](#)

### 22.8.1 context

Indicates the SSL context to use, for example "TLS".

This value is held as the `ssl.context` configuration setting within the **DEFAULT** session section of the XML-based server configuration file.

### 22.8.2 keyManagerFactory

Indicates the key manager factory to use, for example "SunX509".

This value is held as the `ssl.keyManagerFactory` configuration setting within the **DEFAULT** session section of the XML-based server configuration file.

### 22.8.3 keyStoreType

Indicates the type of the key store, for example "jks" .

This value is held as the `ssl.keyStoreType` configuration setting within the **DEFAULT** session section of the XML-based server configuration file.

### 22.8.4 keyStore

Indicates the filename of the keystore. You may use the associated **Browse** button to locate and select a keystore file on your system.

This value is held as the `ssl.keyStore` configuration setting within the **DEFAULT** session section of the XML-based server configuration file.

### 22.8.5 keyStorePassword

Indicates the password for the keystore.

This value is held as the `ssl.keyStorePassword` configuration setting within the **DEFAULT** session section of the XML-based server configuration file.

### 22.8.6 keyStorePassword Verify

Verify the keyStorePassword.

### 22.8.7 trustStore

Indicates the filename of the trust store. You may use the associated **Browse** button to locate and select a truststore file on your system.

This value is held as the `ssl.trustStore` configuration setting within the **DEFAULT** session section of the XML-based server configuration file.

### 22.8.8 trustStorePassword

Indicates the password of the trust store.

This value is held as the `ssl.trustStorePassword` configuration setting within the **DEFAULT** session section of the XML-based server configuration file.

### 22.8.9 trustStorePassword Verify

Verify the trustStorePassword.