

RedNMX MySql

Usage

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Introduction

This document describes in detail the usage of the MySQL Database with the RedNMX System. When using the document, any name that is denoted like the following should be replaced with the department specific name.

ie. <ServerName> would be replaced by HFDSERVER

System and Database Standards

This section describes in detail the standards for the database:

- RedNMX. This is the name of the database.
- RedNMXTraining. This is the name of the training database.
- 3306. This is the port that is required to be open for use across the internet.
- User name and password of the database needs to be entered in Chapter 1E.

Creating a Training Database

This section describes how to export the RedNMX and load the RedNMX Training Database.

1. Open MySQL Administrator. Enter the server name in the Host field. Login as ALPINE and enter the password found in Chapter 1E.
2. Click on **Backup** Icon.
3. Click New Project, name it **RedAlert**.
4. Highlight RedNMX.
5. Then click the > button. This might take a minute for the metadata to be fetched.
6. Click **Advanced Options** Tab. Then click **Complete Backup**.
7. Click the **Execute Backup Now** button and then choose a location to save the backup Sql file. Save it to the file name RedNMXYYYYMMDD.SQL where YYYYMMDD is the date.
8. Skip if this section if the RedNMX Training already exists. Now click the **Catalogs** icon in the list on the left. Right-click anywhere in the schema list and select **Create New Schema**. Name the training database RedNMXTraining
9. Now click the **Restore** Icon.
10. Click the **Open Backup File** and find the file you just saved.
11. **IMPORTANT.** Change the Target Schema to the **BACKUP** database in the lookup.
12. Check the **Ignore Errors** and **Create Database(s) if the don't exist** options.
13. Now click **Start Restore**.
14. Close the Administrator window.
15. Verify the training system has been setup.

Creating a New Database

This section describes how to create a new database.

1. Open MySQL Administrator. Enter the server name in the Host field. Login as ALPINE and enter the password found in Chapter 1E.
2. Click the **Catalogs** icon in the list on the left. Right-click anywhere in the schema list and select **Create New Schema**. Choose a name for your new database.

Checking if the database is running

This section describes how to check if the MySQL database is actually running.

1. First, try to start RedAlert. If the program starts, the database is running. If it is not running, you can use one of the following methods to check the status of the MySQL Server.

Method #1 - Check Service

1. If you are on the Database Server and have administrative rights, you can check the Service status to make sure MySQL is running.
2. Go to Start => Control Panel => Administrative Tools => Services. In the right panel, scroll down until you see the service named MySQL. It should state Started under Status and Automatic under Startup Type. If those are true, then MySQL is running.

Method #2 - Check System Tray Monitor

1. First, check to see if you have MySQL System Tray Monitor installed on that computer. Go to Start => All programs => MySQL. You should see MySQL System Tray Monitor as an option. If you do not see it listed, then you'll need to download it. See Downloading MySQL GUI Tools section below for instructions on downloading them.
2. If the program is there, click on it to start it. It will place the program icon in the system tray, usually located on the task bar near the time. Right click on the icon to get the status, which is located at the top of the menu that appears. It should state that MySQL - Running.

NOTE: If you are not sure which icon it is, you can hover over each icon with the mouse and a pop-up will show what program that icon is for.

Method #3 - Check with MySQL Administrator

1. First, check to see if you have MySQL Administrator installed on that computer. Go to Start => All programs => MySQL. You should see MySQL Administrator as an option. If you do not see it listed, then you'll need to download it. See Downloading MySQL GUI Tools section below for instructions on downloading them.
2. If the program is there, click on it to start it. Enter the server name in the Host field. Login as ALPINE and enter the password found in Chapter 1E.
3. When the main screen loads, it will show the Server Status at the top center portion of the right panel. If an error occurs after log in, double check the user name and password and retry. If you still cannot connect, the server is either not running, or the connection info is incorrect.

Upgrading the MySQL Work Station Driver

Several computers come with the MySQL ODBC driver already installed. The RedNMX System requires version 3.12. Follow these steps.

1. Go to the control panel
2. Add or Remove programs.
3. Highlight MyODBC. Press the Remove button.
4. Download InstallMySQL from Alpine

Downloading MySQL GUI Tools

This section describes how to download the MySQL GUI Tools if they are not on the computer already.

1. Go to <http://dev.mysql.com/downloads/gui-tools/5.0.html>.
2. Scroll down to Windows Downloads.
3. Select Pick a Mirror for the Windows (x86) option.
4. Scroll down below the survey to the *Mirrors in: United States* section.
5. Pick a location to download from (any will work) by clicking on either HTTP or FTP.
6. Select Save File when prompted and save it to a known location (desktop usually.)
7. Use the default setup options EXCEPT change the directory location from C:\Program Files\MYSQL\MySQL GUI Tools to C:\MYSQL\Tools. If you are on the computer with the database, The MySQL Installation may be in a location other than C:\MYSQL. Choose the same location at the MYSQLInstallation In a Tools Folder.

Backing Up MySQL Database

This section describes how to backup the MySQL Server. Your data is saved in a database software program called MySQL.

You cannot simply backup the MySQL installation folder to backup your data. This sometimes causes the database to crash!

Instead, we utilize the tools that MySQL provides to create a backup file that can then be copied/backed up using whatever tools you are comfortable using.

1. Open MySQL Administrator. Enter the server name in the Host field. Login as ALPINE and enter the password found in Chapter 1E.
2. Go to the **Backup** section from the left panel.
3. Press the **New Project** button at the bottom to create a new project.
4. Enter the name you want to use for the backup in the **Project Name** box.
5. Under the **Schemata** section, choose the database you want to back up and press the **right arrow** to move it into the Backup Content.
6. Once it loads the database into the project, press **Execute Backup Now** to run the backup.
7. In the **Save As** box, browse to the location you want to save the backup as and press **Save**.

If you want to schedule the backup to run, follow these additional steps.

1. Once your initial backup is run, go to the **Schedule** tab at the top of the page.
2. Check the **Schedule this Backup Project** checkbox.
3. Select the **Target Folder** where you want the backups to be saved.
4. Select the name you want to use for the backup filename. NOTE: the file name will be appended with the date that the backup runs.
5. Select how often the backup runs in the **Execute Time** area at the bottom of that screen.
6. Now go back to the **Backup Project** tab and save the backup by going to **Save Project**. You will be prompted for a Username and Password for an account to run the backup under. This should be an administrator account.
7. Your backup is now scheduled to run. It will run at the time you requested.

Downloading and Installing the MySQL Server

This section describes how to download the MySQL GUI Tools if they are not on the computer already.

Downloading

1. Go to <http://dev.mysql.com/downloads/mysql/5.0.html#downloads>
2. Scroll down to Windows Downloads.
3. Select Pick a Mirror for the Windows (x86) Zip/Setup.EXE option.
4. Scroll down below the survey to the *Mirrors in: United States* section.
5. Pick a location to download from (any will work) by clicking on either HTTP or FTP.
6. Select Save File when prompted and save it to a known location (desktop usually.)

Installing and configuring the MySQL Server. Before you begin, make sure that windows firewall is disabled, or allows port 3306 for the MySQL Instance. If this port is not open, then the MySQL Instance configuration cannot complete properly.

7. Unzip the file you downloaded then select and run the Setup.exe.
8. Select Custom Installation and press Next.
9. Select the **Change** button and change the directory location from C:\Program Files\MYSQL\ to <drive>:\MYSQL\ where <drive> is the drive where the installation should be placed. Press OK then press **Next**.
10. You should now have a button labeled **Install**. When asked if you want to configure the instance, check the box for yes and press **Next**.
11. Select **Detailed Configuration** and press **Next**.
12. Press **Next** for the next 5 screens until the screen with the port select comes up.
13. If you are setting up a mobile, or a server that requires a different port, select the new port here (usually 3307 for Mobile) Make sure to log the updated port to Chapter 1E. When you are done, or if you do not need a special port, press **Next**.
14. Press **Next** on the following screen.
15. Check the option to include the **BIN Directory in the Windows PATH** and press **Next**.
16. Enter the Root Password from Chapter 1E if there is one, or make a new root password. If a new root password is chosen, make sure to update Chapter 1E to reflect this new password. Check the option **Enable Root Access from Remote Machines**. Press Next.
17. Press **Execute**. If it does not succeed the first time, check that the port you chose is open on any firewalls on that machine, and select execute again.

The MySQL Server is now installed. Next you need to setup the ALPINE User and create the databases.

18. Go to Start => All Programs => MySQL => MySQL Server 5.0 => MySQL Command Line Client.
19. Enter the root password and press enter.
20. Enter the following commands in, pressing enter after each line. Make sure to change <password> to the Chapter 1E ALPINE password, or create a new one and update Chapter 1E with the new password.

```
USE mysql;
DELETE FROM mysql.user WHERE User = " OR Host = '%';
DELETE FROM mysql.db WHERE User = " ;
FLUSH PRIVILEGES;
GRANT ALL PRIVILEGES ON *.* TO ALPINE@'%' IDENTIFIED BY '<password>';
GRANT ALL PRIVILEGES ON *.* TO ALPINE@'localhost' IDENTIFIED BY '<password>';
GRANT ALL PRIVILEGES ON *.* TO alpine@'%' IDENTIFIED BY '<password>';
GRANT ALL PRIVILEGES ON *.* TO alpine@'localhost' IDENTIFIED BY '<password>';
FLUSH PRIVILEGES;
CREATE DATABASE RedNMX;
QUIT;
```

21. Create the directory structure for the RedNMX system. This structure is as follows:

<drive> (this is the drive path where the system will be installed)

```
|– RedNMX
   |– Install
   |– Tools
   |– Update
   |– Temp
```

22. Share the base RedNMX directory by right clicking on it and selecting Sharing and Security. Select Share this Folder and then go to Permission. With Everyone selected, check full control and press ok. Press OK to save settings.
23. If a domain is in use, then go to the Security Tab and add the Users group to the groups tab, then check off Read, Read & Execute, and List Folders then press OK.
24. Download InstallMySQL.exe, InstallMapping.exe, and InstallRedNMX.exe from www.AlpineSoftware.com/download to the RedNMX\Install folder.
25. Run the InstallMySQL.exe to install the MySQL Driver. Use the default values if prompted.
26. Run the InstallRedNMX.exe to install the RedNMX Support Files. Use the default values if prompted.
27. If the system is to have or has mapping, run the InstallMapping.exe. Use the default values if prompted.

The installation is now complete. An update will need to be run to add the tables and views to the database before it can be used.

Migrating a MySQL Database to a New Server

This section describes how to migrate the MySQL Database from one server to another. This would be used when a new server is purchased for example.

1. Make sure that the MySQL Administrator is on both the old server and the new server. We will be using the MySQL Administrator, which is part of the MySQL GUI Tools, to migrate the database. If it is not on either of the computers, follow the steps in Downloading the MySQL GUI Tools.
2. On the New Server, install the MySQL Server by following the Instructions from the Downloading and Installing the MySQL Server section.
3. Next, on the old server, open up MySQL Administrator and follow the instructions for backing up a database in the Backing Up a MySQL Database section. Complete this for each database you want on the new server. Save the files to a known location so you can access them in the next step.
4. Copy the backup file(s) to the new server and put them in the Temp folder.
5. Copy the contents of the Install, Tools and Update directories from the Old Server into the corresponding directory of the New Server. Also copy over any folder that was not created originally to the same location on the new server. (ie. MCI, etc.)
6. On the New Server, open up MySQL Administrator and go to the Restore option.
7. Select Open Backup and navigate to the location where you saved the backup on the new server and press OK. Make sure Original Schema is selected, and the options Ignore Errors and Create Database(s) if they don't exist are checked.
8. Press Start Restore to import the database.
9. If you have more than one database to restore, repeat steps 7-9 for each Database.
10. Next you'll need to change the shortcuts for the system so they point at the new server. This is necessary if the New Server will be using a different name than the old server. If the New Server is going to be renamed to the name of the old server, then the following step is not necessary.
11. For each shortcut in the system, You need to replace the name of the old server with the new server. Right click on the shortcut and go to properties. In the Target box, locate the 2 to 3 instances of the old server name and replace them with the New Server name. The Shortcut will usually look like the following:

```
\\<ServerName>\RedNMX\Update\RedAlertProgramLauncher.exe  
\\<ServerName>\RedNMX\Update\RedNMX.exe C:\RedNMX\RedNMX.exe <ServerName>:RedNMX MYSQL
```

12. You should now be able to test the system by clicking on the shortcut. The program should run as normal. If you have a client across a wide area network, you may have to open up the MySQL port 3306 for the New Server before those clients can be used.
13. Once you have the RedAlert program working with the New Server, you'll need to disable the old server. If the old server was just used for the RedAlert Program, then you can shut the MySQL Service down by going to:
Start => Control Panel => Administrative Tools => Services
Select the MySQL Service from the list and right click on it and select properties from the menu.
14. Change the Startup Type to Disabled and make sure to press Stop to stop the service. Then press Apply followed by OK. This will then disable the MySQL Server on that system.
15. Verify with Alpine Software if there are any other custom programs that need to be copied to the new server.
16. If other programs use databases on the MySQL server, then you will need to disable just the RedAlert databases. You can do this by changing either the ALPINE password, or renaming the database to something else (adding '_old' to the name is the recommended convention.) Both of these functions can be done by using MySQL Administrator with the root password.

The Migration of the Old Server to the New Server is now complete.

Migrating from MySQL 4.x to MySQL 5.x

This section describes how to migrate the MySQL Database from MySQL 4.x to MySQL 5.x.

NOTE 1: This assumes that RedAlert is the only program using this database. If you have other programs accessing databases on this MySQL server, you will need to consult the vendor for each program to get instructions on migrating their software as well.

NOTE 2: This only works for MySQL 4.x and higher. If you have a previous version, special instructions will be needed.

1. Make sure that the MySQL Administrator is on the server. We will be using the MySQL Administrator, which is part of the MySQL GUI Tools, to migrate the database. If it is not on the computers, follow the steps in Downloading the MySQL GUI Tools.

Backing up and removing MySQL 4.x

2. On the server, open up MySQL Administrator and follow the instructions for backing up a database in the Backing Up a MySQL Database section. Complete this for each database you want on the new server. Save the files to a known location so you can access them in the next step.
3. Copy the backup file(s) to a known location outside of the MySQL directory.
4. Copy the **MySQL\Data** Directory to the same folder as step 4.
5. Remove the MySQL 4.x Server by going to **Start => Control Panel => Add/Remove Programs** and selecting MySQL 4.x
6. Delete the my.ini file from the Windows\System32 directory.

Installing and restoring databases on MySQL 5.x

7. On the Server, install the MySQL Server by following the Instructions from the Downloading and Installing the MySQL Server section.
8. Open up MySQL Administrator and go to the Restore option.
9. Select Open Backup and navigate to the location where you saved the backup on the new server and press OK. Make sure Original Schema is selected, and the options Ignore Errors and Create Database(s) if they don't exist are checked.
10. Press Start Restore to import the database.
11. If you have more than one database to restore, repeat steps 7-9 for each Database.
12. You should now be able to run the program. If you did not change the password, then the old shortcuts should work. Test one to verify that it does.

The Migration from MySQL 4.x to 5.x is now complete.

Reference: <http://dev.mysql.com/doc/refman/5.0/en/upgrade.html>