

MySQL Install on OpenSolaris

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For this tutorial, I installed Open Solaris on a Virtual Box machine. VirtualBox is free open source software which can be obtained at <http://www.virtualbox.org/>, Open Solaris is also free open source software and can be obtained from <http://opensolaris.org/os/>.

I'm not going to go through how to install Open Solaris on VirtualBox, but I will say it is fairly simple. Just boot the live OpenSolaris CD and select Install.

Under open solaris, I created a non root account. This account's user was called "solaris" but any non-root account name will do.

Preparation

To get started, first, download a copy of mysql from <http://www.mysql.com/> for solaris. This will give you a *.pkg.gz file.

Extract the pkg file from the gzip file either using gunzip or right clicking and select "Extract Here".

```
solaris@opensolaris:~/Desktop$ gunzip mysql-5.1.34-solaris10-i386.pkg.gz
solaris@opensolaris:~/Desktop$ ls
```

Move the resultant .pkg file to /var/tmp. This directory is the temporary directory set up under solaris.

```
solaris@opensolaris:~/Desktop$ mv *.pkg /var/tmp
solaris@opensolaris:~/Desktop$
```

Note : Normally with a solaris install, you need to create the mysql user. The command to do this is :

```
groupadd mysql
useradd -g mysql mysql
```

This isn't required for OpenSolaris as the mysql user is already created.

Change to the root user using the su command

```
solaris@opensolaris:/var/tmp$ su -
Password:
Sun Microsystems Inc.      SunOS 5.11   snv_101b   November 2008
You have new mail.
root@opensolaris:~#
```

Change to the /var/tmp directory.

Install MySQL

Now to perform the install. Use the pkgadd command from the command line to kick off the install.

```
root@opensolaris:/var/tmp# pkgadd -d mysql-5.1.34-solaris10-i386.pkg
The following packages are available:
 1 mysql   MySQL Community Server (GPL)
           (i86pc) 5.1.34

Select package(s) you wish to process (or 'all' to process
all packages). (default: all) [?,??,q]:
```

Follow the prompts, I selected the defaults.

Finally, MySQL will be installed to the /opt/MySQL/MySQL directory.

You will then finally get the following entry

```
PLEASE REMEMBER TO SET A PASSWORD FOR THE MySQL root USER !
To do so, start the server, then issue the following commands:
```

```
/opt/mysql/mysql/bin/mysqladmin -u root password 'new-password'
/opt/mysql/mysql/bin/mysqladmin -u root -h opensolaris password 'new-password'
```

Alternatively you can run:

```
/opt/mysql/mysql/bin/mysql_secure_installation
```

which will also give you the option of removing the test databases and anonymous user created by default. This is strongly recommended for production servers.

See the manual for more instructions.

Please report any problems with the /opt/mysql/mysql/scripts/mysqlbug script!

The latest information about MySQL is available at <http://www.mysql.com/>
Support MySQL by buying support/licenses from <http://shop.mysql.com/>

Before we start the secure installation, we need to start the MySQL daemon.

Go to /etc/init.d and execute “mysql start” this is the method used to manually start mysql.

If you wish to have mysql start up as a service every time the system re-boots, you need to add it to the services.

To do this, go to the /etc/init.d directory and execute

```
svcadm enable mysql
```

```
root@opensolaris:/etc/init.d# svcadm enable mysql
root@opensolaris:/etc/init.d# ps -ef | grep mysql
mysql 1126  1  1 08:18:33 ?        0:00 /usr/mysql/5.0/bin/mysqld --user=mysql
```

```
--datadir=/var/mysql/5.0/data --pid-file
```

As you can see from the `ps -ef` command, mysql has started.

Secure the MySQL Installation

Execute the `/opt/mysql/mysql/bin/mysql_secure_installation`

```
root@opensolaris:/var/tmp# /opt/mysql/mysql/bin/mysql_secure_installation
```

NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MySQL SERVERS IN PRODUCTION USE! PLEASE READ EACH STEP CAREFULLY!

In order to log into MySQL to secure it, we'll need the current password for the root user. If you've just installed MySQL, and you haven't set the root password yet, the password will be blank, so you should just press enter here.

Enter current password for root (enter for none):

Enter a password for root. By default, there is no password for root, so just press "ENTER".

Answer "Y" to set the root password. Its good practice to have a root password set up. Enter the new root password.

```
Set root password? [Y/n] Y
New password:
Re-enter new password:
Password updated successfully!
Reloading privilege tables..
... Success!
```

Answer Y or N to remove Anonymous users.

By default, a MySQL installation has an anonymous user, allowing anyone to log into MySQL without having to have a user account created for them. This is intended only for testing, and to make the installation go a bit smoother. You should remove them before moving into a production environment.

Remove anonymous users? [Y/n]

If you wish to access mysql from a remote system as the root user, answer N to the following question. This tutorial will go through how to allow users other than root access to mysql from remote systems.

Normally, root should only be allowed to connect from 'localhost'. This ensures that someone cannot guess at the root password from the network.

Disallow root login remotely? [Y/n]

Select Y or N to remove the test database from the installation.

By default, MySQL comes with a database named 'test' that anyone can access. This is also intended only for testing, and should be removed before moving into a production environment.

Remove test database and access to it? [Y/n]

Select Y or N to have privilege tables changes just made to take effect immediately.

Reloading the privilege tables will ensure that all changes made so far will take effect immediately.

Reload privilege tables now? [Y/n]

Now to test mysql, type in `mysql` at the command prompt. You should connect. Once connected, type in `quite` to return to the unix command prompt.

```
solaris@opensolaris:~$ mysql
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 9
Server version: 5.0.67 Source distribution

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> quit
Bye
solaris@opensolaris:~$
```

If you have disabled anonymous access, you will see the following message

```
solaris@opensolaris:/etc# mysql
ERROR 1045 (28000): Access denied for user 'root'@'localhost' (using password: NO)
solaris@opensolaris:/etc#
```

To log into mysql, you need to specify the username and password. Since we havne't created any users yet, we only have root.

Log in with the `--user` and `--password` options.

```
solaris@opensolaris:/etc# mysql --user="root" --password
Enter password:
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 8
```

```
Server version: 5.0.67 Source distribution
```

```
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.
```

```
mysql>
```

Create a new User

Before we can use MySQL remotely (unless you have given root access remotely) we need to create a user.

To create the user, we use the CREATE USER command from the MySQL prompt. Once the user is created, we need to give it permissions. This is done through the GRANT command.

```
mysql> CREATE USER 'mysql'@'localhost' IDENTIFIED BY 'mysql';  
Query OK, 0 rows affected (1.82 sec)
```

```
mysql> GRANT ALL ON *.* TO 'mysql'@'localhost';  
Query OK, 0 rows affected (0.01 sec)
```

```
mysql>
```

Notice that we used 'localhost' as the hostname. We have bound the user “mysql” to the localhost. This isn't what we wanted exactly, we want to be able to access mysql from a remote system. In order to do that, we could have used the host name “%” which is a wild card instead of “localhost”.

If you have already typed in the above command, then you can change the privileges for the user from “localhost” to “%” using the GRANT command again.

```
mysql> CREATE USER 'mysql'@'localhost' IDENTIFIED BY 'mysql';  
Query OK, 0 rows affected (1.82 sec)
```

```
mysql> GRANT ALL ON *.* TO 'mysql'@'localhost';  
Query OK, 0 rows affected (0.01 sec)
```

```
mysql>
```

This completes the basic implementation of MySQL on solaris. You will now be able to connect to the MySQL database with any other tools from a remote system to administer. The following is a quick tutorial to test your connection with Netbeans.

Login To MySQL Through Netbeans

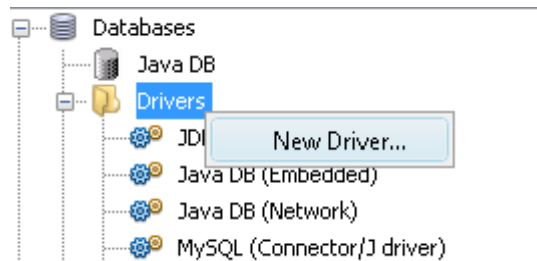
Before we go into netbeans, download the MySQL Java Connector from <http://dev.mysql.com/downloads/> and place it in a directory under Netbeans.

For those using Java CAPS 6/U1 you already have a version of the driver available under \JavaCAPS6U1\netbeans\ide9\modules\ext called “mysql-connector-java-5.1.5-bin.jar”. This will do fine for the connection test.

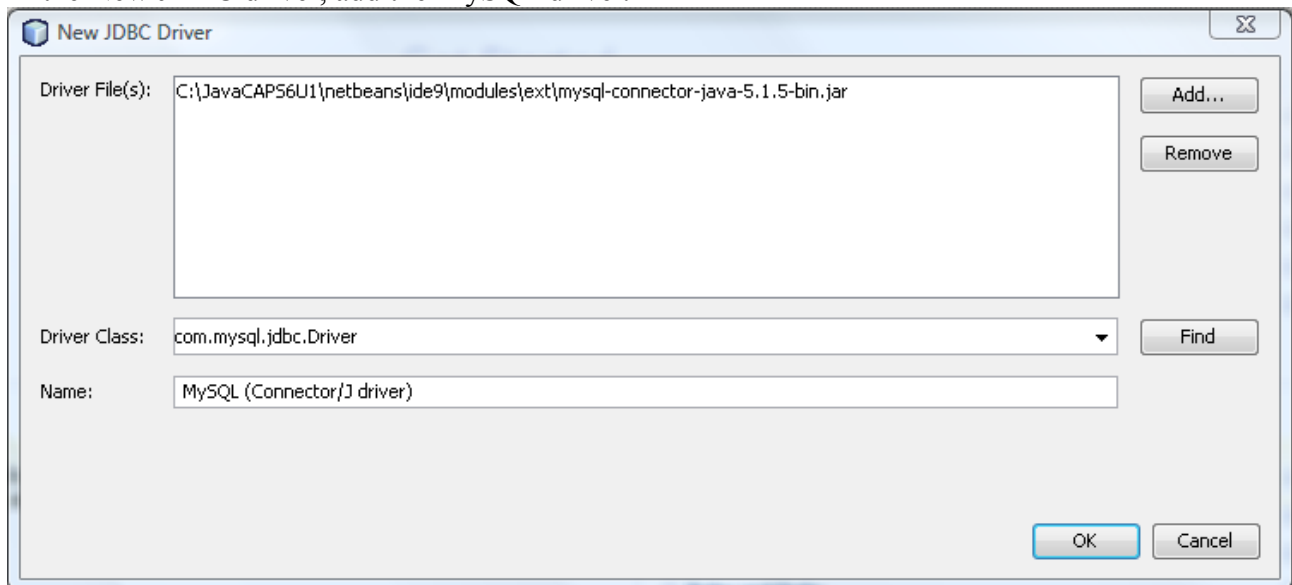
To check if your mysql install has worked fine, log into Netbeans from a remote system.

Select the “Services” tab.

Expand out Databases and Right click on “Drivers”
Select “New Driver”

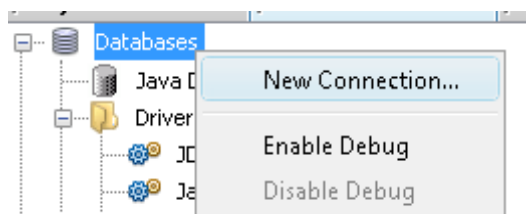


In the New JDBC driver, add the MySQL driver.



Then click OK.

Right click on “Database“ and select “New Connection...”.



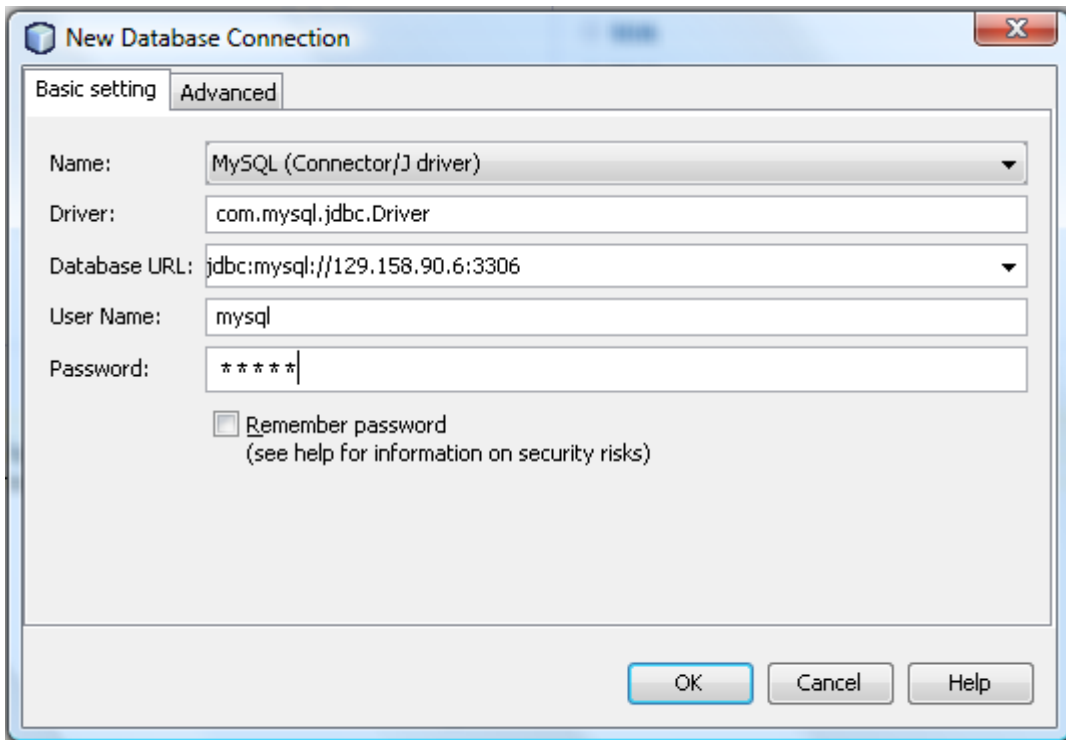
In the dialog box, enter the details for the connection to the MySQL server.

An example is

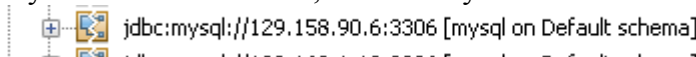
Driver : com.mysql.jdbc.Driver

Database URL : jdbc:mysql://129.158.90.6:3306

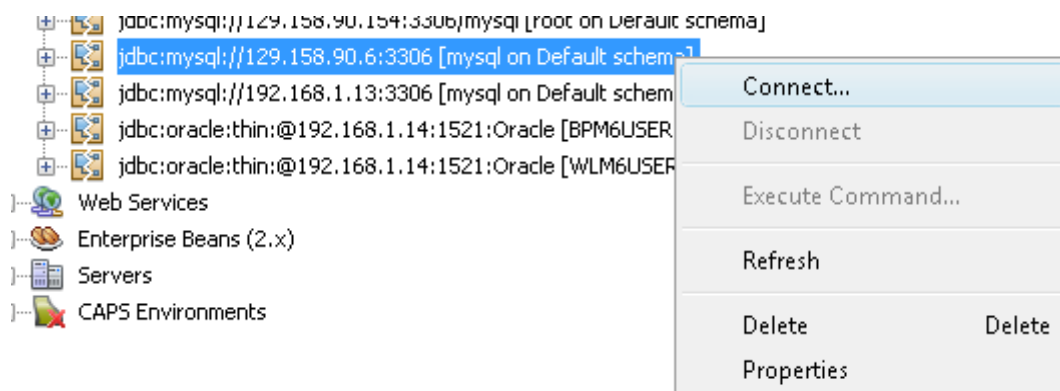
Click Ok



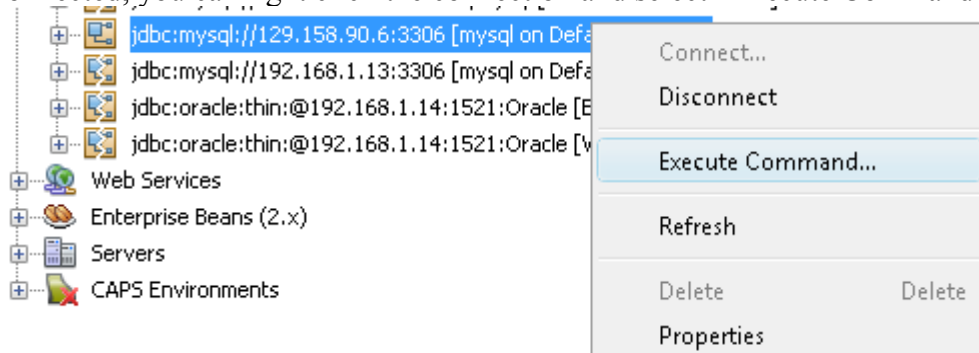
After connectivity has been established, a new entry in the database list will be found.



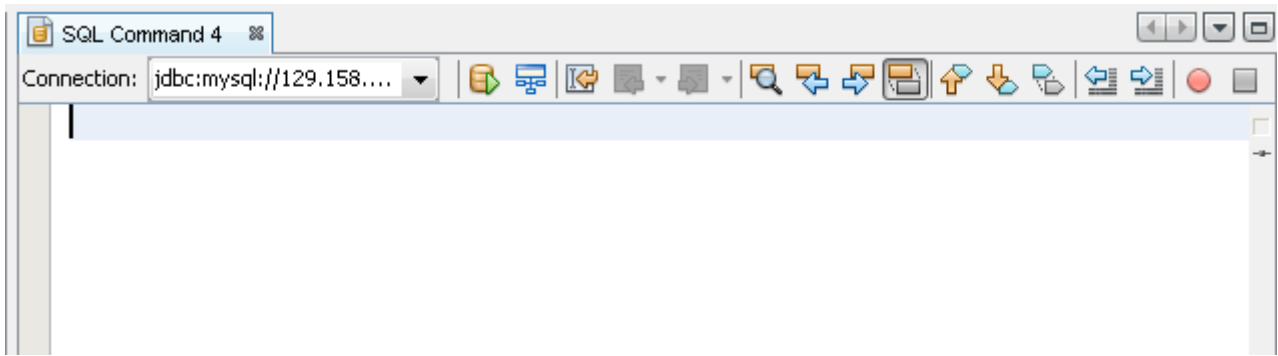
Right click this entry and select “Connect”



Once Connected, you can right click the connection and select “Execute Command”

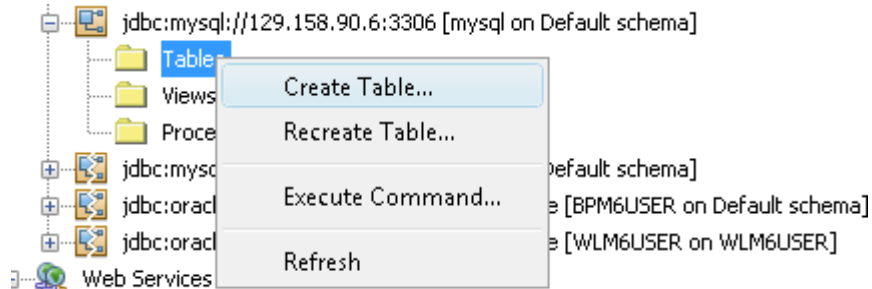


This will bring up a window to execute SQL commands to the database.

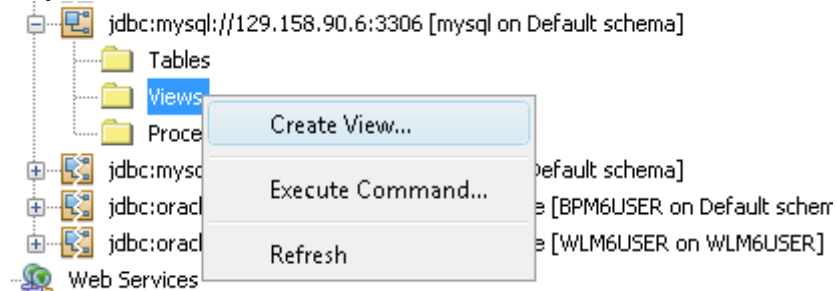


If you click on the [+] on the connection, you will see 3 folders for Table, Views and Procedures.

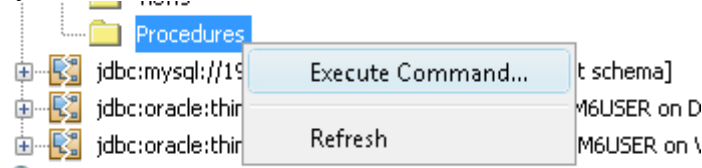
Right Click, Table and you have the options to Create a table, Re-create a table, or execute a SQL command on that table.



Similarly with View you have Create View and Execute Command.



Finally with Procedure, you have "Execute Command".



Going through how to use MySQL is beyond the scope of this tutorial, but it does give the basics of how to set up a MySQL database on Solaris and connect to it from an external system.

References

MySQL Solaris Install

<http://dev.mysql.com/doc/refman/5.0/en/solaris-installation.html>

Adding Users

<http://dev.mysql.com/doc/refman/5.1/en/adding-users.html>

Granting Privileges

<http://forums.mysql.com/read.php?108,62926,114663#msg-114663>

Creating Users From the Command Line

<http://crunchbang.org/archives/2008/04/17/create-mysql-user-accounts-from-the-command-line/>

Solaris Service Startup/Runtime

<http://opensolaris.org/os/project/smf-doc/smf-dev/smf-book.html#lifecycle-runtime>