

MySQL 5.x on QNX Neutrino 6.4.0 OS

Step-by-step installation manual

1. User and Group settings for MySQL 5.x

First of all, we have to create a new GROUP in Photon. On the right side menu (Shelf) select the "Users" icon
push "Advanced" button
Select "Groups" tab
push "New Group" button
write into "Group Name" field: mysql
Apply/Done

Create a new USER mysql
Select "Users" tab
push "New User" button
write into "Full Name" field: mysql
write into "Login ID" field: mysql
write into "Home Directory" field: mysql
select from "Group" list: mysql
select the checkbox "Prevent this user from logging in."
Apply/Done
Done
Done

2. Setup environment

Setup PATH, environment variables:

/etc/profile :

```
PATH= ./usr/kg/bin:/usr/pkg/sbin
```

/etc/rc.d/rc.local :

```
setconf CS_LIBPATH $(getconf CS_LIBPATH):/usr/pkg/lib
```

3. Setup TCP/IP network

Setup the TCP/IP network with fixed IP address, like 192.168.1.121

Do not use "localhost" for host name. Use a different name like "host121" !!!

If you forgot it to modify and leave the name localhost then you will fail to login properly into mysql system.

The full QNX OS + MySQL reinstall could give a help only, due to many distributed files on disk !!!

Now restart the QNX machine and boot into Photon graphical environment again.

Test the proper internet connection by web browser from QNX.

4. Download PKGSRC project

<http://community.qnx.com/sf/wiki/do/viewPage/projects.pkgsrc/wiki/Bootstrap>

Open a terminal window.
cd /
Check the current directory name by
pwd
You have to see it:
/
(if not / - then enter this command: cd /)

a. Download pkgsrc project:

To get pkgsrc, write this line into a single line:

svn checkout --username <username> http://community.qnx.com/svn/repos/pkgsrc/HEAD_640
(username is your registered email address)

////////////////////////////////////
(or <ftp://ftp.netbsd.org/pub/pkgsrc/current/pkgsrc.tar.bz2>
and unpack it:
bzipcat pkgsrc.tar.bz2 | tar xfv)

Pkgsrc documentation:
file:///HEAD_640/pkgsrc/doc/pkgsrc.html
file:///HEAD_640/pkgsrc/doc/pkgsrc.html#developers-guide
Alternatively, you can also import new packages into pkgsrc-wip (pkgsrc work-in-progress);
see the homepage at <http://pkgsrc-wip.sourceforge.net/>

Fault report to pkgsrc developers:
Next, generate an uuencoded gzipped archive that contains all files that make up the package.
Finally, send this package to the pkgsrc bug tracking system:
<http://www.NetBSD.org/support/send-pr.html>
In the form of the problem report, the category should be pkg, the synopsis should include the package name and version number, and the description field should contain a short description of your package
(contents of the COMMENT variable or DESCR file are OK).
The uuencoded package data should go into the "fix" field.

Porting pkgsrc into a new OS:
file:///HEAD_640/pkgsrc/doc/pkgsrc.html#developers-guide
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b. Bootstrapping pkgsrc project:

<http://community.qnx.com/sf/wiki/do/viewPage/projects.pkgsrc/wiki/Bootstrap>

Bootstrap the pkgsrc source (as root user) with ./bootstrap/bootstrap :
cd /HEAD_640/pkgsrc/bootstrap
./bootstrap
(it takes to finish around 35mins.)

5. Compile & Link and Install MySQL 5.x

```
# cd /HEAD_640/pkgsrc  
# (cd databases/mysql5-server && bmake install)  
(it is a quite long process..)
```

6. Create the starter scripts for insertion of Apache start's at Neutrino OS boot

Now we creating the starter scripts into folder: "/etc/rc.d"

Copy "mysqld" (and any other daemon's starter scripts like "apache")

From:

/usr/pkg/share/examples/rc.d

To:

/etc/rc.d

```
# cp /usr/pkg/share/examples/rc.d/mysqld /etc/rc.d
```

Include this line(s) into /etc/rc.d/rc.local file:

```
/etc/rc.d/mysqld
```

Caution: the "rc.local" file should NOT contains any of CR/LF pairs at line ends !!! Only LF permitted. Otherwise the script able to do a very strange behaviour and malfunctions.

7. Test and check for errors

You can try to start MySQL by hand:

```
# cd /etc/rc.d
```

```
# mysqld
```

Starting MySQL (you have to see this message from MySQL)

In case of any fault, see the error log file in folder:

```
"/var/mysql"
```

Start with "mysqld" manually, from a terminal window:

```
/etc/rc.d/mysqld
```

Test mysql connection from a second terminal window:

```
# mysql -u root
```

```
>mysql
```

8. Create dynamic .so modules and for using other features

Create the dynamic *.so modules:

```
# cd /HEAD_640/pkgsrc/databases/mysql5-server/work/mysql5.x.xx
```

```
# ./configure --enable-so
```

```
# cd /HEAD_640/pkgsrc
```

```
# (cd databases/mysql5-server && /usr/pkg/bin/bmake install)
```

To get information about more features, how to use the configure script:

```
# ./configure --help
```

9. Config file of MySQL 5.x

Copy /usr/pkg/share/examples/mysql/my-large.cnf file to /etc/my.cnf

Edit this config file according to the MySQL help descriptions:

```
/etc/my.cnf
```

Important contents of MySQL 5.x config file: /etc/my.cnf, sample configuration:

```
# The following options will be passed to all MySQL clients
[client]
port          = 3306
socket        = /tmp/mysql.sock
host = host121
```

```
# The MySQL server
[mysqld]
port          = 3306
socket        = /tmp/mysql.sock
```

10. Restart with QNX6.4.0 OS

Now you will have to see the "Starting MySQL" message during boot-up.

11. Fault finding and test – in case of different problems

Getting back debug messages:

```
./configure --with-debug
# cd /HEAD_640/pkgsrc
# (cd databases/mysql5-server && /usr/pkg/bin/bmake install)
```

Lost root password, recovery process:

Create a text file first and place the following statements in it.
Replace the password with the password that you want to use.

```
UPDATE mysql.user SET Password=PASSWORD('MyNewPass') WHERE User='root'; FLUSH PRIVILEGES;
```

The UPDATE and FLUSH statements each must be written on a single line.

The UPDATE statement resets the password for all existing root accounts, and the FLUSH statement tells the server to reload the grant tables into memory.

Save the file. For this example, the file will be named /home/me/mysql-init.
The file contains the password, so it should not be saved where it can be read by other users.

Start the MySQL server with the special --init-file option:

```
# mysqld_safe --init-file=/home/me/mysql-init &
```

The server executes the contents of the file named by the --init-file option at startup, changing each root account password.

After the server has started successfully, delete /home/me/mysql-init.

You should now be able to connect to MySQL as root using the new password.

Alternatively, on any platform, you can set the new password using the mysql client (but this approach is less secure):

Stop mysqld and restart it with the --skip-grant-tables option.

Connect to the mysqld server with this command:

```
# mysql
```

Issue the following statements in the mysql client.

Replace the password with the password that you want to use.

```
mysql> UPDATE mysql.user SET Password=PASSWORD('MyNewPass')
-> WHERE User='root';
mysql> FLUSH PRIVILEGES;
```

You should now be able to connect to MySQL as root using the new password.

In any case of problem you can send email to us.

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