

MySQL and Spk

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Introduction

MySQL is a relational database management system that is available under an open source GPL license when included as a part of an application that also bears an open source license. Because Spk is distributed as open source, this powerful tool can be distributed as part of Spk at no cost to users.

Spk requires the ability to make updates to the database as *atomic transactions*. This feature was first available in Version 4 of MySQL. An Spk installation should, therefore, install MySQL Version 4.0 or later.

This document describes how to install, configure, and manage MySQL as part of Spk.

Installing MySQL

The following installation instructions are specific to RPFK and RedHat Enterprise Linux version 3 (RHEL).

Installing the Software

The preferred way to install software in an RHEL system is with packages assembled for installation using the **rpm** command (Redhat Package Manager). Files for **rpm**, which can be identified by the **.rpm** filename suffix, are available for MySQL at the MySQL¹ web site. The needed files, however, have already been downloaded, and are available on `whitechuck.rfpk.washington.edu`.

In a terminal window:

```
cd /tmp
scp whitechuck:/opt/download/mysql.tar .
tar xvf mysql.tar
su
cd mysql
rpm -Uhv *
rm -rf mysql.tar mysql
```

After the set of command listed above have been executed, MySQL should be installed on your machine and the MySQL server should be running. Furthermore, the server will start automatically each time that you boot your machine.

Adding the Root User

As the first step toward using your MySQL database, you must provide the MySQL root user with a password. The MySQL root user is not the same as the Linux root user, and should have a different password, because these two users have different roles and responsibilities.

In the following, assume that the password is *secret-code*. Be certain, however, that you do not actually use *secret-code* as your password, but rather provide a string of alphabetic characters, digits, and special characters that is very difficult to guess.

From a terminal window:

```
su
/usr/bin/mysqladmin -u root password secret-code
/usr/bin/mysqladmin -u root -h $HOSTNAME password secret-code
```

Creating the Databases

In this step we will create two database, *spkdb* and *spktest*. These databases will have exactly the same structure. For now, we will create them empty:

```
mysql -uroot -p
use mysql;
create database spkdb;
create database spktest;
quit;
```

Adding the Test User

For testing of software, we need a user with access rights to the *spktest* database.

```
mysql -u root -p
grant all on spktest.* to tester@localhost;
quit;
```

Notes

1. <http://www.mysql.com/>