Chapter 5

Installing and Configuring the MySQL Server
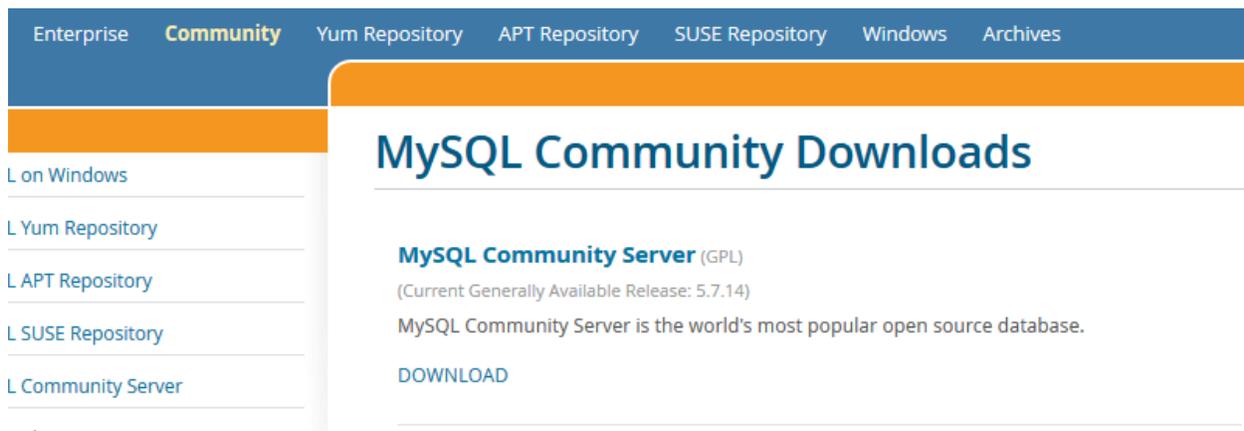
Summary: This tutorial covers basic installation of MySQL on Windows and OS X/macOS.

What you will learn
1. How to download and install MySQL on a Windows computer.
2. How to download and install MySQL on Mac OSX.

MySQL Installation on a Windows computer

Go to MYSQL.com, then navigate to Downloads and choose the Community tab.

Click on the Download link. On the next page, scroll down to find the MySQL Installer option.

The installer is generally the best option for a new installation on Windows. For most installations, it provides a trouble-free experience. We'll walk through the installation using the Installer.

The first step, is to download the file labelled Windows (x86 32-bit),MySQL Installer MSI. To begin, click the Download button. This will take you to the Download MySQL Installer page. Scroll down the page until you see the two download options.

The first option will download a small installer file that will then download MySQL components as part of the installation process. The second option will download all of the required files, so the installation will proceed from your hard drive rather than having to access the Internet. Beyond this difference, the installation processes mirror each other.

Let's walk through the first option. Click to download the 1.6b Mb file. On the next page, you will be prompted for an Oracle account. If you wish to set one up, you can. Otherwise, you can bypass the account step by click on No thanks, just start my download. We will assume you are doing the latter. When you do so, you'll be given the opportunity to either Run or Save the installer. We're going to run it, which means it will be downloaded to your default downloads file, and then Windows will run it, though you may have to tell Windows it's OK to run the program and/or have it make changes to your computer. Go ahead through these steps, and you will be presented with the standard screen to agree to license terms and conditions. You may wish to read the terms and conditions prior to agreeing to them. MySQL is an open source application, and the license terms affirm this.
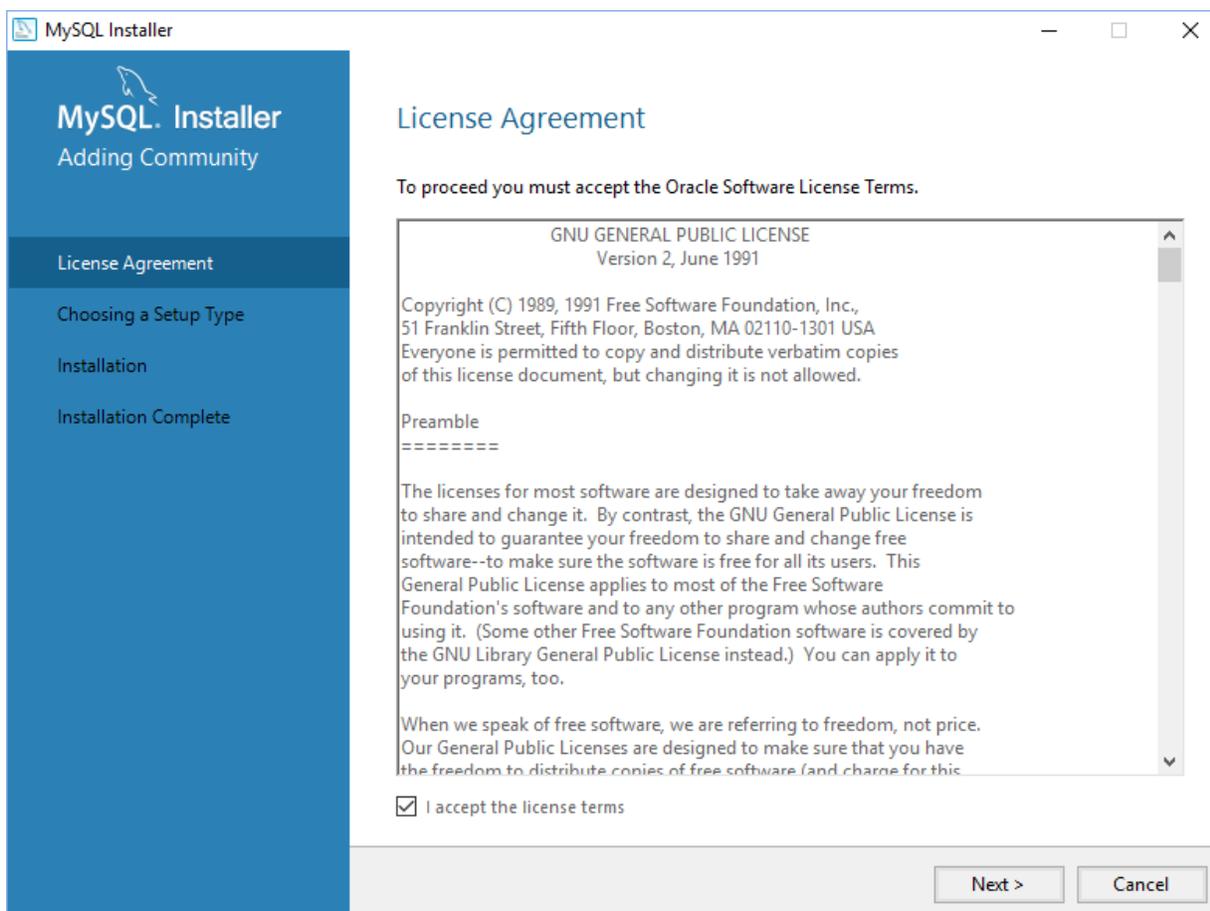
When you are satisfied you can agree to the conditions, click Next to bring up this dialogue.
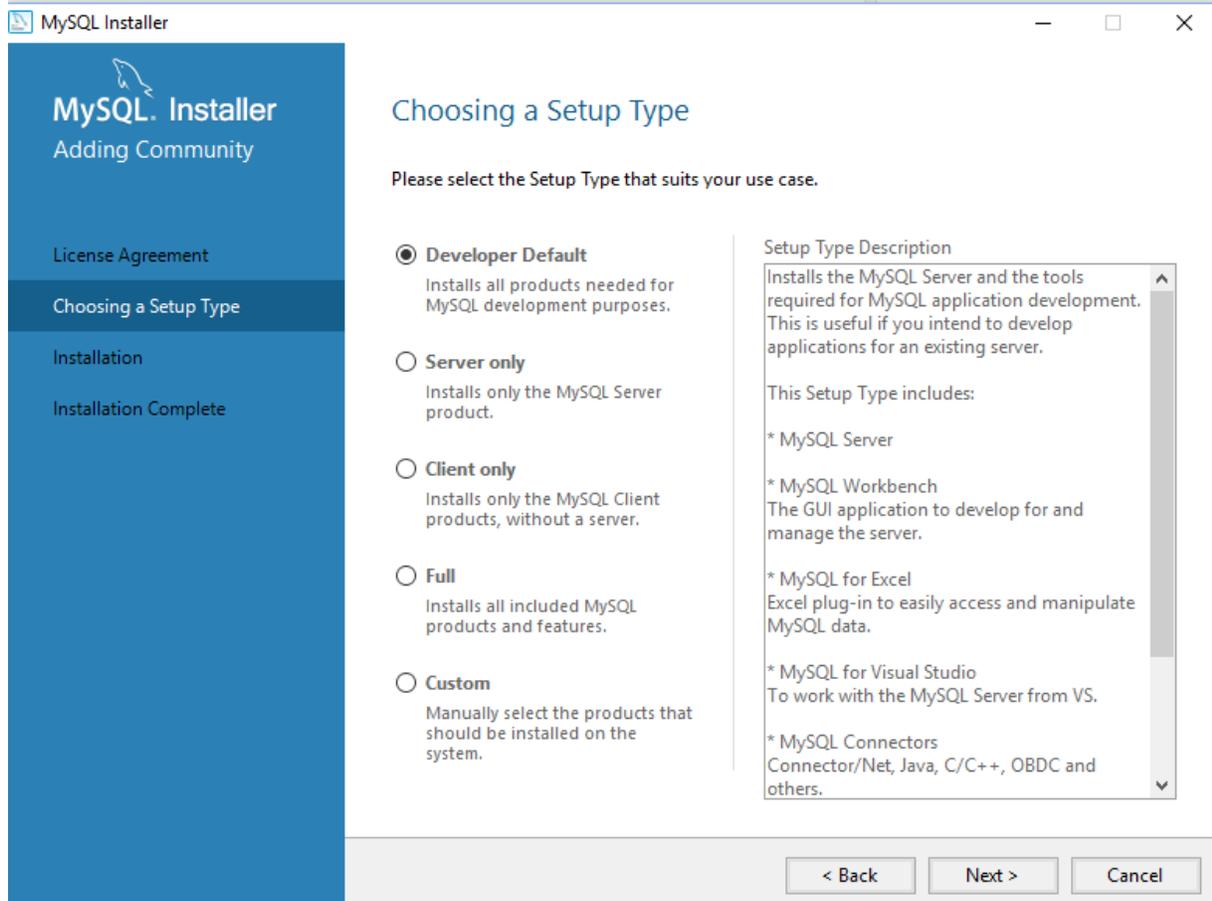
This page is important, because it will determine which of the MySQL products will be installed. You can see the products that will be installed in the window to the right. Generally speaking, you probably won't need them all and you can always add additional products later, so we're going to choose Custom before clicking Next.

On the next page, you are given the opportunity to choose the products you want. Clicking on the little + signs will expand each list. Click on each product you want, then click the rightward-pointing arrow to move that product into the list to the right.

At this point, it is important to be aware of whether you are running at 32-bit machine with 32-bit Windows or a 64-bit machine, with 64-bit Windows. . If you have a 32-bit Windows PC, you must install the 32-bit version of the MySQL Server. If you have a 64-bit PC running a 64-bit version of windows, you should install the 64-bit version. 64 bit software has access to far more system memory, among other advantages.

If you are unsure what kind of machine you have, and the operating system you are running, search for About Your PC in the Windows Search box, then choose About

(this applies to Windows 10: the procedure is nearly identical on earlier versions of Windows). You'll see some information like this:

|	
Edition	Windows 10 Home
Version	1511
OS Build	10586.494
Product ID	00326-10000-00000-AA021
Processor	AMD A8-6410 APU with AMD Radeon R5 Graphics 2.00 GHz
Installed RAM	8.00 GB (6.96 GB usable)
System type	64-bit operating system, x64-based processor
Pen and touch	No pen or touch input is available for this display

It doesn't matter if your system runs Windows 10 or an earlier version, though we would recommend upgrading your operating system if you are running Windows XP, as Microsoft no longer provides support to patch security issues and software bugs. Once you have verified your PC or operating system type, you can choose the products to install. We recommend the configuration seen here. Obviously, if you have a 32-bit machine, you will choose the 32-bit Server version.
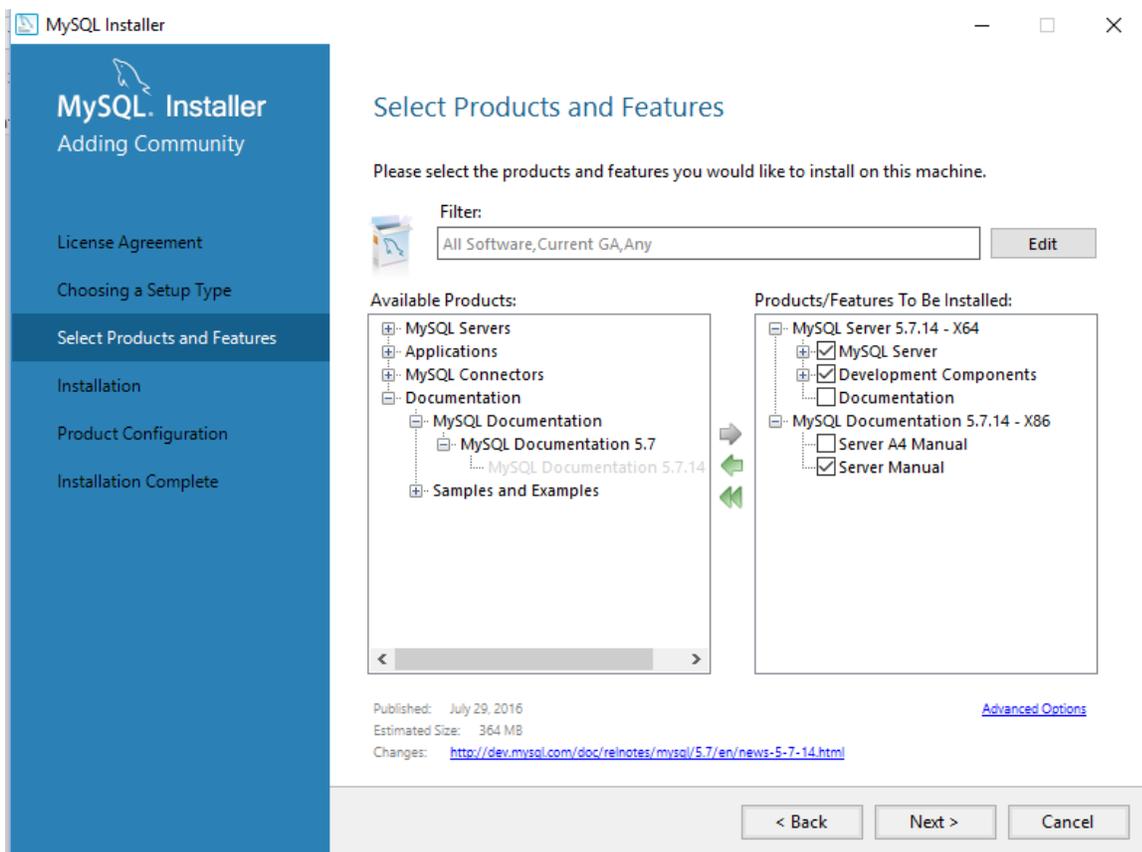
If you like, click on the Advanced Options link to change where MySQL will be installed and where it will store data, though we would recommend leaving these options as is. Click Next, and on the next page, Execute. Because we used the small installer, the actual server and documentation programs will download. This will take a few moments. When they are completed, click Next, taking you to the Product Configuration screen. Click Next again to open the Type and Networking dialogue.
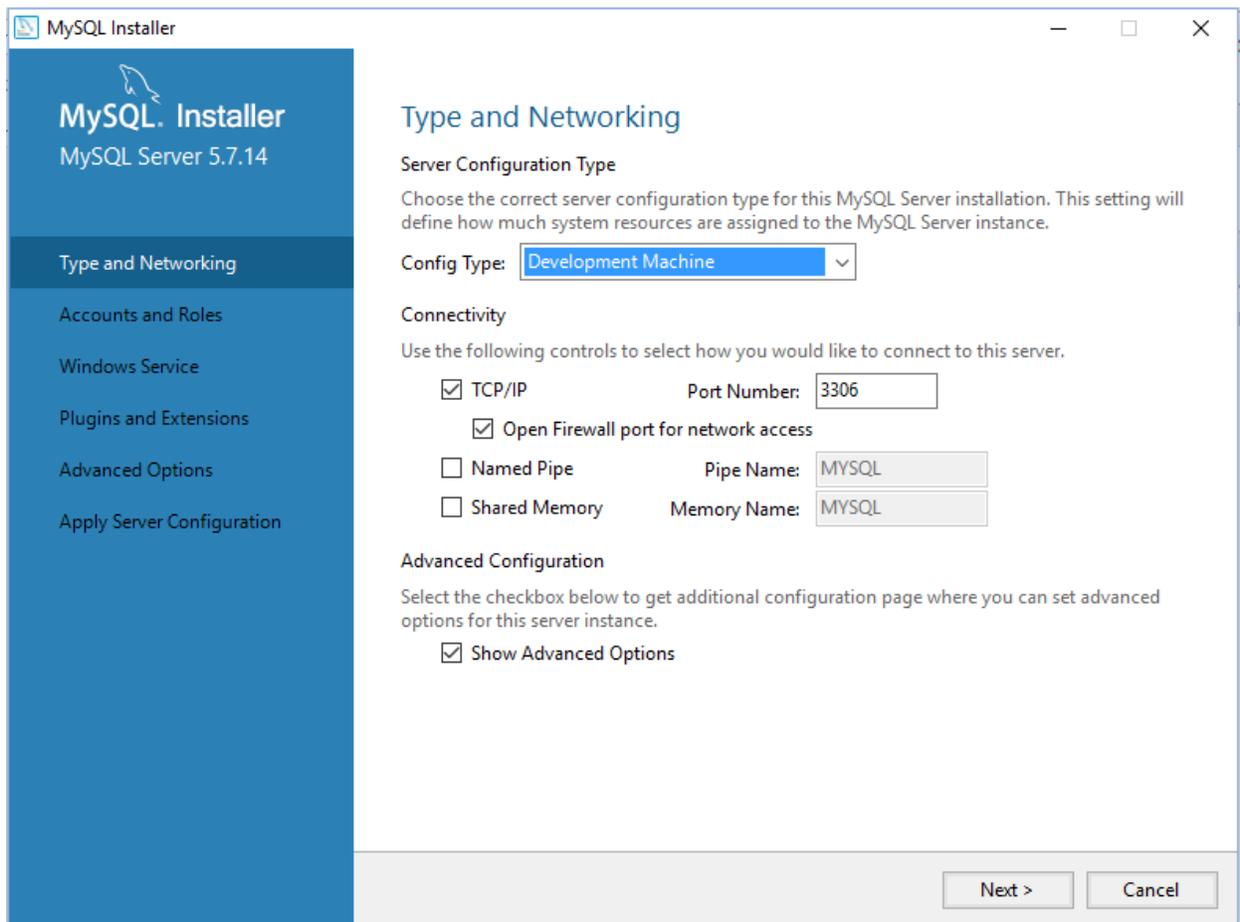
Again, this page has some crucial options.

The Config Type should be left as Development Machine as this is the appropriate configuration to run a standalone installation of the type assumed by this book. You should also leave the Connectivity options as is, unless you have specific reason to change them, which is unlikely in our scenario. Leaving the Show Advanced Options checkbox checked will cause an additional page to appear.

Click Next to bring up the passwords dialogue.
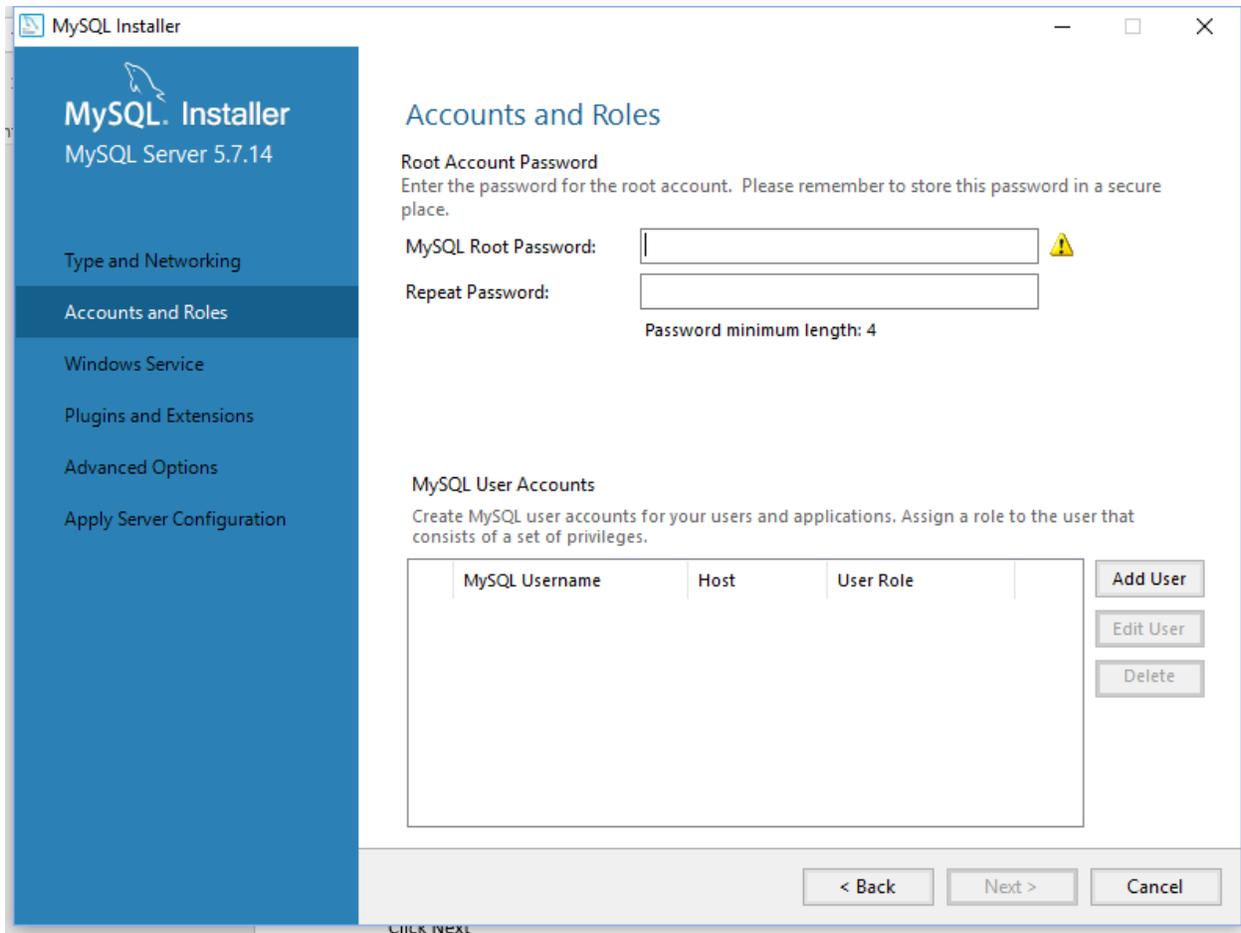
You should definitely set a root password; it's a fundamental security measure that if not taken could let a hacker take control over your entire MySQL installation. Remember, this is a server database, and it is possible an outside hacker could gain access to your computer and then modify an unprotected installation. As a basic security precaution, be sure to keep antivirus and antimalware software up to date, and to make sure the Windows Firewall is turned on.

You can also add users here, but if you are using the machine for your own development work this is not really necessary. If several people will use the database, you may wish to create user accounts. This subject is beyond the scope of this book but is covered well in the MySQL documentation.

Having set our root password, we will click Next.
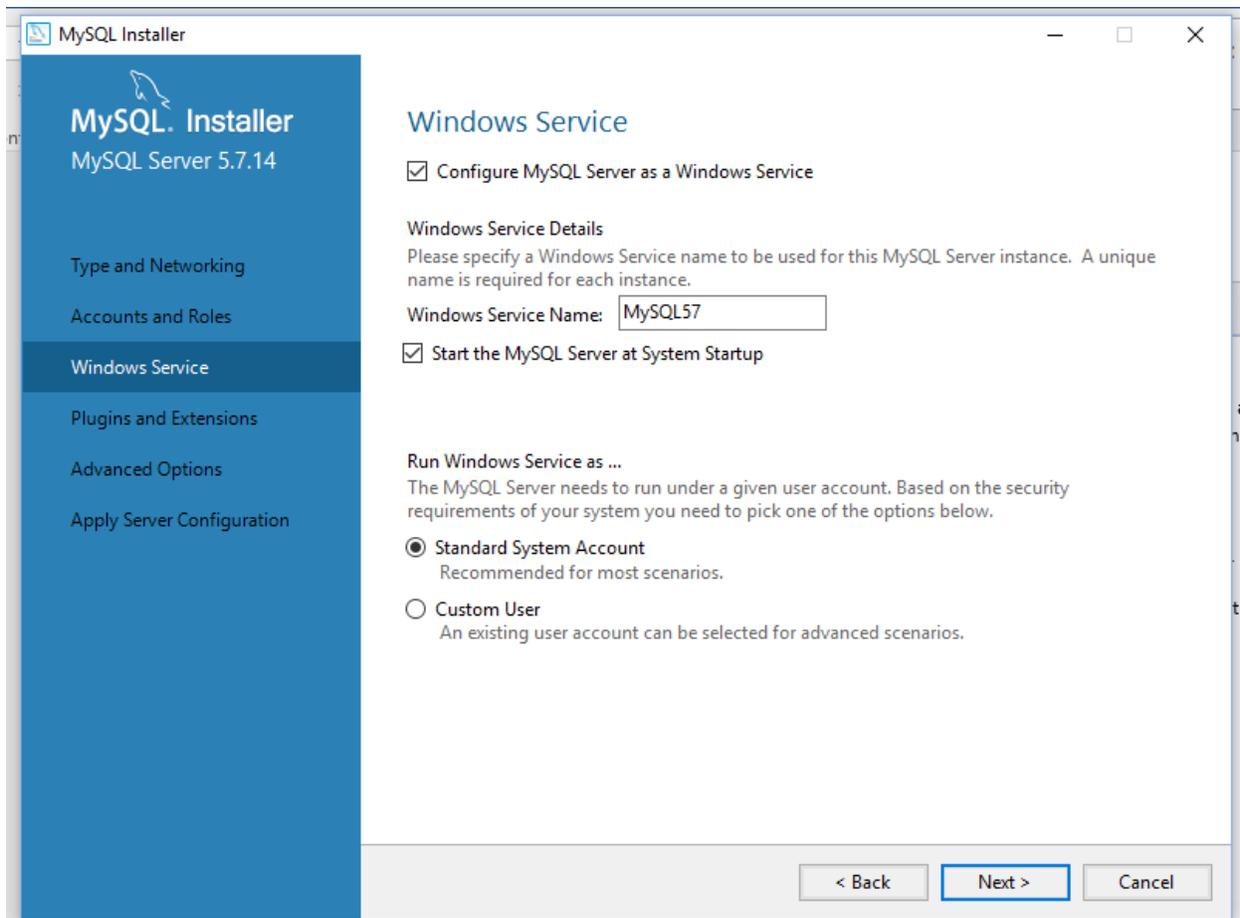
We recommend you leave the options on this page as is. Click Next.

Starting with MySQL 5.7, a new feature has been implemented that permits a MySQL database to behave more like a NoSQL (Not Only SQL) database. This functionality is beyond the scope of this book, but is covered in the MySQL documentation if you would like to explore it. Click Next.

We recommend leaving the options on the Advanced Options page as is, though you can change the folder location for the logs.
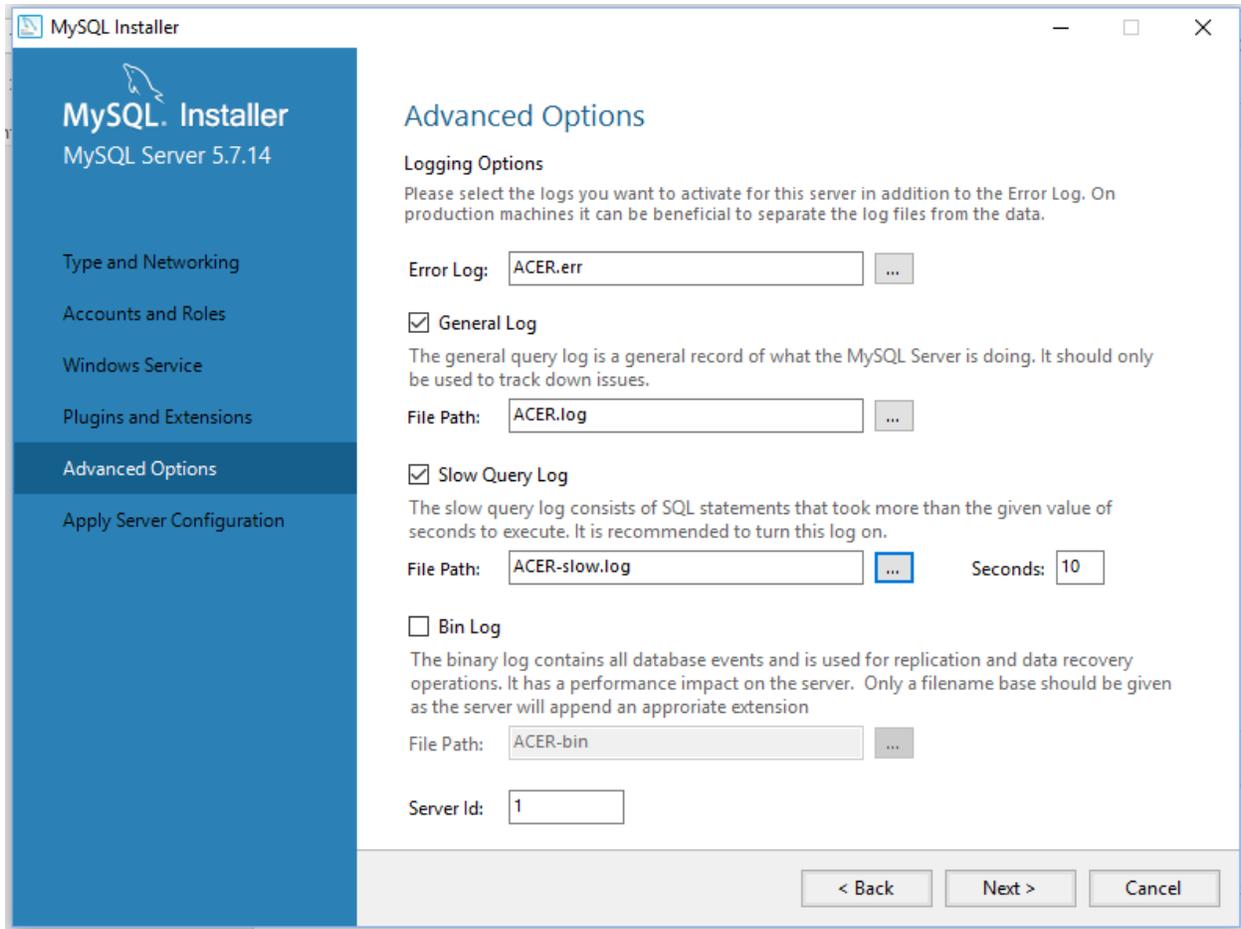
Click Next, then Execute, to finish the installation. MySQL will indicate when each step is completed.
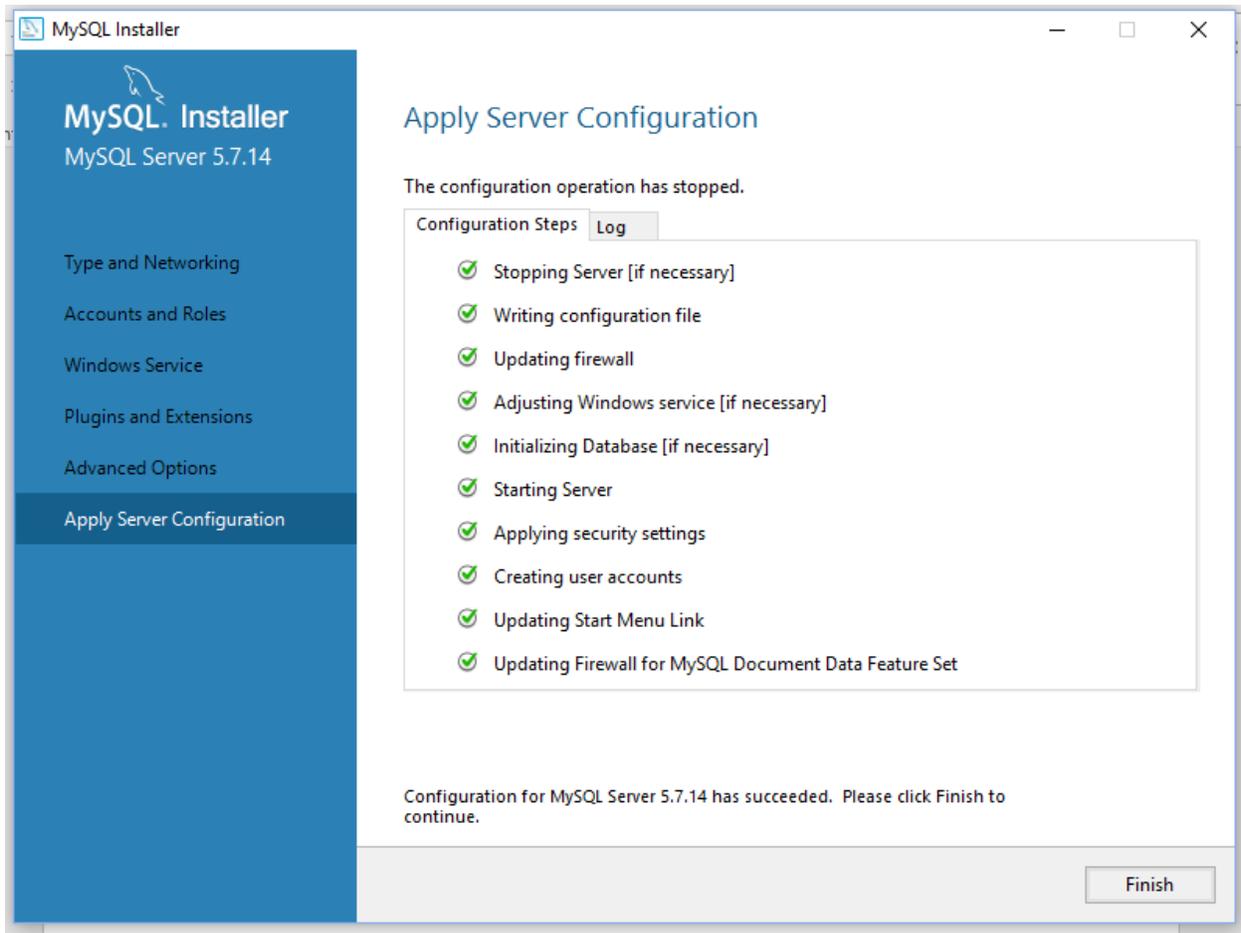
When it's done, click Finish.

A quick way to make sure everything worked OK is to open the MySQL Command Line Client, which is installed along with the server. If it prompts you for your password, and accepts it, that should mean everything is working. After entering your password, you should get a screen that looks something like this.

You can run queries, create and alter databases and tables, and administer your database from the command line. We are, however, using front ends as a recommended method in *The Data Journalist*.

MySQL Installation on Mac OS X/macOS

As with the Windows installation, we'll start by going to the Community tab at MySQL.com/downloads.

Choose the MySQL Community Server option. Unlike with Windows, there is no installer option.

On the Download MySQL Community Server page that opens, scroll down until you find the list of available downloads. The DMG Archive is easiest to install, so we will use that method.

When presented with the Oracle account signup page, either sign up for an account, or choose the "No thanks, just start my download" option. OS X will ask you if you want to install using the DiskImageMounter. Click OK.

Finder should open, and you will see an icon for the installation package. Double click on the icon to open the installer.
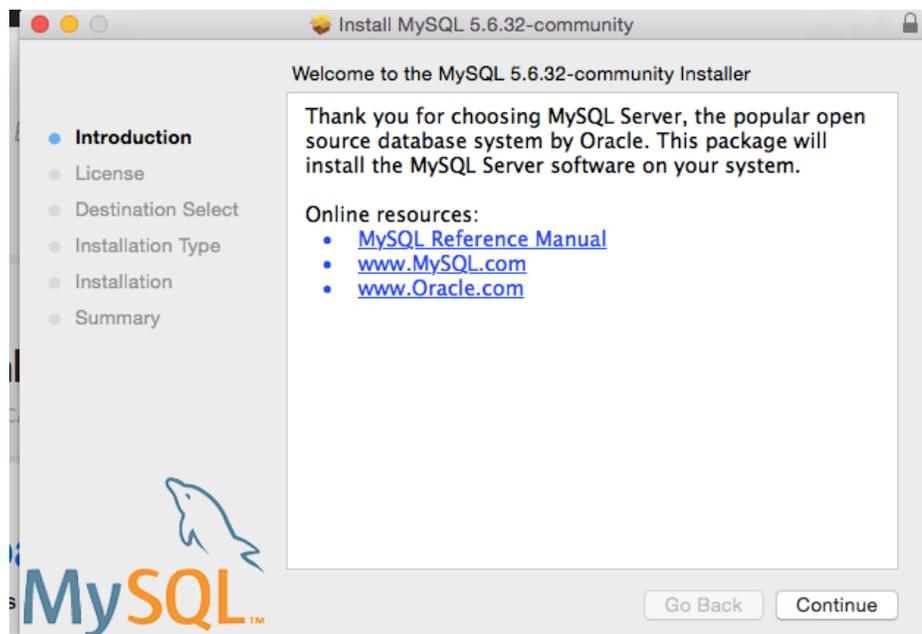
Click Continue, review the license terms, and if you agree with them, click Continue again, then Agree.

You will now be given the option of changing the installation location and customizing your installation options.
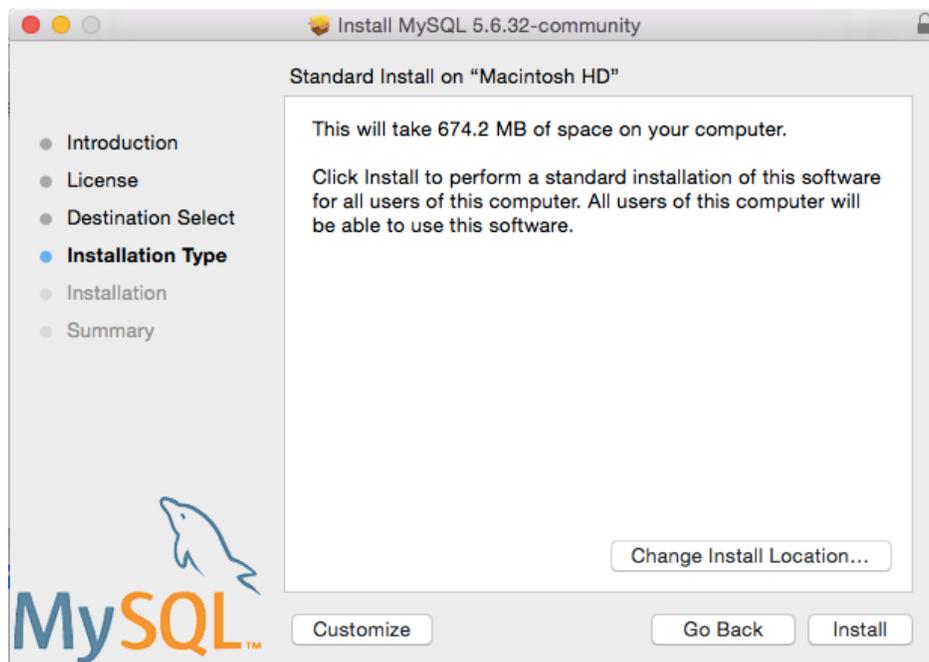

Unless you want to change the installation location from the root of your Mac hard drive, there is no need to change the installation location.

However, click on Customize, and ensure all of the package options are checked off.

When you're finished, click Install.

With MySQL 5.7 and above, you will now be provided with a temporary password for the root user. Make sure you copy it to another computer file, or write it down. You'll need it to log into the MySQL server once the installation is complete.
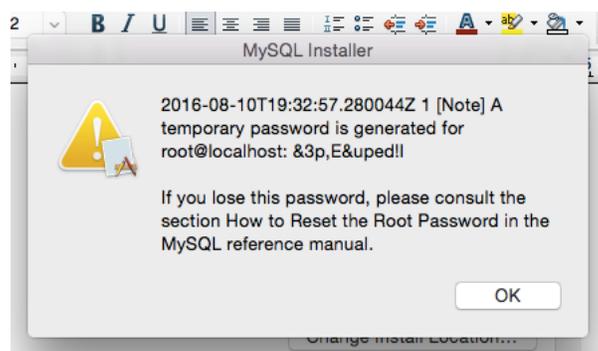
When you're done, click OK and if required, enter the password for your OS X user account.

If all goes well, you should see a window indicating your installation was successful
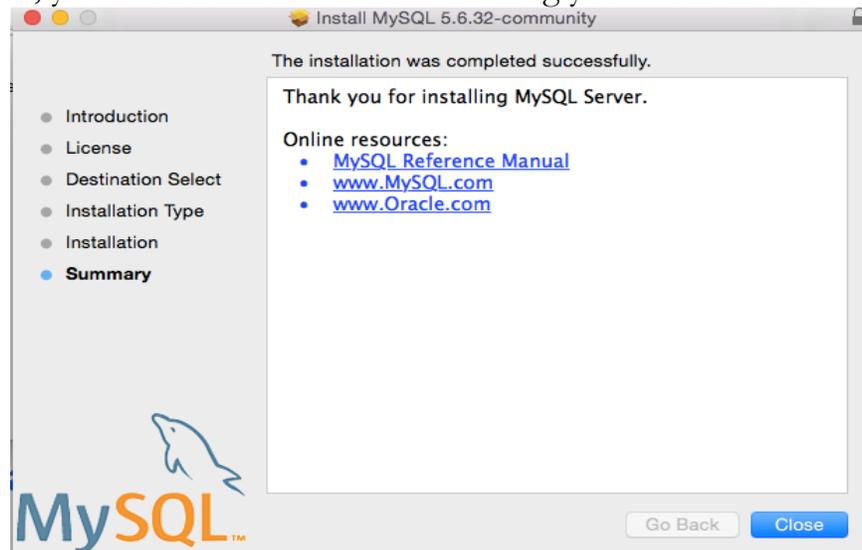
Click Close, and the initial installation will be complete.

You may need to start the MySQL server manually. To do so, go to your System Preferences under the Apple menu (top left corner of your computer's screen on the XXX bar). You will see that a new preferences icon has been added for MySQL.

If you click on the MySQL icon, you will see a simple dialogue that will allow you to start the server (or stop it if it is already running). There is also a checkbox which will alter the system settings so MySQL will always start when you boot up your computer.

Clicking Start MySQL Server will start the server. You may be asked for your Mac user account password.

You can also start and stop the MySQL server from the OS X Terminal window. At the Terminal command prompt type:

```
sudo /usr/local/mysql/support-files/mysql.server start
```

The sudo command means SuperUser and allows you to make changes to your system settings, with root privileges. Be careful with sudo; you can seriously damage your system if you're not careful.

You can also stop and restart the server from the Terminal, with these commands:

```
sudo /usr/local/mysql/support-files/mysql.server stop
sudo /usr/local/mysql/support-files/mysql.server restart
Once you are certain that the serve is running, you can connect
to it from a front end program, or from the command line
utility. We discuss connecting from front ends in the companion
tutorial Exploring Navicat and Sequel Pro.
```

If you wish to connect to MySQL from the command line client, it may be necessary to add MySQL to the PATH environmental variable. In Terminal, run the following command:

```
export PATH=$PATH:/usr/local/mysql/bin
```

This will add MySQL to the path for as long as this terminal window is open. It is also possible to add mySQL to the path permanently by modifying the .bash_profile dot file, a subject beyond the scope of this tutorial but well covered by many online sources.

You can now connect to the MySQL server using the command line client. If a temporary password was set during installation, you will need to enter it. Enter this command at the prompt:

```
mysql --host=localhost --user=root --password=jPASSWORDSETEARLIER;
```

If no password was set, you can simply enter MySQL at the terminal prompt.

You should the see then mysql> prompt.

You really should have a root password. To set or change the root password once connected, enter this command:

```
SET PASSWORD = 'NewPassword';
```

Be sure to remember your password; if you lose it, you'll be locked out of your server.

Getting MySQL up and running on a Mac can sometimes be tricky. You will increase the chance of a successful installation by installing the most recent version of MySQL available for your version of OS X/macOS. If you still have problems, it can be helpful to reinstall OS X/macOS using Internet Recovery (See https://support.apple.com/en-ca/HT204904) as you will then have a clean installation of the operating system. Be sure you don't accidentally erase your entire hard drive, when you do this. You should have a full backup of your drive on an external hard drive, just in case something goes wrong.

It's unlikely you'll have any installation or configuration problem that others haven't had. Copy and paste any error messages you get while trying to configure the server into web searches, and you'll likely find a solution. You can also ask your own questions in the MySQL forums.