Specify Software Project
www.specifysoftware.org

Installing MySQL on MacOS X for Specify

Specify 6 requires MySQL Database Manager Software from Oracle Corporation to operate. The MySQL "Community Server" Release is an open source version of MySQL available at no cost.

This MySQL installation walkthrough documentation is intended for standalone MacOS workstations - desktop computers which are managed by the Specify user and which are not intended to be used as a database server to provide shared collection data access to additional computers running Specify. To install MySQL, one must have a MacOS administrator-level account or have been granted software installation privileges on the target computer. If your campus or organization's IT or network services group manages security and accounts for individual workstations, your user account on your Mac may not have admin level privileges, which are required to complete this installation. Check with your local IT or network support staff if you need to have your admin level status verified for your Mac workstation or laptop.

If your building, administrative unit, or campus manages MySQL for shared access on a server computer, the stand-alone workstation MySQL installation steps described below are not suitable for your situation. For multi-user, shared-server access to a MySQL Specify 6 database, talk to your technical support staff, database or network administrator about MySQL installation and configuration options. The Specify Software Project web site has information on the Documentation tab for setting up MySQL on a database server computer for shared access to two or more Specify workstations. Contact the Specify Software Project (specify@ku.edu) if you would like to know more about institutional installation and configuration options for shared access to Specify collection databases.
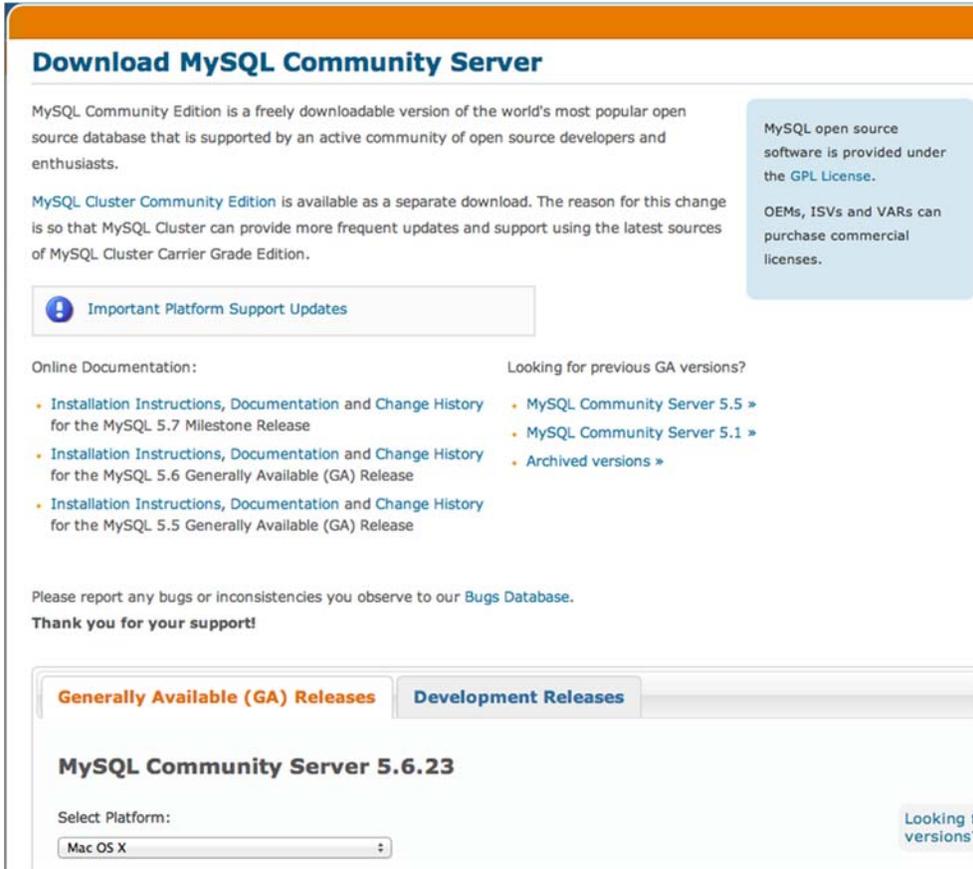
An installation checklist and walk-through guide for installing MySQL on Mac OS X computers are below.

MySQL MacOS X Installation Checklist

❑ 1. Confirm that your Macintosh user account is a member of the Mac Admin User
       Group and determine your Mac OS X release version. Admin User Group
       Membership is required to complete the MySQL installation.

❑ 2. Download the latest release of MySQL Server Community Edition Installer from
       the Oracle web site.

❑ 3. Run the MySQL installer.

❑ 4. Complete additional MySQL configuration.

❑ 5. Configure MySQL with a root password.

❑ 6. Reboot your computer to restart MySQL.

❑ 7. Download the Specify installer package for Mac OS from the Specify Software
       Project web site (http://www.specifysoftware.org).

❑ 8. Run the Specify Installer.

❑ 9.   Run the Specify Collection Setup Wizard. To create a new, empty database for
        your records.

❑ 10. Run Specify with the Specify user account which was created while running the
       Setup Wizard.

Step 2. Download the MySQL Installer Package

Point your web browser to: http://dev.mysql.com/downloads/mysql/

Download MySQL Community Server

MySQL Community Edition is a freely downloadable version of the world's most popular open source database that is supported by an active community of open source developers and enthusiasts.

MySQL Cluster Community Edition is available as a separate download. The reason for this change is so that MySQL Cluster can provide more frequent updates and support using the latest sources of MySQL Cluster Carrier Grade Edition.

MySQL open source software is provided under the GPL License.

OEMs, ISVs and VARs can purchase commercial licenses.

ⓘ Important Platform Support Updates

Online Documentation:

Looking for previous GA versions?

- Installation Instructions, Documentation and Change History for the MySQL 5.7 Milestone Release
- Installation Instructions, Documentation and Change History for the MySQL 5.6 Generally Available (GA) Release
- Installation Instructions, Documentation and Change History for the MySQL 5.5 Generally Available (GA) Release

- MySQL Community Server 5.5 »
- MySQL Community Server 5.1 »
- Archived versions »

Please report any bugs or inconsistencies you observe to our Bugs Database.
Thank you for your support!

Generally Available (GA) Releases	**Development Releases**

MySQL Community Server 5.6.23

Select Platform:

| Mac OS X ⧨ |
| --- |

Looking fo versions?

Choose the installation package which corresponds to your OS X version. A "DMG Archive" is a good choice. You'll be taken to a page with further download options, click "No thanks, just start my download" at the bottom of the screen.

| Mac OS X 10.9 (x86, 64-bit), Compressed TAR Archive	5.6.23	167.1M	**Download**
(mysql-5.6.23-osx10.9-x86_64.tar.gz)		MD5: 6d949a50ebc503b15be30aa225b2ea35	Signature
Mac OS X 10.9 (x86, 64-bit), DMG Archive	5.6.23	167.2M	**Download**
(mysql-5.6.23-osx10.9-x86_64.dmg)		MD5: 30899999e163fed929657b240db75e2b	Signature
Mac OS X 10.8 (x86, 64-bit), Compressed TAR Archive	5.6.23	168.5M	**Download**
(mysql-5.6.23-osx10.8-x86_64.tar.gz)		MD5: 5f989776b8f8766c7f43c27c1a09c032	Signature
Mac OS X 10.8 (x86, 64-bit), DMG Archive	5.6.23	167.2M	**Download**
(mysql-5.6.23-osx10.8-x86_64.dmg)		MD5: 30899999e163fed929657b240db75e2b	Signature

Step 3. Run the MySQL Installer

Open the installed file once the download is complete, the window below will appear. Open the downloaded package such as "mysql-5.6.13-osx10.7x86_64.pkg" as an example package name shown below. Your MySQL installer package name will probably be different.
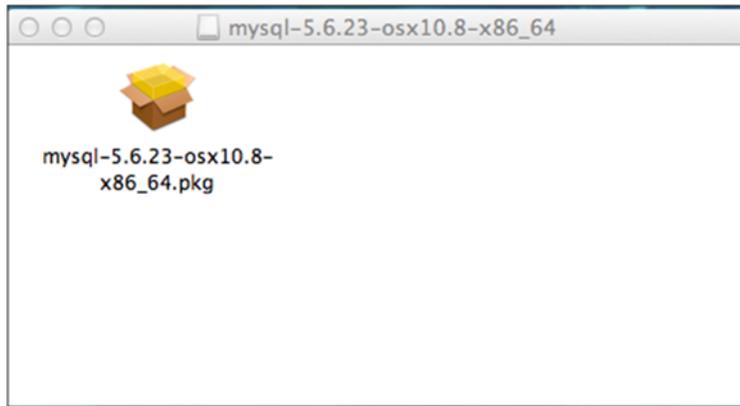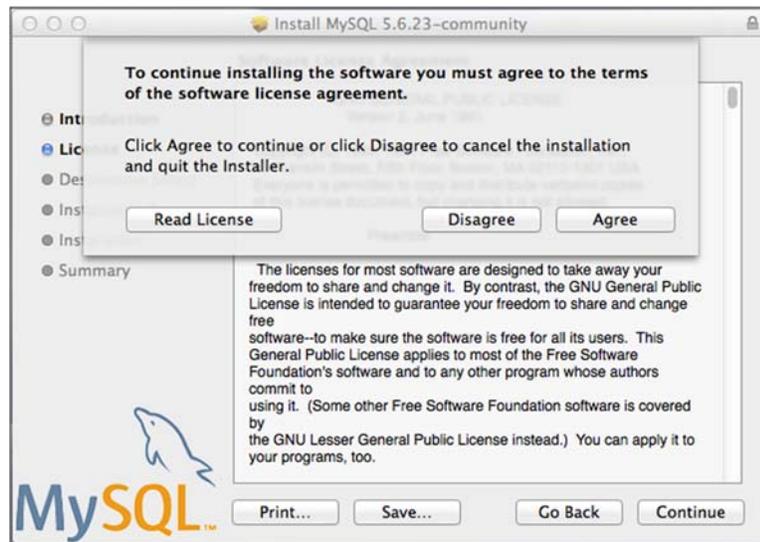

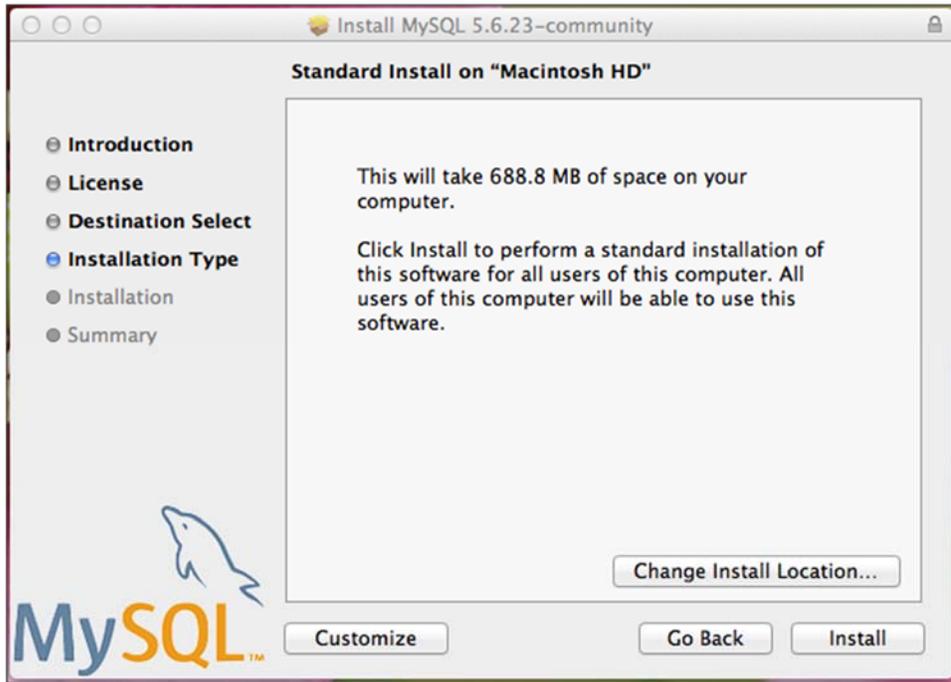In the first screen of the installer window, click the Continue button.

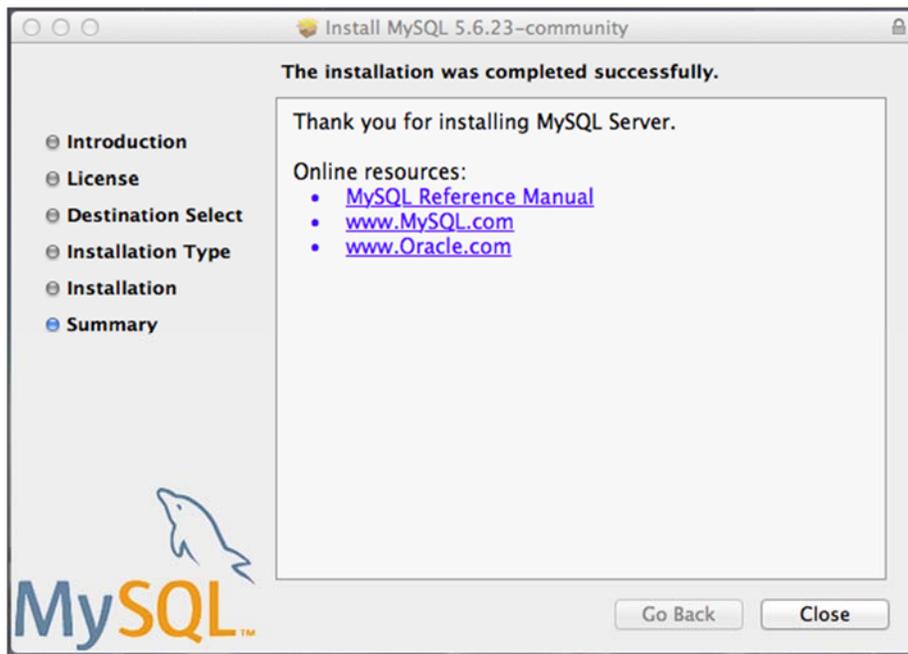Consider the GPL Software License Agreement, then click Continue.
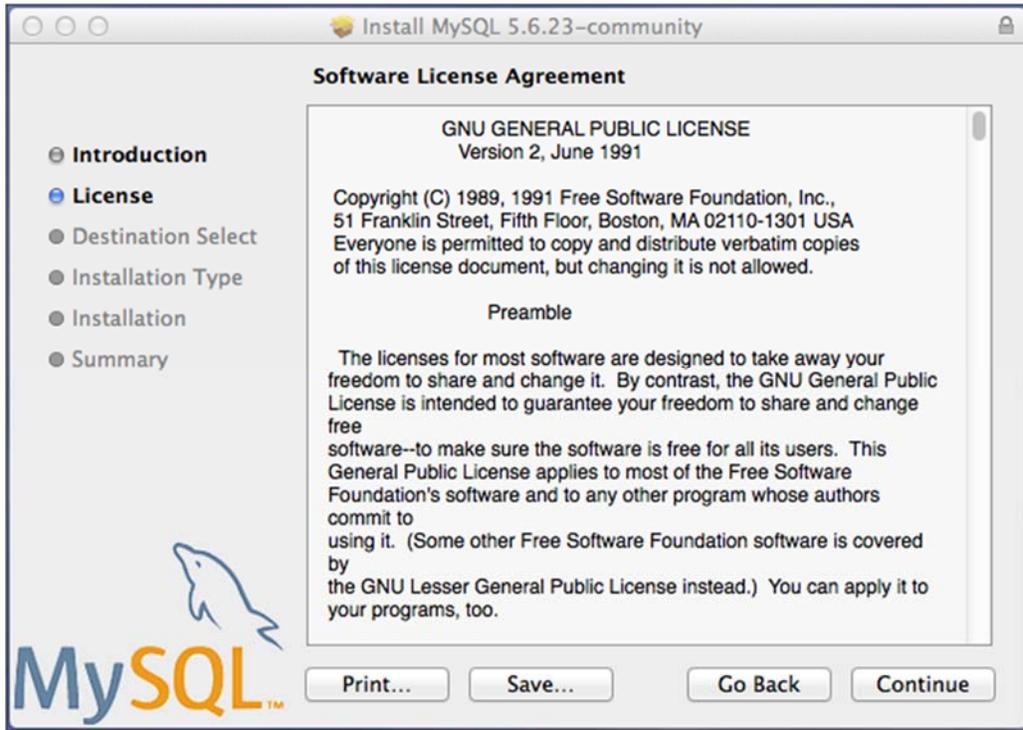
Then click Agree in the popup window.

In this window, change the install location if you wish, or to accept the default location, just click Install.

You should see this window when the install operation is complete, press Close.

Step 4. Additional MySQL Configuration

Setting up the Mac OS Preference File for MySQL

Go back to the DMG file you downloaded which had the installer included. This will look like the photo below.

Now, double click on the MySQL.prefPane in order to install a panel in your Mac's system preferences that allows you to start, stop, and define whether the server starts upon booting.
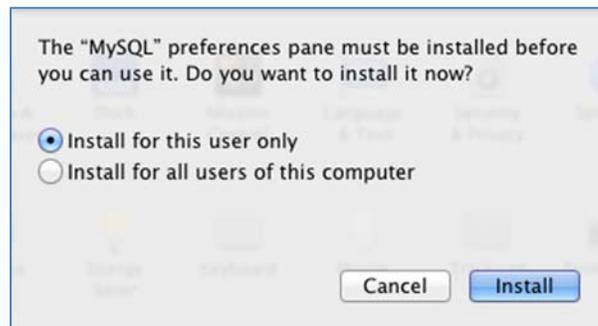
This panel can be accessed by (1) clicking the apple at the top-left of the screen, (2) clicking "System Preferences," and (3) opening the "MySQL" option in the resulting menu.
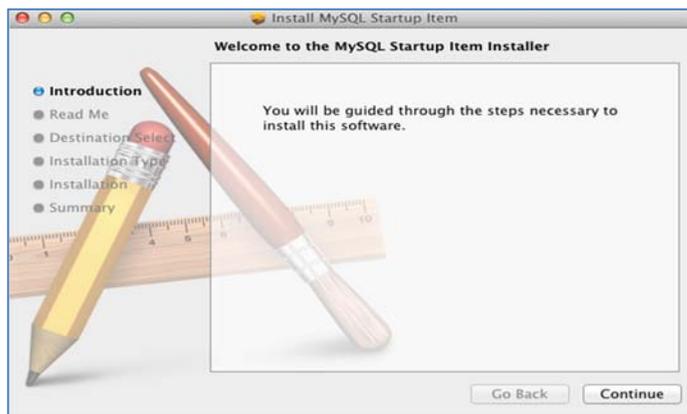

Setting up the MySQL StartupItem for MacOS

Next we will install the "StartupItem". Go back to the DMG file you downloaded which had the
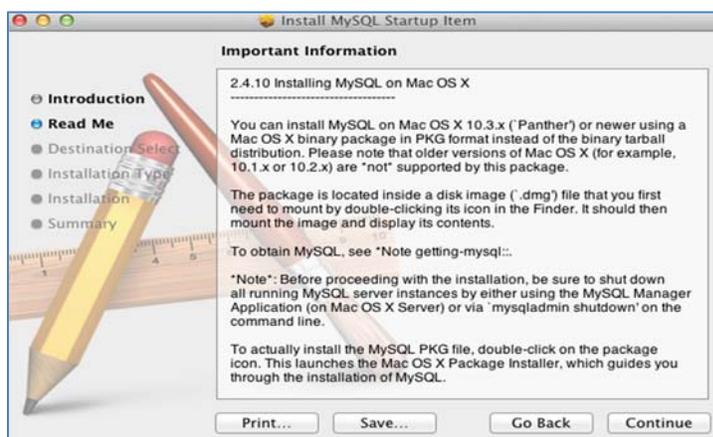
installer included and double click "MySQLStartupItem". This will look like the photo below.
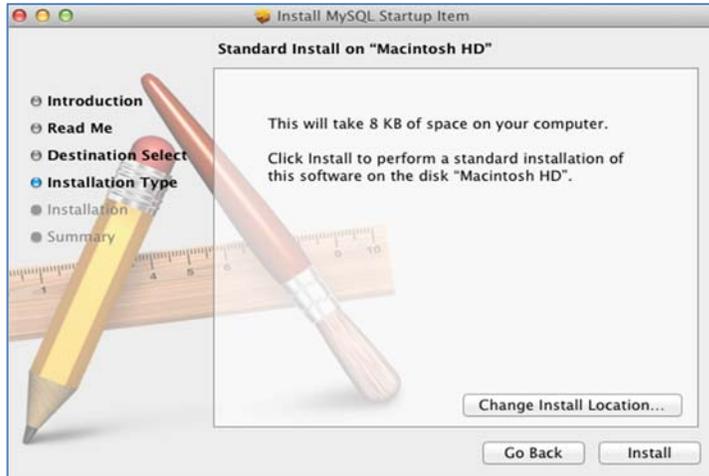

As before, click "Continue".

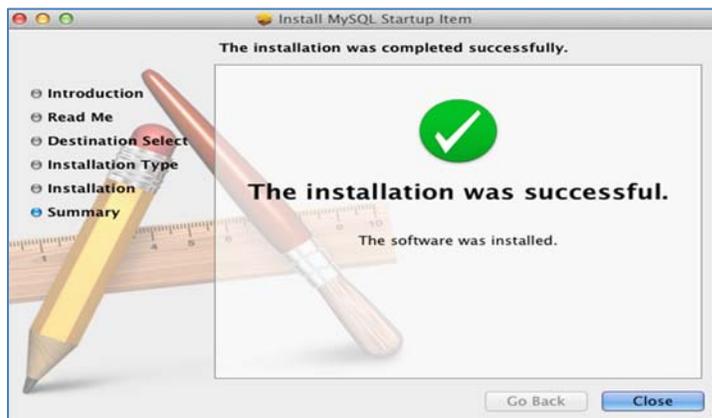See the License Agreement, then click "Continue".

The default location is again Macintosh HD, click "Continue".

On the following screen click "Install Software". The installation will then proceed and complete. You may need to enter an administrator password for your machine and then click "Install Software".

Click "Close".

Step 5. Set the MySQL "root" User Account Password

There is one additional configuration task for Mac OS users of MySQL Specify for configuring MySQL after the MySQL installer has installed its files on your computer and the MySQL service has been started—the MySQL "root" user password must be set.

As a data manager, MySQL maintains its own user accounts and passwords in order to protect and authorize access to the databases it contains. MySQL installations always have one all-powerful user account known as the 'root' user.   When you install MySQL on your Mac an account with the name 'root' is automatically created for MySQL, but the MySQL Mac installer does not automatically set a password for it. **This creates a serious security risk which should be remedied immediately after a MySQL installation on MacOS.** Also, the MySQL root user password must be set before the Specify Setup Wizard is run, the Specify Wizard requires the MySQL 'root' user password to proceed.

> [Please note this important account naming issue. In the Specify Setup Wizard, the MySQL "root" user is referred to as the Specify "IT User" meaning a MySQL user account with root level privileges – this is typically the MySQL user account named 'root'. If you are installing MySQL and Specify on your own Mac OS computer, you are in control of all accounts including the MySQL "root" user account. If you plan to use a shared MySQL installation on a building or campus database server, your systems administrator or network administrator controls access to the MySQL "root" user account. There is separate documentation on the Specify Software Project web site for setting up Specify databases on institutional MySQL server machines and accounts.]

Adding a root user password to MySQL:

1. The easiest way set the MySQL root user password is to utilize the MacOS Terminal application to do it from the MySQL command line.
2. You must be a member of the Admin group on the computer.
3. This task requires running the application "mysqladmin" which is a program located in the MySQL installation directory: /usr/local/msql/bin
4. Open a Terminal window and type (Note: these commands are case sensitive):

        cd /usr/local/mysql/scripts
        sudo mysql_install_db –basedir ../

        [type in password here]

        cd ../bin
        sudo mysql_secure_installation

[It will ask a series of questions:]

"Enter current password for root (enter for none):"

[press enter]

"Change the root password? (Y/N):"

[Y]

[Follow the prompts to enter a secure, non-guessable root password. If your machine is connected to the Internet it will be exposed to network attacks on MySQL Server. Please take this risk seriously and give the MySQL root account a strong password.]

[The rest of the questions are totally up to the user. The questions are for remote root login (generally a bad idea), removing anonymous users (good idea), remove test database (a good idea), and reload privileges table (do it).]

Then close the Mac Terminal window.

> **Now that your MySQL root user password is set, please record it in a safe and memorable place. Recalling this password is critical for future Specify updates, do not lose it. We cannot overemphasize the importance of this step, do not casually record the MySQL root user password and misplace it.** When we periodically issue online updates to the Specify database structure, you will need the MySQL root user account (= Specify "IT User account") password, or you will not be able to update Specify. It is also needed for restoring backup copies of your database should you ever need to recover data.

Step 6. Reboot Your Computer

Rebooting will complete the installation and initialization of MySQL and start it running as a background process on your computer.

Steps 7 & 8. Download and Install Specify

Download and run the Specify installer for Mac OS X. See the Specify Software Project web site Download page for the Specify installers and additional documentation:

http://specifysoftware.org/content/download

Step 9. Run the Specify Setup Wizard

Run the Specify Collection Setup Wizard to set up your collection. You will need the MySQL root user or "IT User" account (username ("root") and password to run the Specify Wizard set up an empty Specify database for your collection.

It is very important that you read the Specify Wizard documentation before running the Wizard. There are several options during collection database setup which require informed decisions about how your collection and institution are organized administratively.

See the step-by-step guide for using the Specify Wizard on the Specify Software web site documentation located here:

http://specifysoftware.org/sites/specifysoftware.org/files/specify_setup_wizard.pdf

Step 10. Run Specify

Use the Specify user account name and password you created in the Setup Wizard, not the MySQL account credentials. See additional documentation on setting up a Specify account user encryption key using the Specify Master user, account name and password. Please email or call the Specify Project if you get stuck, this is a complex process the first time through, we would be glad to help.