Installing Specify on Debian-based Linux

Specify 6 requires Amazon Corretto 11 as a Java Runtime Environment and MariaDB as database management software to operate. This guide will walk you through how to install these to use Specify 6 on Debian-based Linux installations.

This installation walkthrough documentation is intended for standalone Debian 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 the necessary software, one must have a super user 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 computer may not have admin level privileges, which are required to complete this installation.

If your building, administrative unit, or campus manages MySQL or MariaDB for shared access on a server computer, the stand-alone workstation MariaDB installation steps described below are not suitable for your situation. For multi-user, shared-server access to a MySQL/MariaDB Specify 6 database, talk to your technical support staff, database or network administrator about MySQL installation and configuration options. Contact the Specify Collections Consortium (support@specifysoftware.org) if you would like to know more about institutional installation and configuration options for shared access to Specify collection databases.

This guide was written using Ubuntu 20.04.02 ARM64. These instructions should work on any modern version of Debian.

Debian Installation Checklist

1. Confirm you are a super user on your system.

2. Install Amazon Corretto 11.

3. Install MariaDB.

4. Reboot.

5. Download the Specify installation shell script.

6. Run the Specify Installer.

7. Run the Specify Collection Setup Wizard.

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

Step 1. Install Amazon Corretto 11

Open the Terminal.

First type this command and execute it:

```
wget -O- https://apt.corretto.aws/corretto.key | sudo apt-key
add -
 sudo add-apt-repository 'deb https://apt.corretto.aws stable
main'
```

This adds the Corretto repositories on Debian-based systems.

Install Corretto 11 by running the following command:

```
sudo apt-get update; sudo apt-get install -y java-11-amazon-
corretto-jdk
```

Then press enter. Amazon Corretto 11 is now installed!

Step 2. Install MariaDB

Continue using the Terminal Application.

Type in the terminal and press enter after each command:

```
sudo apt update
sudo apt install mariadb-server
sudo mariadb
```

The MariaDB monitor prompt should appear. Set the root password using this command:

```
ALTER USER 'root'@'localhost' IDENTIFIED BY 'new_password';
```

*In this case, **root** is the IT username and **new_password** would be your IT password. Only modify the password portion to create your own.*

It should show Query OK, 0 rows affected. You are good to proceed.

Use the following command to set up your database:

```
mysql_secure_installation
```

Follow the installation path by typing Y for yes and n for no following each prompt.

To have your server auto-start when the machine boots up, use the command:

```
sudo systemctl enable mariadb.service
```

Note: MariaDB is a drop-in replacement for MySQL, meaning that mysql commands are symbolically linked. In other documentation, any reference to MySQL should be directed to your installation of MariaDB.

Step 3. Reboot

Reboot your system! Your MariaDB database should automatically start up if it is configured correctly.

Step 5. Download & Install Specify

Download the shell script file to start the installation. See the Specify Software Project web site Download page for the Specify installers and additional documentation:

https://update.specifysoftware.org/Specify_unix_64.sh

Run this command, substituting your path to the downloaded file, to add execution privileges to the script:

chmod +X ./specify_unix_64.sh

Run the script with this command:

sh ./specify_unix_64.sh

Now you should see the Specify installation window appear! You can proceed and finish the installation.

Step 6. Run the Specify Setup Wizard

Run the Specify Collection Setup Wizard to set up your collection. Put MariaDB root user or "IT User" account credentials in the "IT User" and "IT Password" fields. By default, username and password are "root". Specify Wizard would use this account to 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:
https://www.specifysoftware.org/wp-content/uploads/2017/03/specify_setup_wizard.pdf

Step 7. Run Specify

Use the Specify user account name and password you created in the Setup Wizard, not the MariaDB 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 the Specify Project if you get stuck, this is a complex process the first time through, we would be glad to help.