Applications

- Install MySQL
- Install Postfix
- Install PHP
- Install Apache
- Install Let’s Encrypt

Install MySQL

Installing MySQL on Centos

Uninstall MariaDB

1. Uninstall MariaDB from the server

```
yum remove MariaDB-server MariaDB-client
```

Add the MySQL repository

1. Download and add the following MySQL Yum repository

```
Downloading respository data
============================

wget https://repo.mysql.com/mysql80-community-release-el7-1.noarch.rpm

Installing the repository data
==============================

yum localinstall mysql80-community-release-el7-1.noarch.rpm
```

Verify if the MySQL Yum repository has been added successfully

1. with the command below very that the MySQL Yum repository has been added successfully

```
yum repolist enabled |  grep "mysql.*-community.*"
```

The result should be similar to

```
root@aza2-jhb-azandi /home/aza_admin # yum repolist enabled | grep "mysql.*-community.*"
mysql-connectors-community/x86_64 MySQL Connectors Community                 141
mysql-tools-community/x86_64      MySQL Tools Community                      105
mysql80-community/x86_64          MySQL 8.0 Community Server                 161
mysql80-community-source          MySQL 8.0 Community Server - Source          0
root@aza2-jhb-azandi /home/aza_admin #
```

Installing MySQL Release Series

If a specific release series is required follow the following steps

1. If not already installed, install yum-config-manager

   `yum update && yum install yum-utils`

2. Disable the current active sub-repository, where [xx] replaces the version number

   `yum-config-manager --disable mysql[xx]-community`

3. Enable the appropriate sub-repository, where [xx] replaces the version number

   `yum-config-manager --enable mysql[xx]-community`

Install MySQL

1. Install MySQL with the command below

   `yum install mysql-community-server`

Start and enable MySQL

1. Start and enable MySQL with the commands below

```
Start mySQL
===========

systemctl start mysqld

Enable Mysql
============

systemctl enable mysqld
```

Secure MySQL installation

1. Lastly, secure the installation of MySQL by running the command below and following the prompts

```
mysql_secure_installation
```

Install Postfix

Installing Postfix

Uninstall SendMail

1. Run the command below to ensure that SendMail is removed/not installed

```
yum remove sendmail
```

Install Postfix

1. Install Postfix with the below command

   `yum install postfix`

2. Make postfix as default MTA for your system using the following command

   `alternatives --set mta /usr/sbin/postfix`

> Use the command below, if the above command does not work
>
> `alternatives --set mta /usr/sbin/sendmail.postfix`

Start and Enable Postfix

1. With the below commands, start and enable Postfix

```
Start Postfix
=============

service postfix start

Enable Postfix
==============

chkconfig postfix on
```

Open Firewall Port

1. Open the firewall with the below commands to allow Postfix to communicate

```
iptables -A INPUT -m state --state NEW -m tcp -p tcp --dport 25 -j ACCEPT
iptables -A INPUT -m state --state NEW -m udp -p udp --dport 25 -j ACCEPT
```

Install PHP

Installing PHP

Installing Repositories

1. If not already installed, install the EPEL repository with the command below

   `yum install epel-release`

2. Install the Remi repository to get the latest versions of PHP with the command below

   `yum install http://rpms.remirepo.net/enterprise/remi-release-7.rpm`

3. If not already installed, install yum-utils

   `If not already installed, install`

4. Use yum-config-manager (a utility provided by yum-utils), to Remi repository as the default repository for installing PHP, [xx] represents the version of PHP

   `yum-config-manager --enable remi-php[xx]`

Installing PHP

1. Install PHP with the command below with the default set of "add-ons" used by most PHP applications

```
yum install php php-mcrypt php-cli php-gd php-curl php-mysql php-ldap php-zip php-fileinfo
```

Install Apache

Installing Apache Web Server

1. Run the commands below to install Apache web server

```
Installing Apache Web server
============================


yum install httpd


Install SSL module for Apache Web server
========================================


yum install mod_ssl
```

Disable HTTP_PROXY

1. To prevent an attack through the HTTP_PROXY vulnerability, disable HTTP_PROXY header in apache globally

```
echo "RequestHeader unset Proxy early" >> /etc/httpd/conf/httpd.conf
```

Start And Enable Apache Web Server

1. To start and enable Apache Web Server use the commands below

```
Start Apache Web Server
=======================


service httpd start


Enable Apache Web Server
========================


chkconfig httpd on
```

Install Let’s Encrypt

Installing Let’s Encrypt on the web server

1. Ensure that the CentOS EPEL repository is installed

   `yum install epel-release`

2. Install Let's Encrypt with the command below

```
yum install certbot python2-certbot-apache mod_ssl
```

> To allow the installation to finish, accept the GPG key by typing `y` and pressing `ENTER` when prompted to do so