

# DEVOPS REPORT

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Before proceeding with Magento installation, it's essential to ensure that you have the necessary components in place. These include SQL (MySQL), the Apache web server, Elastic search, and Composer. Below are the steps to set up these prerequisites:

## **Install the Apache2**

**Begin by updating the package index using the following command:**

```
bash
sudo apt update
```

**Install Apache2 with this command:**

```
bash
sudo apt install apache2
```

**To verify the installed Apache version:**

```
bash
sudo apache2ctl -v
```

## **Installing MySQL**

### **1. installing MySQL:**

```
bash
sudo apt install mysql-server
```

**Secure my MySQL installation with the following command:**

```
bash
sudo mysql_secure_installation
```

**Configure password access for the MySQL root account. and access MySQL with:**

```
bash
sudo mysql
```

**Next, check the authentication methods:**

```
sql
SELECT user, authentication_string, plugin, host FROM mysql.user;
```

**update the root password**

**Code:**

```
sql
ALTER USER 'root'@'localhost' IDENTIFIED WITH mysql_native_password BY
'muneeb@12345';
```

**Create a new MySQL user for Magento 2. by accessing MySQL:**

```
sql
mysql -u root -p
```

**Created the new user:**

```
sql
CREATE USER 'magento2'@'localhost' IDENTIFIED BY 'MySQL@#12345';
```

**Update its authentication method:**

```
sql
ALTER USER 'magento2'@'localhost' IDENTIFIED WITH mysql_native_password BY
'muneeb@#12345';
```

**Grant all necessary privileges to the Magento 2 user:**

```
sql
GRANT ALL PRIVILEGES ON *.* TO 'magento2'@'localhost' WITH GRANT OPTION;
```

**Finally, create the Magento 2 database:**

```
sql
CREATE DATABASE magento2;
```

**Installing PHP and the Extensions**

update the repositories using this command:

```
bash
sudo apt update
```

install PHP 7.4 and packages by this command:

```
bash
sudo apt install php7.4 libapache2-mod-php php-mysql
```

**Installing Elasticsearch**

install OpenJDK 17 (Java) with the following command:

```
bash
sudo apt install openjdk-17-jdk
```

Import the GPG key for Elasticsearch packages:

```
bash
sudo apt install curl
sudo curl -sSfL https://artifacts.elastic.co/GPG-KEY-elasticsearch | sudo
gpg --no-default-keyring --keyring=gnupg-
ring:/etc/apt/trusted.gpg.d/magento.gpg --import
```

Add the Elasticsearch repository to your system:

```
bash
sudo sh -c 'echo "deb https://artifacts.elastic.co/packages/7.x/apt stable
main" > /etc/apt/sources.list.d/elastic-7.x.list'
```

Update the package index and install Elasticsearch:

```
bash
sudo apt update
sudo apt install elasticsearch
```

Start and enable the Elasticsearch service:

```
bash
sudo systemctl daemon-reload
sudo systemctl start elasticsearch.service
```

## **Install Composer and download it**

1. Commence by downloading the Composer installer:

```
bash
curl -sS https://getcomposer.org/installer -o composer-setup.php
sudo php composer-setup.php --install-dir=/usr/bin --filename=composer
```

2. To complete the installation of Composer, use this command:

```
bash
composer
```

## **Download and Install Magento 2**

Change to the Magento 2 installation directory:

```
cd /var/www/html
```

Create a new Composer project for Magento 2.4:

```
sudo composer create-project --repository-url=https://repo.magento.com/ magento/project-  
community-edition=2.4.3 magento2
```

```
download magento
```

```
php bin/magento setup:install --base-url=http://muneeb.magento.com --db-  
host=localhost --db-name=magento2 --db-user=magento2 --db-  
password=Talha@12345 --admin-firstname=Admin --admin-lastname=Admin --admin-  
email=admin@admin.com --admin-user=admin --admin-password=Talha@12345 --  
language=en_US --currency=USD --timezone=America/Chicago --backend-  
frontname=admin --search-engine=elasticsearch7 --elasticsearch-host=localhost  
--elasticsearch-port=9200
```