**Magneto 2 Development Environment Setup**

**Step No. 1 Create a vagrant box for Ubuntu**

**Step No. 2 System Requirements**

1. **Ubuntu Operating System**
2. **Memory RAM minimum 2GB & swap file of 2GB**
3. **Latest Composer**
4. **Web Server (Apache 2.4 or Nginx 1.x )**
5. **Mysql 5.6 or 5.7**
6. **PHP 7.1.3 or 7.2.0 varified with PHP 7.2.11**
7. **PHP Extensions**
   1. ext-bcmath
   2. ext-ctype
   3. ext-curl
   4. ext-dom
   5. ext-gd
   6. ext-hash
   7. ext-iconv
   8. ext-intl
   9. ext-mbstring
   10. ext-openssl
   11. ext-pdo\_mysql
   12. ext-simplexml
   13. ext-soap
   14. ext-spl
   15. ext-xsl
   16. ext-zip
   17. lib-libxml
8. **make sure PHP OPcache is enabled**
9. **PHP settings**
   1. Time zone Asia/Dubai
   2. Memory limit 2GB or 4GB
   3. asp\_tags should be disable
   4. apache.save\_comments must enable
10. **SSL**
11. **Required system dependencies**
    1. Bash
    2. Gzip
    3. lsof
    4. mysql
    5. mysqldump
    6. nice
    7. php
    8. sed
    9. tar
12. **Mail Server**
13. **Technologies Magneto can Use**
    1. Redis version 3.2, 4.0, 5.0 for page cache and session storage
    2. Varnish version 4.x or 5.2
    3. Elasticsearch
14. Optional but recommended
    1. php\_xdebug 2.5.x or later for development
    2. mcrypt
    3. PHPUnit

**Step No. 2 Install Apache2 with following command**

2.1 sudo apt-get install apache2

2.2 Then open /etc/apache2/sites-available/000-default.conf file and add following code

<Directory “/var/www/html”>

Options Indexes FollowSymLinks MultiViews

AllowOverride All

Order allow,deny

Require all granted

</Directory>

open /etc/apache2/apache.conf and change user and Group to vagrant

2.3 apache2 –v

To check apache is working

2.4 sudo service apache2 status it should be in running state

create a file with name phpinfo.php in place in /var/www/html folder in Ubuntu and write following code in it

<?php phpinfo(); ?>

and then open browser and type 127.0.0.1/phpinfo.php. should show php information

2.5 run below command so if server restart, apache2 service will

start automatically

sudo update-rc.d apache2 defaults

**Step No. 3 Install PHP version 7.1.x by running the following commands**

3.1 sudo apt-get –y update

sudo add-apt-repository ppa:ondrej/php

sudo apt-get –y update

sudo apt-get install -y php7.1 libapache2-mod-php7.1 php7.1-common php7.1-gd php7.1-mysql php7.1-curl php7.1-intl php7.1-xsl php7.1-mbstring php7.1-zip php7.1-bcmath php7.1-iconv php7.1-soap

sudo apt-get update

sudo apt-get install php7.1

3.2 Run the following command to install, required PHP module

sudo apt-get install libapache2-mod-php7.1 php7.1-common php7.1-gmp php7.1-curl php7.1-soap php7.1-bcmath php7.1-intl php7.1-mbstring php7.1-xmlrpc php7.1-mcrypt php7.1-mysql php7.1-gd php7.1-xml php7.1-cli php7.1-zip

sudo apt install zip unzip php7.0-zip

3.3 install mod rewrite

sudo a2enmod rewrite

3.4 Run the following command to setup locale

locale-gen en\_US.UTF-8

export LANG=en\_US.UTF-8

export LC\_ALL=en\_US.UTF-8

3.5 To search for specific PHP module

sudo apt-cache search module\_name

sudo apt-cache search php7.1-intl

3.5 to check PHP version & installed modules in PHP

php –v

php –me

php –ini this command will show the working php.ini file

3.6 Change the following php configuration value

open php.ini file located at /etc/php/7.1/apache2/php.ini

and adjust below property

/

memory\_limit = 2BG

upload\_max\_filesize = 100M

max\_execution\_time = 360

date.timezone = Asia/Dubai

3.7 after making changes restart apache2 server

sudo service apache2 restart

**Step No. 4 Install Mysql-Server run the following commands**

4.1 run the following commands to install mysql server

sudo apt install -y mysql-server mysql-client

sudo service mysql start

sudo mysql\_secure\_installation

mysql –u root –p

4.2 create database in mysql with name magento2

CREATE DATABASE magento;

4.3 create user in database for magento2 with name magento2user with password m@g1t786

CREATE USER ‘magento’@’LOCALHOST’ IDENTIFIED BY ‘m@g1t786’;

GRANT ALL ON magento2.\* to ‘magento2user’@’localhost’ IDENTIFIED BY ‘m@g1t786’ WITH GRANT OPTION;

FLUSH PRIVILEGES;

4.4 run below command so if server restart, mysql service will start automatically

sudo update-rc.d mysql defaults

4.5 if root user password is not working then follow the link below to reset password

<https://www.digitalocean.com/community/tutorials/how-to-reset-your-mysql-or-mariadb-root-password-on-ubuntu-18-04>

**Step No. 5** Get your authentication key from magneto marketplace login

**Step No. 6 Download & Install phpMyadmin**

Download myphpadmin from <https://www.phpmyadmin.net/downloads/>

Extract file and copy to /var/www/magento-dev.local/public

Then open browser and enter <http://localhost/phpmyadmin>

Enter username root & password m@g1t786

**Step No. 7 Setting Pre Installation Permissions**

Here’s what that means:

* 775 for directories, which means full control by the user, full control by the group, and enables everyone to traverse the directory. These permissions are typically required by shared hosting providers.
* 664 for files, which means writable by the user, writable by the group, and read-only for everyone else.
* Create user using below commands
  + - * adduser magento\_user
      * passwd magento\_user

1. Add user to www-data group
   1. Sudo usermod -a -G www-data magento\_user
2. Check user group membership
   1. groups magento\_user
3. Download magento software using composer using following command
   1. composer create-project --repository=https://repo.magento.com/ magento/project-community-edition <install-directory-name>
4. set permission on magento installation directory
   1. find . –type f –exec chmod 644 {} \;
   2. find . –type d –exec chmod 755 {} \;
   3. find var generated vendor pub/static pub/media app/etc -type f -exec chmod g+w {} +
   4. find var generated vendor pub/static pub/media app/etc -type d -exec chmod g+ws {} +
   5. sudo chown -R :www-data .
   6. chmod u+x bin/magento

Make user to change the user & Group to vagrant in /etc/apache2/apache2.conf

**Step No.6 Install GIT , CURL and COMPOSER**

sudo apt-get install curl git

sudo curl -sS https://getcomposer.org/installer | php

sudo mv composer.phar /usr/local/bin/composer

**Step No. 7 Downlaod Magento**

Add vagrant user to www-data Group

usermod -a -G www-data vagrant

Restart Apache2 services

Service apache2 restart

Make sure in vagrant file /var/www/html/magento2 is map to host directory

Make sure username & Group are changed to vagrant , vagrant in

/etc/apache2/apache2.conf

Get the megento software using composer

issue below command from /var/www/html/magento2 directory using

vagrant user

composer create-project --repository=https://repo.magento.com/ magento/project-community-edition**=version** .

this will request you to enter username & password

login to <https://marketplace.magento.com/customer/account/> and click access keys 🡪 copy paste the username & password

Setup ownership & permission for shared group

cd <your Magento install dir>

find var generated vendor pub/static pub/media app/etc -type f -exec chmod g+w {} +

find var generated vendor pub/static pub/media app/etc -type d -exec chmod g+ws {} +

sudo chown -R :www-data .

chmod u+x bin/magento

Gulf Standard Time (Asia/Dubai)

TRY

Go to /var/www/html/magento2 and run the below commands

find . –type f –exec chmod 644 {} \;

find . –type d –exec chmod 755 {} \;

**Step No. 8 Installing Sample Data in Magento**

Run the belwo command from installation directory (/var/www/html)

php bin/magento sampledata:deploy

php bin/magento setup:upgrade

php bin/magento cache:flush

php bin/magento setup:static-content:deploy -f

make sure RAM for VM is 3 or more GB

**Step No. 9 Run Magento Installation wizard**

now open browser and enter 192.168.20.20/magento2 and press enter

Follow the wizard to install magneto

**Step No. 10 Additional setup**

Creating a file in /etc/apache2/sites-available with name magento-dev.local.conf

Enter the following code in it

<VirtualHost \*:80>

# ServerName (domain) and admin email

ServerAdmin webmaster@magento-dev.local

ServerName magento-dev.local

DocumentRoot /var/www/magento-dev.local/public

# above folder of the site, we have to create this folder

# log file locations

LogLevel warn

ErrorLog /var/log/apache2/magento-dev.error.log

CustomLog /var/log/apache2/magento-dev.access.log combined

</VirtualHost>

enable the new virutalhost

from sites-availble folder location, enter following command to enable the site

sudo a2ensite magento-dev.local.conf

and to disable the default

sudo a2dissite 000-default.conf

restart the apache2 service and test the site.

Run the following command

Sudo chown –R www-data:www-data /var/www/magento-dev.local/

Step No. 6

Installing magento with sample data

Download magento 2 from magento website and extract the code to public folder in /var/www/magento-dev.local/public

Github [rizwanwakil2018@gmail.com](mailto:rizwanwakil2018@gmail.com)

sPersonal access tokens

33ce6daa8c0749a835389d7725fb356d083fc38a

**Store Setup & Configurations**

**Entering Company Information**

Login to admin 🡪 click Stores 🡪 click Configuration 🡪 click General tab 🡪 click general 🡪

country option 🡪 select default United Arab Emirates 🡪 select allow United Arab Emirates 🡪 Locale Options 🡪 select timezone (Gulf standard Time (Asia/Dubai) 🡪 Select Locale English United States 🡪 Weight Unit (Kgs) 🡪Store Information (Enter the name & other details )

click General tab 🡪 click web 🡪 click Base Urls & Base Urls (secure)🡪 Enter the site url 🡪

make sure putting / at end of url.

click General tab 🡪 click Currency 🡪 select Base , Default and Allowed Current to United Arab

Emirates Dirham.

click General tab 🡪 click Store Email Addresses 🡪 Enter in Sender Name (Eye Glassess Online

Customer Care ) 🡪 Enter Email address [sales@eyeglassesonline.com](mailto:sales@eyeglassesonline.com) 🡪

click General tab 🡪 click contacts 🡪 Enter Email Address and Other info

Leave the other tab in General as it as.

Login to admin 🡪 click Stores 🡪 click Configuration 🡪 click Catalog tab 🡪 Click Catalog 🡪 click store front 🡪 use flat catalog product (yes) 🡪 Change Product alert for product comes back in store (yes) 🡪 Search Engine Optimization 🡪 use Canonical link meta tag for products (yes) 🡪

Click catalog 🡪 inventory 🡪 display out of stock product (yes ) 🡪 set only x left threshold (2) 🡪

Login to admin 🡪 click Stores 🡪 click Configuration 🡪 click Sales tab 🡪 Click Sales 🡪 Invoice and Packing Slip Desgin 🡪 Upload Logo 🡪 Enter Address 🡪

**Entering Terms & Conditions**

Login to admin 🡪 click Stores 🡪 click terms & conditions 🡪 click add terms & condition 🡪 give name (agreements) 🡪 Status Enable 🡪 Show content as (Text ) 🡪 applied (Manually) 🡪 Store View (All Stores ) 🡪 Checkboxk Text (I Agreed) 🡪 Enter the Term & Condition Body

**Setup Tax Rules**

Login to admin 🡪 click Stores 🡪 click tax zones & rates 🡪 click add tax rules 🡪 give name UK 🡪 zip code (\*) 🡪 Counter (United Arab Emirates) 🡪 Rate % (5) 🡪 click save 🡪 repeate the process for Dubai

Login to admin 🡪 click Stores 🡪 click Tax Rules 🡪 click add 🡪 give name 🡪 tax rates select UK 🡪 Save

Creating XML Site Map

Login to admin 🡪 click Stores 🡪 click Configuration 🡪 click Catalog tab 🡪 XML site map --

Click generation setting (yes ) 🡪 now click marketing 🡪 click site map 🡪 click add 🡪 give name (sitemap.xml) 🡪 path enter (/sitemap/) 🡪 before saving make sure a directory with name sitemap is created at root of webserver with permission 770 and group (www-data) 🡪 save

**Changing Logo and Footer**

Logo Changing

Login to admin 🡪 click content 🡪 click Configuration 🡪 click edit 🡪 click header 🡪 upload logo

Footer Changing

Login to admin 🡪 click content 🡪 click Configuration 🡪 click edit 🡪 click Footer 🡪 change it accordingly.

**Changing home page layout**

Login to admin 🡪 click content 🡪 click pages 🡪 Select Home Pages🡪 click edit 🡪 change it to one column in design tab

**Creating Category & Sub Category**

Login to admin 🡪 click Catalog 🡪 click Categories 🡪 Select default category

🡪 Click add sub Category 🡪 finish all Category and sub category 🡪 this also work as menu bar for site.

**Add / Creating Sample Products**

Login to admin 🡪 click Catalog 🡪 click Products 🡪 click add product 🡪 from

drop down select simple product 🡪 Give Product name , Price , SKU, Images etc

**How to create static banner on home page**

Login to admin 🡪 click content 🡪 click Block 🡪 create new 🡪 Static Bannar

name 🡪 click insert image 🡪 save block

To Display block on home page 🡪 we need to create widgets 🡪 Login to admin 🡪

click content 🡪 click widgets 🡪 select static block 🡪 select the location as

home page. 🡪 if banner is not display clear the cache

if we don’t want this block then delete the block and the widget both.

**How to create Slidder on Home Page**

Download Slidder Extension from magento marketplace 🡪 login to marketplace and

search for banner 🡪 make sure it’s compatible with your magento version 🡪 add to cart and check out 🡪 click install 🡪 this will give you access key 🡪 go to admin in magento 🡪 click System 🡪 click web setup wizard 🡪 click extension manager 🡪 enter the access key 🡪 follow the wizard

Configure the extension from admin

Download bestseller extension and configure to display best selling item on

home page.

How to create static Promotional bannar block on home page

After cloning the repository

php bin/magento setup:db-schema:upgrade

php bin/magento setup:db-data:upgrade

php bin/magento cache:clean

php bin/magento admin:user:create

php bin/magento setup:static-content:deploy –f

git reset --hard to discard the local change on production server

git pull to pull the latest modification