9340B: GROUP 4

CONTENT MANAGEMENT SYSTEM

INSTALLATION MANUAL

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INTRODUCTION

This document intends to instruct how to install and set-up the Joomla! Content Management System on the Ubuntu Server 16.04 Operating System.

PREREQUISITES

The following items will be needed for the installation of the Joomla! Content Management System:

- Ubuntu Server 16.04 Operating System
- Hardware Specifications:
  - Processor – 300 MHz x86 Architecture
  - System Memory – 256 MB
  - Disk Space – 1.5 GB
  - Display – Monitor or Graphics Card capable of 640x480 resolution
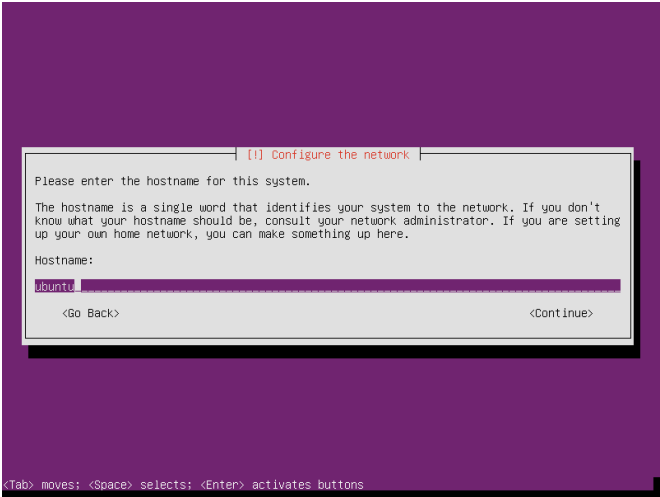- Internet Connection

INSTRUCTIONS

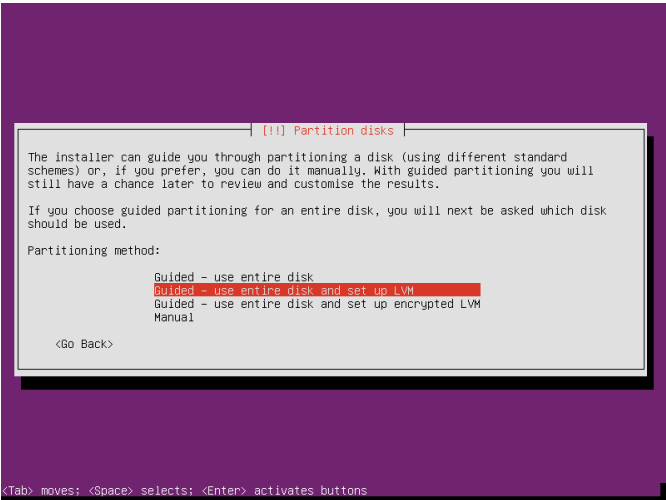I. Operating System Installation and Configuration
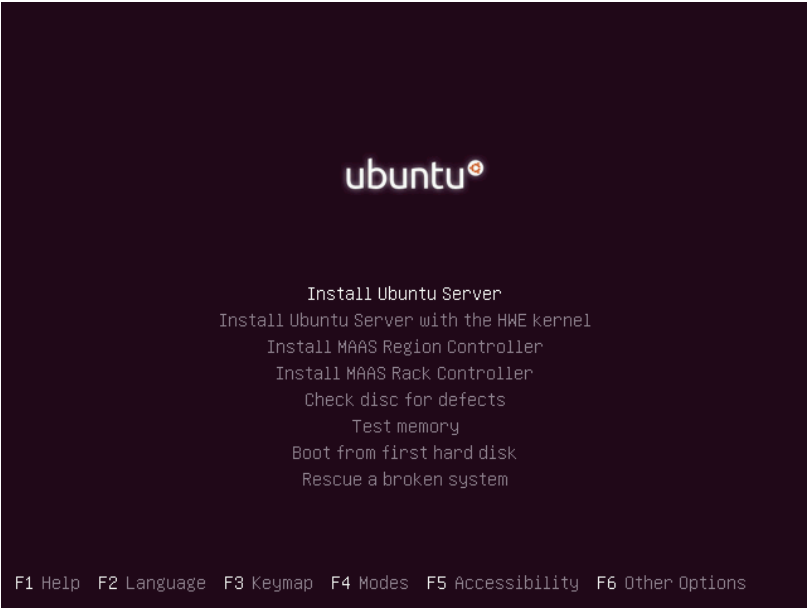
Initiate the installation of the operating system and select the desired system language, time zone, and keyboard configuration.
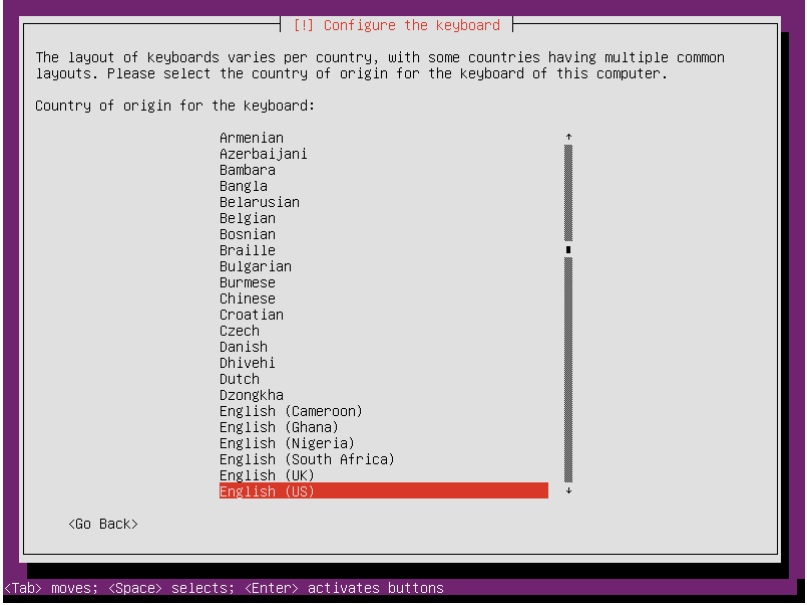
On the next prompt, input the desired system host name, user's full name, user name as well as the password. Do not encrypt the home directory when asked.
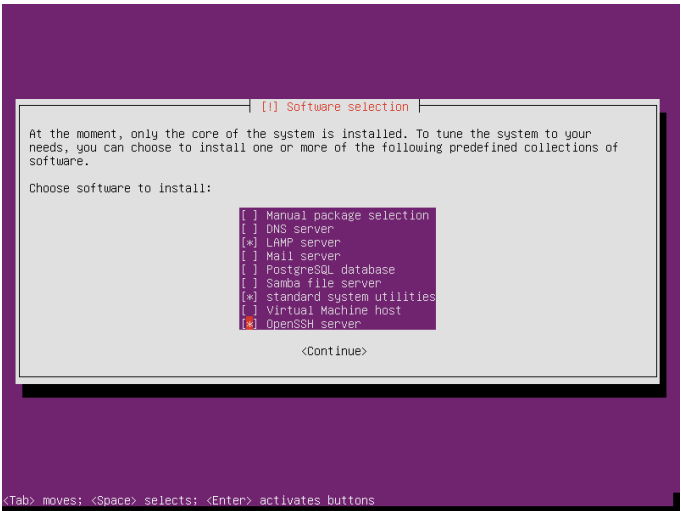
```
┤ [!] Configure the network ├

Please enter the hostname for this system.

The hostname is a single word that identifies your system to the network. If you don't
know what your hostname should be, consult your network administrator. If you are setting
up your own home network, you can make something up here.

Hostname:

ubuntu_____

      <Go Back>                                              <Continue>
```

`<Tab> moves; <Space> selects; <Enter> activates buttons`

The next prompt will ask if which type of disk installation will be taken, select *"Guided use entire disk and set-up LVM"* option and on the next prompt select *"Write changes to disk and configure LVM"*. The amount of disk space to be used will be asked on the next page. Specify the desired amount to be used but according to hardware specifications. Leave the HTTP proxy information blank.

```
┤ [!!] Partition disks ├

The installer can guide you through partitioning a disk (using different standard
schemes) or, if you prefer, you can do it manually. With guided partitioning you will
still have a chance later to review and customise the results.

If you choose guided partitioning for an entire disk, you will next be asked which disk
should be used.

Partitioning method:

         Guided - use entire disk
         Guided - use entire disk and set up LVM
         Guided - use entire disk and set up encrypted LVM
         Manual

     <Go Back>
```

`<Tab> moves; <Space> selects; <Enter> activates buttons`

On the next prompt, select the first option which is *"No Automatic Updates"* to defer automatic updates on system startup.

The next prompt will show the options to install additional software. Select LAMP server, standard system utilities, and OpenSSH server. The software selected will be needed in running and serving the Joomla! CMS.

```
┤ [!] Software selection ├

At the moment, only the core of the system is installed. To tune the system to your
needs, you can choose to install one or more of the following predefined collections of
software.

Choose software to install:

              [ ] Manual package selection
              [ ] DNS server
              [*] LAMP server
              [ ] Mail server
              [ ] PostgreSQL database
              [ ] Samba file server
              [*] standard system utilities
              [ ] Virtual Machine host
              [*] OpenSSH server

                        <Continue>
```

`<Tab> moves; <Space> selects; <Enter> activates buttons`

Input a new password for the MySQL root user when prompted before continuing the installation.
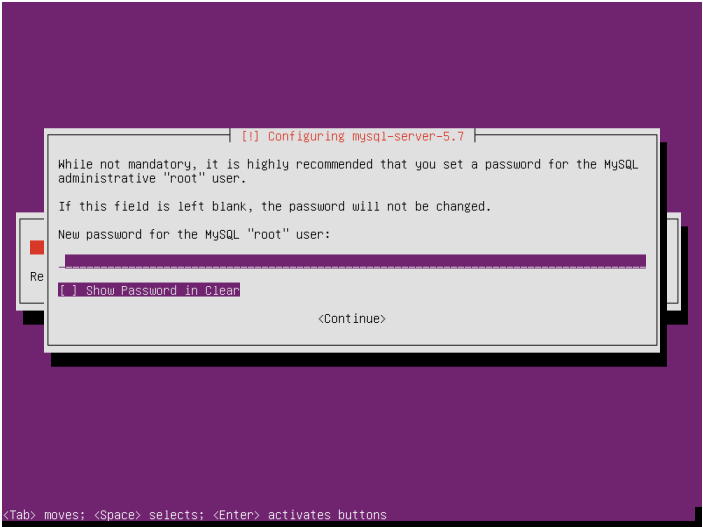
In the next prompt, select *"Yes"* to install the GRUB boot loader in order for the operating system to boot up without problems.
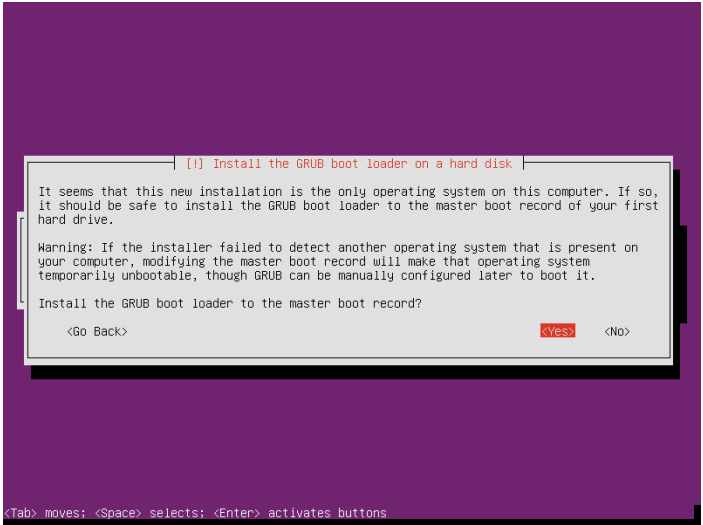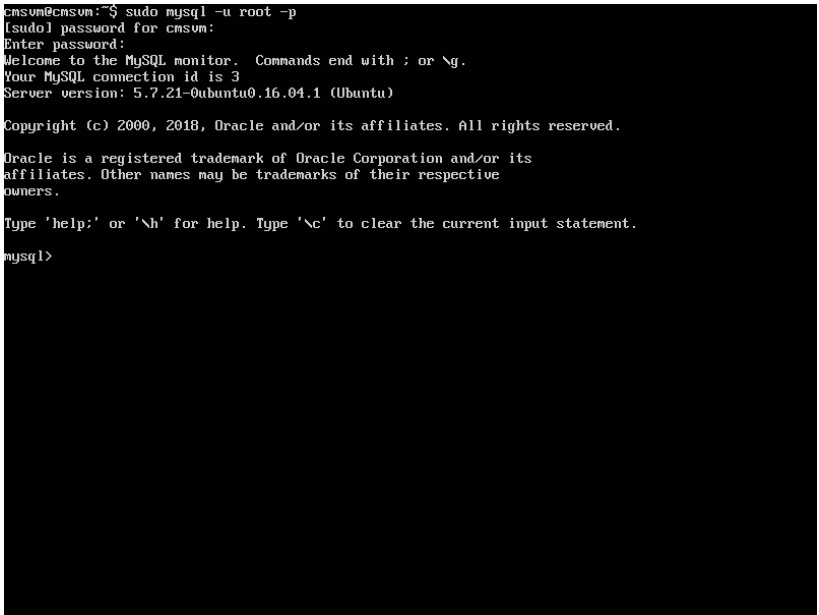

The operating system can now be started after installation.
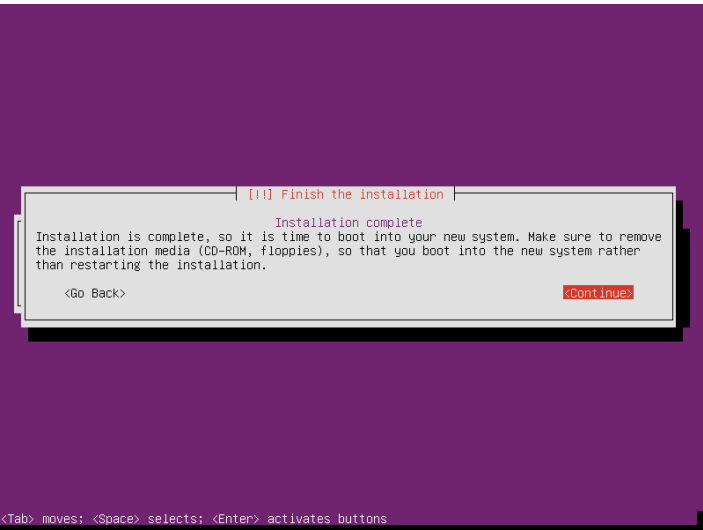
II. Database Set-Up with MySQL

To start setting up and configuring the database, enter the command:

```
sudo mysql -u root -p
```



This will bring you to the MySQL terminal. Create a database by entering the command:

```
CREATE DATABASE databasename;
```

After creating the database, input the following command:

```
GRANT  ALL  ON  databasename.*  TO  'username'@'localhost'
IDENTIFIED BY 'password';
```

Entering the command will simultaneously create a new user along with a corresponding password, as well as grant the created user full access to the database specified.

Input the command `FLUSH  PRIVILEGES;` then `exit` to close the MySQL terminal.
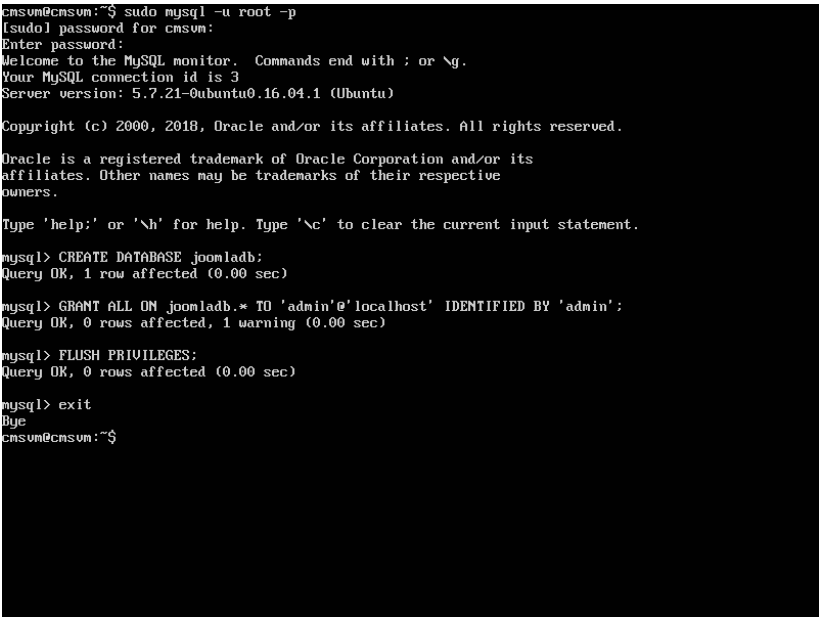
III. PHP Additional Extensions and Configuration

The Joomla! CMS will need additional extensions in order for some of its functions to work properly. These extensions can be installed by running the following command:

```
sudo apt-get install php libapache2-mod-php php-mysql php-
curl php-gd php-pear php-imagick php-imap php-mcrypt php-
pspell php-tidy php-xmlrpc php-xml
```
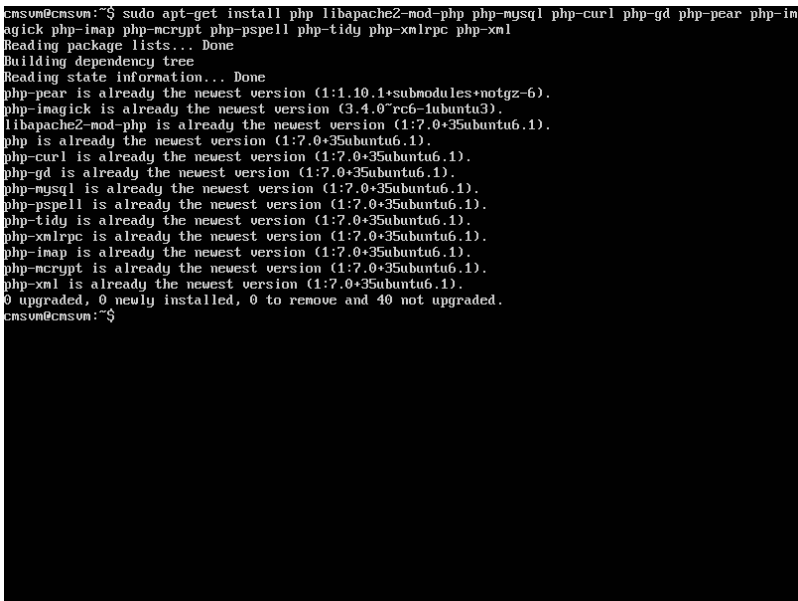

After installing the additional extensions for PHP, navigate to /etc/php/7.0/apache2 and open the php.ini file. Look for the following lines and make the following changes:

```
file_uploads = On
allow_url_fopen = On
memory_limit = 256M
upload_max_file_size = 64M
max_execution_time = 360
date.timezone = Country/City
```
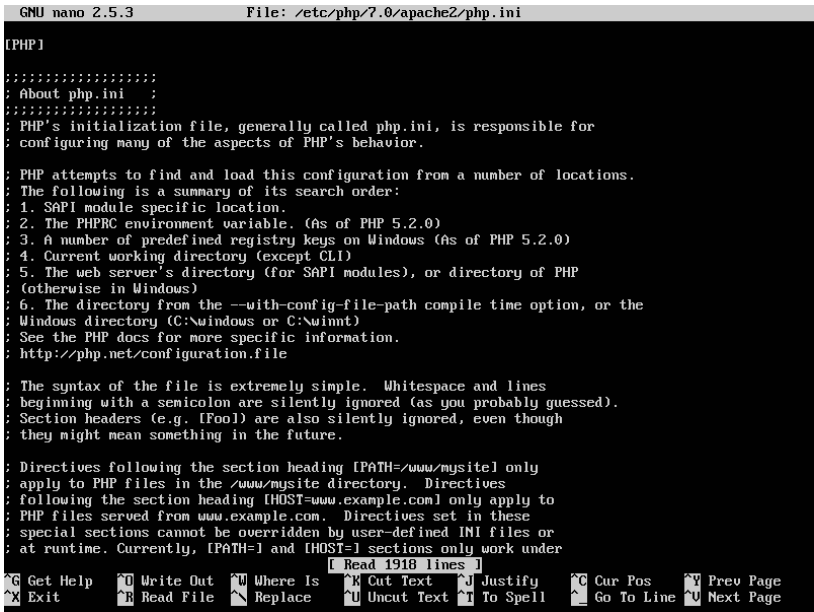
IV.   Web-Server Configuration

Navigate to the Apache virtual host directory and add the following lines:

```
ServerName domainname.com
ServerAlias www.domainname.com
```


This will add a domain name to the Content Management System when it is being served.

V.   Joomla! Web-Server Installation

Navigate to the document root and delete the file index.html. Download the Joomla! 3.8.6 full package in the directory by executing the following command:

```
sudo wget http://downloads.joomla.org/cms/joomla3/3-8-6/Joomla_3-8-6-Stable-Full_Package.zip
```
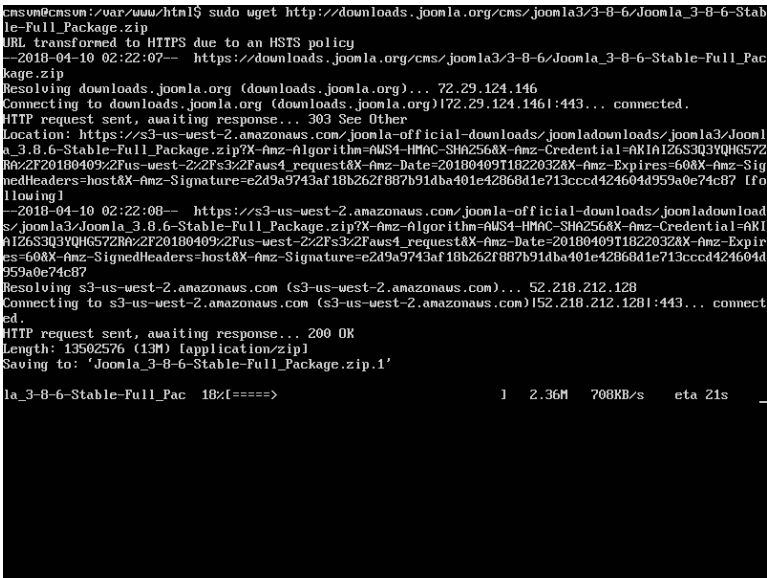
The download will give an archive file which can be extracted using unzip. To install unzip run the following command:

```
sudo apt-get install unzip
```

Extract the Joomla! archive file by running the command:

```
sudo unzip Joomla_3-8-6-Stable-Full_Package.zip
```


Joomla! is now installed on the web server but the website is not yet permitted to be accessed by users. User access can be granted by modifying permissions which can be done by running the following commands:

```
sudo chown -R www-data:www-data /var/www/html
sudo chown -R www-data:www-data /var/www
sudo chmod -R 755 /var/www/html
sudo chmod -R 755 /var/www
```

Apache HTTP Server needs to be restarted in order to load all configuration and changes made. The website that is served by the Joomla CMS can be viewed by entering the web-server's IP address on the address bar of a web browser.

VI.   Joomla! Website Set-Up

The Joomla! website set-up page should be displayed on the browser when all configuration and installation is done correctly.

Enter the desired information being asked on the Main Configuration page.

On the next page which is the Database Configuration page, enter the databases name as well as the username and password that was registered in the MySQL database during a previous section of this guide.

All information entered on the previous set-up pages can be reviewed and finalized on the Overview page.

The successful setup page will be displayed after going through with the finalization and overview of the configuration made. The success page gives the options to install languages and the removal of the installation folder. To view the site immediately, click on the "Site" button on the bottom of the page. To enter the administrator's panel, click on the "Administrator" button which is also at the bottom of the page.