



CYBERROOKIE

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# CyberRookie Project - Learning Cyber Skills By Building A HomeLab

Trevor Shi

# Week 5 Lesson - Linux Server/Web Server

## Overview

1. Linux
2. LAMP Stack
3. Domain Name
4. SSL Certificate
5. LAB Practice
6. Hardening

# Linux System

## 1. What is the Linux

<https://www.linux.com/what-is-linux/>

## 2. Linux Online Free Course

### Beginner:

EDX Course: Introduction to Linux

<https://learning.edx.org/course/course-v1:LinuxFoundationX+LFS101x+1T2020/home>

### Intermediate:

CISCO Course: Nearly Every IT Job Requires Some Linux Knowledge

<https://www.netacad.com/courses/os-it/ndg-linux-essentials>

## 3. Online practice Course

Linux Journey: <https://linuxjourney.com/>

# LAMP Stack

## 1. What is LAMP Stack?

<https://phoenixnap.com/kb/what-is-a-lamp-stack#:~:text=The%20widely%20popular%20LAMP%20stack,Linu x%20Operating%20System>

<https://www.ibm.com/cloud/learn/lamp-stack-explained>

## 2. How to install the LAMP Stack on Ubuntu?

<https://www.digitalocean.com/community/tutorials/how-to-install-linux-apache-mysql-php-lamp-stack-ubuntu-18-04>

## Domain Name

### 1. What is the domain name?

Web Terms 101: <https://domains.google/learn/web-terms-101/>

Domain Name: [https://en.wikipedia.org/wiki/Domain\\_name](https://en.wikipedia.org/wiki/Domain_name)

### 2. Where to register the free domain name?

Freenom: <https://www.freenom.com/en/index.html?lang=en>

## Web SSL Certificate

### 1. What is the SSL Certificate?

<https://blog.hubspot.com/marketing/what-is-ssl>

### 2. Where to register the free SSL Certificate?

Letsencrypt: <https://letsencrypt.org/>

### 3. How to install SSL Certificate on your WordPress Site?

<https://askwpgirl.com/install-ssl-wordpress/>

<https://www.wpbeginner.com/wp-tutorials/how-to-add-ssl-and-https-in-wordpress/>



## LAB Practice

### #1 Deploy Ubuntu to EXSi DMZ Area

1. Download Ubuntu Desktop Version  
<https://ubuntu.com/download/desktop>
2. Deploy Ubuntu into ESXi DMZ vlan
3. Create PfSense Firewall DMZ Rule
  - Allow traffic from Internet to DMZ
  - Allow traffic from Management IP to DMZ
  - Deny the traffic from DMZ to all internal Area



## LAB Practice

### #2 Deploy LAMP stack on Ubuntu

1. Deploy Apache Web Server on Ubuntu
2. Deploy MySQL database on Ubuntu
3. Deploy PHP on Ubuntu



## LAB Practice

### #3 Install WordPress into LAMP Stack On Ubuntu

Resource:

<https://www.digitalocean.com/community/tutorials/how-to-install-wordpress-with-lamp-on-ubuntu-18-04>

## LAB Practice

### #4 Point Web domain to your web server

1. Register the free web domain from Freenom
2. Add A record point to your public IP on Freenom
3. Add Pfsense Port forwarding rule to map the public IP to Web server IP
4. Add Port forwarding rule on Internet provider modem if the PfSense is on internal network



## LAB Practice

### #5 Add SSL certificate to protect your web server

Resource:

<https://www.wpbeginner.com/wp-tutorials/how-to-add-ssl-and-https-in-wordpress/>

## Hardening

CIS\_Apache\_Tomcat\_9\_Benchmark\_v1.1.0

CIS\_Oracle\_MySQL\_Community\_Server\_5.7\_Benchmark\_v1.0.0

CIS\_Ubuntu\_Linux\_20.04\_LTS\_Benchmark\_v1.1.0

## Homework Requirements

1. Complete Linux online practice course
2. Complete the LAB practice to set up the LAMP web server
3. Hardening Ubuntu Linux/Web Server based on CIS Benchmark

# Q&A

**Look forward to your feedbacks and suggestions.  
Contact: [CyberRookieProject@gmail.com](mailto:CyberRookieProject@gmail.com)**





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# Thank You