

NGINX Web Server Administration

Duration: 4 Days

Prerequisites for this course: Basic Linux Commands Knowledge

Hands-On Format: This hands-on class is approximately 80/20 lab to lecture ratio, combining engaging lecture, demos, group activities and discussions with comprehensive machine-based practical programming labs and project work.

Module 1 – Introduction to NGINX and Installation

What is NGINX
What is HTTP and How Does it work?
NGINX vs Apache
Installing NGINX on Centos 7
Install NGINX from Source

Module 2 – NGINX as a Web Server

Understanding the NGINX Architecture
Understanding the Default NGINX Configuration
Simple Virtual Hosts and Serving Static Content
Handling Error Pages
Access Control with HTTP Basic Auth
Generating Self-Signed Certificates
Configuring the Host for SSL_TLS_HTTPS
Redirecting All Traffic to HTTPS
MIME Types
Overview of NGINX Modules
Adding Functionality to NGINX with Dynamic Modules

Module 3 – Reverse Proxy

Introduction to Reverse Proxy
Configuring NGINX as a Reverse Proxy
X-Real-IP
FastCGI Proxy for PHP_WORDPRESS with fastcgi_parameter
Deploying a uWSGI application
Proxying to uWSGI Python Web Application with uwsgi_pass
Simple Caching for Static Content

Module 4 – Load Balancing

Introduction to Load Balancing
Simple Load Balancer
Health Checks in Load Balancer
Understanding Passive Health Check
Parameter Configurations in Passive Health Checks
Active vs Passive Health Checks
Server Weights

Module 5 – The Caching Subsystem

Introduction to HTTP Caching
Understanding the HTTP Cache Control Headers
Cache Control Headers no-store
If-Modified-Since Header

Module 6 – Logging

Understanding of NGINX Logging
Configuring Custom Logging

Module 7 – Advanced NGINX Security

Improving SSL Configuration
Introduction to Web Application Firewall
Introduction to NAXSI
Installing and Configuring NAXSI
NAXSI- Custom Messages on Rule Matching Patterns

Module 8 – Compression

HTTP Compression
Accept Content Encoding
GZIP Compression for NGINX