SpiralTrain
developer courses

Nginx Administration

Audience Course Nginx Administration
The course Nginx Administration is intended for system administrators and web developers who need to manage and configure the Nginx server and install applications on it.

Prerequisites Courses Nginx
Participants must have basic computer skills, such as surfing the web and approaching the file system. Knowledge of web applications and other web servers is beneficial for a good understanding.

Realization Training Nginx
The theory is treated on the basis of presentations. The concepts are explained with demos. The theory is interspersed with exercises.
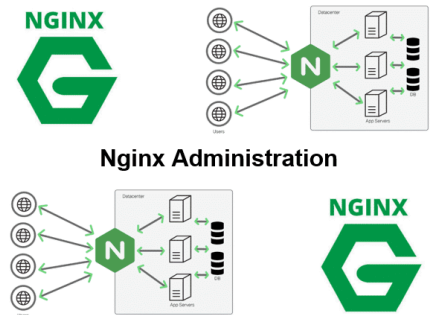
Certificate Nginx Administration
Attendants receive a certificate of participation in Nginx Administration after successful completion of the course.

Duration: 2 days   **Price: € 1499**

Open Schedule

Nginx Administration

Content Course Nginx Administration

In the course Nginx Administration, participants learn to manage and control the Nginx web server. Nginx is an open source web server that can also be used as a proxy server, load balancer, mail proxy and HTTP cache. Nginx is one of the most used web servers and stands out for its good performance and limited memory usage. Nginx is available for various operating systems including Linux, Windows and Mac.

Nginx Intro
The Nginx Administration course deals with the management of the Nginx web server. In the first place the modular architecture of Nginx is discussed and how other modules can be activated in addition to the base modules. The various installation options of Nginx are treated as well.

Nginx Configuration
Next the configuration of Nginx is explained with the various configuration directives and configuration files. Attention is paid to the configuration of logging, virtual hosting, setting up error pages and the configuration of routing and URL rewriting.

Nginx as Reverse Proxy
The course also explains how to configure Nginx as a reverse proxy, where the reverse proxy forwards the original client request to the correct backend server. Redirects and Web Socket connections are also treated. And also the monitoring of Nginx is discussed.

Load Balancing
Another topic in the course is how a cluster with different Nginx instances can be configured and how traffic can be forwarded to underlying Nginx applications by means of load balancing.

Caching
Nginx has many options for caching with which major performance improvements can be realized. The various caching configurations are discussed with scalable content caching, caching zones, caching hash key and Vary header.

Security
Finally the course ends with a discussion of the security configuration in Nginx. Access control with Basic Authentication and JSON Web Tokens, encryption and the use of ModSecurity are treated.

Modules Course Nginx Administration

Module 1 : Nginx Intro	Module 2 : Nginx Configuration	Module 3 : Nginx as Reverse Proxy
What is Nginx?	Configuration directives	Proxy connections
Nginx Architecture	Organization and inclusions	Nginx as reverse proxy
Nginx Benefits	Customize Logging	Nginx and Apache
Nginx installation	The HTTP Server	Supported upstream protocols
Install Nginx from binary	Routing and Maps	Configuring Apache and Nginx
Install Nginx from source	Mail server proxy	Nginx proxy module
Enabling modules	Setting up virtual hosts	Note on variables
Base modules	Configuring locations	Issuing redirects
Serve static content	Location lookup order	Proxying Websocket Connections
Nginx as system service	Setting up error pages	Separating content
Upgrading Nginx	Use Variables in Rewrites	X-Accel-* headers
Module 4 : Monitoring and Logging	**Module 5 : Load Balancing**	**Module 6 : Caching**
Access log Files	HTTP Load Balancing	NGINX HA Mode
Error log Files	TCP Load Balancing	The Vary: header
Log Levels	Load-Balancing Methods	Keep-alives
Specifying custom log format	Connection Limiting	Scalable Content Caching
Tracking slow requests	Clustering Types	Caching Zones
Optimizing logging	Horizonal Clustering	Caching Hash Keys
Log rotation	Vertical Clustering	Cache Bypass and Cache Performance
Log analysis by external programs	Session Persistence	Purging
Monitoring Nginx	Sticky Cookie	Sophisticated Media Streaming
Traffic Monitoring	Sticky Learn	Bandwidth Limits
Nginx stub status page	Sticky Routing	Seamless Reload
Alerts from Nginx	Connection Draining	TCP and HTTP Health Checks

Module 7 : Security
Controlling Access
Access on IP Address
Allowing CORS
Limiting Connections
Limiting Rate and Bandwidth
Client-Side Encryption
HTTP Basic Authentication
Secure Links and Locations
API Authentication Using JWT
Creating JSON Web Keys
Single Sign-On (SSO)
ModSecurity Firewall
HTTPS Redirects