Apache Administration

Audience Apache Administration Course
The course Apache Administration is intended for system administrators or developers on Unix, Linux or Windows who should learn how to administer and control the newest version of the Apache Web Server.

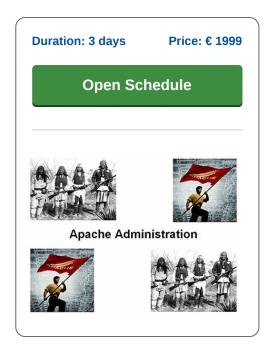### Prerequisites Course Apache Administration
Knowledge of modern operating systems like Unix, Linux or Windows, in particular knowing how to deal with the file system, is desirable.

Realization Training Apache Administration
The theory is covered using presentation slides. The concepts are further explained using demos. The theory is alternated with exercises.

Certification Apache Administration
Attendants receive a certificate of participation in Apache Administration after successful completion of the course.

Duration: 3 days   **Price: € 1999**

Open Schedule

Apache Administration

Content Course Apache Administration

In the course Apache Administration, participants learn to manage and monitor the latest version of the Apache Web Server. Apache is a widely used open source web server available on Windows, Linux and Mac systems. Apache is often used to host PHP applications, but other languages are also possible. Participants learn how to install and configure websites and applications on Apache.

Apache Configuration
The course Apache Administration starts with an explanation of the structure of the central configuration file, httpd.conf and the most important directives in it.

Apache Architecture
Next attention is payed to the architecture of Apache, in particular the way modules, filters and handlers cooperate. Virtual Hosting is discussed and the different varieties of it that exist.

Log Configuration
Also logging is treated in particular the handling and structure of log files. Web Application Security is covered with HTTP Authentication and the configuration of SSL.

Apache Security
And also securing the Apache Web Server itself and the use of mod_security to protect against common attacks like Cross Site Scripting and SQL Injection is on the course schedule. Attention is further payed to the way filters and handlers hook into the request processing cyclus and how they can be configured.

URL Rewriting
And also the manipulation of URL's with the powerful mod_rewrite module is covered. Other topics are the configuration of a Proxy Server with mod_proxy and how to integrate with the Tomcat Web Server for dynamic Java Web Applications.

Apache Performance
The measurement and improvement of the performance of applications through techniques like load balancing and caching is part of the course program as well. In the course attention is payed to both Apache under Linux as under Windows.

Modules Course Apache Administration

Module 1 : Intro Apache	Module 2 : Apache Configuration	Module 3 : Apache Architecture
Apache Web Server	Apache Configuration Files	Apache Architecture Overview
What is the ASF?	Server Configuration Directives	Two Phase Operation
Apache Name and Marketshare	Core Configuration Directives	Apache Portable Runtime
Apache Installation	Authentication Directives	Multi Processing Module (MPM)
Apache Directory Structure	Authorization Directives	Modules
Apache Directories	Three Pass Access Control	Important Apache Modules
Starting Apache	Logging Directives	Two Phase Operation
Uniform Resource Locators (URL's)	Performance Related Directives	Content Generation
Domain Name Service (DNS)	Directive Containers	Request Processing Phases
Static HTML pages	Conditional Containers	Processing Hooks
Styling with CSS	.htaccess Files	Apache Filters
Dynamic Content Generation	AllowOverride Directive	Apache Handlers

Module 4 : Virtual Hosting	Module 5 : Logging	Module 6 : Web Application Security
Processing of Configuration Files	Log File Types	HTTP Basic Authentication
Configuration Contexts	Error Logs	Configuring Authentication
Virtual Hosting	Log Levels	Managing Access Files
Virtual Host Directives	Access Logs	Creating Passwords
Name-based Virtual Hosts	Common Log Format	Secure Sockets Layer (SSL)
Host File Name-based Virtual Hosting	Defining Custom Logs	SSL Encryption Types
IP-based Virtual Hosts	Log File Rotation	Asymmetric Encryption
Host File IP-based Virtual Hosting	Piped logs	Symmetric Encryption
Multiple IP Addresses per NIC	Log File Analyzers	Hash Encryption
Port-based Virtual Hosts	Server Log Reporting	SSL Certificates

Module 7 : Hardening Apache	Module 8 : Mod Security	Module 9 : Handlers and Filters
Update Apache	Firewall Limitations	What are Filters?
Enable Logging	Common Exploits	Standard Apache Filters
HTTP Request Methods	Protection Measures	Simple Filtering
Using SSL	Intrusion Detection Systems	Dynamic Filtering
Set HTTP Limits	Web Application Firewalls	What are Apache Handlers?
Change Default User	Evasion Issues	Built-in Handlers
Block Directory Access	What is ModSecurity?	Server-Info
Disable Directory Listing	ModSecurity Features	Server-Status
Hide Server Details	Rule Examples	Why mod_rewrite ?
Hide Etag Header	Rule Syntax	Rewrite Flags Flow Control
Disable .htaccess Override	Core Rule Set	Rewriting versus Redirection
Web Application Firewall	Default and Chained Actions	Transforming URLs
Install mod_evasive	Regular Expressions	Conditional Rewrites

Module 10 : Tomcat and Apache	Module 11 : Proxy with mod_proxy	Module 12 : Performance
What is Tomcat?	Forward Proxy	Performance Considerations
Tomcat Binary Distributions	Reverse Proxy / Gateway	Server Monitoring
Tomcat Zip Installation	mod_proxy Support	Web Server Log Files
Tomcat Directories	Proxy Modules And Related Modules	Logging and Performance
Server Configuration Files	Configuring a Forward Proxy	Load Testing
Other Configuration Files	Storage of Cached Pages	Operating System Tuning
Tomcat webapp's Directory	Configuring a Reverse Proxy	SSL Performance
Tomcat Apache Communication	Basic Reverse Proxy Config	Caching Dynamic Content
Tomcat Workers	mod_proxy_balancer	Vertical Scaling
Worker Properties	Proxying by Rewriting	Horizontal Scaling
Configuring AJP	Backend Optimisations	Load Balancing
Mounting Tomcat Sites	Access to the Proxy Server	Using mod_proxy