

## APACHE WEB SERVER ADMINISTRATION

### Course Description

Students will learn how to install, configure, and maintain a secure Apache web server. Use the Apache web server to setup single, multiple, and virtual sites. Apply the server to an Intranet application, serving corporate and users pages.

Course Length: 2 Days

Course Tuition: \$500 (US)

### Prerequisites

Students should be familiar with UNIX file systems, daemon installation, and general system maintenance, typically embodied by one (1) year of experience.

### Course Outline

- Introduction to Apache
  - A History
  - The Apache Software Foundation
  - Downloading Apache
  - Binary Download
  - Installing Apache
- Starting and Stopping Apache
  - Windows
  - Installing Apache as a Service
  - The apachectl Script
- The Apache Configuration Files
  - Apache Installation Directories
  - httpd.conf File
  - Configuration File Syntax
  - List of Directives
  - Configuration Sections
  - Example of a Section
  - Testing and Specifying a Config File
  - The Include Directive
  - The Options Directive
  - Example of the Options Directive
- The .htaccess File
- Directory Indexing
  - The DirectoryIndex Directive
  - The IndexOptions Directive
  - IndexOptions Example
  - Headers, Footers and More
- Performance Tuning
  - Speeding up Apache
  - ApacheBench
  - Ways of boosting Performance
  - Avoiding DNS Lookups
  - UNIX Symbolic Links Consideration
  - The AllowOverride Directive
  - Other Performance Increase Options
- Handlers and Filters
  - Overview of Handlers
  - Configuring Handlers
  - Defining Your Own Handler
  - The Section
  - Overview of Filters
- Working with Server-Side Includes
  - Overview of SSI
  - Configuring Apache to Run SSI

Overview of .htaccess Files  
Configuring for .htaccess in httpd.conf  
Creating a .htaccess file  
Authentication Example  
Creating a Password File  
Attention Getters  
• Virtual Hosts  
Overview of Virtual Hosts  
IP-Based Virtual Hosts  
Setting Up IP-Based Virtual Hosts  
Name-Based Virtual Hosts  
Name-based Virtual Host Example  
Port-Based Virtual Hosting  
Tips for Multiple Virtual Hosting  
• MIME and File Types  
Overview of MIME  
Headers  
Logging Header Information in Apache  
Configuring MIME Types  
File Encoding  
Configuring Character Sets and  
Languages  
Multiple File Extensions  
• URL Mapping  
The Alias and AliasMatch Directives  
The ScriptAlias Directive  
The Redirect and the RedirectMatch  
Directives  
The DocumentRoot Directive, Error  
Documents and more

Built-in SSI Directives  
The config Directive  
The echo Directive  
The exec and file Directives  
The include, printenv and set Directives  
Flow Control  
• Managing Scripts  
The mod\_perl Module  
Installing and Configuring mod\_perl  
Installing and configuring PHP  
• Security  
Security Policy Considerations  
UNIX File Permissions  
DirectoryIndex considerations and more  
Paranoid Configuration  
Authentication  
Secure Socket Layer (SSL)  
SSL and Apache  
• Modules  
Overview of Apache Modules