

## Apache Web Server Administration

### Course Summary

#### Description

This course covers the details of installing and configuring the most popular Web server on the planet: Apache's httpd server. Students will learn the details of the httpd.conf configuration file, using .htaccess files, virtual hosts, MIME and file types, URL mapping, directory indexing, performance tuning, handlers, filters, server-side includes, managing scripts, security and Apache modules.

#### Topics

- Introduction to Apache
- Starting and Stopping Apache
- The Apache Configuration Files
- The .htaccess File
- Virtual Hosts
- MIME and File Types
- URL Mapping
- Directory Indexing
- Performance Tuning
- Handlers and Filters
- SSI
- Managing Scripts
- Security
- Modules

#### Audience

This course is for Web Server administrators who need to be able to install, configure and run Apache httpd Web Server.

#### Prerequisites

There are no prerequisites for this course.

#### Duration

Two days

## Apache Web Server Administration

### Course Summary

- I. Introduction to Apache**
  - A. Understanding the Apache HTTP Server
  - B. A Brief History of Apache
  - C. The Apache Software Foundation
  - D. Downloading Apache
  - E. Run the Install Program
  - F. Test the Installation
- II. Starting and Stopping Apache**
  - A. Start/Stop the Server on Windows
  - B. The Apache Monitor
  - C. Install Apache as a Service
  - D. The apachectl Script
- III. The Apache Configuration Files**
  - A. The contents of the /conf directory
  - B. The httpd.conf file
  - C. Directives
  - D. Sections
  - E. The Include Directive
  - F. The Options Directive
  - G. The Installed Directories
  - H. The/conf Directory
- IV. The .htaccess File**
  - A. Overview of .htaccess files
  - B. Configuring .htaccess
  - C. The AllowOverride directive
  - D. Setting directory authentication
  - E. Allowing CGI scripts
  - F. Performance Issues
- V. Virtual Hosts**
  - A. Overview of Virtual Hosting
  - B. IP-Based Virtual Hosts
  - C. Name-based Virtual Hosts
  - D. Port-based Virtual Hosts
  - E. Bulk Virtual Hosting
- VI. MIME and File Types**
  - A. Overview of MIME Types
  - B. Configuring MIME Types
  - C. Encoding Files
  - D. Character Sets
  - E. Languages
- VII. URL Mapping**
  - A. The Alias Directive
  - B. The AliasMatch Directive
  - C. The ScriptAlias Directive
  - D. The Redirect Directive
  - E. The RedirectMatch Directive
  - F. The DocumentRoot Directive
  - G. Error Documents
  - H. The ErrorDocument Directive
- VIII. Directory Indexing**
  - A. The DirectoryIndex Directive
  - B. Generating Directory Indexes
  - C. The Default Directory Index
  - D. The IndexOptions Directive
  - E. Headers and Footers
  - F. Ignoring Files
  - G. Sorting
- IX. Performance Tuning**
  - A. Optimizing the Apache Web Server
  - B. The ApacheBench Utility Program
  - C. Tweaking the Apache Configuration
  - D. Example using ApacheBench
  - E. The HostnameLookups Directive
  - F. The FollowSymLinks Option
  - G. The AllowOverride Directive
  - H. Thread/Process Creation Settings
  - I. Proxy and Caching Options
- X. Handlers and Filters**
  - A. Overview of Handlers
  - B. Configuring Handlers
  - C. Defining Your Own Handler
  - D. The <Location> Section
  - E. The server-status Handler
  - F. Overview of Filters
  - G. Configuring Filters
  - H. Configuring Filters
- XI. SSI**
  - A. Overview of SSI
  - B. Configuring SSI
  - C. The INCLUDES Filter
  - D. The XBitHack Directive
  - E. The Built-in SSI Directives
  - F. The config Directive
  - G. The echo Directive
  - H. The exec Directive
  - I. File Directives
  - J. The include Directive
  - K. The printenv Directive
  - L. The set Directive
  - M. Flow Control

## Apache Web Server Administration

### Course Summary (cont'd)

#### **XII. Managing Scripts**

- A. Overview of scripting options
- B. The mod\_perl Module
- C. Installing mod\_perl
- D. Configuring mod\_perl
- E. Overview of PHP
- F. Installing PHP
- G. Configuring PHP with Apache

#### **XIII. Security**

- A. Common Security Issues with Apache
- B. Access Control
- C. Virtual Host Issues
- D. Dynamic Content Risks
- E. Authentication
- F. Steps for Basic Authentication
  - 1. Create a Password File
  - 2. Configure the password file
  - 3. Create a Group File
- G. Digest Authentication
- H. Database Authentication
- I. Access Control
- J. Overview of SSL
- K. Installing SSL on Apache
- L. Configuring SSL

#### **XIV. Modules**

- A. Overview of Apache Modules
- B. Installing a Module
- C. Build a Module into httpd
- D. Create a Shared Object (or DLL)
- E. The LoadModule Directive