

## **RH320 Red Hat Apache and Secure Web Server Administration**

### **Course Summary**

#### **Description**

The Red Hat Apache and Secure Web Server Administration course is for Linux - and/or UNIX - systems administrators who want to configure and maintain a secure Apache Web Server.

#### **Objectives**

At the end of this course, students will be able to:

- Configure and maintain an Apache web server running under Red Hat Linux
- Incorporate CGI handlers, SSL security, dynamic content, and customization via modules

#### **Topics**

- Introduction and Basic Apache Configuration:
- Apache Virtual Hosts:
- CGI and Server Side Includes:
- Database backends:
- Apache customization through modules:
- Security and authentication:
- Advanced Security with SSL:

#### **Audience**

This course is designed for Linux or UNIX system administrators who desire to obtain intensive hands-on training on configuration and management of an Apache Web Server.

#### **Prerequisites**

Certain prerequisite skills are required to enter the Red Hat Apache and Secure Web Server Administration course:

- RH253 Red Hat Linux Network Services and Security, or RH300 RHCE Rapid Track Course, or equivalent experience with UNIX or Linux
- Creating web pages using HTML
- Some experience with Perl or Python or shell scripting/programming is recommended but not required.

#### **Duration**

Four days

## **RH320 Red Hat Apache and Secure Web Server Administration**

### **Course Outline**

#### **I. Introduction and Basic Apache Configuration:**

- A. httpd overview: client/server topology, transactional overview
- B. History of web servers: NCSA, Apache evolution, The Apache Organization
- C. Apache today: usage, extensibility, process model, Red Hat's Apache packages
- D. Basic configuration: configuration files and options, basic daemon control

#### **II. Apache Virtual Hosts:**

- A. Understanding Virtual hosts: IP-based, name-based
- B. Configuration directives and syntax checking
- C. Using Apache to serve virtually hosted web servers
- D. Web server log files: formats, configuration, use and analysis
- E. Server MIME types

#### **III. CGI and Server Side Includes:**

- A. Understanding CGI: Definition, mechanics, limitations, common CGI languages
- B. Basic CGI requirements
- C. Useful CGI tasks: form processing, database manipulation, custom-built tasks
- D. SSI: similarities to CGI, .shtml implementation, Xbithack directive, examples
- E. CGI security: proper programming; suEXEC: file placement issues, configuration

#### **IV. Database backends:**

- A. Available Databases
- B. Postgres: installation, administration, creating and loading a table; pgaccess
- C. Query and insert with SQL
- D. Implementations of query and insert in CGI
- E. Perl CGI.pm; DBD/DBI.pm

#### **V. Apache customization through modules:**

- A. Concepts
- B. mod\_perl
- C. mod\_php
- D. mod\_status
- E. mod\_usertrack
- F. mod\_rewrite
- G. other modules

#### **VI. Security and authentication:**

- A. Basic access control by host/domain/network
- B. Apache security strategies
- C. Implementing Web-based password authentication
- D. Authentication scenarios

#### **VII. Advanced Security with SSL:**

- A. Basic Cryptography and SSL concepts
- B. SSL Certificates
- C. Obtaining a website certificate
- D. Implementing SSL with Apache