

Tomcat and Apache httpd

Objectives :

- install Java on RedHat/CentOs
- install Tomcat server on RedHat/CentOS
- configure Tomcat as a RedHat/CentOs user
- build and monitor database connection pools
- monitor Tomcat
- secure Java EE web application with Tomcat
- install Apache httpd server on RedHat / CentOS
- understand Apache configuration files (httpd.conf)
- run Tomcat behind Apache httpd
- set up and configure mod_jk
- build Tomcat clusters to ensure high availability
- set up Apache for SSL.

Duration : 5 days

Audience : web server administrators, softwares developers, webmasters

Prerequisites:

- to be familiar with the basic principles of server/systeme administration
- knowledge of XML basic rules
- prior experience with Java as an application server is helpful
- knowledge of HTTP protocol can be helpful
 - note that this concept is cover in the class

Pedagogical approach :

- presentation of concepts, follow by practical exercices (70%)

Training outline :

- Introduction
 - what does a web server do
 - a little HTTP : methods, status codes
 - overview of Java EE platform
 - overview of the features and fonctionnality provided by Tomcat
- Basic installation
 - installing Java
 - installing Tomcat
 - installing Apache
 - Tomcat installation directories
 - managing users for Apache and Tomcat
 - startup scripts
- Configuring Tomcat

- server.xml, web.xml, context.xml
- Servlet/JSP
 - overview
 - life-cycle
 - deploying a web application
- Tomcat Valves
 - AccessLog, FastCommonAccesLog, SingleSignOnValve, ...
- Connecting databases with Tomcat applications
- Security with Tomcat
 - file system security
 - authentication protocols
 - Realms, authentication, authorization
 - SSL
- Memory management and JMX monitoring
 - understanding JMX
 - using JMX and JConsole
 - developing its own JMX Bean
- Configuring Apache httpd
 - httpd.conf under Linux and Windows
 - directives
 - modules
 - logging
 - custom error pages
 - server and directory index pages
- Virtual host with Apache httpd
 - IP-Base virtual host
 - name-base virtual host
- Authentication whith Apache httpd
 - authentication protocol and directives
 - Order, Allow and Deny
 - how to use mod_auth_mysql
- Security with Apache
 - common security issues with Apache
 - certificates
 - overview of SSL
 - generate SSL certificates
 - configuring Apache for SSL
- Tomcat clusters with mod_jk and Apache httpd
 - configure httpd.conf for mod_jk
 - workers
 - lodbalancing
 - configuring an application to be distributable
 - setting and testing failover