Apache Web Server

- It can't be secured with the TCP wrappers since it doesn't support libwrap.a library of Linux.
- We can run two different Apache servers at one time on a Linux machine, but the condition for that is they should listen on different ports and we can change the ports with Listen directive of Apache.
- DocumentRoot in Apache means, it's the location of web files are stored in the server, the default DocumentRoot of Apache is /var/www/html or /var/www. This can be changed to anything, by setting up "DocumentRoot" in a virtual host of configuration file of domain.

Check Apache webserver version	**apache2 -v** **httpd -v**
Ports	By default Apache runs on http port 80 and https port 443 (for SSL certificate). You can also use netstat command to check ports. **netstat -antp | grep http**
Install Apache	**yum install httpd** **apt-get install apache2** Create new virtual directory in Apache2 1. If domain name is test, please create one host file called **test.conf** in below directory. **/etc/apache2/sites-available/test.conf** 2. Activate the host (test.conf) **sudo a2ensite test.conf** 3. Reload Appache2
Configuration directories	By default Apache configuration directories installed under **/etc/httpd/** on (RHEL/CentOS/Fedora) and /**etc/apache2** on (Debian/Ubuntu).
Change default Apache Port	To change the Apache default port, please open your Apache main configuration file **httpd.conf** or apache2.conf file with VI editor. **vi /etc/httpd/conf/httpd.conf** **vi /etc/apache2/apache2.conf** Save the file and restart the web server. **service httpd restart** **service apache2 restart**
To disable Directory listing when an index file is missing.	If the main index file is missing in the website root directory, then the Apache will lists all the contents like files and folder of the website on the browser instead of main website pages.

	To stop Apache directory listing, you can set the following rule in the main configuration file globally for a particular website. **<Directory /var/www/html>** **Options -Indexes** **</Directory>**
Log Files	The default log files of Apache Web Server are access log **"/var/log/httpd/access_log"** and error log **"/var/log/httpd/error_log"**. **access.log** – all request details with the status code **error.log** – capture all the errors within apache or connecting to the backend
Virtual Host in Apache	The Virtual Host section contains the information like Website name, Document root, Directory Index, Server Admin Email, ErrorLog File location etc. You are free to add as many directives you require for your domain, but the two minimal entries for a working website is the ServerName and DocumentRoot. We usually define our Virtual Host section at the bottom of httpd.conf file in Linux machines. <VirtualHost *:80> ServerAdmin webmaster@dummy-host.example.com DocumentRoot /www/docs/dummy-host.example.com ServerName dummy-host.example.com ErrorLog logs/dummy-host.example.com-error_log CustomLog logs/dummy-host.example.com-access_log common </VirtualHost> ▪ ServerAdmin: It's usually the email address of the website owner, where the error or notification can be sent. ▪ DocumentRoot: location where the web files are located in the server (Necessary). ▪ ServerName: It's the domain name which you want to access from your web browser (Necessary). ▪ ErrorLog: It's the location of the log file where all the domain related logs are being recorded.
What's the use of mod_ssl and how SSL works with Apache?	Mod_ssl package is an Apache module, which allows Apache to establish its connection and transfer all the data in a secure encrypted environment. With the help of SSL certificates, all the Login details and other important secret details get transferred in an encrypted manner over the Internet, which prevents our data from Eavesdropping and IP spoofing.
How SSL works with Apache	Whenever an https requests comes, these three steps Apache follows:

	▪ Apache generates its private key and converts that private key to .CSR file (Certificate signing request). ▪ Then Apache sends the .csr file to the CA (Certificate Authority). ▪ CA will take the .csr file and convert it to .crt (certificate) and will send that .crt file back to Apache to secure and complete the https connection request.
Difference between Apache Web Server and Apache Tomcat.	Apache Web is HTTP server to serve static contents where Tomcat is servlet container to deploy JSP files.