

Assignment 1:

Deploy multiple sites using apache2 server. Both sites must be accessible concurrently using IP address or site name.

Note:

- Before following the below steps, we need to install Apache2. I am installing on ubuntu.
- I have downloaded free web templates for this implementation.

Step 1 :

Create directories inside /var/www/ to deploy your websites.

```
sandeep@sandeep-VirtualBox:/var/www$ pwd
/var/www
sandeep@sandeep-VirtualBox:/var/www$
sandeep@sandeep-VirtualBox:/var/www$
sandeep@sandeep-VirtualBox:/var/www$ ll
total 20
drwxrwxrwx  5 root root 4096 Oct  9 13:42 ./
drwxr-xr-x 15 root root 4096 Oct  9 12:52 ../
drwxrwxrwx  2 root root 4096 Oct  9 13:52 html/
drwxrwxrwx  3 root root 4096 Oct  9 13:10 san-agri.comm/
drwxrwxrwx  4 root root 4096 Oct  9 13:57 san-aiml.comm/
```

Note: Inside this directory I have created sub directory to deploy the static webpages

```
sandeep@sandeep-VirtualBox:/var/www$ cd san-agri.comm/
sandeep@sandeep-VirtualBox:/var/www/san-agri.comm$ ll
total 12
drwxrwxrwx 3 root root 4096 Oct  9 13:10 ./
drwxrwxrwx 5 root root 4096 Oct  9 13:42 ../
drwxrwxrwx 4 root root 4096 Oct  9 13:53 public_html/
```

Step 2 :

Navigate to /etc/apache2/sites-available

```
sandeep@sandeep-VirtualBox:/$ cd /etc/
sandeep@sandeep-VirtualBox:/etc$ cd apache2/
sandeep@sandeep-VirtualBox:/etc/apache2$ cd sites-available/
sandeep@sandeep-VirtualBox:/etc/apache2/sites-available$ ll
total 28
drwxr-xr-x 2 root root 4096 Oct  9 14:13 ./
drwxr-xr-x 8 root root 4096 Oct  9 12:52 ../
-rw-r--r-- 1 root root 1332 Mar 23  2022 000-default.conf
-rw-r--r-- 1 root root 6338 Mar 23  2022 default-ssl.conf
```

Step 3:

copy the default config files to the map to your websites

```
sandeep@sandeep-VirtualBox:~$ cd /etc/apache2/
sandeep@sandeep-VirtualBox:/etc/apache2$ ll
total 96
drwxr-xr-x  8 root root  4096 Oct  9 12:52 ./
drwxr-xr-x 130 root root 12288 Oct  9 13:37 ../
-rw-r--r--  1 root root  7224 Jun 14 18:00 apache2.conf
drwxr-xr-x  2 root root  4096 Oct  9 12:52 conf-available/
drwxr-xr-x  2 root root  4096 Oct  9 12:52 conf-enabled/
-rw-r--r--  1 root root  1782 Mar 23  2022 envvars
-rw-r--r--  1 root root 31063 Mar 23  2022 magic
drwxr-xr-x  2 root root 12288 Oct  9 12:52 mods-available/
drwxr-xr-x  2 root root  4096 Oct  9 12:52 mods-enabled/
-rw-r--r--  1 root root   320 Mar 23  2022 ports.conf
drwxr-xr-x  2 root root  4096 Oct  9 13:49 sites-available/
drwxr-xr-x  2 root root  4096 Oct  9 13:49 sites-enabled/
sandeep@sandeep-VirtualBox:/etc/apache2$ cd sites-available/
sandeep@sandeep-VirtualBox:/etc/apache2/sites-available$ ll
total 28
drwxr-xr-x  2 root root  4096 Oct  9 13:49 ./
drwxr-xr-x  8 root root  4096 Oct  9 12:52 ../
-rw-r--r--  1 root root  1332 Mar 23  2022 000-default.conf
-rw-r--r--  1 root root  6338 Mar 23  2022 default-ssl.conf
-rw-r--r--  1 root root  1410 Oct  9 13:41 san-agri.comm.conf
-rw-r--r--  1 root root  1410 Oct  9 13:49 san-aiml.comm.conf
sandeep@sandeep-VirtualBox:/etc/apache2/sites-available$
```

Step 4 :

Edit the copied config files.

```
sandeep@sandeep-VirtualBox:/etc/apache2/sites-available$ sudo vim san-agri.comm.conf
sandeep@sandeep-VirtualBox:/etc/apache2/sites-available$ sudo vim san-aiml.comm.conf
```

Step 5:

Edit the files to map the deployed website directory to Server address.

Below are the files edited with lines **ServerName** and **ServerAlias**.

Also update the **DocumentRoot** to point to the website deployed directory.

```
<VirtualHost *:80>
# The ServerName directive sets the request scheme, hostname and port
# the server uses to identify itself. This is used when creating
# redirection URLs. In the context of virtual hosts, the ServerName
# specifies what hostname must appear in the request's Host: header to
# match this virtual host. For the default virtual host (this file) th
# value is not decisive as it is used as a last resort host regardless
# However, you must set it for any further virtual host explicitly.
#ServerName www.example.com

ServerAdmin webmaster@localhost
ServerName san-agri.comm
ServerAlias www.san-agri.comm
DocumentRoot /var/www/san-agri.comm/public_html

# Available loglevels: trace8, ..., trace1, debug, info, notice, warn,
# error, crit, alert, emerg.
# It is also possible to configure the loglevel for particular
# modules, e.g.
#LogLevel info ssl:warn

ErrorLog ${APACHE_LOG_DIR}/error.log
CustomLog ${APACHE_LOG_DIR}/access.log combined

# For most configuration files from conf-available/, which are
# enabled or disabled at a global level, it is possible to
# include a line for only one particular virtual host. For example the
# following line enables the CGI configuration for this host only
# after it has been globally disabled with "a2disconf".
#Include conf-available/serve-cgi-bin.conf
</VirtualHost>
```

```

<VirtualHost *:80>
    # The ServerName directive sets the request scheme, hostname and port that
    # the server uses to identify itself. This is used when creating
    # redirection URLs. In the context of virtual hosts, the ServerName
    # specifies what hostname must appear in the request's Host: header to
    # match this virtual host. For the default virtual host (this file) this
    # value is not decisive as it is used as a last resort host regardless.
    # However, you must set it for any further virtual host explicitly.
    #ServerName www.example.com

    ServerAdmin webmaster@localhost
    ServerName san-aiml.comm
    ServerAlias www.san-aiml.comm
    DocumentRoot /var/www/san-aiml.comm/public_html

    # Available loglevels: trace8, ..., trace1, debug, info, notice, warn,
    # error, crit, alert, emerg.
    # It is also possible to configure the loglevel for particular
    # modules, e.g.
    #LogLevel info ssl:warn

    ErrorLog ${APACHE_LOG_DIR}/error.log
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    # For most configuration files from conf-available/, which are
    # enabled or disabled at a global level, it is possible to
    # include a line for only one particular virtual host. For example the
    # following line enables the CGI configuration for this host only
    # after it has been globally disabled with "a2disconf".
    #Include conf-available/serve-cgi-bin.conf
</VirtualHost>

```

Step 6 :

Disable the default website and enable the newly deployed websites. Run the below commands to disable and enable sites.

```
/a2dissite 000-default.conf
```

```
/a2ensite san-agri.comm.conf
```

```
/a2ensite san-aiml.comm.conf
```

Note : We can check which website is enable to for routing.

```

sandeep@sandeep-VirtualBox:/etc/apache2$ cd sites-enabled/
sandeep@sandeep-VirtualBox:/etc/apache2/sites-enabled$ ll
total 8
drwxr-xr-x 2 root root 4096 Oct  9 13:49 ./
drwxr-xr-x 8 root root 4096 Oct  9 12:52 ../
lrwxrwxrwx 1 root root   37 Oct  9 13:46 san-agri.comm.conf -> ../sites-available/san-agri.comm.conf
lrwxrwxrwx 1 root root   37 Oct  9 13:46 san-aiml.comm.conf -> ../sites-available/san-aiml.comm.conf
sandeep@sandeep-VirtualBox:/etc/apache2/sites-enabled$

```

Step 7:

Edit the hosts file on the system to locate the route of the website.

This is from the system where we are trying to access the website.

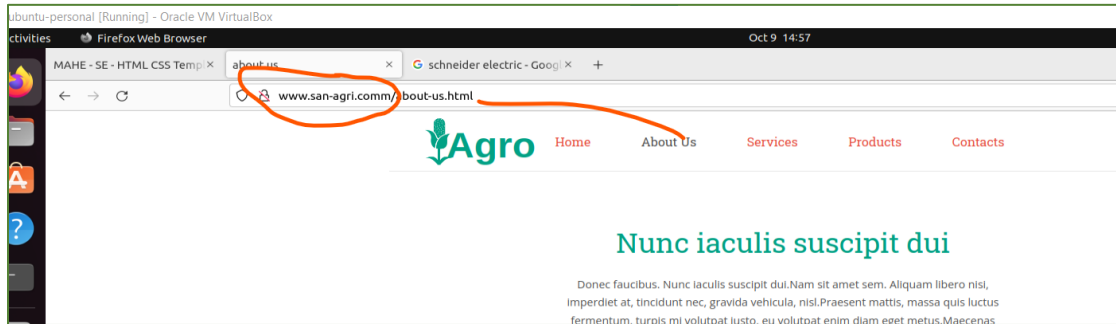
```

sandeep@sandeep-VirtualBox:~$ cat /etc/hosts
127.0.0.1      localhost
127.0.1.1      sandeep-VirtualBox
127.0.0.1      san-agri.comm www.san-agri.comm
127.0.0.1      san-aiml.comm www.san-aiml.comm

```

Below is the output of the websites hosted on Apache2.

<http://www.san-agri.comm>



<http://www.san-aiml.comm>

