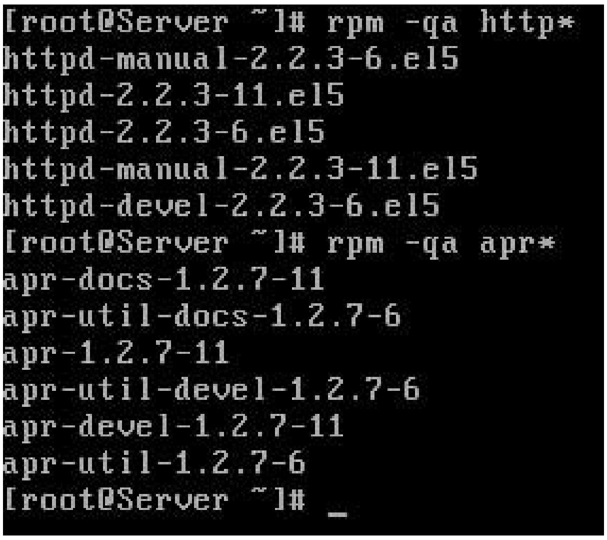
When you view a web page over the Internet, the code to create that page must be retrieved from a server somewhere on the Internet. The server that sends your web browser the code to display a web page is called a web server. There are countless web servers all over the Internet serving countless websites to people all over the world. Whether you need a web server to host a website on the Internet a Red Hat Enterprise Linux server can function as a web server using the Apache HTTP server. The Apache HTTP server is a popular, open source server application that runs on many UNIX-based systems as well as Microsoft Windows.

***Exam question 1** There are two sites www.vinita.com and www.nikita.com. Both sites are mappings to 192.168.0.X IP address where X is your Host address. Configure the Apache web server for these sites to make accessible on web*

Configure web server

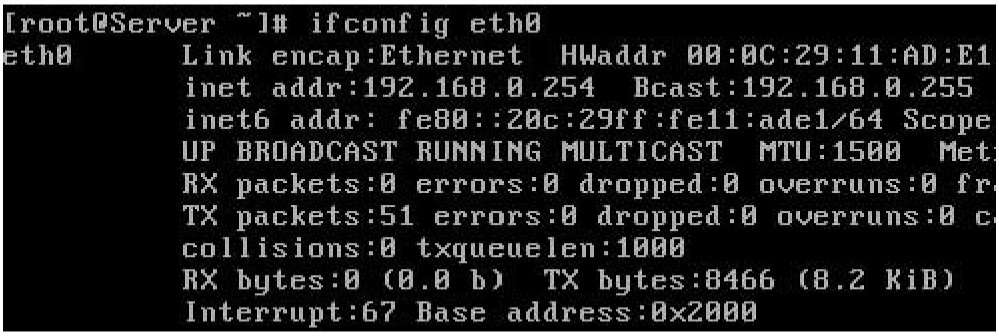
In this example we will configure a web server.

Necessary rpm for web server is httpd, httpd-devel and apr check them for install



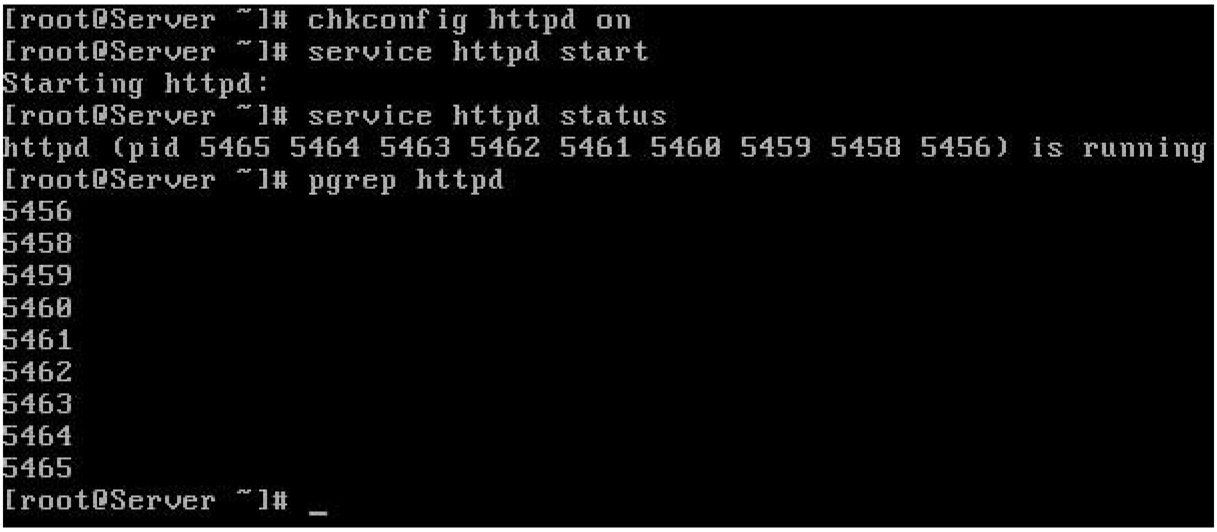
```
[root@Server ~]# rpm -qa http*
httpd-manual-2.2.3-6.el5
httpd-2.2.3-11.el5
httpd-2.2.3-6.el5
httpd-manual-2.2.3-11.el5
httpd-devel-2.2.3-6.el5
[root@Server ~]# rpm -qa apr*
apr-docs-1.2.7-11
apr-util-docs-1.2.7-6
apr-1.2.7-11
apr-util-devel-1.2.7-6
apr-devel-1.2.7-11
apr-util-1.2.7-6
[root@Server ~]# _
```

Now configure the ip address to 192.168.0.254 and check it



```
[root@Server ~]# ifconfig eth0
eth0      Link encap:Ethernet  HWaddr 00:0C:29:11:AD:E1
          inet addr:192.168.0.254  Bcast:192.168.0.255
          inet6 addr: fe80::20c:29ff:fe11:ade1/64 Scope
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Met
          RX packets:0 errors:0 dropped:0 overruns:0 fr
          TX packets:51 errors:0 dropped:0 overruns:0 c
          collisions:0 txqueuelen:1000
          RX bytes:0 (0.0 b)  TX bytes:8466 (8.2 KiB)
          Interrupt:67 Base address:0x2000
```

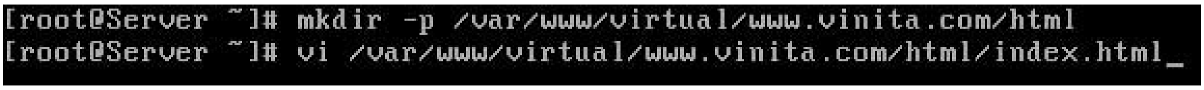
Start httpd daemons and verify its running status



```
[root@Server ~]# chkconfig httpd on
[root@Server ~]# service httpd start
Starting httpd:
[root@Server ~]# service httpd status
httpd (pid 5465 5464 5463 5462 5461 5460 5459 5458 5456) is running
[root@Server ~]# pgrep httpd
5456
5458
5459
5460
5461
5462
5463
5464
5465
[root@Server ~]# _
```

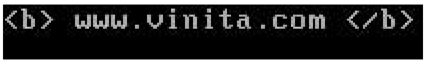
Configure virtual hosting

In this example we will host a website www.vinita.com to apache web server. Create a documents root directory for this website and a index page



```
[root@Server ~]# mkdir -p /var/www/virtual/www.vinita.com/html
[root@Server ~]# vi /var/www/virtual/www.vinita.com/html/index.html_
```

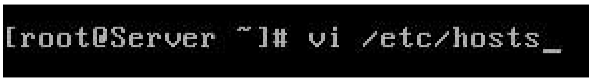
For testing purpose we are writing site name in its index page



```
<b> www.vinita.com </b>
```

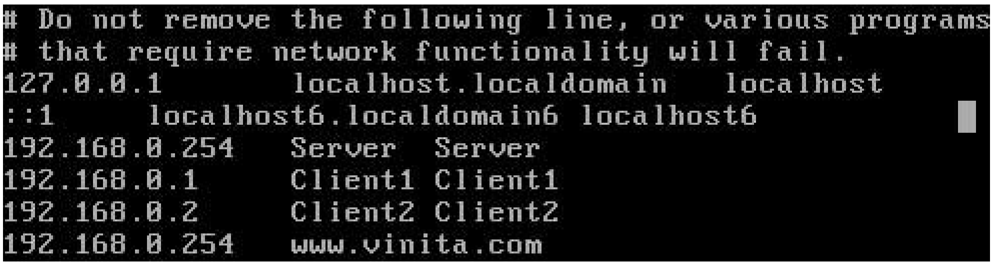
Save file and exit

Now open /etc/hosts file



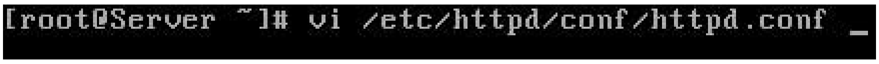
```
[root@Server ~]# vi /etc/hosts_
```

In the end of file bind system IP with www.vinita.com



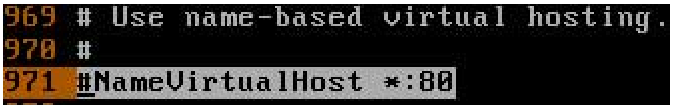
```
# Do not remove the following line, or various programs
# that require network functionality will fail.
127.0.0.1       localhost.localdomain   localhost
::1     localhost6.localdomain6 localhost6
192.168.0.254   Server  Server
192.168.0.1     Client1 Client1
192.168.0.2     Client2 Client2
192.168.0.254   www.vinita.com
```

Now open /etc/httpd/conf/httpd.conf main configuration file of apache server



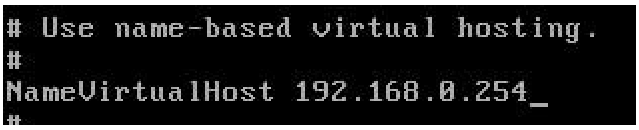
```
[root@Server ~]# vi /etc/httpd/conf/httpd.conf _
```

Locate virtual host tag



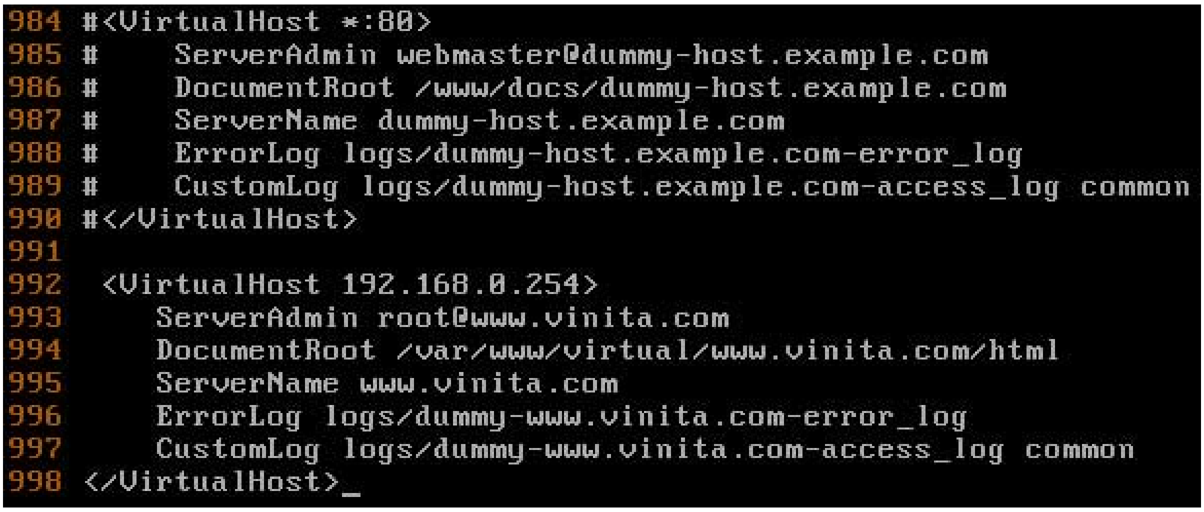
```
# Use name-based virtual hosting.
#
#NameVirtualHost *:80
```

Remove # from the beginning and add the IP of host



```
# Use name-based virtual hosting.
#
NameVirtualHost 192.168.0.254_
#
```

Now go in the end of file and copy last seven line [virtual host tag] and paste them in the end of file. Change these seven lines as shown in image

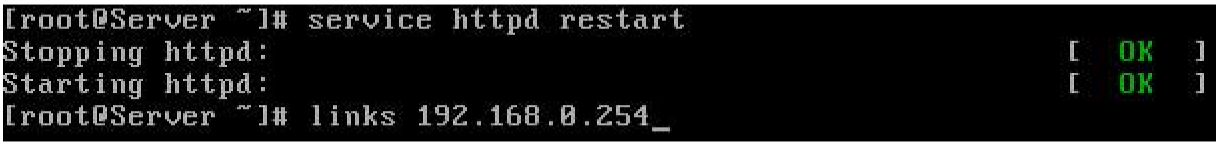


```
#<VirtualHost *:80>
#     ServerAdmin webmaster@dummy-host.example.com
#     DocumentRoot /www/docs/dummy-host.example.com
#     ServerName dummy-host.example.com
#     ErrorLog logs/dummy-host.example.com-error_log
#     CustomLog logs/dummy-host.example.com-access_log common
#</VirtualHost>

 <VirtualHost 192.168.0.254>
    ServerAdmin root@www.vinita.com
    DocumentRoot /var/www/virtual/www.vinita.com/html
    ServerName www.vinita.com
    ErrorLog logs/dummy-www.vinita.com-error_log
    CustomLog logs/dummy-www.vinita.com-access_log common
</VirtualHost>_
```

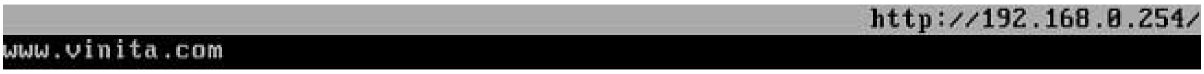
Now save this file and exit from it

You have done necessary configuration now restart the httpd service and test this configuration run links command



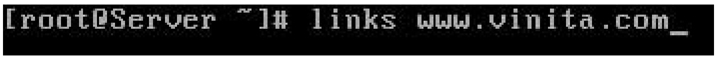
```
[root@Server ~]# service httpd restart
Stopping httpd:                                            [  OK  ]
Starting httpd:                                            [  OK  ]
[root@Server ~]# links 192.168.0.254_
```

If links command retrieve your home page



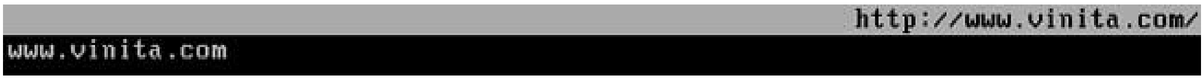
```
                                               http://192.168.0.254/
www.vinita.com
```

Means you have successfully configured the virtual host now test it with site name



```
[root@Server ~]# links www.vinita.com_
```

In output of links command you should see the index page of site

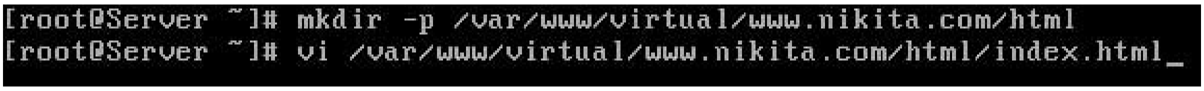


```
                                              http://www.vinita.com/
www.vinita.com
```

Configure multiple site with same IP address

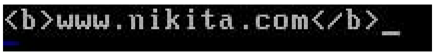
At this point you have configured one site www.vinita.com with the IP address 192.168.0.254. Now we will configure one more site www.nikita.com with same IP address

Create a documents root directory for www.nikita.com website and a index page



```
[root@Server ~]# mkdir -p /var/www/virtual/www.nikita.com/html
[root@Server ~]# vi /var/www/virtual/www.nikita.com/html/index.html_
```

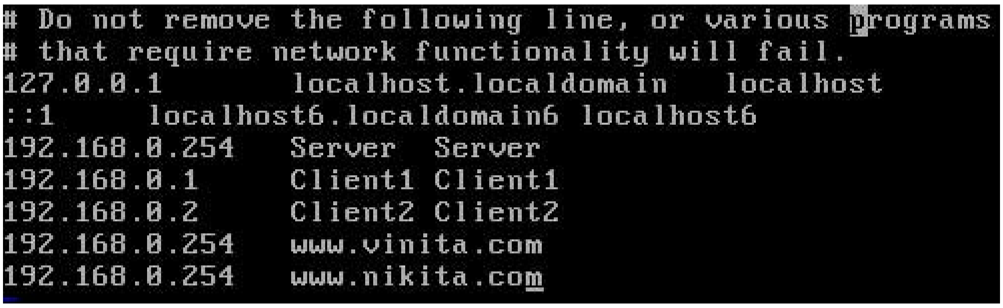
For testing purpose we are writing site name in its index page



```
<b>www.nikita.com</b>_
```

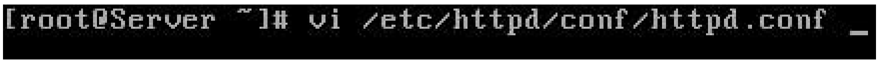
Save file and exit

Now open /etc/hosts file and bind system IP with www.nikita.com



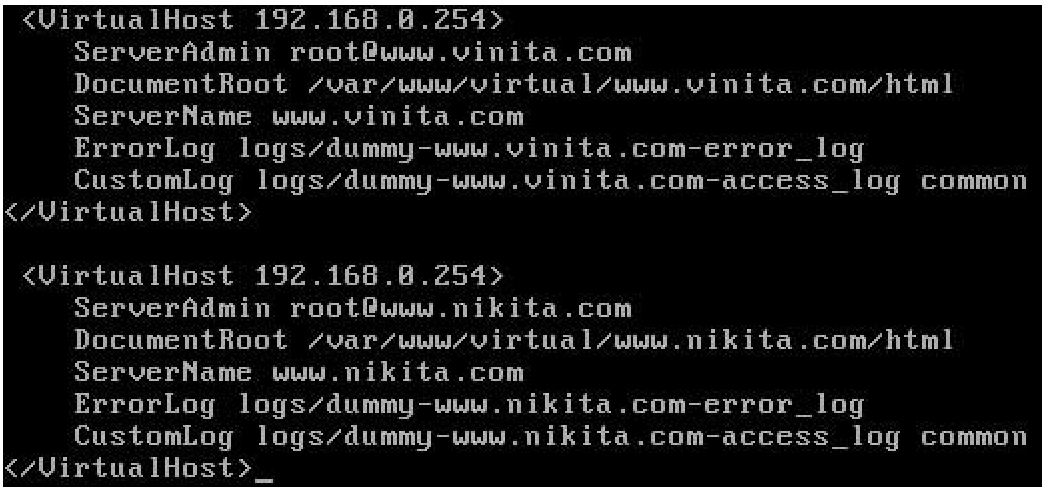
```
# Do not remove the following line, or various programs
# that require network functionality will fail.
127.0.0.1       localhost.localdomain   localhost
::1     localhost6.localdomain6 localhost6
192.168.0.254   Server  Server
192.168.0.1     Client1 Client1
192.168.0.2     Client2 Client2
192.168.0.254   www.vinita.com
192.168.0.254   www.nikita.com
```

Now open /etc/httpd/conf/httpd.conf main configuration file of apache server



```
[root@Server ~]# vi /etc/httpd/conf/httpd.conf _
```

Now go in the end of file and copy last seven line [virtual host tag] and paste them in the end of file. Change these seven lines as shown in image

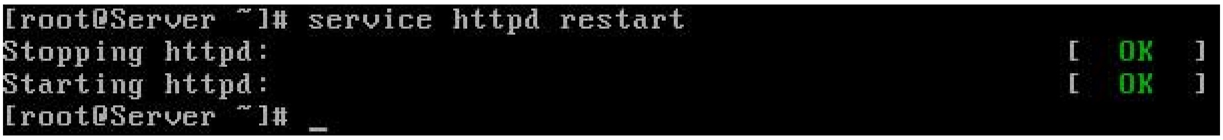


```
 <VirtualHost 192.168.0.254>
    ServerAdmin root@www.vinita.com
    DocumentRoot /var/www/virtual/www.vinita.com/html
    ServerName www.vinita.com
    ErrorLog logs/dummy-www.vinita.com-error_log
    CustomLog logs/dummy-www.vinita.com-access_log common
</VirtualHost>

 <VirtualHost 192.168.0.254>
    ServerAdmin root@www.nikita.com
    DocumentRoot /var/www/virtual/www.nikita.com/html
    ServerName www.nikita.com
    ErrorLog logs/dummy-www.nikita.com-error_log
    CustomLog logs/dummy-www.nikita.com-access_log common
</VirtualHost>_
```

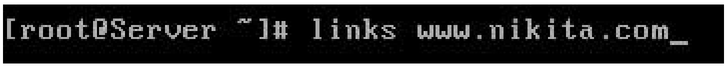
Now save this file and exit from it

You have done necessary configuration now restart the httpd service



```
[root@Server ~]# service httpd restart
Stopping httpd:                                            [  OK  ]
Starting httpd:                                            [  OK  ]
[root@Server ~]# _
```

Test this configuration run links command



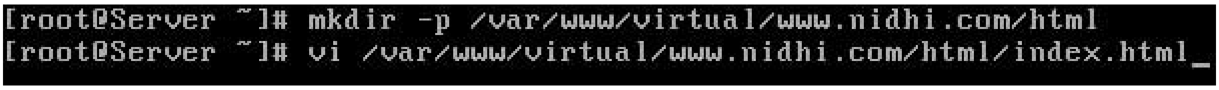
```
[root@Server ~]# links www.nikita.com_
```

In output of links command you should see the index page of site

Configure multiple site with multiple IP address

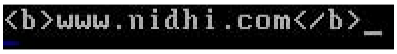
Now we will host multiple sites with multiple ip address. Create a virtual lan card on server and assign its an ip address of 192.168.0.253. [if you don't know how to create virtual lan card and read our pervious article how to create virtual lan card]. we will create a testing site www.nidhi.com and will bind it with ip address of 192.168.0.253

Create a documents root directory for www.nidhi.com website and a index page



```
[root@Server ~]# mkdir -p /var/www/virtual/www.nidhi.com/html
[root@Server ~]# vi /var/www/virtual/www.nidhi.com/html/index.html_
```

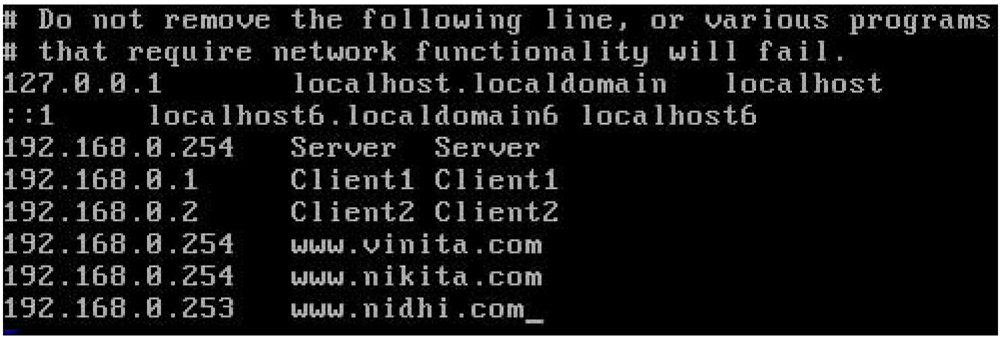
For testing purpose we are writing site name in its index page



```
<b>www.nidhi.com</b>_
```

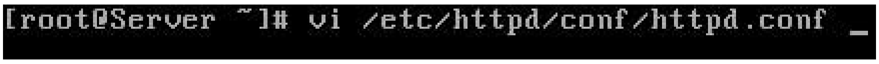
Save file and exit

Now open /etc/hosts file and bind system IP with www.nidhi.com



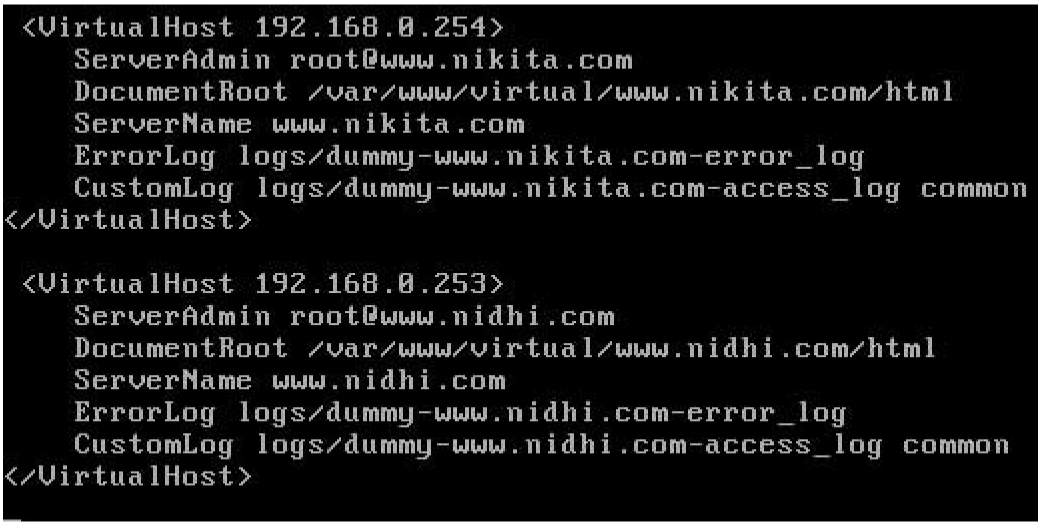
```
# Do not remove the following line, or various programs
# that require network functionality will fail.
127.0.0.1        localhost.localdomain   localhost
::1      localhost6.localdomain6 localhost6
192.168.0.254    Server  Server
192.168.0.1      Client1 Client1
192.168.0.2      Client2 Client2
192.168.0.254    www.vinita.com
192.168.0.254    www.nikita.com
192.168.0.253    www.nidhi.com_
```

Now open /etc/httpd/conf/httpd.conf main configuration file of apache server



```
[root@Server ~]# vi /etc/httpd/conf/httpd.conf _
```

Now go in the end of file and copy last seven line [virtual host tag] and paste them in the end of file. Change these seven lines as shown in image

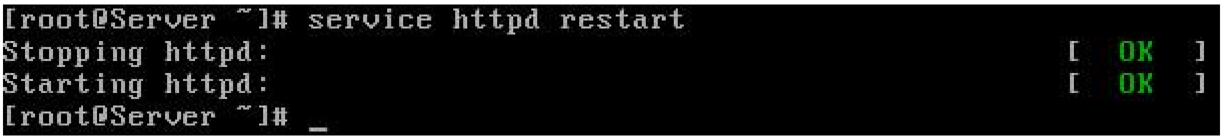


```
 <VirtualHost 192.168.0.254>
    ServerAdmin root@www.nikita.com
    DocumentRoot /var/www/virtual/www.nikita.com/html
    ServerName www.nikita.com
    ErrorLog logs/dummy-www.nikita.com-error_log
    CustomLog logs/dummy-www.nikita.com-access_log common
</VirtualHost>

 <VirtualHost 192.168.0.253>
    ServerAdmin root@www.nidhi.com
    DocumentRoot /var/www/virtual/www.nidhi.com/html
    ServerName www.nidhi.com
    ErrorLog logs/dummy-www.nidhi.com-error_log
    CustomLog logs/dummy-www.nidhi.com-access_log common
</VirtualHost>
_
```

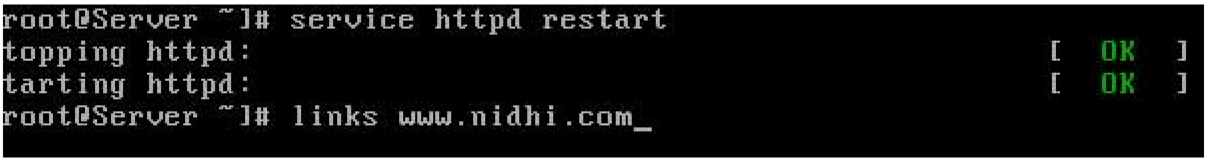
Now save this file and exit from it

You have done necessary configuration now restart the httpd service



```
[root@Server ~]# service httpd restart
Stopping httpd:                                            [  OK  ]
Starting httpd:                                            [  OK  ]
[root@Server ~]# _
```

Test this configuration run links command



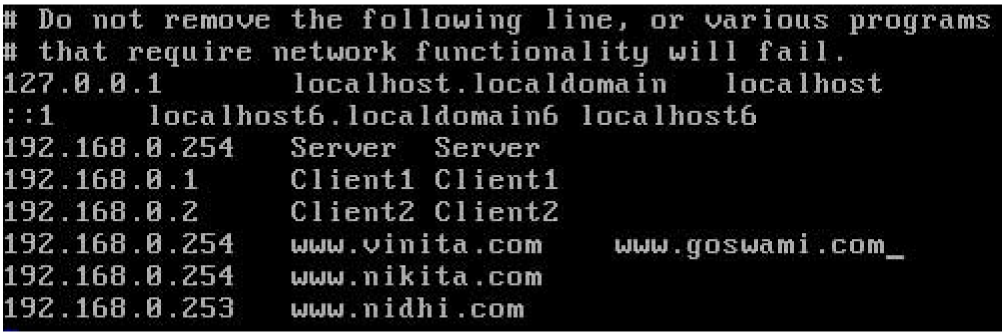
```
root@Server ~]# service httpd restart
topping httpd:                                             [  OK  ]
tarting httpd:                                             [  OK  ]
root@Server ~]# links www.nidhi.com_
```

In output of links command you should see the index page of site

How to create site alias

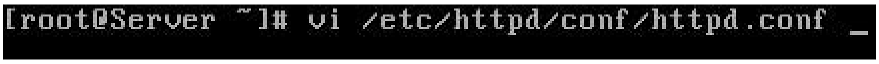
Now I will show you that how can you use site alias to configure more name of same site. We configure a site www.vinita.com in stating of example. Now we will create www.goswami.com site alias for this site so this site can be access with both name.

To create alias first make its entry in /etc/hosts file as shown here



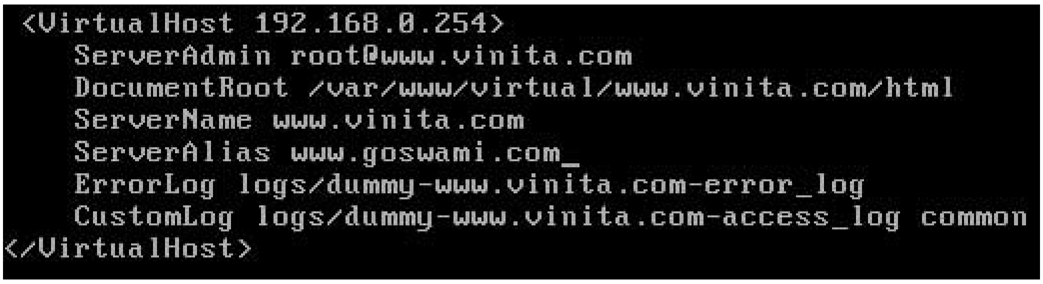
```
# Do not remove the following line, or various programs
# that require network functionality will fail.
127.0.0.1       localhost.localdomain   localhost
::1     localhost6.localdomain6 localhost6
192.168.0.254   Server  Server
192.168.0.1     Client1 Client1
192.168.0.2     Client2 Client2
192.168.0.254   www.vinita.com    www.goswami.com_
192.168.0.254   www.nikita.com
192.168.0.253   www.nidhi.com
```

Now open main apache configuration /etc/httpd/conf/httpd.conf



```
[root@Server ~]# vi /etc/httpd/conf/httpd.conf _
```

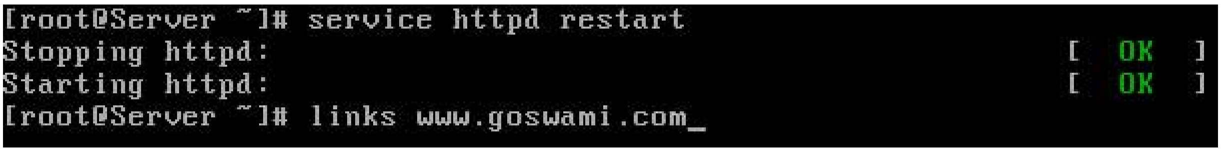
Now go in the end of file and copy last seven line [virtual host tag] and paste them in the end of file. Change these seven lines as shown in image



```
 <VirtualHost 192.168.0.254>
    ServerAdmin root@www.vinita.com
    DocumentRoot /var/www/virtual/www.vinita.com/html
    ServerName www.vinita.com
    ServerAlias www.goswami.com_
    ErrorLog logs/dummy-www.vinita.com-error_log
    CustomLog logs/dummy-www.vinita.com-access_log common
</VirtualHost>
```

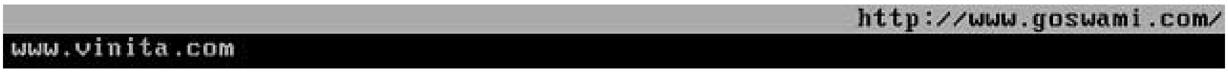
Now save this file and exit from it

You have done necessary configuration now restart the httpd service and test this configuration run links command



```
[root@Server ~]# service httpd restart
Stopping httpd:                                            [  OK  ]
Starting httpd:                                            [  OK  ]
[root@Server ~]# links www.goswami.com_
```

In output of links command you should see the index page of site



```
                                               http://www.goswami.com/
www.vinita.com
```