NGINX LOAD-BALANCER – LINUX

By-Maheswaran.V

NGINX is a popular load balancer with many benefits, including:

- **Improved performance**

  NGINX distributes traffic across multiple servers, which improves performance and response times for users.

- **Enhanced reliability**

  NGINX eliminates single points of failure, so if one server goes down, the others can continue to operate.

- **Scalability**

  NGINX can be easily scaled by adding or removing backend servers as needed.

- **Improved security**

  NGINX offers security features like rate limiting and request filtering to protect servers from cyber threats.

- **Ease of configuration**

  NGINX configuration files are simple and human-readable.
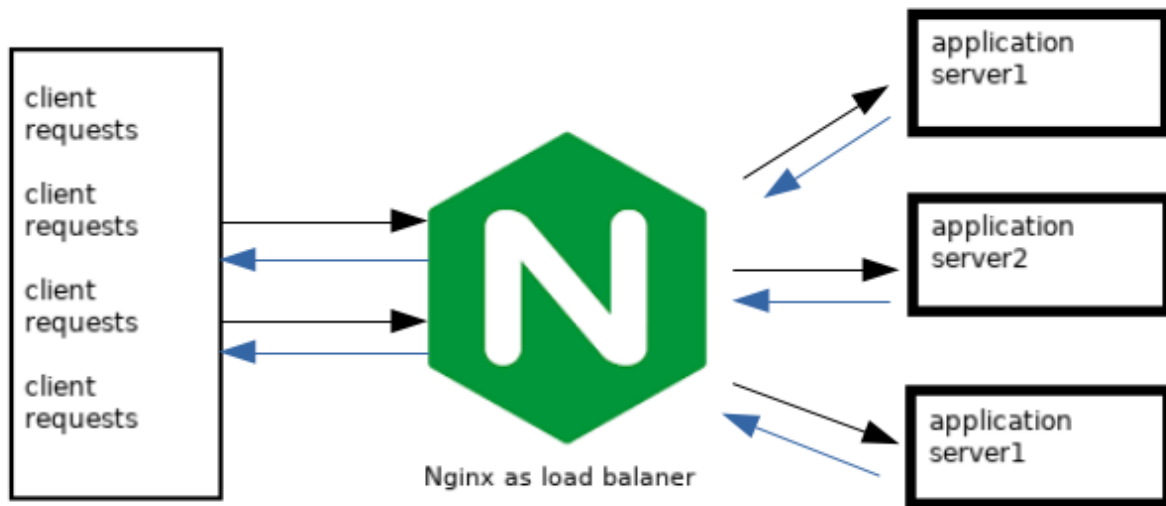
- **Rich feature set**

  NGINX supports a variety of load balancing algorithms and advanced features.

- **Low memory footprint**

  NGINX can handle thousands of connections with minimal resource consumption.

- **Extensibility**

  NGINX modules allow for extensive customization and integration with other tools and services.

Nginx as load balaner

LoadBalancer (13.127.190.132)
NginxServer1 (3.110.121.49)
NginxServer2 (3.111.38.157)

STEP 1 :
    First we have to create 3 instances for load balancer, Nginx server1 ,nginx server2.

IN Load balancer

[root@www ~]# hostnamectl set-hostname www.srghimire.com
 [root@www ~]# exec bash
[root@www ~]# vi /etc/hosts

13.127.190.132 www.srghimire.com

[root@www ~]# vi /etc/sysconfig/network-scripts/ifcfg-ens33

BOOTPROTO=static
DEVICE=ens33
ONBOOT=yes
IPADDR=13.127.190.132
NETMASK=255.255.255.0
GATEWAY=13.127.190.100
DNS1=13.127.190.100

[root@www ~]# systemctl restart network
[root@www ~]# systemctl restart network
[root@www ~]# hostname
www.srghimire.com
[root@www ~]# hostname -I
13.127.190.132

```
MAHESH@DESKTOP-IIPD8N1 MINGW64 ~/Downloads
$ ssh -i "nginix.pem" ec2-user@13.127.190.132
     ,       #_
    ~\_   ####_        Amazon Linux 2023
   ~~  \_#####\
   ~~      \###|
   ~~        \#/ ___   https://aws.amazon.com/linux/amazon-linux-2023
    ~~       V~' '->
     ~~~         /
       ~~._.   _/
          _/ _/
        _/m/'
Last login: Tue Nov 26 06:35:39 2024 from 1.38.96.40
[ec2-user@ip-10-0-1-188 ~]$ sudo su
[root@ip-10-0-1-188 ec2-user]# hostnamectl set-hostname www.shakthigroups.com
[root@ip-10-0-1-188 ec2-user]# exec bash
[root@www ec2-user]# vi /etc/hosts
[root@www ec2-user]# vi /etc/sysconfig/network-scripts/ifcfg-ens33
[root@www ec2-user]# systemctl restart network
Failed to restart network.service: Unit network.service not found.
[root@www ec2-user]# systemctl restart network
Failed to restart network.service: Unit network.service not found.
[root@www ec2-user]# hostname
www.shakthigroups.com
[root@www ec2-user]# hostname -I
10.0.1.188
[root@www ec2-user]# ^C
[root@www ec2-user]# yum install nginx
Last metadata expiration check: 0:22:55 ago on Tue Nov 26 06:28:57 2024.
Dependencies resolved.
================================================================================
 Package              Arch     Version                   Repository    Size
================================================================================
Installing:
 nginx                x86_64   1:1.26.2-1.amzn2023.0.1   amazonlinux   33 k
Installing dependencies:
 generic-logos-httpd  noarch   18.0.0-12.amzn2023.0.3    amazonlinux   19 k
 gperftools-libs      x86_64   2.9.1-1.amzn2023.0.3      amazonlinux  308 k
 libunwind            x86_64   1.4.0-5.amzn2023.0.2      amazonlinux   66 k
 nginx-core           x86_64   1:1.26.2-1.amzn2023.0.1   amazonlinux  670 k
 nginx-filesystem     noarch   1:1.26.2-1.amzn2023.0.1   amazonlinux  9.9 k
 nginx-mimetypes      noarch   2.1.49-3.amzn2023.0.3     amazonlinux   21 k

Transaction Summary
================================================================================
Install  7 Packages

Total download size: 1.1 M
```

```
generic-logos-httpd    noarch    18.0.0-12.amzn2023.0.3    amazonlinux    19 k
gperftools-libs        x86_64    2.9.1-1.amzn2023.0.3      amazonlinux    308 k
libunwind              x86_64    1.4.0-5.amzn2023.0.2      amazonlinux    66 k
nginx-core             x86_64    1:1.26.2-1.amzn2023.0.1   amazonlinux    670 k
nginx-filesystem       noarch    1:1.26.2-1.amzn2023.0.1   amazonlinux    9.9 k
nginx-mimetypes        noarch    2.1.49-3.amzn2023.0.3     amazonlinux    21 k

Transaction Summary
================================================================================
Install  7 Packages

Total download size: 1.1 M
Installed size: 3.6 M
Is this ok [y/N]: y
Downloading Packages:
(1/7): libunwind-1.4.0-5.amzn2023.0.2.x86_64.rp 1.1 MB/s |  66 kB        00:00
(2/7): generic-logos-httpd-18.0.0-12.amzn2023.0 295 kB/s |  19 kB        00:00
(3/7): gperftools-libs-2.9.1-1.amzn2023.0.3.x86 4.3 MB/s | 308 kB        00:00
(4/7): nginx-core-1.26.2-1.amzn2023.0.1.x86_64.  31 MB/s | 670 kB        00:00
(5/7): nginx-1.26.2-1.amzn2023.0.1.x86_64.rpm   1.1 MB/s |  33 kB        00:00
(6/7): nginx-filesystem-1.26.2-1.amzn2023.0.1.n 460 kB/s | 9.9 kB        00:00
(7/7): nginx-mimetypes-2.1.49-3.amzn2023.0.3.no 1.4 MB/s |  21 kB        00:00
--------------------------------------------------------------------------------
Total                                           6.9 MB/s | 1.1 MB        00:00
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing        :                                                        1/1
  Running scriptlet: nginx-filesystem-1:1.26.2-1.amzn2023.0.1.noarch        1/7
  Installing       : nginx-filesystem-1:1.26.2-1.amzn2023.0.1.noarch        1/7
  Installing       : nginx-mimetypes-2.1.49-3.amzn2023.0.3.noarch           2/7
  Installing       : libunwind-1.4.0-5.amzn2023.0.2.x86_64                  3/7
  Installing       : gperftools-libs-2.9.1-1.amzn2023.0.3.x86_64            4/7
  Installing       : nginx-core-1:1.26.2-1.amzn2023.0.1.x86_64              5/7
  Installing       : generic-logos-httpd-18.0.0-12.amzn2023.0.3.noarch      6/7
  Installing       : nginx-1:1.26.2-1.amzn2023.0.1.x86_64                   7/7
  Running scriptlet: nginx-1:1.26.2-1.amzn2023.0.1.x86_64                   7/7
  Verifying        : generic-logos-httpd-18.0.0-12.amzn2023.0.3.noarch      1/7
  Verifying        : gperftools-libs-2.9.1-1.amzn2023.0.3.x86_64            2/7
  Verifying        : libunwind-1.4.0-5.amzn2023.0.2.x86_64                  3/7
  Verifying        : nginx-1:1.26.2-1.amzn2023.0.1.x86_64                   4/7
  Verifying        : nginx-core-1:1.26.2-1.amzn2023.0.1.x86_64              5/7
  Verifying        : nginx-filesystem-1:1.26.2-1.amzn2023.0.1.noarch        6/7
  Verifying        : nginx-mimetypes-2.1.49-3.amzn2023.0.3.noarch           7/7

Installed:
  generic-logos-httpd-18.0.0-12.amzn2023.0.3.noarch
  gperftools-libs-2.9.1-1.amzn2023.0.3.x86_64
```

```
  generic-logos-httpd-18.0.0-12.amzn2023.0.3.noarch
  gperftools-libs-2.9.1-1.amzn2023.0.3.x86_64
  libunwind-1.4.0-5.amzn2023.0.2.x86_64
  nginx-1:1.26.2-1.amzn2023.0.1.x86_64
  nginx-core-1:1.26.2-1.amzn2023.0.1.x86_64
  nginx-filesystem-1:1.26.2-1.amzn2023.0.1.noarch
  nginx-mimetypes-2.1.49-3.amzn2023.0.3.noarch


Complete!
[root@www ec2-user]# cd /etc/nginx/conf.d/
[root@www conf.d]# vim lb.conf
[root@www conf.d]# nginx -t
nginx: the configuration file /etc/nginx/nginx.conf syntax is ok
nginx: configuration file /etc/nginx/nginx.conf test is successful
[root@www conf.d]# systemctl status nginx
o nginx.service - The nginx HTTP and reverse proxy server
    Loaded: loaded (/usr/lib/systemd/system/nginx.service; disabled; preset: d>
    Active: inactive (dead)
lines 1-3/3 (END)

[root@www conf.d]# systemctl restart nginx
[root@www conf.d]# systemctl enable nginx
Created symlink /etc/systemd/system/multi-user.target.wants/nginx.service → /usr
/lib/systemd/system/nginx.service.
[root@www conf.d]# netstat -tnl | grep 80
tcp        0      0 0.0.0.0:80              0.0.0.0:*               LISTEN
tcp6       0      0 :::80                   :::*                    LISTEN
[root@www conf.d]# firewall-cmd --permanent --add-service=http
bash: firewall-cmd: command not found
[root@www conf.d]# gettenforce
bash: gettenforce: command not found
[root@www conf.d]# cd /
[root@www /]# gettenforce
bash: gettenforce: command not found
[root@www /]# getenforce
Permissive
[root@www /]# getsebool -a
abrt_anon_write --> off
abrt_handle_event --> off
abrt_upload_watch_anon_write --> on
antivirus_can_scan_system --> off
antivirus_use_jit --> off
auditadm_exec_content --> on
authlogin_nsswitch_use_ldap --> off
authlogin_radius --> off
authlogin_yubikey --> off
awstats_purge_apache_log_files --> off
boinc_execmem --> on
cdrecord_read_content --> off
cluster_can_network_connect --> off
```

```
virt_use_execmem --> off
virt_use_fusefs --> off
virt_use_glusterd --> off
virt_use_nfs --> off
virt_use_pcscd --> off
virt_use_rawip --> off
virt_use_samba --> off
virt_use_sanlock --> off
virt_use_usb --> on
virt_use_xserver --> off
webadm_manage_user_files --> off
webadm_read_user_files --> off
wine_mmap_zero_ignore --> off
xdm_bind_vnc_tcp_port --> off
xdm_exec_bootloader --> off
xdm_manage_bootloader --> on
xdm_sysadm_login --> off
xdm_write_home --> off
xen_use_nfs --> off
xend_run_blktap --> on
xend_run_qemu --> on
xguest_connect_network --> on
xguest_exec_content --> on
xguest_mount_media --> on
xguest_use_bluetooth --> on
xserver_clients_write_xshm --> off
xserver_execmem --> off
xserver_object_manager --> off
zabbix_can_network --> off
zabbix_run_sudo --> off
zarafa_setrlimit --> off
zebra_write_config --> off
zoneminder_anon_write --> off
zoneminder_run_sudo --> off
[root@www /]# getsebool -a | grep network_connect
cluster_can_network_connect --> off
cobbler_can_network_connect --> off
collectd_tcp_network_connect --> off
condor_tcp_network_connect --> off
fenced_can_network_connect --> off
httpd_can_network_connect --> off
httpd_can_network_connect_cobbler --> off
httpd_can_network_connect_db --> off
logwatch_can_network_connect_mail --> off
mozilla_plugin_can_network_connect --> on
openfortivpn_can_network_connect --> on
openvpn_can_network_connect --> on
pdns_can_network_connect_db --> off
piranha_lvs_can_network_connect --> off
sge_domain_can_network_connect --> off
```

[root@www ~]# yum -y install nginx

[root@www ~]# cd /etc/nginx/conf.d/
[root@www conf.d]# vim lb.conf

```
upstream myapp {
    server 3.110.121.49;
    server 3.111.38.157;
}

server  {
    listen        80;
    server_name    www.Shakthigroups.com;
    location / {
        proxy_pass    http://myapp;
    }
}
```

Start nginx server

```
[root@www ~]# nginx -t
[root@www ~]# systemctl status nginx
[root@www ~]# systemctl restart nginx
[root@www ~]# systemctl enable nginx
```

To check default port 80

```
[root@www ~]# netstat -tnl | grep 80
```

Configure on firewall

```
[root@www ~]# firewall-cmd --permanent --add-service=http
[root@www ~]# firewall-cmd --reload
[root@www ~]# firewall-cmd --list-all
```

Configure SELinux

```
[root@www ~]# getenforce
Enforcing
[root@www ~]# getsebool -a
[root@www ~]# getsebool -a | grep network_connect
…
httpd_can_network_connect --> off
```

```
…
[root@www ~]# setsebool -P httpd_can_network_connect=1
[root@www ~]# getsebool -a | grep network_connect
```

STEP 2 :

Next, we have to configure the nginx server 1,

```
[root@www ~]# hostnamectl set-hostname www1.srghimire.com
[root@www ~]# exec bash
[root@www1 ~]# vi /etc/hosts
--------------------------------
3.110.121.49 www.shakthigroups.com
--------------------------------
[root@www1 ~]# vi /etc/sysconfig/network-scripts/ifcfg-ens33
--------------------------------
BOOTPROTO=static
DEVICE=ens33
ONBOOT=yes
IPADDR=3.110.121.49
NETMASK=255.255.255.0
GATEWAY=13.127.190.100
DNS1=13.127.190.100
--------------------------------
[root@www1 ~]# systemctl restart network
[root@www1 ~]# systemctl restart network
[root@www1 ~]# hostname
www.shakthigroups.com
[root@www1 ~]# hostname -I
13.127.190.132
```

1. Install nginx package

```
[root@www1 ~]# yum -y install nginx
```

2. Add configuration file inside /etc/nginx/conf.d/

```
[root@www1 ~]# cd /etc/nginx/conf.d/
[root@www1 conf.d]# vim www1.conf
--------------------------------
server  {
    listen        80;
    server_name    13.127.190.132;
    root        /usr/share/nginx/html;
    index        index.html;
}
```

3. Add index page

```
[root@www1 conf.d]# cd /usr/share/nginx/html/
[root@www1 html]# mv index.html index.html.orig
[root@www1 html]# vim index.html
[root@www1 html]# cat index.html
<h1>Welcome to Mahesh Portfolio Site -Web1</h1>
```

4. Start nginx service

```
[root@www1 html]# nginx -t
[root@www1 html]# systemctl restart nginx
[root@www1 html]# systemctl enable nginx
```

5. Configure on firewall

```
[root@www1 html]# firewall-cmd --permanent --add-service=http
[root@www1 html]# firewall-cmd --reload
[root@www1 html]# firewall-cmd --list-all
```

```
        _/m/'
[ec2-user@ip-10-0-1-22 ~]$ sudo su
[root@ip-10-0-1-22 ec2-user]# hostnamectl set-hostname www.shakthigroups.com
[root@ip-10-0-1-22 ec2-user]# exec bash
[root@www ec2-user]# vi /etc/hosts
[root@www ec2-user]#  vi /etc/sysconfig/network-scripts/ifcfg-ens33
[root@www ec2-user]# systemctl restart network
Failed to restart network.service: Unit network.service not found.
[root@www ec2-user]# systemctl restart network
Failed to restart network.service: Unit network.service not found.
[root@www ec2-user]# hostname
www.shakthigroups.com
[root@www ec2-user]# hostname -i
3.110.121.49
[root@www ec2-user]# yum install nginx
Last metadata expiration check: 0:36:16 ago on Tue Nov 26 06:30:10 2024.
Dependencies resolved.
================================================================================
 Package              Arch     Version                  Repository     Size
================================================================================
Installing:
 nginx                x86_64   1:1.26.2-1.amzn2023.0.1   amazonlinux    33 k
Installing dependencies:
 generic-logos-httpd  noarch   18.0.0-12.amzn2023.0.3    amazonlinux    19 k
 gperftools-libs      x86_64   2.9.1-1.amzn2023.0.3      amazonlinux   308 k
 libunwind            x86_64   1.4.0-5.amzn2023.0.2      amazonlinux    66 k
 nginx-core           x86_64   1:1.26.2-1.amzn2023.0.1   amazonlinux   670 k
 nginx-filesystem     noarch   1:1.26.2-1.amzn2023.0.1   amazonlinux   9.9 k
 nginx-mimetypes      noarch   2.1.49-3.amzn2023.0.3     amazonlinux    21 k

Transaction Summary
================================================================================
Install  7 Packages

Total download size: 1.1 M
Installed size: 3.6 M
Is this ok [y/N]: y
Downloading Packages:
(1/7): generic-logos-httpd-18.0.0-12.amzn2023.0 390 kB/s |  19 kB      00:00
```

```
Downloading Packages:
(1/7): generic-logos-httpd-18.0.0-12.amzn2023.0 390 kB/s |  19 kB       00:00
(2/7): libunwind-1.4.0-5.amzn2023.0.2.x86_64.rp 1.0 MB/s |  66 kB       00:00
(3/7): gperftools-libs-2.9.1-1.amzn2023.0.3.x86 4.3 MB/s | 308 kB       00:00
(4/7): nginx-1.26.2-1.amzn2023.0.1.x86_64.rpm   1.3 MB/s |  33 kB       00:00
(5/7): nginx-core-1.26.2-1.amzn2023.0.1.x86_64.  14 MB/s | 670 kB       00:00
(6/7): nginx-filesystem-1.26.2-1.amzn2023.0.1.n 233 kB/s | 9.9 kB       00:00
(7/7): nginx-mimetypes-2.1.49-3.amzn2023.0.3.no 497 kB/s |  21 kB       00:00
--------------------------------------------------------------------------------
Total                                           6.8 MB/s | 1.1 MB       00:00
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing        :                                                        1/1
  Running scriptlet: nginx-filesystem-1:1.26.2-1.amzn2023.0.1.noarch         1/7
  Installing       : nginx-filesystem-1:1.26.2-1.amzn2023.0.1.noarch         1/7
  Installing       : nginx-mimetypes-2.1.49-3.amzn2023.0.3.noarch            2/7
  Installing       : libunwind-1.4.0-5.amzn2023.0.2.x86_64                   3/7
  Installing       : gperftools-libs-2.9.1-1.amzn2023.0.3.x86_64             4/7
  Installing       : nginx-core-1:1.26.2-1.amzn2023.0.1.x86_64               5/7
  Installing       : generic-logos-httpd-18.0.0-12.amzn2023.0.3.noarch       6/7
  Installing       : nginx-1:1.26.2-1.amzn2023.0.1.x86_64                    7/7
  Running scriptlet: nginx-1:1.26.2-1.amzn2023.0.1.x86_64                    7/7
  Verifying        : generic-logos-httpd-18.0.0-12.amzn2023.0.3.noarch       1/7
  Verifying        : gperftools-libs-2.9.1-1.amzn2023.0.3.x86_64             2/7
  Verifying        : libunwind-1.4.0-5.amzn2023.0.2.x86_64                   3/7
  Verifying        : nginx-1:1.26.2-1.amzn2023.0.1.x86_64                    4/7
  Verifying        : nginx-core-1:1.26.2-1.amzn2023.0.1.x86_64               5/7
  Verifying        : nginx-filesystem-1:1.26.2-1.amzn2023.0.1.noarch         6/7
  Verifying        : nginx-mimetypes-2.1.49-3.amzn2023.0.3.noarch            7/7

Installed:
  generic-logos-httpd-18.0.0-12.amzn2023.0.3.noarch
  gperftools-libs-2.9.1-1.amzn2023.0.3.x86_64
  libunwind-1.4.0-5.amzn2023.0.2.x86_64
  nginx-1:1.26.2-1.amzn2023.0.1.x86_64
  nginx-core-1:1.26.2-1.amzn2023.0.1.x86_64
  nginx-filesystem-1:1.26.2-1.amzn2023.0.1.noarch
  nginx-mimetypes-2.1.49-3.amzn2023.0.3.noarch

Complete!
[root@www ec2-user]# cd /etc/nginx/conf.d/~
bash: cd: /etc/nginx/conf.d/~: No such file or directory
[root@www ec2-user]# cd /etc/nginx/conf.d/
[root@www conf.d]# vim www1.conf
[root@www conf.d]# cd /usr/share/nginx/html/
[root@www html]# mv index.html index.html.orig
```

```
Installed:
  generic-logos-httpd-18.0.0-12.amzn2023.0.3.noarch
  gperftools-libs-2.9.1-1.amzn2023.0.3.x86_64
  libunwind-1.4.0-5.amzn2023.0.2.x86_64
  nginx-1:1.26.2-1.amzn2023.0.1.x86_64
  nginx-core-1:1.26.2-1.amzn2023.0.1.x86_64
  nginx-filesystem-1:1.26.2-1.amzn2023.0.1.noarch
  nginx-mimetypes-2.1.49-3.amzn2023.0.3.noarch

Complete!
[root@www ec2-user]# cd /etc/nginx/conf.d/~
bash: cd: /etc/nginx/conf.d/~: No such file or directory
[root@www ec2-user]# cd /etc/nginx/conf.d/
[root@www conf.d]# vim www1.conf
[root@www conf.d]# cd /usr/share/nginx/html/
[root@www html]# mv index.html index.html.orig
[root@www html]# vim index.html
[root@www html]# nginx -t
nginx: the configuration file /etc/nginx/nginx.conf syntax is ok
nginx: configuration file /etc/nginx/nginx.conf test is successful
[root@www html]# systemctl restart nginx
[root@www html]# systemctl enable nginx
Created symlink /etc/systemd/system/multi-user.target.wants/nginx.service → /usr
/lib/systemd/system/nginx.service.
```

STEP 3

:

Next we have to configure Nginx Webserver 02

Configuring Webserver2 (Backend Webserver)

[root@www ~]# hostnamectl set-hostname www2.srghimire.com
[root@www ~]# exec bash
[root@www2 ~]# vi /etc/hosts

192.168.13.132 www2.srghimire.com

[root@www2 ~]# vi /etc/sysconfig/network-scripts/ifcfg-ens33

BOOTPROTO=static
DEVICE=ens33
ONBOOT=yes
IPADDR=3.111.38.157
NETMASK=255.255.255.0

```
GATEWAY=13.127.190.100
DNS1=13.127.190.100
--------------------------------
[root@www2 ~]# systemctl restart network
[root@www2 ~]# systemctl restart network
[root@www2 ~]# hostname
www.shakthigroups.com
[root@www2 ~]# hostname -I
3.111.38.157
```

Install nginx package
```
[root@www2 ~]# yum -y install nginx
```

2. Add configuration file inside /etc/nginx/conf.d/

```
[root@www2 ~]# cd /etc/nginx/conf.d/
[root@www2 conf.d]# vim www2.conf
--------------------------------
server  {
    listen       80;
    server_name    3.111.38.157;
    root         /usr/share/nginx/html;
    index        index.html;
}
```

3. Add index page

```
[root@www2 conf.d]# cd /usr/share/nginx/html/
[root@www2 html]# mv index.html index.html.orig
[root@www2 html]# vim index.html
[root@www2 html]# cat index.html
<h1>Welcome to Mahesh Webpage 02</h1>
```

4. Start nginx service

```
[root@www2 html]# nginx -t
[root@www2 html]# systemctl restart nginx
[root@www2 html]# systemctl enable nginx
```

5. Configure on firewall

```
[root@www2 html]# firewall-cmd --permanent --add-service=http
[root@www2 html]# firewall-cmd --reload
[root@www2 html]# firewall-cmd --list-all
```

```
[ec2-user@ip-10-0-1-24 ~]$ sudo su
[root@ip-10-0-1-24 ec2-user]# hostnamectl set-hostname www.shakthigroups.com
[root@ip-10-0-1-24 ec2-user]# exec bash
[root@www ec2-user]# vi /etc/hosts
[root@www ec2-user]# vi /etc/sysconfig/network-scripts/ifcfg-ens33
[root@www ec2-user]# systemctl restart network
Failed to restart network.service: Unit network.service not found.
[root@www ec2-user]# systemctl restart network
Failed to restart network.service: Unit network.service not found.
[root@www ec2-user]# hostname
www.shakthigroups.com
[root@www ec2-user]# hostname -i
3.111.38.157
[root@www ec2-user]# yum install nginx
Last metadata expiration check: 0:46:27 ago on Tue Nov 26 06:31:20 2024.
Dependencies resolved.
================================================================================
 Package               Arch     Version                    Repository     Size
================================================================================
Installing:
 nginx                 x86_64   1:1.26.2-1.amzn2023.0.1     amazonlinux    33 k
Installing dependencies:
 generic-logos-httpd   noarch   18.0.0-12.amzn2023.0.3      amazonlinux    19 k
 gperftools-libs       x86_64   2.9.1-1.amzn2023.0.3        amazonlinux   308 k
 libunwind             x86_64   1.4.0-5.amzn2023.0.2        amazonlinux    66 k
 nginx-core            x86_64   1:1.26.2-1.amzn2023.0.1     amazonlinux   670 k
 nginx-filesystem      noarch   1:1.26.2-1.amzn2023.0.1     amazonlinux   9.9 k
 nginx-mimetypes       noarch   2.1.49-3.amzn2023.0.3       amazonlinux    21 k

Transaction Summary
================================================================================
Install  7 Packages

Total download size: 1.1 M
Installed size: 3.6 M
Is this ok [y/N]: y
Downloading Packages:
(1/7): generic-logos-httpd-18.0.0-12.amzn2023.0 396 kB/s |  19 kB     00:00
(2/7): libunwind-1.4.0-5.amzn2023.0.2.x86_64.rp 1.2 MB/s |  66 kB     00:00
(3/7): nginx-1.26.2-1.amzn2023.0.1.x86_64.rpm   2.1 MB/s |  33 kB     00:00
(4/7): gperftools-libs-2.9.1-1.amzn2023.0.3.x86 4.3 MB/s | 308 kB     00:00
(5/7): nginx-core-1.26.2-1.amzn2023.0.1.x86_64.  20 MB/s | 670 kB     00:00
(6/7): nginx-mimetypes-2.1.49-3.amzn2023.0.3.no 1.1 MB/s |  21 kB     00:00
(7/7): nginx-filesystem-1.26.2-1.amzn2023.0.1.n 327 kB/s | 9.9 kB     00:00
--------------------------------------------------------------------------------
Total                                           7.7 MB/s | 1.1 MB     00:00
Running transaction check
```

```
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing        :                                                      1/1
  Running scriptlet: nginx-filesystem-1:1.26.2-1.amzn2023.0.1.noarch      1/7
  Installing       : nginx-filesystem-1:1.26.2-1.amzn2023.0.1.noarch      1/7
  Installing       : nginx-mimetypes-2.1.49-3.amzn2023.0.3.noarch         2/7
  Installing       : libunwind-1.4.0-5.amzn2023.0.2.x86_64                3/7
  Installing       : gperftools-libs-2.9.1-1.amzn2023.0.3.x86_64          4/7
  Installing       : nginx-core-1:1.26.2-1.amzn2023.0.1.x86_64            5/7
  Installing       : generic-logos-httpd-18.0.0-12.amzn2023.0.3.noarch    6/7
  Installing       : nginx-1:1.26.2-1.amzn2023.0.1.x86_64                 7/7
  Running scriptlet: nginx-1:1.26.2-1.amzn2023.0.1.x86_64                 7/7
  Verifying        : generic-logos-httpd-18.0.0-12.amzn2023.0.3.noarch    1/7
  Verifying        : gperftools-libs-2.9.1-1.amzn2023.0.3.x86_64          2/7
  Verifying        : libunwind-1.4.0-5.amzn2023.0.2.x86_64                3/7
  Verifying        : nginx-1:1.26.2-1.amzn2023.0.1.x86_64                 4/7
  Verifying        : nginx-core-1:1.26.2-1.amzn2023.0.1.x86_64            5/7
  Verifying        : nginx-filesystem-1:1.26.2-1.amzn2023.0.1.noarch      6/7
  Verifying        : nginx-mimetypes-2.1.49-3.amzn2023.0.3.noarch         7/7

Installed:
  generic-logos-httpd-18.0.0-12.amzn2023.0.3.noarch
  gperftools-libs-2.9.1-1.amzn2023.0.3.x86_64
  libunwind-1.4.0-5.amzn2023.0.2.x86_64
  nginx-1:1.26.2-1.amzn2023.0.1.x86_64
  nginx-core-1:1.26.2-1.amzn2023.0.1.x86_64
  nginx-filesystem-1:1.26.2-1.amzn2023.0.1.noarch
  nginx-mimetypes-2.1.49-3.amzn2023.0.3.noarch

Complete!
[root@www ec2-user]# cd /etc/nginx/conf.d/
[root@www conf.d]# vim www2.conf
[root@www conf.d]# cd /usr/share/nginx/html/
[root@www html]# mv index.html index.html.orig
[root@www html]# vim index.html
[root@www html]# nginx -t
nginx: the configuration file /etc/nginx/nginx.conf syntax is ok
nginx: configuration file /etc/nginx/nginx.conf test is successful
[root@www html]# systemctl restart nginx
[root@www html]# systemctl enable nginx
Created symlink /etc/systemd/system/multi-user.target.wants/nginx.service → /usr
/lib/systemd/system/nginx.service.
[root@www html]# cd /
[root@www /]# cd /
[root@www /]# sudo su
[root@www /]# ping 3.111.38.157
PING 3.111.38.157 (3.111.38.157) 56(84) bytes of data.
```
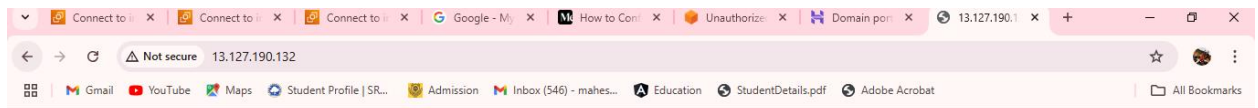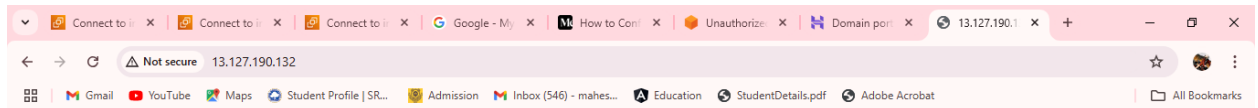
RESULT

Now when we enter the LB machine IP (13.127.190.132) it will balance the traffic and spin out to the two nginx servers such as NGINX Server 01 (3.110.121.49),NGINX Server 02(3.111.38.157)

Welcome to Mahesh Portfolio Site -Web1

welcome to mahesh webpage 02