Assignments:11

Module:- COSA(Proxy Server and squid proxy)
Name:- Prithviraj Nikam

Lab Assignment :-
In my case
Proxy Server :-192.168.3.47
Client as Centos:-192.168.3.137
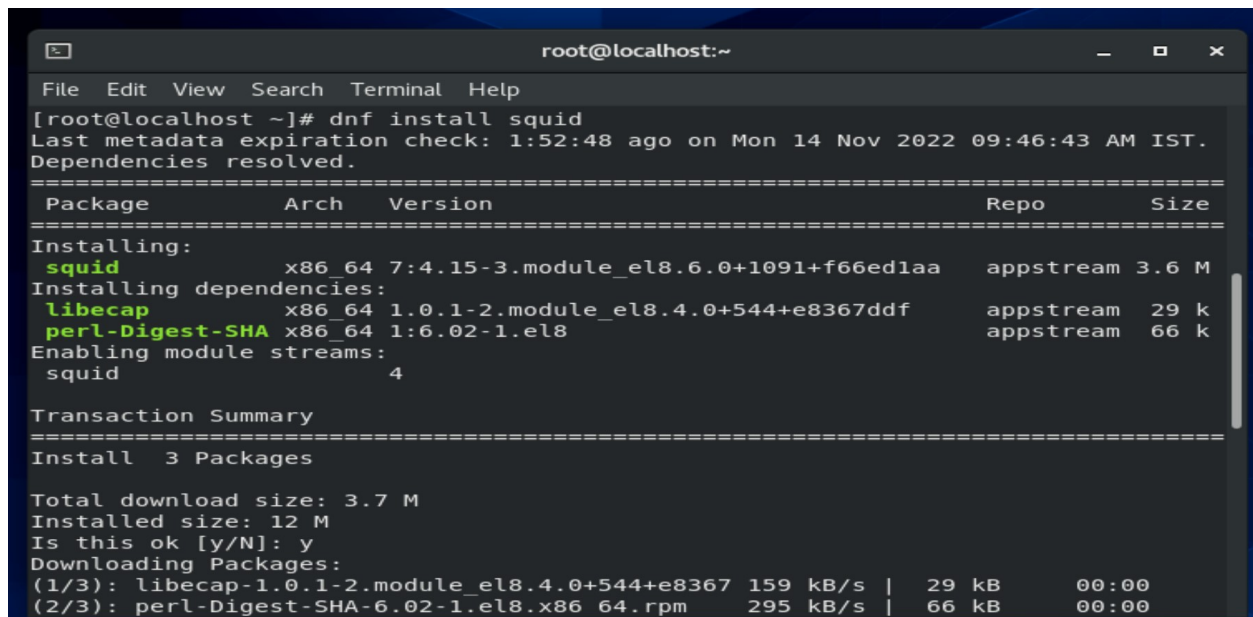**Client as Windows 10:-192.168.3.131**
Installation and configuration of Squid Proxy server

Step-1:- Step 1:- Install the squid packages
 # dnf install –y squid*
 # systemctl enable squid.service –now
#systemctl status squid.service

```
root@localhost:~

File  Edit  View  Search  Terminal  Help
[root@localhost ~]# dnf install squid
Last metadata expiration check: 1:52:48 ago on Mon 14 Nov 2022 09:46:43 AM IST.
Dependencies resolved.
================================================================================
 Package            Arch     Version                              Repo      Size
================================================================================
Installing:
 squid             x86_64 7:4.15-3.module_el8.6.0+1091+f66ed1aa   appstream 3.6 M
Installing dependencies:
 libecap           x86_64 1.0.1-2.module_el8.4.0+544+e8367ddf     appstream  29 k
 perl-Digest-SHA   x86_64 1:6.02-1.el8                            appstream  66 k
Enabling module streams:
 squid                    4

Transaction Summary
================================================================================
Install  3 Packages

Total download size: 3.7 M
Installed size: 12 M
Is this ok [y/N]: y
Downloading Packages:
(1/3): libecap-1.0.1-2.module_el8.4.0+544+e8367    159 kB/s |  29 kB     00:00
(2/3): perl-Digest-SHA-6.02-1.el8.x86 64.rpm       295 kB/s |  66 kB     00:00
```

```
[root@localhost ~]# systemctl enable squid
[root@localhost ~]# systemctl start squid
[root@localhost ~]# systemctl status squid
● squid.service - Squid caching proxy
   Loaded: loaded (/usr/lib/systemd/system/squid.service; enabled; vendor prese>
   Active: active (running) since Mon 2022-11-14 11:43:44 IST; 3s ago
     Docs: man:squid(8)
  Process: 64157 ExecStartPre=/usr/libexec/squid/cache_swap.sh (code=exited, st>
 Main PID: 64162 (squid)
    Tasks: 3 (limit: 12262)
   Memory: 13.9M
   CGroup: /system.slice/squid.service
           ├─64162 /usr/sbin/squid --foreground -f /etc/squid/squid.conf
           ├─64165 (squid-1) --kid squid-1 --foreground -f /etc/squid/squid.conf
           └─64166 (logfile-daemon) /var/log/squid/access.log

Nov 14 11:43:44 localhost.localdomain systemd[1]: Starting Squid caching proxy.>
Nov 14 11:43:44 localhost.localdomain squid[64162]: Squid Parent: will start 1 >
Nov 14 11:43:44 localhost.localdomain squid[64162]: Squid Parent: (squid-1) pro>
Nov 14 11:43:44 localhost.localdomain systemd[1]: Started Squid caching proxy.
lines 1-17/17 (END)
```

Step-2:- If firewall enable:-
Add the rule in the firewall for squid
 # firewall-cmd --permanent --add-service=squid
 # firewall-cmd -- reload


```
root@localhost:~
File  Edit  View  Search  Terminal  Help
[root@localhost ~]# firewall-cmd --permanent --add-service=squid
FirewallD is not running
[root@localhost ~]# systemctl start firewalld
[root@localhost ~]# firewall-cmd --permanent --add-service=squid
success
[root@localhost ~]# firewall-cmd --reload
success
[root@localhost ~]#
```

Step-3:- Add the rules in configuration file of squid.conf
vim /etc/squid/squid.conf


```
root@localhost:/etc/squid
File  Edit  View  Search  Terminal  Help
[root@localhost ~]# cd /etc/squid
[root@localhost squid]# vi squid.conf
```

Step-4:- Below the line number 49
Now we want to allow internet connection for our network.
acl mynetwork src 192.168.3.0/24
http_access allow mynetwork

```
46  #http_access deny to_localhost
47
48  #
49  # INSERT YOUR OWN RULE(S) HERE TO ALLOW ACCESS FROM YOUR CLIENTS
50
51  acl myprox src 192.168.3.0/24
52  http_access allow myprox
53
54
55  # Example rule allowing access from your local networks.
56  # Adapt localnet in the ACL section to list your (internal) IP networks
```
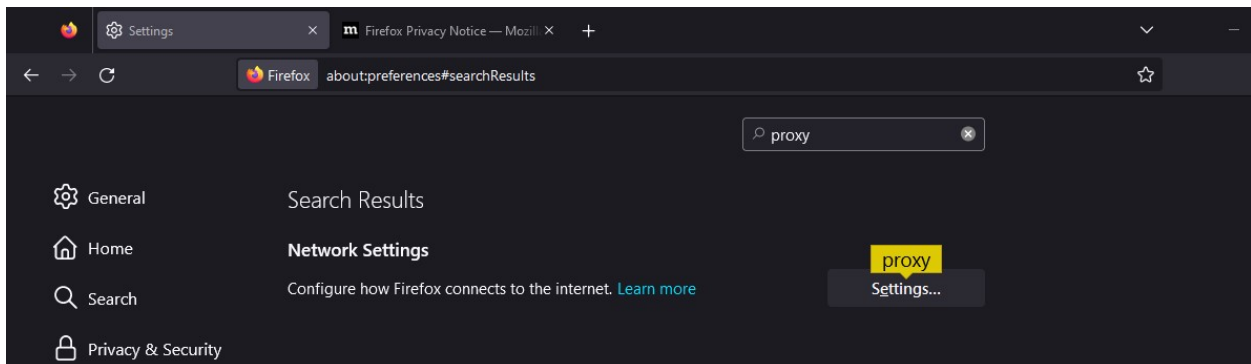
Restart the service:-

```
[root@localhost squid]# systemctl restart squid
[root@localhost squid]#
```

Step-5:- After restart the squid configure your client machine.
On Windows:
Open mozilla browser Go to Setting search proxy Enter the proxy server detail

Connection Settings   ✕

Configure Proxy Access to the Internet

○ No proxy

○ Auto-detect proxy settings for this network

○ Use system proxy settings

● Manual proxy configuration

    HTTP Proxy | 192.168.3.47 | Port | 3128 |

    ☐ Also use this proxy for HTTPS

    HTTPS Proxy | 192.168.3.47 | Port | 3128 |

    SOCKS Host | | Port | 0 |

    ○ SOCKS v4   ● SOCKS v5

○ Automatic proxy configuration URL

    | | Reload |

No proxy for

Or

Open Internet OptionsGo to Connection tabClick on LAN settingsin proxy server fill the details as like below the image and press "OK"
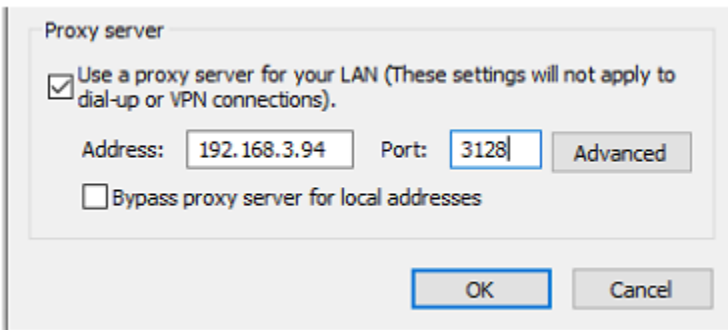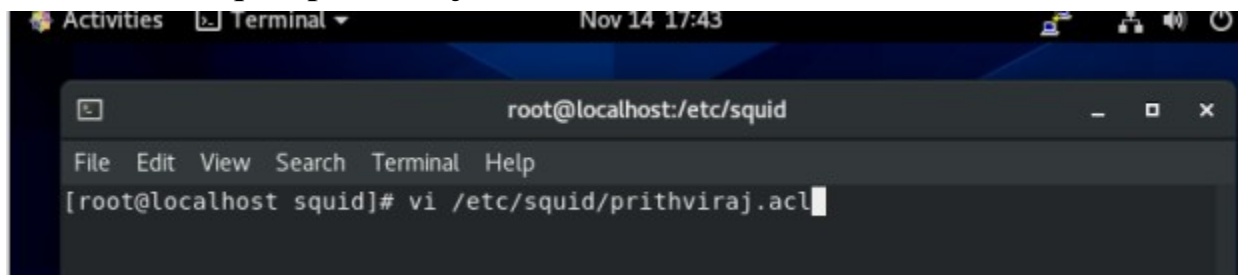

Step-6:-Log detail of the Squid server

```
[root@localhost squid]# tail -f /var/log/squid/access.log
1668427502.915 170458 192.168.3.131 TCP_TUNNEL/200 1397 CONNECT incoming.telemet
ry.mozilla.org:443 - HIER_DIRECT/34.120.208.123 -
```

Step-7 :- Try to block certain web sites through the squid proxy:-
     Create a file with "prithviraj.acl"
     Location of file /etc/squid/ prithviraj.acl
     Vi /etc/squid/prithviraj.acl

Step-8:- Add the rule as below in squid.conf file
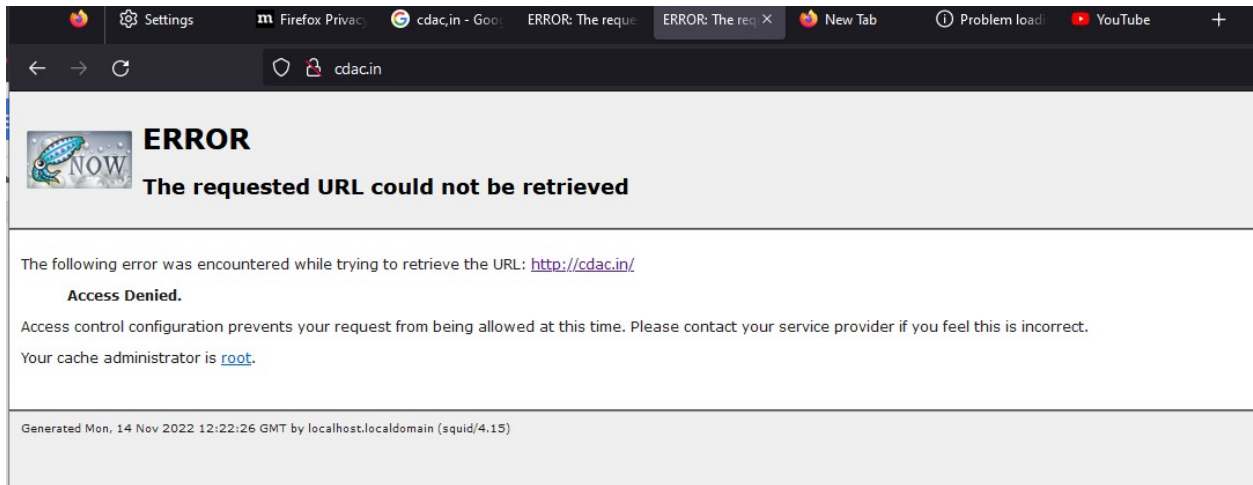## vi /etc/squid/squid.conf
Then restart it


```
#http_access deny to_localhost

acl blocksites dstdomain "/etc/squid/prithviraj.acl"
http_access deny blocksites
```

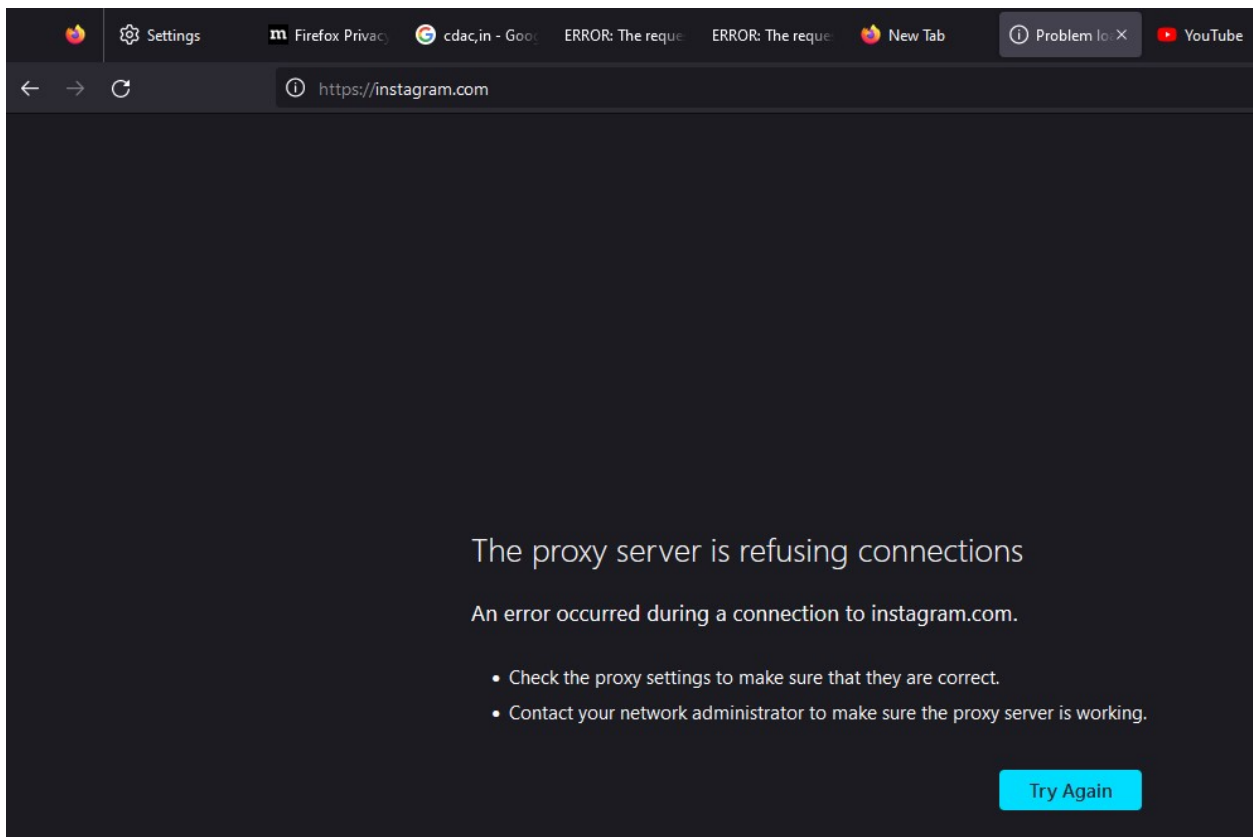## Step-9:- To check on browser and type the websites
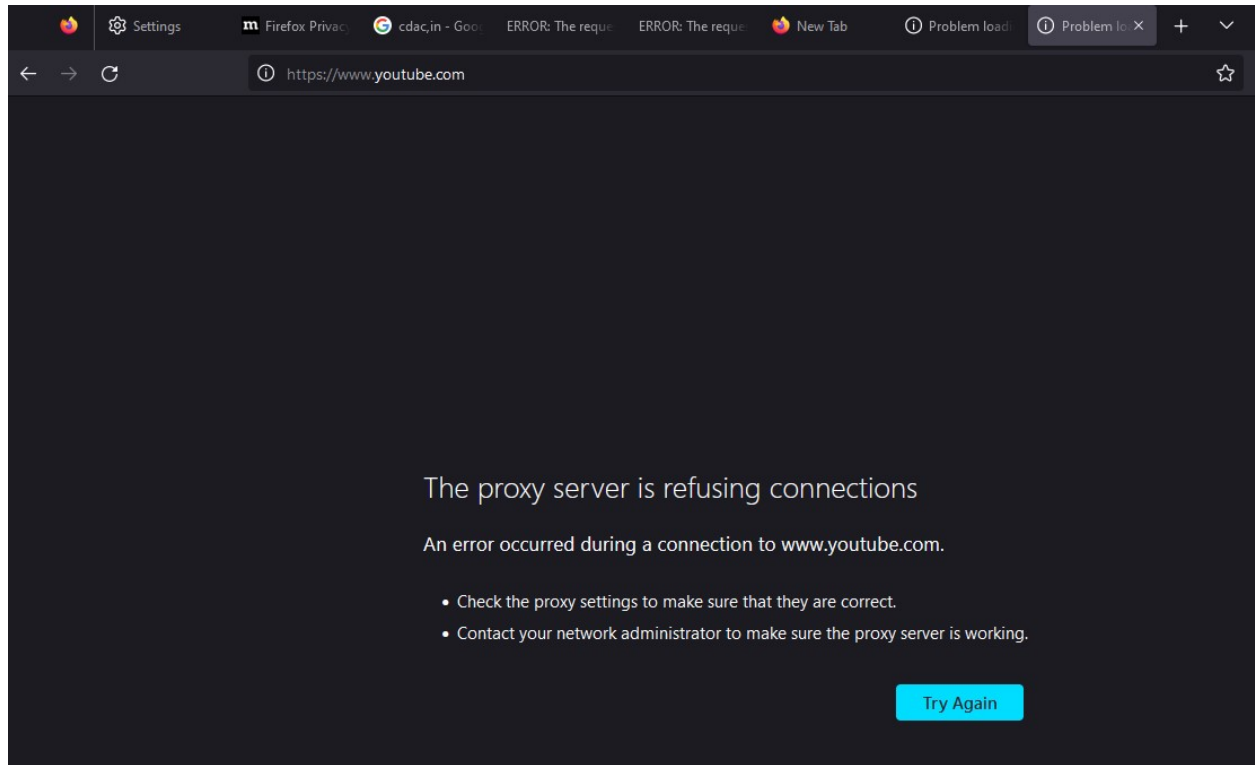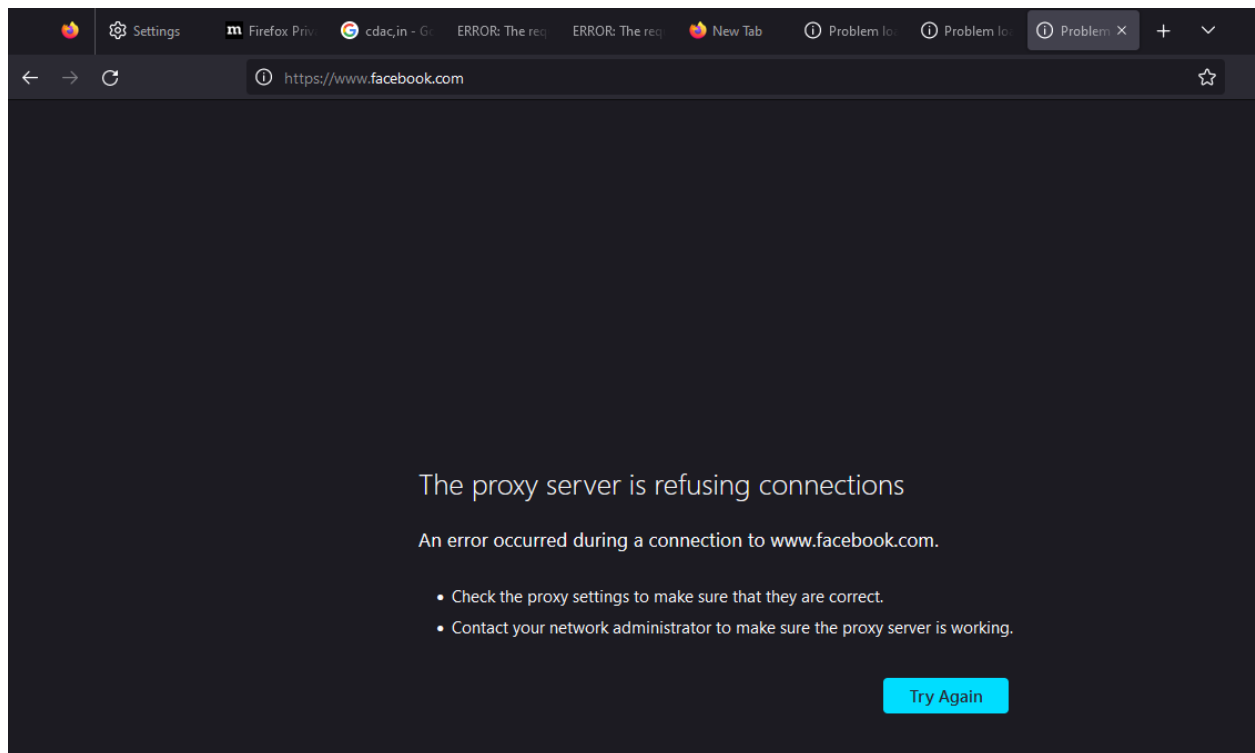## google.com
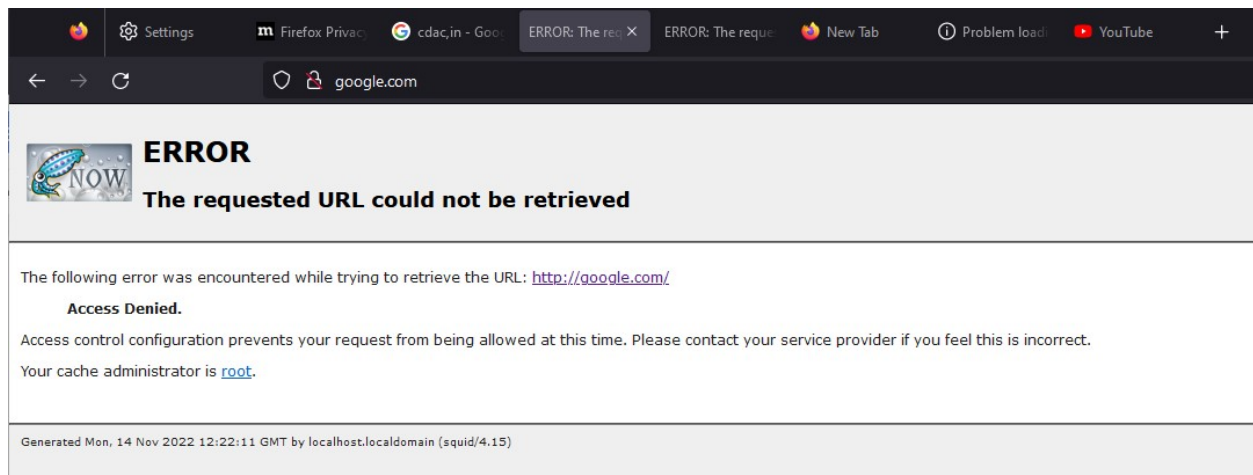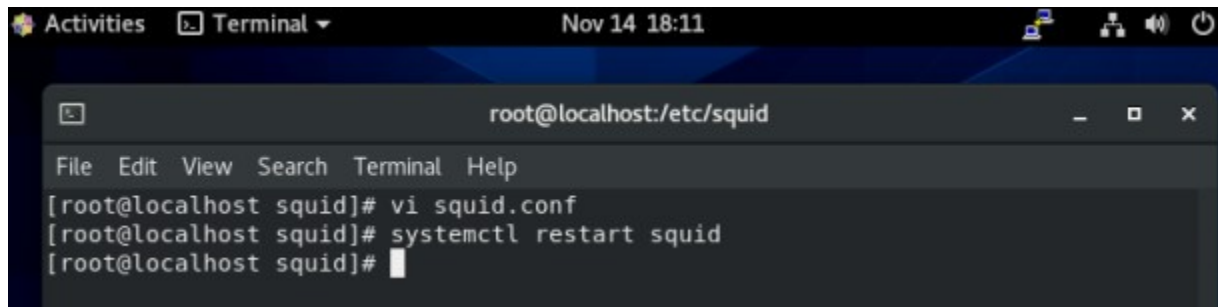
Cdac.in

instagram.com
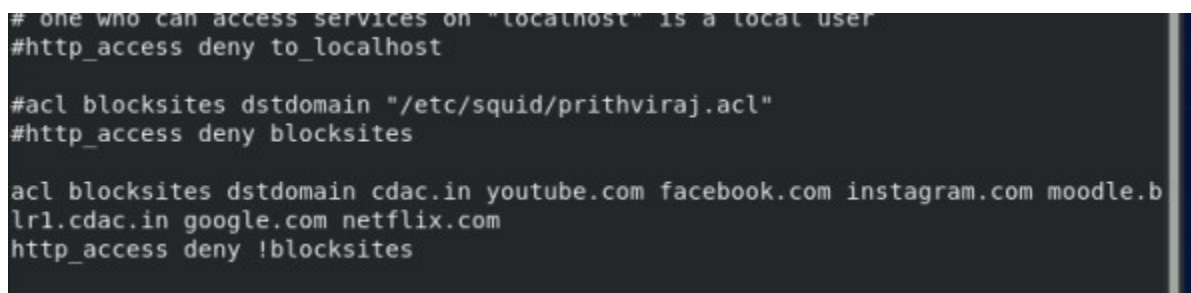
Youtube.com

Facebook

Step-10:- (2)Other method


```
root@localhost:/etc/squid

File  Edit  View  Search  Terminal  Help
[root@localhost squid]# vi squid.conf
[root@localhost squid]# systemctl restart squid
[root@localhost squid]#
```
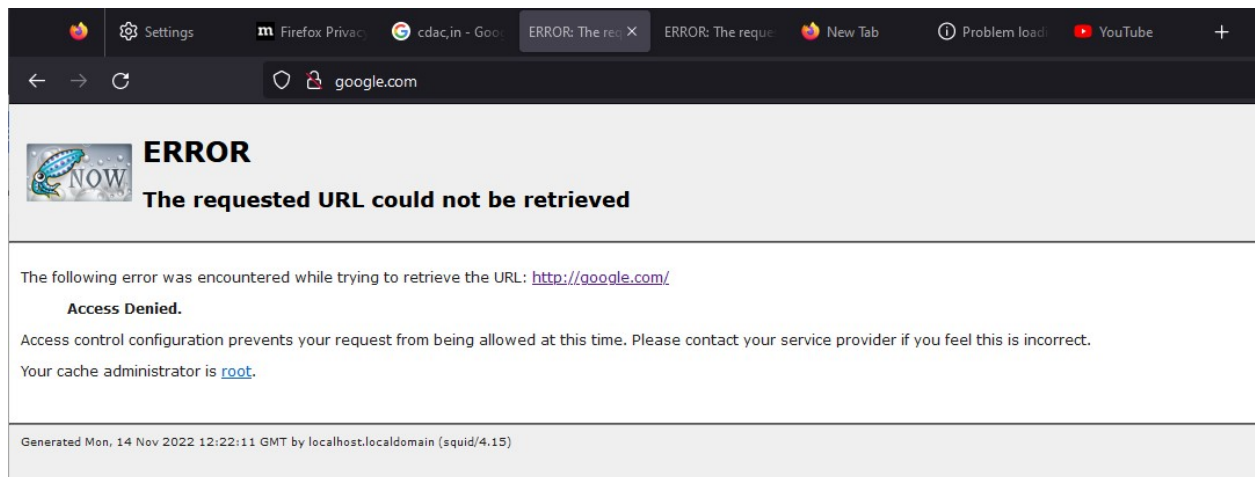
```
# one who can access services on "localhost" is a local user
#http_access deny to_localhost

#acl blocksites dstdomain "/etc/squid/prithviraj.acl"
#http_access deny blocksites

acl blocksites dstdomain cdac.in youtube.com facebook.com instagram.com moodle.b
lr1.cdac.in google.com netflix.com
http_access deny !blocksites
```

Step-11:- To check on browser and type the websites
google.com

ERROR

The requested URL could not be retrieved

The following error was encountered while trying to retrieve the URL: http://google.com/

Access Denied.

Access control configuration prevents your request from being allowed at this time. Please contact your service provider if you feel this is incorrect.

Your cache administrator is root.

Generated Mon, 14 Nov 2022 12:22:11 GMT by localhost.localdomain (squid/4.15)

Cdac.in

instagram.com

Youtube.com

https://www.**youtube**.com

The proxy server is refusing connections

An error occurred during a connection to www.youtube.com.

- Check the proxy settings to make sure that they are correct.
- Contact your network administrator to make sure the proxy server is working.

Try Again

---

https://www.**facebook**.com

The proxy server is refusing connections

An error occurred during a connection to www.facebook.com.

- Check the proxy settings to make sure that they are correct.
- Contact your network administrator to make sure the proxy server is working.

Try Again