

EX NO: 9**INSTALL AND CONFIGURE IPTABLES FIREWALL****AIM:**

To install iptables and configure it for variety of options.

Common Configurations & outputs:**1. Start/stop/restart firewalls**

```
[root@localhost ~]# systemctl start firewalld  
[root@localhost ~]# systemctl restart firewalld  
[root@localhost ~]# systemctl stop firewalld  
[root@localhost ~]#
```

2. Check all existing IPTables Firewall Rules

```
[root@localhost ~]# iptables -L -n -v  
[root@localhost ~]#
```

3. Block specific IP Address(eg. 172.16.8.10) in IPTables Firewall

```
[root@localhost ~]# iptables -A INPUT -s 172.16.8.10 -j DROP  
[root@localhost ~]#
```

4. Block specific port on IPTables Firewall

```
[root@localhost ~]# iptables -A OUTPUT -p tcp --dport xxx -j DROP  
[root@localhost ~]#
```

5. Allow specific network range on particular port on iptables

```
[root@localhost ~]# iptables -A OUTPUT -p tcp -d 172.16.8.0/24 --dport xxx -j ACCEPT  
[root@localhost ~]#
```

6. Block Facebook on IPTables

```
[root@localhost ~]# host facebook.com  
facebook.com has address 157.240.24.35  
facebook.com has IPv6 address 2a03:2880:f10c:283:face:b00c:0:25de  
facebook.com mail is handled by 10 smtpin.vvv.facebook.com.  
[root@localhost ~]# whois 157.240.24.35 | grep CIDR  
CIDR: 157.240.0.0/16  
[root@localhost ~]#  
[root@localhost ~]# whois 157.240.24.35  
[Querying whois.arin.net]  
[whois.arin.net]
```

```
#  
# ARIN WHOIS data and services are subject to the Terms of Use  
# available at: https://www.arin.net/resources/registry/whois/tou/  
#  
# If you see inaccuracies in the results, please report at  
# https://www.arin.net/resources/registry/whois/inaccuracy_reporting/  
#  
# Copyright 1997-2019, American Registry for Internet Numbers, Ltd.  
#
```

NetRange: 157.240.0.0 - 157.240.255.255
CIDR: 157.240.0.0/16
NetName: THEFA-3
NetHandle: NET-157-240-0-0-1
Parent: NET157 (NET-157-0-0-0-0)
NetType: Direct Assignment
OriginAS:
Organization: Facebook, Inc. (THEFA-3)
RegDate: 2015-05-14
Updated: 2015-05-14
Ref: <https://rdap.arin.net/registry/ip/157.240.0.0>

OrgName: Facebook, Inc.
OrgId: THEFA-3
Address: 1601 Willow Rd.
City: Menlo Park
StateProv: CA
PostalCode: 94025
Country: US
RegDate: 2004-08-11
Updated: 2012-04-17
Ref: <https://rdap.arin.net/registry/entity/THEFA-3>

```
OrgTechHandle: OPERA82-ARIN
OrgTechName: Operations
OrgTechPhone: +1-650-543-4800
OrgTechEmail: domain@facebook.com
OrgTechRef: https://rdap.arin.net/registry/entity/OPERA82-ARIN
OrgAbuseHandle: OPERA82-ARIN
OrgAbuseName: Operations
OrgAbusePhone: +1-650-543-4800
OrgAbuseEmail: domain@facebook.com
OrgAbuseRef: https://rdap.arin.net/registry/entity/OPERA82-ARIN
```

```
#
# ARIN WHOIS data and services are subject to the Terms of Use
# available at: https://www.arin.net/resources/registry/whois/tou/
#
# If you see inaccuracies in the results, please report at
# https://www.arin.net/resources/registry/whois/inaccuracy_reporting/
#
# Copyright 1997-2019, American Registry for Internet Numbers, Ltd.
#
```

```
[root@localhost ~]# iptables -A OUTPUT -p tcp -d 157.240.0.0/16 -j DROP
Open browser and check whether http://facebook.com is accessible
```

To allow facebook use -D instead of -A option

```
[root@localhost ~]# iptables -D OUTPUT -p tcp -d 157.240.0.0/16 -j DROP
[root@localhost ~]#
```

6. Block Access to your system from specific MAC Address(say 0F:22:1E:00:02:30)

```
[root@localhost ~]# iptables -A INPUT -m mac --mac-source 0F:22:1E:00:02:30 -j
DROP
[root@localhost ~]#
```

7.Save IPTables rules to a file

```
[root@localhost ~]# iptables-save > ~/iptables.rules  
[root@localhost ~]# vi iptables.rules  
[root@localhost ~]#
```

8.Restrict number of concurrent connections to a Server(Here restrict to 3 connections only)

```
[root@localhost ~]# iptables -A INPUT -p tcp --syn --dport 22 -m connlimit  
--connlimit-above 3 -j REJECT
```

9. Disable outgoing mails through IPTables

```
[root@localhost ~]# iptables -A OUTPUT -p tcp --dport 25 -j REJECT  
[root@localhost ~]#
```

10. Flush IPTables Firewall chains or rules

```
[root@localhost ~]# iptables -F  
[root@localhost ~]#
```

RESULT:

Thus, the iptables has been installed successfully and it has been configured for variety of options.