

Exp. No.: 11

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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 existsting 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 specifig 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:
```

```
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 to install iptables and configure it for variety of options has been done successfully.