Ex. No.: 11 Date:

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 exitsting 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

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]

#

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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/
#
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#

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)

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

#

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

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

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

7. Save IPtables rules to a file

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

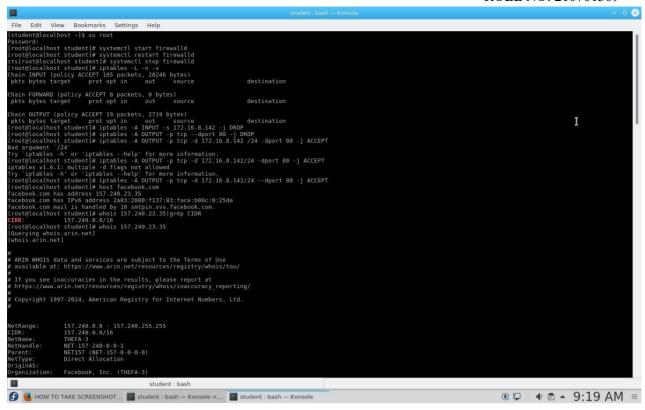
8. Restrict number of concurrent connections to a Server(Here restrict to 3 connections only) [root@localhost ~]# iptables -A INPUT -p tcp --syn --dport 22 -m connlimit --connlimit-above 3 -j REJECT

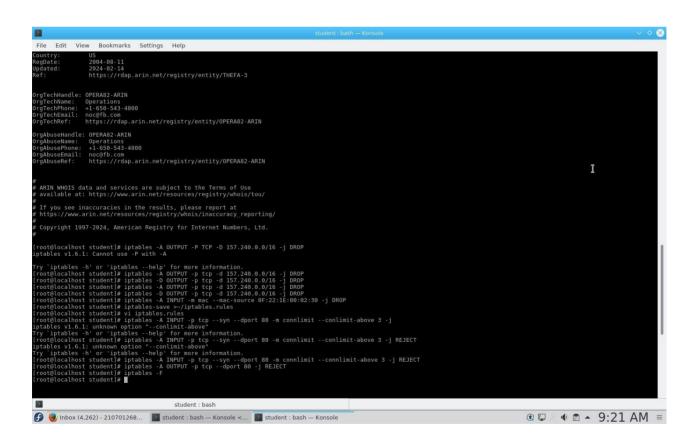
9. Disable outgoing mails through IPtables

[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: