

SETTING UP SQUID PROXY SERVER IN DMZ:

In this module, we have configured the Squid Proxy Server in DMZ.

Note: In the previous modules, we setup LAN and DMZ and configured the appropriate IPTABLES routing rules.

Steps involved in setting up Squid Proxy Server in DMZ:

1. Setup another workstation in DMZ to serve as a Squid Proxy Server and Install Webmin.
 - a. Operating System Used: Ubuntu 15.04.
 - b. Workstation Host Name: **msit-is**, Username: **dmz**.
 - c. IPAddress: **192.168.1.53**

The screenshot displays the Webmin 1.770 interface on a workstation named MSIT-IS. The browser address bar shows `https://msit-is:10000`. The left sidebar contains navigation links: Login: root, Webmin, System, Servers, Others, Networking, Hardware, Cluster, Un-used Modules, Search, View Module's Logs, System Information, Refresh Modules, and Logout. The main content area shows the 'System Information' section with the following details:

- System hostname: MSIT-IS (127.0.1.1)
- Operating system: Ubuntu Linux 15.04
- Webmin version: 1.770
- Time on system: Wed Dec 23 09:52:17 2015
- Kernel and CPU: Linux 3.19.0-42-generic on i686
- Processor information: Intel(R) Pentium(R) 4 CPU 3.00GHz, 2 cores
- System uptime: 0 hours, 15 minutes

Overlaid on the bottom right is a terminal window titled 'dmz@MSIT-IS: ~'. It shows the output of the `ifconfig` command:

```
dmz@MSIT-IS:~$ ifconfig
eth0      Link encap:Ethernet  HWaddr 00:16:76:b8:fb:24
          inet addr:192.168.1.53  Bcast:192.168.1.255  Mask:255.255.255.0
          inet6 addr: fe80::216:76ff:feb8:fb24/64  Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:126257 errors:0 dropped:0 overruns:0 frame:0
          TX packets:36208 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:185142906 (185.1 MB)  TX bytes:2890097 (2.8 MB)

lo        Link encap:Local Loopback
          inet addr:127.0.0.1  Mask:255.0.0.0
          inet6 addr: ::1/128 Scope:Host
          UP LOOPBACK RUNNING  MTU:65536  Metric:1
          RX packets:25533 errors:0 dropped:0 overruns:0 frame:0
          TX packets:25533 errors:0 dropped:0 overruns:0 frame:0
```

2. Install Squid from Webmin.

The screenshot shows the Webmin interface in a Mozilla Firefox browser window. The page title is "Webmin 1.770 on MSIT (Ubuntu Linux 15.04) - Mozilla Firefox". The address bar shows "https://localhost:10000". The left sidebar lists various server modules like PPP Dialin Server, PPTP VPN Client, etc. The main content area is titled "Install Package" and shows the command "apt-get -y --force-yes -f install squid..". It displays the output of the command, including package lists, dependency tree, and the list of packages to be installed: libecap2, squid-langpack, squid3, and squid3-common. It also shows the disk space requirements and the download progress for each package.

3. Configure the Squid proxy server.

The screenshot shows the Webmin interface in a Mozilla Firefox browser window. The page title is "Webmin 1.770 on MSIT (Ubuntu Linux 15.04) - Mozilla Firefox". The address bar shows "https://localhost:10000". The left sidebar lists various server modules like Fail2Ban Intrusion Detector, Fetchmail Mail Retrieval, etc. The main content area is titled "System configuration" and shows the configuration options for the Squid proxy server. The options include: Full path to squid config file (/etc/squid/squid.conf), Command to start squid (Automatic), Command to stop squid (Automatic), Command to apply changes (Automatic), Squid executable (squid), Full path to PID file (/var/run/squid.pid), Full path to squid cache directory (/var/spool/squid), Squid cachemgr.cgi executable (/usr/lib/cgi-bin/cachemgr.cgi), Full path to squid log directory (/var/log/squid), Path to calamaris log analysis program (Not installed, calamaris), and Path to squidclient program (Not installed, squidclient). There is a "Save" button and a "Return to index" link at the bottom.

4. Access the Squid Proxy Server Interface in Webmin.

5. After configuring it successfully, edit the `/etc/squid3/squid.conf` file to allow all the http access to this proxy.

```
# INSERT YOUR OWN RULE(S) HERE TO ALLOW ACCESS FROM YOUR CLIENTS
#

# Example rule allowing access from your local networks.
# Adapt localnet in the ACL section to list your (internal) IP networks
# from where browsing should be allowed
#http_access allow localnet
http_access allow localhost

# And finally deny all other access to this proxy
http_access allow all
```

6. Now add a custom ACL to the Squid.

Webmin 1.770 on M... x +

https://localhost:10000

Module Index

Edit ACL

Start Squid

URL Regexp ACL

ACL Name:

Regular Expressions ☐ Ignore case?

facebook
facebook.com
http://facebook.com
http://www.facebook.com
https://facebook.com
https://www.facebook.com
http://fb.com

Failure URL:

Store ACL values in file: ☒ Squid configuration ☐ Separate file

Save Delete

[Return to ACLs](#) | [Return to index](#)

7. Create a Proxy restriction such that it denies all the requests pertaining to the recently added ACL.

Webmin 1.770 on M... x +

https://localhost:10000

Module Index

Create Proxy Restriction

Start Squid

Proxy Restriction

Action: ☐ Allow ☒ Deny

Match ACLs: all (1), SSL_ports (1), Safe_ports (1), CONNECT (1), **FB (0)**

Don't match ACLs: all (1), SSL_ports (1), Safe_ports (1), CONNECT (1), FB (0)

Save

[Return to ACL list](#) | [Return to index](#)

8. Move the ACL to the top of the Proxy restriction list.

Webmin 1.770 on M... x +

https://localhost:10000

Module Index Help..

Access Control

Start Squid

Access control lists **Proxy restrictions** ICP restrictions External ACL programs Reply proxy restrictions

Add proxy restriction.

Action	ACLs	Move
<input type="checkbox"/> Deny	FB	↓
<input type="checkbox"/> Deny	ISafe_ports	↓↑
<input type="checkbox"/> Deny	CONNECT ISSL_ports	↓↑
<input type="checkbox"/> Allow	localhost manager	↓↑
<input type="checkbox"/> Deny	manager	↓↑
<input type="checkbox"/> Allow	localhost	↓↑
<input type="checkbox"/> Allow	all	↑

Add proxy restriction.

Delete Selected Restrictions

Return to squid index

9. Now, back in the router, add an additional IPTABLES rule such that it routes the default traffic to the Squid Proxy Server in DMZ (192.168.1.53).

Note: All the pre-required routing IPTABLES rules has been configured in the previous modules.

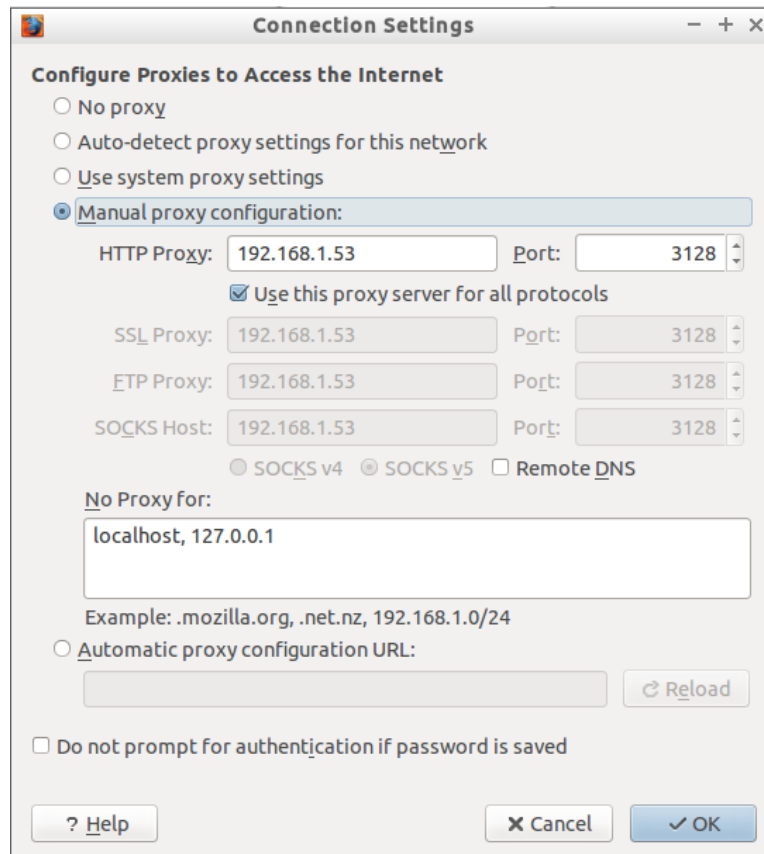
```

root@MSIT: /home/inf053c
File Edit Tabs Help
root@MSIT:/home/inf053c# iptables -t nat -A PREROUTING -i DMZ ! -d 192.168.1.53 -p tcp --dport 80 -j REDIRECT --to-ports 3128
root@MSIT:/home/inf053c#

```

10. Now, start the squid server (192.168.1.53) in DMZ.

11. Add the proxy server setting in the browsers of the LAN users.



12. Results (LAN Users accessing Facebook Via Squid Proxy Server in DMZ):

