

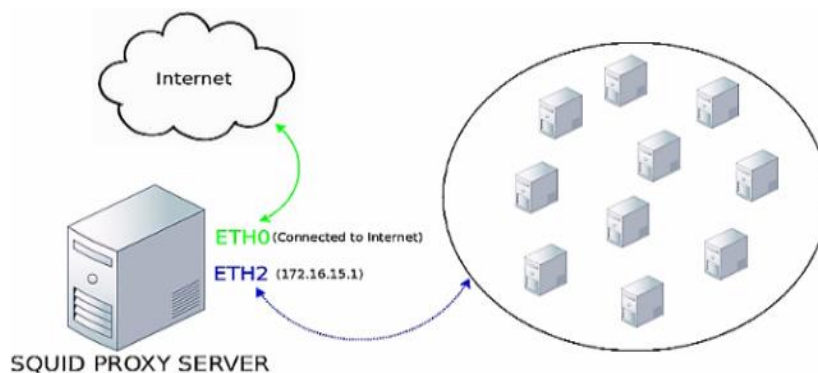
**GETTING STARTED  
WITH  
SQUID WEB PROXY**

## ➤ SQUID WEB PROXY:

- Squid is a proxy server that caches content to **reduce bandwidth** and **load web pages** more quickly.
- Squid is a high-performance proxy caching server for web clients, supporting FTP, Gopher, and HTTP data objects. It reduces bandwidth and improves response times by caching and reusing frequently-requested web pages.
- Squid has extensive access controls and makes a great server accelerator. It runs on the most available operating systems, including Windows and is licensed under the GNU GPL.
- In RHEL, the squid package provides the Squid Caching Proxy.
- A Proxy server can be configured as:
  - **Simple proxy server** : To share the internet connection.
  - **Caching web server** : Store web pages locally to improve performance.
  - **Firewall** : To control access to the internet.

## WEB PROXY ARCHITECTURE:

- Proxy sits between the **client** and **web server** that the user is trying to connect to. Many times, these devices are used when you want to control access to the internet (**Think web filtering**).



## ❖ **SQUID INSTALLATION AND CONFIGURATION:**

### **PRE-REQUISITES:**

<b>Package name</b>	<b>: squid</b>
<b>Main config file</b>	<b>: /etc/squid/squid.conf</b>
<b>Startup options for config file</b>	<b>: /etc/sysconfig/squid</b>
<b>Cache Location</b>	<b>: /var/spool/squid</b>
<b>Log File Location</b>	<b>: /var/log/squid</b>
<b>Log File</b>	<b>: access.log &amp; cache.log</b>
<b>Service / Daemon</b>	<b>: squid</b>
<b>Ports</b>	<b>: SQUID – 3128</b>

### **CONFIGURATION OPTIONS:**

<b>http_port</b>	<b>: Specifies the port to listen on</b>
<b>visible_hostname</b>	<b>: Identifies name of the squid server</b>
<b>access_log</b>	<b>: Keeps track of the web page</b>
<b>acl</b>	<b>: Access control List</b>
<b>http_access</b>	<b>: Which system or network have access</b>

#### **→ Installing squid package:**

**#dnf install squid -y**

#### **→ Reload the systemd manager configuration:**

**#systemctl daemon-reload**

#### **→ Start and enable the squid service:**

**#systemctl start squid**

**#systemctl enable squid**

→ **Verify the status of the squid:**

```
#systemctl status squid
```

→ **Verify the port number of squid:**

```
#netstat -pantl
```

```
#netstat -pantl | grep -i squid
```

## **SQUID AS PROXY SERVER:**

- A proxy server is a system or router that provides a gateway between users and the internet.
- It improves privacy, security, and possibly performance in the process.

→ **Edit squid main configuration file:**

```
#vim /etc/squid/squid.conf
```

```
acl mynetwork src 192.168.10.0/24
```

```
http_access allow mynetwork
```

```
#### Squid normally listens to port 3128
```

```
http_port 3128
```

→ **Restart the squid service:**

```
#systemctl restart squid
```

## **WEB BROWSER SETTINGS:**

Go to web browser, in settings → Network Settings → Under manual Proxy Configuration → Add:

HTTP Proxy: **192.168.10.254** Port: **3128**

Now we can access Shared Internet

## SQUID AS CACHING SERVER:

- Squid is a proxy server that caches content to reduce bandwidth and load web pages more quickly.

→ **Edit squid main configuration file:**

```
#vim /etc/squid/squid.conf
```

```
cache_dir ufs /var/spool/squid 100 16 256
```

#### Above settings are ###

Squid uses the **ufs** cache type.

Squid stores its cache in the **/var/spool/squid/** directory.

The cache grows up to **100 MB**.

Squid creates **16 level-1 sub-directories** in the **/var/spool/squid**.

Squid creates **256 sub-directories** in each level-1 directory.

→ **Restart the squid service:**

```
#systemctl restart squid
```

→ **Now go and verify /var/spool/squid directory:**

```
#cd /var/spool/squid
```

```
#ls
```

## SQUID AS FIREWALL SERVER:

- Many times, these devices are used when you want to control access to the internet (**Think web filtering**).
- Squid is a caching proxy for the web. We can also configure it to filter and block internet traffic on a client.

→ **Edit squid main configuration file:**

```
#vim /etc/squid/squid.conf
```

```
acl badsite url_regex .facebook.com
acl badsites url_regex "/etc/squid/badsites_list"
acl badtime time 00:00-06:00
acl badhost src 192.168.10.10
```

```
http_access deny badhost
http_access deny badtime
http_access deny badsites
http_access deny badsite
```

→ **Create a file for badsites list:**

```
#vim /etc/squid/badsites_list

.facebook.com

.youtube.com      ## add more bad sites here
```

→ **Restart the squid service:**

```
#systemctl restart squid
```

→ **Now verify the blocked web sites:** <http://www.youtube.com>

**ERROR: The requested URL could not be retrieved**

### **WEB SITE REDIRECTION SETTING:**

```
acl blocksite dstdomain .yahoo.com
deny_info http://www.ibm.com all
http_reply_access deny blocksite all
```

→ **Now Restart squid and verify the web site:** <http://www.yahoo.com>

**NOTE:** The output would be [www.ibm.com](http://www.ibm.com)

### **LOG FILES:**

- The logs are a valuable source of information about Squid workloads and performance. By default log files are: **/var/log/squid**

```
#tail -f access.log    and    #tail -f cache.log
```