Running SQUID in *freeBSD*

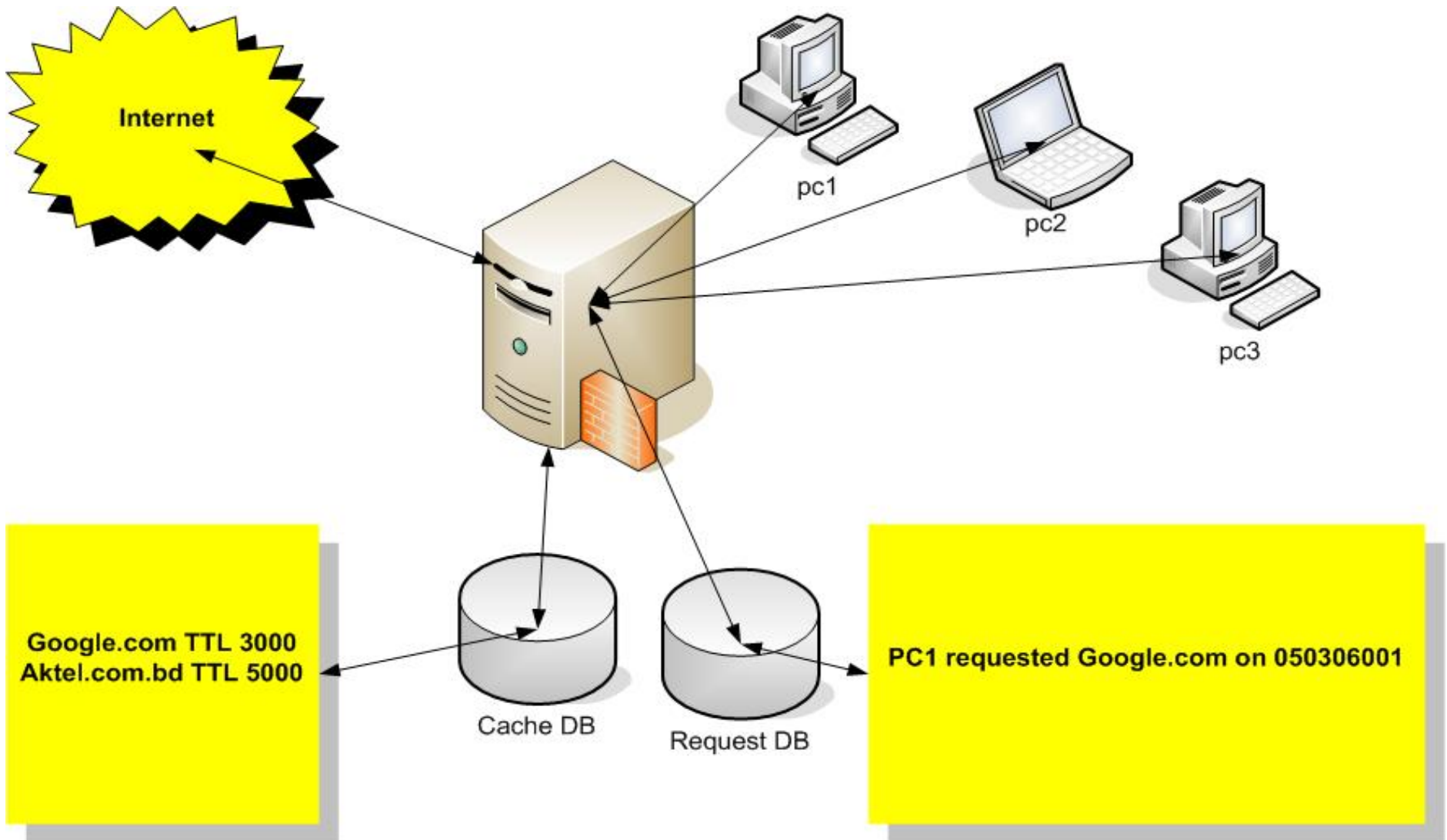## Sufi Faruq Ibne Abubakar

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What is *Squid* ?

- A full-featured Web proxy cache
- Designed to run on Unix systems
- Free, open-source software
- The result of many contributions by unpaid (and paid) volunteers

Why will I use *Squid* ?

- Save 30% Internet Bandwidth
- Access Control
- Low cost proxy

- **Proxy keeps database of each request comes from client**
- **Proxy itself goes to get resource from internet to satisfy first time request**
- **Proxy caches resources immediately after obtaining it from internet.**
- **Proxy serves the resource from cache in second request for same resources**

Consideration for Squid deployment

- User calculation
- System Memory (Min 256 MB RAM)
- Speedy Storage (SCSI Preferred)
- Faster CPU
- Functionality expectations

Supports

- Proxying and caching of HTTP, FTP, and other URLs
- Proxying for SSL
- Cache hierarchies
- ICP, HTCP, CARP, Cache Digests
- Transparent caching
- WCCP (Squid v2.3 and above)
- Extensive access controls
- HTTP server acceleration
- SNMP
- caching of DNS lookups

Obtaining *Squid*

- Obtain package source from:
  - http://www.squid-cache.org
  - Squid Mirror Sites (http://www.squid-cache.org/Mirrors/http-mirrors.html)
  - Binary download for FreeBSD also available (http://www.squid-cache.org/binaries.html)
- "STABLE" releases, suitable for production use
- "PRE" releases, suitable for testing

Installing Squid

- tar zxvf squid-2.4.STABLE6-src.tar.gz
- cd squid-2.4.STABLE6
- ./configure --enable-removal-policies
  --enable-delay-pools
  --enable-ipf-transparent
  --enable-snmp
  --enable-storeio=diskd,ufs --enable-storeio=diskd,ufs
  --disable-ident-lookups
- make all
- make install

Configuring Squid

- The squid.conf file (/usr/local/squid/etc/squid.conf)

- Essential Parameters (port, cache, acl)

- Create cache dir and create swap (-k parse, -z)

- Create start-up script (/usr/local/etc/rc.d/start.sh)

- Run

Simple Squid configuration

- http_port 3128

- cache_mem 128 MB

- cache_dir diskd /usr/local/squid/cache 15360 16 256

- cache_replacement_policy GDSF

- acl all src 0.0.0.0/0.0.0.0

  acl outgoing src 192.168.10.2/255.255.255.255

  http_access allow outgoing

  http_access deny all

--enable-delay-pools

-Enable delay pools to limit bandwidth usage.

-It will give fair bandwidth usage for everybody.

--enable-ipf-transparent

-You need to use IP Filter to redirect traffic.

- You don't have to configure the client's browser.

- You can force the client to use the proxy every time.

--enable-storeio=diskd,ufs

- Improve disk I/O performance up to 400 % (squid FAQ).

- You might need to recompile the kernel to support message queues and shared memory (if not supported).

--enable-removal-policies

- Enable support for the list of removal policies
- By default, Squid uses LRU. You can enable two better policies: GDSF & LFUDA

--enable-snmp

- Enable SNMP to monitor squid performace.
- SNMP enables you to monitor squid with mrtg or rrdtool.

Configuring Transparent Proxy

- **Compile with --enable-ipf-transparent**
- **Edit "squid.conf" to fiill with following options.**

```
http_port 3128
httpd_accel_host virtual
httpd_accel_port 80
httpd_accel_with_proxy   on
httpd_accel_uses_host_header on
```

- **Edit "/etc/rc.conf" to enable ipfilter**

```
ipfilter_enable="YES"
ipnat_enable="YES"
ipmon_enable="YES"
ipfs_enable="YES"
```

- **Edit /etc/ipnat.rules to add http traffic redirection rules.**

```
rl00/0  port 80 -> 127.0.0.1 port 3128 tcp
```

Logging

- cache_access_log
- cache_store_log
- cache_log