

Paket SQUID

Version 4.0.0-r60785-testing

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October 14, 2022

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1. Documentation For Package SQUID

1.0.1. Description:

Squid is a HTTP proxy that allows to cache web pages to a local disk and if the page is opened again will send the current local copy, instead of loading the page again from the web. This reduces Internet traffic and the display of the page is faster. Particularly, the use is recommended if more than one person at the same time wants to surf, but only a small bandwidth to the Internet is available.

1.0.2. Preconditions:

A running base flil4l system installed on a harddisk is needed. Minimum requirements are:

CPU: 100 MHz

RAM: 32 MB

HD: 100 MB

Important: *Squid is a process on the flil4l! Therefore every system that has unrestricted access on the input list of the packet filter configuration also has the same unrestricted Internet access over Squid. This relates to the protocols HTTP, HTTPS and FTP!*

1.1. Variables in squid.txt:

SQUID_MANAGER Specifies the E-Mail-address of the local proxy administrator. This address is also the contact address in error message outputs. Likewise the E-Mail-address is used as the login for the cache manager. Default Setting is:

```
SQUID_MANAGER='squid@flil4l'
```

SQUID_PASSWORD Password for the cache manager.

Default Setting is:

```
SQUID_PASSWORD='flil4l'
```

SQUID_TRANSPARENT_CACHING

SQUID_TRANSPARENT_FORWARDING If activating this function, Squid filters all “surf accesses” from the internal net to the Internet and thus caches them. This can be of use if you want to cache those clients not explicitly having a proxy configured in their bowsers. The client does not recognize the redirection. The advantage:

1. You can cache the line to the Internet even if you do not want to take care of the proper configuration of the clients.

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2. Programs not supporting a proxy will be cached as well and can make use of the “faster connection”

Default Setting is:

```
SQUID_TRANSPARENT_CACHING='no'  
SQUID_TRANSPARENT_FORWARDING='no'
```

Important: *If these options are set to 'yes', you can no longer use port forwarding on port 80. That would lead to a conflict and Squid would stop working.*

Furthermore, access blocking for individual IP's in the base.txt is not working anymore! The firewall itself always has full access to the Internet.

If transparent caching is enabled, an additional port will be opened to allow Squid to deliver certain pages (i.e. error pages) seamlessly. This is the value of SQUID_HTTP_Port (see below) plus one. So if SQUID_HTTP_Port=3128 is set, the port 3129 is also opened and hence may not be assigned to other applications on the firewall.

SQUID_HTTP_PORT Here you can specify on which TCP port Squid should wait for connections. Default Setting is:

```
SQUID_HTTP_PORT='3128'
```

If transparent caching is enabled (SQUID_TRANSPARENT_CACHING='yes', see above), an additional port will be opened, SQUID_HTTP_PORT plus one. This port may not be assigned to other applications on the firewall.

SQUID_MEM_CACHE_SIZE This setting determines how much space the cache may take in RAM in maximum. Set the size in MB.

Recommended is 1/4 of the available main memory of the router.

SQUID_DISK_CACHE_SIZE This setting determines how much space the cache is allowed to take on the hard disk as a maximum. Set the size in MB. While the cache gets bigger, Squid automatically deletes old files so that the maximum size is not exceeded. On the disk at least 25% should be still free at full cache because Squid becomes very slow when the disk is nearly full. If Squid has no space on the disk left to write files, it exits with an error.

Also note that Squid needs about 6 MB of RAM for itself plus the RAM specified at SQUID_MEM_CACHE_SIZE plus about 6 MB of RAM per GB of cache on the disk. The Squid process may not be swapped, physical memory must be available in corresponding amount!

When hitting problems set SQUID_DISK_CACHE_SIZE smaller. Squid with small cache is faster than Squid with big cache and not enough RAM.

SQUID_MAX_OBJECT_SIZE The value is specified in kB. Objects that are larger than this value are not saved to disk. If you want to save a lot of traffic at the expense of high speed, you should set this value high. If you want higher speed at the expense of more traffic this value should be set to 10000 kB or less.

Default Setting is:

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`SQUID_MAX_CACHE_SIZE='65536'`

SQUID_WORK_DIR In this directory Squid stores its cache, the log files, and other files relevant for operating.

The cache is stored in: `SQUID_WORK_DIR/cache`

Similarly, the logs: `SQUID_WORK_DIR/logs`

`SQUID_WORK_DIR` should therefore point to a hard disk with enough capacity. Important requirement is having read/write access and that the hard drive is formatted with the ext file system. More detailed information on disk preparation and use under `fl4l` can be found in the HD package.

Default Setting is:

`SQUID_WORK_DIR='/data/squid'`

Alternatively, you may use 'auto' here so that the system path for persistent files is used. Pay attention to `FL4L_UUID` pointing to a medium with sufficient space, otherwise `/boot` or if this is not writable even the RAMdisk will be used.

SQUID_CYCLE_LOG_N This option determines the number of logfile rotations. If setting this to the value "0", the logfiles will only be closed and reopened. This allows you to rename the log files yourself.

Default Setting is:

`SQUID_CYCLE_LOG_N='10'`

This equals 10 rotating log files.

SQUID_CYCLE_LOG_TIME Since Squid, once it runs, mostly is performing without problems, it comes in handy that the log files regularly may be deleted automatically. This avoids that the hard drive will overflow. The value is specified in seconds. 1 hour corresponds to 3600 seconds.

Default Setting is:

`SQUID_CYCLE_LOG_TIME='172800'`

This equals 48 hours.

1.2. Variables Important Only For Network Configurations Outside base.txt

SQUID_AUTO_CONFIG This option determines whether the networks with rights to access the services of Squid should automatically be taken from the `base.txt`, or whether the networks are configured manually by the following fields.

For large networks with multiple IP ranges and other routers, this automatic may be combined with the following options.

SQUID_ACCESS_NET_N Number of networks that are allowed to access the services of Squid. Normally this value is '0' because all networks configured directly on the fil4 are already detected by SQUID_AUTO_CONFIG.

SQUID_ACCESS_NET_x Specify networks here that are allowed to access Squid. This information will be used only internally by Squid to control the user's web access through Squid. Access to Squid itself has to be allowed with additional packet filter rules if necessary (see PF_INPUT_x in base.txt or PF6_INPUT_x in ipv6.txt).

An example would be:

```
SQUID_ACCESS_NET_1='192.168.0.0/24'
```

All computers with IP addresses 192.168.0.XXX are allowed to use Squid.

1.3. Optional Variables Not Necessary For Operation

SQUID_CONNECT_TIMEOUT This option determines how long Squid waits for a full TCP connection to a server. Within this time (default: 120 seconds) the connection to the server must be established.

SQUID_CACHE_N If you want to spread the cache over multiple disks you may activate this here. With this you can specify several additional cache directories. In order to do this the index must be set to the desired number of additional directories.

Now fill the variable

SQUID_CACHE_1_DIR

SQUID_CACHE_1_SIZE with the values desired. If, for example a second harddisk with a capacity of 4 GB is mounted under /disk2:

```
SQUID_CACHE_1_DIR='/disk2'  
SQUID_CACHE_1_SIZE='3000'
```

This harddisk would be used only for Squid cache now.

Default Setting is: no additional cache_dir.

SQUID_NEXT_PROXY If the internet access is only possible via a proxy, or for performance reasons an upstream proxy should be accessed, is has to be entered here in the format 'name.domain', eg

```
SQUID_NEXT_PROXY='www-proxy.t-online.de'
```

In case of failure of this proxy Squid tries to resolve the pages directly.

Default Setting is: no upstream proxy

SQUID_NEXT_PROXY_PORT Port of the upstream proxy. Only taken into account if SQUID_NEXT_PROXY is not empty, i.e.

```
SQUID_NEXT_PROXY_PORT='80'
```

Default Setting is: empty

1.4. ONLY FOR EXPERTS!

In file `opt/etc/rc.d/rc455.squid` all variables from `squid.conf` can be found. Those in need of changes to `squid.conf` may incorporate them there. When booting `fl4l` the changes made are taken over to the dynamically generated `squid.conf`.

1.5. Links

For further questions I advice to check the homepage of the Squid project and the FAQs there: <http://wiki.squid-cache.org/SquidFaq>
or the (german) manual at <http://www.Squid-handbuch.de/hb/>

1.6. Credits

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