

Phc manual

for version 1.1 of Phc. Latest update: 25 June 2005.

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This manual documents version 1.1 of Phc, the validator of free proxy. The latest update of this manual: 25 June 2005.

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1 What is phc?

Phc is a customizable proxy hunter. (It is not a really brave hunter, but a lazy and kind one who will only select beasts puted before him or her,;-).)

It reads free proxy list from file and outputs data used to value speed or response of the free proxies available. All of the process can be customized by the user.

Certainly, you can learn and finish configuration in a few minutes. And then, if you have a big proxylist, just have a cup of coffe to wait for the result.

2 Featurelist

Featurelist

1. Checking free http proxy¹ with GET or CONNECT method:
 - HTTP_CONNECT
 - This kind of http proxy accepts CONNECT request. Most of application based on tcp can use this kind of proxies, for example: telnet,ssh, http etc.
 - This kind of http proxy usually do not limit strictly the range of target port of the request.
 - HTTP_GET
 - The common http proxy. It only proxy common service, such as http,ftp,gopher. It is due to the proxy server what kind of service can be supported.
 - It will benefit from cache of proxy server. So it is a good selection if many people use the same proxy to visit similar sites in the same time.
2. Checking free socks5 proxy with connect method:
 - SOCKS5_CONNECT
 - Socks5 proxies accept connect command. This method of socks5 proxy is very like the connect method of http proxy. Just above, it can be used as tcp tunnel. That is to say, it can proxy any request based on TCP.
3. Checking the testproxy² via myproxy.

Myproxy is the proxy which phc connect to it and go to testproxy via it. Now myproxy can be http (support CONNECT method) or socks5 (support connect command) proxy. Two kind of authentication of myproxy is supported for socks5 or http proxy:

Notice, the directly connection in phc is for testing. So you can try to validate testproxy without myproxy now.

 1. Authentication with username and password needed.

http: basic authentication socks5: username/password authentication(RFC1929).
 2. no authentication.

That is to say, myproxy can be free proxy also. Certainly, you must have route to connect to myproxy directly.
4. Multithread.
5. All delay on process are written to file and printed on screen in the same time.

There is a simple script available used to sort the result according to the speed of proxies.
6. You can use ctrl-c to kill it without loss on result.
7. Read testproxy by line but not reading to memory at a glance. Phc is expected to check big proxylist without influencing the other process.

¹ proxies without authentication and free to use by the others

² The free proxis in proxy list file

8. Flexible, customizable. All detail on validating can be customized, such as: `user_agent`: you can check testproxy as any browsers with it if you like. `checksite`: you can select the best testproxy for a single site. `key`: you can select a better key in the site of target to match the result thoroughly. ...

3 Requirements

Requirements

- cpu
i386,alpha,sparc and more
- os
It has been tested on many linux dictribution, such as gentoo,debian ,fedora core. It works on SunOS and OSF1,too. I am not sure whether it will run at other operating system.
- Compile
Libpthread is needed. It was implemented in most of the glibc in the world. I compile it sucessfully with gcc. I am not sure whether it will be compiled by the other compilers.
- Network
A http or socks5 proxy which support CONNECT method or command. It is used as myproxy just as above.
Direct connection to testproxy without myproxy is supported without well test. Just let mytype=-1 to enable it.
Marvin have written a patch for phc-1.0 to support connection directly without myproxy. If you met problems with mytype=-1 , you can try this patch.
- Privileges.
Common user who can create,read,write socket and file is ok. If you are puzzled ,I am sure you have this privilege. :-). Just try it.

4 Quick start

You can use phc after a few minutes if you do like this step by step:

1. Extract from source and enter the work dir:

```
tar zxvf phc-1.1.tar.gz
cd phc-1.1
```

2. Compile && Install:

```
./configure
make
make install
```

3. Phc will search configuration file and proxylist file in current dir. If you still in work dir, just create configuration file like this:

```
cp doc/phc.conf.example phc.conf
```

Now read the configuration file "phc.conf". Notice: The line begin with '#' is comment line. The line after the line begin with '#' must be customized with you own setting. And the line begin with

'#! if'

need be updated only if the condition expression after "if" is true.

5 Introduction to basic configuration

- **mytype** The type of myproxy, which phc connect to directly. 1 for http proxy without authentication. 2 for socks5 proxy without authentication. 3 for http proxy with basic authentication. 4 for socks5 proxy with username/password authentication. -1 for connection to testproxy without myproxy(Testing).
- **myhost** The ip of domain name of myproxy. This will be in effect only if mytype != -1
- **myport** The http proxy service port of myproxy. This will be in effect only if mytype !=-1
- **myuser** This will be read only if mytype=3 or 4.
- **mypass** This will be read only if mytype=3 or 4.

For example, you username at myproxy is abc, password is guest, then you should set myuser and mypass like this:

```
myuser=abc
mypass=guest
```

- **httptestmethod** The http method which should be supported by the testproxy. httptestmethod=0(HTTP_GET) or 1(HTTP_CONNECT) is supported now. If you need a HTTP CONNECT proxy, just set it to 1:

```
httptestmethod=1
```

- **socks5testmethod** The socks5 command which should be supported by the testproxy. Only 2 support to (SOCKS5_CONNECT) is implemented now. You should leave it intact now:

```
socks5testmethod=2
```

4. If you have proxy list file like the file proxylist in directory doc, just rename it as proxylist. Otherwise, you can copy the proxylist file in doc to current directory to begin test immediately:

```
cp doc/proxylist .
```

Notice, phc.conf must be in the same directory now.

5. At last, start checking:

```
phc
```

Tips: If you have found enough free proxies, you can use "^C" to stop phc at any time.

The result of validation will be printed on screen and saved to file named proxyout in current directory immediately after any free proxy is found .

6. Example of configuration.

- **Conditions:** a socks5 proxy(socks.you.com) with username/password authentication. socks5 service port:1080, username:abc,password:def.

Want to validate: free http CONNECT proxy and free socks5 proxy which support connect command.

You configuration should look like this:

```
#You must customize the follow
mytype=4
```

```

myhost=socks.you.com
myport=1080
myuser=abc
mypass=def
httptestmethod=1
socks5testmethod=2
#Optional to be changed. But you SHOULD NOT comment or remove it.
threads=50
checksite=http://www.google.com:80/webhp?hl=en
key=2005 Google
user_agent=User-Agent: MSIE 6.0
myconreplysize=256
testconreplysize=256
testtagreplysize=65535
rcvtimeo=10
sndtimeo=5
logfilename=phc.log

```

- Conditions: a http proxy(proxy.you.com) without authentication. http proxy service port:8080.

Want to validate: Common free http proxy and free socks5 proxy which support connect command.

Your setting will be similiar with this:

#The follow lines must be customized.

```

mytype=1
myhost=proxy.you.com
myport=8080
httptestmethod=0
socks5testmethod=2
#The follow lines is optional to be changed , but you should not
#delete or remove it.
threads=50
checksite=http://www.google.com:80/webhp?hl=en
key=2005 Google
user_agent=User-Agent: MSIE 6.0
myconreplysize=256
testconreplysize=256
testtagreplysize=65535
rcvtimeo=10
sndtimeo=5
logfilename=phc.log
#All of the other setting(such as "user=", "pass=") will be ignored.

```

6 Advanced configuration

Please read See Chapter 4 [Quick start], page 5. to know the meaning of '#!' or '#! if' at the start of a line and what are the vars that must be customized.

Syntax: a line will be ignored unless it is in the format like this:

```
varname=value
```

Notice: No chars (such as whitespace,quote) will be exceptional. So any chars before, after or inside "varname=value" will be recognized as part of "varname=value".

The list of advanced vars:

- threads The number of threads opened at the same time. This should be set according to ulimit. The number can't be more than 65535. Though nocache header is used, it is expected that less threads give more precise delay information to evaluate the proxies better.
- myconreplysize The size of buffer used to receive reply after sending CONNECT request for testproxy to myproxy. This is used for some weird proxies. Please leave it intact if unsure.
- testconreplysize The size of buffer used to receive reply after sending CONNECT request for target to testproxy. It is only be used when you validate HTTP CONNECT proxies. Just as above, do not change it if unsure.
- testtagreplysize The size of buffer used to receive reply after sending GET request to the target. Phc will find key from this buffer.
- user_agent Identified as Browsers or others to "cheat" some proxies.
- rcvtimeo Receiving timeouts in second.
- sndtimeo Sending timeouts in second.
- logfilename Redirect stderr to log file. Use a single "." ("." is just before LF) to leave stderr as it is.

The line begin with other varnames which do not appeare here or See Chapter 4 [Quick start], page 5. will be ignored.

7 Scripts

There are two scripts in directory scripts.

- createlist

A script used to filter and create proxylist file from raw file.

Only line in format of "ip:port@proto.*" will be reserved and the chars after proto in the line will be removed. All duplicate line will be removed.

What the script does is: start->read a line from raw file->capitalize ->find port between : and @->port is number->check the string after @ to find proto -> proto is SOCKS5 or HTTP -> write ip:port@proto to tmpfile -> continue read next line ... loop

If any of the steps failed, just break and continue with the next line from start.

After all of lines are filtered,changed and saved to tmpfile, sort and uniq are used to remove duplicate line.

Usage: `./createlist infile outfile` Example:

```
./createlist p proxylist
```

- sortlist

sort the file proxylist. Usage:

```
cp doc/sortlist .  
./sortlist
```

8 Format of proxylist

The format of proxylist accepted by phc should like this:

`ip:port@proto.*`

or

`ip:port`

I remove support on domain, so ip must be IPV4 address. The port must be integer range from 1 to 65535. The proto can only be HTTP,http,socks5 or SOCKS5. All of the chars after proto will be ignored.

If no @ in the line, proto is default as HTTP. Differently, no other chars after port can be appeared.

Example:

`61.132.89.130:80@HTTP`

`202.123.52.156:8080`

9 Format of output

The current version of phc output timeouts of every steps of validation:

Method	Output (time increase ->)
HTTP_GET	host:port@HTTP estab pget end
HTTP_CONNECT	host:port@HTTTPC estab pcon get end
SOCKS5_CONNECT	host:port@SOCKS5 estab pcon get end

The figure on process of validation. See the table for the meaning of symbol in the figure:

symbol	meaning
—	start to send, the left string is time.(such as ta)
<—	The data entered,the left string is the time when data come in.

Figure:

Phc — (myproxy) — testproxy — target(checksite)



delay	define
estab	Delay from the time(ta) phc send CONNECT request for test-proxy to myproxy (or connect to testproxy directly) to the time(tb) it receives "Connection Established".
pcon	Delay from the time(tc) phc send CONNECT request for target to testproxy to the time(td) it receives "Connection Established". With HTTP_GET method, it is impossible to get "connection delay" for that is added to pget delay. It is only be used with HTTP_CONNECT or SOCKS5_CONNECT method.
get	Delay from the time(te) phc send HTTP GET request to target to the time(tf) it receives the first byte data returned. This is only be used with HTTP_GET method and the "middle-delay"(like pcon) can't be got by the client.
pget	Delay from the time(te) phc send GET request for target to testproxy to the time(tf) it receives the first byte data returned.

The value of the delays:

The guide to use the delay

- If you want to select a testproxy with best response to myproxy(or phc), just sort the result according to estab.
- If you need a testproxy through which you can get the best response (shortest route?) from the target defined in configuration, please sort according to pcon , get or pget.
- On the other hand , if you care for the bandwidth of the whole route to target, you should sort according to end.

- You can sort testproxies according to `estab` if you want to browse webpages via test-proxy(through myproxy firstly or not).

- You can sort testproxies according to end if you want to download files via test-proxy(through myproxy firstly or not) from target.

- The less delay, the more speed. You should select the testproxies with the shortest delay, such as `estab,pcon,get,pget` or `end`.

10 TODO

- SOCKS5_UDP
- https.
- cgi
- curses like interface?
- graphic interface?

more... updating

Please contact with me if you have idears on phc.

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