

# Haproxy TCP- HTTP-

- [HAProxy](#)
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- [haproxy](#)
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- Astra Linux Special Edition .10015-01 ( 1.7), .10015-10
- Astra Linux Special Edition .10015-17
- Astra Linux Special Edition .10015-37 ( 7.7)
- Astra Linux Special Edition .10015-03 ( 7.6)
- Astra Linux Special Edition .10152-02 ( 4.7)
- Astra Linux Special Edition .10015-01 ( 1.6)
- Astra Linux Special Edition .10015-16 . 1
- Astra Linux Special Edition .10015-16 . 2
- Astra Linux Special Edition .10265-01 ( 8.1)
- Astra Linux Common Edition 2.12



HAProxy TCP- HTTP-, , .

## HAProxy

- :
  - tcp-check;
  - http-check;
  - mysql-check;
- ( HTTP-/HTTPS-/TCP- ) (layer 4);
- (stick-tables);
- :
  - IPv6 UNIX sockets;
  - HTTP/1.1 (deflate, gzip, libsz);
  - SSL;
  - HTTP-;
  - Lua ;
- WEB- .

:

- , haproxy, :
  - IP- 192.168.27.200;
- Web- 1:
  - host1.domain.name;
  - IP- 192.168.27.201;
- Web- 2:
  - host2.domain.name;
  - IP- 192.168.27.202;
- ,

, , haproxy. (. [synaptic](#)) :

```
sudo apt install haproxy
```

web-:

1. DNS, /etc/hosts :
  - a. web- 1:

```
sudo sed -i '$a 192.168.27.201\thost1.domain.name host1' /etc/hosts
sudo hostnamectl set-hostname host1.domain.name
```

b. web- 2:

```
sudo sed -i '$a 192.168.27.202\thost2.domain.name host2' /etc/hosts
sudo hostnamectl set-hostname host2.domain.name
```

2. apache2:

```
sudo apt install apache2
```

3. apache2 /etc/apache2/apache2.conf:



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```
sudo sed -i '/AstraMode/{s/on/off;/s/# //}' /etc/apache2/apache2.conf
```

4. apache2:

```
sudo apachectl restart
```

## haproxy

haproxy /etc/haproxy/haproxy.cfg, :

- global --- HAProxy;
- defaults --- - ;
- frontend --- , ;
- backend --- , , ;
- listen --- frontend backend. - , , TCP-a.

.

global	log <address> <facility> [max level [min level]]  : log 127.0.0.1 local0 notice	. <facility> 24 : <ul style="list-style-type: none"><li>• kern</li><li>• user</li><li>• mail</li><li>• daemon</li><li>• auth</li><li>• syslog</li><li>• lpr</li><li>• news</li><li>• uucp</li><li>• cron</li><li>• auth2</li><li>• ftp</li><li>• ntp</li><li>• audit</li><li>• alert</li><li>• cron2</li><li>• local0 local1 local2 local3 local4 local5 local6 local7</li></ul>
	maxconn <number> : maxconn 10000	haproxy.
	nbproc <number> : nbproc 2	haproxy. haproxy.
	daemon	haproxy <<daemon>>.
	user	, haproxy.
	group	, haproxy.
	chroot /var/lib/haproxy	haproxy.
defaults	log global	.

	mode http	HAProxy. :  • http --- Layer7, http-; • tcp ---
	option dontlognull	.
	retries 3	.
	option redispatch	.
	option httpclose	.
	option forwardfor	X-Forwarded-For IP- .
fronte nd	frontend http	frontend.
	bind *:80	IP- .
backe nd	backend sitecluster	
	balance (roundrobin/leastconn/static-rr/uri/source)	. :  • Round Robin --- , , . <<>>. balance roundrobin; • Least Connected --- . balance leastconn; • Static Round Robin --- , , . Round Robin, <<>>. HAProxy. balance static-rr; • Source --- , IP- . , .
	server srv-1.3.my.com 21.86.21.20:80 cookie site113ha check inter 2000 fall 3 minconn 30 maxconn 70 weight 100	, :  • srv-1.3.my.com --- ; • 21.86.21.20:80 --- IP-: ; • cookie site113ha --- cookie, ; • check inter 2000 fall 3 --- 2, ; • minconn 30 maxconn 70 --- , 70 ; • weight 100 --- , 1 100.
	stats enable	.
	fullconn 200	.
	listen	IP- .
	listen stats-srv-3.my.com *:8180	
	stats uri /stats	URL .
	stats realm Haproxy Statistics	(title) .
	stats show-legends	.
	stats refresh 5s	.
	stats auth test:test	.

, ... :

```
frontend http_front
    bind *:80
    stats uri /haproxy?stats
    default_backend http_back

backend http_back
    balance roundrobin
    server host1.domain.name 192.168.27.201:80 check
    server host2.domain.name 192.168.27.202:80 check
```

haproxy:

```
sudo systemctl restart haproxy
```

:

```
for i in {1..1000} ; do
    wget --no-cache -qO- http://192.168.27.200/index.html > /dev/null &
done
wait
```

haproxy (/var/log/haproxy.log) , , :

```
Apr 28 13:40:46 balancer haproxy[2430]: 192.168.27.201:38710 [28/Apr/2021:13:40:28.550] http_front http_back/host2.domain.name
0/0/13032/5332/18364 200 10962 - - ---- 21/21/19/4/2 0/0 "GET /index.html HTTP/1.1"
Apr 28 13:40:46 balancer haproxy[2430]: 192.168.27.201:38726 [28/Apr/2021:13:40:28.550] http_front http_back/host2.domain.name
0/0/13032/5332/18364 200 10962 - - ---- 20/20/18/3/2 0/0 "GET /index.html HTTP/1.1"
Apr 28 13:40:46 balancer haproxy[2430]: 192.168.27.201:38728 [28/Apr/2021:13:40:28.550] http_front http_back/host2.domain.name
0/0/13032/5332/18364 200 10962 - - ---- 19/19/17/2/2 0/0 "GET /index.html HTTP/1.1"
Apr 28 13:40:46 balancer haproxy[2430]: 192.168.27.201:38730 [28/Apr/2021:13:40:28.550] http_front http_back/host2.domain.name
0/0/13032/5332/18364 200 10962 - - ---- 18/18/16/1/2 0/0 "GET /index.html HTTP/1.1"
Apr 28 13:40:47 balancer haproxy[2430]: 192.168.27.201:38042 [28/Apr/2021:13:40:28.490] http_front http_back/host1.domain.name
0/0/3044/16011/19055 200 10962 - - ---- 16/16/15/16/0 0/0 "GET /index.html HTTP/1.1"
Apr 28 13:40:47 balancer haproxy[2430]: 192.168.27.201:38192 [28/Apr/2021:13:40:28.490] http_front http_back/host1.domain.name
0/0/3044/16011/19056 200 10962 - - ---- 16/16/14/15/0 0/0 "GET /index.html HTTP/1.1"
Apr 28 13:40:47 balancer haproxy[2430]: 192.168.27.201:37914 [28/Apr/2021:13:40:28.490] http_front http_back/host1.domain.name
0/0/3044/16013/19057 200 10962 - - ---- 14/14/13/14/0 0/0 "GET /index.html HTTP/1.1"
Apr 28 13:40:47 balancer haproxy[2430]: 192.168.27.201:37996 [28/Apr/2021:13:40:28.490] http_front http_back/host1.domain.name
0/0/3044/16014/19058 200 10962 - - ---- 13/13/12/13/0 0/0 "GET /index.html HTTP/1.1"
```

http://192.168.27.200/haproxy?stats :  
blocked URL

, web- 1 web- 2 , 1 ( Server:Wght) , 500 ( Sessions:LbTot).



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astra-mode ( . : ) . :

astra-mode on | off

(Astra Linux Special Edition 1.6 Astra Linux Special Edition x.7 ) . :

- maclev — ;
- maccat — .

:

acl <\_> <> <\_> <\_>

:

- eq - ;
- ge - ;
- gt - ;
- le - ;
- lt - ;

:

```

frontend http_frontend
    bind *:8081
    mode http

    acl maclev_ge_1 maclev ge 1
    acl maclev_eq_2 maclev eq 2
    acl maccat_eq_0 maccat eq 0
    tcp-request content accept if maclev_ge_1 maccat_eq_0
    use_backend http_back_2 if maclev_eq_2 maccat_eq_0

    option http-keep-alive
    default_backend http_back_1

backend http_back_1
    mode http
    server s1 host.domain.name:80

backend http_back_2
    mode http
    server s2 host.domain.name:81

```

:

- :
  - acl maclev\_ge\_1 maclev ge 1 - ;
  - acl maclev\_eq\_2 maclev eq 2 - ;
  - acl maccat\_eq\_0 maccat eq 0 - ;
- tcp-request content accept if maclev\_ge\_1 maccat\_eq\_0 - ;
- use\_backend http\_back\_2 if maclev\_eq\_2 maccat\_eq\_0 - 2 http\_back\_2.