Installation and Configuration HAproxy

HAProxy is a free, very fast and reliable solution offering high availability, load balancing, and proxying for TCP and HTTP-based applications. It is particularly suited for very high traffic web sites and powers quite a number of the world's most visited ones.

The balancing algorithms are used to decide which server at the backend each connection is transferred to. Some of the useful options include the following:

Roundrobin: Each server is used in turns according to their weights. This is the smoothest and fairest algorithm when the servers' processing time remains equally distributed. This algorithm is dynamic, which allows server weights to be adjusted on the.

Leastconn: The server with the lowest number of connections is chosen. Round-robin is performed between servers with the same load. Using this algorithm is recommended with long sessions, such as LDAP, SQL, TSE, etc, but it is not very well suited for short sessions such as HTTP.

First: The first server with available connection slots receives the connection. The servers are chosen from the lowest numeric identifier to the highest, which defaults to the server's position on the farm. Once a server reaches its maxconn value, the next server is used.

Source: The source IP address is hashed and divided by the total weight of the running servers to designate which server will receive the request. This way the same client IP address will always reach the same server while the servers stay the same.

Installation & Configuration

```
# yum info haproxy
# yum install gcc pcre-devel tar make -y
# wget http://www.haproxy.org/download/2.0/src/haproxy-2.0.7.tar.gz
# tar xzvf haproxy.tar.gz
# cd haproxy-2.0.7

# make TARGET=linux-glibc
# make install

# mkdir -p /etc/haproxy
# mkdir -p /var/lib/haproxy
# touch /var/lib/haproxy/stats
# ln -s /usr/local/sbin/haproxy /usr/sbin/haproxy

# cp ~/haproxy-2.0.7/examples/haproxy.init /etc/init.d/haproxy
# chmod 755 /etc/init.d/haproxy
# systemctl daemon-reload
# systemctl enable haproxy
# useradd -r haproxy
# haproxy -v


# firewall-cmd --permanent --add-service=http
# firewall-cmd --permanent  --add-port=8181/tcp
# firewall-cmd --reload
# firewall-cmd --list-all
```

Config File & Directory

- ✓ /etc/haproxy

Configuration directory

- ✓ /etc/haproxy/haproxy.cfg

Configuration file

- ✓ /var/log/ haproxy.log

Log file

HAproxy Configuration:

```
# cd /etc/haproxy/

# vim haproxy.cfg
```

```
global
  log /dev/log local0
  log /dev/log local1 notice
  chroot /var/lib/haproxy
  stats timeout 30s
  user haproxy
```

```
    group haproxy
    daemon

  defaults
    log global
    mode http
    option httplog
    option dontlognull
    timeout connect 5000
    timeout client 50000
    timeout server 50000
  frontend http_front
    bind *:80
    stats uri /haproxy?stats
    default_backend http_back

  backend http_back
    balance roundrobin
    server webserver_1 192.168.0.150:80 check
    server webserver_2 192.168.0.103:80 check
```

```
# systemctl restart haproxy
# systemctl status haproxy
```

Validation & GUI:

http://load_balancer_public_ip/haproxy?stats