

# HAProxy

- ✓ Understanding Load Balancing
- ✓ Installation and Configuration
- ✓ Understanding “global” section
- ✓ Modes – TCP vs. HTTP
- ✓ Proxies Section
- ✓ Load Balancing Algorithms
- ✓ Use HAProxy and share the load with round-robin policy
- ✓ Nginx vs Haproxy

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# What's HAProxy?

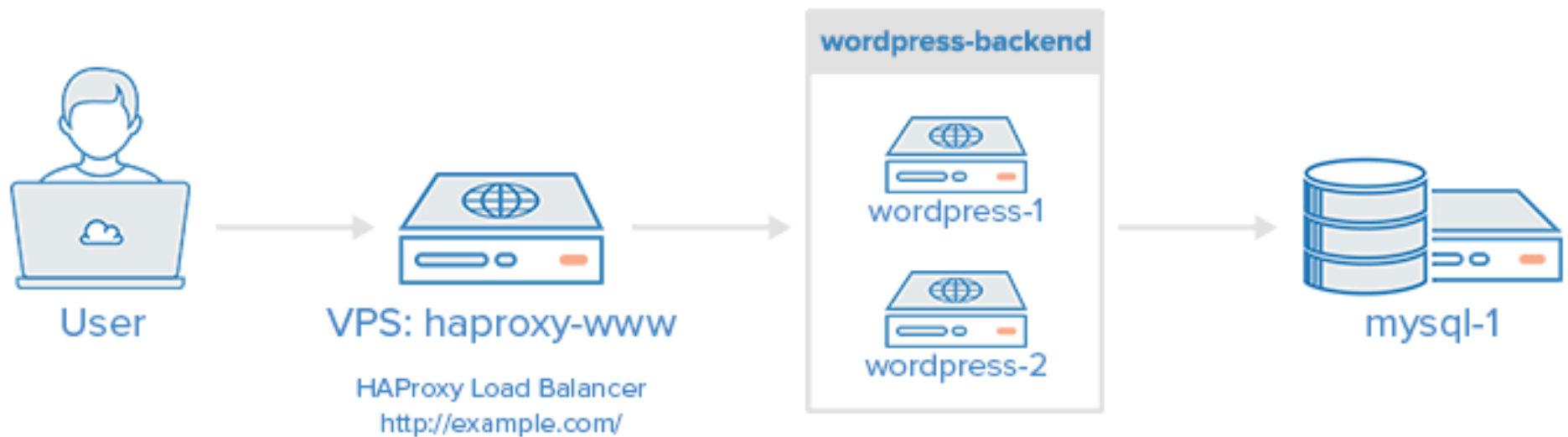
- It is free, open source software that provides a high availability load balancer and proxy server for TCP and HTTP-based applications that spreads requests across multiple servers.
- License: GNU General Public License Version 2
- Stable release: 1.8.0 / November 26, 2017
- Original author(s): Willy Tarreau
- Written in: C

Operating system: Linux, FreeBSD, OpenBSD, Solaris (8/9/10), AIX (5.1–5.3)



# How it works?

## Layer 4 Load Balanced WordPress Servers



# Install and Start HAProxy

Install the haproxy package with following command:

***sudo apt-get -y install haproxy***

After installation, verify that HAProxy is working:

***haproxy -v***

Note: *The HAProxy main configuration file is located at ***/etc/haproxy/haproxy.cfg***.*

# The “*global*”, “*default*” and other sections

This section contains settings that apply to the HAProxy process itself. And it also contains user, group, log directives, and stats.

The “***defaults***” section contains all of the proxies settings.

“***frontend***”: Defines a reverse proxy which will listen for incoming requests on a specific IP address and port.

“***backend***”: Defines a pool of servers that the frontend will forward requests to.

“***listen***”: A shorthand notation which combines frontend and backend features into a single command.

# Load Balancing ..to be continued

Let's define a frontend first. We will have it listen on the HAProxy IP address at port 80.

Open `/etc/haproxy/haproxy.cfg` configuration file and add the following lines to the bottom:

```
frontend samplebalance  
  bind *:80  
  option forwardfor  
  default_backend appservers
```

You can use either an IP address or an asterisk \*, which means any IP address configured on this machine.

# Load Balancing ..to be continued

Our frontend section is configured. To forward requests to a pool of servers defined in a backend section called **appservers**.

**appservers** backend shares the traffic equally among two web servers by using the roundrobin algorithm.

**backend appservers**

**balance roundrobin**

**server appserver1 127.0.0.1:8081 check**

**server appserver2 127.0.0.1:8082 check**

Note: The **leastconn** algorithm is a good choice for servers that may hold on to connections longer, such as database instances.

# Check Configuration File

***haproxy -f /etc/haproxy/haproxy.cfg -c***

**Note:** *If you would like to monitor live traffic that passes through HAProxy, enable debugging with the -d flag.*

***haproxy -f /etc/haproxy/haproxy.cfg -d***



# Start HAProxy

***sudo service haproxy restart***

**Lets see practical.**