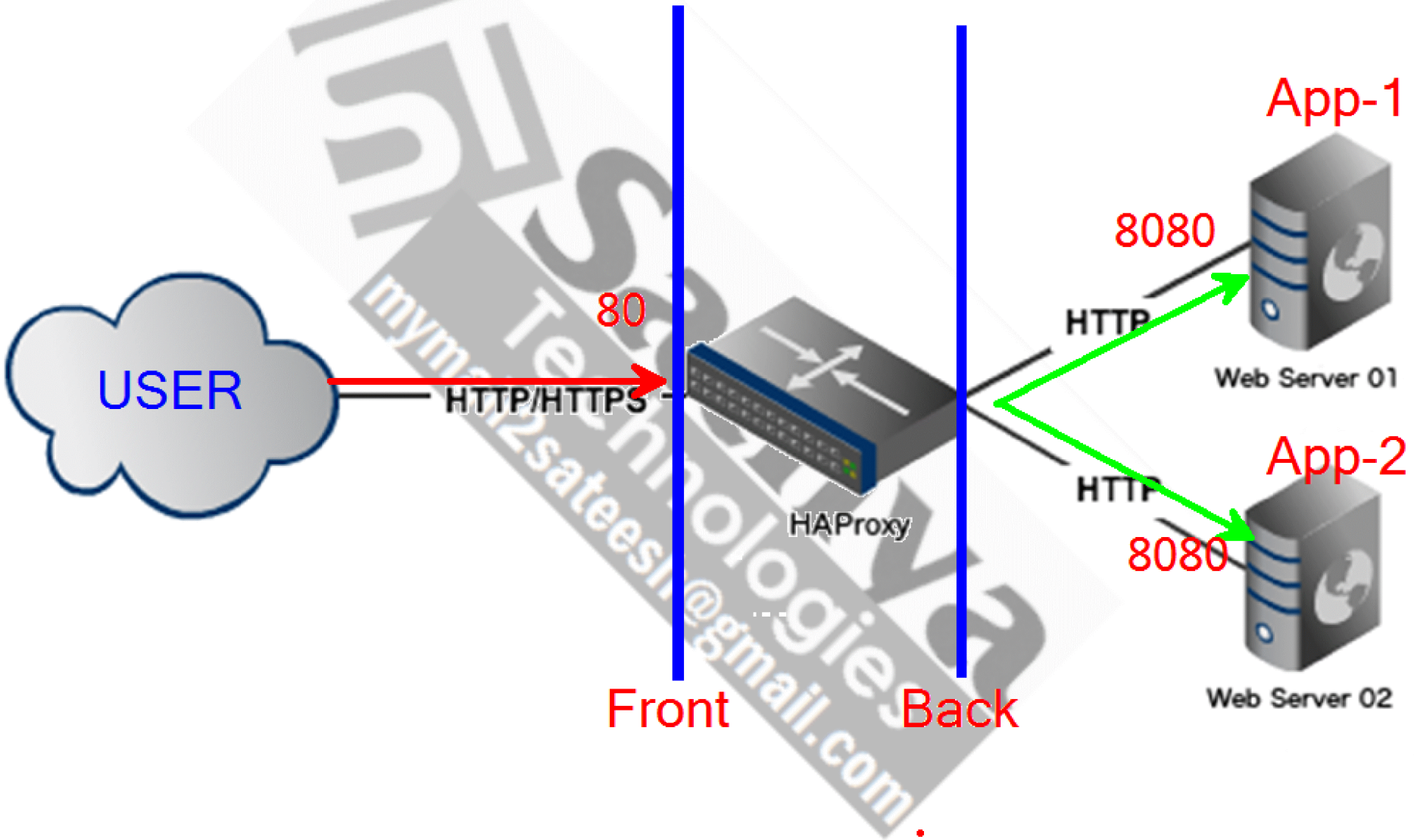
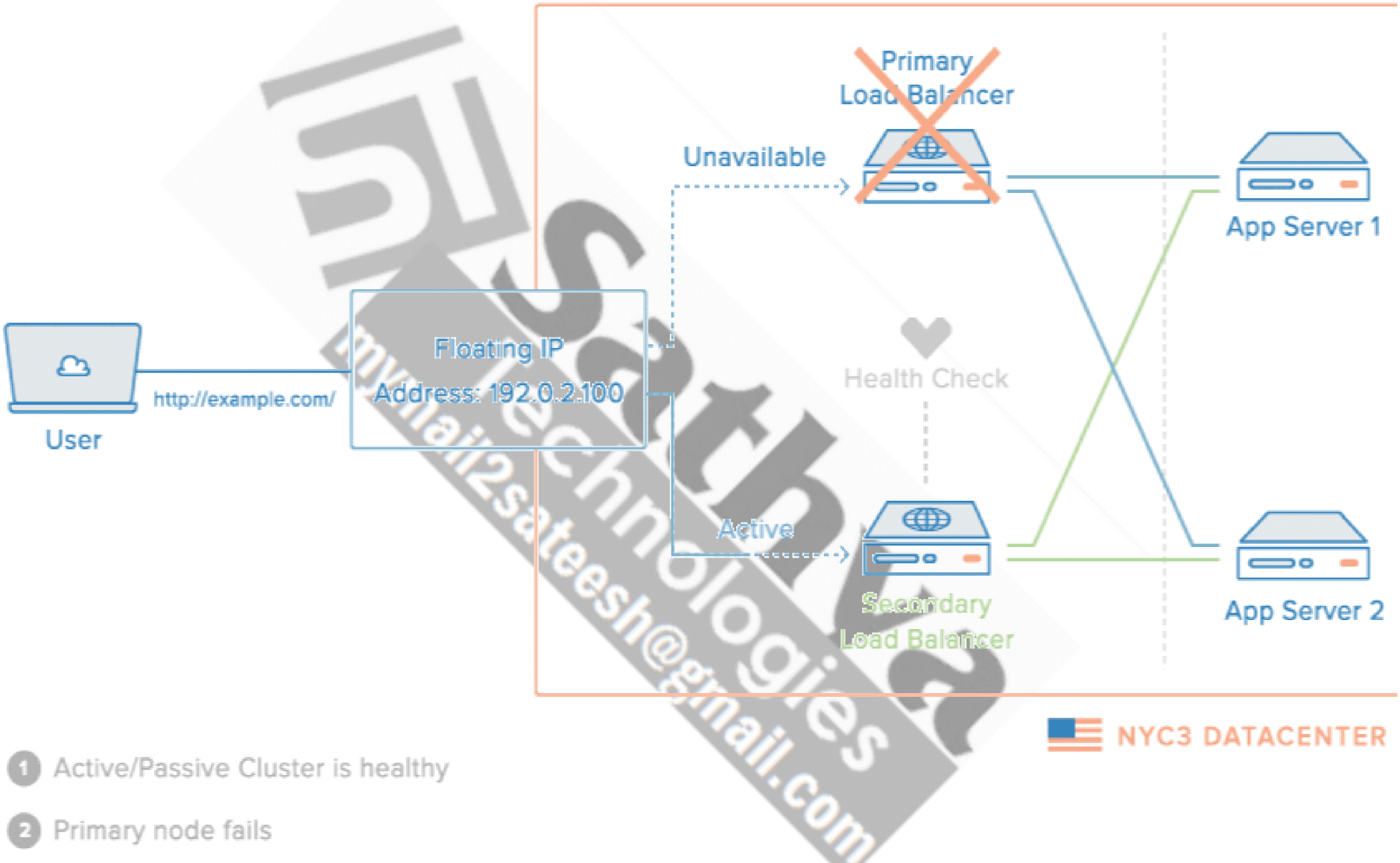

# Load Balancing Concepts



# Load Balancing Algorithms

- The load balancing algorithm that is used determines which server, in a backend, will be selected when load balancing.
- **Roundrobin** : Round Robin selects servers in turns. This is the default algorithm.
- **Leastconn** : Selects the server with the least number of connections--it is recommended for longer sessions.



# HAProxy Installation

- # sudo apt-get update
- # sudo apt-get install -y haproxy

(or)

# sudo yum install –y haproxy

install Web Servers(apache2) or Application(tomcat) in backend servers

# sudo apt-get install apache2 -y

# sudo apt-get install tomcat7 -y

# HAProxy Configuration

- **HAProxy configuration can be found at /etc/haproxy/haproxy.cfg**

```
global
   daemon
   maxconn 256
defaults
   mode http
   timeout connect 5000ms
   timeout client 50000ms
   timeout server 50000ms
frontend http-in
   bind *:80
   balance roundrobin
   default_backend servers
backend servers
   server tom1 192.168.33.3:8080 check maxconn 32
   server tom2 192.168.33.4:8080 check maxconn 32
```

# Enable HAProxy

- We need to enable HAProxy to be started by the init script */etc/default/haproxy*.
- Set ENABLED option to 1 as:

ENABLED=1

To Start HAProxy Service:

#service  haproxy restart

# Testing Load-Balancing and Fail-over

- Start the service backend servers
- Then test in HAProxy Servers

  # while true; do curl http://localhost;  sleep 1;
  done

- Open HAProxy IP in Browser and check load-balancing and fail-over