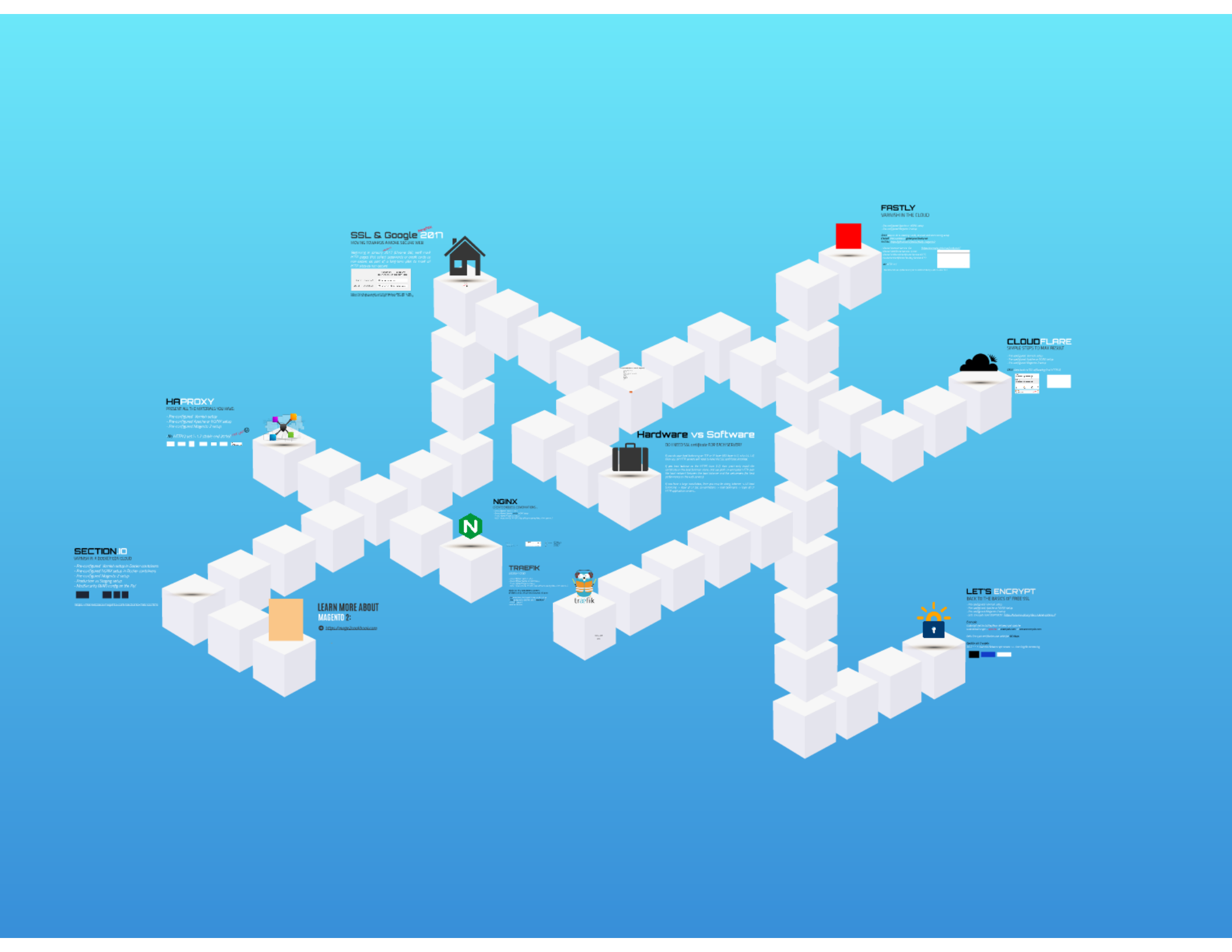

SSL & Google 2017
MOVING TOWARDS A MORE SECURE WEB
FASTLY
VARNISH IN THE CLOUD
CLOUDFLARE
HAPROXY
Hardware vs Software
NGINX
TRAEFIK
SECTION.IO
LET'S ENCRYPT
LEARN MORE ABOUT
MAGENTO 2:

SSL Offloading with Magento 2

Meet Magento™
Denmark

SSL vs TLS

#MM17DK

SSL vs TLS

TLS (Transport Layer Security) and SSL (Secure Sockets Layer) are protocols that provide data encryption and authentication between applications and servers

https://luxsci.com/blog/ssl-versus-tls-whats-the-difference.html

3 components (ssl proxy - varnish - magento 2)

multiple proxy options {
Haproxy,
NGINX,
Google Cloud Load Balancing with SSL,
Amazon EC2,
Fastly,
Section.io
CloudFlare,
Traefik,
etc....
}

WHY NO SSL

with **Varnish**

First, I have yet to see a SSL library
where the source code is not a nightmare.

Second, it is not exactly the
best source-code in the world.
Even if I have no idea what it does,
there are many aspect of it that scares me.

https://www.varnish-cache.org/docs/trunk/phk/ssl.html#phk-ssl

Varnish 5

Very Experimental HTTP/2 support

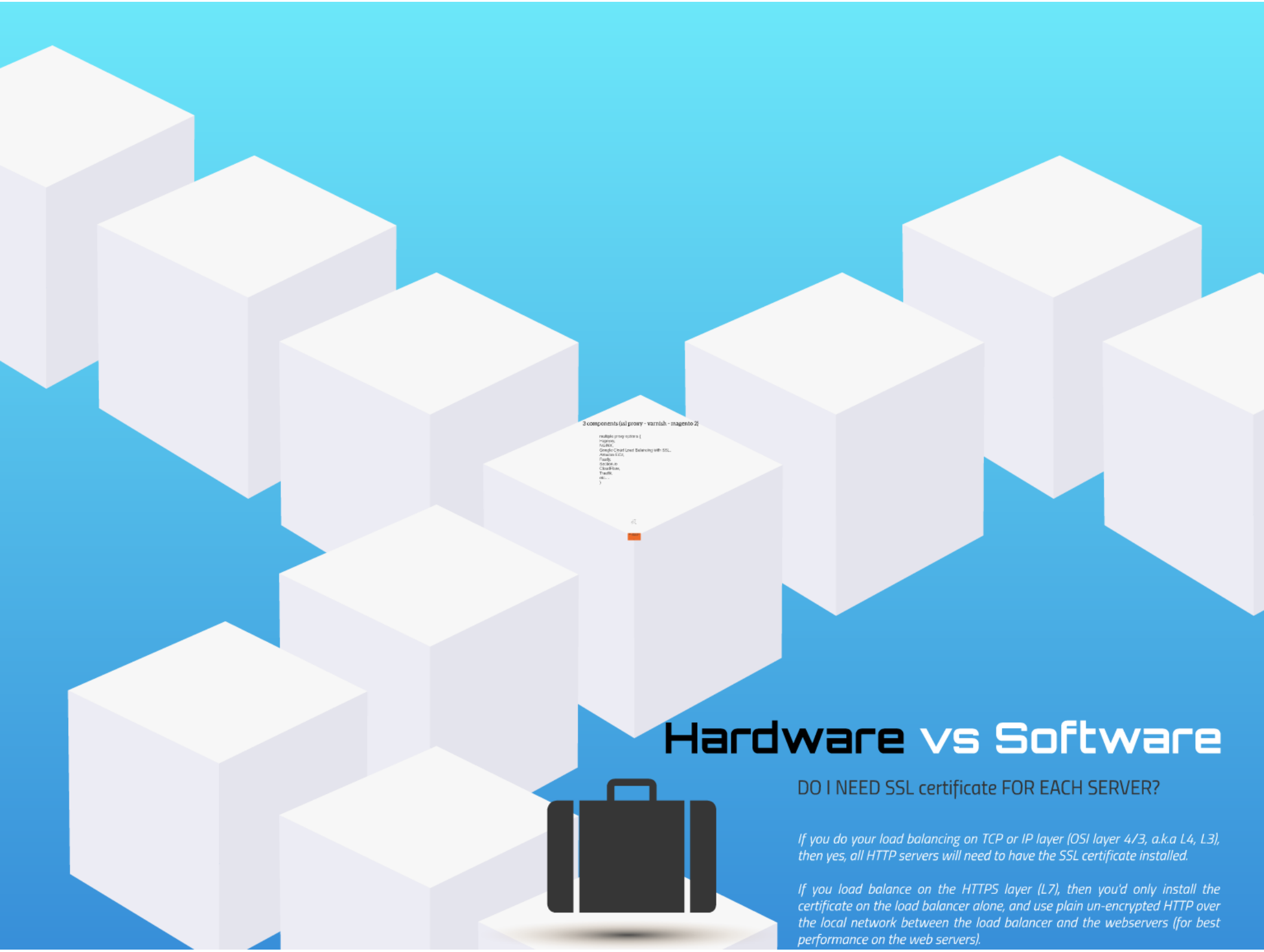
We are in the process of adding HTTP/2 support to Varnish, but the code is very green still - life happened.

But you can actually get a bit of traffic though it already, and we hope to have it production ready for the next major release (2017-03-15).

Varnish supports HTTP/1 -> 2 upgrade. For political reasons, no browsers support that, but tools like curl does.

For encrypted HTTP/2 traffic, put a SSL proxy in front of Varnish.

HTTP/2 support is disabled by default, to enable, set the http2 feature bit.



Hardware vs Software

DO I NEED SSL certificate FOR EACH SERVER?

If you do your load balancing on TCP or IP layer (OSI layer 4/3, a.k.a L4, L3), then yes, all HTTP servers will need to have the SSL certificate installed.

If you load balance on the HTTPS layer (L7), then you'd only install the certificate on the load balancer alone, and use plain un-encrypted HTTP over the local network between the load balancer and the webservers (for best performance on the web servers).

Hardware vs Software

DO I NEED SSL certificate FOR EACH SERVER?

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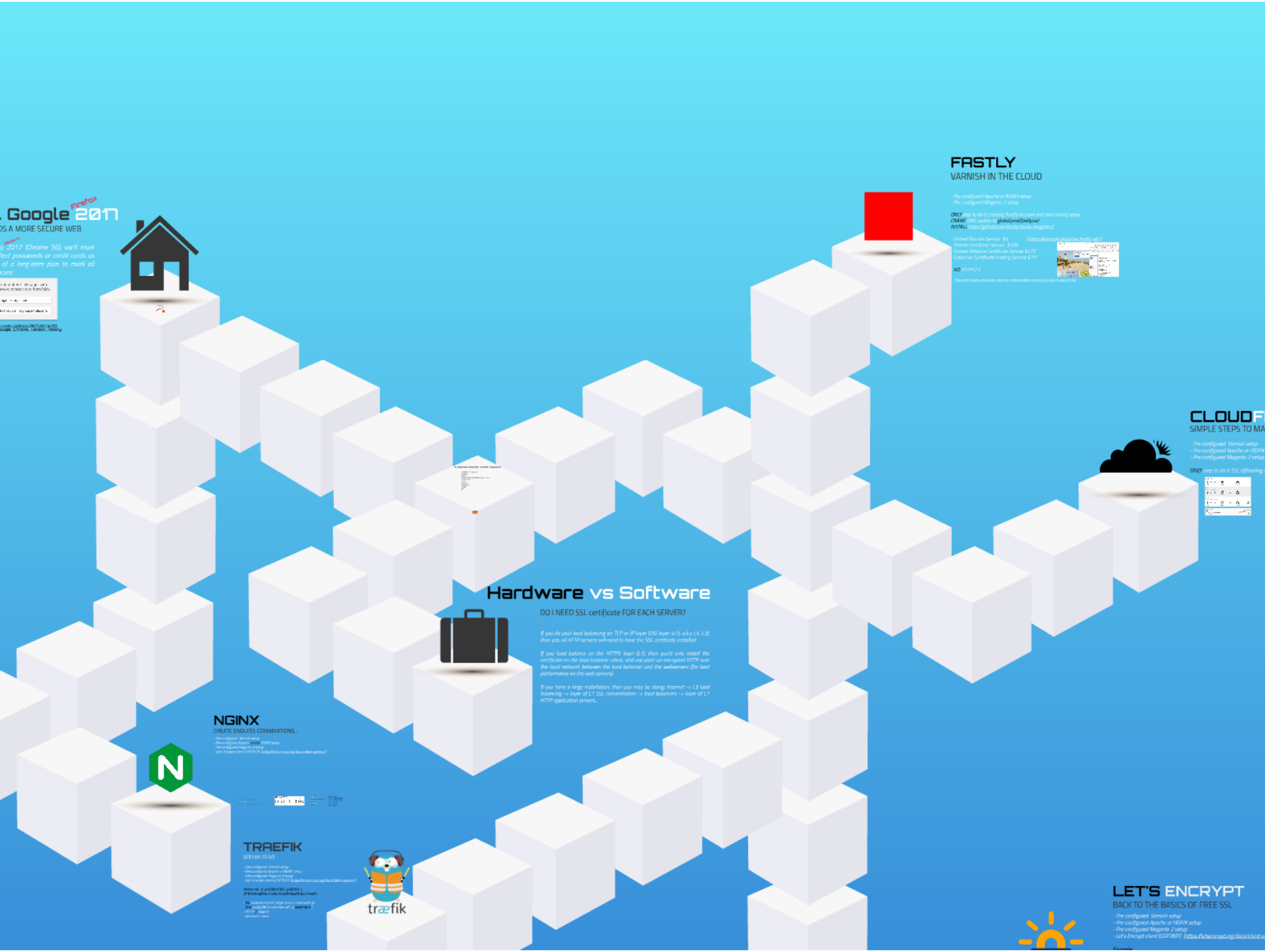
If you have a large installation, then you may be doing; Internet -> L3 load balancing -> layer of L7 SSL concentrators -> load balancers -> layer of L7 HTTP application servers...


Google Firefox 2017
OS A MORE SECURE WEB
FASTLY
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CLOUDF
SIMPLE STEPS TO MA
Hardware vs Software
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CREATE ENDLESS COMBINATIONS...
TRAEFIK
træfik
LET'S ENCRYPT
BACK TO THE BASICS OF FREE SSL

SSL & Google 2017

Firefox

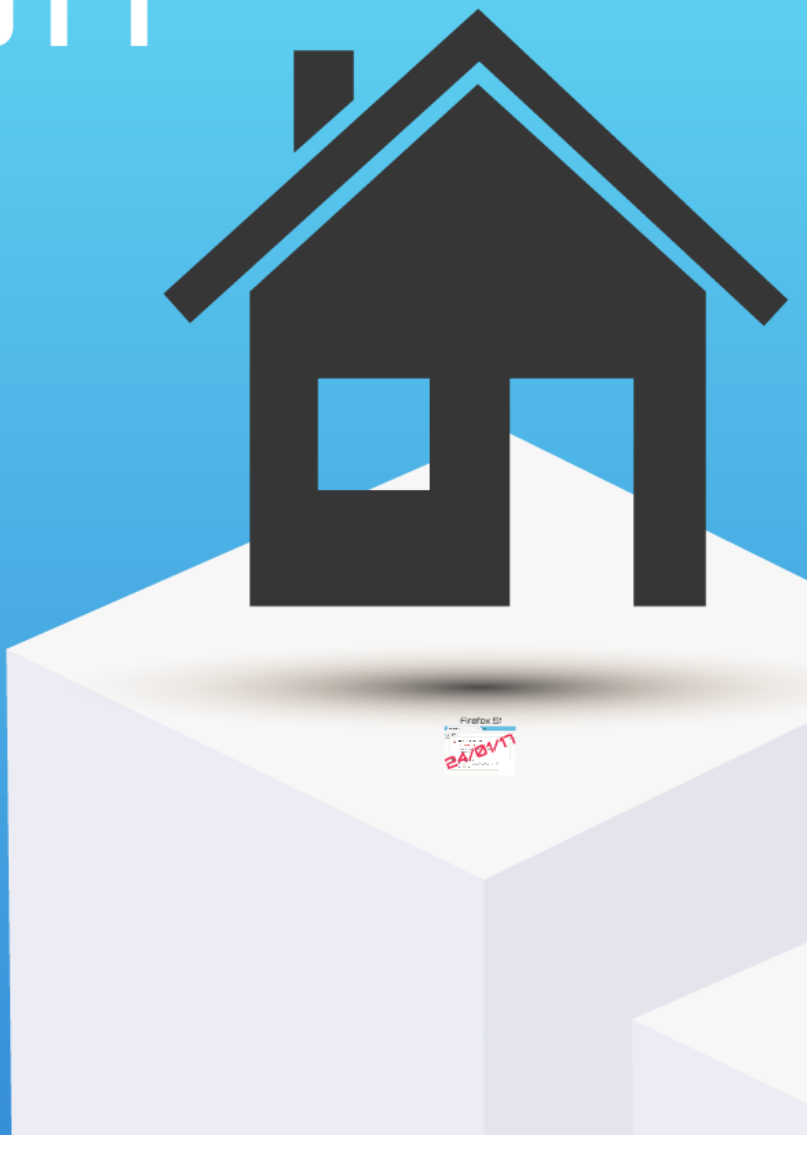
MOVING TOWARDS A MORE SECURE WEB

'Beginning in January 2017 (Chrome 56), we'll mark HTTP pages that collect passwords or credit cards as non-secure, as part of a long-term plan to mark all HTTP sites as non-secure.'

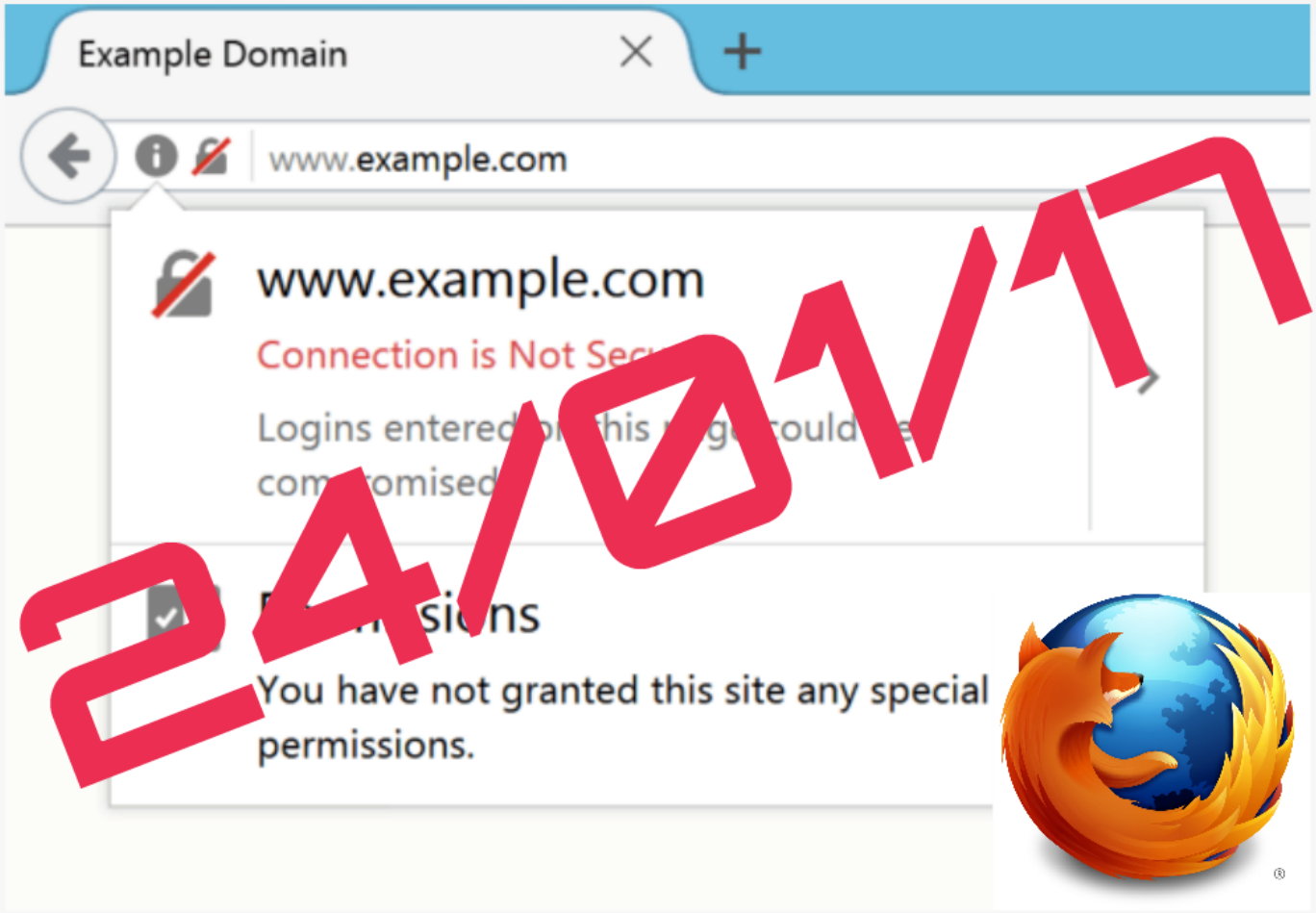
25/01/17

	Treatment of HTTP pages with password or credit card form fields:
Current (Chrome 53)	login.example.com
Jan. 2017 (Chrome 56)	Not secure login.example.com

https://developers.google.com/web/updates/2017/01/nic56
https://en.wikipedia.org/wiki/Google_Chrome_version_history



Firefox 51

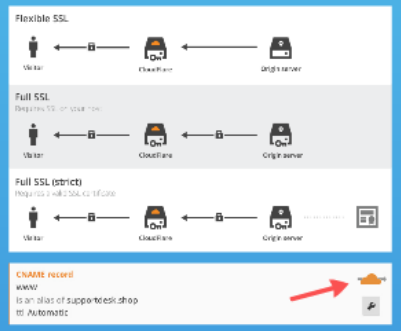

Example Domain
www.example.com
www.example.com
Connection is Not Sec
Logins entered
com omised
sions
You have not granted this site any special permissions.
24/01/17

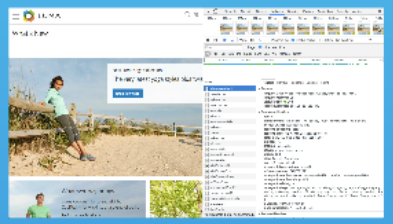
CLOUDFLARE

SIMPLE STEPS TO MAX RESULT

- *Pre-configured Varnish setup*
- *Pre-configured Apache or NGINX setup*
- *Pre-configured Magento 2 setup*

ONLY step to do is SSL offloading (incl HTTP/2)





Flexible SSL

Full SSL

Requires SSL on your host

Full SSL (strict)

Requires a valid SSL certificate

Visitor CloudFlare Origin server

Full SSL (strict)

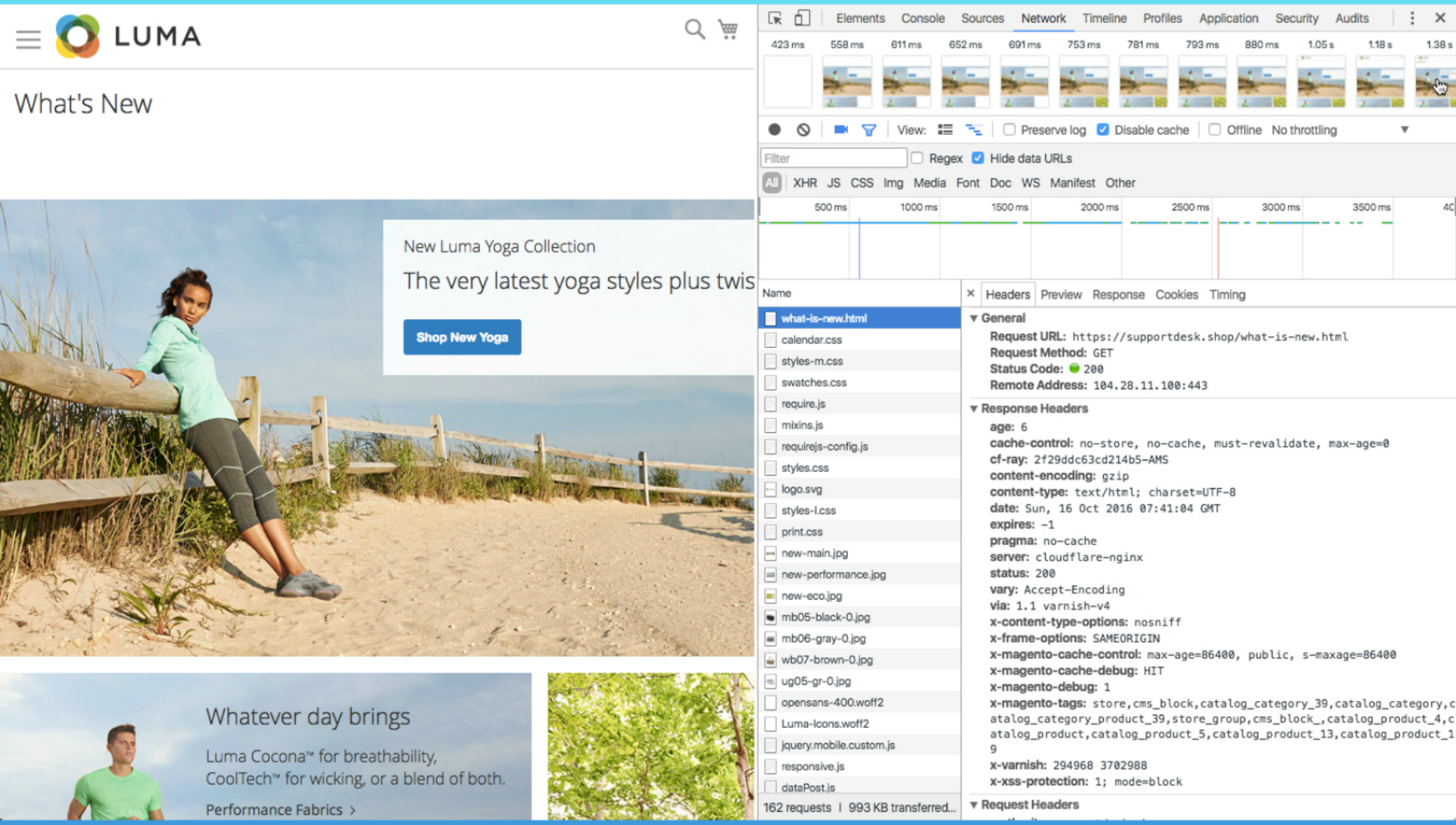
Requires a valid SSL certificate

CNAME record

www

is an alias of supportdesk.shop

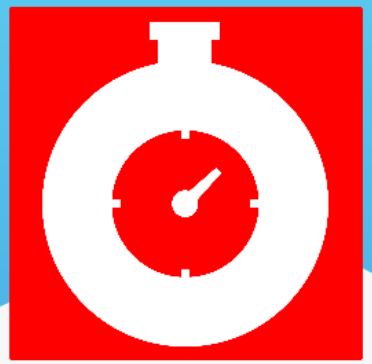
ttl Automatic


LUMA
What's New
New Luma Yoga Collection
The very latest yoga styles plus twis
Shop New Yoga
Whatever day brings
Luma Cocona™ for breathability,
CoolTech™ for wicking, or a blend of both.
Performance Fabrics ›
Elements Console Sources Network Timeline Profiles Application Security Audits
423 ms 558 ms 611 ms 652 ms 691 ms 753 ms 781 ms 793 ms 880 ms 1.05 s 1.18 s 1.38 s
View: Preserve log Disable cache Offline No throttling
Filter Regex Hide data URLs
All XHR JS CSS Img Media Font Doc WS Manifest Other
500 ms 1000 ms 1500 ms 2000 ms 2500 ms 3000 ms 3500 ms
Name
what-is-new.html
calendar.css
styles-m.css
swatches.css
require.js
mixins.js
requirejs-config.js
styles.css
logo.svg
styles-l.css
print.css
new-main.jpg
new-performance.jpg
new-eco.jpg
mb05-black-0.jpg
mb06-gray-0.jpg
wb07-brown-0.jpg
ug05-gr-0.jpg
opensans-400.woff2
Luma-Icons.woff2
jquery.mobile.custom.js
responsive.js
dataPost.js
162 requests | 993 KB transferred...
Headers Preview Response Cookies Timing
General
Request URL: https://supportdesk.shop/what-is-new.html
Request Method: GET
Status Code: 200
Remote Address: 104.28.11.100:443
Response Headers
age: 6
cache-control: no-store, no-cache, must-revalidate, max-age=0
cf-ray: 2f29ddc63cd214b5-AMS
content-encoding: gzip
content-type: text/html; charset=UTF-8
date: Sun, 16 Oct 2016 07:41:04 GMT
expires: -1
pragma: no-cache
server: cloudflare-nginx
status: 200
vary: Accept-Encoding
via: 1.1 varnish-v4
x-content-type-options: nosniff
x-frame-options: SAMEORIGIN
x-magento-cache-control: max-age=86400, public, s-maxage=86400
x-magento-cache-debug: HIT
x-magento-debug: 1
x-magento-tags: store,cms_block,catalog_category_39,catalog_category,c
atalog_category_product_39,store_group,cms_block_,catalog_product_4,c
atalog_product,catalog_product_5,catalog_product_13,catalog_product_1
9
x-varnish: 294968 3702988
x-xss-protection: 1; mode=block
Request Headers

expires: -1
pragma: no-cache
server: cloudflare-nginx
status: 200
vary: Accept-Encoding
via: 1.1 varnish-v4
x-content-type-options: nosniff
x-frame-options: SAMEORIGIN
x-magento-cache-control: max-age=86400, public, s-maxag
x-magento-cache-debug: HIT
x-magento-debug: 1
x-magento-tags: store,cms_block,catalog_category_39,ca
atalog_category_product_39,store_group,cms_block_,cat
atalog_product,catalog_product_5,catalog_product_13,c
9
x-varnish: 294968 3702988
x-xss-protection: 1; mode=block

FASTLY

VARNISH IN THE CLOUD

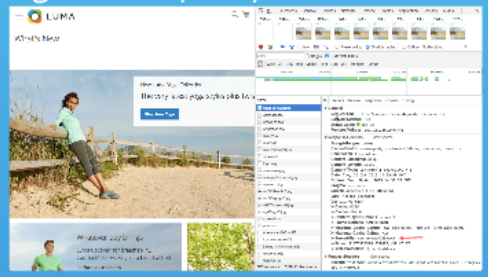


- *Pre-configured Apache or NGINX setup*
- *Pre-configured Magento 2 setup*

ONLY step to do is creating Fastly account and start tuning setup
CNAME DNS update to global.prod.fastly.net
INSTALL https://github.com/fastly/fastly-magento2

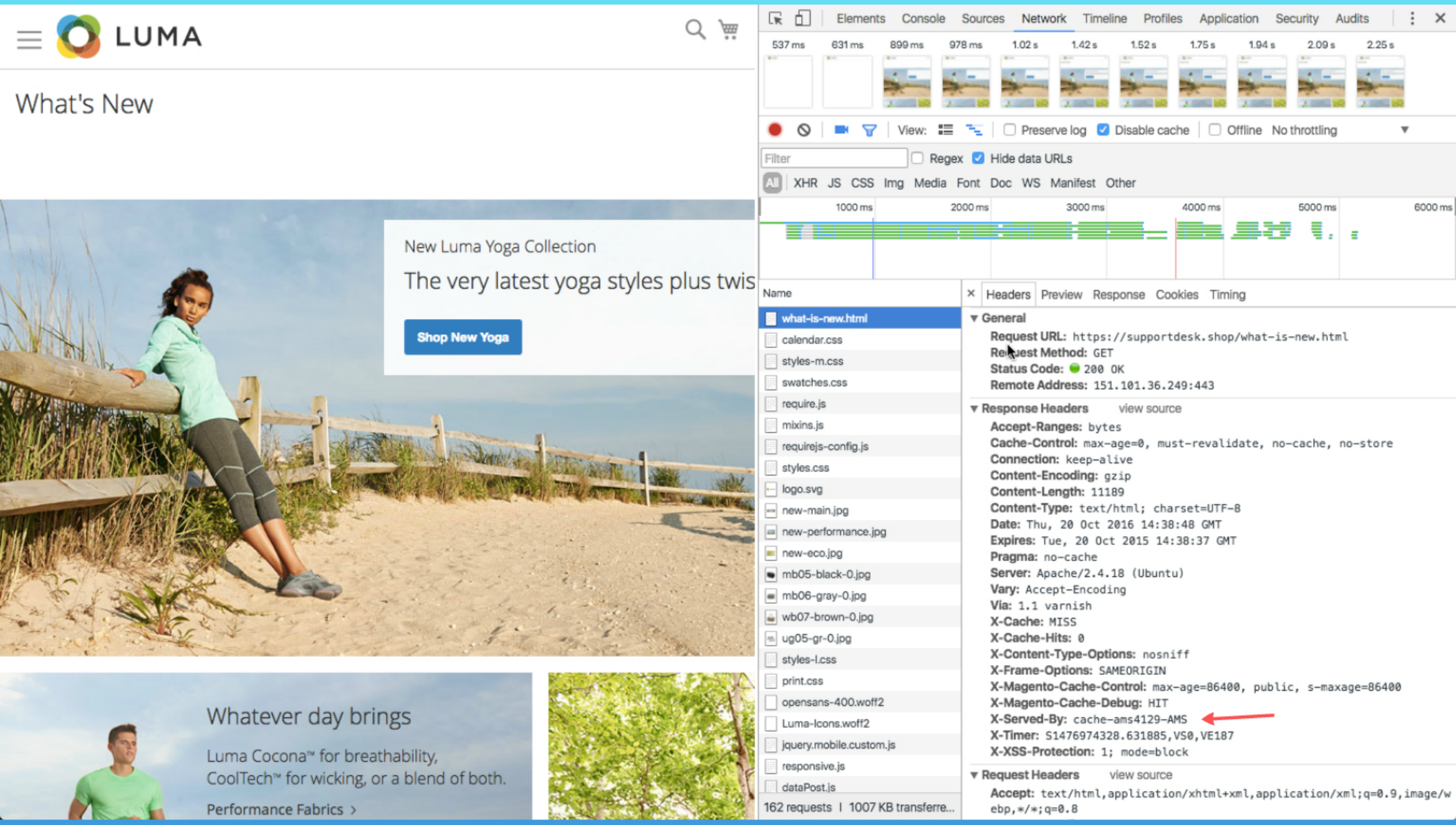
- *Shared Domain Service $0* *[https://example.global.ssl.fastly.net/]*
- *Shared Certificate Service $100*
- *Shared Wildcard Certificate Service $275*
- *Customer Certificate Hosting Service $???*

- *NO HTTP/2 :(*



https://docs.fastly.com/guides/securing-communications/ordering-a-paid-tls-option.html

e.global.ssl.fastly.net/]



ls-option.html

Pragma: no-cache
Server: Apache/2.4.18 (Ubuntu)
Vary: Accept-Encoding
Via: 1.1 varnish
X-Cache: MISS
X-Cache-Hits: 0
X-Content-Type-Options: nosniff
X-Frame-Options: SAMEORIGIN
X-Magento-Cache-Control: max-age=86400, public, s-maxage=86400
X-Magento-Cache-Debug: HIT
X-Served-By: cache-ams4129-AMS
X-Timer: S1476974328.631885,VS0,VE187
X-XSS-Protection: 1; mode=block

▼ **Request Headers** view source

Accept: text/html,application/xhtml+xml,application/xml;q=0.9,ima
ebp,*/*;q=0.8

SSL & Google 2017

MOVING TOWARDS A MORE SECURE WEB

'Beginning in January 2017 (Chrome 56), we'll mark HTTP pages that collect passwords or credit cards as non-secure, as part of a long-term plan to mark all HTTP sites as non-secure'

HAPROXY

PRESENT ALL THE MATERIALS YOU HAVE:

- *Pre-configured Varnish setup*
- *Pre-configured Apache or NGINX setup*
- *Pre-configured Magento 2 setup*

No HTTP/2 yet (v1.7 stable end 2016)

Hardware vs Softw

DO I NEED SSL certificate FOR EACH SERVE

NGINX

CREATE ENDLESS COMBINATIONS...

SECTION.IO

VARNISH IN A DOCKER CDN CLOUD

- *Pre-configured Varnish setup in Docker containers*
- *Pre-configured NGINX setup in Docker containers*
- *Pre-configured Magento 2 setup*
- *Production vs Staging setup*
- *ModSecurity (WAF) config on the Fly!*

https://marketplace.magento.com/sectionio-metrics.html

TRAEFIK

DOCKER TO DO

træfik

LEARN MORE ABOUT MAGENTO 2:

https://mage2cookbook.com

NGINX

CREATE ENDLESS COMBINATIONS...

- *Pre-configured Varnish setup*
- *Pre-configured Apache and/or NGINX setup*
- *Pre-configured Magento 2 setup*
- *Let's Encrypt client (CERTBOT) [https://letsencrypt.org/docs/client-options/]*

```
location ~ \.php$ {
    # Pass the request on to Varnish.
    proxy_pass  http://127.0.0.1:6081;

    # Pass a bunch of headers to the downstream server, so they'll know what's going on.
    proxy_set_header Host $host;
    proxy_set_header X-Real-IP $remote_addr;
    proxy_set_header X-Forwarded-For $proxy_add_x_forwarded_for;

    # Most web apps can be configured to read this header and understand that the current session is actually HTTPS.
    proxy_set_header X-Forwarded-Proto https;

    # We expect the downsteam servers to redirect to the right hostname, so don't do any rewrites here.
    proxy_redirect     off;
}
```

```
root@supportdesk:/etc/nginx/conf.d# netstat -tulpn
Active Internet connections (only servers)
Proto Recv-Q Send-Q Local Address           Foreign Address         State       PID/Program name
tcp        0      0 0.0.0.0:443             0.0.0.0:*               LISTEN      7514/nginx -g daemo
tcp        0      0 0.0.0.0:6081            0.0.0.0:*               LISTEN      7822/varnishd
tcp        0      0 127.0.0.1:6082          0.0.0.0:*               LISTEN      7822/varnishd
tcp        0      0 127.0.0.1:9001          0.0.0.0:*               LISTEN      2727/php-fpm.conf)
tcp        0      0 127.0.0.1:3306          0.0.0.0:*               LISTEN      1297/mysqld
tcp        0      0 0.0.0.0:8080            0.0.0.0:*               LISTEN      7514/nginx -g daemo
tcp        0      0 0.0.0.0:80              0.0.0.0:*               LISTEN      7514/nginx -g daemo
tcp        0      0 0.0.0.0:22              0.0.0.0:*               LISTEN      1382/sshd
tcp6       0      0 :::6081                 :::*                    LISTEN      7822/varnishd
tcp6       0      0 :::22                   :::*                    LISTEN      1382/sshd
```

curl -I https://example.com/
HTTP/1.1 200 OK
Server: nginx
Date: Sat, 22 Oct 2016 18:03:00 GMT
Content-Type: text/html; charset=UTF-8
Connection: keep-alive
X-Magento-Cache-Control: max-age=86400, public, s-maxage=86400
Pragma: no-cache
Cache-Control: max-age=0, must-revalidate, no-cache, no-store
Expires: Thu, 22 Oct 2015 17:56:02 GMT
X-Magento-Cache-Debug: HIT
X-Content-Type-Options: nosniff
X-XSS-Protection: 1; mode=block
X-Frame-Options: SAMEORIGIN
Vary: Accept-Encoding
X-Varnish: 65607
Via: 1.1 varnish-v4
Accept-Ranges: bytes

/etc/varnish/default.vcl

```
#unset resp.http.X-Magento-Debug;
#unset resp.http.X-Magento-Tags;
#unset resp.http.X-Powered-By;
#unset resp.http.Server;
#unset resp.http.X-Varnish;
#unset resp.http.Via;
#unset resp.http.Link;
```

HAPROXY

PRESENT ALL THE MATERIALS YOU HAVE:

- *Pre-configured Varnish setup*
- *Pre-configured Apache or NGINX setup*
- *Pre-configured Magento 2 setup*

-No HTTP/2 yet (>1.7 stable end 2016) not yet! ☹

```
frontend http-in
        bind 82.196.4.34:80
        bind 82.196.4.34:443 ssl crt /etc/ssl/private/jira.nl.pem
        mode http
        option httpclose
        option http-server-close
        option forwardfor
        default_backend servers

backend servers
        reqadd X-Forwarded-Proto:\ https
        mode http
        balance leastconn
        cookie SERVERID insert indirect nocache
        redirect scheme https if !{ ssl_fc }
        server server1 82.196.4.104:6083 check send-proxy-v2
        #server s1 82.196.5.10:80 check cookie s1 weight 1 maxqueue 25 rise 2 fall 1 maxconn 250

frontend http-in-proxy
        bind *:81
        default_backend servers-proxy

backend servers-proxy
        server server1-proxy 82.196.4.104:6083 send-proxy-v2
                                                                    61,1          Bot
```

```
# edit that file.

# Should we start varnishd at boot?  Set to "no" to disable.
START=yes

# Maximum number of open files (for ulimit -n)
NFILES=131072

# Maximum locked memory size (for ulimit -l)
# Used for locking the shared memory log in memory.  If you increase log size,
# you need to increase this number as well
MEMLOCK=82000

DAEMON_OPTS="-a :6081 \
             -a :6083,PROXY \
             -T localhost:6082 \
             -f /etc/varnish/default.vcl \
             -S /etc/varnish/secret \
             -s malloc,256m"
```

27,0-1 Bot

```
vcl 4.0;

backend default {
    .host = "82.196.5.10";
    .port = "80";
}

acl purge {
    "localhost";
}

sub vcl_recv {
        set req.http.x-clientip = client.ip;
        set req.http.x-serverip = server.ip;
        set req.http.x-localip = local.ip;
        set req.http.x-remoteip = remote.ip;
        return(pass);

     if (req.method == "PURGE") {
        if (client.ip !~ purge) {
            return (synth(405, "Method not allowed"));
        }
        if (!req.http.X-Magento-Tags-Pattern) {
            return (synth(400, "X-Magento-Tags-Pattern header required"));
        }
        ban("obj.http.X-Magento-Tags ~ " + req.http.X-Magento-Tags-Pattern);
        return (synth(200, "Purged"));
    }

    if (req.method != "GET" &&
        req.method != "HEAD" &&
        req.method != "PUT" &&
        req.method != "POST" &&
        req.method != "TRACE" &&
        req.method != "OPTIONS" &&
        req.method != "DELETE") {
          /* Non-RFC2616 or CONNECT which is weird. */
          return (pipe);
    }

    # We only deal with GET and HEAD by default
    if (req.method != "GET" && req.method != "HEAD") {
        return (pass);
                                                                  1,1           Top
```

```
<VirtualHost *:80>
        ServerAdmin webmaster@localhost
        DocumentRoot /var/www/html/magento

        ErrorLog ${APACHE_LOG_DIR}/error.log
        CustomLog ${APACHE_LOG_DIR}/access.log combined

        <Directory /var/www/html/magento>
                AllowOverride All
                Require all granted
        </Directory>

        SetEnv MAGE_MODE production
        #SetEnvIf X-Forwarded-Proto https HTTPS=on
        SetEnvIf X-Forwarded-Proto "^https$" HTTPS=on
</VirtualHost>

~
~
~
                                                                1,1           All
```

Varnish Configuration

Access list	localhost IPs access list separated with \',\' that can purge Varnish configuration for config file generation. If field is empty default value localhost will be saved.	[GLOBAL]
Backend host	82.196.4.104 Specify backend host for config file generation. If field is empty default value localhost will be saved.	[GLOBAL]
Backend port	6081 Specify backend port for config file generation. If field is empty default value 8080 will be saved.	[GLOBAL]
Export Configuration	Export VCL for Varnish 3	[GLOBAL]
	Export VCL for Varnish 4	[GLOBAL]

```php
<?php
echo "Client IP: " . $_SERVER["HTTP_X_CLIENTIP"]. "<br />".PHP_EOL;
echo "Server IP: " . $_SERVER["HTTP_X_SERVERIP"]. "<br />".PHP_EOL;
echo "Local IP: " . $_SERVER["HTTP_X_LOCALIP"]. "<br />".PHP_EOL;
echo "Remote IP: " . $_SERVER["HTTP_X_REMOTEIP"]. "<br />".PHP_EOL;
echo "X-Forwarded-For: " . $_SERVER["HTTP_X_FORWARDED_FOR"]. "<br />".PHP_EOL;
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
"proxy.php" 6L, 355C                                                    1,1           All
```

Client IP: 72.213.70.220
Server IP: 82.196.4.34
Local IP: 82.196.4.104
Remote IP: 82.196.4.34
X-Forwarded-For: 72.213.70.220, 72.213.70.220

SECTION.IO

VARNISH IN A DOCKER CDN CLOUD

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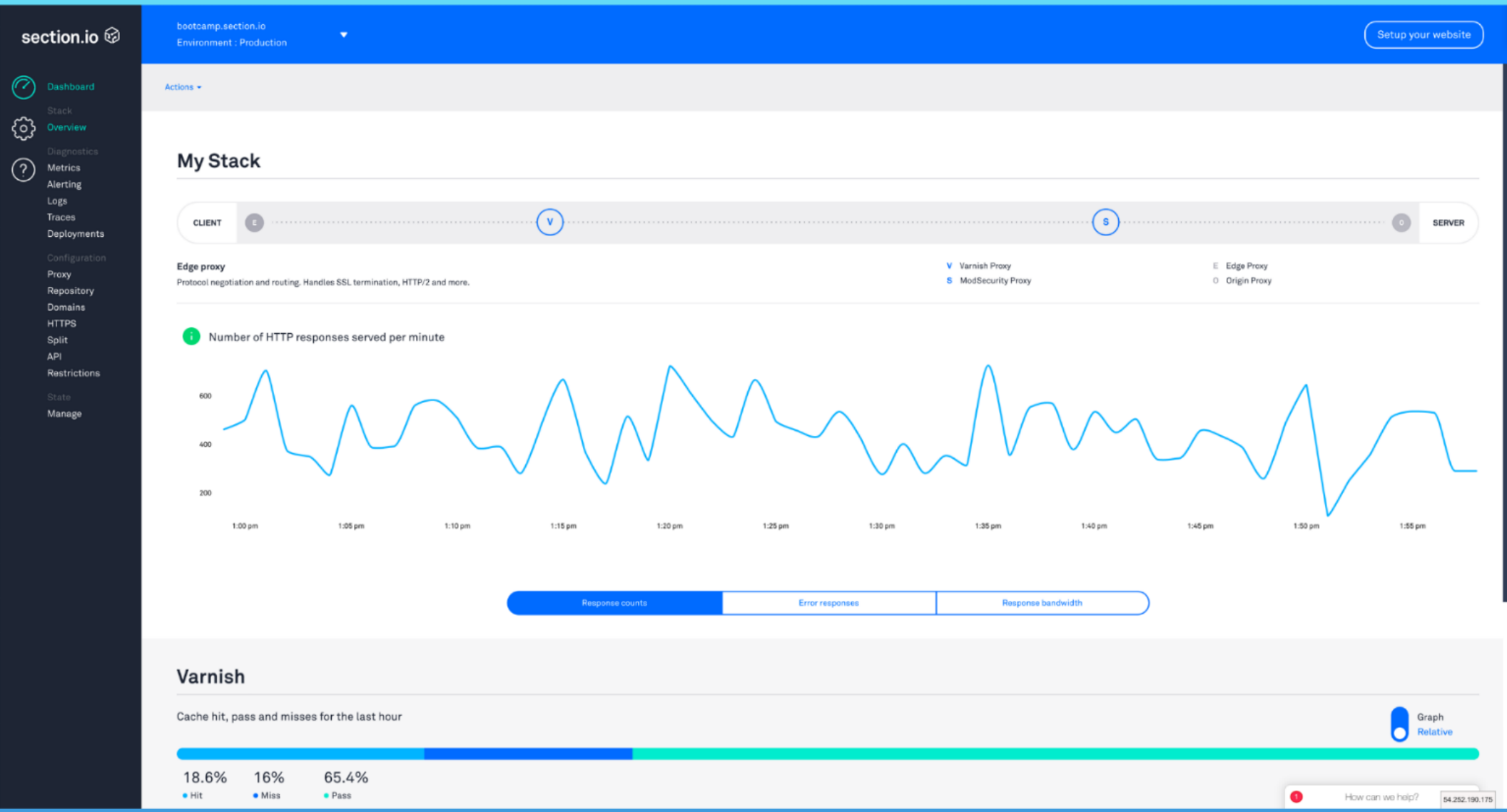
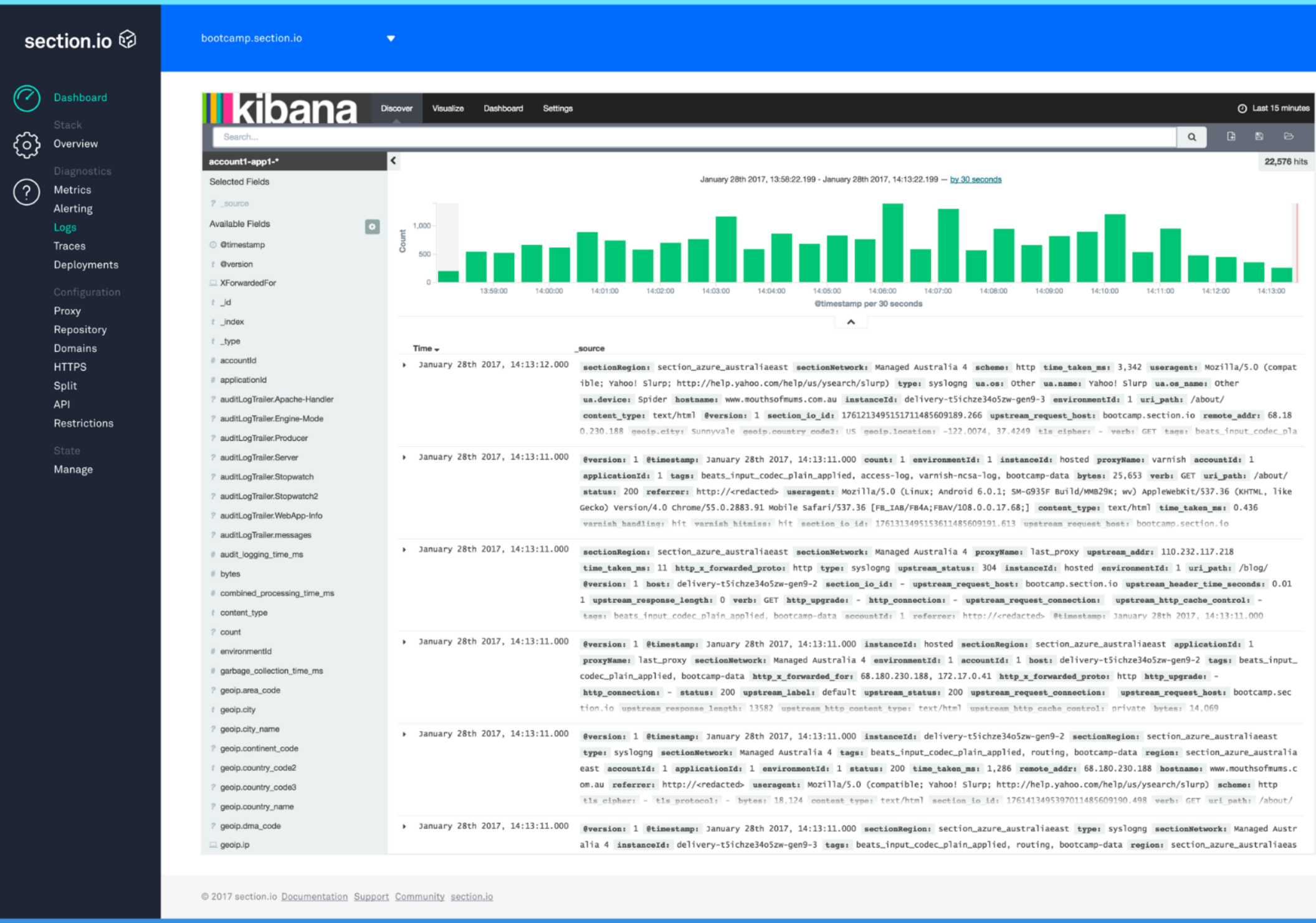
https://marketplace.magento.com/sectionio-metrics.html


section.io
bootcamp.section.io
Environment : Production
Setup your website
Dashboard
Stack
Overview
Diagnostics
Metrics
Alerting
Logs
Traces
Deployments
Configuration
Proxy
Repository
Domains
HTTPS
Split
API
Restrictions
State
Manage
Actions
My Stack
CLIENT
E
V
S
O
SERVER
Edge proxy
Protocol negotiation and routing. Handles SSL termination, HTTP/2 and more.
V Varnish Proxy
S ModSecurity Proxy
E Edge Proxy
O Origin Proxy
Number of HTTP responses served per minute
600
400
200
1:00 pm
1:05 pm
1:10 pm
1:15 pm
1:20 pm
1:25 pm
1:30 pm
1:35 pm
1:40 pm
1:45 pm
1:50 pm
1:55 pm
Response counts
Error responses
Response bandwidth
Varnish
Cache hit, pass and misses for the last hour
Graph
Relative
18.6%
Hit
16%
Miss
65.4%
Pass
How can we help?
54.252.190.175


section.io
bootcamp.section.io
Dashboard
Stack
Overview
Diagnostics
Metrics
Alerting
Logs
Traces
Deployments
Configuration
Proxy
Repository
Domains
HTTPS
Split
API
Restrictions
State
Manage
kibana
Discover
Visualize
Dashboard
Settings
Last 15 minutes
Search...
account1-app1-*
Selected Fields
_source
Available Fields
@timestamp
@version
XForwardedFor
_id
_index
_type
accountId
applicationId
auditLogTrailer.Apache-Handler
auditLogTrailer.Engine-Mode
auditLogTrailer.Producer
auditLogTrailer.Server
auditLogTrailer.Stopwatch
auditLogTrailer.Stopwatch2
auditLogTrailer.WebApp-Info
auditLogTrailer.messages
audit_logging_time_ms
bytes
combined_processing_time_ms
content_type
count
environmentId
garbage_collection_time_ms
geoip.area_code
geoip.city
geoip.city_name
geoip.continent_code
geoip.country_code2
geoip.country_code3
geoip.country_name
geoip.dma_code
geoip.ip
22,576 hits
January 28th 2017, 13:58:22.199 - January 28th 2017, 14:13:22.199 — by 30 seconds
Count
1,000
500
0
13:59:00
14:00:00
14:01:00
14:02:00
14:03:00
14:04:00
14:05:00
14:06:00
14:07:00
14:08:00
14:09:00
14:10:00
14:11:00
14:12:00
14:13:00
@timestamp per 30 seconds
Time
_source
January 28th 2017, 14:13:12.000
sectionRegion: section_azure_australiaeast sectionNetwork: Managed Australia 4 scheme: http time_taken_ms: 3,342 useragent: Mozilla/5.0 (compatible; Yahoo! Slurp; http://help.yahoo.com/help/us/ysearch/slurp) type: syslogng ua.os: Other ua.name: Yahoo! Slurp ua.os_name: Other ua.device: Spider hostname: www.mouthsofmums.com.au instanceId: delivery-t5ichze34o5zw-gen9-3 environmentId: 1 uri_path: /about/ content_type: text/html @version: 1 section_io_id: 176121349515171148560918 9.266 upstream_request_host: bootcamp.section.io remote_addr: 68.180.230.188 geoip.city: Sunnyvale geoip.country_code2: US geoip.location: -122.0074, 37.4249 tls_cipher: - verb: GET tags: beats_input_codec_pla
January 28th 2017, 14:13:11.000
@version: 1 @timestamp: January 28th 2017, 14:13:11.000 count: 1 environmentId: 1 instanceId: hosted proxyName: varnish accountId: 1 applicationId: 1 tags: beats_input_codec_plain_applied, access-log, varnish-ncsa-log, bootcamp-data bytes: 25,653 verb: GET uri_path: /about/ status: 200 referrer: http://<redacted> useragent: Mozilla/5.0 (Linux; Android 6.0.1; SM-G935F Build/MMB29K; wv) AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/55.0.2883.91 Mobile Safari/537.36 [FB_IAB/FB4A;FBAV/108.0.0.17.68;] content_type: text/html time_taken_ms: 0.436 varnish_handling: hit varnish_hitmiss: hit section_io_id: 176131349515361148560919 1.613 upstream_request_host: bootcamp.section.io
January 28th 2017, 14:13:11.000
sectionRegion: section_azure_australiaeast sectionNetwork: Managed Australia 4 proxyName: last_proxy upstream_addr: 110.232.117.218 time_taken_ms: 11 http_x_forwarded_proto: http type: syslogng upstream_status: 304 instanceId: hosted environmentId: 1 uri_path: /blog/ @version: 1 host: delivery-t5ichze34o5zw-gen9-2 section_io_id: - upstream_request_host: bootcamp.section.io upstream_header_time_seconds: 0.011 upstream_response_length: 0 verb: GET http_upgrade: - http_connection: - upstream_request_connection: upstream_http_cache_control: - tags: beats_input_codec_plain_applied, bootcamp-data accountId: 1 referrer: http://<redacted> @timestamp: January 28th 2017, 14:13:11.000
January 28th 2017, 14:13:11.000
@version: 1 @timestamp: January 28th 2017, 14:13:11.000 instanceId: hosted sectionRegion: section_azure_australiaeast applicationId: 1 proxyName: last_proxy sectionNetwork: Managed Australia 4 environmentId: 1 accountId: 1 host: delivery-t5ichze34o5zw-gen9-2 tags: beats_input_codec_plain_applied, bootcamp-data http_x_forwarded_for: 68.180.230.188, 172.17.0.41 http_x_forwarded_proto: http http_upgrade: - http_connection: - status: 200 upstream_label: default upstream_status: 200 upstream_request_connection: upstream_request_host: bootcamp.section.io upstream_response_length: 13582 upstream_http_content_type: text/html upstream_http_cache_control: private bytes: 14,069
January 28th 2017, 14:13:11.000
@version: 1 @timestamp: January 28th 2017, 14:13:11.000 instanceId: delivery-t5ichze34o5zw-gen9-2 sectionRegion: section_azure_australiaeast type: syslogng sectionNetwork: Managed Australia 4 tags: beats_input_codec_plain_applied, routing, bootcamp-data region: section_azure_australiaeast accountId: 1 applicationId: 1 environmentId: 1 status: 200 time_taken_ms: 1,286 remote_addr: 68.180.230.188 hostname: www.mouthsofmums.com.au referrer: http://<redacted> useragent: Mozilla/5.0 (compatible; Yahoo! Slurp; http://help.yahoo.com/help/us/ysearch/slurp) scheme: http tls_cipher: - tls_protocol: - bytes: 18,124 content_type: text/html section_io_id: 176141349539701148560919 0.498 verb: GET uri_path: /about/
January 28th 2017, 14:13:11.000
@version: 1 @timestamp: January 28th 2017, 14:13:11.000 sectionRegion: section_azure_australiaeast type: syslogng sectionNetwork: Managed Australia 4 instanceId: delivery-t5ichze34o5zw-gen9-3 tags: beats_input_codec_plain_applied, routing, bootcamp-data region: section_azure_australiaeas
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Dashboard

Stack
Overview

Diagnostics
Metrics
Alerting
Logs
Traces
Deployments

Configuration
Proxy
Repository
Domains
HTTPS
Split
API
Restrictions

State
Manage

Varnish Log

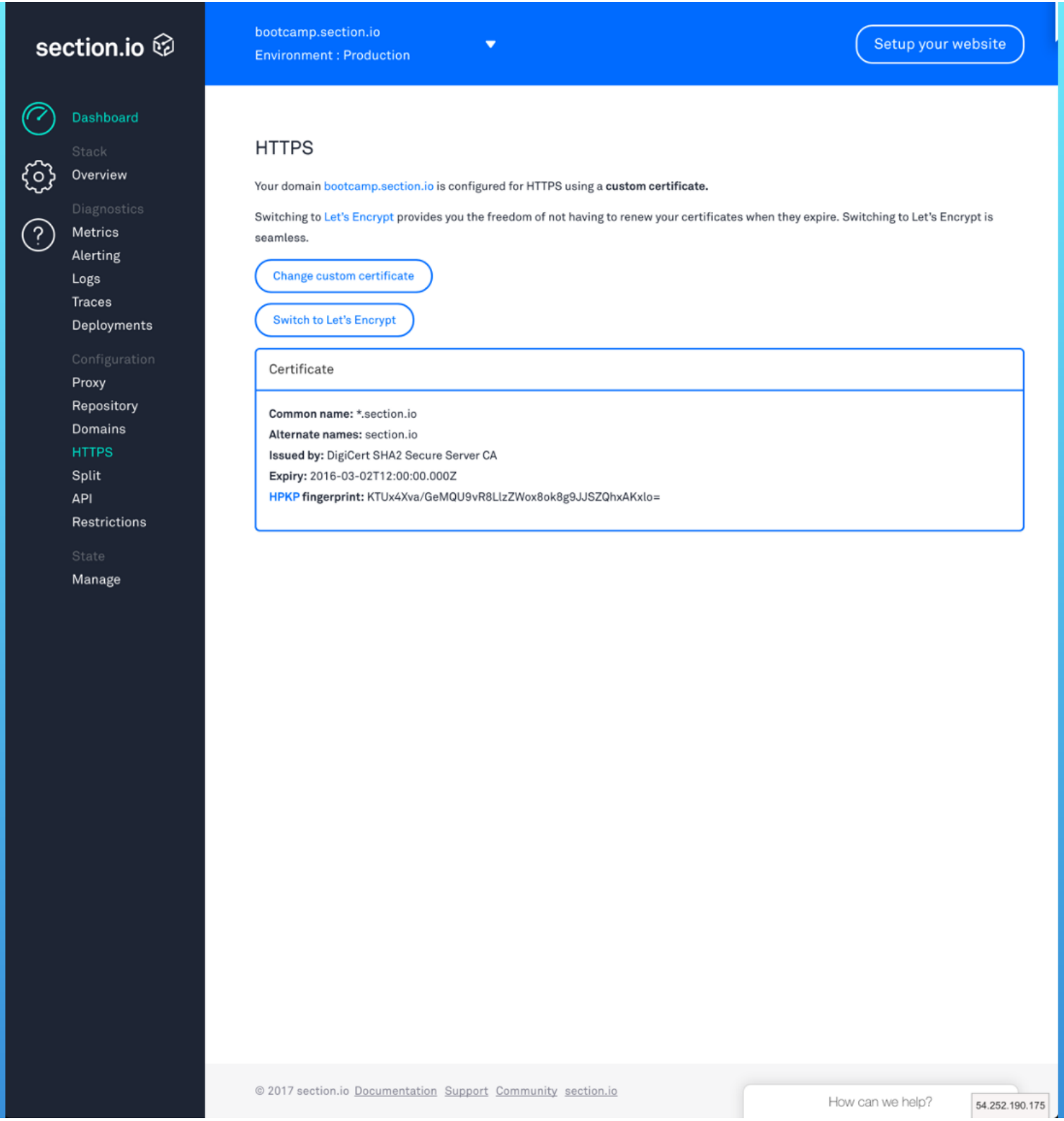
- From here you can find diagnostic information on the requests being handled by varnish. This is using the *varnishlog* tool. Click on the *Load* button to retrive the last 500 lines of varnishlog from your delivery nodes.

  Technical Note: This will run `varnishlog -d` on the varnish containers in this environment.

✓

Results from varnishlog

```
19 SessionOpen  c 172.17.42.1 51915 :80
19 ReqStart     c 172.17.42.1 51915 742209755
19 RxRequest    c GET
19 RxURL        c /redacted
19 RxProtocol   c HTTP/1.1
19 RxHeader     c Host: bootcamp.section.io
19 RxHeader     c X-Forwarded-Proto: http
19 RxHeader     c X-Forwarded-For: 173.252.112.107
19 RxHeader     c section-io-id: 388072613073344114437508O3.516
19 RxHeader     c User-Agent: facebookexternalhit/1.1 (+http://www.facebook.com/externalhit_uatext.php)
19 RxHeader     c Accept: */*
19 RxHeader     c Accept-Encoding: deflate, gzip
19 VCL_call     c recv
19 VCL_Log      c req.xid:742209755
19 VCL_return   c lookup
19 VCL_call     c hash
19 Hash         c no_unique_cookie
19 Hash         c 635604354115400000
19 Hash         c http
19 Hash         c /redacted
19 Hash         c bootcamp.section.io
19 VCL_return   c hash
19 VCL_call     c miss fetch
19 Backend      c 16 default default
19 TTL          c 742209755 RFC 604800 -1 -1 1443750804 0 1443750803 1444355603 604800
19 VCL_call     c fetch
19 TTL          c 742209755 VCL 604800 86400 -1 1443750804 -0
19 VCL_Log      c backend:default
19 TTL          c 742209755 VCL 120 86400 -1 1443750804 -0
19 VCL_return   c hit_for_pass
19 ObjProtocol  c HTTP/1.1
19 ObjResponse  c OK
19 ObjHeader    c Date: Fri, 02 Oct 2015 01:53:23 GMT
19 ObjHeader    c Server: nginx
19 ObjHeader    c Content-Type: image/jpeg
19 ObjHeader    c Content-Length: 36831
19 ObjHeader    c Accept-Ranges: bytes
19 ObjHeader    c Cache-Control: max-age=604800
```


section.io
bootcamp.section.io
Environment : Production
Setup your website
Dashboard
Stack
Overview
Diagnostics
Metrics
Alerting
Logs
Traces
Deployments
Configuration
Proxy
Repository
Domains
HTTPS
Split
API
Restrictions
State
Manage
HTTPS
Your domain bootcamp.section.io is configured for HTTPS using a custom certificate.
Switching to Let's Encrypt provides you the freedom of not having to renew your certificates when they expire. Switching to Let's Encrypt is seamless.
Change custom certificate
Switch to Let's Encrypt
Certificate
Common name: *.section.io
Alternate names: section.io
Issued by: DigiCert SHA2 Secure Server CA
Expiry: 2016-03-02T12:00:00.000Z
HPKP fingerprint: KTUx4Xva/GeMQU9vR8LlzZWox8ok8g9JJSZQhxAKxlo=
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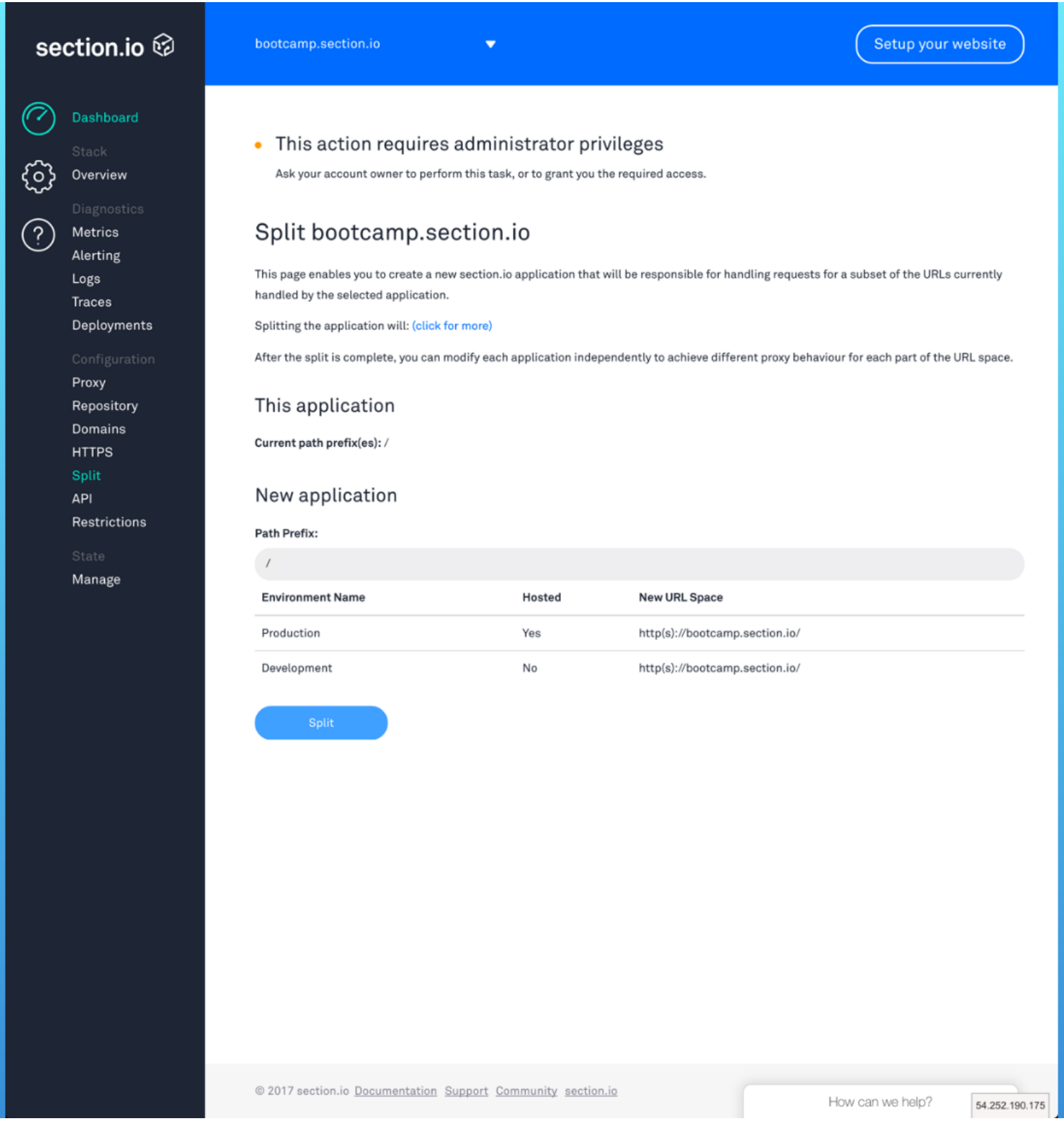
How can we help?
54.252.190.175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Setup your website
Dashboard
Stack
Overview
Diagnostics
Metrics
Alerting
Logs
Traces
Deployments
Configuration
Proxy
Repository
Domains
HTTPS
Split
API
Restrictions
State
Manage
This action requires administrator privileges
Ask your account owner to perform this task, or to grant you the required access.
Split bootcamp.section.io
This page enables you to create a new section.io application that will be responsible for handling requests for a subset of the URLs currently handled by the selected application.
Splitting the application will: (click for more)
After the split is complete, you can modify each application independently to achieve different proxy behaviour for each part of the URL space.
This application
Current path prefix(es): /
New application
Path Prefix:
/
Environment Name
Hosted
New URL Space
Production
Yes
http(s)://bootcamp.section.io/
Development
No
http(s)://bootcamp.section.io/
Split
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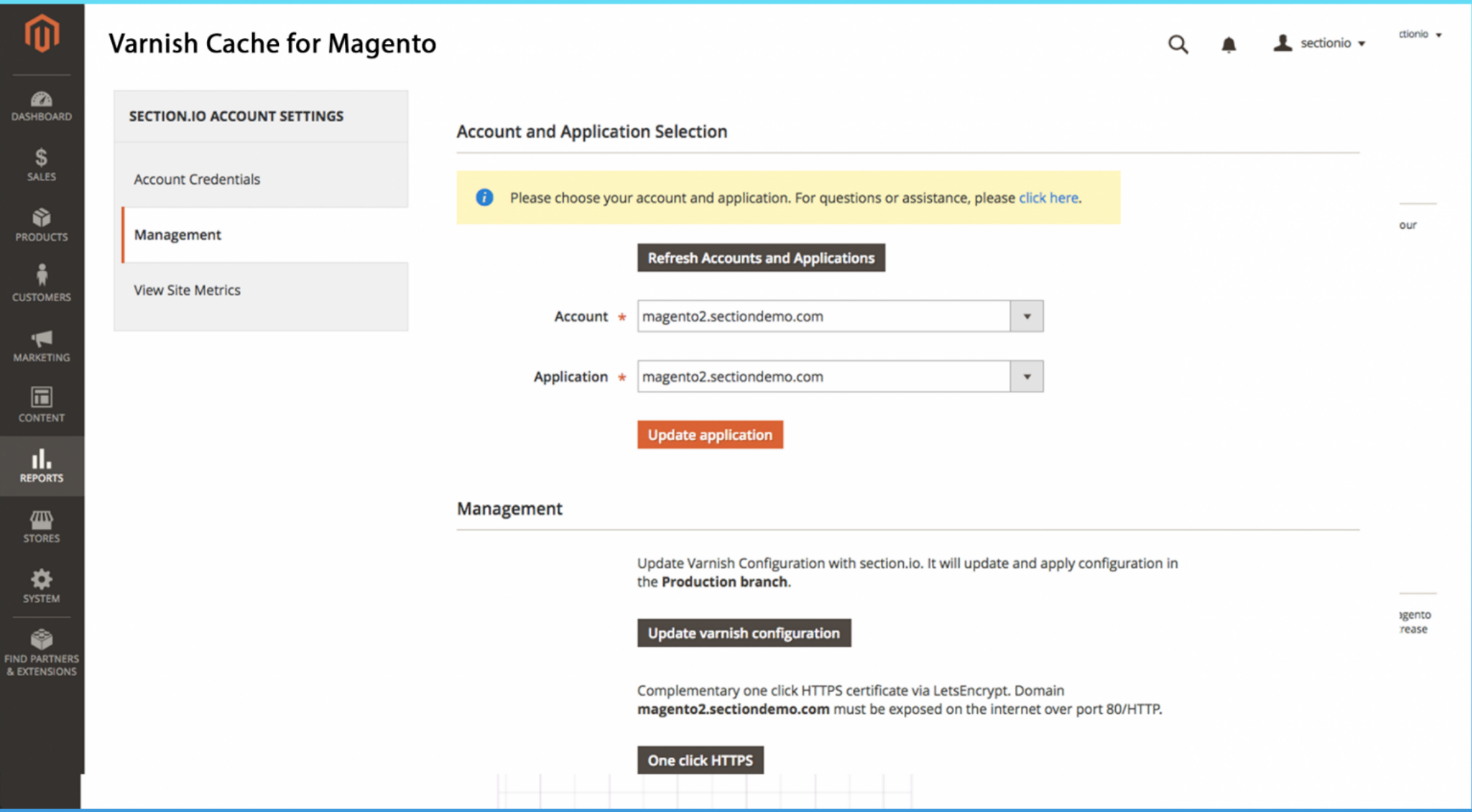
How can we help?
54.252.190.175


Varnish Cache for Magento
sectionio
DASHBOARD
SALES
PRODUCTS
CUSTOMERS
MARKETING
CONTENT
REPORTS
STORES
SYSTEM
FIND PARTNERS & EXTENSIONS
SECTION.IO ACCOUNT SETTINGS
Account Credentials
Management
View Site Metrics
Account and Application Selection
Please choose your account and application. For questions or assistance, please click here.
Refresh Accounts and Applications
Account *
magento2.sectiondemo.com
Application *
magento2.sectiondemo.com
Update application
Management
Update Varnish Configuration with section.io. It will update and apply configuration in the Production branch.
Update varnish configuration
Complementary one click HTTPS certificate via LetsEncrypt. Domain magento2.sectiondemo.com must be exposed on the internet over port 80/HTTP.
One click HTTPS

Varnish Cache for Magento

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CONTENT
REPORTS
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FIND PARTNERS & EXTENSIONS

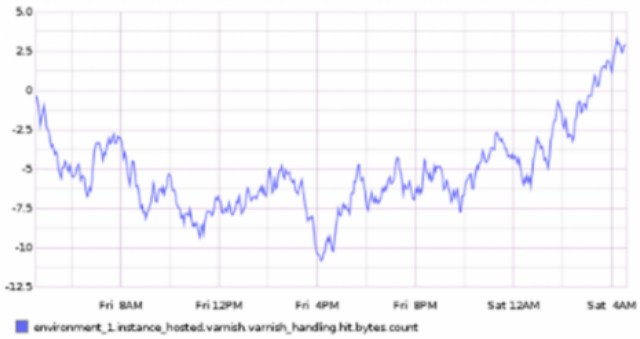
SECTION.IO ACCOUNT SETTINGS

- Account Credentials
- Management
- View Site Metrics

section.io Learn more about section.io. Get support from section.io.

Overall Cache Hit Count

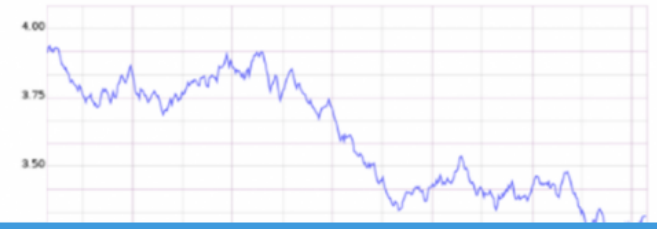
This chart shows how often your customer requests are able to be answered by the cache (a "cache hit"). The higher this rate, the faster your website loads and the less work required by your servers. You can increase this rate by caching more content. Read more.

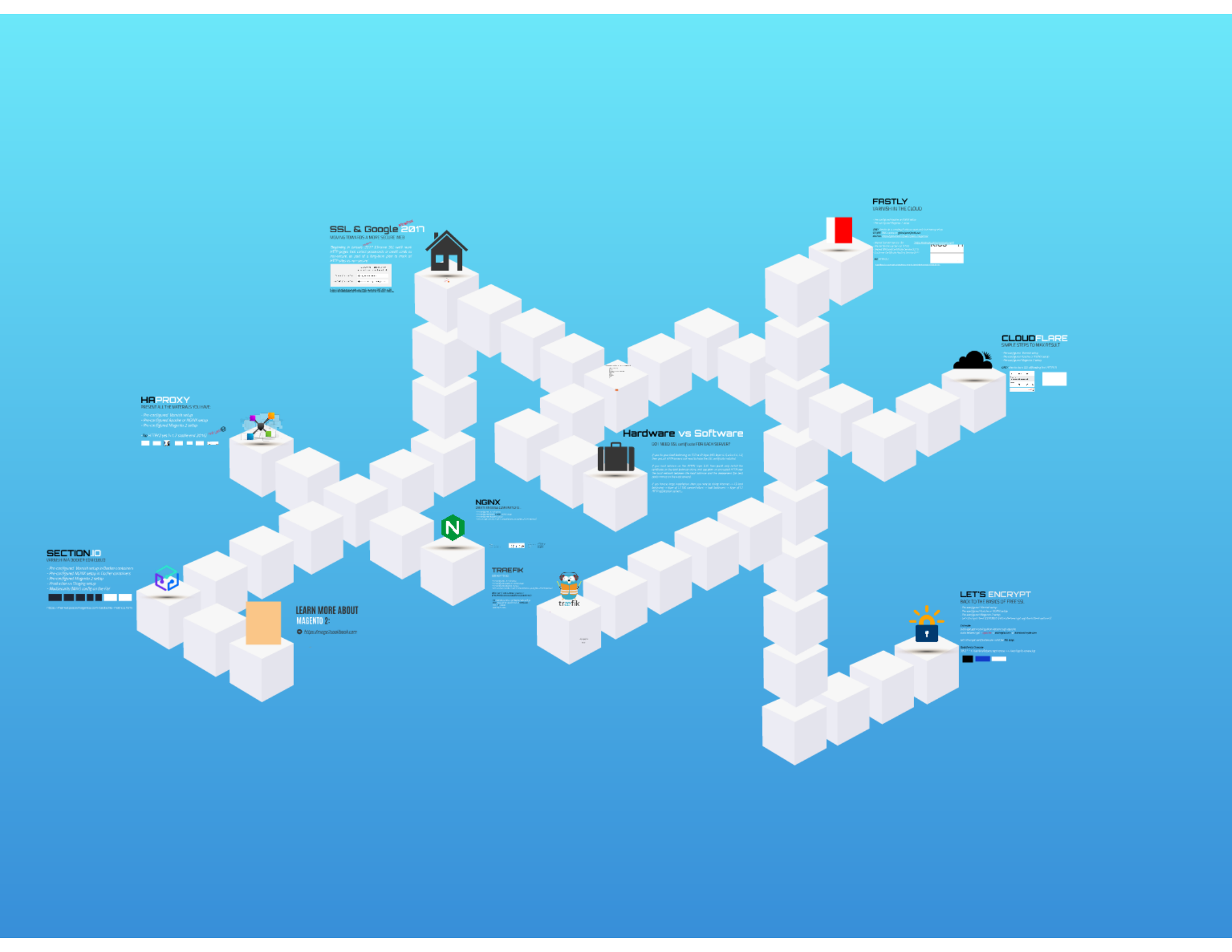


View this in the section.io console.

HTML Cache Hit Count

This chart shows how often your HTML document requests are able to be answered by the cache (a "cache hit"). HTML documents are a set of instructions used to create the web page. Magento generates these documents for you and they consume a significant amount of your server resources. Serving these documents from the cache instead of your server is a critical way to increase performance. Read more.




SSL & Google 2017
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FASTLY
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Hardware vs Software
NGINX
TRAEFIK
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LEARN MORE ABOUT MAGENTO 2:
LET'S ENCRYPT
BACK TO THE BASICS OF FREE SSL

LET'S ENCRYPT

BACK TO THE BASICS OF FREE SSL

- *Pre-configured Varnish setup*
- *Pre-configured Apache or NGINX setup*
- *Pre-configured Magento 2 setup*
- *Let's Encrypt client (CERTBOT) [https://letsencrypt.org/docs/client-options/]*

Example:

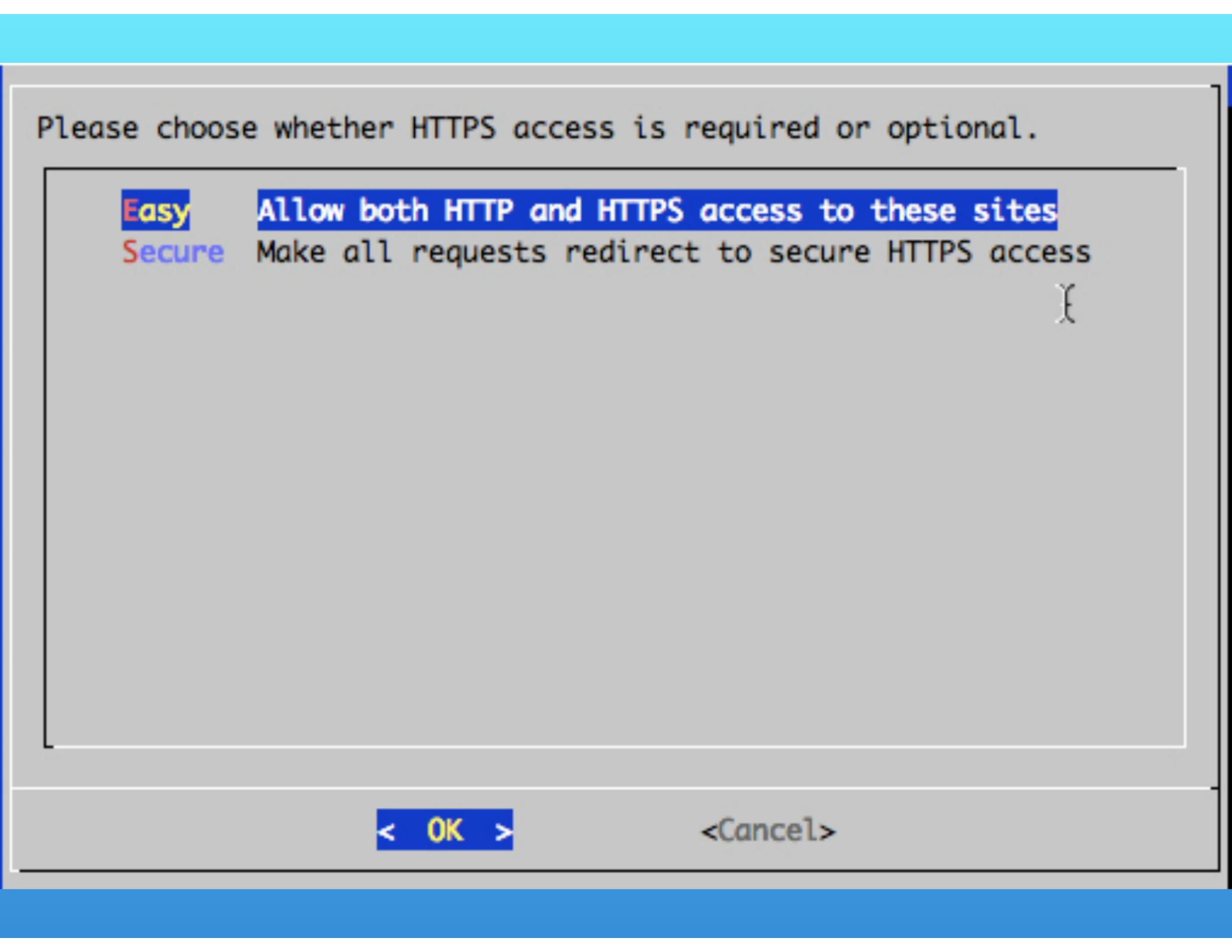
```
sudo apt-get install python-letsencrypt-apache
sudo letsencrypt --apache -d example.com -d www.example.com
```

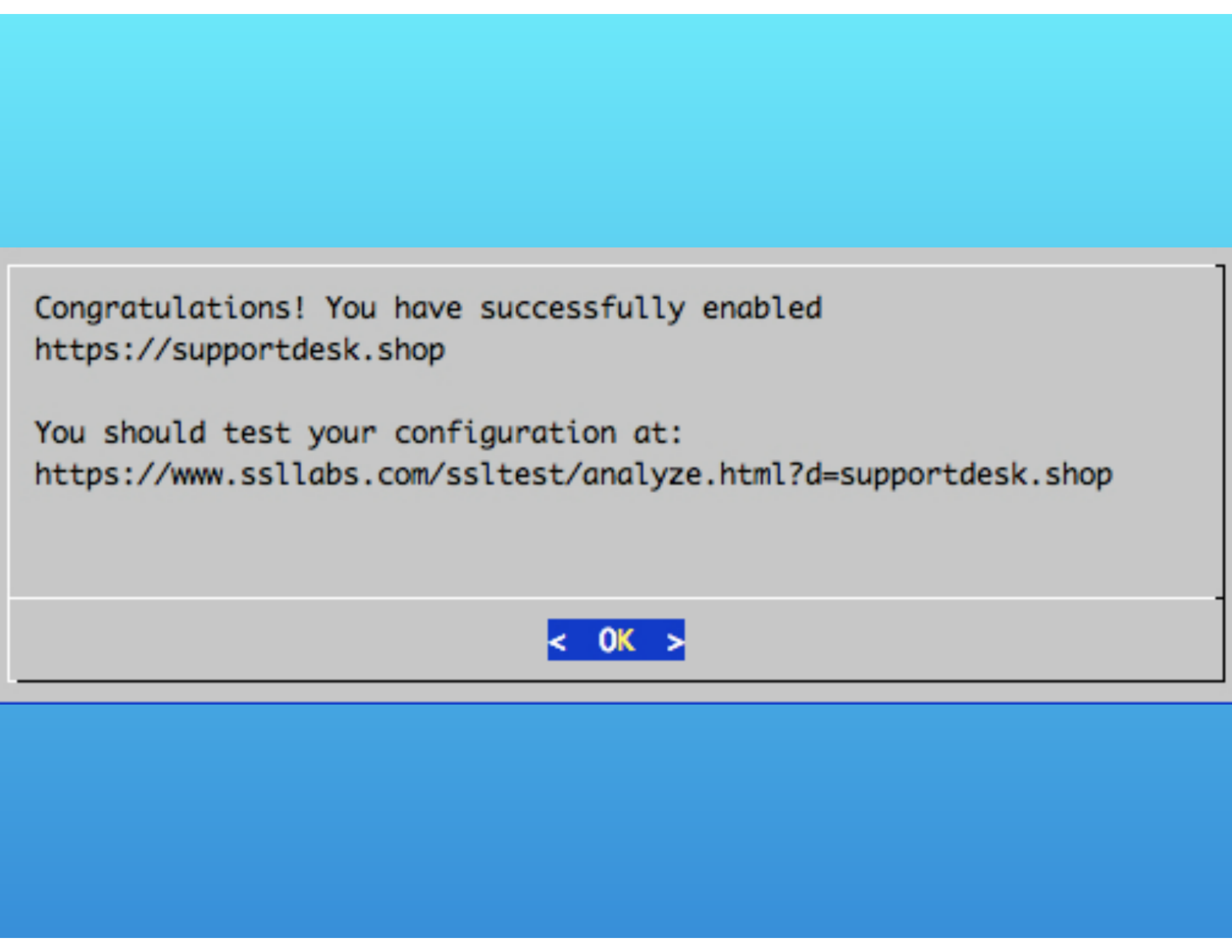
Let's Encrypt certificates are valid for 90 days

Update via Cronjob:

```
30 2 * * 1 /usr/bin/letsencrypt renew >> /var/log/le-renew.log
```




Please choose whether HTTPS access is required or optional.
Easy
Allow both HTTP and HTTPS access to these sites
Secure
Make all requests redirect to secure HTTPS access
< OK >
<Cancel>


Congratulations! You have successfully enabled
https://supportdesk.shop
You should test your configuration at:
https://www.ssllabs.com/ssltest/analyze.html?d=supportdesk.shop
< OK >

```
- Congratulations! Your certificate and chain have been saved at
  /etc/letsencrypt/live/supportdesk.shop/fullchain.pem. Your cert
  will expire on 2017-01-17. To obtain a new version of the
  certificate in the future, simply run Let's Encrypt again.
- If you like Let's Encrypt, please consider supporting our work by:

  Donating to ISRG / Let's Encrypt:   https://letsencrypt.org/donate
  Donating to EFF:                    https://eff.org/donate-le
```

Hardware vs Software

DO I NEED SSL certificate FOR EACH SERVER?

If you do your load balancing on TCP or IP layer (OSI layer 4/3, a.k.a L4, L3), then yes, all HTTP servers will need to have the SSL certificate installed.

If you load balance on the HTTPS layer (L7), then you'd only install the certificate on the load balancer alone, and use plain un-encrypted HTTP over the local network between the load balancer and the webservers (for best performance on the web servers).

If you have a large installation, then you may be doing: Internet -> L3 load balancing -> layer of L7 SSL concentrators -> load balancers -> layer of L7 HTTP application servers...

NGINX

CREATE ENDLESS COMBINATIONS...

- Pre-configured Varnish setup
- Pre-configured Apache or NGINX setup
- Pre-configured Magento 2 setup
- Let's Encrypt client (CERTBOT) (https://letsencrypt.org/docs/client-options/)

TRAEFIK

DOCKER TO GO

- Pre-configured Varnish setup
- Pre-configured Apache or NGINX setup
- Pre-configured Magento 2 setup
- Let's Encrypt client (CERTBOT) (https://letsencrypt.org/docs/client-options/)

```
docker run -d -p 8000:8080 -p 80:80 -v
$PWD/traefik.toml:/etc/traefik/traefik.toml traefik
```

- No dependency hell, single binary, made with go
- One config file to rule them all (./traefik.toml)
- HTTP/2 support
- and much more...

LET'S ENC

BACK TO THE BASICS O

- Pre-configured Varnish setup
- Pre-configured Apache or NGINX se
- Pre-configured Magento 2 setup
- Let's Encrypt client (CERTBOT) (htt

Example:

```
sudo apt-get install python-letsencr
sudo letsencrypt --apache -d exampl
```

Let's Encrypt certificates are valid fo

Update via Cronjob:

```
30 2 * * 1 /usr/bin/letsencrypt rene
```

TRAEFIK

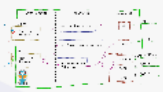
DOCKER TO GO

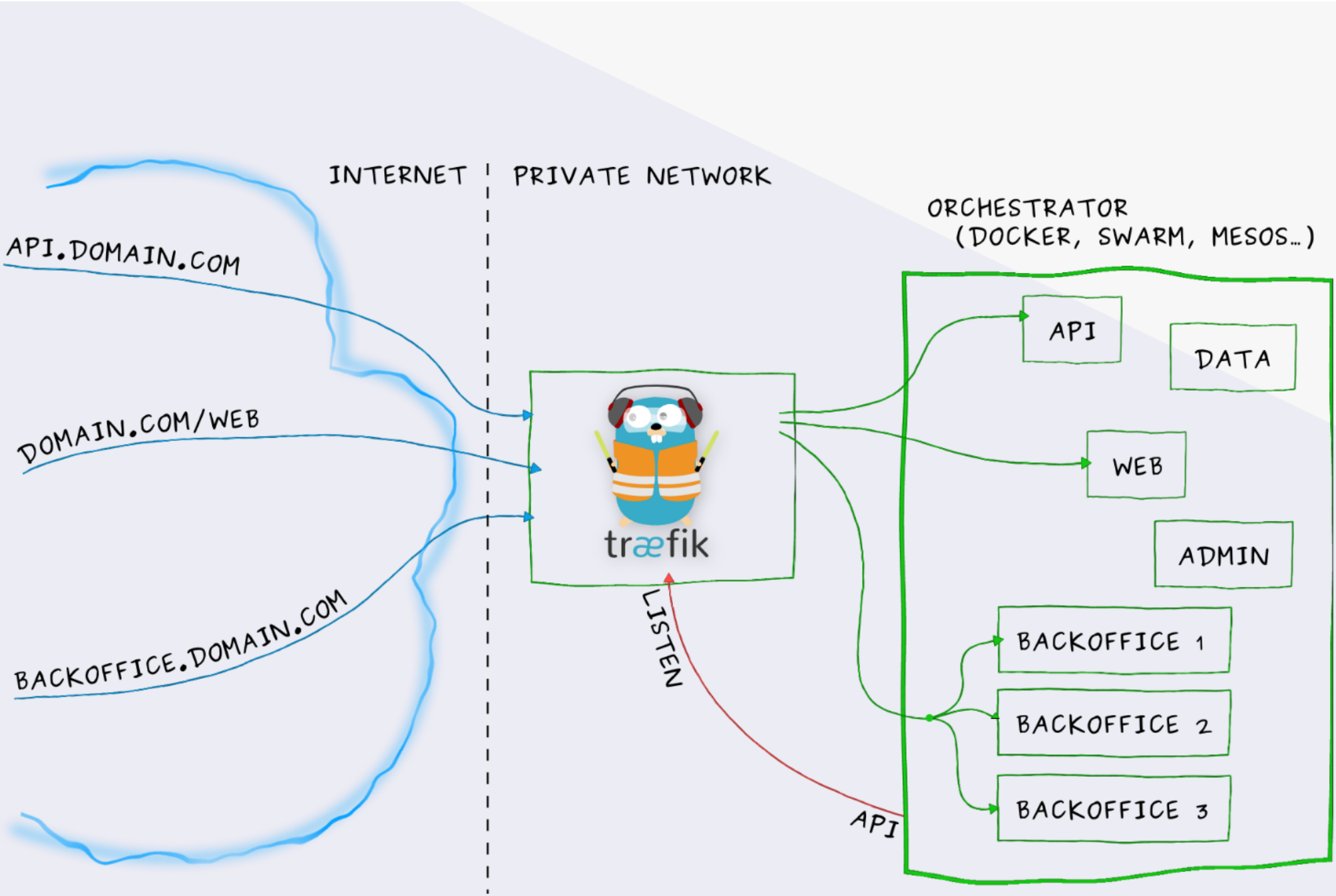
- *Pre-configured Varnish setup*
- *Pre-configured Apache or NGINX setup*
- *Pre-configured Magento 2 setup*
- *Let's Encrypt client (CERTBOT) [https://letsencrypt.org/docs/client-options/]*

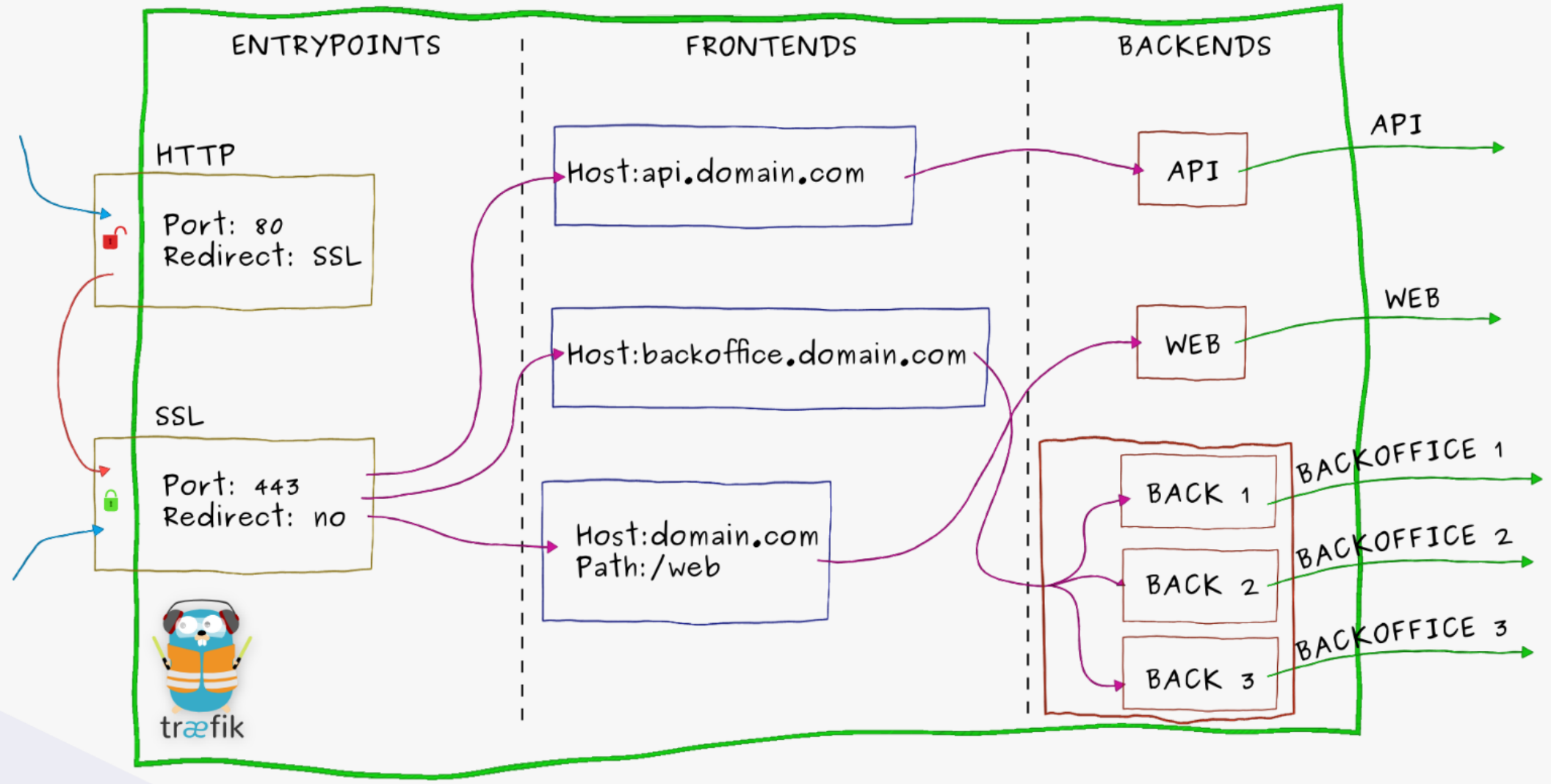
docker run -d -p 8080:8080 -p 80:80 -v $PWD/traefik.toml:/etc/traefik/traefik.toml traefik

- *No dependency hell, single binary made with go*
- *One config file to rule them all ;-) (traefik.toml)*
- *HTTP/2 support*
- *and much more...*

træfik



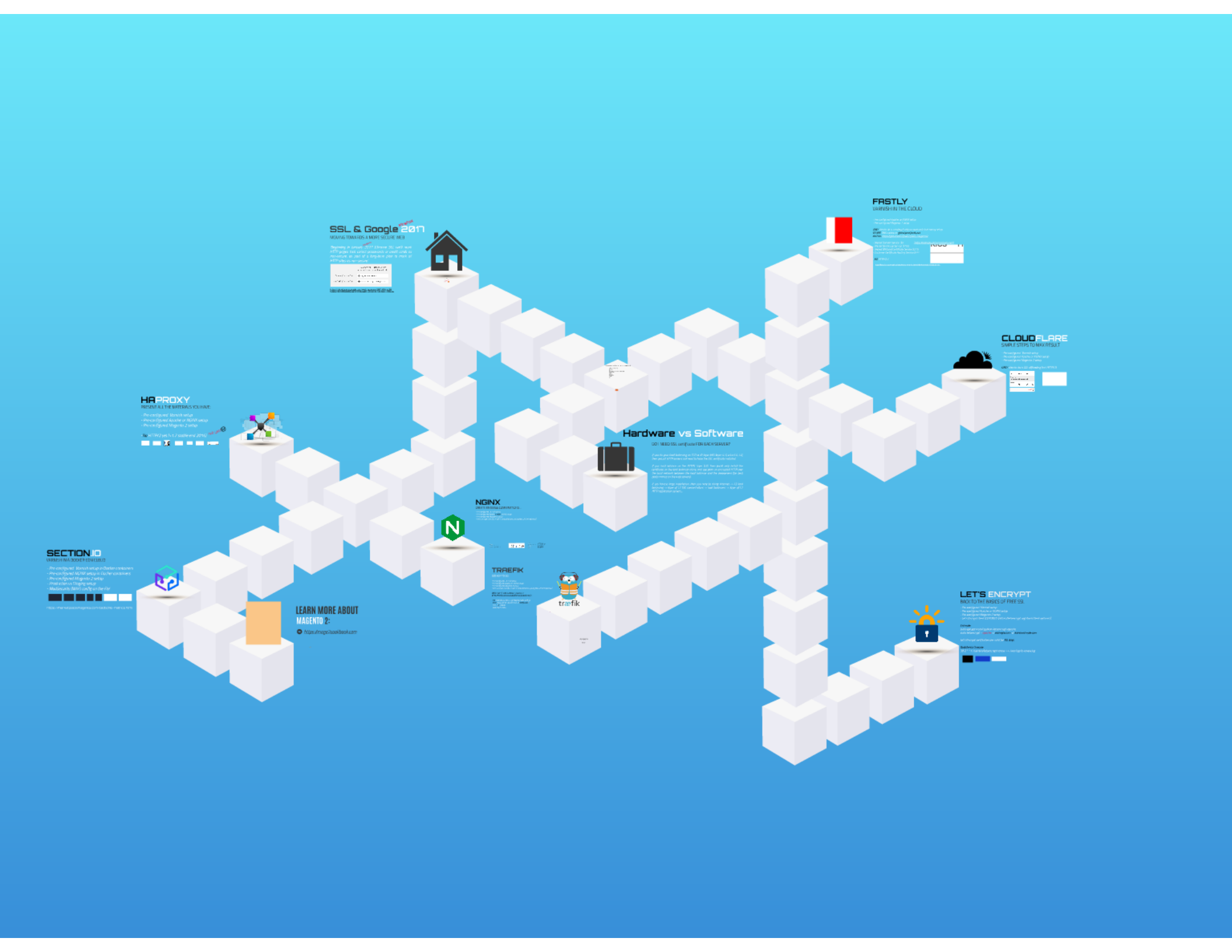

INTERNET
PRIVATE NETWORK
ORCHESTRATOR
(DOCKER, SWARM, MESOS…)
API.DOMAIN.COM
DOMAIN.COM/WEB
BACKOFFICE.DOMAIN.COM
træfik
LISTEN
API
API
DATA
WEB
ADMIN
BACKOFFICE 1
BACKOFFICE 2
BACKOFFICE 3


ENTRYPOINTS
FRONTENDS
BACKENDS
HTTP
Port: 80
Redirect: SSL
SSL
Port: 443
Redirect: no
Host:api.domain.com
Host:backoffice.domain.com
Host:domain.com
Path:/web
API
WEB
BACK 1
BACK 2
BACK 3
API
WEB
BACKOFFICE 1
BACKOFFICE 2
BACKOFFICE 3
træfik

CONCLUSION

SSL TO **GO** or **NOT** TO **GO**

??????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https://mage2cookbook.com

Creative Contributions by:

Ray Bogman

- Magento Evangelist
- Trainer
- Performance nerd
- Security geek
- SEO freak

Magento Certified SOLUTION SPECIALIST

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@supportdesknu

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