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Building Microservices @ Squarespace

QCon New York 2017



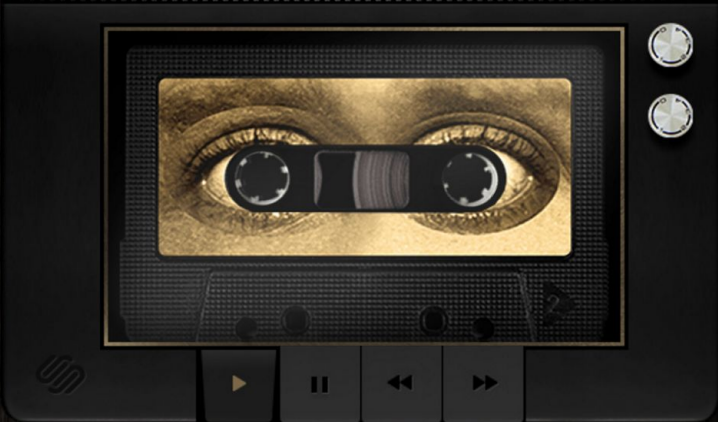
SUPER

BOWL

XLIX

UNIVERSITY
OF PHOENIX
STADIUM

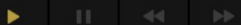




DOWNLOAD ALBUM



- INTRODUCTION (GOOD EVENING) ★ 2:14
- SLEEP. DREAM. WAKE UP. 2:08
- CHIMES FOR DREAMS ★ 1:24
- HUMMMMMM ★ 2:52
- GOODMORNING, SWEETHEART 1:29
- SEE YOU AT THE DREAMING TREE 3:05
- A GLASS OF WATER 0:53
- THE RAVEN 0:55
- THE HEN ★ 1:05
- IKEA 1:03
- THE SEA 2:24
- TEMESCAL CANYON ★ 11:03
- FEELING GOOD 3:27



1/15 INTRODUCTION (GOOD EVENING)



1:19 / 2:25

DOWNLOAD

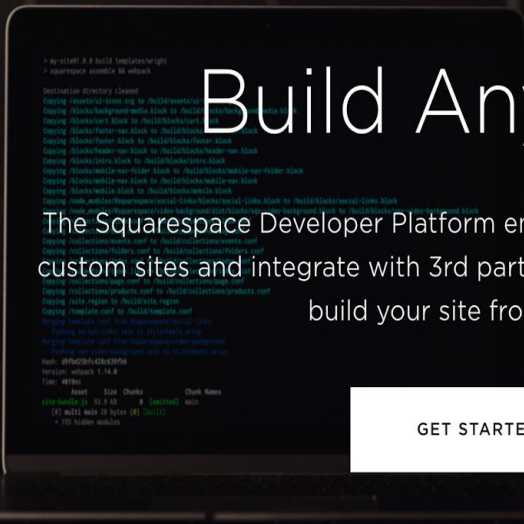
SHARE



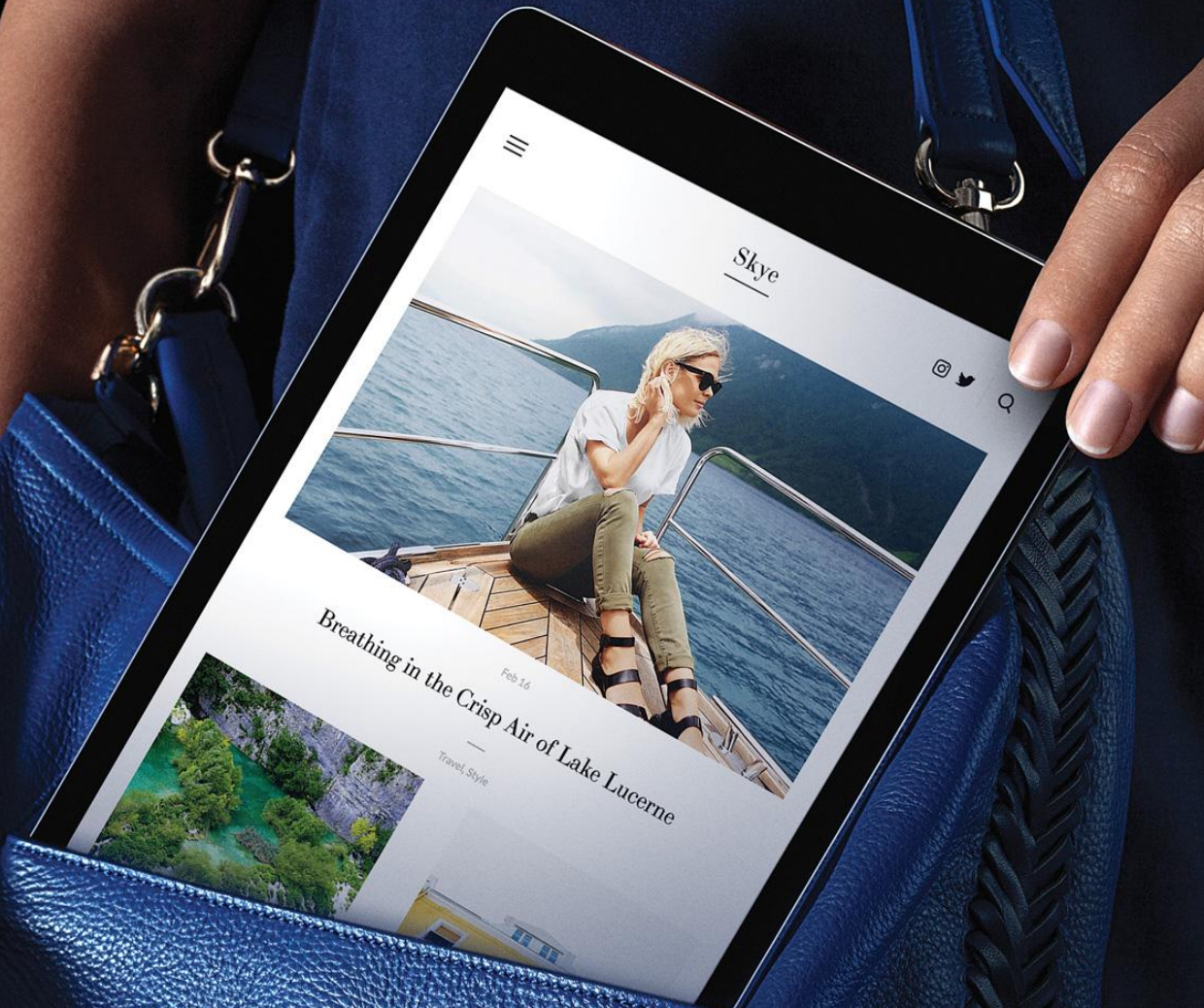
Build Anything

The Squarespace Developer Platform enables developers to create fully custom sites and integrate with 3rd party tools. Start with a template, or build your site from scratch.

GET STARTED







Skye



Breathing in the Crisp Air of Lake Lucerne

Feb 16

Travel, Style



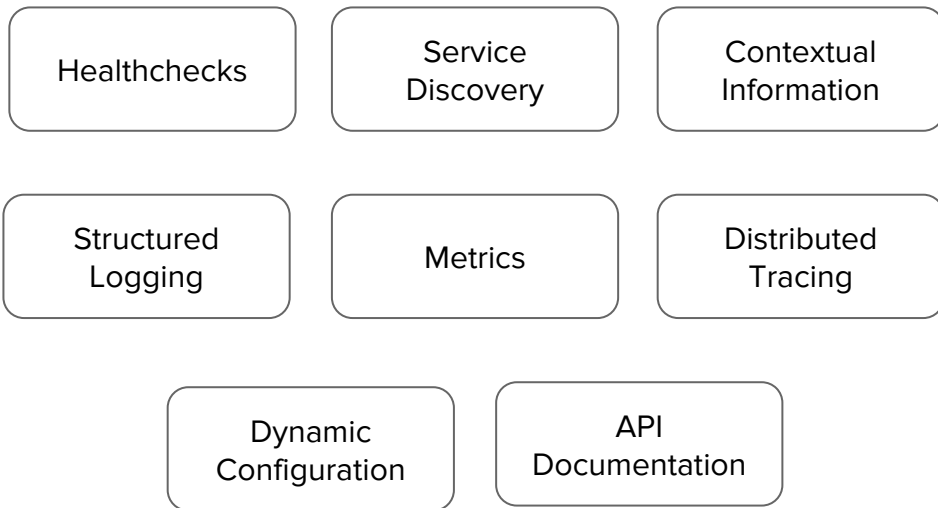
AGENDA

- 01 Microservice Framework*
- 02 Organizational Changes*
- 03 New Opportunities & Challenges*



SERVICE CORE

Microservice Framework





Healthchecks

```
service:  
  name: taxation  
  version: 1.0
```

```
server:  
  port: 8080  
management:  
  port: 8081
```



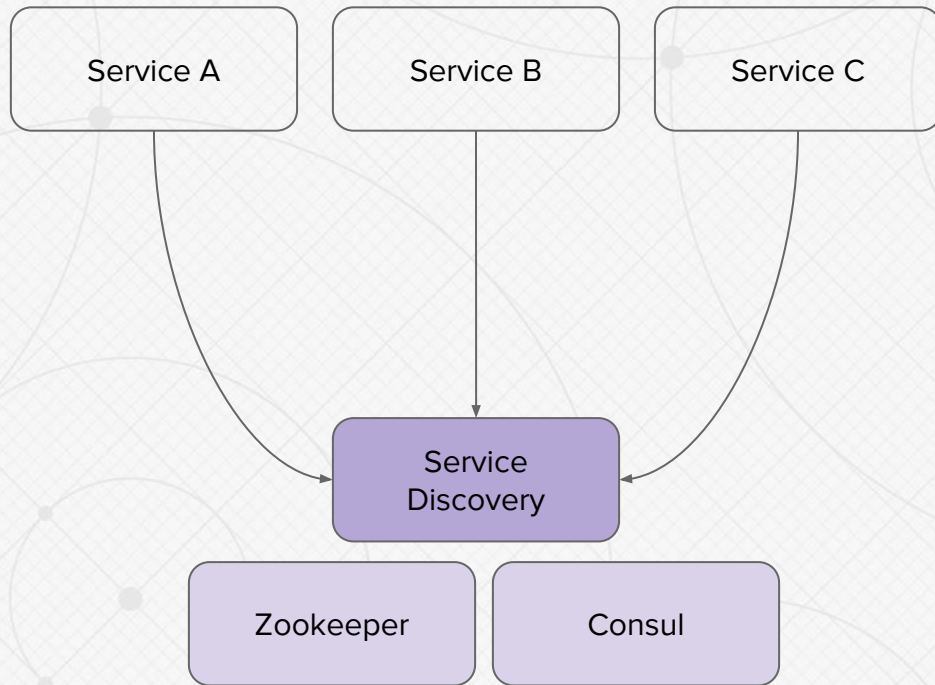
Healthchecks

<http://taxation101.eqx.dal.prod.squarespace.net:8081/healthcheck>

```
{  
  "status": "UP",  
  "taxation-core": {  
    "healthy": true  
    "message": "Service is running version TAX-459"  
  }  
}
```




Service Discovery & Registration





Service Discovery & Registration

taxation101.eqx.dal.prod.squarespace.net

2 services

taxation102.eqx.dal.prod.squarespace.net

2 services

taxation103.eqx.dal.prod.squarespace.net

2 services

taxation101.eqx.dal.prod.squarespace.net

10.120.201.24

SERVICES

taxation

No tags

:8080

taxation-server

No tags

:8080

CHECKS

Serf Health Status serfHealth

passing

NOTES

OUTPUT

Agent alive and reachable

Service 'taxation-server' check service:taxation-server:1

passing

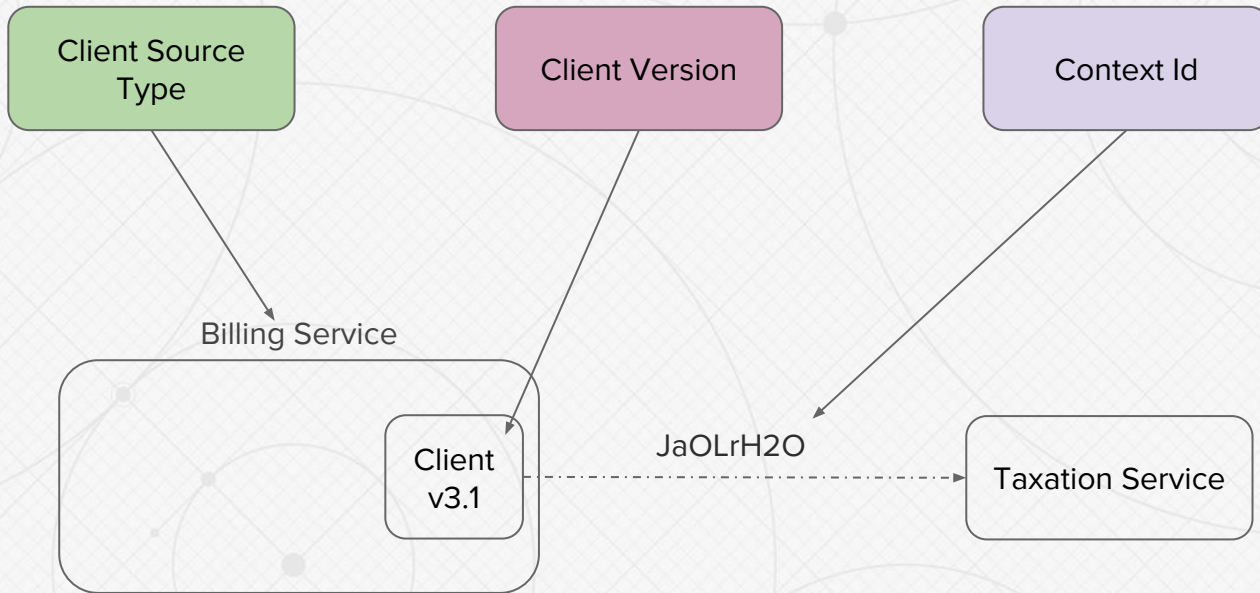
NOTES

OUTPUT

TCP connect localhost:8080: Success



Contextual Information





Structured Logging

Taxation Service

Application Logs

Access Logs

GC Logs



Structured Logging

```
logging.level: DEBUG
logging:
  level:
    org.springframework: INFO
    com.squarespace.metrics.Graphite: "OFF"
  directory: /data/logs
  extension: .log
  maxFileSize: 512MB
  totalSizeCap: 8GB
  maxHistory: 5
```

```
tail -f /data/logs/taxation-access.log
```

```
2017-03-22 07:24:45:026 GMT
```

```
thread=jetty-846
contextId=Ja0LrH20
contextSourceType=billing
clientVersion=taxation-client-3.1
level=INFO
class=AccessLog
ip=10.100.101.205
method=GET
uri=/api/1/taxation/rates
queryString=
httpVersion=HTTP/1.1
responseCode=200
responseTimeMs=39
responseSize=-1
```



Metrics

```
graphite:  
  enabled: true  
  enableConsole: false  
  host: {{ graphite_host }}  
  port: {{ graphite_port }}
```




Metrics

<http://taxation101.eqx.dal.prod.squarespace.net:8081/metrics>

```
{
  "mem":2210292,
  "mem.free":831939,
  "processors":2,
  "threads":89,
  "GET.api.1.taxation.tax-overrides.sourceTypes.admin.requests.snapshot.stdDev":0,
  "GET.api.1.taxation.exemptions.externalId.requests.snapshot.99thPercentile":90,
  "GET.api.1.taxation.exemptions.requests.oneMinuteRate":2.964393875E-314,
  "GET.api.1.taxation.exemptions.externalId.requests.meanRate":1.4890452464986816,
  "PUT.api.1.taxation.tax-overrides.id.decisions.requests.snapshot.98thPercentile":22,
  "GET.api.1.taxation.vat-countries.list-results.sourceTypes.billing.requests.snapshot.p75":0
}
```



Metrics



Taxation Generated API (P...

[Back to dashboard](#)

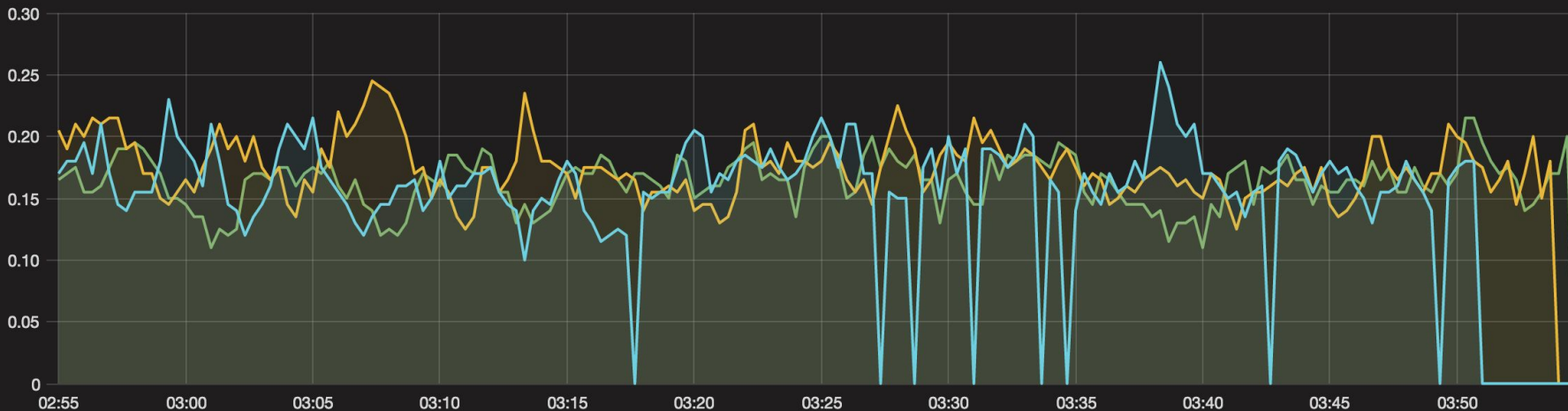
[Zoom Out](#)

[Last 1 hour](#)

[Refresh every 30s](#)



Requests (per sec)



Graph

General

Metrics

Axes

Legend

Display

Time range



`aliasByNode(PRODUCTION.host.*taxation*.GET.api.1.taxation.rates.requests.m1_rate, 2)`





Distributed Tracing

Zipkin

Investigate system behavior

Find a trace

Dependencies

Go to trace

Duration: 72.000ms

Services: 4

Depth: 2

Total Spans: 14

JSON

Expand All

Collapse All

Filter... ▾

billing x4

location x1

mongodb x4

site-server x10

Services	14.400ms	28.800ms	43.200ms	57.600ms	72.000
- site-server	72.000ms : get /api/billing/available-plans/product-types/website/current				
location	1.000ms : get /api/1/location/ips/80.12.55.144				
mongodb	2.000ms : squarespace.pricetests.query()				
billing	13.000ms : get /api/1/billing/offerings/currencies/eur/product-types/website/product-lines/website-cover-page/current?countryco				
site-server	NaNs : getcurrentoffering				
mongodb	1.000ms : squarespace.pricetests.query()				
site-server	1.000ms : getcurrentoffering				
billing	25.000ms : get /api/1/billing/offerings/currencies/eur/product-types/website/product-lines/webs				
mongodb	1.000ms : squarespace.pricetests.q				
billing	5.000ms : get /api/1/billing/offe				
site-server	NaNs : getcurrentoffering				
mongodb	1.000ms : square				
site-server	1.000ms : getc				
billing	3.000ms : ge				



Dynamic Configuration

vars:

tracing_sample_rate:

prod: 0.2

stage: 1.0

qa1: 1.0



Dynamic Configuration



SERVICES

NODES

KEY/VALUE

ACL

PEER1-JFK-STAGE ▾



SERVICES/BILLING-SERVICE/TRACING/ +

sampleRate

services/billing-service/tracing/sampleRate

0.77

UPDATE

CANCEL

DELETE KEY



API Documentation

URL

TOKEN



API REFERENCE

CountryInfo

CurrencyFormat

CurrencyInfo

Read a list of currency info

Create a new currency info

Read accepted currencies

Read currency info

Read valid currencies

Read currency by code

FeatureLevel

GatewayPlan

Offering

Plan

ProductLine

ProductType

Product

PurchaseRecord

Create a new currency info

Show samples

PUT /currency-info

Creates a new (@link CurrencyInfo) resource.

Parameters

info

Content type:

application/json

CurrencyInfo

Test this endpoint

TRY

Response Type

application/json



SERVICE CLIENT

Microservice Framework

Client-Side Load
Balancing

Latency & Fault
Tolerance

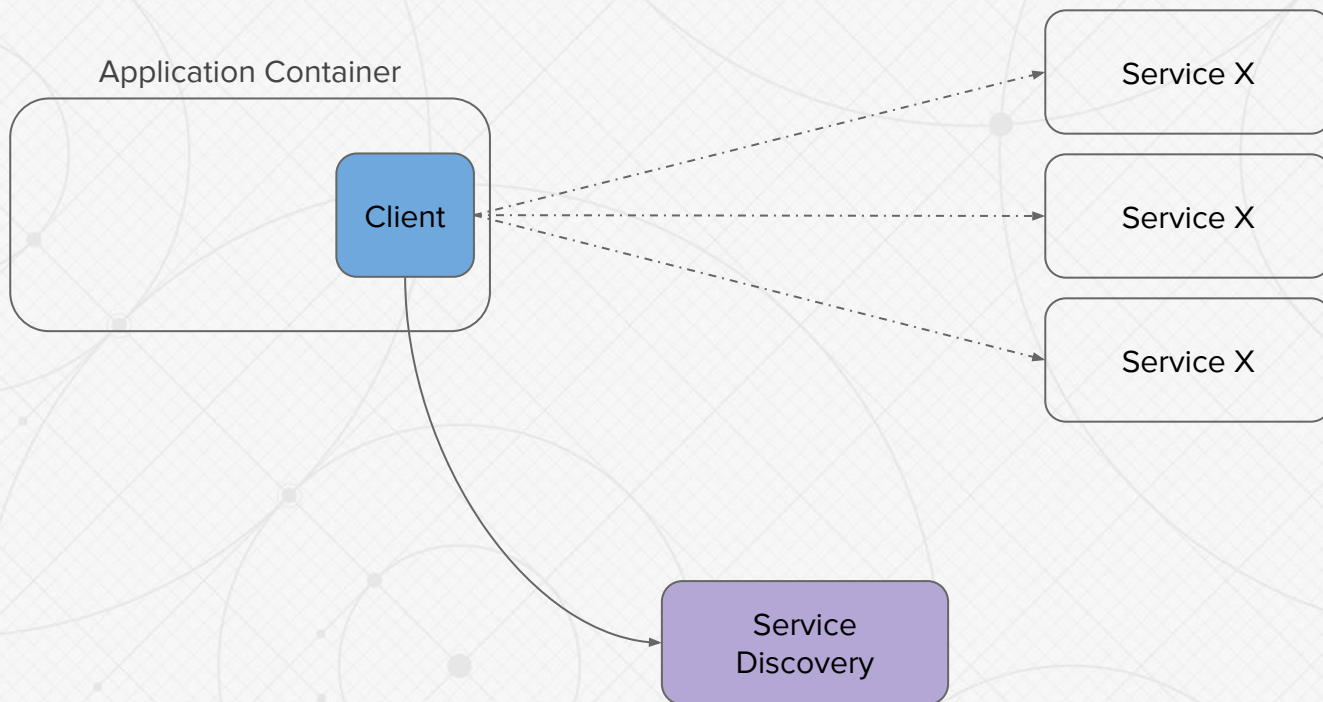
Client-Side
Caching

Asynchronous
Request
Execution

HTTP Request
Builders

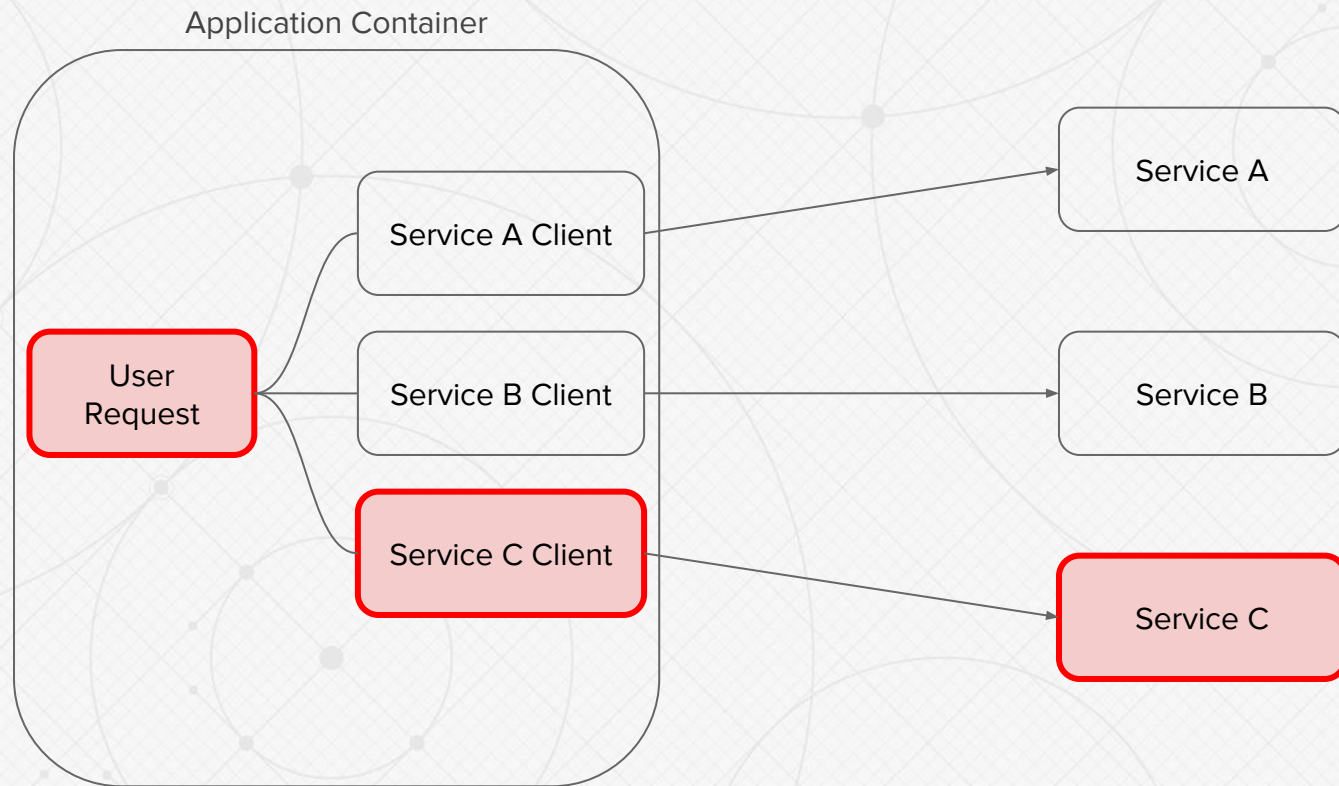


Client-Side Load Balancing



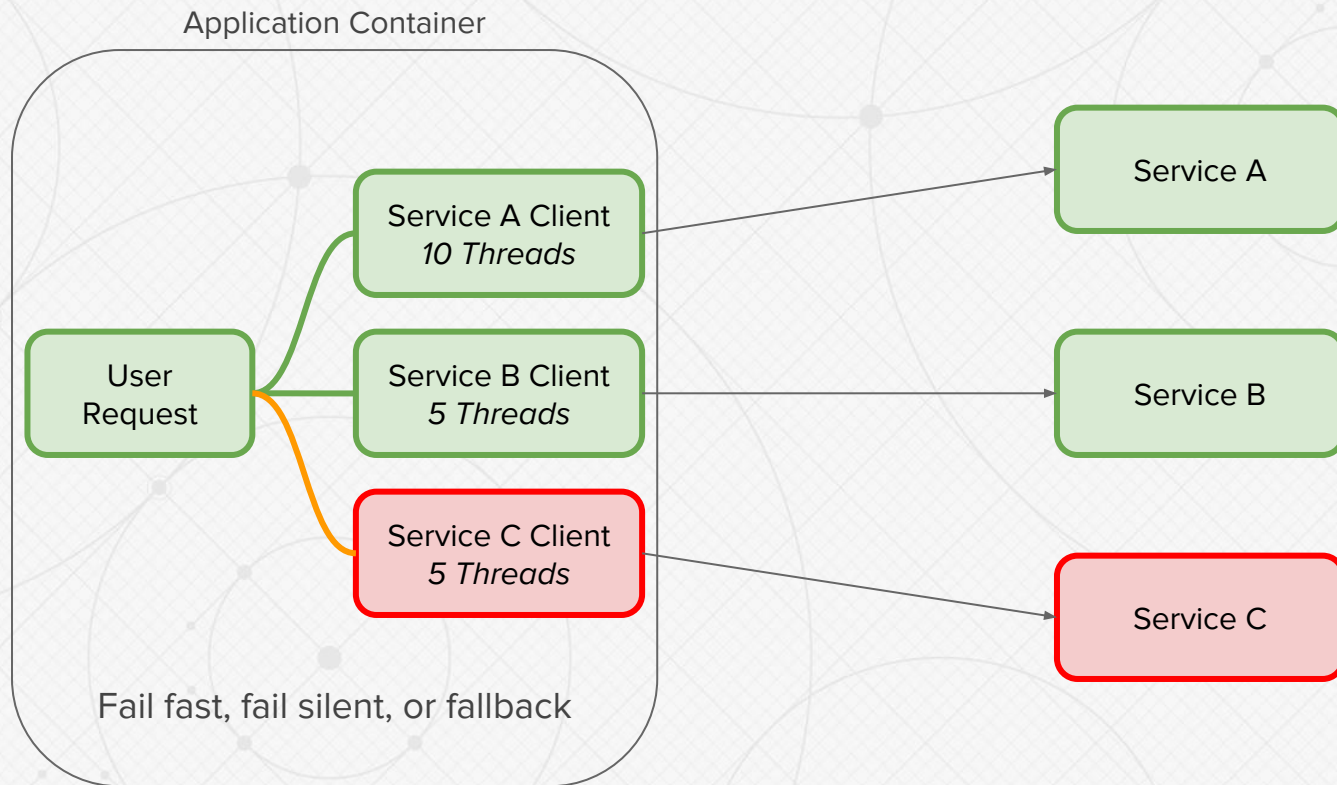


Latency & Fault Tolerance





Latency & Fault Tolerance





Hystrix

billing-getCurrencyFormat

60 | 0 | 0.0 %
 0 | 0 |
 0 | 0 |

Host: 0.1/s

Cluster: 6.0/s

Circuit Closed

Hosts	48	90th	3ms
Median	1ms	99th	4ms
Mean	1ms	99.5th	4ms

billing-get

68 | 0 | 0.0 %
 0 | 0 |
 0 | 0 |

Host: 0.1/s

Cluster: 6.8/s

Circuit Closed

Hosts	48	90th	4ms
Median	2ms	99th	7ms
Mean	2ms	99.5th	7ms

billing-listAccepted

67 | 0 | 0.0 %
 0 | 0 |
 0 | 0 |

Host: 0.1/s

Cluster: 6.2/s

Circuit Closed

Hosts	48	90th	5ms
Median	2ms	99th	6ms
Mean	2ms	99.5th	6ms

screenshot-v2-getScreenshotInfo

74 | 0 | 0.0 %
 0 | 0 |
 4 | 0 |

Host: 0.1/s

Cluster: 6.1/s

Circuit Closed

Hosts	48	90th	5ms
Median	3ms	99th	6ms
Mean	3ms	99.5th	6ms

locationFromIpAddress

37 | 0 | 0.0 %
 0 | 0 |
 0 | 0 |

Host: 0.1/s

Cluster: 3.7/s

Circuit Closed

Hosts	48	90th	3ms
Median	2ms	99th	4ms
Mean	2ms	99.5th	4ms

billing-getPlan

34 | 0 | 0.0 %
 0 | 0 |
 0 | 0 |

Host: 0.1/s

Cluster: 3.4/s

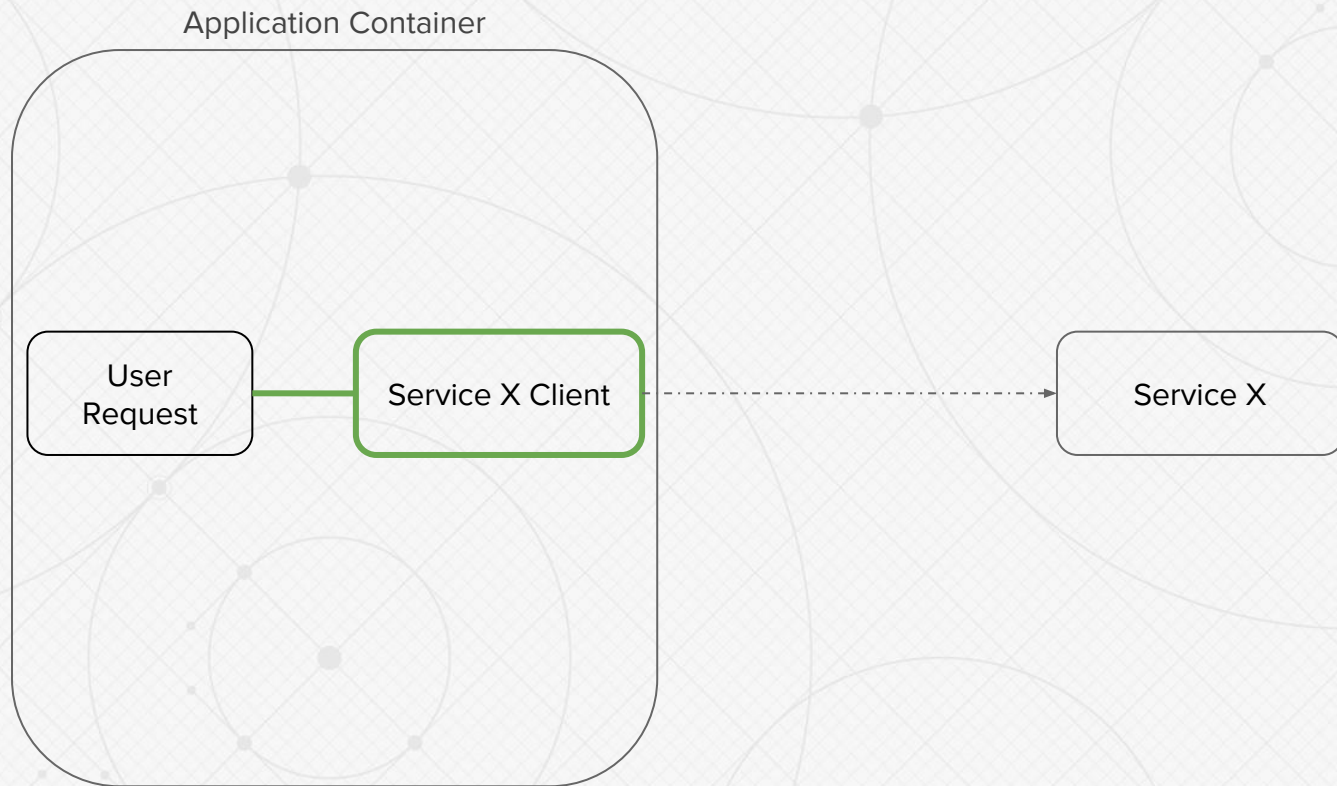
Circuit Closed

Hosts	48	90th	5ms
Median	3ms	99th	6ms
Mean	3ms	99.5th	6ms

Success | Short-Circuited | Bad Request | Timeout | Rejected | Failure | Error %

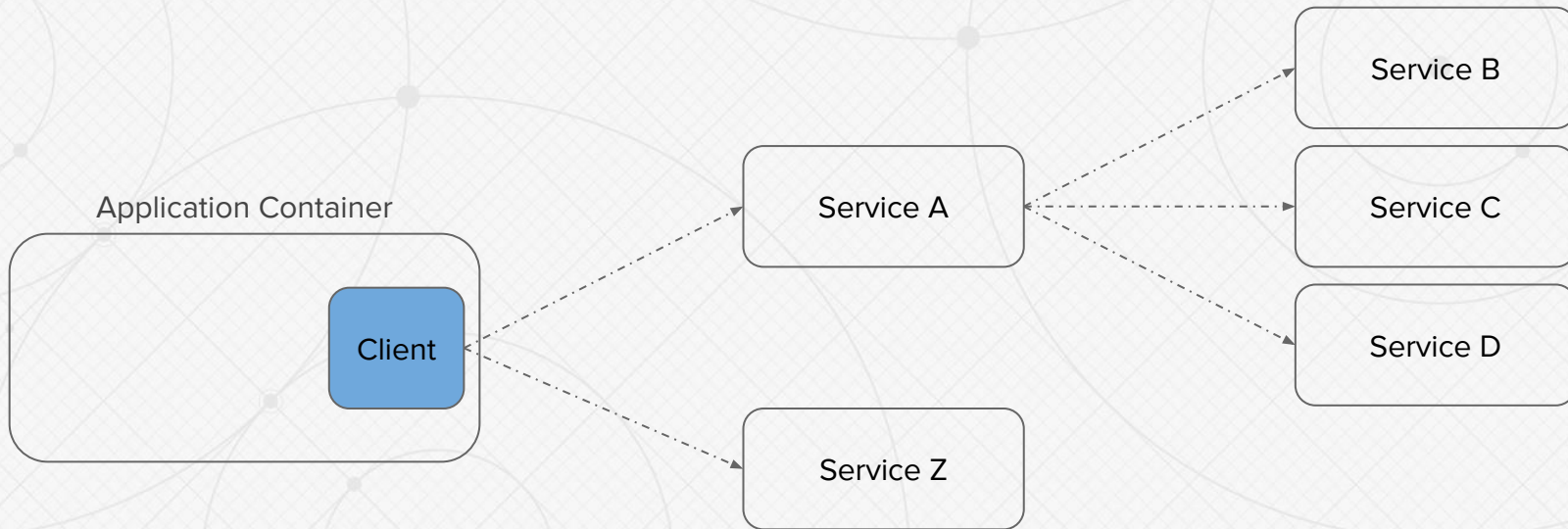


Client-Side Caching





Asynchronous Request Execution



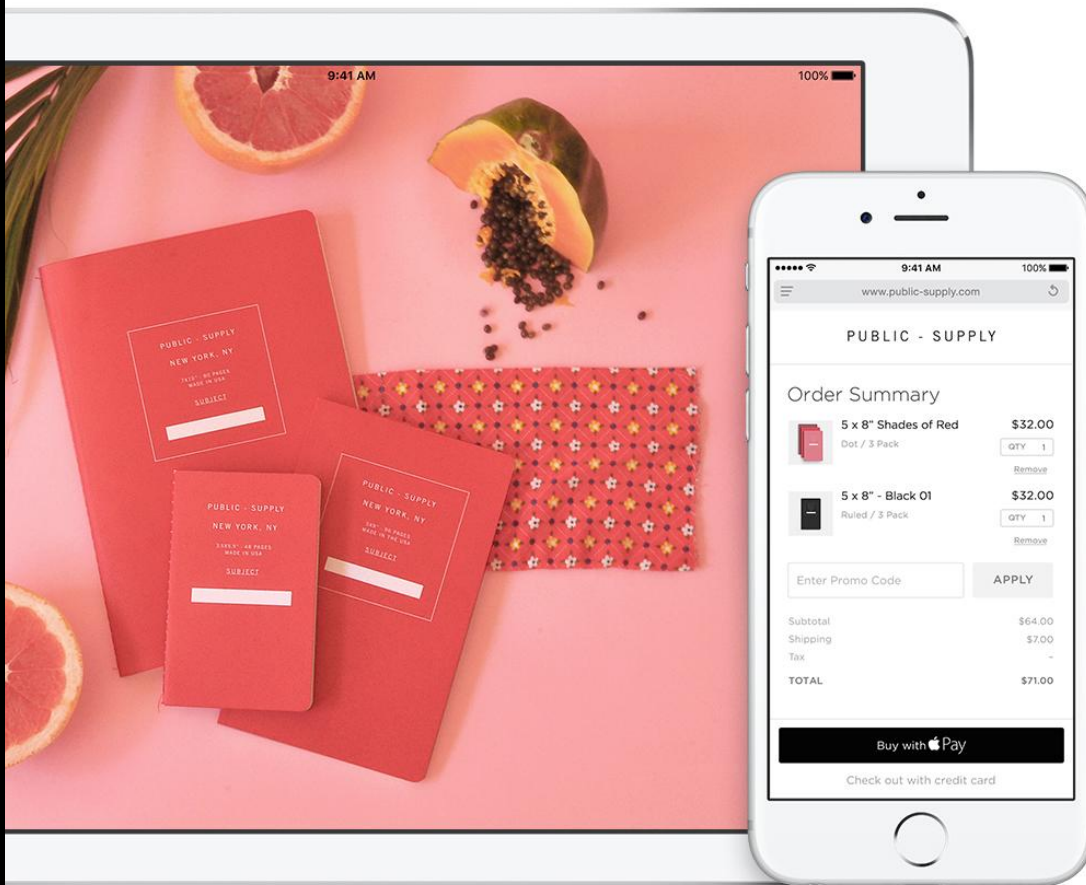


HTTP Request Builders

```
getCurrentProductOfferingTemplate = group
    .newTemplateBuilder("getCurrentProductOffering")
    .withMethod(HttpMethod.GET.name())
    .withUriTemplate(RESOURCE_URL + "/offerings/countries/{country}/current")
    .build();
```

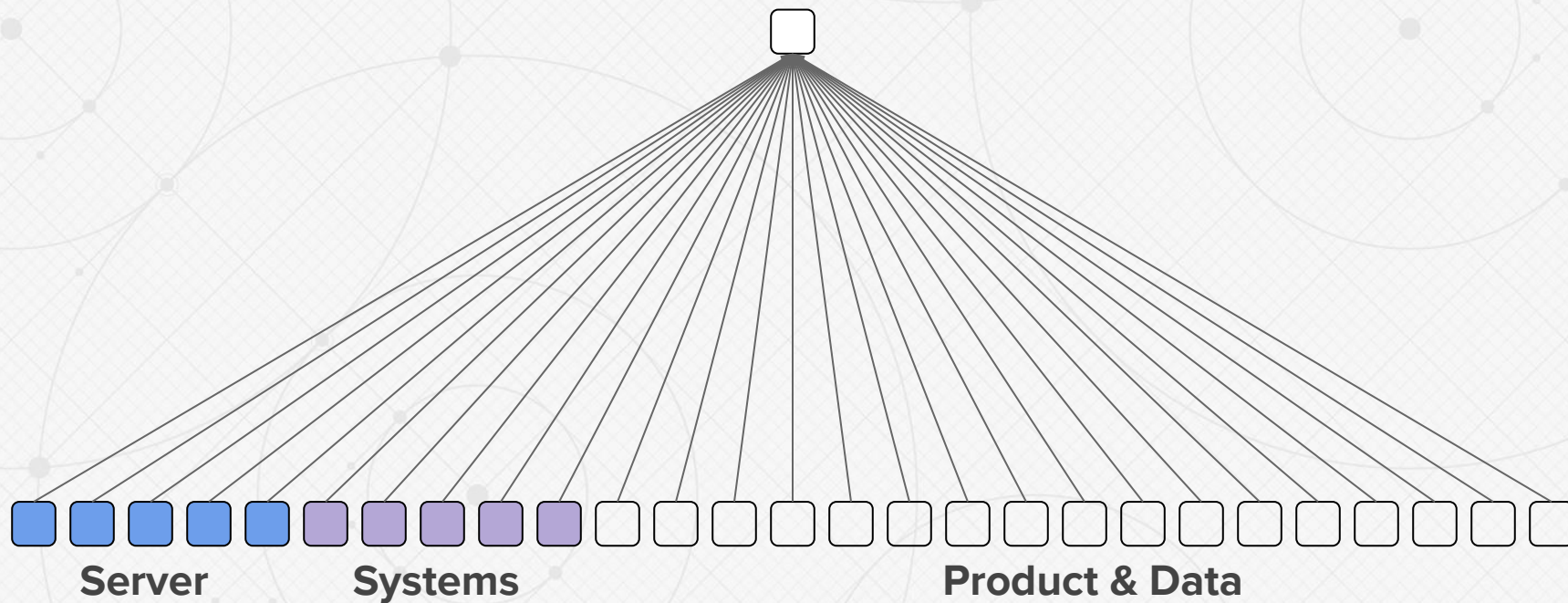


ORGANIZATIONAL CHANGES





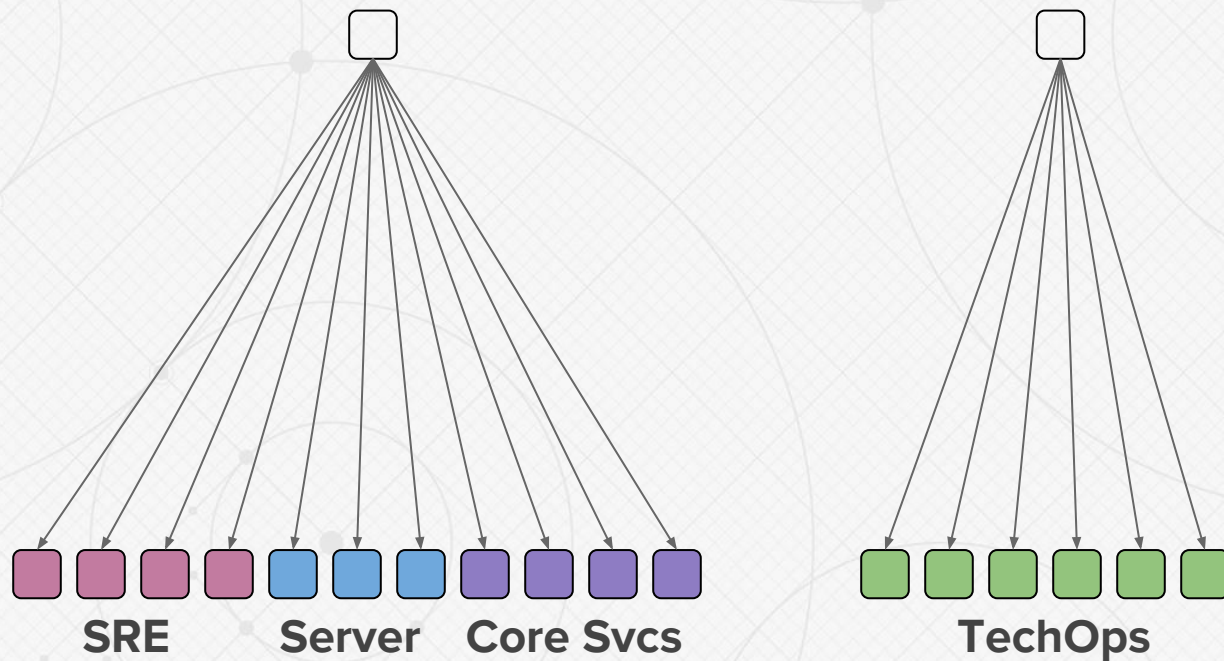
Squarespace Engineering @ 2013



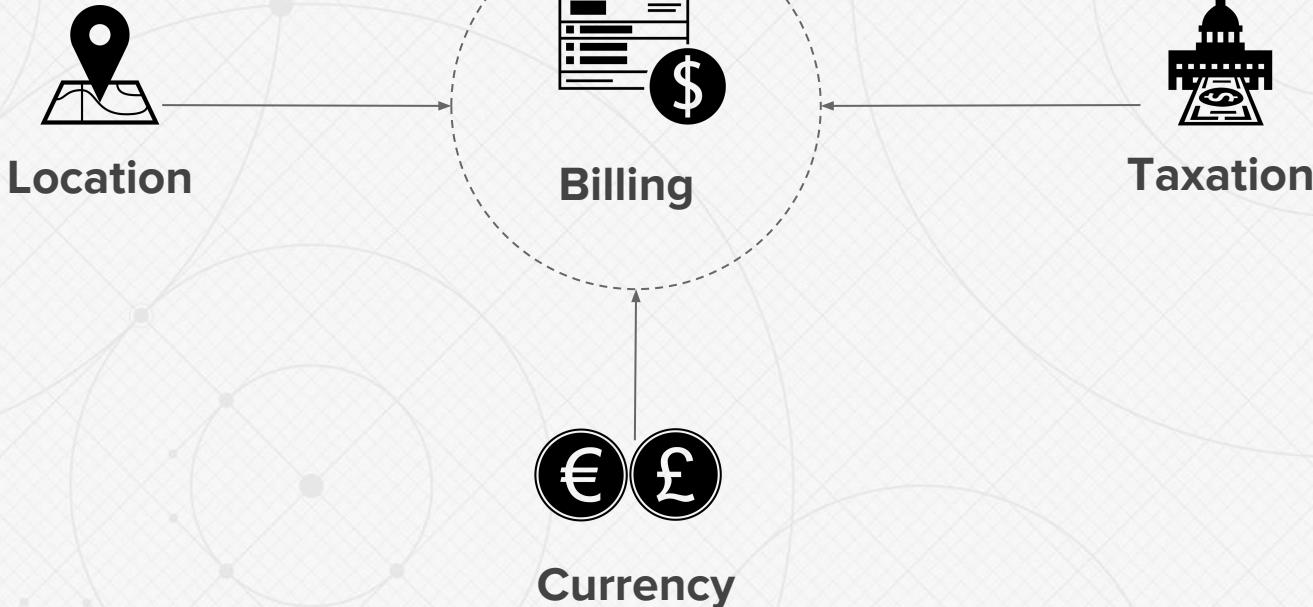




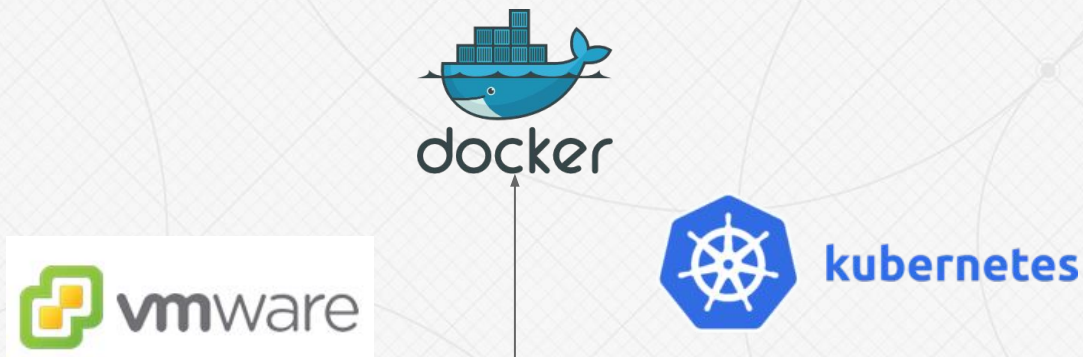
Squarespace Engineering @ 2014



The First Services



 Provisioning



Provisioning

- Cobbler
- IP Plan
- DNS
- LDAP
- YUM
- NTP



Ansible & Configuration Management



Home



Hosts



Networks

Hosts

namespace00



Hostname	Last Seen	Last Modified	Last Modified By
namespace002.peer1.jfk.stage.squarespace.net		2017-02-28 12:48:02....	mzampino
namespace001.eqx.dal.prod.squarespace.net		2017-02-28 12:47:20....	mzampino
namespace003.eqx.dal.prod.squarespace.net		2017-02-28 12:47:25....	mzampino
namespace002.peer1.jfk.prod.squarespace.net		2017-02-28 12:47:30....	mzampino
namespace002.eqx.dal.prod.squarespace.net		2017-02-28 12:46:50....	mzampino
namespace003.peer1.jfk.prod.squarespace.net		2017-02-28 12:47:53....	mzampino
namespace001.peer1.jfk.prod.squarespace.net		2017-02-28 12:47:58....	mzampino
namespace001.peer1.jfk.stage.squarespace.net		2017-02-28 12:48:08....	mzampino
namespace001.eqx.dal.internal.squarespace.net		2017-02-28 16:59:56....	mzampino

PREVIOUS

NEXT



Release Engineering & Developer Productivity

Helm

Drone



Release
Engineering /
Developer
Productivity



Ansible & Configuration Management

hello-service/deploy/deploy.yml:

```
- name: deploy hello service
  hosts: "{{ hosts }}"
  serial: "{{ serial|default(1) }}"

vars:
  dropwizard_app_name: hello-service
  dropwizard_service_name: hello
  dropwizard_deploy_path: "{{ dropwizard_root_path }}/{{ artifact|basename_root }}"

sensu_alert_subscriptions:
  - squarespace-servers
  - dropwizard-services

logstash_shipped_logs:
  default:
    - document_type: application
      fields:
        service: "{{ dropwizard_app_name }}"
      multiline_filter: dropwizard
      paths:
        - /data/logs/hello.log
    - document_type: service_access
      fields:
        service: "{{ dropwizard_app_name }}"
      paths:
        - /data/logs/hello-access.log

roles:
  - dropwizard-service
```



Ansible & Configuration Management

hello-service/deploy/config.yml.j2:

```
---
server:
  applicationConnectors:
    - type: http
      port: {{ dropwizard_http_port }}
      maxRequestHeaderSize: 64KiB
      maxResponseHeaderSize: 64KiB
  adminConnectors:
    - type: http
      port: {{ dropwizard_admin_port }}
      maxRequestHeaderSize: 64KiB
      maxResponseHeaderSize: 64KiB

discovery:
  zookeeperHosts: "{% for zookeeper in groups[services_zookeeper_group] %}{{ zookeeper }}:2181{% if not loop.last %},{% endif %}{% endfor %}"

graphite:
  enabled: true
  enableConsole: false
  host: {{ graphite_host }}
  port: {{ graphite_port }}

hello:
  securePassword: {{ secure_password }}
```



Build & Deploy Tooling



Build projects / Services / taxation-service

Build #459

master



International taxation service

#459 was successful – Manual run by [Brian Asman](#)

Stages & jobs

Test

End To End Testing

Integration Tests

Unit Tests

Release

Build Artifacts

Summary Tests Commits Artifacts Logs Metadata Issues

Build result summary

Details

Completed 03 Mar 2017, 11:39:38 AM – 2 weeks ago

Duration 7 minutes

Labels None

Revision [56db64a...](#)

Total tests 108

First to pass since #451 (Changes by [Brian Asman](#) – 2 days before)

0

New failures

0

Existing failures

0

Fixed

Included in deployment project

[Taxation Service](#) › Release: [master-459](#)

Environment	Status	Actions
QA	not deployed yet	now at master-449
Staging (NY)	REPLACED	now at master-460
Production (Dallas)	SUCCESS	
Production (NYC)	SUCCESS	
Internal	SUCCESS	

[Taxation Service Docker Image](#) › Release: [master-459](#)

Environment	Status	Actions
Docker	REPLACED	now at master-460



Write a comment...

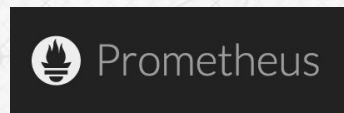
Shared artifacts

Artifact	File size
ZIPs	54 MB
deploy	3 KB



Observability & Alerting

elasticsearch.





Observability & Alerting Tooling

The screenshot shows a dark-themed dashboard interface. At the top, there is a navigation bar with a logo on the left, a 'Home' dropdown menu, and several utility icons: a star, a refresh icon, a document icon, and a settings gear. Below the navigation bar, a search bar contains the text 'taxation'. To the right of the search bar, there is a 'starred' filter and a 'tags' section. The 'tags' section contains two colored tags: a purple 'home-service' tag and a green 'team-coresvc' tag. Below the search bar, a list of services is displayed, each with a grid icon on the left and a star icon on the right. The services listed are:

- Prod (Multi) - Taxation Service - Overview (with 'home-service' and 'team-coresvc' tags)
- Taxation Generated (PRODUCTION)
- Taxation Generated (STAGING)
- Taxation Generated API (PRODUCTION)
- Taxation Generated API (STAGING)

On the left side of the dashboard, there is a sidebar with a vertical list of items, each starting with 'Prod ('.



Observability & Alerting Tooling





Observability & Alerting Tooling





Observability & Alerting Tooling

kibana

3,270,588 hits
New Save Open Share Reporting Last 15 minutes

service-access-prod*

Selected Fields

? _source

Available Fields

Popular

- f ip
- f level
- f message
- f method
- f service

Quick Count (500/500 records)

- v6_site 79.8%
- trace-collection 11.2%
- public-api-gateway 8.2%
- screenshot-v2 0.8%

Visualize

- f thread
- f uri
- f website
- @timestamp
- f @version
- f _id
- f _index
- #_score
- f _type
- f account
- f beat.hostname
- f beat.name
- f beat.version
- f cacheHits
- f cacheHitOps
- f cacheMissMs
- f cacheMissOps

March 22nd 2017, 04:51:04.013 - March 22nd 2017, 05:06:04.013 — by 30 seconds

Time → source

- March 22nd 2017, 05:06:03.640

```
source: /data/logs/screenshot-v2-access.log type: service_access clientVersion: screenshot-v2-client-3.1 responseCode: 200 httpVersion: HTTP/1.1
beat.hostname: screenshot114.eqx.dal.prod.squarespace.net beat.name: screenshot114.eqx.dal.prod.squarespace.net beat.version: 5.2.0 @version: 1
indexer_hostname: elk-indexer133.eqx.dal.prod.squarespace.net class: AccessLog source_host: screenshot114.eqx.dal.prod.squarespace.net offset: 17,129,898
method: POST contextSourceTypes: site-server level: INFO ip: 10.120.201.132 input_type: log contextId: 4bR17km7/BQIQTXR responseTimeMs: 3 responseSize: 1
thread: jetty-10286 @v: prod message: 2017-03-22 09:06:03:226 GMT thread=jetty-10286 contextId=4bR17km7/BQIQTXR contextSourceHost=web138.eax.dal.prod.s
```
- March 22nd 2017, 05:06:03.465

```
source: /data/logs/screenshot-v2-access.log type: service_access clientVersion: screenshot-v2-client-3.1 responseCode: 200 httpVersion: HTTP/1.1
beat.hostname: screenshot101.eqx.dal.prod.squarespace.net beat.name: screenshot101.eqx.dal.prod.squarespace.net beat.version: 5.2.0 @version: 1
indexer_hostname: elk-indexer102.eqx.dal.prod.squarespace.net class: AccessLog source_host: screenshot101.eqx.dal.prod.squarespace.net offset: 100,785,023
method: POST contextSourceTypes: site-server level: INFO ip: 10.120.201.132 input_type: log contextId: 4bR17km7/BQIQTXR responseTimeMs: 2 responseSize: 1
thread: jetty-10857 @v: prod message: 2017-03-22 09:06:03:084 GMT thread=jetty-10857 contextId=4bR17km7/BQIQTXR contextSourceHost=web138.eax.dal.prod.s
```
- March 22nd 2017, 05:06:03.465

```
source: /data/logs/screenshot-v2-access.log type: service_access clientVersion: screenshot-v2-client-3.1 responseCode: 200 httpVersion: HTTP/1.1
beat.hostname: screenshot101.eqx.dal.prod.squarespace.net beat.name: screenshot101.eqx.dal.prod.squarespace.net beat.version: 5.2.0 @version: 1
indexer_hostname: elk-indexer107.eqx.dal.prod.squarespace.net class: AccessLog source_host: screenshot101.eqx.dal.prod.squarespace.net offset: 100,784,631
method: GET contextSourceTypes: site-server level: INFO ip: 10.120.201.132 input_type: log contextId: 4bR17km7/BQIQTXR responseTimeMs: 1 responseSize: 0
thread: jetty-10920 @v: prod message: 2017-03-22 09:06:02:941 GMT thread=jetty-10920 contextId=4bR17km7/BQIQTXR contextSourceHost=web138.eax.dal.prod.sau
```
- March 22nd 2017, 05:06:03.465

```
source: /data/logs/screenshot-v2-access.log type: service_access clientVersion: screenshot-v2-client-3.1 responseCode: 200 httpVersion: HTTP/1.1
beat.hostname: screenshot101.eqx.dal.prod.squarespace.net beat.name: screenshot101.eqx.dal.prod.squarespace.net beat.version: 5.2.0 @version: 1
indexer_hostname: elk-indexer124.eqx.dal.prod.squarespace.net class: AccessLog source_host: screenshot101.eqx.dal.prod.squarespace.net offset: 100,784,236
method: GET contextSourceTypes: site-server level: INFO ip: 10.120.201.132 input_type: log contextId: 4bR17km7/BQIQTXR responseTimeMs: 2 responseSize: 0
thread: jetty-10880 @v: prod message: 2017-03-22 09:06:02:840 GMT thread=jetty-10880 contextId=4bR17km7/BQIQTXR contextSourceHost=web138.eax.dal.prod.sau
```
- March 22nd 2017, 05:06:03.369

```
template: 503ba86de4b04953d0f49846:1487039605005:1634 cacheHitsMs: 0 tmplCompiles: 7 tmplErrors: 0 cacheMissMs: 93 source: /data/logs/access.log type: a
ccess db.writeMs: 0 beat.hostname: web121.eqx.dal.prod.squarespace.net beat.name: web121.eqx.dal.prod.squarespace.net beat.version: 5.2.0 @version: 1
indexer_hostname: elk-indexer108.eqx.dal.prod.squarespace.net tmplElapsedUs: 2396 cachePutMs: 1 httpCode: 200 db.readMs: 97 elapsedMs: 127 website: 52d
c3033e4b0e34b862f0cf8:1390161971974:1489583573732:2054:29 source_host: web121.eqx.dal.prod.squarespace.net offset: 510,908,623 method: GET cacheHits: 0
input_type: log userAgent: Mozilla/5.0 (Windows NT 10.0; WOW64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/45.0.2454.93 Safari/537.36 responseSize: 6108
```
- March 22nd 2017, 05:06:03.369

```
template: 55c57823e4b0851a71cfff28:1466194597436:155 cacheHitsMs: 1 tmplCompiles: 0 tmplErrors: 0 cacheMissMs: 0 source: /data/logs/access.log type: acc
ess db.writeMs: 0 beat.hostname: web121.eqx.dal.prod.squarespace.net beat.name: web121.eqx.dal.prod.squarespace.net beat.version: 5.2.0 @version: 1
```

- fangulo
- Logout
- Collapse



Observability & Alerting Tooling

uchima



489

2445

7381

159

0

0

20

CLIENTS > TAXATION101.EQX.DAL.PROD.SQUARESPACE.NET

TAXATION101.EQX.DAL.PROD.SQUARESPACE.NET

ⓘ a few seconds ago

🖱 eqx-dal-prod

```

      _id      eqx-dal-
              prod/taxation101.eqx.dal.prod.squarespace.net
      address  10.120.201.24
      environment prod
              fqdn  taxation101.eqx.dal.prod.squarespace.net
      keepalive {
                "handlers": [
                  "global-slack",
                  "systems-pagerduty"
                ],
                "refresh": 1800,
                "thresholds": {
                  "critical": 300,
                  "warning": 60
                }
              }
      name     taxation101.eqx.dal.prod.squarespace.net
      silenced false
      subscriptions
              dropwizard-services, squarespace-servers, vmware-guests, splunkd,
              client:taxation101.eqx.dal.prod.squarespace.net
      timestamp 2017-03-22 05:08:01
      version   0.27.0
  
```

Check

Output

🕒

🔊 check_collectd_process	CheckProcess OK: Found 1 matching processes; cmd /collectd/	2 minutes ago
🔊 keepalive	Keepalive sent from client 9 seconds ago	a few seconds ago
🔊 dns_a	DNS OK: Resolved taxation101.eqx.dal.prod.squarespace.net A in...	2 minutes ago
🔊 fstab_mounts	CheckFstabMounts OK: All mountpoints accounted for	a few seconds ago
🔊 dropwizard_http	CheckHttp OK: 200, 2 bytes	a few seconds ago
🔊 corrupt_file_system_dmesg	CheckLog OK: 0 warnings, 0 criticals for pattern corruption detecte...	a few seconds ago
🔊 kernel_panic	DirCount OK: /var/crash has 0 files	2 minutes ago
🔊 dump_files	DirCount OK: /data/dumps has 0 files	a minute ago
🔊 check_splunk_process	CheckProcess OK: Found 2 matching processes; cmd /splunkd/	a few seconds ago
🔊 system_load	CheckLoad OK: Load average: 0.02, 0.02, 0.03	a few seconds ago
🔊 ram	CheckRAM OK: 63.46% RAM used	a few seconds ago
🔊 swap	CheckSWAP OK: 0.59% SWAP used	a few seconds ago
🔊 check_filebeat_process	CheckProcess OK: Found 1 matching processes; cmd /filebeat/	a minute ago
🔊 open_file_handles	CheckSystemFileHandles OK: Number of open files okay 2112 (2...	a few seconds ago
🔊 corrupt_file_system_messages	CheckLog OK: 0 warnings, 0 criticals for pattern corruption detecte...	a few seconds ago
🔊 stale_mounts	CheckFSWritable OK: No mount points found	a few seconds ago
🔊 check_vmtools_process	CheckProcess OK: Found 1 matching processes; cmd /vmtoolsd/	a few seconds ago
🔊 ntp	CheckNTP OK: NTP offset by 2.903ms	a few seconds ago
🔊 dns_ptr	DNS OK: Resolved 10.120.201.24 PTR included taxation101.eqx.d...	2 minutes ago
🔊 dropwizard_health	CheckJson OK: Valid JSON returned	a few seconds ago
🔊 dhclient	CheckProcess OK: Found 0 matching processes; cmd /dhclient/	2 minutes ago
🔊 check_oom	CheckLog OK: 0 warnings, 0 criticals for pattern Out of memory: Kill.	2 minutes ago
🔊 disk_usage	CheckDisk OK: All disk usage under 90% and inode usage under 85%	a few seconds ago

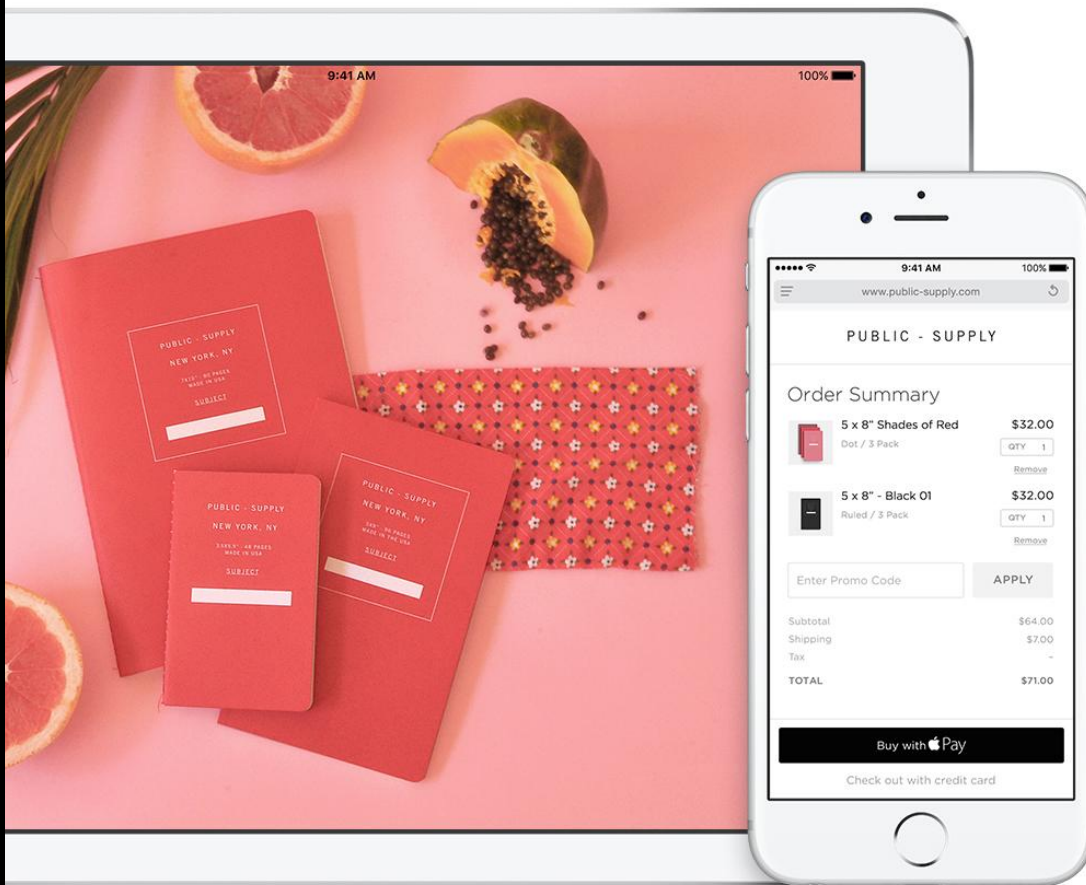


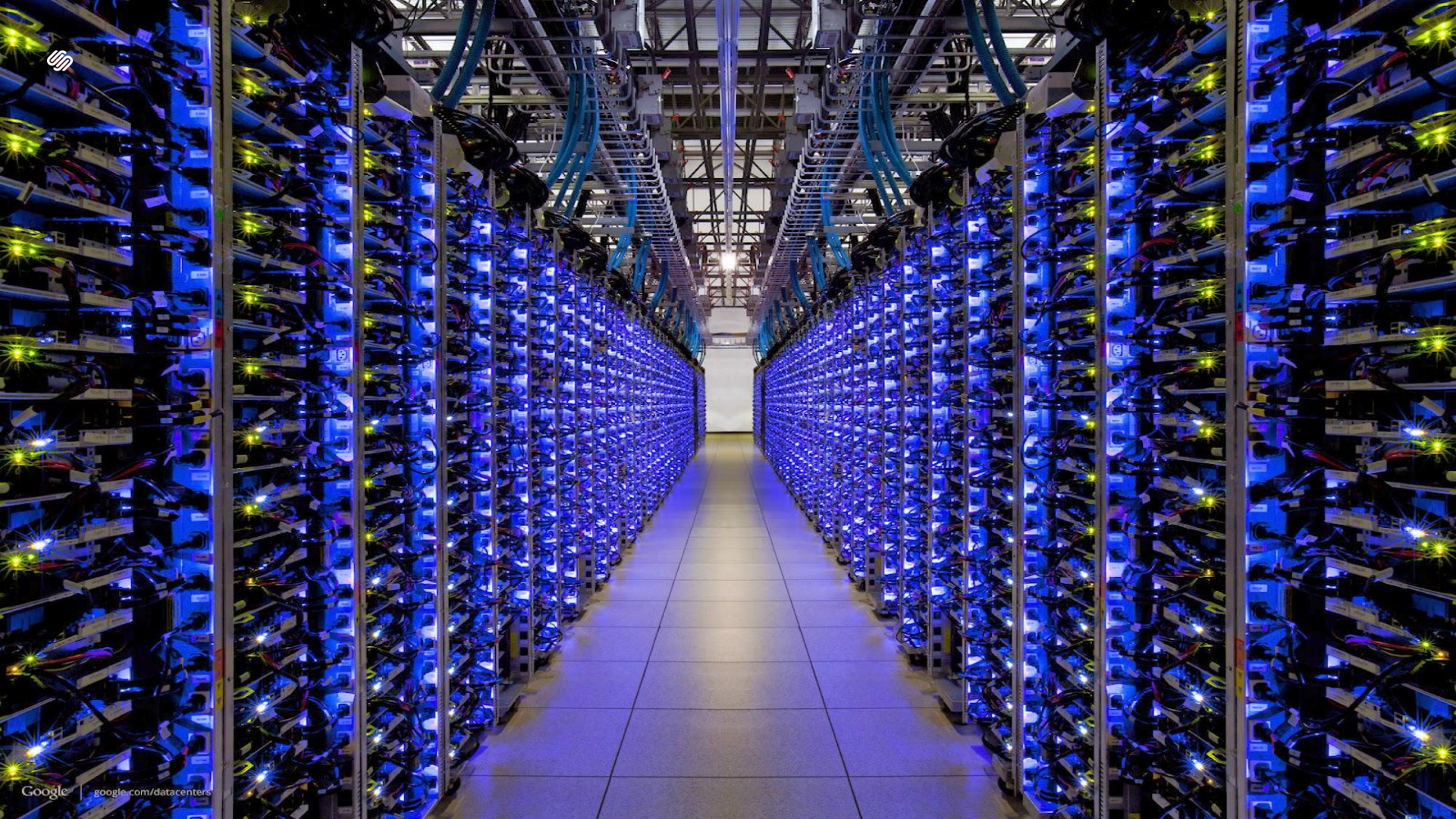
Registered Services

Service ▲ / URL	Version	Status	Info	
taxation (4c079292) http://taxation101.eqx.dal.prod.squarespace.net:8081	1.0	UP		Details ▼
taxation (221f0174) http://taxation102.eqx.dal.prod.squarespace.net:8081	1.0	UP		Details ▼
taxation (b12e34db) http://taxation103.eqx.dal.prod.squarespace.net:8081	1.0	UP		Details ▼



NEW OPPORTUNITIES AND CHALLENGES

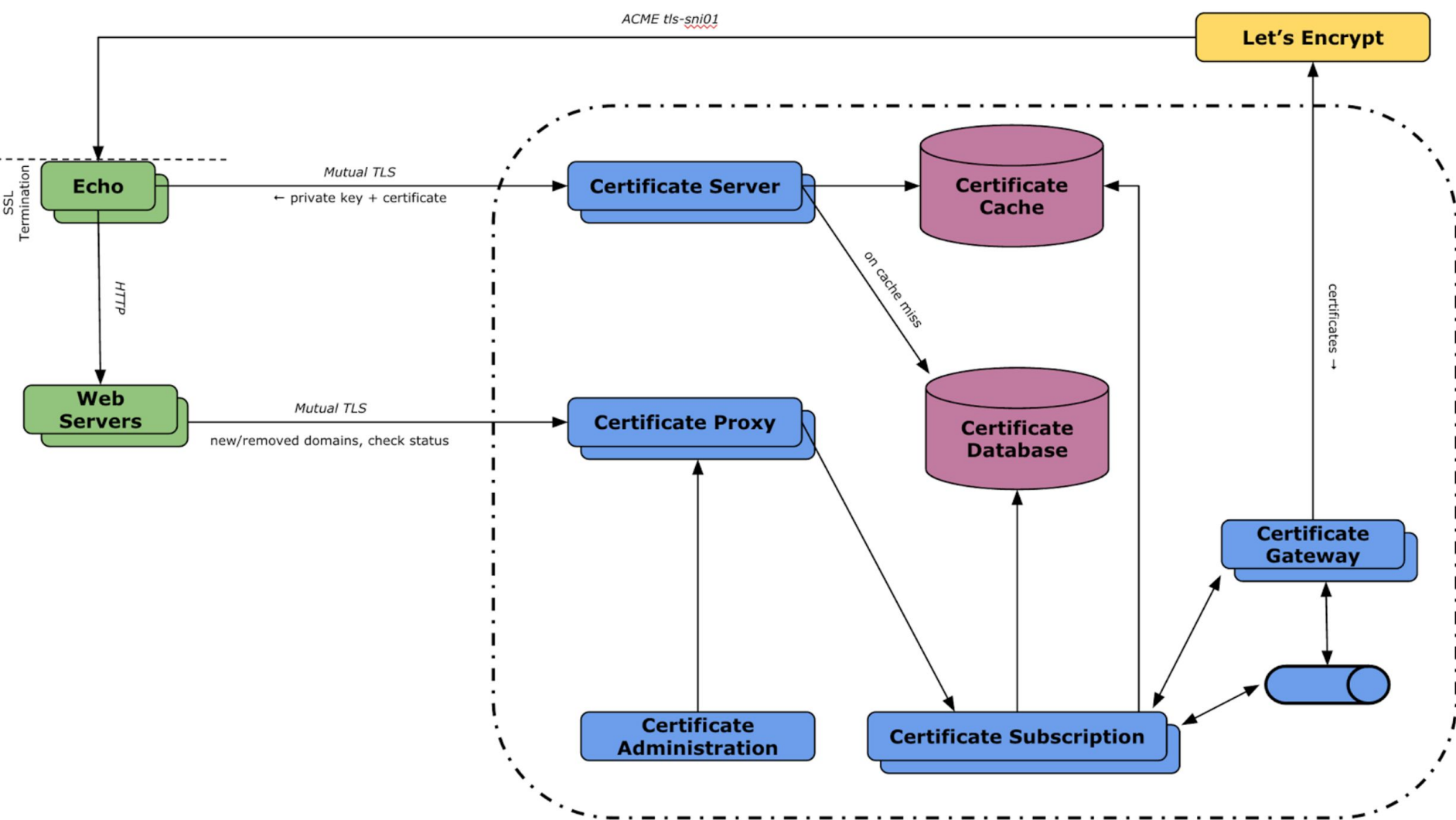






WJ

[Artist's Signature]











“It just works”



FUTURE WORK

Self-service provisioning

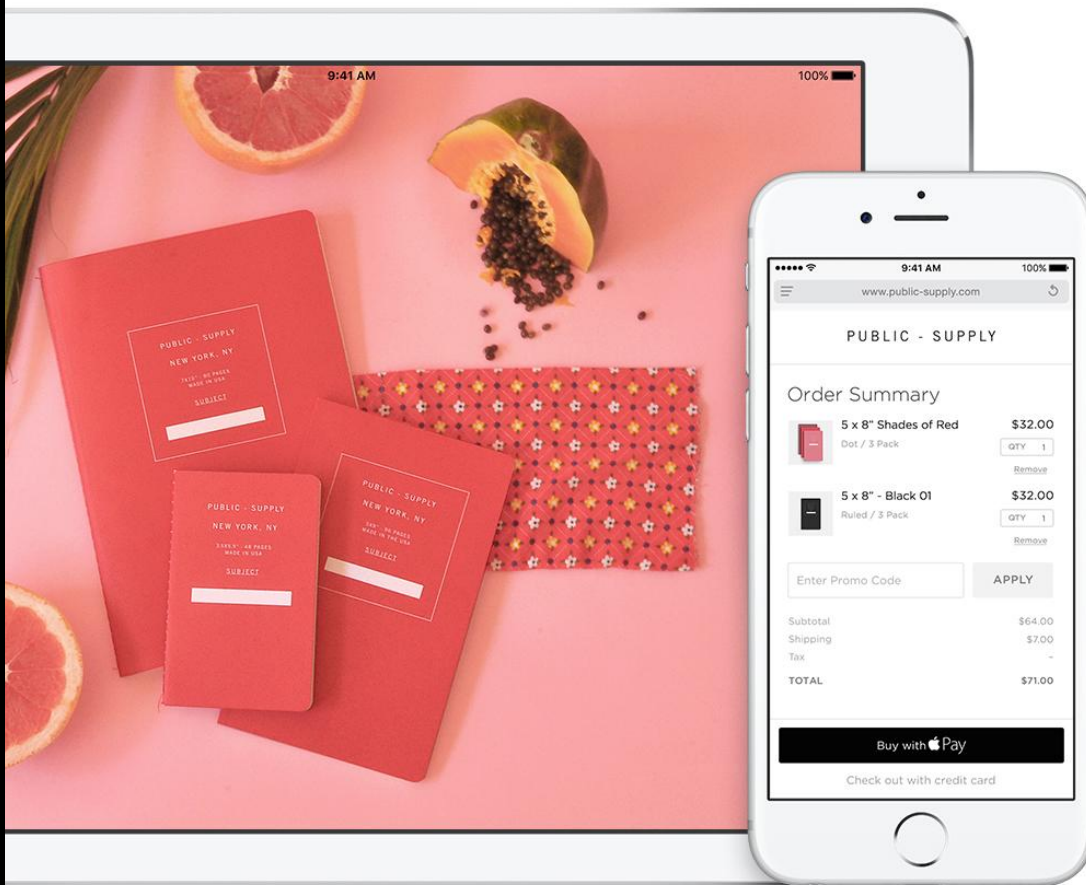
Code generation

Pull-based metrics

Log collection improvements

Distributed tracing improvements

Alerting improvements





Microservices Journey

2013: small (< 50 engineers)
build product & grow customer base
whatever works

2016: large (100+ engineers)
architect for scalability and reliability
organizational structures

2014: medium (< 100 engineers)
we have a lot of customers now!
whatever works doesn't work anymore

?: XL (200+ engineers)



QUESTIONS

Thank you!

Franklin Angulo
@feangulo



squarespace.com/careers

