Moving to the cloud

By Valerio & Bert

ICEMOBILE

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ICEMOBILE

the full service mobile agency

Before: we developed stand-alone apps

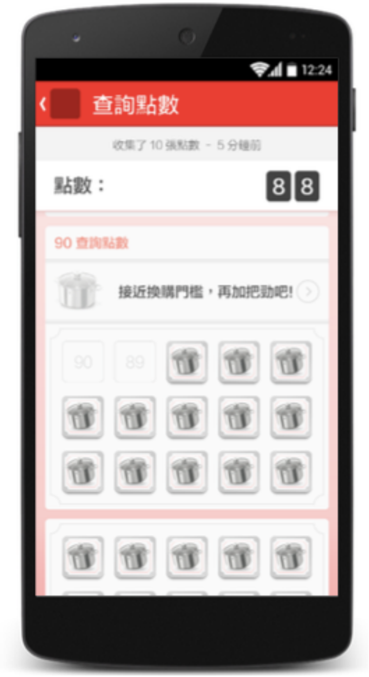
ICEMOBILE

Adding emotion to transactional loyalty

Today: we are building products

BRIGHT SHOPPER

BRIGHT STAMPS



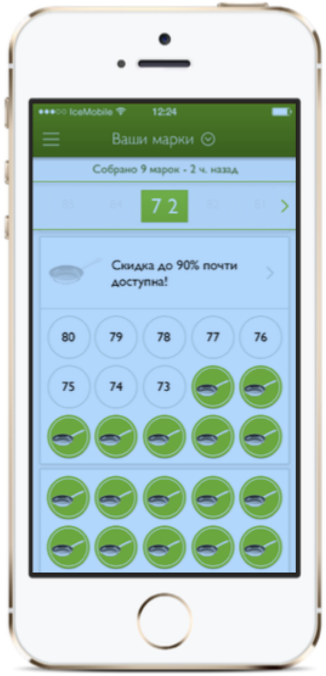
查詢點數

收集了 10 張點數 - 5 分鐘前

點數：88

90 查詢點數

接近換購門檻，再加把勁吧!



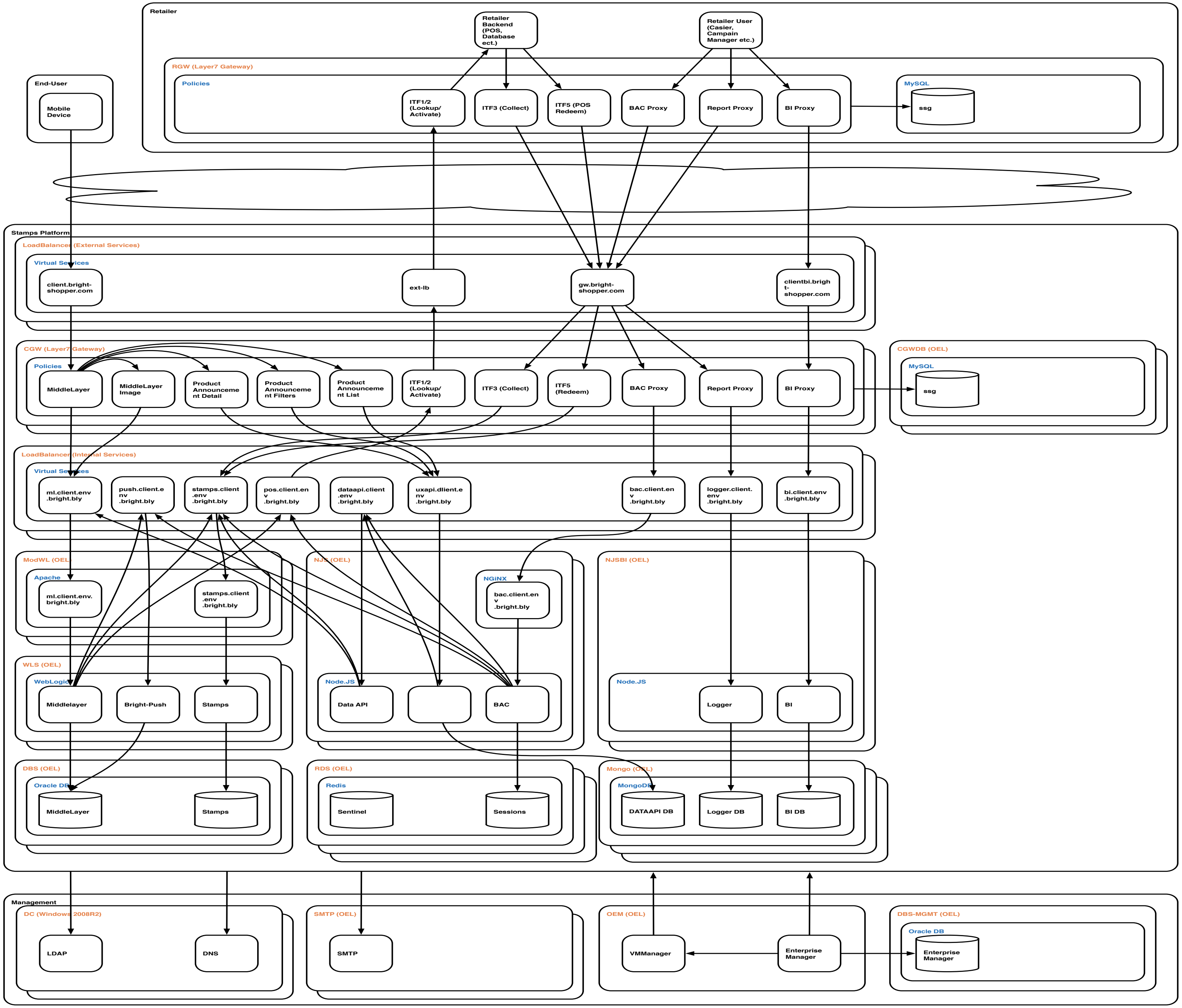
Ваши марки

Собрано 9 марок - 2 ч. назад

Скидка до 90% почти доступна!

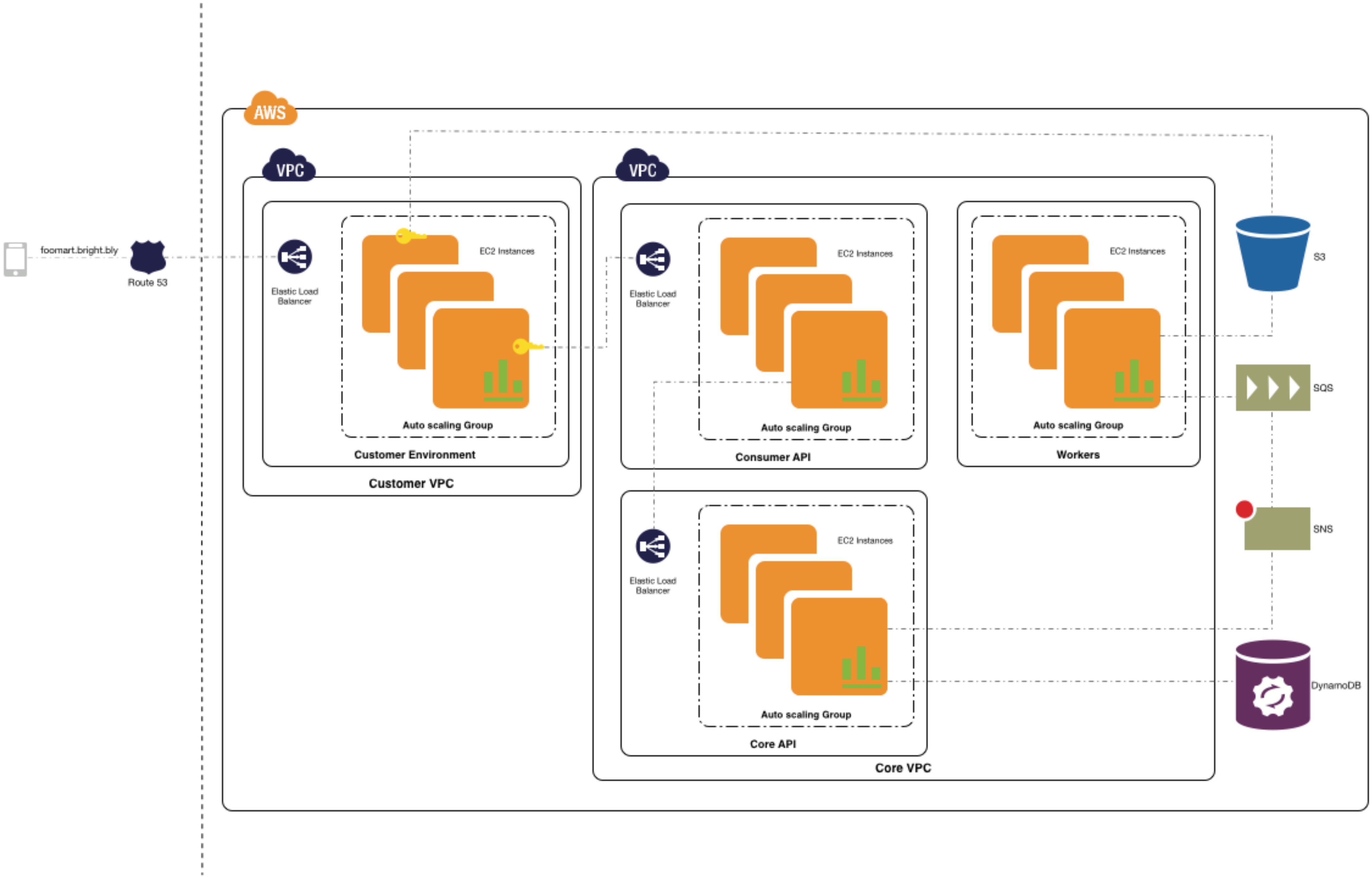
Context

How we work(ed) at IceMobile


Retailer
Retailer Backend (POS, Database ect.)
Retailer User (Casier, Campain Manager etc.)
RGW (Layer7 Gateway)
Policies
ITF1/2 (Lookup/ Activate)
ITF3 (Collect)
ITF5 (POS Redeem)
BAC Proxy
Report Proxy
BI Proxy
MySQL
ssg
End-User
Mobile Device
Stamps Platform
LoadBalancer (External Services)
Virtual Services
client.bright-shopper.com
ext-lb
gw.bright-shopper.com
clientbi.bright-shopper.com
CGW (Layer7 Gateway)
Policies
MiddleLayer
MiddleLayer Image
Product Announcement Detail
Product Announcement Filters
Product Announcement List
ITF1/2 (Lookup/ Activate)
ITF3 (Collect)
ITF5 (Redeem)
BAC Proxy
Report Proxy
BI Proxy
CGWDB (OEL)
MySQL
ssg
LoadBalancer (Internal Services)
Virtual Services
ml.client.env .bright.bly
push.client.env .bright.bly
stamps.client .env .bright.bly
pos.client.env .bright.bly
dataapi.client .env .bright.bly
uxapi.dlient.env .bright.bly
bac.client.env .bright.bly
logger.client.env .bright.bly
bi.client.env .bright.bly
ModWL (OEL)
Apache
ml.client.env. bright.bly
stamps.client .env .bright.bly
NJS (OEL)
NGiNX
bac.client.env .bright.bly
NJSBI (OEL)
WLS (OEL)
WebLogic
Middlelayer
Bright-Push
Stamps
Node.JS
Data API
BAC
Node.JS
Logger
BI
DBS (OEL)
Oracle DB
MiddleLayer
Stamps
RDS (OEL)
Redis
Sentinel
Sessions
Mongo (OEL)
MongoDB
DATAAPI DB
Logger DB
BI DB
Management
DC (Windows 2008R2)
LDAP
DNS
SMTP (OEL)
SMTP
OEM (OEL)
VMManager
Enterprise Manager
DBS-MGMT (OEL)
Oracle DB
Enterprise Manager

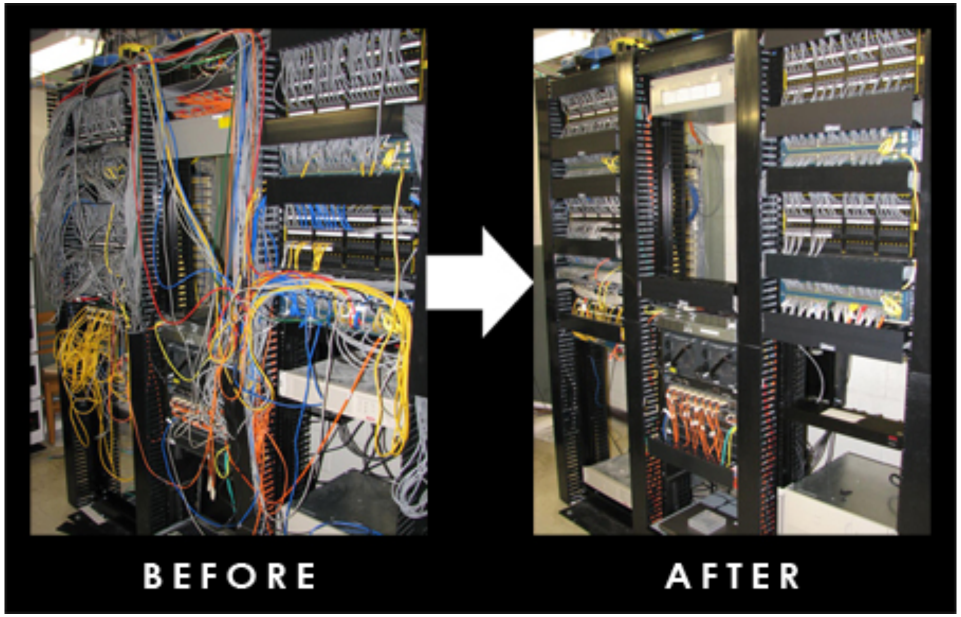
Our goal

- Needs to be simple
- Needs to scale
- Easy to manage


foomart.bright.bly
Route 53
AWS
VPC
Elastic Load Balancer
EC2 Instances
Auto scaling Group
Customer Environment
Customer VPC
VPC
Elastic Load Balancer
EC2 Instances
Auto scaling Group
Consumer API
EC2 Instances
Auto scaling Group
Workers
Elastic Load Balancer
EC2 Instances
Auto scaling Group
Core API
Core VPC
S3
SQS
SNS
DynamoDB

Did we succeed?

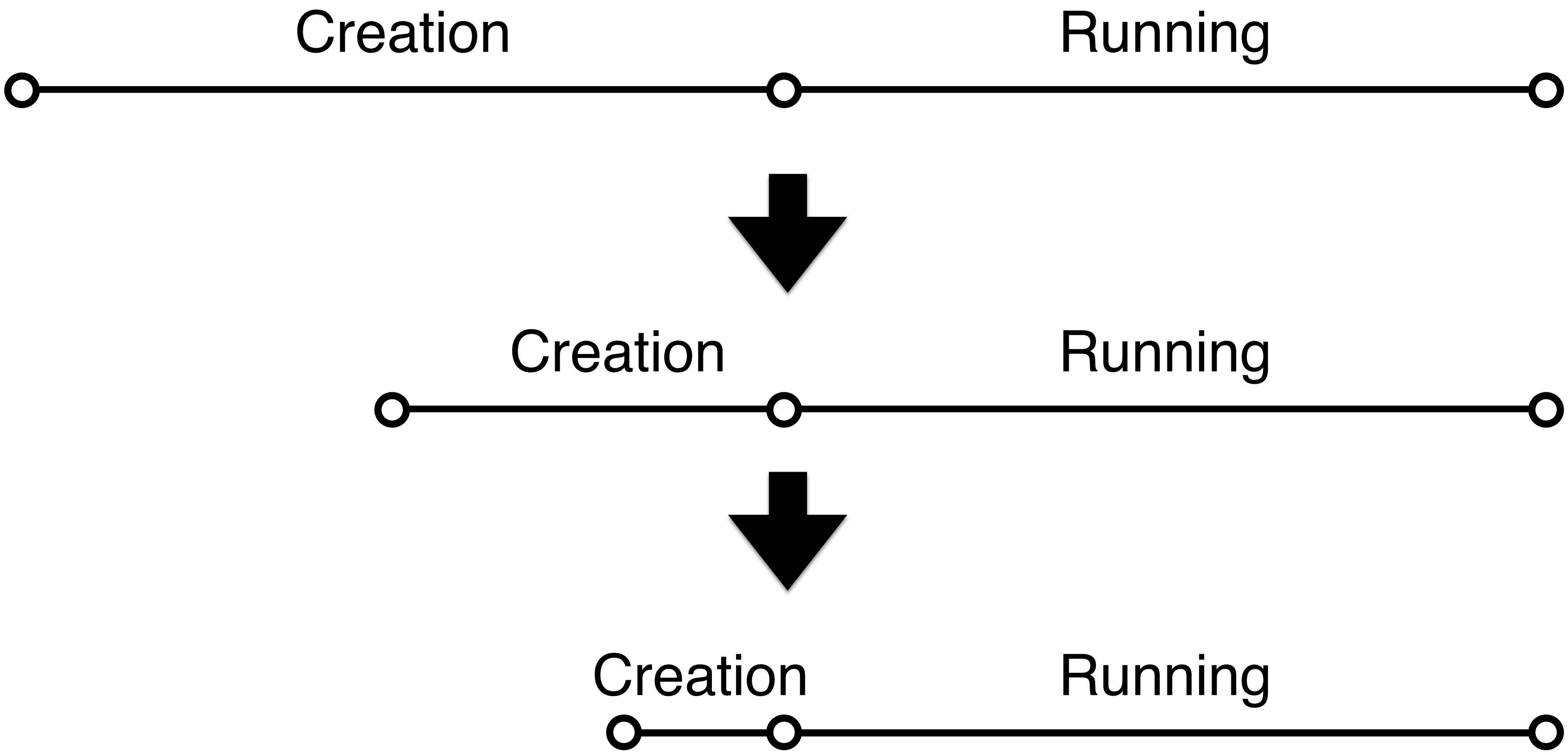
- ✓ It is simple, we use patterns
- ✓ It's scalable, we use AWS
- ✓ It's easy to manage, we pay amazon


BEFORE
AFTER

But what is scalability?

Is infrastructure the only thing that needs to scale?

The lifecycle of a loyalty program



What about people?

There's no such thing as a "DevOps Team", there is only The Team.

THE
A TEAM

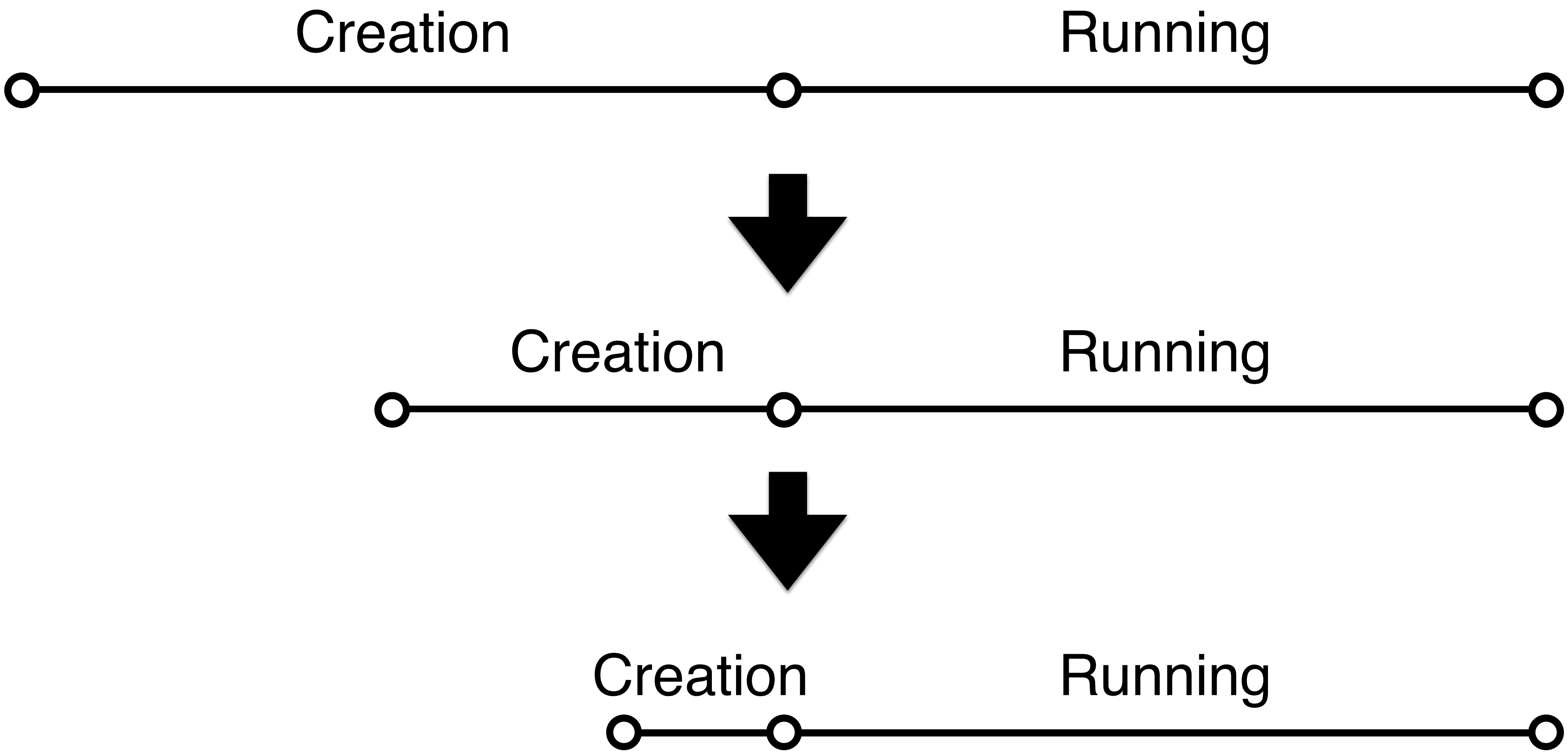
Delivering Quality

The magic happens at the intersection

Testers: We were feeling the pain

- Waiting for environments and data
- Effort duplication
- There were too many dependencies
- Testing was not able to do it’s work freely

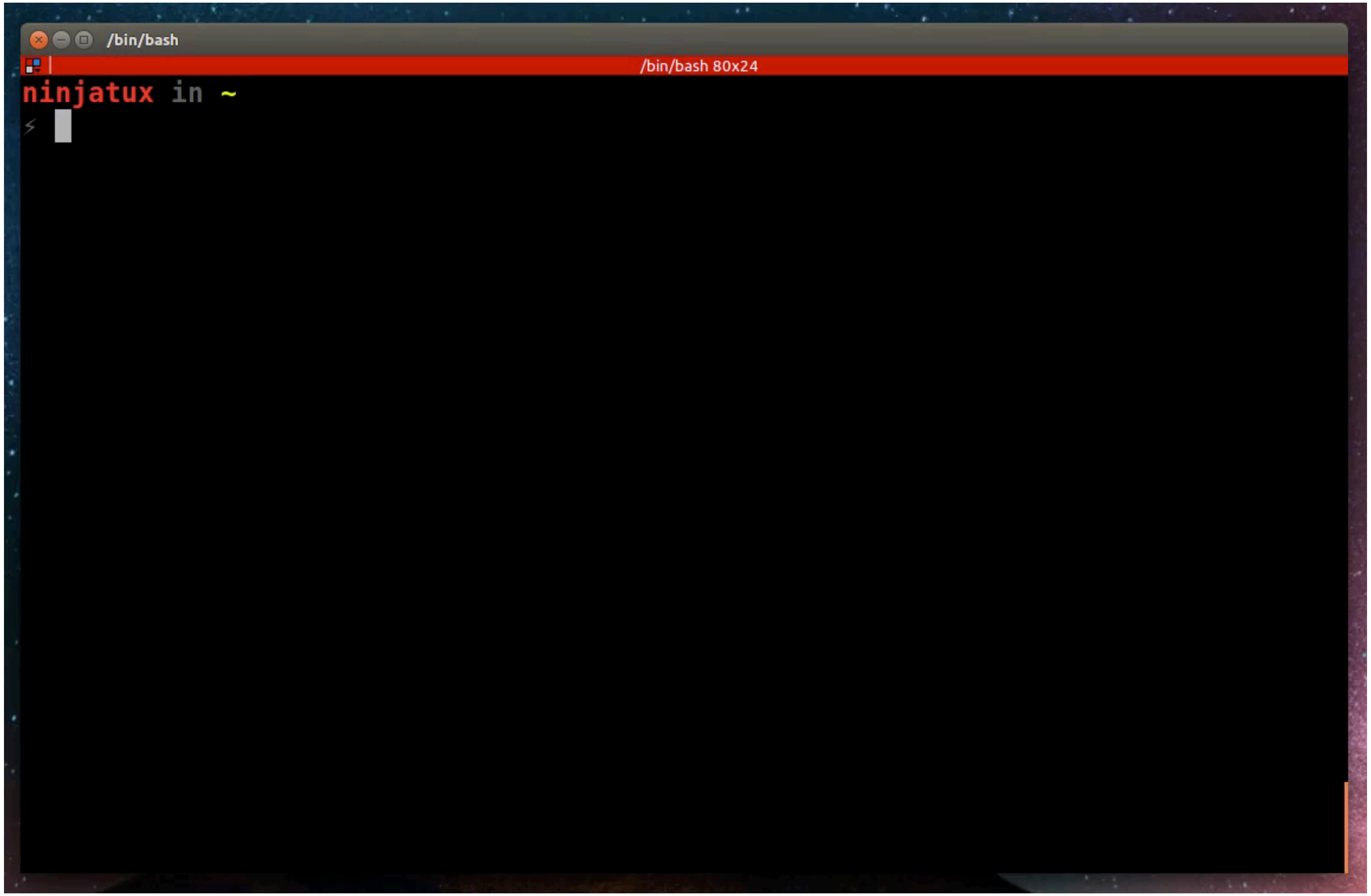
The lifecycle of a loyalty program



Tester: What do we want

- Being in control and independent and do what we do best
- Being fast and flexible
- Able to make a new environment at a touch of a button
- Do not want to duplicate our efforts
- Do not want to be programmers

Now: Independent and in control



```
/bin/bash 80x24
ninjatux in ~
⚡ 
```

Now: Independent and in control

✓ Testers are independent (cucumber-api-teststeps)

✓ Testers can create their own environment (loyalty-cli)

How to ensure this without forcing the team?

AUTOMATE
ALL THE THINGS!
memegenerator.net

#!/bin/bash

GitHub

node js™

CHEF™

CODE CAN

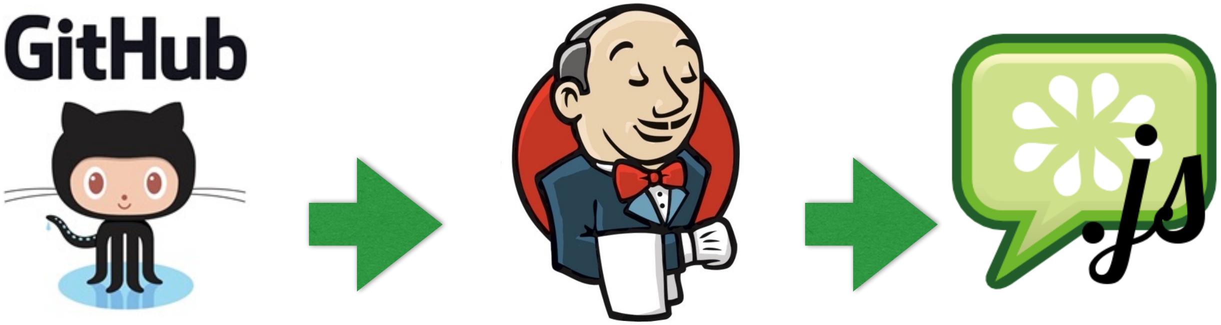
amazon
web services™

.js

Packer

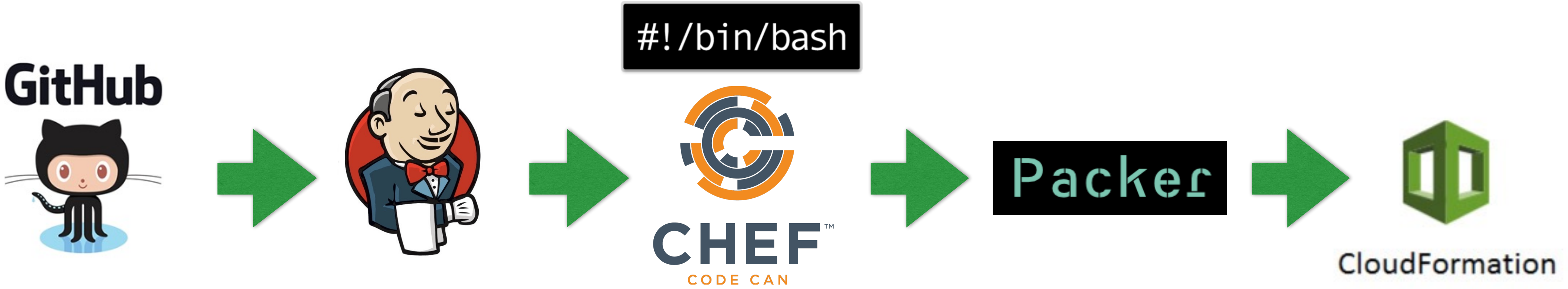
CloudFormation

Integration Pipeline



Code Automate Tests

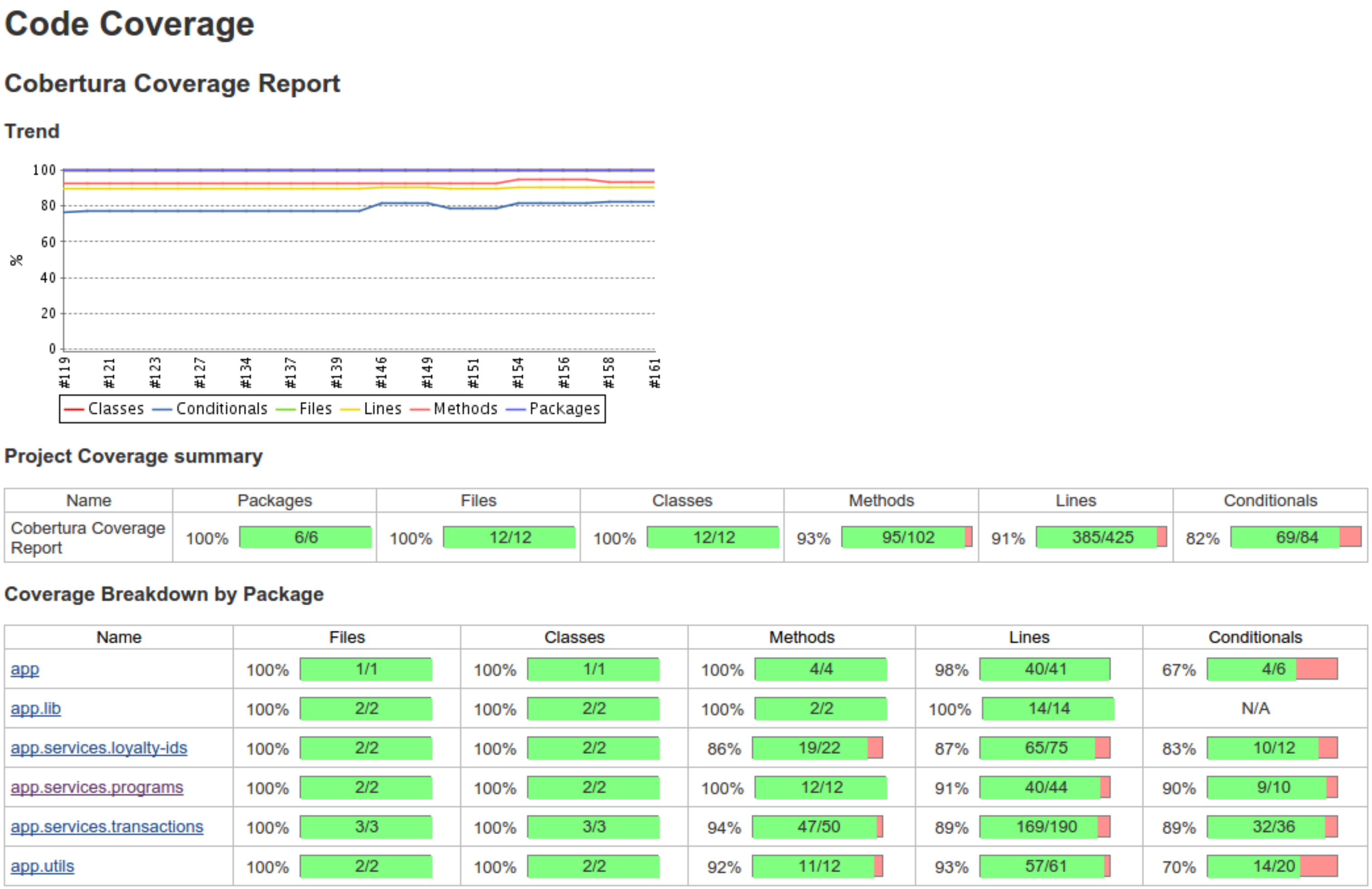
Delivery Pipeline



Code → Automate → Configure → Generate → Deploy

What kind of benefits do we have from our pipeline?

Code coverage



Code Coverage

Cobertura Coverage Report

Trend

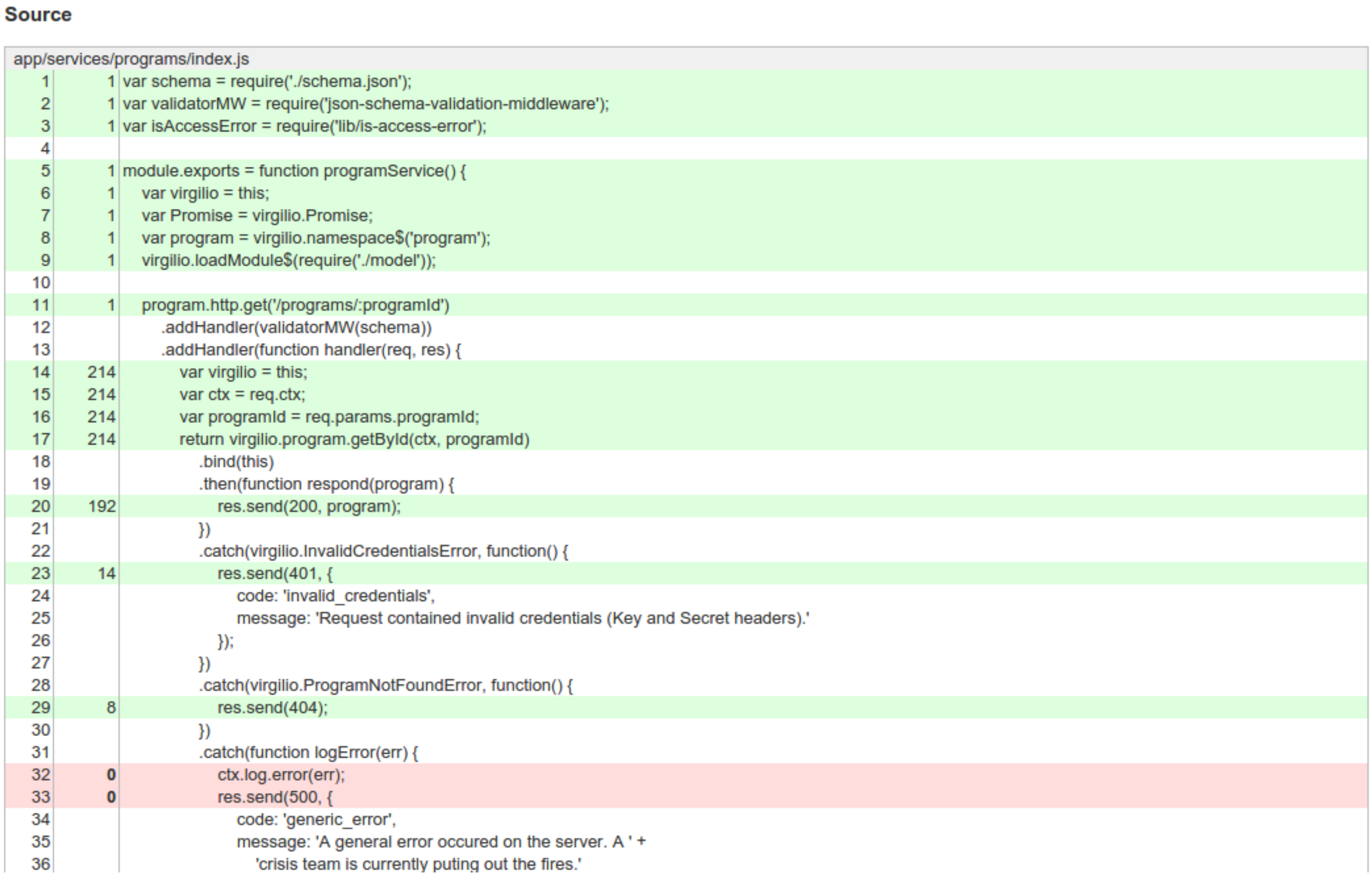
Project Coverage summary

Name	Packages	Files	Classes	Methods	Lines	Conditionals
Cobertura Coverage Report	100% 6/6	100% 12/12	100% 12/12	93% 95/102	91% 385/425	82% 69/84

Coverage Breakdown by Package

Name	Files	Classes	Methods	Lines	Conditionals
app	100% 1/1	100% 1/1	100% 4/4	98% 40/41	67% 4/6
app.lib	100% 2/2	100% 2/2	100% 2/2	100% 14/14	N/A
app.services.loyalty-ids	100% 2/2	100% 2/2	86% 19/22	87% 65/75	83% 10/12
app.services.programs	100% 2/2	100% 2/2	100% 12/12	91% 40/44	90% 9/10
app.services.transactions	100% 3/3	100% 3/3	94% 47/50	89% 169/190	89% 32/36
app.utils	100% 2/2	100% 2/2	92% 11/12	93% 57/61	70% 14/20

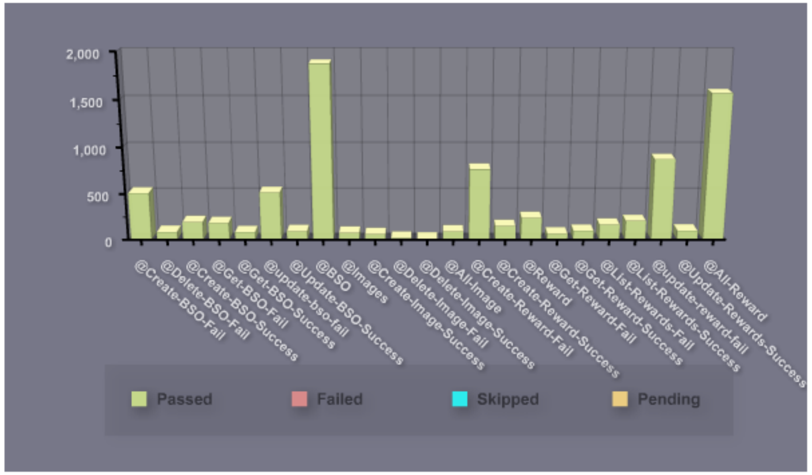
Code coverage



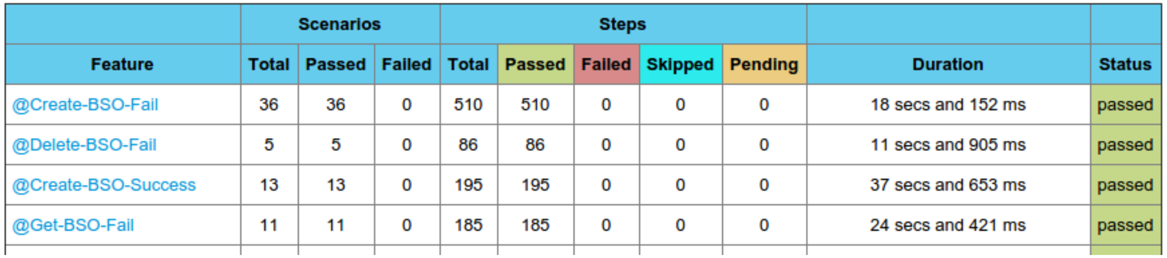
Source

```
app/services/programs/index.js
  1 var schema = require('./schema.json');
  1 var validatorMW = require('json-schema-validation-middleware');
  1 var isAccessError = require('lib/is-access-error');

  1 module.exports = function programService() {
  1     var virgilio = this;
  1     var Promise = virgilio.Promise;
  1     var program = virgilio.namespace$('program');
  1     virgilio.loadModule$(require('./model'));

  1     program.http.get('/programs/:programId')
            .addHandler(validatorMW(schema))
            .addHandler(function handler(req, res) {
214             var virgilio = this;
214             var ctx = req.ctx;
214             var programId = req.params.programId;
214             return virgilio.program.getById(ctx, programId)
                    .bind(this)
                    .then(function respond(program) {
192                     res.send(200, program);
                    })
                    .catch(virgilio.InvalidCredentialsError, function() {
 14                     res.send(401, {
                            code: 'invalid_credentials',
                            message: 'Request contained invalid credentials (Key and Secret headers).'
                        });
                    })
                    .catch(virgilio.ProgramNotFoundError, function() {
  8                     res.send(404);
                    })
                    .catch(function logError(err) {
  0                     ctx.log.error(err);
  0                     res.send(500, {
                            code: 'generic_error',
                            message: 'A general error occured on the server. A ' +
                                'crisis team is currently puting out the fires.'
```

Cucumber reports



Tag Statistics



	Scenarios			Steps						
Feature	Total	Passed	Failed	Total	Passed	Failed	Skipped	Pending	Duration	Status
@Create-BSO-Fail	36	36	0	510	510	0	0	0	18 secs and 152 ms	passed
@Delete-BSO-Fail	5	5	0	86	86	0	0	0	11 secs and 905 ms	passed
@Create-BSO-Success	13	13	0	195	195	0	0	0	37 secs and 653 ms	passed
@Get-BSO-Fail	11	11	0	185	185	0	0	0	24 secs and 421 ms	passed

Epic Test Library

- Developed our own tool Cucumber-API steps library
- Testers and developers speak the same language
- Enables better cooperation between developers and testers
- Cucumber-API steps library will be available soon on Github!

Conclusion

- We now have a scalable platform
- Separation of concerns - microservices
- Dev-ops tasks become part of team
- Testers are independent, flexible and can do what they do best

github.com/icemobilelab

IceMobileAmsterdam

@icemobile

@icemobile

we are hiring.
icemobile.com/jobs

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Adding emotion to transactional loyalty