

Understand industry trends and drivers

Some problems with distributed systems

APIs

Demo

Workshop

Consume services from another system

Provide services to another system

Modularize my application

Respond to multiple overlapping requests

Make changes persistent

Allow and restrict user access

Display information from a source

Synchronize information shown on different views

Maximize responsiveness

Adapt to different devices and screen sizes

Protect user data from being harvested

Protect my business from harm (prevent exploits)

"From this point going forward, no single human being is ever going to have a completely full grasp of every corner of JavaScript, CSS, and Web APIs. Nobody is

<https://medium.com/javascript-scene/why-im-thankful-for-js-fatigue-i-know-you-re-sick-of-those-words-but-this-is-different-296fae0c888f#.bs9mg54qh>

INTRODUCTION TO APIS

Consume services from another system
Provide services to another system



https://upload.wikimedia.org/wikipedia/commons/a/a0/Speakers_Corner_London_-_a_speaker.JPG



By Matt G. Borowick -
<http://www.flickr.com/photos/mattborowick/3207635903/>,
CC BY 2.0,
<https://commons.wikimedia.org/w/index.php?curid=575397>



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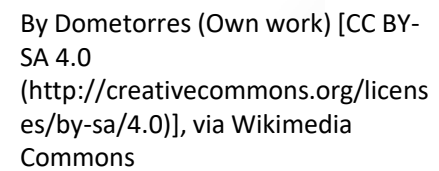
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maturity of cloud computing, the growing sophistication of backend-as-a-service offerings, APIs, containers and microservices, and the move first to DevOps and increasingly to “NoOps”

“Every day, AWS adds enough new server capacity to support all of Amazon’s global infrastructure when it was a \$7B annual revenue enterprise”

November 12, 2014





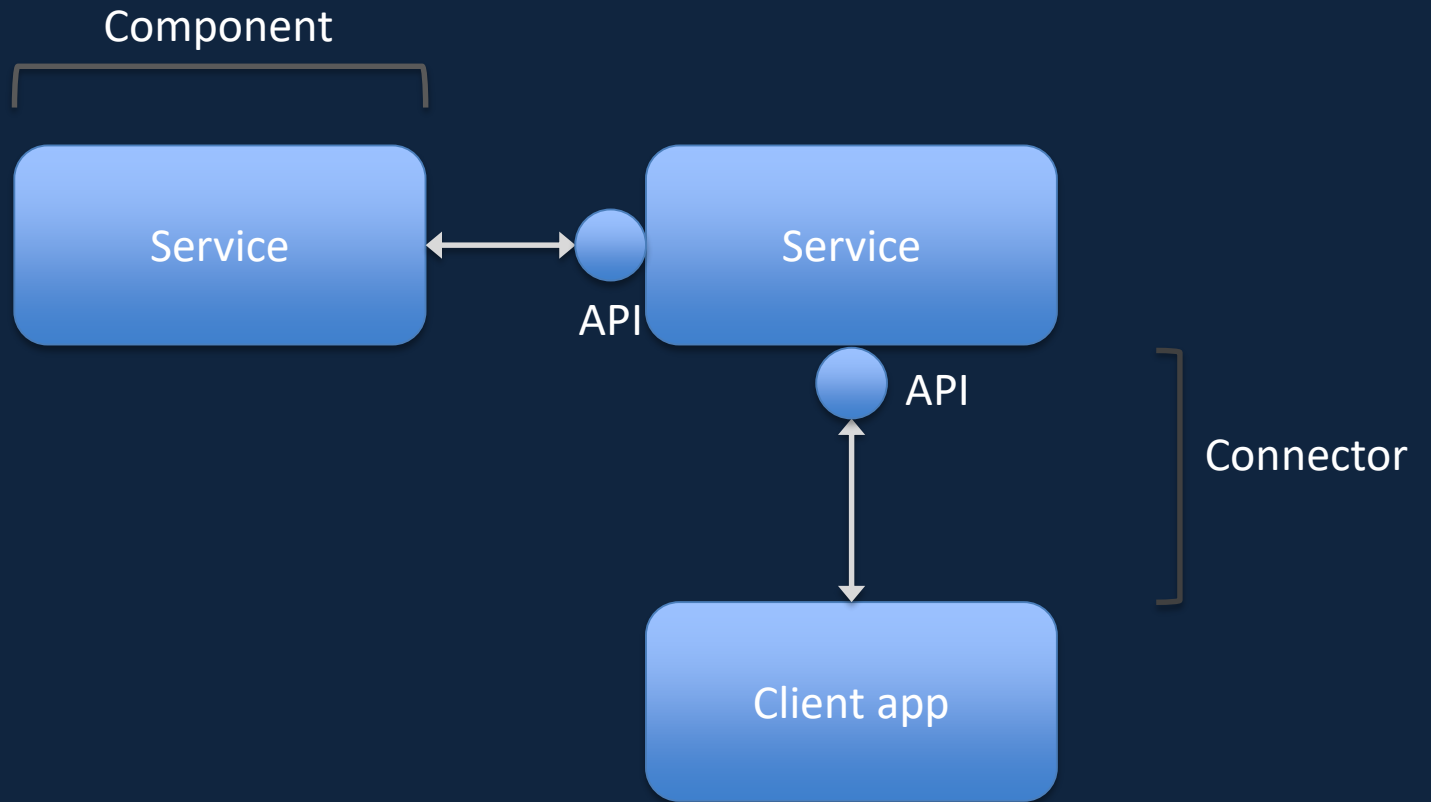


Can't do that while

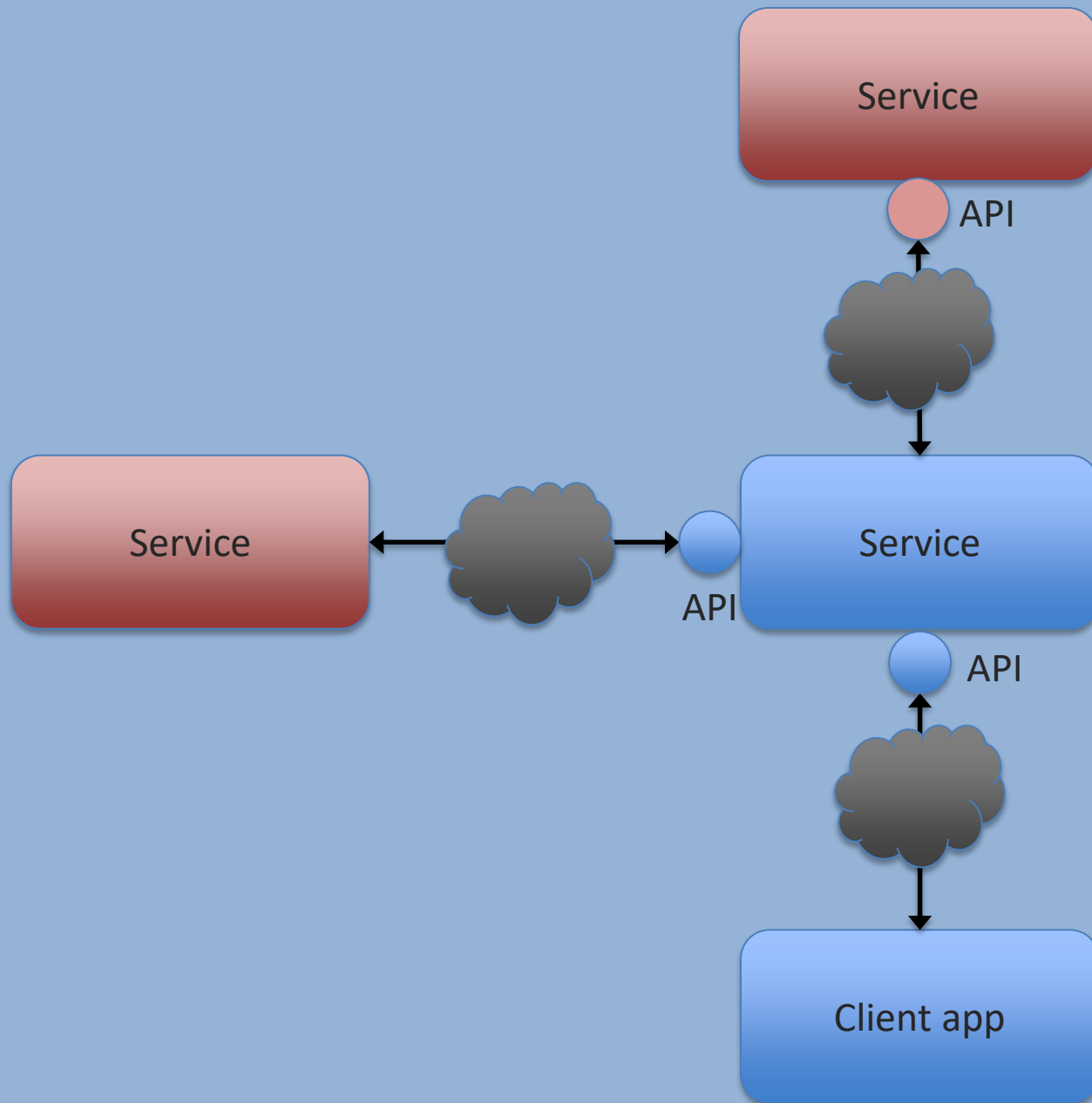
Quests

- 1 Battle Pet Roundup
 - 0/1 Mark of Pet Master
- 2 Naval Domination
 - 0/25 Naval Treasure Victories
 - ✓ 5535/2500 Garrison
- 3 Survey Ashran
 - Ready for turn-in
- 4 Into The Wilderness
 - 0/1 Tattered Armor
 - 0/1 Fel Ember
- 5 Grand Master Antari
 - Defeat Blood Knight
- 6 Might of the Elements
 - 2/3 Elemental Tablets
- 7 Blackhand's Secret
 - 0/1 Blackhand's Seal
- 8 Damsels and Dragons
 - 0/1 Shed Proto-Drake
 - 0/1 Warlord Zaela slain
- 9 Cenarion Concerns
 - 0/1 Strangely-Glowing
 - 0/1 Yalnu slain
- 10 The Same, But Different
 - 4/50 Misprinted Drakes
- 11 Ashran Dominance
 - 0/1 Defeat enemy faction
 - 0/4 Event victory
- 12 Slay Them All!
 - 0/200 Horde Players
- 13 The Lunarfall Shipyard
 - Deliver the ship to the
 - Level 100
 - Stormwind
 - PvP

<https://i.ytimg.com/vi/6S-rbGIDeNs/maxresdefault.jpg>



Web server	Provides a basic HTTP service Receive HTTP requests and send HTTP responses
Web service	Provides a service (between different machines) based on operations defined at its interface
API	Defines the interface to a web service (or other component)
Web application	Application running on a browser (with a GUI). Web apps may use web servers, and web services



Naming

Communications

Software architecture and design

Consistency

Failure modes

Workload allocation

ORGANISATION EUROPÉENNE POUR LA RECHERCHE
CERN EUROPEAN ORGANIZATION FOR NUCLEAR
1211 GENEVE 23 (SUISSE)

This machine is a ser
DO NOT POWER
... DOWN!!

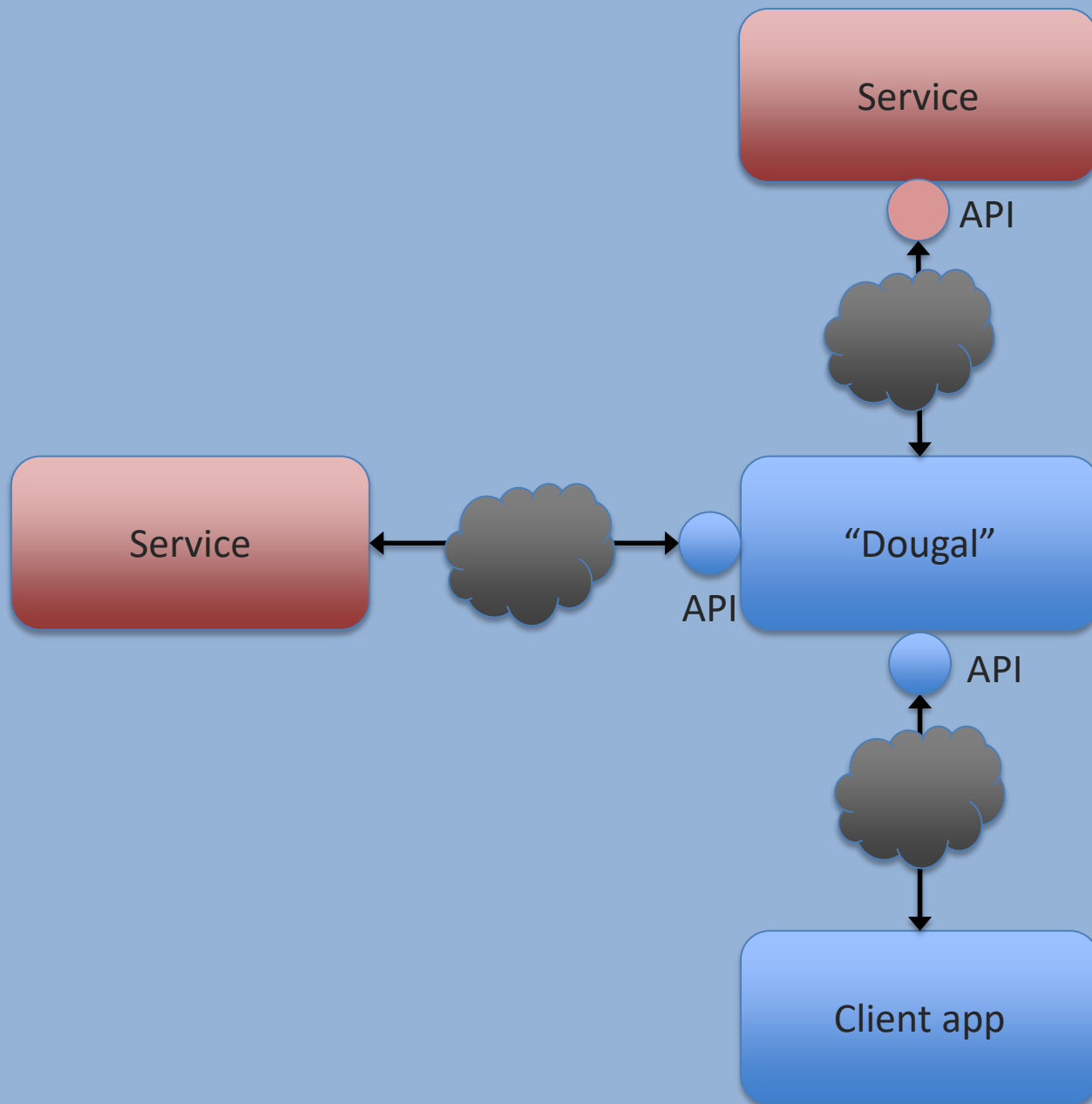
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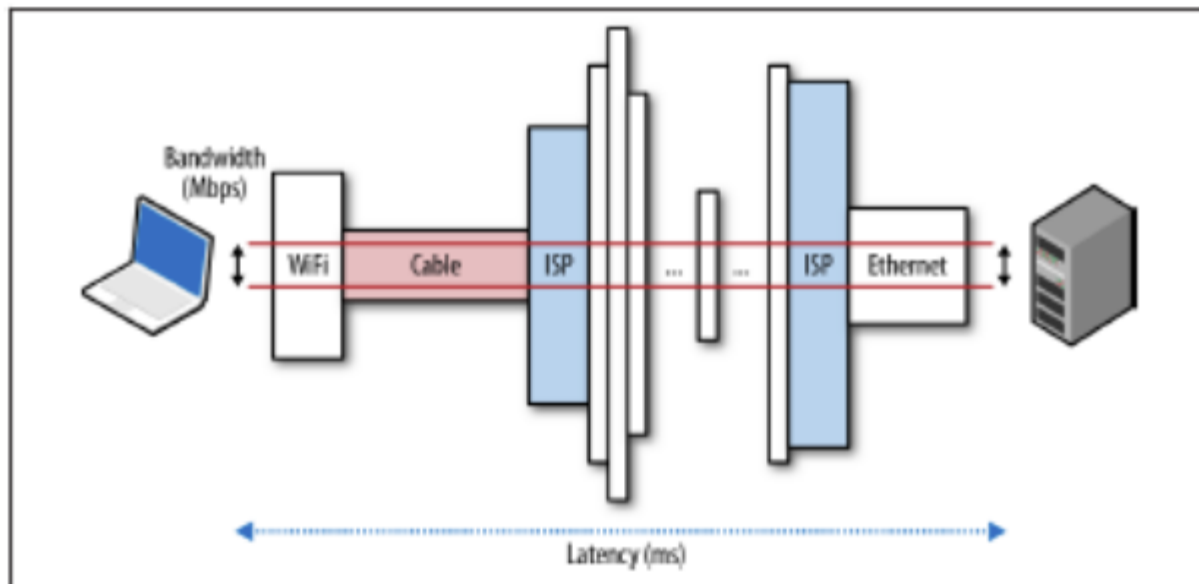


Dougal



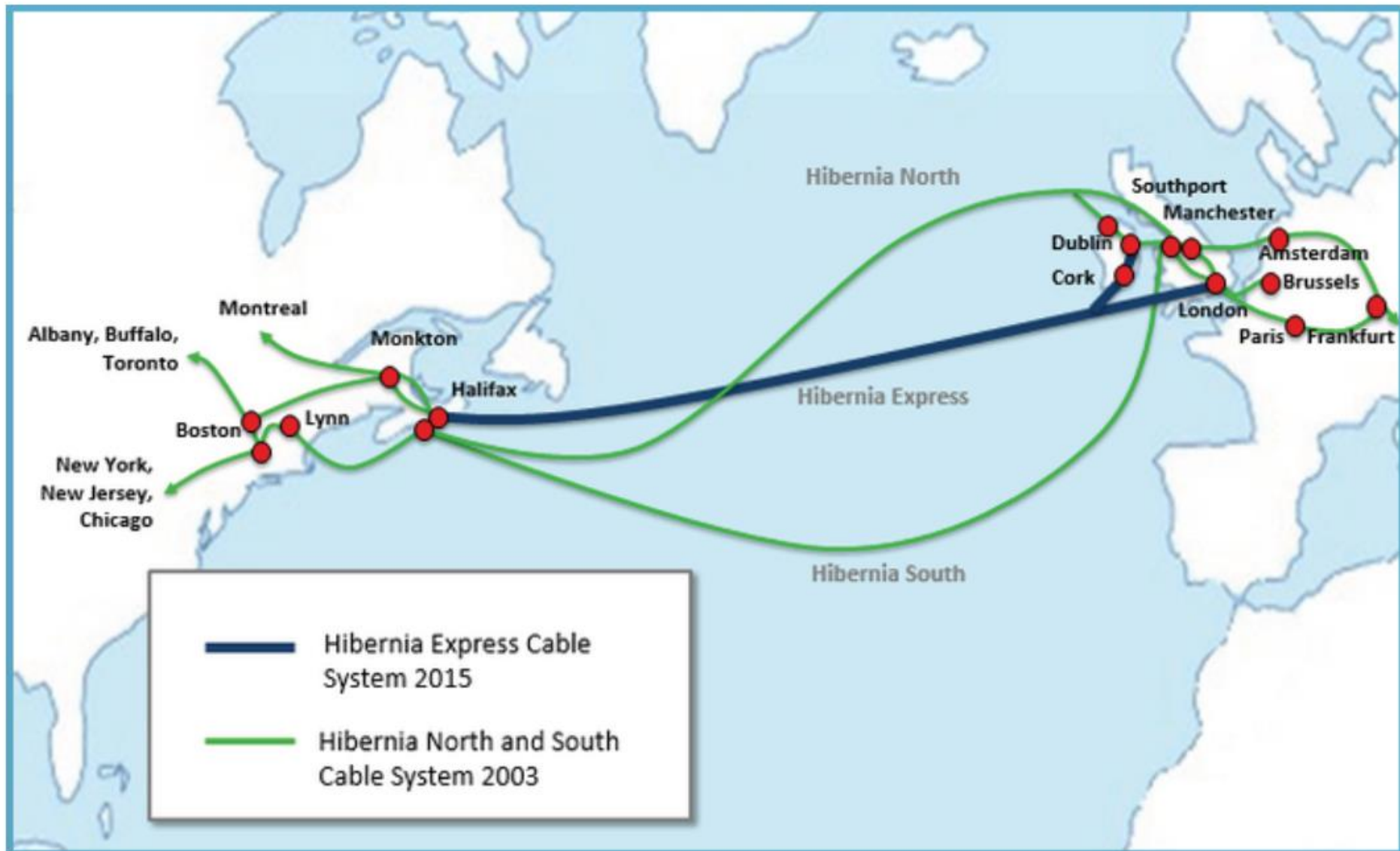
Some cattle





High performance browser networking, O'Reilly

Hibernia Express





Prep for next week

Take a look at Kickstarter, GiveALittle, Boosted

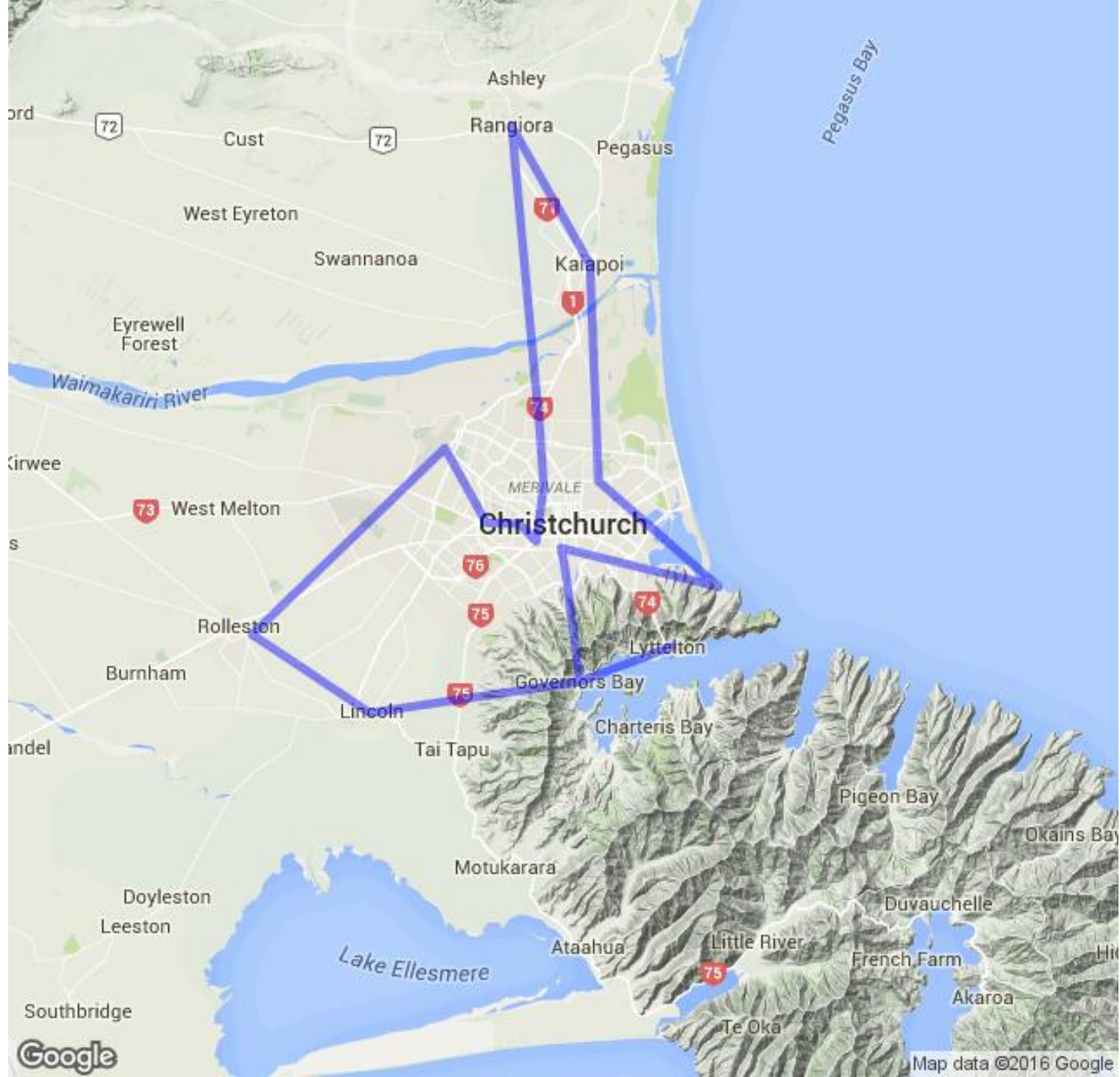
HTTP method definitions

HTTP status code definitions

Further reading

Course wiki - Web and internet trends

Course wiki - Fundamentals of distributed computing



1. Work in groups
2. Feel free to use laptops, phones, carrier-pigeons...
3. Read the handout
4. In your groups, work through the questions and record your answers
5. Groups at a table to compare answers at the STOP point and consolidate for reporting
6. One person from table to report answers