

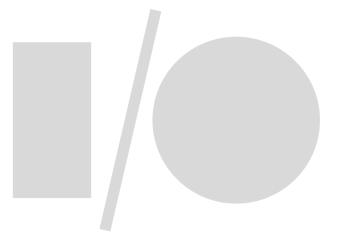


Dart End-to-End: A productive developer experience for the web

#dartlang



+KevinMoore314
@kevmoo





Dart



Developer Experience



DX



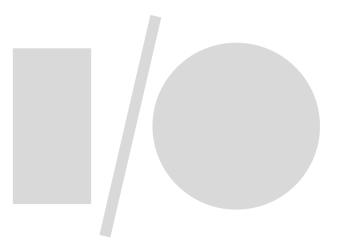
DX?



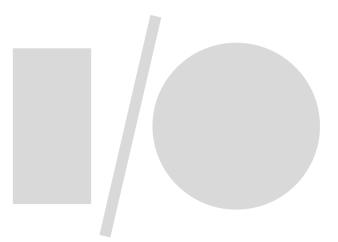
UI



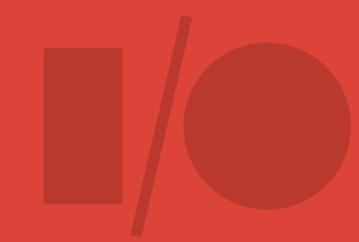
cool



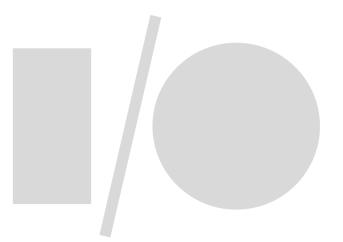
Pretty



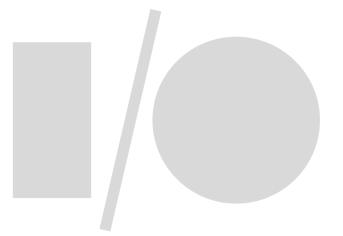
Pretty Cool!



Interface Experience



**Intuitive
Enjoyable
Productive**

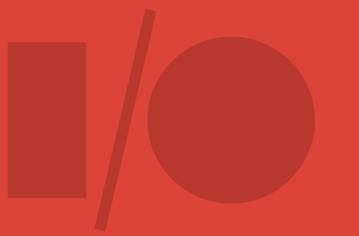


UX

DX



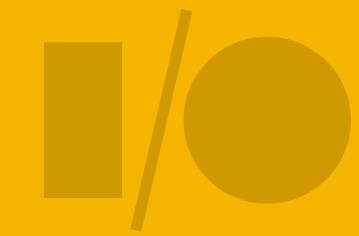
More than...
syntax
color coding
test framework



End-to-End



Language Tools Libraries



Visual Studio
XCode
Android Studio

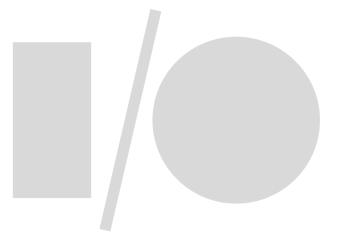


Web?





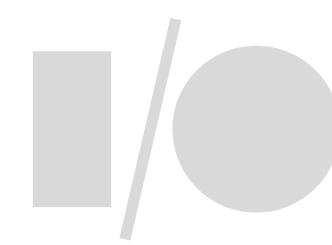
Dart





end-to-end
Developer Experience
for the web



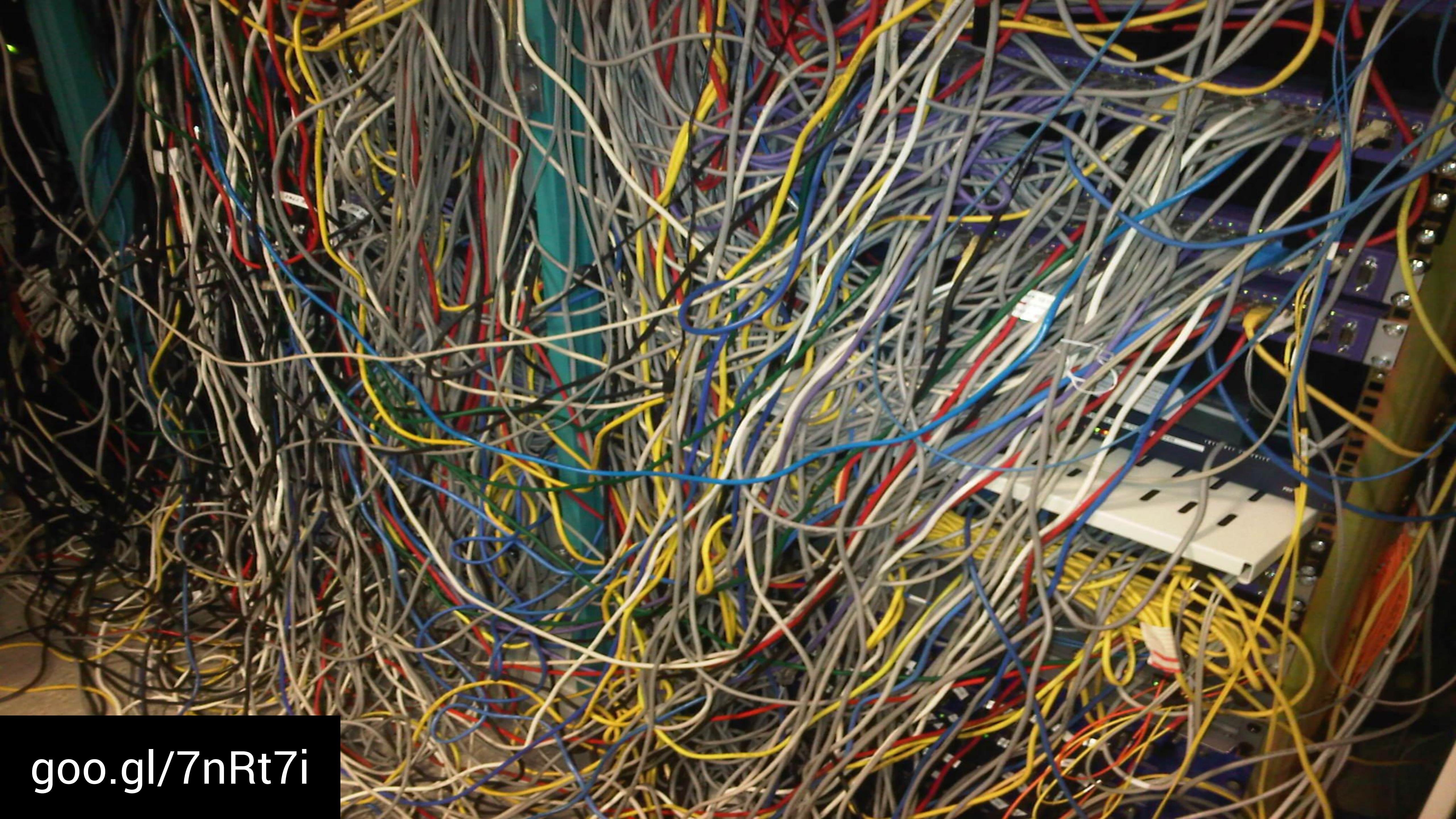


Demo

Pretty cool context







goo.gl/7nRt7i

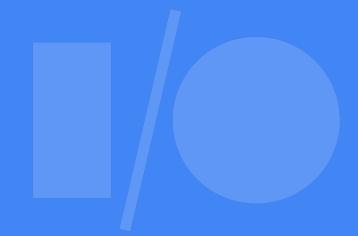


Wish List

Structure
Smart Tools
Integration



Demo
Hello, Dart



dartanalyzer

Static errors, warnings, and hints

pub serve

Development server. On-demand compilation.

dart2js

Compiles Dart into Javascript

Dart Editor

All of the tools under one roof.





“Dartium”
Chromium + Dart VM
Dart in the Browser
Part of the Dart SDK



Develop Debug



Deploy

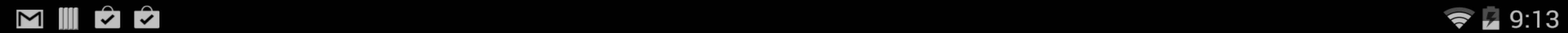


JS









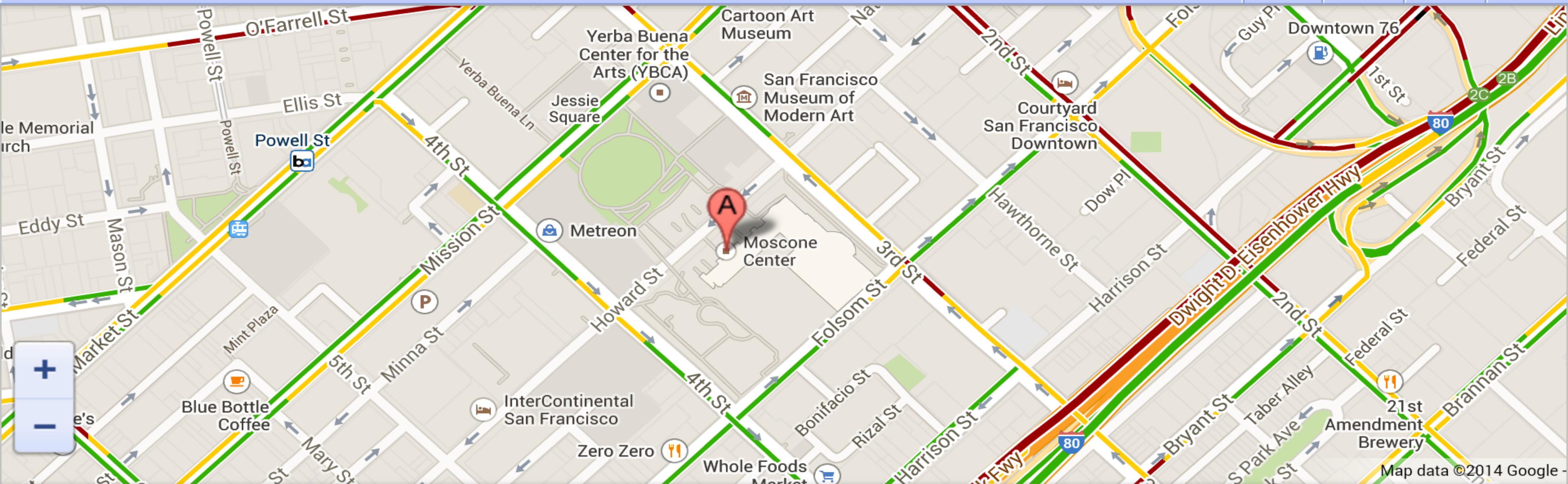
Moscone Center, Howard X



<https://maps.google.com>



Moscone Center, Howard Street, San Francisco, CA



A. [Moscone Center](#)

4.1 ★★★★☆ 161 reviews

(415) 974-4000



Rich UX!



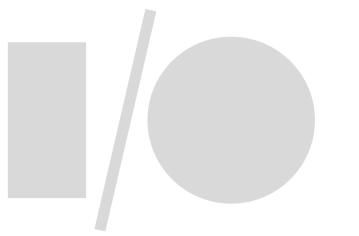
Rational DX?



Datagrid



```
<div class='data-grid'>
```

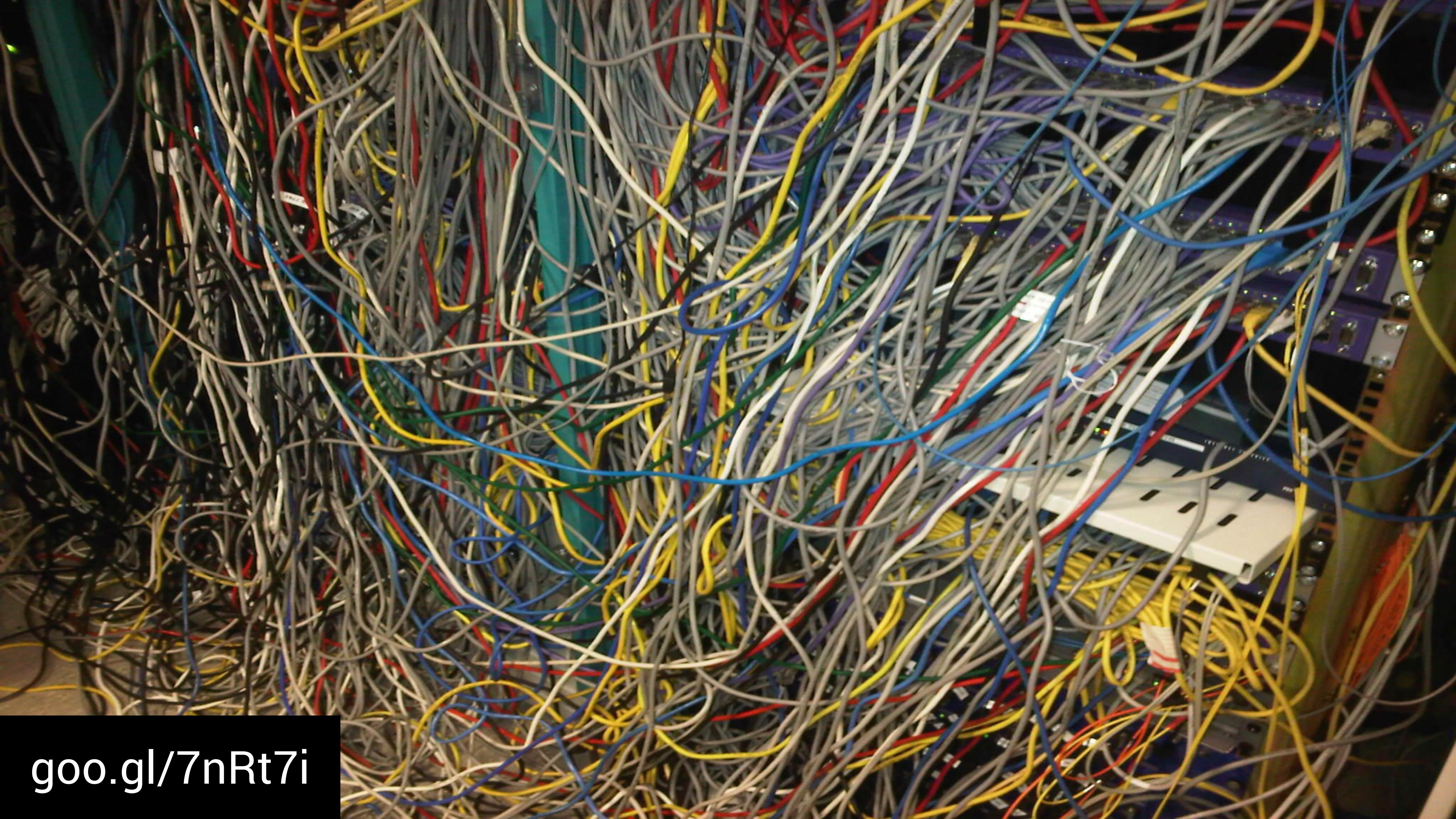


<script>

<style>

<div>





goo.gl/7nRt7i

```
<div class='data-grid'>
```

Not Rational





MyComponent

extends

BaseComponent



Visual Studio
XCode
Android Studio



<data-grid>

Rational

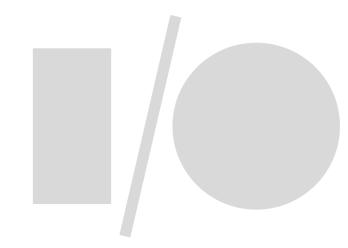


W3C



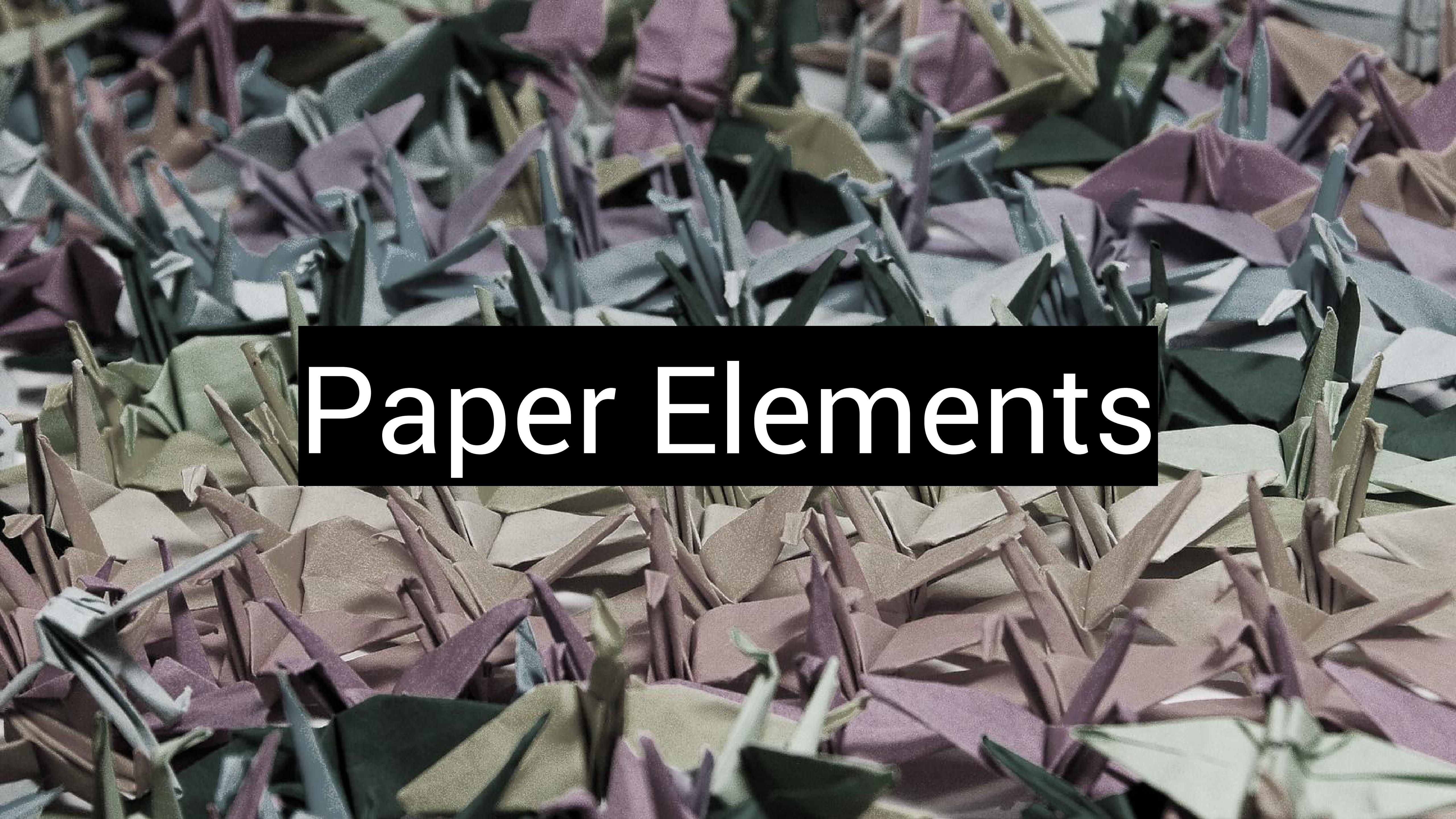
Shadow DOM Template Custom Element







Material Design



Paper Elements

Wish List

Structure

Easy to make

Easy to use

Easy to share



Demo

Dart + Polymer + Paper



Paper Element

is a

Polymer Element

is a

Custom Element

is a

Element

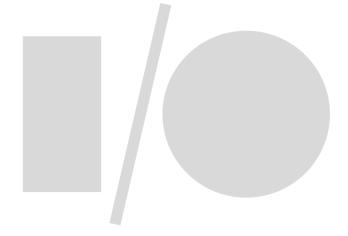


pub.dartlang.org

core_elements

paper_elements

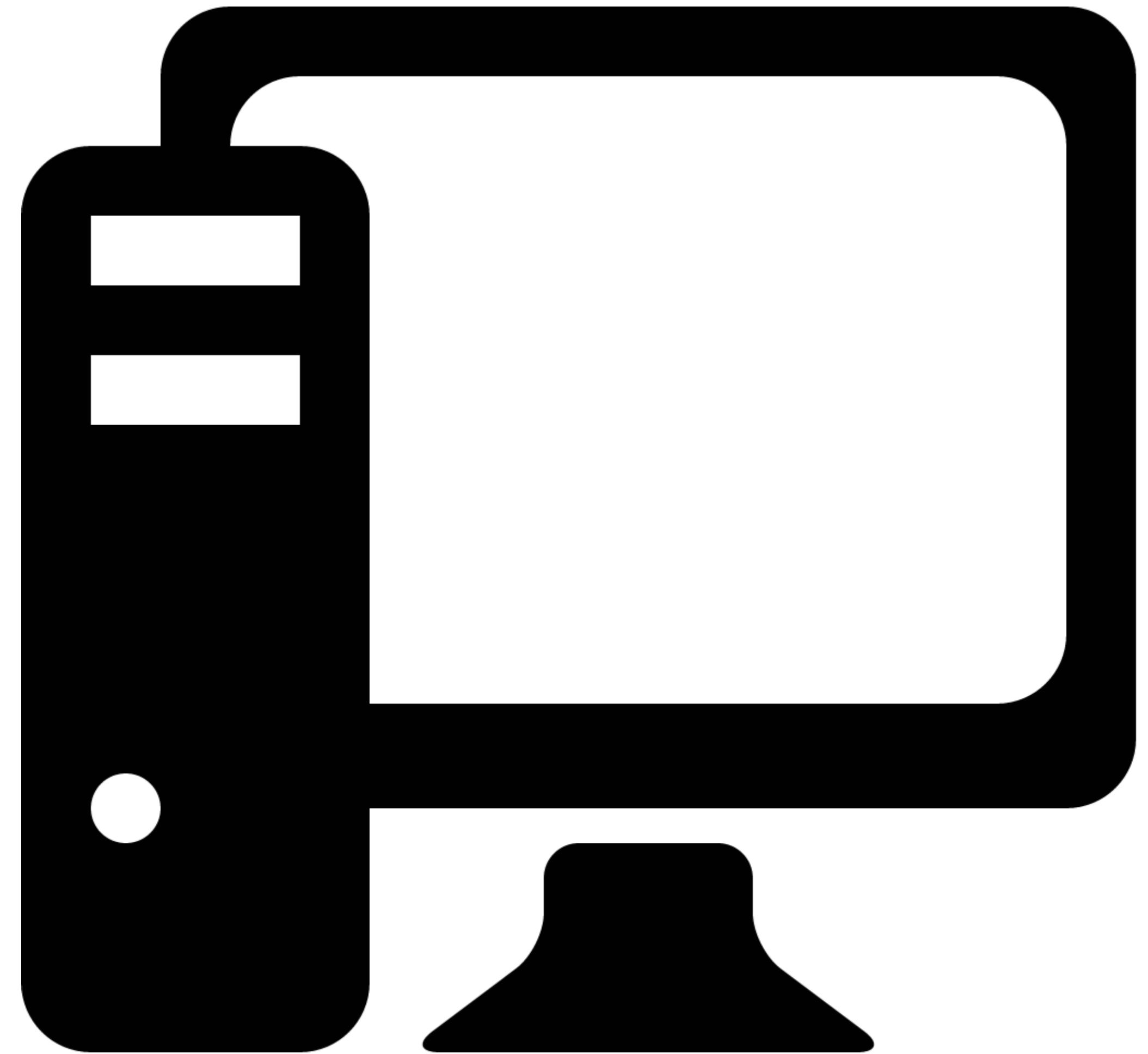
beta



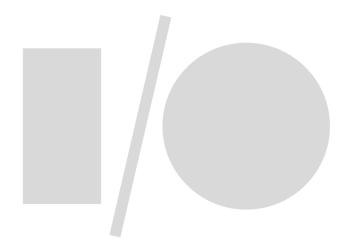
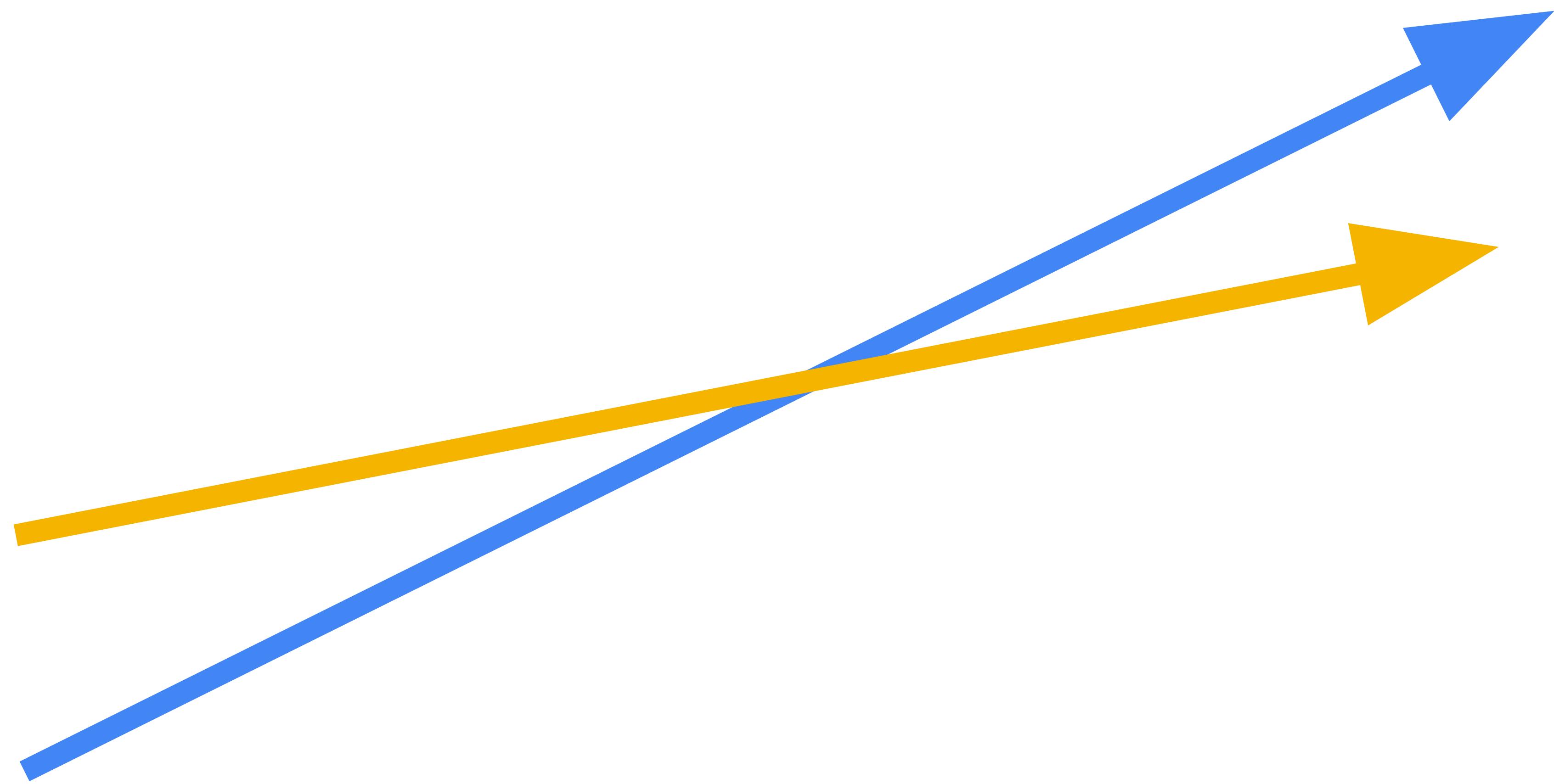












Mobile First





Dartium on Android
Chrome tools
Dart Editor



Demo

Dart DX: Mobile



Dartium on Android
Chrome tools
Dart Editor



Today!

Dart v1.5







||/○



Dart VM



app.dart

```
void main() => print('Hello, Dart!');
```

Shell

```
~/> dart app.dart  
Hello, Dart!
```



dart2js
dartanalyzer
pub
docgen



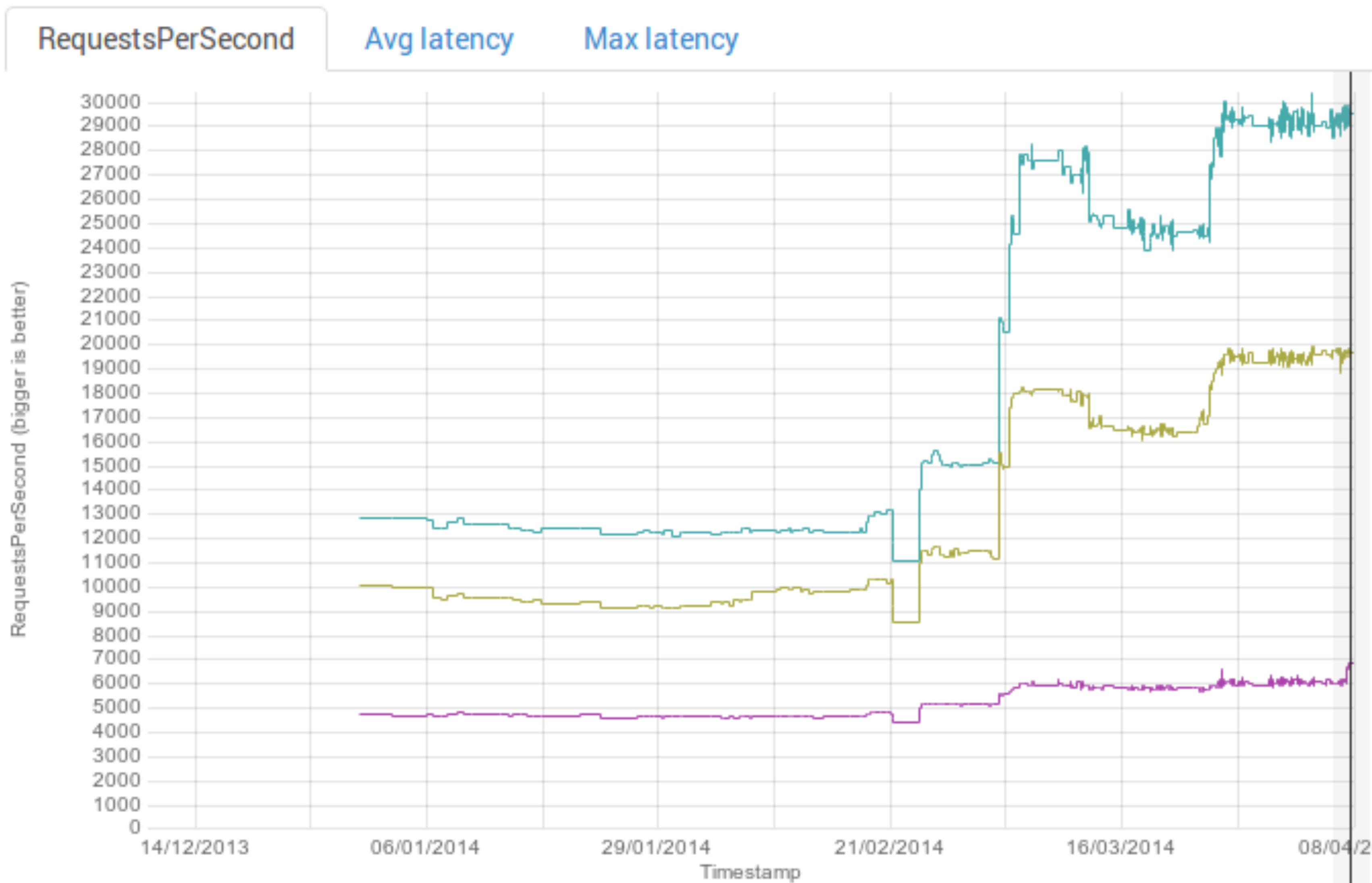
dart:io

stderr stdin stdout Directory File
FileState HttpClient HttpRequest
HttpResponse HttpServer IOSink
Link Process SecureSocket Socket
WebSocket



Dart I/O Performance

Tracking server-side performance, using the Dart VM and the `dart:io` library





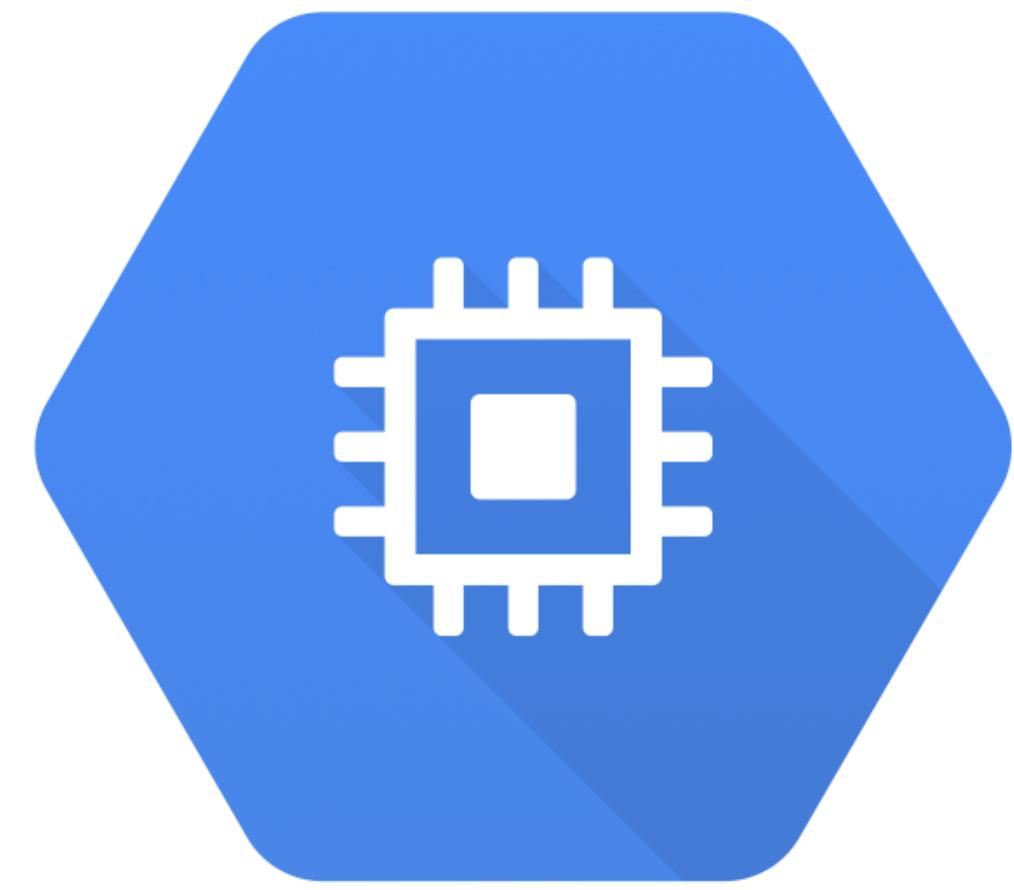
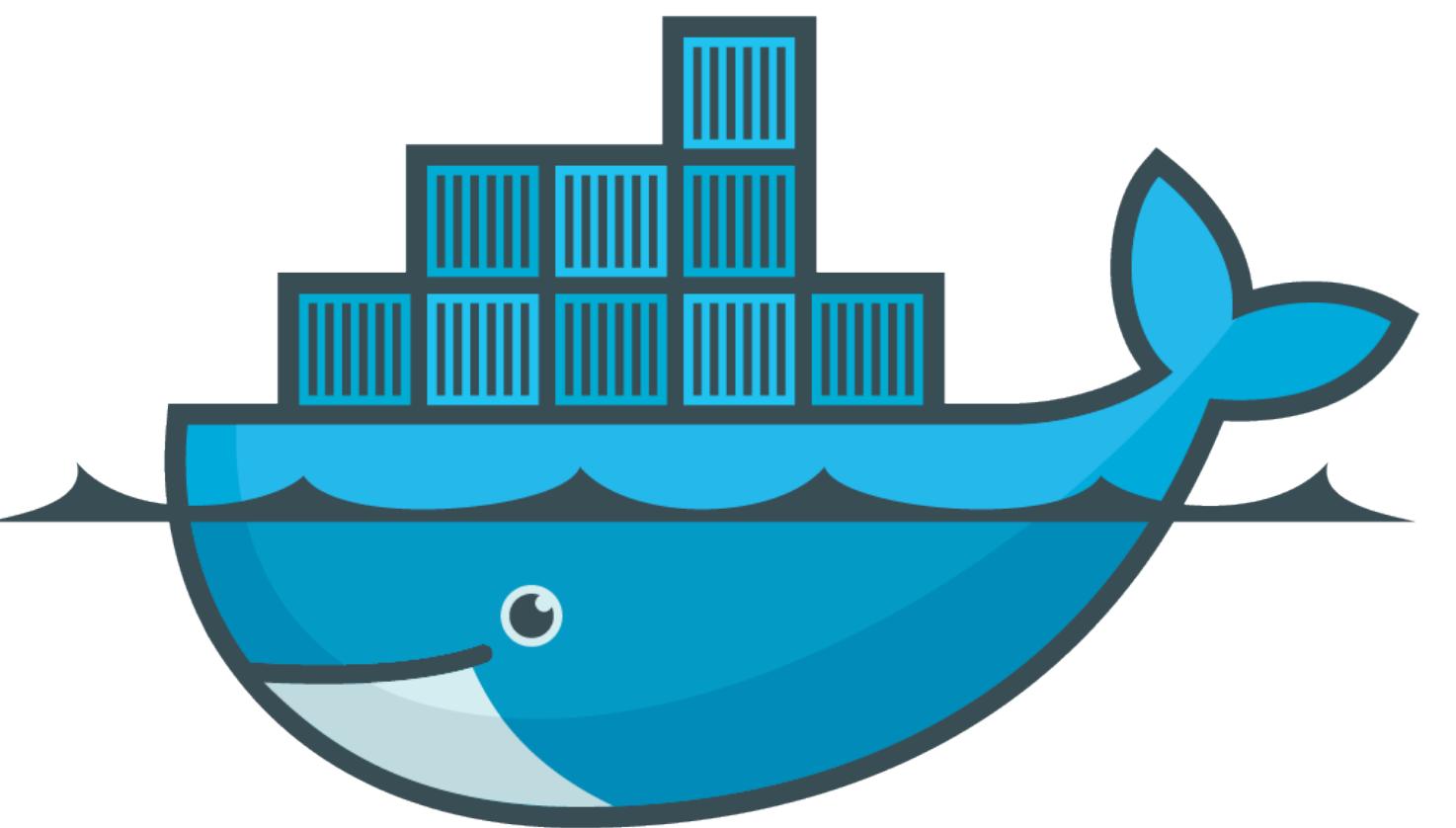
Google Cloud Platform





Google Compute Engine





Search: docker google cloud platform

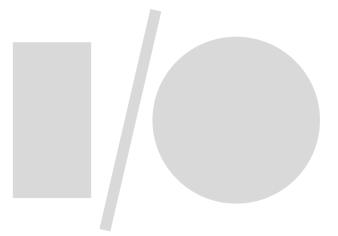
github.com/kevmoo/docker-dart-sample





Google App Engine

Dev Server
Memcache
Data Store
Monitoring and Management



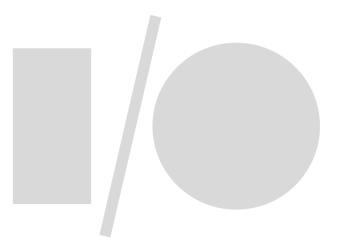
App Engine Custom Runtime

App Engine Features
BYO Runtime

private beta

The background features a large, semi-transparent red rectangle containing the text "Sneak Peak". Behind this rectangle are several overlapping, semi-transparent geometric shapes in shades of teal, blue, and white, creating a sense of depth and motion.

Sneak Peak



appengine

memcache

cloud_datastore



```
import 'dart:io';
import 'package:appengine/appengine.dart';

void main() {
    runAppEngine((HttpRequest request) {
        // handle request here
        var ds = context.services.data_store;
    });
}
```



Request

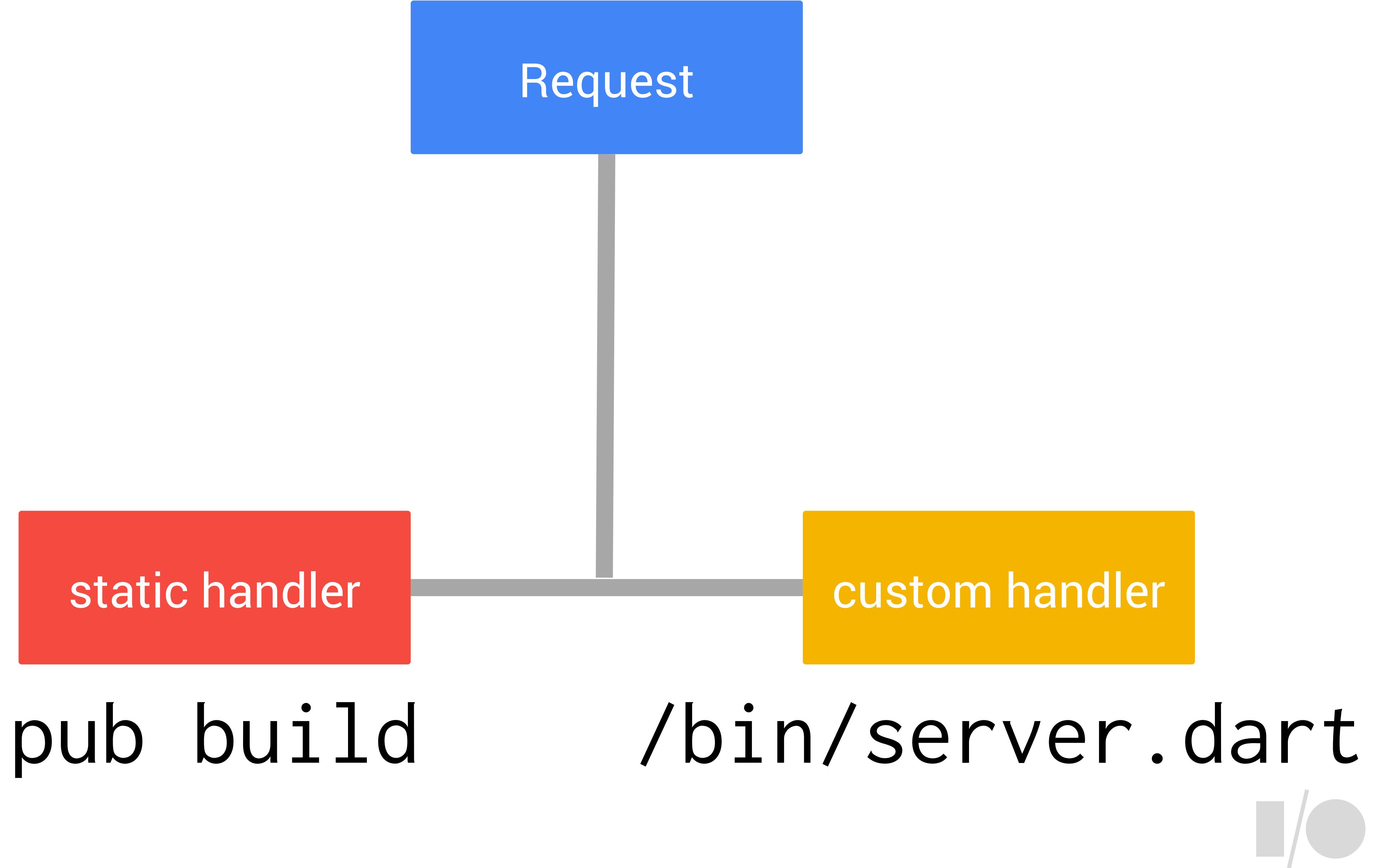
pub serve

custom handler

/web/*

/bin/server.dart





```
@ModelMetadata(const GreetingDesc())
class Greeting extends Model {
    String author;
    String content;
    DateTime date;
}

class GreetingDesc extends ModelDescription {
    final id = const IntProperty();
    final author = const StringProperty();
    final content = const StringProperty();
    final date = const DateTimeProperty();

    const GreetingDesc() : super('Greeting');
}
```



Demo

Dart Custom Runtime



App Engine Custom Runtime

**App Engine Features
BYO Runtime**

private beta

dartlang.org/cloud

stay tuned



||/○

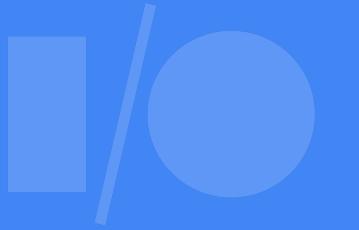
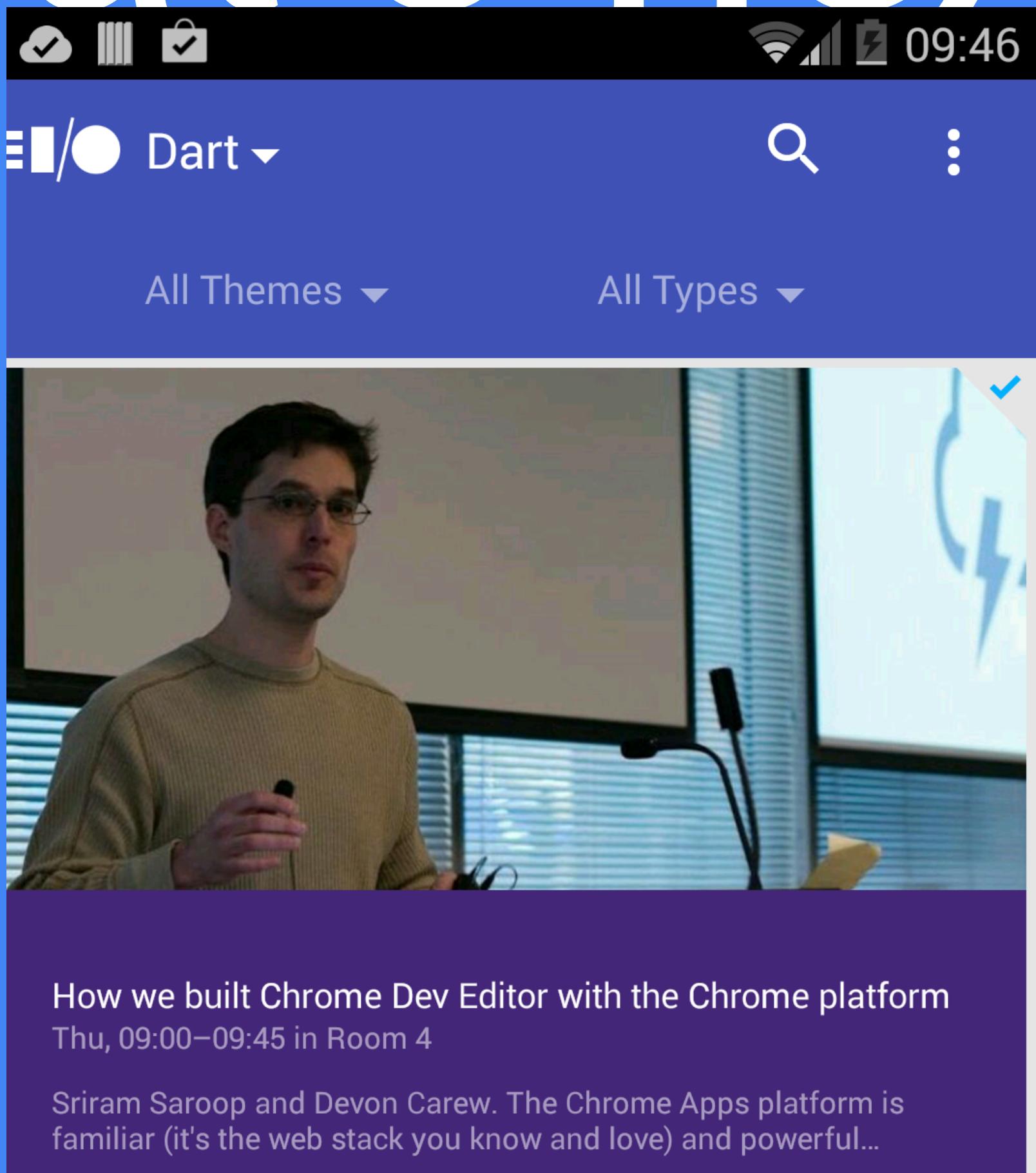




end-to-end
Developer Experience
for the web



What's next?

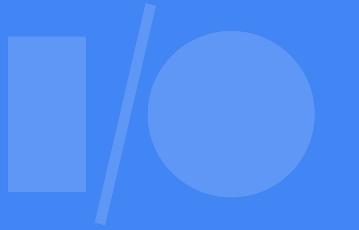


What's next?

All Things Dart
dartlang.org

+dartlang
@dartlang
#dartlang

youtube.com/GoogleDevelopers



Thank you!



+KevinMoore314
@kevmoo



FEEDBACK

#dartlang



