



# 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





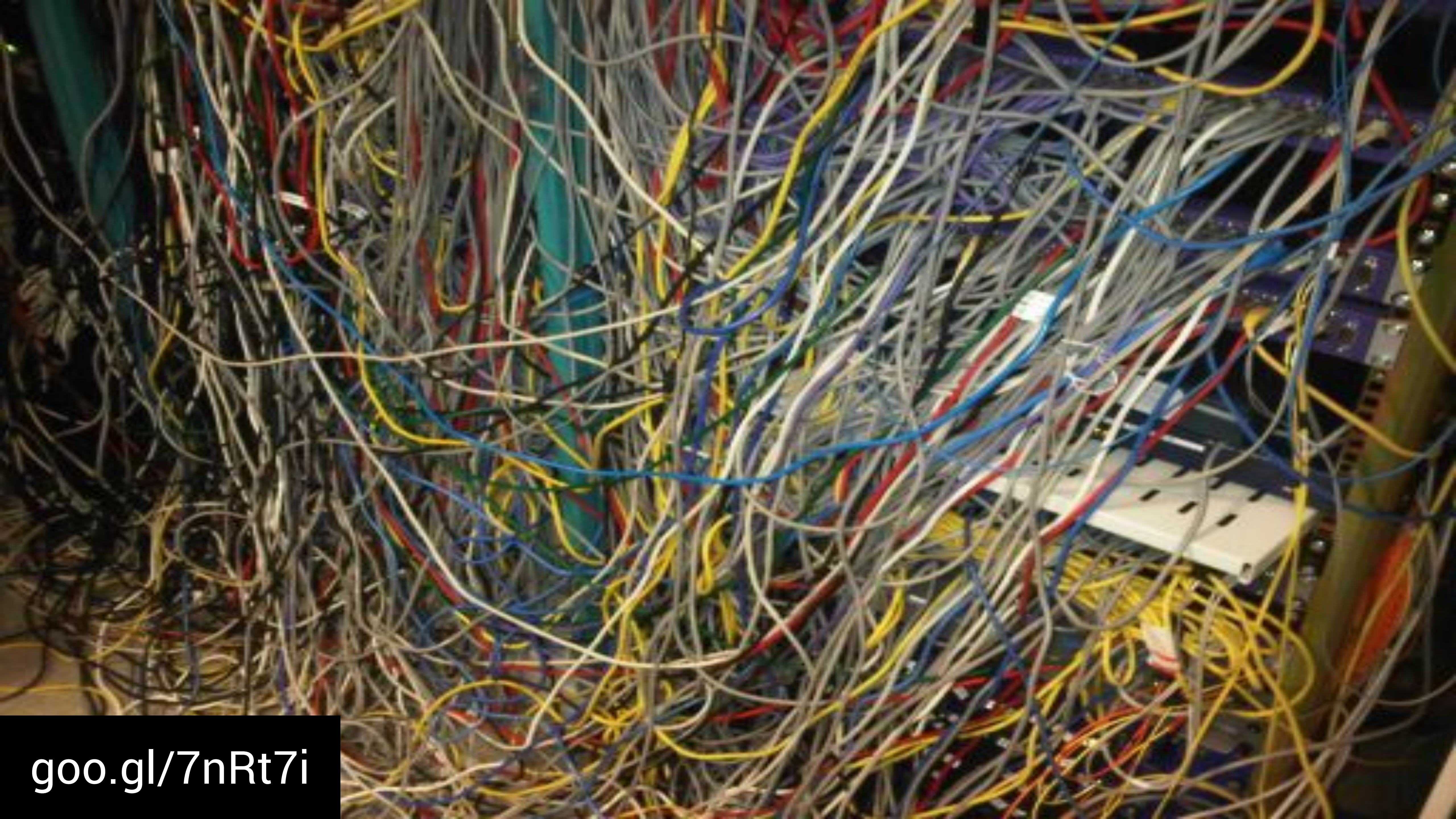
*Demo*

Pretty cool context









[goo.gl/7nRt7i](https://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”**

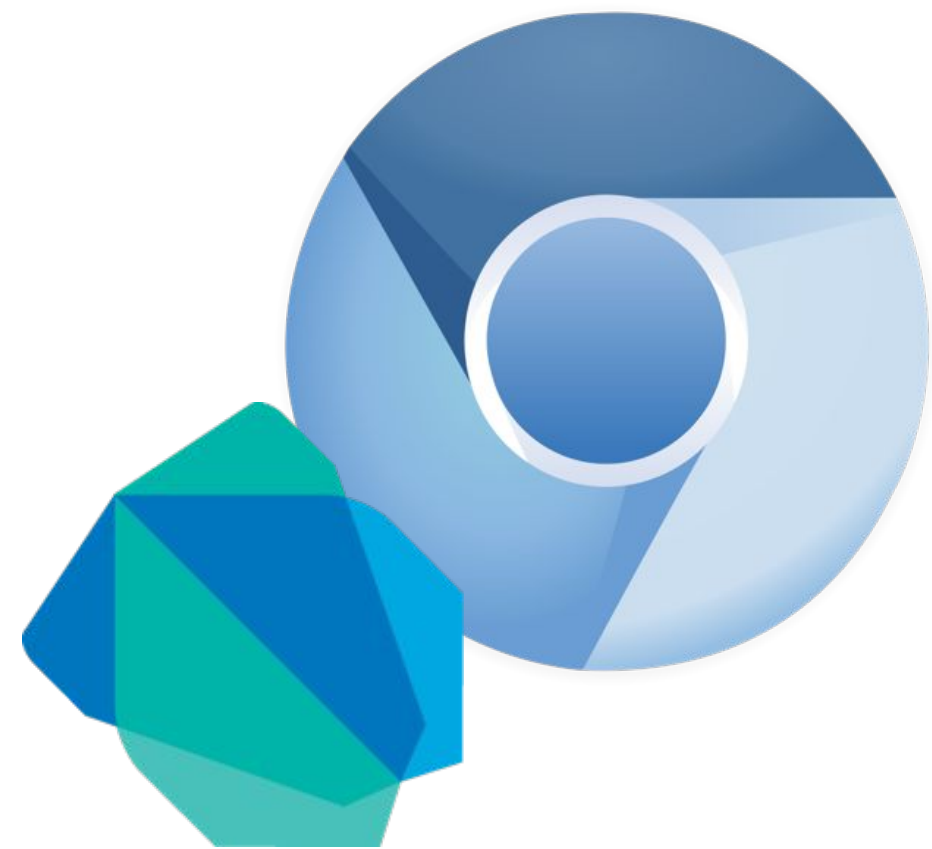
Chromium + Dart VM

Dart in the Browser

Part of the Dart SDK



**Develop  
Debug**

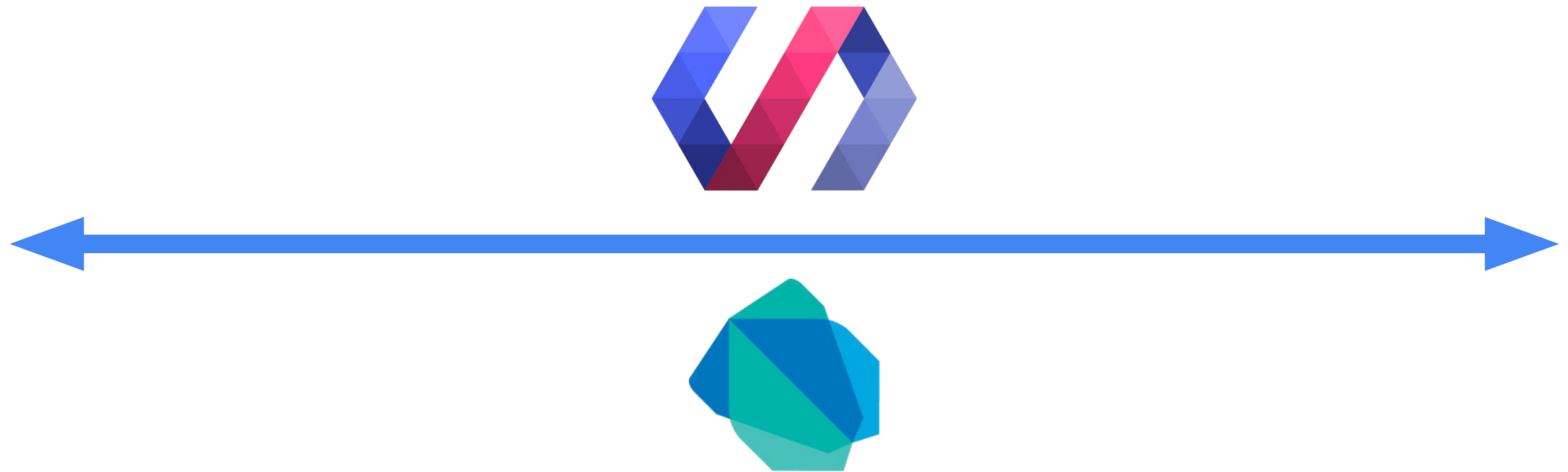


**Deploy**















# Rich UX!



# Rational DX?



	<h1>Datagrid</h1>	



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



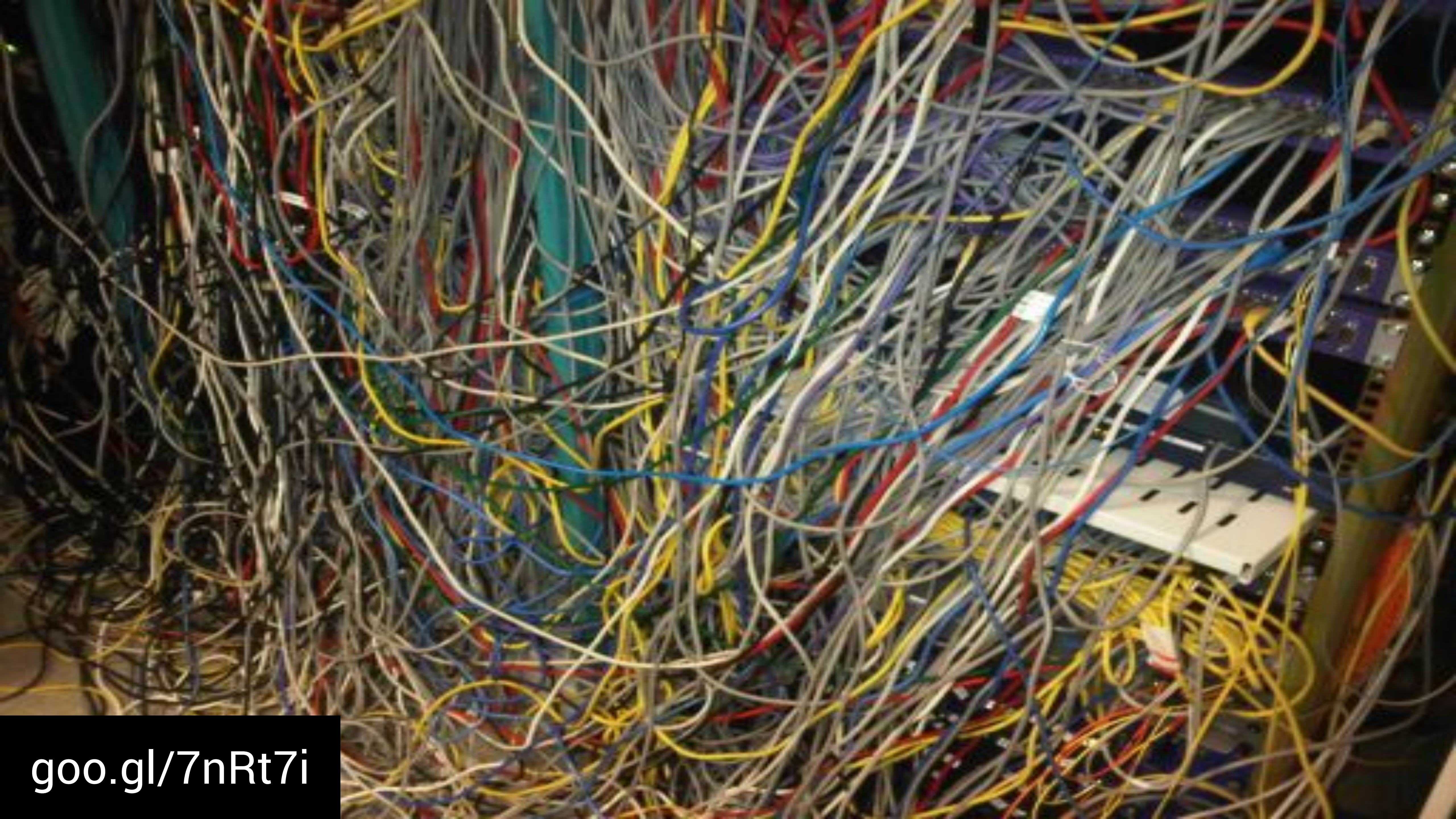
<script>

<style>

<div>







[goo.gl/7nRt7i](https://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

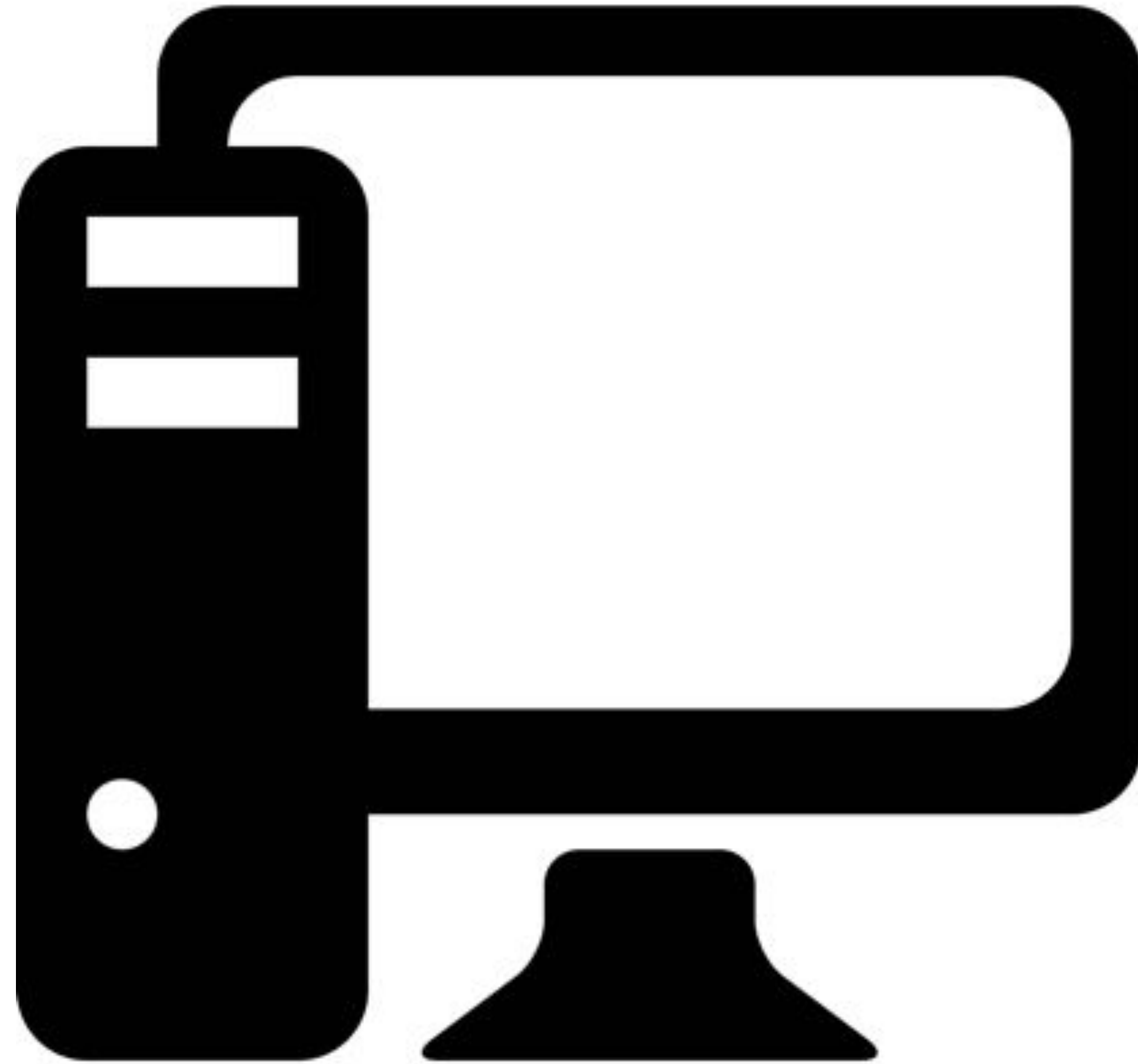




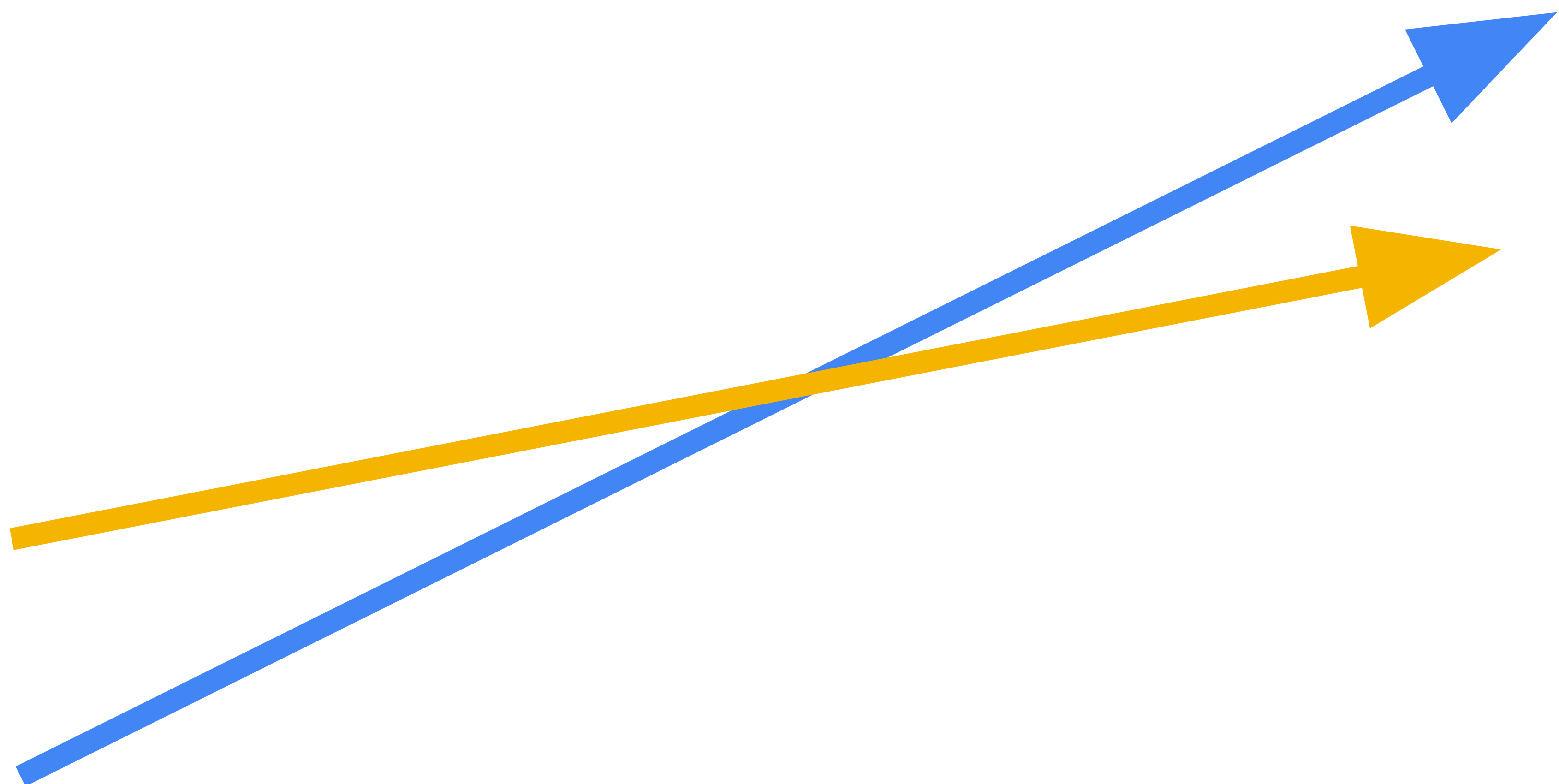












# *Mobile First*







# 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

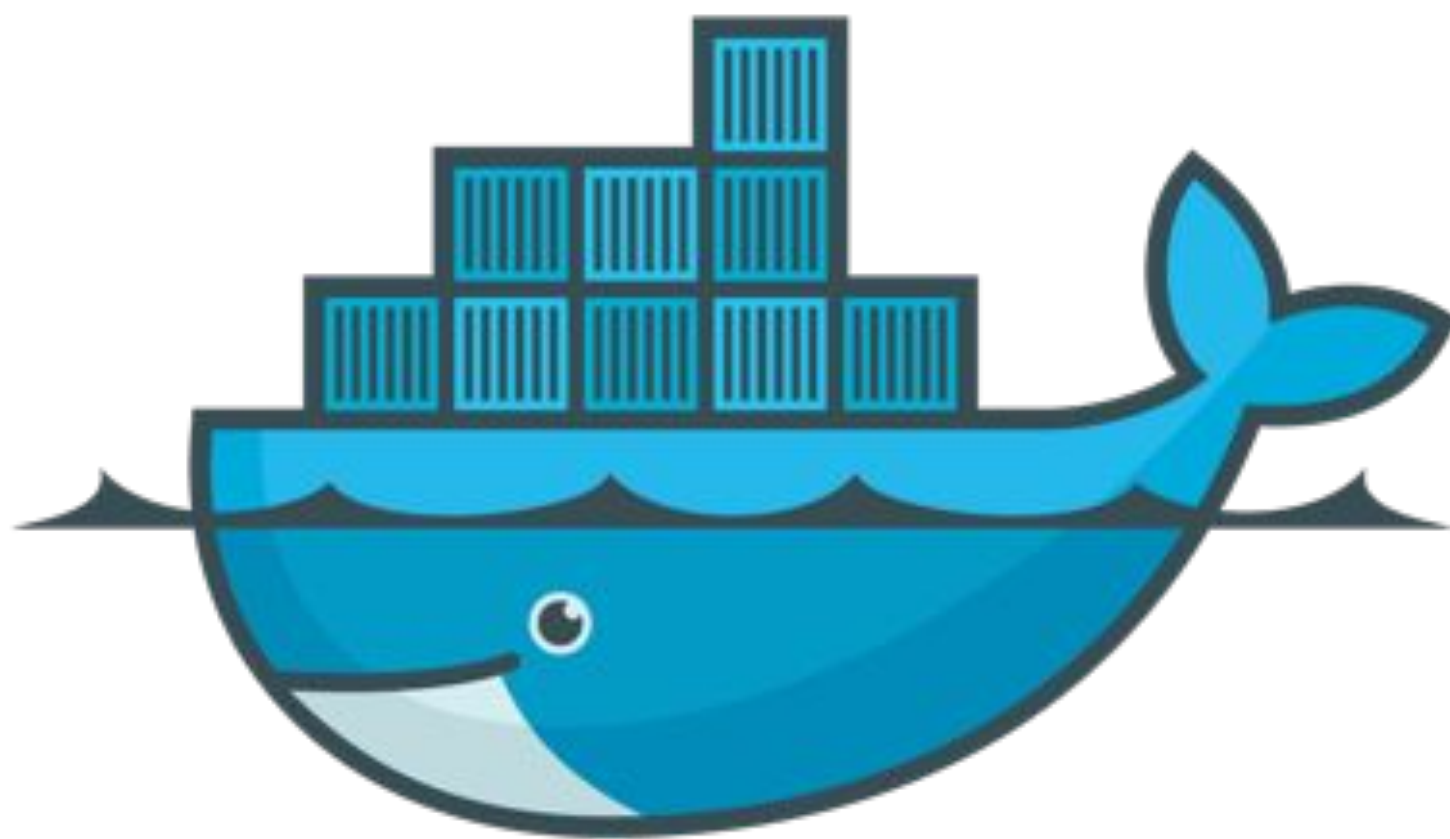




Google Compute Engine







Search: docker google cloud platform

[github.com/kevmoo/docker-dart-sample](https://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*



***Sneak Peak***



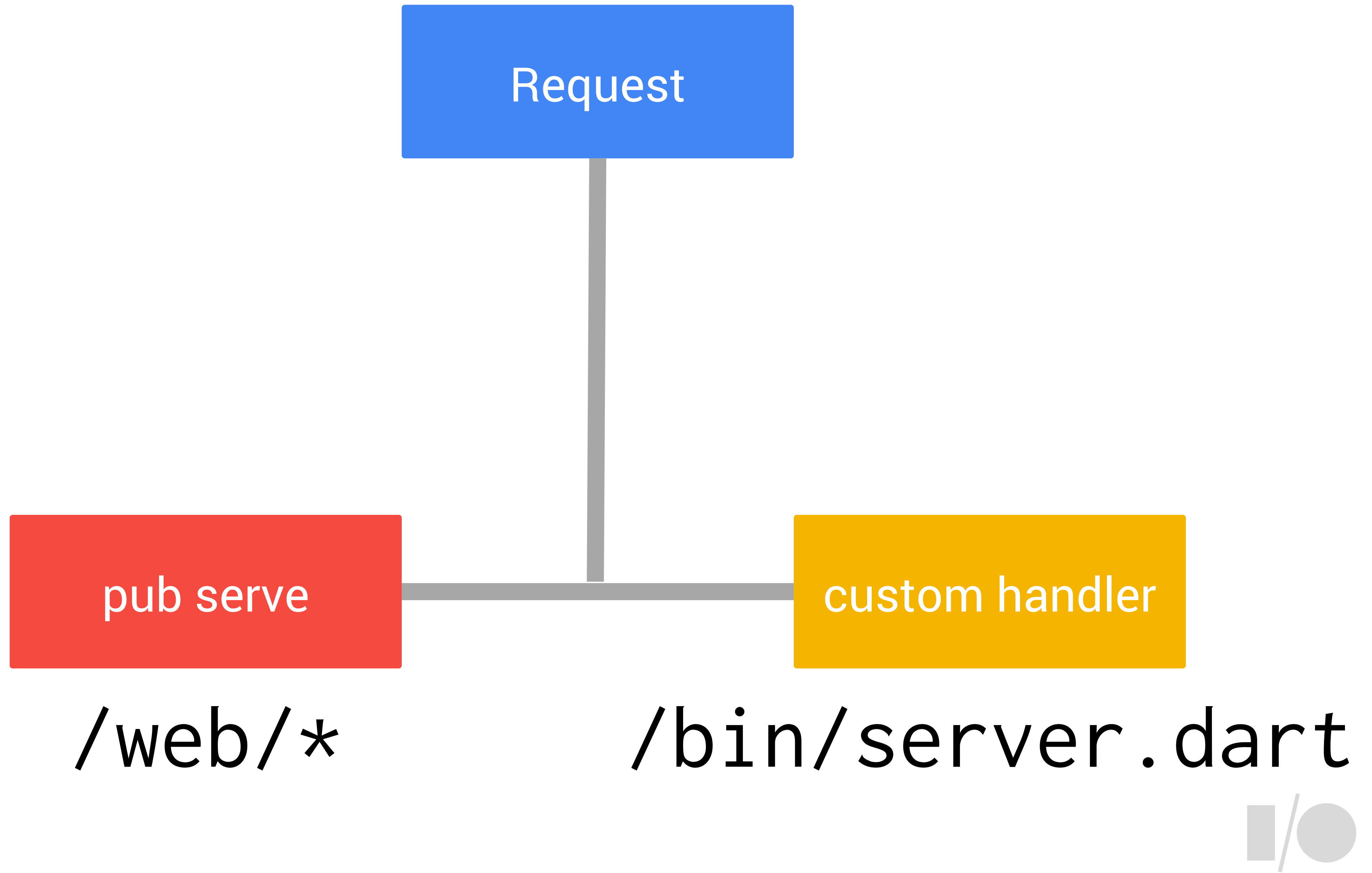
appengine  
memcache  
cloud\_datastore

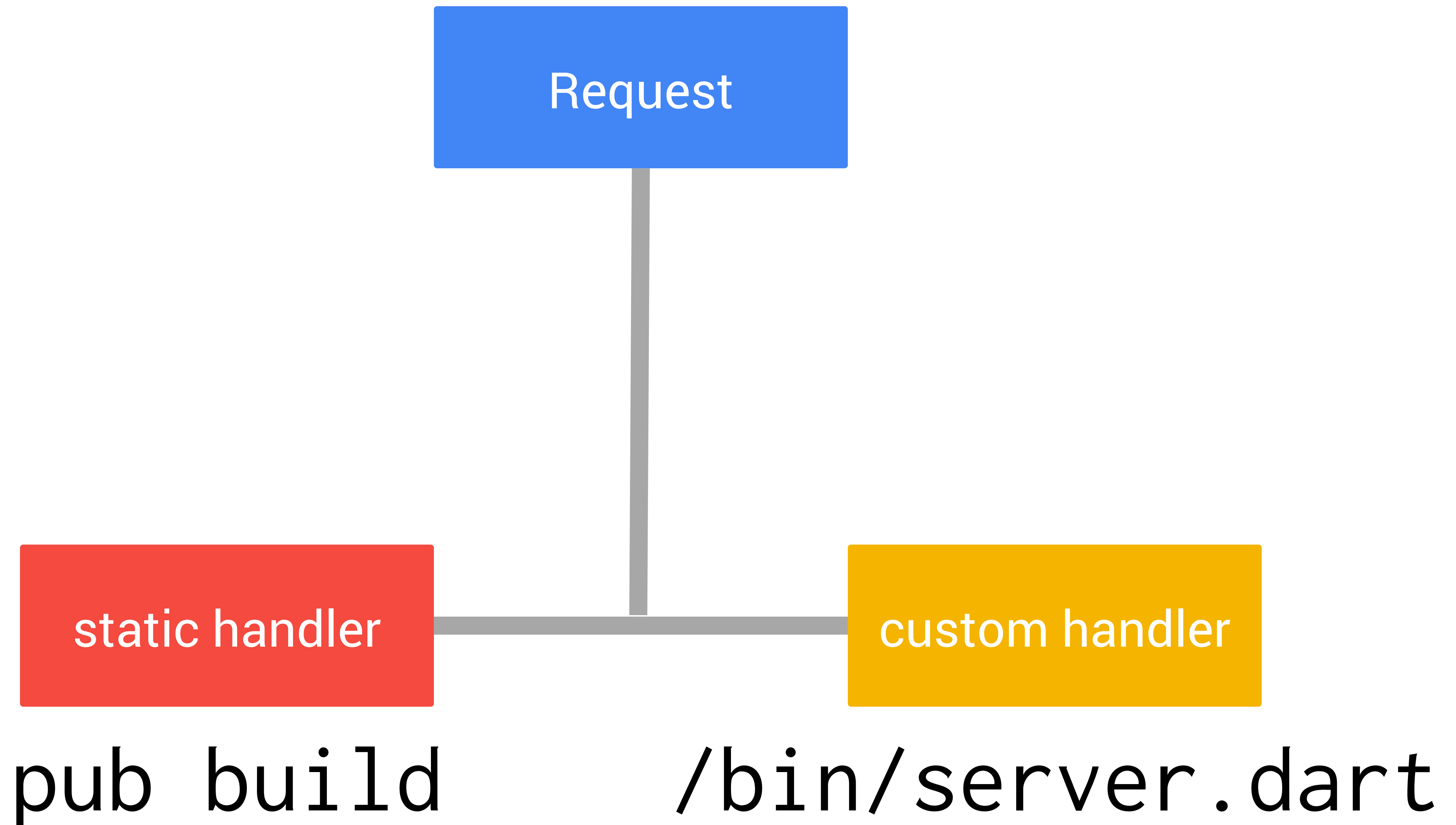


```
import 'dart:io';  
import 'package:appengine/appengine.dart';  
  
void main() {  
    runAppEngine((HttpRequest request) {  
        // handle request here  
        var ds = context.services.data_store;  
    });  
}
```









```
@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](https://dartlang.org/cloud)

*stay tuned*





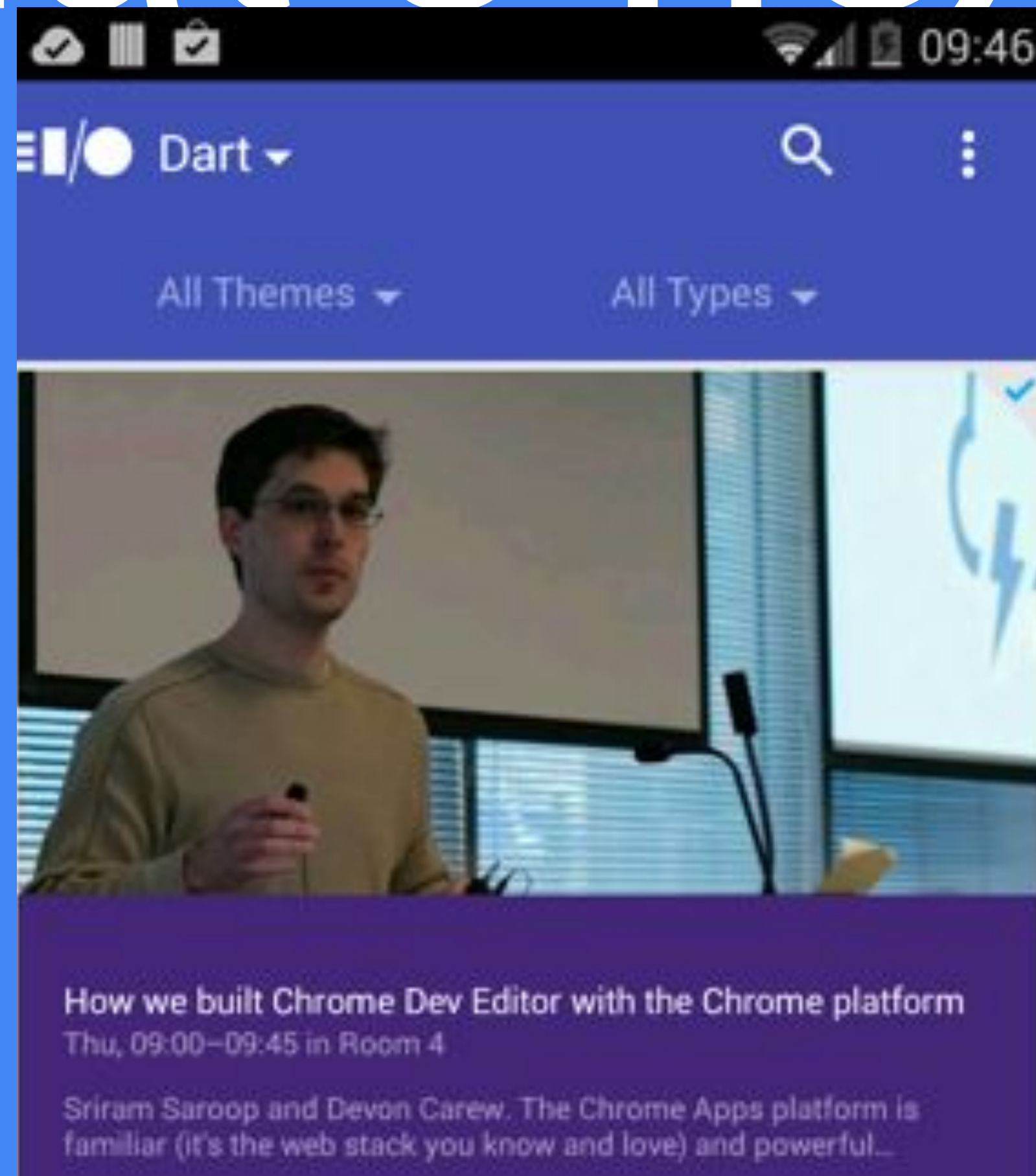




end-to-end  
**Developer Experience**  
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# What's next?



# What's next?

**All Things Dart**  
[dartlang.org](https://dartlang.org)

+dartlang  
@dartlang  
#dartlang

[youtube.com/GoogleDevelopers](https://youtube.com/GoogleDevelopers)



# Thank you!



+KevinMoore314  
@kevmoo



FEEDBACK

#dartlang





