

DataStax

Developers

Building a **NetFlix** clone

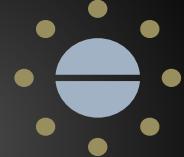
using GraphQL, React and JAMStack



01

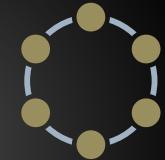


Housekeeping Live and Hands-on



02

Our Goal Component overview



03

GraphQL Learn & Hands-On



GraphQL

04

Serverless + Client Run the application



05

What's next? Quiz, Homework, ...



Agenda





Housekeeping

Live and Hands-on



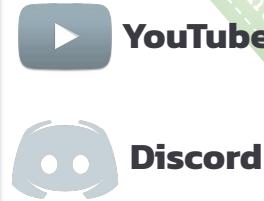
Livestream: youtube.com/DataStaxDevs

Questions: <https://dtsx.io/discord>

Agenda



A screenshot of a Discord channel titled "workshop-chat". The channel has over 100 members. A message from user "isole001" discusses the workshop background and its relevance to DataStax Astra. Another message from "Erick Ramirez" asks about machine learning and its relation to the workshop.



Games and quizzes: menti.com

A Menti poll titled "How much experience do you have with the Spring Framework ?" with the following results:

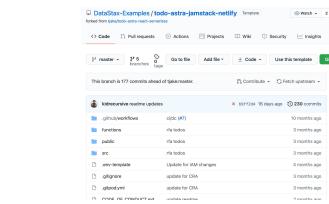
Experience Level	Percentage
Never heard about it	41%
I know the concepts	29%
I have already used it	10%
I use it regularly	20%

The poll also includes a link to a Mentimeter poll.

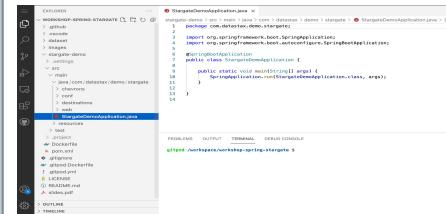
Mentimeter

Nothing to install !

Source code, exercises, slides



IDE

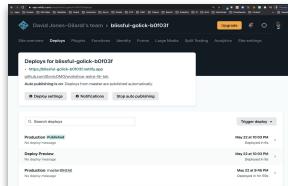


Database + GraphQL + PlayGround



DataStax
Astra DB

Deploy + Run + Host



Hands-On Housekeeping



Get your badge for today

- **BEGINNERS**

- Relax, no complex code to write
- Get the most of if by following what presenters do and ask Questions !
- Try to improve and develop the application later!

- **INTERMEDIATE**

- Scroll and do exercises on your own PACE
- Sample code, ready to go to copy-paste

- **EXPERTS**

- Run stuff locally
- Challenge



Choose your path



01



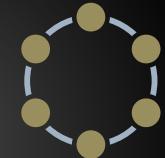
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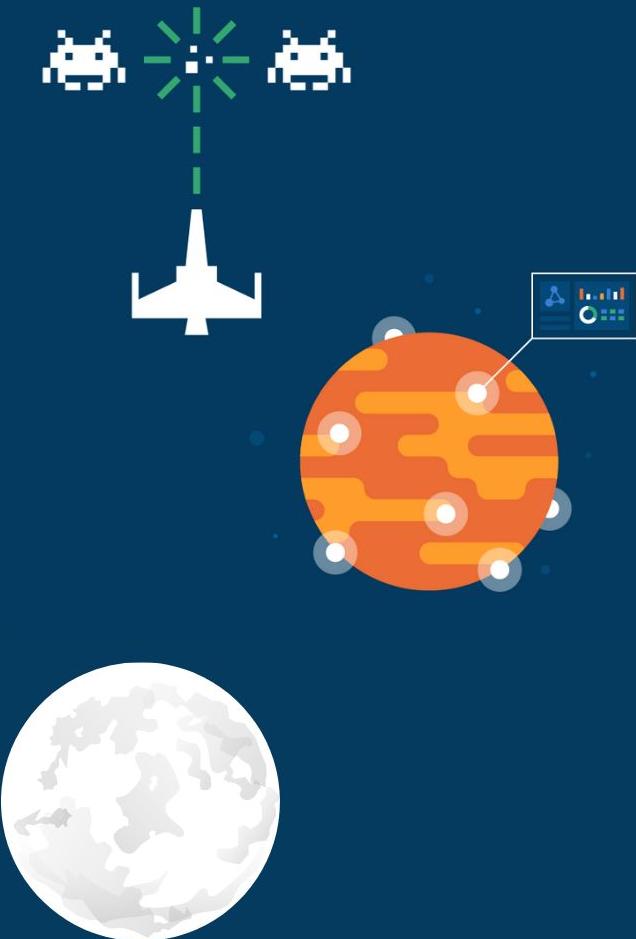


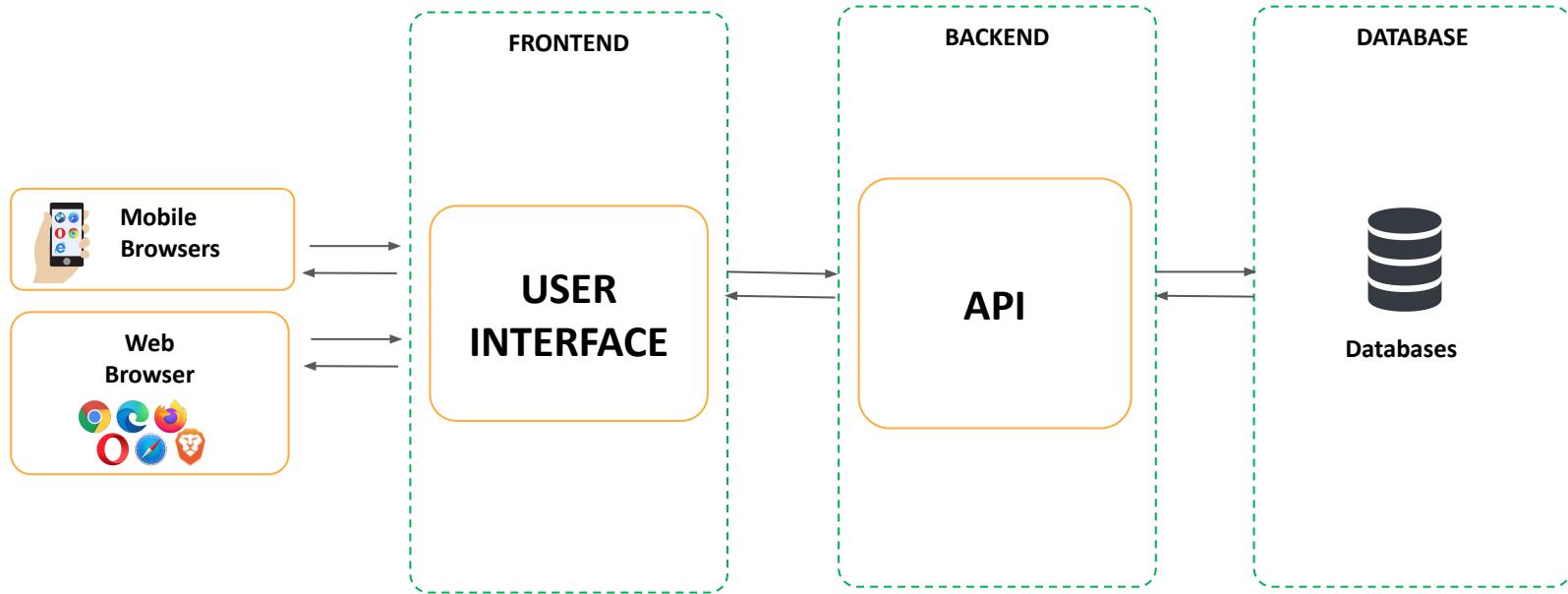
What's next? Quiz, Homework, ...



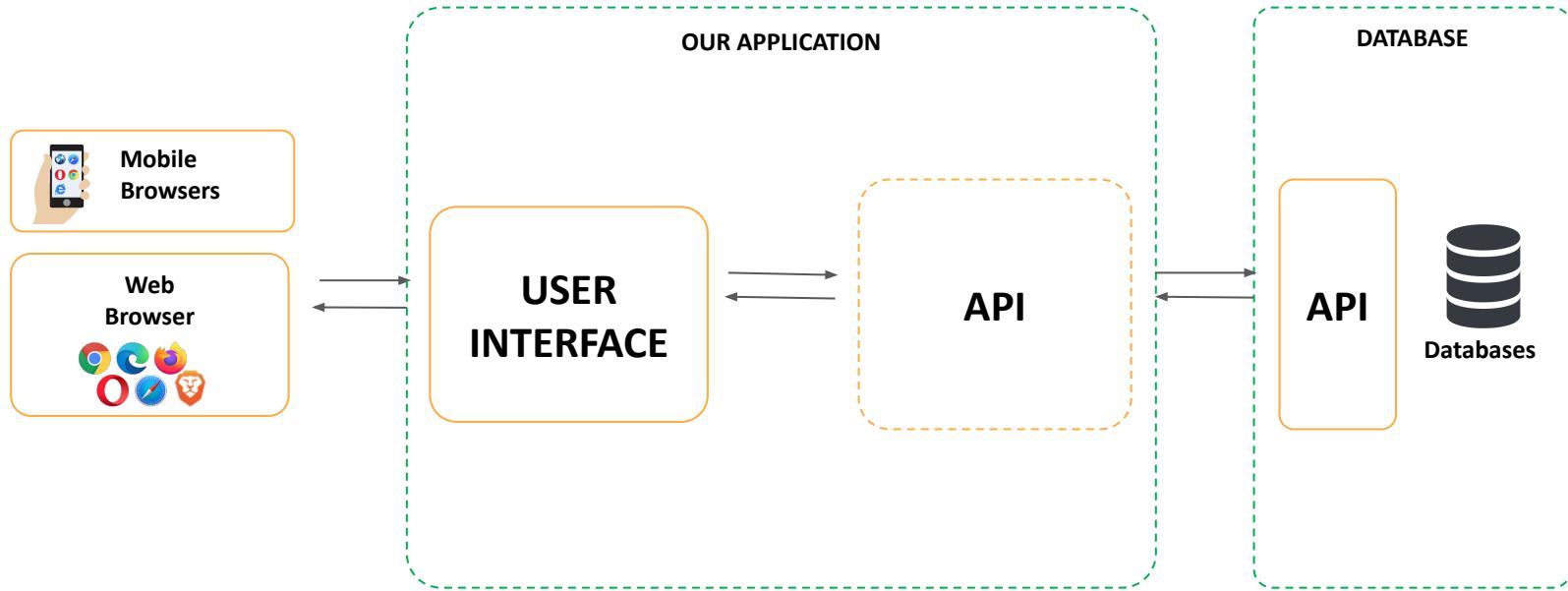
Agenda



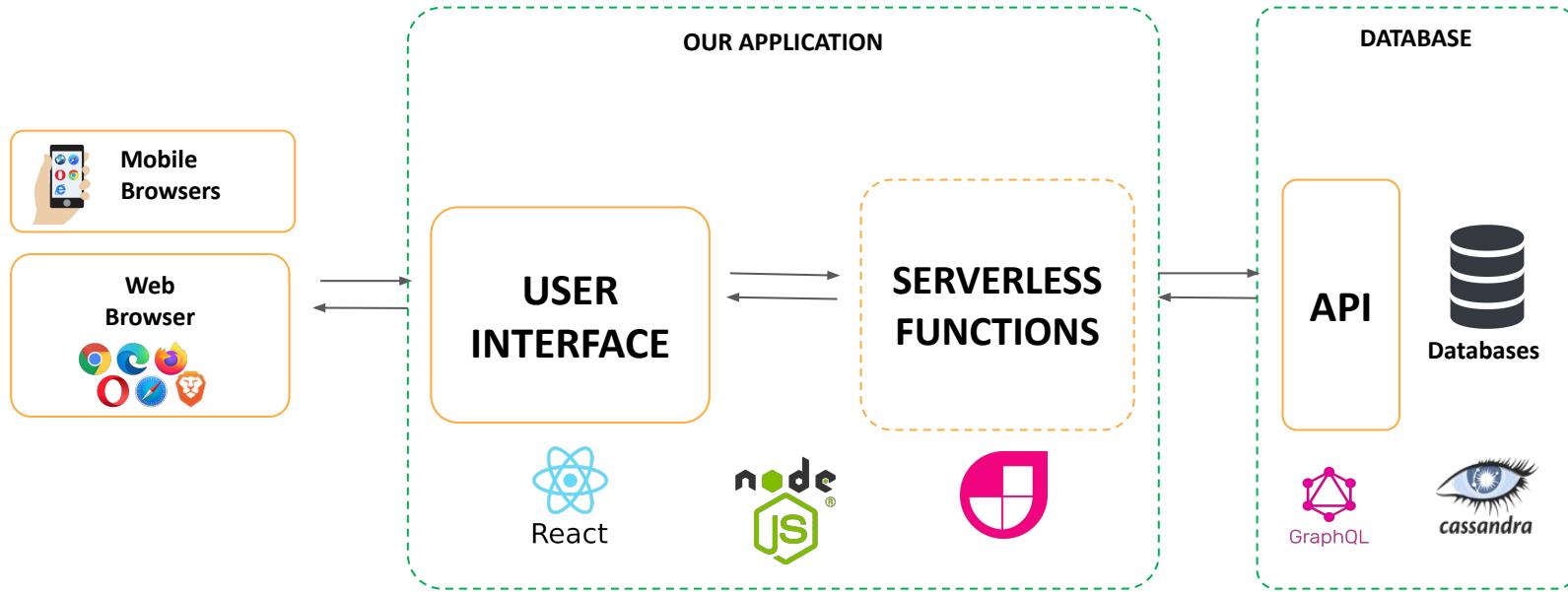




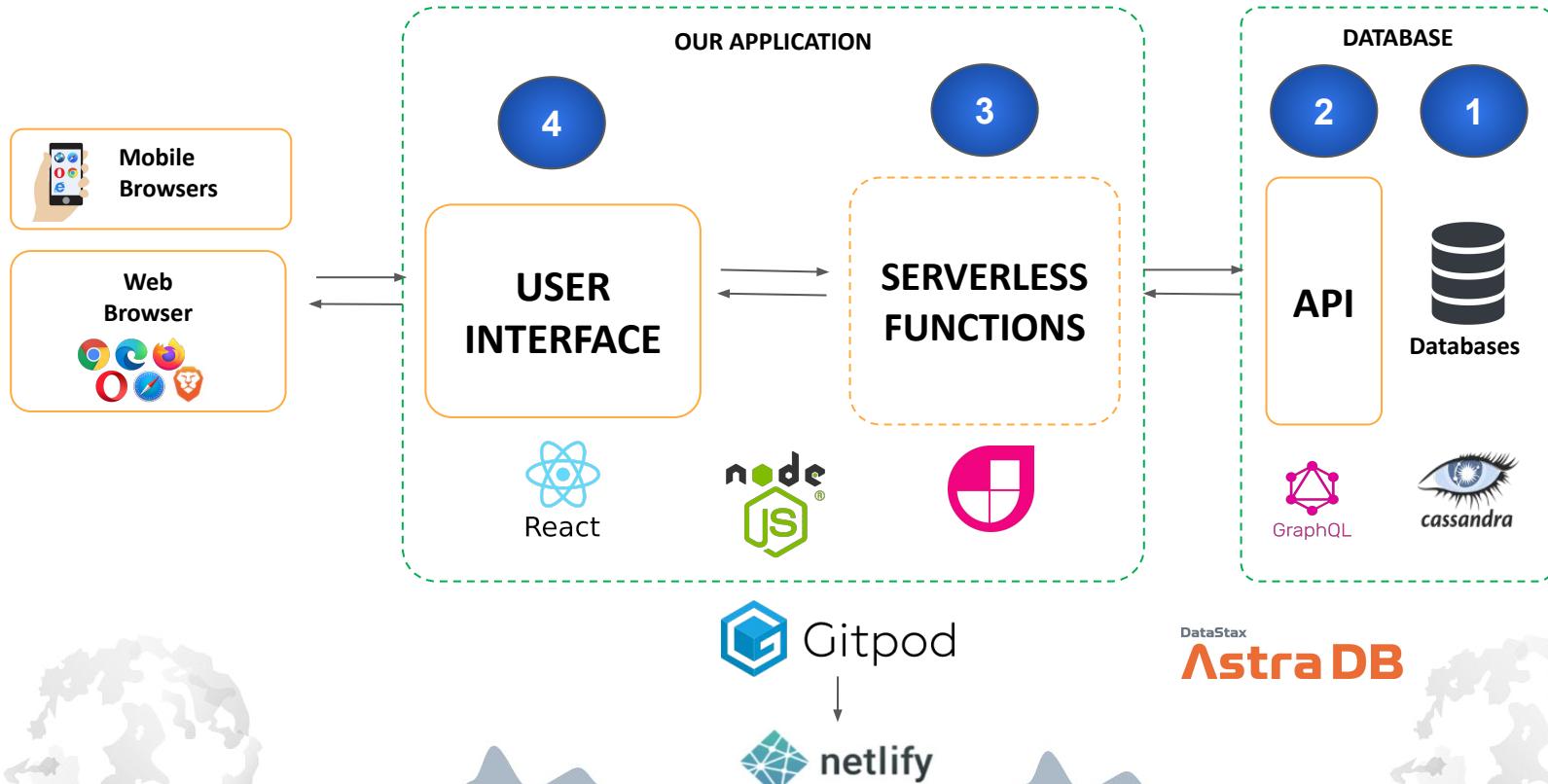
Building a Full-stack application



Building a Full-stack application



Building a Full-stack application



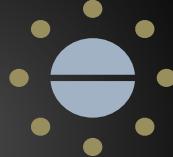
Agenda

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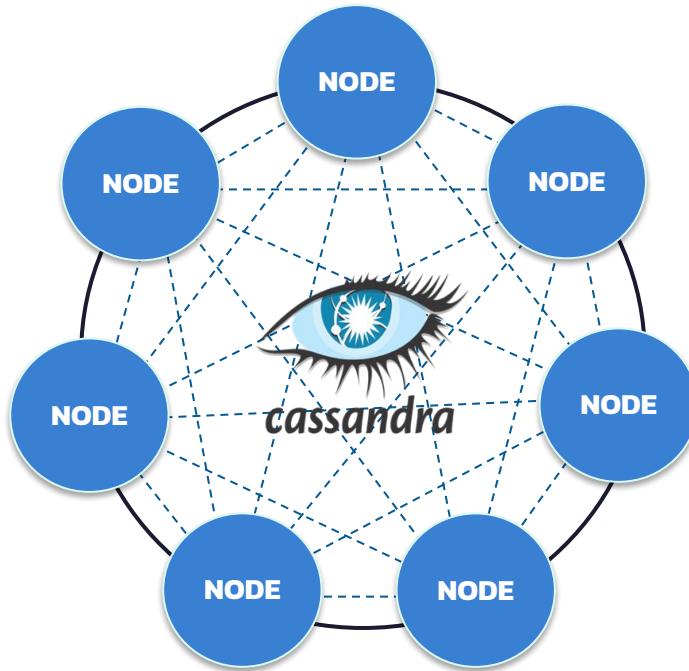


Database setup



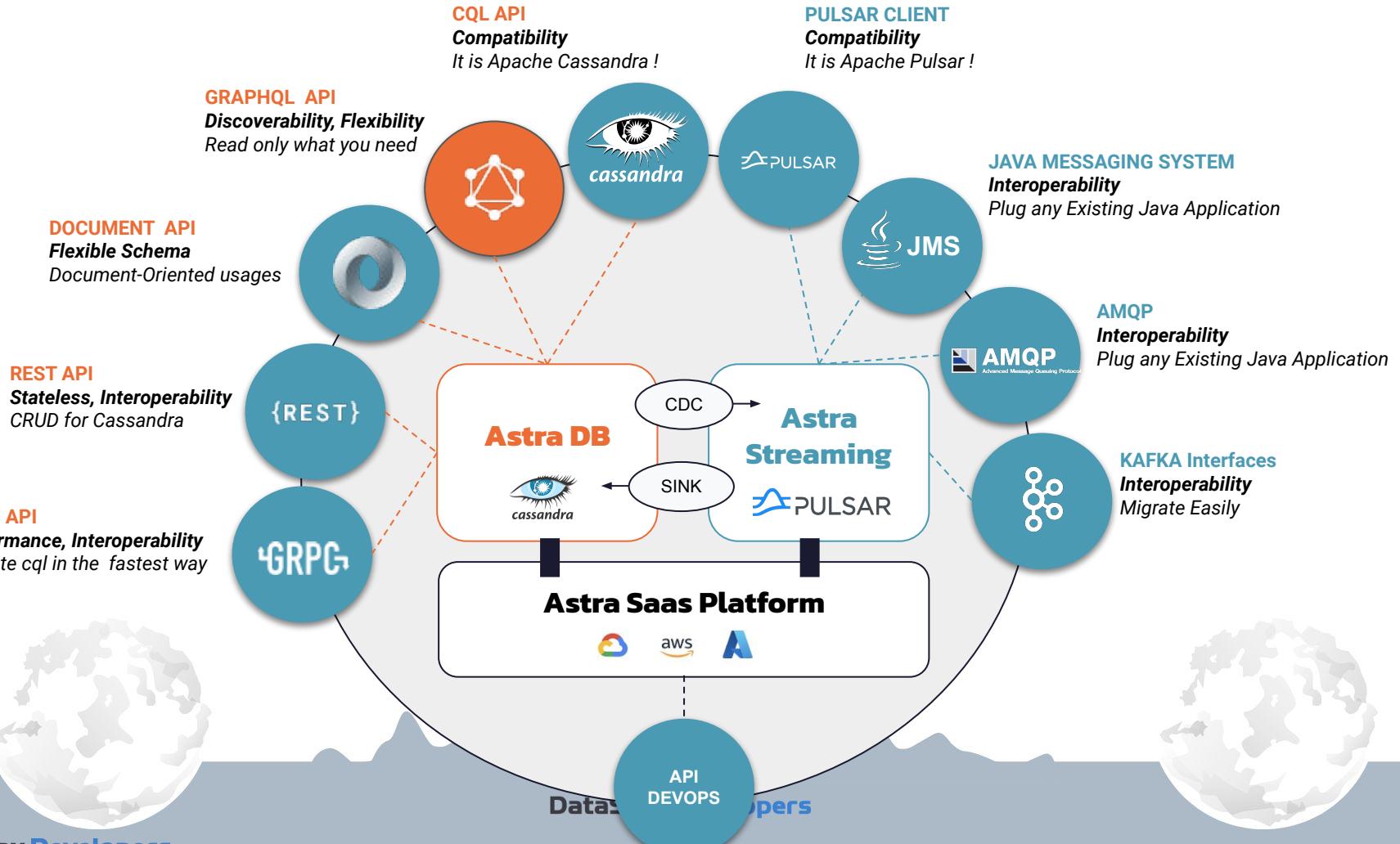
Data model & Astra DB

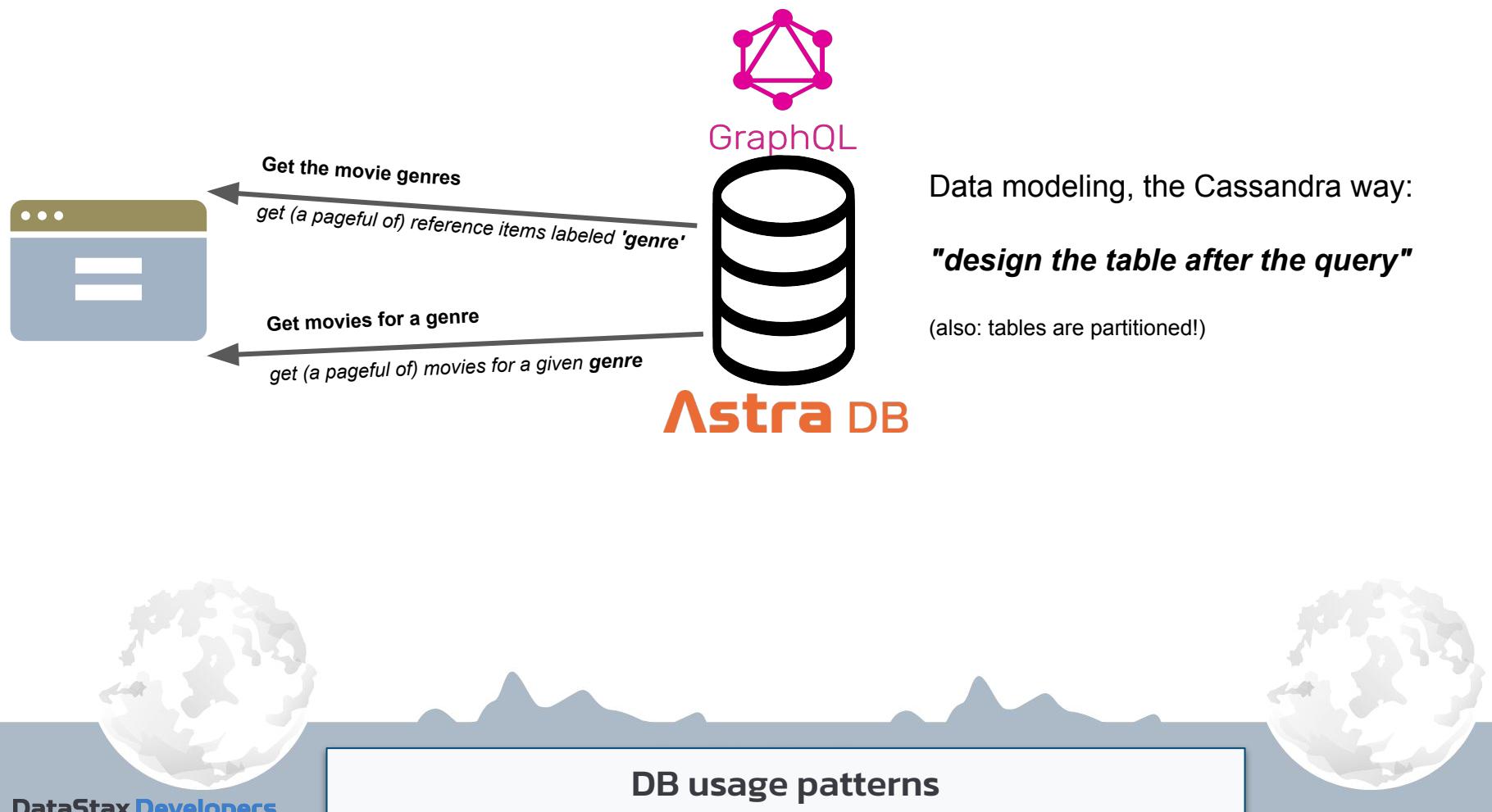


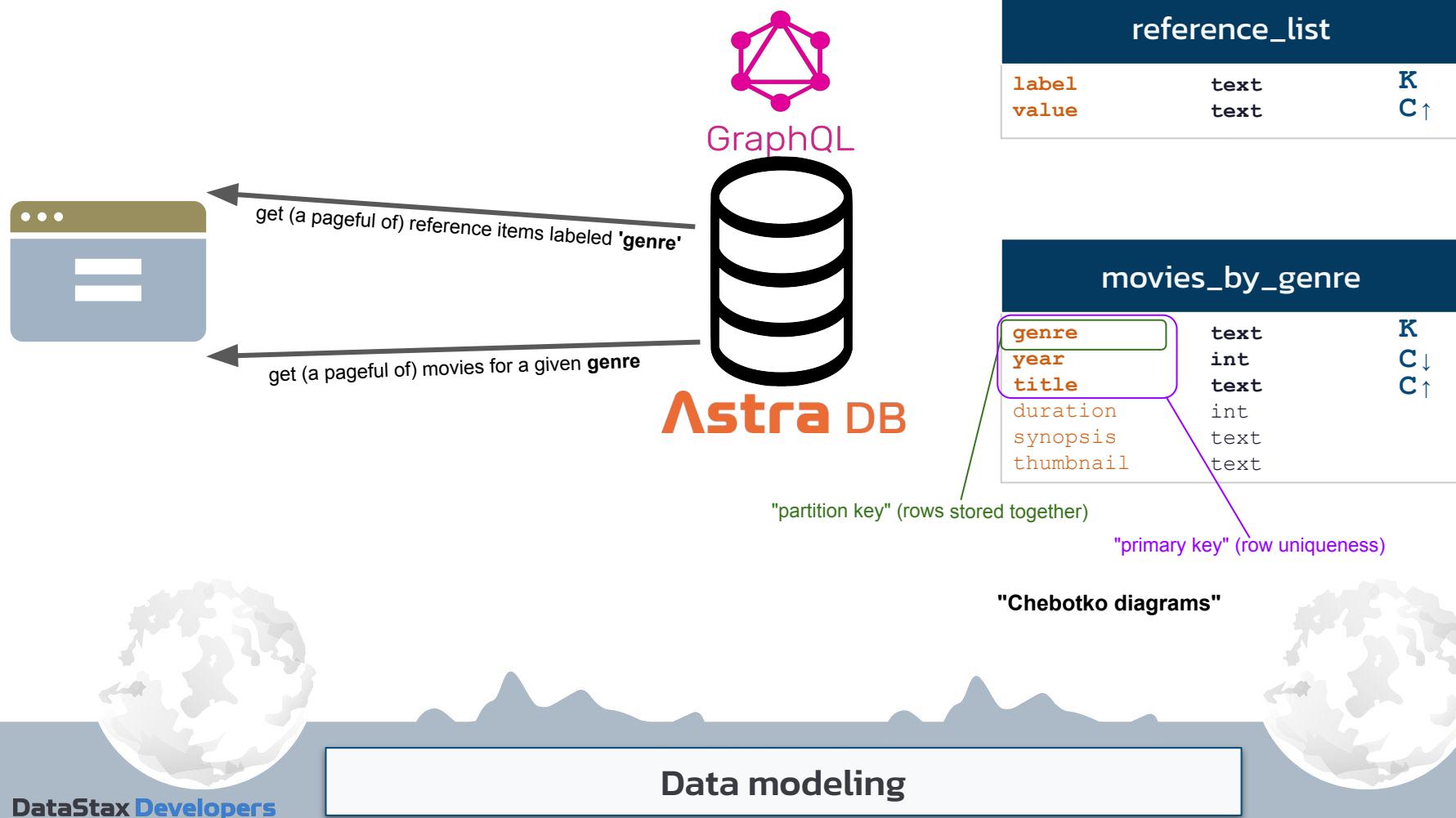


- Big Data Ready
- Read / Write Performance
- Linear Scalability
- Highest Availability
- Self-Healing and Automation
- Geographical Distribution
- Platform Agnostic
- Vendor Independent

Introduction to Apache Cassandra™







label	value
genre	Action
genre	Anime
genre	Award-Winning
genre	Children & Family
...	

reference_list

label	text	K
value	text	C↑

genre	year	title	duration
Comedies	2020	AJ and the Queen	142
Comedies	2020	All the Freckles in the World	148
Comedies	2020	Leslie Jones: Time Machine	140
Comedies	2020	Live Twice, Love Once	123
Comedies	2019	"Gabriel ""Fluffy"" Talesias: One Show Fits All"	134
...			
Reality TV	2019	Fastest Car	117
Reality TV	2019	Flinch	111
Reality TV	2019	Haunted	124
Reality TV	2019	Hyperdrive	144
Reality TV	2019	I'm with the Band: Nasty Cherry	119
Reality TV	2019	Jailbirds	140
...			

movies_by_genre

genre	text	K
year	int	C↓
title	text	C↑
duration	int	
synopsis	text	
thumbnail	text	

stored together)

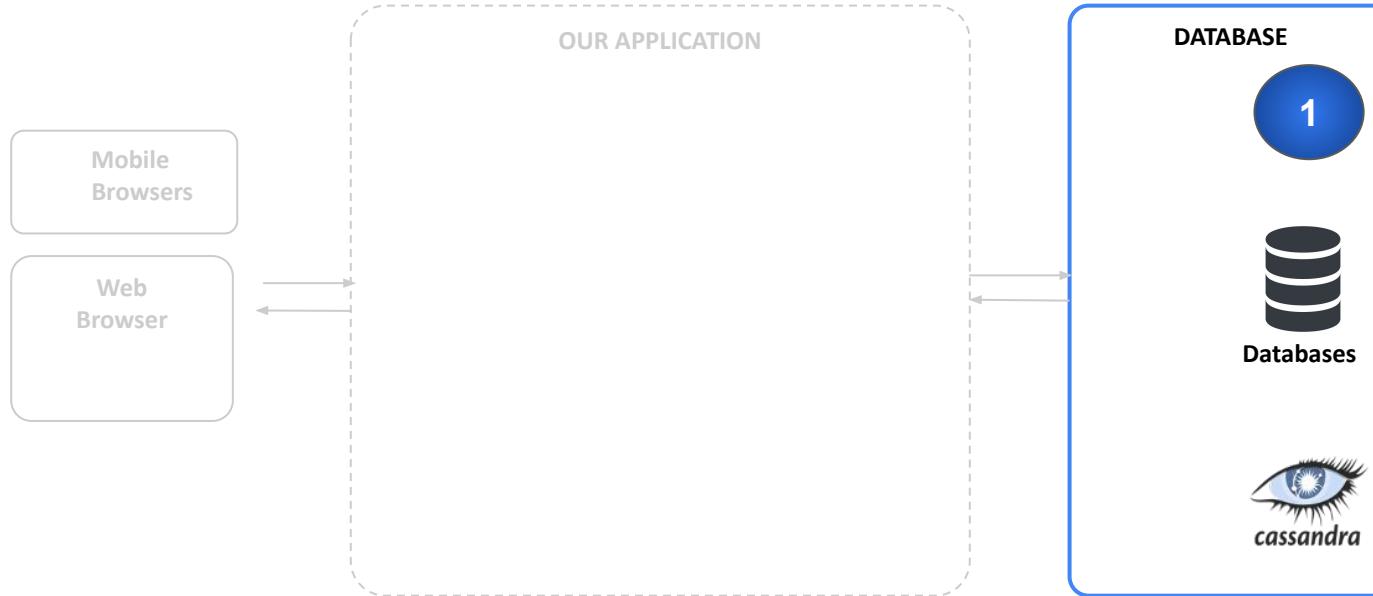
"primary key" (row uniqueness)

"Chebotko diagrams"

Table row examples

DataStax

Astra DB



Create your Astra DB

Github/datastaxdevs



Create Astra DB

DataStax

Astra DB

OUR APPLICATION



DATABASE

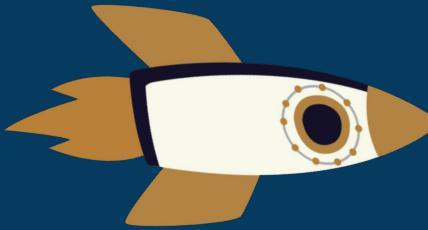


Databases



cassandra

Create your Astra DB



Hands-on (!github) DB SETUP

- ✓ Create (or resume) your Database
- ✓ Create a token

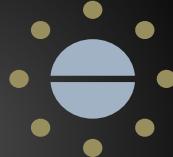


01



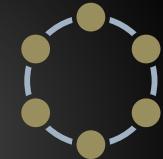
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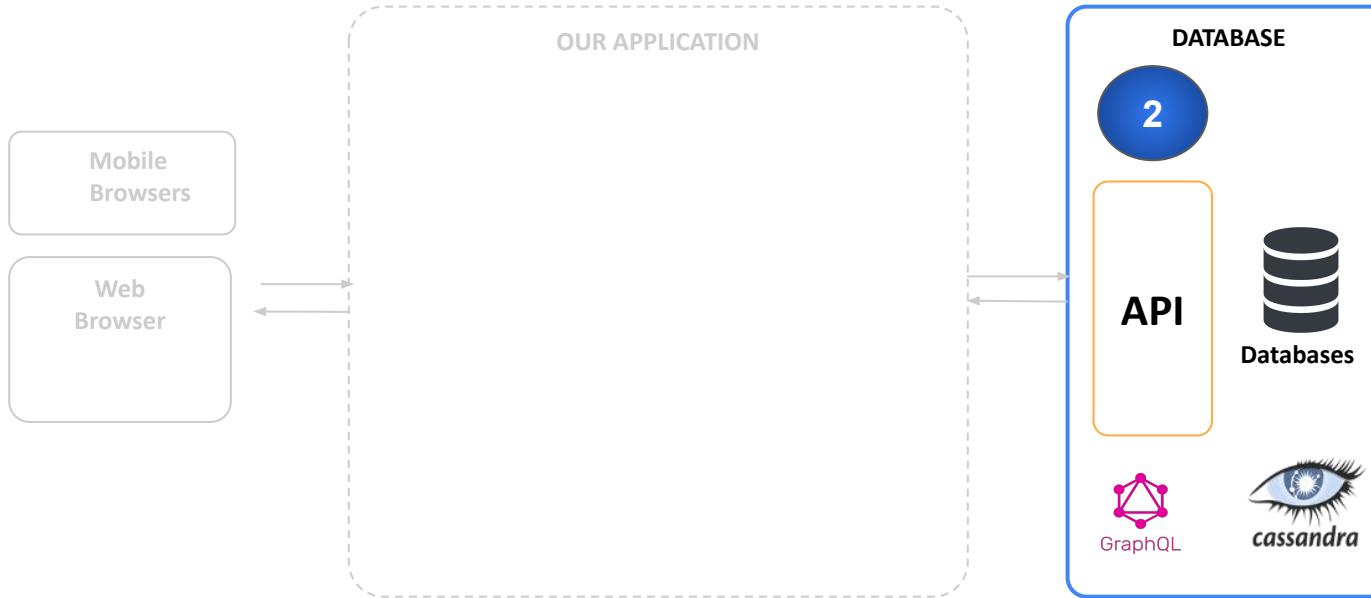




 **GraphQL**
GraphQL
Learn & Hands-on

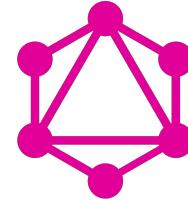
DataStax

Astra DB



GraphQL to access data

- 2012 Created by Facebook
 Used internally for mobile apps
- 2015 Facebook give talk at ReactJs Conf
- 2015 Facebook open sourced GraphQL
- 2016 Github announced move to GQL



GraphQL

Definition

GraphQL is an application programming interface (API) query language and server-side runtime that prioritises giving customers precisely the data they request.



Meet GraphQL





GraphQL

Describe your data

```
type Project {  
    name: String  
    tagline: String  
    contributors: [User]  
}
```

Ask for what you want

```
{  
    project(name: "GraphQL") {  
        tagline  
    }  
}
```

Get predictable results

```
{  
    "project": {  
        "tagline": "A query language for APIs"  
    }  
}
```



Why GraphQL ?



- ❖ Discoverability, introspection
- ❖ Declarative Data Fetching
- ❖ Schema stitching
- ❖ Customize responses
- ❖ Flexible versioning
- ❖ Match standards (Json | Http)



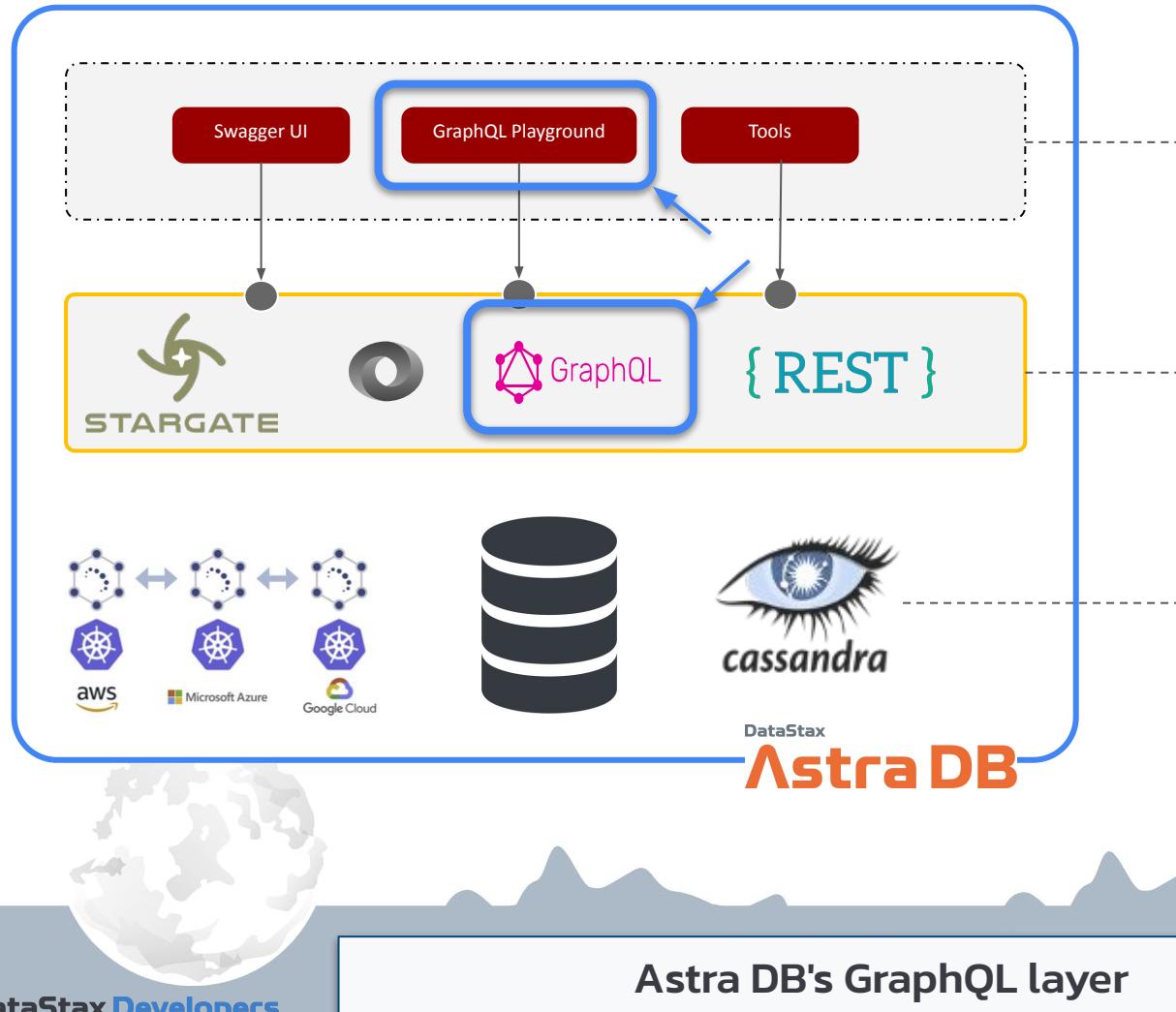
- ❖ Single endpoint (*versioning, monitoring, security*)
- ❖ Complex implementation (*tooling, still young*)
- ❖ Nice for customers, nasty for DB (*N+1 select*)
- ❖ Rate limiting is required
- ❖ Caching is hard (Apollo is a good solution here
<https://www.apollographql.com>) <- this is what Netflix uses



- ❖ BFF : Backend for frontend
- ❖ Service aggregation | composition, "federation" (*joins*)
- ❖ When bandwidth matters (*mobile phones*)



GraphQL S.W.O.T. analysis



User Interface

Web Utils

OSS Stargate.io

Gateway



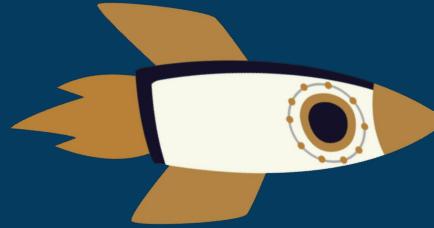
STARGATE

Apache Cassandra



cassandra

Astra DB's GraphQL layer



Hands-on (!github)

DATA SETUP

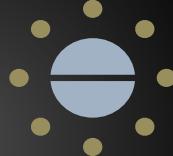
- ✓ Schema with GraphQL Playground
- ✓ Read/write data with Playground
- ✓ Bulk-import data into DB

01



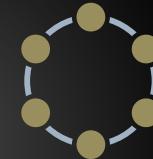
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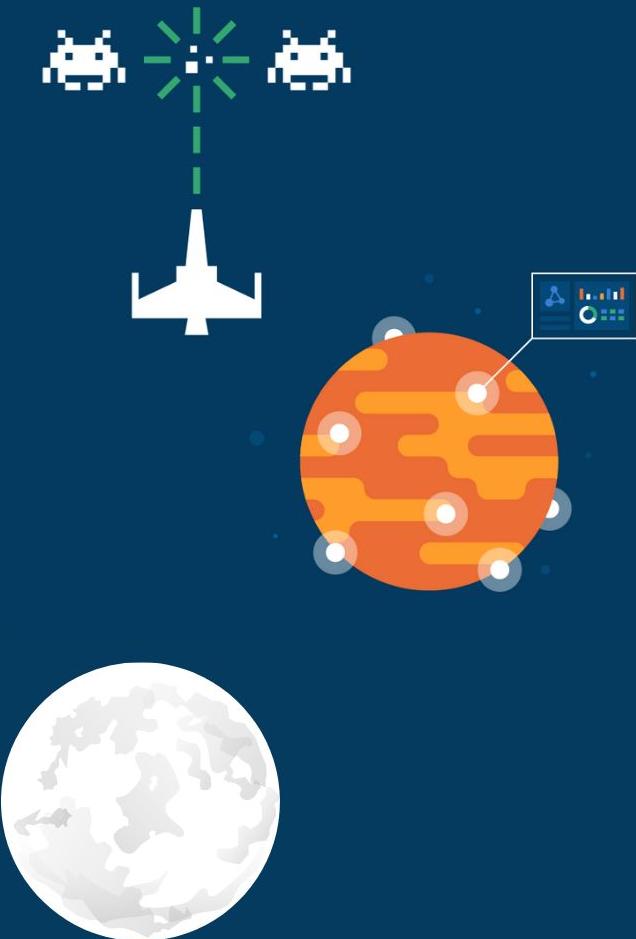


What's next? Quiz, Homework, ...



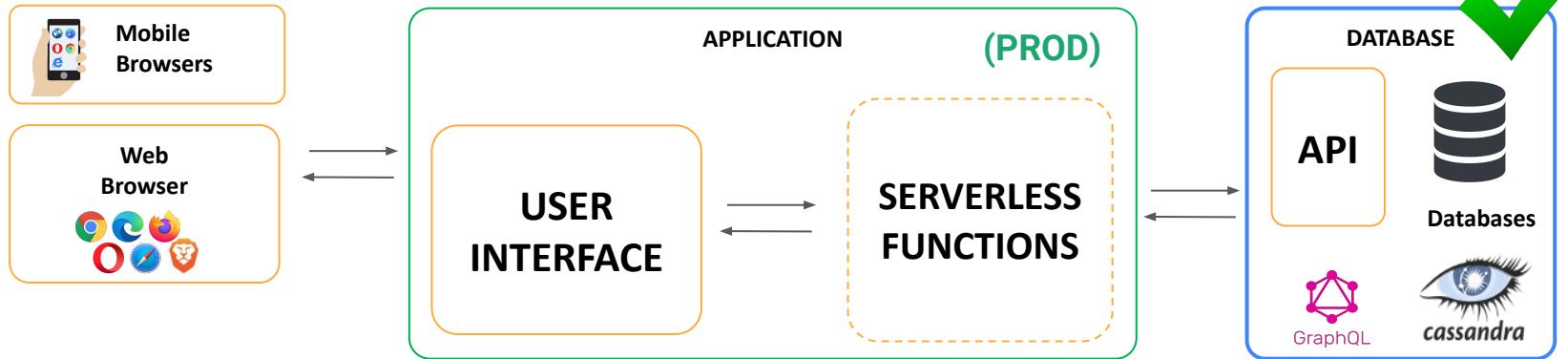
Agenda





Serverless + client

Run the application



Desired prod result





Mobile
Browsers



Web
Browser



netlify

APPLICATION

(PROD)

USER
INTERFACE

SERVERLESS
FUNCTIONS

DATABASE

API



Databases



GraphQL

cassandra



Code + Setup + Run Locally



Open in Gitpod



OUR APPLICATION

(DEV)



A screenshot of a Gitpod terminal window. The code shown includes imports from react, react-native, and other components like Header, ChatMessage, and App. It also shows a node.js file named "index.js" with a simple "const App = () =>" definition.

```
1 import React from 'react';
2 import { Header, ChatMessage } from 'react-native';
3 import { createStackNavigator } from 'react-navigation';
4 import { createAppContainer } from 'react-navigation-drawer';
5 import { createBottomTabNavigator } from 'react-navigation-tabs';
6 import { createMaterialTopTabNavigator } from 'react-navigation-material-top-tabs';
7 import { createMaterialBottomTabNavigator } from 'react-navigation-material-bottom-tabs';
8 import { createSwitchNavigator } from 'react-navigation-switch';
9 import { App } from './src';
10
11 const App = () =>
12   <Provider store={store}>
13     <AppContainer>
14       <SwitchNavigator>
15         <StackNavigator>
16           <CreateStackNavigator>
17             <CreateStackNavigator>
18             <CreateStackNavigator>
19             <CreateStackNavigator>
20             <CreateStackNavigator>
21             <CreateStackNavigator>
22             <CreateStackNavigator>
23             <CreateStackNavigator>
24           </StackNavigator>
25         </StackNavigator>
26       </SwitchNavigator>
27     </AppContainer>
28   </Provider>
29 </App>
```

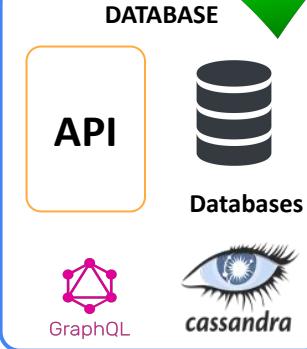
GitHub/datastaxdevs



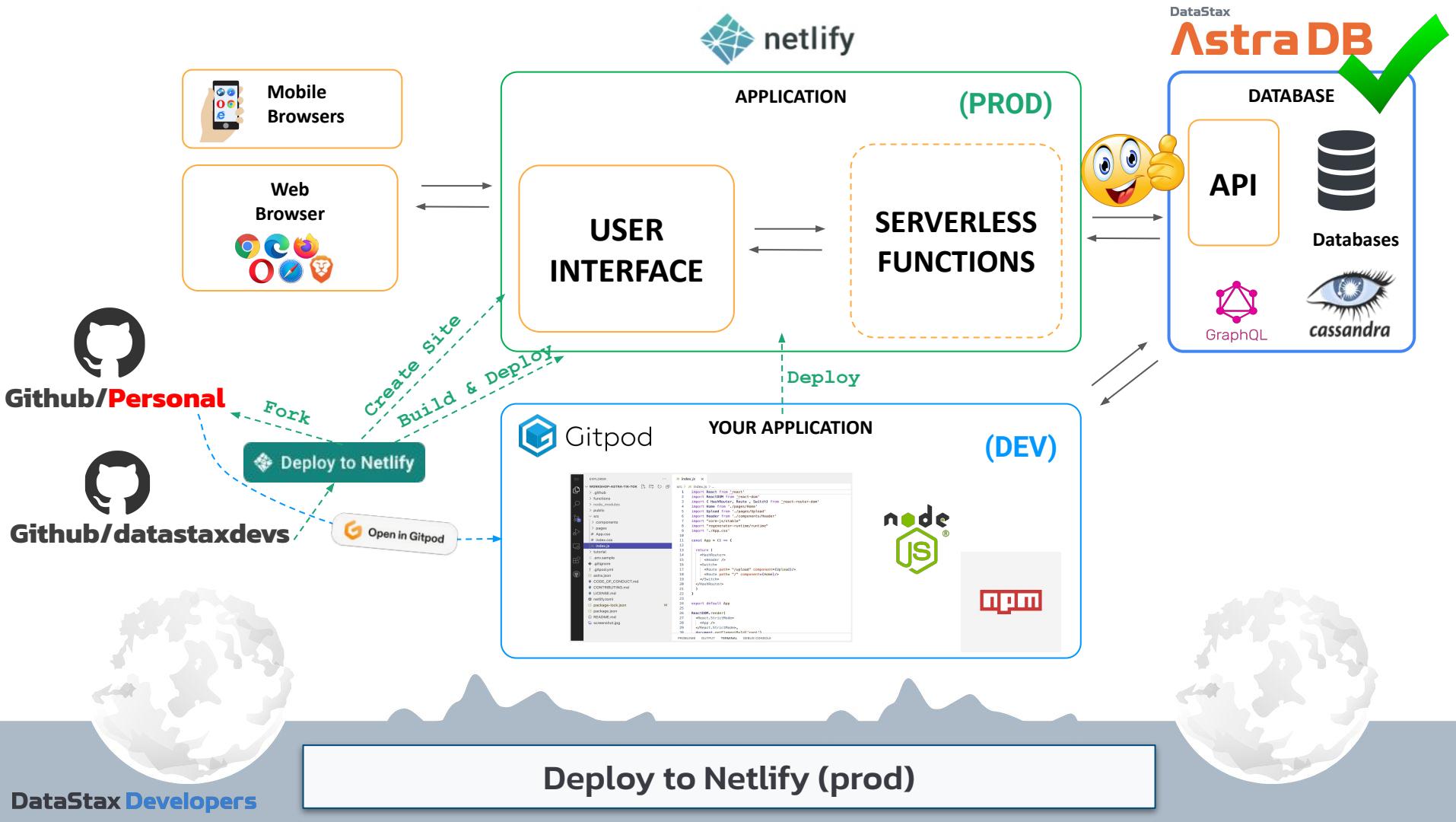
"just" dev run on Gitpod

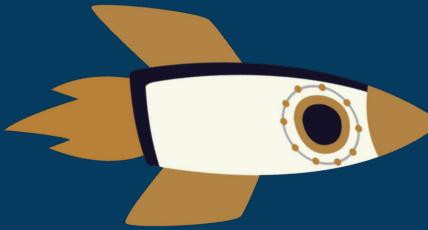
DataStax

Astra DB



DataStax Developers





Hands-on (!github)

RUN APP

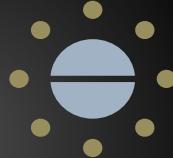
- ✓ Run app on Gitpod (dev mode)
- ✓ Inspect serverless + client code
- ✓ *(Deploy in prod to Netlify)*

01



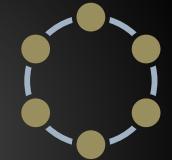
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What's next? Quiz, Homework, ...



Agenda



What's next?



Quiz, Homework, ...



- **Homework**

- Complete hands-on by adding YOUR OWN movie to the DB
- Show the NEW movie in the running app (Github is fine)
- Submit screenshot to us ... and wait for your **badge!**

- Optionally

- Deploy to Netlify!
- Client code deep dive with Ania's video

- Do reach us for anything: dtsx.io/discord !



All info on Github – !homework



Assignment and Badge



DataStax Developers

workshop-chat

<https://www.youtube.com/watch?v=MuwT5xxFVVI> - Subscribe to mailing list: [http...](http://)

Rechercher

PRESENTER — 1
David Jones-Gilardi

HELPER — 7
012345
AaronP
B1nary
Chelsea Navo
Jeremy Hanna
John Sanda
Patrick_McFadin

EN LIGNE — 560
-samu-
6304-42JB
Aahlya
Abdurahim
abhi3pathi
Abhiis.s
Abhineet
Abirsh

Événements
moderator-only
. WELCOME
start-here
code-of-conduct
introductions
upcoming-events
useful-resources
memes
your-ideas
@the-stage

WORKSHOPS
workshop-chat
workshop-feedback
workshop-materials
upcoming-workshops

ASTRA DB
getting-started
astra-apis
astra-development
sample-applications

APACHE CASSANDRA
Cedrick Lun...

RIGGITYREKT Hier à 21:14
I have a 5 node datacenter, 4 nodes are on dse version 5.1.20, one is on dse5.0.15. I am doing some mixed version testing for a class and the one node that is 5.0.15 is coming up as an analytics workload. I dont have /etc/default/dse, instead I am using /etc/init.d/dse-cassandra.
how do I make that node start in cassandra workload, not in analytics?

RIGGITYREKT Hier à 23:39
Okay I found out my issue, when i started DSE 5.0.15 it had endpointsnitch set to DseSimpleSnitch, the rest of my cluster is using PropertyFileSnitch, when i change it to PropertyFileSnitch, it still uses the simple snitch config. looking at the docs i see there is a way to go to GossipingPropertyFileSnitch, but i need the property file one. I can wipe this dbs, do anything with this node to get this done. how do i fix this?
@here

Erick Ramirez Aujourd'hui à 02:19
mixed versions isn't supported and you're guaranteed to run into weird issues that will cause further problems down the track

Cedrick Lunen Aujourd'hui à 09:01
When you start a node you have parameters -k for analytics, -g for graph and -s for search. To remove analytics check and remove -k

Envoyer un message dans #workshop-chat

!discord

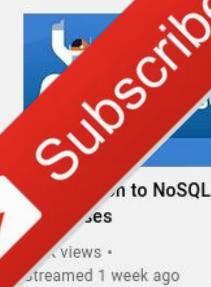
dtsx.io/discord



DataStax Developers Discord (18k+)



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How to create an Authentication Token in...

37 views • 4 weeks ago

How to use the Data Loader in Astra DB

62 views • 4 weeks ago

Astra DB Sample App Gallery

36 views • 4 weeks ago

How to use Secure Connect in Astra DB

42 views • 4 weeks ago

Cassandra Day India: CL Room (Workshops)

2.4K views • Streamed 4 weeks ago

Cassandra Day India: RF Room (Talks)

1.3K views • Streamed 1 month ago

Thank You!

