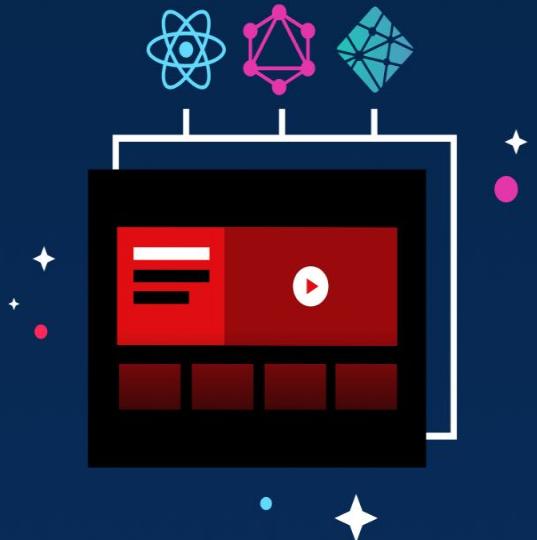


LIVE HANDS-ON WORKSHOP

Build a Netflix clone with GraphQL and React

January 04, Wednesday

8am PT | 4pm GMT | 5pm CET | 9.30pm IST

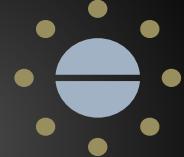


DataStax

01

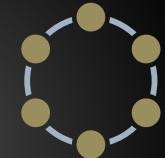


Housekeeping Live and Hands-on



02

Our Goal Component overview



03



GraphQL Learn & Hands-On

04



Serverless + Client Run the application



05

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



Agenda





Housekeeping

Live and Hands-on



Livestream: youtube.com/DataStaxDevs



YouTube

Agenda

01 PetClinic Architecture & Use Case	02 DataStax Astra	03 Cassandra Database The Art of Data Modelling
04 Spring Reactive Boot and WebFlux	05 User Interface Angular	06 Reactive Drivers Reactive vs Async
Game & Resources		

DataStax Developers

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



YouTube
(with nightbot)



Discord
(#workshop-chat)

!discord

YouTube Developers

#workshop-chat

Games and quizzes: menti.com



Mentimeter

Mentimeter

!menti

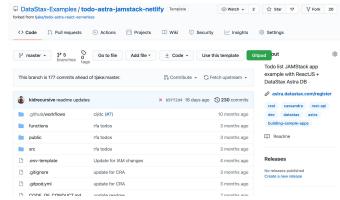


Live Sessions

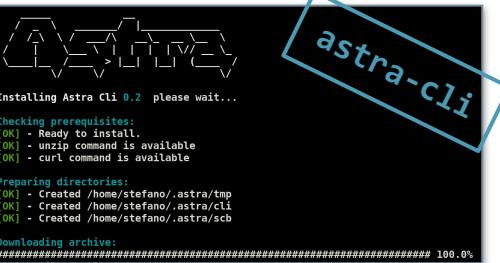
Live and interactive

Nothing to install !

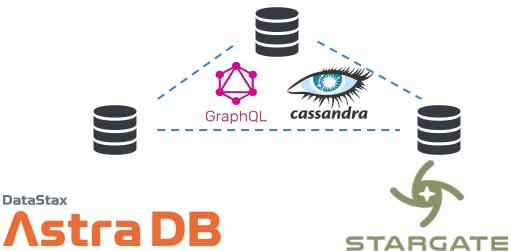
Code + Slides + Tutorial



Command-line database management



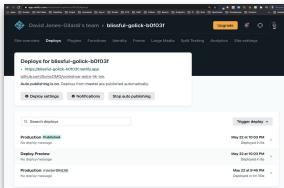
Database + GraphQL + Playground



DataStax
Astra DB

STARGATE

Run + Deploy + Host



Hands-On Housekeeping



Get your badge for today

01



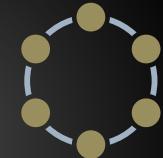
Housekeeping Live and Hands-on

02



Our Goal Overall architecture

03



Database Setup Data model & Astra DB

04



GraphQL Learn & Hands-On

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Serverless + Client Run the application

06

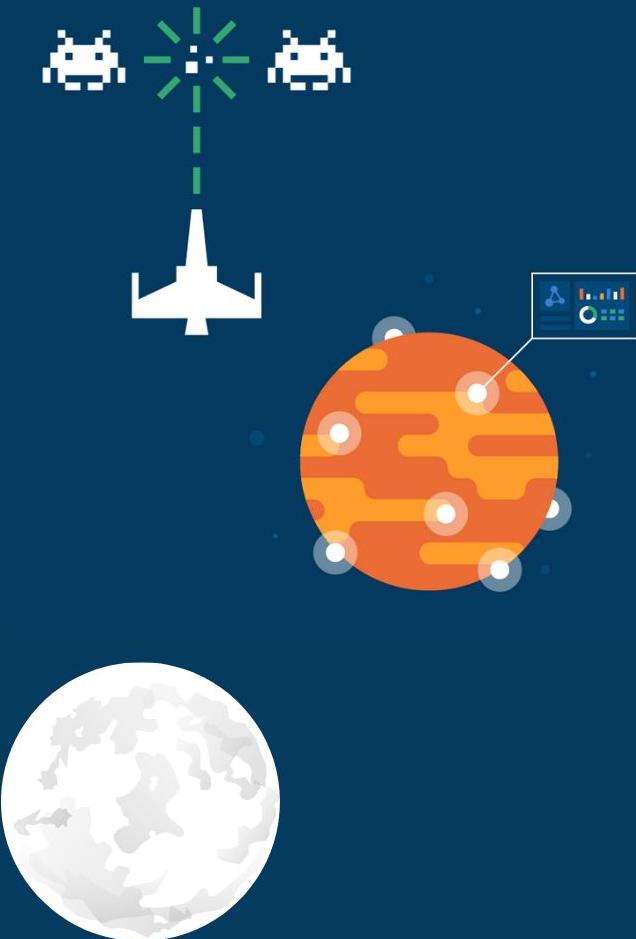


What's next? Quiz, Homework, ...



Agenda







https://deluxe-daffodil-4ea497.netlify.app

Deployed to a public URL

When a civil war ravages the UK a scientist awakens in a futuristic cell and is tortured by her captor for information she claims she doesn't possess.

Play More info

Genres: pagination + infinite scroll

Movies: pagination

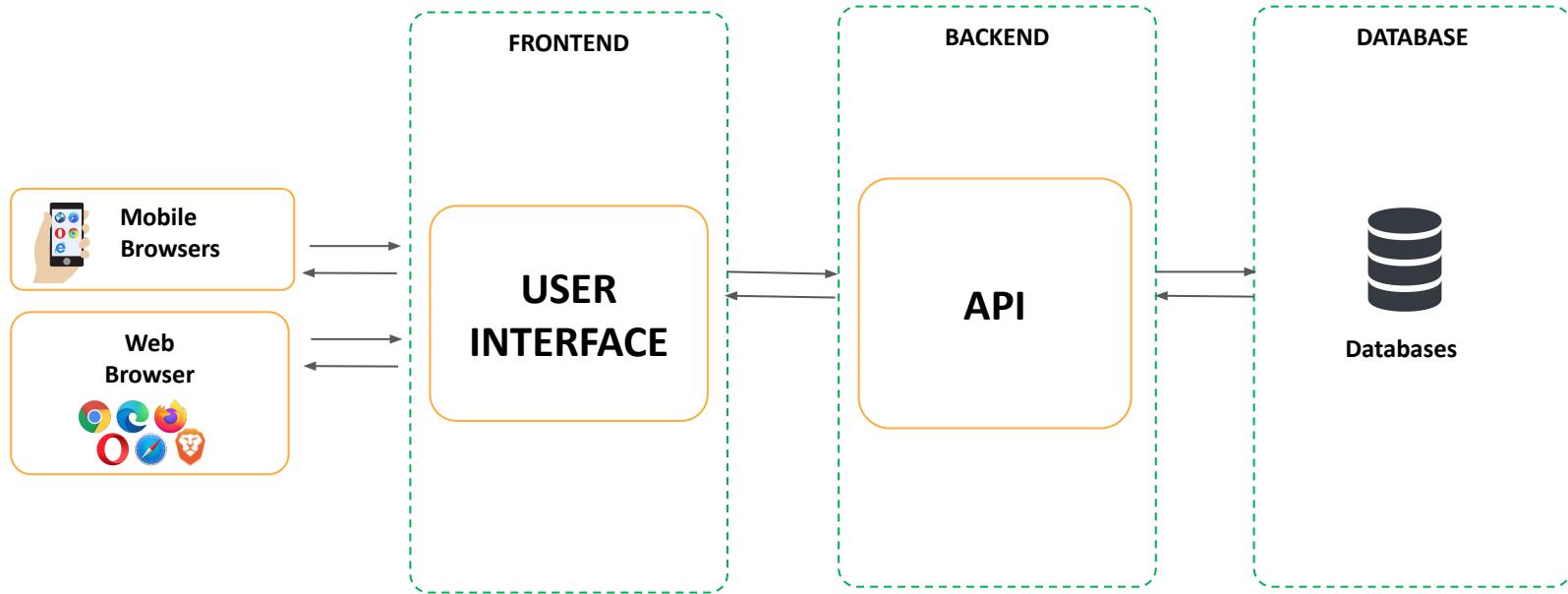
A screenshot of a movie recommendation interface. At the top, there's a main movie poster with a woman in a pink dress. Below it, a section titled "Genres: pagination + infinite scroll" contains a scrollable list of genre names like Action, Crime, Thriller, and Romance. To the right, a section titled "Movies: pagination" shows a scrollable list of movie thumbnails. A large pink arrow points down from the "Genres" section towards the "Movies" section, indicating the integration of multiple data sources.



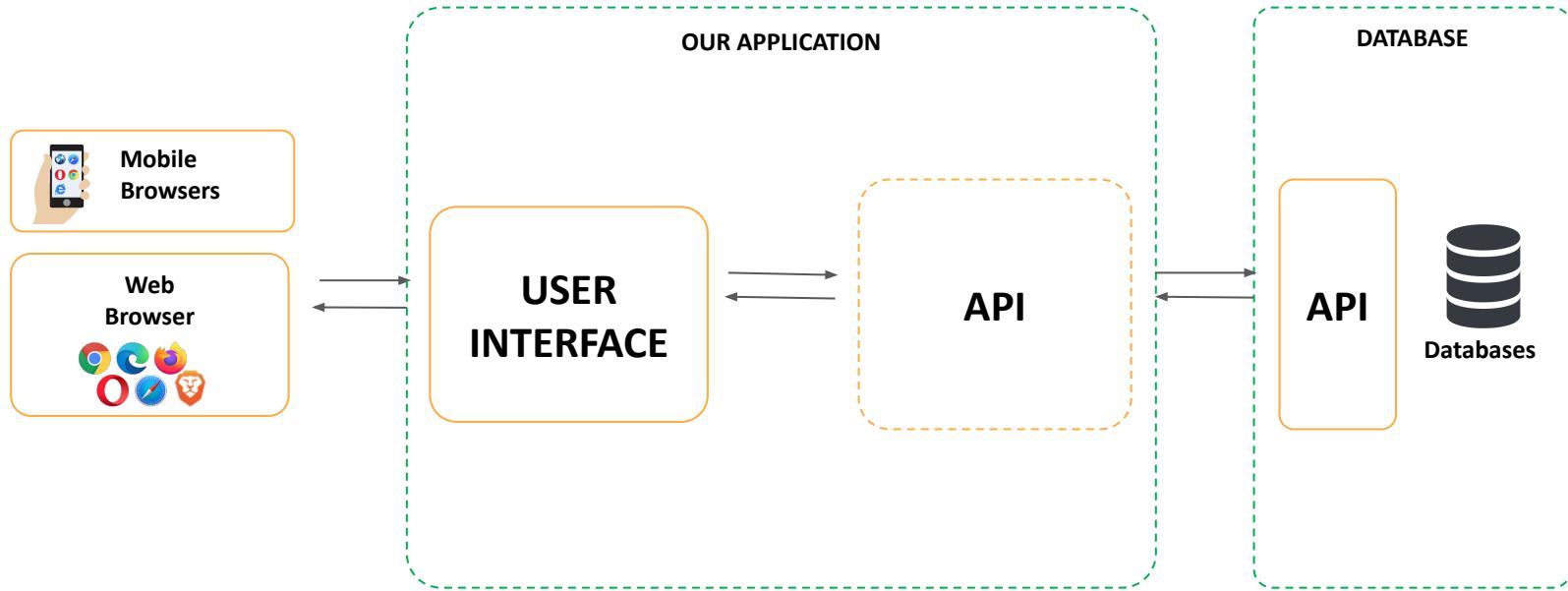
Data
actually
from a DB



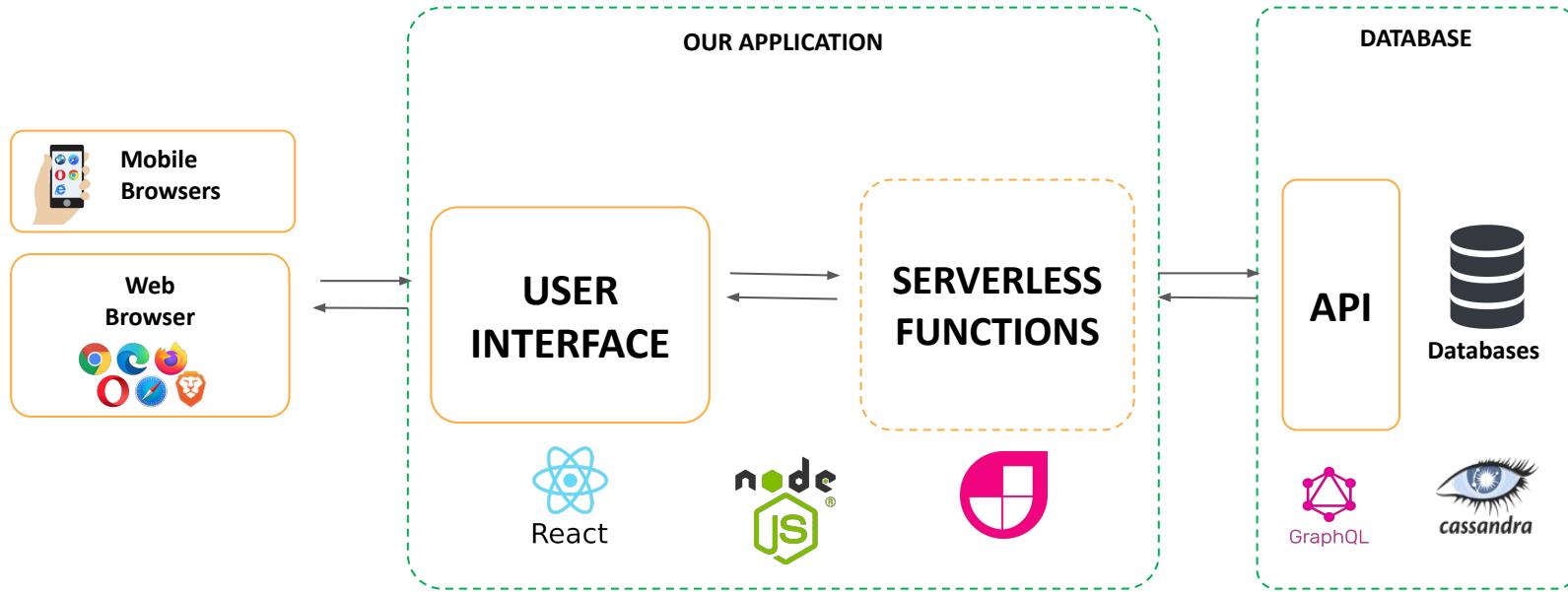
What we want



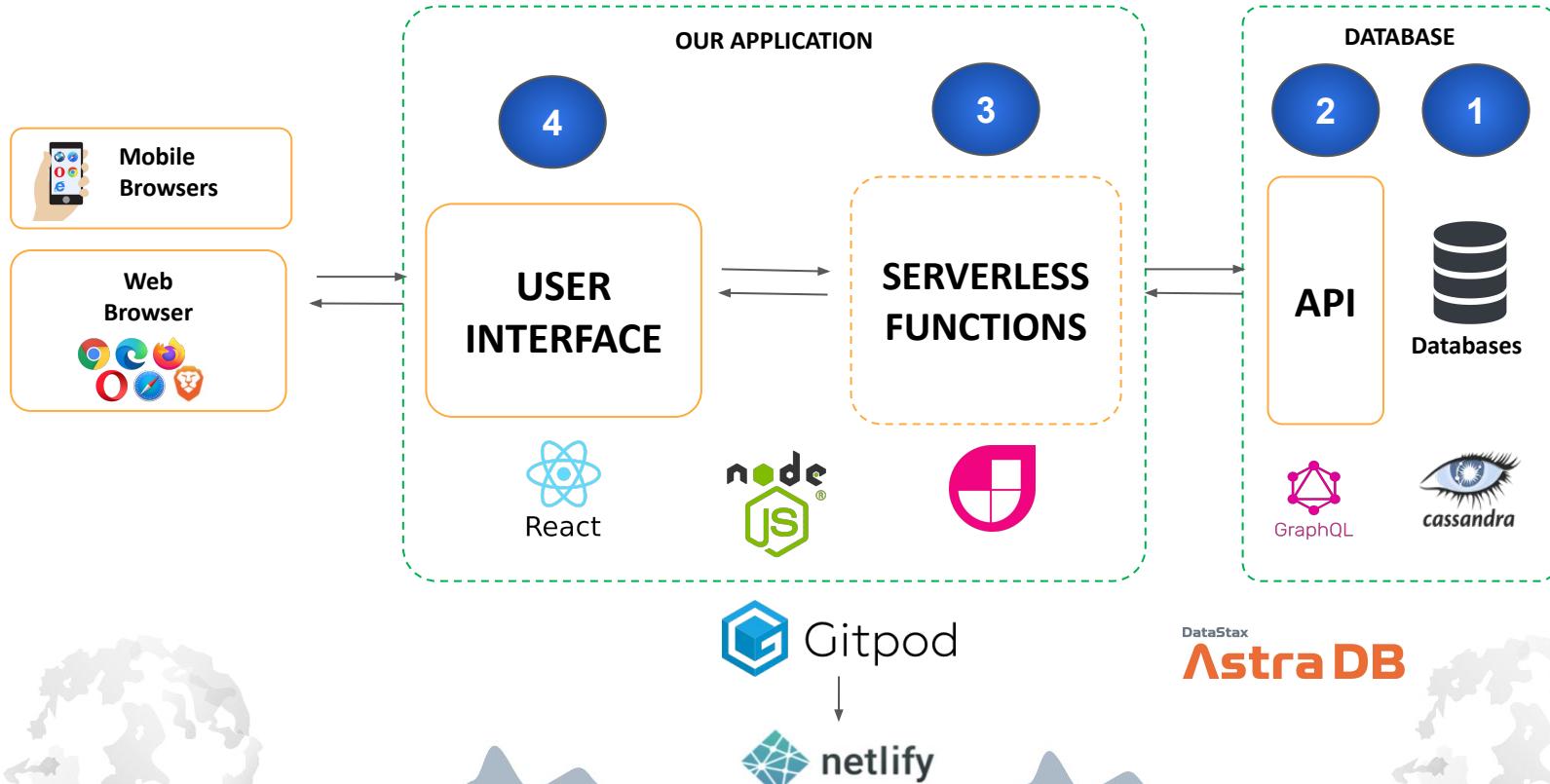
Building a Full-stack application



Building a Full-stack application



Building a Full-stack application



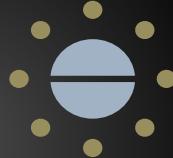
Building a Full-stack application

01



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



Agenda

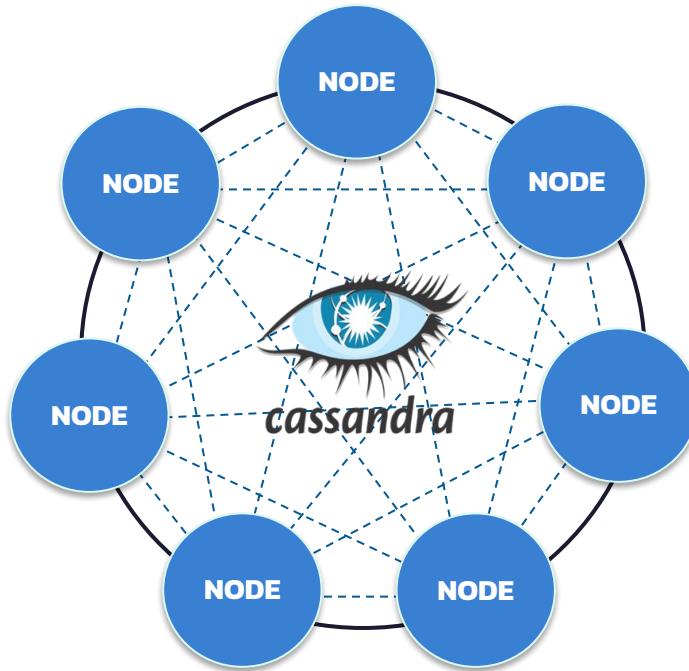


Database setup



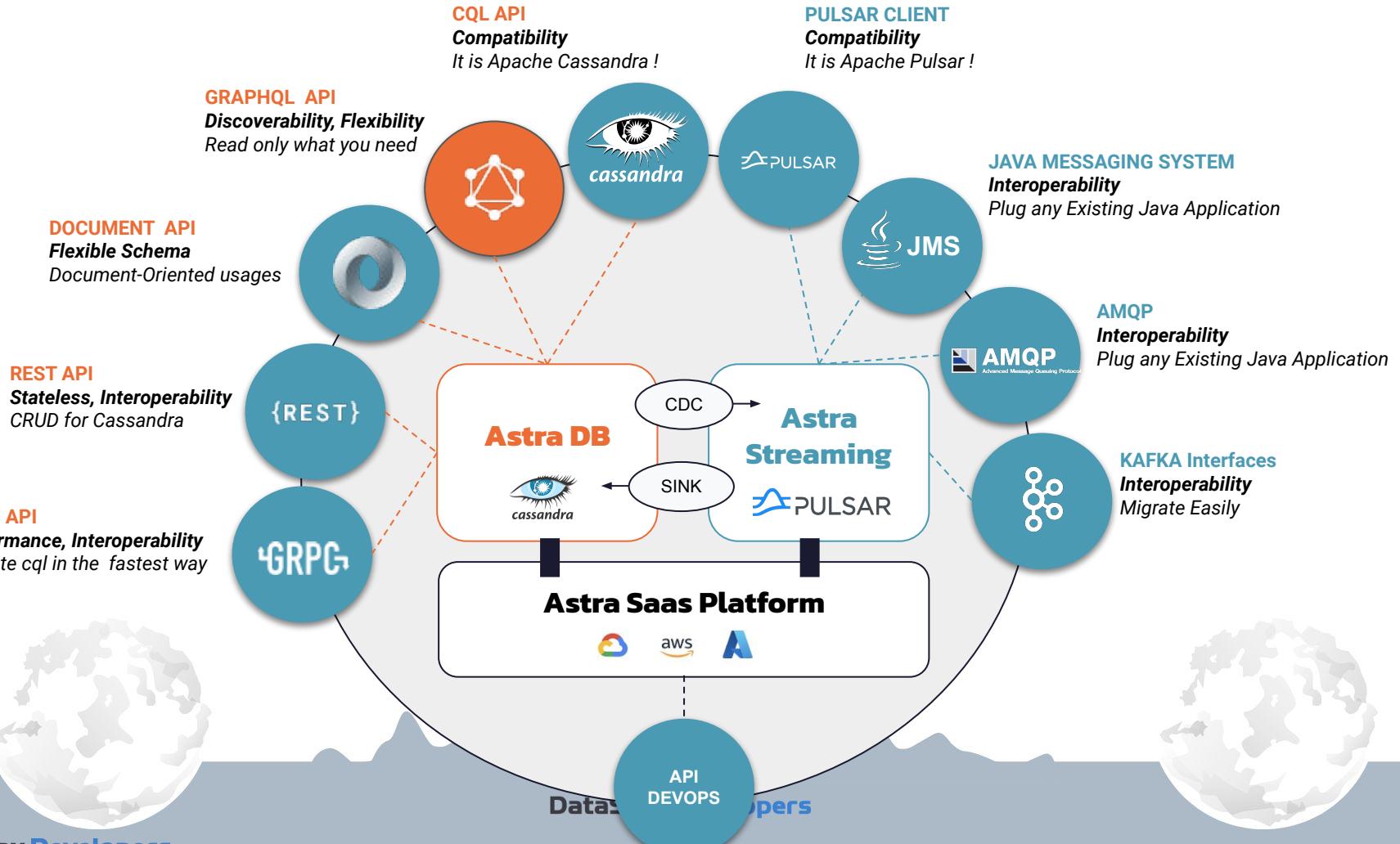
Data model & Astra DB





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

Introduction to Apache Cassandra™



DataStax

Astra DB



Create your Astra DB

Github/datastaxdevs



Create Astra DB

DataStax

Astra DB

OUR APPLICATION



DATABASE

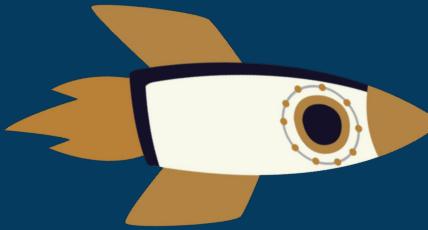


Databases



cassandra

Create your Astra DB



Hands-on (!github)

1. DB SETUP

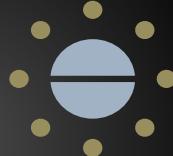
- ✓ Create (or resume) your Database
- ✓ Create a token

01



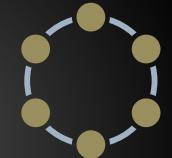
Housekeeping Live and Hands-on

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



Agenda

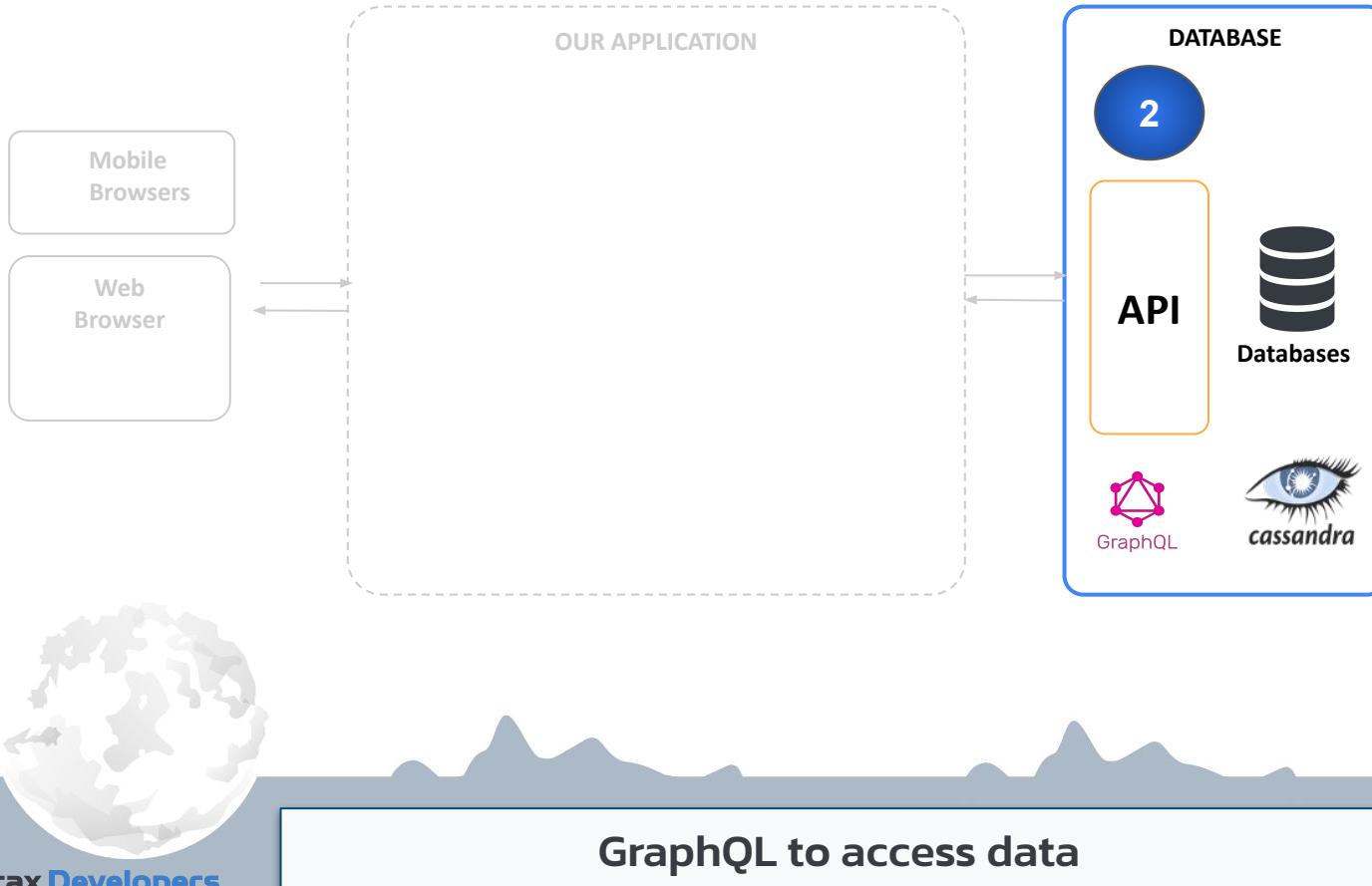




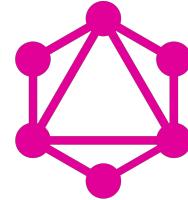
 **GraphQL**
GraphQL
Learn & Hands-on

DataStax

Astra DB



- 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

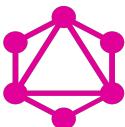
(see Apollo, <https://www.apollographql.com>, used e.g. at Netflix)



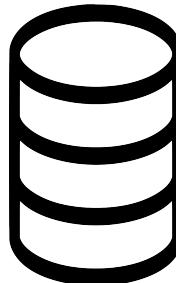
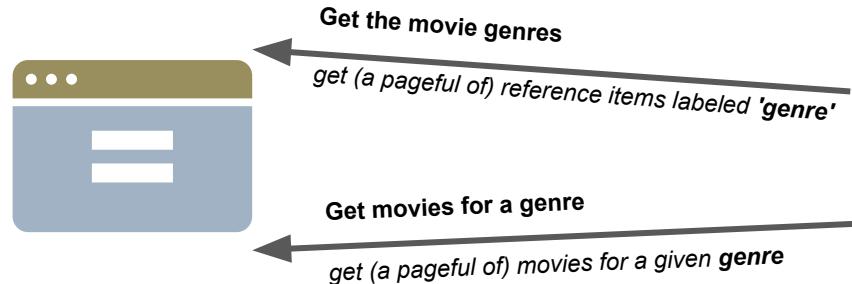
- ❖ BFF : Backend for frontend
- ❖ Aggregation | composition, "federation" (*joins and more*)
- ❖ When bandwidth matters (*mobile phones*)



GraphQL S.W.O.T. analysis



GraphQL



Data modeling, the Cassandra way:

"design the table after the query"

(also: tables are partitioned!)



DB usage patterns



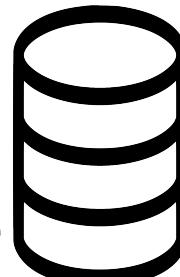


GraphQL



get (a pageful of) reference items labeled 'genre'

get (a pageful of) movies for a given genre



Astra DB

reference_list		
label	text	K
value		C↑

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

"partition key" (rows stored together)

"primary key" (row uniqueness)

"Chebotko diagrams"



Data modeling

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

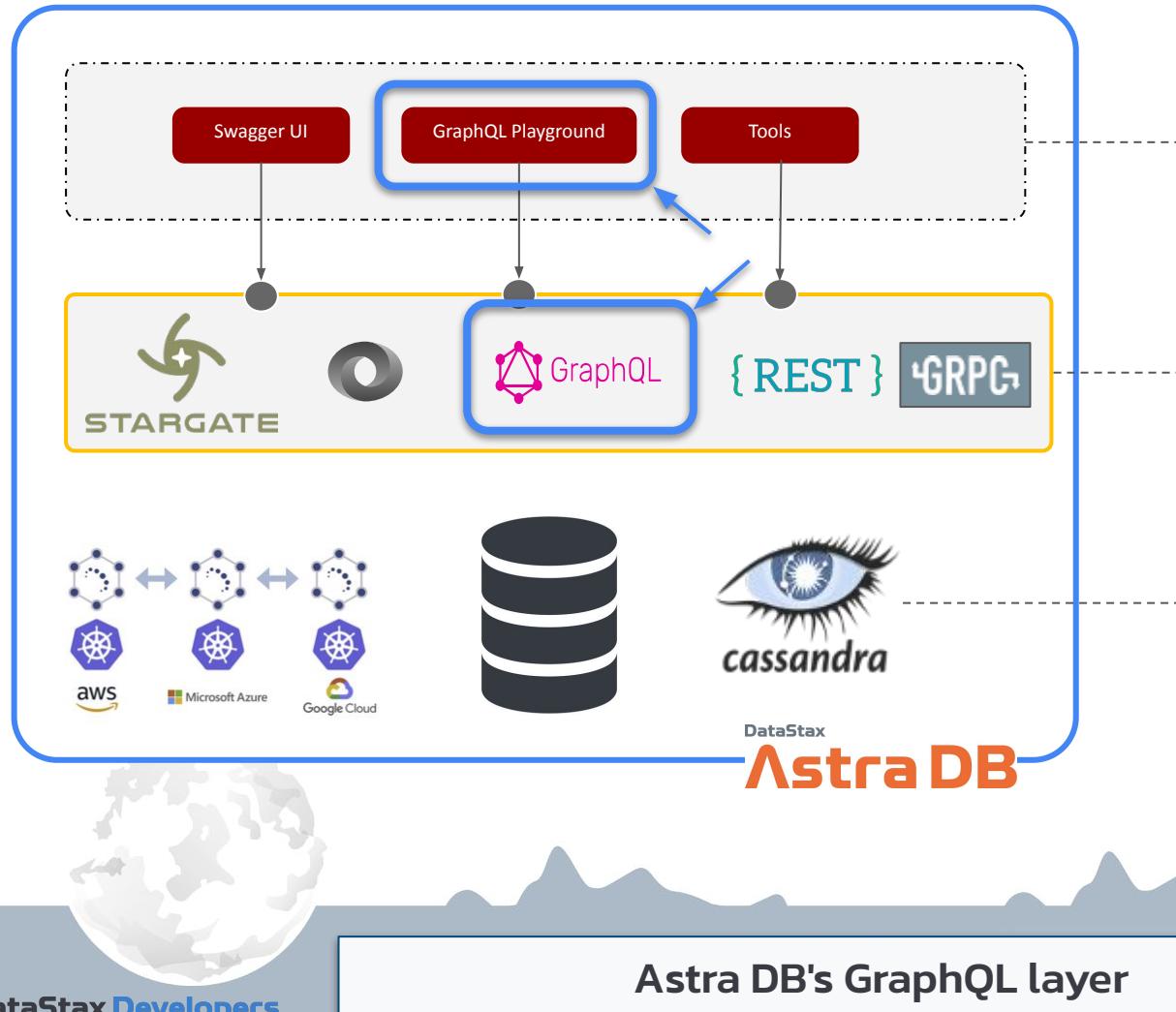
genre	text	K
year	int	C↓
title	text	C↑
duration	int	
synopsis	text	
thumbnail	text	

stored together)

"primary key" (row uniqueness)

"Chebotko diagrams"

Table row examples



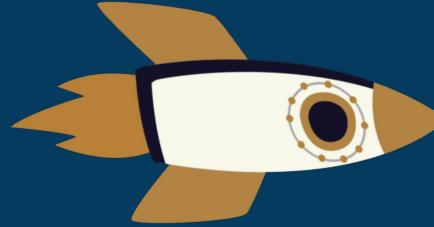
User Interface
Web Utils

OSS Stargate.io
Gateway

Apache Cassandra



Astra DB's GraphQL layer



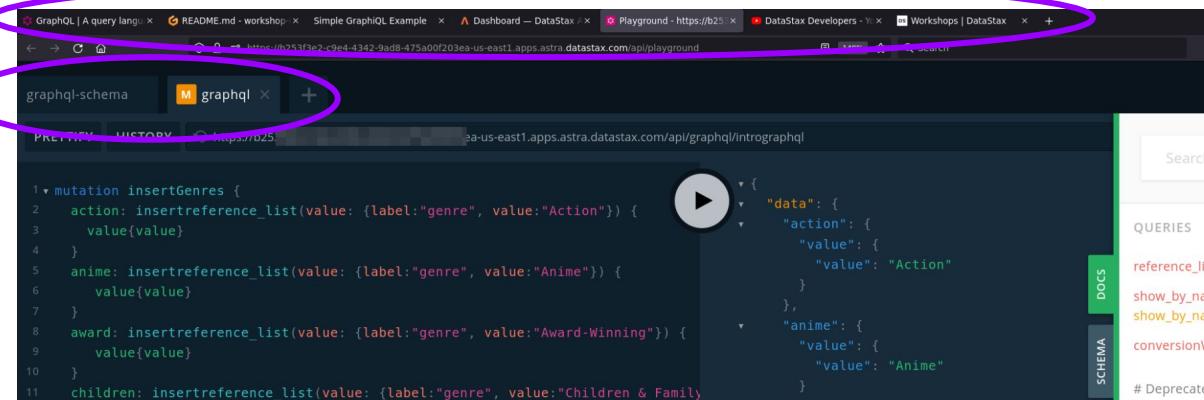
Hands-on (!github)

2. DATA SETUP

- ✓ Schema with GraphQL Playground (*) See next slide!
- ✓ Read/write data with Playground

In your GraphQL Playground ...

These are your browser's tabs



graphql-schema M graphql x +

PREVIOUS HISTORY https://b25... https://b25...

graphql-schema

```
1 mutation insertGenres {  
2   action: insertreference_list(value: {label:"genre", value:"Action"}) {  
3     value{value}  
4   }  
5   anime: insertreference_list(value: {label:"genre", value:"Anime"}) {  
6     value{value}  
7   }  
8   award: insertreference_list(value: {label:"genre", value:"Award-Winning"}) {  
9     value{value}  
10  }  
11  children: insertreference_list(value: {label:"genre", value:"Children & Family"}...  
11}
```

data: {
 action: {
 value: {
 value: "Action"
 }
 },
 anime: {
 value: {
 value: "Anime"
 }
 }
}

Search

QUERIES

reference_li...
show_by_na...
show_by_na...
conversionV...
Deprecate

DOCS

SCHEMA

These are the playground tabs ("graphql-schema" & "graphql")



Tabs, tabs, tabs: know the difference

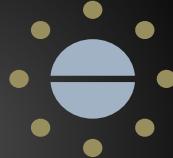


01



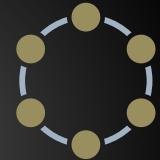
Housekeeping Live and Hands-on

02



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GraphQL Learn & Hands-On

05



Serverless + Client Run the application

06

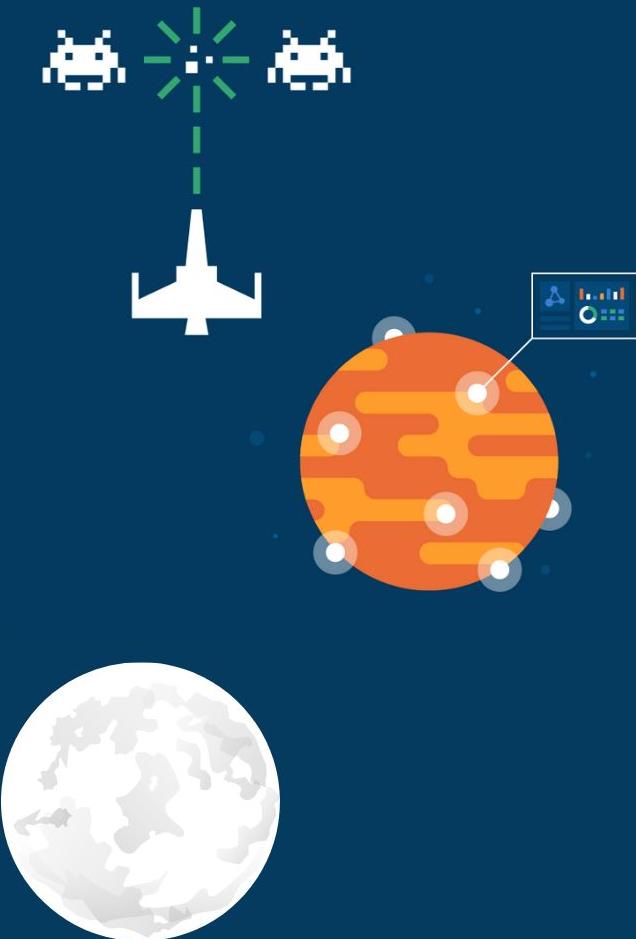


What's next? Quiz, Homework, ...



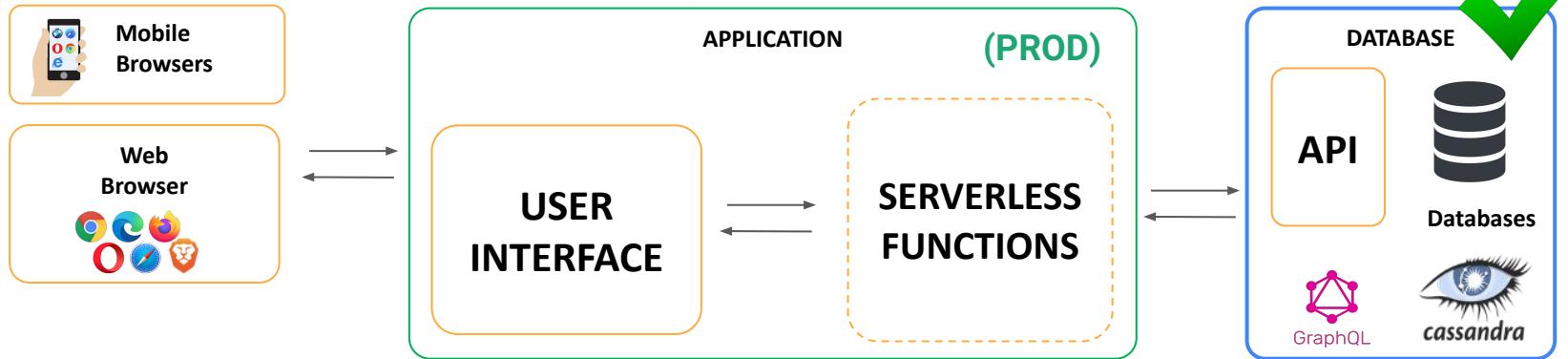
Agenda





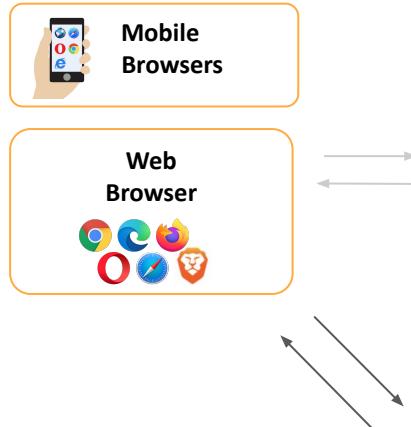
Serverless + client

Run the application

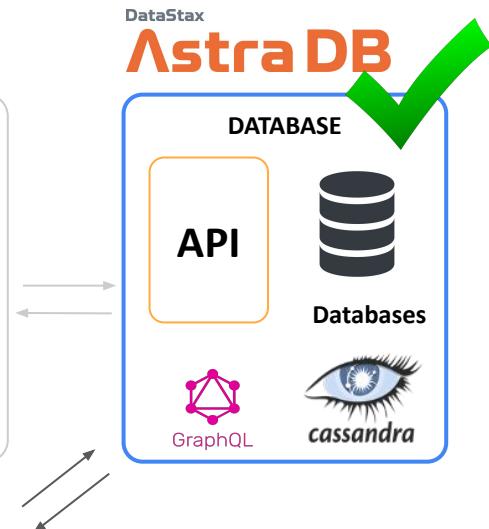


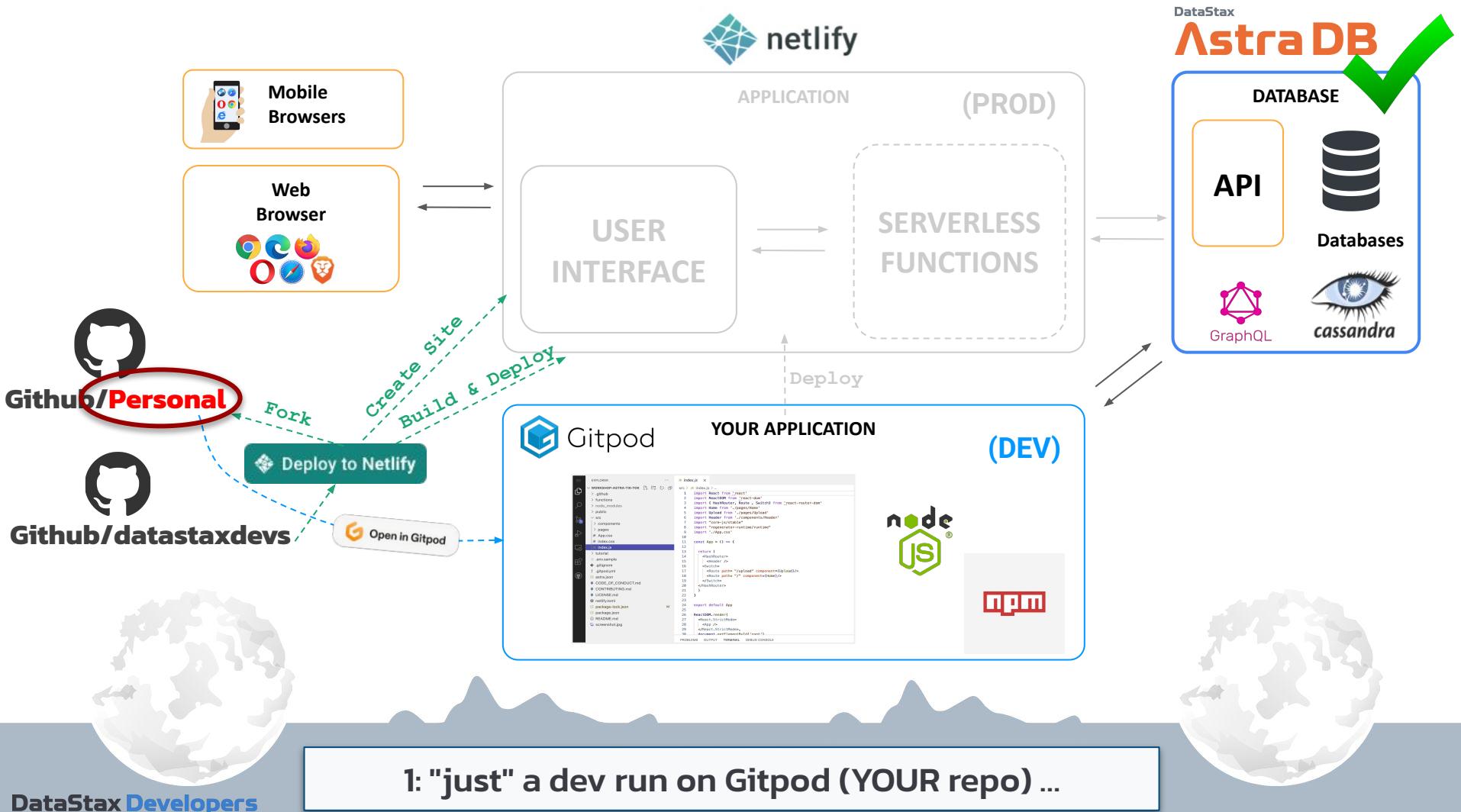
Desired prod result

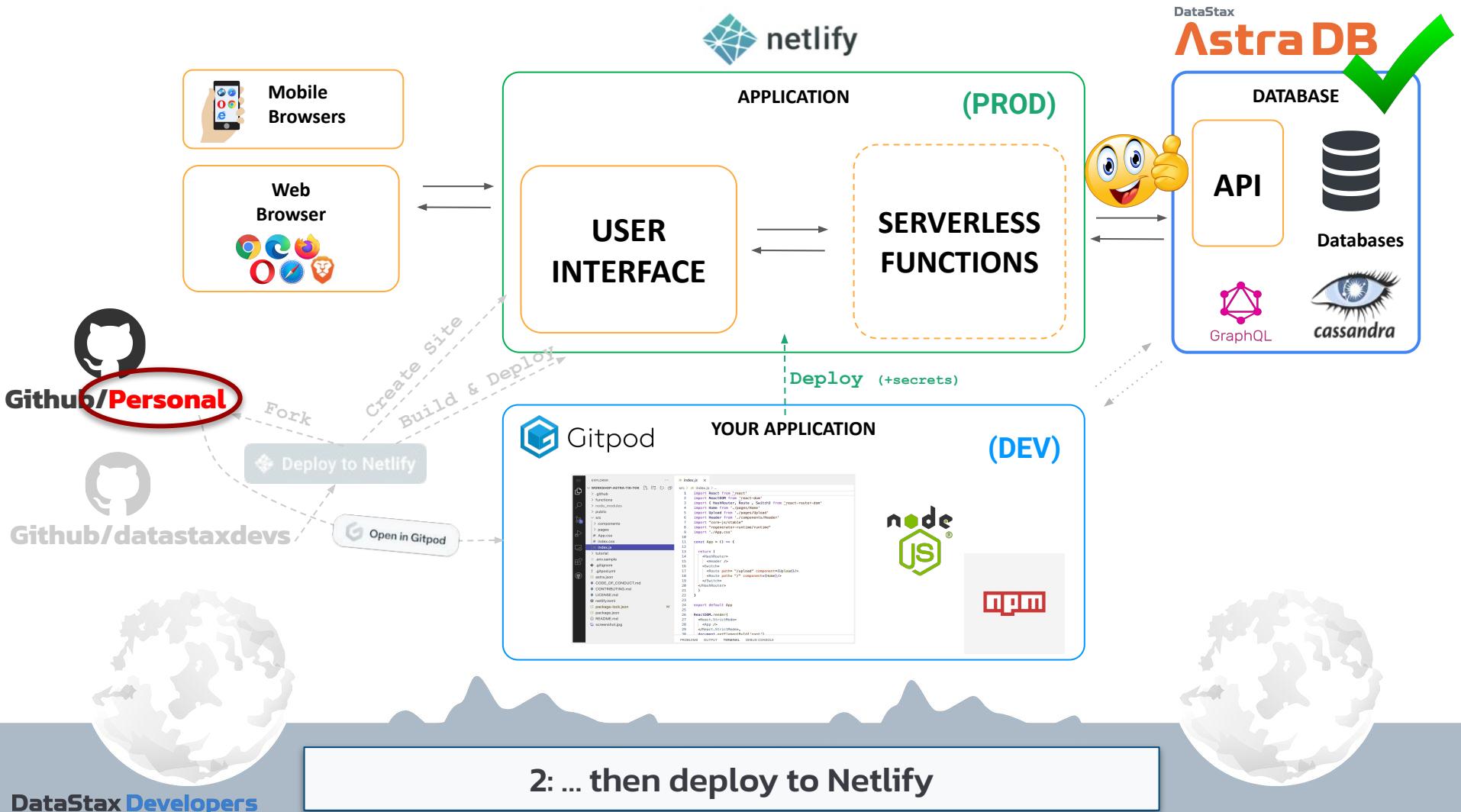


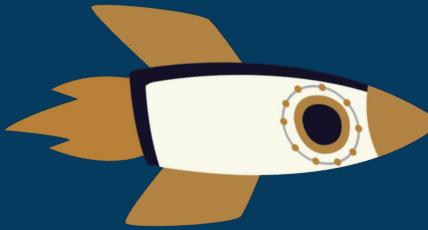


Heads up! This slide shows how to JUST get the app running on Gitpod (dev mode), but it is not the way to Netlify since you would be running YOUR repo in Gitpod instead of a copy in your github. Consult the README for more on this.









Hands-on (!github)

3. RUN APP

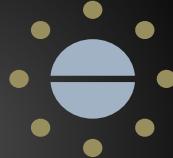
- ✓ Copy to YOUR repo and prepare Netlify
- ✓ Gitpod: bulk data load + dev run
- ✓ Inspect serverless + client code
- ✓ Deploy in production  netlify

01



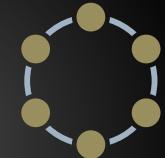
Housekeeping Live and Hands-on

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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 (Gitpod is fine)
- Submit screenshot to us ... and wait for your **badge!**

- Optionally

- **(Strongly suggested)** deploy to 
- Client code deep dive with Ania's video

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

All info on Github – !homework





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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177 views • 2 weeks ago

Kubernetes Ingress Management with Traefik...
496 views • Streamed 2 weeks ago

Build your own TikTok clone!
1.9K views • Streamed 3 weeks ago

Build your own TikTok Clone!
4K views • Streamed 3 weeks ago

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113 views • 4 weeks ago

How to use the CQL Console in Astra DB
39 views • 4 weeks ago



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!

