



Build a **Social Media App** using
document APIs and a **NoSQL Database**



LEVEL
UP
with the

DataStax
Developers

Your presenters



Cédrick Lunven

Director of Developer
Advocacy

Apache Cassandra™ expert

Open Source Developer

Java Geek



@clun



@clunven



@clunven



Stefano Lottini

Developer Advocate

Apache Cassandra™ expert

Developer/architect



@hemidactylus



@rsprrs



@stefano-lottini

DataStaxDevs: Developer Advocates Team



Cedrick
Lunven

Aleksandr
Volochnev

Jack
Fryer

Kirsten
Hunter

Stefano
Lottini

David
Gilardi

Ryan
Welford

Rags
Srinivas

Sonia
Siganporia

R

S

Agenda

01

HouseKeeping
And Use Case



02

AstraDB
Reminders



03

Understanding
Jamstack



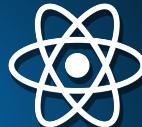
04

Deploy to
Netlify



05

React Application
Serverless Functions



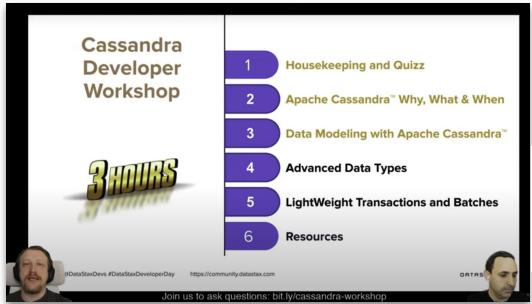
06

Resources



Housekeeping #1: Attending the workshop

Livestream: youtube.com/DataStaxDevs



YouTube



Twitch

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



Discord

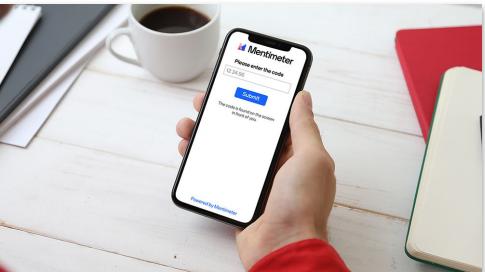


YouTube



Available on the iPhone

Games menti.com



Mentimeter



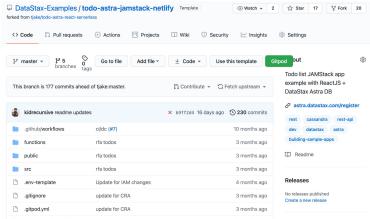
GET IT ON
Google play

Live and interactive

Nothing to install !

Housekeeping #2: Doing Hands-On

Source code + exercises + slides



GitHub

Database + GraphQL + PlayGround



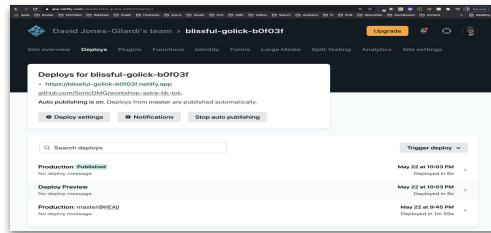
DataStax
Astra DB

IDE

A screenshot of an IDE (IntelliJ IDEA) displaying Java code for a Spring Boot application named 'StargateDemoApplication'. The code includes imports for Spring and annotations like @SpringBootApplication. The IDE interface shows the code editor, toolbars, and a terminal window at the bottom.

Gitpod

Deploy + Run + host



netlify

DataStax Developers

Get your Badge for today !



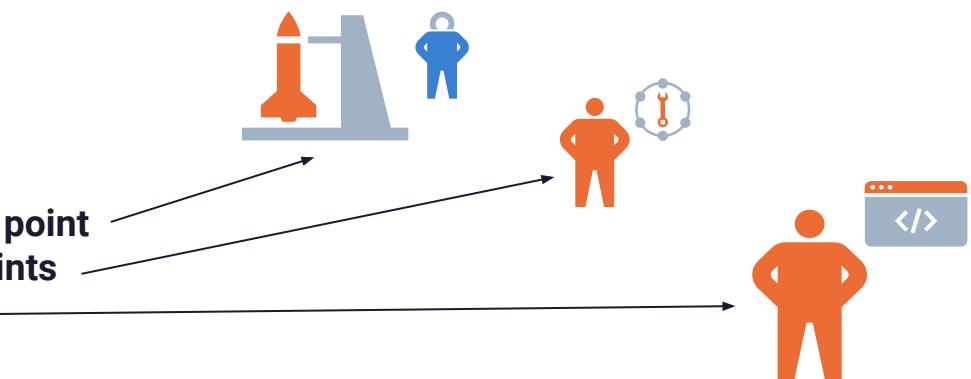


<https://dtsx.io/staxgiving>

3 x 500\$ AMAZON gift cards to win

CONDITIONS

- **#engage-with-us** : Tasks that will earn you 1 point
- **#work-with-us**: Tasks that will earn you 5 points
- **#build** : Tasks that will earn you 10 points.



DUE DATE

Winners randomly chosen **live** on **12/8**

THANKSGIVING DAY => 25/11



TikTok

Welcome to the TikTok clone workshop.



TikTok

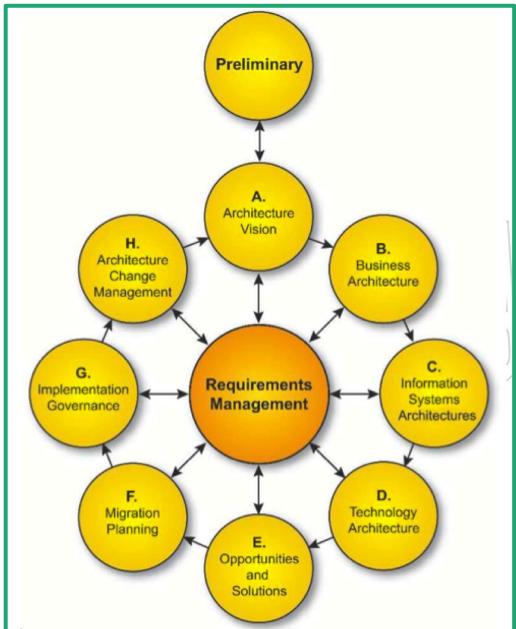
Your mission is to **Deploy** a **TikTok clone** to **production** over a **global CDN** using one of the **most robust and scalable** **NoSQL databases** on the **planet**.



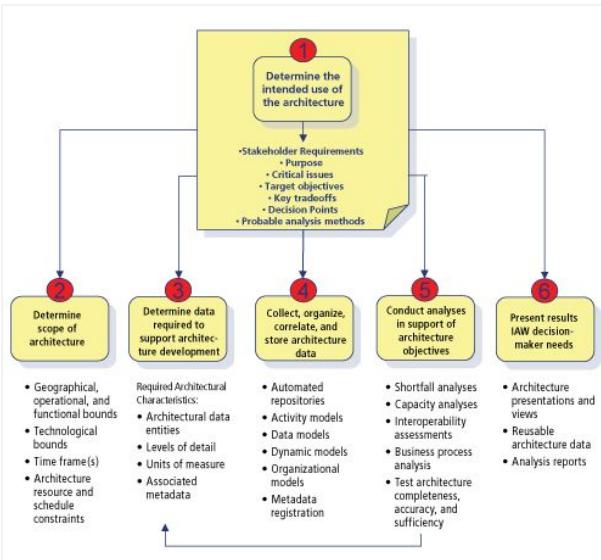
You have 2 hours. Good luck.



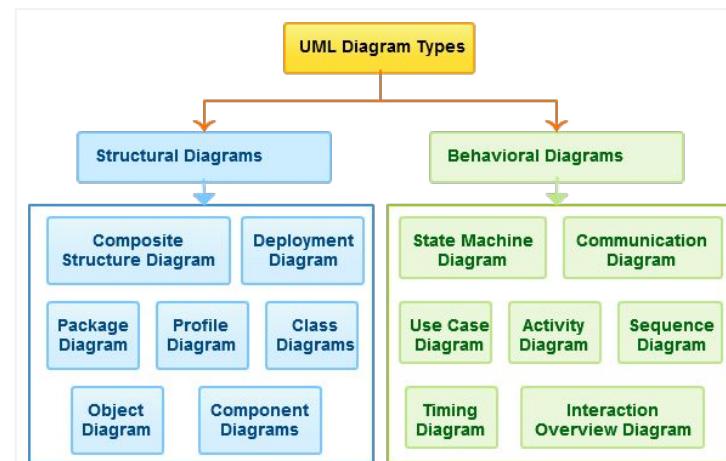
Social Media :: Architecture



ToGAF (Archimate)



DoDAF (DM2)

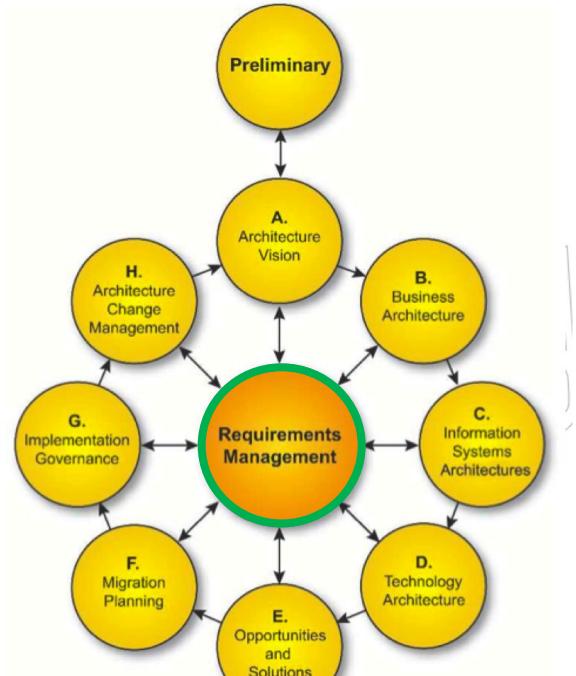
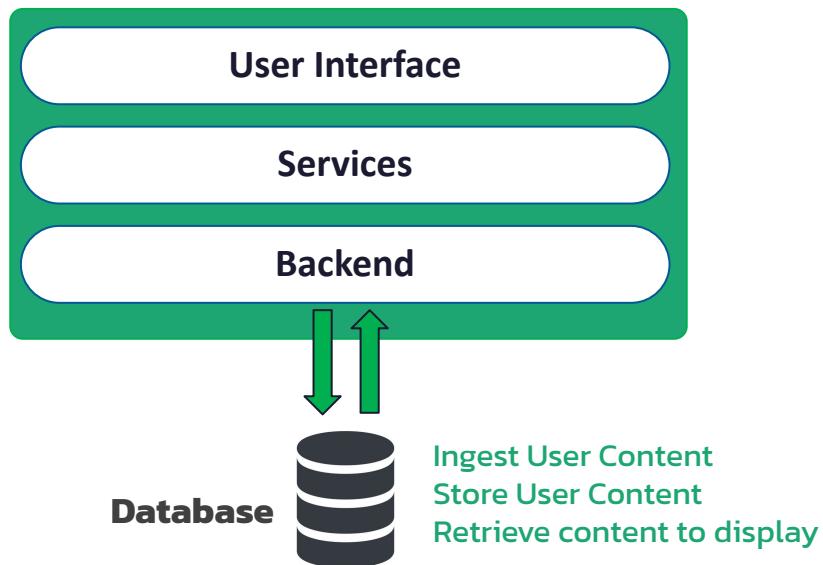


[online diagramming & design] [creately.com](#)

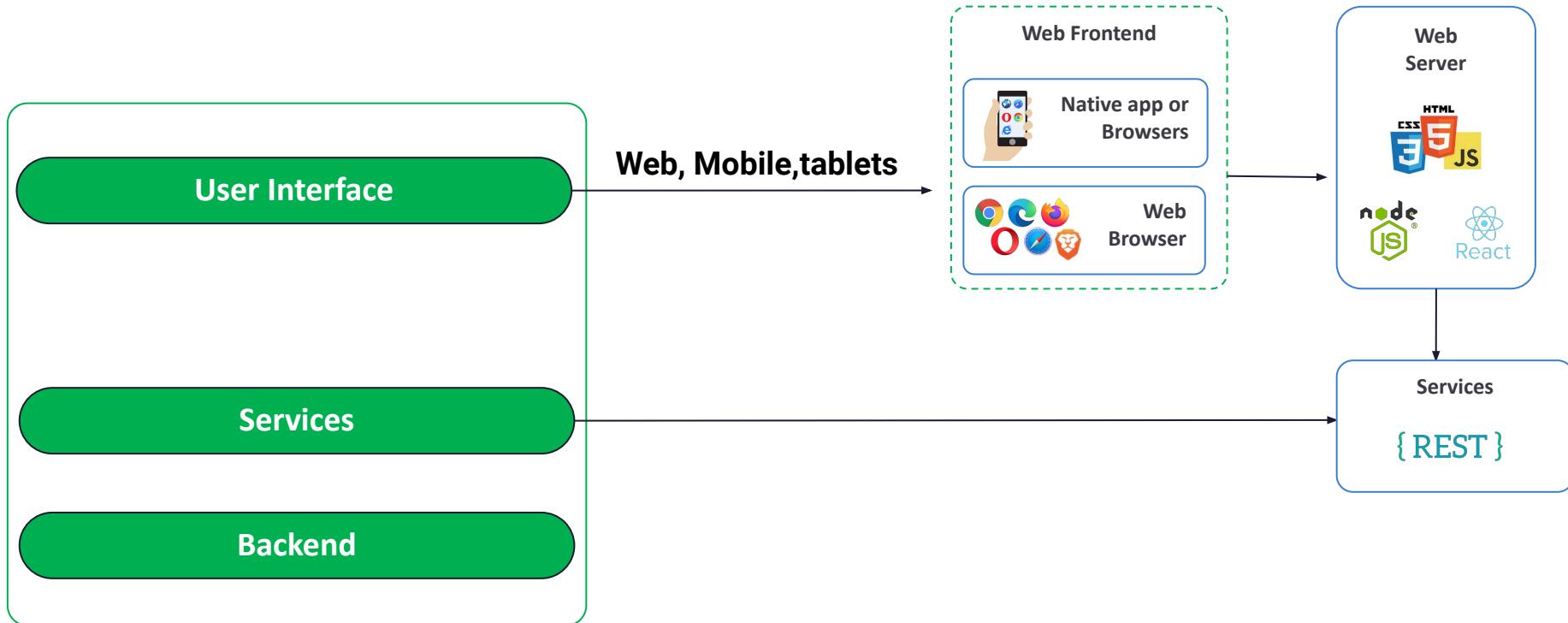
UML

Social Media :: Requirements

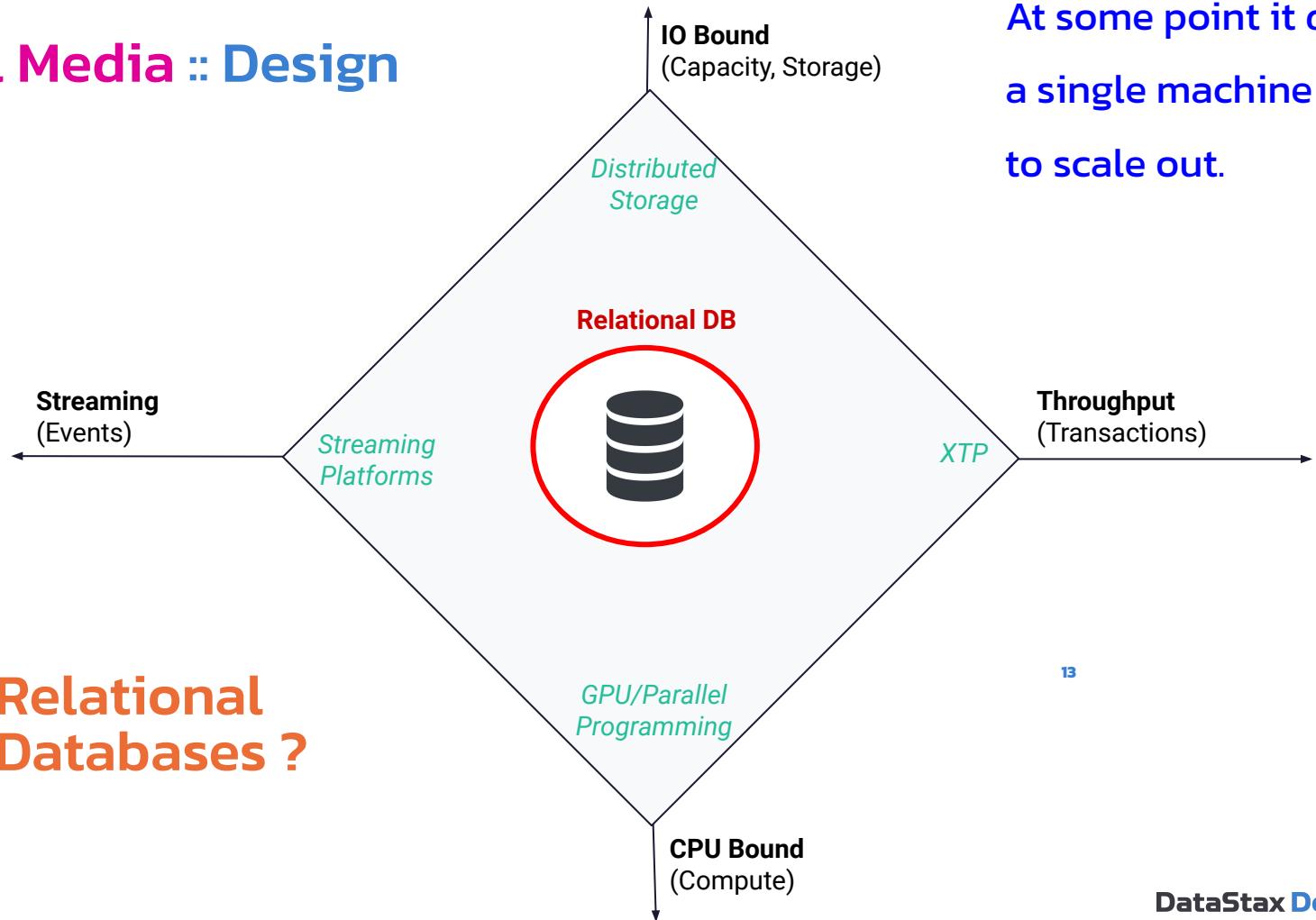
- Millions of users across the world exchanging any form of content: Text, video, images, music
- Access data on multiple devices: web, mobile, tablets in real time



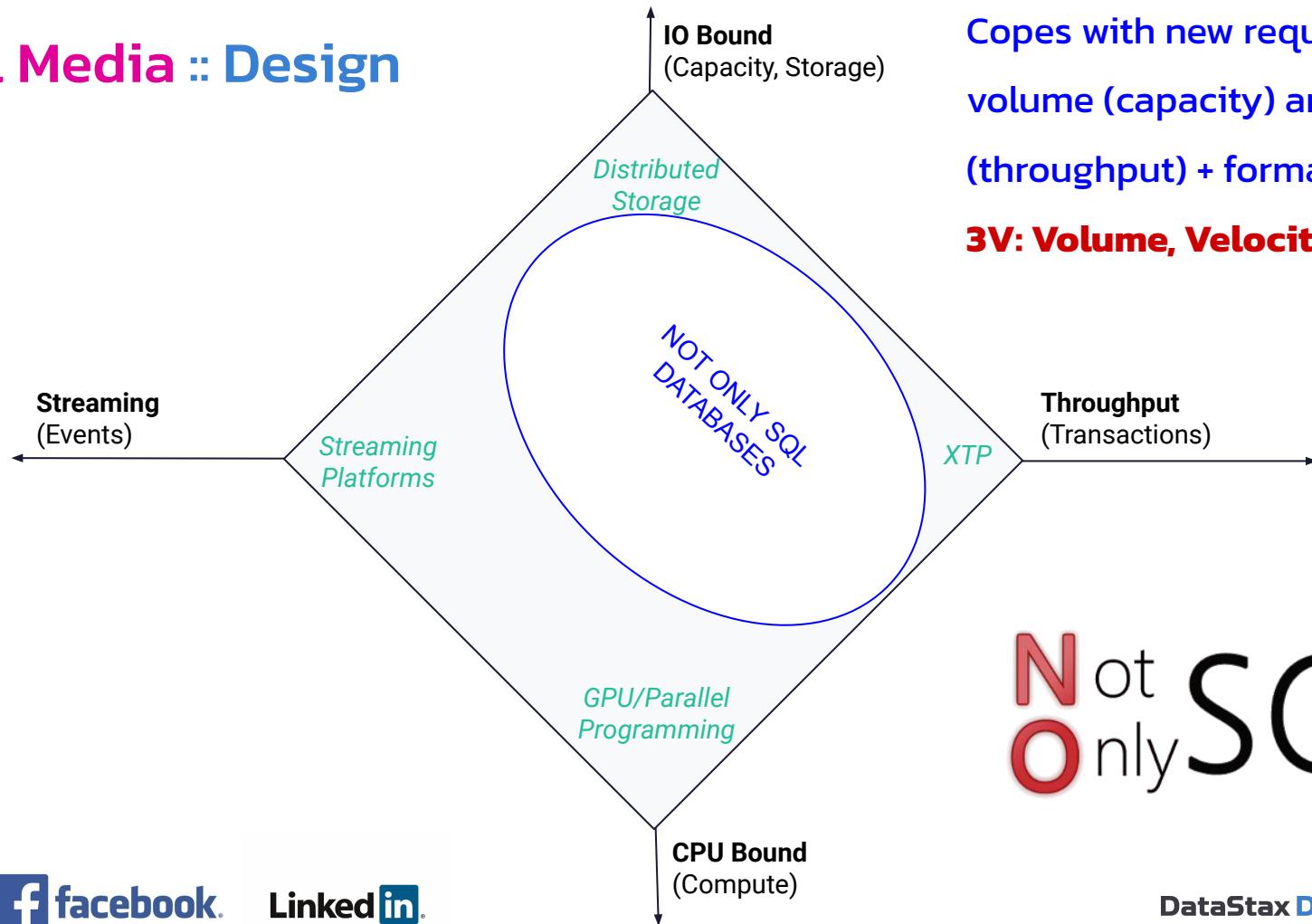
Social Media :: Design



Social Media :: Design



Social Media :: Design



Copes with new requirements in volume (capacity) and velocity (throughput) + format (variety)

3V: Volume, Velocity, Variety

Not Only SQL

Social Media :: Design

- Web and Mobile
- Javascript
- React

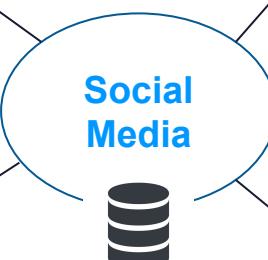


Which
Technology ?

- Unstructured
- Synchronous
- Document API

{ REST }

Which
Data Model
Which Api ?



WHY
NoSQL ?

Not
Only SQL

- Distributed System
- Variety of data
- High Volume
- High Throughput



WHY
Cassandra ?

- Geographic Distribution
- Heavy Writes
- Maximum Scalability

Agenda

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and Use Case



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Jamstack



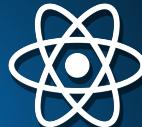
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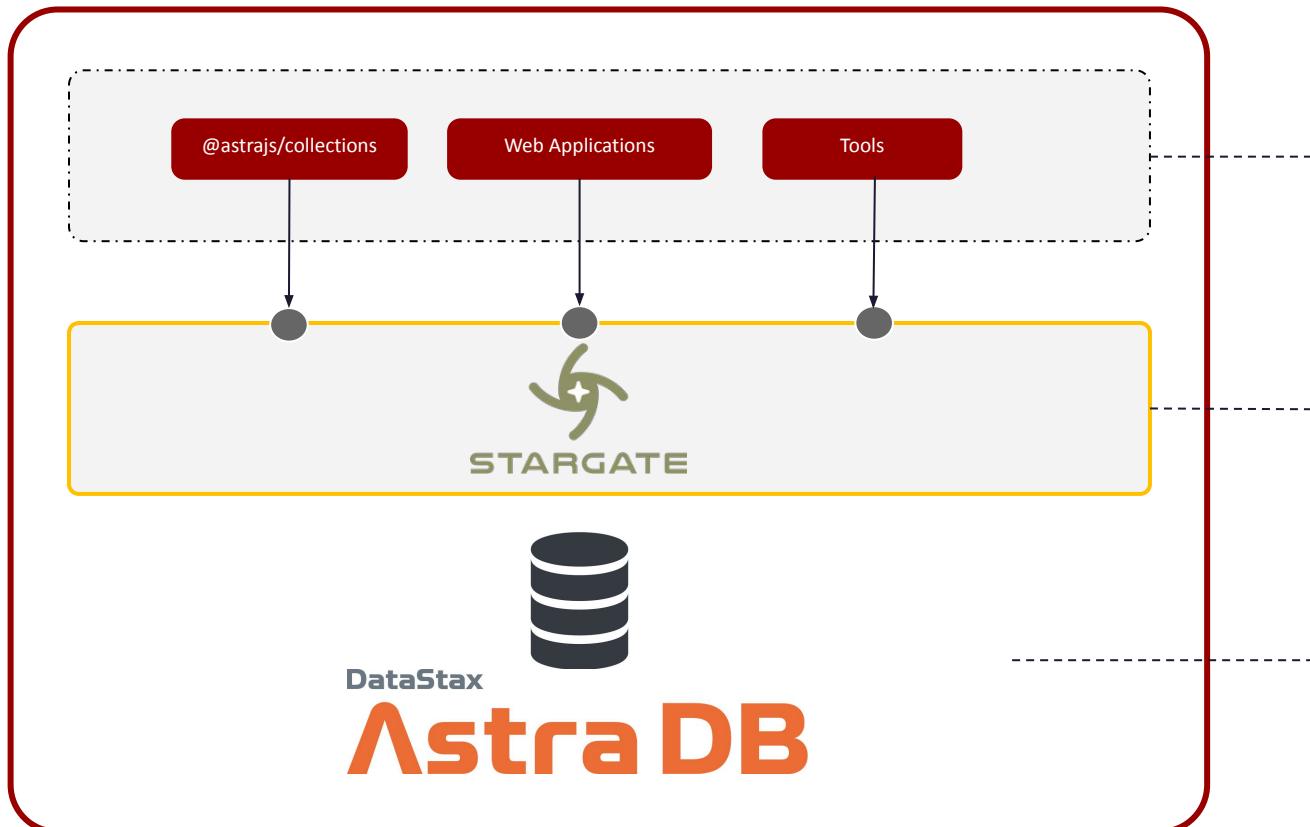


06

Resources



Database Connection



User Interface

Web apps
Developer Tools



STARGATE

A data gateway to allow
multiple usages



cassandra

A Column oriented NoSQL
Database

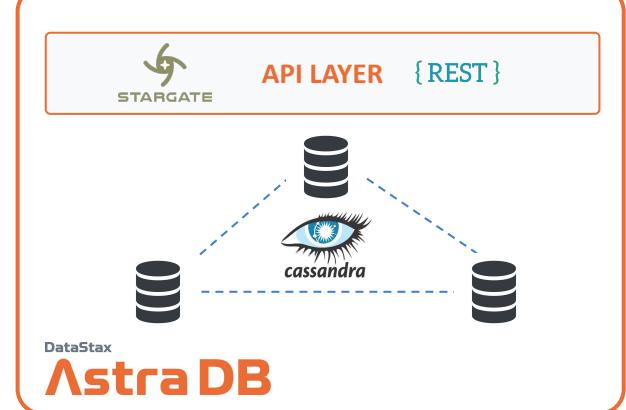
DataStax Developers

 Create Astra DB

Create Instance + token



DataStax
Repository



DataStax Developers

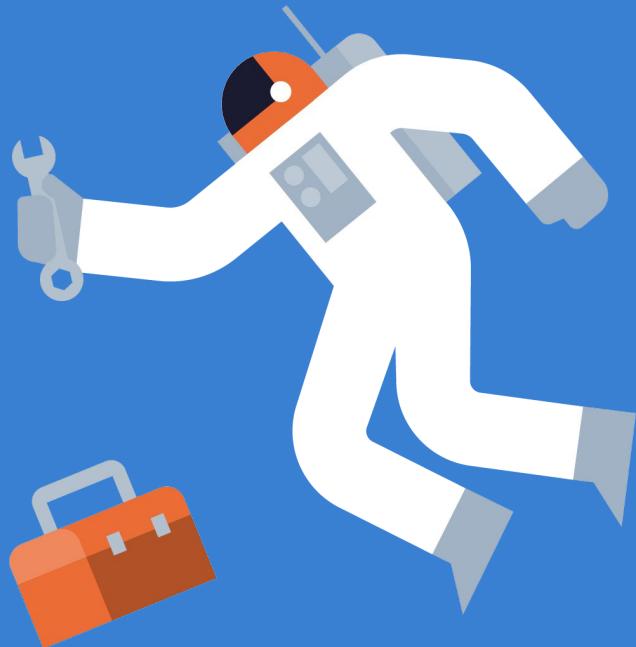
HandsOn: Create Instance



Astra DB

Get your instance here:

- <https://astra.dev/11-10>



GitHub

Repository:

- github.com/datastaxdevs/workshop-social-media-tiktok



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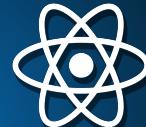
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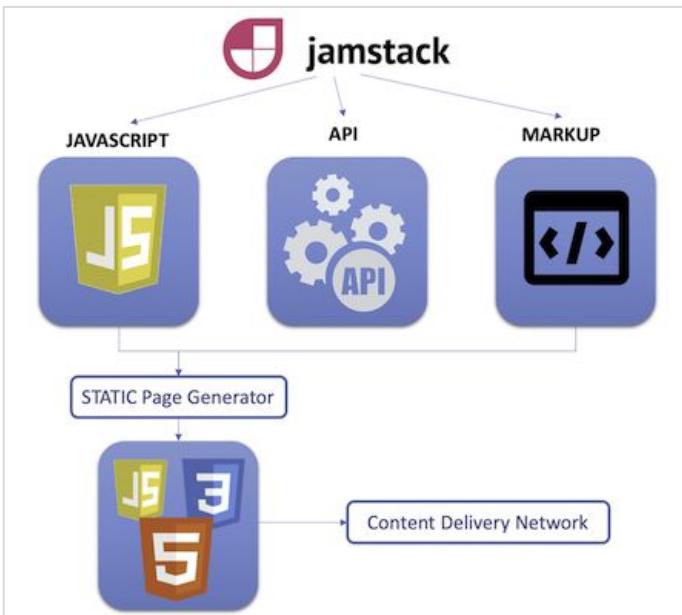


06

Resources



What is JamStack ?



https://github.com/datastaxdevs/workshop-battlestack/blob/master/README_JAM.md

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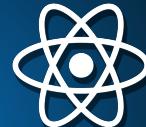
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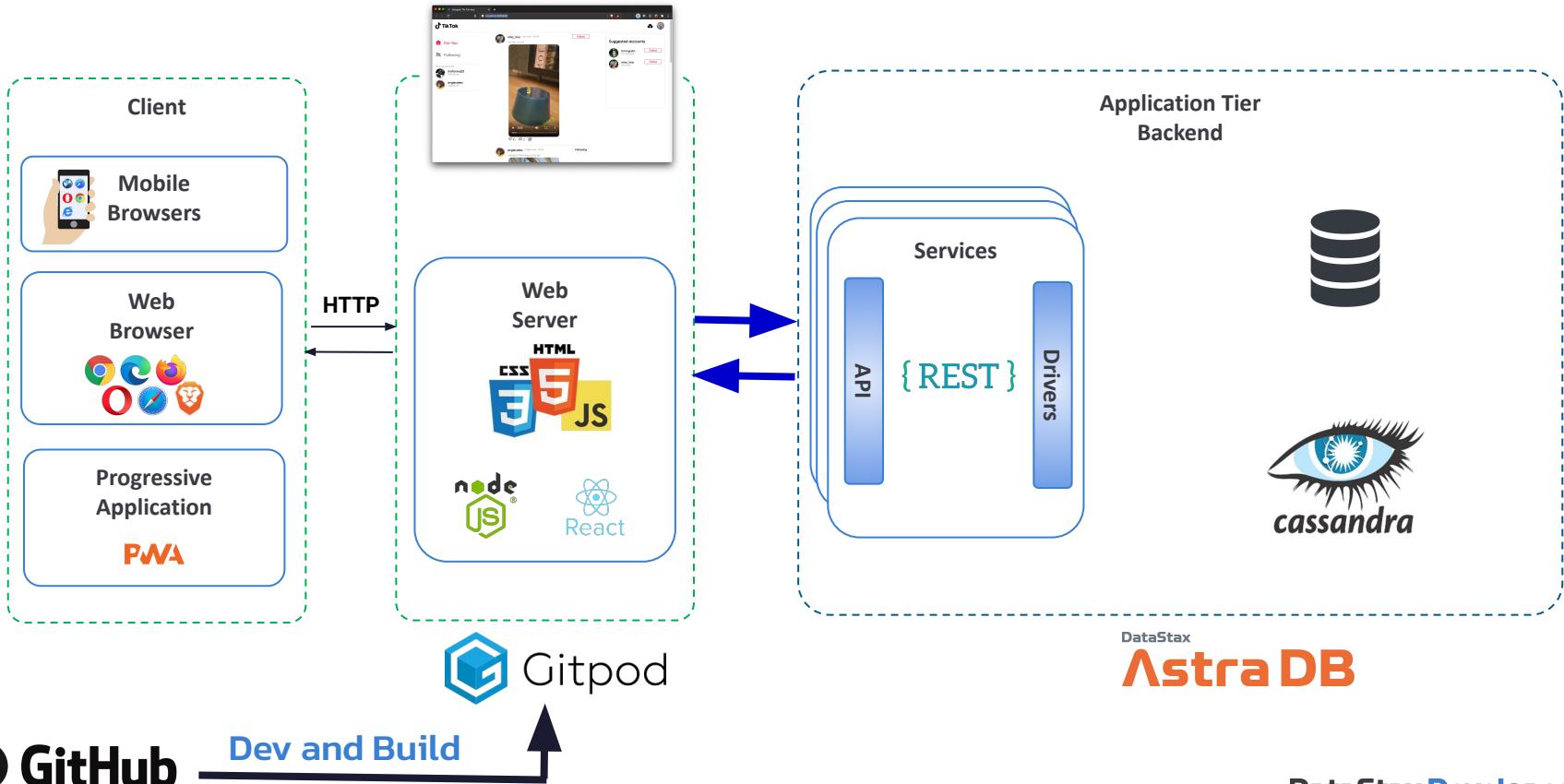


06

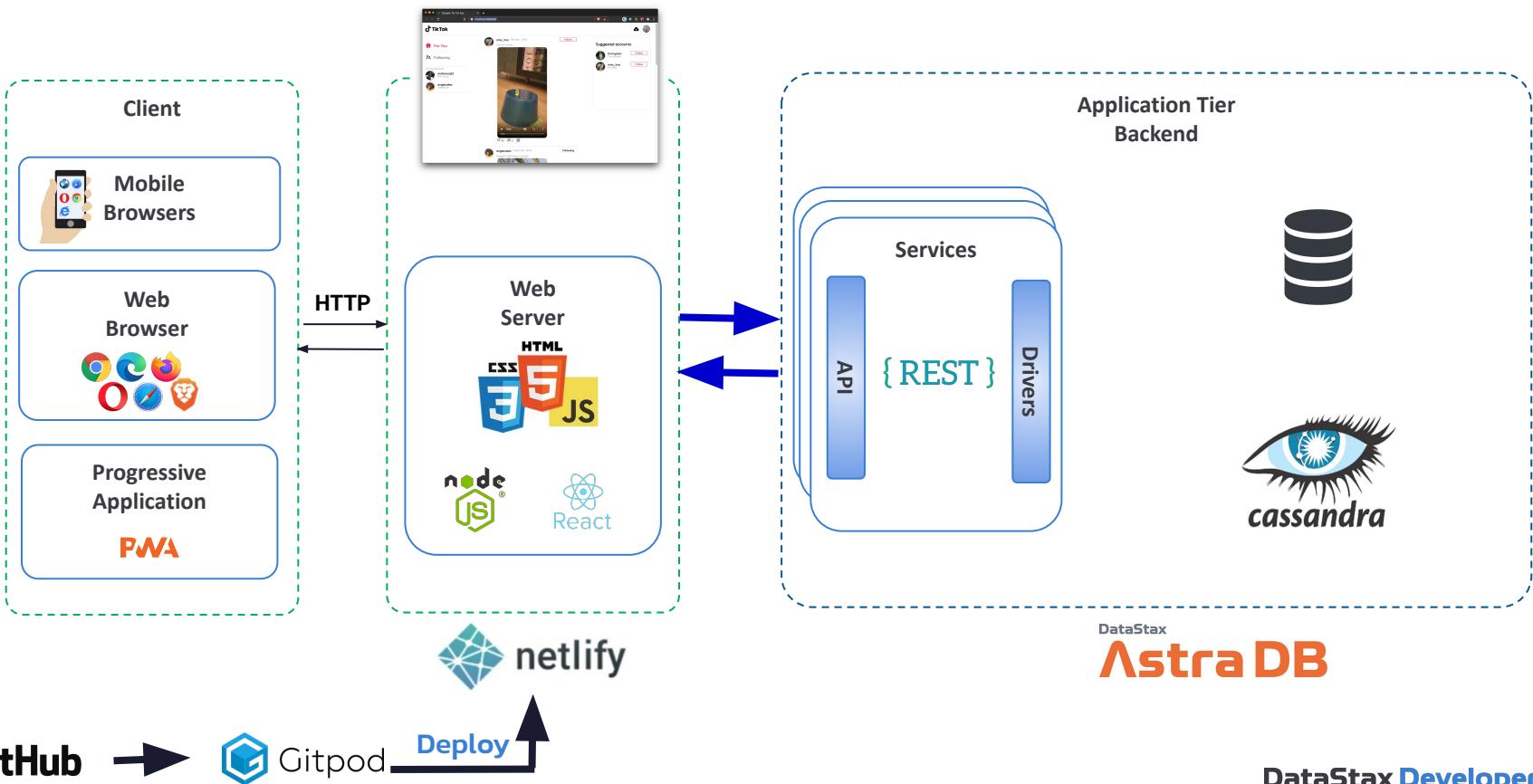
Resources



Web application Architecture with Gitpod



Web application Architecture with NETLIFY



Gitpod

Deploy

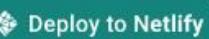
DataStax Developers



DataStax
Repository



Your
Repository



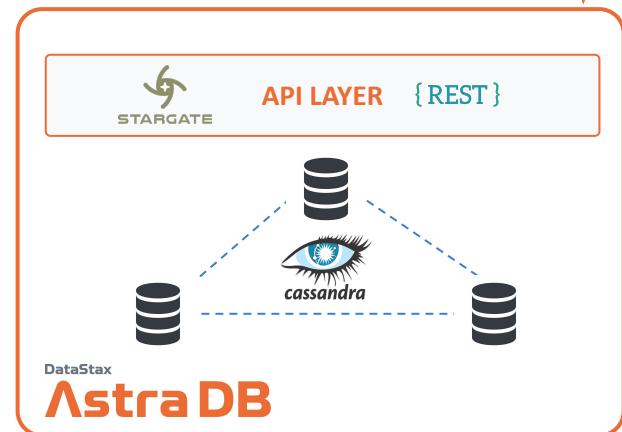
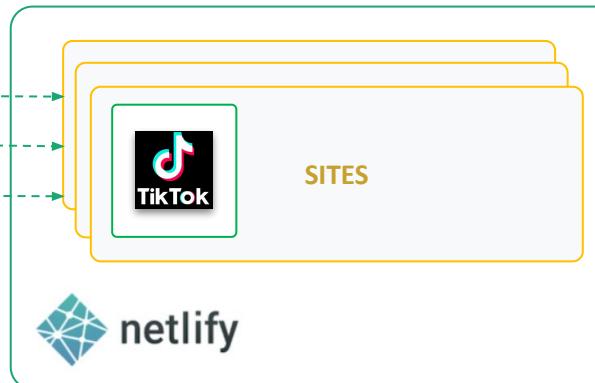
Create Instance + token



Create Site

Fork + Link

Push Code + Build



DataStax Developers

HandsOn: Deploy to Netlify



Astra DB

Get your instance here:

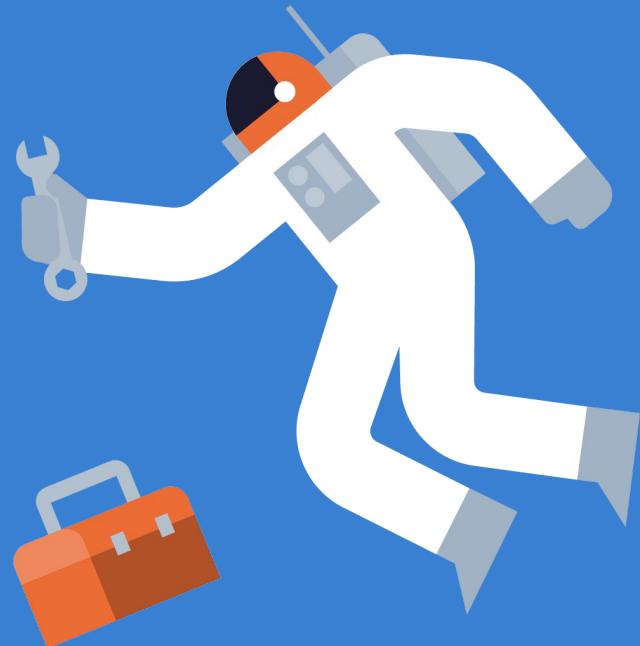
- <https://astra.dev/11-10>



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Repository:

- github.com/datastaxdevs/workshop-social-media-tiktok





**DataStax
Repository**

Create Astra DB

Create Instance + token

Deploy to Netlify

Create Site

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Push Code + Build



Your
Repository

Open in Gitpod

EditCode + Setup + Run Locally

```

    WORKSHOP-ASTRA-TIK-TOK
    ├── github
    ├── functions
    ├── node_modules
    ├── public
    └── src
        ├── components
        ├── pages
        ├── App.css
        └── index.css

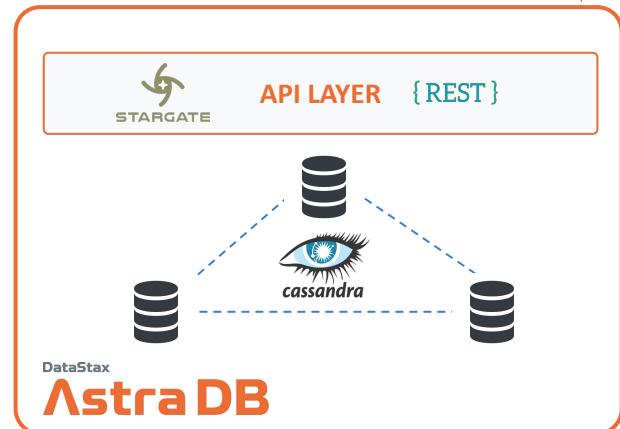
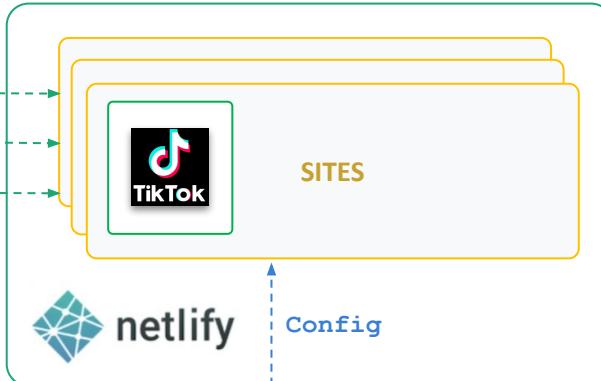
```

```

    index.js
    ...
    1  import React from 'react';
    2  import ReactDOM from 'react-dom';
    3  import { BrowserRouter, Route, Switch } from 'react-router-dom';
    4  import Home from './pages/Home';
    5  import Upload from './pages/Upload';
    6  import Header from './components/Header';
    7  import Footer from './components/Footer';
    8  import 'regenerator-runtime/runtime';
    9  import './App.css';
    ...
    11 const App = () => {
    12   return (
    13     <BrowserRouter>
    14       <header>
    15         <Switch>
    16           <Route path="/upload" component={Upload}/>
    17           <Route path="/" component={Home}/>
    18         </Switch>
    19       </header>
    20       <main>
    21         <Switch>
    22           <Route exact path="/" component={Home}/>
    23           <Route exact path="/upload" component={Upload}/>
    24         </Switch>
    25       </main>
    26       <Footer>
    27     </BrowserRouter>
    28   );
    29 }
    30
    31 export default App;
    32
    33 ReactDOM.render(
    34   <React.StrictMode>
    35     <App />
    36   </React.StrictMode>,
    37   document.getElementById('root')
    38 )
  
```

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE

Gitpod



DataStax Developers



DataStax
Repository

Open in Gitpod

Your
Repository

EditCode + Setup + Run Locally

```
src > index.js ...
1 import React from 'react';
2 import ReactDOM from 'react-dom';
3 import { BrowserRouter, Route, Switch } from 'react-router-dom';
4 import Home from './pages/Home';
5 import Upload from './pages/Upload';
6 import Header from './components/Header';
7 import Footer from './components/Footer';
8 import 'regenerator-runtime/runtime';
9 import './App.css';
10
11 const App = () => {
12   return (
13     <BrowserRouter>
14       <Header />
15       <Switch>
16         <Route path="/upload" component={Upload} />
17         <Route path="/" component={Home} />
18       </Switch>
19     </BrowserRouter>
20   );
21 }
22
23
24 export default App;
25
26 ReactDOM.render(
27   <React.StrictMode>
28     <App />
29   </React.StrictMode>,
30   document.getElementById('root')
31 );
```

Gitpod

Deploy to Netlify

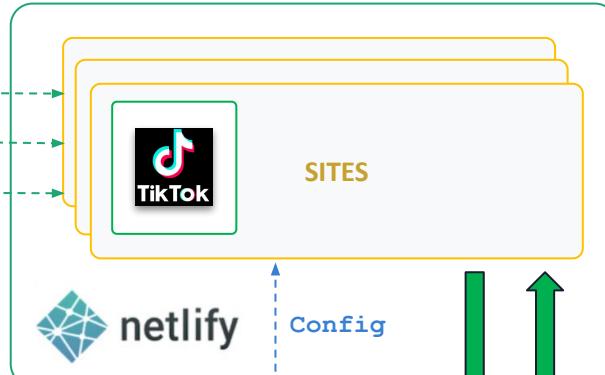
Create Site

Fork + Link

Push Code + Build

Create Instance + token

A Create Astra DB

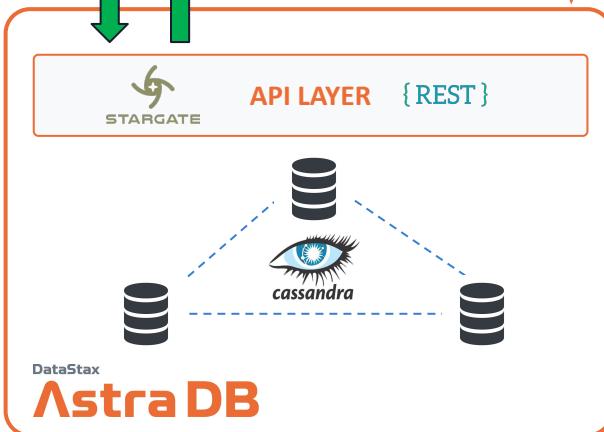


SITES

Config



API LAYER {REST}



DataStax
Astra DB

DataStax Developers

HandsOn: Run in Gitpod



Astra DB

Get your instance here:

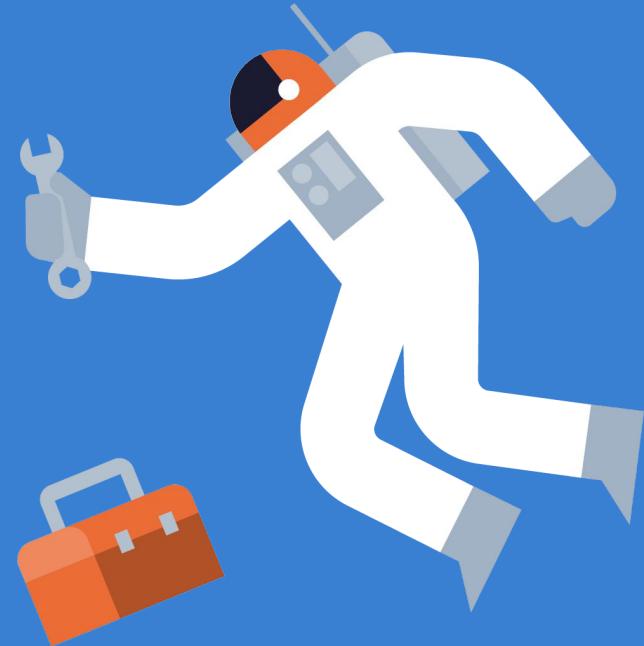
- <https://astra.dev/11-10>



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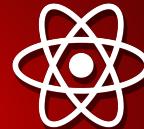
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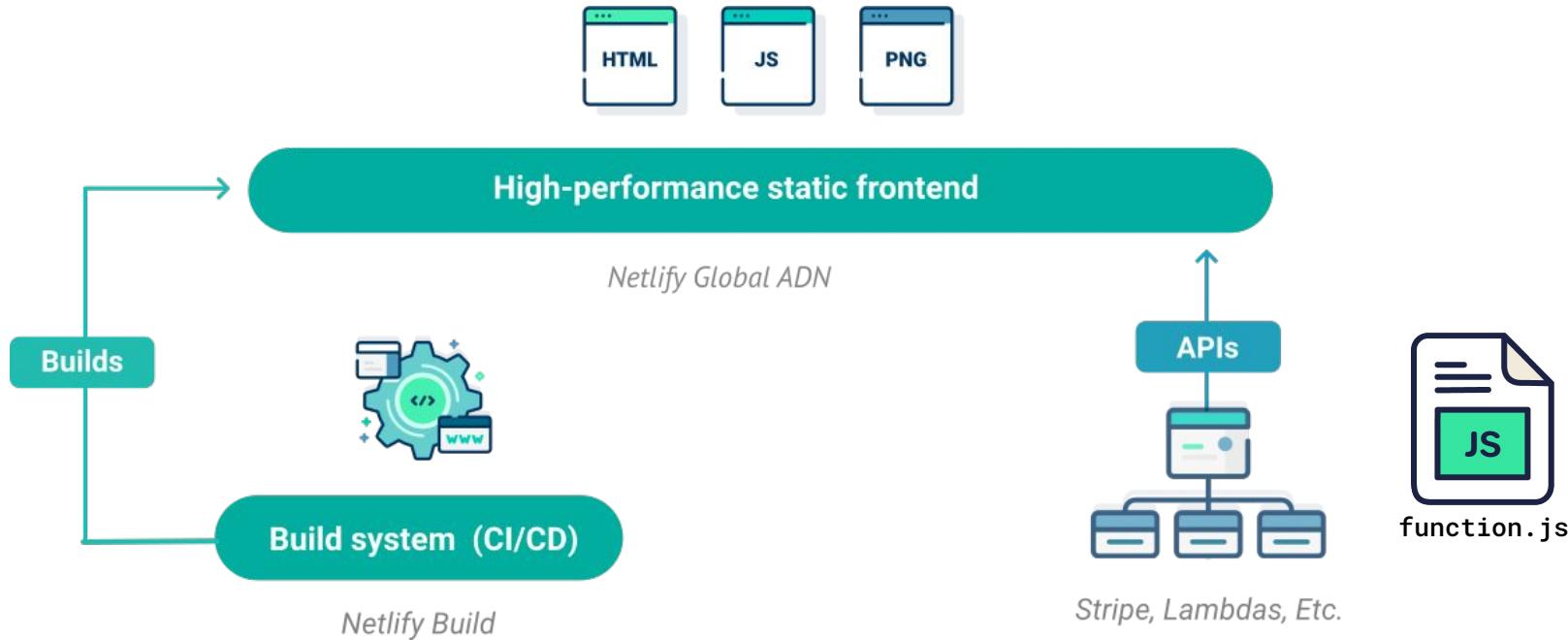


Serverless Functions

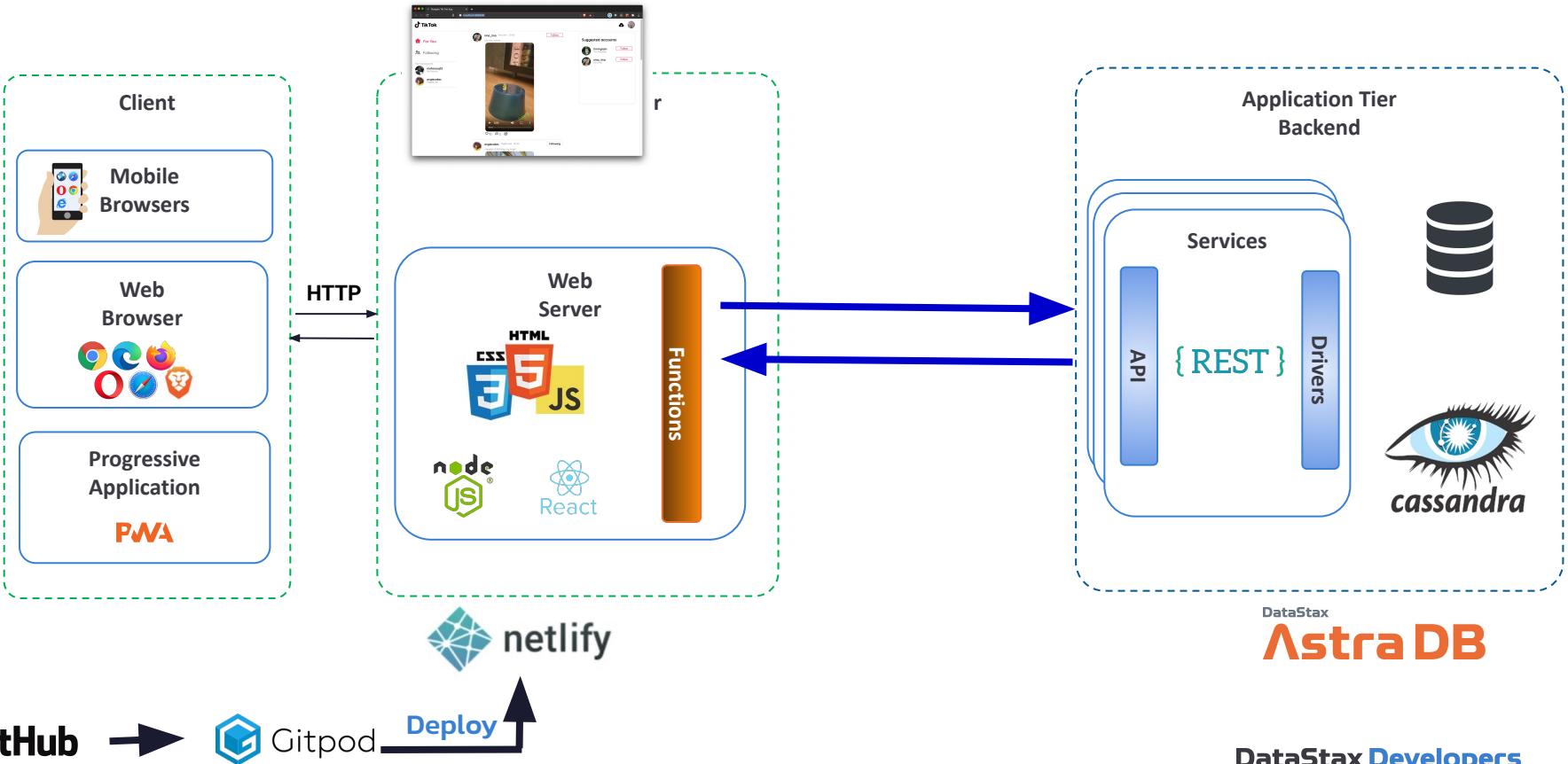


(...not this)

Serverless Functions



Architecture NETLIFY FUNCTIONS



HandsOn: Serverless



Astra DB

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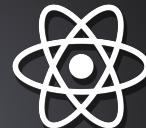
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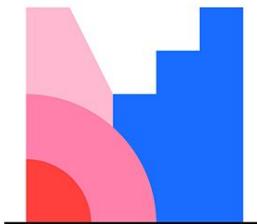


06

Resources



menti.com



Mentimeter



Congratulations to 1st, 2nd and 3rd place on the menti quiz!

To claim your prize, please send an email to:

jack.fryer@datastax.com

37

**** Include a screenshot of your menti screen**

How to submit Homeworks

The screenshot shows a GitHub interface for creating a new issue. The title of the issue is "Issue: Homework Assignment". The body of the issue contains the following text:

```
**Name:** Cedrick Lunven  
**Email:** cedrick.lunven@datastax.com  
**Linkedin Profile:** https://linkedin.com/in/clunven
```

Below the text, there are sections for attaching screenshots and files.

Assignees listed are: clun, HadesArchitect, RyanWelford, and SonicDMG.

A message on the right side of the issue creation interface says: "It looks like this is your first time opening an issue in this project! Be sure to review the contributing guidelines and code of conduct."

At the bottom of the issue creation interface, there is a "Submit new issue" button.



DataStax Developers

How to submit Homeworks

Link to submission form in the

The screenshot shows a web-based homework submission form. At the top, there's a header with the text "TikTok clone". Below it, a large blue box displays the message "DataStax Developers" and "Thank you!". To the left of this message, there's a section for "Your Homework" which includes a note: "In this section you have to upload your homework files and submit them." A "Submit" button is located at the bottom of this section, highlighted with a pink circle.

TikTok clone

The name and phone number are required. Please upload your homework files and submit them.

* Required

Your Homework

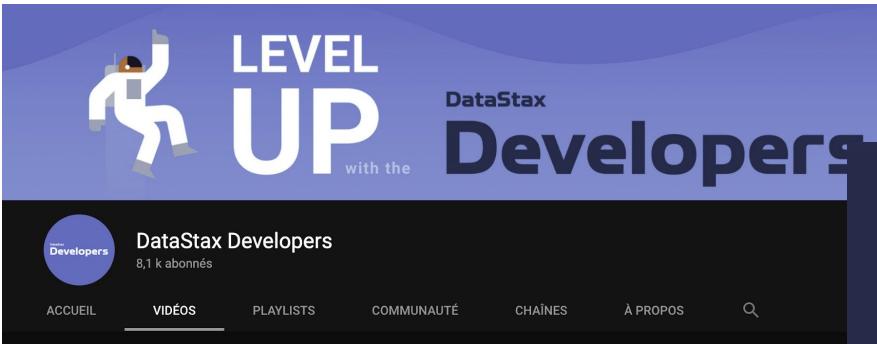
In this section you have to upload your homework files and submit them. Please follow the requirements.

Submit



Weekly Workshops

datastax.com/workshops



LEVEL UP with the DataStax Developers

8,1 k abonnés

ACCUEIL VIDÉOS PLAYLISTS COMMUNAUTÉ CHAÎNES À PROPOS

Vidéos mises en ligne ▾ TOUT REGARDER

Hands-on live workshop Microservices with Cassandra + Spring 1:23:56 ADVANCED TOPIC	Hands-on live workshop Advanced Data Modeling with Aleksey Volkov 2:41:51 INTERMEDIATE TOPIC	LIVE hands-on workshop An Introduction to Apache Cassandra™ with Aleksey Volkov 1:28:14 INTERMEDIATE TOPIC	Hands-on live workshop Streaming to C* with Apache Pulsar! with Cedrick Lumeau 2:11:40 INTERMEDIATE TOPIC	Apache Cassandra™ Certification Preparation
Building Microservices with Cassandra + Spring 1,1 k vues • Diffusé il y a 20 heures	Advanced Data Modeling in Apache Cassandra™ 1,3 k vues • Diffusé il y a 1 semaine	Polska DataOps Meetup: Introduction to Apache... 151 vues • Diffusé il y a 1 semaine	Bring Streaming to Cassandra with Apache... 703 vues • Diffusé il y a 2 semaines	Apache Cassandra™ Certification Preparation Multiple Dates NoSQL Beginner
Taking your K8s app to the Cloud! 1 k vues •	RESTful Data Access from a Spring Boot App 215 vues • il y a 1 mois	Ask Me Anything Hackathon Special 667 vues • Diffusé il y a 1 mois	Connecting Apache Cassandra™ and Kubernetes 1,1 k vues • Diffusé il y a 1 mois	Build Microservices with Apache Cassandra™! Feb 17 or Feb 18 NoSQL Beginner
Learn how to build a Serverless Game! Feb 24 or Feb 25 Game Development Beginner	Build Microservices with Cassandra & Quarkus March 11 Microservices Beginner			

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Upcoming Live Events

LIVE hands-on workshop </>

Apache Cassandra™ Certification Preparation

MULTIPLE DATES | NoSQL | Beginner

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Certification Exam Preparation Workshop

Register Now

LIVE hands-on workshop </>

Build Microservices with Apache Cassandra™!

FEB 17 OR FEB 18 | NoSQL | Beginner

LEVEL UP with the DataStax Developers

Cloud-Native Workshop: Build Spring Microservices with Apache Cassandra™

Register Now

LIVE hands-on workshop </>

Learn how to build a Serverless Game!

FEB 24 OR FEB 25 | Game Development | Beginner

LEVEL UP with the DataStax Developers

Cloud-Native Workshop: Build a serverless game with the JAMStack!

START

Register Now

LIVE hands-on workshop </>

Build Microservices with Cassandra & Quarkus

MAR 11 | Microservices | Beginner

LEVEL UP with the DataStax Developers

Cloud-Native Workshop: Build Microservices w/ Apache Cassandra™ + Quarkus!

THU MAR 11 2021

Register Now

Next week:

datastax.com/workshops

Build a Multiplayer Real-time Game with Astra Streaming

Wednesday, November 17th



- Astra Streaming
- React.js
- WebSockets
- FastAPI



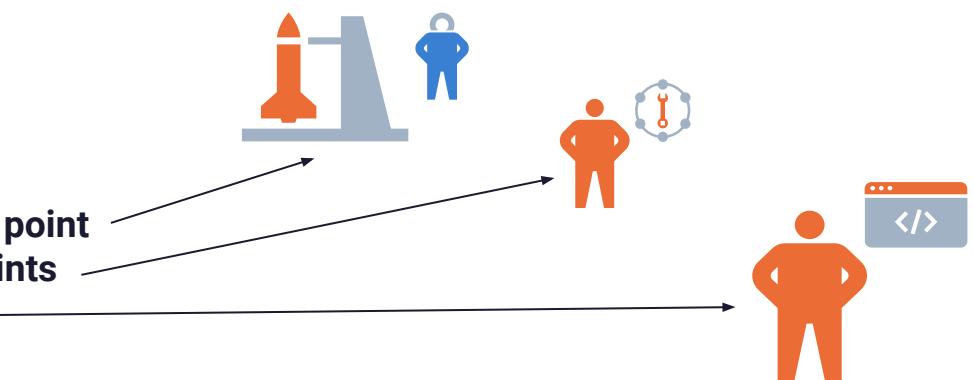
WIN SOME
PRIZES !!

<https://dtsx.io/staxgiving>

3 x 500\$ AMAZON gift cards to win

CONDITIONS

- **#engage-with-us** : Tasks that will earn you 1 point
- **#work-with-us**: Tasks that will earn you 5 points
- **#build** : Tasks that will earn you 10 points.



DUE DATE

Winners randomly chosen **live** on 12/8

THANKSGIVING DAY => 25/11

Join our 17k Discord Community

The Fellowship of the RINGS

dtsx.io/discord

The screenshot shows the main channel of the "Fellowship of the (Cas...)" server. The left sidebar lists channels: server-conduct, upcoming-events, useful-resources, moderator-only, WORKSHOPS (main-chat-room, Breakout room 1, Breakout room 2, Breakout room 3, Hidden Channel), and TOPICS (grafana-cassandra-data..., docker-training). The main chat window displays a message from Jack Fryer about a new workshop, followed by a link to an Eventbrite page for a "Cloud-Native Workshop: Connecting Cassandra and Kubernetes!". Another message from Cedrick Lunven announces a live talk on Spring + Cassandra. The right sidebar shows user lists for PRESENTER—3 (Aleks Volochnev, David Jones-Gilardi, jscarp), HELPER—1 (John Sanda), and EN LIGNE—222 (Abhiprada, Absurdism, hiya, Adalberto, aditya_dhunna, adnaneCord, Adrigunz, Aemilius Gaurav, Aemilius gaurav, Aguvas, ajscilingo, akashTaxvisor).

main-chat-room

thank you everyone! we hope to see you again in a future workshop! 🎉

Jack Fryer Aujourd'hui à 14:30
NEW WORKSHOP ALERT

Cassandra meets Kubernetes!

Come and meet K8ssandra! A cloud-native distribution of Apache Cassandra™ built for running on Kubernetes

<https://www.eventbrite.co.uk/e/cloud-native-workshop-connecting-cassandra-and-kubernetes-tickets-142078180663>

Eventbrite

Cloud-Native Workshop: Connecting Cassandra and Kubernetes!

Come and meet K8ssandra! A cloud-native distribution of Apache Cassandra™ built for running on Kubernetes

LIVE hands-on workshop </>

Apache Cassandra™ meets Kubernetes!

March 3 or March 4 | Cloud-native | Beginner

LEVEL UP Developers

Cedrick Lunven Aujourd'hui à 16:18
Hey Community I will be live tonight for 50 min talk on Spring + Cassandra to the Virtual Java User Group

<https://www.youtube.com/watch?v=nuyPKDQn1gl> come and say hi ?

Envoyer un message à #main-chat-room

Thank you!

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Thank you!

DataStax Developers

Thank you!



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