



STARGATE

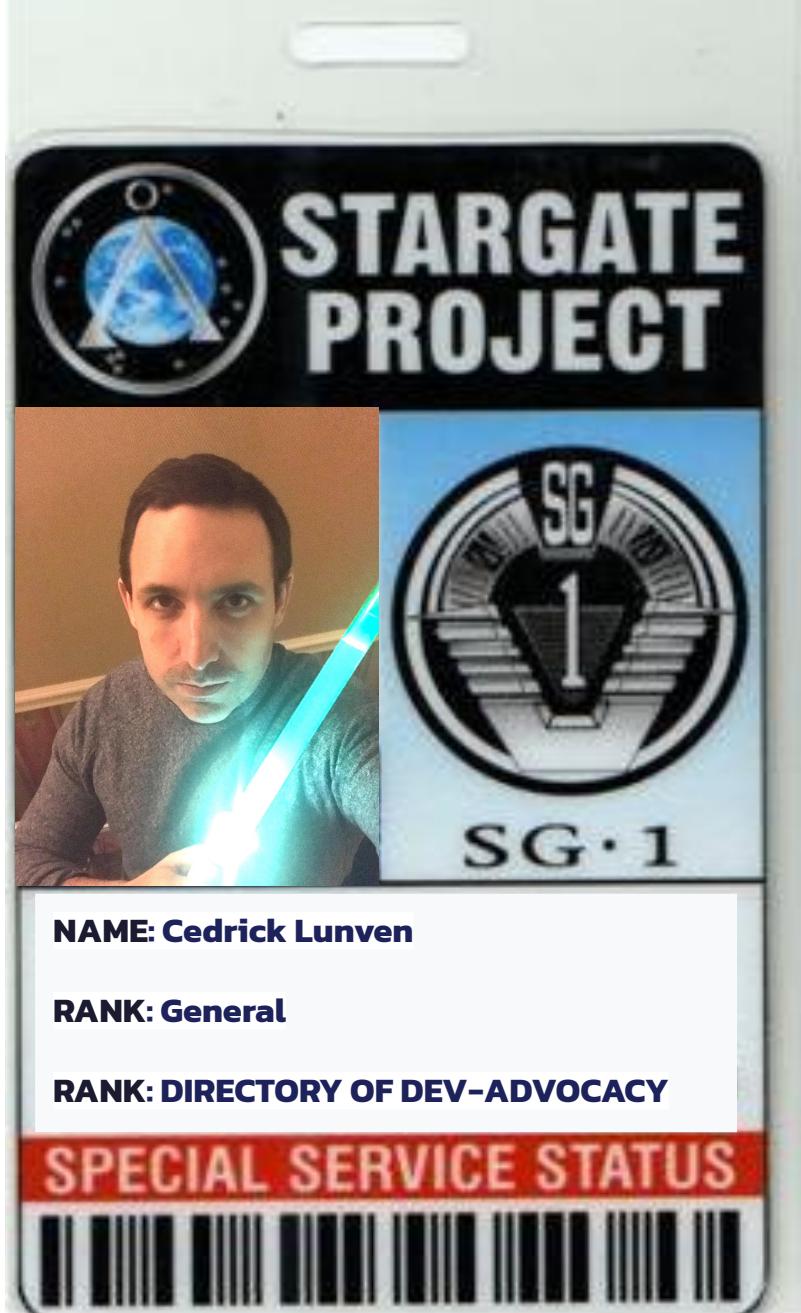


DataStax



DataStax
Astra





- Training
- Teaching
- Reference Applications
- Support
- Public Speaking

- Creator of ff4j (ff4j.org)
- Maintainer for 7 years+

- Happy developer for 14 years
- Petclinic Reactive
- spring-boot-starter Astra
- bootiful podcast + live coding with Josh



@clunven



@aclun

DataStax Developers

David Jones-Gilardi

🚀 DevRel-1



Developer Advocate,
Major and our HOST
TODAY



- Training
- Teaching
- Reference Applications
- Support
- Public Speaking

➤ Certified !

- Advanced User
-



@SonicDMG



@SonicDMG

DataStax Developers

Aleks Volochnev

🚀 DevRel-1



**Developer Advocate,
Major and our HOST
TODAY**



- Training
- Teaching
- Reference Applications
- Support
- Public Speaking

- Developer and Committer

- Advanced User
-

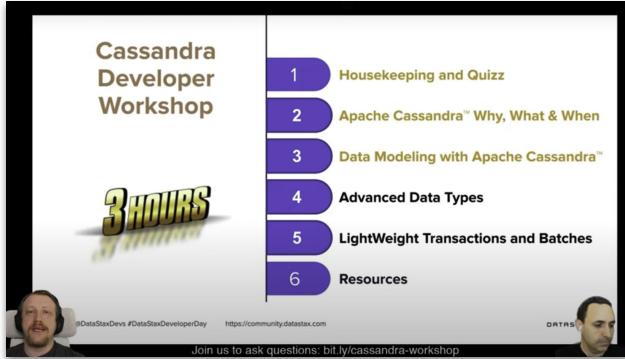


@hadesarchitect

DataStax Developers

Housekeeping

Livestream: youtube.com/DataStaxDevs



YouTube



Twitch

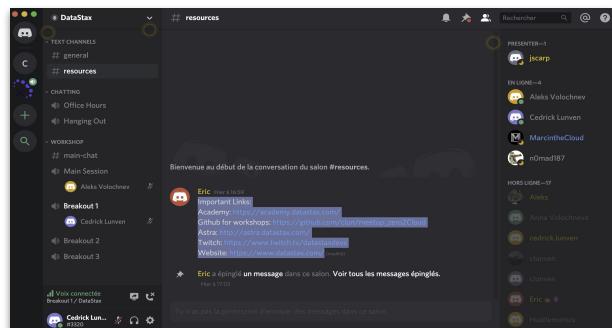
Database: dtsx.io/workshop

DataStax

Astra

Gitpod

Questions: bit.ly/cassandra-workshop



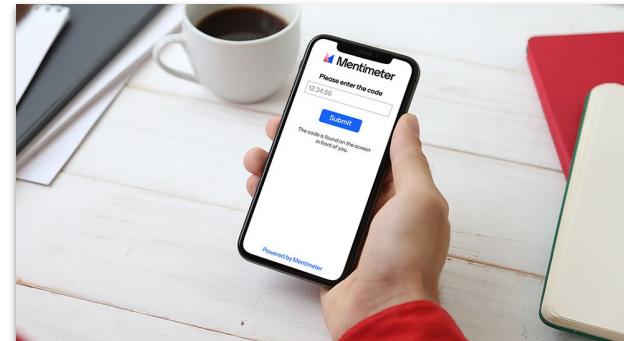
Discord



YouTube



Quizz: menti.com



Mentimeter



DataStax Developers

Difficulty: NORMAL

- **BEGINNERS**
 - Relax, no complex code to write
 - Get the most of it by following what presenters do and ask Questions !
- **INTERMEDIATES**
 - Scroll and do exercises on your own PACE
 - Sample code, ready to go to copy-paste
- **EXPERTS**
 - Run stuff locally
 - Challenge



{REST}



Congratulations to last week winners !

dtsx.io/badges



K8ssandra Workshop

Awarded to **Sylwester Lachiewicz** · slachiewicz@gmail.com
Issued on **Mar 5, 2021**

Offered By
DataStax Developers

Upgrade Complete! This badge is to certify successful completion of the DataStax K8ssandra Workshop: "Running Apache Cassandra on Kubernetes".

 **Verified**
Last verified by Badgr on **Mar 31, 2021**

[Re-verify Badge](#)

EARNING CRITERIA
Recipients must complete the earning criteria to earn this Badge

To earn this badge, individuals must complete the following steps during the **K8ssandra Workshop**:

- Attend the lecture
- Complete the practical steps by doing all required exercises

[View External Criteria](#)

TAGS

kubernetes

cassandra





Today !



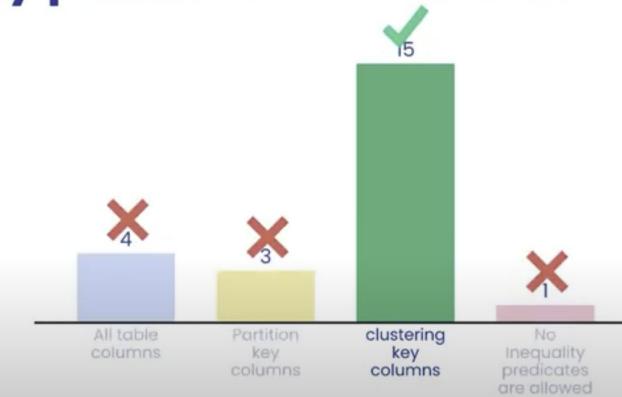
PLAY WITH US !



Go to: [menti.com](https://www.menti.com)

Go to www.menti.com and use the code 3491 9972

Inequality predicates are allowed on ...



Go to www.menti.com and use the code 3491 9972

Leaderboard

| | | |
|--------|--|----------------------|
| 4821 p | | spanda |
| 4820 p | | Agent X9 |
| 4775 p | | fastest |
| 4711 p | | Sam |
| 4468 p | | CCedrickThePresenter |
| 4371 p | | shubham |
| 3895 p | | aaa |
| 3877 p | | vignesh |
| 3861 p | | adry |
| 3812 p | | Millie |
| | | Puggie |

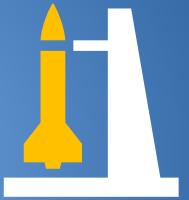
2:11:07 / 2:26:05

DataStax

Agenda

01

Demo



02

Setup
our Database



03

Start
the Application



04

Stargate



STARGATE

05

Software
Development
Kit



{REST}

06

Resources



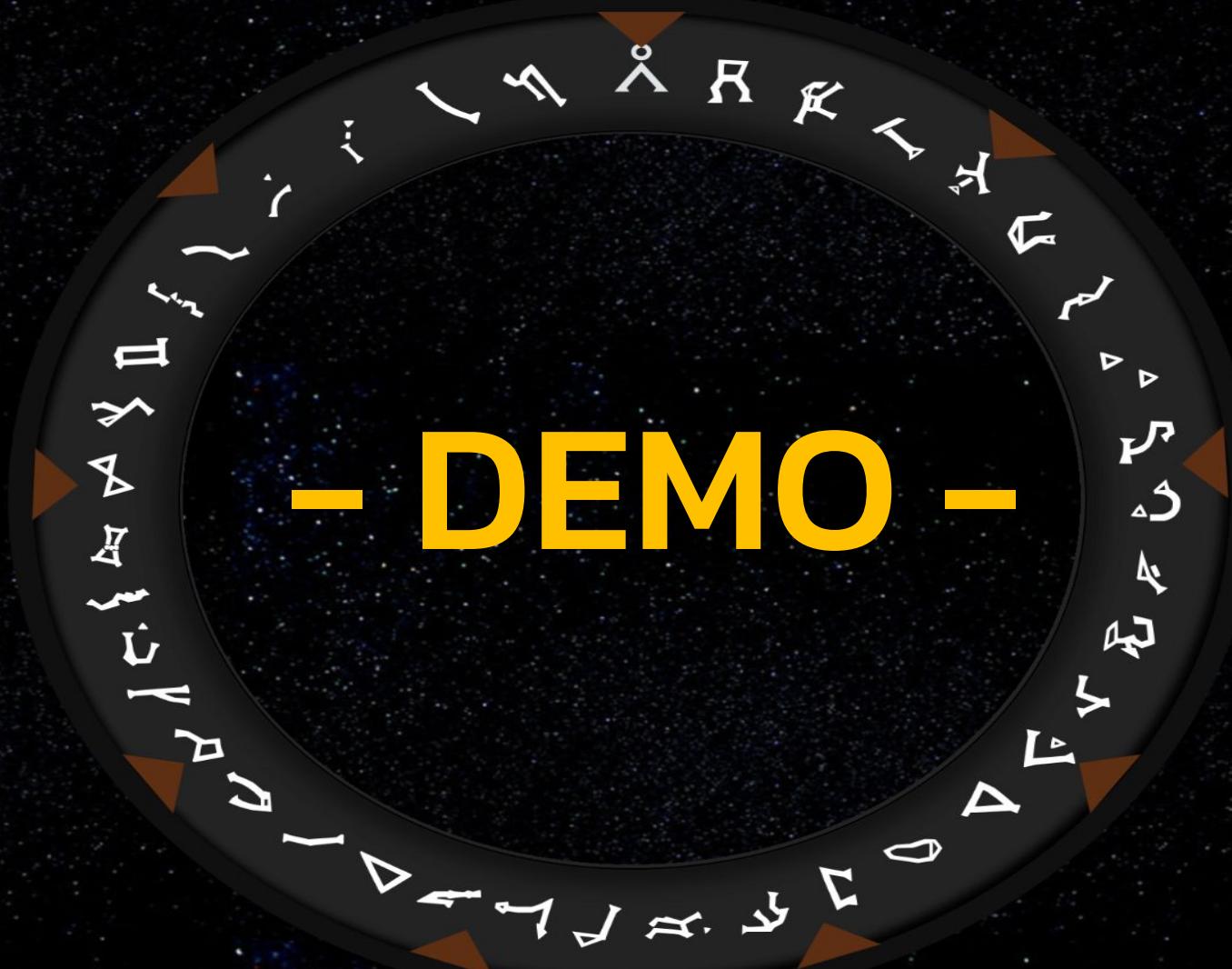


Welcome to Stargate Command.

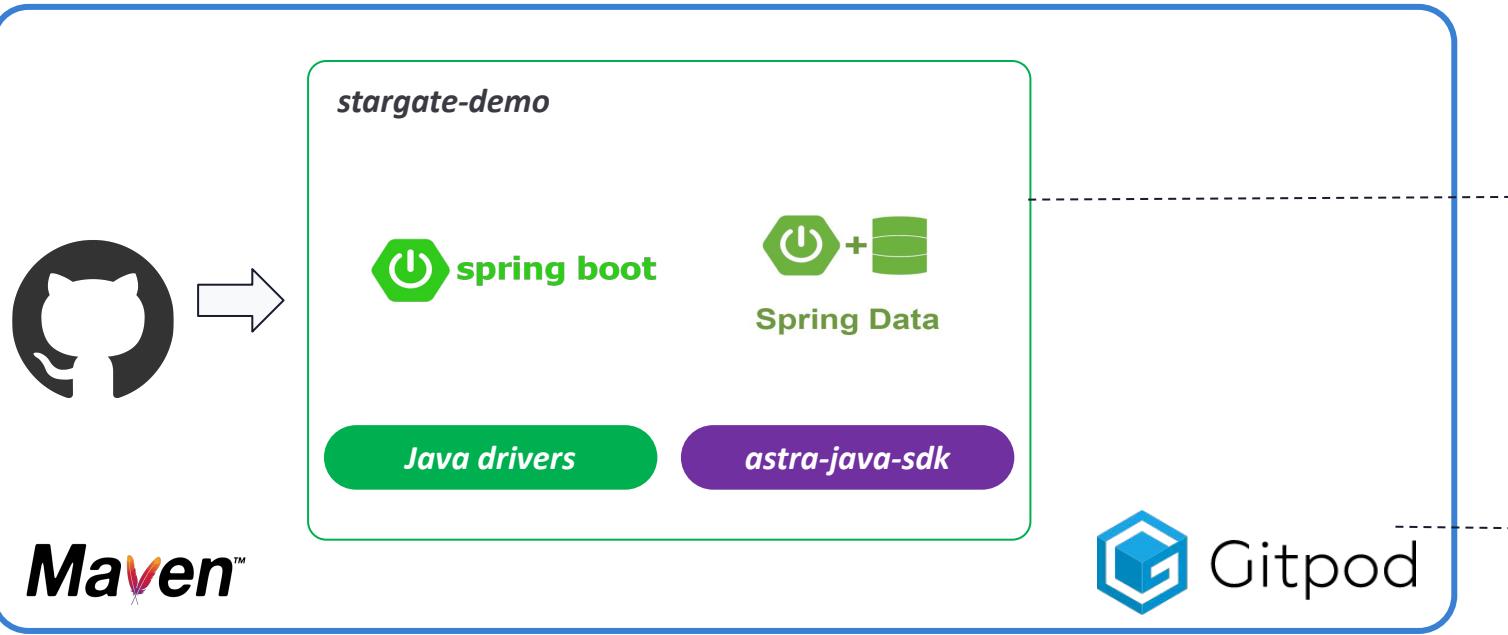


Your mission is to find the coordinates of Planet **Chulak** in the Galaxy **Milky Way** to save **Teal'c** from Goa'uld Apophysis.

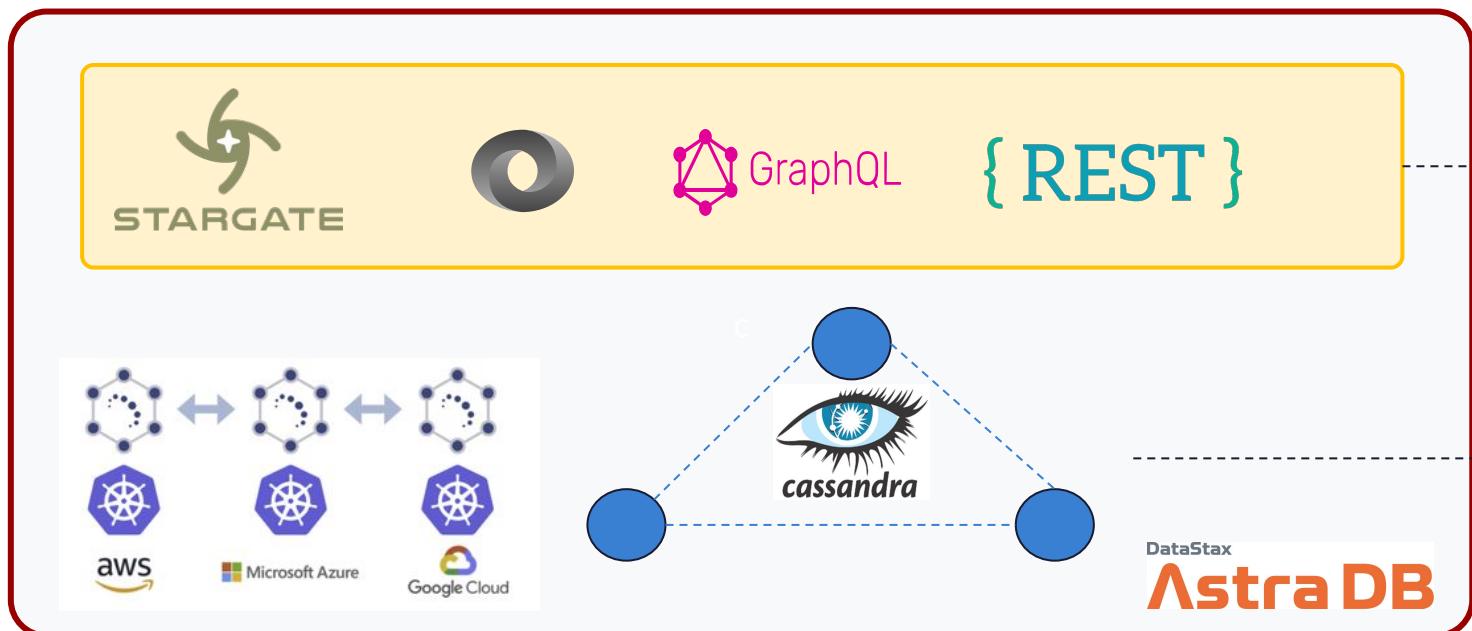
ASTRA and the network of **Stargate** will help you here.



Dial your destination with <chevrons>



IDE Gitpod.io
A free cloud-based IDE



OSS Stargate.io
A data gateway to allow multiple usages



OSS Apache Cassandra
A Column oriented NoSQL Database



What will you do in the next 2H

01

Housekeeping
Demo



02

Setup
our Database



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the Application



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STARGATE

05

Software
Development
Kit

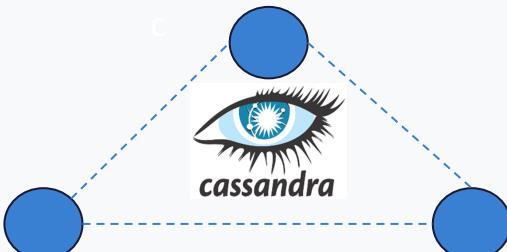
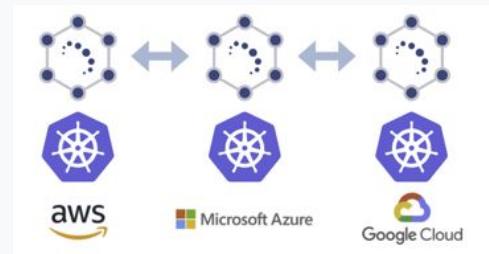


{REST}

06

Resources





OSS Apache Cassandra
A Column oriented NoSQL
Database



Hands-on From #1 to #4



DataStax

Astra

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GitHub

Repository:

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STARGATE

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{REST}

06

Resources





Inversion of Control : Work with interfaces

```
public interface GreetingServices {  
    String sayHello();  
}
```

```
@Component  
public class GreetingServicesImpl implements GreetingServices {  
    /** {@inheritDoc} */  
    public String sayHello() {  
        return "hello";  
    }  
}
```

```
@RestController  
public class MyApi {  
  
    private GreetingServices greetingServices;  
  
    // Inversion of control  
    public MyApi(GreetingServices gs) {  
        this.greetingServices = gs;  
    }  
  
    @GetMapping  
    public String hello() {  
        return greetingServices.sayHello();  
    }  
}
```

What Spring can do



Microservices

Quickly deliver production-grade features with independently evolvable microservices.



Reactive

Spring's asynchronous, nonblocking architecture means you can get more from your computing resources.



Cloud

Your code, any cloud—we've got you covered. Connect and scale your services, whatever your platform.



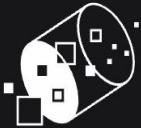
Web apps

Frameworks for fast, secure, and responsive web applications connected to any data store.



Serverless

The ultimate flexibility. Scale up on demand and scale to zero when there's no demand.



Event Driven

Integrate with your enterprise. React to business events. Act on your streaming data in realtime.



Batch

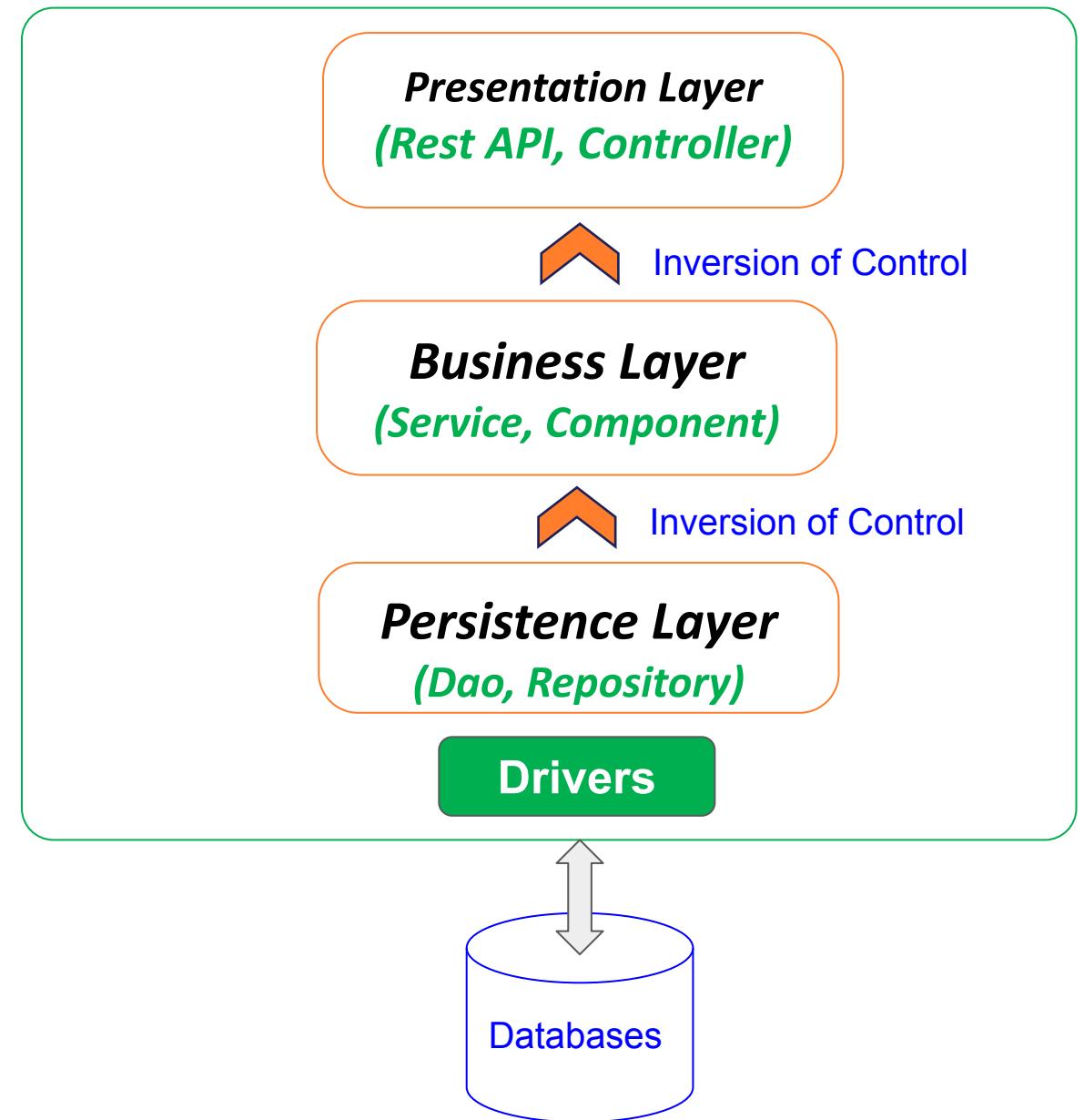
Automated tasks. Offline processing of data at a time to suit you.



spring.io



- Create **stand-alone** Spring applications
(no need to deploy WAR files)
- **Simplify** your build configuration
- **Automatically** configure Spring and 3rd party libraries
- Production-ready features such as
 - metrics
 - health checks
 - externalized configuration





Spring Boot 2



Reactor

Optional Dependency

Reactive Stack

Spring WebFlux is a non-blocking web framework built from the ground up to take advantage of multi-core, next-generation processors and handle massive numbers of concurrent connections.

Netty, Servlet 3.1+ Containers

Reactive Streams Adapters

Spring Security Reactive

Spring WebFlux

Spring Data Reactive Repositories
Mongo, Cassandra, Redis, Couchbase, R2DBC

Servlet Stack

Spring MVC is built on the Servlet API and uses a synchronous blocking I/O architecture with a one-request-per-thread model.

Servlet Containers

Servlet API

Spring Security

Spring MVC

Spring Data Repositories
JDBC, JPA, NoSQL

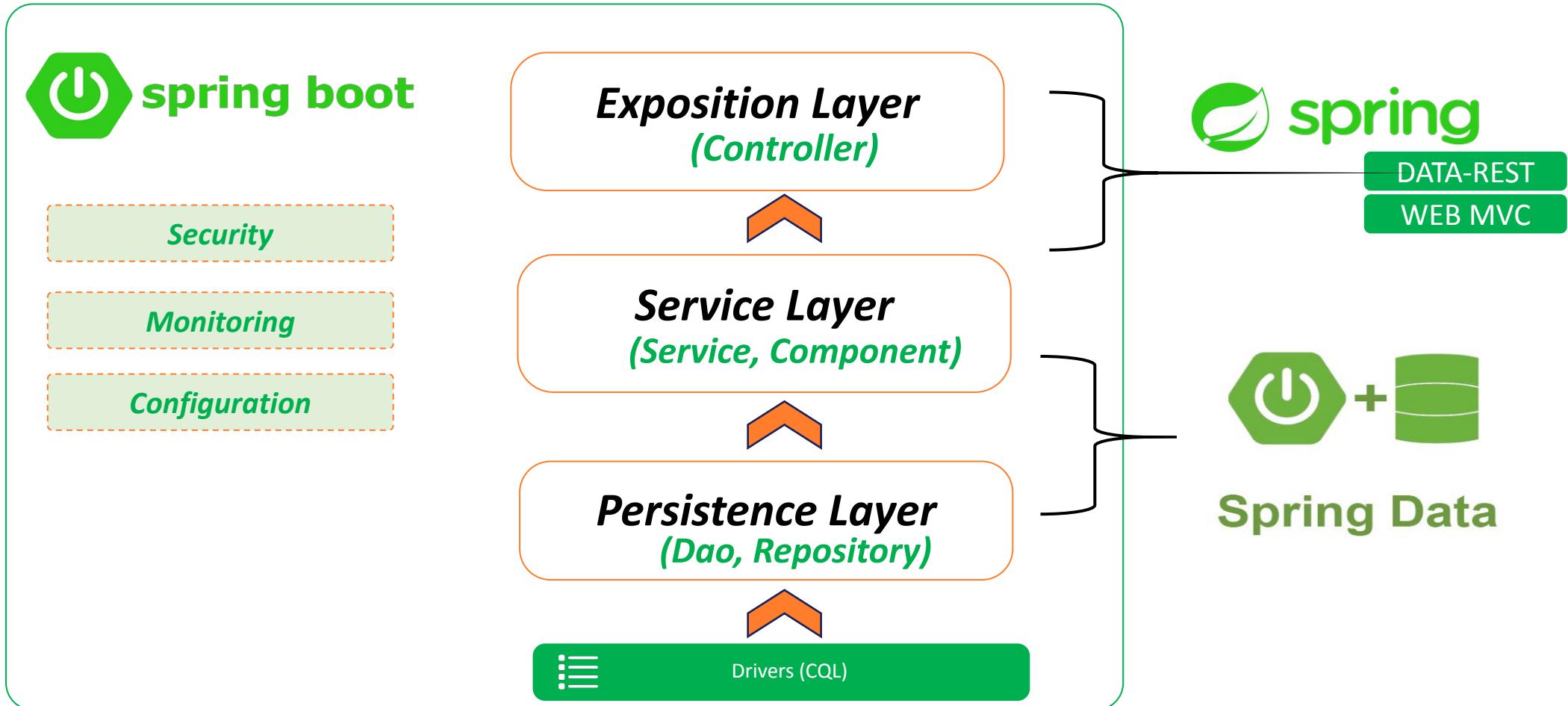
CONTROLLERS

SERVICES

REPOSITORIES

CONNECTIVITY

DATABASE



DataStax Drivers

*One of set drivers to connect them all -
January 2020*



Connectivity

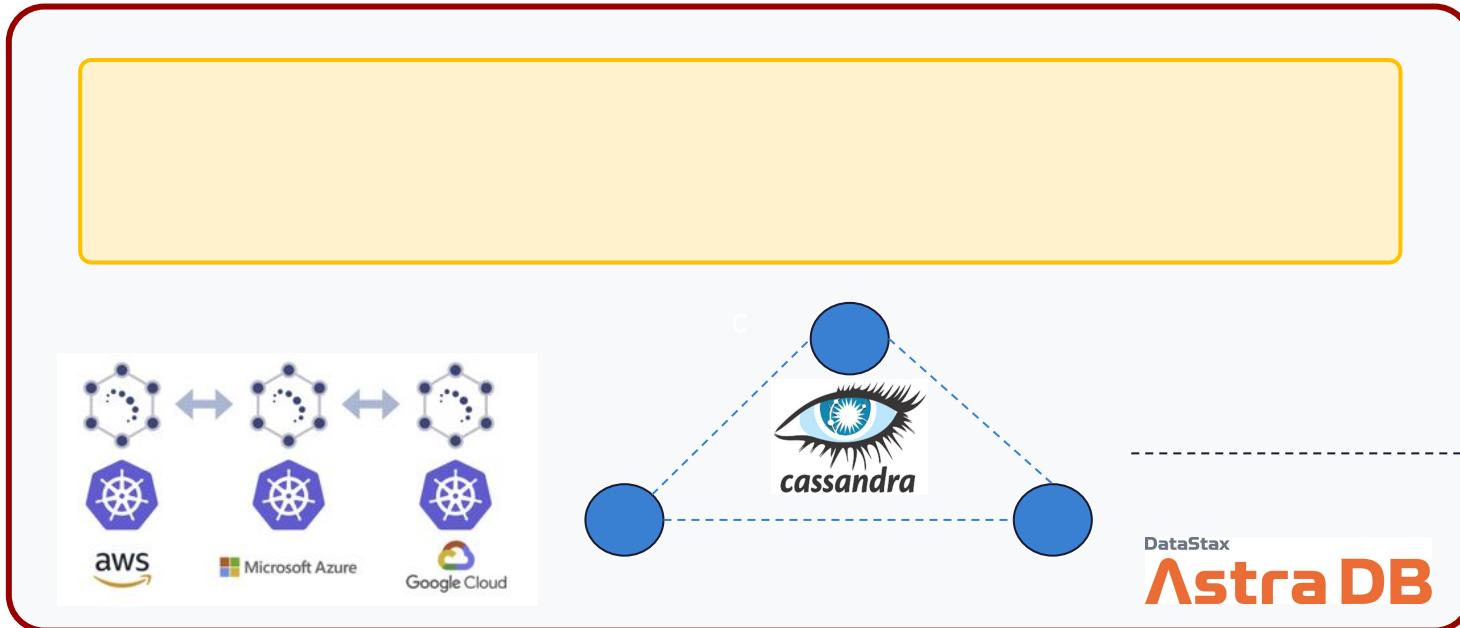
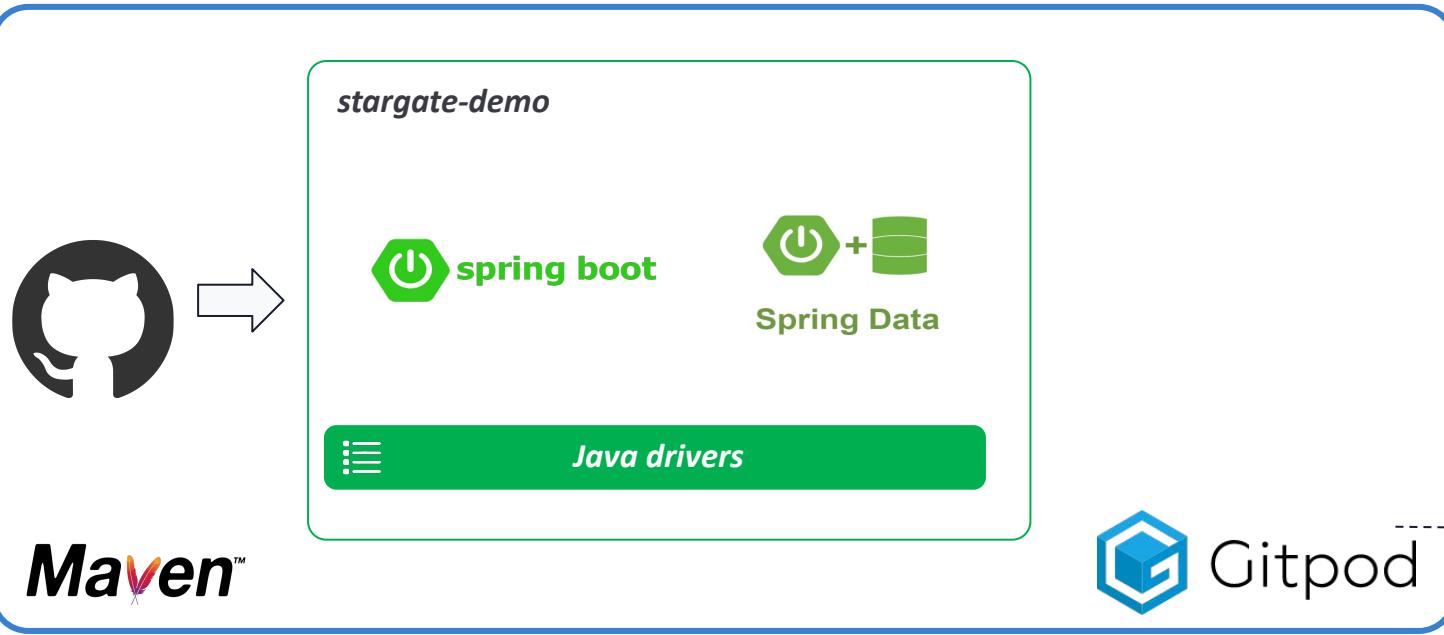
- Token & Datacenter Aware
- Load Balancing Policies
- Retry Policies
- Reconnection Policies
- Connection Pooling
- Health Checks
- Authentication | Authorization
- SSL

Query

- CQL Support
- Schema Management
- Sync/Async/Reactive API
- Query Builder
- Compression
- Paging

Parsing Results

- Lazy Load
- Object Mapper
- Spring Support
- Paging



OSS Apache Cassandra
A Column oriented NoSQL Database



Hands-on From #5 to #9



DataStax

Astra

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GitHub

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What will you do in the next 2H

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STARGATE

05

Software
Development
Kit



{REST}

06

Resources



Start with Why – *Simon Sinek*

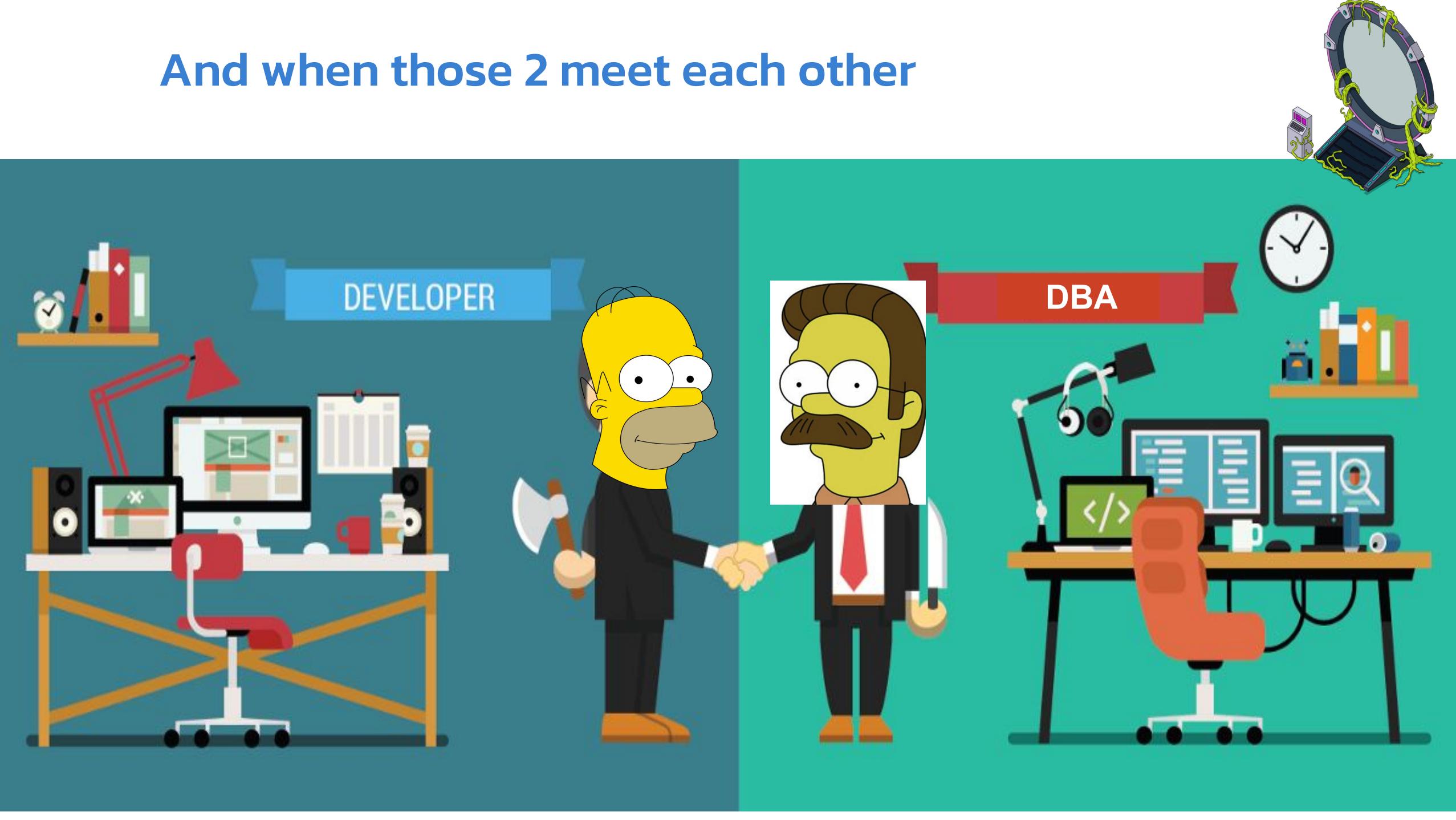
- **Developers**

- Do you like learning query languages (CQL, N1QL, GQL, cypher, gremlin....)
 - No. Save my JSON, give it to me back when I need it
 - ORM / Spring Data are so popular nowadays
- Do you care about how your data is stored ?
 - Physical data model part of the interface...yikes
 - Create structures based on queries
- Do you like installing and running Databases locally
 - especially distributed databases
 - especially with datasets and integration tests

Start with Why – *Simon Sinek*

- Operators and Databases Administrators...
 - Do you allow developers to execute direct queries against your DB ?
 - Do you like opening port ranges like 0-65536 to allow communications with applications, especially in the cloud.
 - Do you like creating dedicated projects and hiring people just to create APIs to expose an existing treatment (digital transformation FTW)
 - Do you like to maintain 4 different databases if developers ask for them?

And when those 2 meet each other

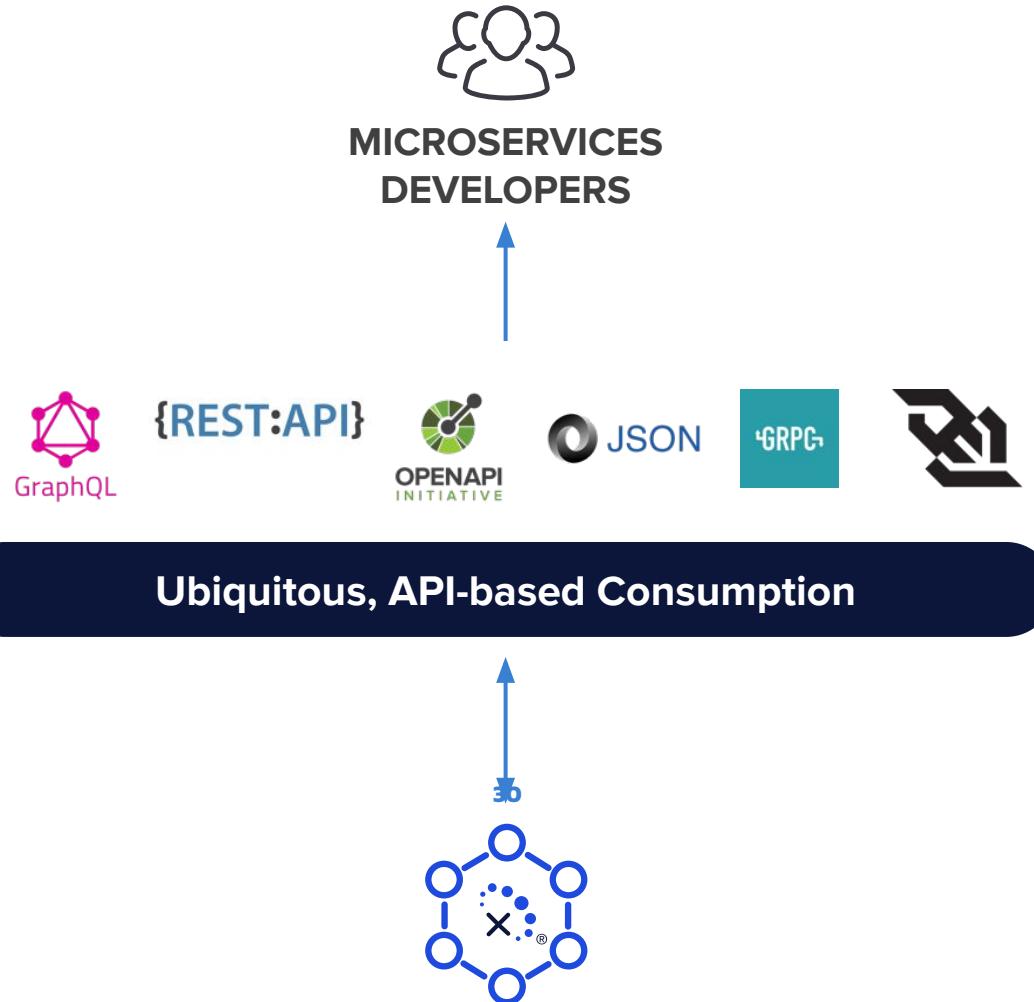


Data Gateway Rationale

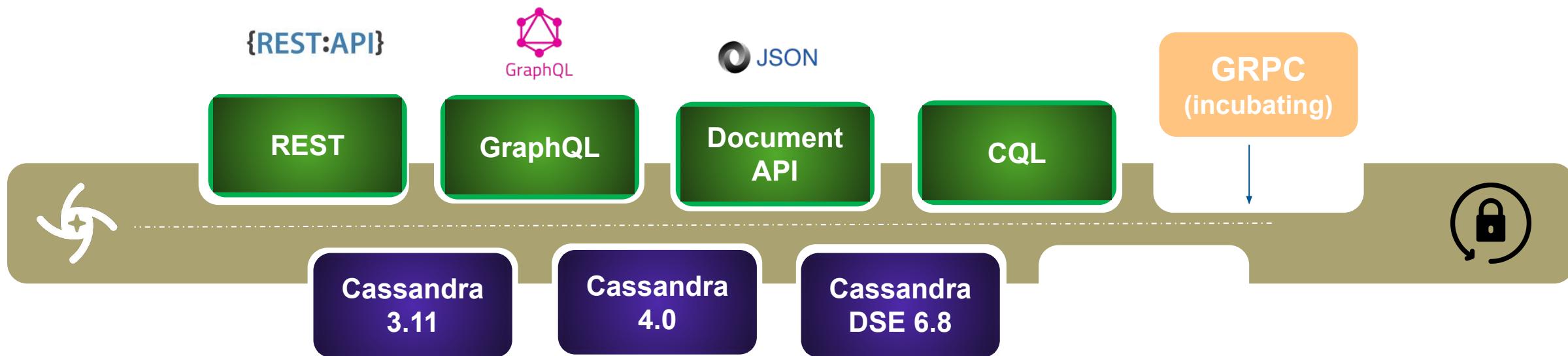


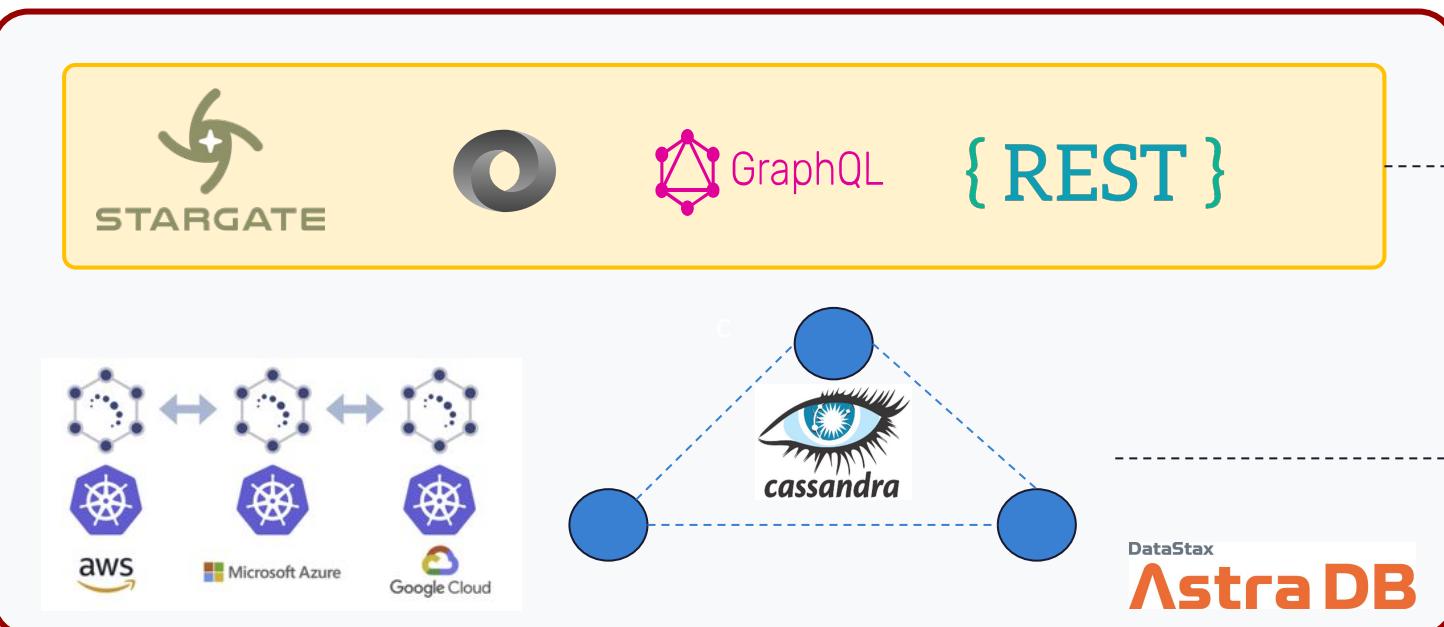
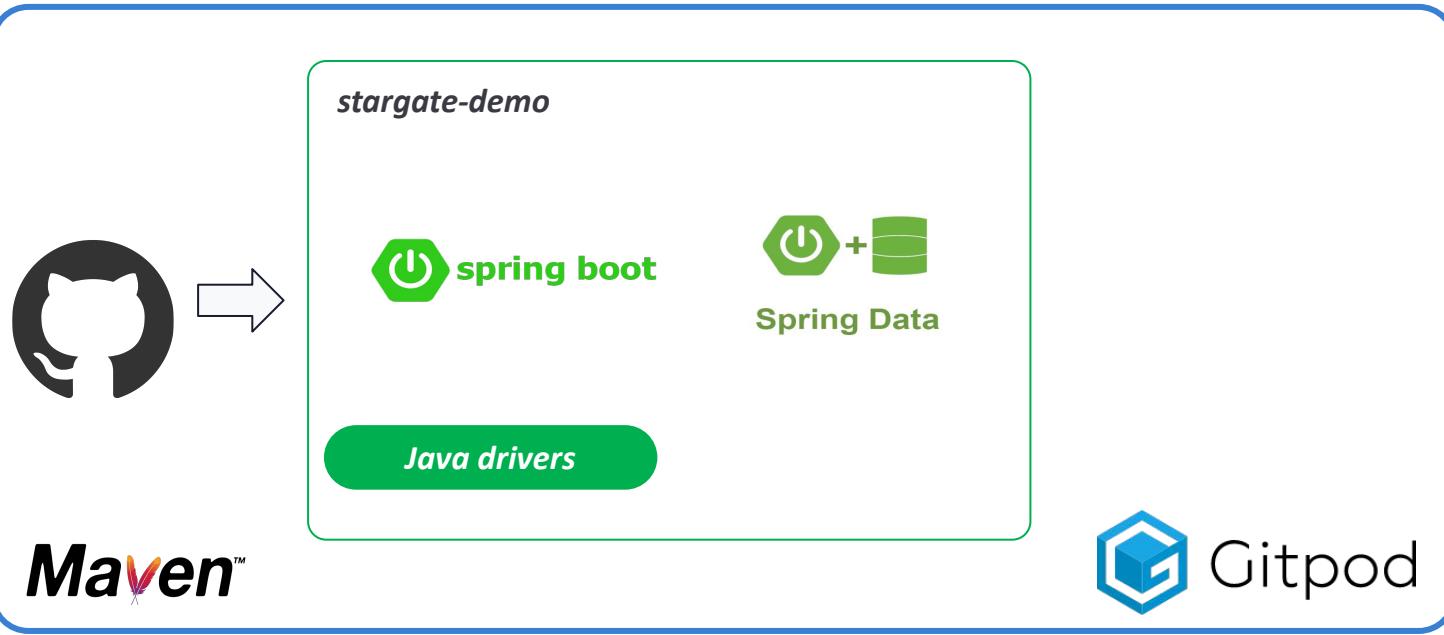
Developers want the option to use modern APIs and development gateways.

Cassandra is a database designed for the new standard and the associated APIs that facilitate the first choice of developers.



Modules





OSS Stargate.io
A data gateway to allow multiple usages



OSS Apache Cassandra
A Column oriented NoSQL Database



Hands-on From #10 to #12



DataStax

Astra

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Stargate



STARGATE

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Software
Development
Kit



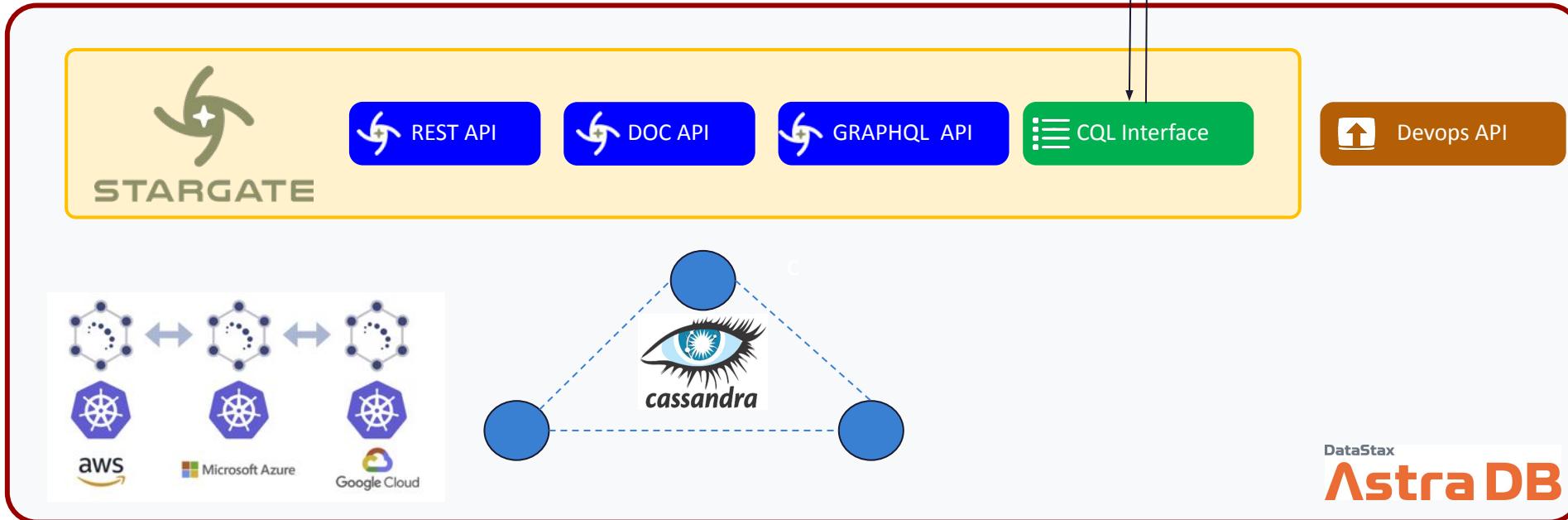
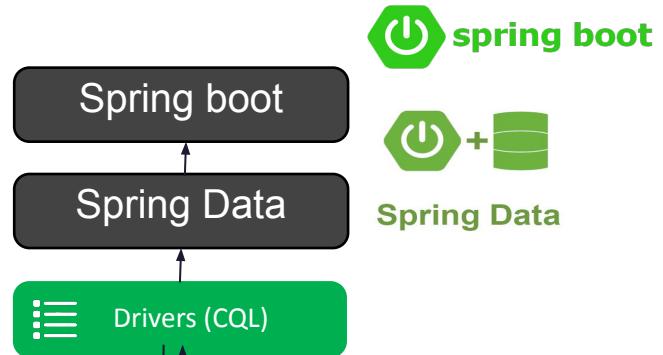
{REST}

06

Resources



stargate-demo



stargate-demo

Astra Java SDK

Spring boot
Spring Data

spring boot
Spring Data

Drivers (CQL)

STARGATE

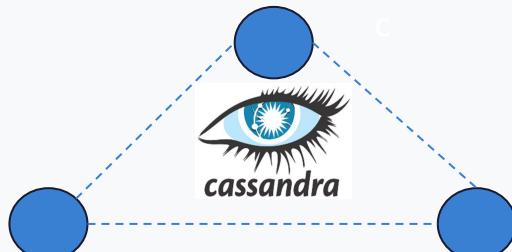
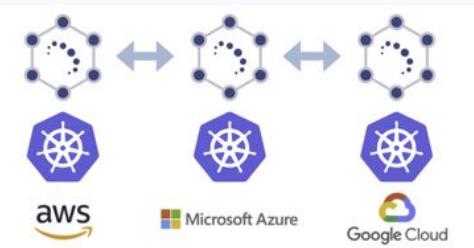
REST API

DOC API

GRAPHQL API

CQL Interface

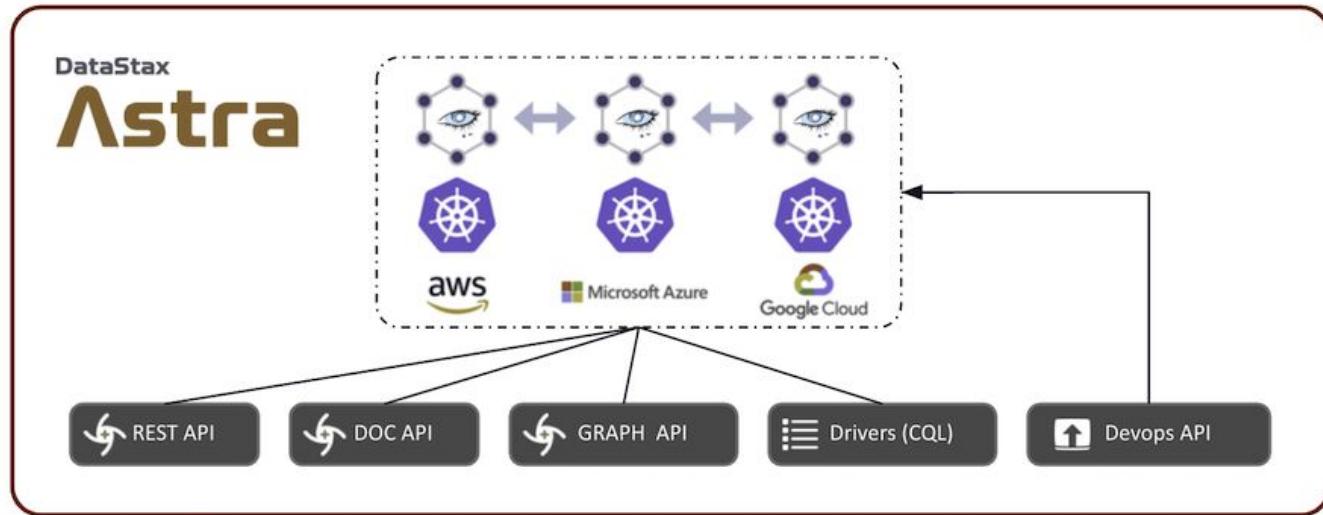
Devops API



DataStax
Astra DB

DataStax Developers

Astra SDKs



<https://github.com/datastax/astra-sdk-java>



<https://github.com/datastax/astrajs>

Hands-on #13



DataStax

Astra

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STARGATE

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Development
Kit



{REST}

06

Resources





Get your badge! (and brag on LinkedIn)

#1 - [Complete hands-on]
Show Screenshot of the Application
running

#2 - [Spring Boot REST] -
datastax.com/dev/spring

YOUR NAME NEXT WEEK
ON SCREEN !!



Build a Spring Boot REST Service

This scenario is a brief introduction to Spring Boot so you can see how to create an initial project.

Do you want to set up your first Spring Boot project? Then, you're at the right place!

In this scenario, we'll learn how to:

- Create a Spring Boot project for a simple REST server
- Create some service endpoints
- Pass parameters to an endpoint
- Create a REST endpoint that uses Cassandra

This scenario is a brief introduction to Spring Boot so you can see how to create an initial project.

CONTRIBUTORS

START SCENARIO

TIME TO COMPLETE
15 minutes

DIFFICULTY
Beginner

SHARE



Katakoda

datastax.com/dev/certifications



Vouchers (regular price 145\$) , valid 3 months, with 2 attempts

Get ready, take a course first, they are free!

LEARNING PATHS at the academy.datastax.com



Weekly Workshops

datastax.com/workshops

The screenshot shows the DataStax Developers YouTube channel page. At the top, there's a large banner with the text "LEVEL UP with the DataStax Developers". Below the banner, the channel's profile picture and name "DataStax Developers" are displayed, along with the subscriber count "8,1 k abonnés". The main navigation menu includes "ACCUEIL", "VIDÉOS" (which is underlined), "PLAYLISTS", "COMMUNAUTÉ", "CHAÎNES", and "À PROPOS". A search bar is also present. The "VIDÉOS" section features a grid of video thumbnails with titles like "Building Microservices with Cassandra + Spring", "Advanced Data Modeling in Apache Cassandra™", and "Polska DataOps Meetup: Introduction to Apache...". Each thumbnail includes a duration (e.g., 2:23:56, 2:41:51, 1:28:14) and a "BEGGINER TOPIC" badge.

The screenshot displays a section titled "Upcoming Live Events" from the DataStax Developers website. It features four event cards:

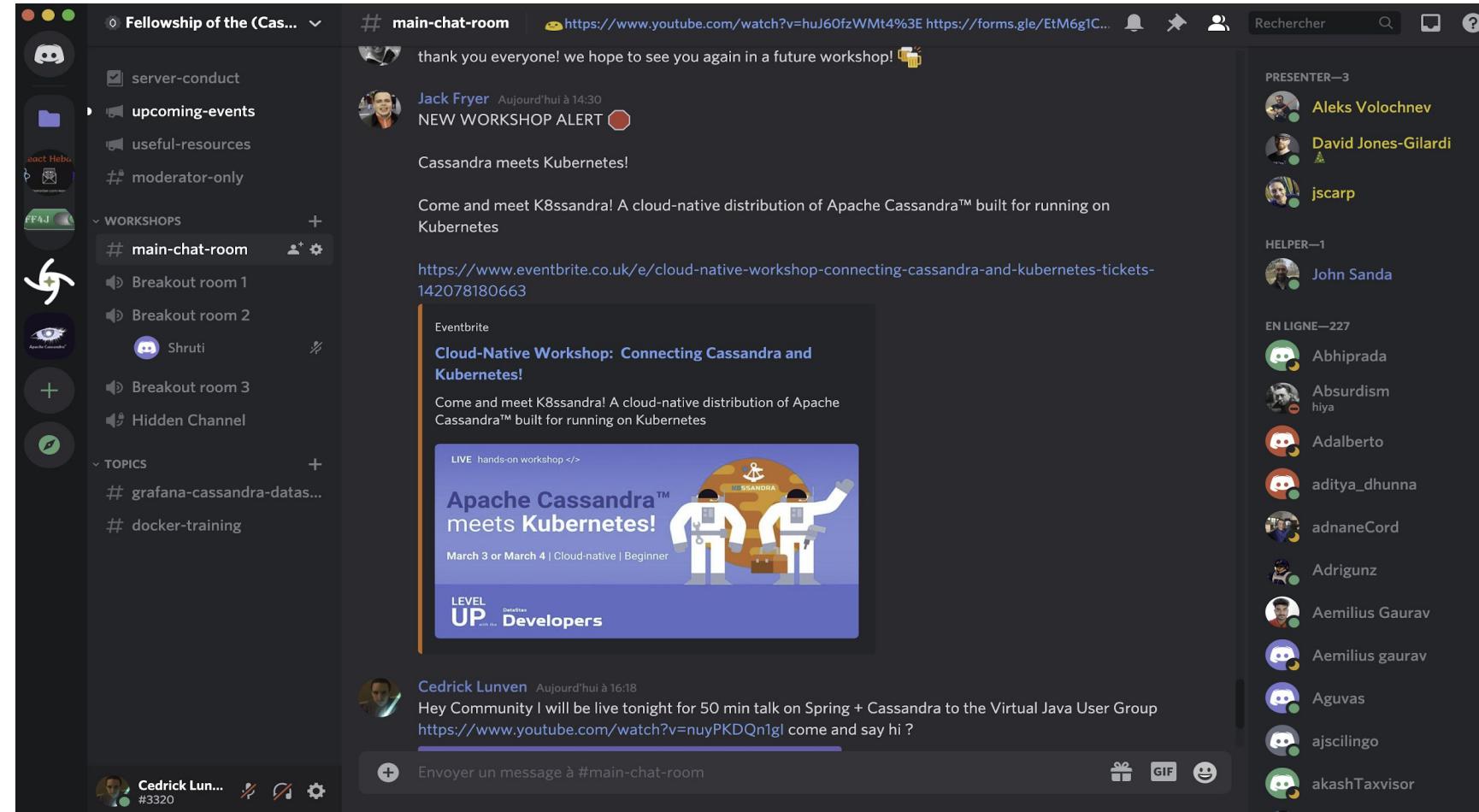
- Apache Cassandra™ Certification Preparation** (Multiple Dates | NoSQL | Beginner) - Includes a "Register Now" button.
- Build Microservices with Apache Cassandra™!** (Feb 17 or Feb 18 | NoSQL | Beginner) - Includes a "Register Now" button.
- Learn how to build a Serverless Game!** (Feb 24 or Feb 25 | Game Development | Beginner) - Includes a "START" button and a "Register Now" button.
- Build Microservices with Cassandra & Quarkus** (March 11 | Microservices | Beginner) - Includes a "Register Now" button.

Each event card features a small illustration of a developer character.

Join our 10k Discord Community

The Fellowship of the RINGS

dtsx.io/discord



DataStax Developers

Thank you!



@hadesarchitect
@clun
@SonicDMG



@hadesarchitect
@clunven
@SonicDMG



@hadesarchitect
@clunven
@david-gilardi

