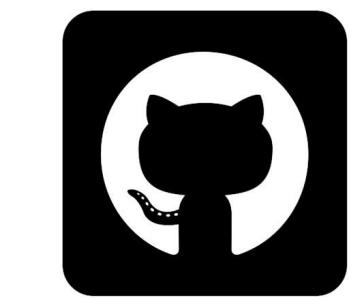


Construire des Applications Performantes avec



Developers



@clunven

clunven

@clun



Cédrick Lunven
Directeur Developer Relations

01

Introduction

- Architecture
- Cas d'usages
- Installation

02

Modélisation

- Types de données
- Méthodologie
- Exemples concrets

03

Les drivers

- Connectivité
- Requêteage
- Parser Résultats



js



python™

04

Object Mapping

- Drivers
- Active Records
- Pièges à éviter

05

Java Frameworks

- Spring Data
- Quarkus Extension
- Micronaut + C*

06

Stargate.io

- Architecture
- Tests Apis
- SDK(s)



01

Introduction

- Architecture
- Cas d'usages
- Installation

02

Modélisation

- Types de données
- Méthodologie
- Exemples concrets

03

Les drivers

- Connectivité
- Requêteage
- Parser Résultats



04

Object Mapping

- Drivers
- Active Records
- Pièges à éviter

05

Java Frameworks

- Spring Data
- Quarkus Extension
- Micronaut + C*

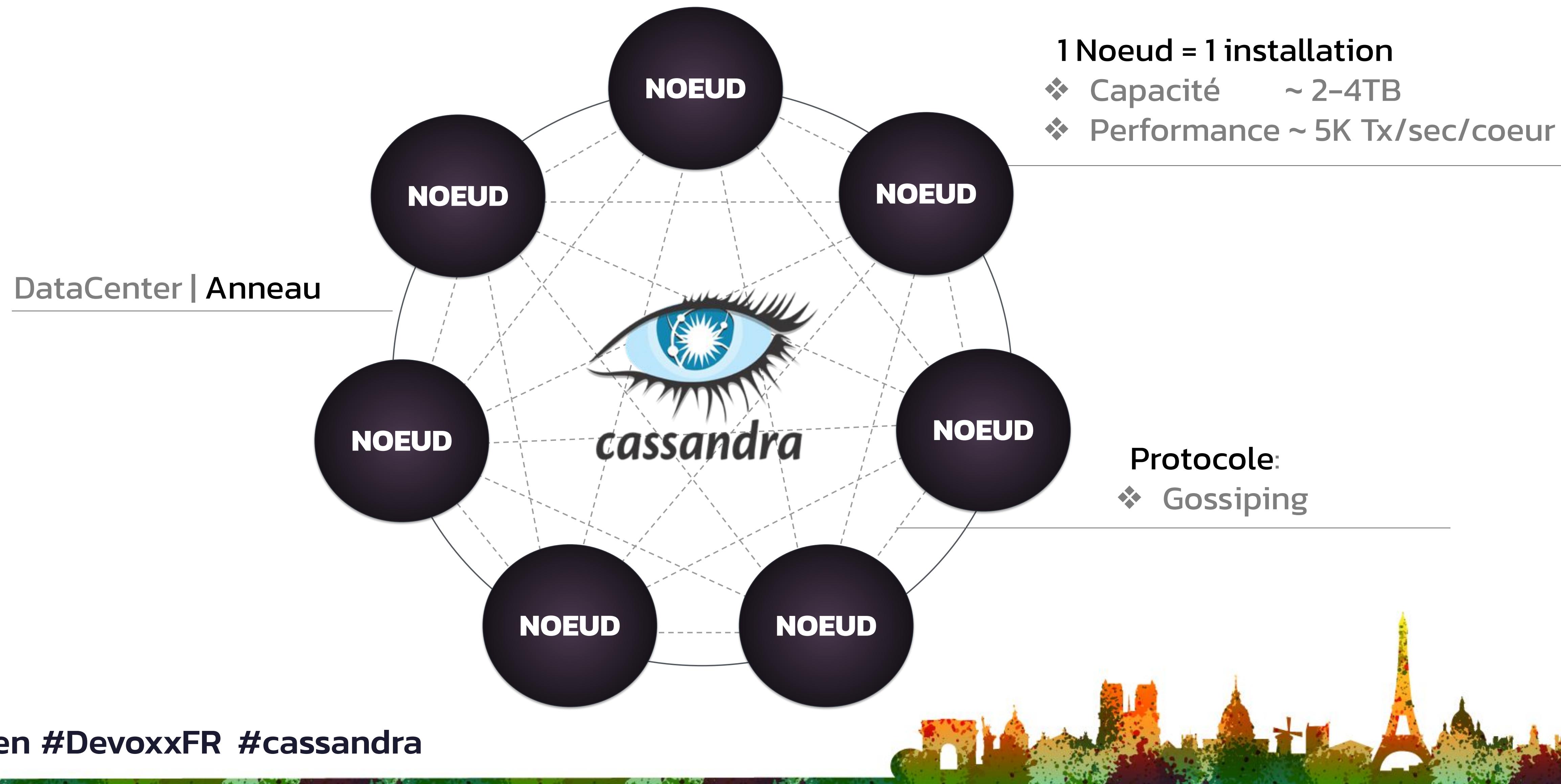
06

Stargate.io

- Architecture
- Tests Apis
- SDK(s)



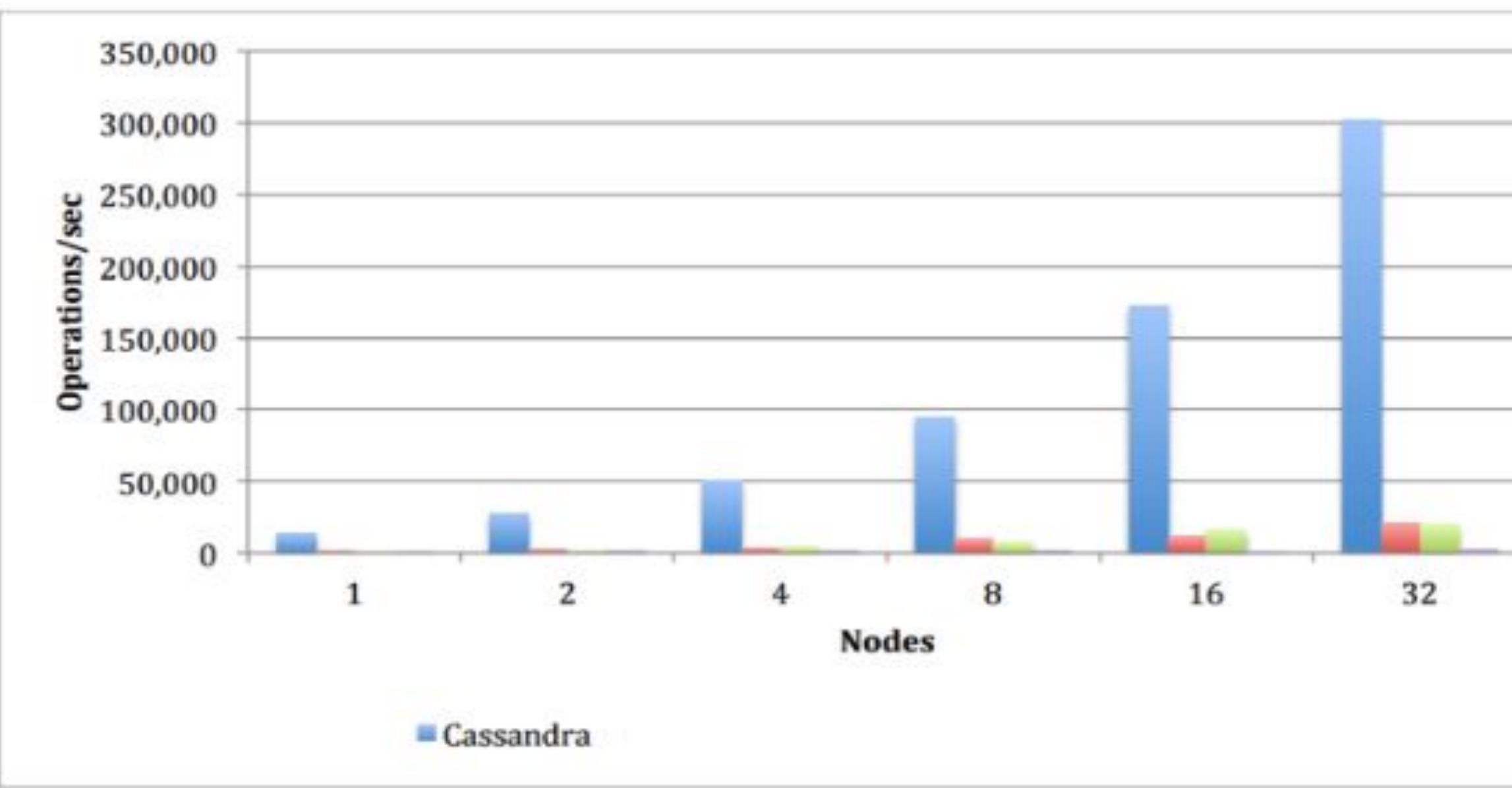
Apache Cassandra™ = BDD NoSQL Distribuée



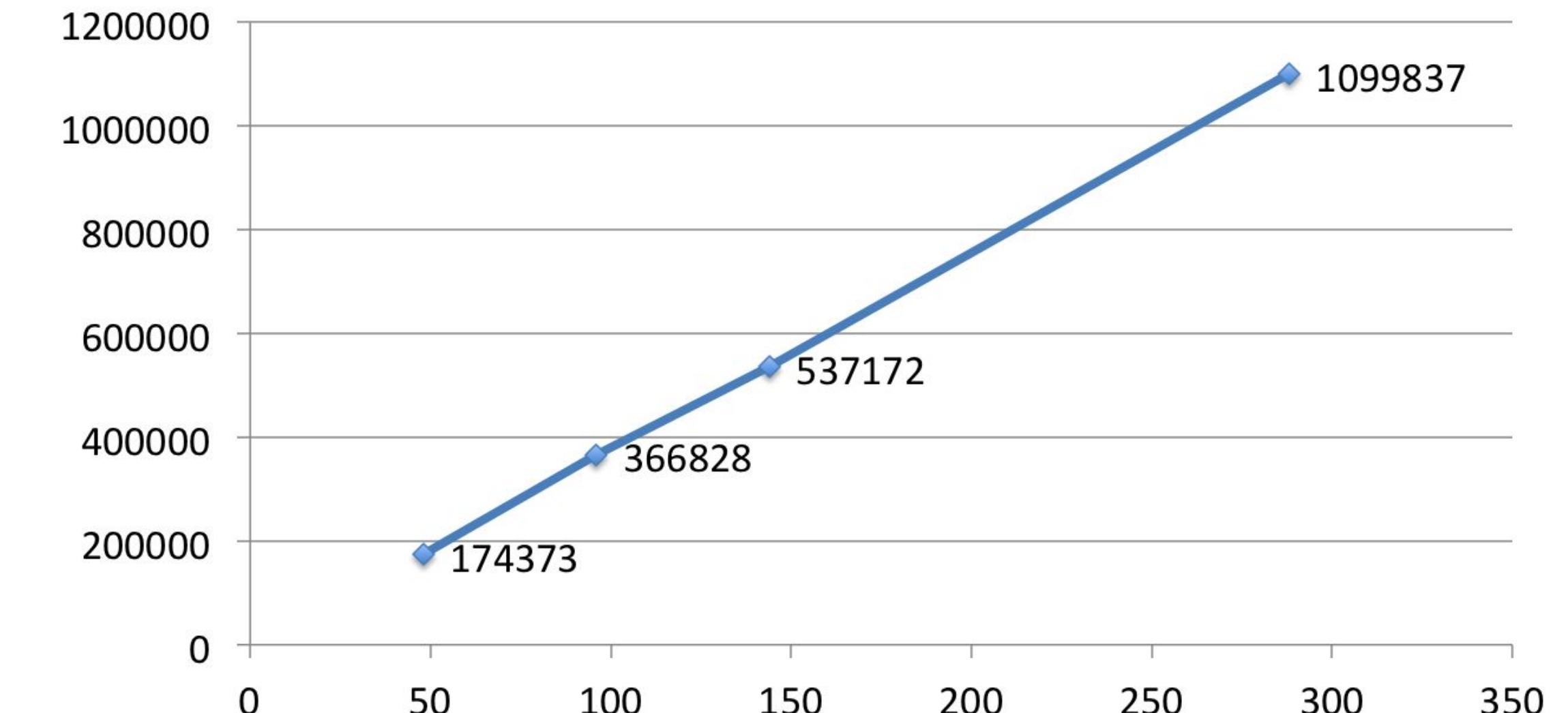
Scale-Up Linearity

Scalabilité Linéaire

Balanced Read/Write Mix



Client Writes/s by node count – Replication Factor = 3



netflixtechblog.com/benchmarking-cassandra-scalability-on-aws-over-a-million-writes-per-second-39f45f066c9e



Scalabilité !

Apache Cassandra @ Netflix

- 98% of streaming data is stored in Apache Cassandra
- Data ranges from customer details to viewing history to billing and payments
- Foundational datastore for serving millions of operations per second

- 30 million ops/sec on most active single cluster
- 500 TB most dense single cluster
- 9216 CPUs in biggest cluster

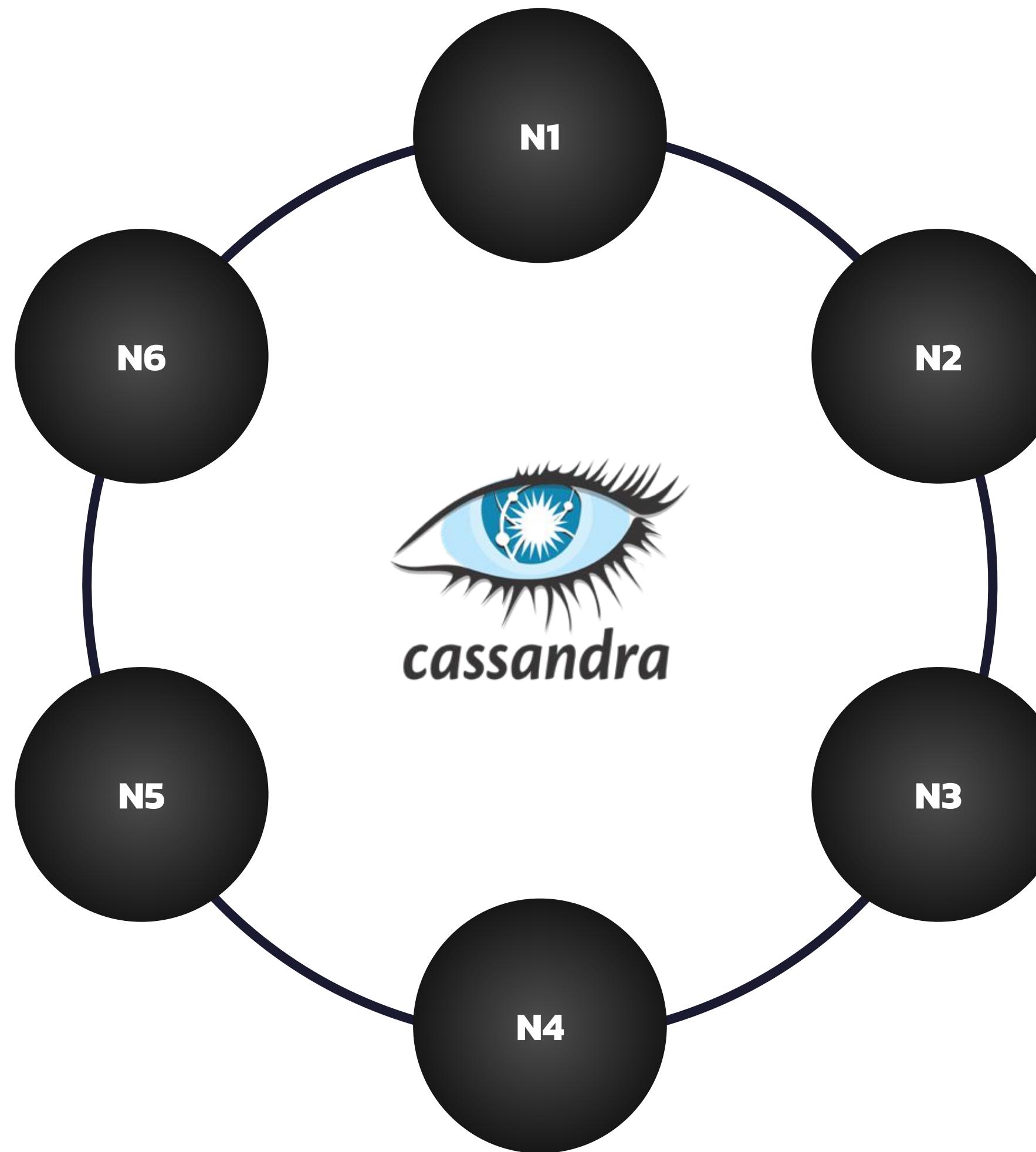
O(100) Clusters
O(10000) Instances
O(10,000,000) Replications per second
O(100,000,000) Operations per second
O(1,000,000,000,000) Petabytes of data

Apple Scale

- 160K+ Apache Cassandra instances
- 100+ PB stored
- Several million ops / sec
- 1000s of clusters



La donnée est distribuée, partitionnée, repliquée



user_by_city		
Country	City	Population
USA	New York	8.000.000
USA	Los Angeles	4.000.000
FR	Paris	2.230.000
DE	Berlin	3.350.000
UK	London	9.200.000
AU	Sydney	4.900.000
DE	Nuremberg	500.000
CA	Toronto	6.200.000
CA	Montreal	4.200.000
FR	Toulouse	1.100.000
JP	Tokyo	37.430.000
IN	Mumbai	20.200.000

Partition Key



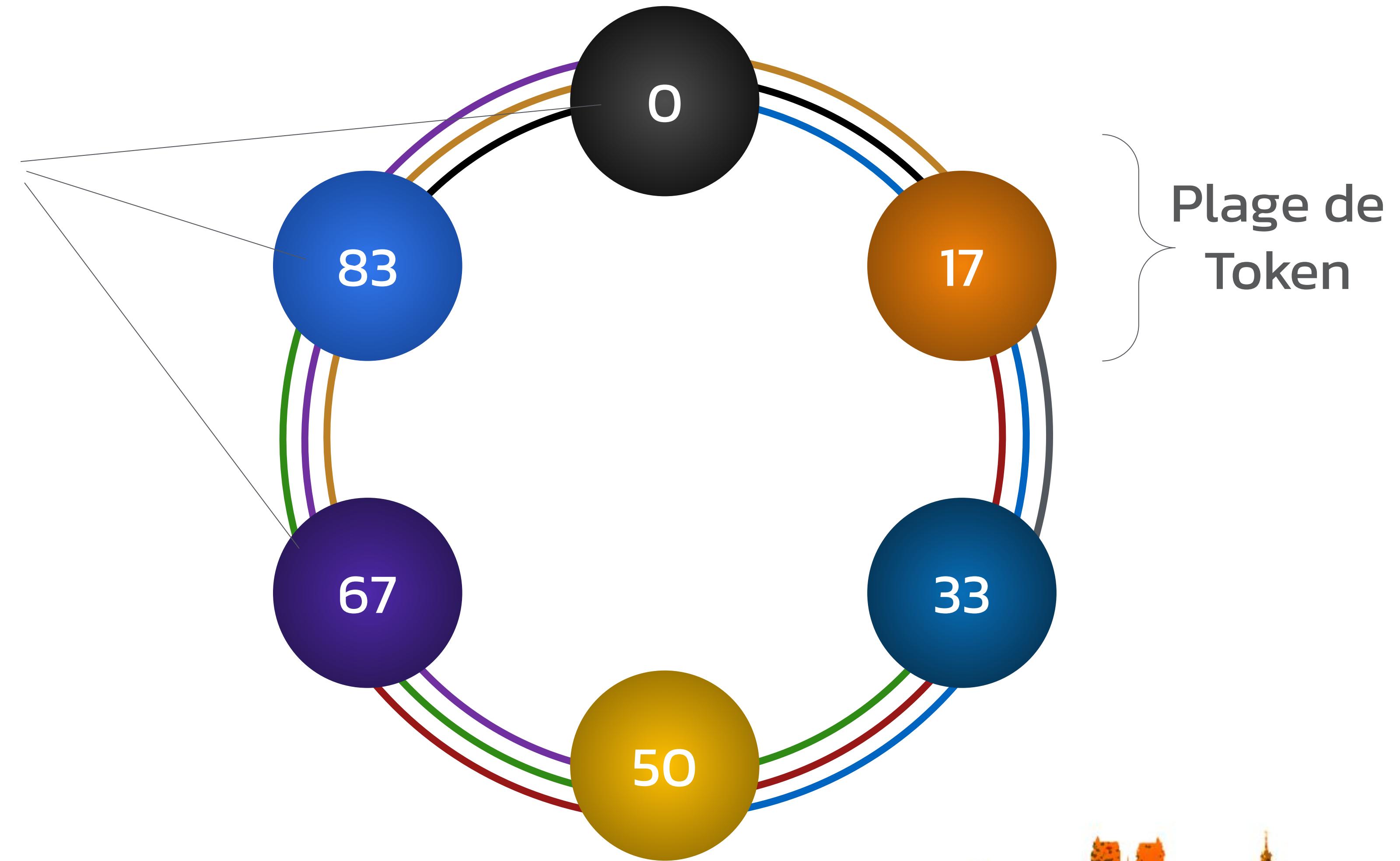
Country	City	Population
USA	New York	8.000.000
USA	Los Angeles	4.000.000
FR	Paris	2.230.000
DE	Berlin	3.350.000
UK	London	9.200.000
AU	Sydney	4.900.000
DE	Nuremberg	500.000
CA	Toronto	6.200.000
CA	Montreal	4.200.000
FR	Toulouse	1.100.000
JP	Tokyo	37.430.000
IN	Mumbai	20.200.000



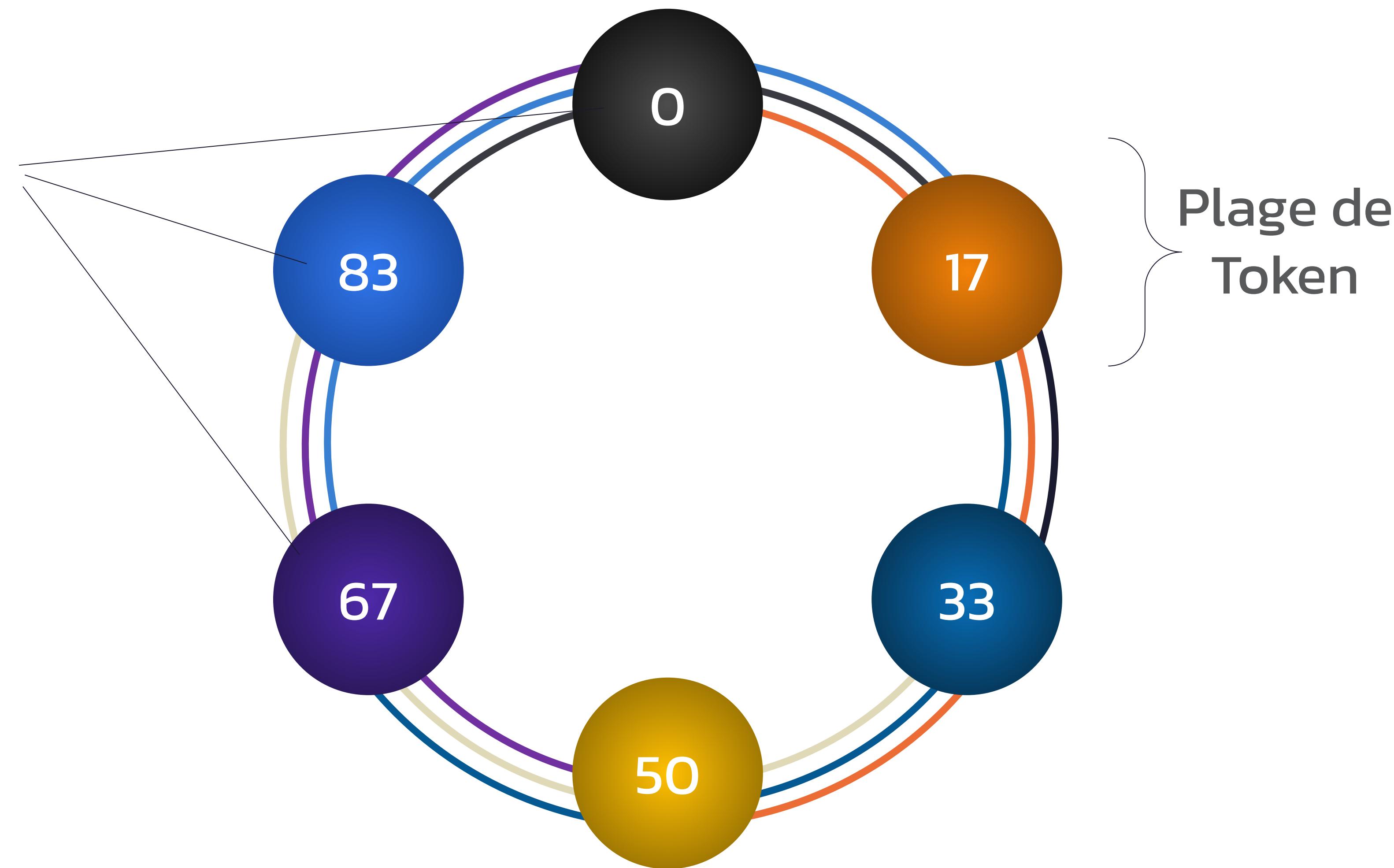
Partition Key

La donnée est distribuée, partitionnée, repliquée

Facteur de
réPLICATION (RF)

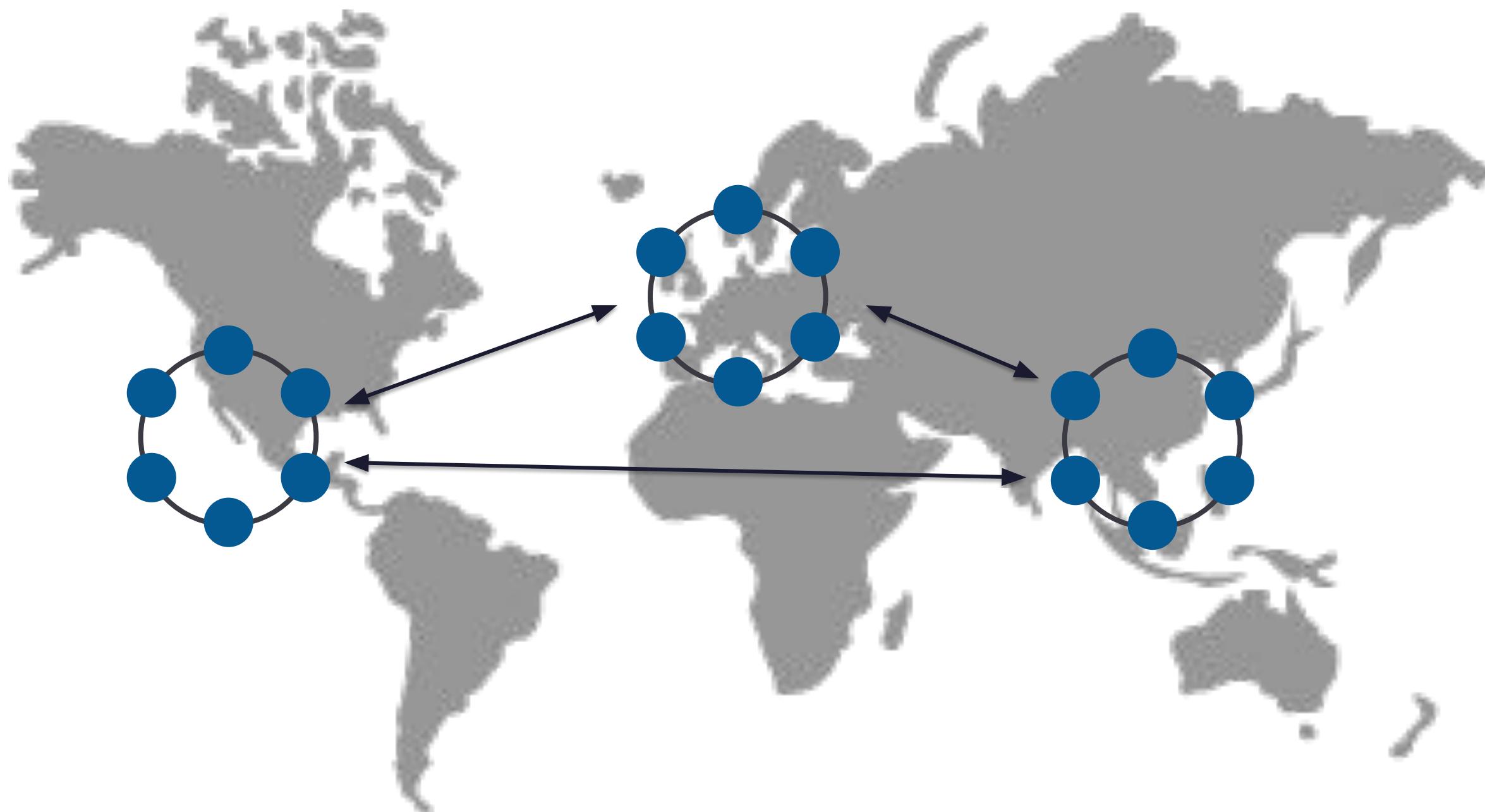


Facteur de
réPLICATION (RF)

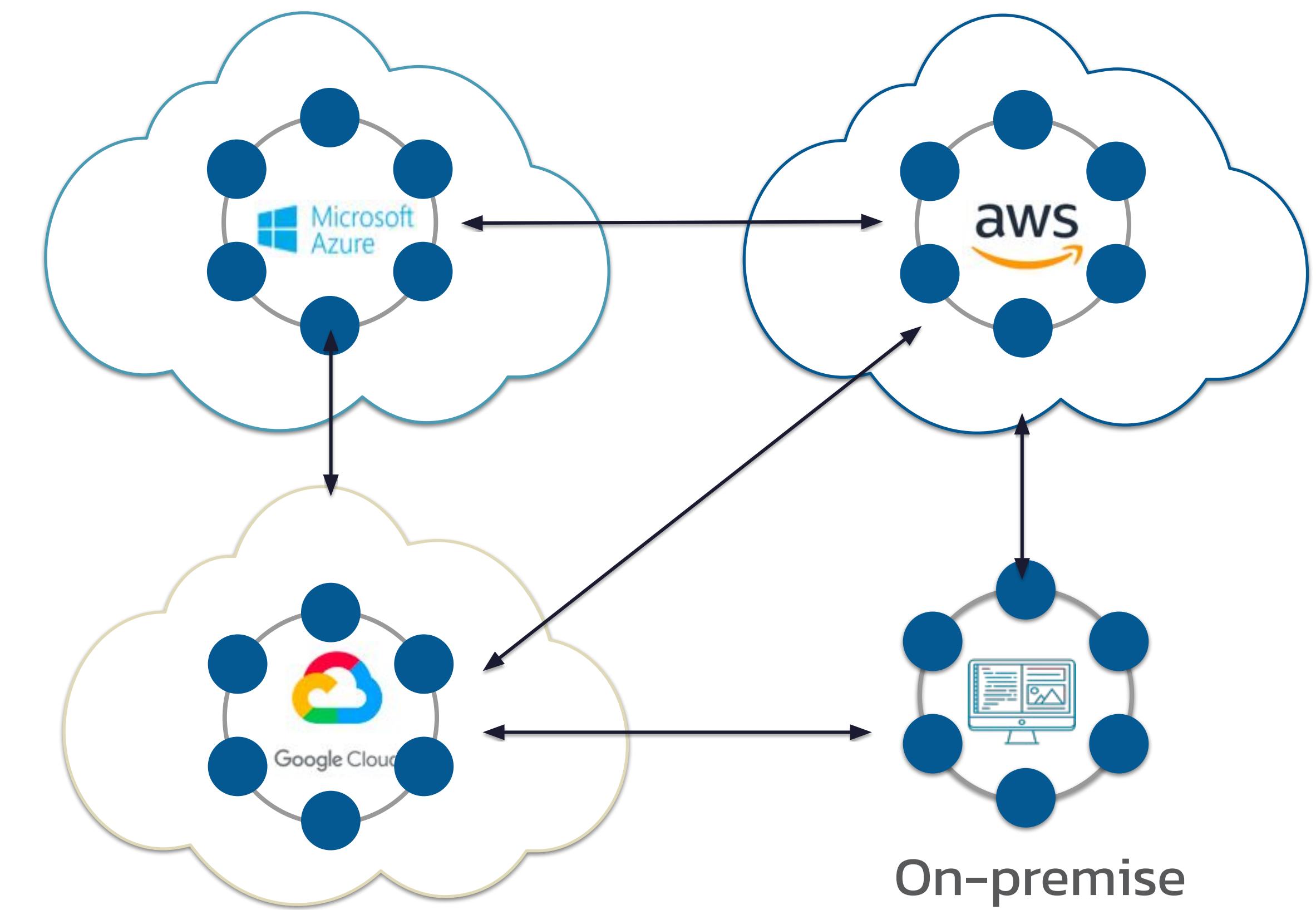


Architectures distribuées

Distribution géographique (DDN)



Déploiements Hybrid-Cloud et Multi-Cloud



Cas d'usages Apache Cassandra™ :

Scalabilité

High Throughput
High Volume



Heavy Writes
Heavy Reads



Event Streaming	Log Analytics
Internet of Things	Other Time Series

Disponibilité

Mission-Critical



No Data Loss
Always-on



Caching	Pricing
Market Data	Inventory

Distribuée

Global Presence
Workload Mobility



Compliance /
GDPR



Banking	Retail
Tracking / Logistics	Customer Experience

Cloud-native

Modern Cloud Applications



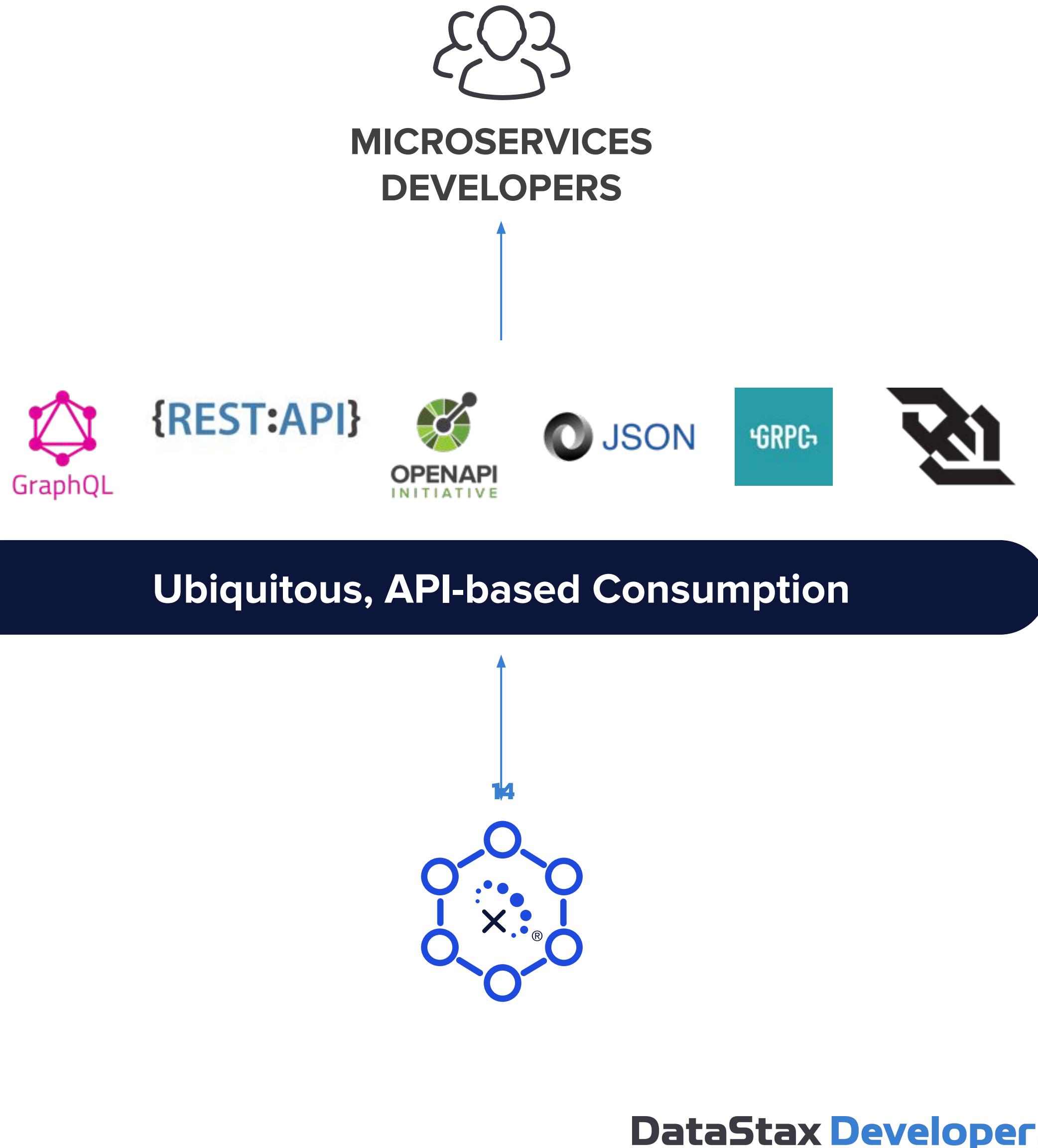
Containers	Hybrid-cloud
Kubernetes	Multi-cloud

Pourquoi une Data Gateway ?



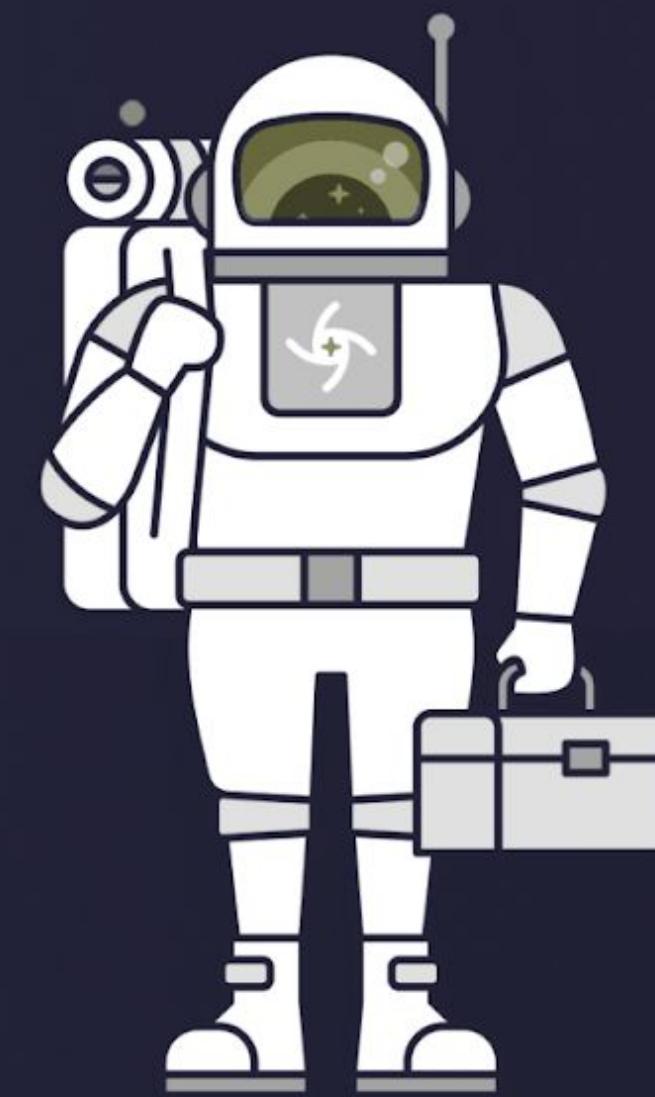
Les développeurs souhaitent travailler avec des APIs modernes (Rest API)

Une gateway permet une abstraction des communications (language, protocole, états)





Docs Community Blog



OPEN SOURCE DATA GATEWAY

Stargate is an open source data gateway that sits between your app and your databases. Stargate brings together an API platform and data request coordination code into one OSS project.

[Get Started](#)

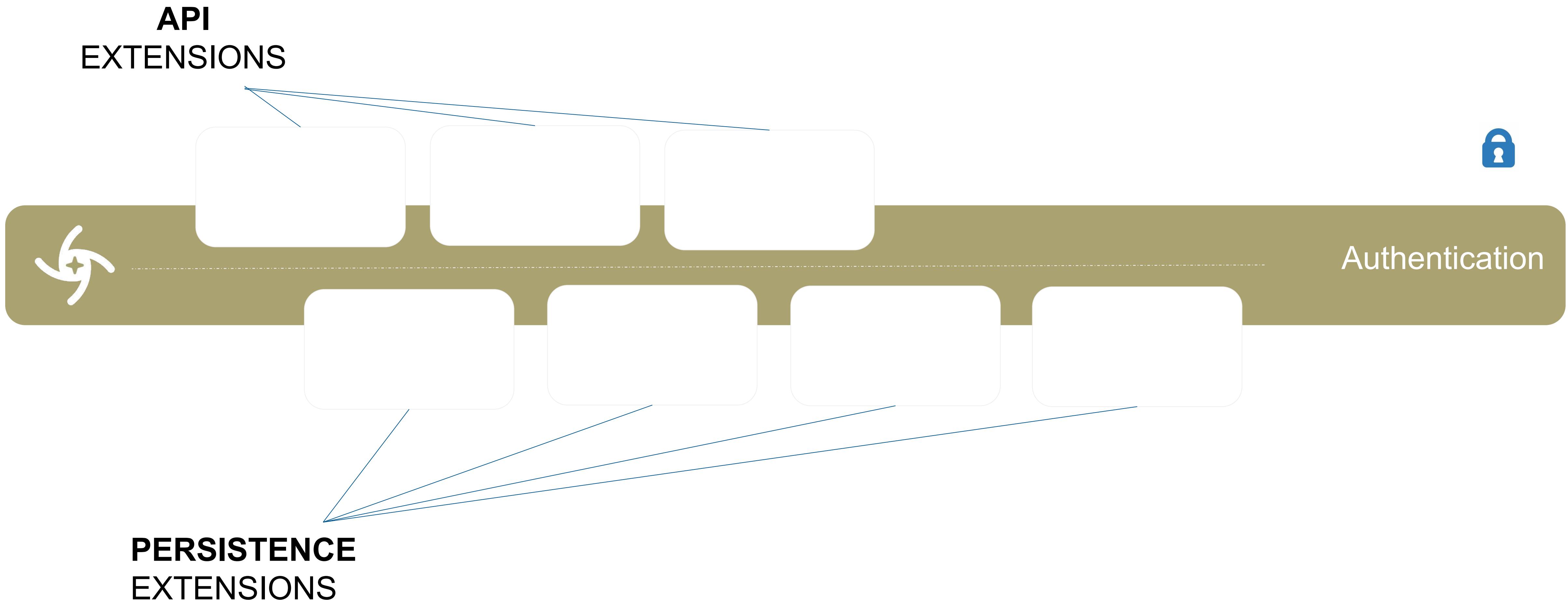


Github

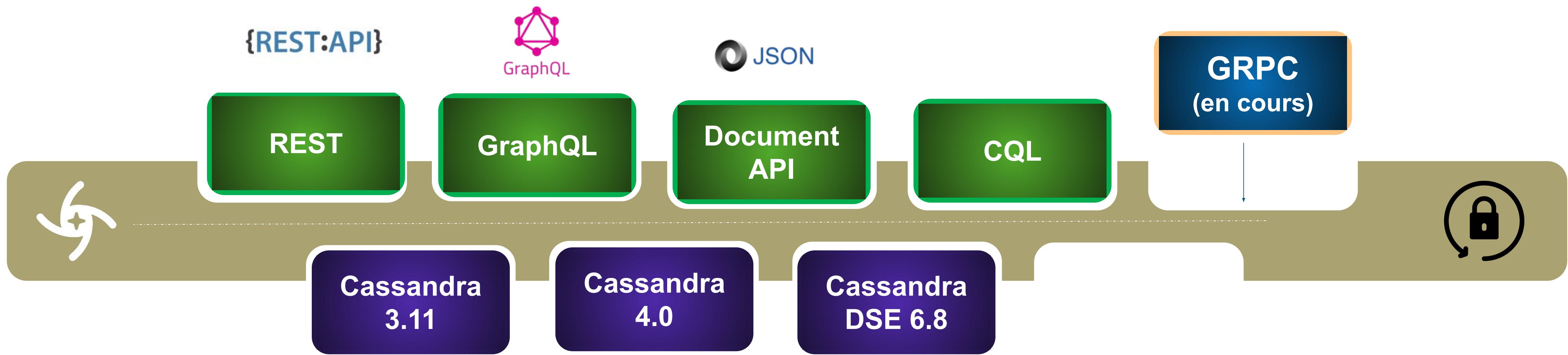
Stargate is the official data API for DataStax Astra and DataStax Enterprise!

[Try It Now](#)

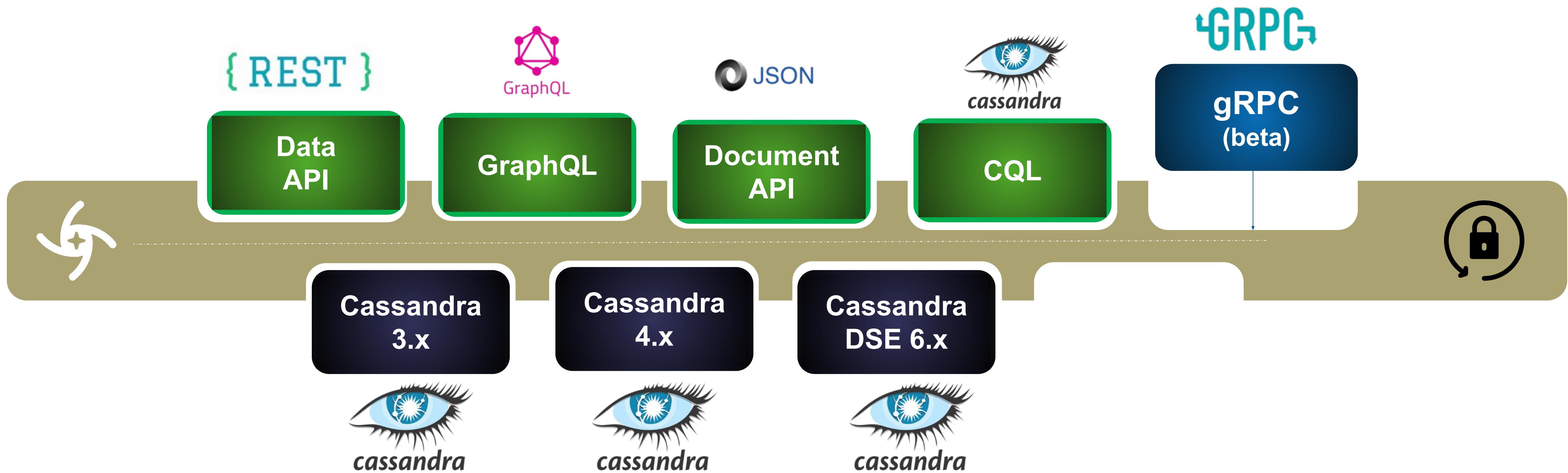
Extensions pour API et Persistence



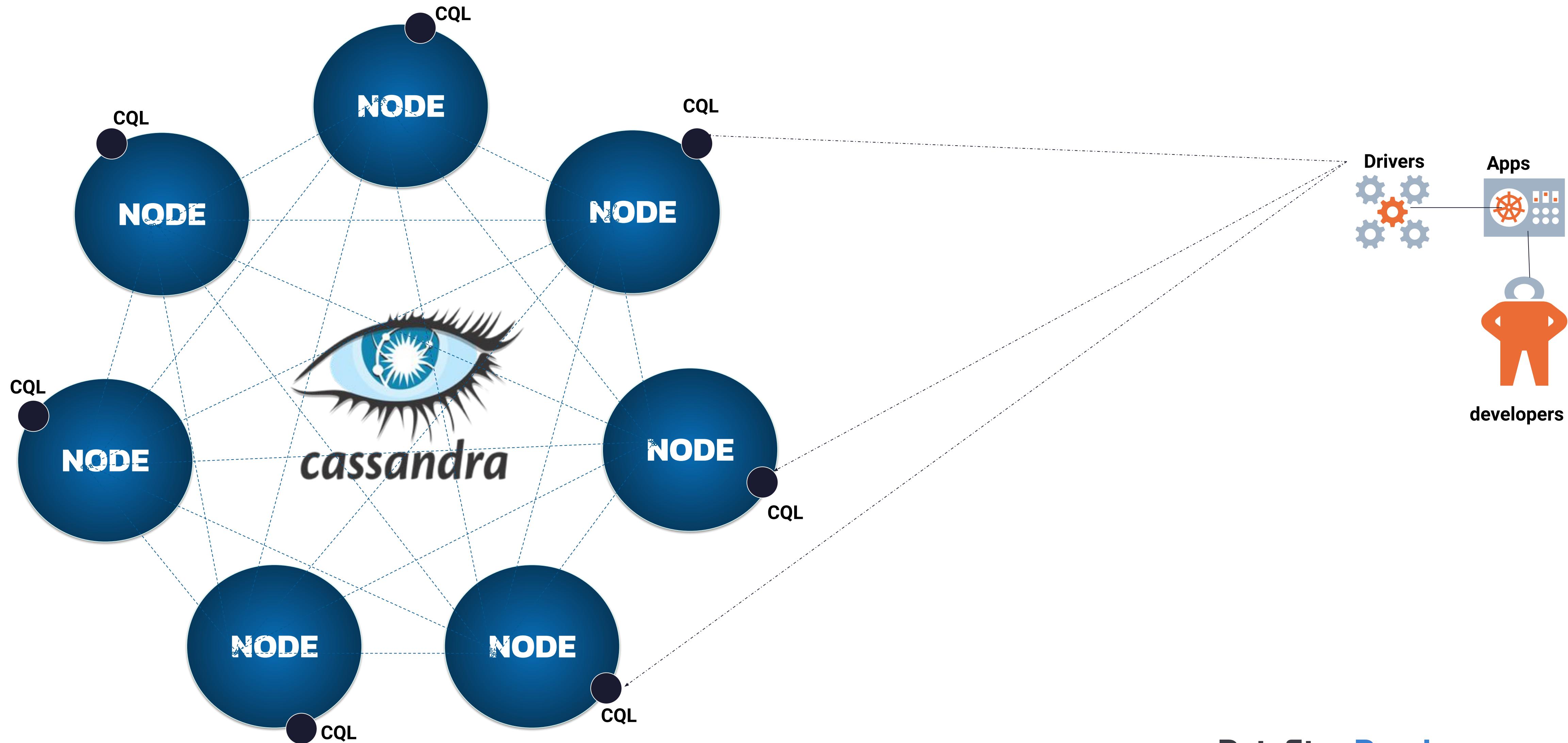
Modules existants



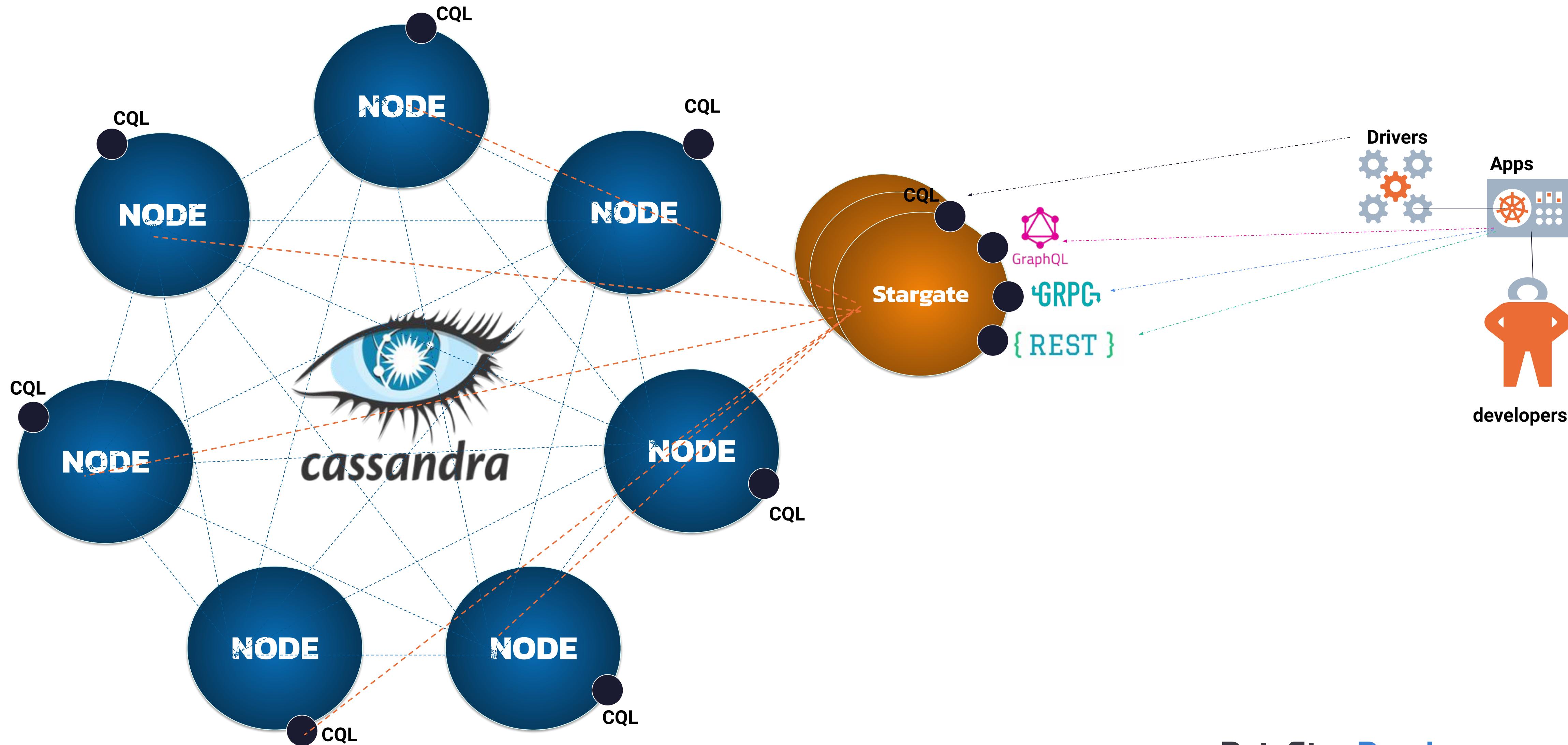
API Extensions and Persistence Extensions



Ça c'était avant...



Et maintenant, avec Stargate...



2021 Meilleure année pour Apache Cassandra™

01



Les cas d'usage pour
Apache Cassandra

02

Apache Cassandra™ 4
Quoi de neuf ?



03



Introduction à
Stargate.io

04



Introduction à
K8ssandra.io

05



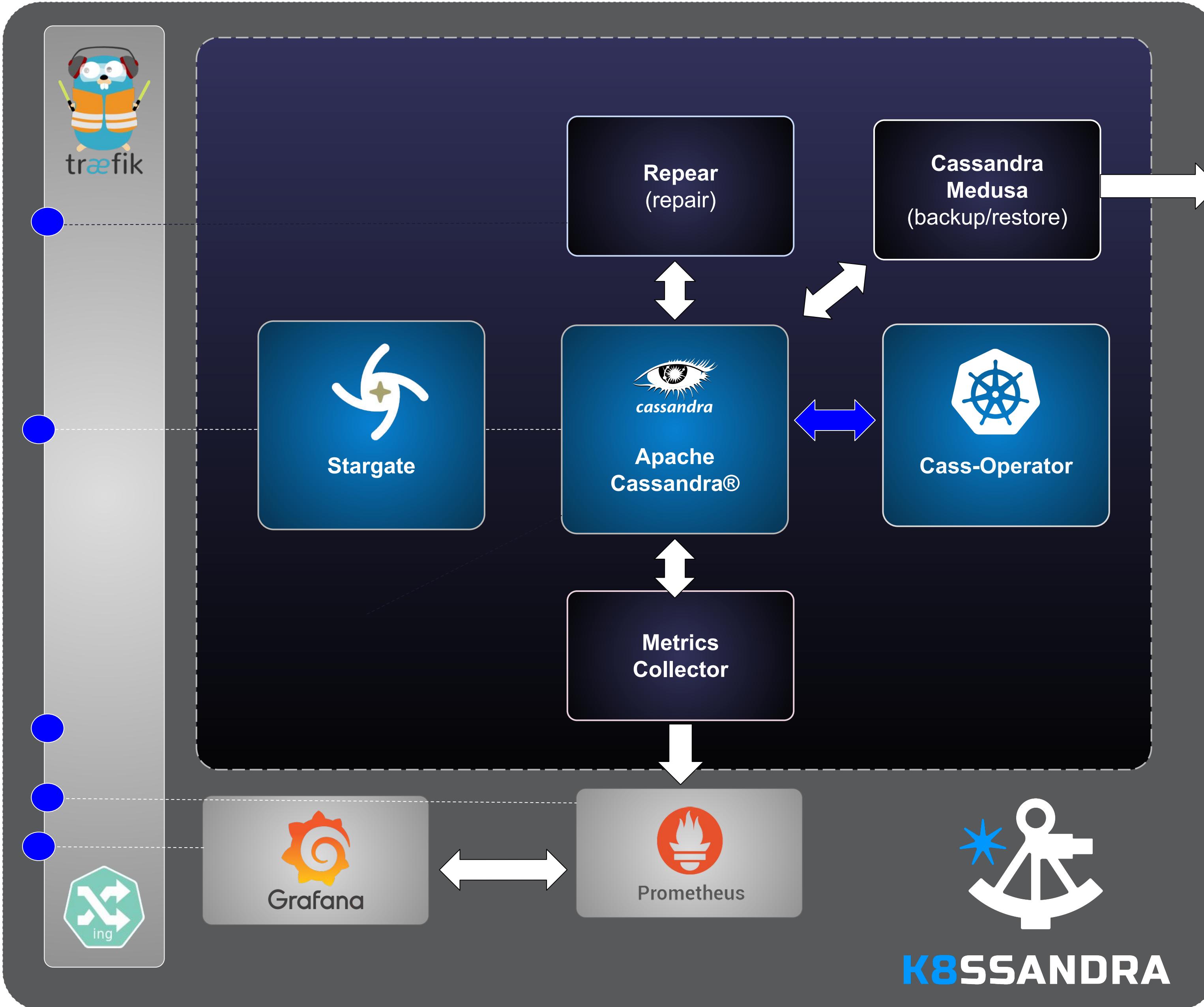
ASTRA
Cassandra DBaaS

06



vous aide





Devoxx FR 2022 colors



#236148

RGB 35, 97, 72

#F0B129

RGB 240, 177, 41

#1DBFBF

RGB 29, 191, 191

- See online
<https://color.adobe.com/Devoxx-FR-2022-v2-color-theme-19678356>
- Color 1 #236148
- Color 2 #F0B129
- Color 3 #1DBFBF
- Color 4 #49384D
- Color 5 #EB8038



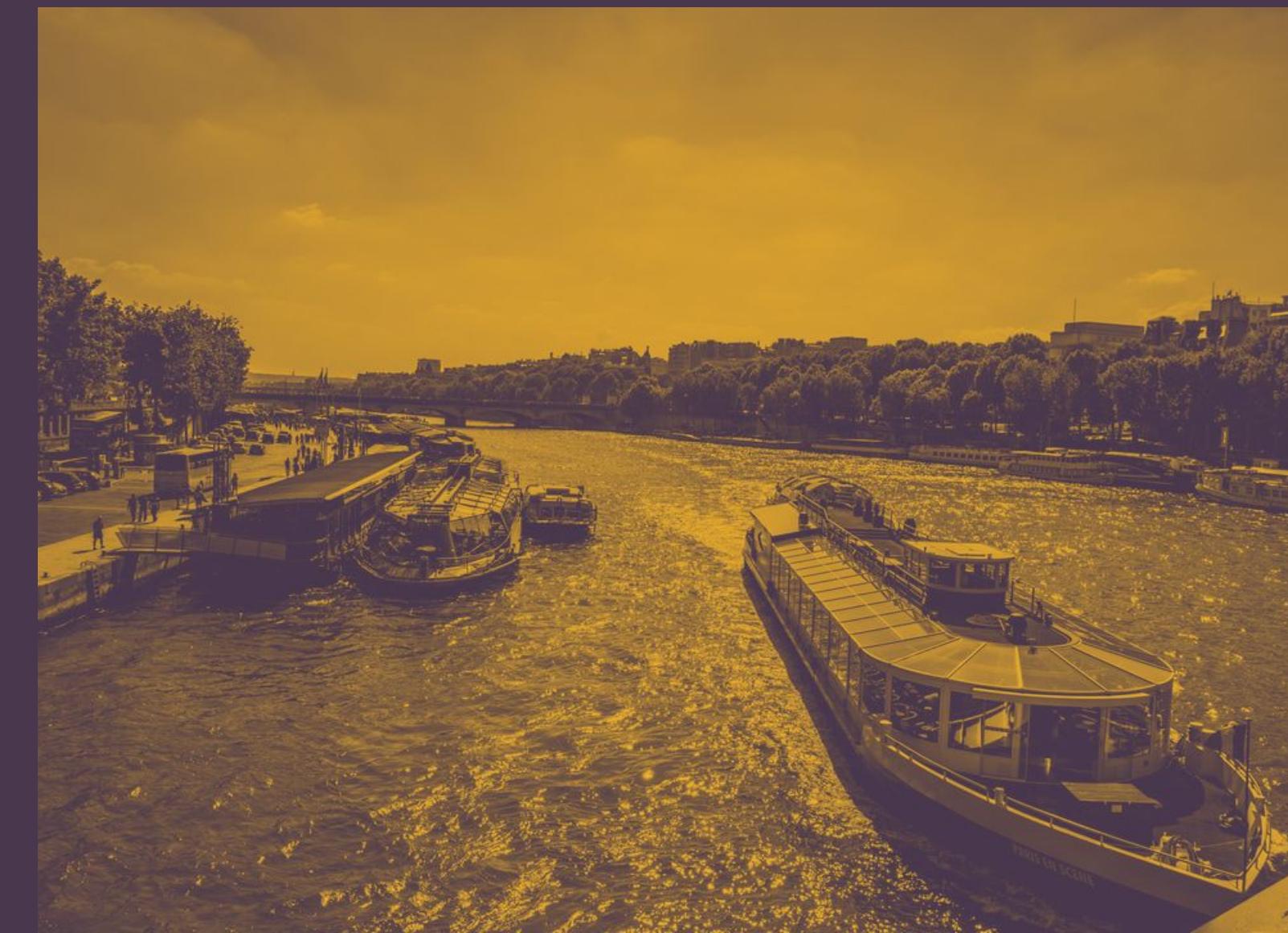
#49384D

RGB 73, 56, 77

#EB8038

RGB 235, 128, 56







Show me shome code !

Try to keep a font size as big as possible. Remember also that too much code on one slide is useless. The audience reads this texte and does not listen to your presentation anymore. Try to split on different slides your presentation.

If you show some code : BIG FONT please

Ask the audience and confirm that they can read from far far away...



Live Demo

Texte du titre

Texte du titre



Merci / Thanks you

Texte du titre

Texte du titre



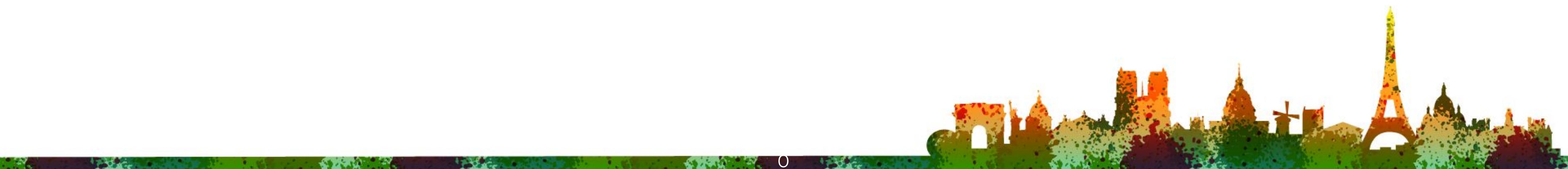
Facts and numbers



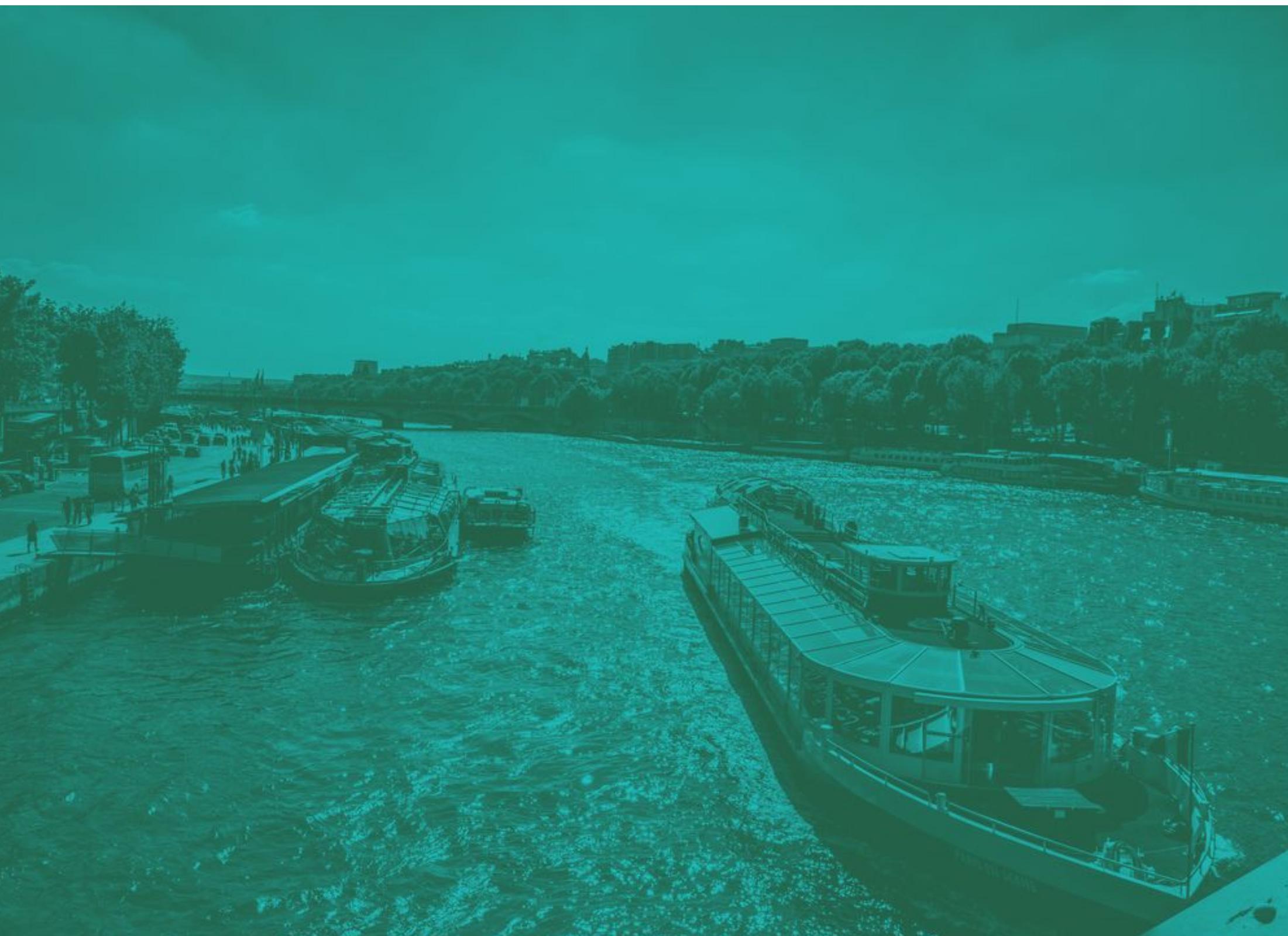
- 10th Anniversary
- 220 speakers with a badge
- 2900 attendees
- The speaker's dinner is on Thursday. Make sure to register. A valid speaker's badge (purple) is required. No access for green badge (Combi). Thanks for your understanding



Less code is less bug



I want cool images



- You can generate Dualtone photos quickly on <https://duotone.shapefactory.co/?f=eb8038&t=49384d&q=subway&i=Zi8T2OwJf44>







[https://duotone.shapefactory.co/?i=ELy8RcnCgEo&f=313741&t=6bb884
&q=wave](https://duotone.shapefactory.co/?i=ELy8RcnCgEo&f=313741&t=6bb884&q=wave)



Why less slides is better than more slides

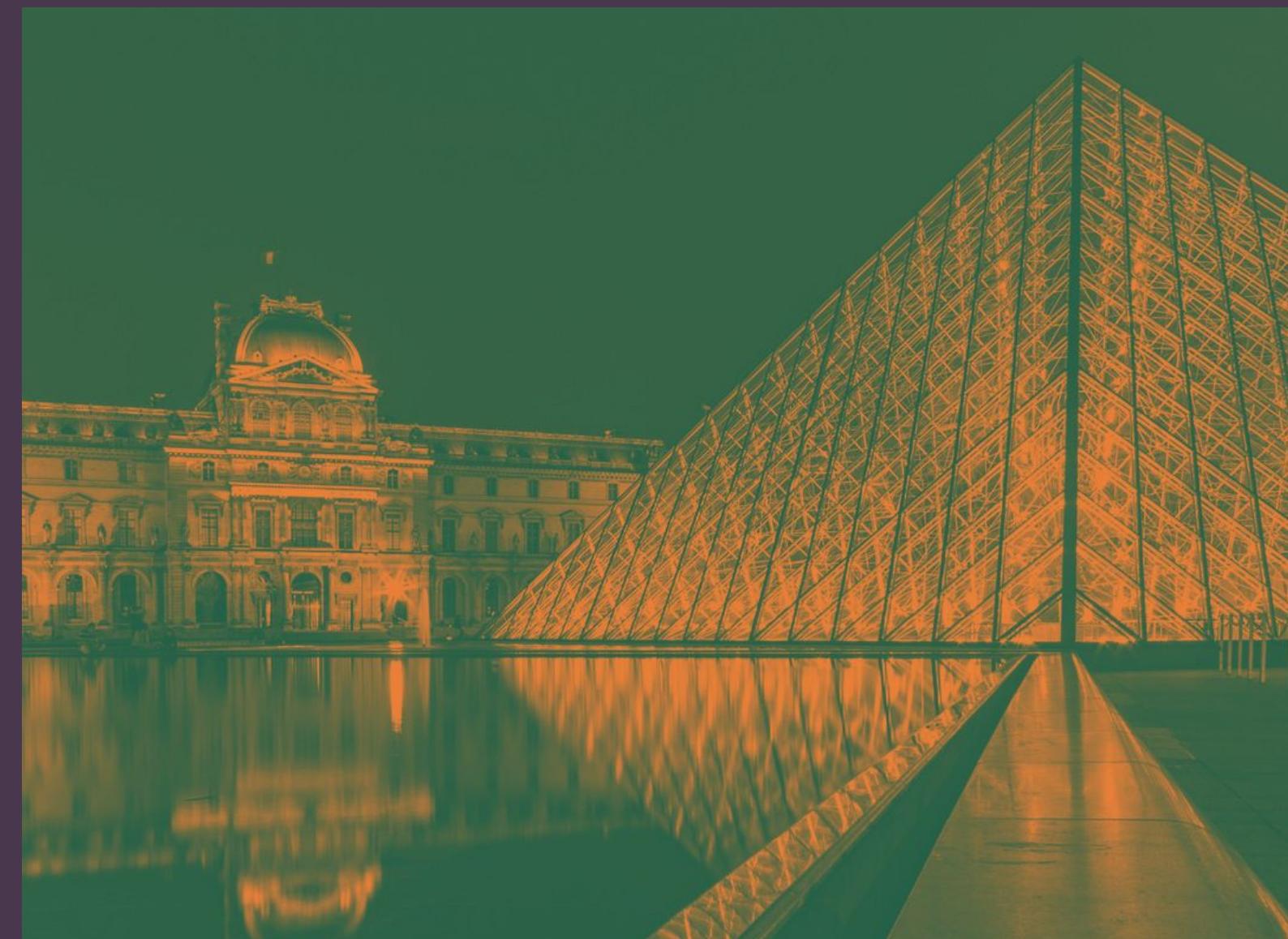
- Devoxx France runs on 3 days
- Audience loves live coding and demo
- Too much bullet points is super boring
- More text : less concentration from the audience that will just read your slides
- So this is exactly what you should not do



Pourquoi peu de diapositives c'est mieux

- Devoxx France se déroule sur 3 jours
- Le public préfère les démonstrations et l'écriture de code en direct
- Trop de points avec des puces c'est ennuyant
- Plus il y a de texte à lire sur vos diapos, moins l'audience vous écoute
- Si vos slides peuvent vous remplacer, alors vous ne servez à rien comme orateur
- Imaginez que votre ensemble de diapos ne doivent pas pouvoir vivre sans vous, sans votre présentation et votre contenu
- Merci donc de ne PAS faire comme ce slide à mourir





Screen capture



redis

Commands Clients Documentation Community Download Issues Support License

HMGET key field [field ...]

Available since 2.0.0.

Time complexity: O(N) where N is the number of fields being requested.

Returns the values associated with the specified fields in the hash stored at key.

For every field that does not exist in the hash, a nil value is returned. Because non-existing keys are treated as empty hashes, running [HMGET](#) against a non-existing key will return a list of nil values.

Return value

[Array reply](#): list of values associated with the given fields, in the same order as they are requested.

```
redis> HSET myhash field1 "Hello"
(integer) 1
redis> HSET myhash field2 "World"
(integer) 1
redis> HMGET myhash field1 field2 nofield
1) "Hello"
2) "World"
3) (nil)
redis>
```

Related commands

[HDEL](#)
[HEXISTS](#)
[HGET](#)
[HGETALL](#)
[HINCRBY](#)
[HINCRBYFLOAT](#)
[HKEYS](#)
[HLEN](#)
[**HMGET**](#)
[HMSET](#)
[HSCAN](#)
[HSET](#)
[HSETNX](#)
[HVALS](#)

<https://cfp.devoxx.fr>

Devoxx FR preview

Here are just a few photos from Devoxx France so that you get a better idea of what you're about to live

Voici quelques photos de Devoxx France afin de vous donner une idée de ce que vous vous apprêtez à vivre...







Thanks

Contribute and propose other templates format on
<https://github.com/quantixx/template-presentation>

Open Office, Powerpoint, Reveal.JS...

