



Introducción al Backend

Nicolas Molina

@nicobytes

- Colombiano viviendo en Bolivia.
- Senior Software Developer.
- +8 de experiencia.





Experts

Platzi



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Most Valuable
Professional

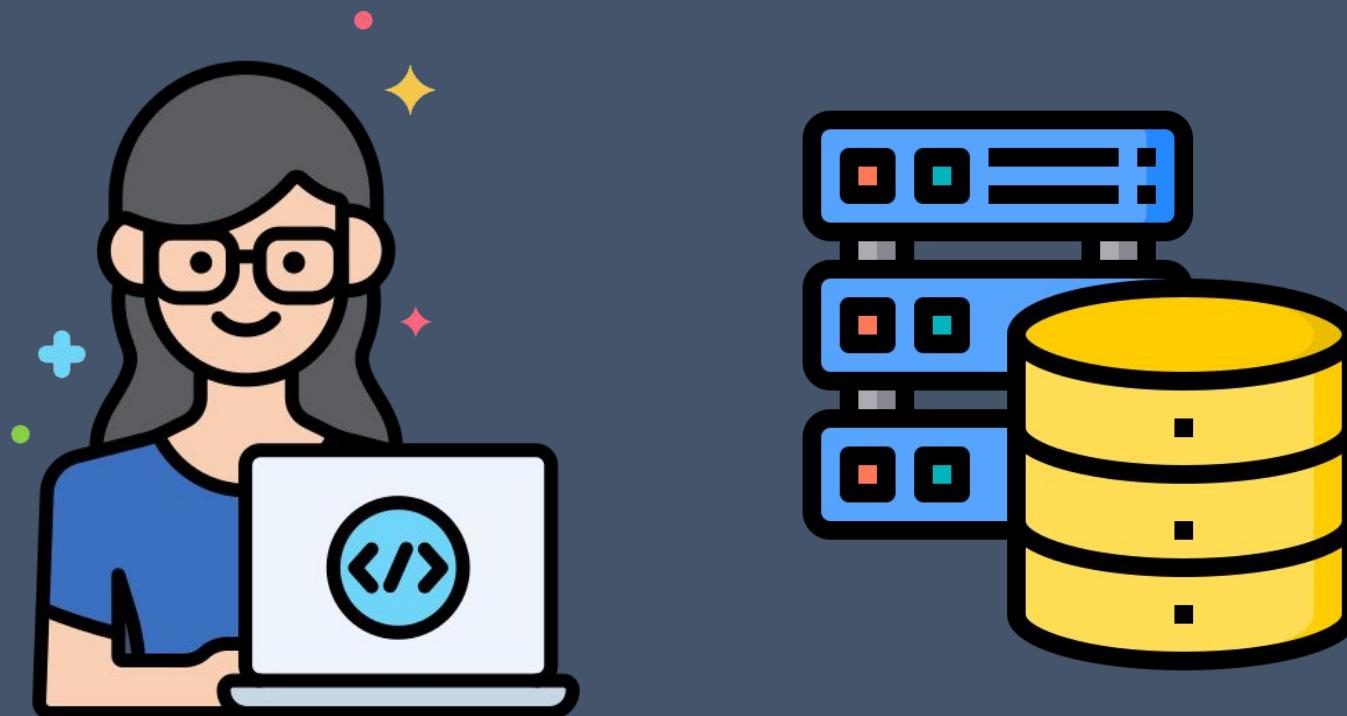
ionic

Roles del Desarrollo Backend

BACKEND DEV



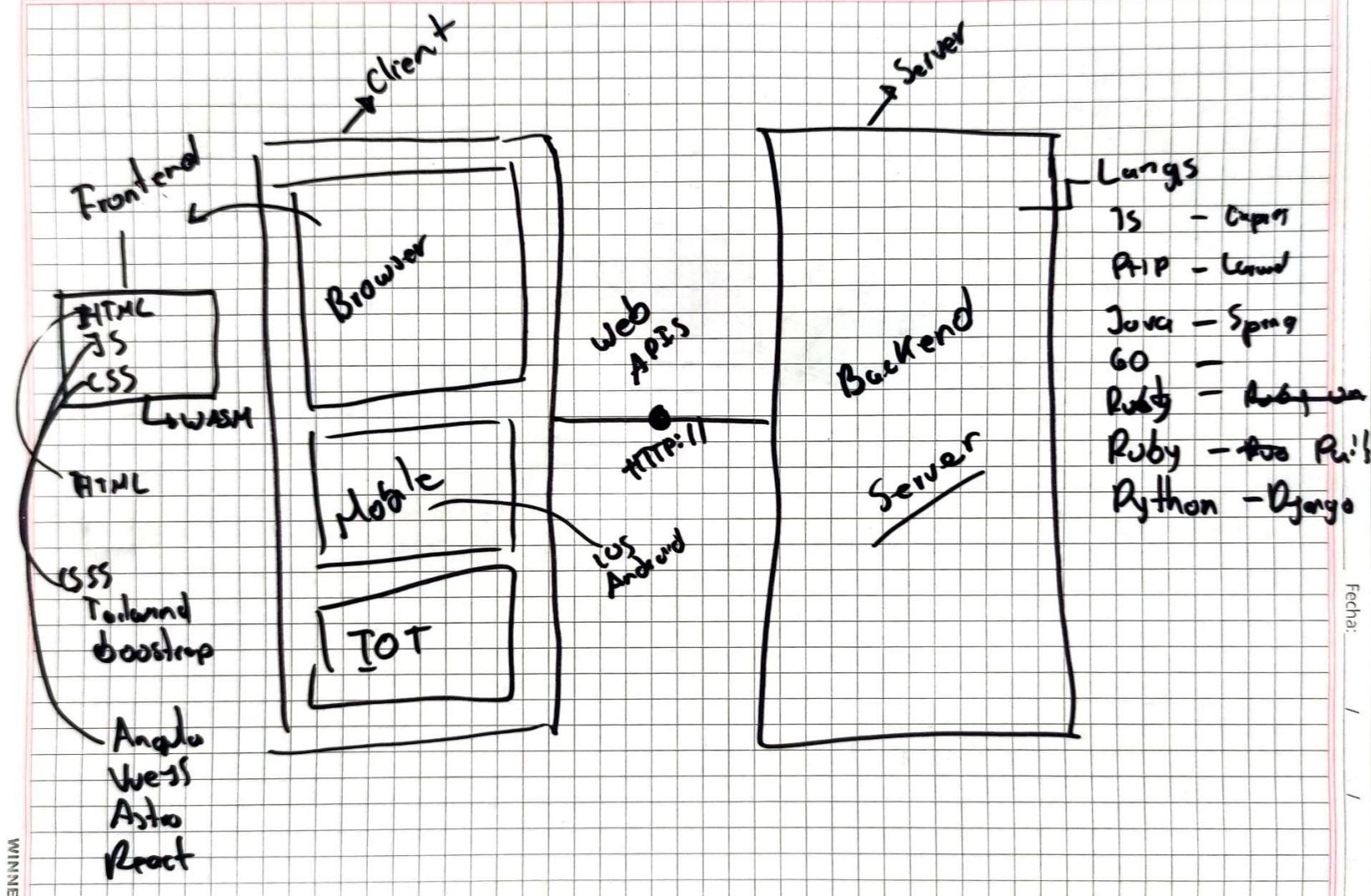
DB ADMIN



SERVER ADMIN



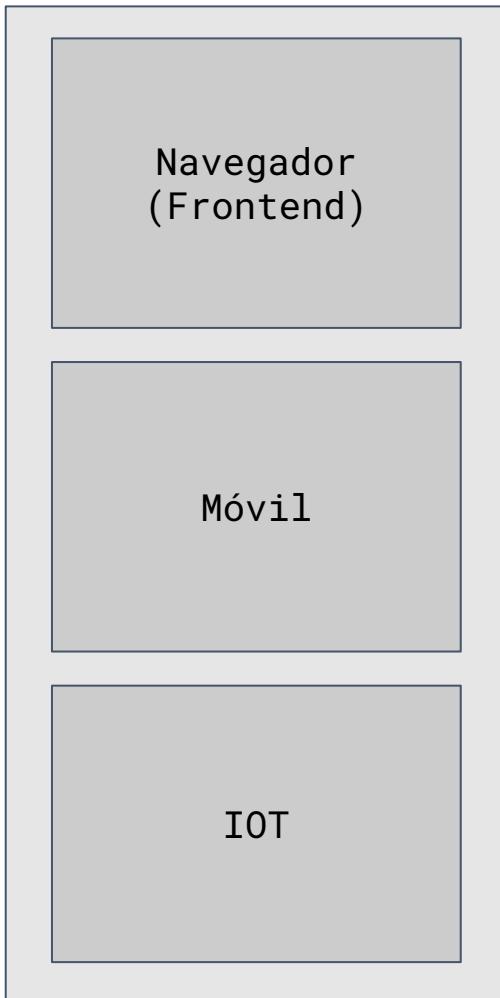
FRONTEND y BACKEND



Frontend
(Client)

Backend
(Server)

Client



Backend
(Server)

Navegador
(Frontend)

HTML
(icon + text)

CSS
(icon + text)

JS
(icon + text)

Markdown
(icon +text)

Tailwind
(icon +text)
Bootstrap
(icon + text)
Foundation
(icon + text)

Angular
(icon + text)
React
(icon + text)
Vue
(icon + text)

Mobile

iOS
(icon + text)

Android
(icon + text)

Cross Platforms

Swift
(icon + text)
Objet C
(icon + text)

Kotlin
(icon + text)
Java
(icon + text)

React Native
(icon + text)
Ionic
(icon + text)
.NET MAUI
(icon + text)

Backend

Python - Django
(icon + text)

JavaScript - Express
(icon + text)

TypeScript - NestJS
(icon + text)

Ruby - Ruby on Rails
(icon + text)

PHP - Laravel
(icon + text)

Java - Spring
(icon + text)

GO
(icon + text)

C#
(icon + text)

Client

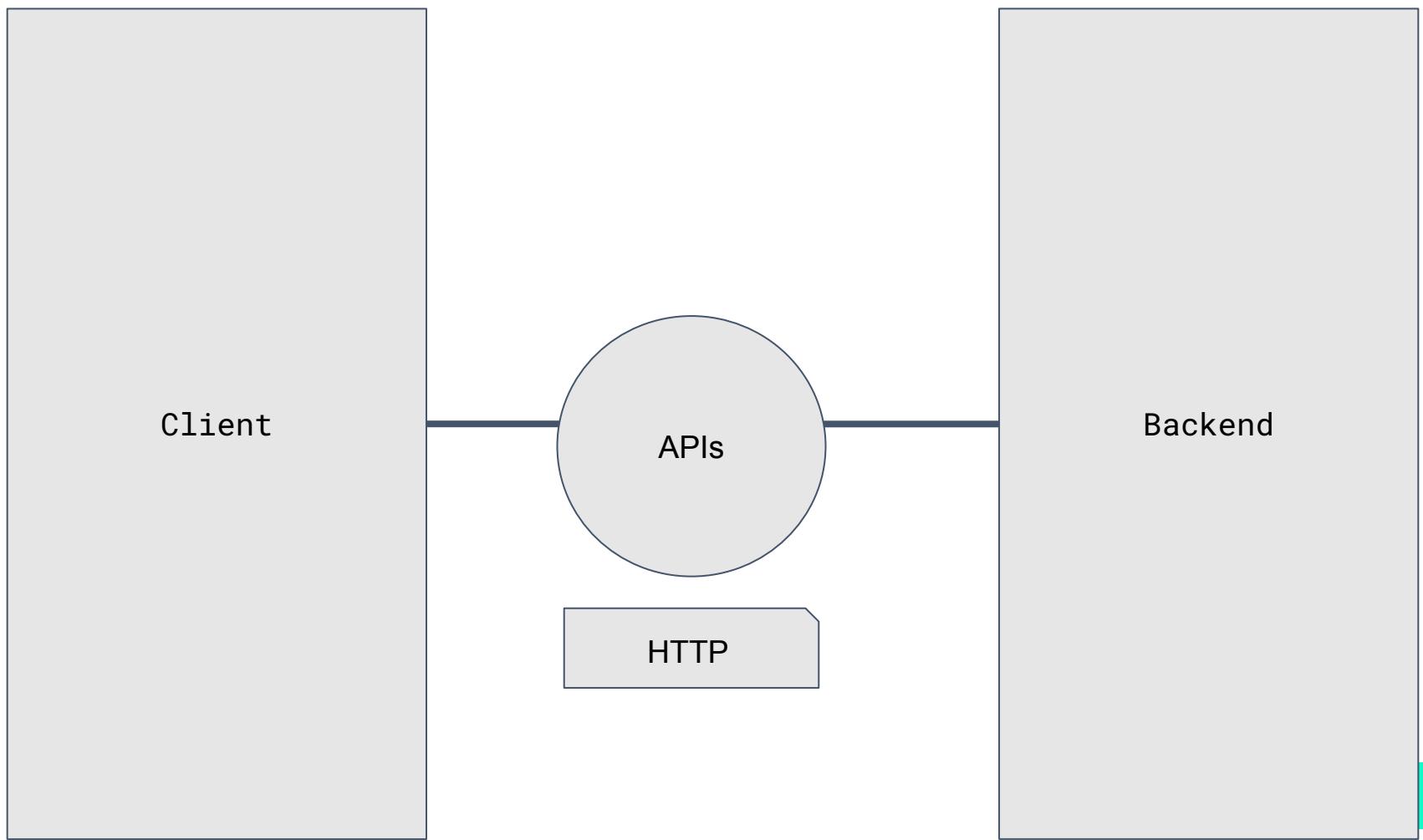


Backend
(Server)

Client

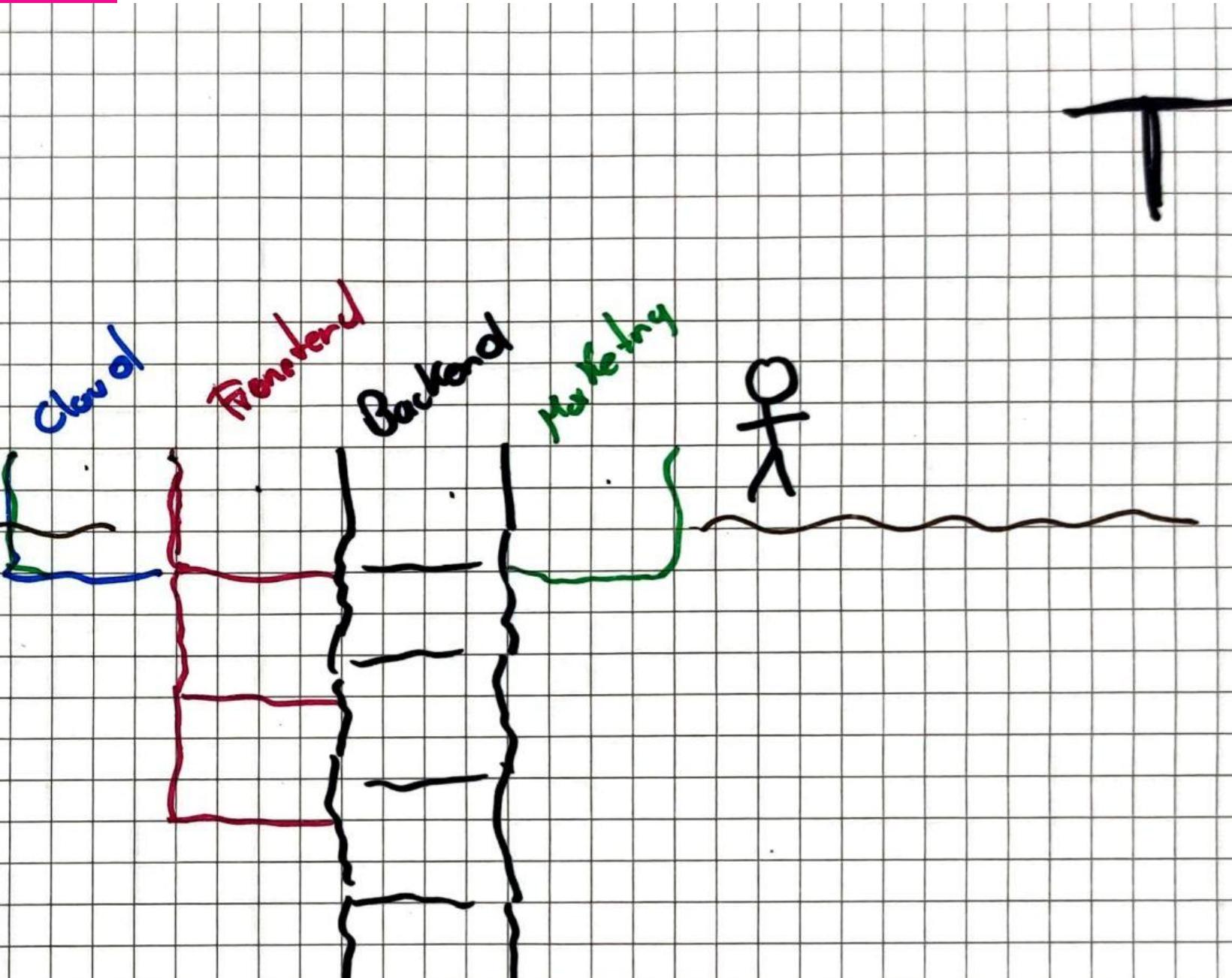


Backend
(Server)



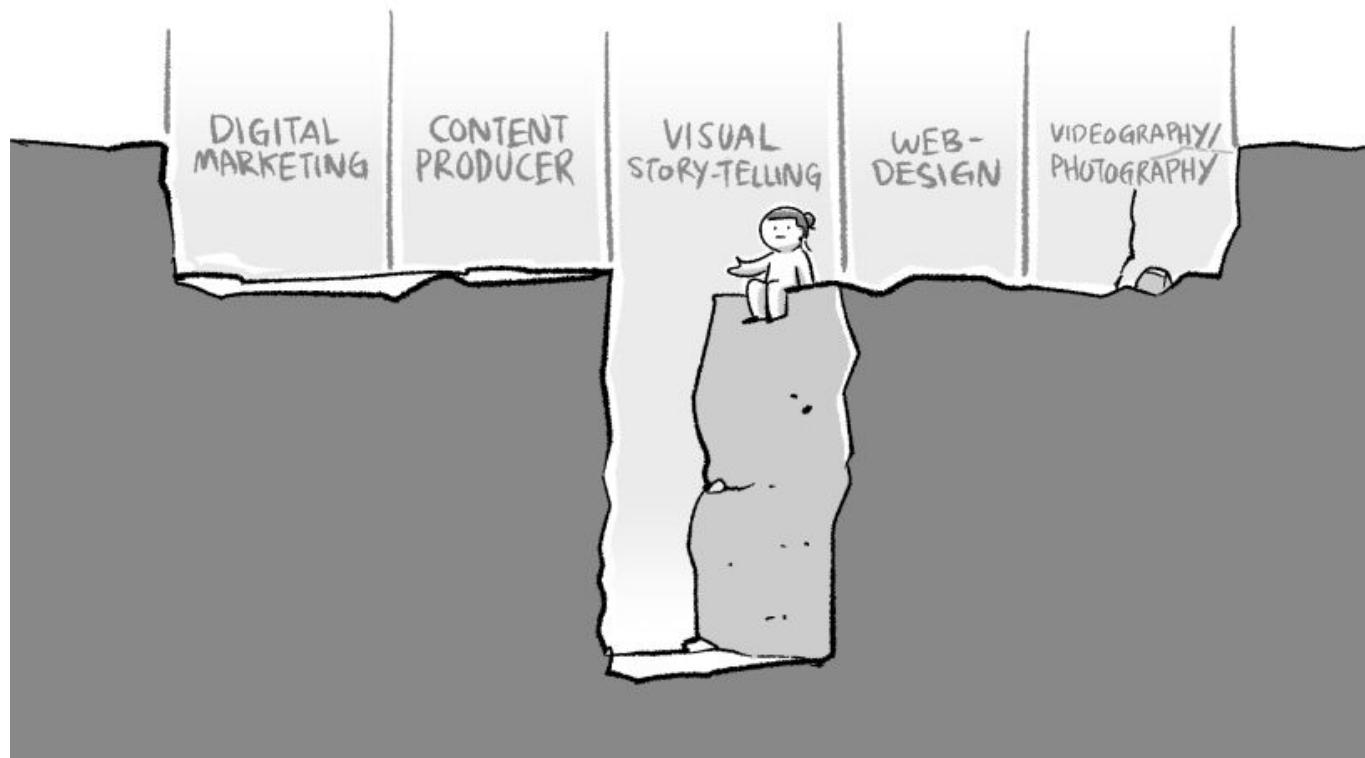
¿QUÉ ES UN FULLSTACK?





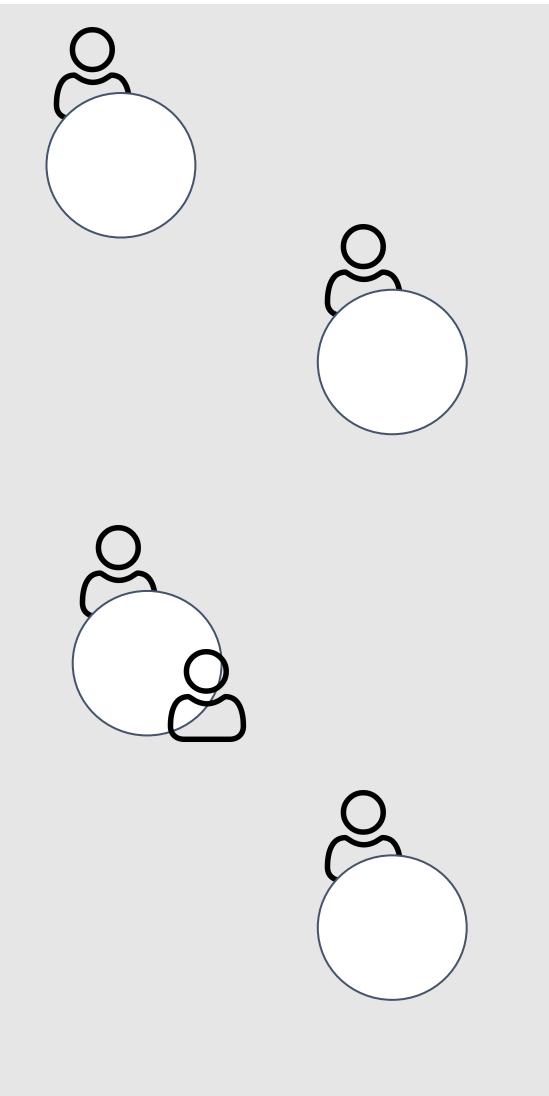
It's basically the same idea as being a T-shaped individual.

So you have deep knowledge in a few areas, and you know a little bit about most other things.



¿Cómo se construye el Backend?

CLIENTES



COCINA



CHEFS

COMIDA

IMPLEMENTOS

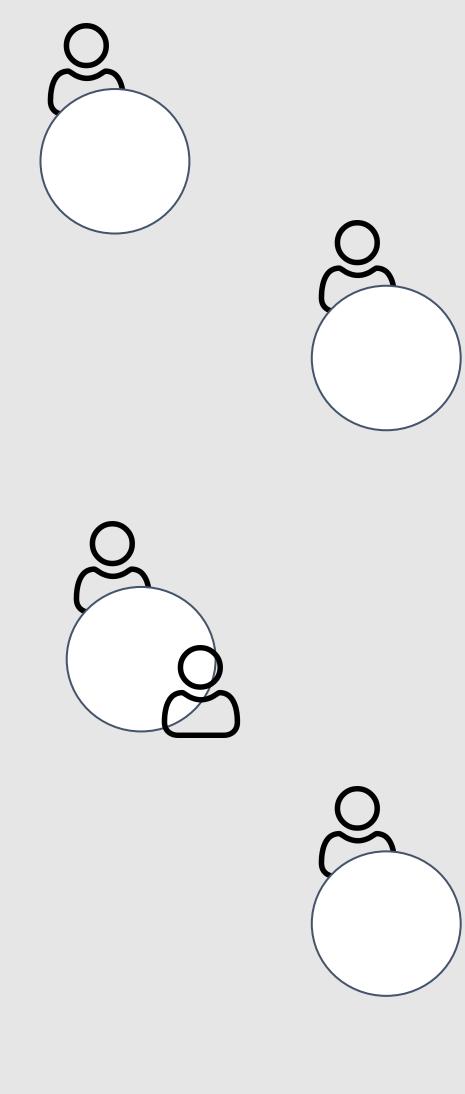


MESERO



CARTA

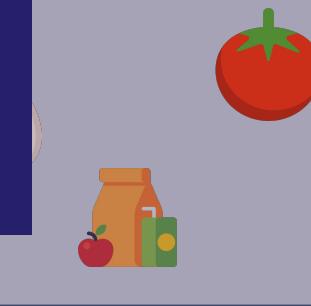
CLIENTES



COCINA



CHEFS



COMIDA



IMPLEMENTOS

USUARIOS /
NAVEGADORES

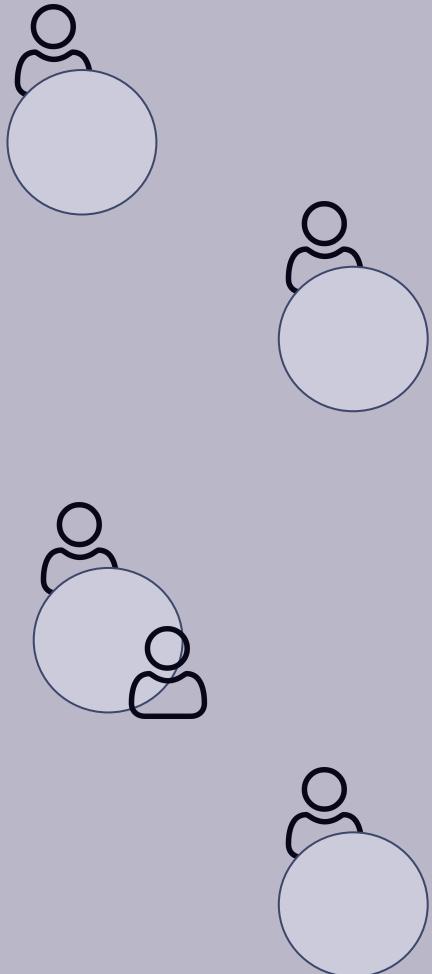
CARTA



MES



CLIENTES



FRONTEND



COCINA

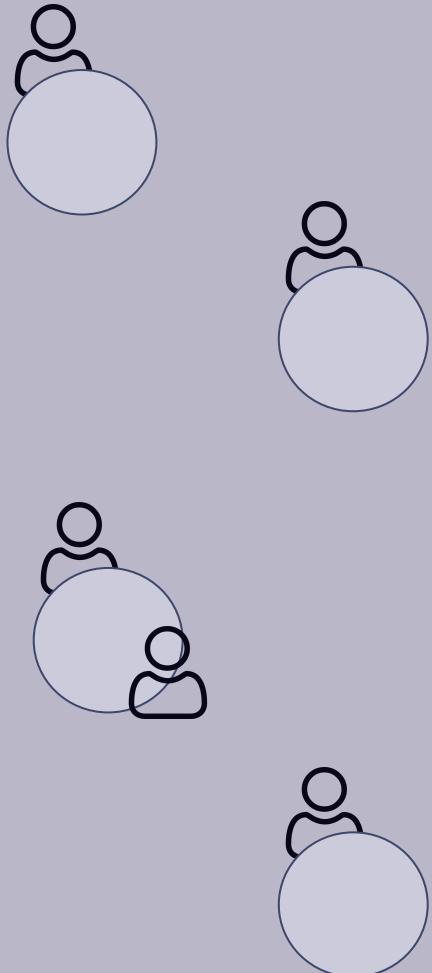


CHEFS

COMIDA

IMPLEMENTOS

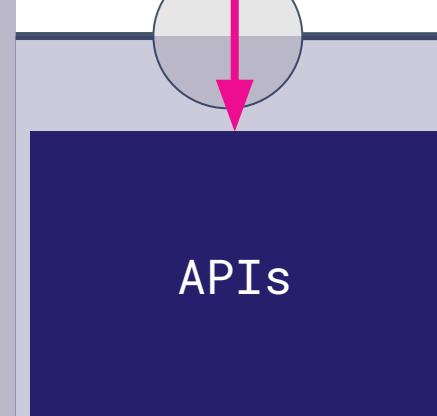
CLIENTES



MESERO



APIs



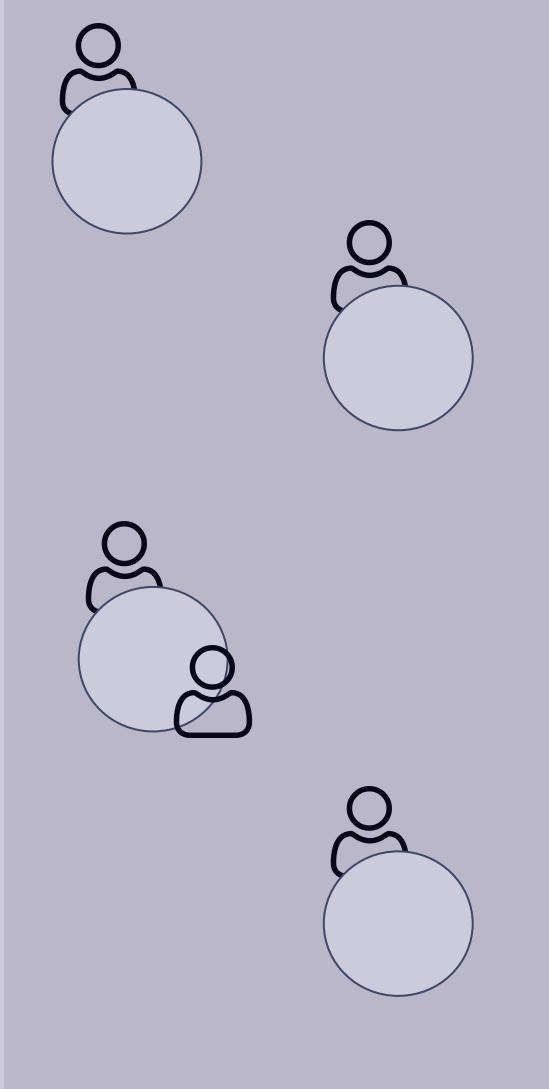
COCINA



CHEFS

COMIDA

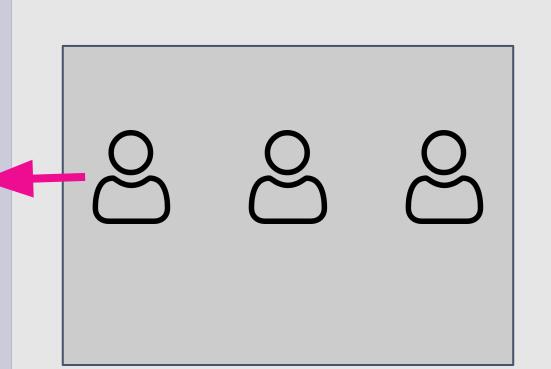
IMPLEMENTOS



DEVs /
Endpoints

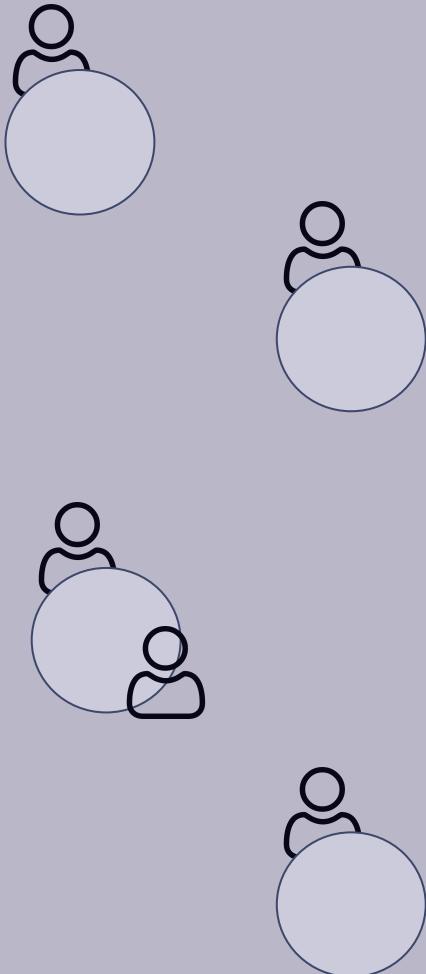
MESERO

CARTA



CHEFS
COMIDA
IMPLEMENTOS

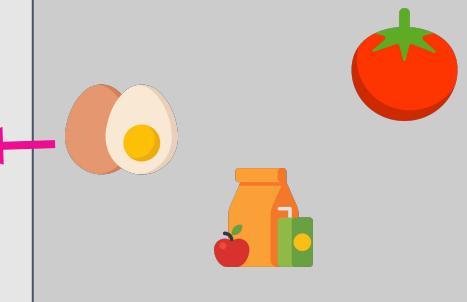
CLIENTES



Bases
de Datos



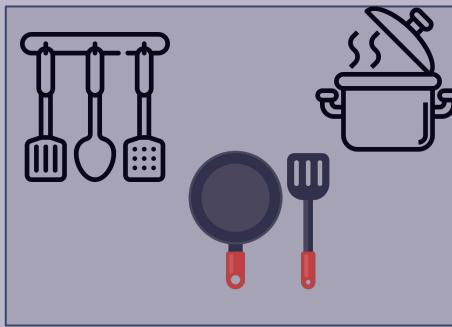
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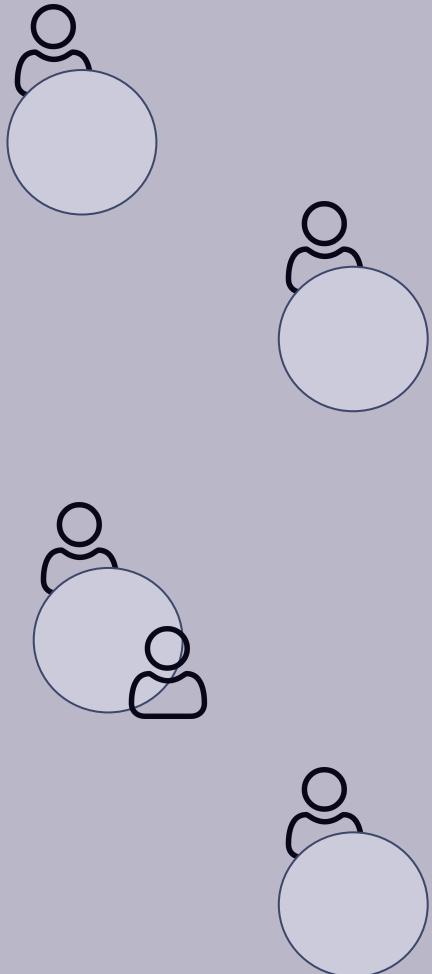
CHEFS

COMIDA

IMPLEMENTOS



CLIENTES



MESERO



CARTA

Librerías

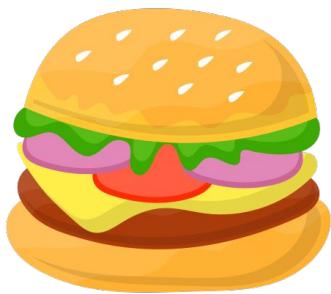
COCINA

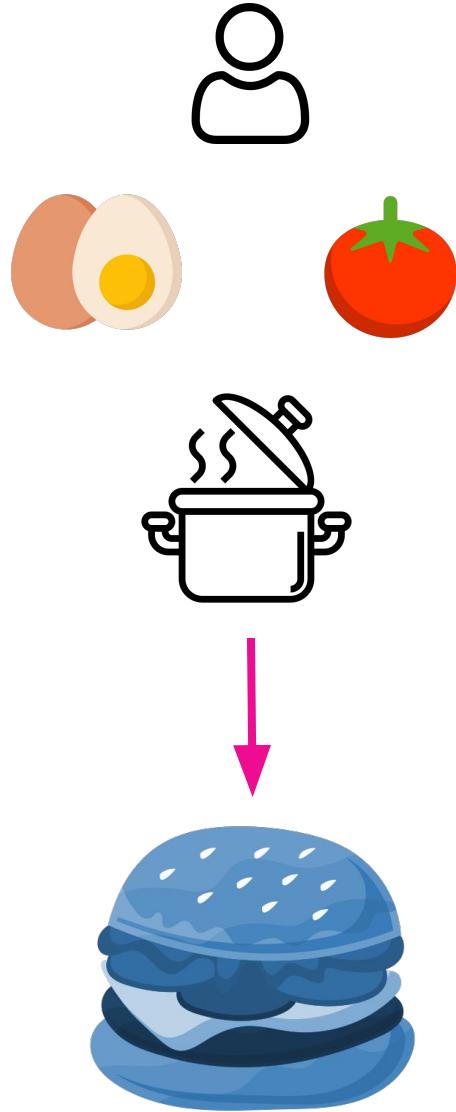


CHEFS

COMIDA

IMPLEMENTOS





FRAMEWORKS

- 2 Chefs
- 5 Huevos
- 1 Sartén



¿Cómo escoger
lenguajes y frameworks
para Backend?

 Python	 django  Flask	Django Flask	 Java	 Spring
 JavaScript	 FastAPI  Express			 Go Gin
 PHP	 NestJS			 Ruby Rails
	 Laravel			 .NET Core
	 Symfony			

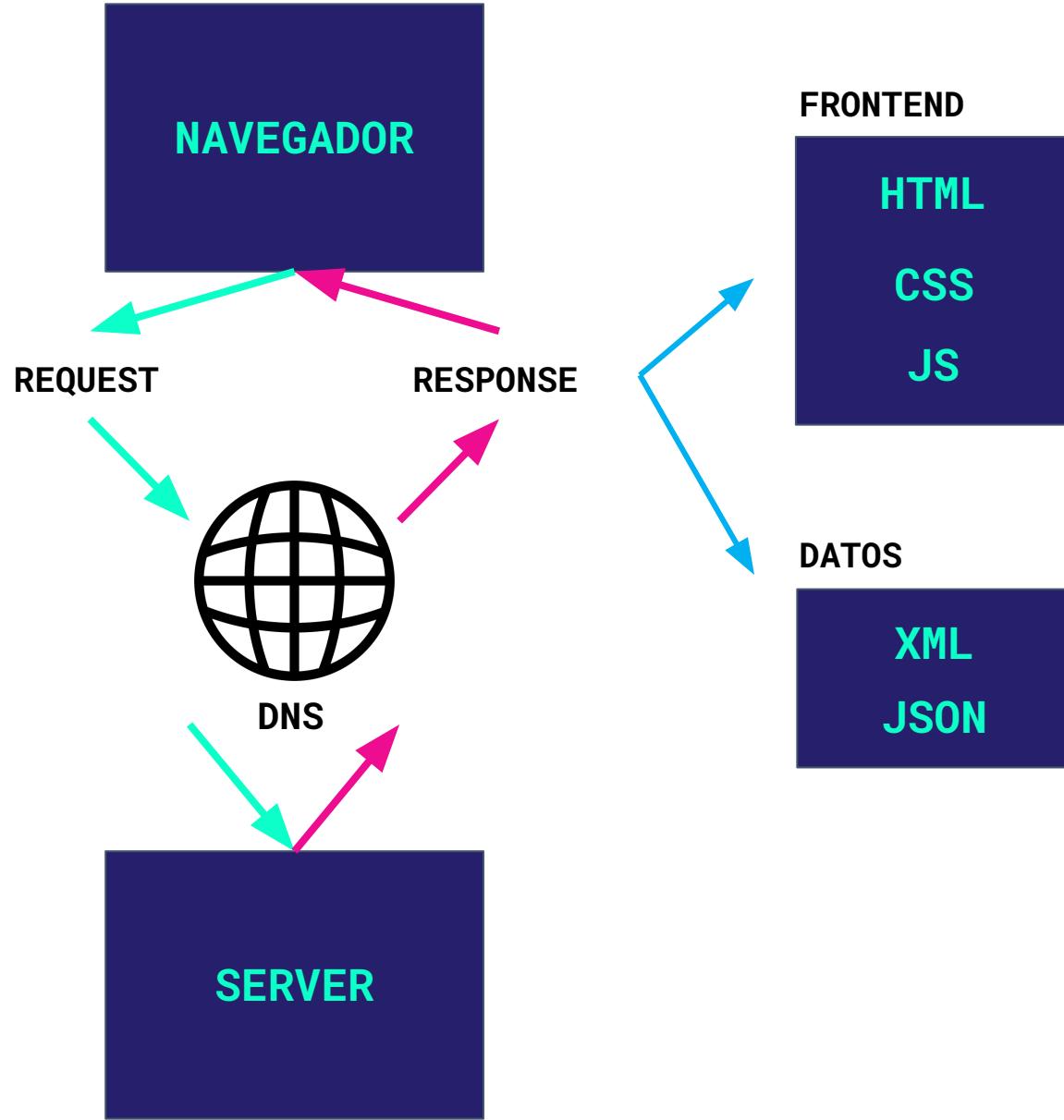
HTTP

DOMINIO

https://platzi.com/cursos

PROTOCOLO

**PATH /
ENDPOINT**



1XX = INFO

2XX = INFO

200 = OK

201 = CREATED

3XX = REDIRECT

301 = MOVED

4XX = CLIENT ERROR

400 = BAD

404 = NOT FOUND

409 = CONFLICT

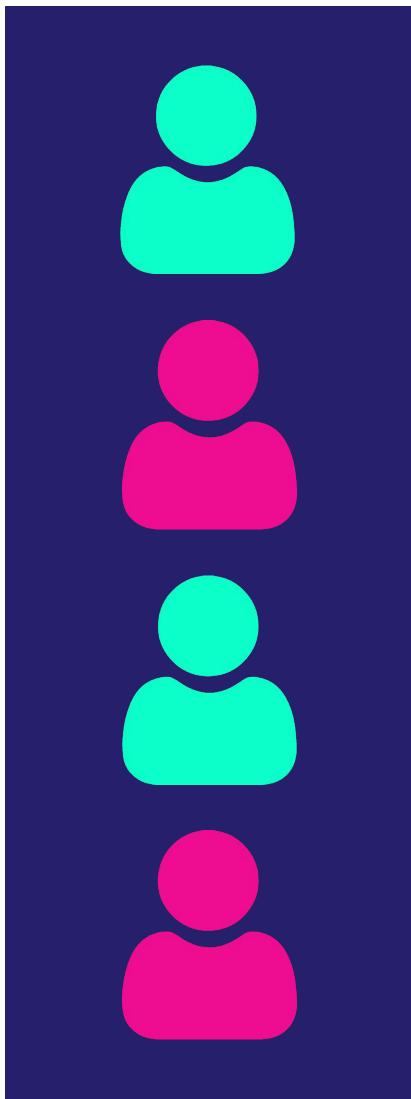
5XX = SERVER ERROR

500 = ?

503 = ?

APIs

CLIENTES



ENDPOINTS

/users
/users/create
/users/:id

SERVIDORES

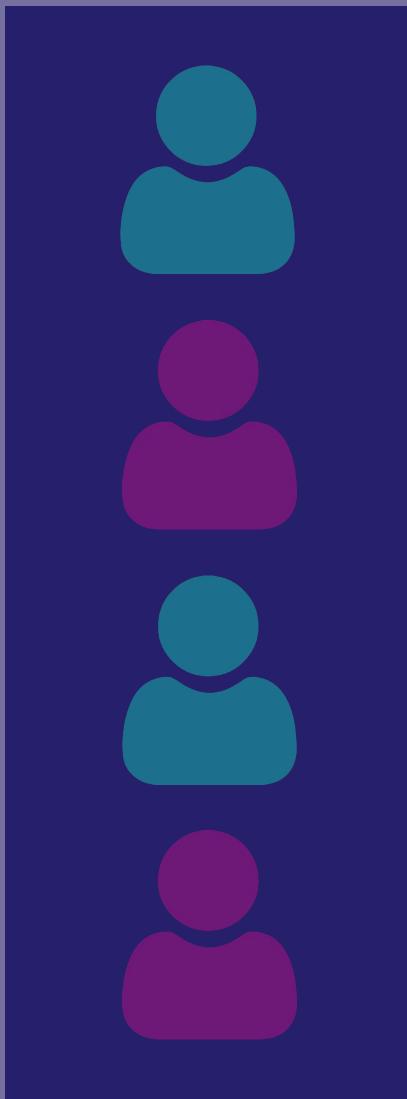
Servidor
1

Servidor
2

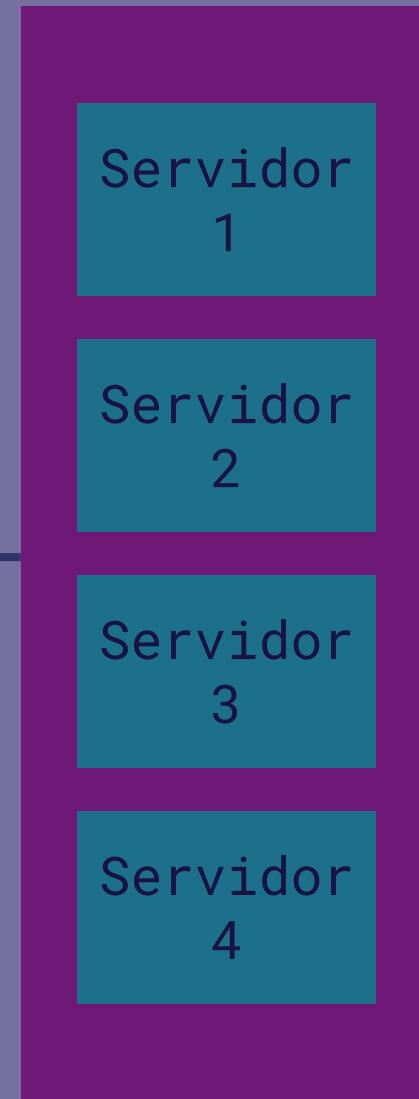
Servidor
3

Servidor
4

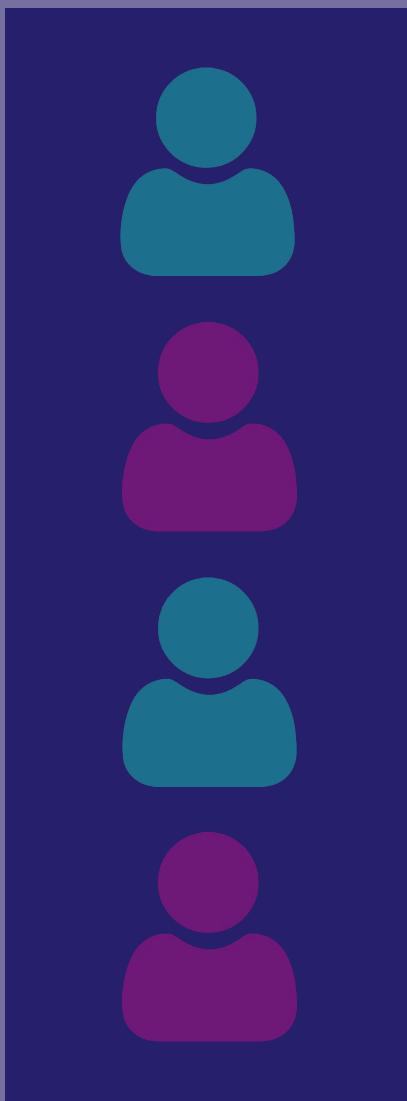
CLIENTES



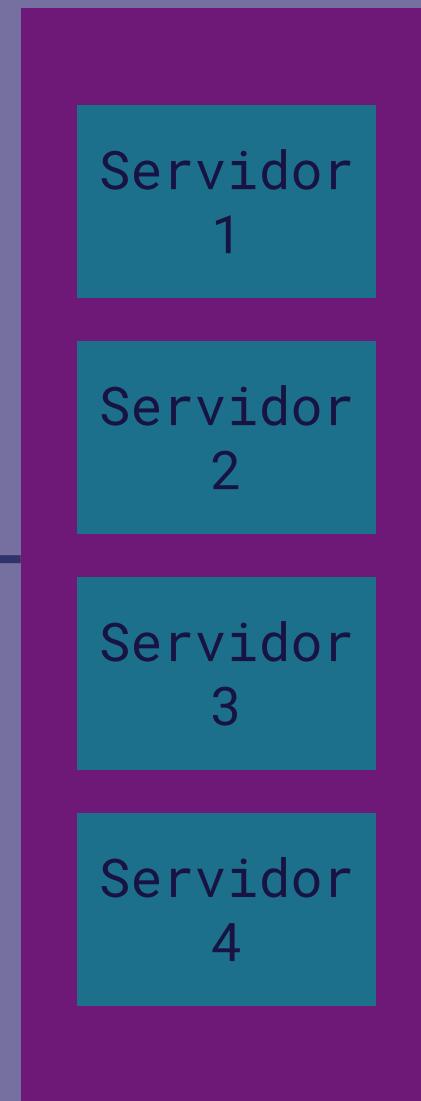
SERVIDORES



CLIENTES



SERVIDORES



REST API

domain.com

domain.com/users

domain.com/tasks

domain.com/companies

CRUD

CREATE = POST

READ = GET

UPDATE = PUT / PATCH

DELETE = DELETE

endpoint	method	body	response	status
----------	--------	------	----------	--------

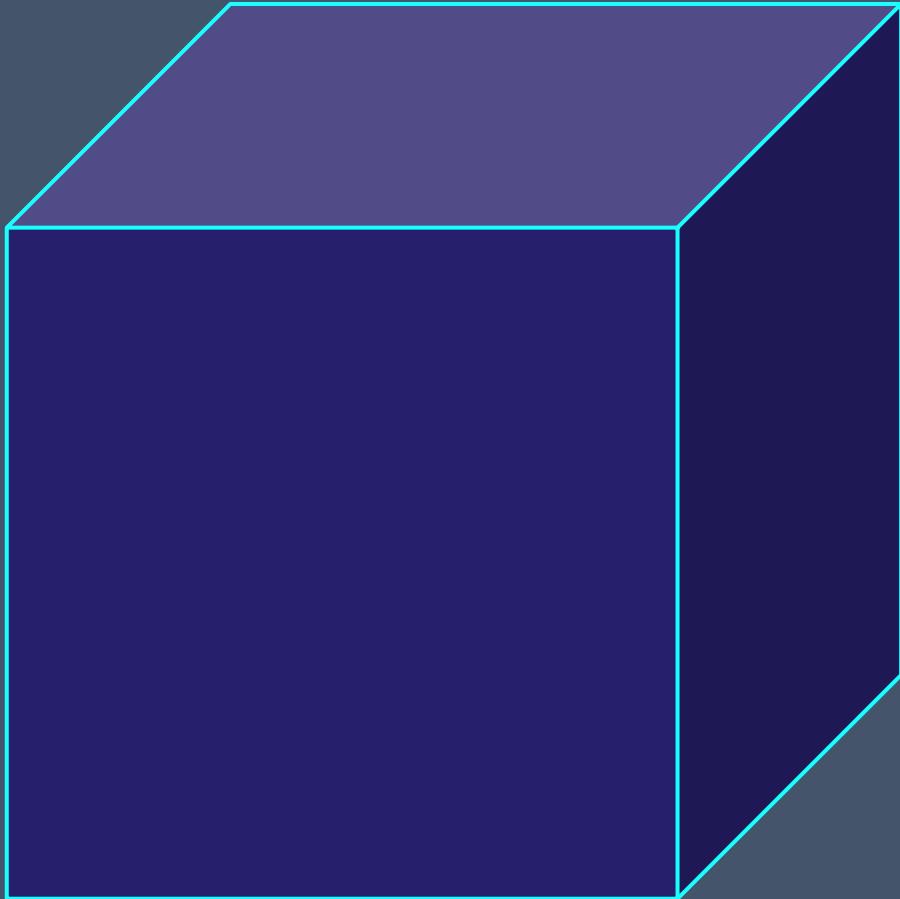
Insomnia & Postman

La nube

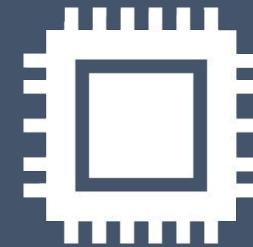


NUBE





CPU



RAM



SSD





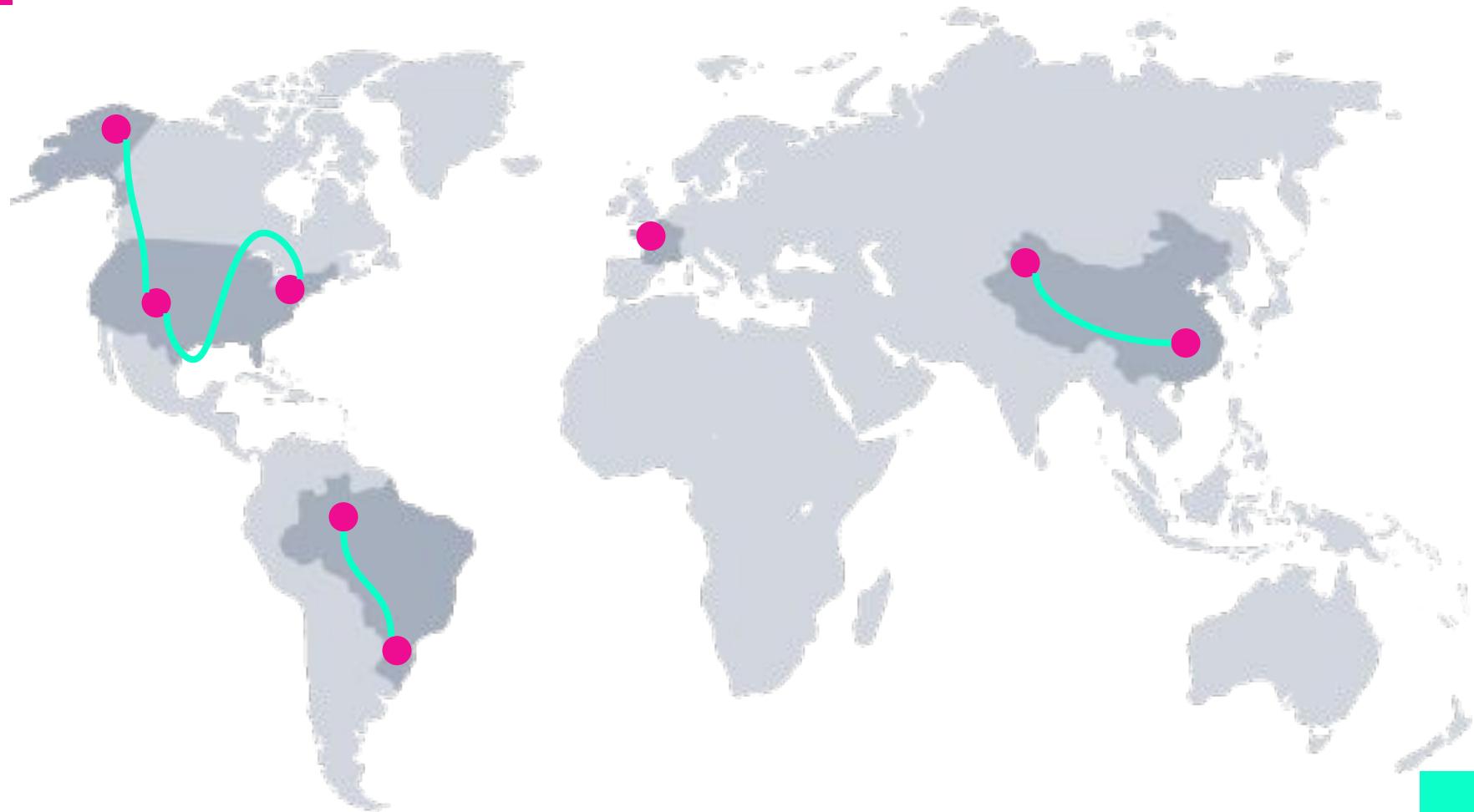


platzi.com



Address: Cra. 7a ...
Lote: 2km²

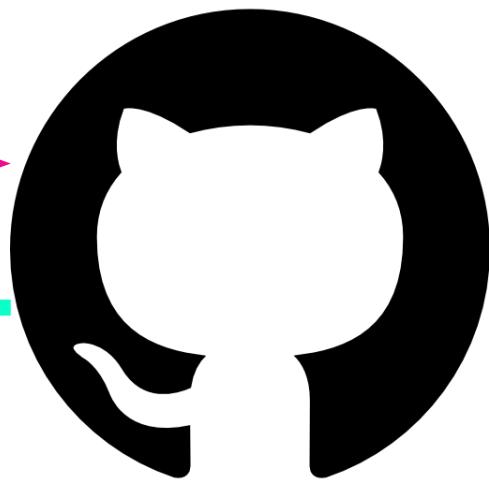




LOCAL



**REPO
REMOTO**



PUSH

PULL



LOCAL



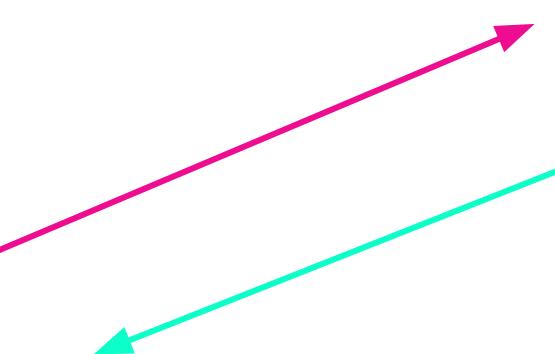
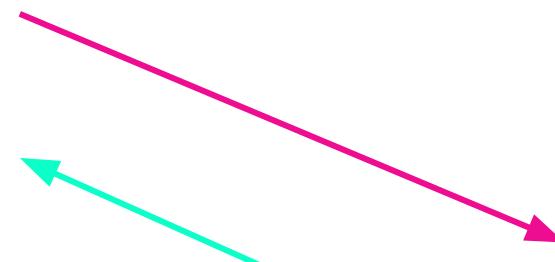
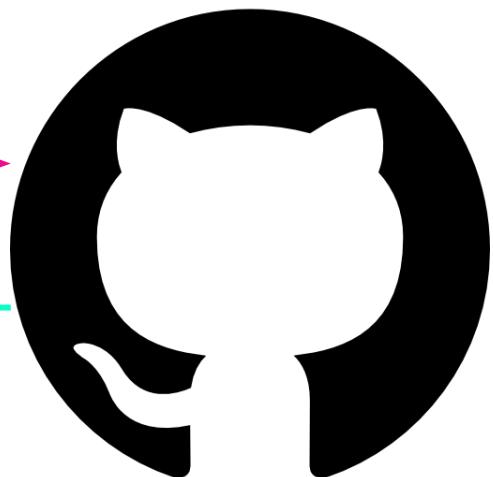
LOCAL



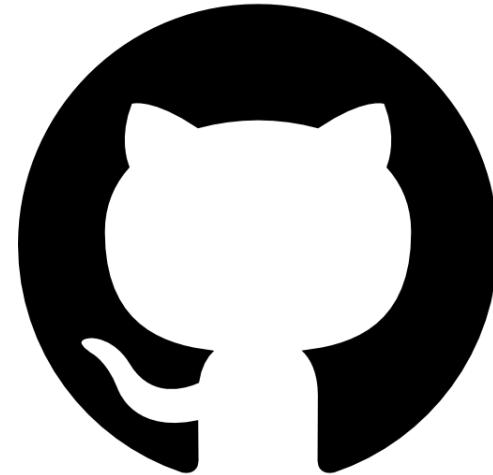
LOCAL



**REPO
REMOTO**



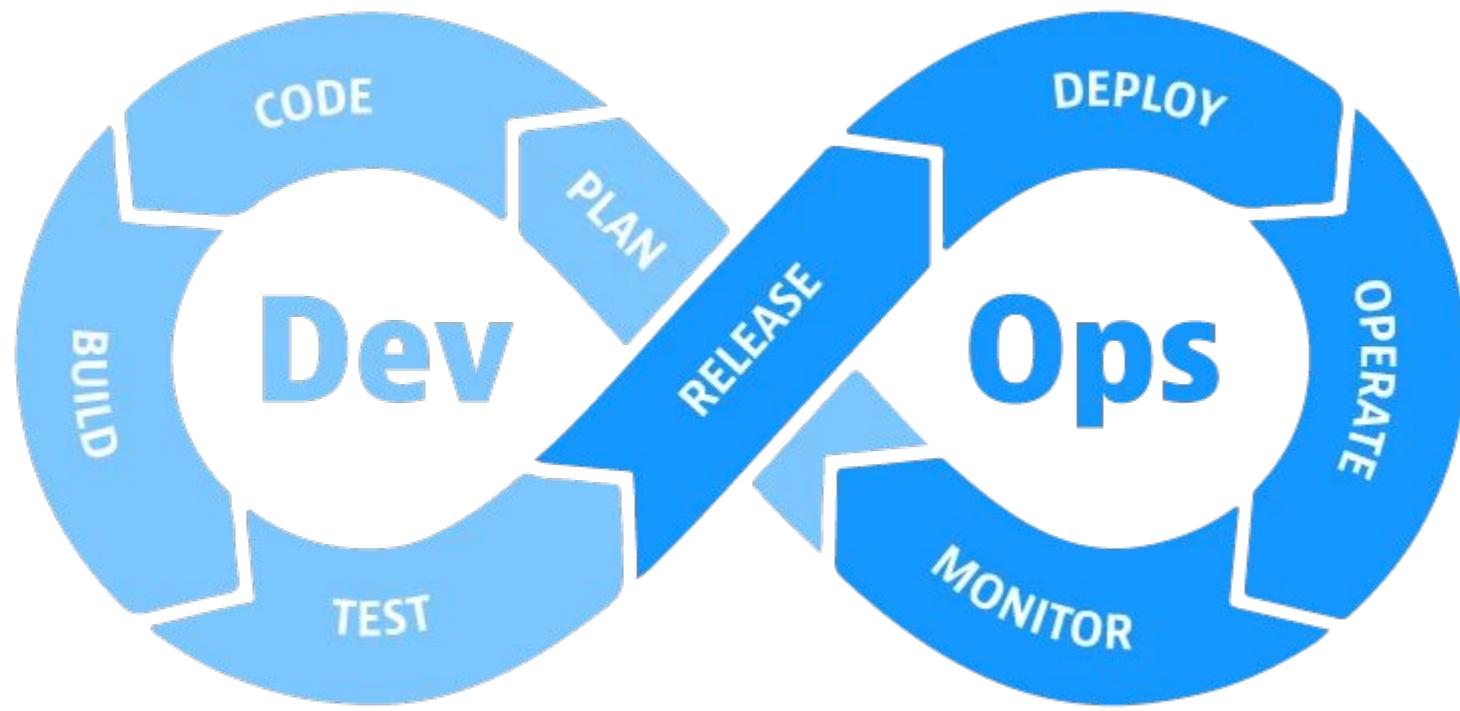
**REPO
REMOTO**



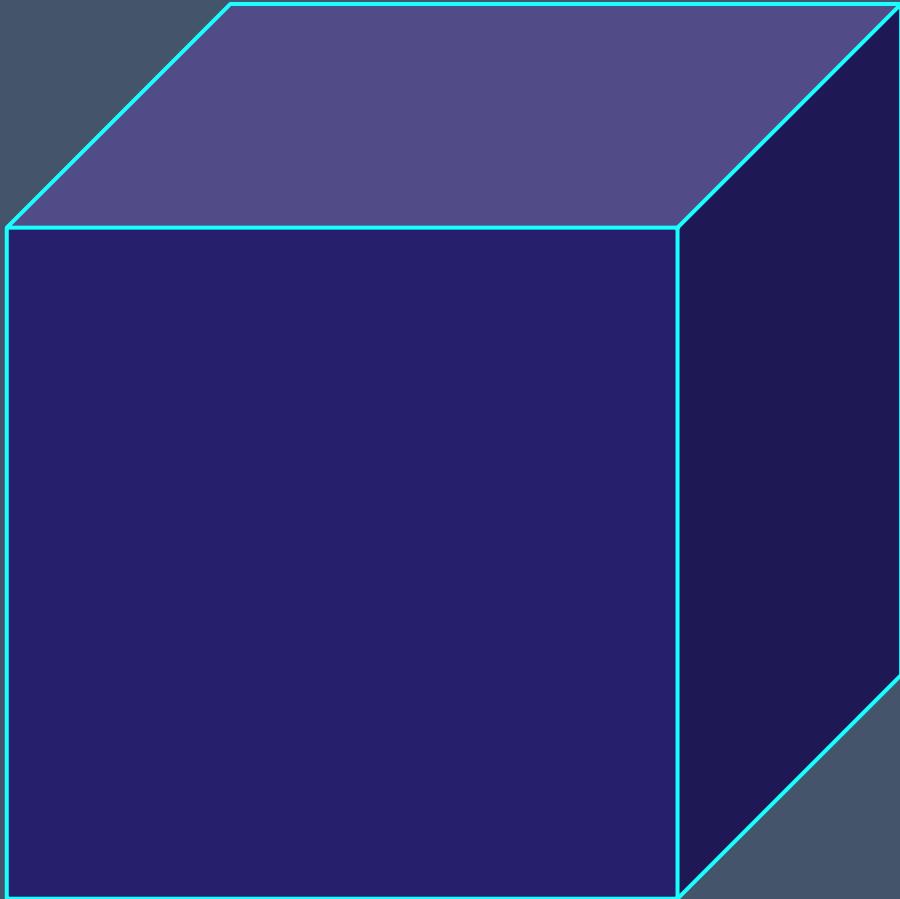
Pruebas

Calidad

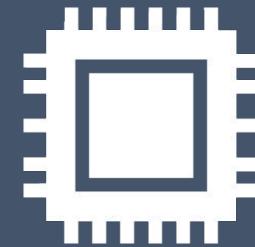
Seguridad



El servidor



CPU



RAM



SSD



IaaS

Infrastructure
as a Service



PaaS

Platform
as a Service



SaaS

Software
as a Service



On-site

IaaS

PaaS

SaaS

Applications

Applications

Applications

Applications

Data

Data

Data

Data

Runtime

Runtime

Runtime

Runtime

Middleware

Middleware

Middleware

Middleware

O/S

O/S

O/S

O/S

Virtualization

Virtualization

Virtualization

Virtualization

Servers

Servers

Servers

Servers

Storage

Storage

Storage

Storage

Networking

Networking

Networking

Networking



You manage

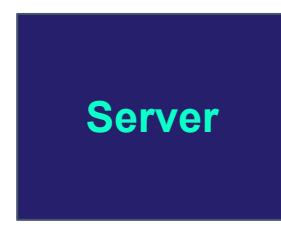


Service provider manages

Cookies y sesiones



Almacena información en los navegadores











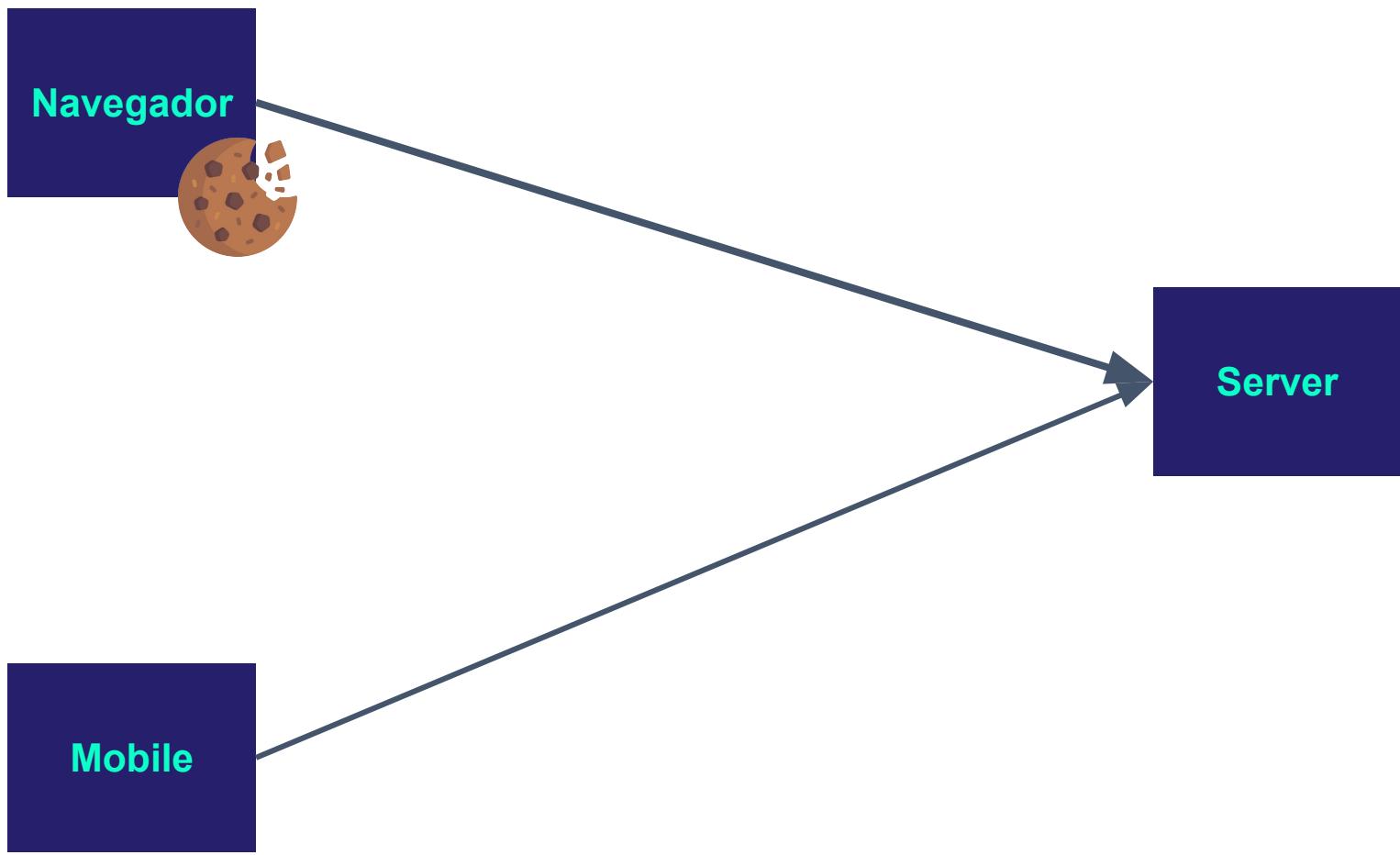
El server puede
verificar
la información
en la cookie

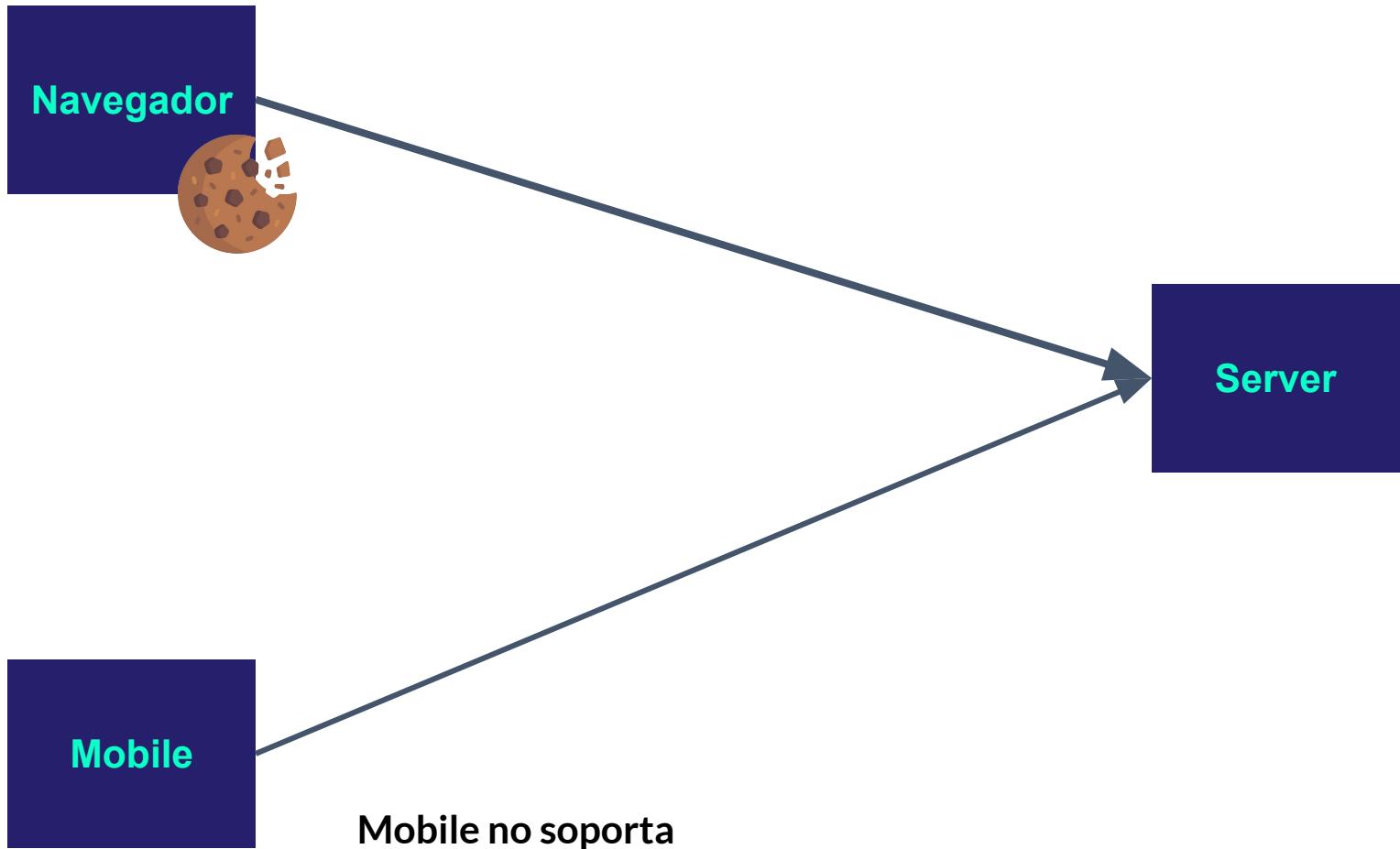


Con la cookie puede recordar el usuario

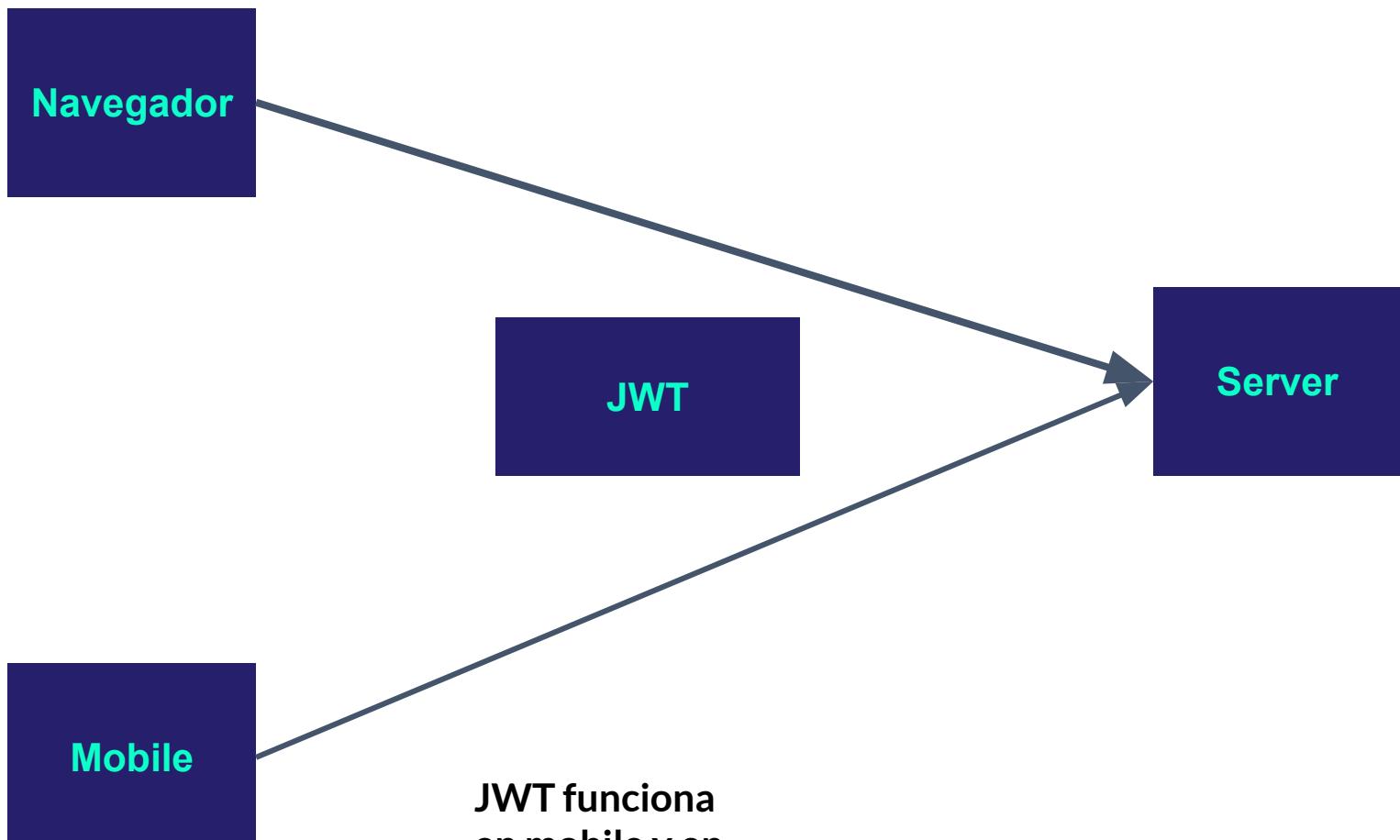


**Con la cookie se puede
manejar la sesión**



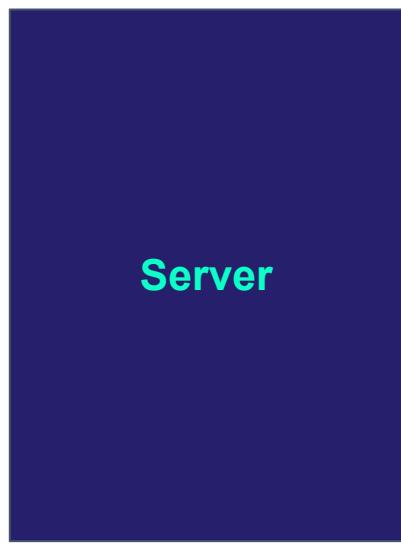


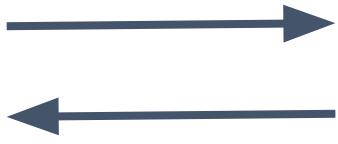
Mobile no soporta
cookies ya que no
es un navegador



JWT funciona
en mobile y en
navegadores

Bases de datos





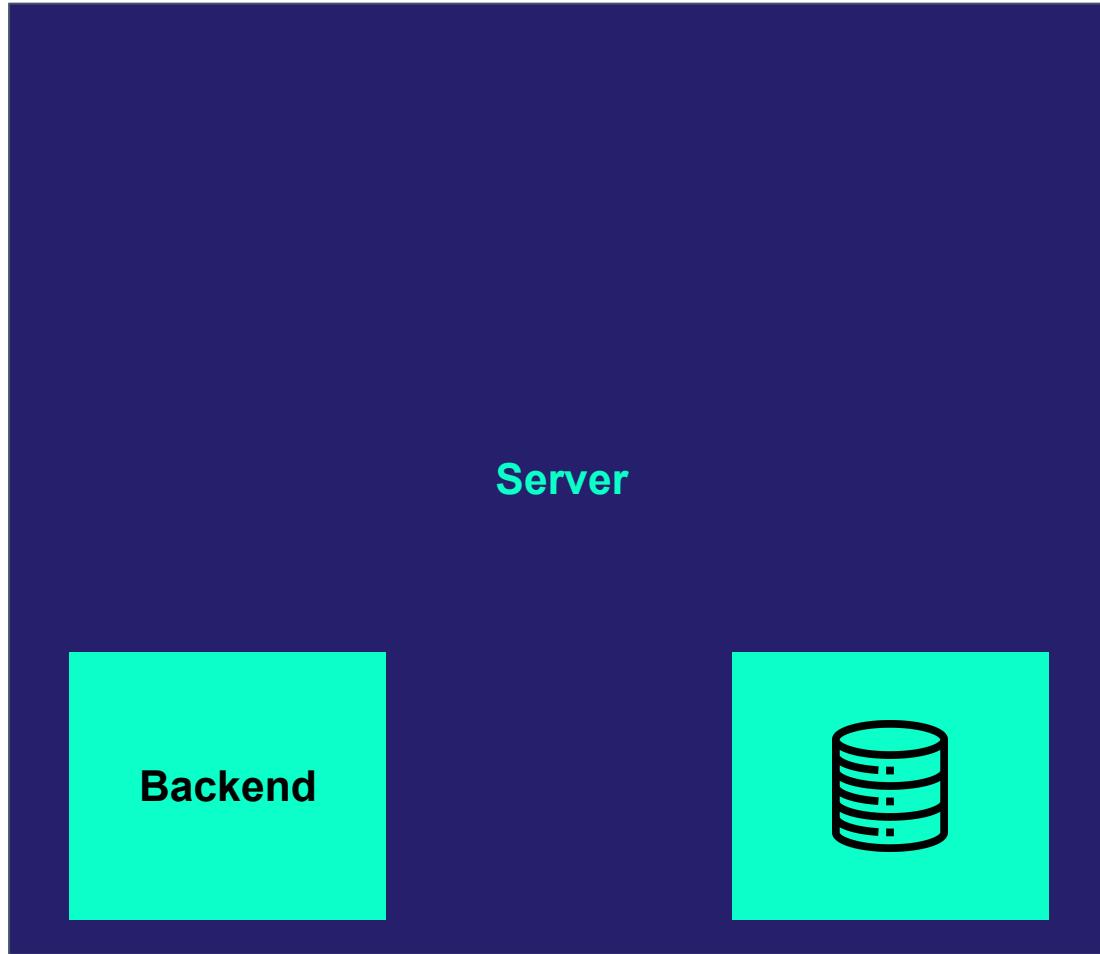
Server

En el server tenemos lógica

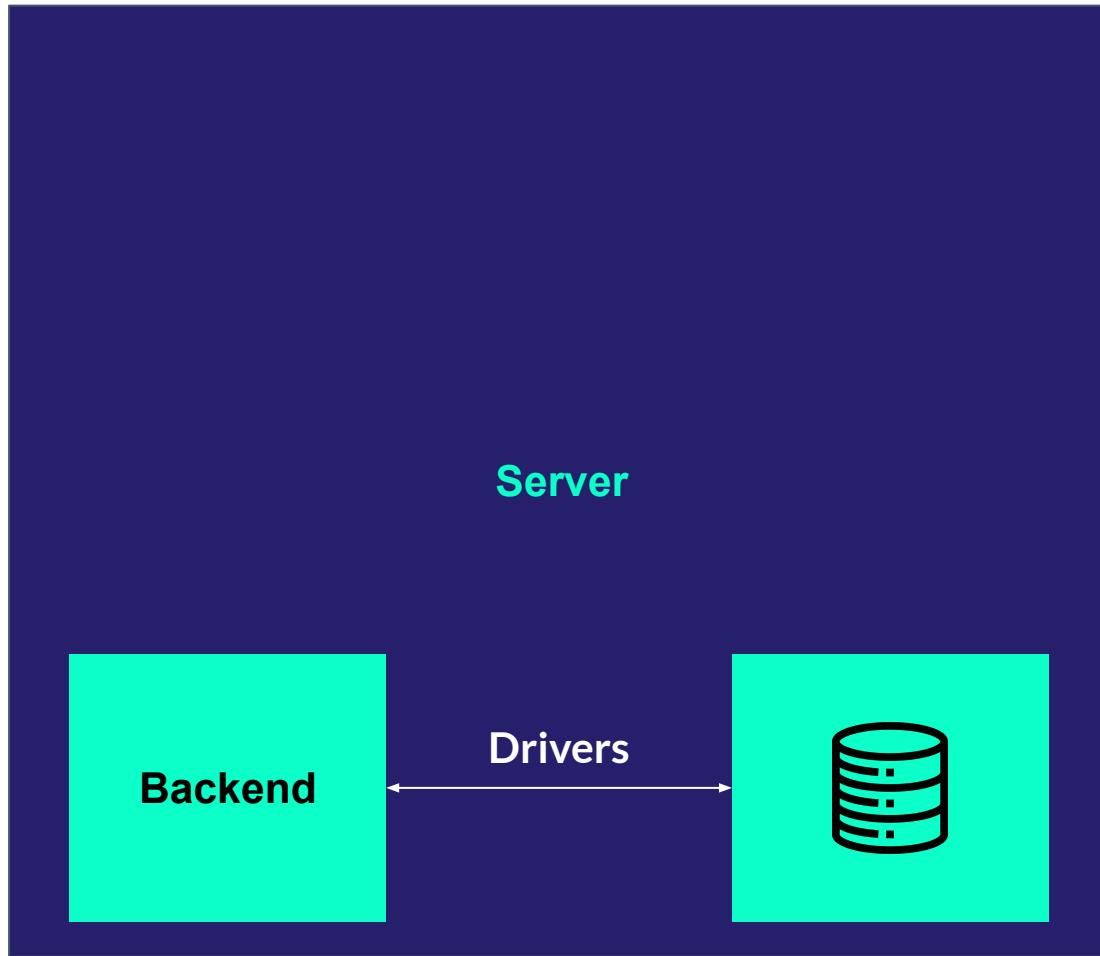
- Reglas de negocio
- Validación
- Autorización
- Etc.

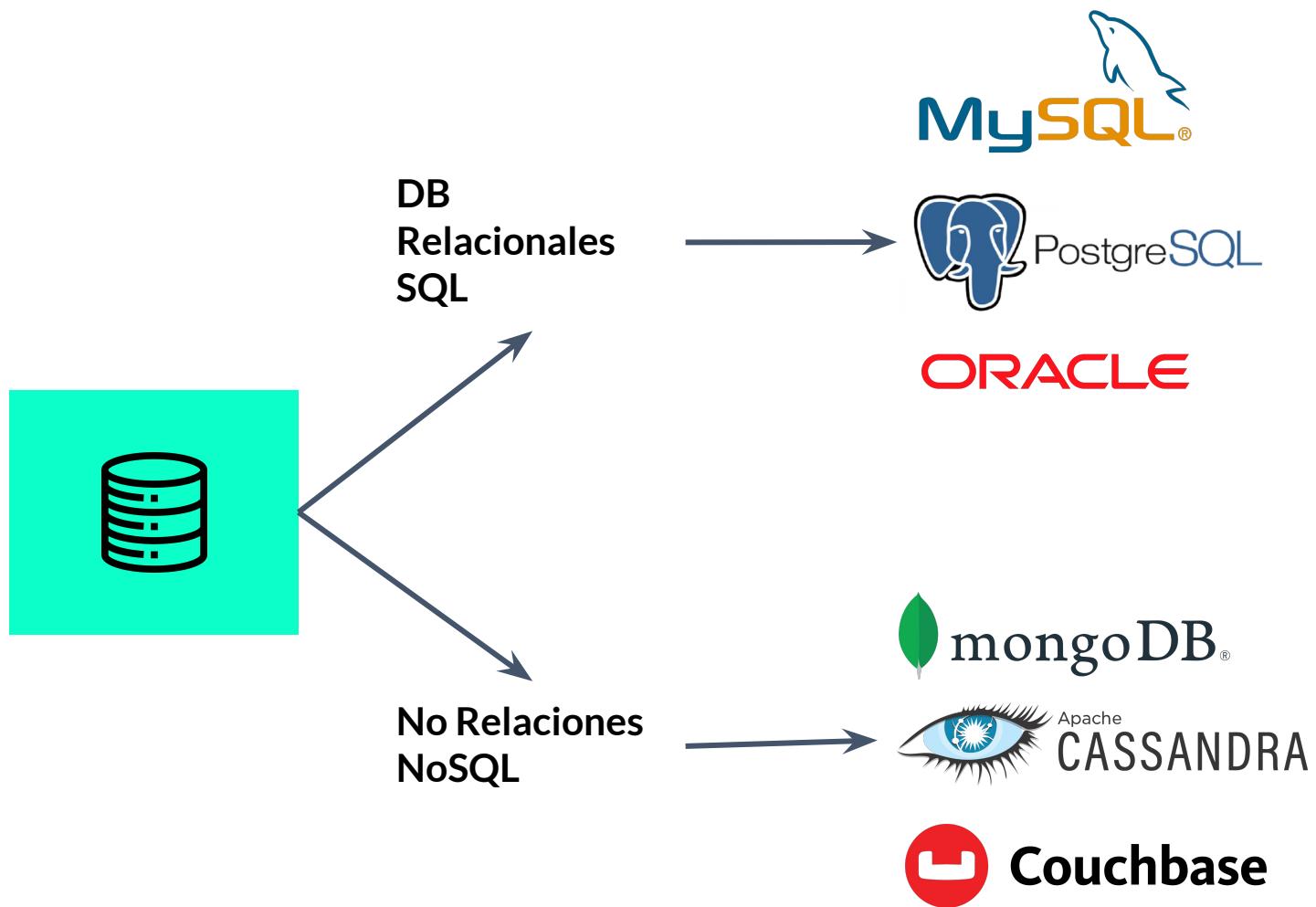
Server

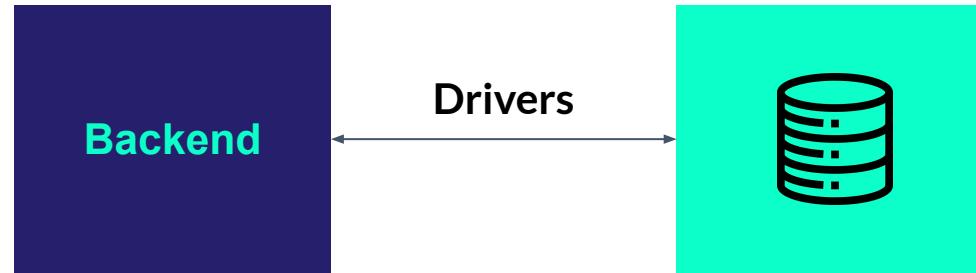
CPU
RAM
Disk



CPU
RAM
Disk







PostgreSQL

ORACLE

SQL

ORMS - POO



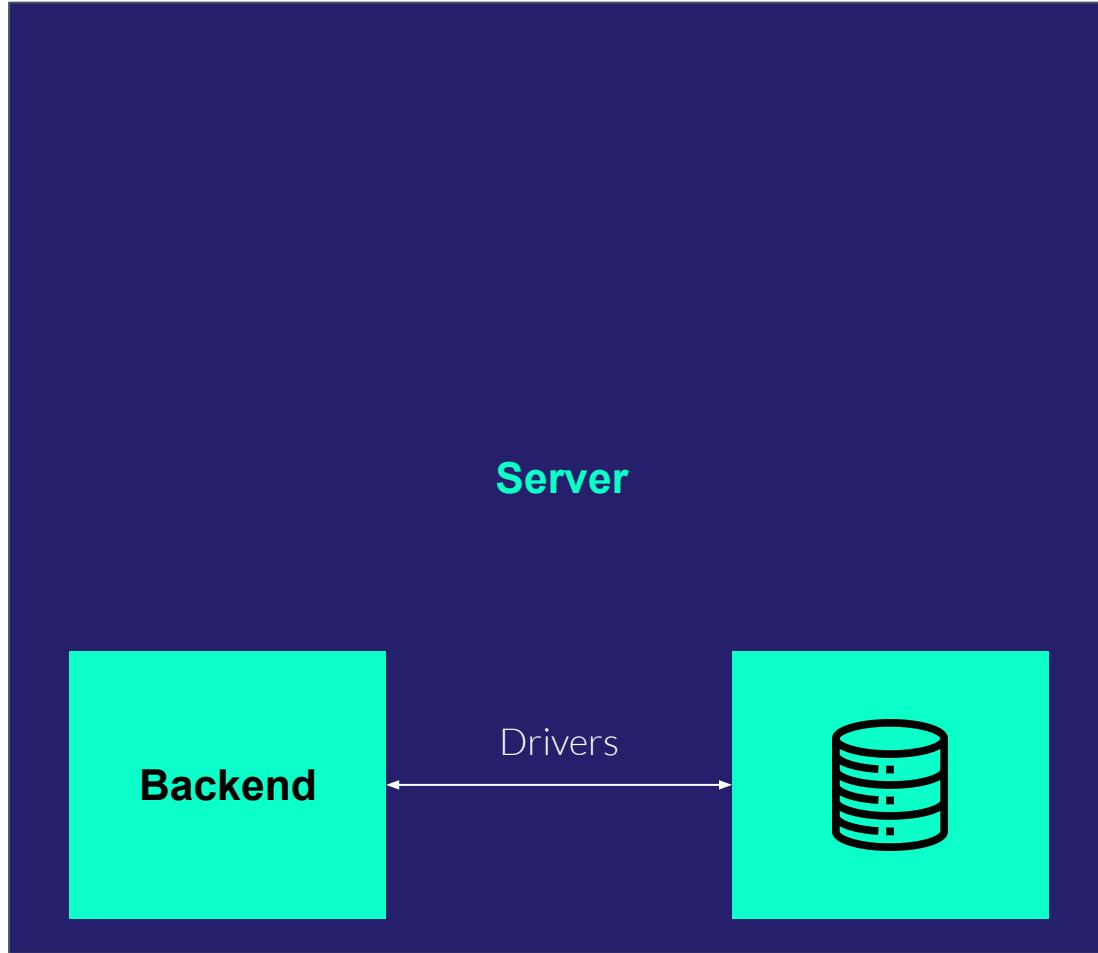
Laravel

django

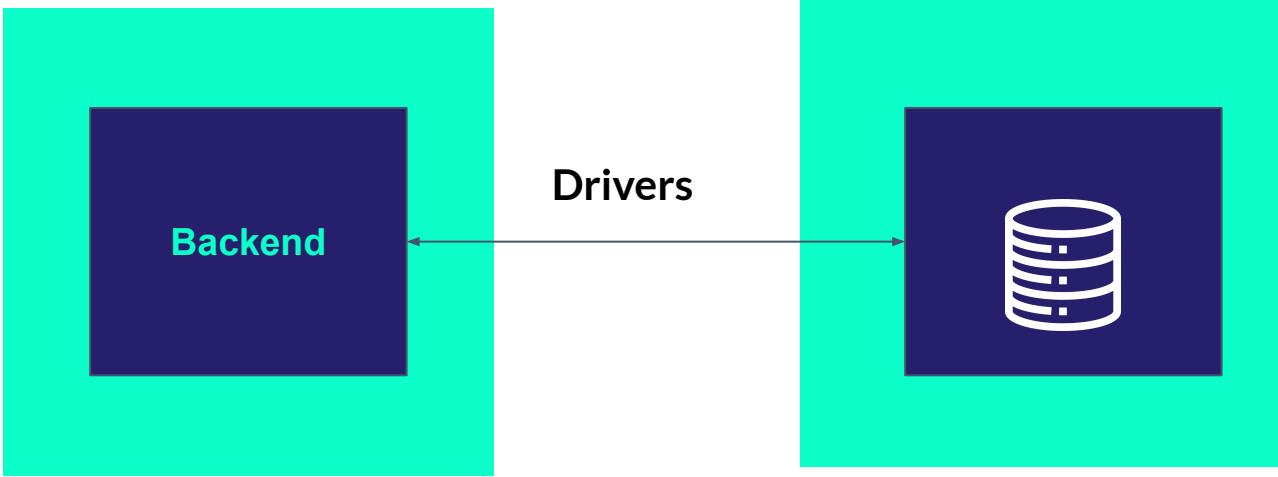


TYPEORM

TITLE



Backups
Replicación
Escalamiento
Soporte



**Backups
Replicación
Escalamiento
Soporte**

chrome web store

hi@nicobytes.com

Inicio > Extensiones > Angular DevTools

Angular DevTools

Ofrecido por: Angular

★★★★★ 71 | Herramientas para desarrolladores | 60.000+ usuarios

Desinstalar

Descripción general Prácticas de privacidad Reseñas Ayuda Relacionados

The screenshot shows the Angular DevTools extension page on the Chrome Web Store. At the top, there are standard browser controls (red, yellow, green) and the URL 'chrome web store'. On the right, there's a user profile icon with the email 'hi@nicobytes.com' and a dropdown arrow. Below the address bar, the navigation path is 'Inicio > Extensiones > Angular DevTools'. The main title is 'Angular DevTools' with the Angular logo to its left. It's described as being offered by 'Angular'. It has a rating of 71 stars and over 60,000 users. A prominent blue button on the right says 'Desinstalar' (Uninstall). Below this, there are tabs for 'Descripción general' (selected), 'Prácticas de privacidad', 'Reseñas', 'Ayuda', and 'Relacionados'. A large preview window shows the Angular DevTools interface, which includes tabs like 'Elements', 'Performance', 'Console' (which is selected), 'Sources', 'Network', 'Memory', 'Application', 'Security', and 'Lighthouse'. The 'Console' tab displays developer messages such as 'Angular is running in development mode. Call enableProdMode() to enable production mode.' and '[WDS] Live Reloading enabled.'. A mouse cursor is hovering over the 'Layers' tab in the toolbar.

¿Qué es el
escalamiento?

Server

**CPU
RAM
Disk**

Server

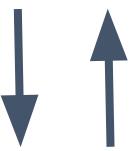
CPU ++
RAM ++
Disk ++

Server

CPU ++
RAM ++
Disk ++

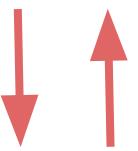
Server

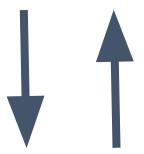
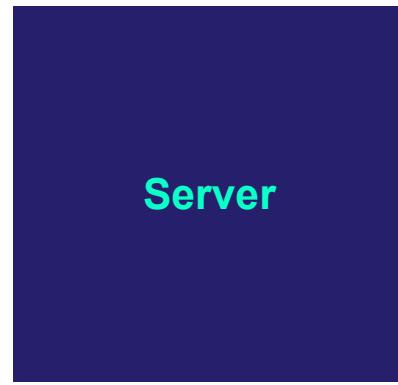
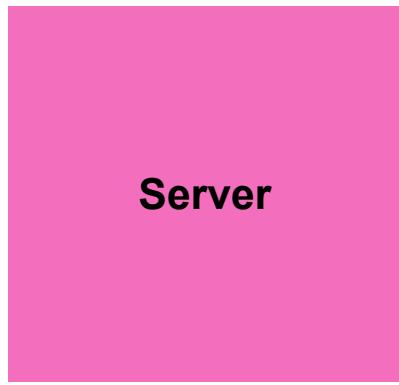
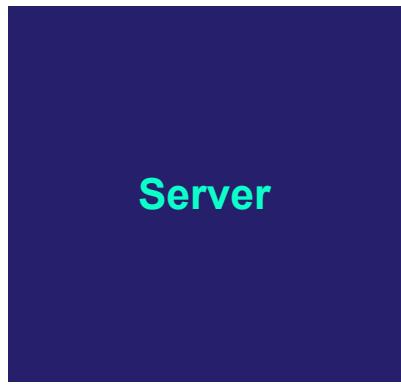
CPU ++
RAM ++
Disk ++

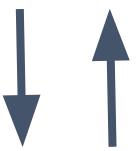
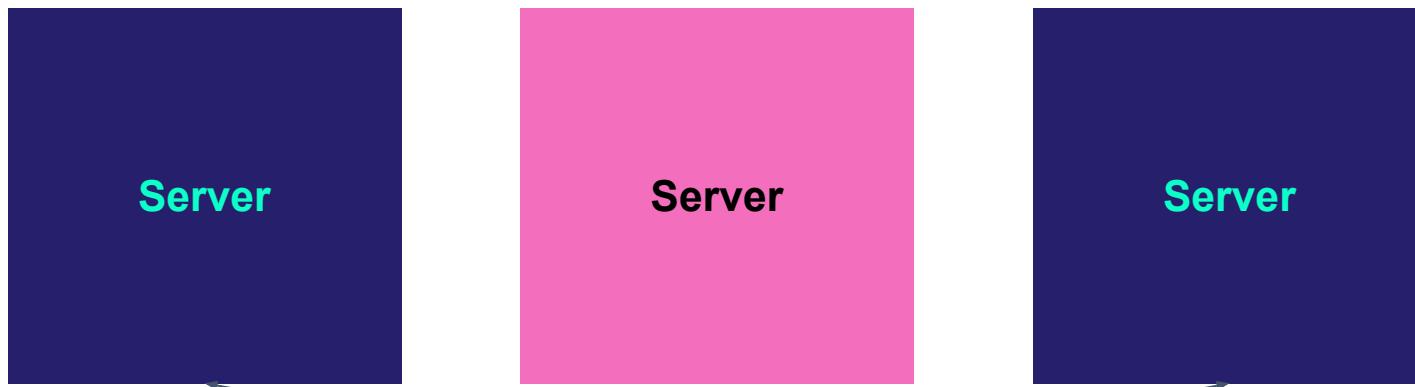


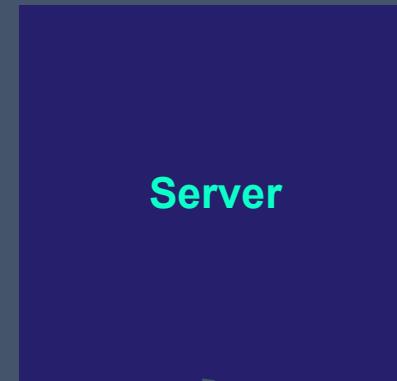
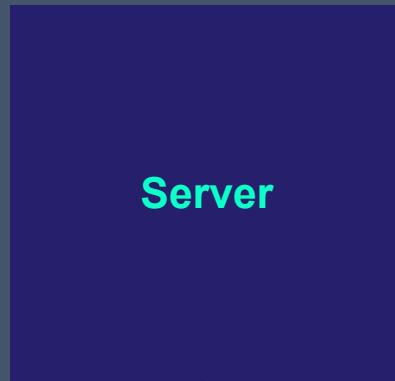
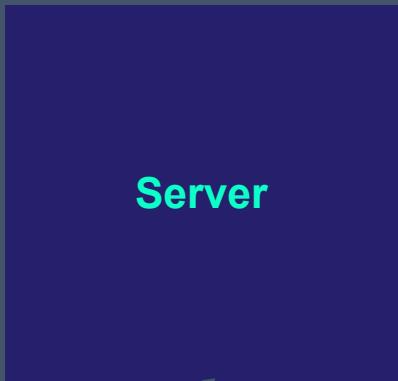
Server

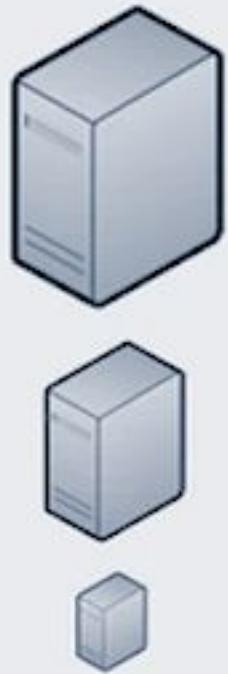
CPU ++
RAM ++
Disk ++









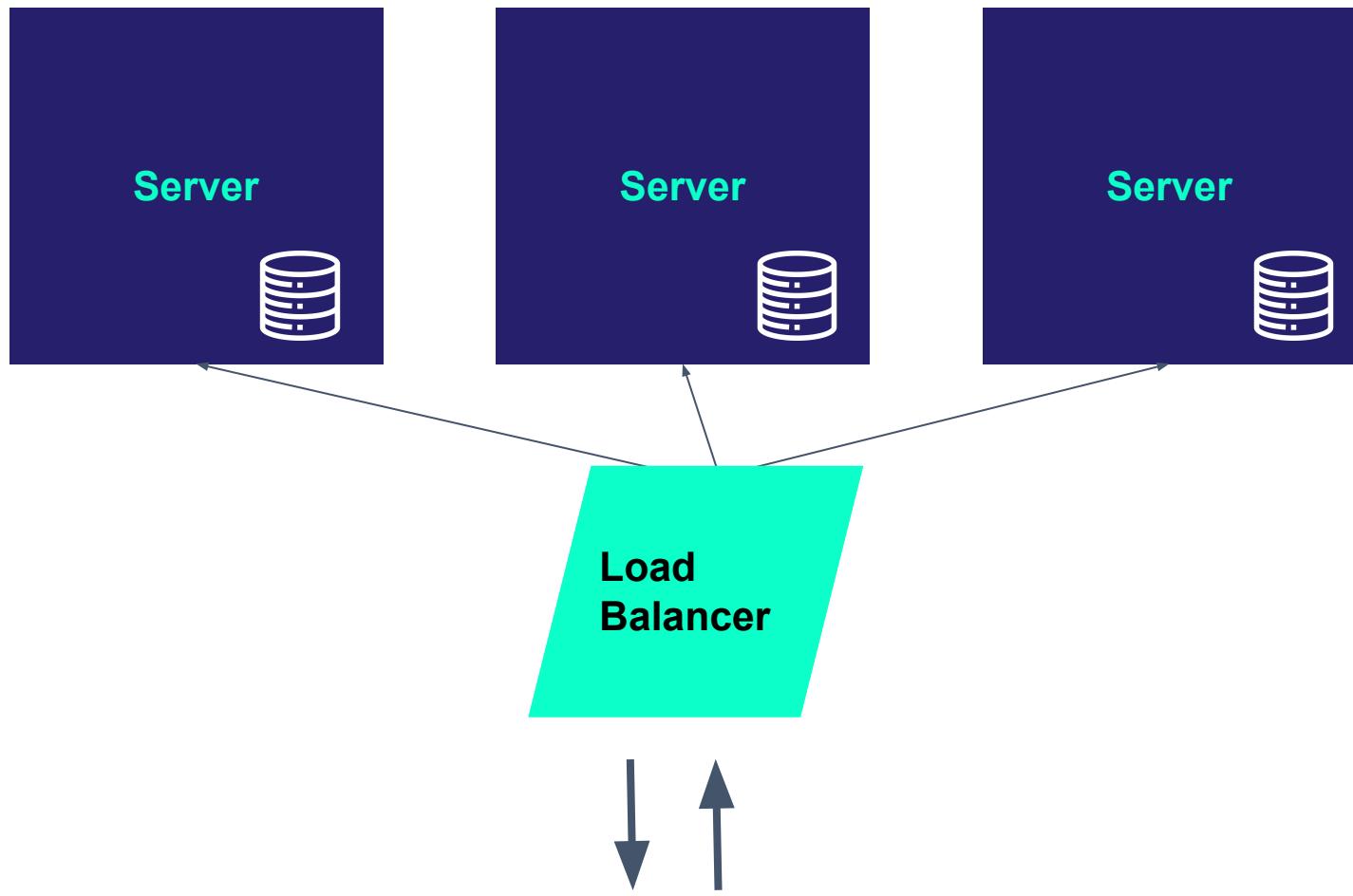


Vertical

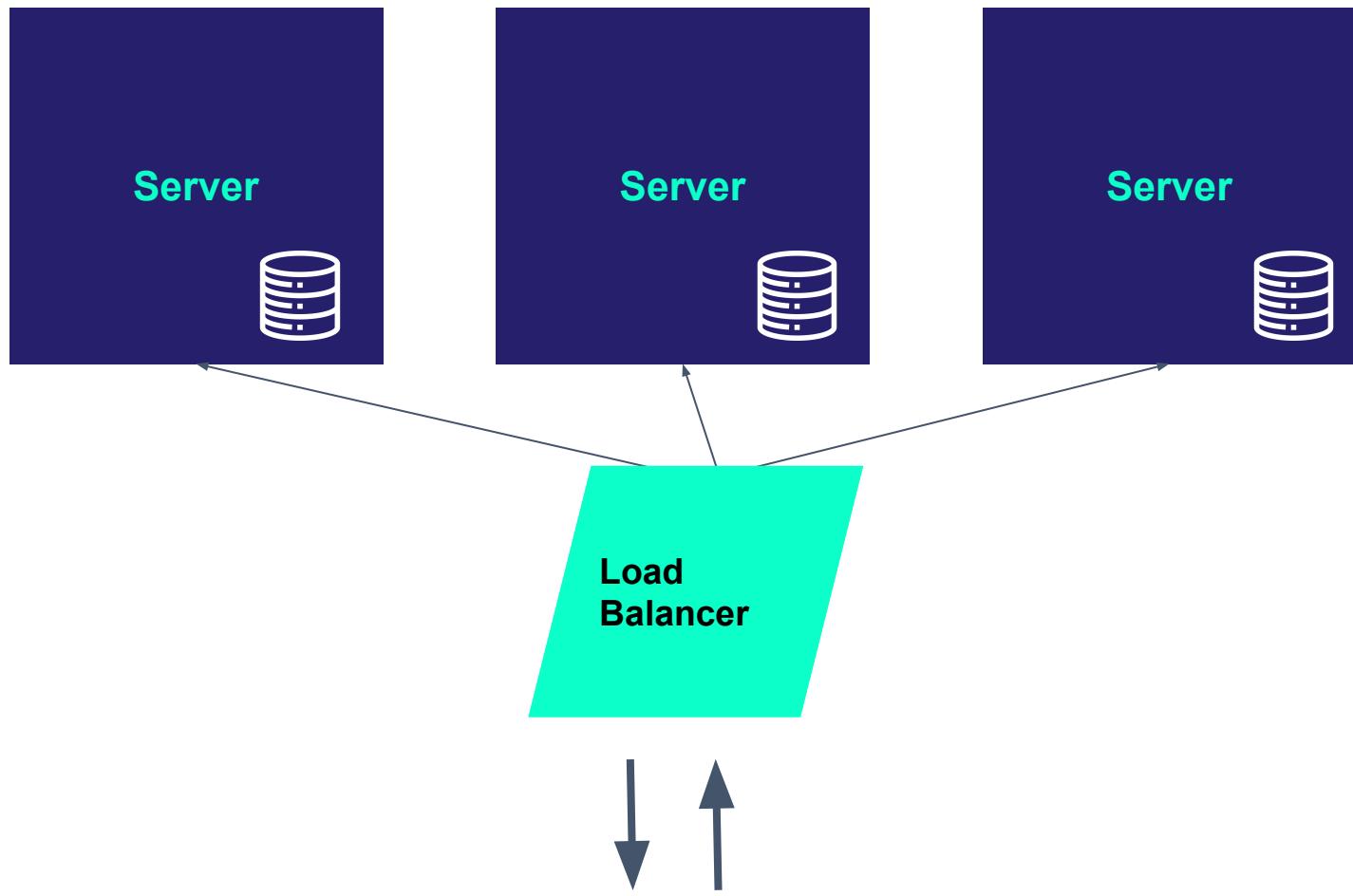
vs.

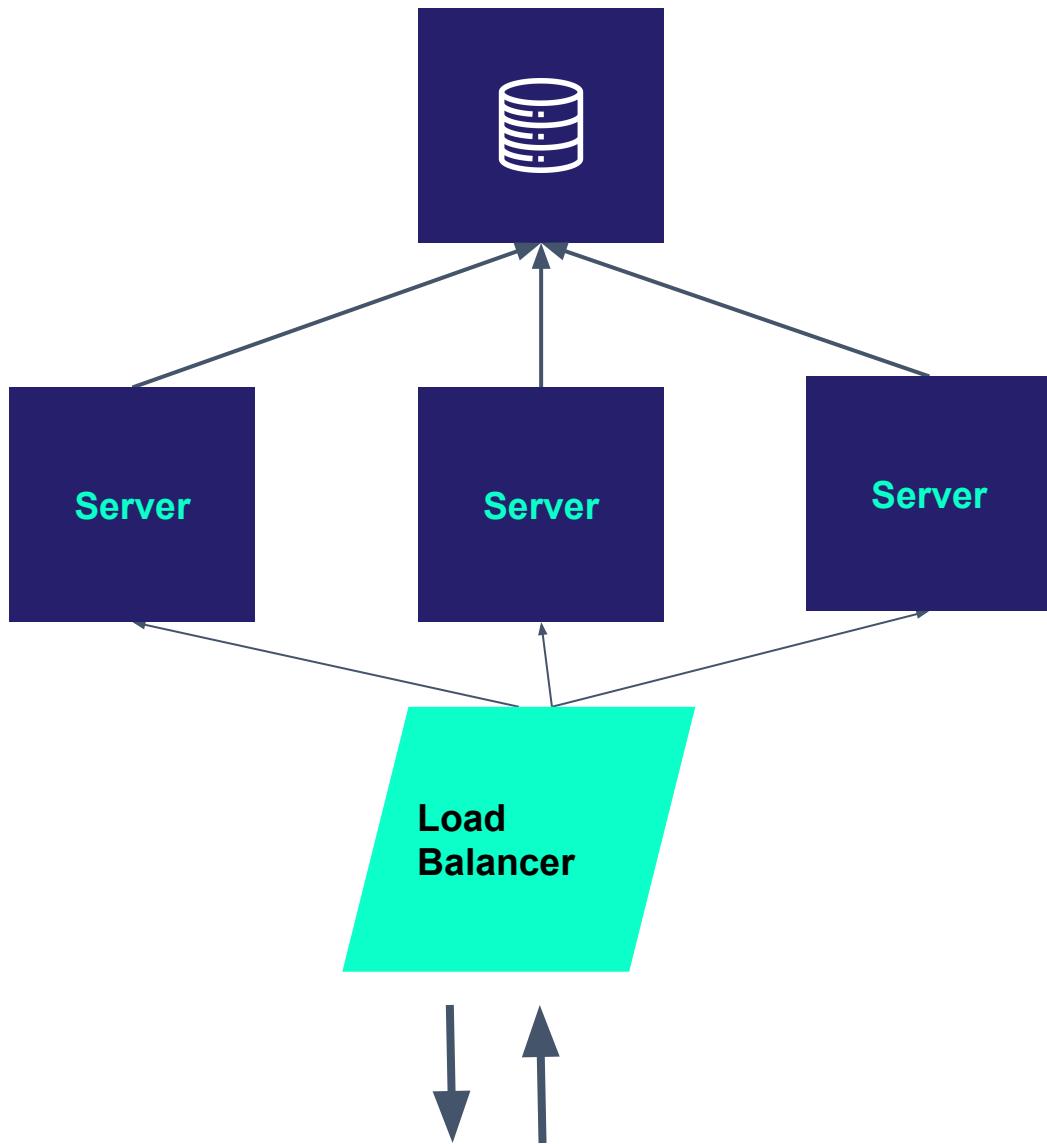
Horizontal

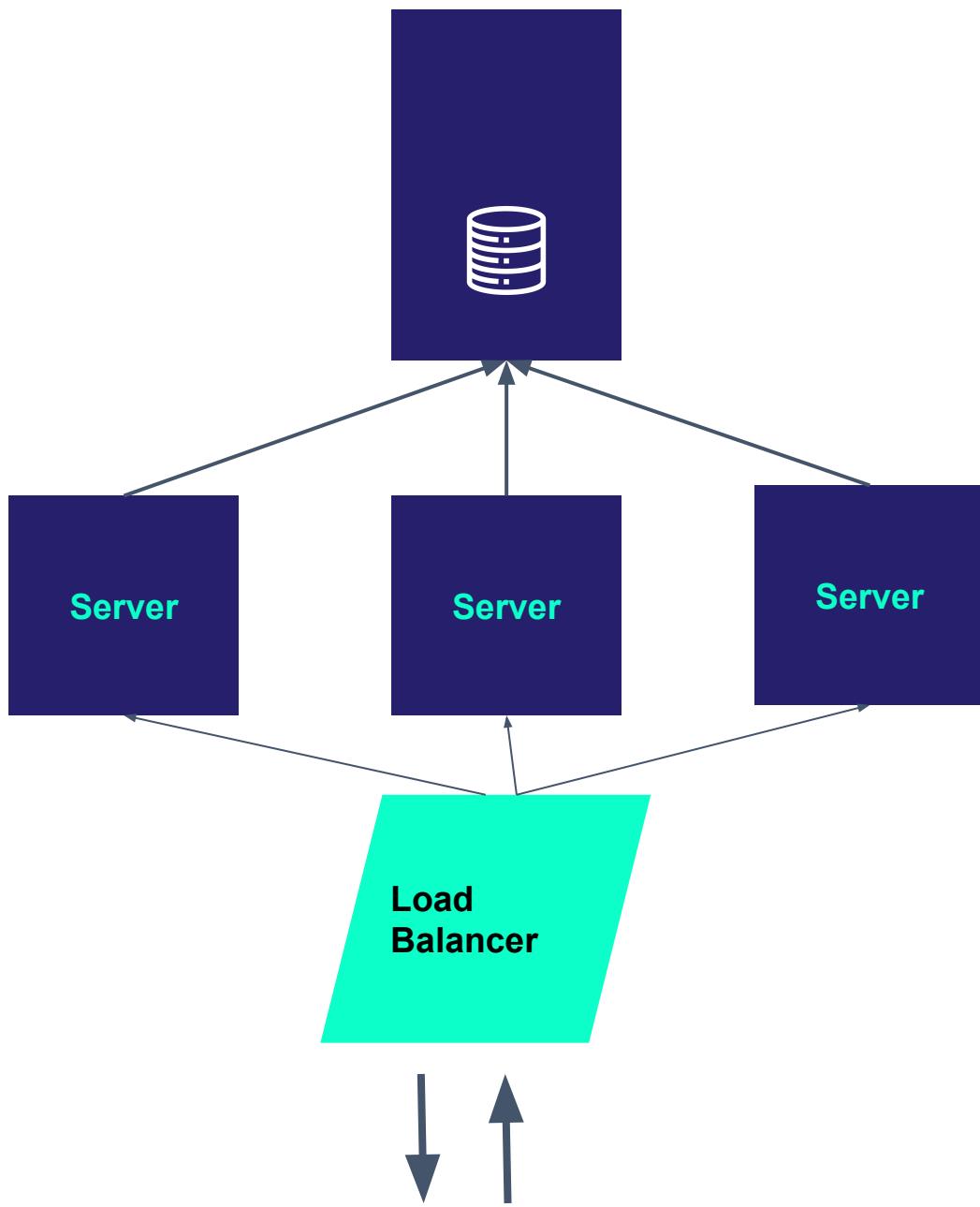


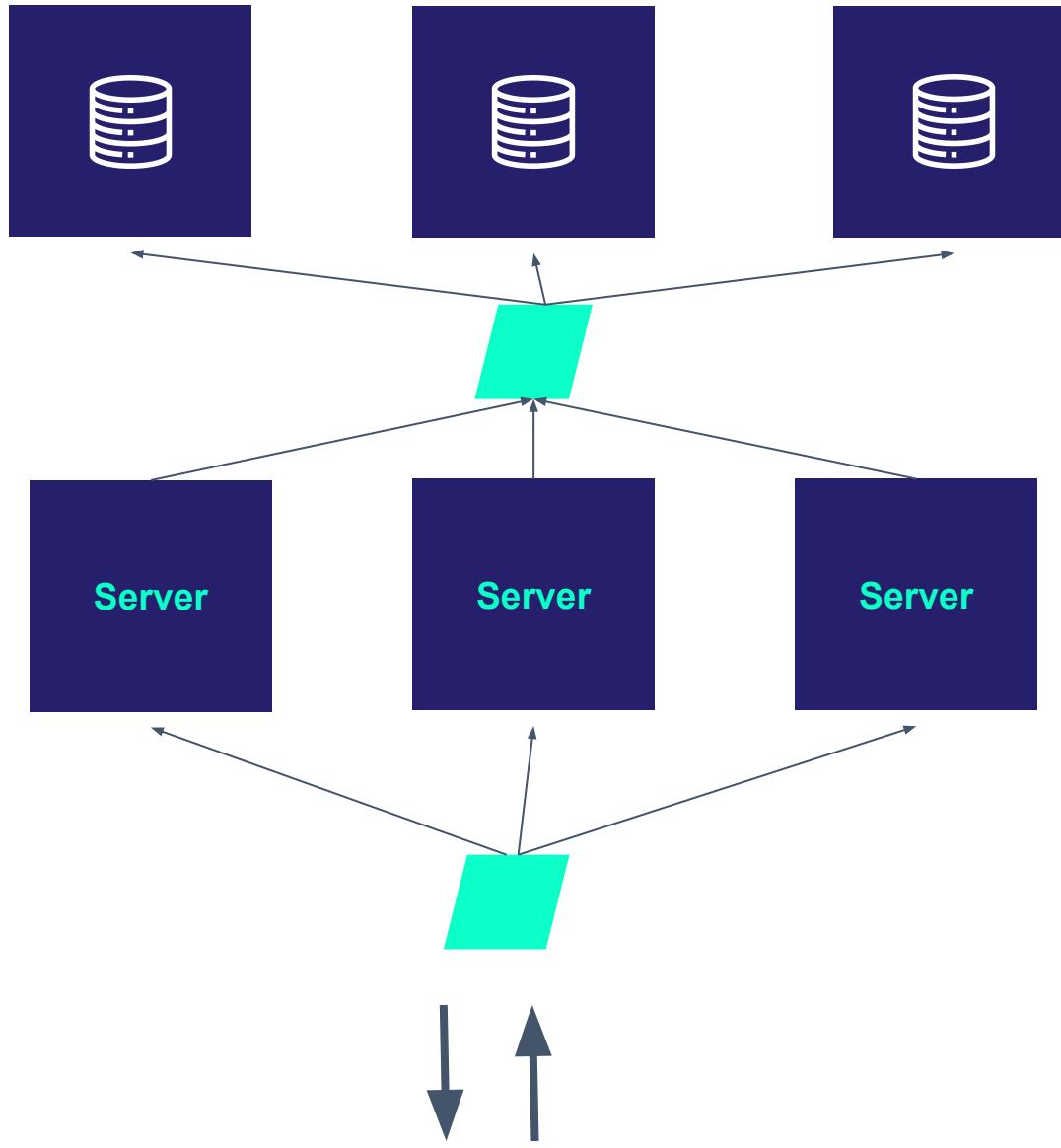


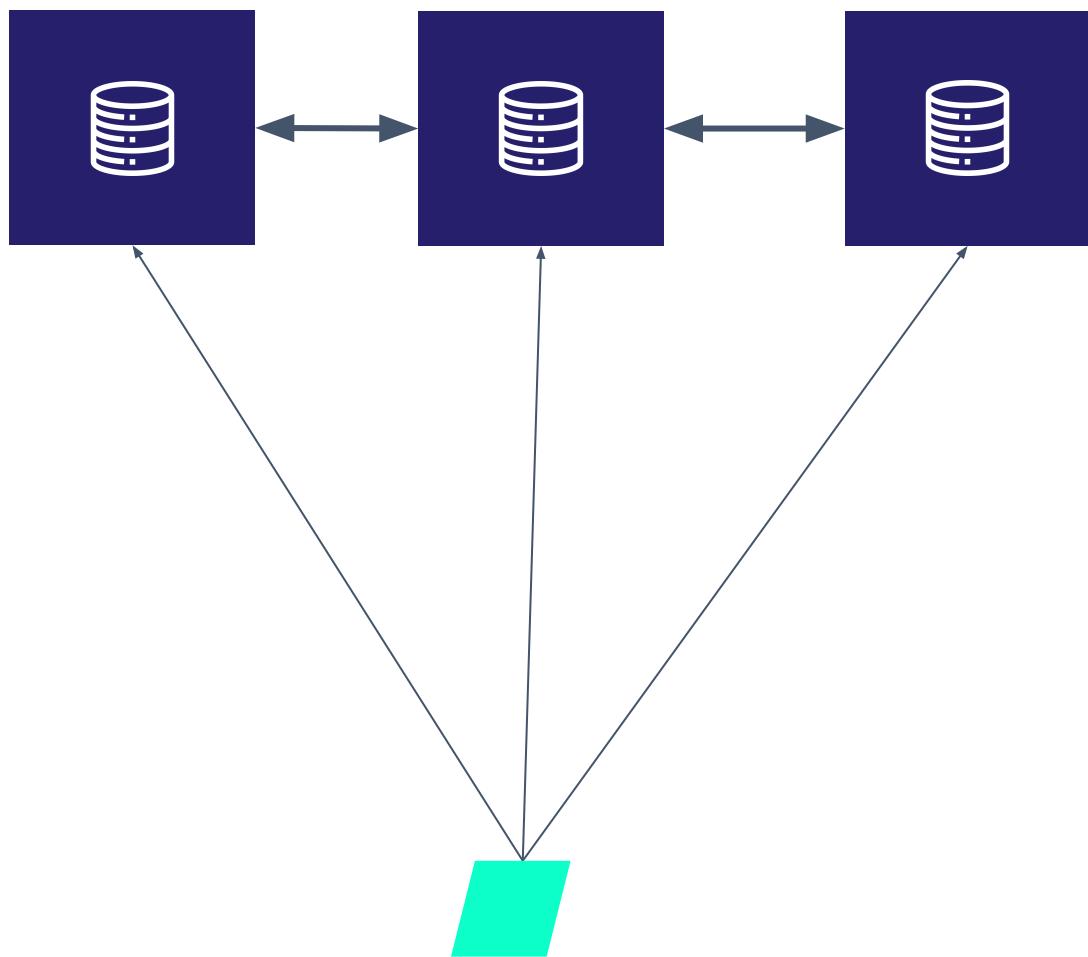
¿Qué es la
replicación?

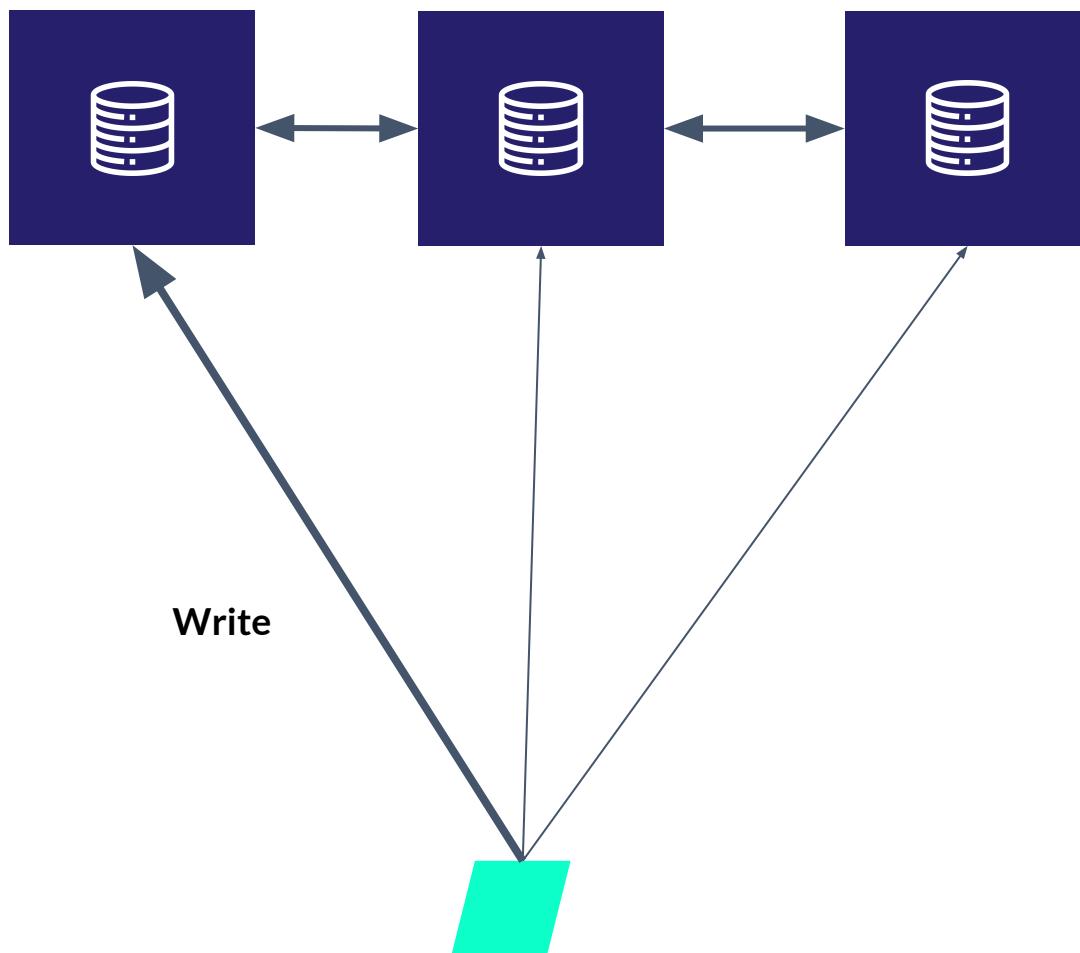


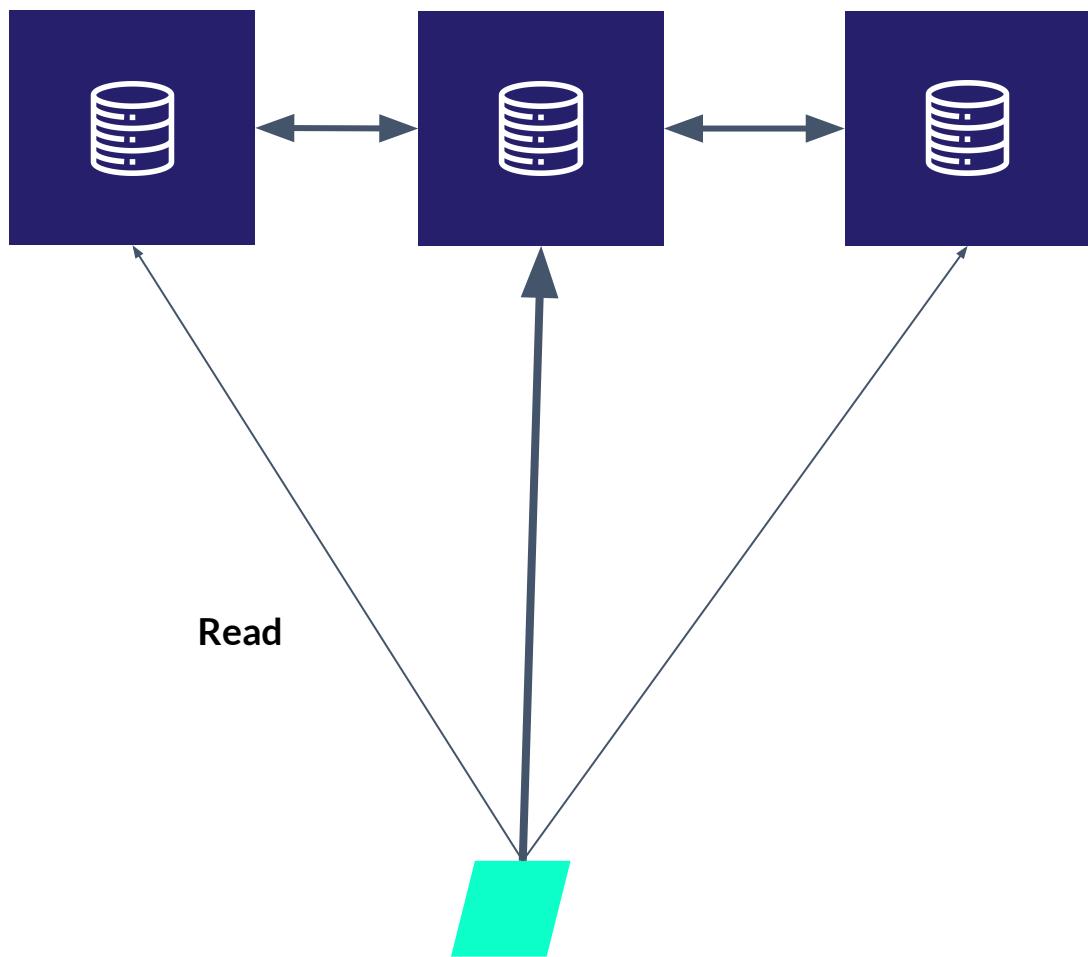


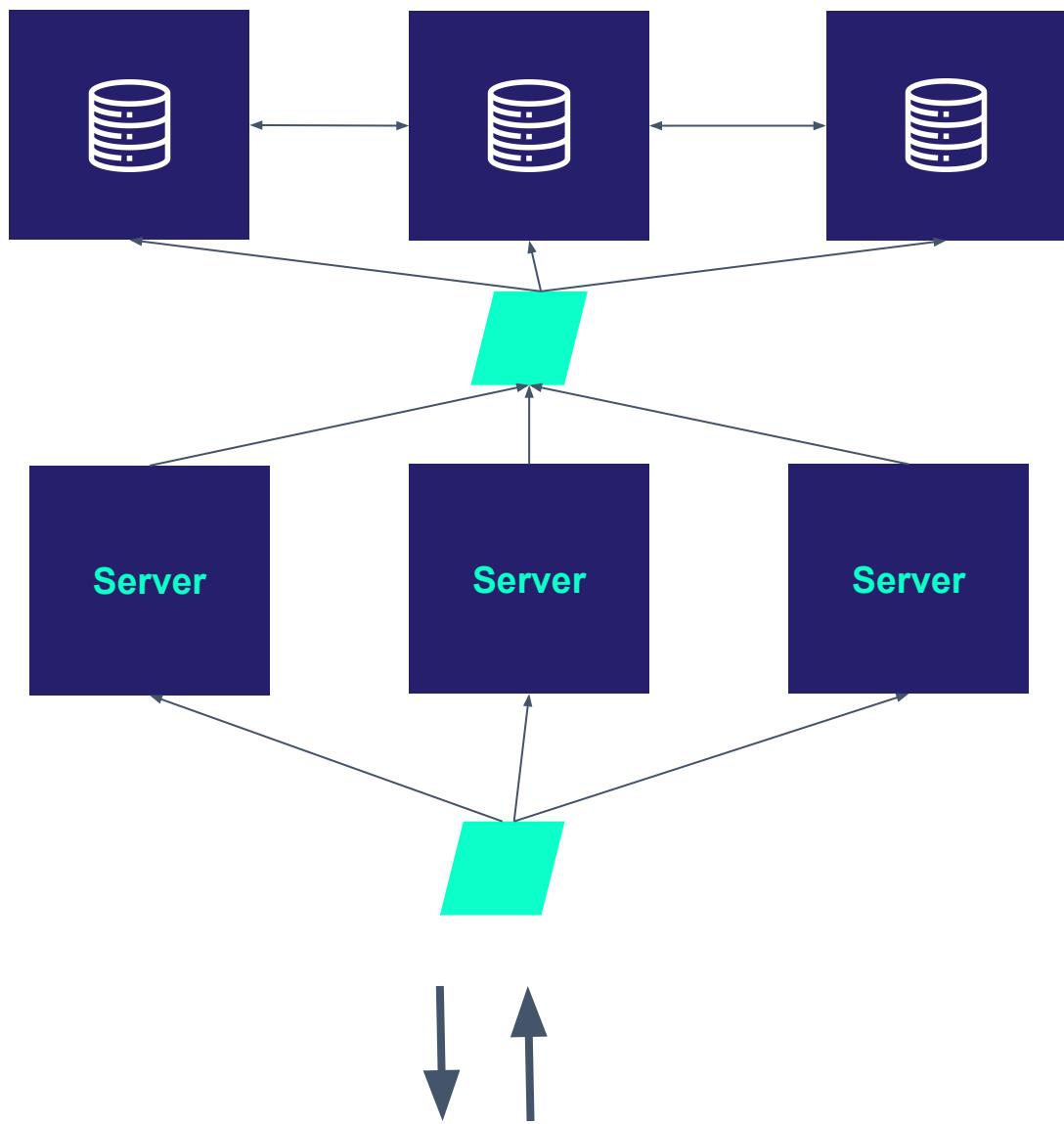








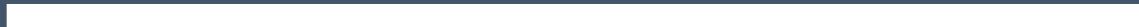




¿Qué es
la caché?

955

844



+

955

844

1799



Primera vez = 30s

955

+

844

1799



Segunda vez = 2s

955

+

844

1799



Server





Server

Lógica de negocio
Autorización
Autenticación
Conexión a DB Rules

Solicitudes





Lectura

Server

Lógica de negocio
Autorización
Autenticación
Conexión a DB Rules



Solicitudes



Lectura

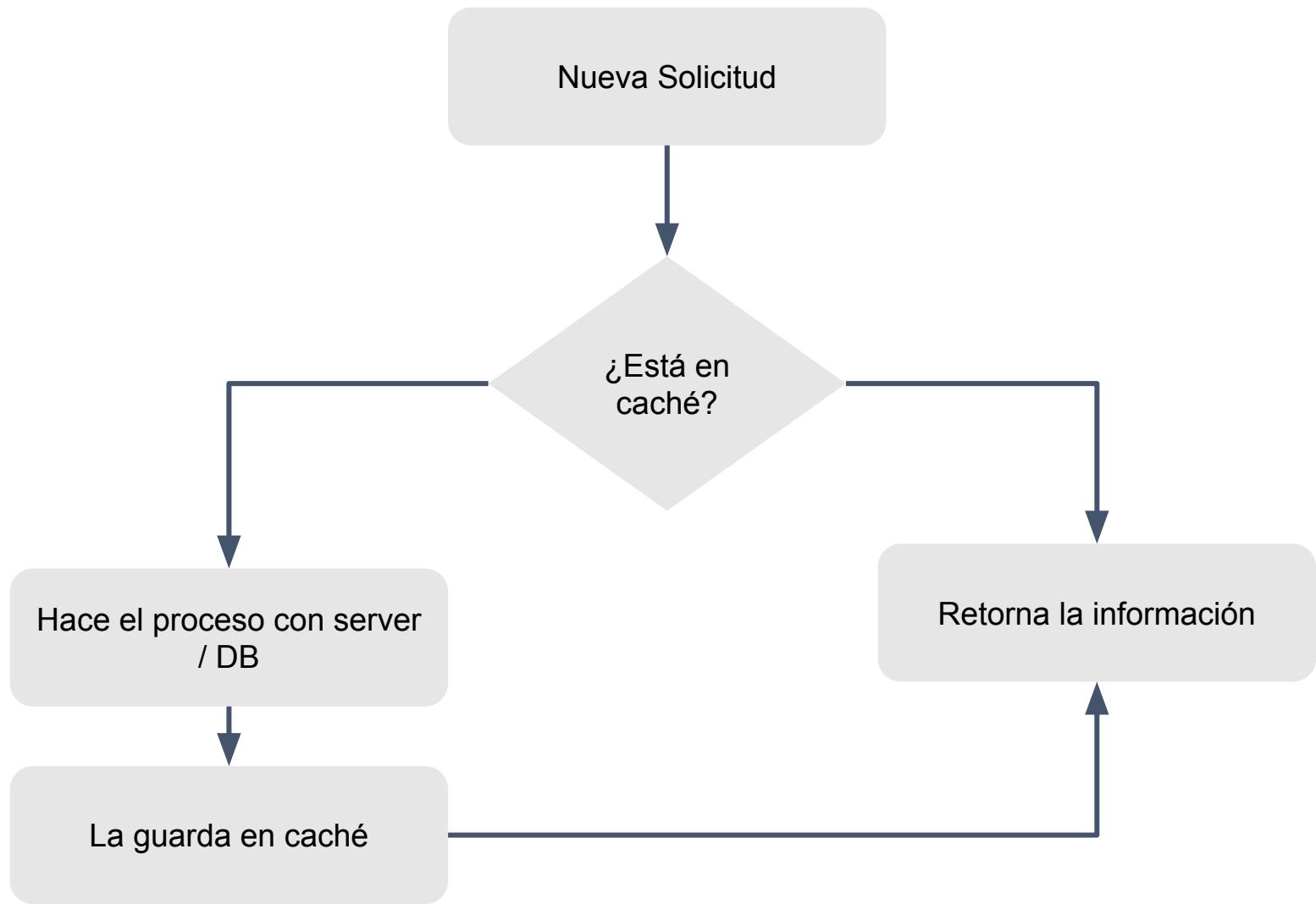
Server

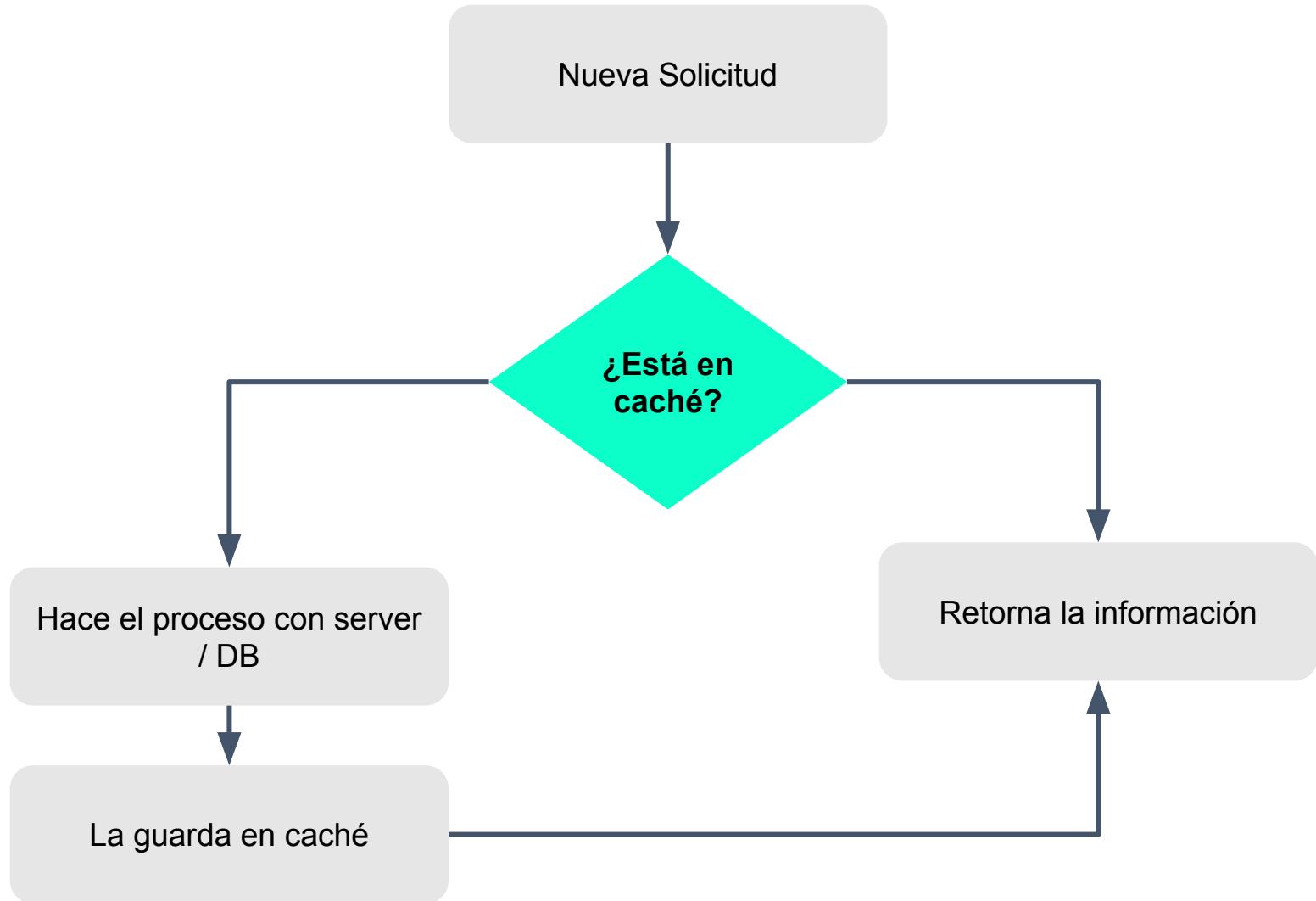


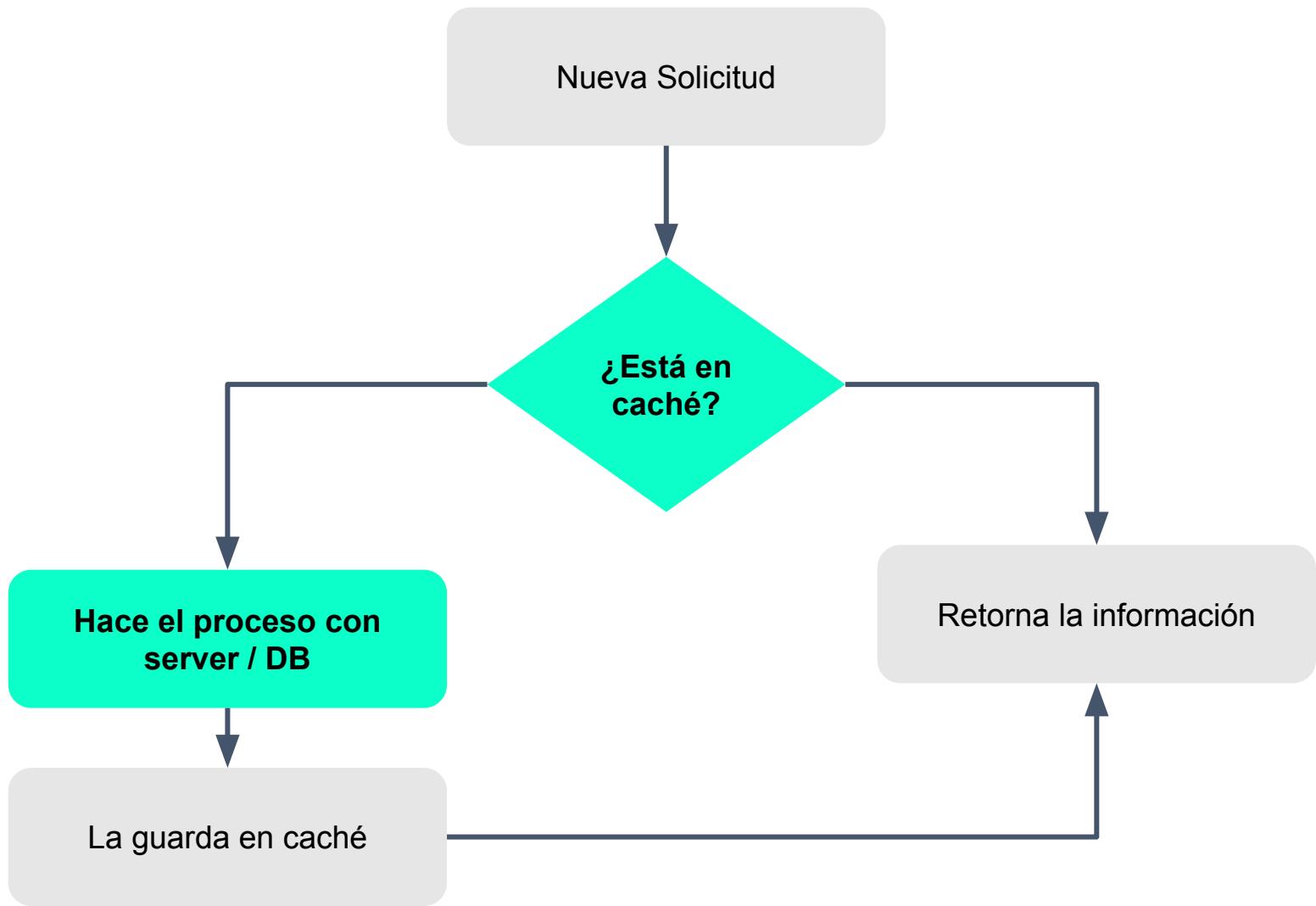
Lógica de negocio
Autorización
Autenticación
Conexión a DB Rules

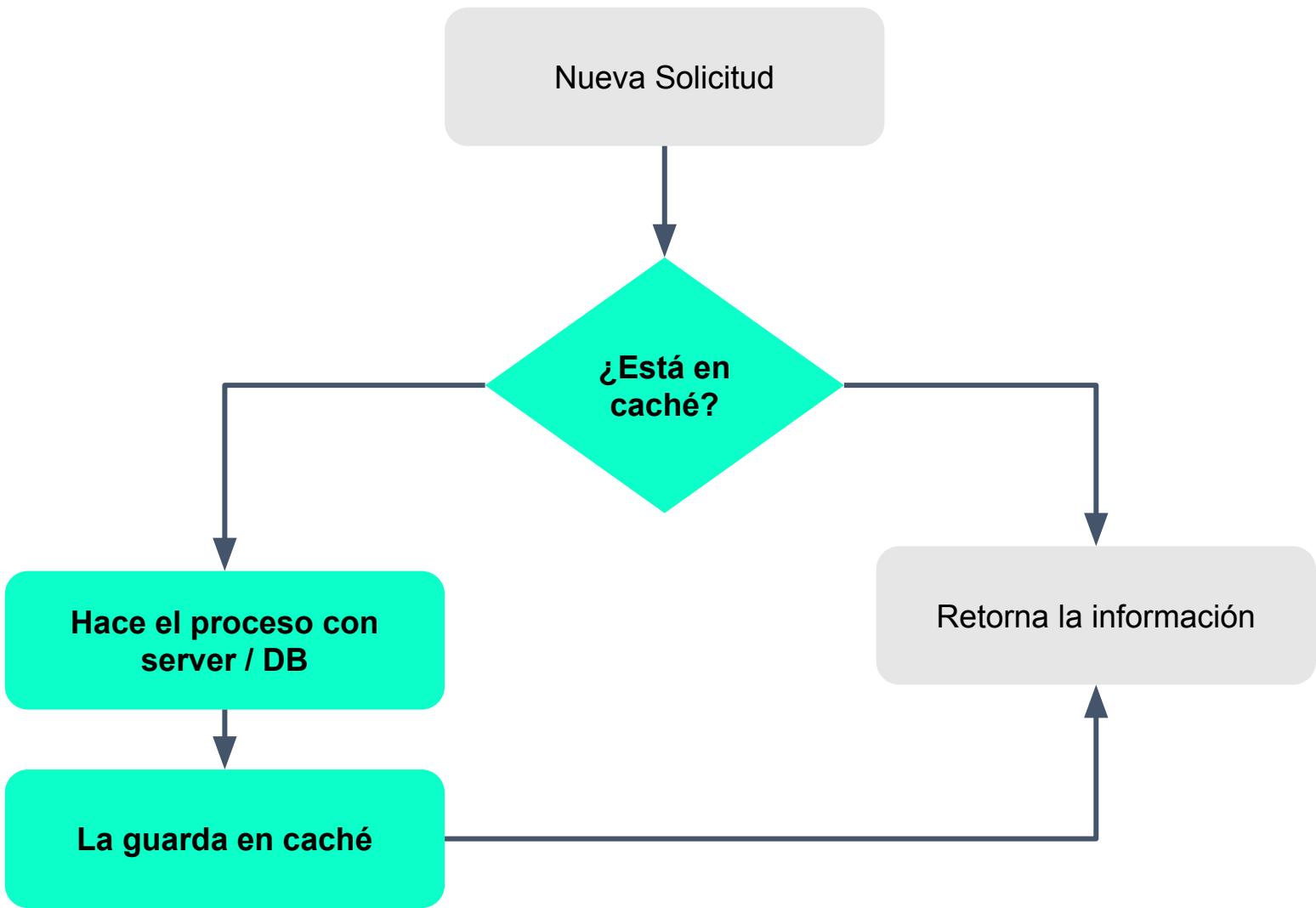


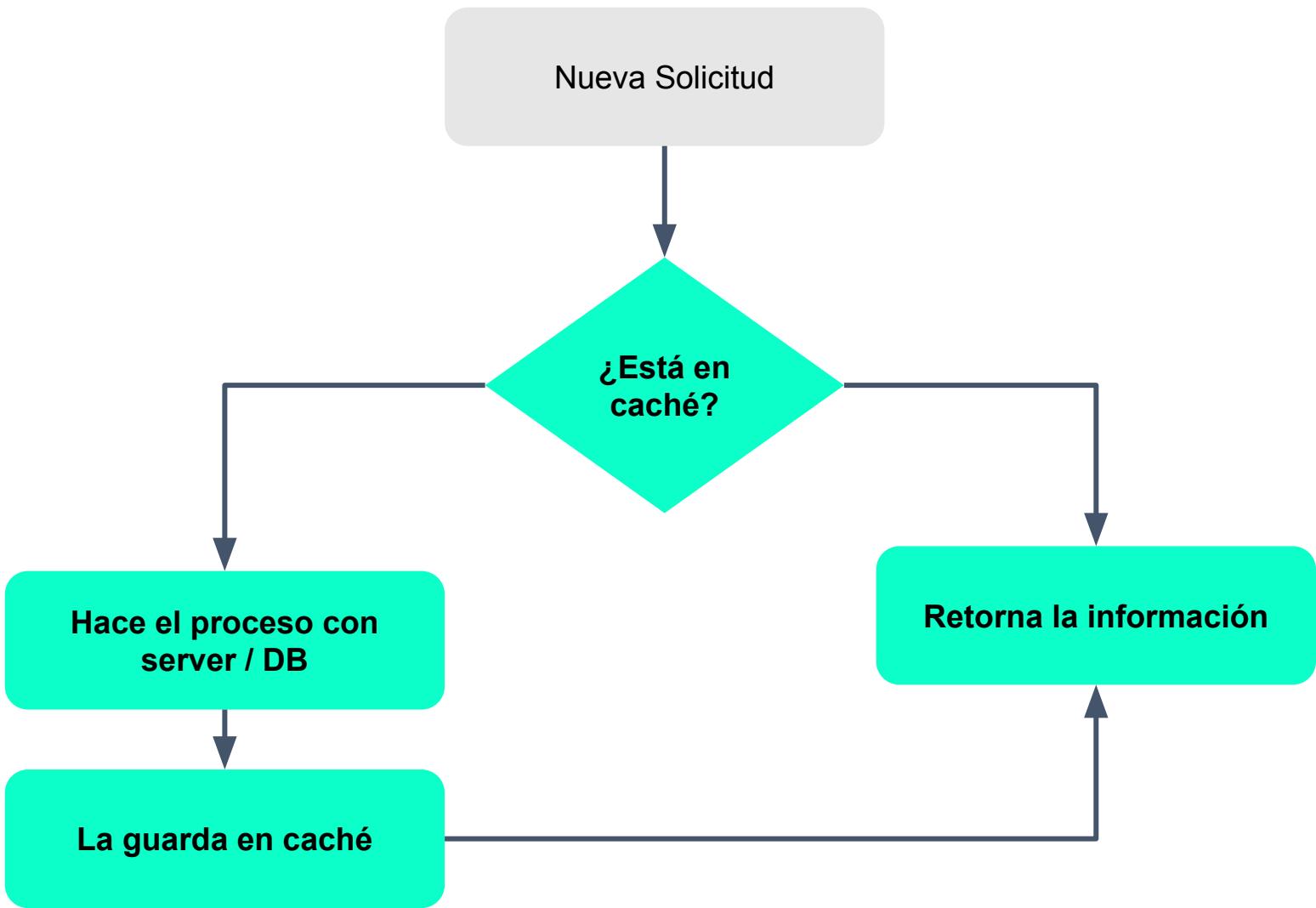
Solicitudes

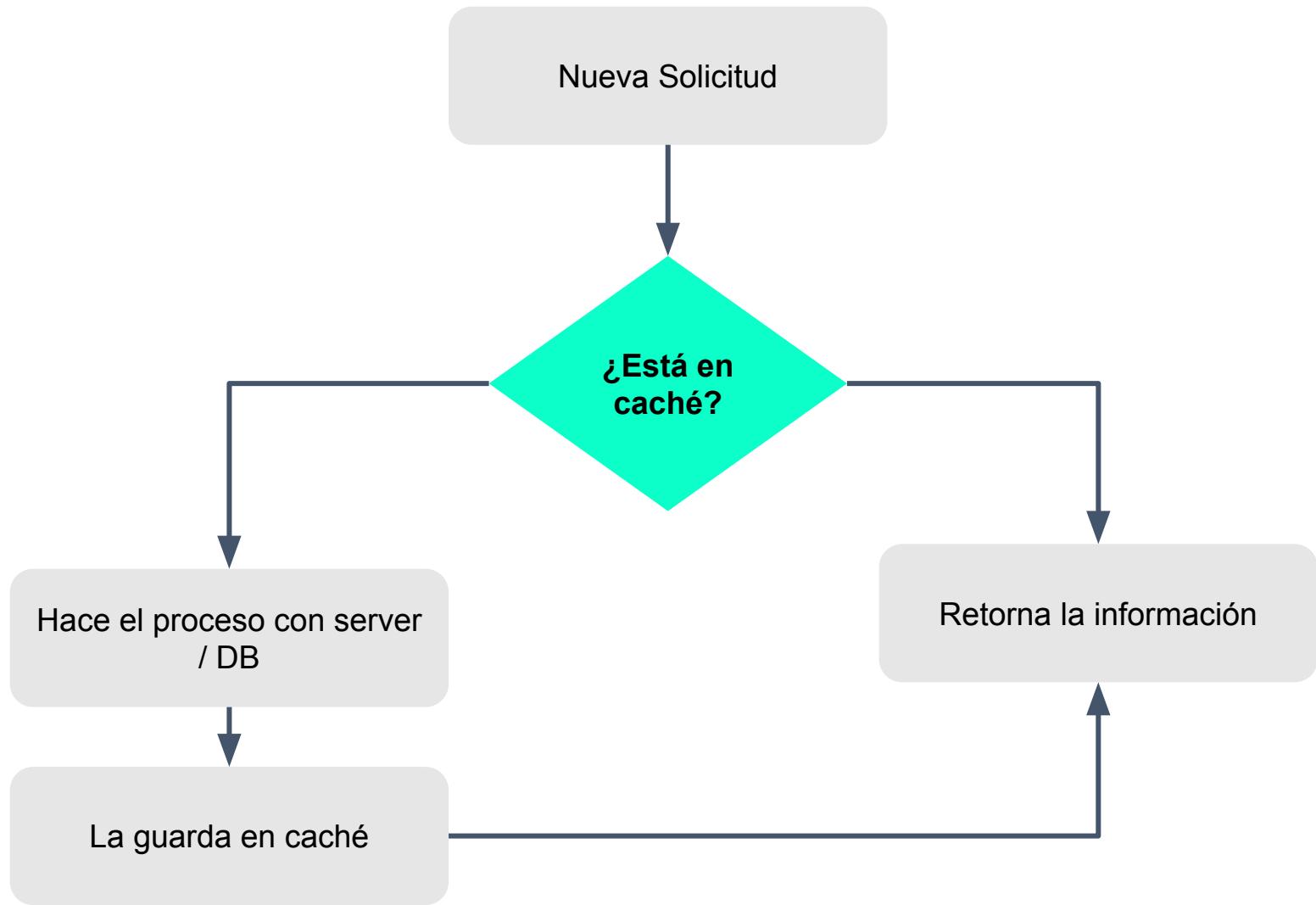


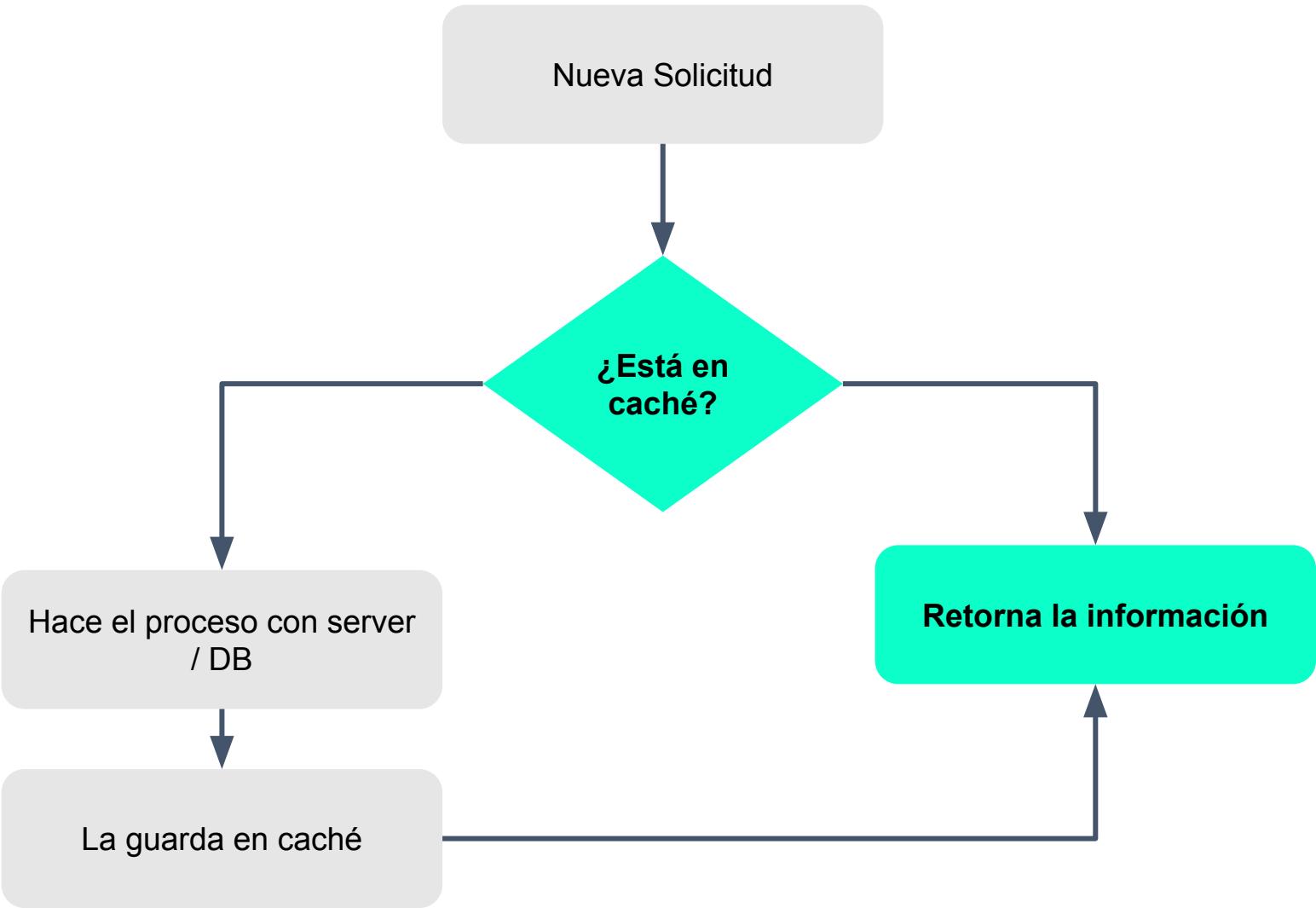


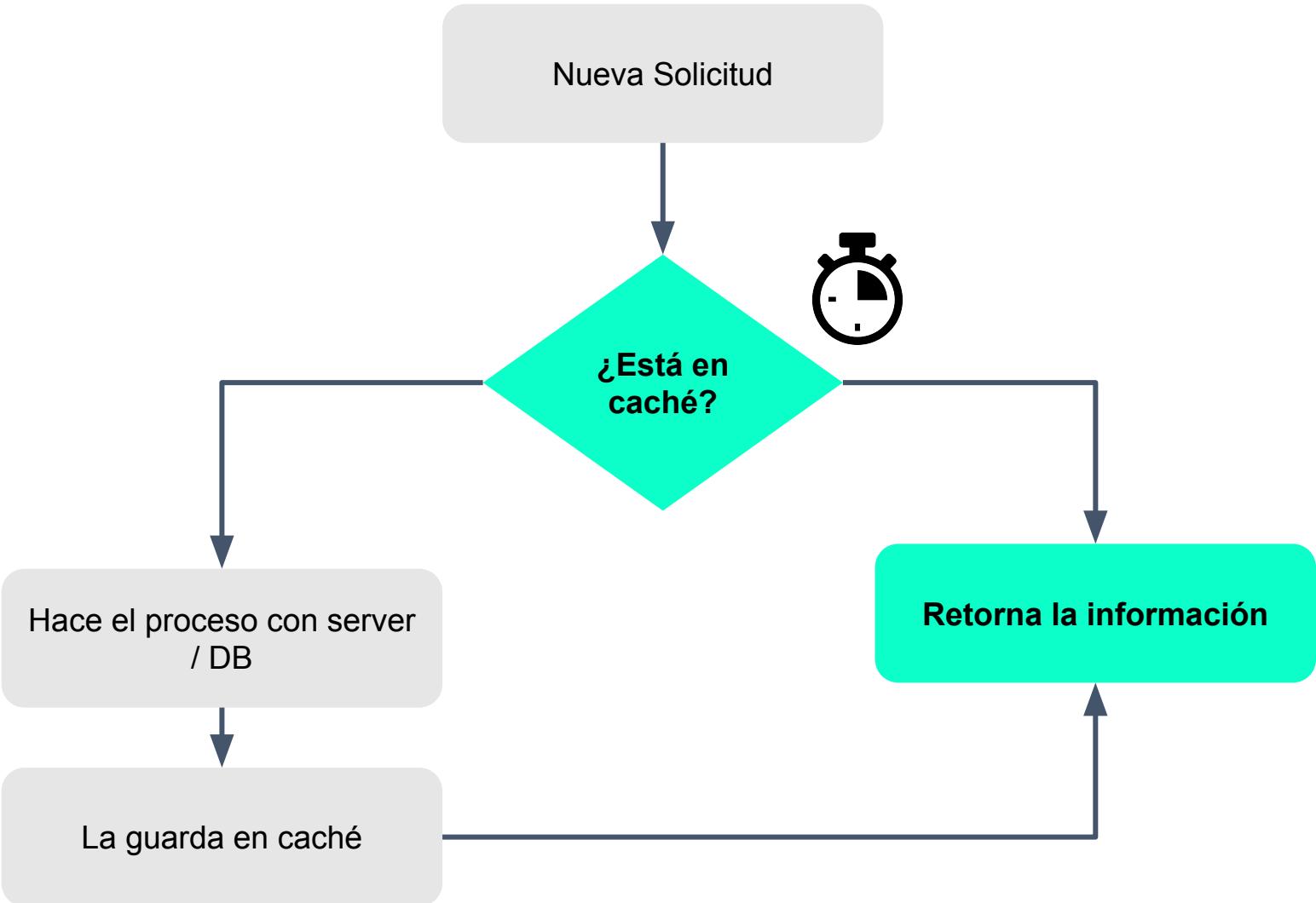












- E-commerce
- Sitios de noticias
- Blogs
- No es bueno para Realtime
- Evitar ataques DDOS

Colas de tareas

Reportes
Backups
Gráficos
ZIPs, PDFS, CSVs



Un request se ejecuta
lo más pronto posible
y responde por el
mismo medio.

Un request se ejecuta
lo más pronto posible
y responde por el
mismo medio.

Una cola de tareas
eventualmente ejecuta un
proceso y puede responder
por otros medios.

Una cola de tareas
eventualmente ejecuta un
proceso y puede responder
por otros medios.



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High

Date range (required)
All time

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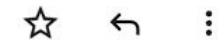
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Facebook <notification@facebookmail.com>
to me ▾

5:51 PM (17 minutes ago)



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The file you've requested containing your Facebook information is now ready for you to download. You can find your file in the [Available Files](#) tab on the [Download Your Information](#) page. For security reasons, the file will be available to download for only a few days after you receive this email. If your file is no longer available by the time you read this email, you can create a new file from the [New File](#) tab.

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- The Facebook Team

Cajero

Tarea

Tarea

Tarea

Tarea

Tarea

Tarea

Cajero

Tarea

Tarea

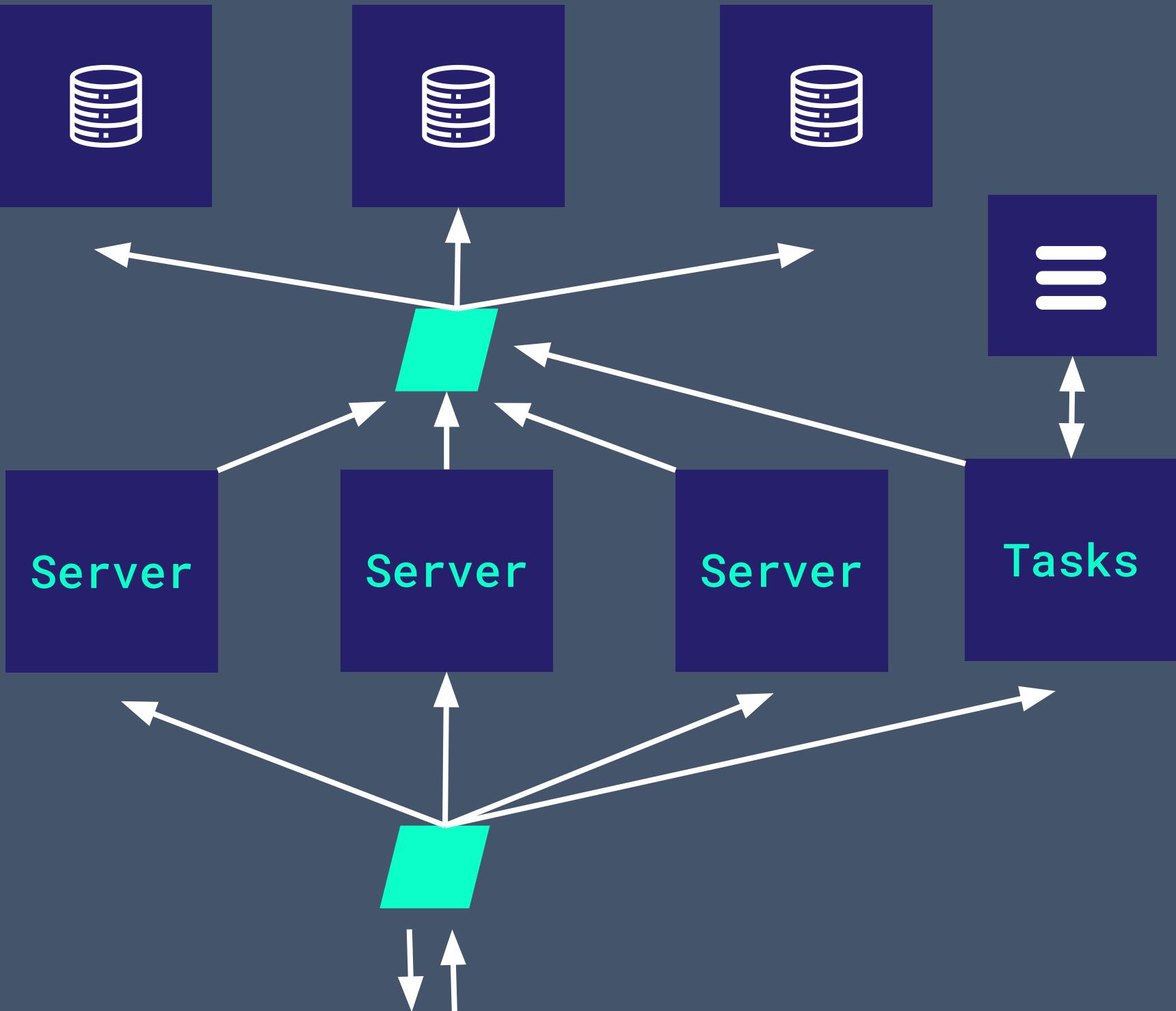
Tarea

Tarea

Tarea

Tarea

Fila



Reportes
Backups
Gráficos
Zips, PDFS, CSVs

Server-Side Rendering

SERVER

JSON
XML
FILES
HTML

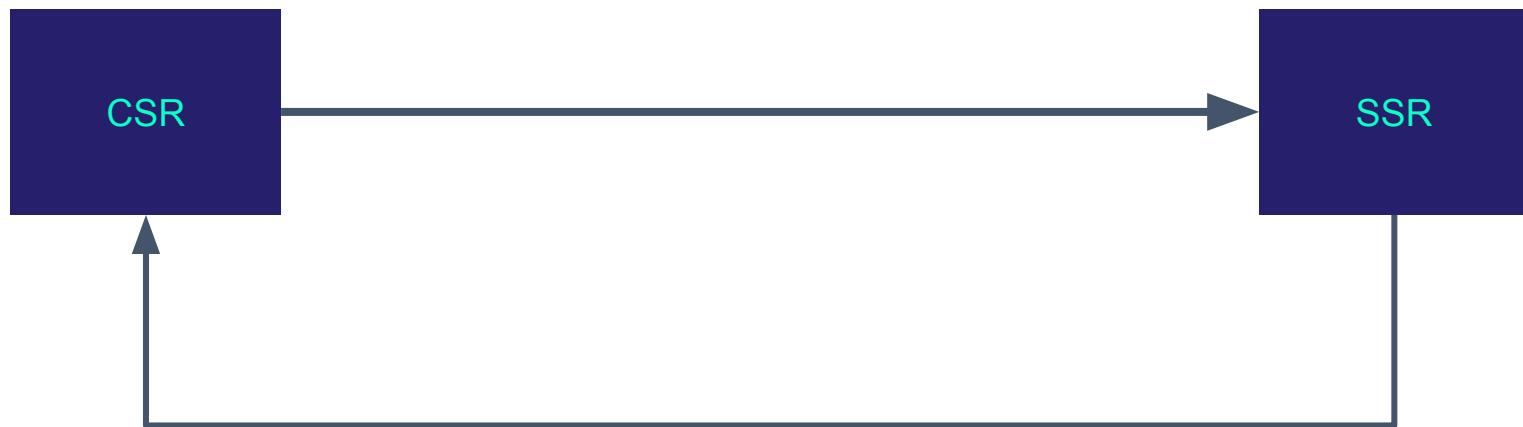
SERVER

JSON
XML
FILES
HTML



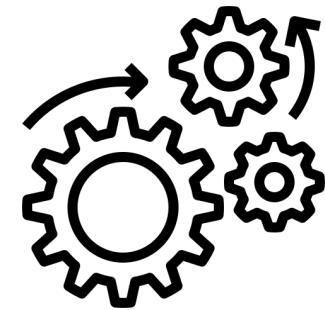


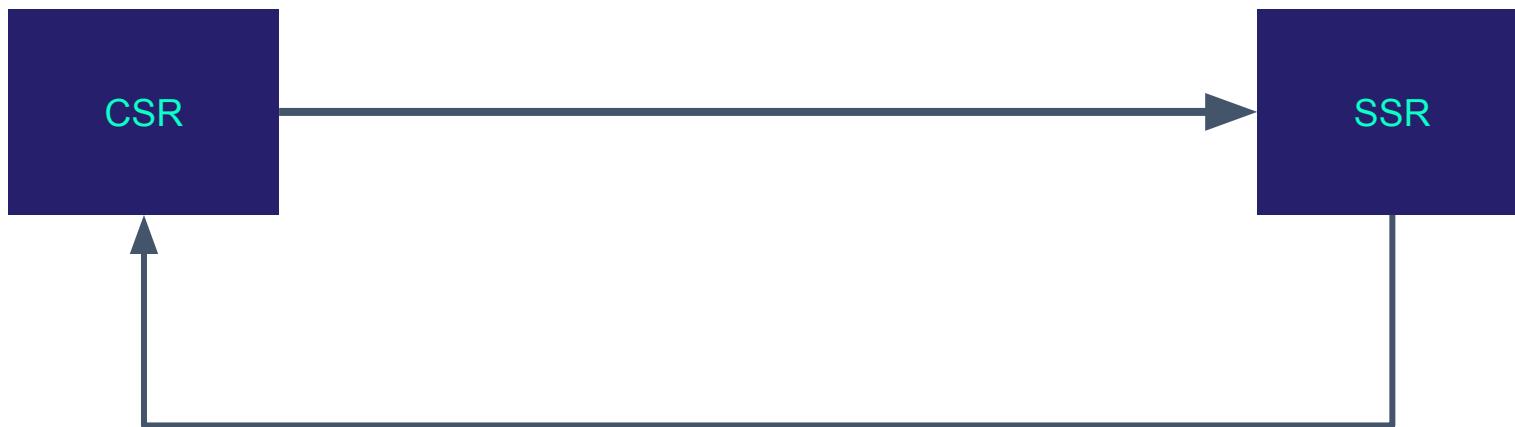
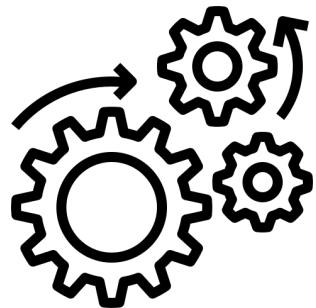
HTML



**HTML es rápido.
Y bueno para los motores de búsqueda.**

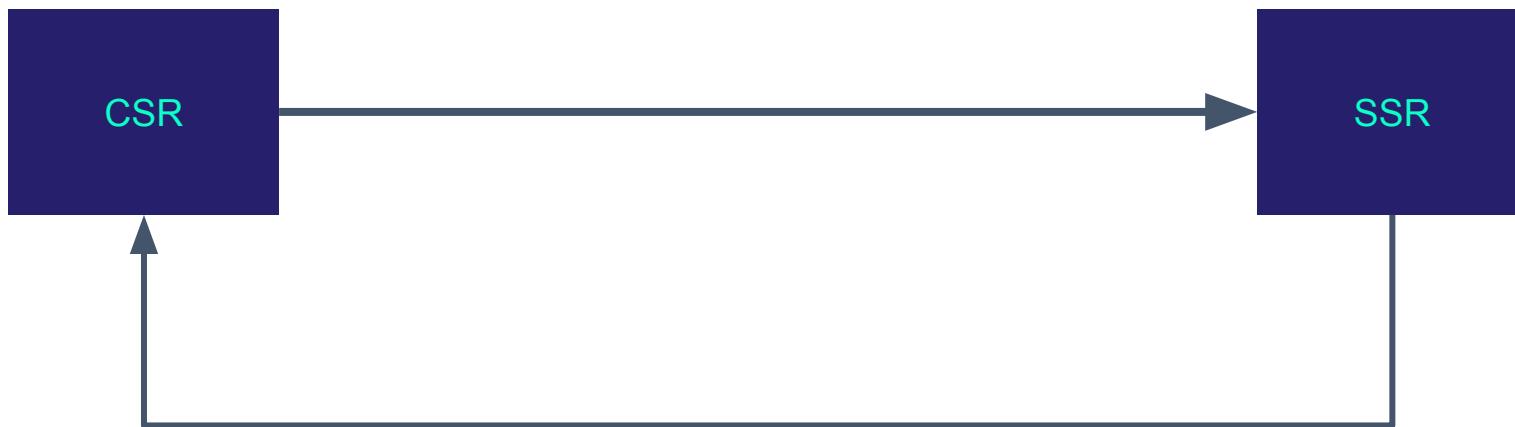
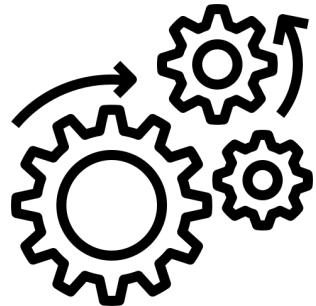
Pero NO es interactivo.





**JSON no es tan rápido.
Malo para los motores de búsqueda.**

Es altamente interactivo.

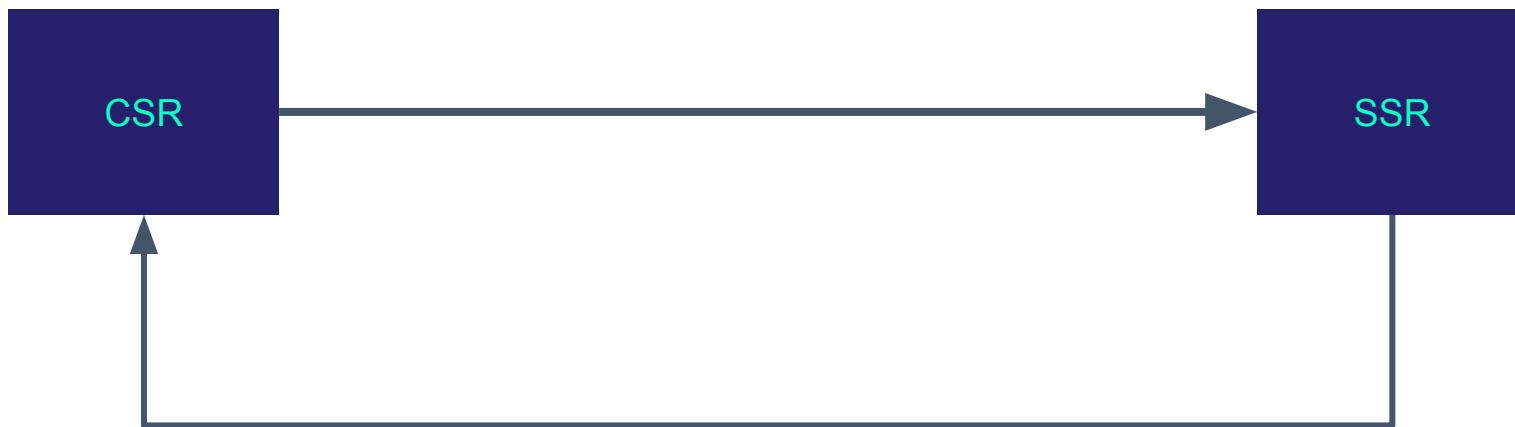
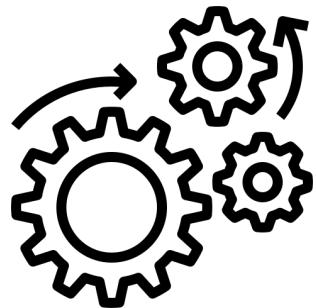


JSON

No es tan Rápido

Malo para los motores de búsqueda

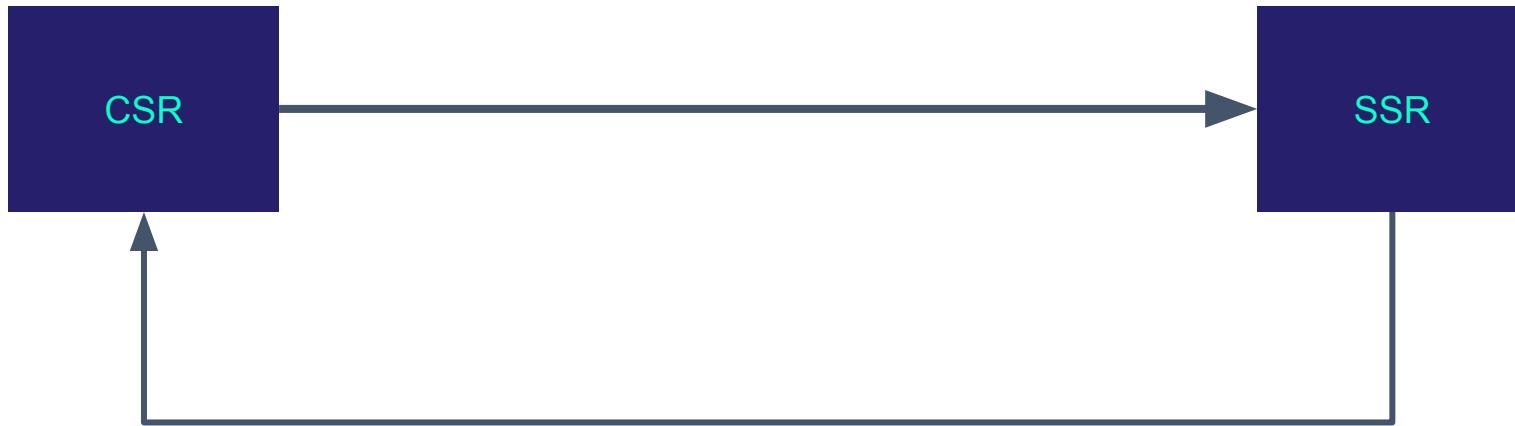
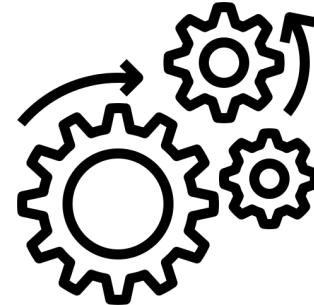
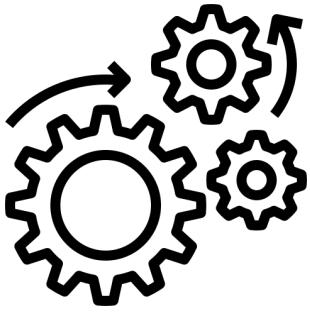
Es altamente interactivo



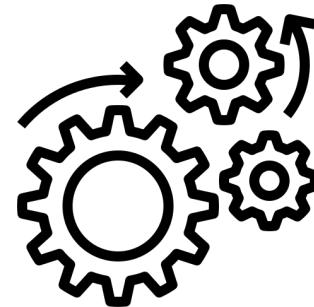
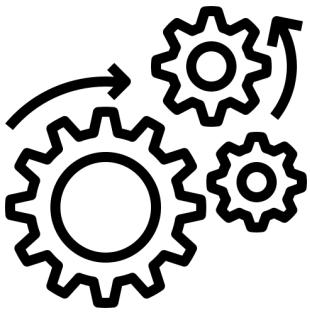
 Angular

 VueJS

 React



Es interactivo
Rápido
Bueno para los buscadores
HTML / JSON



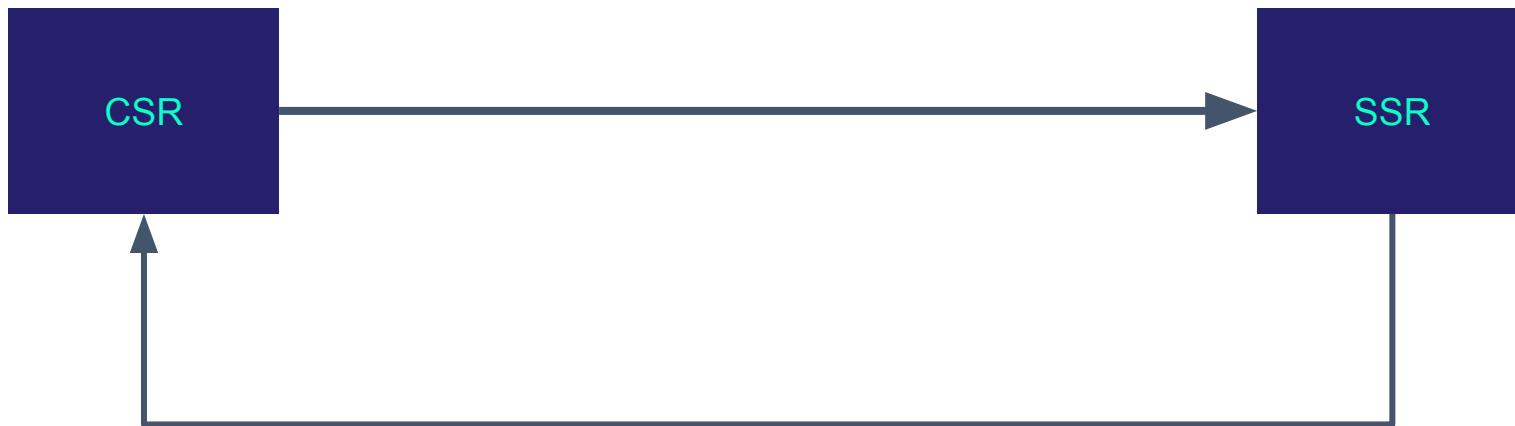
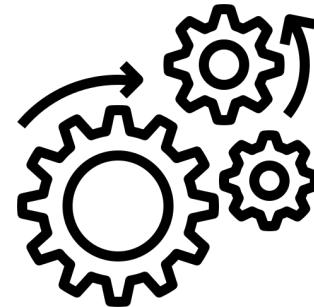
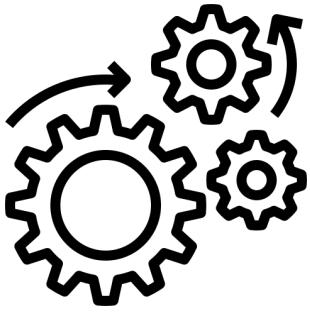
Angular

VueJS

React / NextJS

Astro

Qwik



Angular



VueJS



React / NextJS

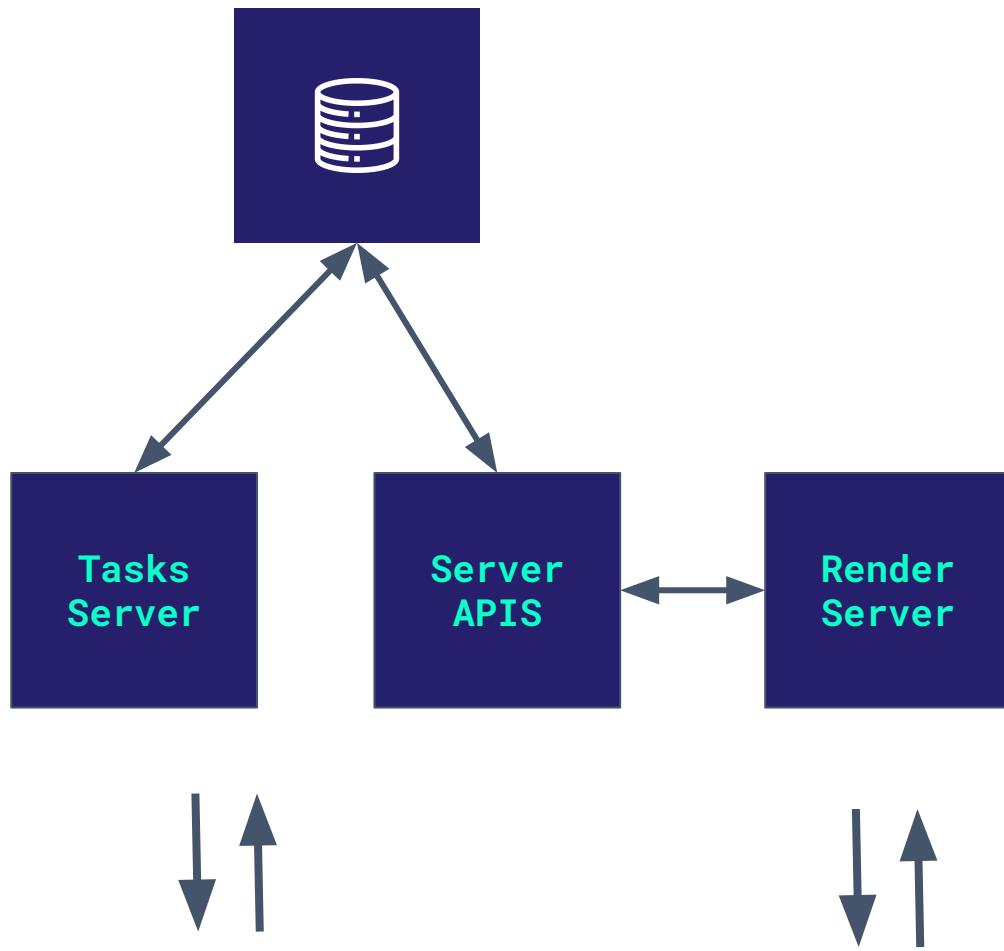


Astro



Qwik





Vercel

Netflix

Firebase Hosting

¿Qué aprender
ahora?

```
<li *ngFor="let name of names">
  {{ name }}
</li>
```

```
node -v  
npm -v  
npm install -g @angular/cli  
ng version
```