Sesión 02

Seguridad en angular

Instructor:

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GALAXY
TRAINING

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01

Lazy Loading de componentes

GALAXY
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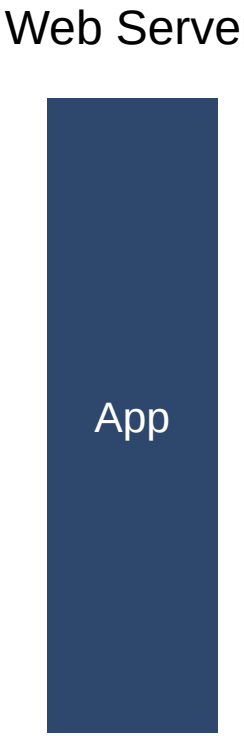
GALAXY TRAINING

Carga de componentes

Carga de componentes



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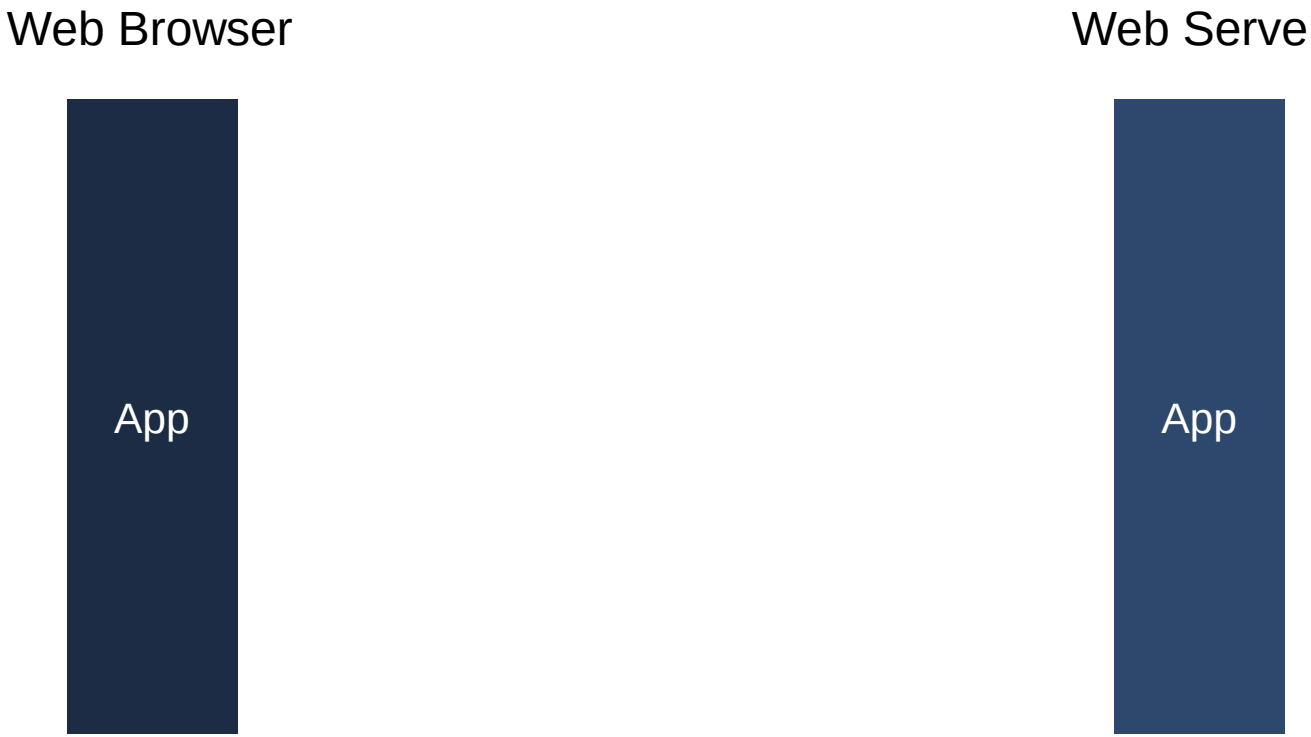

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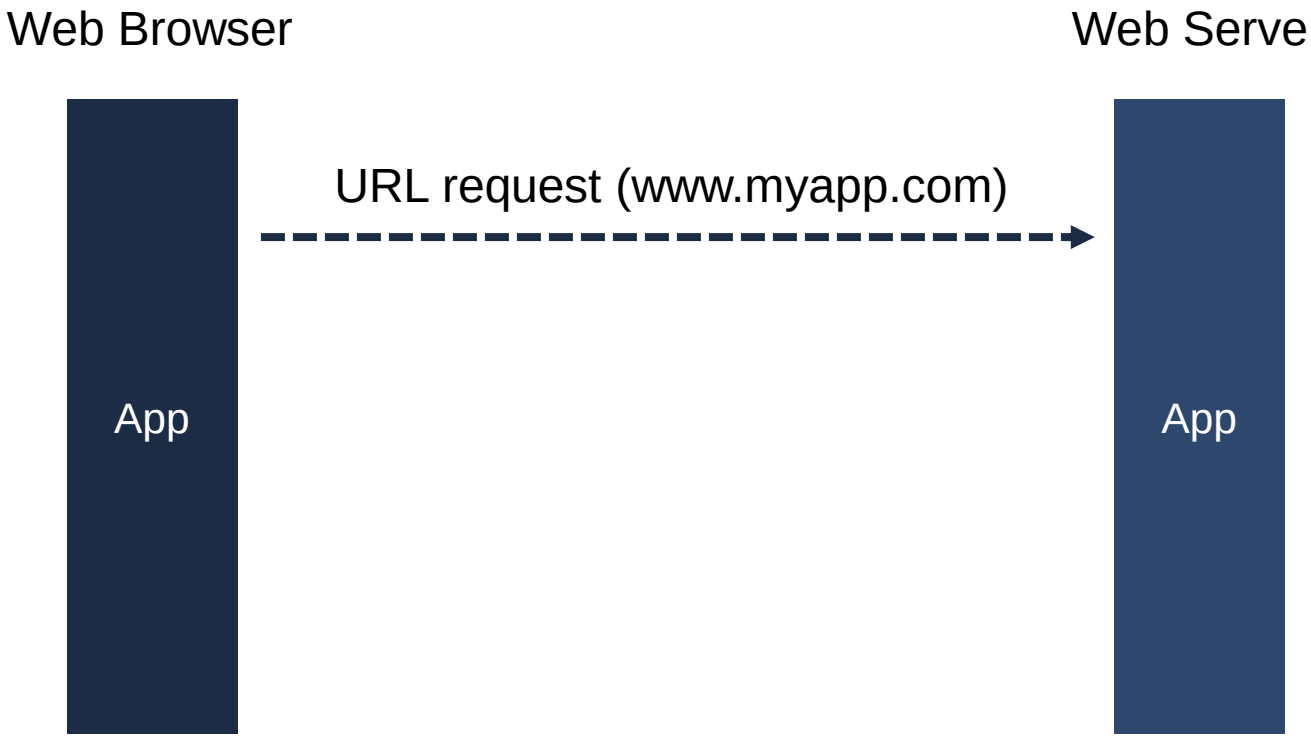

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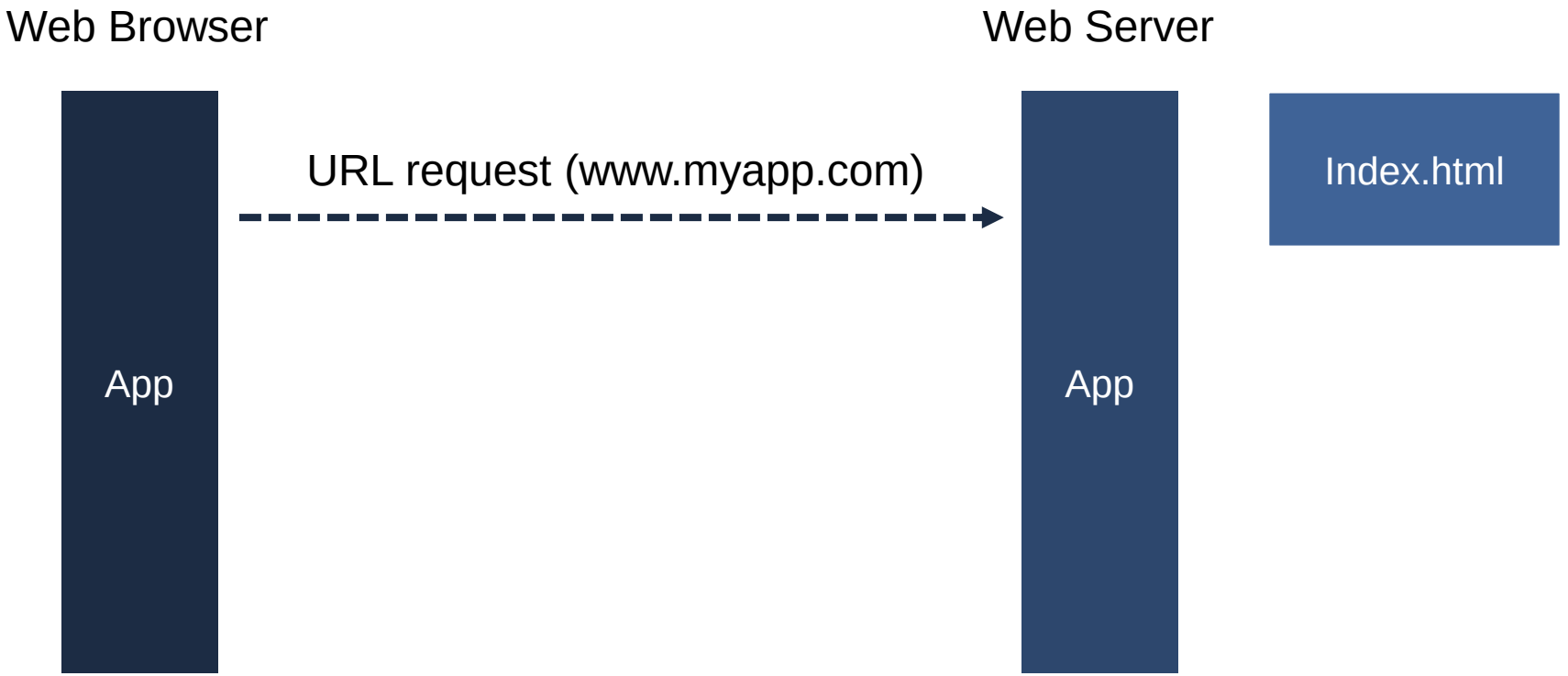

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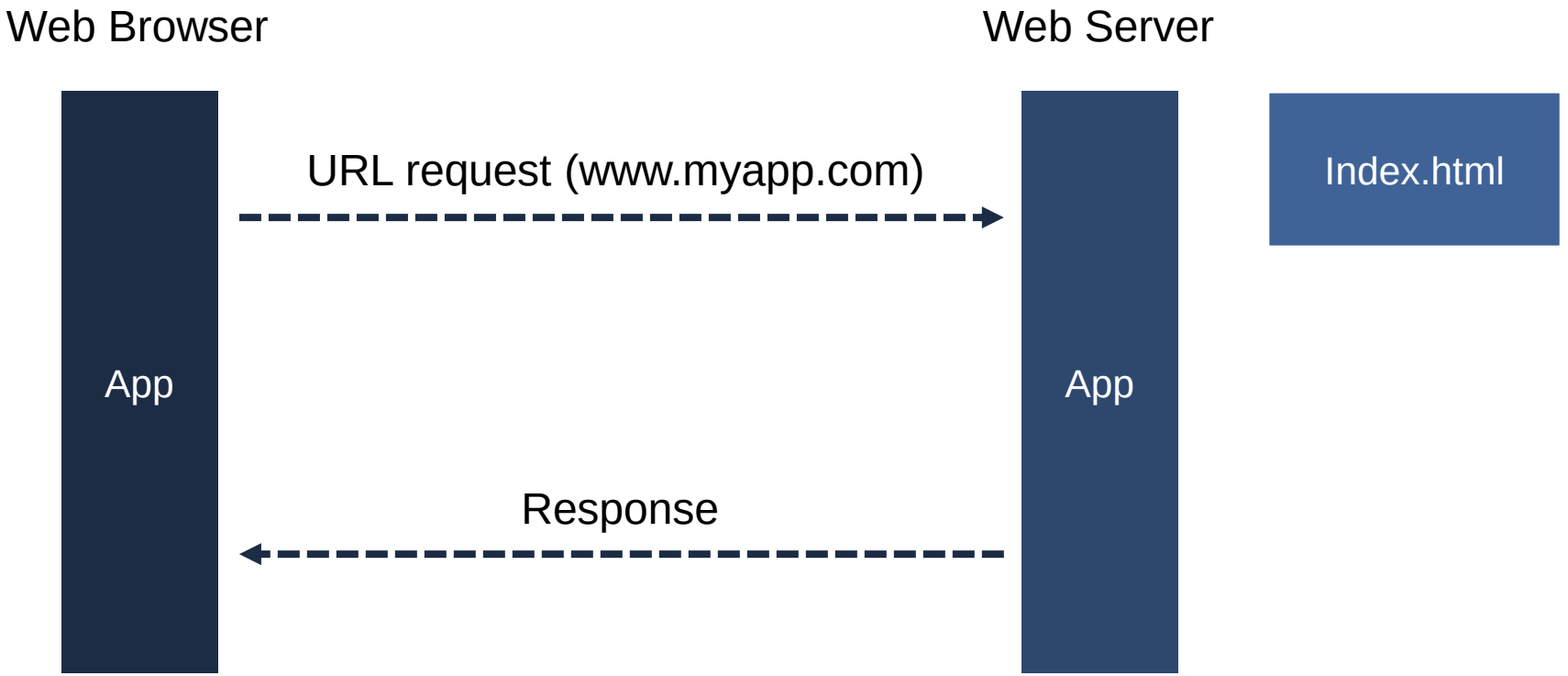

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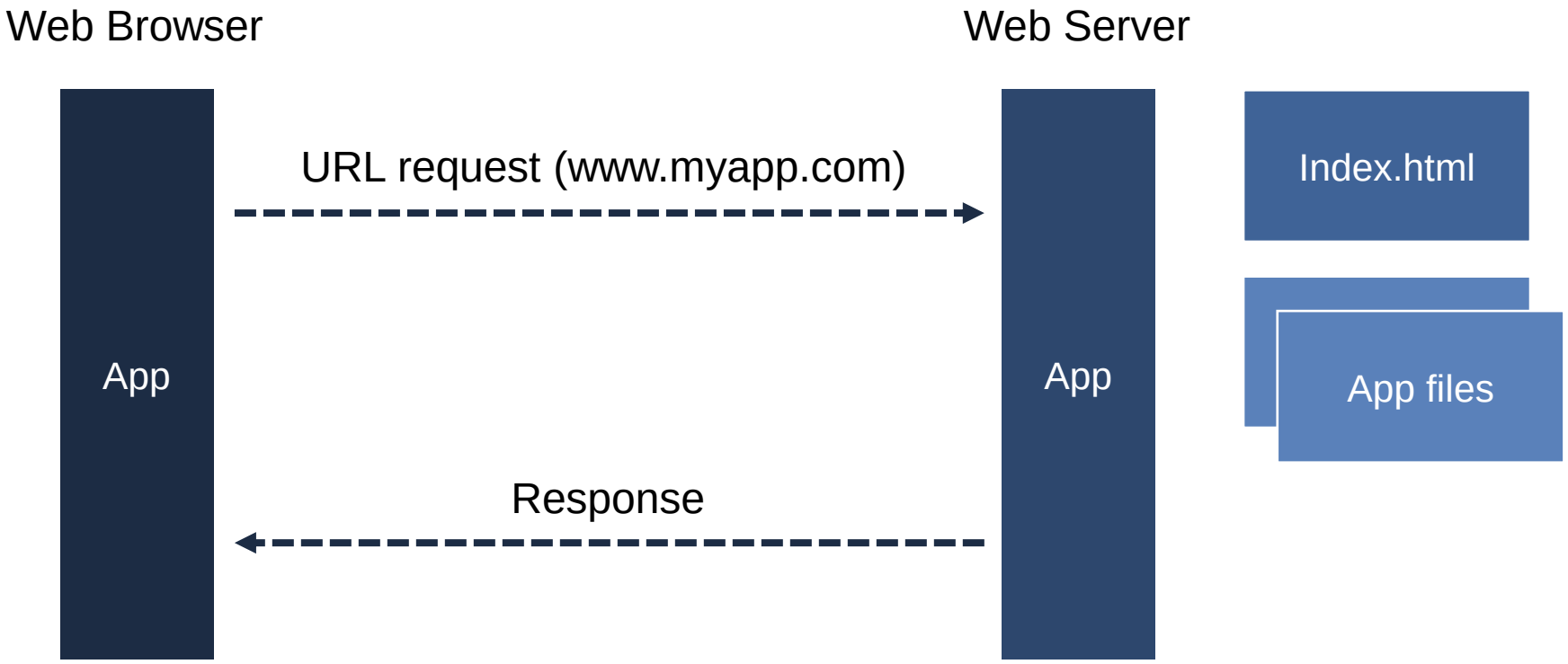

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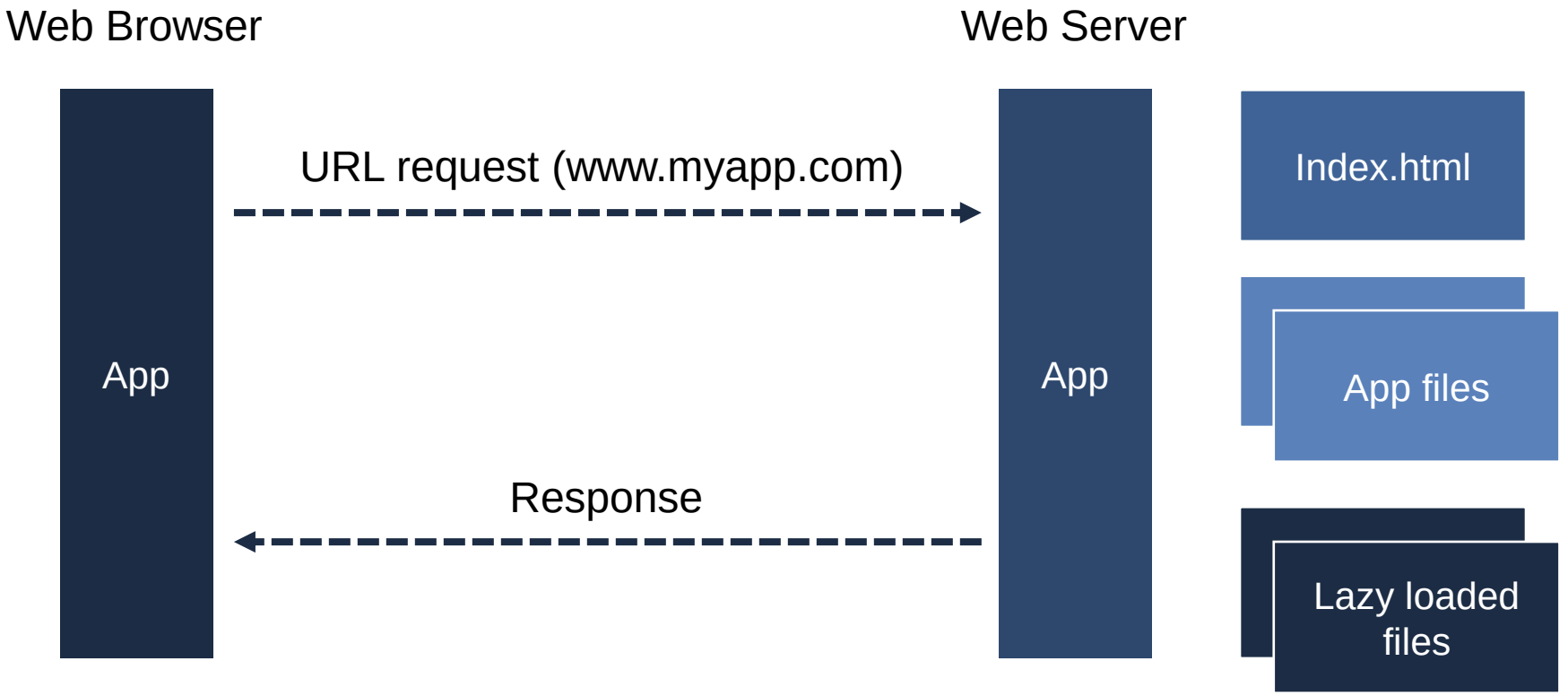


GALAXY TRAINING

Recomendaciones para el uso de Lazy loading

Usar en Feature Module

Rutas agrupadas bajo un mismo padre

No importado en otro módulo

GALAXY TRAINING

Lazy loading - modules

app-routing.module.ts

```
RouterModule.forRoot([
  ...
  {
     path: 'authors',
     loadChildren: () =>
         import('./authors/authors.module')
             .then(m => m.AuthorsModule)
  },
  ...
])
```

GALAXY TRAINING

Lazy loading - Standalone

app.routes.ts

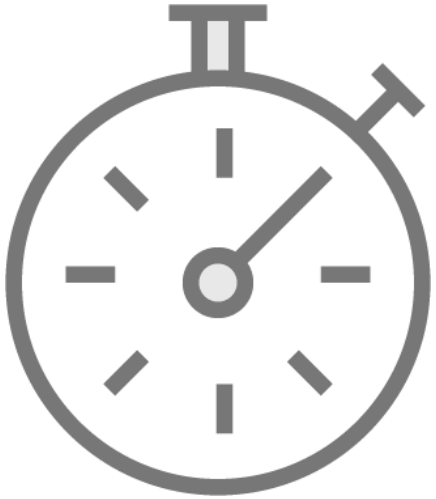
```
export const APP_ROUTES: Routes = [
 ...

{ path: 'libary', loadChildren: () =>
import('../../features/library/routes/library.routes').then(m => m.LIBRARY_ROUTES) },

 { path: 'security', loadChildren: () =>
import('../../security/routes/security.routes').then(m => m.SECURITY_ROUTES) },

 ...
];
```

Lazy loading

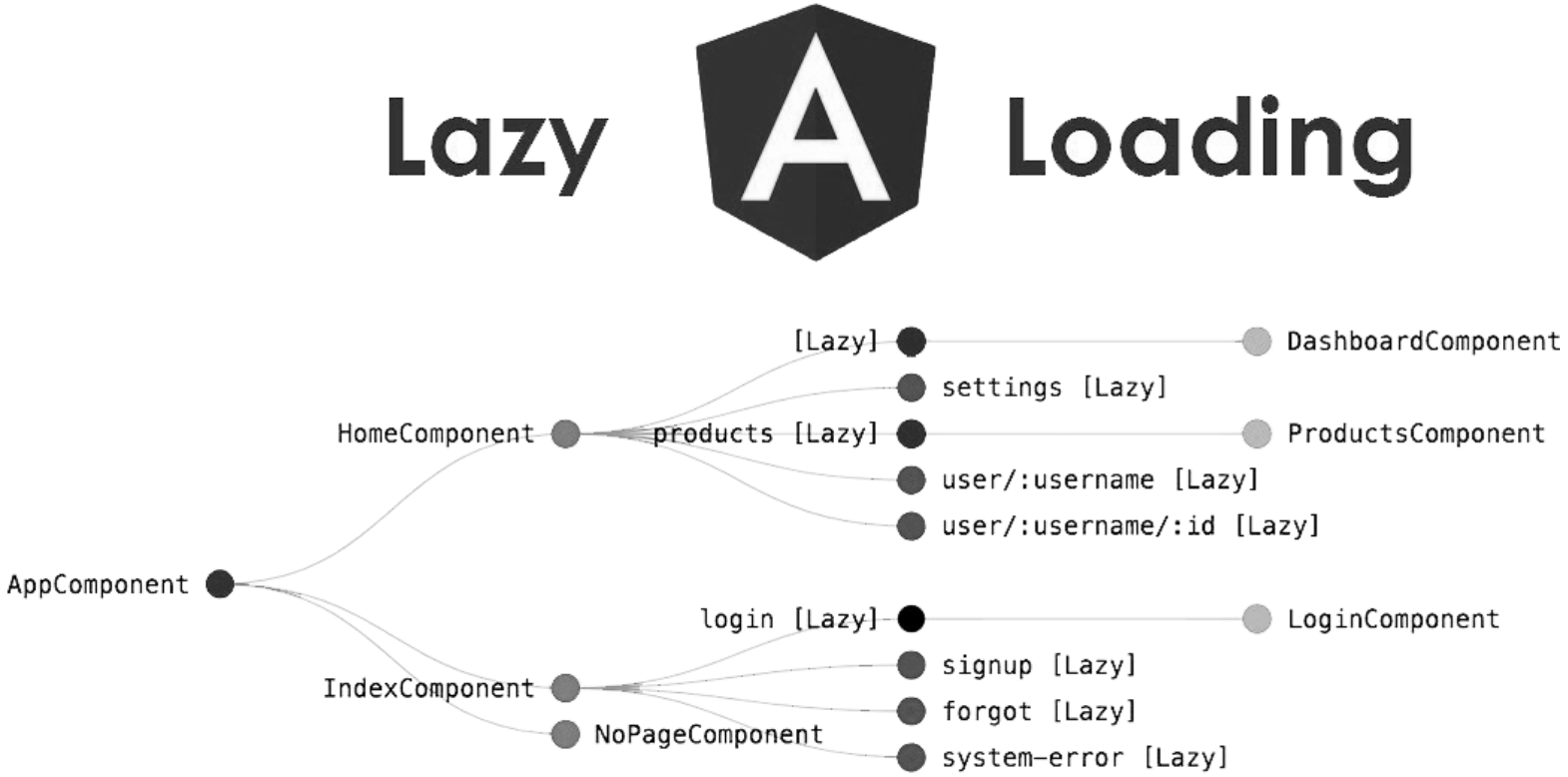


Retrasar la descarga hasta que sea necesario

Acelerar el tiempo de carga inicial

Lazy Loading de componentes

DEMO



GALAXY TRAINING

02

Protección de rutas a través de Guards

Protección de rutas con guards

canActivate

- Proteger la navegación a una ruta

canActivateChild

- Proteger la navegación a una ruta secundaria

canDeactivate

- Proteger la navegación lejos de una ruta

canLoad

- Impedir el enrutamiento asincrónico

resolver

- Cargar datos antes de activar una ruta

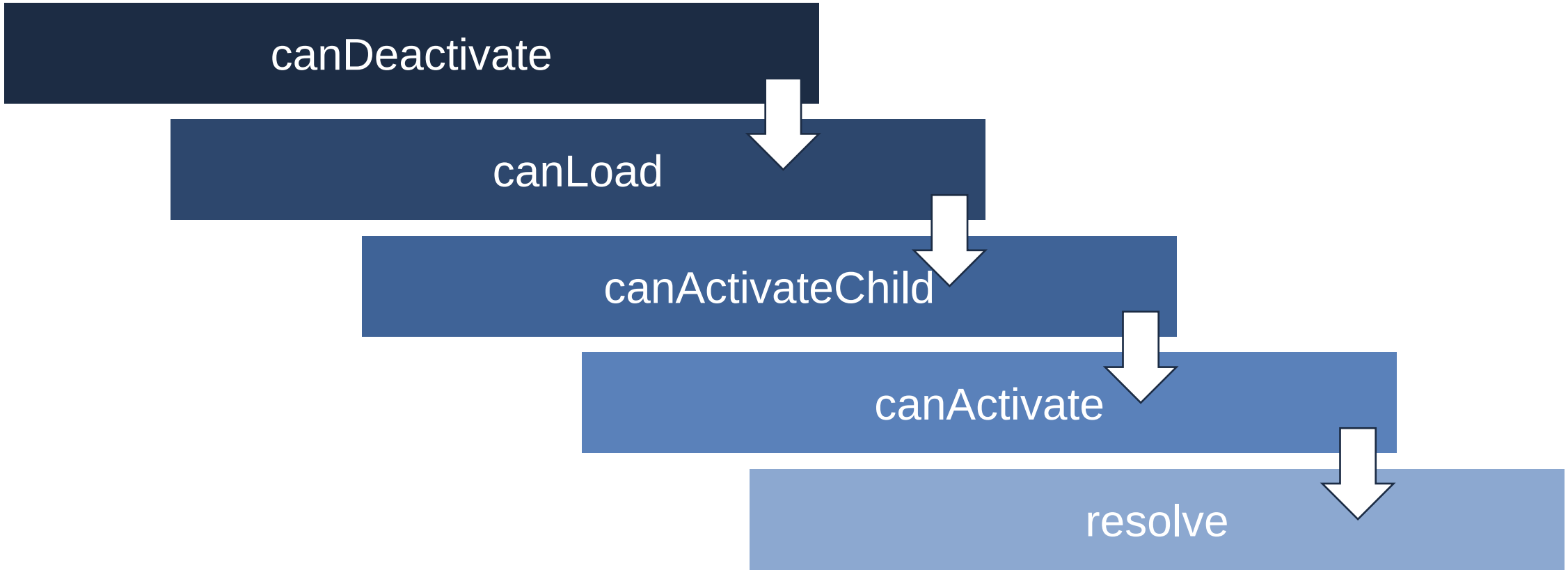
Uso de Route Guards

Limitar el acceso a una ruta

Avisar antes de abandonar una ruta

Recuperar datos antes de acceder a una ruta

Procesamiento de guards



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Creación de un guard

auth.guard.ts

```
import { inject } from '@angular/core';
import { CanActivateFn, Router } from '@angular/router';
import { AuthService } from '../services/auth.service';

export const authGuard: CanActivateFn = (route, state) => {
  const router = inject(Router);
  const authService = inject(AuthService);

  if (authService.isAuthenticated) {
    return true;
  }

  authService.redirectUrl = state.url;
  return router.parseUrl('/security/login');
};
```

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Protegiendo una ruta

Angular Module

```
...
import { authGuard } from "../../../../core/guards/auth.guard";
...

{
  path: '', component: LibraryShellComponent, canActivate: [authGuard],
}
```

canActivate Guard

Criterios de comprobación antes de activar una ruta

Comúnmente utilizado para:

- Limitar el acceso de ruta a usuarios específicos
- Asegúrese de que se cumplen los requisitos previos

Se llama cuando la URL cambia a la ruta

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Compartir datos

Route parameters

```
canActivate(route: ActivatedRouteSnapshot,
                state: RouterStateSnapshot): boolean {
    console.log(route.paramMap.get('authorId'));
    ...
}
```

Route data

```
canActivate(route: ActivatedRouteSnapshot,
                state: RouterStateSnapshot): boolean {
    console.log(route.data['author']); // undefined
    ...
}
```

Service property

```
export class AuthService {
     currentUser: User;
     redirectUrl: string;
}
```

canActivateChild Guard

Comprueba los criterios antes de activar una ruta secundaria

Comúnmente utilizado para:

- Limitar el acceso a las rutas secundarias
- Garantizar que se cumplan los requisitos previos para las rutas secundarias

Se llama cuando la dirección URL cambia a la ruta secundaria

canActivateChild Guard

Comprueba los criterios antes de activar una ruta secundaria

Comúnmente utilizado para:

- Limitar el acceso a las rutas secundarias
- Garantizar que se cumplan los requisitos previos para las rutas secundarias

Se llama cuando la dirección URL cambia a la ruta secundaria

canDeactivate Guard

Criterios de comprobación antes de abandonar una ruta

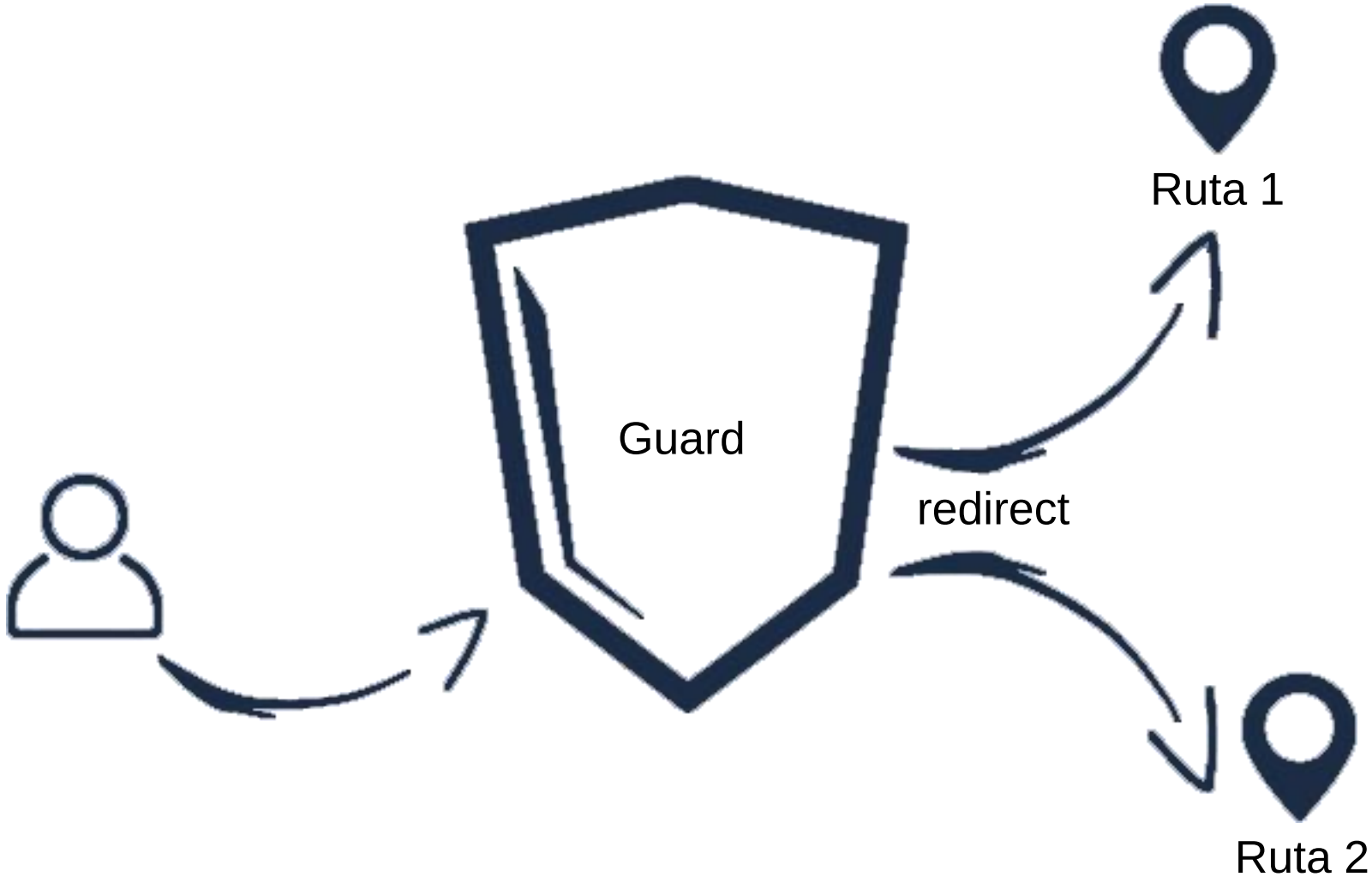
Comúnmente utilizado para:

- Comprobar si hay cambios no guardados
- Confirmar que se ha dejado una operación incompleta

Se llama cuando la dirección URL cambia a una ruta diferente

Protección de rutas a través de Guards

DEMO



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03

Consumo de servicios REST

RESTful CRUD

C

Create
- POST - http://localhost/api/authors
- Si tiene éxito, devuelve HTTP 201 Created

R

Read
- GET - http://localhost/api/authors o http://localhost/api/authors/1
- Si tiene éxito, devuelve HTTP 200 OK

U

Update
- PUT - http://localhost/api/authors/1
- Si tiene éxito, devuelve HTTP 204 No Content

D

Delete
- DELETE - http://localhost/api/authors/1
- Si tiene éxito, devuelve HTTP 204 No Content

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Suscribirse a Observables

```
getAllAuthors(): Observable<Author[]> {
    return this.http.get<Author[]>('/api/authors');
}
```

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Suscribirse a Observables

```
getAllAuthors(): Observable<Author[]> {
    return this.http.get<Author[]>('/api/authors');
}


this.dataService.getAllAuthors()
    .subscribe(




   );
```

GALAXY TRAINING

Suscribirse a Observables

```
getAllAuthors(): Observable<Author[]> {
    return this.http.get<Author[]>('/api/authors');
}


this.dataService.getAllAuthors()
    .subscribe(
        (data: Author[]) => this.allAuthors = data,



    );
```

Suscribirse a Observables

```
getAllAuthors(): Observable<Author[]> {
    return this.http.get<Author[]>('/api/authors');
}


this.dataService.getAllAuthors()
    .subscribe(
        (data: Author[]) => this.allAuthors = data,
        (err: any) => console.log(err),


    );
```

Suscribirse a Observables

```
getAllAuthors(): Observable<Author[]> {
    return this.http.get<Author[]>('/api/authors');
}


this.dataService.getAllAuthors()
    .subscribe(
        (data: Author[]) => this.allAuthors = data,
        (err: any) => console.log(err),
        () => console.log('All done getting authors.')
    );
```

Suscribirse a Observables

```
getAllAuthors(): Observable<Author[]> {
    return this.http.get<Author[]>('/api/authors');
}


this.dataService.getAllAuthors()
    .subscribe(
        (data: Author[]) => this.allAuthors = data,
        (err: any) => console.log(err),
        () => console.log('All done getting authors.')
    );
```

Suscribirse a Observables

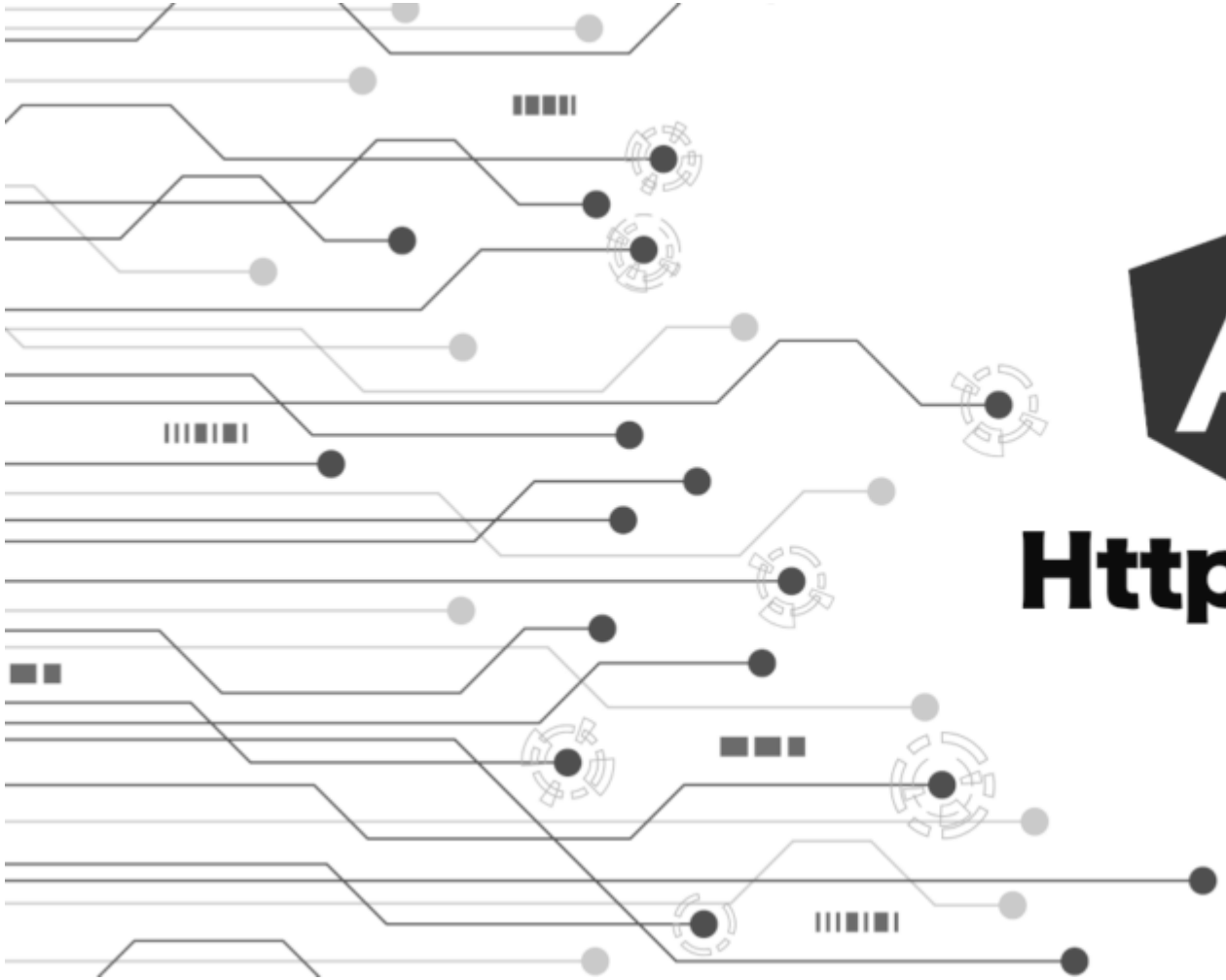
```
getAllAuthors(): Observable<Author[]> {
    return this.http.get<Author[]>('/api/authors');
}


this.dataService.getAllAuthors()
    .subscribe(
        (data: Author[]) => this.allAuthors = data,
        (err: any) => console.log(err),
        () => console.log('All done getting authors.')
    );
```

Promise

```
 public async getAuthors(): Promise<Author[]> {
  ...
  const response = await firstValueFrom(this.http.get<AuthorResponse[]>(url, { headers })
  .pipe(
    catchError(this.handleError)
  ));
  ...
}

export class AuthorRepositoryImpl implements AuthorRepository {
  ...
  public getAuthors(): Promise<Author[]> {
    return this.authorAgentService.getAuthors();
  }
}

export class GetAuthorsUseCase{
  ...
  public async execute(): Promise<AuthorModel[]> {
    const authors = await this.authorRepository.getAuthors();
    return applicationMapper.mapArray(authors,Author, AuthorModel);
  }
}

const authors = getAuthorsUseCase.execute();
```

Consumo de servicios REST

DEMO



HttpClient

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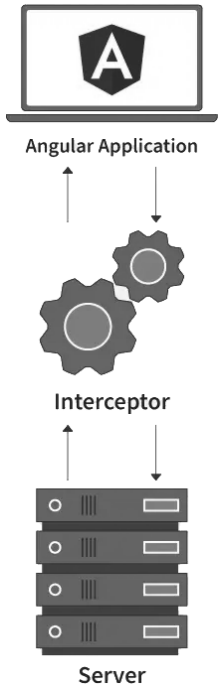
04

Creando Interceptores

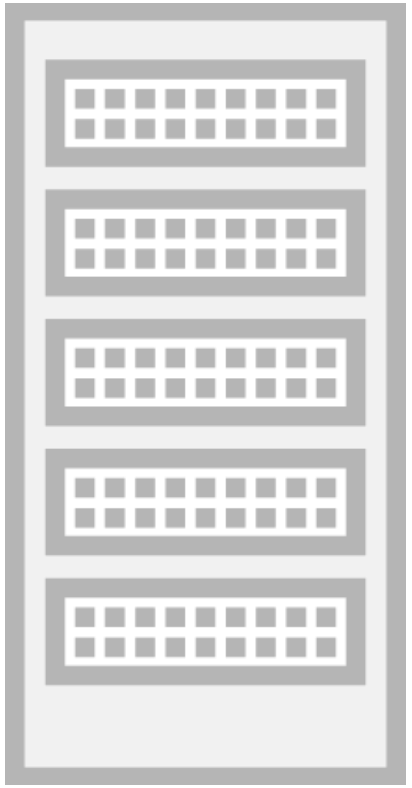
¿Que son interceptores?



- Aplicado a servicios
- Implementa la interfaz HttpInterceptor
- Manipula la solicitud HTTP antes de enviarla al servidor
- Manipula las respuestas HTTP antes de que se devuelvan a su aplicación

Interceptando requests y responses

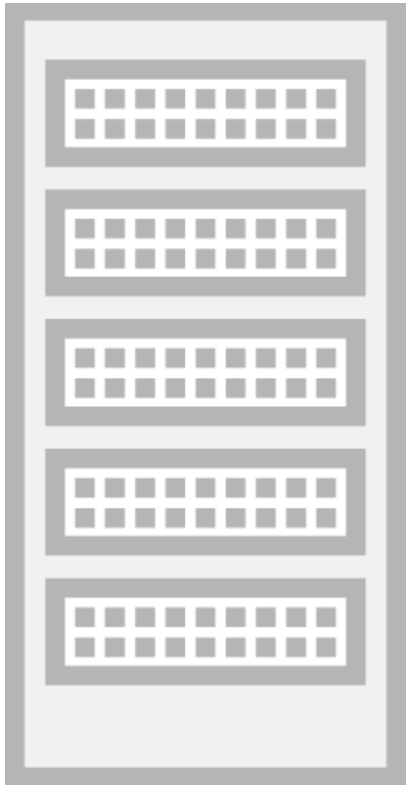
Interceptando requests y responses



Server

Interceptando requests y responses

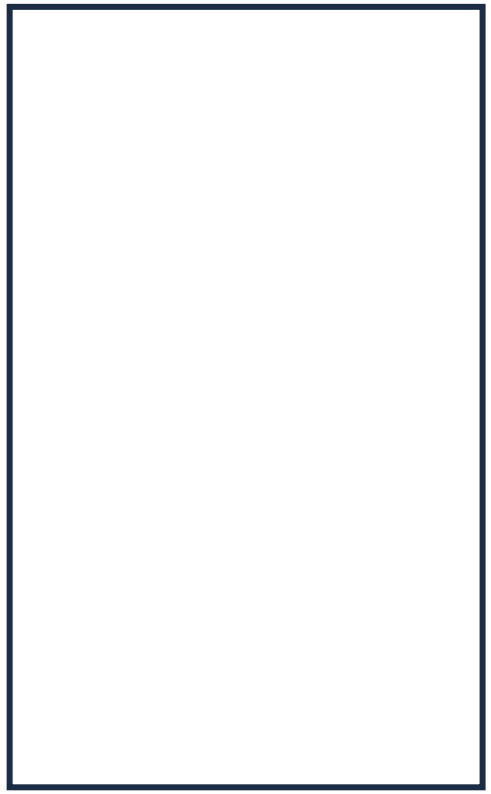
Client



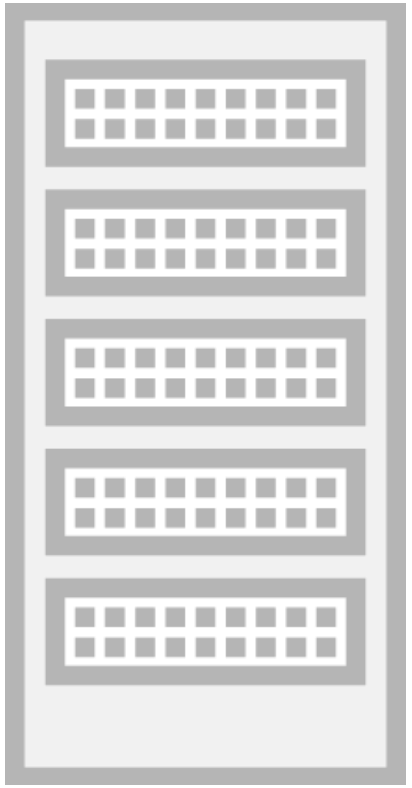
Server

Interceptando requests y responses

Client



Interceptor



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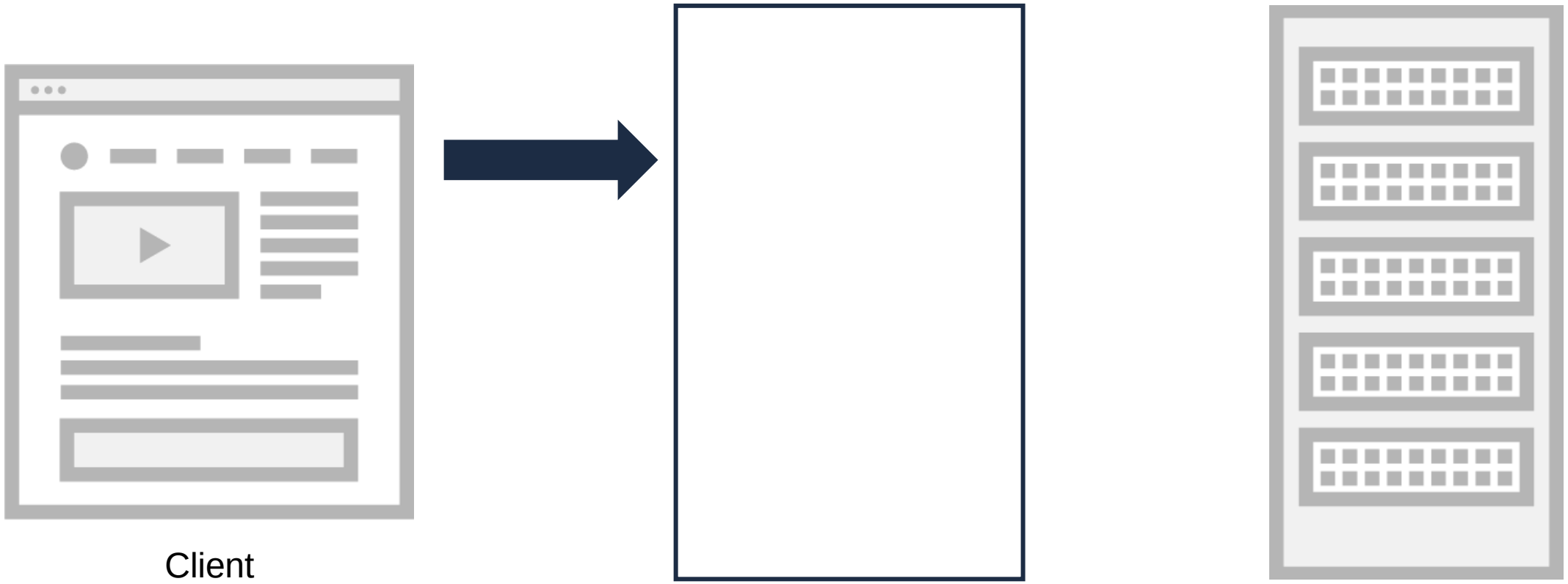
Interceptando requests y responses



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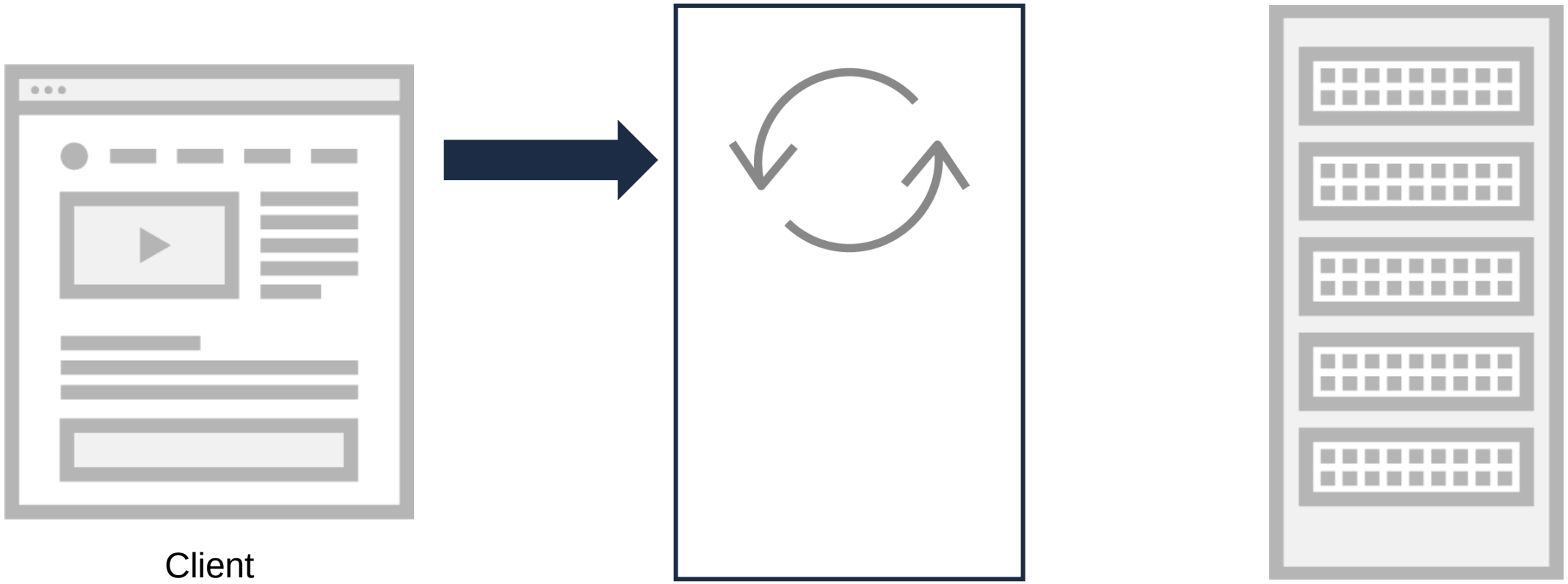

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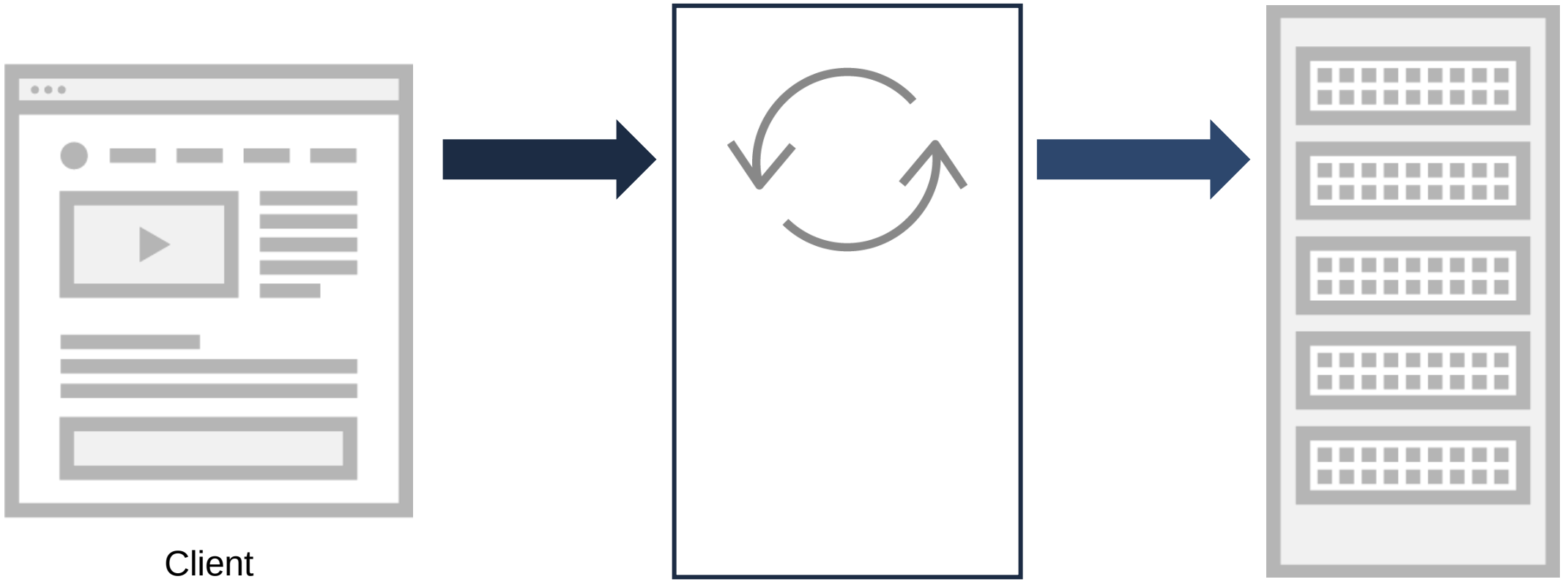
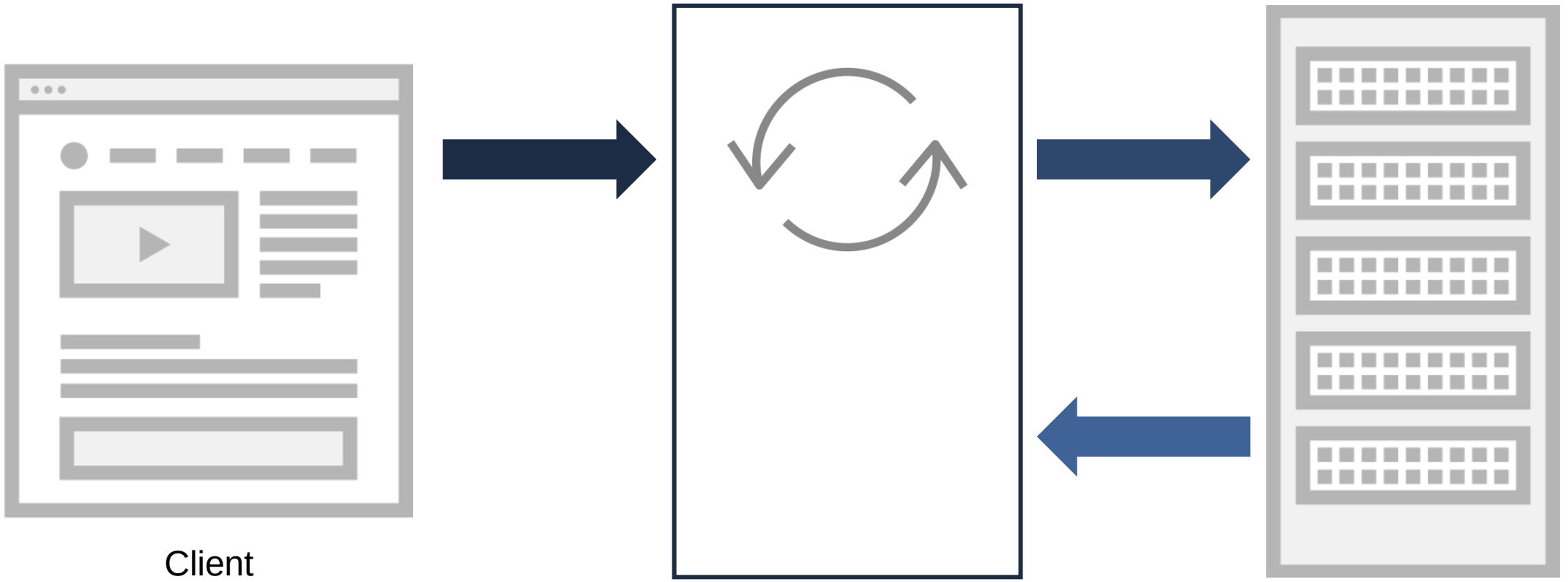
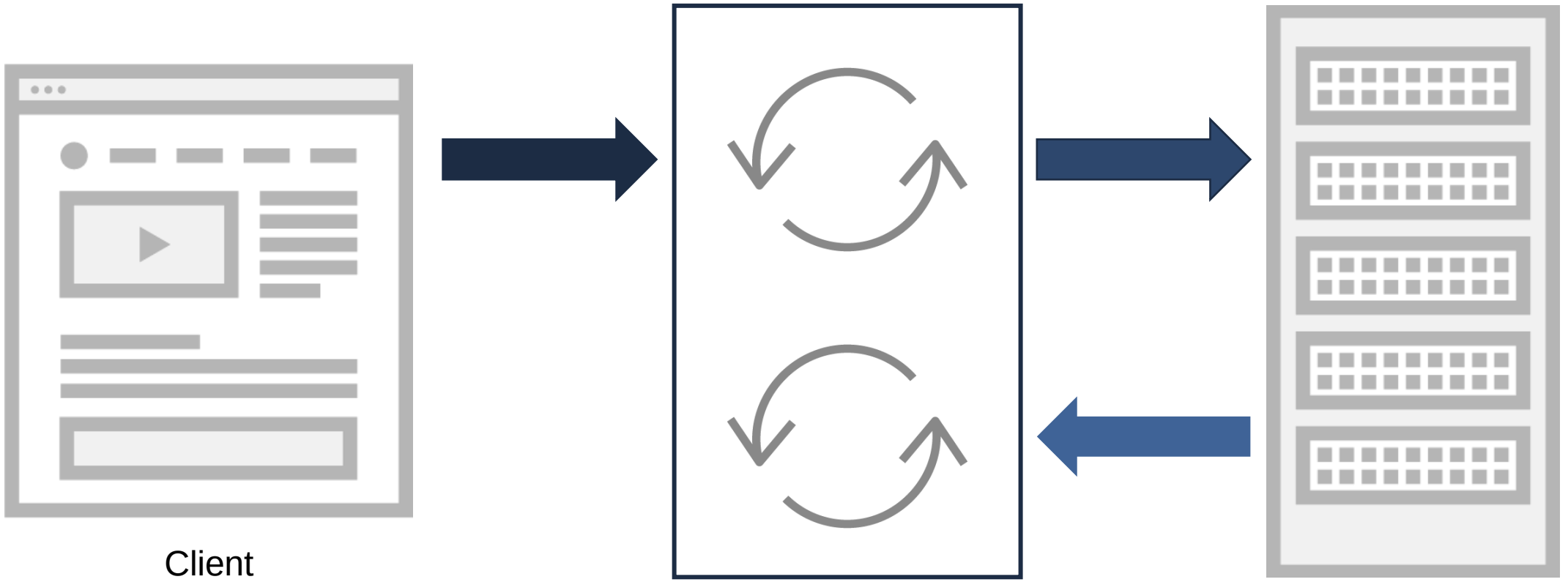


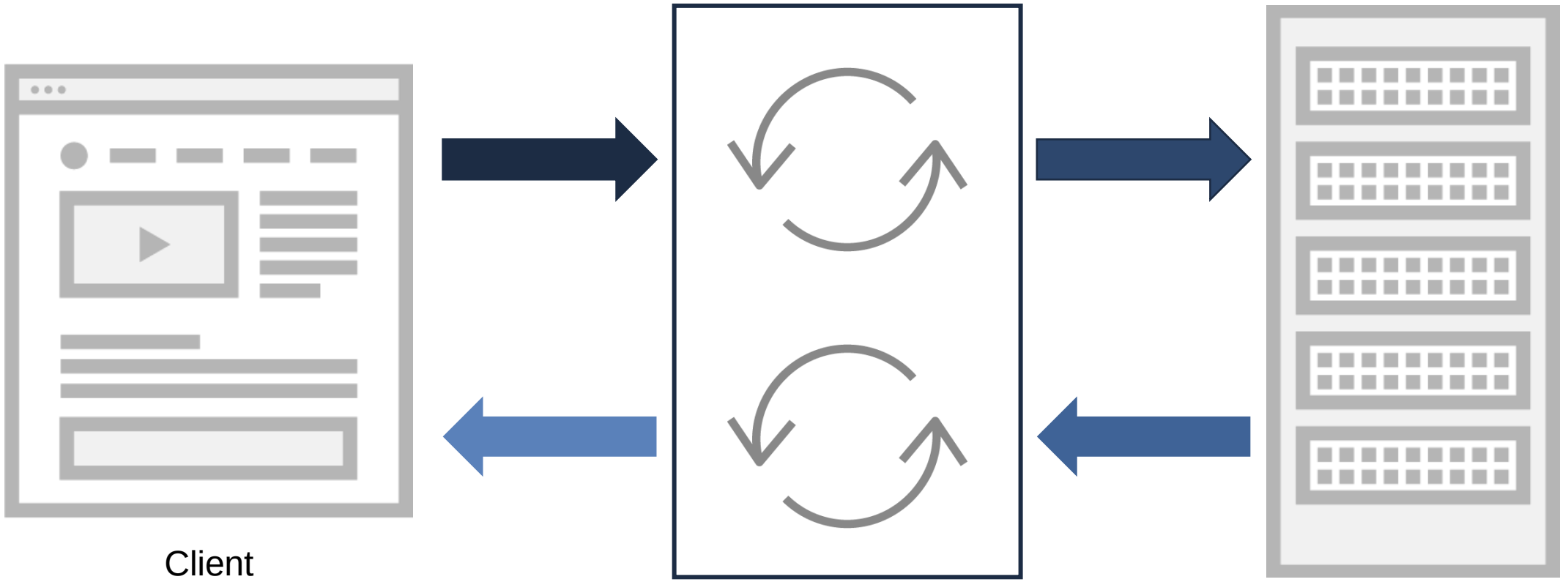
Interceptando requests y responses



Interceptando requests y responses



Interceptando requests y responses



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Uso de interceptores

- Agregar headers a todos los requests
- Logging
- Informes de eventos en progreso
- Caching del lado del cliente

GALAXY TRAINING

Definiendo un interceptor

```
export class FirstInterceptor implements HttpInterceptor {
```

GALAXY TRAINING

Definiendo un interceptor

```
export class FirstInterceptor implements HttpInterceptor {
   intercept(req: HttpRequest<any>, next: HttpHandler): Observable<HttpEvent<any>> {
```

GALAXY TRAINING

Definiendo un interceptor

```
export class FirstInterceptor implements HttpInterceptor {
   intercept(req: HttpRequest<any>, next: HttpHandler): Observable<HttpEvent<any>> {
      const modifiedRequest = req.clone();
```

GALAXY TRAINING

Definiendo un interceptor

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export class FirstInterceptor implements HttpInterceptor {
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GALAXY TRAINING

Definiendo un interceptor

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export class FirstInterceptor implements HttpInterceptor {
   intercept(req: HttpRequest<any>, next: HttpHandler): Observable<HttpEvent<any>> {
      const modifiedRequest = req.clone();
      // change modifiedRequest here
```

GALAXY TRAINING

Definiendo un interceptor

```
export class FirstInterceptor implements HttpInterceptor {
   intercept(req: HttpRequest<any>, next: HttpHandler): Observable<HttpEvent<any>> {
      const modifiedRequest = req.clone();
      // change modifiedRequest here
      return next.handle(modifiedRequest)
```

GALAXY TRAINING

Definiendo un interceptor

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export class FirstInterceptor implements HttpInterceptor {
   intercept(req: HttpRequest<any>, next: HttpHandler): Observable<HttpEvent<any>> {
      const modifiedReq = req.clone();
      // change modifiedRequest here
      return next.handle(modifiedRequest)
```

GALAXY TRAINING

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GALAXY TRAINING

Definiendo un interceptor

```
export class FirstInterceptor implements HttpInterceptor {
   intercept(req: HttpRequest<any>, next: HttpHandler): Observable<HttpEvent<any>> {
      const modifiedRequest = req.clone();
      // change modifiedRequest here
      return next.handle(modifiedRequest)
         .pipe(
            .tap(event => {
               if (event instanceof HttpResponse) {
                  // modify the HttpResponse here
               }
            })
         );
   }
}
```

GALAXY TRAINING

Registrando interceptor

```
@NgModule({
   imports: [],
   declarations: [],
   providers: [




   ]
})
export class AppModule { }
```

GALAXY TRAINING

Registrando interceptor

```
@NgModule({
   imports: [],
   declarations: [],
   providers: [
      { provide: HTTP_INTERCEPTORS, useClass: FirstInterceptor, multi: true },


   ]
})
export class AppModule { }
```

GALAXY TRAINING

Registrando interceptor

```
@NgModule({
   imports: [],
   declarations: [],
   providers: [
      { provide: HTTP_INTERCEPTORS, useClass: FirstInterceptor, multi: true },
      { provide: HTTP_INTERCEPTORS, useClass: SecondInterceptor, multi: true },
   ]
})
export class AppModule { }
```

GALAXY TRAINING

Registrando interceptor

```
@NgModule({
   imports: [],
   declarations: [],
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Registrando interceptor

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GALAXY TRAINING

Registrando interceptor

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GALAXY TRAINING

Registrando interceptor

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   imports: [],
   declarations: [],
   providers: [
      { provide: HTTP_INTERCEPTORS, useClass: FirstInterceptor, multi: true },
      { provide: HTTP_INTERCEPTORS, useClass: SecondInterceptor, multi: true },
   ]
})
export class AppModule { }
```

Definiendo un interceptor - Standalone

```
export const authInterceptor: HttpInterceptorFn = (req, next) => {
  const configService = inject(ConfigService);
  const authService = inject(AuthService);

  if (req.url.includes(configService.getValue('AUTHORS_URL'))) {
    req = req.clone({
      setHeaders: {
        Authorization: `Bearer ${authService.appUserAuth.access_token}`
      }
    });
  }

  return next(req);
};
```

GALAXY TRAINING

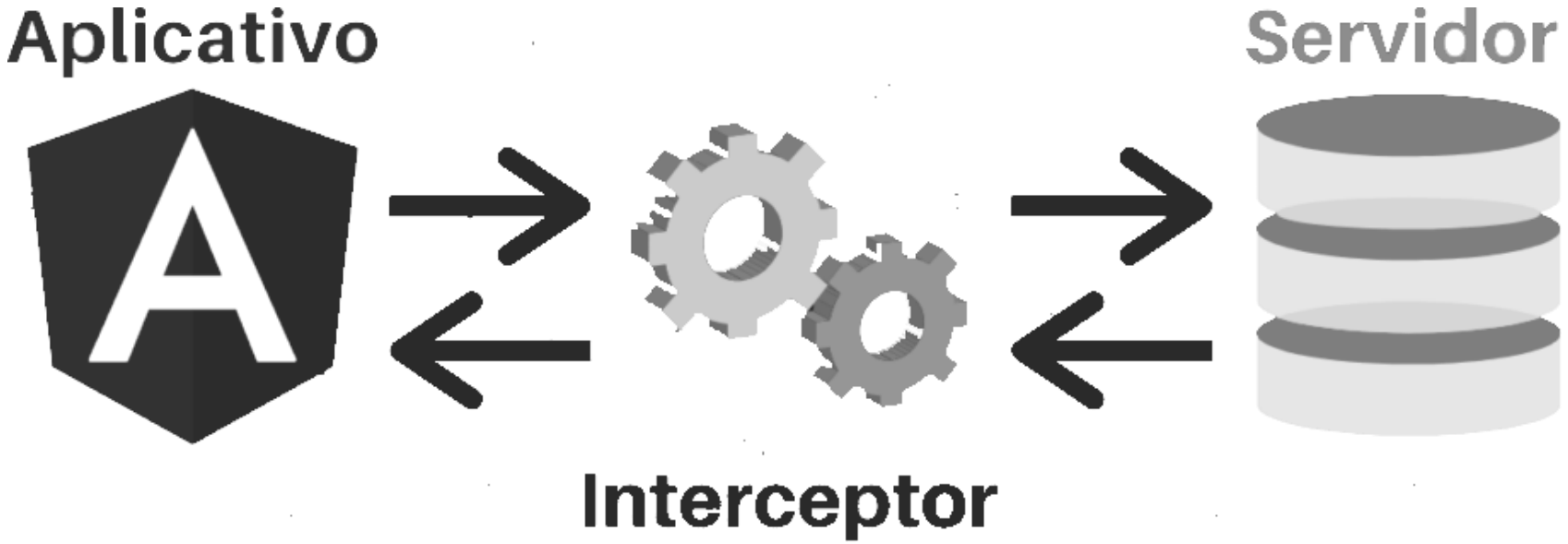
Registrando interceptor - Standalone

```
import { provideHttpClient, withFetch, withInterceptors } from '@angular/common/http';
...

export const appConfig: ApplicationConfig = {
  providers: [
     ...
     provideHttpClient(withFetch(),withInterceptors([authInterceptor])),
     ...
  ]
};
```

Creando Interceptores

DEMO



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Integración con Keycloak

DEMO

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GRACIAS

POR SU PREFERENCIA

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