MASTER CLOUD APPS

TRABAJO FIN DE MASTER

APLICACIÓN DE PLANIFICACIÓN DE REDES SOCIALES CON TBD Y CI/CD

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Tutor: Francisco Gortázar

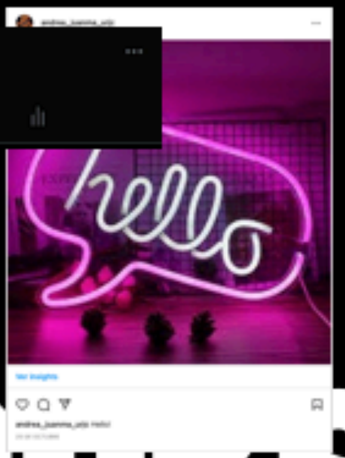
ÍNDICE

QUE ES TBD-SOCIAL-NETWORKS-PLANNER ?

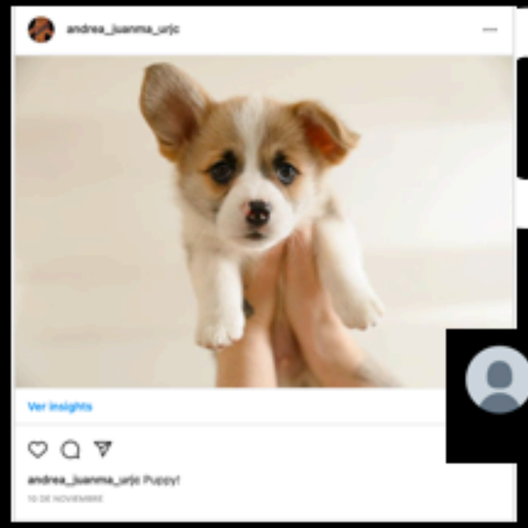
Andrea Juanma @andrea_juanma · Nov 19
Hola desde la The Social Networks Planner app 18 NOV!

Andrea Juanma @andrea_juanma · Oct 16
Replying to @andrea_juanma
Responder a un tweet desde la app y ver todas las respuestas ootra vez mas

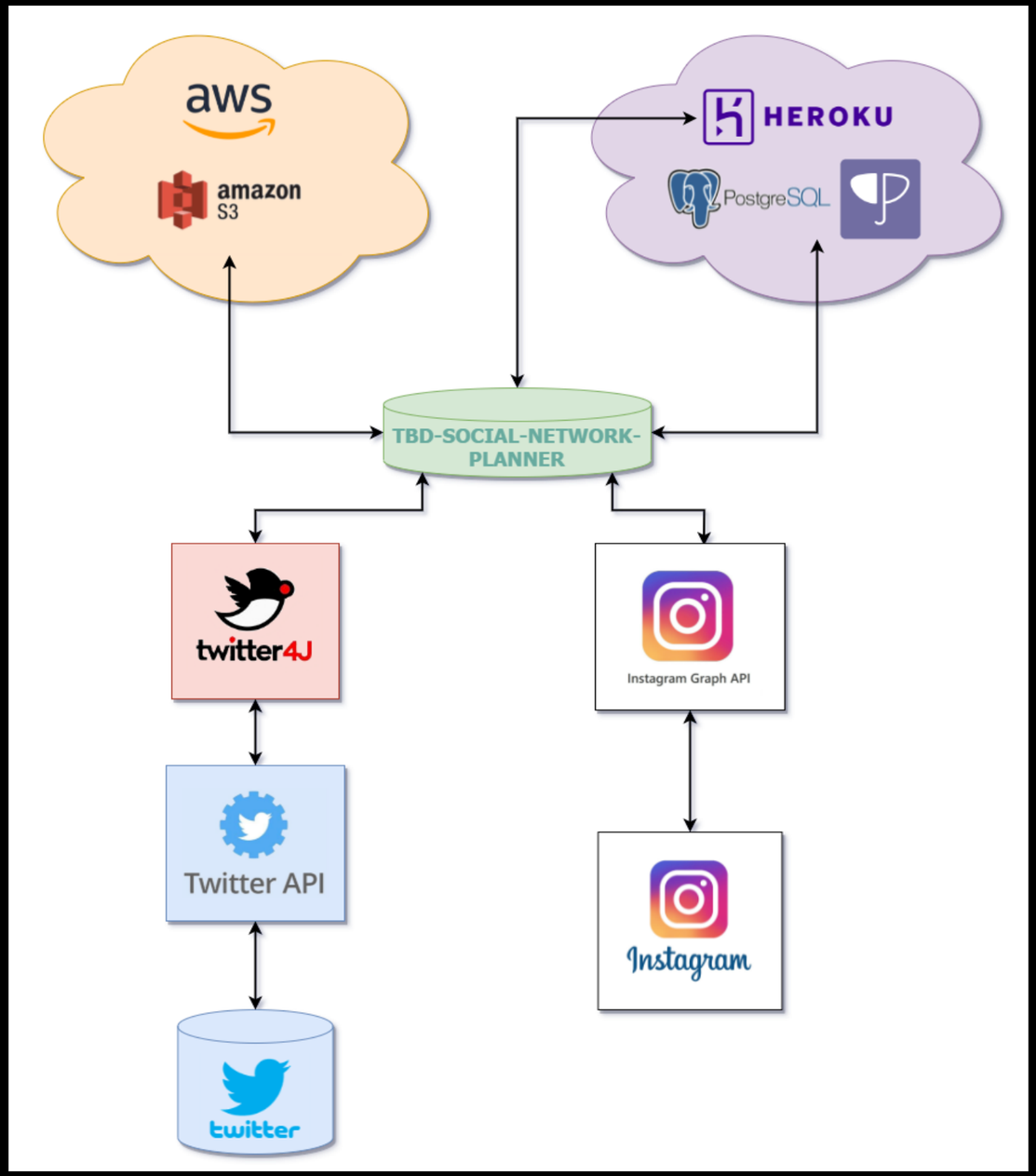
Andrea Juanma @andrea_juanma · Oct 9
Hello from Spring Java!



QUE ES TIBUTNET SOCIAL-PLAN



Andrea Juanma @andrea_juanma · Oct 26
Prueba de carga en BBDD interna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S3
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PostgreSQL
TBD-SOCIAL-NETWORK-PLANNER
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Twitter API
twitter
Instagram Graph API
Instagram


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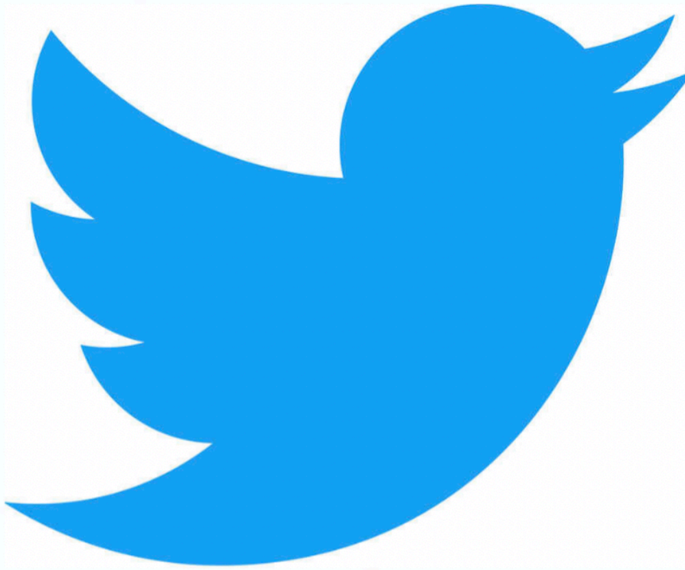


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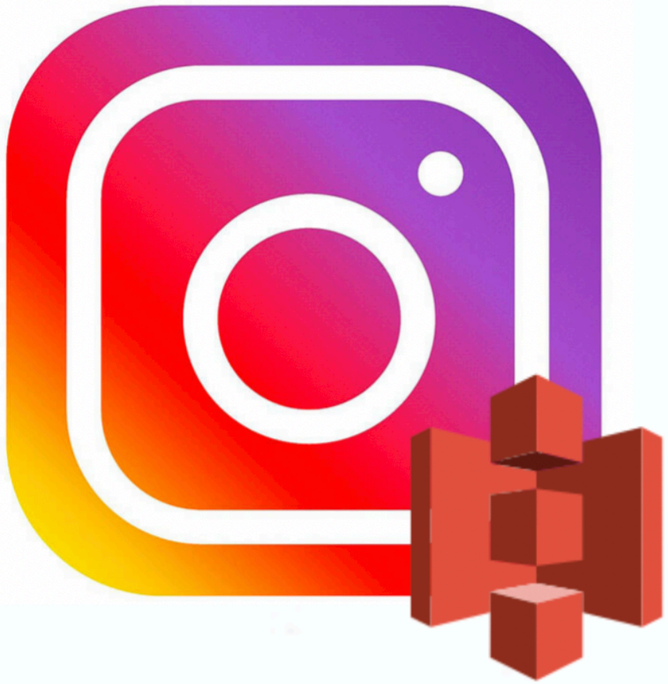

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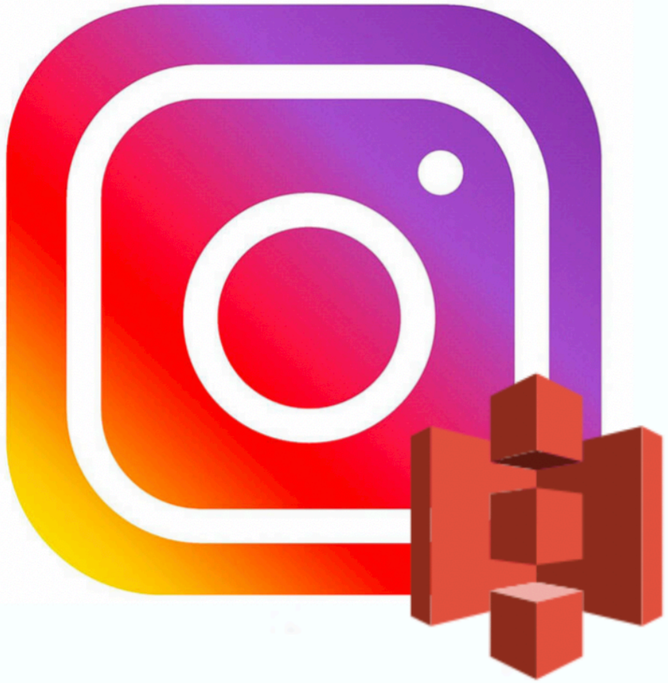

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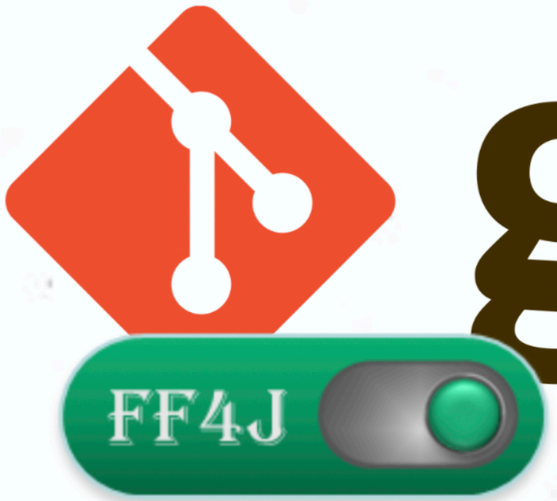

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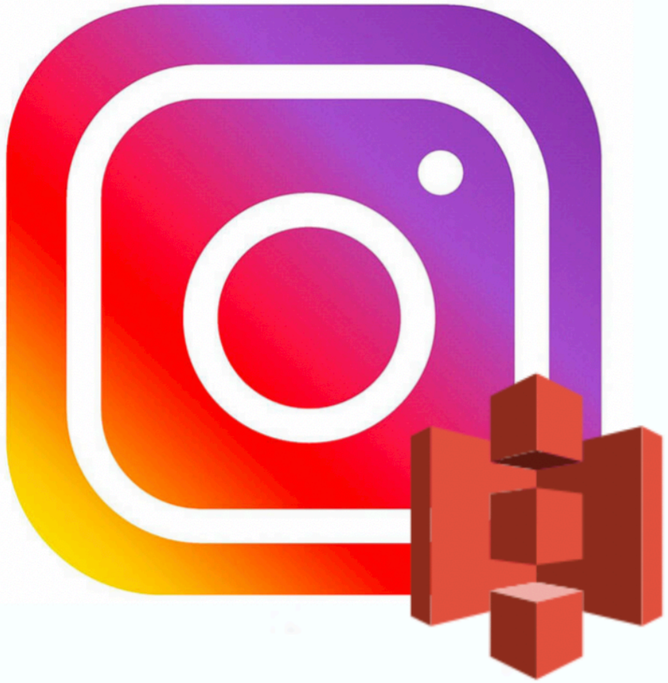

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Swagger™

CARACTERÍSTICAS:
TRUNK BASED DEVELOPMENT

» Ramas de corta duración

» Commits pequeños

» Se trabaja sobre trunk

» Pull requests sobre main (trunk)

» Uso de técnicas de CI/CD

TÉCNICAS APLICADAS:
TRUNK BASED DEVELOPMENT

» Feature Toggles

» Branch by Abstraction

TÉCNICAS APLICADAS: FEATURE TOGGLES
TRUNK BASED DEVELOPMENT

» Importamos la libreria FF4J:

» Creamos un feature toggle:

```
public static String FEATURE_ABSTRACT_IG_CLIENT = "Instagram client";

if (!ff4j.exist(FEATURE_ABSTRACT_IG_CLIENT)) {
            ff4j.createFeature(FEATURE_ABSTRACT_IG_CLIENT, false);
}
```

TÉCNICAS APLICADAS: FEATURE TOGGLES
TRUNK BASED DEVELOPMENT

» Usamos el toggle:

```
if (ff4j.check(FEATURE_ABSTRACT_IG_CLIENT)) {
    // New code (if toggle is active)
    return this.instagramRestClient.login();

} else {
    // Old code
    DeviceLoginRequest deviceLoginRequest = DeviceLoginRequest.builder()
        .accessToken(loginAccessToken)
        .redirectUri(redirectUri)
        .scope(scope)
    ...
```

TÉCNICAS APLICADAS: FEATURE TOGGLES
TRUNK BASED DEVELOPMENT

Activamos y desactivamos el toggle a través de la interfaz grafica:

https://ais-tbd-social-networks.herokuapp.com/ff4j-web-console/features

TÉCNICAS APLICADAS: BRANCH BY ABSTRACTION
TRUNK BASED DEVELOPMENT

Abstraemos la implementación de una funcionalidad a través de una interfaz.

Nos permite intercambiar las implementaciones.

Ambas implementaciones coexisten en el proyecto.

TÉCNICAS APLICADAS: BRANCH BY ABSTRACTION
TRUNK BASED DEVELOPMENT

» Creación de la interfaz:

```
public interface InstagramClient {

    InstagramDeviceLoginResponse login() throws InstagramException;

    String authenticate() throws InstagramException;

    String post(ResourceResponse resource, String caption) throws InstagramException;

    InstagramPostInfoResponse getPostInfo(String id) throws InstagramException;

    InstagramMediaResponse getAllMedia() throws InstagramException;

}
```

TÉCNICAS APLICADAS: BRANCH BY ABSTRACTION
TRUNK BASED DEVELOPMENT

» Implementation de la interfaz:

```
public class InstagramRestClient implements InstagramClient {

    @Override
    public InstagramDeviceLoginResponse login() throws InstagramException {
    ...
```

TÉCNICAS APLICADAS: BRANCH BY ABSTRACTION
TRUNK BASED DEVELOPMENT

» Uso de feature flag para activar desactivar la funcionalidad:

```
if (ff4j.check(FEATURE_ABSTRACT_IG_CLIENT)) {
    // Nueva implementación
    return this.instagramRestClient.login();

} else {
     // Código antiguo
     try {
        log.info("Request to Facebook Business API: " + deviceLoginUrl);

        ResponseEntity<InstagramDeviceLoginResponse> response =
    this.restTemplate.exchange(deviceLoginUrl, HttpMethod.POST,
    getEntity(deviceLoginRequest.toJsonString()), InstagramDeviceLoginResponse.class);
              ...
```

TÉCNICAS APLICADAS: BRANCH BY ABSTRACTION
TRUNK BASED DEVELOPMENT

» Futuros pasos:

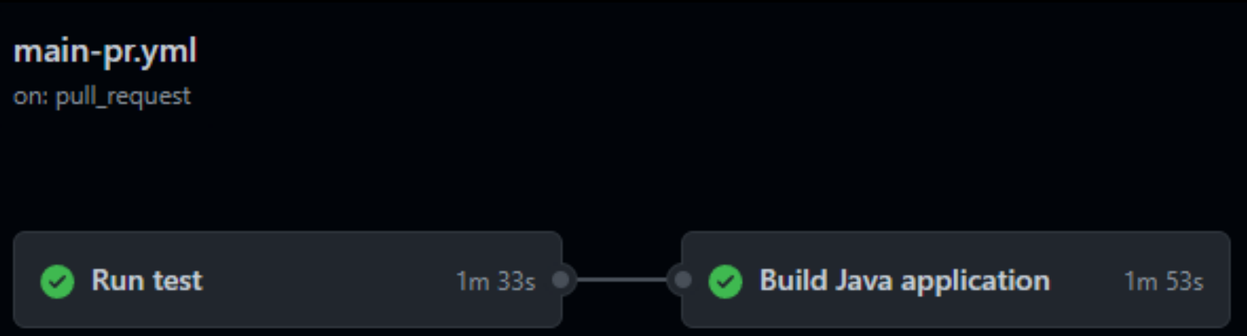
Esta abstracción nos va a facilitar en un futuro sustituir el cliente Rest por una librería, por ejemplo.

CI/CD

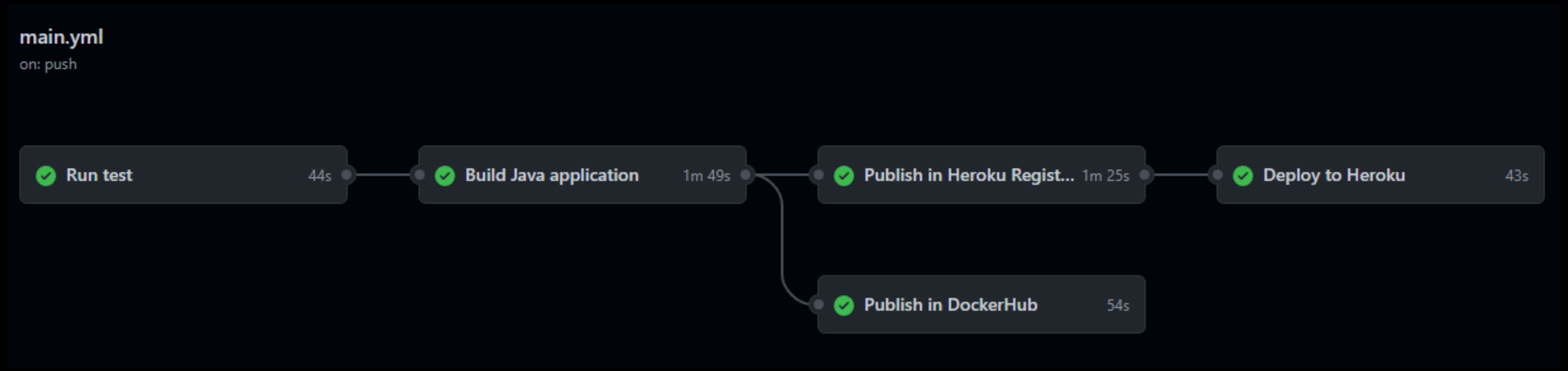
» GitHub Actions

» Testeo Automatizado

GITHUB ACTIONS
CI/CD



GITHUB ACTIONS
CI/CD



TESTEO AUTOMATIZADO

» Tests Unitarios

» Tests de Integración

CONCLUSIONES:

» Periodo de adaptación corto

» Conciencia de equipo

» GitHub Actions

FUTUROS PASOS

» Gestión de versiones

» Gestión de usuarios

» Terminar de configurar callback de Instagram

» Branch by Abstraction en Twitter Client

GRACIAS!