



# Xtrem App'



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# Sommaire

- Présentation des choix techniques et répartition des rôles
- Protocoles
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# Choix technologique/ Rôles

Solution choisie :

Redis / Express / iOS / Python

Répartition des tâches :

Bergoens Laura	Web Service - Swagger / Docker / NodeJs
Drouaire Matthieu	iOs Application - Xcode
Eon Antoine	Alert System - Python WebService - NodeJs
Pujade Jean-Marie	Bases de données - Redis / Sqlite WebService - NodeJs / Swagger
Pujolas Alex	Serveur d'authentification - Swift / Kitura



# Protocoles

/alert/geo

GET /alert/geo

## Summary

Set an alert on a geoposition

## Parameters

Name	Located in	Description	Required	Schema
latitude	query	Latitude of location	Yes	≧ number (double)
longitude	query	Longitude of location	Yes	≧ number (double)
perimeter	query	Perimeter around the location	No	≧ number (integer)

## Responses

Code	Description	Schema
200	Routes to manage subscription to a channel	<pre>≧ AlertChannelRoutes {   subscribeRoute: string   unsubscribeRoute: string   data: Activity { } }</pre>
default	Unexpected error	<pre>≧ Error {   code: integer   message: string }</pre>

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# Protocoles

/alert/topic

GET /alert/topic

## Summary

Set an alert on a topic, optionnally within a geolocation

## Parameters

Name	Located in	Description	Required	Schema
topic	query	Topic to follow	Yes	↔ string
latitude	query	Latitude of location	No	↔ number (double)
longitude	query	Longitude of location	No	↔ number (double)
perimeter	query	Perimeter around the location	No	↔ number (integer)

## Responses

Code	Description	Schema
200	Routes to manage subscription to a channel	↔ <pre>▼ AlertChannelRoutes {   subscribeRoute: ▶ string   unsubscribeRoute: ▶ string   data: ▶ Activity { } }</pre>
default	Unexpected error	↔ <pre>▼ Error {   code: integer   message: string }</pre>

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# Protocoles

/geo

GET /geo

## Summary

Current activities near to a specific location

## Parameters

Name	Located in	Description	Required	Schema
latitude	query	Latitude of location	Yes	↔ number (double)
longitude	query	Longitude of location	Yes	↔ number (double)
token	query	User's token	Yes	↔ string
perimeter	query	Perimeter around the location	No	↔ number (integer)
time	query	Ancienneté max du post en minutes	No	↔ number (integer)

## Responses

Code	Description	Schema
200	An array of recent activities order by proximity and date	↔ { Activities { } }
default	Unexpected error	↔ { Error { code: integer message: string } }

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# Protocoles

/newPost

## GET /newPost

### Summary

New post

### Parameters

Name	Located in	Description	Required	Schema
activity	body	new post (topic name, geopositions data)	Yes	<pre>⌵Activity {   topic:    ▶ string   date:     ▶ string   geolocation: ▶ Geolocation { }   popularity: ▶ number }</pre>

### Responses

Code	Description	Schema
200	Routes to manage subscription to a channel	<pre>⌵AlertChannelRoutes {   subscribeRoute: ▶ string   unsubscribeRoute: ▶ string   data:           ▶ Activity { } }</pre>
default	Unexpected error	<pre>⌵Error {   code:    integer   message: string }</pre>

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# Protocoles

GET /subChannel/geoloc

### Summary

get geoloc subscription

### Parameters

Name	Located in	Description	Required	Schema
geolocData	body	geolocation subscription asked	Yes	<pre>↔ {   latitude: number   longitude: number   perimeter: number }</pre>

### Responses

Code	Description	Schema
200	Routes to manage subscription to a channel	<pre>↔ {   channelname: string }</pre>
default	Unexpected error	<pre>↔ {   code: integer   message: string }</pre>

Try this operation



# Protocoles

/subChannel/topic

GET /subChannel/topic

## Summary

Subscription to a channel

## Parameters

Name	Located in	Description	Required	Schema
topicName	query	topic subscription asked	Yes	≡ string

## Responses

Code	Description	Schema
200	Routes to manage subscription to a channel	≡ ▼ ChannelName { channelname: ▼ string }
default	Unexpected error	≡ ▼ Error { code: integer message: string }

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# Protocoles

/topic

## GET /topic

### Summary

Details on a specific activity by its topic name

### Parameters

Name	Located in	Description	Required	Schema
topic	query	Topic in camelCase	Yes	↔ string
token	query	User's token	Yes	↔ string
latitude	query	Latitude of location	No	↔ number (double)
longitude	query	Longitude of location	No	↔ number (double)

### Responses

Code	Description	Schema
200	All activities related to the topic, close to a location if specified	↔ { Activities { } }
default	Unexpected error	↔ { Error { code: integer message: string } }

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# Protocoles

/user/

GET /user/

## Summary

Recent activities of a specific user.

## Parameters

Name	Located in	Description	Required	Schema
token	query	Current token of user's session	Yes	≡ string

## Responses

Code	Description	Schema
200	An array of recent activities order by date	≡ ▼ [ ▸ Activities { } ]
default	Unexpected error	≡ ▼ Error { code: integer message: string }

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# Protocoles

## POST /topic

### Description

Creates an activity on a specific location

### Parameters

Name	Located in	Description	Required	Schema
token	query	User's token	Yes	<code>string</code>
activity	body	Activity details	Yes	<pre>Activity {   topic:    string   date:    string   geolocation: Geolocation { }   popularity: number }</pre>

### Responses

Code	Description	Schema
201	Null response	
default	Unexpected error	<pre>Error {   code: integer   message: string }</pre>

Try this operation



# Protocoles

PUT /topic

## Description

Creates an activity related to an existent one

## Parameters

Name	Located in	Description	Required	Schema
token	query	User's token	Yes	$\neq$ string
activity	body	New activity	Yes	$\neq$ <pre>Activity {   topic: string   date: string   geolocation: Geolocation { }   popularity: number }</pre>

## Responses

Code	Description	Schema
200	An array of recent activities order by proximity and date	$\neq$ <pre>[   Activities { } ]</pre>
default	Unexpected error	$\neq$ <pre>Error {   code: integer   message: string }</pre>

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# Structures de données

## Sqlite :

Base de données divisée en deux tables  
"users" et "tokens".

```
CREATE TABLE "Users" ("id_user" INTEGER PRIMARY KEY AUTOINCREMENT NOT NULL ,  
"nom_user" VARCHAR NOT NULL ,  
"prenom_user" VARCHAR NOT NULL ,  
"email_user" VARCHAR NOT NULL ,  
"password_user" VARCHAR NOT NULL ,  
"date_naiss_user" DATETIME NOT NULL);  
  
CREATE TABLE "Tokens" ("id_token" INTEGER PRIMARY KEY AUTOINCREMENT NOT NULL ,  
"id_user" INTEGER NOT NULL ,  
"token" VARCHAR NOT NULL ,  
"date_last_use" DATETIME NOT NULL ,  
FOREIGN KEY(id_user) REFERENCES Users(id_user));
```

## Redis :

Construction des HMaps de données:

HMSET> ACTIVITY:TOKEN:<TOKEN>:<N°>:<N°>

-> topic " "

-> geoposition " "

-> date " "

HMSET> ACTIVITY:GEOPOSITION:<X>:<Y>:<N°>

-> topic " "

-> token " "

-> date " "

HMSET> ACTIVITY:TOPIC:<TOPIC CAMELCASE>:<N°>

-> token " "

-> geoposition " "

-> date " "

GEORADIUS > calcul des distances entre  
deux points



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# Implémentations

## Implémentations possibles :

- Possibilité de déplacer le marqueur de notre propre topic si on se déplace mais que le topic, lui, est inchangé.
- Tracer un itinéraire de la position de l'utilisateur à la position d'un topic.
- Regrouper les marqueurs de topics si plusieurs sont dans le même périmètre.





# Démonstration

