AWS FINAL PROJECT

Table of Contents

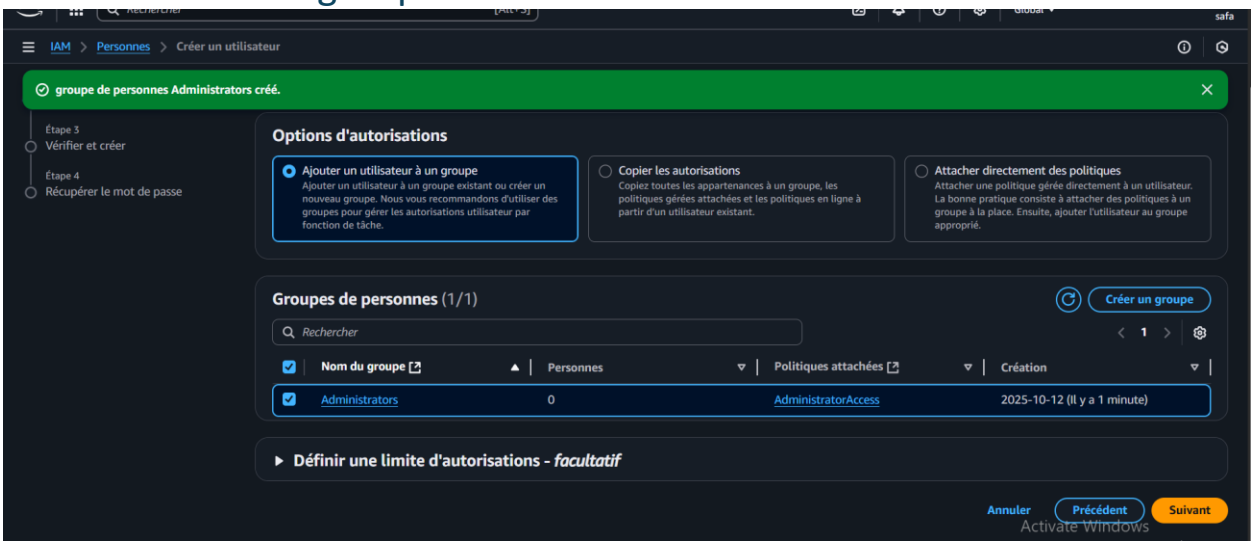
Security 3
MultiFactor Authentication (MFA) Activation: 3
IAM Creation and group: 3
Security Budget: 4
Authentication : 5
Amazon cognito: 5
DataBase 6
Dynamodb 6
Overview 6
Second table : expanses 7
Lambda Function: 7
Overview 7
First Test function : 8
Test Succeeded 8
Api Gateway : 9
Overview : 9
Cors: 10
HTTPS: 10
Politique notetableaccess: 11
Dev Note Function 11
Cors origin : 12
API Test : 12
Sécurité : Autorisation cognito : jwt 13
Test without header (JWT Security) : 14
expenses dev Lambda Function : 15
Connectivity with Dynamodb : 16
Cognito 17
Security Test : 17
Amazom Simple Storage Service: 17

Creation 17
Creation de cloudfront 18
Adding index.html to s3 19
Invalidation with loudFront 19
Updating authorization URI 20
Cross origin Security : 20
Project ScreenShot: 21
Home page 21
Sign in page : 21
NotePage : 22

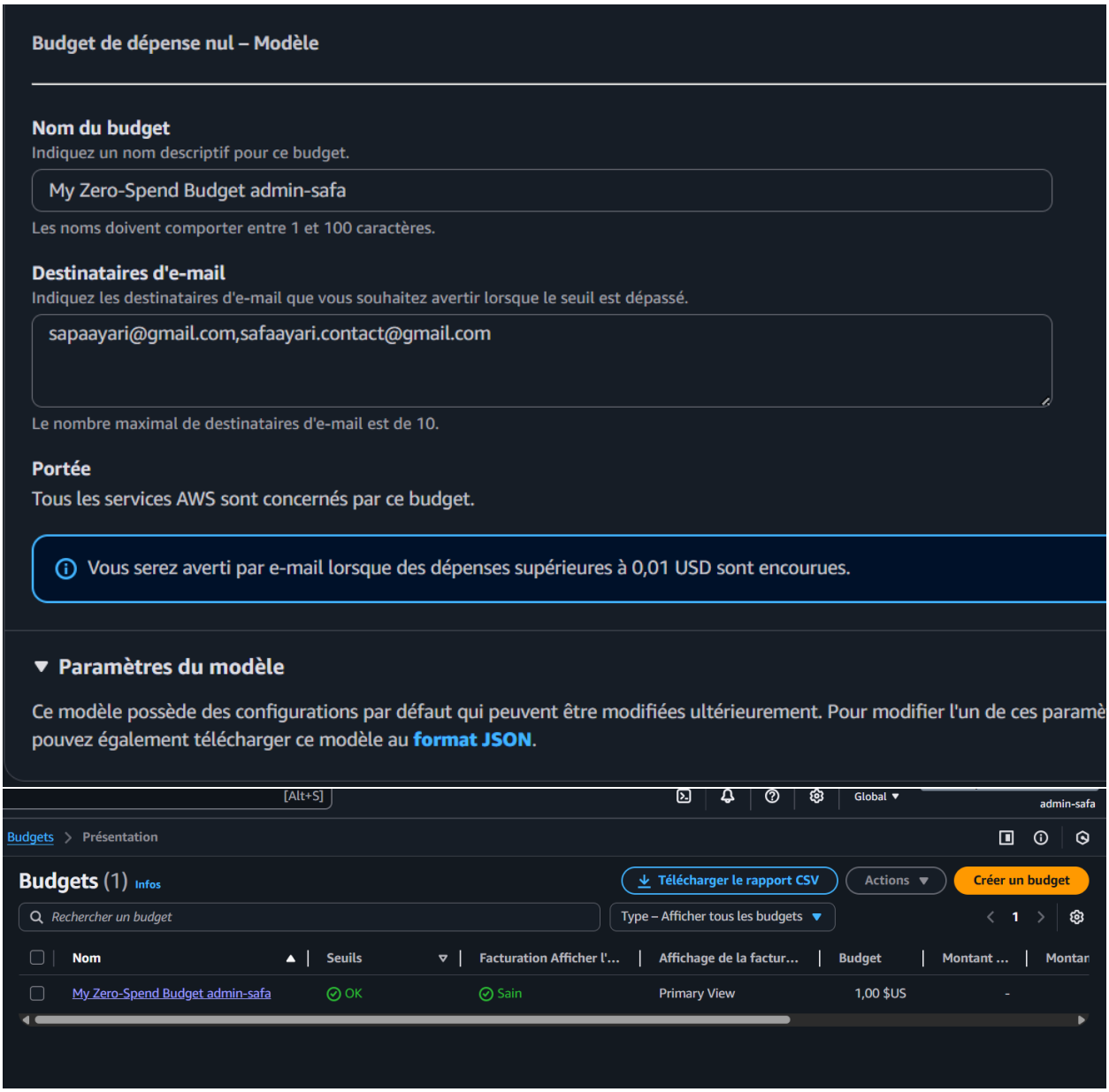
Security :

MultiFactor Authentication (MFA) Activation:

IAM Creation and group:



Security Budget:



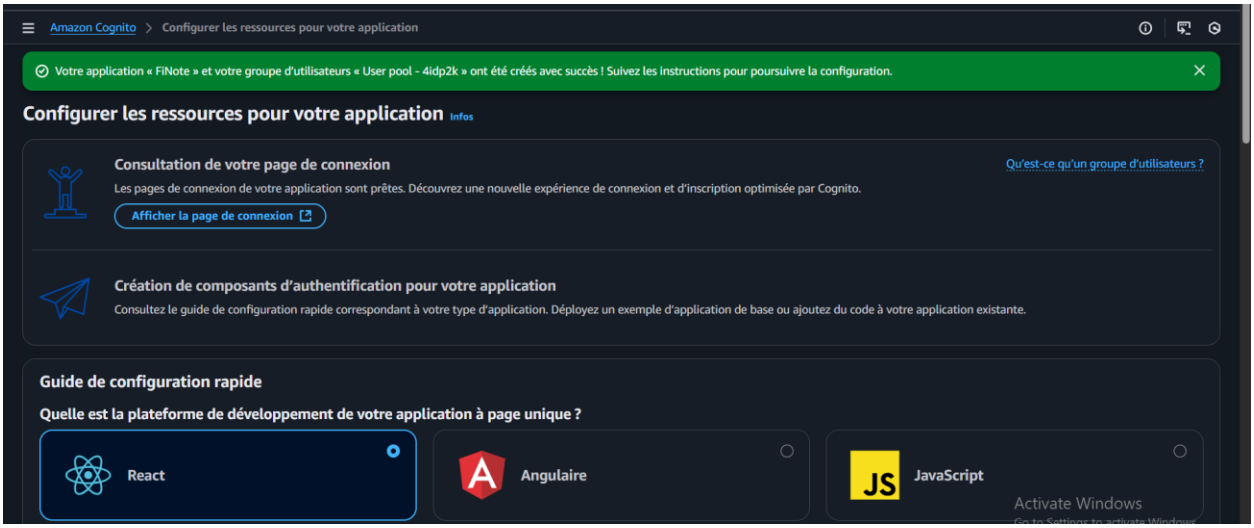
Authentication :

To authenticate on this app, we've used **AWS Cognito** Service which is a fully managed **user authentication and authorization service.**

It enables to:

- ✓ **Sign up / sign in users** securely (email, password, social logins, etc.)
- ✓ Manage **tokens (JWT)** for accessing protected APIs
- ✓ Handle password resets, MFA, user pools, and identity federation
- ✓ Easily integrate with **API Gateway**, **Lambda**, or frontend apps (e.g., React)

Amazon cognito:



DataBase

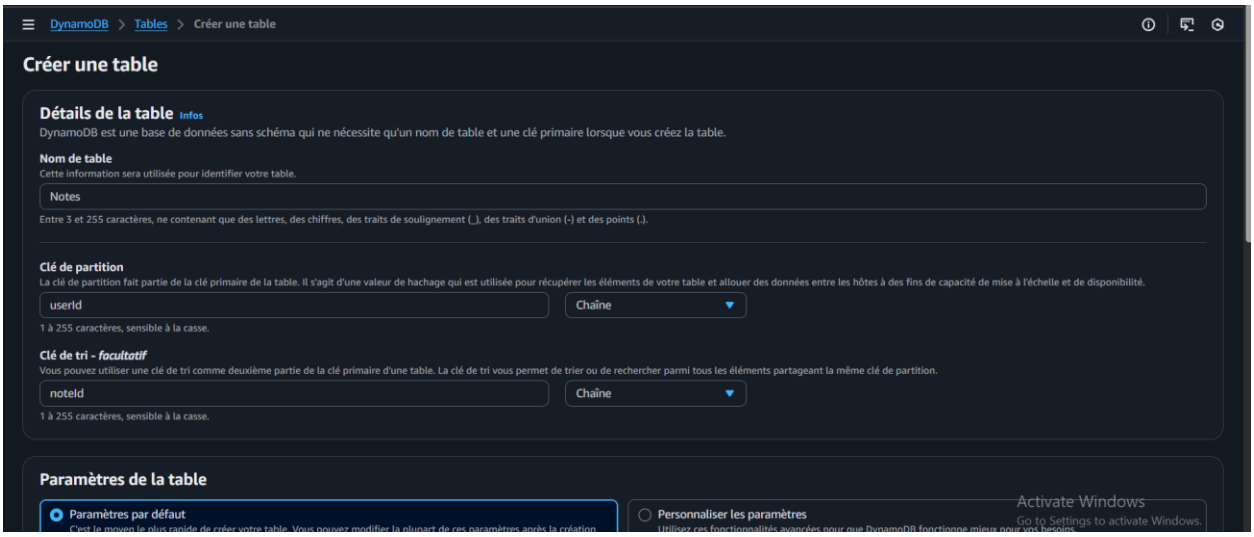
Dynamodb

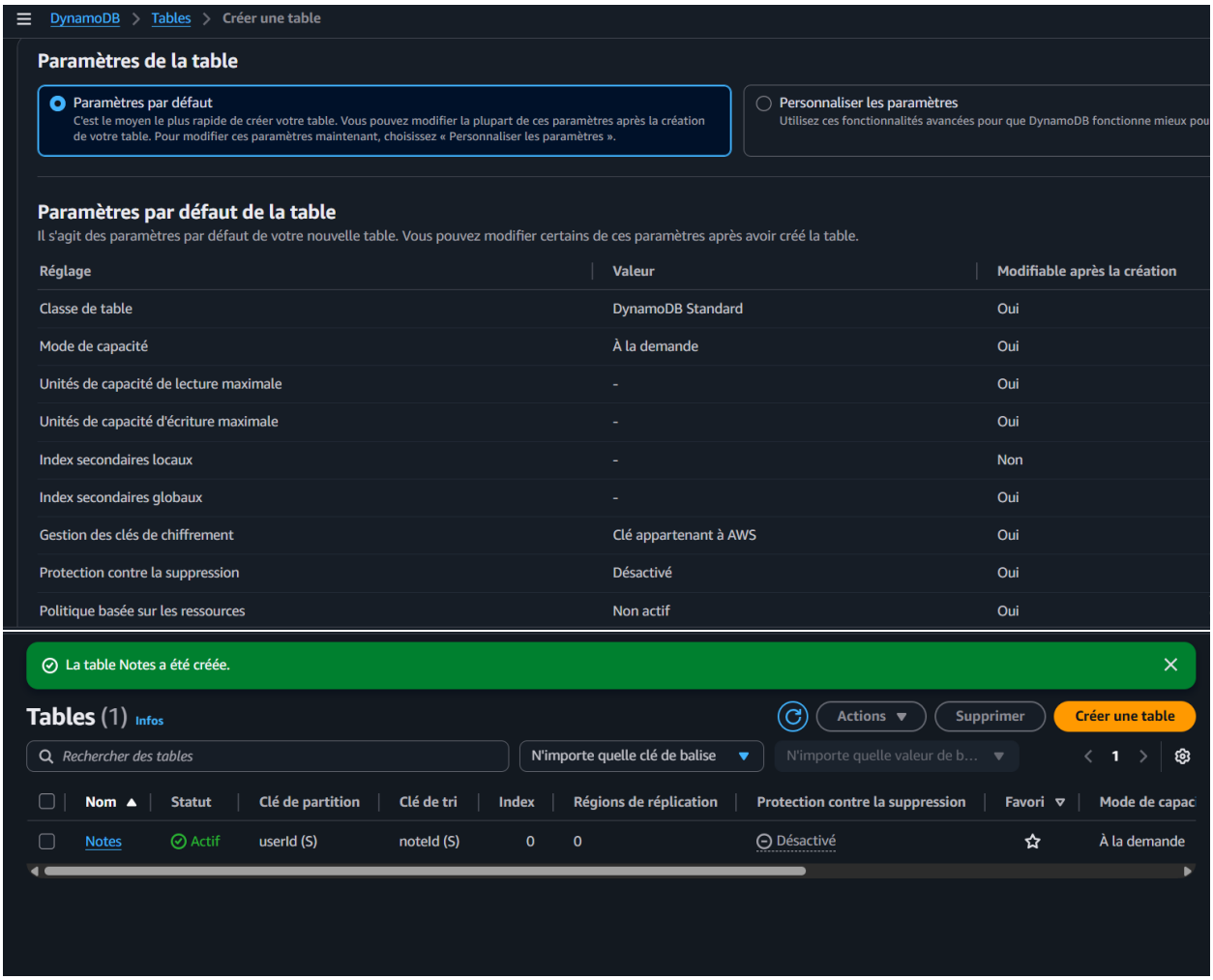
Overview :

Amazon DynamoDB is a **fully managed, serverless NoSQL database**.

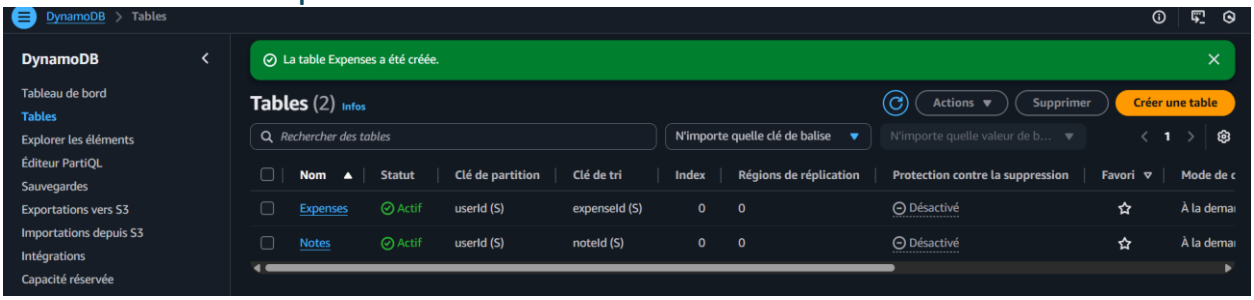
It allows apps to be fast, scalable, serverless database without worrying about infrastructure.

First table : notes





Second table : expanses



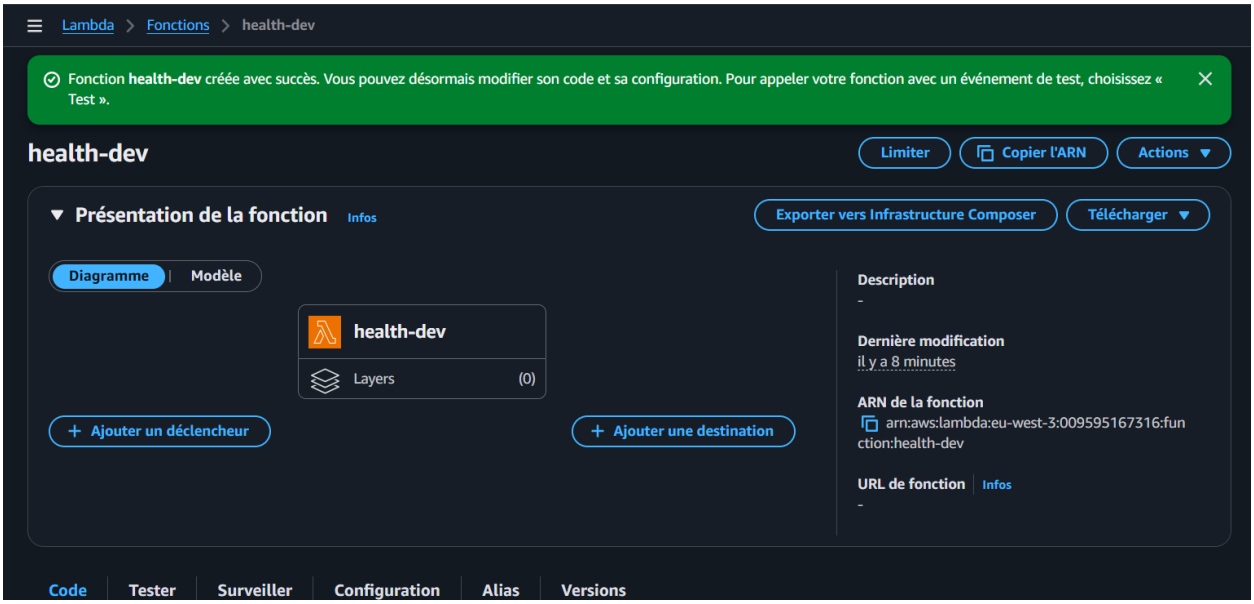
Lambda Function:

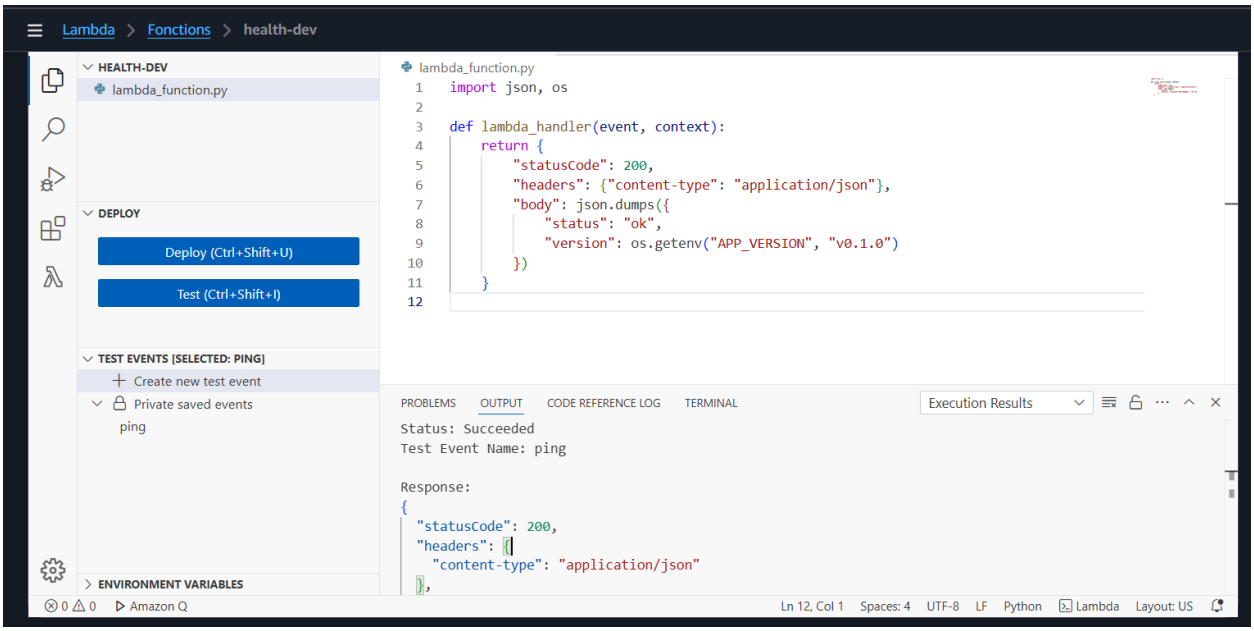
Overview :

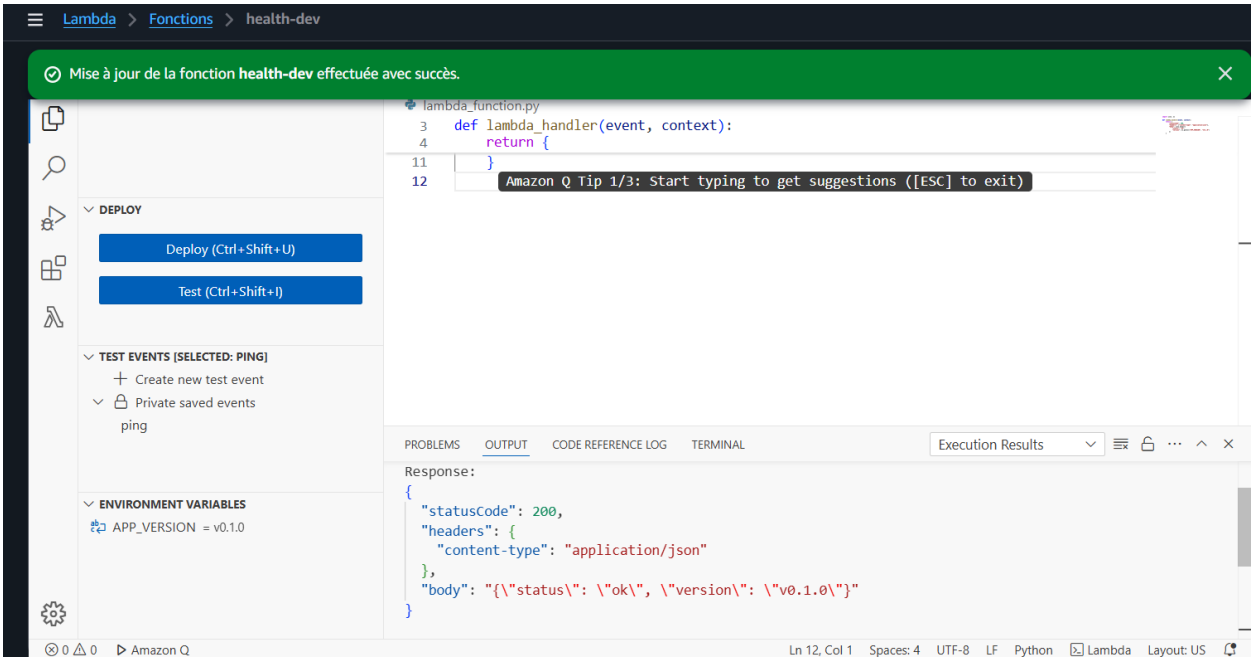
AWS Lambda is a **serverless compute service** that lets you run code **without managing servers**.

First Test function :

Test Succeeded







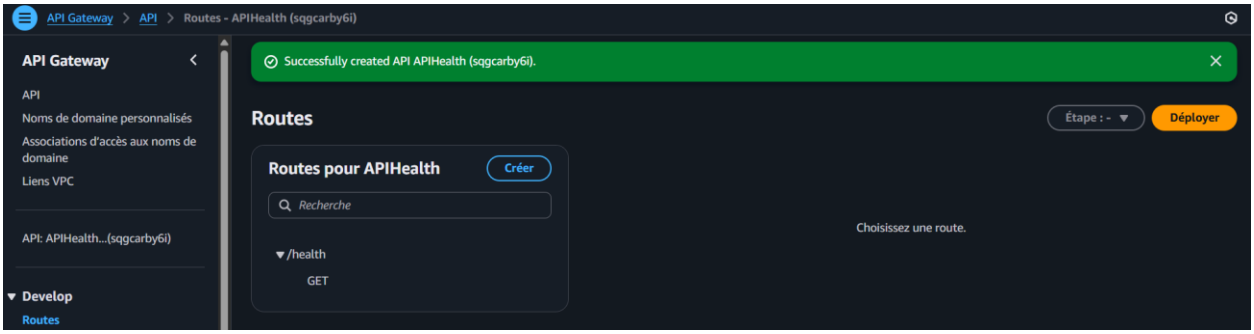
Api Gateway :

Overview :

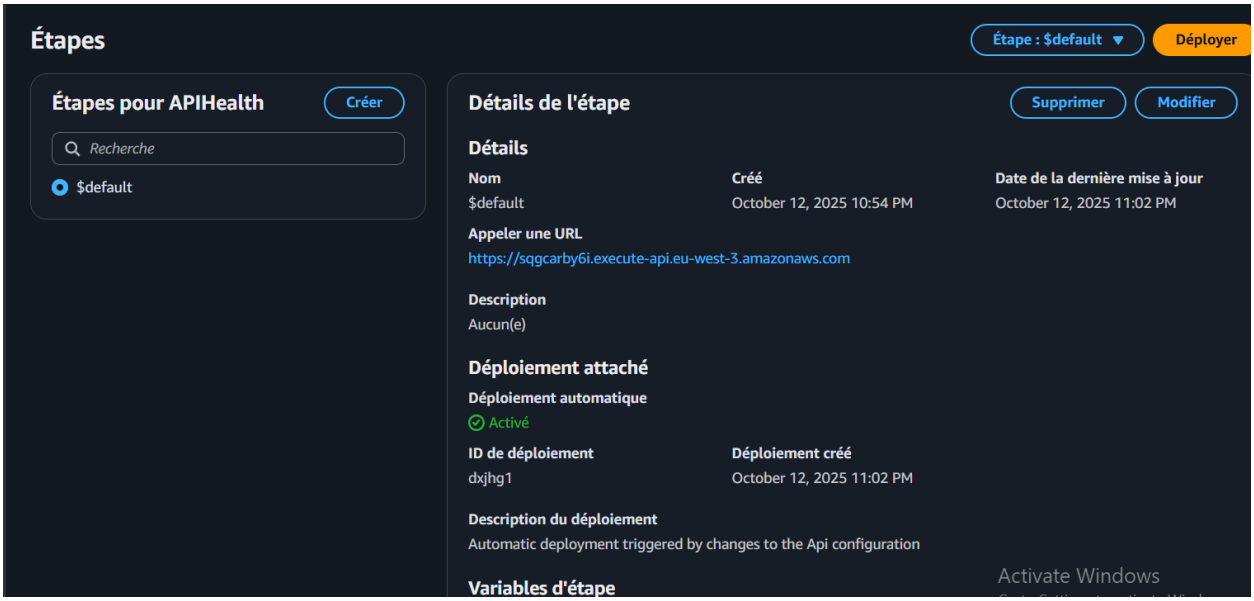
Amazon API Gateway is a **fully managed service to create, publish, and secure APIs**.

Some key points the API Gateway offer :

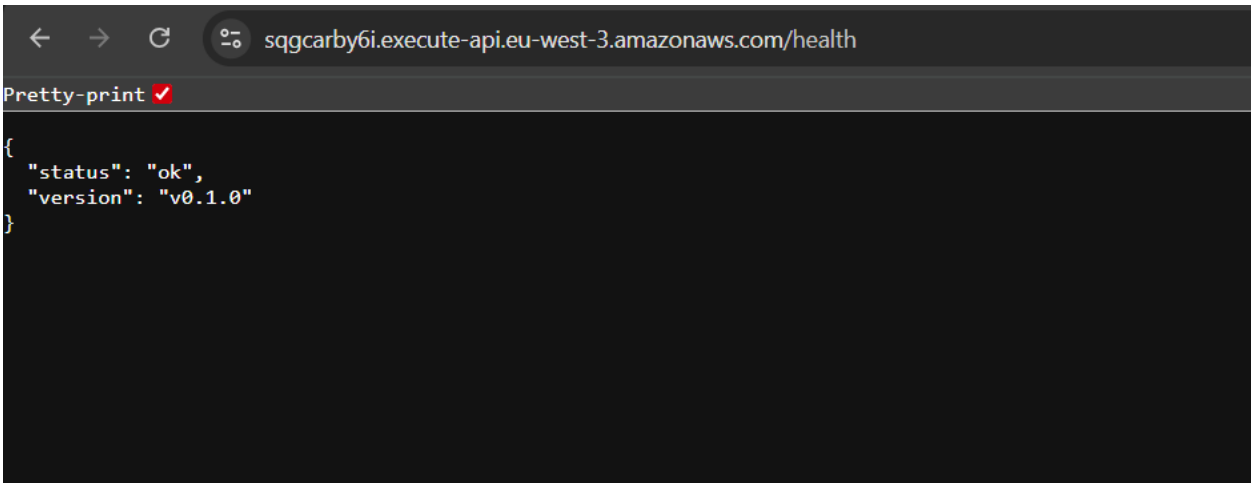
- ✓ **Expose backend services** (Lambda, EC2, or other endpoints) via HTTP/REST APIs
- ✓ **Handle authentication and authorization** → works with Cognito or custom tokens
- ✓ **Automatic scaling** → handles thousands of requests without managing servers
- ✓ **CORS support, throttling, caching** → control performance and security


API Gateway > API > Routes - APIHealth (sqgcarby6i)
API Gateway
API
Noms de domaine personnalisés
Associations d'accès aux noms de domaine
Liens VPC
API: APIHealth...(sqgcarby6i)
Develop
Routes
Successfully created API APIHealth (sqgcarby6i).
Routes
Étape : -
Déployer
Routes pour APIHealth
Créer
Recherche
/health
GET
Choisissez une route.

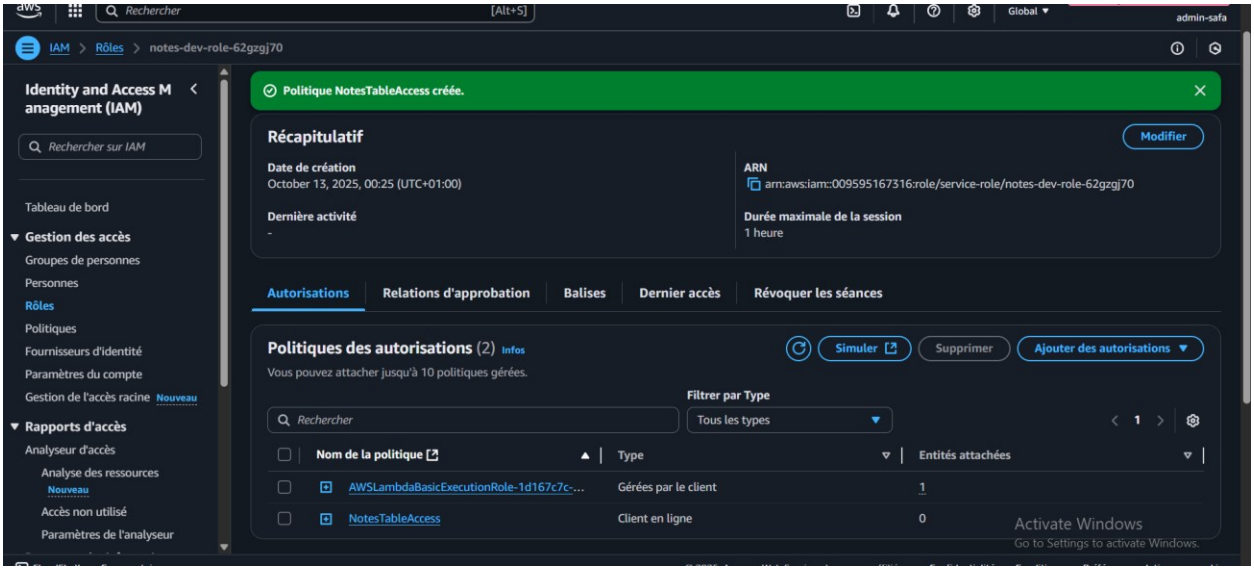
Cors:


Étapes
Étape : $default
Déployer
Étapes pour APIHealth
Créer
Recherche
$default
Détails de l'étape
Supprimer
Modifier
Détails
Nom
$default
Créé
October 12, 2025 10:54 PM
Date de la dernière mise à jour
October 12, 2025 11:02 PM
Appeler une URL
https://sqgcarby6i.execute-api.eu-west-3.amazonaws.com
Description
Aucun(e)
Déploiement attaché
Déploiement automatique
Activé
ID de déploiement
dxjhg1
Déploiement créé
October 12, 2025 11:02 PM
Description du déploiement
Automatic deployment triggered by changes to the Api configuration
Variables d'étape
Activate Windows

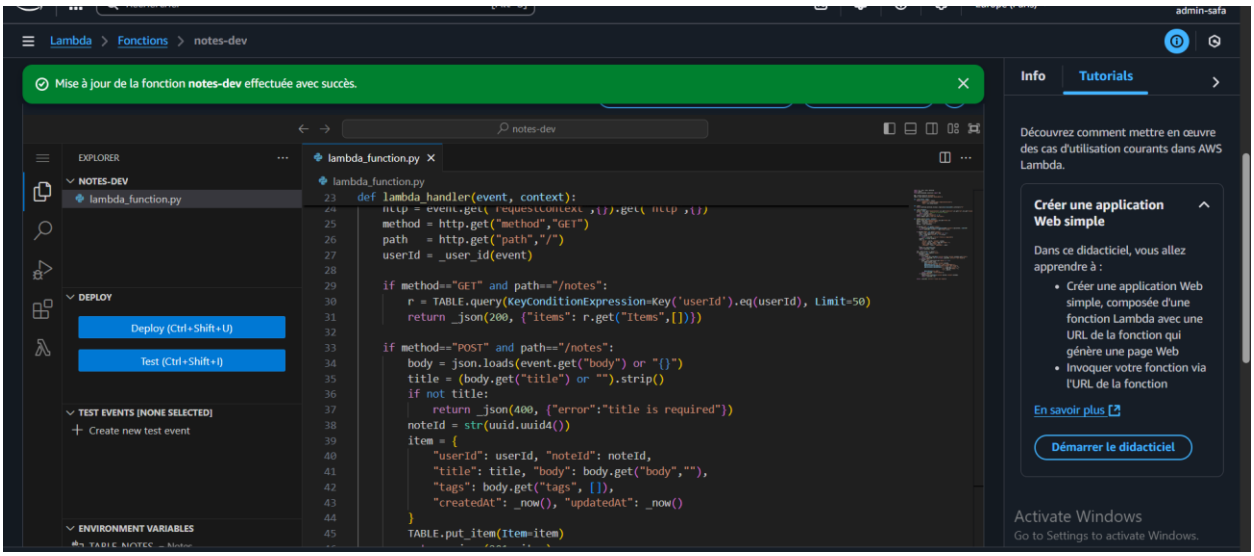
HTTPS:


sqgcarby6i.execute-api.eu-west-3.amazonaws.com/health
Pretty-print
{
"status": "ok",
"version": "v0.1.0"
}

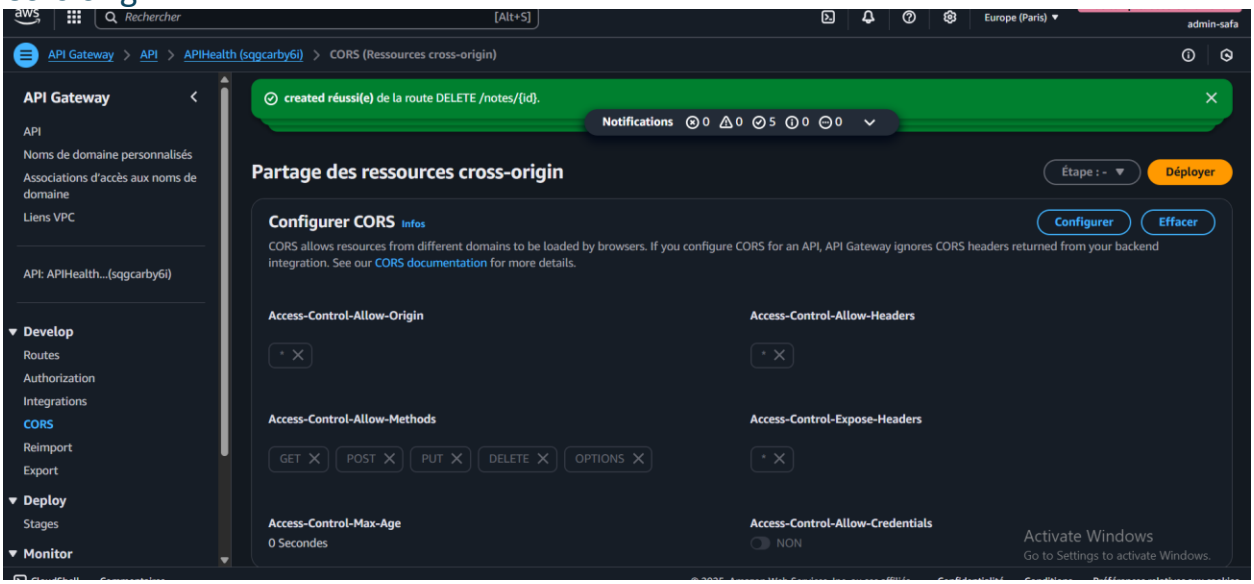
Politique notetableaccess:



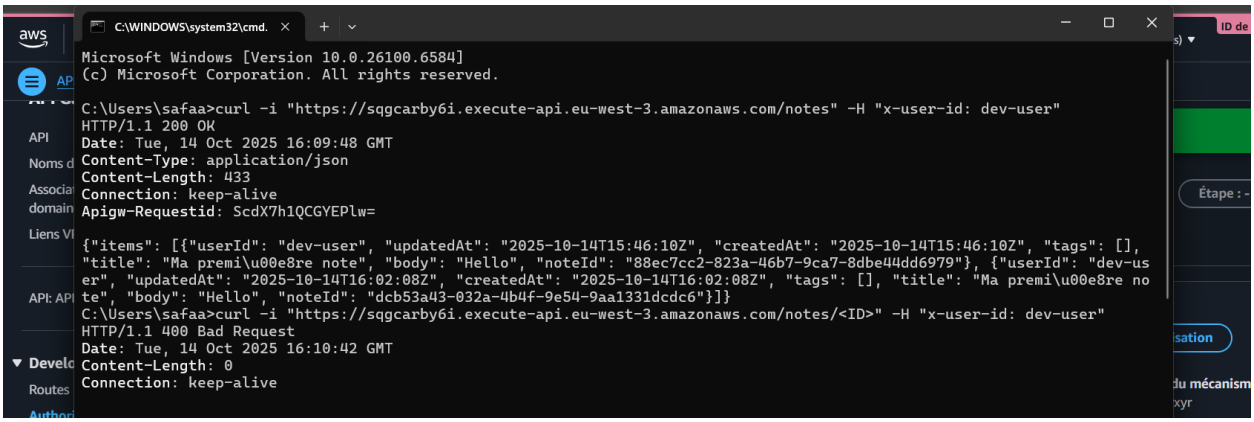
Dev Note Function



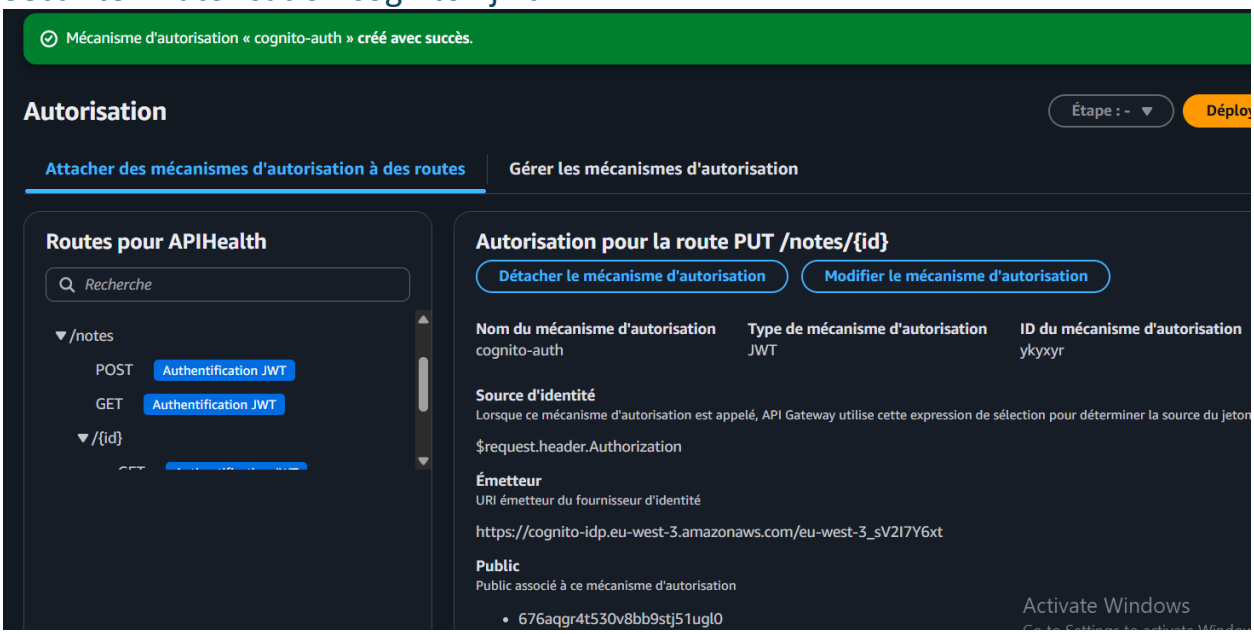
Cors origin :

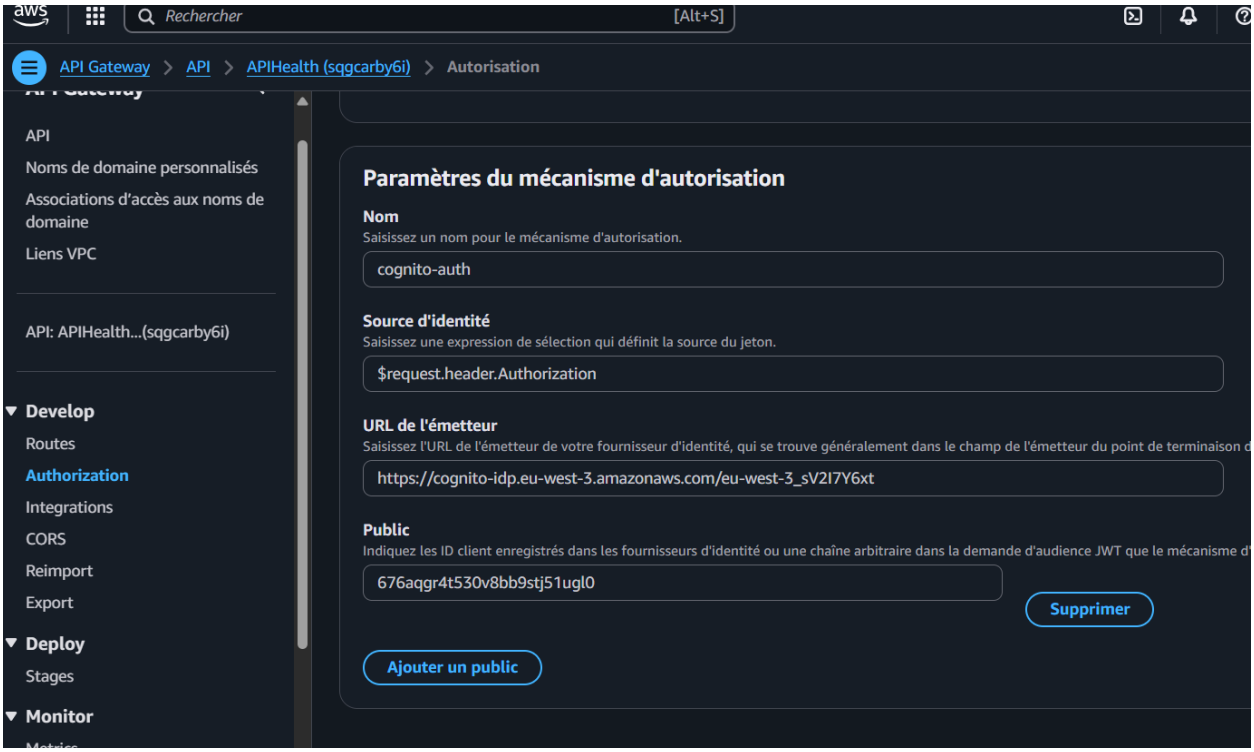


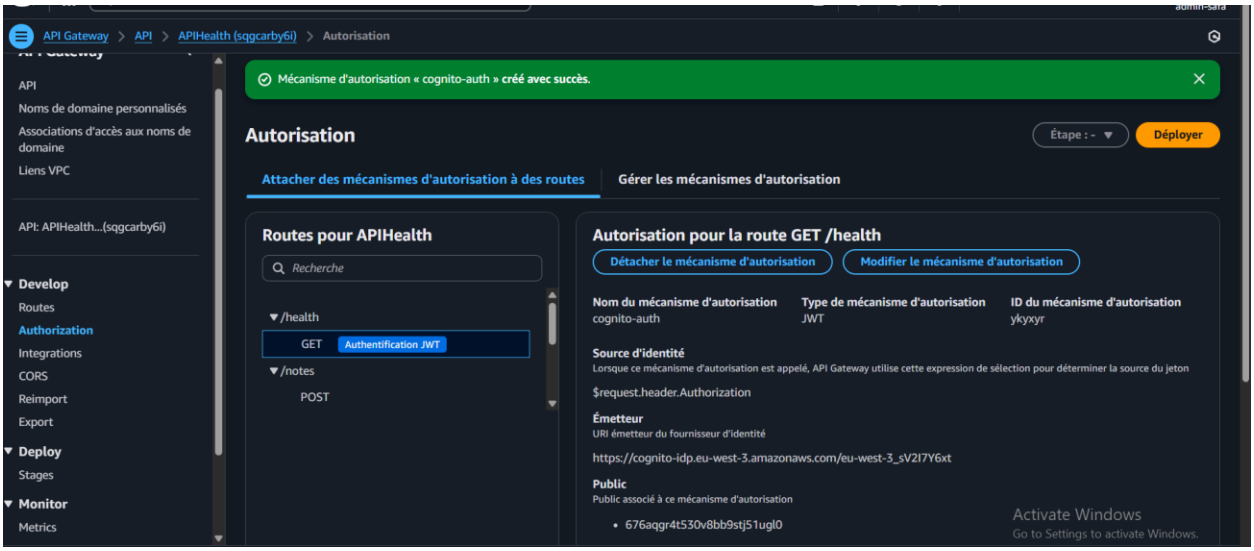
API Test :



Sécurité : Autorisation cognito : jwt



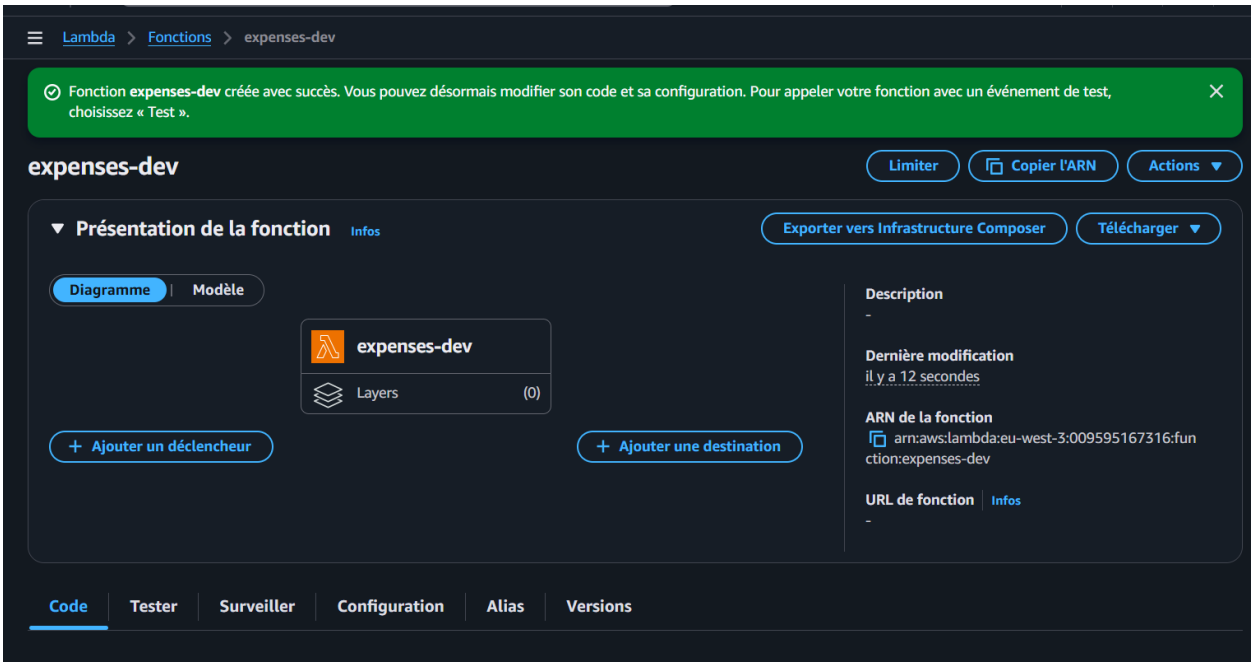


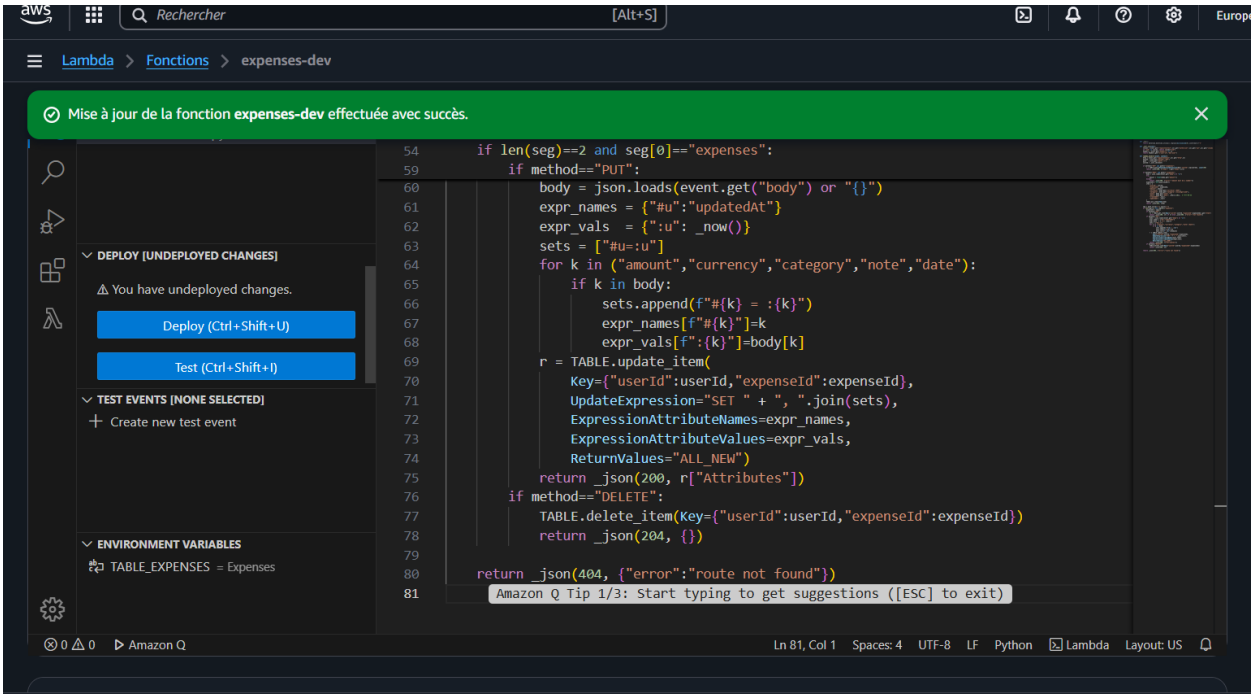


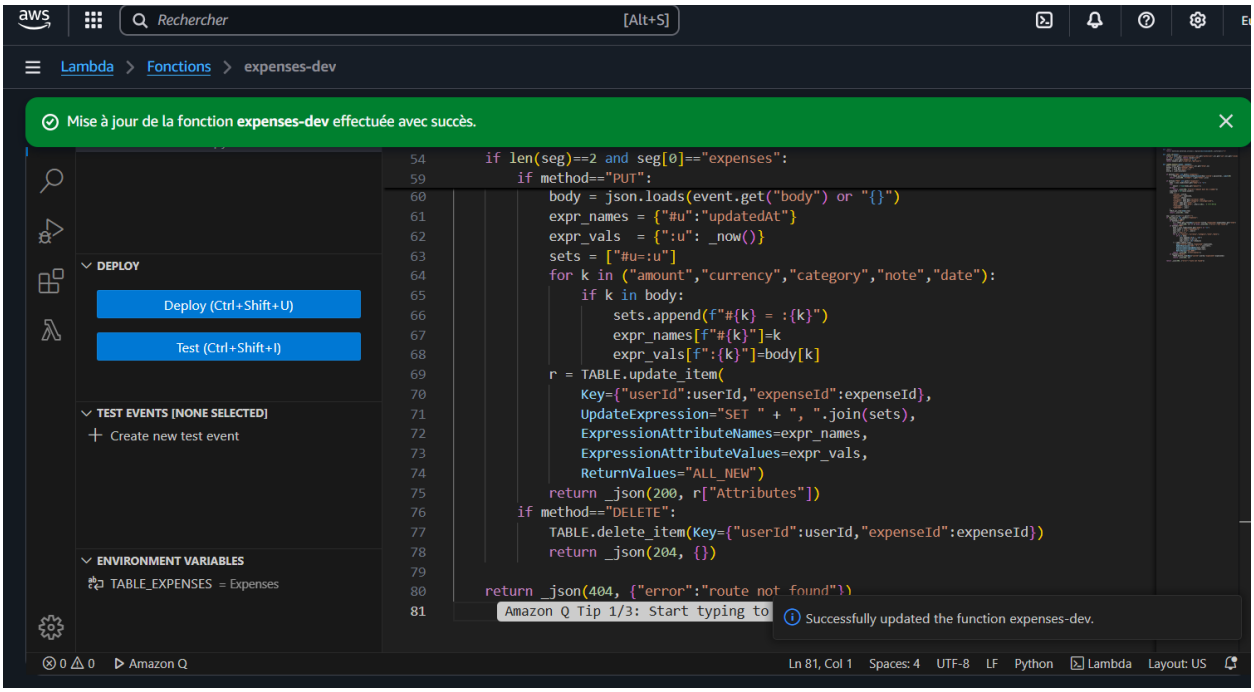
Test without header (JWT Security) :

```
C:\Users\safaa>curl -i -X DELETE "https://sqgcarby6i.execute-api.eu-west-3.amazonaws.com/notes/<ID>" -H "x-user-id: dev-user"
HTTP/1.1 400 Bad Request
Date: Tue, 14 Oct 2025 16:11:15 GMT
Content-Length: 0
Connection: keep-alive


C:\Users\safaa>curl -i "https://sqgcarby6i.execute-api.eu-west-3.amazonaws.com/notes"
HTTP/1.1 401 Unauthorized
Date: Tue, 14 Oct 2025 16:36:20 GMT
Content-Type: application/json
Content-Length: 26
Connection: keep-alive
www-authenticate: Bearer
apigw-requestid: SchQwhKjCGYEMqA=

{"message":"Unauthorized"}
C:\Users\safaa>
```

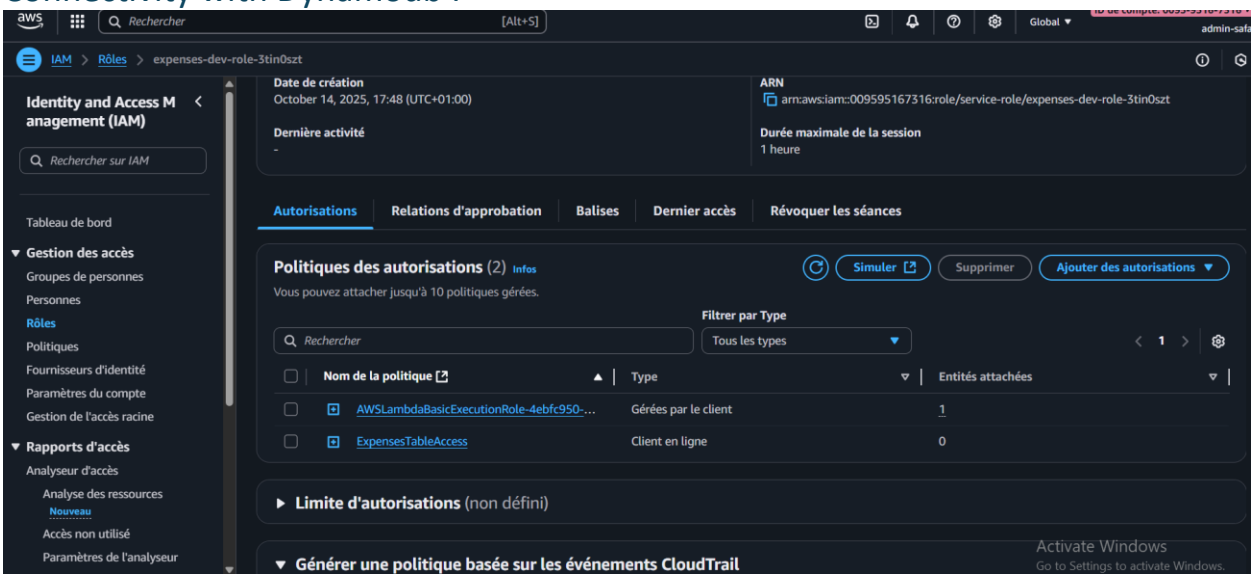
expenses dev Lambda Function :





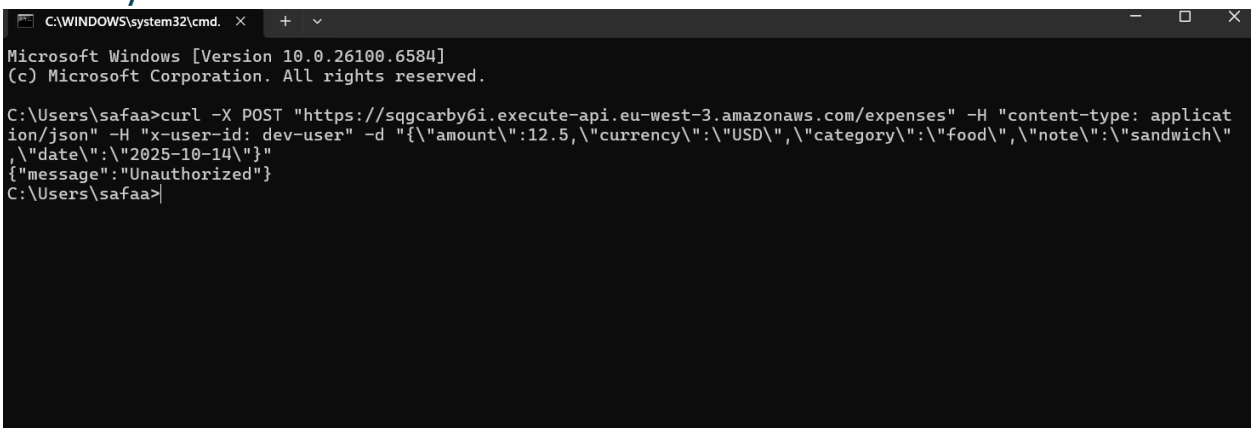


Connectivity with Dynamodb :



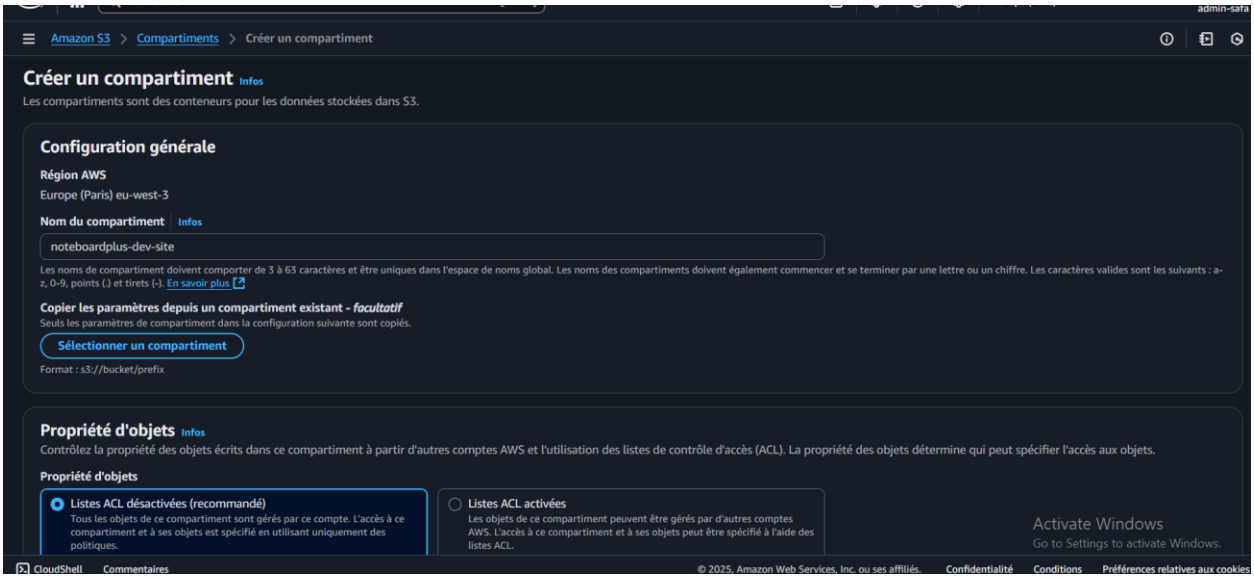
Cognito

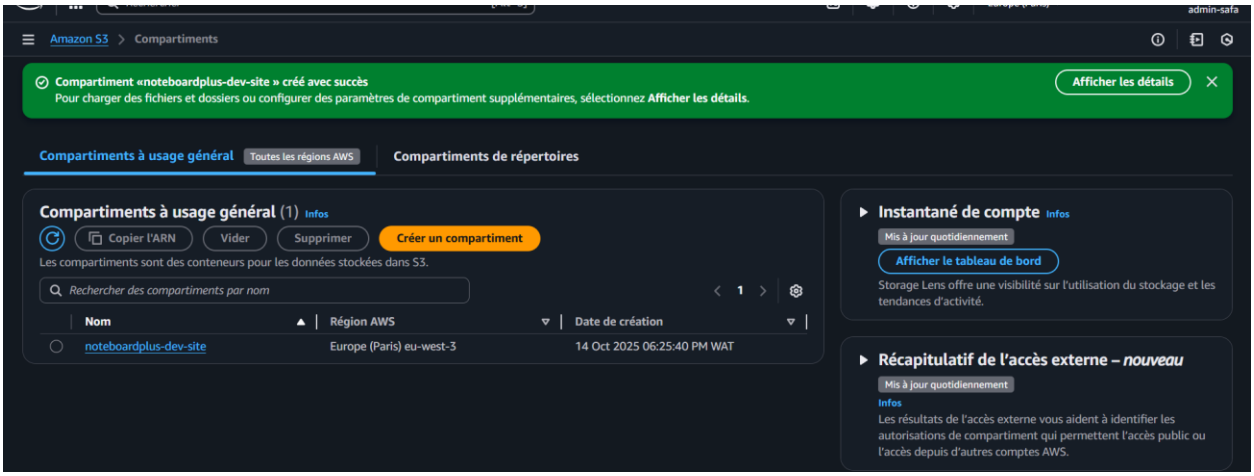
Security Test :



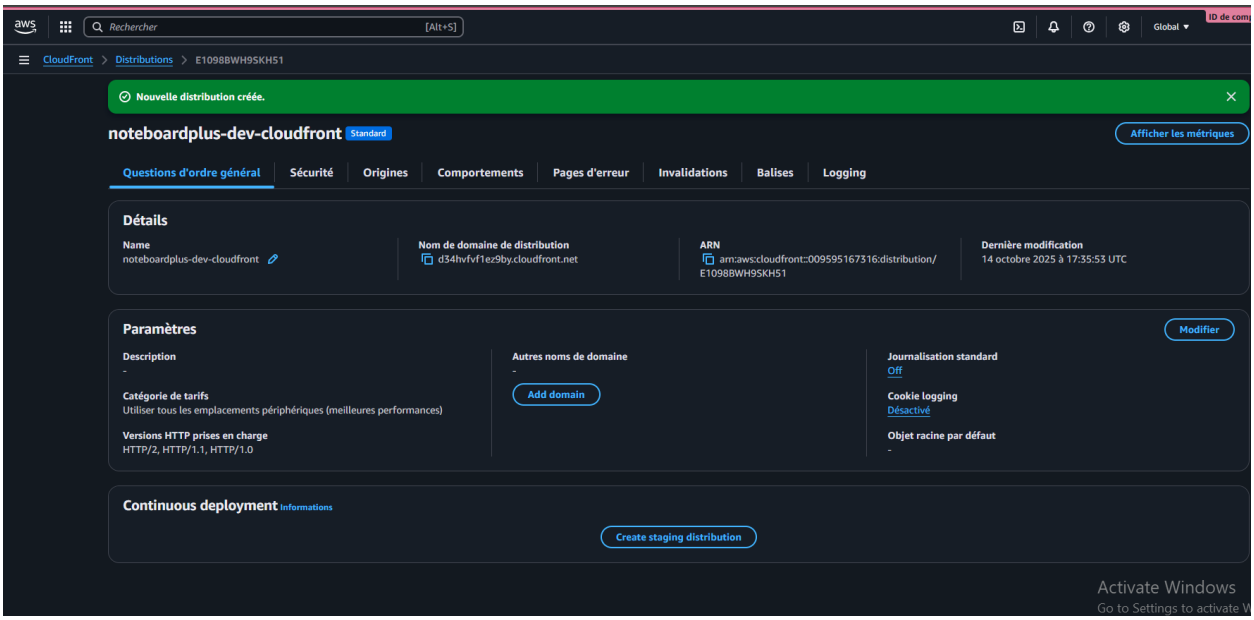
Amazom Simple Storage Service:

Creation

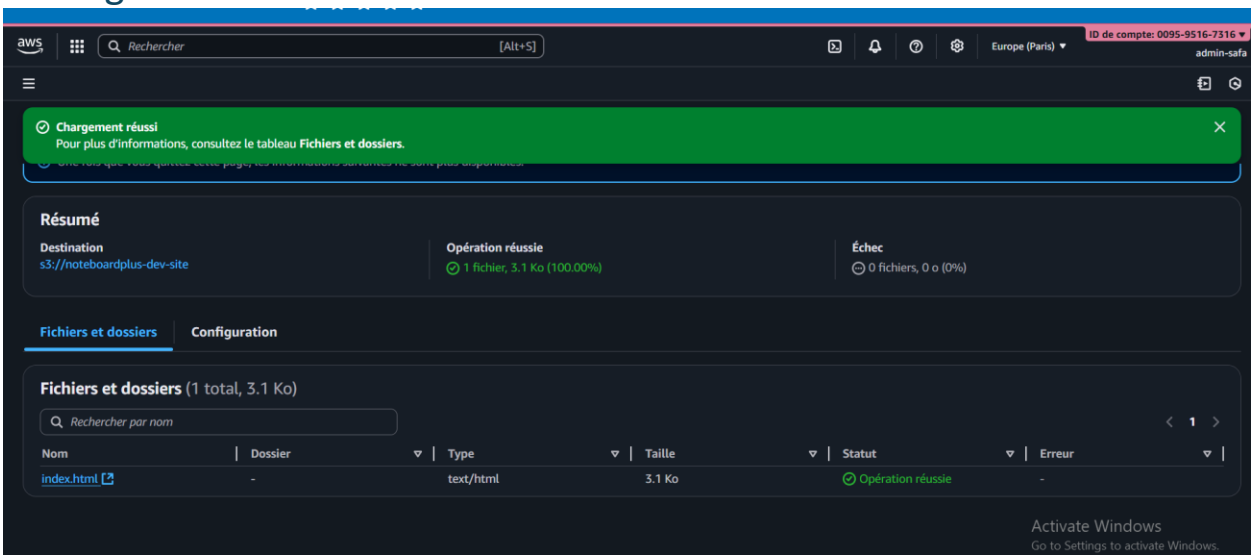


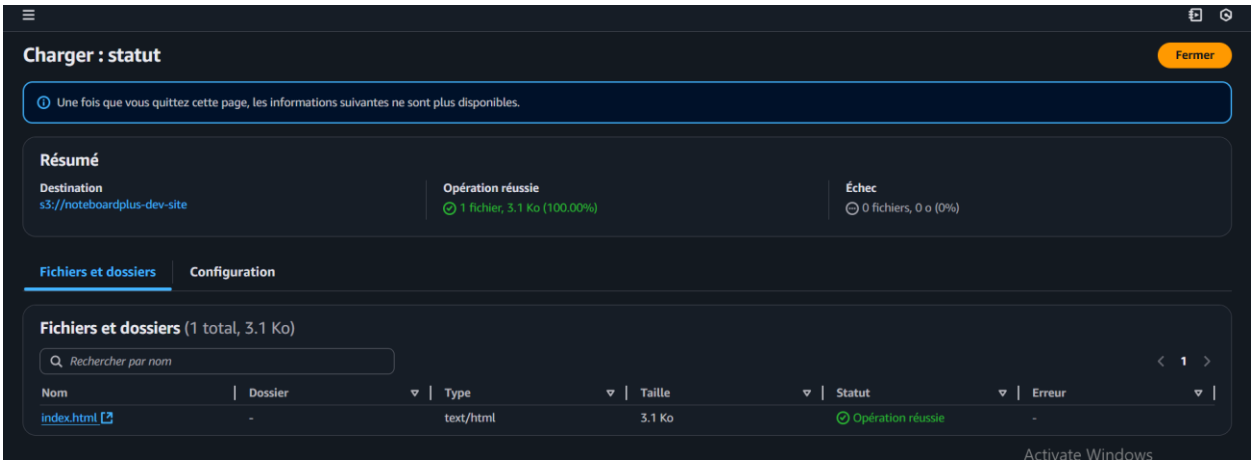


Creation de cloudfront

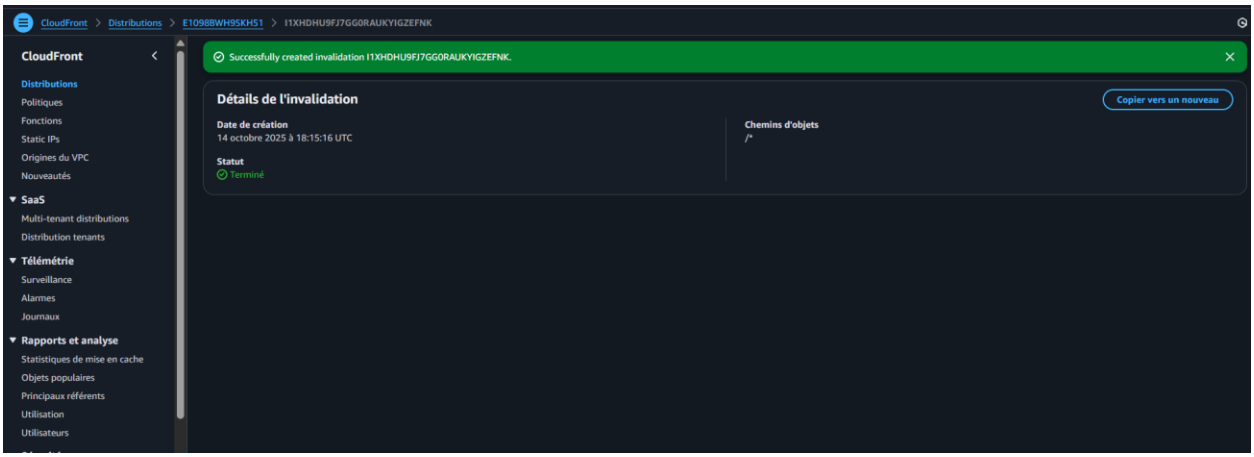


Adding index.html to s3

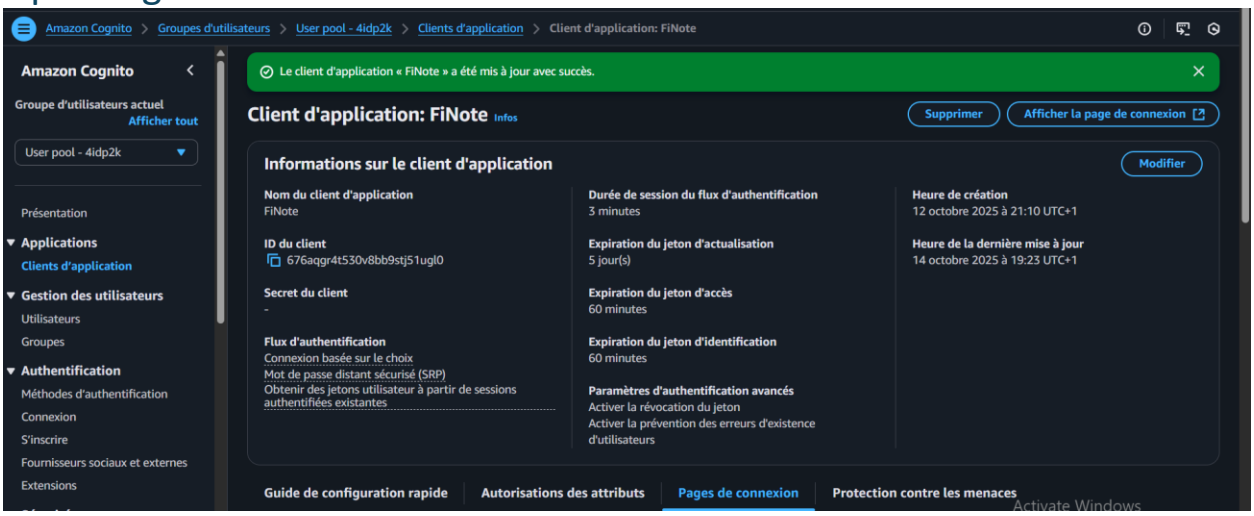




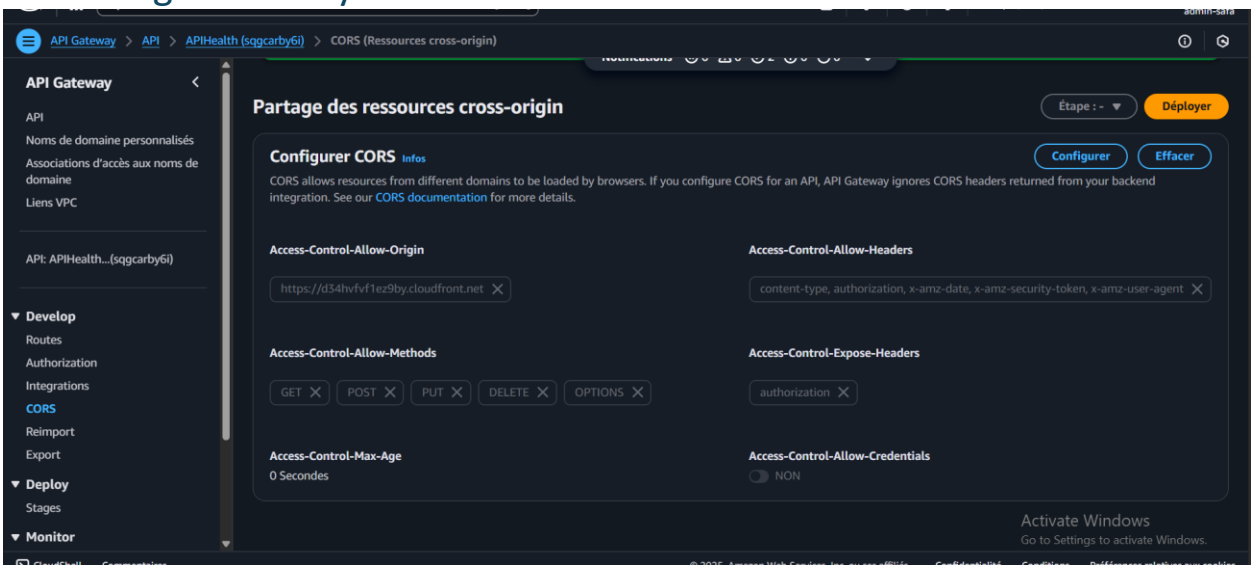
Invalidation with loudFront



Updating authorization URI

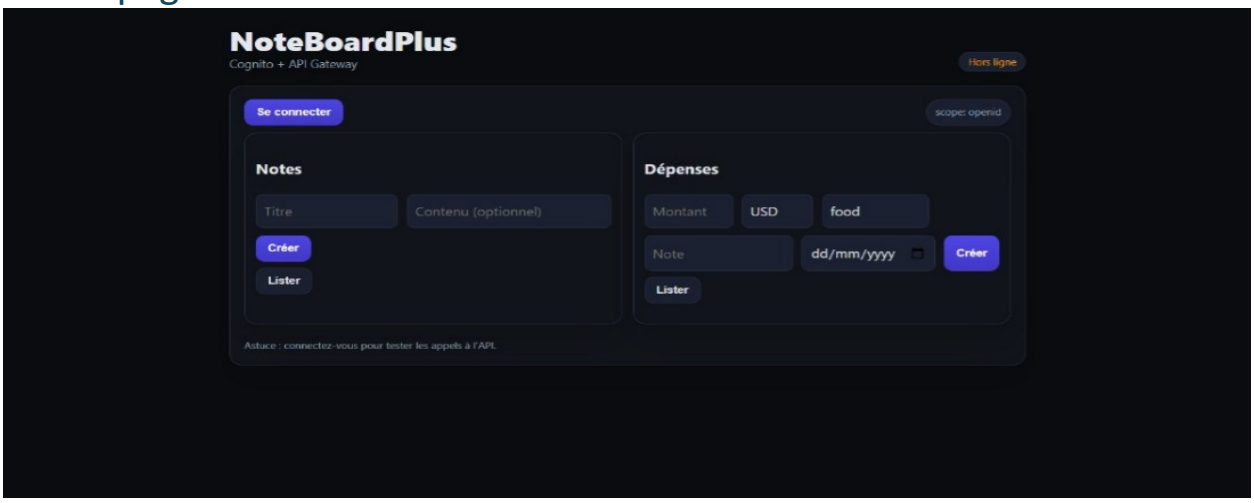


Cross origin Security :

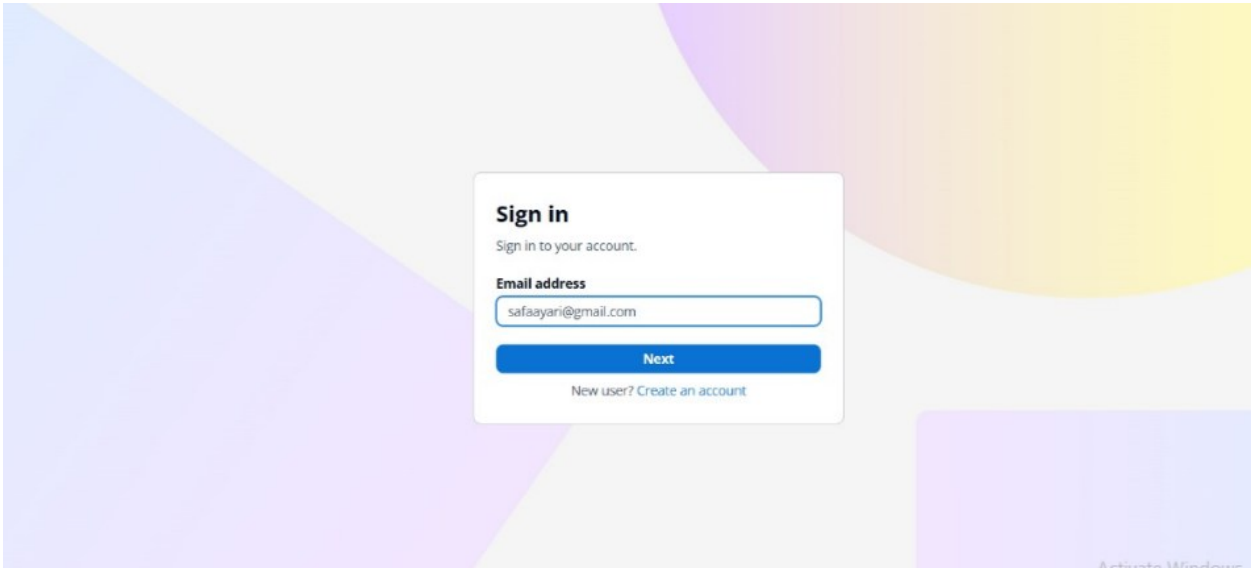


Project ScreenShot:

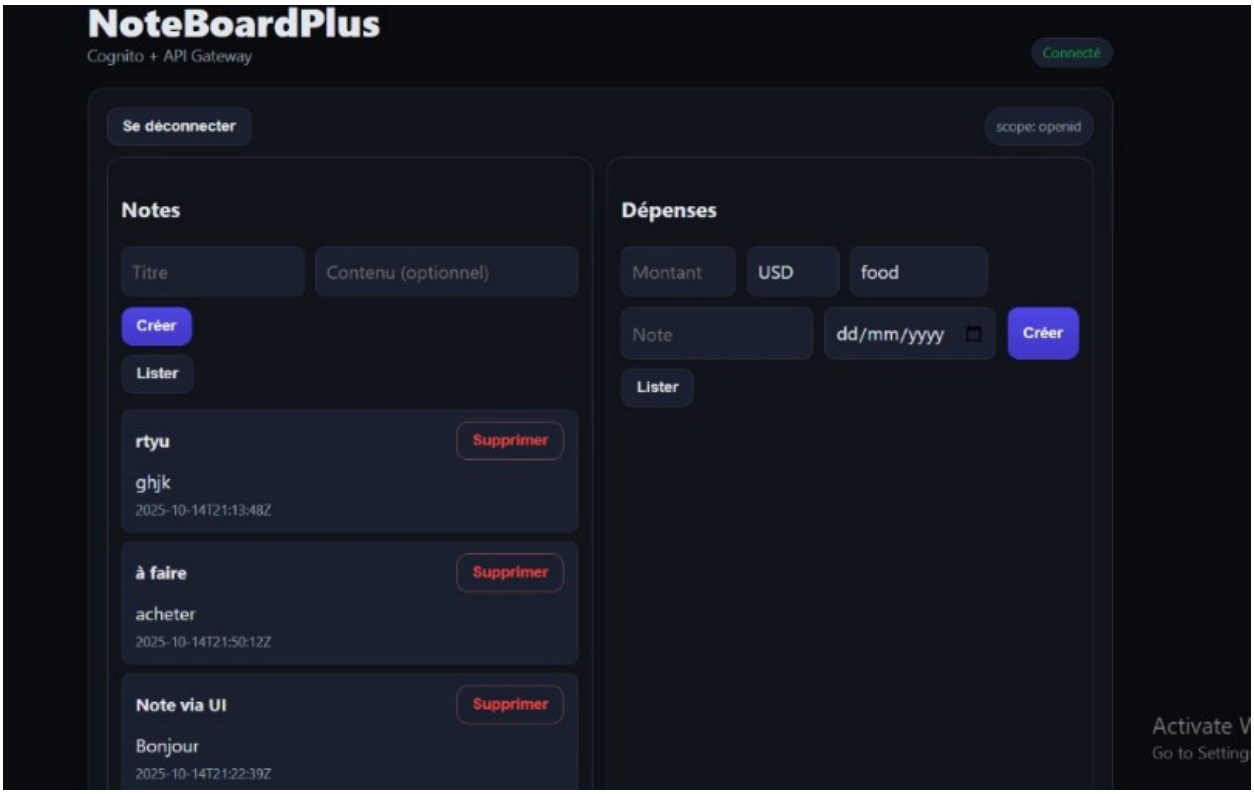
Home page



Sign in page :



NotePage :


NoteBoardPlus
Cognito + API Gateway
Connecté
Se déconnecter
scope: openid
Notes
Titre
Contenu (optionnel)
Créer
Lister
rtyu
Supprimer
ghjk
2025-10-14T21:13:48Z
à faire
Supprimer
acheter
2025-10-14T21:50:12Z
Note via UI
Supprimer
Bonjour
2025-10-14T21:22:39Z
Dépenses
Montant
USD
food
Note
dd/mm/yyyy
Créer
Lister