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Workshop: The bees are important: use SDKs wisely

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Hello, I'm **Paolo**!

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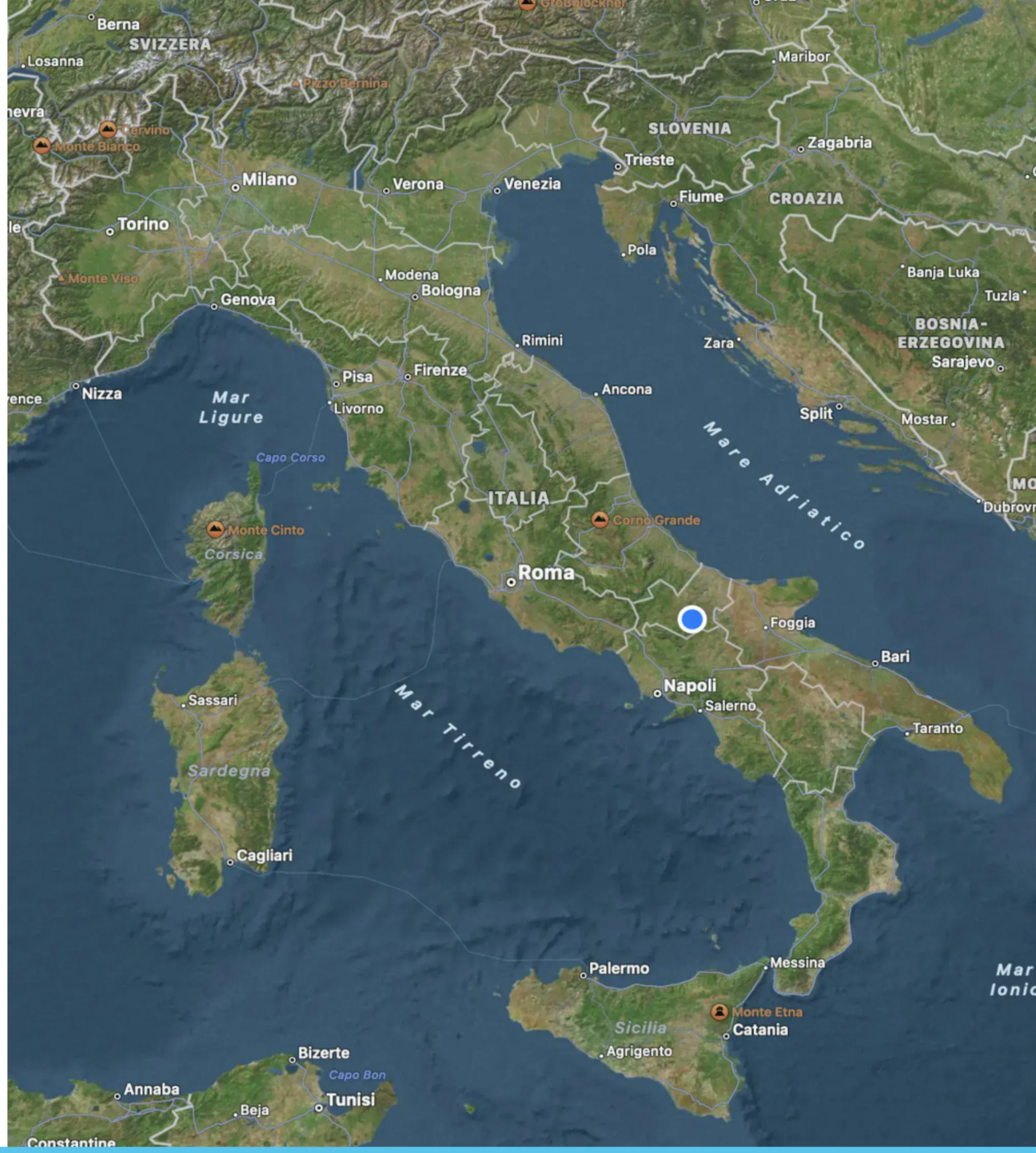


What are we talking about?

Let's start with a brief introduction.

https://talks.paoloinsogna.dev/bees

The details lie in the documentation

AWS S3 PutObject REST API
Documentation

AWS Signature Version 4
Calculations for the Authorization Header

Let's get to the action!

Setup

No dependencies in **`package.json`**, Node.js already has our backs ...

```
{
  "name": "direct",
  "version": "1.0.0",
  "main": "index.js",
  "type": "module",
  "scripts": {},
  "dependencies": {}
}
```

The skeleton

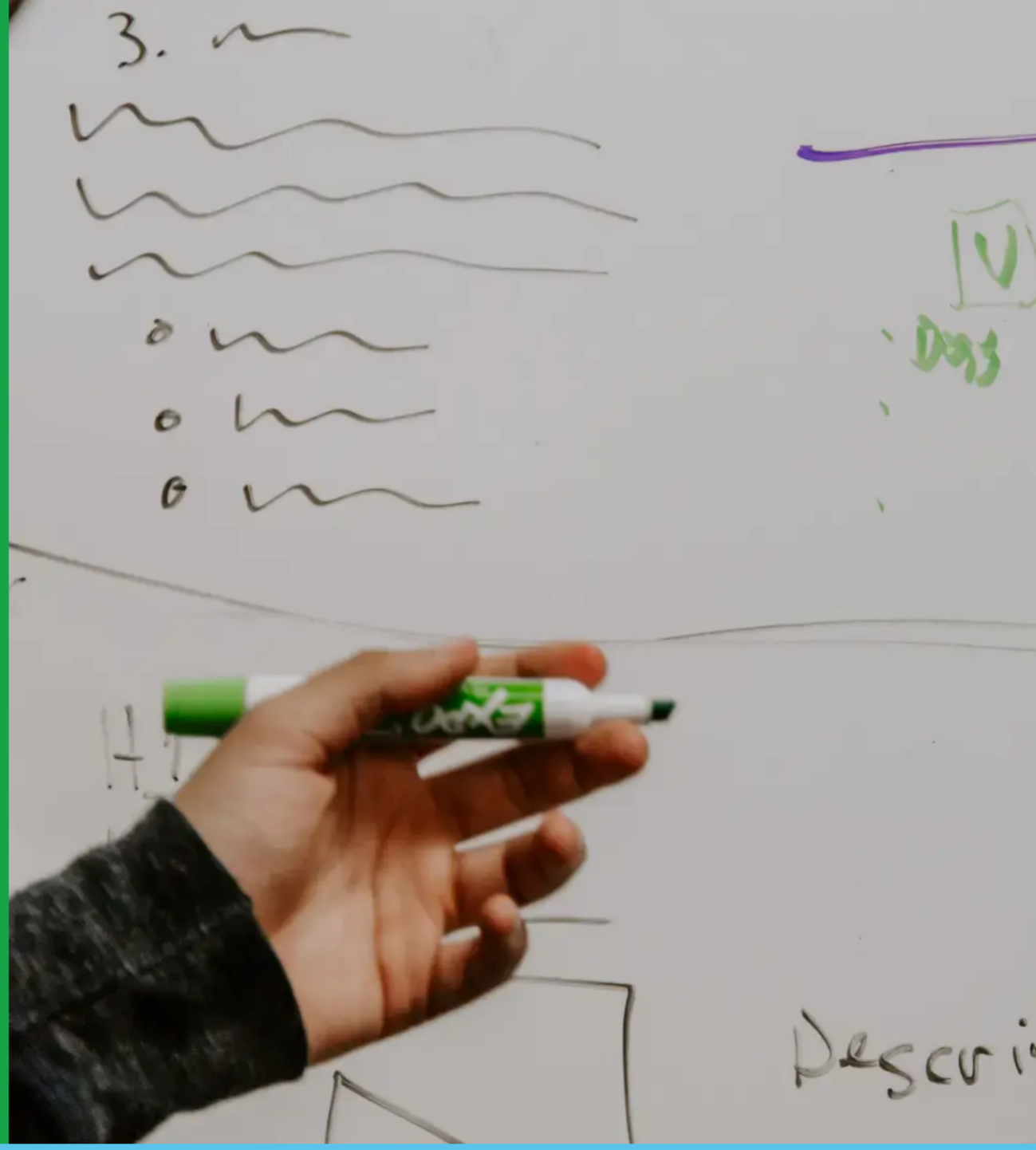
```
1  import { createHash, createHmac } from 'node:crypto'
2  import { readFile } from 'node:fs/promises'
3
4  const awsS3UnsignedPayload = 'UNSIGNED-PAYLOAD'
5
6  function sha256(contents) {
7    return createHash('sha256').update(contents).digest('hex')
8  }
9
10 function hmacSha256(key, contents) {
11   return createHmac('sha256', key).update(contents).digest()
12 }
13
14 // Implements the Authenticating Requests (AWS Signature Version 4) algorithm.
15 function signS3Upload(keyId, accessKey, region, method, rawUrl, headers, payloadHash) {
16   // CanonicalRequest calculation
17   // StringToSign calculation
18   // Signature calculation
19 }
```

Task 1: Create a Canonical Request

Enjoy! 😈

Task 2: Create a String to Sign

Enjoy! 😂

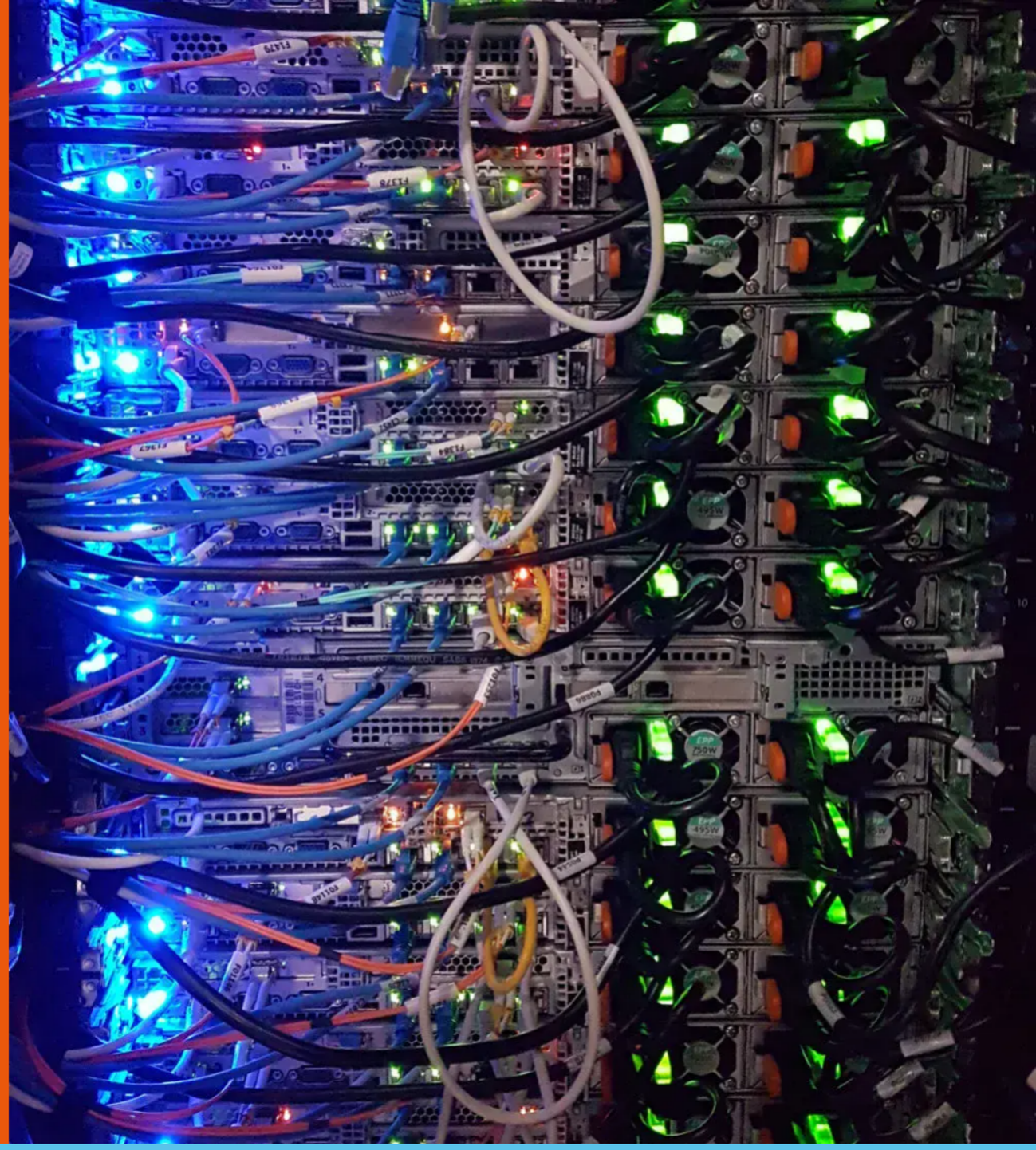


Task 3: Calculate Signature

Enjoy! 😶

Task 4: REST API call

Enjoy! 😎



Task 5: Main function

Enjoy! 🍺

Take home

You can find all the code on GitHub:

https://github.com/ShogunPanda/workshops-bees

Thank you!

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