

Building a scaleable tiling service using Amazon API Gateway

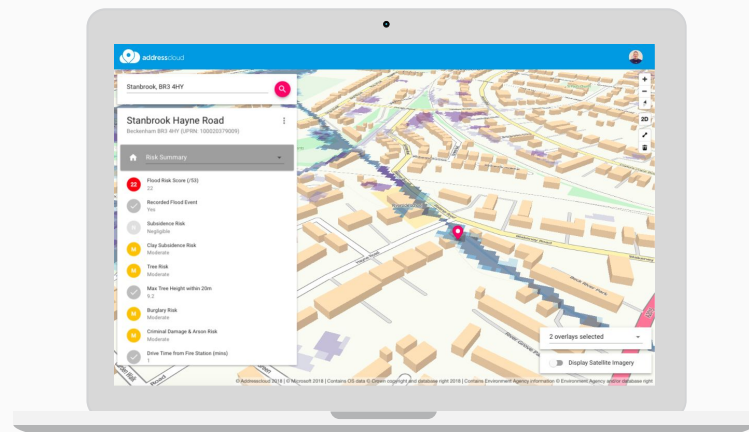
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Why did we build it?

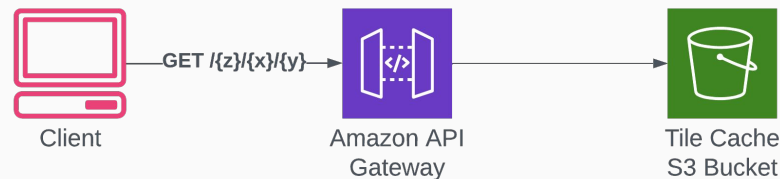
- Protect commercial data
- Operates at scale (serverless)
- Standardise our APIs
- Improve our developer experience



How does it work?

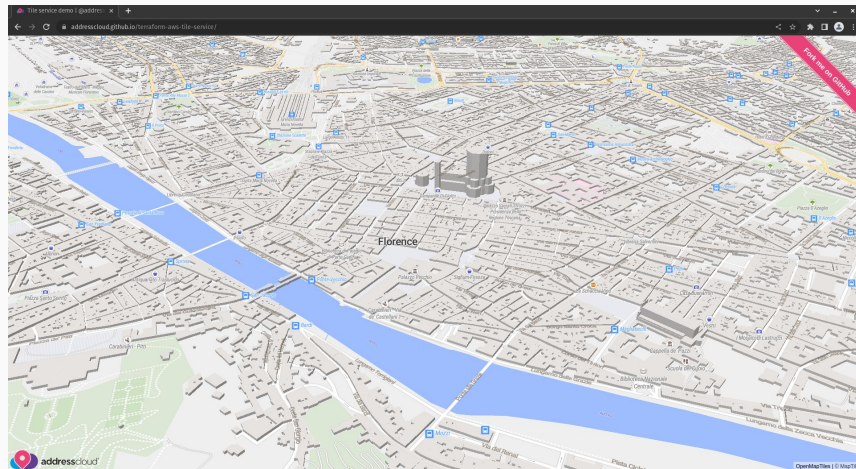
Vector tile service in the cloud

- API Gateway interface
- Slippy tiles spec API
- S3 Bucket storage
- Supports vector tile cache (PBFs)



API Gateway

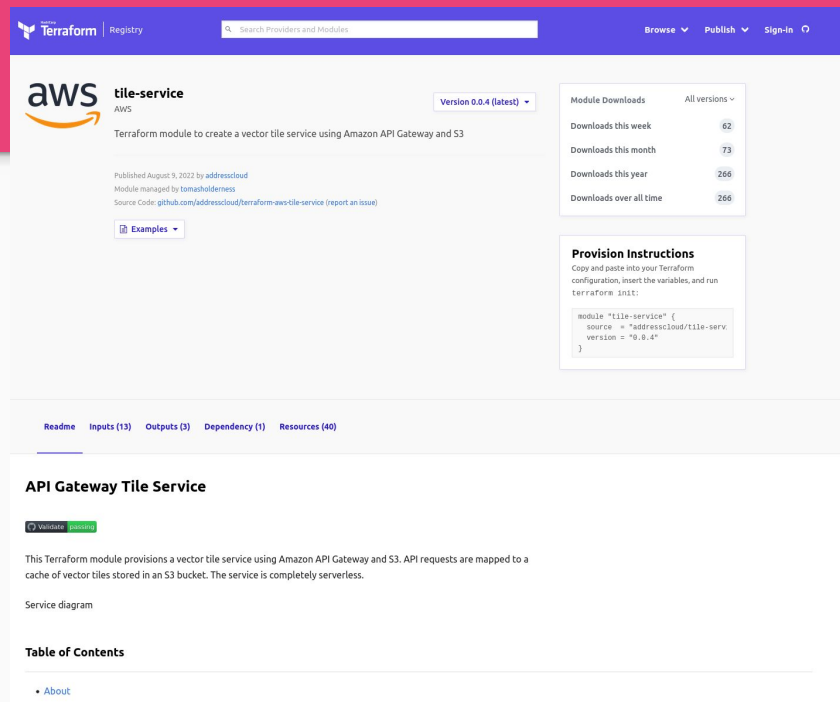
- Forwards HTTP requests to S3
- Protects S3 from public access
- In-built cache available
- Edge deployment via CloudFront
- No Lambda or compute layer



Getting started

Service packaged as Terraform module

1. Terraform run
 - create S3 bucket and API gateway
2. Upload vector tiles and tile.json
3. Instructions and examples on GitHub



The screenshot shows the Terraform Registry page for the 'aws-tile-service' module. The page header includes the Terraform logo, 'Registry', a search bar, and links for 'Browse', 'Publish', and 'Sign in'. The main content area displays the module name 'aws-tile-service' with the AWS logo, the version '0.0.4 (latest)', and a description: 'Terraform module to create a vector tile service using Amazon API Gateway and S3'. It also shows the publication date (August 9, 2022), the maintainer (addresscloud), and the source code link. A 'Provision Instructions' box provides a code snippet for the module. The 'Table of Contents' section includes a link to 'About'.

Module Downloads	All versions
Downloads this week	62
Downloads this month	73
Downloads this year	266
Downloads over all time	266

```
module "tile-service" {
  source = "addresscloud/tile-serv"
  version = "0.0.4"
}
```

API Gateway Tile Service

This Terraform module provisions a vector tile service using Amazon API Gateway and S3. API requests are mapped to a cache of vector tiles stored in an S3 bucket. The service is completely serverless.

Table of Contents

- About

Bonus features

- Modify API response using VTL
 - update TileJson on-the-fly
- Supports custom S3 policies
 - Use S3 replication
 - Replicate cross-region/account



Resources

- This talk
 - <https://github.com/addresscloud/terraform-aws-tile-service>
- Serverless vector tiles with Cloudfront CDN (FOSS4G 2018):
 - <https://github.com/addresscloud/serverless-tiles>
- Raster tiles with rio-tiler
 - <https://cogeotiff.github.io/rio-tiler/>