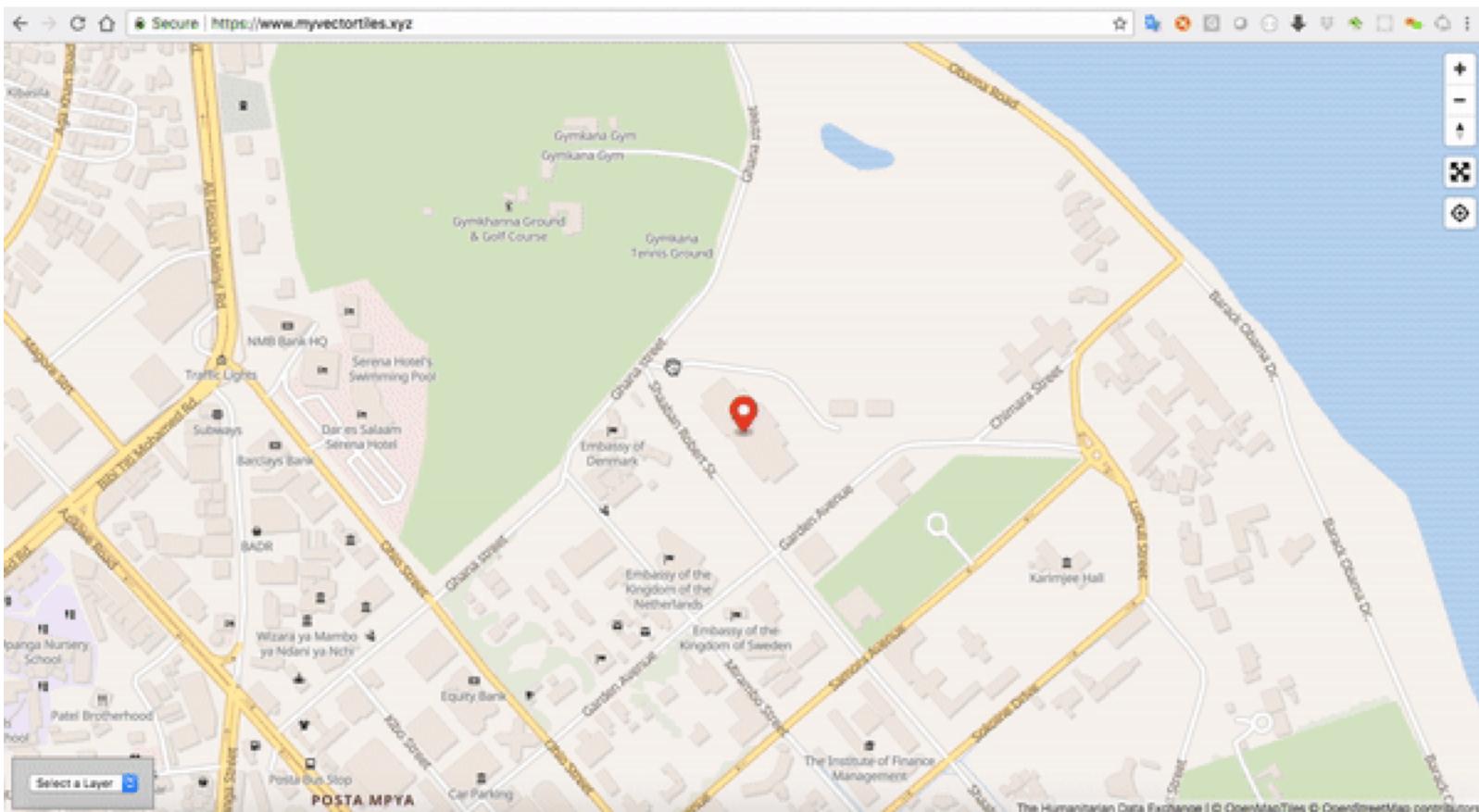


Serverless Vector Tiles on AWS

Mark Varley <mark@addresscloud.com>

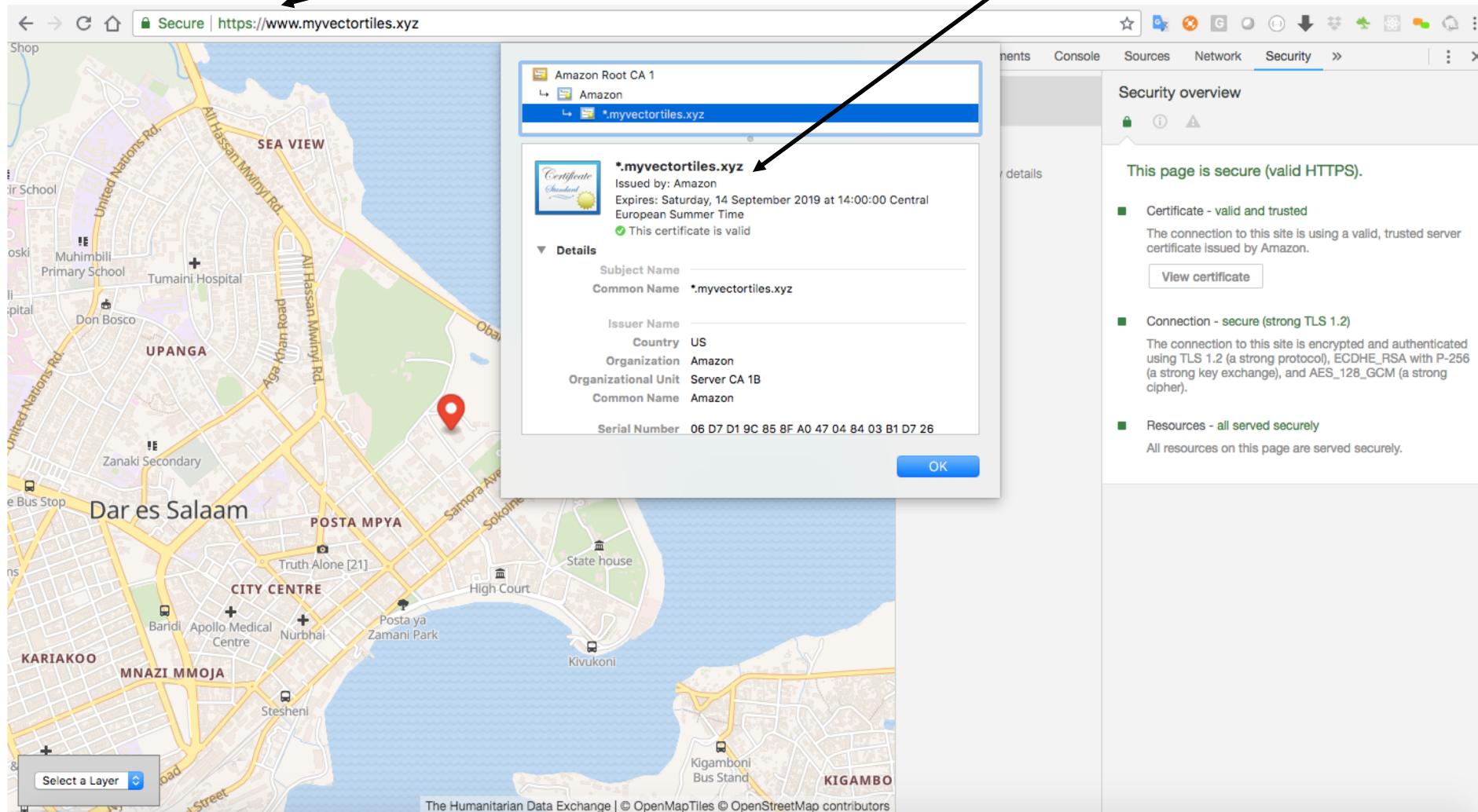
Let's start with the end



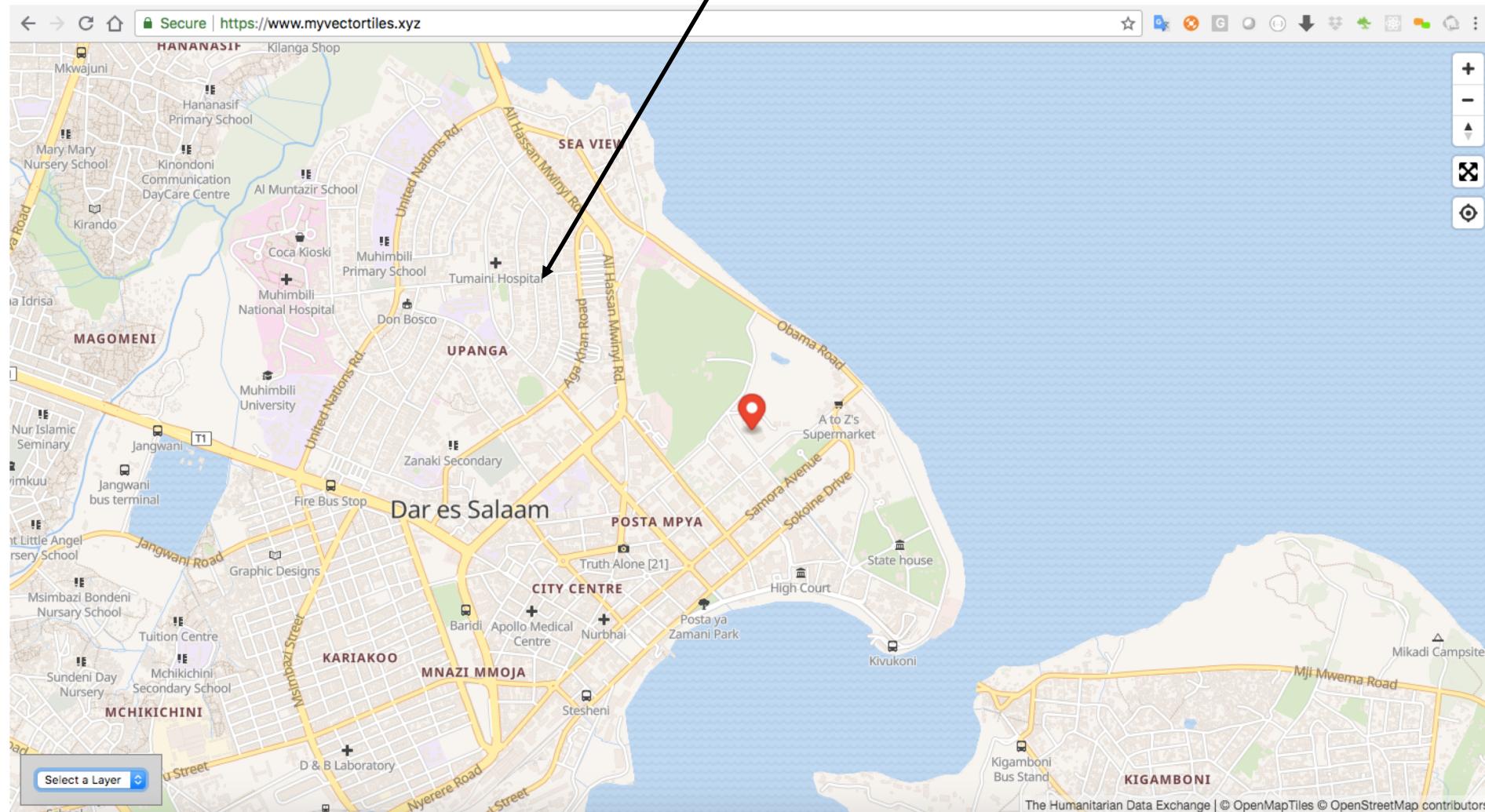
VERY GOOD

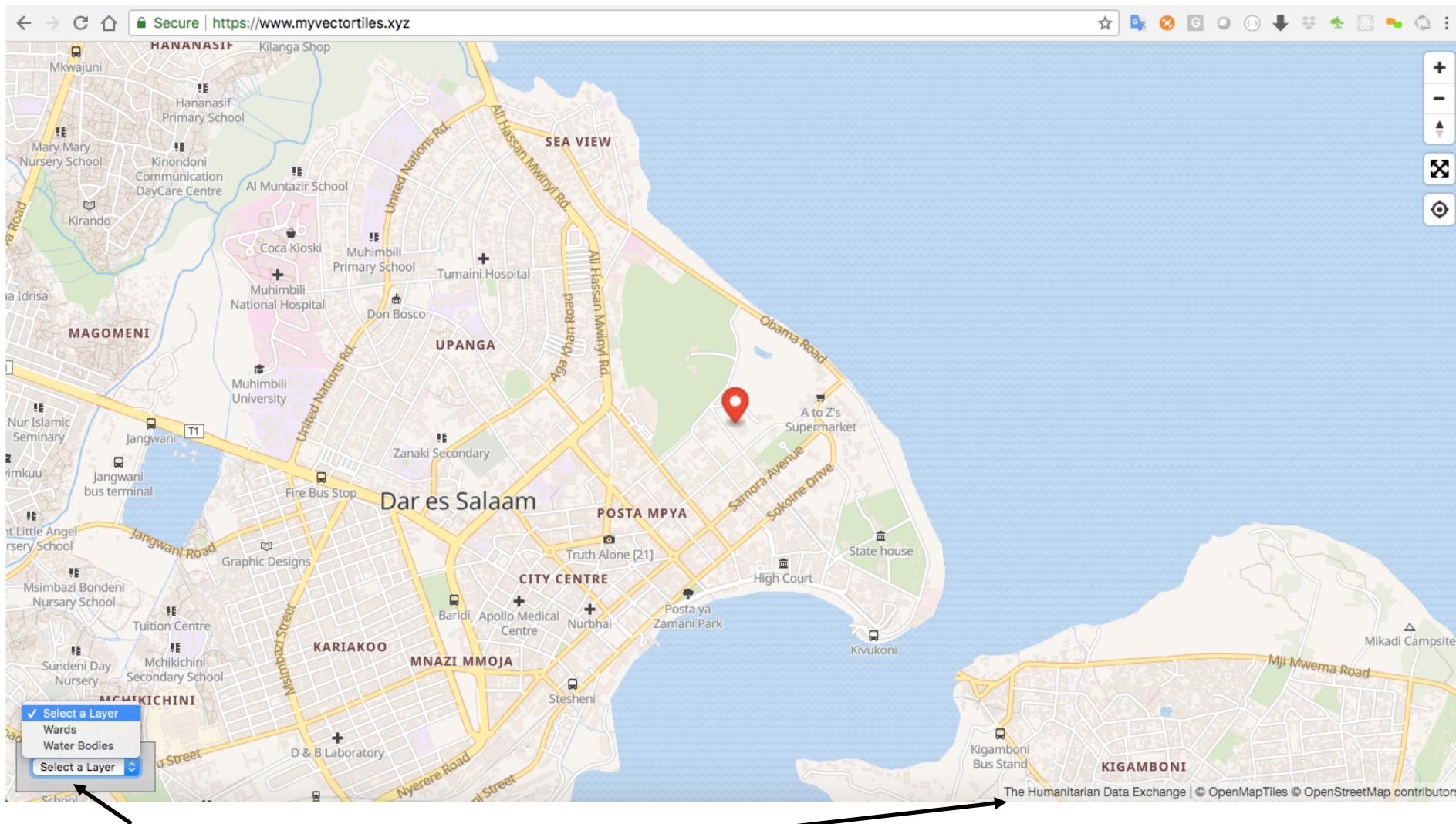
I CLAP FOR YOU

It's secure and running on our domain



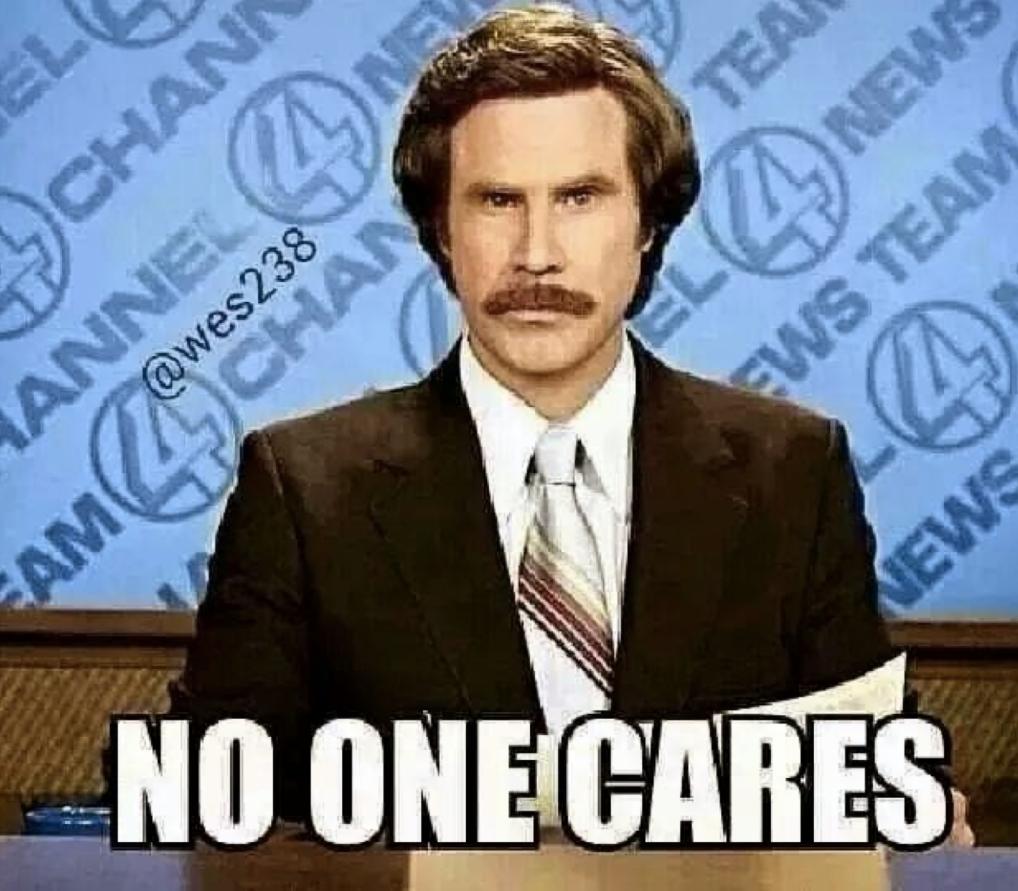
We are hosting our own OpenStreetMap vector tiles which we can style on the fly

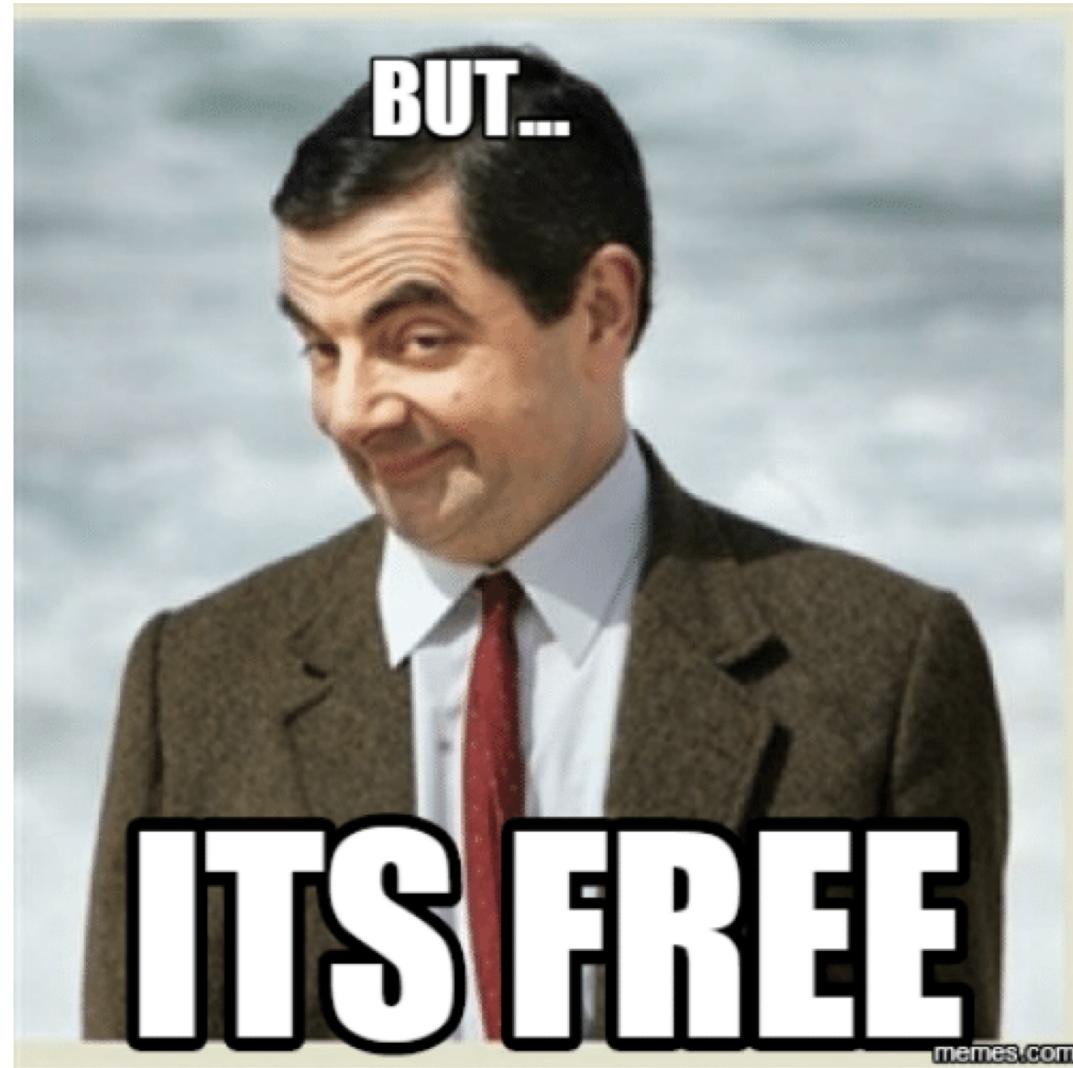




We are overlaying our own data

THIS JUST IN





*(Almost)

**THAT FACE U MAKE WHEN
SOMEONE SAY IT'S FREE**

AND THERE ISN'T A CATCH

imgflip.com



Free Usage Tier

For New AWS Customer

*Free for one year since AWS sign up



OpenStreetMap

Amazon CloudFront	\$0.18
Charges	\$0.17
VAT **	\$0.01
GST	\$0.00
Estimated US sales tax to be collected	\$0.00
CT	\$0.00

What are our requirements?

<https://www.myvectortiles.xyz/>

The screenshot shows a web browser window with a map of Dar es Salaam, Tanzania, on the left and a network performance monitor on the right.

Map View: The map displays the city's coastline and major roads. Labeled areas include UPANGA, CITY CENTRE, KARIAKOO, MNAZI MMOJA, and KIGAMBO. Key landmarks shown are the State House, High Court, and various hospitals like Tumaini Hospital and Muhimbil Primary School. A red location pin is placed near the center of the city. A legend at the bottom left says "Select a Layer".

Network Tab: The Network tab in the developer tools shows the following requests:

Name	Status	Type	Initiator	Size	Ti...	Waterfall
myvectortiles.xyz	301	Other		275 B	2...	
www.myvectortiles.xyz	301	text/html	myve...	380 B	7...	
www.myvectortiles.xyz	200	document	www...	1.4 KB	2...	
mapbox-gl.js	200	script	(index)	158 KB	1...	
mapbox-gl.css	200	stylesheet	(index)	7.5 KB	1...	
data:image/webp;bas...	200	webp	brow...	(from memory ...	0 ...	
462c5797-bf68-497f-9f...	200	text/javas...	sourc...	(from disk cac...	4 ...	
462c5797-bf68-497f-9f...	200	text/javas...	sourc...	(from disk cac...	4 ...	
bright.json	200	xhr	ajax...	5.9 KB	1...	
data:image/svg+xml;...	200	svg+xml	(index)	(from memory ...	0 ...	
data:image/svg+xml;...	200	svg+xml	(index)	(from memory ...	0 ...	
data:image/svg+xml;...	200	svg+xml	(index)	(from memory ...	0 ...	
data:image/svg+xml;...	200	svg+xml	(index)	(from memory ...	0 ...	
data:image/svg+xml;...	200	svg+xml	(index)	(from memory ...	0 ...	
tile.json	200	xhr	ajax...	9.8 KB	1...	
tile.json	200	xhr	ajax...	12.5 KB	1...	
sprite.json	200	xhr	ajax.j...	1.5 KB	9...	
sprite.png	200	xhr	ajax...	16.9 KB	1...	
8502.pbf	200	xhr	blob...	54.9 KB	4...	
8502.pbf	200	xhr	blob...	292 KB	7...	
8503.pbf	200	xhr	blob...	298 KB	1...	
8502.pbf	200	xhr	blob...	1.7 KB	3...	
8503.pbf	200	xhr	blob...	103 KB	1...	
8503.pbf	200	xhr	blob...	72.3 KB	1...	

At the bottom of the browser window, there are links for "App Store" and "Stand". The footer includes the text "The Humanitarian Data Exchange | © OpenMapTiles © OpenStreetMap contributors" and "33 requests | 1.4 MB transferred | Finish: 19.66 s | DOMContentLoaded: 1.48 s | Load: 1.68 s".

1) We need to serve the map page
and have it load quickly



+



2) We need to support HTTPS



+



3) We need to generate vector tiles and serve these quickly



+



4) We need to support multiple subdomains to optimise performance



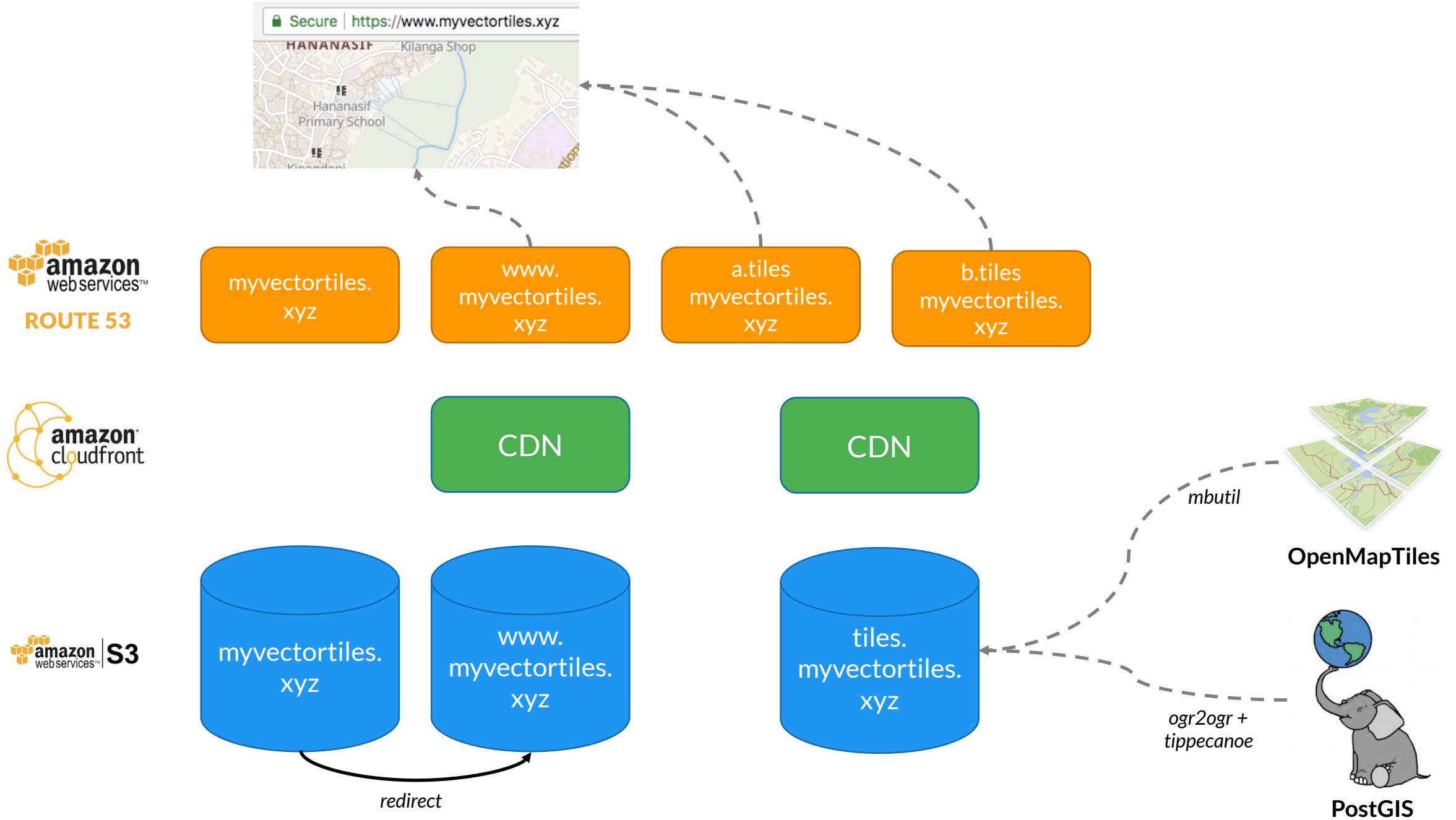
ROUTE 53

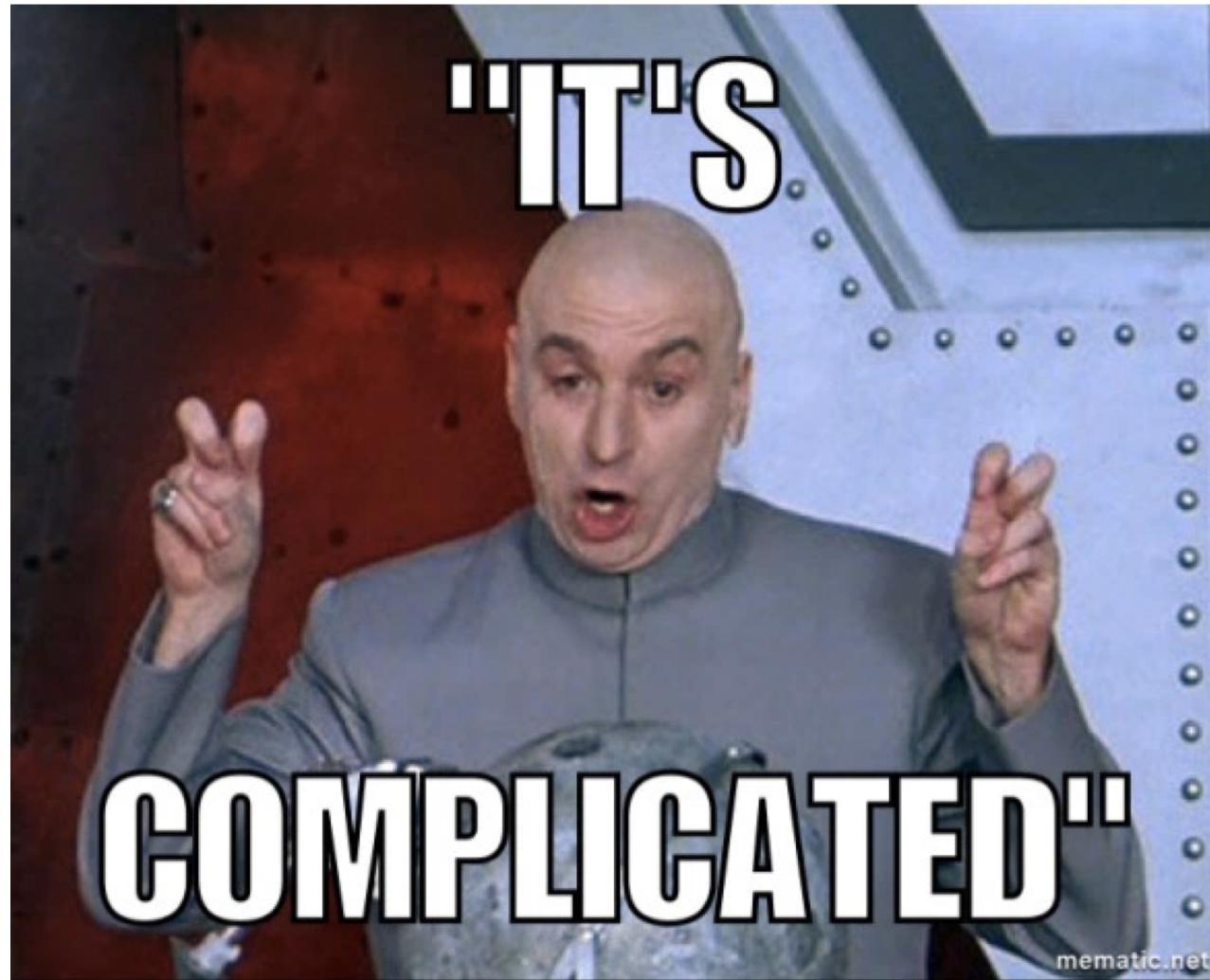
5) We need to be able to scale from 1 to 1 million users instantly

SIT BACK 'N RELAX

WE GOT THIS

Putting it all together





mematic.net

So I did it myself and wrote it all
down

[https://github.com/addresscloud/
serverless-tiles](https://github.com/addresscloud/serverless-tiles)

Mark Varley

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