# Serverless? are there any Cons?

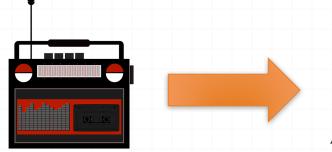
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### The New Paradigm





Netflix: 125 million streaming hours a day





Millennials spend 25 hours a week streaming music

✓ From Passive Delivery, to Active Delivery

**Event-based** 

### From Streaming to File Transfer

Spotify Free Everything you want from music. Completely free	Foatures Upgrade Help Login Get Spotty Premium Your music is everywhere, \$9.99 per month	You Tube Red	
Listen on mobile, tablet & computer Millions of songa – just hit play Made possible by ads	Play any song, anywhere Download music & listen offline in high-quality audity No audio ads & no commitment	S Because you () (±) (f)	
GetFree	Try Premium  Try Premium  My Downloads  Home  Available for Download	I-free videos     Save offline     Background play	
	Netflix Originais TV Shows	Trending Now	
	Action & Adventure Award-winning Movies Children & Family Movies	C R W N Because you	

- Subscription pays more than adds!
- ✓ Streaming is costly!
- ✓ Solution: File Transfer with Smart-Client
- Transfer from long-lived event, to short lived event!

## Why not simply PaaS?

	Google Developers Console	My Project 📼	Sign up for a free	trial. D	0	φ
	Overview	OAuth No client IDs found.				
	Permissions	OAuth 2.0 allows users to				
	APIs & auth	Create a new key	×			
	APIs		and a short second s			
	Credentials	The APIs represented in the Google Developers Console re include a unique project identifier. This enables the Conso				
	Consent screen	specific project forder to monitor traffic, enforce quotas,	and handle billing.			
	Push	Server key Browser key Android key iOS key				
	Monitoring					
	Source Code					
(	Deploy & Manage	Public API access No keys found.				
	Compute	Use of this key does not				
	Networking	require any user action or				
	Storage	consent, does not grant access to any account				
	Big Data	information, and is not used for authorization.				
		Learn more				
		Create new Key				
	<<					

Manage min # of instances
 With microservice this can grow
 Manage the workflow
 Scaling is reactive, not deterministic

## Pricing is a trap!

A function created with 1 GB of memory will cost \$0.000001667 per 100ms of execution time





Amazon provides a perpetual free tier with 1 million free requests and **400,000 GB-seconds** of compute time per month

5M requests, 100GB data moving, 10M GB-seconds = \$62.307 per month



ACTION EXECUTION TIME	ACTION MEMORY	EXECUTIONS PER MONTH	COST PER MONTH
500ms	128MB	5,000,000	Free
500ms	256MB	5,000,000	\$3.83

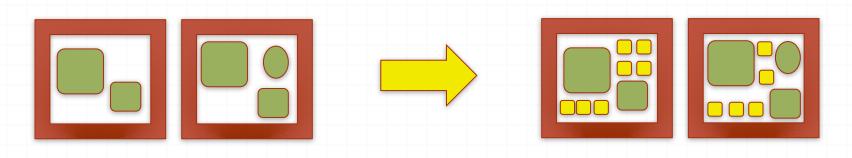
# Making Sense Of Pricing

Cloud Providers know that:

serverless cannot work independently

You will need a backends that the cloud provider is offering (less latency), otherwise you pay for egress
As well as other services, and notifications ...

The model allows Cloud Providers to fill unused resources in small portions



# Any Cons?

#### When Public:

It may not be suitable for privacy-sensitive apps
Government, healthcare, Banking, ...

- \*It may not be suitable for latency-sensitive applications
- You cannot customize your infrastructure to better suit your needs (e.g. lighter OS)

Vendor lock-in with the APIs and ther services eco-system

#### When Private:

You have to manage and maintain the serverless framework

Typically it is a multicomponent system (nginx, kafka, CouchDB, ...)

Deployment, Availability, scaling, ...

# Any Cons?

You need to consider building thicker smarter front ends

E.g. make Third Party Calls and embed them in the request action

Smarter front-ends can help reducing the number of invocations, and making sense of the results

## Remaining Question

#### Is it still worth it??

