

Lambda monthly cost estimation - simple-forecast-raw-to-structured

Duration of each request:

- We tested it on 30 urls (sample-urls.txt)
 - it takes 11007 billing ms to complete
- So what is the real processing time per day?
 - if we increase 100 times the volumetry, then we'll have 3000 urls per day to process
 - the processing time is linear so it will take 1100700 billing ms to complete
 - as the maximum time of Lambda is 900000 ms, we can split into **2 batches** of **550350 ms**

Amount of memory allocated:

- We tested it on 30 urls with 128 MB
 - should be more than enough to process 3000 urls (one DataFrame row per url)

Amount of ephemeral storage allocated:

- We tested it on 30 urls (sample-urls.txt) with 512 MB of Ephemeral storage
 - This should be more than enough to process 3000 urls

Lambda monthly cost estimation - simple-forecast-structured-to-sqs

Duration of each request:

- We tested it on 30 urls (sample-urls.txt)
 - it takes 12119 billing ms to complete
- So what is the real processing time per day?
 - if we increase 100 times the volumetry, then we'll have 3000 urls per day to process
 - the processing time is linear so it will take 1211900 billing ms to complete
 - as the maximum time of Lambda is 900000 ms, we can split into **2 batches** of **605950 ms**

Amount of memory allocated:

- 128 MB

Amount of ephemeral storage allocated:

- 512 MB

Lambda monthly cost estimation - simple-forecast-sqs-to-rds

Duration of each request:

- We tested it on 30 urls (sample-urls.txt)
 - it takes 27 billing ms to complete per url
- So what is the real processing time per day?
 - if we increase 100 times the volumetry, then we'll have 3000 urls per day to process
 - the processing time is linear so it will take $3000 \times 27 = 81000$ billing ms to complete
 - as we'll have 2 batches, we'll have **40500 billing ms** per batch

Amount of memory allocated:

- 128 MB

Amount of ephemeral storage allocated:

- 512 MB

S3 monthly cost estimation - simple-forecast-bucket and simple-forecast-structured-files-bucket

- Ephemeral storage of each lambda is 512 MB
- Per day, we'll have 2 batches of 3 of these lambda functions executions.
 - So we'll need $2 \times 3 \times 512 = 3072$ MB of ephemeral storage.
- If we consider this ephemeral storage is then stored in Lambda, then we'll need 3072 MB of S3 storage per day.
 - As we have more or less the same amount of data to store in 2 S3 separated buckets, then the total of S3 storage we would need per day is about $2 \times 3072 \text{ MB} = 6144 \text{ MB} = 6.144 \text{ GB}$
 - So we'll need about $30 \times 6.144 \text{ GB per month} = 184.320 \text{ GB per month}$

SQS cost - simple-forecast-queue

- As we have one url per message event, we'll have 3000 queue requests per day
 - So we'll have about $30 \times 3000 = 90000$ queue requests per month = 0.09 million of requests per month

RDS cost - krz-ml-mba-test-1

- We tested with a db.t3.micro instance
 - but we'll have 3000 new rows update/addition per day
 - there is a limited number of Pokemons, so a few GB should more than enough to store all of them.
 - So we'll consider a db.t2.small instance (2 GB, 1 vCPU)