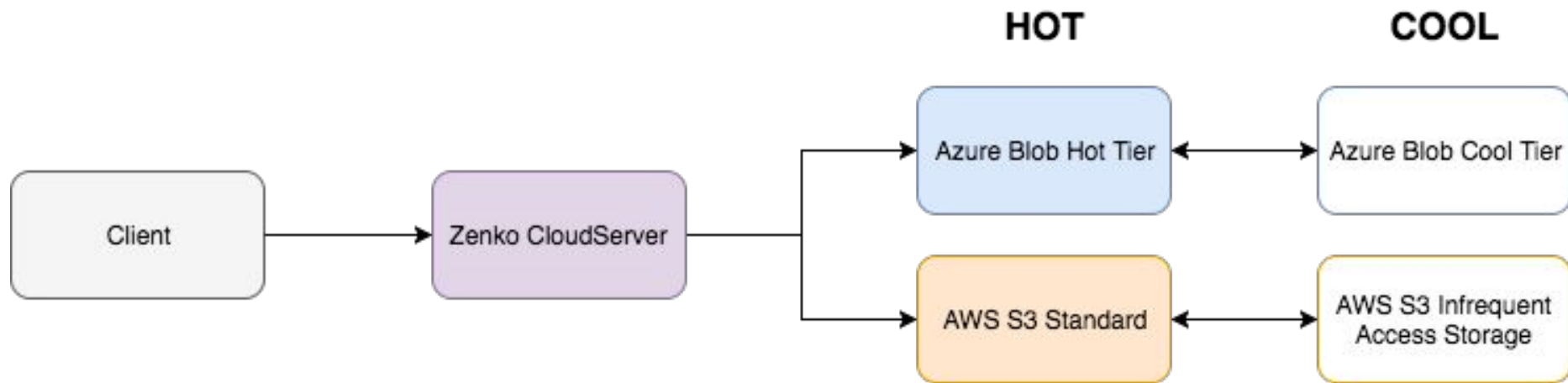


DATA-JANITOR

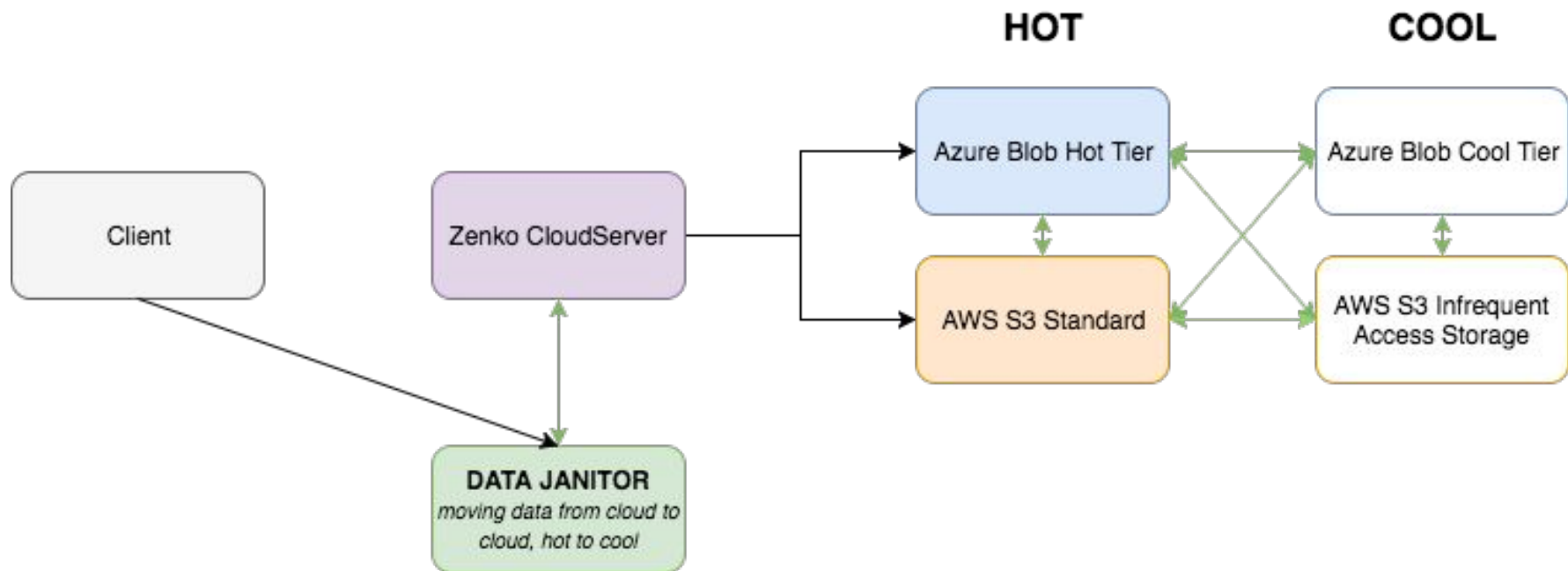
Ze Janitorz



THE SITUATION :



WHAT WE ARE BUILDING :



TRANSFER YOUR DATA FOR A BETTER CONCURRENT OFFER, IS IT WORTH IT ?



Algo in three steps :

- compare access, transfer and storage prices of each part
- calculate the cost of transfer :

$$size_{object} * \underbrace{price_{download}}_{free\ upload} + (price_{GET} + price_{PUT}) * \overbrace{\frac{size_{object}}{size_{chunk}}}^{nb_{chunks}}$$

- how long would it take to absorb the cost of transfer ?

TRANSFER YOUR DATA FOR A BETTER CONCURRENT OFFER, IS IT WORTH IT ?

Region : EU-West	AWS Hot	Azure Hot
Stockage /month and /Gb	0,024\$	0,0196\$
Download /Gb	0,09\$	0,087\$
Request PUT (for 10 000)	0,0053\$	0,0054\$
Request GET (for 10 000)	0,0042\$	0,0043\$
Other request (for 10 000)	0,0053\$	0,0054\$

Example : AWS to Azure

Size : 1 Gb

Chunks number : 100

Cost of transfer : about 9 cents

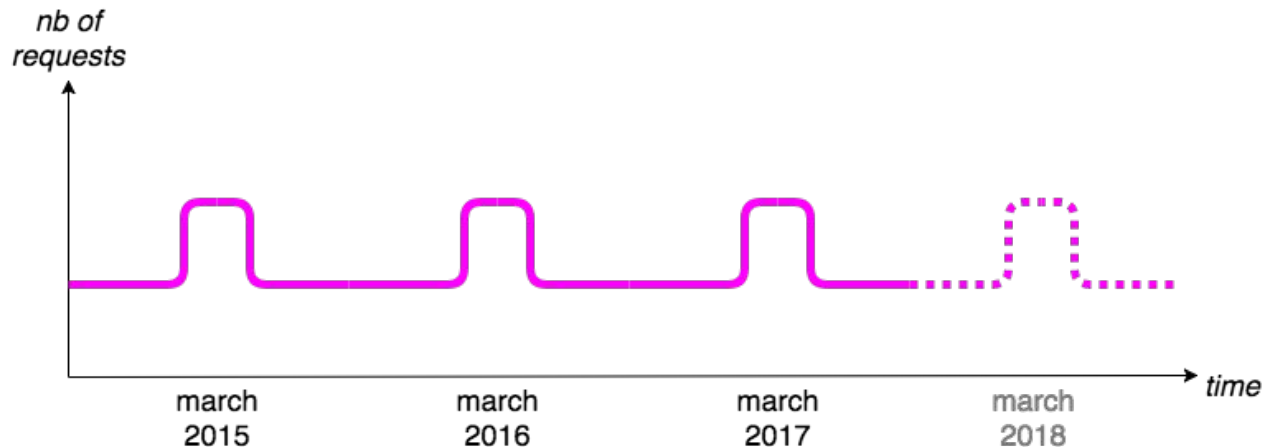
Benefit per month thanks to lower
Azure's stockage price : 0,44 cent/Gb

Rentabilty in 20 months



TRANSFER YOUR DATA DUE TO YOUR USAGE, IS IT WORTH IT ?

- **A.I. project based on objects metadatas** : which requests ? How many ?
- **Anticipate** the trend of your usage and **switch between cool and hot storage** :



Example :

Go to a hot storage in march, go back to cool for the rest of the year.

- **Move** the data to the cheaper cool/hot storage (Azure or AWS) thanks to Zenko CloudServer used by the Data-Janitor

DEMO TIME : DATA TRANSFER !



DEMO TIME : DATA TRANSFER !

Test with a 2.4Gb file:

```
→ app git:(move_bucket) ✗ node move.js Paul.mkv sarah-azure sarah-aws
```

```
→ app git:(move_bucket) ✗ s3cmd la
```

```
2017-11-09 11:06 26055503 s3://sarah-aws/japan.mp3
2017-11-09 11:12 26055503 s3://sarah-aws/japan2.mp3
2017-11-08 08:35 0 s3://sarah-aws/titi
2017-11-09 09:51 6 s3://sarah-aws/tutu
```

```
DIR s3://sarah-azure//
2017-11-09 11:44 2549385264 s3://sarah-azure/Paul.mkv
2017-11-08 10:44 26055503 s3://sarah-azure/japan.mp3
2017-11-08 08:42 0 s3://sarah-azure/titi

2017-11-08 15:21 0 s3://sarah-cold/titi
```

```
→ app git:(move_bucket) ✗ node move.js Paul.mkv sarah-azure sarah-aws
```

```
I like to move it move it
```

```
{ ETag: '"d42aa0b5753c1e4e229c3661f97e980b"',
  PartNumber: 1,
  receivedSize: 104857600,
  uploadedSize: 104857600 }
```

```
PartNumber: 23,
receivedSize: 2549385264,
uploadedSize: 2444527664 }
{ ETag: '"36a3554403085c31a41a9270199d8164"',
  PartNumber: 24,
  receivedSize: 2549385264,
  uploadedSize: 2549385264 }
{ Location: 'http://sarah-aws.localhost/Paul.mkv',
  Bucket: 'sarah-aws',
  Key: 'Paul.mkv',
  ETag: '"e54db1c5f43fcd92d3b215e2a889425-25"' }
}
```

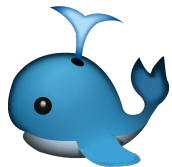
```
→ app git:(move_bucket) ✗ s3cmd la
```

```
2017-11-09 12:01 2549385264 s3://sarah-aws/Paul.mkv
2017-11-09 11:06 26055503 s3://sarah-aws/japan.mp3
2017-11-09 11:12 26055503 s3://sarah-aws/japan2.mp3
2017-11-08 08:35 0 s3://sarah-aws/titi
2017-11-09 09:51 6 s3://sarah-aws/tutu
```

```
DIR s3://sarah-azure//
2017-11-08 10:44 26055503 s3://sarah-azure/japan.mp3
2017-11-08 08:42 0 s3://sarah-azure/titi

2017-11-08 15:21 0 s3://sarah-cold/titi
```


WHAT WE'VE LEARNED...



How to use Docker



How to use Zenko



How to navigate through
clouds



How to code an app in node.js !
How to put it into a container



How cloud providers
make you pay...!



How 'streams' work and how to
transfer big files by using chunks of
data.

THE FUTURE...



- Implement ourself the **library of stream uploads** that we used
- Implement the **A.I based on the datas usage**.
Keep in mind the complexity of :
 - ◆ getting all the metadata before Zenko's usage
 - ◆ mathematic model to anticipate the trend
 - ◆ the Azure's and AWS's fees (many particular conditions)
- Add a **feature in the A.I** : move the datas due to the economical conjectures and the security

THANKS FOR YOUR ATTENTION

