

# Cloud Cost Optimization 101

# PRACTICAL TIPS

# Cloud cost optimization principles

## 01 Cost visibility

**How** and **Why** each \$ spent makes a business outcome

## 02 Resource usage optimization

Monitor through the **lens** of each **service design**

## 03 Price efficiency

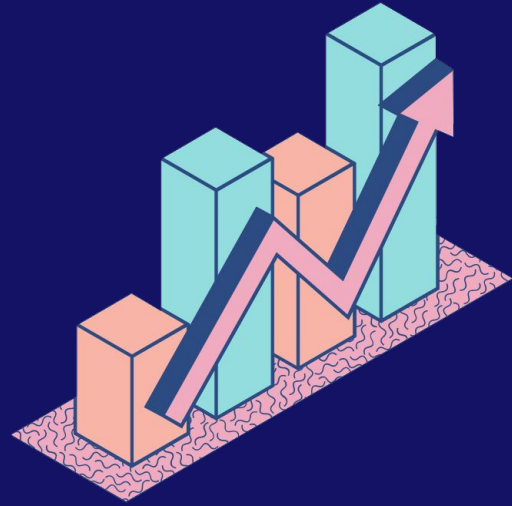
Make a use of **all discounts** available at your Cloud provider

## 04 Cost planning

Re-evaluate the architecture and **plan ahead**

# 01 Cost Visibility

Enable *spending transparency*  
within your organization



# 01 Make costs transparent

Segregate Cloud provider accounts according to your corporate structure

for example:  
engineering | accounting | support

Separate resources further by using own accounts per environment

for example:  
dev | test | uat | production

But keep all accounts under one organization entity

e.g.: AWS Organization | Google Cloud Org | Openstack Domain

Automatically tag all resources by their team, application or purpose

e.g.: team A labels their resources as team A

Setup billing alerts for each account to avoid surprises

e.g.: notify if monthly cost forecast to reach 10 000 \$

Separation of Cloud resources enables spending transparency, enhances security and ensures future scalability

## 02 Resource Usage Optimization

In the Cloud **time is \$\$\$**



# 02 Make your Cloud fit

Ask the following questions:

Are we using the best services and capabilities of IaaS? When was the last architecture review?

Managed services; PaaS; CDN can simplify operations and reduce cost

Are we automatically right sizing the infra according to the current load?

number of requests; CPU and RAM usage can be used to determine when to scale in and out

Which tools are we using to monitor resource utilization?

AWS Trusted Advisor; Azure Insight; Google Sizing and other can give valuable advice

Do we need non-prod environments 24/7, during the weekends or in the night?

e.g.: team A labels their resources as team A

Are all of our workloads business-critical?

e.g.: notify if monthly cost estimate to reach 10 000 \$

Make sure that the resources you are using **fit your demand and use-case**

## 03 Pricing Efficiency

Discounts are not only  
on **Christmas**



# 03 Make use of discounts

Combine Cloud resource commitments with reservations

reserved instances (for 1-3 years) are up to 75% cheaper vs. regular on-demand instances



Most Cloud providers provide volume discounts per Organization entity

use AWS consolidated billing; Google cloud billing to make all accounts count for volume discounts



Use Cloud provider region that is close to your customers, but has lower prices

data transfer in distant regions can be twice as expensive

Use the right type of Virtual machines depending on the specifics of workloads

consider burstable VMs; memory or CPU optimized; GPU instances



Use discounted storage types for long term archival or backups

AWS Glacier or S3 IA is 50-70% cheaper than standard S3



Proper resource allocation along with consolidated billing complements the use of discounted services



## 04 Cost Planning

How much \$\$\$  
wrong decisions cost?



# 04 Price of vendor lock-in

Multi Cloud might not be for everyone, but should be considered in **some cases**

Google Cloud Instances become cheaper the longer they used

sustained use discount up to 30% applied automatically



Google Cloud Functions are about 80% cheaper to AWS Lambda

mind the extra costs for API gateway



AWS and Azure vGPU Instances are about 70% cheaper than Google vGPU VMs

but with upfront reservation it is twice less the difference

Premium support plans at AWS and Azure start at 29\$, where at Google Cloud from 150\$

e.g.: team A labels their resources as team A



Operating high-traffic services in advertising or content sharing?

many cloud providers are not a good option at all due to expensive bandwidth



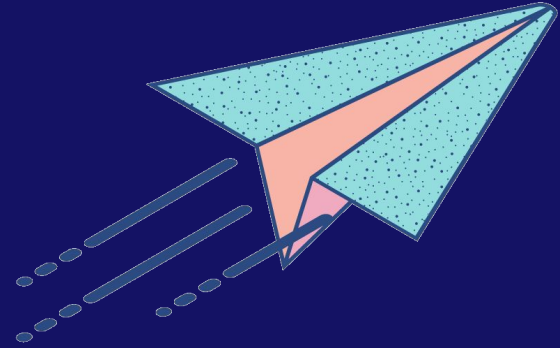
Right design & architecture decisions from the beginning **save significant money in the long term**

// Planning **Cloud Migration?**

// Spending too much for **Infrastructure?**

// Would like to know **More?**

**Get in touch!**



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