Episode 1 – Cost optimization basics

In this article we discuss:

* How the cloud cost model developed and what impact it has on your business
* How it can put you in jeopardy if your business model is unaligned with it
* Key steps to take in order to set up a cost-optimized workload in the cloud

#TLDR

Use the cloud to secure fast scalability and independence of upfront investments during the early stages of your business/product and move to dedicated models once you can predict loads reliably. Consider data storage costs early on and factor in your egress costs for data retrieval. The more scale you can achieve, and the more predictable your workloads become, the less benefit cloud will provide you. Be prepared to also move off if required.

Cloud services enable you to provision the right sized infrastructure for your needs at any time, bring up short-lived testing environments, scale down to near zero and rebuild your complete application in the case of a serious accident. It moves your costs from investments with complex planning upfront to operational expenditures that scale as your business grows. It empowers your engineers to access just the right resources at the right time reducing time spend on workloads and increasing flexibility and developer productivity.

## Costing in the cloud

Cloud providers virtualize underlying hardware to provide you a level of services based on your demands, from renting individual commodity hardware or bespoke high-performance instances in an IaaS (Infra as service) to deploying applications such as databases (PaaS) or running your CRM system on the cloud in a SaaS (Software as service) model.

As Amazon, Google, Microsoft, and others grew an ever-expanding global reach in their networks, they discovered that their scale could be used to provide lower-cost services for a multitude of businesses, relieving them from the pain to manage their own infrastructure. Cost models moved from an upfront provisioning, maintaining, and replacing model (before) to a pay-per-use model. They build up cost savings based on an economy of scale, in which the resources became cheaper as the amount they managed grew.

## Why the cloud can cost you dearly

If you run your services in the cloud as a direct relation to customer value created, and your business model accounts for the variety of usage patterns you will see you should be fine.

The problem starts, if you don’t account for the full spectrum of costs you will incur to service your clients, or your business model does not accurately predict the way your users will utilize the service. This can lead to your operational costs overrunning your customer bill, resulting in a net loss on your service which can bankrupt your business quickly as you scale. Especially dramatic, if you run a web-based business in which you can have high amounts of fast user signups resulting in your deficiencies in your model exploding on you in no time.

So be aware of all costs, plan your business model accordingly, and ensure you place proper monitoring to catch misbehaving users in your model and make the right business choices to ensure you run a profitable, stable business on the cloud.

Cost-optimize your workload