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Costs

Understand the basic concepts of cloud economics so you can optimize cloud costs and increase savings.

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Cloud Cost Optimization | Business And Finance

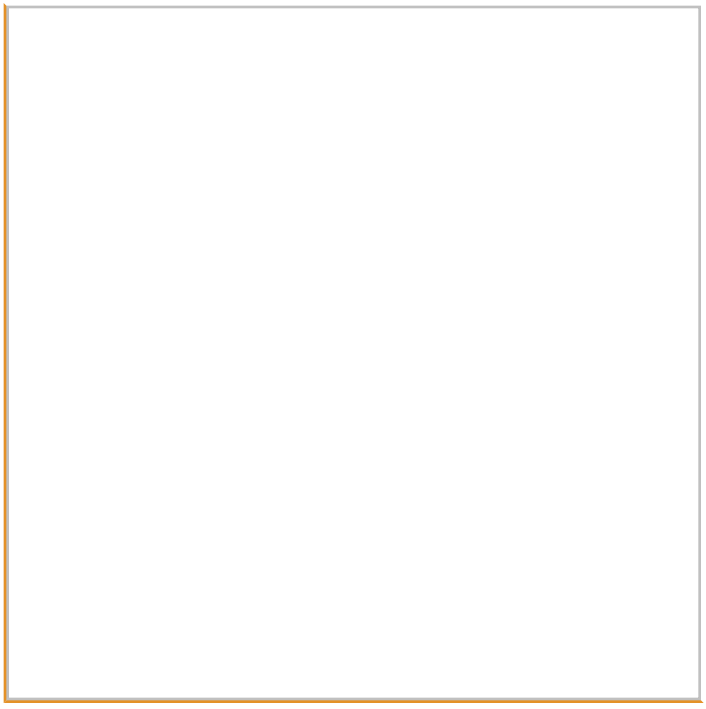
Businesses are increasingly interested in the economics of cloud computing. For instance, what are the financial implications of moving to the cloud versus staying on-premises? And what's the best strategy for optimizing cloud consumption to get the best value from cloud resources?

This article takes a look at some of the key concepts of cloud economics, and how your business can leverage **cloud cost intelligence** to maximize the value of your investment.

What Is Cloud Economics?

Cloud economics is the study of the benefits, costs, and principles of cloud computing. It involves understanding: The total cost of ownership (TCO) of cloud computing, the benefits of the cloud over on-premises models, and cost optimization strategies that will maximize ROI on your cloud investment.

Cloud economics is not just about costs in actual monetary terms, but also about the opportunity costs of the cloud and the peculiarities of managing costs in a highly dynamic environment.



Understanding Cloud Economics: Key Areas To Consider

1. Cloud total cost of ownership (TCO)

In cloud computing, the total cost of ownership (TCO) is the total cost of adopting, operating, and provisioning cloud infrastructure. TCO is helpful for understanding your return on investment.

Businesses have always performed TCO analysis for traditional IT infrastructure. However, performing TCO analysis for cloud computing can be challenging because the environment is inherently more complex and dynamic than on-premises environments.

Getting an accurate TCO for cloud computing means capturing the purchase price of on-premises vs. cloud solutions as well as the intangible costs of either solution. In practice, this means:

- Calculating the cost of your current IT infrastructure
- Estimating the total cost of cloud adoption (including migration costs)
- Quantifying the intangible benefits of the cloud (You can read a step-by-step guide for calculating cloud TCO here.)

The overall goal is to achieve a lower TCO compared to on-premises infrastructure, but it can also be about justifying a higher TCO by listing the intangible benefits associated with the cloud, such as agility and greater speed to market.

2. CAPEX to OPEX switch

Cloud computing uses a different pricing model from traditional computing and this affects how businesses account for cost. The move from capital expenses (CAPEX) to operating expenses (OPEX) is a key difference, and it affects how businesses gauge profitability in the cloud.

In traditional IT environments, computing costs are predictable and relatively fixed. A business pays for the computing capacity it needs upfront and uses the capacity over time. Calculating the total cost of ownership in this setup is fairly straightforward. In contrast, cloud providers adopt a pay-as-you-go model and most services do not require any upfront commitment.

The implication is that your business will have variable cloud computing bills that depend on the services you use and how they are consumed. While this model may save your business upfront capital expenditure, it can become a huge financial suck if resources are not managed properly.

When moving to or operating in the cloud, it is important to develop and implement cloud cost optimization strategies that will help regulate your cloud costs. For example, CloudZero's cost intelligence platform helps you track the cost of migrating to AWS and thereafter provides insights that help you reduce your AWS bill.

3. Elasticity

With on-premises systems and traditional IT environments, there's a cost associated with anticipating demand. Traditional IT environments are built to anticipate peaks, which means you buy and maintain excess computing capacity in anticipation of those peak days. For most businesses, that's a significant cost for something that's rarely — if ever — used.

Cloud computing eliminates the need for over-provisioning because you pay only for what you use. Cloud computing platforms, such as AWS, dynamically allocate resources to projects and processes, ensuring that a business has the right amount of resources it needs at any given time. This increases cost efficiency and allows businesses to optimize resource usage.

This elasticity is one of the most appealing aspects of cloud computing and a major selling point when making a case for switching to the cloud.

4. On-demand pricing

On-demand pricing is a fundamentally different economic approach to computing power. Outside of the cloud, you'd buy a fixed amount of computing capacity or a physical server that you own. But in the cloud, you switch to on-demand pricing, so your costs become elastic.

This means cloud costs can quickly spiral out of control if you are not monitoring them regularly and making data-driven decisions.

The Concept Of Cloud Cost Intelligence

One of the key things to remember when moving to the cloud is that a lot of people will be involved in

cloud economics who may not necessarily be in core finance departments.

In classic IT infrastructure and computing, only a few people were involved in the economics of computing, including IT hardware people, who were responsible for creating the infrastructure, and finance personnel who approved those expenses and managed budgets.

In the cloud, many decisions that impact cloud cost are made outside of finance and IT teams. These include:

- Engineers, who decide which services to use to deliver software
- The product team, who decides how to price the licensing for software
- The marketing team, who determines product-led growth strategies

At CloudZero, we believe that economic success in the cloud requires that everyone in a company understands their contribution to cloud costs in their part of the business.

Cloud cost intelligence is about democratizing cost knowledge so everyone is empowered to maximize the benefit of the cloud.

Businesses that employ cloud cost intelligence are more likely to succeed in optimizing cloud costs because they:

1. Have a good understanding of how their cost structure is different in the cloud compared to a non-cloud environment.
2. Ensure that engineers and all relevant participants understand this difference.
3. Give all relevant stakeholders visibility into how their workloads affect cost so everyone can collectively make good decisions that lead to higher profitability.

Understanding AWS Cloud Economics With CloudZero

When relevant stakeholders don't have access to cost knowledge, it's difficult to get a grip on costs. That's where CloudZero comes in.

CloudZero's cost intelligence platform helps you understand your cloud unit economics by aligning your cloud costs to key business metrics, such as cost per customer or product feature.

This data can be distributed to respective teams without giving people access to the master billing account.

Our customer Malwarebytes provides an excellent example of cloud cost intelligence at work. Before adopting CloudZero, the company had already been taking steps to track and manage costs, including implementing an aggressive tagging policy and using a cost management tool that allowed the DevOps team to report on their AWS bill.

The problem was that they were spending up to 10 hours a week drilling into reports and

communicating with various teams to help them understand their cloud spend.

CloudZero made it possible for them to attribute AWS costs to specific products and decentralize cost management. DevOps immediately gained granular visibility into their cloud spend and could confidently explain their AWS expenses to the executive team.

The best part: The engineering team also became more cost-conscious and now had the ability to make informed decisions about the products they were building. As a result, Malwarebytes is now better positioned to optimize its cloud costs going forward.

To learn more about how the CloudZero cost intelligence platform can provide deeper insight into cloud cost economics at your company, Schedule a demo today.

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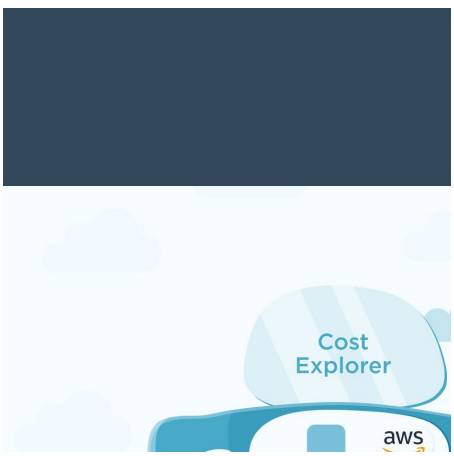

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