UpCloud

Optimising cloud costs

Your comprehensive guide to successful cloud cost management

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Cloud computing market at a glance

Valued at $563.6 billion in 2023[1], the global cloud computing market is expected to grow at an annual growth rate (CAGR) of 14.1% from 2023 to 2030[2]. However, within the competitive arena the “Big Three” still account for two thirds of market share, with competitors barely scratching the surface.

Despite the challenging macroeconomic of 2023, businesses worldwide spent a whopping $270 billion on cloud infrastructure services representing a 19% increase in comparison to 2022[3]. For small and medium-sized businesses, this does not adequately reflect the pressure to optimise cloud costs.

For a typical SaaS company, cloud hosting costs usually account for 6%-12% of SaaS revenue and constitute a sizable portion of their cost of goods sold (COGS)[4]. To ensure financial sustainability and continued growth in this competitive market, addressing and optimising cloud expenses have become critical priorities for SaaS companies.

To tackle this issue, a clear and comprehensive understanding of cloud costs and business needs is essential to achieve cost optimisations without sacrificing performance. This is your guide to do just that!

1 www.gartner.com/en/newsroom/press-releases/11-13-2023-gartner-forecasts-worldwide-public-cloud-end-user-spending-to-reach-679-billion-in-20240#:~:text=Worldwide%20end%2Duser%20spending%20on,Vice%20President%20Analyst%20at%20Gartner
2 www.grandviewresearch.com/industry-analysis/cloud-computing-industry
3 www.statista.com/chart/18819/worldwide-market-share-of-leading-cloud-infrastructure-service-providers

4 EY-Parthenon Proprietary Benchmarking Tool, n=1281, 2020-2021.

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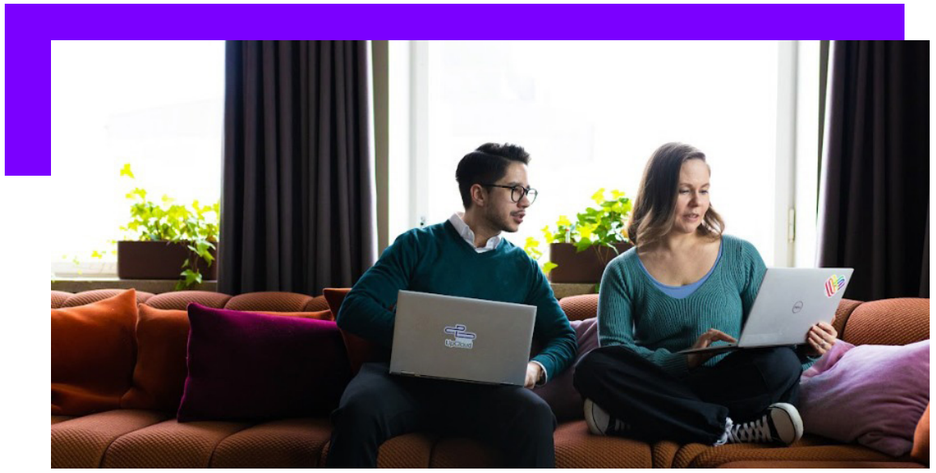
Understanding **cloud costs**

Over the past decade, many businesses have moved their workloads to the cloud to unlock new advantages, such as elasticity, scalability and global deployment capabilities. Yet for many, this shift has come with a hefty price tag, heightened by the increasing demand for innovation and the need to deliver new technologies.



Powerhouse of modern businesses

For modern business operations, cloud computing is a cornerstone of agility that transcends the limitations of traditional IT architectures. This shift to the cloud represents a fundamental change in how computing resources are provisioned, managed, and consumed. The term ”cloud-native” refers to applications and services specifically designed to run and scale in cloud environments, leveraging cloud capabilities such as elasticity, scalability, and automation from the ground up. Cloud-native businesses are built to fully exploit these advantages, focusing on rapid deployment and continuous improvement.

As a consequence, the emphasis has often been on accelerating development and deployment rather than carefully considering the associated costs. In the competitive arena of cloud infrastructure, where each provider offers various service models catering to different use cases, it’s crucial for businesses to assess which option best meets their needs. By understanding the cost components of cloud computing, cloud-native businesses can more effectively manage expenses while harnessing the full potential of their cloud investments.

Cost considerations **include:**

Compute resources

Costs associated with cloud servers, containers, and computing resources utilised to run applications and workloads.

Storage

Costs related to storing data in the cloud, including block storage, object storage, and archival storage.

Network transfer

Charges for data transfer between cloud services, regions, and the internet.

Additional services

Costs for using additional cloud services such as databases, message queue, monitoring tools, and other managed services.

In addition to understanding associated cloud costs, it is vital to analyse which cloud service model caters to your business needs. As industries increase adoption of cloud technologies there has been increased demand for Platform as a Service (PaaS) which offers developers the ability to build, deploy, and manage applications without worrying about underlying infrastructure components.

Yet for those starting their cloud journey often Infrastructure as a Service (IaaS) is preferred which virtualised computing resources over the internet, allowing users to provision and manage infrastructure components such as cloud servers, storage, and networking.

While PaaS often comes with a higher price tag, it provides significant value by allowing developers to focus on application development and innovation rather than managing underlying infrastructure. On the other hand, IaaS offers the flexibility to build and control your applications from the OS level, giving you the option to fine-tune your infrastructure components and integrate managed services as needed. This balance of control and convenience can be especially advantageous for businesses looking to optimise their infrastructure costs while still benefiting from streamlined operations.

Irrespective of the service model your business chooses to use, several factors can influence costs stacking up. The unpredictability of these costs is, and will continue to be, a challenge for businesses and therefore a thorough review of cloud spend should be conducted.

These costs can include

Usage patterns

The frequency and duration of resource utilisation impacts overall costs.

Resource configuration

The type, size, and configuration of cloud resources chosen can affect costs.

Geographical regions

Costs may vary based on the region in which resources are provisioned and utilised.

Pricing models

Different pricing models (e.g., pay-as-you-go, Reserved Instances) offer varying cost structures and discounts.

Network transfer fees

Charges may apply for transferring data between cloud services, regions, and the internet.

Migration and setup costs

Initial migration and setup activities may incur additional costs.

Common challenges

in cloud cost management

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Lack of visibility and control of costs

One of the most significant challenges organisations face in cloud cost management is the lack of visibility and control over their cloud spending. Without comprehensive tools and processes, organisations continue to grapple with their cloud usage and costs.

One further challenge businesses often face when turning to the cloud is dealing with complex billing structures and a limited understanding of what services are being provided for the cost. For smaller organisations or start-ups, often the allures of hyperscaler's kick-start packages which boast free credits and premium services are the very thing which inflict financial strain once the initial credits expire and the monthly bills roll in.

To effectively tackle this issue certain **strategies can be put in place including:**

Implement cost monitoring tools

Invest in cloud cost management tools and platforms that provide real-time visibility into cloud usage and spending, allowing organisations to track costs, analyse trends, and identify optimisation opportunities effectively.

Establish cost allocation policies

Define clear cost allocation policies and tagging strategies to categorise cloud resources based on attributes such as department, project, environment, or business unit, enabling accurate cost attribution and accountability.

Educate stakeholders

Educate stakeholders across the organisation about the importance of cloud cost management, the impact of their actions on cloud costs, and best practices for optimising cloud spending, fostering a culture of cost consciousness and accountability.

Assess current provider

Conduct regular review of current provider, to evaluate the value they bring. Often businesses pay a premium for services which go unused or don't meet the size/spend criteria to be offered key resources as rapid customer service.

By addressing these issues organisations will have ascertained key insights into cloud spend and have the ability to assess if an alternative cloud provider would bring more value for money.

Overprovisioning and underutilising **of resources**

Overprovisioning and underutilisation of cloud resources are common challenges that can significantly impact cloud costs and performance.

Overprovisioning occurs when organisations allocate more resources than necessary to meet workload demands, resulting in wasted capacity and increased costs. Conversely, underutilisation occurs when resources are provisioned but remain idle or underutilised, leading to inefficiencies and missed optimisation opportunities.

In order to address this issue businesses **can take measures to minimise the strain.**

Optimise instance sizes

Conduct regular performance analysis and rightsizing exercises to match cloud instances' resources (such as CPU, memory, and storage) with actual workload demands, optimising performance and minimising costs.

Implement auto scaling policies

Set up auto-scaling policies to automatically adjust resource allocation based on workload demand, scaling resources up or down dynamically to meet changing performance requirements while minimising overprovisioning and underutilisation.

Monitor and optimise resource utilisation

Implement comprehensive monitoring and reporting mechanisms to track.

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What does optimisation look **like in practice?**

xensam

Swedish Software Asset Management (SAM) provider Xensam successfully managed to lower operational costs while hosting on UpCloud's fully GDPR-compliant cloud. Leveraging UpCloud's Managed Kubernetes and Load Balancers, Xensam has enhanced its application stack infrastructure enabling the business to focus on pursuing its ambitious expansion plans.

With a strategic focus on the European market, Xensam must ensure they comply with the European data protection regulations (such as GDPR) and strict data residency requirements imposed by their customers. For this reason, Xensam utilises several of UpCloud's European data centres, including Stockholm, Sweden.

"Evaluation of different providers, incorporating assessments of cost-effectiveness, compliance with GDPR, and performance benchmarks within the EU sector concluded that UpCloud excelled in all these areas. After the migration, we noticed significant enhancements in system performance and a reduction in operational costs," says Gustav Fösker, Co-founder and CTO, Xensam.

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Future trends, considerations and opportunities

As previously mentioned, the cloud market is evolving and growing despite external factors. For cloud native businesses planning for this future is vital.

Inflation and **geopolitical uncertainty**

The persistent rise in inflation rates globally, paired with the uncertain and volatile geopolitical situation may continue to pose challenges for organisations worldwide. For those managing their cloud costs and budgets, inflationary pressures may drive up the cost of cloud services, infrastructure, and operations, impacting cost management strategies and financial projections.

In safeguarding for the future, organisations operating on the cloud should take into consideration practices for cost optimisation as previously mentioned. Furthermore, regulatory compliance and cybersecurity should be viewed as an opportunity for revenue generation - building customers' trust, loyalty and protecting against financial loss for non-compliance.

Zero-cost Egress

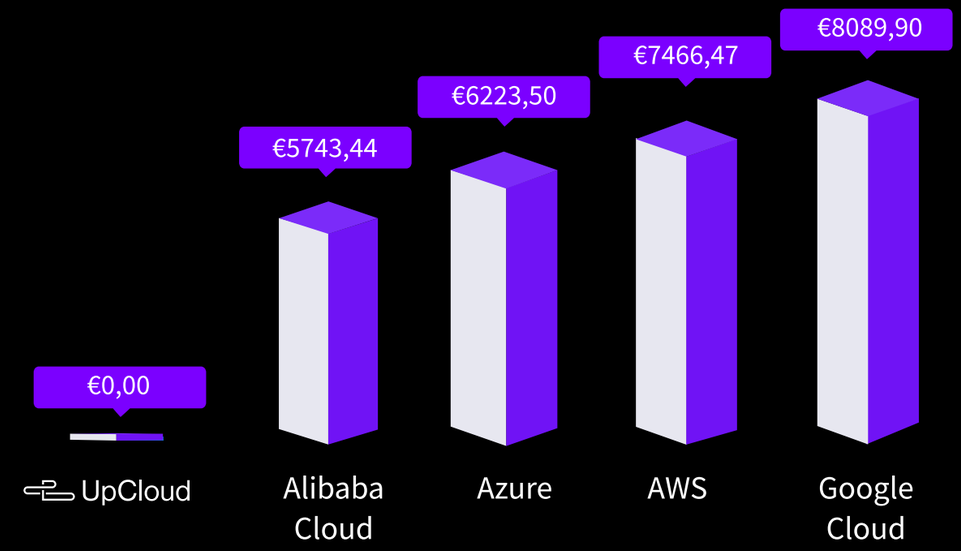
In order for businesses to achieve clear visibility over cloud costs the elimination of egress transfer fees represents a significant development in cloud pricing models, offering organisations greater flexibility and cost predictability.

This shift towards zero-cost egress will have profound implications for cloud cost management and data transfer strategies, representing the final barrier for many businesses looking to expand and scale their cloud projects.

With this development so too comes great opportunity for businesses, with financial spend freed up teams can now add resource to projects, which may have been halted leading to revenue generation and growth for the future.

Read more on UpCloud’s zero-cost egress pricing model.

Egress cost breakdown:
Price per 100TB outbound traffic/month*



*Calculation based on a customer deploying from a European data centre. Currency exchange and pricing as of May 2024. Cloud footprint of 25 server with total capacity of 100CPU's and 200GB of RAM.

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Conclusion

With the adoption and use of cloud infrastructure set to rise, now is the time to embrace cloud-native architectures and adopt a strategic approach to cloud cost management. In doing so businesses can position themselves for success in an increasingly competitive and dynamic marketplace.

The journey to optimal cloud cost management requires careful navigation and strategic decision-making and as it encompasses many facets of an organisation. Yet, in embracing alternative cloud providers organisations meet at the intersection of innovation and cost efficiency.

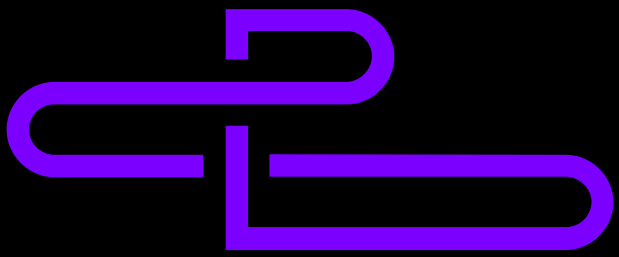
UpCloud - the only alternative you need

Understanding the pressure faced by organisations worldwide, UpCloud works with clients to optimise cloud costs and enhance value provided with support on hand 24/7/365. Offering zero egress fees, UpCloud is on a mission to provide businesses visibility and control over their cloud costs, breaking the final barrier in successful cloud cost management.

What's more, with UpCloud peace of mind is free!
As an ISO 27001 certified European-owned provider, businesses and end-users alike can rest assured regarding the safety and security of their data. With 13 data centres (8 located in Europe), data is handled in compliance with European regulations to safeguard businesses from financial penalties for non-compliance.

Ready to start optimising your organisation's cloud cost?

Book a call with our team to further discuss.



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