
GlobalDots
Case Study:
eCommerce Group Reduces
Cloud Costs By $1.4M Annually
Cloud Bill
-20%
Resources Scaling
+30%

Executive summary

Even the smartest online businesses and DevOps teams can find themselves in a state of cloud overspend. The more complex the business structure - the deeper the problem might become.

This was just the case for our client, a giant eCommerce retail group.

This is the story of how GlobalDots cloud economy services, backed by the latest FinOps technology, enabled:

- **20% cloud spend reduction ($1.4M annually)**
- **30% scaling of resources with no added financial costs**
- **DevOps visibility & ownership of resource utilization and spend control**

A Quick Intro to FinOps

FinOps, also known as “cloud cost optimization”, is a business administration approach, backed by specialized technology, with a purpose to minimize and govern cloud spend. It is critical to the success of firms when they transition from fixed-priced data centers to adaptive, usage-based clouds for additional core computing services. Business organizations are increasingly turning to FinOps to manage, budget, and forecast their cloud spending demands.

FinOps introduces financial accountability to the dynamic cloud spending paradigm, which allows collaborative teams to work exchange among speed, cost, and quality. FinOps teams integrate IT and finance responsibilities to decrease cloud costs, through resource optimization and discounting strategies.

👉 What Cloud Trends Made FinOps Emerge?

Just after a company has committed to shifting to the cloud, it is usual to run into several challenges that might result in a considerable increase in the cloud spending budget.

👉 Pricing and Billing is Tough to Comprehend

Cloud spending is more variable and less predictable than conventional on-premises equipment. Navigating the large quantity of data available on cloud pricing and invoicing can be difficult. FinOps provides a solution to track,

👉 There is a Lack of Accountability

The decision to spend money on cloud services is now in the power of the engineers who often blatantly disregard established financial and purchasing processes. FinOps provides accountability for all cloud costs.

👉 Transparency is Insufficient

Costs must be more transparent, updated, and related to the commercial value for organizations to succeed. Companies require unit-level economics and real-time input and response when developing business cases.

👉 Optimization is Intermittent and Partial

Optimization is a continuing effort that includes cloud resource optimization, and related expense management spans various layers, obligations, and techniques. It is overseen by technical experts in a centralized location and by technical teams working on the ground in the cloud.

👉 Supplier Costs Are Being Examined in Isolation

The ability to standardize and consolidate cloud costs and use information into a single reference source is often frustrating for organizations pursuing multi-cloud initiatives.
This examination is where Cloud FinOps can be of assistance. Its goal is to increase financial accountability in the cloud’s varying expenditure model, allowing dispersed teams to deliver business and sales between speed, expense, and efficiency. It is about increasing the sophistication of the administration and cost management of cloud expenditures to establish and facilitate efficient and real-time control.

👉 Why is FinOps Important?

The management of cloud technology infrastructure is significantly different from the management of on-premises technology infrastructure. The conventional financial model involves purchasing resources then depreciating and amortizing them over a three-year or five-year duration. By replacing this with a FinOps model, you shift the firm’s perspective to one focused on actual operational expenses by-the-minute usage.

Furthermore, memory space limitations in the cloud are less of a problem than on-premise solutions, and financial exhaustion has a strong chance. When planning projects, professional software development engineers must include cost as a first-class performance indicator.

FinOps may assist firms in getting the most value out of their cloud investments, and guarantee the availability of computing resources in the time and place they are needed for product development.

Client overview

Our client is a large Asian retail group, operating both department stores and e-stores in multiple consumer verticals, like fashion, household hardware & appliances.

Largest
AWS customer in SE Asia

$7
Million yearly AWS spend

15
business units

75
AWS accounts

1.500
servers

Each of the client's 16 verticals is managed as a separate business unit. This mainly meant several things:

- **Discovery, times 16:** The number of AWS accounts to be examined and optimized, as well as the number of teams & engineers to be questioned and instructed, was unusually large.
- **Uniqueness, times 16:** e-stores varied in traffic & performance, and as a result in their priority with the management and their cost optimization needs.

👉 Unmanageable spend = overspend

Like most businesses, the group's cloud transformation was gradual, with no methodology or architectural preplanning. This led to an uncontrollable cloud bill, with low visibility into resource usage & waste.

Examples:

- Engineers sometimes utilized only ~5% of CPUs because of their habit to increase machine size every time an application underperformed, instead of investigating the problem.
- The testing environment was distributed over multi-AZ (availability zones). This wrong practice perhaps stemmed from a misconception that this may prevent outages.

Results:

- Cloud spend was excessive, which led to this one of the biggest AWS accounts in its headquarter country.
- Cloud spend was unmanageable, with very low visibility into cost centers which spread over 1,500 servers, 74 AWS accounts and 16 business units, with no centralized optimization practices.

👉 There's only so much DevOps can do

The DevOps engineers on the client's infrastructure team made several manual cost optimization attempts. However, being generally overworked with other duties, they could not commit to a regular process. Therefore their efforts were sporadic and mostly insufficient in moving the needle.

👉 ...And cloud consultants, too

The client requested their cloud consultancy firm to come forth with an offer for a large-scale cost reduction project.

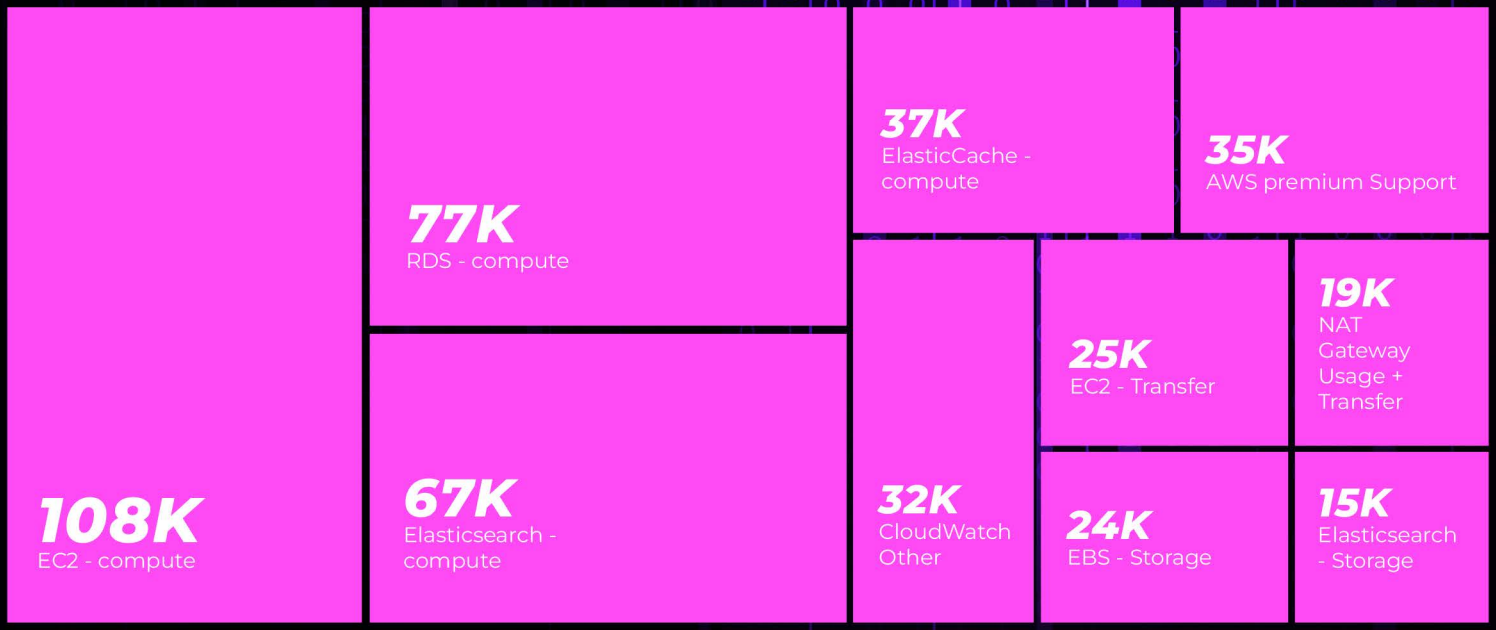
As that firm specialized mainly in cloud transformation, but not optimization, they referred the client to GlobalDots - a cloud technology partner with innovative FinOps methodologies and tools.

The client's RFP was then responded to by GlobalDots senior cloud architect, Steven Pudepphatt. The offer also included direct involvement of David Amir, head of FinOps at GlobalDots.

Tackling waste, step by step

1. Discovery - over a month, GlobalDots cloud economy consultants monitored the client's cloud bill, and interviewed the Head of Infrastructure and several DevOps working with him. In this stage, savings opportunities were identified.

👉 Cost Mapping
Top AWS Services Cost

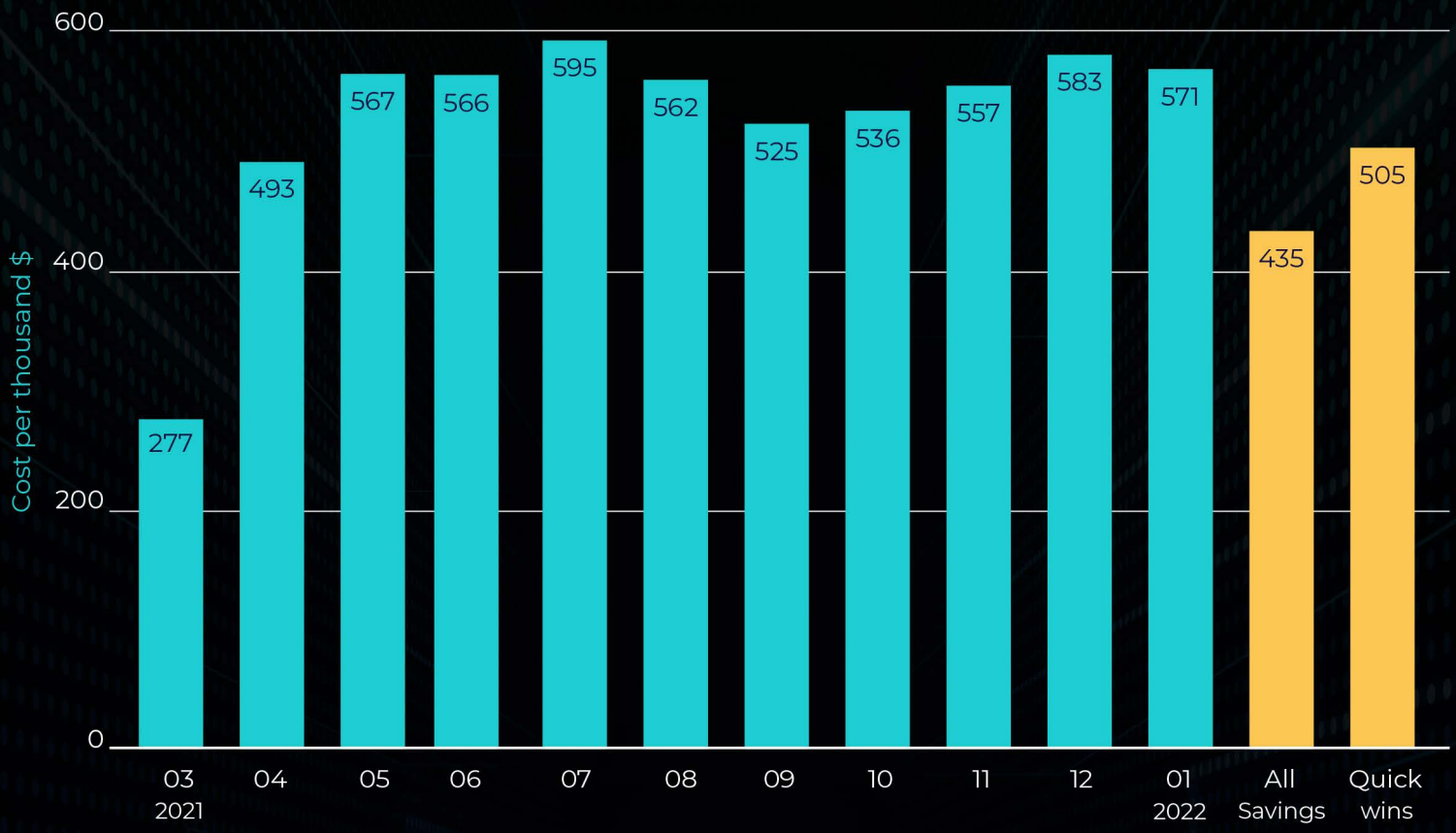


2. Proposal - the initial proposal concerned cloud economy services to reduce the client's current cloud bill. It stated key discovery findings and savings potential associated with specific recommendations.

👉 Savings strategies proposed

AWS Service	Estimated monthly savings
EC2 Compute - short term	$16,000
EC2 Compute - long term	$20,000
RDS Compute	$12,000
ElasticSearch (option 1)	$14,000
ElasticSearch (option 2)	$34,000
ElasticCache	$8,000
AWS Premium Support	$10,000
NAT Gateway	$20,000
EC2 Transfer	$10,000
Housekeeping (snapshots & s3)	$6,000
TOTAL per month	**$136,000**
TOTAL per year	**$1,632,000**

👉 Spending Forecast



👉 Proposal SLA

Management of tools by **GlobalDots**

Collaboration & communication tools

Jira
Opsgenie
zendesk
Confluence
slack

24/7/365 help desk support

Weekly update meetings

Monthly management reports

Outcome = REAL RESULTS

3. Setting the framework: As the only ones authorized to modify or remove resources were the client's employees, GlobalDots provided them with support to carry out the recommended targeted actions:
a. Personal dashboard - Each resource owner on the infrastructure team got a dashboard to track their costs, to create accountability.
b. Weekly calls - set to track the progress of resource inspection & rightsizing by each owner.

4. Monthly reporting - GlobalDots was responsible for consolidating weekly achievements into reports presented to the client's management. This report communicated to the client's infrastructure and finance teams their shared responsibility on cloud cost management.

Reduce Cost, Scale Resources

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It's not a road without some roadblocks

- **The complexity factor** - A commonly known best practice in cloud management requires that development, production and QA each run on a separate AWS account, with an additional account to manage billing. This means at least 4 AWS accounts per business. As mentioned, the client's cloud spend was distributed over 16 different business units, which meant not 4, but 64 AWS accounts to start with. This number excluded individual accounts serving ad-hoc projects, according to corporate policy. This reality required repetition on many discovery & intervention activities. Consequently, although some quick-win savings took effect from the very first month (representing 1% from the bill), the process of optimizing the client's entire cloud estate was relatively long & complex.
- **The human factor** - Different business units are naturally run by different people. Different perceptions, as well as different relationships and prioritization with corporate management, are highly likely. Accordingly, some of the client's business units disliked the idea of external intervention & inspection. Cooperation (and visibility with it) had to be worked out over time.

Actions & direct impact

a. Manually Rightsizing VMs to remove unnecessary paid-for resources - **saved $9.5K/mo.**

b. Elastic block storage migration (EBS upgrade) - migrated cloud data to newer disks that were 20% cheaper and better performing **saved $1k/mo**

c. Purchased reservations (manual work following human behavior analytics via visibility tool (Pileus) & automation utilizing RI marketplaces combined) - increased coverage (the % of machines that run on a reservation plan) from 40% to 85% , as a result **saved $73.3K/month.**

d. Tool-assisted monitoring & resource cleanup - used GlobalDots dedicated dashboards to detect anomalies that were manifested in spend spikes - e.g. as a result of misconfiguration, database overuse, keeping old inactive resources, etc.
e.g. a machine was switched off but the disk still contained data. So the data was migrated from disk to storage that way way cheaper.
saved $20K/mo

e. K8 migration -
- More manageable - there are more opportunities to automate via an orchestration system, so less manpower
- More cost-effective - auto-scaling of machines by use.
- **Saved $3k/month**

f. Resource cleanup - DynamoDB cleanup & upgrade (serverless databases that contained old tables, some inactive. We upgraded tables to dynamoDB and erased unnecessary ones that incurred unnecessary storage costs) - **saved $4.2K/mo**

g. Data transfer - we modified interactions between machines in the testing environment and migrated all machines into a single availability zone.

h. AWS premium support deal - support cost is derived from the bill (5%). As a result of the cost reduction, we managed to reduce the cost and started to make a more intense use of this resource - saved $4k/mo

👉 In total

The client's total cloud bill was reduced by 20%. As scaling took place during the project (+30% as a result of increased website traffic & feature development amid the Pandemic), absolute savings exceeded the initial forecasts, and amounted to $116K/mo. And almost $1.4M/y.
The client was able to keep scaling with a solid cloud strategy, based on best practices for governance & security.

Impact

$250,000
savings in first
4 months

Monthly bill is
16% lower
$116k /month
$1.4 million /year

Key KPIs tracked
20% reduction in EC2 per CPU cost
44% reduction in ElastiCache per node cost
40% reduction in RDS per instance cost

Further
DevOps
business awarded

Trusted advisors
to technical board

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Conclusion

Cloud cost optimization has become a top-priority task for infrastructure owners. Running a cloud estate without a sufficient cost optimization strategy will inevitably result in waste, which can undermine business growth plans.

In such scenarios, it is near impossible to carry out a successful, comprehensive cost reduction project without a dedicated FinOps hire, which is extremely hard to acquire, or a skilled technology partner.

The initial cost optimization project will probably last several months, after which ongoing monitoring must take place to preserve the achievements. This can be done with 3rd party automated tools for commitment management and cleanup. However, some human intervention is irreplaceable. If your DevOps are overworked as is, it is advised to seek support from your FinOps service provider.

About GlobalDots

GlobalDots is a 20-year world leader in cloud & web innovation, connecting over 1,000 global businesses such as Lufthansa, Playtika, AppsFlyer, Fiat and Payoneer with the latest technologies. Our ever-growing solution portfolio contains over 80 innovative technologies, including: Security, Performance, DevOps & Cloud Management, Corporate IT, and advanced AI/ML models.

Led by a team of innovation-driven engineers & architects, GlobalDots offers easy end-to-end technology adoption. Proactively introducing newer, better solutions, it helps businesses maintain a scalable, up-to-date technology posture in a quickly-changing world. Its enterprise clients breeze through cloud transformation; Its growing, cloud-native clients benefit from scalable, cost-effective and highly secure infrastructures.

With our services, clients achieve significant cost reductions, accelerated business processes, and globally scalable infrastructures.

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