# Follow the Money: Why accountability is key in saving money in public cloud

Why accountability is key in saving money in public cloud

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Cloud computing has become an integral part of modern-day business operations. It offers scalability, flexibility, and cost-effectiveness that are unmatched by traditional IT infrastructure. It also offers unique capabilities to enable or complement services at the touch of a button, or better still, with a line of code. If done right, cloud computing can be a money-saving solution for large organisations, it can however, also be a costly endeavour if not handled and maintained properly.
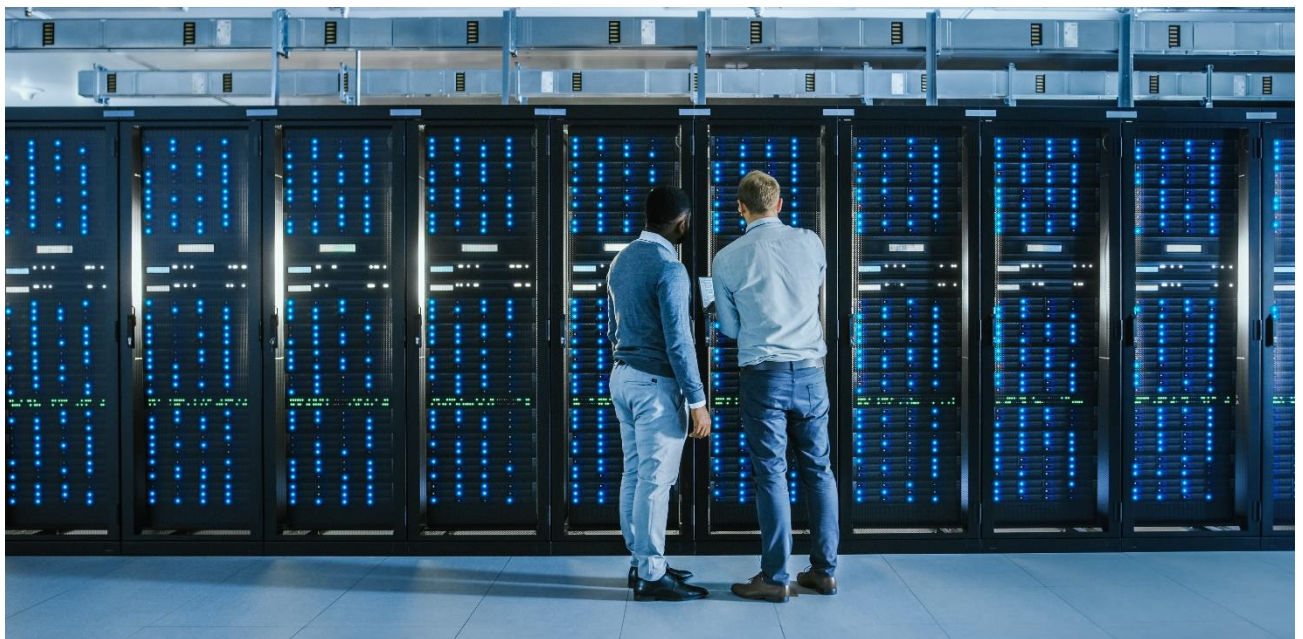
02

Cloud computing introduces new layers of abstraction and complexity that require specialized skills and knowledge to manage effectively. Without proper planning and implementation, it is easy to misconfigure or underutilize cloud resources, resulting in poor performance, downtime, or security issues. All of which ultimately lead to unexpected high costs.

In this paper, I will try to avoid only discussing the standard FinOps pillars and advice and focus on what I've learnt running a large Cloud Engineering capability for our clients and why here at KPMG, we have learnt the importance of accountability to reduce cloud spend.

Getting Cloud Wrong

Migrating to the cloud is not without its challenges and getting it wrong can be costly. The cloud is a complex and dynamic environment that requires careful planning and management to ensure optimal performance, security, and cost-efficiency. Failure to do so can result in a wide range of issues, from sluggish application performance to security breaches and data loss.

Getting cloud wrong can really hit your wallet if you are not careful. It's easy to do (yes, I've done it) and it boils down to how you consume cloud. Essentially, cloud providers charge you based on how much you use their services. So, if you're not careful, you could end up with a hefty bill for stuff you're not even using. For example.

- If you forget to turn off an instance that's just sitting there, you'll still be charged for it even if it's not doing anything.

- Miss-configuring logs can lead to huge data transfer and storage costs that you are not expecting.

- Even using the wrong runtime environment for your Lambda functions or using a runtime environment that's too heavy for the function's needs can result in higher costs.

So, while cloud computing can be a great solution for many businesses, you just need to make sure you're keeping an eye on your usage and costs to avoid any unpleasant surprises on your bill.

Accountability

At KPMG we spend ~£30m a year in the UK across AWS, Azure and GCP supporting our clients' workloads as well as building and running Products and services of our own which deliver value to our clients. Over the past 8 years, we have had incredible growth in our Engineering team starting on a single project which saw the birth of our Cloud team (I was employee 18) fast forward to today, we have over 650 Engineers and architects who design, build, and run cloud services every day.

For each engagement we have segregated Azure Subscriptions, AWS Accounts or GCP Projects.

Two key reasons for this is;

1. So we can track spend effort and therefore total cost of ownership to a product/service that resides in its own entity. This segregates spend and enables us to align ownership or accountability to workloads and as tangibly as possible, segregate the data from other clients. Sure, shared services are needed in certain situations but by tightly aligning the workload with the consumption you get great clarity on how much an individual project will cost. You can then ask, is it worth it?

2. Blast Radius. Each account is segregated and cannot talk to another, unless specified. This means during a security incident, the blast radius is often to the subscription, account, or project itself for most scenario's keeping other services, products, or projects safe.

Accountability (cont.)

You can of course have a mature tagging policy in play to do something similar if your organisation has more of a flat network structure. Where possible I would of course advocate NOT having a flat network. Often this can be tricky and also involves thinking differently to traditional approaches which often lead to an attackers paradise without significant controls in place.

One key lesson we have learnt being in the team and eventually leading it, is accountability. It's a key principle to have to ensure that you can always follow the money and lead to a person who is accountable for the cloud spend. In KPMG terms, this is often a Partner, Director or Senior Manager who have great ideas and ask our Software and Cloud Engineers to turn these ideas into a reality.

At the start of any Product or Service we build, we ensure we can link Cloud accounts, subscriptions, or projects (depending on the cloud provider) to a person or requestor which involved a cost code (our way of tracking money in our ERP system). This means our engineers don't start work until we have this, mainly because I'm a Yorkshireman and I don't want to have to pay from my Cost Centre 😄.

This accountability allows our team (and the requester) to track their cloud usage and costs and identify areas of inefficiency. By doing so, we can take appropriate actions to reduce their cloud costs and optimize their resource utilization. Moreover, accountability for cloud spend at the subscription, project, or account level enables us to implement cost-saving measures that are meaningful to our stakeholders. For instance, by setting up budgets and alerts, our clients can be notified when their cloud spending exceeds a specific threshold. This enables them to take immediate action and optimise their cloud usage before it results in higher costs.

Monthly reporting also enables us to breakdown cloud cost by resource so we can be as transparent as possible in demonstrating where our clients' costs are going and help, they decide if the value is worth the spend. We have found this useful in helping us re-architect larger solutions to eke out as much value for as little spend as possible.

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Cloud Waste

Let's face it, no one likes spending money they don't need to spend, and everyone wants to spend wisely to achieve the highest value possible. The most frustrating way of overspending in cloud is "Cloud Waste".

Cloud waste is when you find services or resources running that no matter who you ask, no one knows what it is. **Historically we had this all the time, things running that had no owners (most likely left the organisation) which led to Engineers being nervous in turning it off.**

We often found ourselves in that position as to "let's turn it off and wait for the issues" which is not an ideal place to be in. Not only is there a cost implication, but there is also a security one too. More services running = more risk.

Ensuring Accountability is at the forefront of everything you are running is key. I said earlier in this paper that we spend around £30m a year across all 3 major cloud providers and that linking spend to people have helped us lower cloud spend. Last year Cloud Waste (unaccounted/unwanted cloud services) costed us £120k. That's a lot of money, however when compared to the £30m spend, it's around 0.4%. Which is incredibly low. Cloud waste is suspected to be around 30% of all cloud spend. This includes over provisioned and unused cloud resources. Lowering your un-accountable cloud resources could save you significant funds that can be repurposed on value driving activities.

Conclusion

Sure, there are some simple FinOps ways of lower cloud spend including:

- Embrace Serverless Computing
- Using Reserved Instances
- Monitoring and Alerting on Spend
- Optimising resource utilisation

But one of the most effective ways in saving money in public cloud is to lower cloud waste through greater accountability in your engineering teams. Ensure the same team who built **the thing also run the thing.** Ensure people are on the hook for the spend and you keep on top of your billing by having a regular billing cycle.

If you would like to learn what **tools we have built and implemented** to enable the above or would like a chat about how KPMG can help you on your cloud journey, no matter where you are, please get in touch.

Contact our author(s) for assistance

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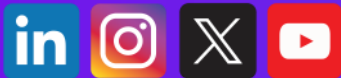
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Jonny is the Director of Cloud and Software Engineering for KPMG UK. With over 20 years of expertise in building and delivering large-scale cloud capabilities solutions for clients across a variety of markets.

Jonny has been instrumental in building cloud engineering capabilities for KPMG UK He has lead cross-functional teams in delivering impactful cloud-based software products and migrations in highly regulated environments for many of KPMG's clients with his large, geographical diverse team

His passion lies in helping organisation's on their cloud journey, whether it's starting from scratch or optimising existing cloud workloads to align with business objectives, of course ensuring value for money while doing so.

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