Controlling cloud costs without compromise

Practical Guide

Controlling your cloud costs without compromising performance

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Controlling your cloud costs without compromising performance

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IT managers love efficiency. Finance directors get excited by cost-effectiveness. The cloud should satisfy both groups. But only if you really understand what you're spending, what you're getting for your money, and whether that's really what your business really needs.

The reality is that cloud costs can spiral out of control if left unchecked. Public cloud services in particular with their ability to offer instant, on-demand scalability. Anyone with a credit card can spin up services. With that kind of availability, there isn't always central oversight of the costs. With many businesses using multiple clouds, this lack of oversight is amplified and can lead to wasted cloud resource and spikes in usage that leave you paying a premium.

The trick to optimising your use of the cloud? It starts with a shift in behaviour. For us, there are several key areas of concern that crop up time and time again in cloud discussions with our clients. We've summarised a few of the essential lessons here.

1 Change your mindset first

Optimisation stems from having the right cloud mindset.

For starters, one essential cloud benefit is the ability to pay for the computing power you actually use, instead of maintaining a significant IT estate that may be left underutilised. You gain the ability to spin up resources via the cloud for temporary workflows, testing or projects in minutes. This is in contrast to the previous process of briefing, scoping, buying and adding capacity to your datacentre – which could take months.

One example of the need to change your thinking is that while organisations have quickly adapted to cloud speed, a lack of controls or visibility often leads them forgetting the other advantage of the cloud: the ability to switch it off just as quickly when you are done. So make the cloud shift to buying resources just when you need them, but don't forget to decommission them when you don't!

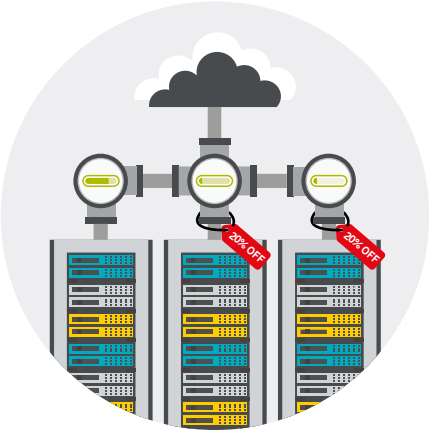
Adopting a cloud mindset also means looking at the way you currently do things, and discovering the many areas for improvement. The agility that the cloud brings cannot be fully achieved if you do not change the way in which things are done. You need to establish a movement within your company, so that everybody understands the value and the changes that the cloud brings, and actively participates in making them happen. Since the cloud enables everybody to use it with a click of the mouse and a credit card, then everybody must understand how to keep costs and usage under control.

2 Understand the way you pay

Only pay for what you use with the public cloud. On the surface that all seems like quite a simple thing. But in fact there are three different ways to pay. The three payment methods are:

Pay-per-use On-Demand

This one really is exactly what it says on the tin, you'll pay for the server time you physically use.



Reserved instances

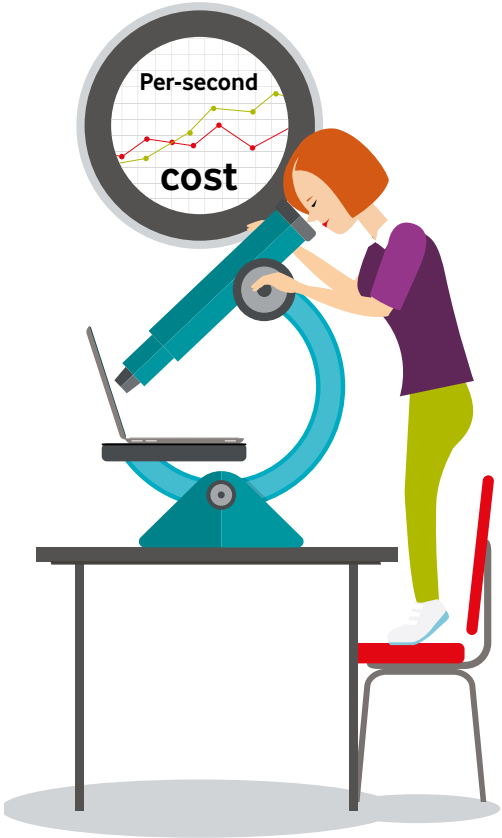
You definitely are able to achieve some discount, perhaps to run services that are available round the clock, though you can expect this to involve a longer-term commitment and investment.

Spot instances

When available, you can get the best price for unused server capacity with savings up to 90% compared to On-Demand pricing; think of it like attempting to buy the last seat on a plane just before take-off at a knockdown price.

Each of these ways to pay might meet your business needs in a different manner, and switching all, or part, of your business cloud spending to another method of payment (or mix of methods) could potentially save you money.

3 Take stock



Start with an audit. Examine all the cloud services you're using and what they're costing you. And we don't mean the monthly bill, we mean the per-second cost, because that's the time horizon in this new world. It's only by getting down to this level of insight that you'll be able to identify the best opportunities for savings.

Remember, your approach to the cloud needs to be all about being agile, buying just when you need it, switching off when you don't, but without compromising your business performance. So per-second billing information is the lowest common denominator that will help steer your decisions around price.

Centralise and consolidate

It's likely you'll find that having a centralised approach to buying will be the best strategy for many organisations. One team can co-ordinate everything for the whole organisation. They can maintain standards and apply best practice consistently, see where overlaps are occurring. For example, there may be multiple underused resources that can be successfully aggregated, resources that can be shut down for an hour or so, overnight or at weekends; a bit like turning off the lights when you leave the building.

It might fly in the face of the pay-per-use model, but decisions around using reserved and spot instances are best made by someone who is able to see a fuller picture. This reinforces the centralised approach — your buying team can make sure that pre-purchased resources are seamlessly available to different development and other teams. They can use a combination of account segregation and tags if possible to track usage to understand the dynamics of how your organisation uses resources, and plan accordingly.

4 Be aware of what's happening in the market

Research potential providers. Understand the advantages and disadvantages of their datacentre locations, and whether some are more cost-effective than others. You may or may not need to physically locate workloads in specific data centres. The process of finding this out may well assist you in uncovering savings. For example, if you run research and development work that is location neutral, it might cost you more to run in a data centre in Amsterdam than in Caracas.

You might approach this research process in one of two ways:

- **Select your preferred provider** - then identify their datacentre location that best suits you
- **Select your preferred location** - then look for providers with an operation there

While both of these are valid approaches, you have to bear in mind that taking a 'location first' approach could lead to other complexities, such as having to manage multiple suppliers, and ensuring that the security of each providers' network matches your own needs and meets industry standards. Issues like certifications, best practises and lock-out options are all worth exploring.

Finally, remember that all this activity is about the search for the greatest cost-efficiency without impacting performance. So price will always be an important consideration.

5 Start with the minimum viable cloud approach

Organisations who are still at a nascent stage in their journey to the cloud are likely to prefer to test the water before making any organisation-wide changes. That sounds like a prudent approach, but there's still a need to do this in a structured fashion. Your strategy will be important; without one, you're likely to end up paying more than you need. This is also important for businesses who already have widespread cloud adoption and are looking to optimise or right-size it.

Your strategy should:

- **Define your minimum viable cloud** - it's likely to focus on small, manageable workloads that show business value quickly.
- **Ensure you are able to learn from it** - your strategy should help you to continually grow your cloud skills and knowledge.
- **Avoid complexity** - start with something you know is achievable, then capitalise on the learnings.
- **Avoid doubling up on costs** - pick a workload you can move to the cloud immediately without having to continue to pay for your current arrangements e.g. datacentre lease, hardware rent, software licenses.

Other ways you can unlock cloud savings

Monitoring will be a key tool in making sure you remain optimised. Cloud management tools will provide you with information on performance and usage that will prove invaluable. Remember, the key way to save is through ensuring that you only pay for the services you need. Without constant monitoring, you don't have the data needed to make essential buying decisions.

Using multiple service providers is probably a viable option for most businesses, though you may find yourself in a stronger negotiating position with a single provider. Equally, sticking rigidly with one provider may not always be the best option and doesn't sit particularly well with the notion of always selecting the route that's best for the business. Using more than one service for the same application — for example using the cloud and in-house services together — is most definitely not cost effective.

Conclusion

We've outlined a number of practical steps you can take to get your cloud costs under control. But when thinking about continuing on your cloud journey in the medium to long term, first look at your people. Building and running applications and services in the cloud changes roles and responsibilities for many people across many different teams. Security and operations must get more heavily involved earlier in the systems development life cycle. Development must assume more ownership of running their code. Ownership of certain tasks may move from one team to another. Some roles may go away, while new roles may be required. New skills will definitely be required and a new operational model around cloud based applications will need to be established.

Perhaps your biggest challenge unlocking these cloud savings will be in facilitating this cultural change. One that moves IT from the business function that prepares for the worst by buying everything now, to the area that can react with speed and agility when needed, without the overheads and obstacles of a large infrastructure.

Find out more about how public cloud services can fit into your strategy and unlock greater agility.

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