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MANAGING AND OPTIMISING YOUR AZURE COSTS

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Azure cost management

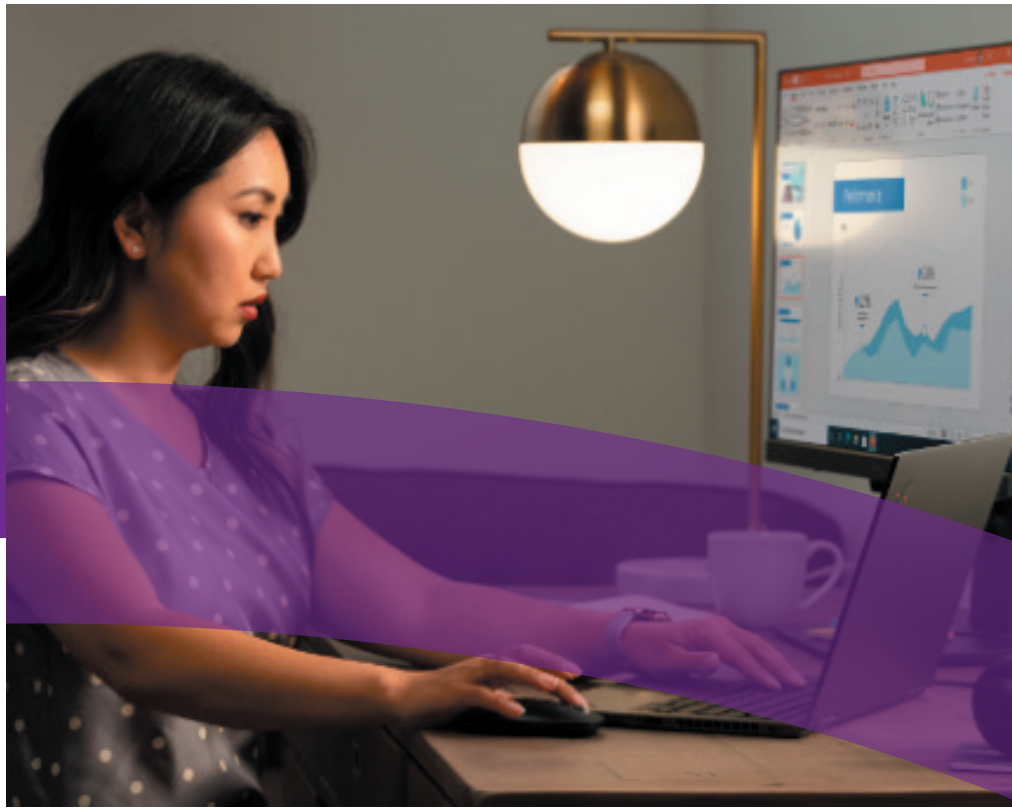
As cloud adoption rises and more organisations run increasing workloads out of the cloud, proper management, optimisation and measurement becomes key for managing your cloud costs.

A new practice called Cloud FinOps has arisen to manage this new and critical cloud activity. To gain the full benefit of the cloud organisations need to carefully monitor and manage the services and spend being used as in many cases the required services can be provided for a much lower cost.

In this guide we explore the wide range of techniques and strategies that we use to help our customers, save money and better manage their Azure costs. We discuss an approach that could help you save up to 80% of your Azure costs.

What this guide covers

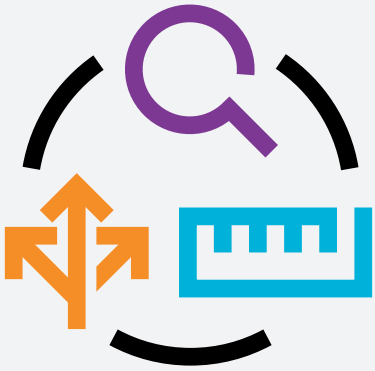
- Azure cost management approach
- Cloud FinOps
- Azure cost management strategies
- Case studies



Azure cost management overview

59% of IT professionals cited IT spend and cloud cost overruns as a top cloud computing issue[1]. As more and more workloads are moved into the cloud, it becomes more complex to manage. Combine that with a complex licensing model and a wide-ranging product set and you create a difficult environment to manage.

The best way to start dealing with your Azure environment is to take action. There are 3 main principles that underpin how we should approach managing your Azure environment.



1. Visibility

Visibility is key. You must have your Azure environment set up correctly with each resource, organised, labelled and sorted into resource groups. This allows you to clearly see what your Azure environment is and allows you to start the process of optimising this.

2. Measurement

Once you have full visibility of your Azure environment the next stage is measurement. You need to set up monitoring and measurement to gain an understanding of how your cloud resources are being utilised and to start identifying opportunities for optimisation.

For example, understanding what resources each Virtual Machine [VM] has available vs what is actually being used will identify opportunities to save money. Even spotting resources that may no longer be in use can sometimes be a challenge and easily create huge bills. The key is measurement. There is a wide range of capability in Azure Resource Manager and prebuilt dashboards available in Power BI to provide measurement capability.

3. Flexibility

You need to focus on how flexible Azure is. In most cases it takes minutes to scale resources up or down. When compared to the limited ability of on-premise servers to scale, this is quite a change. Creating a culture and a focus on taking the insight from your measurement and adjusting your Azure environment to match is a critical change for many organisations.

Cloud FinOps

A new practice of cloud management has arisen called Cloud FinOps. Cloud FinOps is shorthand for Cloud Financial Management. It is the practice of bringing financial accountability to the variable spend model of cloud, enabling distributed teams to make business trade-offs between speed, cost, and quality.

At its core, FinOps is a cultural practice. It's the most efficient way for teams to manage their cloud costs, where everyone takes ownership of their cloud usage supported by a central best-practices group. Cross-functional teams work together to enable faster delivery, while at the same time gaining more financial and operational control.

No longer is a siloed procurement team identifying costs and signing off on them. Instead, a cross functional FinOps team adopts a definitive series of procurement best practices, enabling them to pull together technology, business, and finance in order to optimise cloud vendor management, rate, and discounting.

[1] https://www.infoworld.com

Managing your Azure costs

We have detailed the following techniques for reducing and optimising your Azure costs.

Right sizing cloud resources

Wrongly sized or oversized cloud resources are one of the main issues causing overspend on Azure. Most people when migrating to Azure carry out a pure lift and shift, looking at what compute they had on-premise and replicate this in Azure.

This creates a scenario where most people have more resources than they need. To avoid this problem you should look at what you previously had available and your usage.

With on-premise resources you have no flexibility to extend the resources available for short periods of time or if your consumption grows, so users typically built in a large buffer. However, in the cloud there's no need to do this, you can easily scale up additional resources when you need to.

Reserved Instances

Reserved Instances are a great option for VM's and Azure SQL. Reserved Instances allow you to plan ahead for predictable workloads and buy a 1 or 3-year reservation for the required resources. This comes at a huge discount and is an ideal way of reducing Azure spend.

Most businesses have a number of workloads that are predictable and reliable over the next few years. This strategy is not for every workload but when utilised properly it is a great way of saving up to 72%.

Upgrading classic Azure products

Many users of Azure are still using the products that they initially migrated to. If you are in a classic product then you are missing out on potentially better value, lower pricing and Azure Resource Manager.

If you purchased an Azure VM before 2014 then you are most likely still in a classic version using the Azure Service Manager [ASM] model. These products come to end of life on the 1st of March 2023 where they will require to be moved to the new versions.

Azure Resource Manager is the deployment and management service for Azure. It provides a management layer that enables you to create, update, and delete resources in your Azure account. Azure Resource Manager provides a range of metrics and notification services that allow you to better manage your Azure products, to identify actions. You can then create scripts that can be used to scale down when not in use and scale up when use passes a threshold, but this requires a fairly complex set up.

Turn off resources when not in use

Azure services like VMs charge by the hour based on the size of the VM and the operating system it runs on. These services automatically run 24/7. In reality, most organisations still operate Monday to Friday from around 8-6, so you are paying for services you are only using about 30% of the time. Changing to the working week schedule can save you 70% of your Azure costs.

A simple solution is to turn the resources off when you are not using them. This can be done via scripts to deallocate the VMs in question and then start them back up in the morning.

Azure Hybrid Benefits

Azure Hybrid Benefits allow existing customers to make use of their on-premise licenses in the cloud. If you have an active Windows Server or SQL Server licenses and an active Software Assurance agreement you can transfer this over to the cloud, saving you the operating system costs in your VMs.

Iaas vs Paas

As mentioned above, one of the most overlooked costs in Azure can be the operating system for the VMs. When analysing your spend it is important to consider this as a factor when choosing a service. When you look at platform as a service offering like Azure app services, they initially look more expensive. But once you take into consideration Windows Server or SQL Server licensing you will find use cases where you would be better off moving to Azure App Services.

This move also comes with an added benefit of reducing your management requirements with Microsoft taking over more responsibility for some aspects of the service.

Azure SQL is another great opportunity to save money by moving from IaaS where you pay for the VM and the SQL license to PaaS where you just pay for the service and can be used to reduce costs.

One of the most overlooked costs in Azure can be the operating system for the VMs.

Licensing via CSP

Another way of reducing the licensing costs for operating systems in Azure is to purchase your Windows Server Licenses through CSP.

A CSP or cloud solution provider, is a company that can sell Microsoft licenses and can normally offer you a discount. This means you can buy your windows server licenses for less money. The slight catch here is that you do need to pay for licenses upfront.

For one of our customers running 15 VMs, we managed to save them 88% on the operating license costs over a 1 year period, saving them £62,000.

Spot pricing

Spot pricing can be a great solution to be used as part of a proof of concept or development environment. Spot pricing allow you to purchase unused compute capacity at deep discounts - up to 90% compared to pay-as-you-go prices.

If your workload can tolerate interruptions, and its execution time is flexible, such as in a development environment rather than a production environment you depend on. Then using spot VMs can significantly reduce the cost of running your workload in Azure.

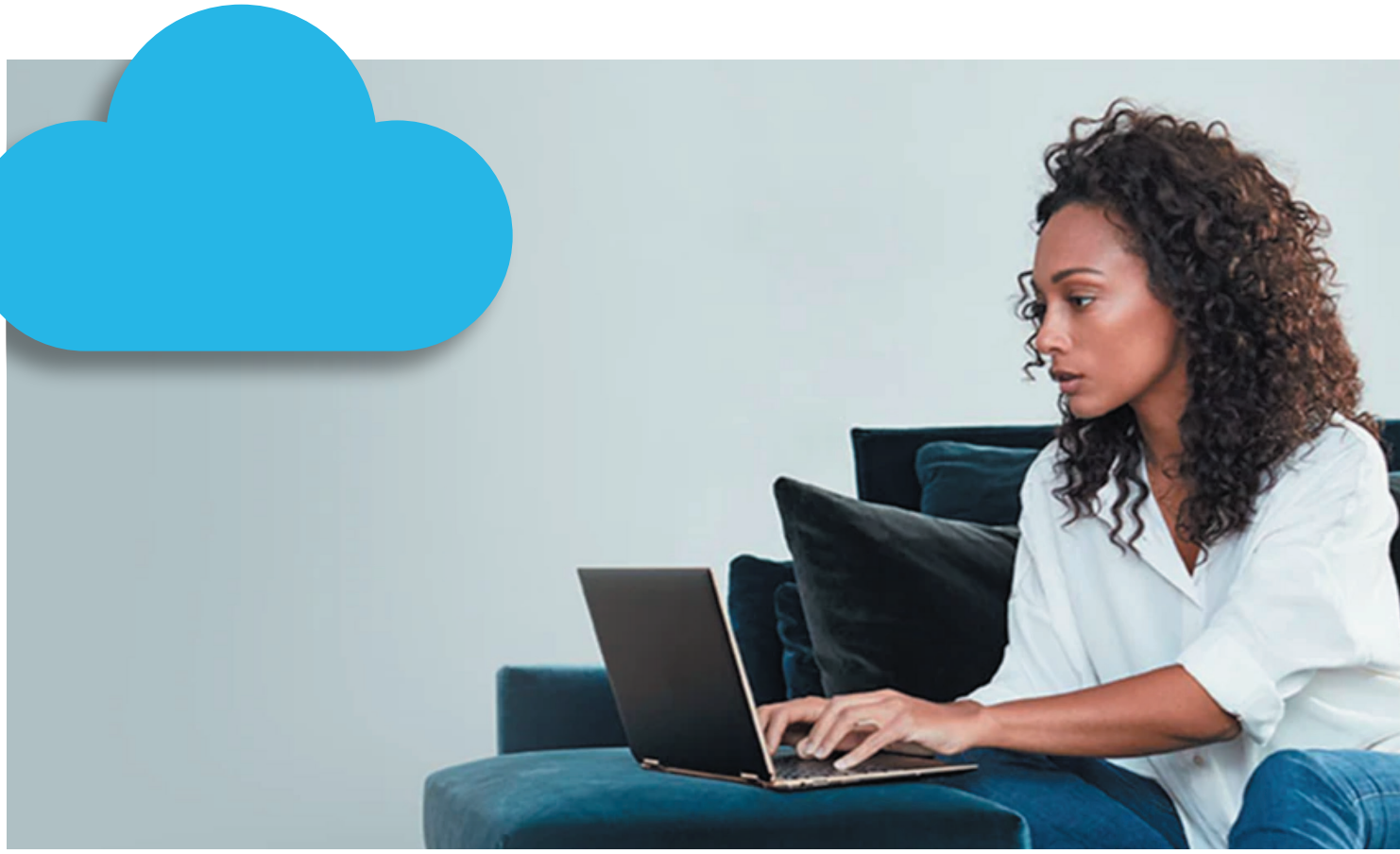
Case study

GRANT PROPERTY
INVESTMENT + MANAGEMENT

Grant Property

Grant Property are a property management company based in Edinburgh. They were using Azure to provide key infrastructure services to their business, running a number of virtual machines and operating primarily using IaaS.

Grant were spending around £8,000 - £9,000 per month. We carried out an Azure cost analysis service and identified a number of strategies available to the business that would reduce their Azure costs by around 70% to around £2,000 per month.



What's next?

Azure cost assessment

In our Azure cost review our expert cloud consultants will review and analyse your Azure requirements and current set up to identify any cost savings or improvements that could be gained.

FIND OUT MORE

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Since 2003 Bridgeall has delivered advisory, development, implementation and support services to our clients on 100's of successful projects. We're a multiple Microsoft Accredited Gold Partner and ISO9001, IS027001 and Cyber Essentials accredited.

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