avanade

# Do what matters to optimize your cloud journey

## Azure cost optimization FAQs

Do what matters

# Questions to help you **optimize your cloud journey**

We talk to clients every day about optimizing the cloud. Our experts are committed to helping clients and sharing their insights so you can get **visibility of your spend** and take controlover your **cloud expenditure**.

**There are 3 key pillars to any cloud cost optimization approach:**

Optimize resources

Create visbility and control

Establish effective governance

# General

**Which of the pillars - optimization, visibility or governance - is the most important?**

You need all of the pillars together in order to be effective. We recommend focusing on quick wins first for immediate value, followed by dashboard creation for improved visibility and then governance to maintain an optimal state.

Getting your house in order first is the right way to start.

**Has Avanade optimized its own cloud expenditure? What was the reason for starting the internal cost reduction effort?**

We have multiple reasons:

**There was an early awareness that we need to manage costs**

Many of our clients have growing Azure estates and we, just as our clients, recognize it is important to use cloud efficiently to get the expected value as originally desired when the cloud journey started.

It can be easy to lose a bit of control on costs given the freedom allowed to add resources in Azure.

It can be difficult to understand the complex cloud catalog to know what resources to use when.

Plus there are challenges understanding the billing, interpreting trends from the data, and knowing who to bill if you have a chargeback model.

**We have seen client costs grow significantly**

Clients have come to us unsure of why their Azure bills are climbing and they aren't necessarily recognizing more value. In these cases, we saw inefficiencies ranging from the original Azure foundation to the way specific resources were being used. We have been able to quickly identify where costs could be cut.

We used lessons learned in our own use of Azure and with our clients to establish three pillars of cost optimization to identify quick wins, build reports and establish governance to maintain an optimal state.

**We recognize we need new ways to balance agility with costs**

With cloud comes new ways of operating, different financial models and different expectations. Our approach is aimed at addressing this so you can have both the agility the cloud promises with the control required to stay within budgets and manage risks.

# Savings

## What savings can we expect?

We have seen savings of up to 70% in an initial optimization. Of course, your results may differ, but suffice to say that almost every first optimization has led to substantial savings. By continuously optimizing, improving visibility and establishing governance, you can maintain an optimal state so costs do not get out of hand in future.

It is also important to note that it's not always about savings. While cost takeout is a sensible place to start, it's important to think about value. When you start thinking about cost to serve, such as the cost per new client or cost per sale, you get a better understanding of how to use the cloud more effectively. You can make more informed decisions on where to focus your cloud spending.

Here is one example, if consumption costs double for an application, and sales triple, you have derived more value from your cloud spend on that application and achieved a better cost to serve.

## What does it take to achieve the savings and maintain an optimal state?

To achieve initial savings:

Analyze your estate and identify optimization opportunities across compute, storage and networking, focusing on the biggest costs first and/or what you see increasing month over month. You will need access to the costs and utilization of the Azure services. If you have tagged the Azure services by environment for instance the optimization will be easier. Also consider strategies around discounting mechanisms such as reserved instances.

To maintain an optimal state, you will need:

- **Governance** – the policies around budget adherence, resource creation permissions and more
- **Transparency** – reports of costs, usage and forecasts
- **Well defined KPIs** – to help you understand and work towards specific goals
- **Resource tagging** – identify usage, ownership and department allocation if you use a chargeback model
- **Continuous review** – keeping on top of optimization opportunities and new cloud features is key. As the cloud evolves, your portfolio must evolve alongside.

# Timing

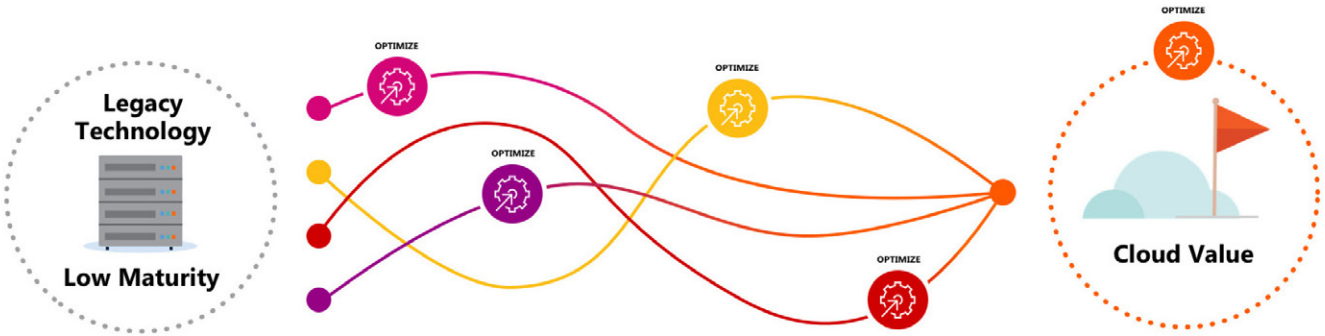
### When should we start optimizing?

You need to start optimizing as you move to the cloud. Optimization must be continuous and part of your operating model. It is not a one and done event of once optimized, always optimized.

By applying optimization practices as you move into the cloud you establish a culture of optimization and accountability. You need to setup the org structures, define the optimization roles, rightsize on entry, and define policies and processes as you move to the cloud.

If you wait until you are in the cloud, with a significant number of assets migrated, it could take longer to fully optimize. During that period, you may drift from an optimal state without suitable controls in place

We do see clients who start optimizing once in the cloud. This typically happens after costs get out of control. In these instances, it's recommended to identify and implement the biggest savings then put in place the roles, governance, reports and process to stay optimal.




### How often should we go through this cycle?

There is no particularly defined cycle. How often you optimize depends on your needs, velocity of your cloud adoption, the speed at which you develop and the alignment of your financial cycles. We typically audit monthly but the tools we use allow for real time analysis.

In some instances, we will look on a daily basis for certain spikes in usage so they can be addressed quickly. It's important to stay on top of everything during the initial phases of optimization in order to keep budgets under control. Automation can help you here.

As you move to the visibility and governance phases, this becomes continuous monitoring, so spend is constantly monitored and spikes are instantly identified.

# Tools and approaches

### Why is this necessary if you rightsize when you migrate?

When you originally moved to the cloud and rightsized on entry, you were likely optimal… at that moment in time. However, as needs change, application usage changes and new resources are added, the need for continuous optimization grows. The cloud provides a lot of freedom but requires a balance across the often-competing priorities of cost, performance and speed.

Optimization and governance enables you to maintain an optimal state.

### How is this different than / better than if I were to use Azure Cost Management and Azure Advisor? Or 3rd party tools?

Gaining visibility from Azure Cost Management (ACM) and recommendations from Azure Advisor is only half the battle. In fact, it's less than half.

ACM does not have all the reports we know our clients need. Particularly valuable are our month over month reports which show changes over time, and our reserved instance (RI) analysis that provides an understanding into efficient usage of RI and insights into where it could be used.

In addition, the advice from Azure Advisor must be complemented with an understanding of how your apps and data are used in order to understand if those recommendations are correct.

Our extensive experience gives us an informed approach with 50 scenarios to evaluate for optimization including VM usage, storage usage, orphaned resource handling and many more.

**We will also build your tagging strategy, cost allocation strategy, policies and more, aligned with your business and technical goals so you can maintain an optimal state.**

### Why can't I just do this in house with standard Azure tools?

Standard Azure tools such as Azure Cost Management, Azure Advisor and Azure Monitor are a great start and will pick up some of the quick wins.

But they are not complete. In order to cover all types of optimization you need a good knowledge of the Azure Advisor algorithms to understand if/how you should leverage the recommendation.

For instance, when recommending VM rightsizing, Azure Advisor only looks at the last 7 days of usage and CPU utilization. You may want to base your recommendation on a longer time period and also look at memory utilization, disk utilization, network utilization and understand if there are any attached disks that are in use.

# Cost allocation

### How do you distribute costs among multiple cost centers when you provide shared resources?

Common resources may be distributed or buried in central IT costs. If you share the costs today, you can bring that same model to the cloud. If you don't share costs today, we can create that model in the cloud for you.

So, if for instance, the shared resource(s) is an application that tracks the calling systems (e.g. authorization system used by multiple applications) then the costs can be allocated proportionately to the calling systems.

A well thought out tagging strategy that is built around your business gives you the visibility you need to understand where shared resources are being consumed, and accurately allocate costs.

### What kind of tag names do you recommend we set up?

This will depend how you want to view your data, what you need for your KPIs and how you want to manage accountability.

For instance, some suggested tags at a minimum are:

- **Environment** – such as dev, test, production
- **Category –** such as infrastructure, application
- **Application** – the application name

You can always join these tags to an external database keyed by application for instance. This will allow you to:

- Understand the associated department for chargeback purposes and budget limits
- Associate with a business process and the number of customers or sales from that business process
- Derive business KPIs such as consumption costs per unit of value

This tagging approach will shed light on the real value you are getting from Azure, allowing you to identify where expectations are being met, and where they are not.

### What are some more examples of tagging?

Think with the end in mind and consider business as well as technical needs from a reporting perspective and you'll quickly identify most of the tags you'll need in your organization.

For instance, you can tag a resource based on its intended use - production or dev/test. With this simple tag you can easily identify usage patterns so may decide to turn off the dev/test resources at weekends. Or you may decide that you need premium services for production resources. Other tags can be for projects, departments, people and so on, with a view to easily allocating costs to the right cost centers, so if there's a spike you know who to talk to.

### How many tags do you have per resource group?

The number of tags per resource or resource group is limited to 50.

# Automation

### How much of this is automated?

There is some automation within Azure Advisor today. We bring additional automation tools and capabilities over and above what's available within Azure Advisor and Azure Cost Management.

We can create specific dashboards with specific alerts that incorporate a combination of factors – usage, cost, time, tags, etc.

### How are any of these monitoring aspects automated?

There are multiple sources of data used in the recommendations, primarily cost which is continuously captured in Log Analytics which must be enabled. Usage and cost are captured in billing details and if enabled you can capture the memory utilization, disk utilization and other metrics continuously.

# PaaS Tips

### What are some areas of cost optimization for Azure PaaS?

Some examples are:

- Storage account blob tiering – use the hot, cool and archive tiers appropriately
- Right size SQL databases
- Reserved instances for SQL databases
- Hybrid benefits for SQL databases
- Some regions have a lower cost
- Go serverless where you can

# Why work with Avanade

## What is the advantage of just using a tool vs. Avanade's optimization service based approach?

A tool will not know how the business uses an application. In addition, you may not be familiar with the algorithms used in the tool and therefore may not be confident in a recommendation.

Here are some considerations and differences between a tools-based approach, which relies primarily on first of third party tools, and a more comprehensive service based approach from Avanade

### Tool based approach

- A tool will help you to find the low hanging fruit and act fast to make some quick wins.
- You can use a tool repeatedly but bear in mind its value will diminish quickly with every subsequent use.
- Be wary about becoming over reliant upon a tool. You may not understand how it arrived at any recommendations (e.g. did algorithm look at past 7 days or 30 days, can you adjust it, does it look at CPU/ Memory/Disk/Networking for resizing or just CPU) and have full confidence in any recommendation.
- A tool will analyze usage for you but can't uncover real insight.
- You still have to create the optimization strategy and ensure role-based access control and tags are in place.

### Service based approach from Avanade

- A tool is one part of the solution but not the sole focus. You are left with the tool if you do not retain Avanade to continuously optimize.
- We help you define the best optimization strategy and approach for your business.
- We help you define governance policies and guidelines to get to and maintain an optimal state.
- We understand the logic in the tools used to create recommendations.
- We work with technical and business teams to create and approve recommendations that are aligned with client goals, application performance, security, availability and more.
- Avanade can also act as the project management office to manage the optimization cycle.
- Avanade can implement the right recommendations.
- Avanade can evaluate the portfolio for further optimization such as going serverless, using

## What is the best way to get started?

Here are some considerations and differences between a tools-based approach, which relies primarily on first of third party tools, and a more comprehensive service based approach from Avanade.

The workshop is a three week collaborative effort with:

- Week 1 – being the analysis phase to review cloud costs and usage and design the first iteration of a dashboard
- Week 2 – identifying quick wins; deploying a first version of a dashboard; defining strategies for tagging, allocation and more
- Week 3 – implementing quick wins and building the roadmap for short and long term optimization

**And, we can tailor this to your specific needs, to include a strategy for security and regulatory compliance for example.**

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# Let Avanade partner with you **to optimize the cloud and enable greater value from your Azure investments.**

We hope this has answered some of your questoins. For specific questions, please contast us or find further advice on cloud cost optimization at **avanade.com**.


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**Do what matters**