# Servium



# GET STARTED WITH MICROSOFT AZURE

What IT teams need to know



### IN THIS GUIDE

Organisations of all sizes are realising great value from running business solutions in the cloud. Incredible scalability, great reliability and robust availability are attractive benefits, especially when your IT team is looking to define new ways to create value.

Azure

Navigating the cloud is a critical transformation and choice of cloud a big success factor. There are good reasons why many businesses are choosing to use Azure to help ease this transition.

If you're looking to migrate workloads to Azure, the chances are you've got unanswered questions and may even feel a little daunted by the array of options that confront you and how to tackle the road ahead.

How do you move servers, applications and data into Azure? How do you understand application compatibility? What will my environment cost in Azure? These are all reasons your cloud project may have stalled.

This guide is perfect for IT teams who are looking to make the move to Azure for the first time. It will help you to understand the big picture, discover if it's right for you, give you top tips to support your business case and give advice on what you need to know when it comes to planning your move.

### Learn

- Key Azure offerings
- Things you need to know
- Reasons to choose Azure
- Azure journey basics
- Which workloads to start with



### What is Microsoft Azure?

Microsoft Azure is a platform that enables users to engage in the practice of cloud computing. It is a collection of services including hosted and managed versions of Microsoft technologies, as well as open technologies, such as Linux. It provides the tools and infrastructure to successfully create and manage apps using Microsoft's data centres. Azure is viewed as both a Platform as a Service (PaaS) and an Infrastructure as a Service (IaaS) offering.

### **Cloud models**



### Need to know

# Why does Microsoft Azure matter?

- Zero upfront costs.
- Instant resource provisioning
  capacity on demand.
- Usage-based billing.
- Compelling for moving on-premises Windows servers to the cloud.

### The key offerings

Azure has various classes of offering, under which over 600 services are categorised.



### Why choose Azure?

Choosing a cloud provider isn't straight forward. Beyond the hyperscalers, there are countless clouds you could choose to move your workloads to. So, why choose Azure? There are a few important reasons most organisations favour it:

### 1. A safe bet

Microsoft makes a strong case for a joined-up strategy thanks to the power of Azure, Microsoft 365 and Teams being used together. For organisations looking to deliver on a cloud strategy at scale, the global coverage that Azure promises also makes it highly attractive.

### 2. Familiarity

The task of administering a cloud infrastructure is typically very different to an on-premises infrastructure. However, inside Azure, proprietary Microsoft technologies like Windows Server, Active Directory, and SharePoint provide a familiar management experience for IT teams. When used in combination with Microsoft 365, tight knit integration saves time and frees up resources to work on new projects, rather than spending time on general system upkeep.



### Need to know

### **Azure Hybrid Benefit**

A licensing benefit that helps you to significantly reduce the costs of running your workloads in the cloud. Use your on-premises Software Assurance-enabled Windows Server and SQL Server licences on Azure.

The benefit also applies to RedHat and SUSE Linux subscriptions.

In other clouds you'll need to repurchase your Windows Server licence.

### 3. Hybrid cloud

Where Microsoft is already a strategic technology within an organisation, Azure can easily play a role in simplifying migration of workloads to the cloud. Azure provides the hardware and software required to deploy public cloud services from a local data centre using a shared management portal, code and APIs. This interoperability, plus the ability to run open source workloads on Linux, makes it a natural choice for hybrid cloud strategies.

### 4. Attractive commercials for Microsoft users

Beyond the easier time integrating Azure versus other clouds, existing Microsoft customers can unlock attractive discounts for moving workloads to Azure. The Azure Hybrid Benefit in particular, has the potential to significantly reduce the cost of running Microsoft-centric workloads in the cloud.





### 7 Azure terms you need to know

### Azure Active Directory (AD)

This service, also known as a "tenant," is Microsoft's cloud-based identity and access manager. It helps a company's users log in and access resources.

### Azure Resource Manager (RM)

A framework that lets companies set up and manage resources within Azure. The service also allows you to build, update and remove resources from your Azure subscription.

### **Azure Stack**

Allows companies to deploy Azure resources outside of the public cloud and, instead, in a private data centre.

#### Resource

Refers to the individual service offerings in Azure, including the Azure Virtual Machine, an Azure Storage account and the Azure SQL database. Resources must be attached to a resource group.

#### **Resource Group**

Contains the resources in Azure. One group usually manages resources that must be secured, managed and deployed as a whole. Resource groups can help you both organise resources and create a security boundary where necessary.

### **Subscription**

A subscription simply refers to the billing agreement with Microsoft. Every Azure subscription comes with a directory, but each directory can contain multiple subscriptions.

### Virtual Machine

The software equivalent of a physical machine that runs an operating system (OS). With cloud computing, several virtual machines can run at once on the same hardware.



Planning your path to Azure

If you're going to migrate workloads to Azure you need to carefully plan your flight path. Best practice is to follow the Microsoft Cloud Adoption Framework for Azure.

### Microsoft Cloud Adoption Framework for Azure

### Define strategy

- Understand motivations
  - Business outcomes
- Business justification
  - Prioritise project





### **Before migration**

First of all, consider what you are looking to achieve with the app you want to move to the cloud and the combination of infrastructure resources (workload) required to make it function:

Lift & Shift Migrate applications to the cloud as-is. This is sometimes referred to as rehosting.		<b>Refactor</b> Modifying applications to better support the cloud environment.		<b>Replatform</b> Moving applications to the cloud without major changes, but taking advantage of the benefits of the cloud environment.		<b>Rebuild</b> Rewrite the application from scratch.		<b>Replace</b> Retire the application and replace it with a new cloud-native application.	
Pros	Cons	Pros	Cons	Pros	Cons	Pros	Cons	Pros	Cons
Relatively fast and simple as next to no alterations made ahead of move.	Migrate any problems into the cloud.	Cloud-native architectures can rapidly adjust to changing requirements.	Refactoring isn't for beginners and takes time and skill in coding.	Start small and scale as needed and at your own pace.	"Scope creep" can turn a replatforming project into a full-blown refactoring project.	Ensures your app is wholly cloud compatible.	Again, not for novices due to dependency on coding expertise.	More agility as apps can quickly be updated following new DevOps practices.	Will require additional tool sets to help manage the development process.

If you're unsure of your apps and workloads then discovery is critical. Depending on how far you want to go with Azure, an application inventory is a brilliant starting point to ensure that nothing is missed and helps avoid headaches later.

Probing your apps and workloads in this way also provides an opportunity to consider the interdependencies between them. While you may think something is a standalone solution you don't want to discover broken integrations once it's in the cloud. Server interdependencies matter in Azure, so Microsoft has created the Azure Migrate Assessment tool to help you find them. Azure Migrate will help you assess and migrate various environments including servers, databases, web applications, virtual desktops and data.

As you build out your migration plan to Azure, you'll need to consider the key building blocks at play:



### Compute

Azure gives you instant access to computing resources. It's worth looking at Azure Autoscale during your planning stage as it offers the ability to dynamically scale applications as performance requirements change. Azure Virtual Machines gives you the flexibility of virtualisation without having to buy and maintain the physical hardware that runs it.



### Network

Be sure to address your networking requirements, especially how many subnets you'll need to provision to ensure Azure resources can securely communicate with each other, the internet, and your on-premises networks.



#### Storage

Azure offers two classes of storage - hot and cool depending on how often your users access it. Hot data requires fast storage, while data that is rarely accessed (cold data) is stored on the slowest storage.



#### Governance

Before you start migration, you need to have the right processes in place to manage your workloads effectively and baseline operational posture.

These building blocks (and others) will help to shape your Azure landing zone(s) - an optimised cloud environment aligned specifically to your needs. Helpfully, Microsoft has created countless reference architectures to assist with process also.



### Need to know

### Azure Migrate Assessment tool

Helps you discover, assess and migrate applications, infrastructure and data from your on-premises environments to Azure. Everything you need to right-size infrastructure and understand cost.



### During migration

### Provision your landing zone

With your migration plan set, it's time to provision your Azure landing zone(s) - the destination that will receive the workloads you plan to migrate. A fully functioning landing zone is the final deliverable before you start migrating. Microsoft has a sizeable library of deployment instructions and supporting scripts to help automatically deploy reference implementations for all kinds of Azure landing zone to suit your workloads. Of course, you can completely custom build your landing zone as well.

### Pilot workload

The first migration will be a source of learning. Your pilot project should output a set of clear requirements that support a longer-term production solution and make any necessary changes to your original plan.

### Organise your migration into batches

Once you know the workloads you wish to migrate, organise them into manageable cohorts, so you're not biting off more than you can chew at any one time. Batched adoption has the advantage of breaking down both the action and cost of migration into more practical pieces.

### What workload to start with?



Disaster Recovery

Azure is well suited for organisations with a single data centre that haven't planned for disaster recovery. Azure Site Recovery, is a cost-effective way to get data off-premises and have a secondary data centre where workloads can switch to in the event of a failure.



End-of-support technologies

Azure is well suited when a workload is hosted on a product nearing end-of-support, providing an obvious alternative to continuing with onpremises solutions.



Simple apps with minimal complexity

Applications that are not mission critical and that have few dependencies are another smart place to start your migration.



Create virtual desktops in the cloud so remote employees have a reliable and secure

means of accessing

applications and

services.



Test and development

Run test and dev on Azure Virtual Machines or using Azure DevTest Labs to achieve efficiency and save costs.



🔥 Azure

Apps like corporate web sites and eCommerce platforms are wellmatched to the scalability of Azure where unpredictability in capacity and performance is high.

### After migration

You will truly recognise the value of the previous stages once you've started operating in the cloud. It's easy to do the wrong thing quickly when the environment is new, so the choices made previously and the modus operandi decided will play a big role in post-migration success. Once you're live however, don't forget to:

### Secure your cloud

Just because your workloads are in Azure, that doesn't mean Microsoft will do everything for you. Securing your virtual machines is your responsibility - that means everything from deciding your security rules to setting strong passwords. Likewise, Microsoft will not patch your virtual machines, so don't fall behind with update routines.

### Continuously monitor

After migration, you should seek to continually monitor workloads. This will help to optimise costs and forecast for future usage patterns. It's common that migrated resources start out as one type of workload but because of usage, costs, and changing business requirements, shift to another type over time. It will also help you to independently assess SLAs and hold Microsoft to account on the service being delivered.

#### **Data protection**

As with security, backup of your data in Azure is your responsibility. Independent and isolated backups guard against unintended destruction of data and enable your business to keep operational in the event of a catastrophe. There may be occasion that backup should take place outside of Azure to add an additional layer of protection.

### Mature the experience

Armed with insight, there are all kinds of actions you can begin to take. Add operations expansions to improve performance, reliability and operational excellence. Governance expansion can help to improve cost, reliability, security and consistency. Finally, security expansions can enhance the protection of sensitive data and critical systems that exist within Azure.



### Need to know

### Security and backup are your responsibility

It's not unusual for IT teams to believe that workloads on Azure will be fully attended by Microsoft. However, your responsibility for security and protection does not change.



### DON'T GO IT ALONE

While there are lots of tools, reference designs and resources to assist your migration to Azure, there's no substitute for working with a partner who is delivering these projects on a regular basis. Servium's cloud practice will help with every step of your migration to ensure you build the best blueprint, pick the right components and put the appropriate cloud controls in place.

If you'd like to get started, try our Vapour Trail Discover service and then put Azure to work for free. Please contact your Account Manager, email us at hello@servium.com, or speak to one of the team on +44 (0)303 334 3000.



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