

# Best practices to accelerate your cloud migration

Recommendations for moving your apps, databases, and infrastructure to the cloud quickly and efficiently

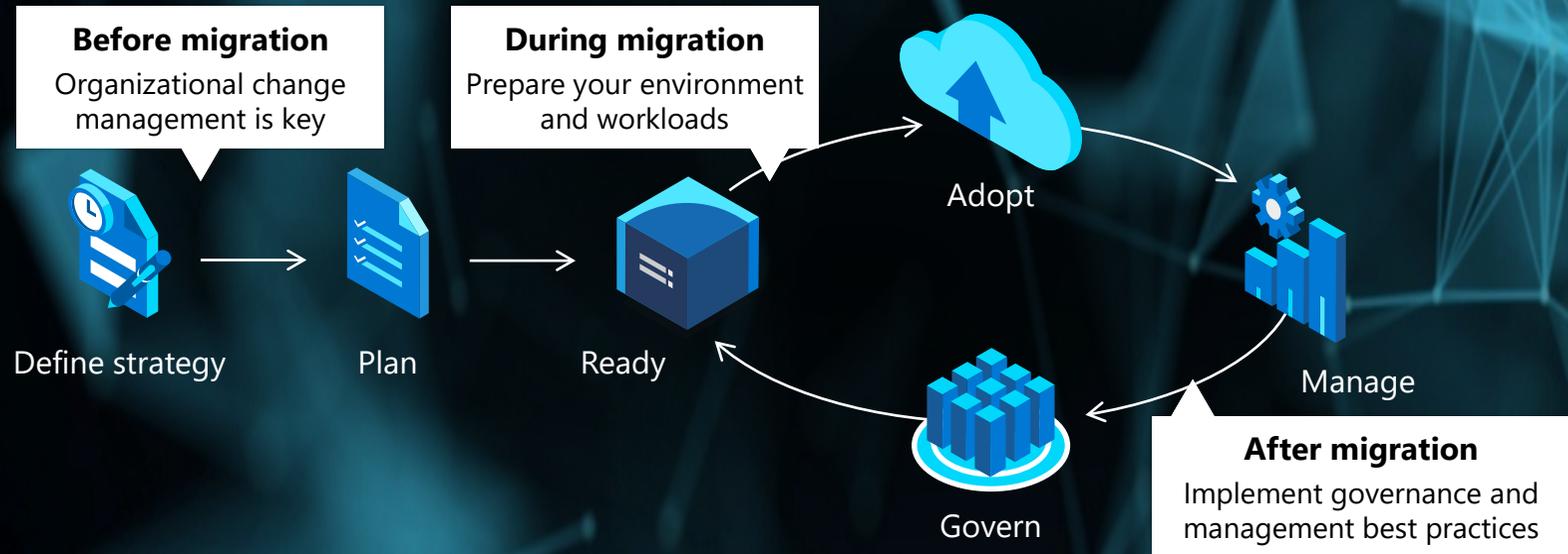




# Understanding the migration journey

Cloud migration can help address many of the new and recurring challenges organizations face, including shrinking IT budgets, remote work forces, new cybersecurity threats, and growing demands for innovation.

But migrating to the cloud is not a simple one-and-done task – it's a journey, with different phases that require strategic actions in order to move business critical workloads quickly, safely, and in a way that positions your organization for growth and optimization in the future. Understanding how to move through this journey is crucial to accelerating cloud adoption and kickstarting digital transformation.





# Common migration projects

Every organization's environment is comprised of different applications and databases, but these are some of the common workloads and projects for cloud migration. While everyone's needs are unique, this should hopefully provide an idea of what types of workloads are typically migrated to the cloud, and why.



## Windows Server

Migrating your Windows Server to Azure helps innovate, save money, and increase security and compliance of your applications.



## SQL Server

Migrate SQL Server to Azure Virtual Machines or a fully managed option like Azure SQL Database to get minimal downtime and built-in HA, monitoring, and security.



## Linux & open-source databases

Azure supports running virtually any application, allowing you to build with preferred apps that work well together.



## DevTest

Improve software quality and reduce costs by moving Dev/Test environments to Azure, allowing you to quickly deploy and manage hundreds of VMs for development and testing.



## Web apps

Spend more time creating value for your customers and less time managing infrastructure by moving web apps to Azure App Service.



## SAP

Run business-critical services like SAP on Azure to enhance operations by optimizing costs and lowering time-to-market.



## Specialized workloads

Many specialized and high-performance workloads run natively on Azure, so users can use familiar tools while gaining the benefits of automation, scale, and security.



## VDI

Deliver a virtual desktop and applications experience to anyone, anywhere with the cloud, with built-in security and the ability to deploy and scale in minutes.

# Respond to challenges now and build resilience for the future

Many businesses today are facing significant challenges in terms of enabling remote work, ensuring business continuity, securing resources, optimizing costs, and scaling on-demand.

Not only do organizations need to quickly adapt to the current environment, they also must find ways to build resilience for the future – while dealing with constrained budgets.

Cloud migration involves significant changes across people, processes, and technology. While organizations understand these benefits and even feel a sense of urgency to migrate, many remain hesitant about how to get started.

Taking a holistic approach will help you navigate this journey with the guidance you need to move forward with confidence.

By accelerating your cloud migration process and leveraging best practices based on real customer engagements, you can prepare your organization to meet these current and future challenges head-on

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Prioritize assessments of existing workloads

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Anticipate and mitigate complexities

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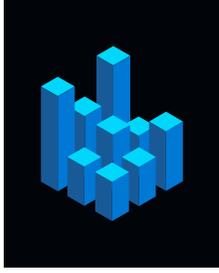


Execute migration phases iteratively

4



Leverage workload specific guidance



# Prioritize assessments of existing apps and workloads

Before migrating to the cloud, it's important to carefully assess your current environment and understand the size and structure of your migratable estate, as well as any dependencies between applications.



## Perform comprehensive discovery across your source environment

Create a comprehensive inventory of on-premises infrastructure, databases, and applications. This is the first step in generating right-sized and optimized cost projections for running your applications in the cloud.

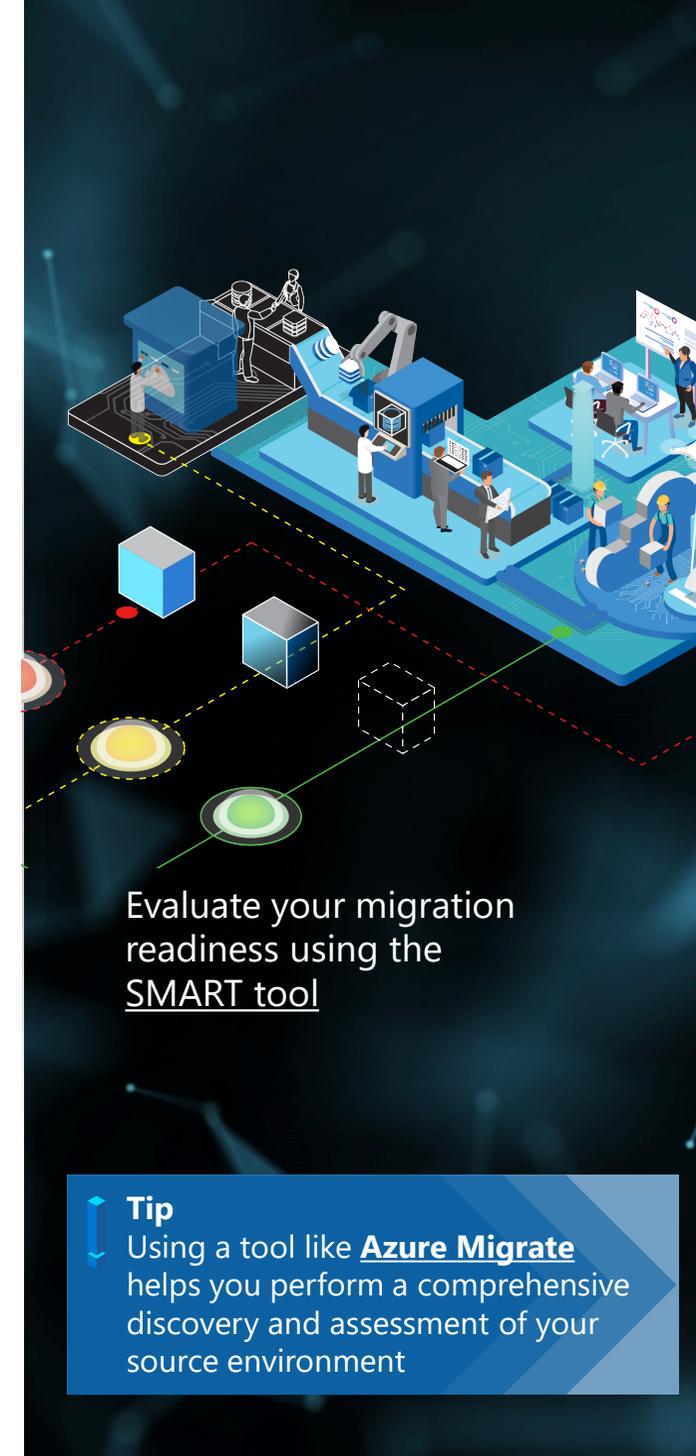
Leverage assessment tools like [Azure Migrate](#) for a holistic overview of your source environment and application dependencies.



## Identify quick wins for migrating workloads

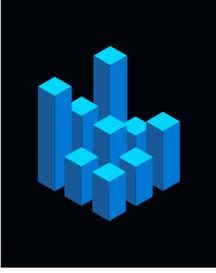
Prioritize covering your entire fleet of applications and then decide which ones to migrate first, along with specific plans for each group.

Identify workloads that could be "quick wins" for the first wave of your migration plan. These might include resources that are impacted by hardware refreshes, end-of-support, and capacity constraints.



Evaluate your migration readiness using the [SMART tool](#)

**Tip**  
Using a tool like [Azure Migrate](#) helps you perform a comprehensive discovery and assessment of your source environment



## Prioritize assessments of existing apps and workloads *(cont.)*

Performing a comprehensive analysis of your on-premises environment reveals the insights needed to determine which resources are ready for migration and what the cost will be once they're running in Azure – both critical parts of an effective migration strategy.



### Optimize costs by right-sizing resources

Generate right-sized and optimized cost projections for running your applications in Azure. Leverage best practices to cost and size workloads migrated to Azure.

Take advantage of offers such as [Azure Hybrid Benefit](#) to significantly lower your operating costs in Azure.



### Take quick action to migrate efficiently

Adopt a posture of continuous urgency. This involves selecting specific trigger points that result in quick hit actions, which drive new operational efficiencies along the way.

Two useful programs that can provide expert guidance for accelerating migration and increasing efficiencies are [Microsoft FastTrack for Azure](#) and the [Azure Migration Program](#).



"Microsoft engineering and FastTrack's ability to quickly aggregate and visualize our application hosting estate is the cornerstone to our migration planning activities. GSK is comprised of many different business units, and we are able to tailor migration priorities for each of these business units. In addition, we also now have clear visibility for each server, what they are dependent on, and can now also determine the appropriate server size in Azure to create our migration bundles and landing zones. With this excellent foundation of data, we are able to quickly move into the migration phase of our cloud journey with a high degree of confidence in our approach."

**Jim Funk, Director,  
Hosting Services, GlaxoSmithKline**



# Anticipate and mitigate complexities

Each organization will have its own unique set of requirements and challenges when moving to the cloud, related to both technical complexity and people and processes.

Having a migration plan in place and involving key stakeholder from the start, including finance, is crucial for ensuring everyone is on the same page and can respond to any potential issues quickly.

## Tip

Start by determining which cloud operating model meets your needs

## Prepare people and processes with a clear migration plan



Establish clear ownership and requirements among stakeholders across security, networking, IT, and application teams.

This strategy will ensure that everyone can move quickly when they do encounter complexities. Otherwise, rushing into a migration can result in overspending, conflicting priorities, roadblocks, delays, and inefficiencies



## Set up a landing zone for your migrated workloads in Azure



Prior to your migration, establish a foundation for your workloads in the cloud. These are sometimes referred to as "landing zones."

Establishing a baseline framework here with networking, identity, security, operations, compliance, and governance capabilities will help to ensure your cloud migration proceeds efficiently across your organization and that you can easily scale operations after.



## Simplify application management during and after migration



While designing your landing zones and baseline cloud environment, it's important to decide how you want to manage your applications.

Azure Arc is an ideal way to extend Azure management and capabilities across on-premises, edge, or multi-cloud environments.

Azure offers comprehensive management solutions for backup, disaster recovery, security, monitoring, governance, and cost management.



# Execute migration iteratively

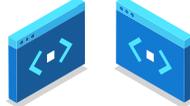
While it's often easy to think of migration as a single, uniform process, in reality it's a series of many smaller migrations that must be coordinated and managed together.



## Migrate workloads in waves

Follow an iterative approach for migration to have the most success moving workloads and applications safely and efficiently.

Your first "pilot" wave enables you to test your landing zone and ensure that the infrastructure is configured correctly before migrating more advanced business critical applications. Explore examples of some [first cloud migration projects](#).



## Consider dependencies between applications

Identify dependencies between discovered servers to understand how they're connected and whether they must be grouped together for assessment and migration.

This allows you to test them to verify they are working properly and perform a final migration. Use [dependency analysis](#) in Azure Migrate to view dependencies.



## Leverage free migration tools

Using free migration tools helps you achieve the scale that works best for your business.

Tools like [Azure Migrate](#) can help simplify your migration journey and extend your unique workloads into the cloud with coverage for many scenarios including Windows Server, Linux, VDI, web applications, and more.



Tip

### Use a "Lift-and-shift" migration approach

- Quick path to the cloud
- Immediate savings by shifting CAPEX to OPEX
- No major code changes required
- Maintain familiarity with applications



# Execute migration iteratively *(cont.)*

## Case Study

A global banking and financial services company needed to migrate thousands of resources. They chose Azure and were able to showcase quick wins.



Needed to migrate

**6,000** servers  
**4,500** desktops  
**20,000** containers  
to Azure over a 2-year period



Used the first phase consisting of

**100%**  
**Linux VMs**  
to develop in-depth understanding of Azure platform capabilities and build confidence



Disciplined execution and best practices during the first project helped them achieve

**1,000**  
**servers / week**  
velocity during the second phase



"We went from around one wave of virtual machines (VMs) migration over two months' period to one wave of 50 VMs every week."

**Alan David Wilson, Head of IT Strategy & Architecture  
Celcom**



# Leverage workload specific guidance

Not all applications are equal, and in some cases special care should be taken to ensure they can be moved to the cloud successfully.

Here is a brief compilation of recommended approaches for migrating common, business-critical workloads.



## Windows Server

### Before migration:

- Perform comprehensive discovery and assessment of source environment
- Identify best candidates for migration

### During migration:

- Organize workloads into groups
- Right-size your resources

### After migration:

- Optimize resources in the cloud to continuously enhance security, performance, and ROI

For detailed guidance, refer to [Windows Server migration guide](#)



## SQL Server

### Before migration:

- Discover your SQL Server assets
- Assess workloads for compatibility

### During migration:

- Migrate on-premises schema and data to target
- Sync on-premises data with cloud data
- Cutover databases to target environment

### After migration:

- Remediate your apps and test performance
- Optimize apps for performance; test again
- Retire old assets

For detailed guidance, refer to the [Database migration guide](#)



## Web Apps

### Before migration:

- Assess your website for migration by running a scan of its public URL
- For .NET apps, use the [Migration Assistant](#). For other app types see our [solution assessment program](#).

### During migration:

- Download the Migration Assistant tool to run readiness checks
- Migrate your web application to Azure App Service

### After migration:

- Scale performance as needed with built-in managed services

For detailed guidance, refer to [this guide](#)



## Leverage workload specific guidance *(cont.)*

Not all applications are equal, and in some cases special care should be taken to ensure they can be moved to the cloud successfully.

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### Virtual Desktop Infrastructure (VDI)

#### Before migration:

Consider these two approaches for migration:

- Refactoring
- Replicating (“lift-and-shift”)

#### During migration:

- Migrate your VDI to the new Windows Virtual Desktop host infrastructure on Azure

#### After migration:

- Tailor your VDI workloads to work in the new environment

For detailed guidance, refer to [this video](#)



### SAP

#### Before migration:

- Discover your SAP estate. Document core SAP landscapes and customizations
- Define your goals, align key stakeholders, assess and plan
- Right-size SAP to fit business needs
- Use reference architectures jointly created by Microsoft and SAP

#### During migration:

- Realize your migration plan and communicate it to the business
- Test for recovery and performance
- Migrate to bring technology to life

#### After migration:

- Optimize landscapes to continuously enhance your environment
- Drive insights with data visualization
- Invent new customer experiences by extending the core platform

For detailed guidance, visit the [website](#)



### Dev/Test

#### Before migration:

- Use the “lift-and-shift” method to replicate dev/test workloads
- Prepare Azure environment with dev/test architecture setup

#### During migration:

- Replicate on-premises dev/test workloads
- Test migration, then cutover from on-premises workloads to Azure workloads

#### After migration:

- Redirect development workstations to point at the cloud dev/test workloads
- Set lab policies to automatically shut down and start up virtual machines.
- Use lab cost trend feature to estimate spending and set thresholds.

For detailed guidance, refer to [this video](#)

# Next steps

Are you ready to get started on your cloud migration?  
Whatever your plans entail, keep these key steps in mind:

**Assess your  
source environment**

**Anticipate and  
mitigate complexities**

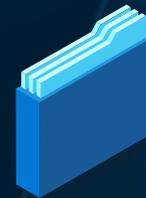
**Adopt an  
iterative approach**

Following the steps detailed here can help save costs, boost confidence, and create new efficiencies across your organization.

Check out these useful resources and tools to learn more about how to get your migration started on the right track.



[Assess your cloud migration readiness](#)



[Find key resources for Azure migration](#)



[Assess and move your workloads to Azure](#)



**Get help simplifying your journey to the cloud with the right guidance, tools, and expert assistance by joining the [Azure Migration Program \(AMP\)](#).**