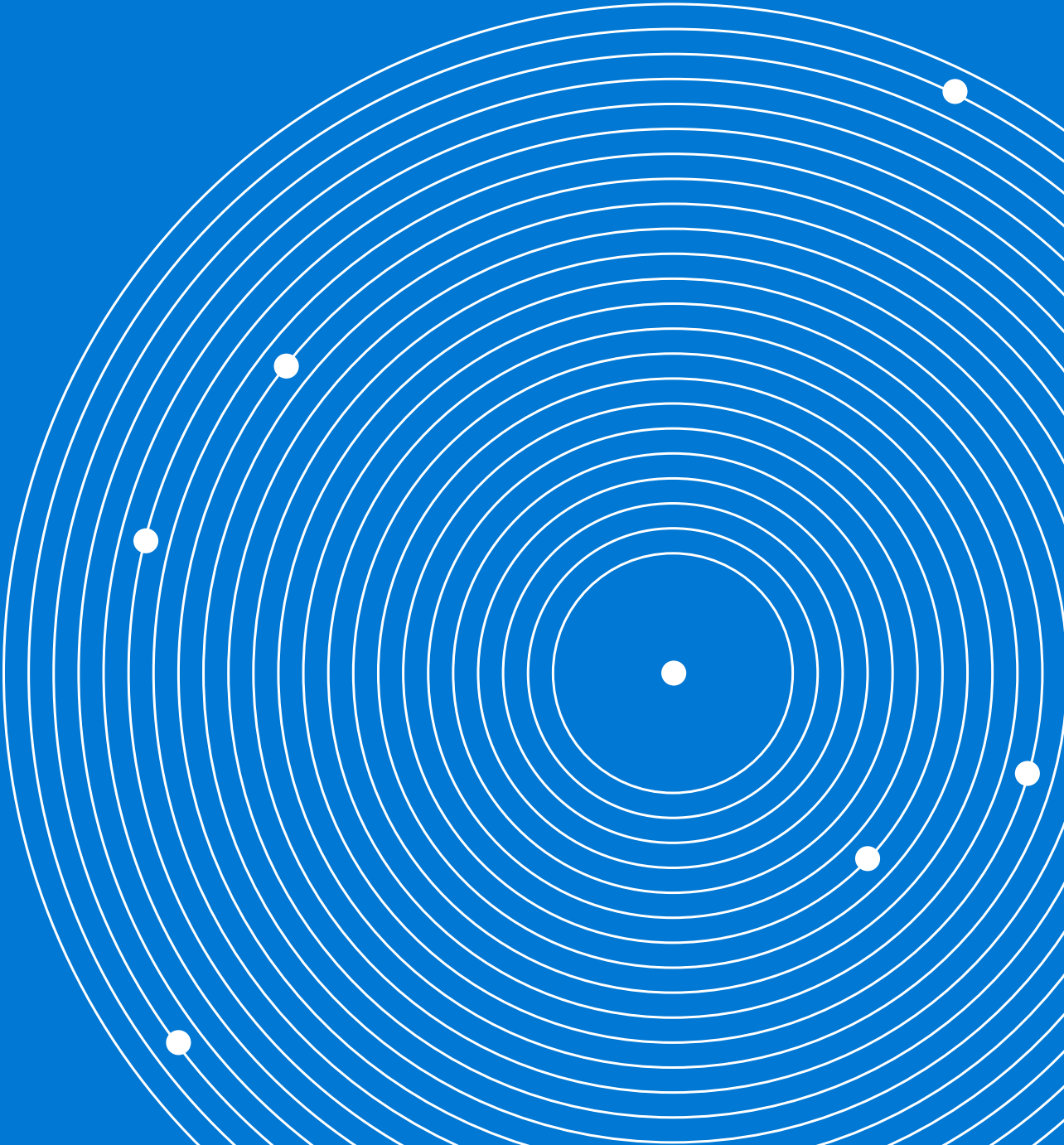
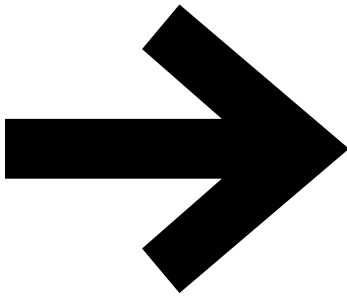


# Windows Server on Azure

The ultimate guide





You're running a lot of your business on Windows Server today—mission-critical apps, Active Directory, Domain Name Servers, not to mention virtual machines and storage.

For more than 20 years, Windows Server has been the operating system of choice for enterprise workloads.

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# Give your organization a boost in the age of cloud computing

This guide shows you how you can use your Windows Server expertise to give your organization a boost in the age of cloud computing, addressing these topics and others:

- Why move to the cloud?
- What are some ways to use Azure for Windows Server workloads?
- What about security?
- Who else is doing this?
- How do I get started?

## **Gain cloud expertise**

This guide helps you understand how to find answers and build internal capability around cloud security and governance, new application models, and cloud architecture.

01 /

# Cloud computing drives transformational change

Cloud adoption is on the rise as businesses today face market and supply chain disruptions unlike any they've faced in the past and turn to the cloud for the scale, flexibility, and security they need to keep up. As a result, IT is emerging as an important enabler of business success. As an IT professional, you have the opportunity to grow and leverage your existing skill sets by architecting, migrating, and managing software in the cloud.

You can master this shift to the cloud by tapping into a broad range of training, technology, and tools from Microsoft. This document will guide you to the resources available from Microsoft and its partners to understand Microsoft Azure capabilities and the opportunities now available for datacenters heavily invested in Windows Server.

## The rising demand for a trusted, secure hybrid cloud

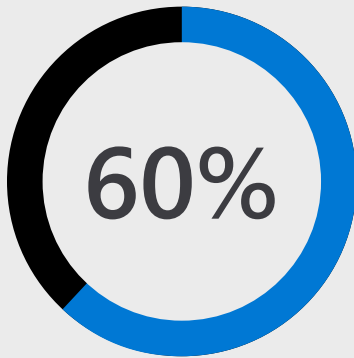
The public cloud is a major IT investment.



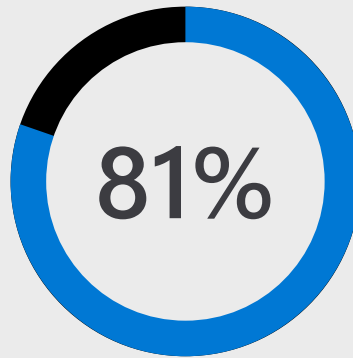
Cloud providers need to understand their customers' industry-specific needs.



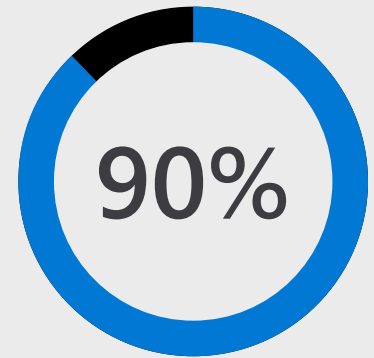
Most trust Microsoft to understand their business and industry.



60% of enterprise IT infrastructure spending will be allocated to public cloud.<sup>1</sup>



81% of IT decision makers believe it is very important for their cloud provider to have a deep understanding of their industry-specific business needs.<sup>1</sup>



90% of IT decision makers who hold the previous belief, also feel Microsoft understands the business needs of their industry.<sup>1</sup>

### Start with a strategy

The transformation to cloud computing is a great opportunity for IT pros to evolve and meet the changes in the modern workforce, to protect workloads with unmatched security, innovate anywhere with seamless hybrid capabilities, and to migrate to cloud infrastructures that can be trusted to run a business.

But digital transformation is not something to jump into blindly. There's a broad range of business, financial, and technology challenges to consider first. Some questions to ask include:

- What benefits (e.g. agility, cost savings, scalability) are we expecting from the cloud and how do we prioritize them?

- What is our short-term and long-term roadmap for moving to the cloud?
- What is my personal roadmap for building the necessary cloud skills?
- Should we use a certified Azure partner? If so, which one?
- What servers, applications, and data should stay in the datacenter and what should be cloud-based?
- How can we continue to derive the maximum benefit from existing investments?
- How do we want to design future solutions to best leverage the cloud?

<sup>1</sup> [International Data Corporation, Addressing Enterprise Cloud Priorities with Microsoft Azure, June 2020.](#)

## Bringing others along

Cloud strategy development is an evolutionary process in most enterprises. It requires coordination among a variety of stakeholders including IT professionals, developers, compliance experts, procurement, and security.

Part of moving to the cloud is understanding the technology, but you also have to consider business and organizational impacts. Typical stages organizations go through include:

| Stage                 | Impact  |
|-----------------------|---|
| Cloud aware           | IT staff is aware of broad cloud trends.  |
| Cloud experimentation | IT organization begins to learn about various categories of cloud computing services such as Software as a Service, Platform as a Service, and Infrastructure as a Service. |
| Opportunistic cloud   | IT organization begins to actively migrate workloads to the cloud to meet new business requirements.  |
| Cloud first           | Default assumption is that cloud services will fulfill the majority of the computing needs.   |

## Think about your own organization

Where are you along this evolutionary journey? IT staff members may feel anxious about their roles and positions as they realize that a different set of skills is needed for the support of cloud solutions. But agile employees who explore and learn new cloud technologies need not fear. Current skills are still important as you manage a hybrid cloud environment. By adding new skills to manage compute, storage, and networking in the cloud, IT can lead the adoption of cloud services and help the organization understand and embrace changes in the industry.

# 02 /

## Why move Windows Server to Azure

You probably already have a significant investment in Microsoft technology within your datacenter: Windows Server, as well as Exchange, SQL Server, SharePoint, or Dynamics. You might use Active Directory for authentication, certificate management, file server, and other pivotal IT functions as well as System Center to simplify configuration and operations management.

These are all good reasons to consider Azure, because you can use existing skills, familiar tools, and established procedures to move workloads to Microsoft's cloud.

Maybe your datacenter is more heterogeneous with virtualized software workloads hosted on both Microsoft Hyper-V and VMware virtual machines. Or maybe Oracle and MySQL are operating alongside Microsoft SQL Server and other applications running on Linux.

Even so, you can integrate or migrate these and other compute and database environments to Azure using a consistent set of tools and services. You'll still have one place to go to for support. Plus, you can add "cloud administrator" to your list of proficiencies.

To understand how Azure impacts and integrates with current Windows Server implementations, take a look at the [Windows Server on Azure](#) section of the Azure website.

# Move workloads to the cloud at your own pace, using existing skills, familiar tools, and established procedures

Here are some of the reasons Microsoft customers move workloads to Azure:

## **Azure-only offers**

Pay less than on other clouds, because you can bring your Windows Server and SQL Server licenses to Azure using [Azure Hybrid Benefit](#).

## **The most trusted cloud**

Take advantage of multi-layered security across physical datacenters, infrastructure, and operations and Microsoft's \$1 billion annual investment in security. Benefit from 8,500 cybersecurity experts and active monitoring that helps protect your business assets and data.

## **Cloud innovation**

Take advantage of features [only in Azure](#) that can help you accelerate the modernization of your infrastructure.

## **Consistent hybrid services**

Azure is also the only consistent hybrid cloud. Connect your on-premises infrastructure, data, and apps to the cloud with [Azure Arc](#)—for maximum portability and value from existing investments. You also benefit from hybrid consistency in application development, management and security, identity management, and across the data platform. This means your organization is free to decide what computing resources stay in-house and what moves to the cloud.



# 03 /

## Manage costs while you save on Azure

Moving to the cloud upends traditional IT economics. When computers are treated as a capital expense, enterprises must spend capital to build and equip new datacenters. With cloud computing, enterprises pay for what they use as part of a subscription-based operating expense, or OpEx, model.

The OpEx model is more flexible and more predictable over time. Services essentially become metered by usage, meaning the more you use the more you're charged.

To help manage costs, Microsoft provides several calculators and capacity planning tools.

Use assessment guidance to identify the right size of Azure resources as you move. Azure Virtual Machines, for example, include a wide range of virtual machine sizes with support for Linux, Windows Server, SQL Server, Oracle, IBM, SAP, and more. Most instances include load-balancing and autoscaling free of charge.

Azure Cost Management + Billing enables you to track cloud usage and expenditures for Azure and other clouds. In this way, you can continually optimize your cloud spend.

## Save with your existing Windows Server licenses

Windows Server customers also benefit from Azure-only savings. With the Azure Hybrid Benefit, you can use existing Windows Server licenses with Software Assurance to save on virtual machines (VMs) in Azure. For each Windows Server license, Microsoft will cover the cost of the operating system on up to two VMs in Azure, while you pay only base compute costs. If you are running Datacenter Edition, you can continue to use the license on-premises while you add two VMs in Azure at a discount. If you use Standard Edition licenses, on the other hand, you can use each license only in one place—either on-premises or in Azure. The exception is Dual Use Rights, on a onetime basis, for up to 180 days, to allow you to migrate the same workloads to Azure.

To help you understand the extent of the savings, use this [online calculator](#). Whether you want to enable a hybrid cloud model or move completely to the cloud, Azure-only offers help you maximize the value of existing licenses:

- Save 40 percent or more on Azure VMs with Azure Hybrid Benefit.
- Boost savings [up to 80 percent](#) compared to pay-as-you-go prices when you also reserve the Azure Virtual Machine instances for one-year or three-year terms.

### Understand options for Windows Server End of Support

As Microsoft continues to introduce innovations in Windows Server, support for older versions eventually ends.

As you may know, end of life is coming for Windows Server 2012 and 2012 R2. Extended support for those versions ends on October 10, 2023, which means no more security updates.

#### Free security updates in Azure

Customers can migrate apps to Azure Virtual Machines and get Extended Security Updates free for three years after end of support.

#### Upgrade on-premises

If you cannot upgrade on-premises servers before end of support, get peace of mind by buying Extended Security Updates for your servers running Windows Server or SQL Server 2012 and 2012 R2.

#### Protect Windows Server 2008 workloads in Azure

Extended Security Updates for Windows Server 2008 and 2008 R2 ends on January 10, 2023. If you need more time, Microsoft is offering one more year of security updates, only Azure.

Learn more [here](#).

# 04 /

## Azure and Windows Server: industry-leading security

Microsoft spends more than \$1 billion each year on cybersecurity to keep workloads safe. Azure offers a secure platform for your cloud workloads, providing industry-leading security intelligence, multi-layer threat discovery and defense, encryption, multifactor authentication, and a strong network of integrated partner solutions. These easy-to-deploy, built-in protections maximize security, reduce complexity, and free up operational resources for more critical functions.

Protecting systems requires a holistic approach that builds security from the chip to the cloud across hardware, firmware, and the operating system. That's why Windows Server includes multiple layers of security built right into the operating system to protect workloads—whether you run them on-premises or in a cloud environment.

And whether you keep Windows servers on-premises or bring them to Azure, two key cloud-based tools add critical layers of security. Both tools integrate with Azure and non-Azure workloads.

- Improve your security posture with Microsoft Defender for Cloud.
- See and stop threats with Microsoft Sentinel.

## Improve your security posture

Complementing the security built into the operating system is [Microsoft Defender for Cloud](#). Defender for Cloud is an extended threat detection and response (XDR) solution. It provides comprehensive coverage for workloads running in Azure, other cloud platforms, and your datacenter, and offers a unified dashboard for visibility across your digital estate.

When you activate Defender for Cloud, a monitoring agent deploys automatically into Azure Virtual Machines (VMs). Defender for Cloud begins assessing the security state of your VMs, networks, applications, and data. For on-premises virtual machines, you need to manually deploy the agent.

Microsoft analytics engines analyze the data and synthesize it with machine learning. Then, Defender for Cloud provides recommendations and threat alerts to help you address vulnerabilities or anomalous activity.

Microsoft Defender for Cloud helps you assess, secure, and defend:

- Assess the security of your machines and networks continuously using built-in security assessments. A secure score helps you benchmark your security posture.
- Improve your posture with customized recommendations that prioritize hardening tasks to secure and harden resources. For many recommendations, Defender for Cloud offers a “Fix” button that automates implementation.
- Defend against malicious attacks by detecting and resolving threats. Enable alerts for display in the Azure portal, for streaming to other IT solutions, and for delivery by email.

Defender for Cloud integrates with Microsoft Sentinel and other security information and event management (SIEM) solutions. It also integrates with security orchestration, automation, and response (SOAR) solutions.

## See and stop threats

With [Microsoft Sentinel](#), you can avoid time-consuming searches through logs in different systems trying to decide what may be relevant. Sentinel helps you understand the big picture across your environment and connect the dots that might be related to the same security incident.

Microsoft Sentinel uses AI and Microsoft's threat intelligence stream to correlate alerts from different systems into incidents. Use deep investigation tools to determine the scope and root cause, and access powerful hunting search and query tools.

- Collect data at cloud scale—across all users, devices, applications, and infrastructure, both on-premises and in multiple clouds.
- Detect previously uncovered threats and minimize false positives.
- Respond to incidents rapidly with built-in orchestration and automation of common tasks.

## Protect data with confidential computing

While data is traditionally encrypted at rest and in transit, Azure confidential computing protects your data while it's being processed. Integrated across disks, storage, and SQL, Azure confidential computing includes these capabilities:

- Encrypts data while in use
- Enables new scenarios like secure block-chain or multi-party machine learning
- Safeguards keys and other secrets using HSMs

# 05 /

## Bring cloud innovation to your datacenter

Many organizations will choose to remain hybrid, retaining their current datacenter environment while shifting some functions to the cloud. But even on-premises workloads can benefit by extending capabilities using Azure services.

Beyond efficiency and reliability, extending your datacenter to the cloud provides an opportunity to enhance and extend IT offerings. Most organizations begin with small steps: quickly start up some VMs on Azure for DevTest, migrate simple workloads, or develop some cloud-aware apps, for example.

But with Azure's comprehensive set of cloud services, much more is possible. Use Azure services to modernize your on-premises infrastructure. Find everything from new storage and security capabilities to support for the Internet of Things, machine learning, data analytics, and artificial intelligence. Expand your Azure footprint as expertise grows and business needs dictate.

Administrators and developers can get started by adopting innovative Azure services that support hybrid operations.

- Bring Azure security and services to hybrid environments.
- Simplify IT management.
- Modernize apps from your datacenter.
- Manage Windows Server in Azure Virtual Machines.

### **Bring Azure security and services to hybrid environments**

[Azure Arc](#) helps you convert Windows Servers into Azure resources, making it easy to organize, govern, and secure Windows Server machines along with Linux servers, SQL Server, and Kubernetes clusters across datacenters and the edge. After you use Arc to enroll your Windows Servers, you can easily integrate with powerful Azure Services, including Microsoft Defender for Cloud, discussed in the previous section of this book.

### **Simplify IT management**

Simply point and click with [Azure Automanage](#) to automate operations and apply consistent best practices across the entire lifecycle of Windows Server and Linux virtual machines, on-premises or in Azure. Benefit from additional capabilities only with your Azure virtual machines, such as Hotpatch, and deploy security updates without having to reboot.

### **Modernize apps from your datacenter**

Modernize Linux and Windows .NET apps on-premises and deploy them anywhere, with [Azure Kubernetes Services \(AKS\) on Azure Stack HCI](#).

The solution simplifies on-premises implementation of the popular AKS orchestrator, which automates running containerized applications at scale. Use familiar tools, gain consistency and built-in security, and extend to Azure with hybrid capabilities.

Integration with Azure Arc enables you to automatically deploy applications and connect on-premises applications to Azure services, such as Azure Policy and Azure Monitor.

### **Manage Windows Server in Azure VMs**

One of the fastest ways to extend to the cloud is with [Windows Admin Center](#), a free download available with your Windows Server license. Windows Admin Center enables you to easily connect to Azure for monitoring, storage, backup, disaster recovery, and more. Windows Admin Center is also available [in the Azure portal \(preview\)](#) to help you manage the Windows Server OS running in Azure VMs seamlessly and at a granular level.

## Extend your on-premises environment to Azure

Shifting functions to the cloud can benefit on-premises workloads. Organizations are using Azure services to extend capabilities of their in-house Windows Server environments. This includes integrating services for robust high-availability and disaster recovery, high performance cloud storage, and hybrid identity and management. Typically this can be done without touching a line of code. Find more details on the [Azure services pages](#).

### Azure services

| Category                  | Services   |
|---------------------------|--|
| Compute                   | Virtual Machines, VM Scale Sets, Batch, Service Fabric, Containers, and more   |
| Networking                | Load Balancer, VPN Gateway, Azure DNS, Content Delivery Network, Azure DDoS Protection, and more   |
| Storage                   | Blob, Queue, File, Disk, Data Lake, StorSimple, Backup, Site Recovery  |
| Web and mobile            | Mobile Apps, API Management, Media Services, Notification Hubs, Streaming, Content Protection, and more  |
| Containers                | Container Registry and Instances, Azure Container Service, Container Instances, Batch, App Service   |
| Databases                 | SQL Database, Azure Database for MySQL and PostgreSQL, Data Warehouse, Stretch Database, and more  |
| Data and analytics        | Stream Analytics, Data Lake Analytics, Power BI Embedded, Log Analytics, Custom Speech Service, and more   |
| AI and cognitive services | Machine Learning, Bot Service, Cognitive Services, Computer Vision API, Speech Services, and more  |
| Internet of Things (IoT)  | IoT Hub and Edge, Time Series Insights, Stream Analytics, Notification and Event Hubs, and more  |
| Enterprise integration    | Service Bus, StorSimple, SQL Server Stretch Database, Data Catalog, Data Factory, Event Grid, and more   |
| Security and identity     | Key Vault, Microsoft Defender for Cloud, Microsoft Sentinel, Microsoft Entra ID, Active Directory B2C and Domain Services, Multi-Factor Authentication |
| Developer tools           | Visual Studio Team Services, Azure DevTest Labs, Application Insights, API Management  |
| Monitoring and management | Azure portal, Azure mobile app, Resource Manager, Automation, Scheduler, Service Health, and more  |



# 06 /

## What to do first: migrate or extend?

Azure allows IT to quickly create and configure new Windows Server virtual machines. With the proper tools and procedures, you can easily set up thousands of servers (VMs) in the cloud in minutes, compared to the weeks it typically takes to set up on-premises servers. Also, with datacenters in 60+ regions around the world, Azure achieves 99.95 percent availability, along with 24/7 support and continual health monitoring.

Of course, just having a lot of VMs on Azure isn't worth much if you don't migrate applications on them. To ensure the success of your organization's adoption of Azure, consider the needs of your business and the requirements of your applications. You'll need to determine:

- Which apps can you "lift and shift" directly to the cloud?
- Which apps benefit from integrating with Azure services?
- Which apps require a transformation or re-architecting?

Based on the analysis of your operating systems and applications, you have a number of options:

- Migrate the applications and data to the Azure platform.
- Extend existing on-premises Windows Server environments to the cloud with new Azure services.
- Modernize legacy applications for the cloud. Move applications into containers, re-architect applications using microservices architectures or rewrite using Azure PaaS services.

If you're building a cloud plan, begin by getting an inventory of all on-premises workloads and then decide on a strategy. For guidance in defining your strategy, reference the [Cloud Adoption Framework](#) section of the Azure website.

## Azure Migrate and Modernize + Azure Innovate


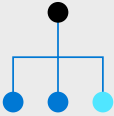
Microsoft can help you save money and simplify your move to the cloud through [Azure Migrate and Modernize + Azure Innovate](#). Bring your workloads to Azure with confidence, supported with best-practice guidance and direct access to Azure engineers, tools, and subsidized partner services.

With Azure Migrate and Modernize + Azure Innovate, you can:

- Pay less with cost-effective offers.
- Gain new skills with technical courses.
- Get free Azure migration tools.
- Access self-guided digital support or get support for guided deployments.
- Find specialized partners that fit your business needs.

Get started by [exploring Azure Migrate and Modernize + Azure Innovate](#).

## Build your cloud plan

|   |                              |   |                                |
|---|------------------------------|---|--------------------------------|
|  <p>I am ready to move these apps to Azure</p> | Commodity workloads          | → | SaaS: e.g. Office 365          |
|   | Rewrite as cloud-native apps | → | Azure PaaS Services            |
|   | Lift and modernize           | → | Containers and microservices   |
|   | Lift and shift               | → | Azure IaaS virtual machines    |
|  <p>I need to keep these apps on-premises</p>  | New cloud-native apps        | → | Azure Stack                    |
|   | Existing apps                | → | Upgrade to Windows Server 2022 |

## Migrate and modernize

To assure a successful migration, it's important to fully evaluate your current datacenter environment using a discovery process. Some of the questions you'll want to ask include:

- Which applications can migrate to Azure and which should remain on-premises?
- What about the services that the applications depend on? Can they be split across on-premises and the cloud?
- What will the impact be on the network?
- What databases do the applications depend on and where should they be located?
- How will a migration to Azure impact budgeting and costs?

To minimize the risk of migration, Microsoft provides several comprehensive tools for doing the initial discovery and assessment of your environment, and prioritizing what workloads should migrate first. To make things even easier, Microsoft allows you to

try Azure for free. You can set up your own "sandbox" to experiment with Azure free for 12 months. Deployment guides and technical whitepapers, based on hundreds of real-life migrations, will walk you through the process, so you can experience a successful first migration and build from that.

### Azure Storage Migration Service

The Azure Storage Migration Service makes it easier to migrate storage to Windows Server or to Azure. If you have a server (or multiple servers) that you want to migrate to newer hardware or virtual machines, Storage Migration Service can help you:

- Inventory multiple servers and their data.
- Rapidly transfer files, file shares, and security configuration from the source servers.
- Optionally take over the identity of the source servers so users and apps don't need to change to access existing data.
- Manage one or multiple migrations from the Windows Admin Center user interface.

## Customer story

When massive data volumes made datacenters too expensive for Sentara Healthcare, the not-for-profit organization decided to move its data to Microsoft Azure. The organization, which runs 12 hospitals in Virginia and northeastern North Carolina, wanted a modern platform it could use to connect doctors, patients, and data in a single portal.

Sentara subsequently migrated its mixed Windows Server and Linux environment. The organization achieved substantial savings by minimizing licensing costs with Azure Hybrid Benefit, right-sizing applications, and reducing infrastructure overhead. So far, Sentara has updated and moved 200 out of 400 business applications, and it will continue to run a hybrid cloud environment as it migrates the remaining 200 applications.

The table on this page lists some of the ways Sentara and other organizations have used the Azure services to migrate workloads, applications, virtual machines, and data to Azure. For more information about migration to Azure, see <https://azure.microsoft.com/migration/>.

| Use cases   |  |
|---|--|
| Discover: Catalog existing applications and identify migration candidates.                              | To understand what, when, and how applications should be moved, it's important to create a complete catalog of applications managed by IT. Use Azure Migrate or other tools to assess current computing environment, identify what can be moved, and understand costs. |
| Discover: Catalog current data environment prior to migration.  | Use Data Migration Assistant to catalog the existing data environment, identify compatibility issues, and suggest performance and reliability improvements.  |
| Migrate: Shift VMs and workloads to Azure.  | Azure Site Recovery offers one-click failover and replication of applications and workloads from Windows Server, Linux and VMware machines. Automation reduces time and complexity of migration tasks.   |
| Migrate: Shift data and databases to Azure.   | Database Migration Service migrates existing on-premises SQL Server, Oracle, and MySQL databases to Azure SQL Database, Azure SQL Database Managed Instance or SQL Server on Azure virtual machines.   |
| Modernize: Lift and shift existing .NET applications by optimizing deployments with Windows containers. | Improve your DevOps operations for your dev/test/production environment. Make your application cloud DevOps-ready. Containers remove friction caused by application dependencies when you deploy in multiple stages.   |
| Optimize: Manage your cloud spend with transparency and accuracy.                                       | Azure Cost Management + Billing provides granular, real-time visibility into cloud consumption, cost, and performance.   |

| Use cases   | How Microsoft Azure helps   | How organizations benefit  |
|---|---|--|
| <p>Assure business continuity and data protection.</p>                              | <p>Azure Backup and Azure Site Recovery increase compliance, reduce complexity, and lower costs. They replicate on-premises virtual machines to Azure and orchestrate failover and failback.</p>  | <p>Reduce disaster recovery infrastructure by paying for only the compute, storage, and network needed in Azure with software as a service—no need to purchase hardware. Onboard faster, because the capability is built into Azure.</p>         |
| <p>Manage a diverse hybrid cloud environment.</p>                                   | <p>System Center simplifies deployment, configuration, management, and monitoring of your infrastructure and virtualized datacenter. Use Azure monitoring and analytics to collect, correlate, and search your systems and application data across Azure and on-premises servers.</p> | <p>Gain visibility into the health, performance, and utilization of your applications, workloads, and infrastructure. Proactively find and fix issues before they impact your users.</p>   |
| <p>Quickly establish dev and test environments.</p>                                 | <p>Use Azure Virtual Machines to simplify and speed the process of running a dev-test environment. Spin up as many virtual machines as you need, network them, and allocate to your developers.</p>   | <p>Give your developers freedom and speed to develop in Azure, then deploy where needed. Choose Linux or Unix. Use your own virtual machine image or download a certified pre-configured image. Use your preferred coding language natively.</p> |
| <p>Extend on-premises file servers to the cloud.</p>                                | <p>With Azure File Sync, you can deliver consistent file share performance for users whether they work locally or remotely.</p>   | <p>Leverage Azure as centralized storage for less frequently used file server data while turning your local Windows server into a high-performance cache for frequently used file data.</p>  |
| <p>Unite identity and access management across on-premises directory and Azure.</p> | <p>Use Microsoft Entra ID to manage users and secure access to on-premises and cloud information. Extend Active Directory and any other on-premises directory to Microsoft Entra ID.</p>  | <p>Enable single sign-on to simplify access to thousands of cloud applications across multiple devices. Protect sensitive data and apps with multi-factor authentication.</p>  |
| <p>Archive on-premises data to Azure.</p>   | <p>Azure Blob storage stores from hundreds to billions of objects in hot, cool, or archive tiers, depending on how often data access is needed. Use StorSimple to automatically archive inactive primary data from on-premises to the cloud for effortless capacity expansion.</p>    | <p>Cloud snapshots provide off-site data protection. With cloud storage, no secondary datacenter is needed. Reduce capacity purchases and infrastructure maintenance.</p>  |

07 /

# Trust Azure for your mission-critical applications and data

Your ideal cloud infrastructure should earn your trust with resilience, scalability, and cost efficiency.

With Azure, you can simplify app and data protection with cost-effective (built-in or third party) backup and disaster recovery solutions, supported by highly available infrastructure. You can scale applications automatically and consistently, without compromising on performance. You can efficiently run core applications with a choice of consumption models, and you can extend your existing on-premises VMware environments natively to Azure, ensuring operational continuity.

## Increase business resiliency

Azure operates a robust foundation and provides additional capabilities for high availability, disaster recovery, and backup purposes. Build and run highly available applications on Azure, and implement disaster recovery plans with data residency and minimal RPO/RTO impact. Deploy end-to-end backup and disaster recovery solutions that are simple, secure, scalable, and can be integrated with your on-premises environment and third-party tools.

Azure supports your existing data protection solutions no matter where they reside, with added remote management capabilities and minimal maintenance. If there's a service disruption or accidental deletion or corruption of data, you'll be able to recover your business services in a timely and orchestrated manner.

## Evolve freely with right-sized, scalable infrastructure

Azure delivers VM series engineered to run any workload: compute, memory, disk, or CPU intensive. Choose from over 700 VM sizes and underlying CPU and CPU technologies, and take advantage of a unique range of network capabilities and robust storage solutions to meet your needs. Scale your applications automatically and manage your core applications globally with 60+ Azure regions and 190+ network points of presence.

## Run core applications cost effectively

Free up IT staff time, minimize data center infrastructure, and reduce IT labor costs. Scale your IT footprint automatically to optimize your costs based on demand.

Efficiently run core applications on Azure with a choice of consumption models, unique offers available only on Azure, and a comprehensive set of tools.

# 08 /

## Getting started

How you get started with Azure depends on where your organization is in your cloud evolution. Are you just beginning to investigate what's out there? Or, are you already moving datacenter workloads to the cloud or developing cloud-native applications?

There's no single cloud adoption path that works for every organization, but the main implementation stages are similar for all organizations and industries. For more help in defining your organization's strategy for success in the cloud, reference the [Cloud Adoption Framework](#) section of the Azure website.



Find all core Azure information—training, documentation, pricing, partners, code samples, and more—at [azure.com](https://azure.com). Free documentation and training is available for everyone from cloud beginners to Azure experts. You can also speed up the entire process by engaging with Microsoft partners who have tools and expertise that help guarantee success.

Get up to speed on Azure services with [Microsoft Learn](https://microsoft.com/learn) and [Pluralsight](https://pluralsight.com), two complementary learning platforms to help you get recognized and take the next step in your career courses. Check out Microsoft Learn for instructor-led or self-paced interactive training and for hands-on learning, and go to Pluralsight for videos, skills assessments, and more.

New to the cloud? [Azure fundamentals](https://microsoft.com/learn/azure-fundamentals) is a six-part series in Microsoft Learn that teaches you basic cloud concepts, provides a streamlined overview of many Azure services, and guides you with hands-on exercises to deploy your very first services for free.

And for Windows Server admins, we've created a special page of resources just for you! Bookmark [www.azure.com/windowsserver](https://www.azure.com/windowsserver) and check back often for resources specific to Window Server on Azure.

### **Jump right in**

Start by launching your first virtual machine on Azure. Or go a little slower and do some reading or view videos to get more acquainted with cloud architectures and the Azure environment. The [Get started page](https://azure.com/get-started) of the Azure website will help you start your exploration in the right place.

### **If you get lost, don't worry**

Remember, [azure.com](https://azure.com) serves as the central point for all of Microsoft's core Azure information, including documentation, training, and code samples.

### **Azure sales specialists are here to help**

Whether you're evaluating the cloud, deploying your first service, or migrating applications and infrastructure to the cloud, our Azure sales specialists are here to answer your questions and help you get started. Get in touch with one [here](#).

# Resources

## Resources

### **IT Architect role**

[Azure virtual datacenter guidance](#)

[Azure Architecture Center](#)

[Azure reference architectures](#)

[Azure Solutions Architect training](#)

### **IT Admin role**

[Windows Server on Azure](#)

[Azure Learning Paths for all types of IT Pros](#)

[Azure Administrator training](#)

[Get started with Azure](#)

[Cloud migration and modernization resources](#)

### **Dev-Test role**

[Get started guide for Azure developers](#)

[Azure languages and frameworks](#)

[Azure .NET training](#)

[Azure Node.js training](#)

[Azure code samples](#)

### **All roles**

[All core Azure information](#)

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