



## Microsoft Azure Tutorial for Beginners

### Introduction

Getting started with cloud computing sometimes sounds daunting. Most beginners are confused by the many services, titles, and function names they hear; it is also hard to figure out where to begin. This Microsoft Azure tutorial for beginners is specifically designed to eradicate those pain points by breaking down these complex topics into simple, easy steps that are understandable. You'll build foundational knowledge that prepares you to confidently take on the Azure ecosystem.

Want to know precisely what we'll cover? Take a look at the complete [Microsoft Azure Course Syllabus](#) now!

### Why Students or Freshers Learn Microsoft Azure?

Learning Microsoft Azure will give you immense competitive advantage and a sound basis for your career in this fast-growing technology industry:

- **High Demand & Job Growth:** The demand for cloud computing skills is insatiable. With enterprise adoption as massive as Azure has (including use by over 95% of Fortune 500 companies), certified professionals are always in demand.
- **Diverse Career Paths:** Azure expertise opens doors to various roles like Cloud Developer, Solutions Architect, DevOps Engineer, and Cloud Administrator—offering career flexibility.
- **Higher Earning Potential:** It is one of the major reasons for choosing Azure certification, as these certifications have a very strong correlation with higher starting salary compared to non-certified peers.
- **Future Skill Set:** Cloud migration is permanent. Mastering Azure ensures your skills remain relevant and central in modern IT infrastructure and at the heart of innovation AI/ML, IoT.

Want to nail your first interview? Download our Free [Microsoft Azure Interview Questions and Answers](#) Guide today!

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## Step-by-Step Microsoft Azure Tutorial for Beginners

In this Microsoft Azure tutorial, you will get a walk-through of how to set up your environment and go ahead deploying your very first two key cloud services: a VM for computing and an App Service for web hosting.

### Step 1. Installation and Setup: Laying Your Azure Foundation

First and foremost, is the creation of an Azure account; it is here that one is introduced to the main management interface.

## 1.1 How to Create Azure Free Account

Azure has a free account, which seems very much ideal for the starters. It includes \$200 of credit towards anything you want to try for the first 30 days, and 12 months of popular services like Virtual Machines and App Services for free.

- **Azure Website:** Go to the free account page for Microsoft Azure.
- **Sign Up:** You are going to want a Microsoft email address. Provide the appropriate information to sign up and follow the prompts.
- **Provide Information:** You will be prompted to provide an email, phone number-for identity verification-and credit card details. Be rest assured that you will not be charged unless you explicitly upgrade to a Pay-As-You-Go account once your free credit/period expires. The credit card is solely for identity verification.
- **SignUp:** Signup and agree to the terms and conditions. Review them and then click Sign-up.
- **Launch Azure Portal:** After your account is activated, click Go to the portal or browse to [portal.azure.com](https://portal.azure.com).

## 1.2 Introduction to Azure Portal

The Azure Portal provides the consistent, browser-based interface to manage all your Azure resources.

- **Global Search Bar:** The most crucial tool. Find anything related to a service, documentation, or a group of resources.
- **Resource Groups:** The basic building block that constitutes a resource group; it's a logical container for resources pertaining to an Azure solution. They allow you to manage, monitor, and delete as a set all components of an application.

## 1.3 Installing the Azure CLI(Optional but Recommended)

The Azure CLI is a powerful interface to create and manage resources by writing commands in a terminal. Although optional, using the CLI is very important for automation and thus is a basic necessity for every cloud professional.

1. **Installation:** Run the download and installation of the Azure CLI for your OS: Windows, macOS, or Linux.
2. **Sign In:** Open a terminal, such as Command Prompt, PowerShell, or Bash, and execute:

```
az login
```

It will open your default browser and ask you to log in using your Azure credentials. After successful login, the respective account information will be shown in your terminal.

3. **Set Subscription (if needed):** If you have multiple subscriptions, you can select the active one:

```
az account set --subscription "Your Subscription Name or ID"
```

## Step 2. Deploying a Virtual Machine (VM)

A VM is an Infrastructure as a Service offering that provides the user with an operating system and some compute power in the cloud. A bit like renting a physical server, if you will.

### 2.1 Resource Group Creation-Portal Method

- In the Azure Portal search bar, clear **Resource groups** and select the service.
- Click + **Create**.
- **Subscription:** Click the radio button to select your Free Trial subscription.
- **Resource Group Name:** Type a descriptive name, for example, my-first-vm-rg.

- **Region:** Choose a region that is nearer to you to ensure better performance. For example, East US
- Click **Review + create** then **Create**.

## 2.2 VM Creation – Portal Method

1. In the search bar of the portal, enter **Virtual Machines**, and select the service.
2. Click + **Create** then select **Azure virtual machine**.
3. **Basics Tab:**
  - **Subscription:** Choose your subscription:
  - **Resource Group:** Select the group you just created, my-first-vm-rg.
  - **Virtual Machine Name:** Provide a unique name, for instance, my-first-vm.
  - **Region:** Select the same region as the Resource Group.
  - **Image:** Select an operating system. In this lab, Windows Server 2022 Datacenter will be used.
  - **Size:** The default size will be a cheap option. This defines your VM's CPU and memory. For example, Standard\_D2s\_v3
  - **Admin Account:** Provide an Username, for instance AzureUser and a complicated Password. Store these credentials!
  - **Inbound Port Rules:** Select Allow selected ports and then select RDP (3389). This will allow you to connect to the Windows VM remotely.
4. **Networking Tab:** Defaults for now. Azure will create a VNet and an NSG for you automatically. The VNet is a private network; an NSG functions like a virtual firewall.
5. **Review + Create:** Review all settings. Azure will do a final validation.
6. Click Create. It will take a few minutes to deploy.

## 2.3 Connect to Your VM

- Go to the resource page of the VM once deployment is complete.
- Click the **Connect** button and select **RDP**.

- Click **Download RDP file**.
- Open the file that was downloaded, click **Connect**, and enter the username and password created earlier.
- Congratulations! You are now logged in to your first VM running in the Azure Cloud.

## 2.4 Clean Up (Vital to Cost Control)

Always clean up resources that you're not actively using to avoid unexpected charges.

- Go back to your Resource Group (my-first-vm-rg).
- Click Delete resource group at the top.
- Type the name of the resource group to confirm, and select Delete. This single action will delete the VM, VNet, NSG, and all associated components.

## Step 3. Deploy a Web App (App Service)

Azure App Service is a service in a PaaS offering. The service keeps the operating system, patching, and infrastructure management for you, so that you can just write your web application code.

### 3.1. Create Resource Group and App Service Plan (by Azure CLI)

This time, we will perform resource management with the Azure CLI. Let's start with opening a terminal where you have already signed in using `az login`.

#### Create Resource Group:

```
az group create --name my-web-app-rg --location eastus
```

- **--name:** The resource group name.
- **--location:** The Azure region in which the RG metadata should reside.

#### Create an App Service Plan:

The App Service Plan will define what underlying compute resources-VMs-your app will be hosted on. In other words, think of it as the host environment.

```
az appservice plan create --name my-app-service-plan --resource-group my-web-app-rg  
--sku F1 --is-linux
```

- **--sku F1:** The Free (F1) pricing tier is ideal to learn and test.
- **--is-linux:** Specifies that the host environment should run Linux (or you can omit for Windows).

## 3.2 Create the Web App and Deploy Code – Azure CLI Method

**Create the Web App (App Service):** This is actually the container for your application code. **Note:** The name needs to be globally unique across all of Azure.

```
APP_NAME="unique-web-app-$(date +%s)" # Generates a unique name
```

```
az webapp create --resource-group my-web-app-rg --plan my-app-service-plan --name  
$APP_NAME --runtime "NODE|20-lts"
```

- **--name \$APP\_NAME:** Employ the dynamically generated unique name.
- **--runtime "NODE|20-lts":** Runtime environment that can be used for your application, e.g., Node.js, Python, .NET, Java.1

**Verify the Deployment:** Within a minute or two, the command output will finish. The App Service is now running a default web page. To see it live, find the Default Host Name in the command output, or find it in the Azure Portal. The URL will be in the format:

## 3.3. Clean Up

- Go back to your **Resource Group** in the Azure Portal (my-web-app-rg).
- Click on **Delete resource group** at the top.

- Type the resource group name to confirm and click **Delete**. This deletes the App Service along with the App Service Plan.

As you continue learning, you'll encounter real-world scenarios, challenges, and architectural decisions that require a more profound knowing of security, networking, and cost optimization.

Ready for the next level in cloud computing? Check out some real-world [Azure challenges and their solutions](#) to help you get sharper now!

## Real Time Examples for Microsoft Azure Tutorial for Learners

The more theory you apply to real-world scenarios, the better you will become in mastering Azure. Here are some common use cases that are perfect for beginner projects:

### Hosting a Scalable E-commerce Website:

- **Objective:** Deploy a basic application—a product catalog or a simple blog—that can handle sudden spikes in user traffic, say, because of a flash sale.
- **Azure Services:** Azure App Service is a PaaS offering to host the front-end application. Azure SQL Database, being a PaaS offering, will serve for transactional data of the application.
- **Real-Time Usage:** You learn how to set up Auto-Scaling in the App Service Plan, which automatically adds or removes compute instances based on demand. This means that your application will be fast and available under heavy load—a critical requirement for any public-facing website.

### Design of a Secure FSA System:

- **Objective:** Highly available, cost-effective storage for Organizational documents and media files.



- **Azure Services:** Azure Blob Storage is a purpose-built storage solution for data objects; manage these with Azure Storage Explorer.
- **Real-Time Benefit:** You are able to practice in data handling, including using different Storage Tiers for cost optimization, implementing security policies on stored data, and understand data redundancy across a multitude of regions.

## Basic DevOps Implementation of CI/CD Pipeline:

- **Objective:** Automate the deployment process of changes done in code from a repository like GitHub to immediately deploy it to a cloud application.
- **Azure Services:** Connect Azure DevOps (Azure Pipelines) to the Azure App Service.
- **Real-Time Benefit:** This will teach you about the industry standard of Continuous Integration/Continuous Delivery-CI/CD. You will know how a simple commit of code fires up the build, runs tests, and publishes your updated application automatically with a lot fewer errors and time for the deployment manually.

Ready to start building these solutions and many more? Here are some of the most exciting [Azure project ideas for beginners](#) to strengthen your portfolio, so go ahead!

## FAQs About Microsoft Azure Tutorial for Beginners

### 1. How to start learning Azure for beginners?

The AZ-900: Azure Fundamentals learning path has been thought out on Microsoft Learn. Create a free Azure account, which you will use to practice hands-on with some core services such as Virtual Machines and Storage.

### 2. How to use Azure step by step?

Sign up and create a free account, go to the Azure Portal, create a subscription, set up a Resource Group, then deploy your first resource, such as a Virtual Machine or Web App. Join our [Microsoft Azure Online course](#) to get started with hands-on exposure.

### 3. What is the basic knowledge of Microsoft Azure?

The basic knowledge includes comprehending the concepts of Cloud-IaaS, PaaS, SaaS; core services-Compute, Storage, Networking; resource groups; and what the functions of Azure Portal are.

#### **4. What are the 5 pillars of Azure cloud?**

The 5 pillars of cloud stand for the principle of Azure Well-Architected Framework: Cost Optimization, Operational Excellence, Performance Efficiency, Reliability, and Security.

#### **5. What is the salary in Azure?**

**Azure Salary for professionals** vary widely by role, experience, and location. In India, the average is around ₹28.4 lakhs, with Azure Administrator salaries around ₹7.3 LPA.

#### **6. How quickly can I learn Azure?**

You can learn concepts of Azure Fundamentals AZ-900 within days and up to six weeks. Associate level proficiency normally takes 3-6 months if you do practice regularly.

#### **7. What programming languages does Azure use?**

Azure supports all major languages, which include but are not limited to C#/.NET, Java, Python, Node.js (JavaScript), PHP, PowerShell, and Go, especially via its PaaS and serverless services.

#### **8. Does NASA use Azure?**

Yes, NASA uses Microsoft Azure, along with AWS, for the Science Managed Cloud Environment of NASA to speed up research, data collaboration, and open science.

#### **9. How to become an Azure administrator?**

The standard path would be gaining 6-12 months of IT experience, mastering core services on Azure like networking, security, and compute, and the passing of the AZ-104: Azure Administrator Associate certification.

#### **10. Does Azure admin need coding?**

Full coding is not necessarily required, but a great dealing with scripting languages, such as PowerShell or Azure CLI, is necessary for automation, resource management, and other effective administration tasks.

## Conclusion

You have completed a path of learning the basics of Microsoft Azure from creating your free account to deploying IaaS with Virtual Machine and PaaS with App Service. Now you can create, secure, and manage resources in the cloud. This is just getting started. Want to take the deep dive into Security, Networking, and Advanced Deployment strategies? Enrol in our detailed [Microsoft Azure Certification Course in Chennai](#) and boost your career!