



# Microsoft Azure Fundamentals

10979F

2 Days

Instructor-led, Hands-on

## Introduction

This two-day, instructor-led course provides the underlying knowledge required by all individuals who will be evaluating Microsoft Azure, whether they are administrators, developers, or database administrators.

This course will introduce students to the principles of cloud computing. Students will become familiar with how these principles have been implemented in Microsoft Azure. In addition, this course will explain how to implement the core Azure infrastructure, consisting of virtual networks and storage. With this foundation, students will learn how to create the most common Azure services, including Azure Virtual Machines, Web Apps, and Azure SQL Database. The students will also learn about container-based Azure services and the most prominent examples of serverless computing. The course concludes by describing features of Azure Active Directory (Azure AD).

This course is intended for individuals who want to evaluate deploying, configuring, and administering services and virtual machines (VMs) by using Azure. This includes:

- Developers who want to evaluate creating Azure solutions.
- Windows Server administrators who are looking to evaluate the migration of on-premises Active Directory services and roles to the cloud.
- IT professionals who want to evaluate the use of Azure to host web sites and mobile app back-end services.
- Database administrators who want to evaluate the use of Azure to host SQL databases.

## At Course Completion

After completing this course, students will be able to:

- Describe cloud computing, Azure, and Azure subscriptions.
- Use Azure PowerShell, the Azure Software Development Kit (SDK), and the Azure command-line interface (CLI) to manage Azure subscriptions.
- Create and configure virtual machines in Azure, and manage their disks.
- Create, configure, and monitor web apps in Azure and deploy Azure platform as a service (PaaS) cloud services.
- Create and configure Azure virtual networks.
- Create, manage, and configure cloud storage in Azure.
- Use Azure SQL Database to create, configure, and manage SQL databases.
- Create and manage Azure AD.

Contact ISINC for more information at 916.920.1700 or by visiting our website at <http://www.isinc.com>

## Prerequisites

Before attending this course, students must have:

- Understanding of how to deploy websites
- A basic understanding of virtualization
- A basic understanding of Active Directory concepts, including domains, users, and domain controllers
- A basic understanding of database concepts, including tables and simple queries

## Course Outline

### Module 1: Getting Started with Microsoft Azure

This module introduces students to cloud services and the various Azure services. It describes how to use the Azure portal to access and manage Azure services, and to manage Azure subscription and billing.

Lessons

- What is cloud computing?
- What is Azure?
- Managing Azure
- Subscription management, support, and billing

Lab : Using the Azure portals

- Customizing the Azure Portal interface
- View billing, usage and quotas data

After completing this module, students will be able to:

- Describe cloud computing.
- Describe Azure and the various services
- Manage Azure services from the Azure portal.
- Manage your Azure subscription and billing

### Module 2: Microsoft Azure management tools

This module explains Azure PowerShell and its use in managing Azure subscriptions. It also describes the Azure Software Development Kit (SDK) and the Azure cross-platform command-line interface (CLI) to manage Azure subscriptions.

Lessons

- What is Azure PowerShell?
- Azure SDK and Azure CLI

Lab : Using Microsoft Azure management tools

Contact ISInc for more information at 916.920.1700 or by visiting our website at <http://www.isinc.com>



- Use the Azure PowerShell modules
- Using the Azure CLI

After completing this module, students will be able to:

- Describe and use Azure PowerShell to manage your Azure subscription.
- Describe the Visual Studio Tools for Azure and use the Azure CLI to manage your Azure subscription.

### **Module 3: Virtual machines in Microsoft Azure**

This module explains how to create and configure virtual machines in Azure and how to manage disks for virtual machines.

Lessons

- Create and configure Azure virtual machines
- Configure Azure VM storage

Lab : Creating a VM in Microsoft Azure

- Creating a VM from the Azure portal by using an Azure Marketplace image
- Verifying the functionality of the VM
- Configuring storage of a VM

After completing this module, students will be able to:

- Create and configure VMs in Azure.
- Configure VM availability.
- Configure disks for VMs.

### **Module 4: Azure Web Apps**

This module explains how to create, configure, and monitor web apps in Azure.

Lessons

- Creating and configuring Azure web apps
- Deploying and monitoring Azure web apps

Lab : Creating and Managing Azure Web Apps

- Creating and configuring an Azure web app

After completing this module, students will be able to:

- Create and configure web apps in Microsoft Azure.
- Deploy and monitor Azure web apps.

Contact ISInc for more information at 916.920.1700 or by visiting our website at <http://www.isinc.com>

## **Module 5: Implementing Azure networking**

This module explains how to create and implement Azure networks and how to use their components to enhance the resiliency and availability of virtual machines.

### Lessons

- Getting started with Azure networking
- Getting started with Azure Load Balancer

### Lab : Creating and configuring virtual networks

- Creating a virtual network
- Creating an Azure load balancer

After completing this module, students will be able to:

- Describe the purpose and functionality of Azure networking and Azure virtual networks.
- Create Azure virtual networks.
- Describe and implement Azure Load Balancer.

## **Module 6: Introduction to Azure Storage and Data Services**

This module explains the features and benefits of Azure storage and data services.

### Lessons

- Understanding Azure Storage options
- Creating and managing storage
- Understanding options for relational database deployments
- Creating and connecting to Azure SQL databases

### Lab : Configuring Azure storage

- Creating and configuring an Azure Storage account
- Creating and managing blobs

### Lab : Creating a SQL Database in Azure

- Creating a new Azure SQL database in Azure and configuring SQL Server firewall rules
- Managing content of an Azure SQL database by using SQL Server Management Studio

After completing this module, students will be able to:

- Describe the features and benefits of Microsoft Azure Storage.
- Create and manage Azure Storage.
- Describe options for relational database deployment in Microsoft Azure.

- Create, connect to, and manage the content of Microsoft Azure SQL Database instances.

## **Module 7: Introduction to containers and serverless computing in Azure**

This module explains the options for implementing containers and describes the serverless technologies available in Azure

### Lessons

- Implementing Windows and Linux containers in Azure
- Introduction to Azure serverless computing

### Lab : Implementing containers on Azure VMs

- Implementing Docker hosts on Azure VMs
- Deploying containers to Azure VMs
- Deploying multicontainer applications with Docker Compose to Azure VMs

After completing this module, you will be able to:

- Describe the options for implementing containers in Azure.
- Describe the serverless technologies available in Azure.

## **Module 8: Configuring and managing Azure AD**

This module explains how to create users, domains, and directories in Azure AD, integrate applications with Azure AD, and use Multi-Factor Authentication.

### Lessons

- Overview of Azure AD
- Manage Azure AD authentication and authorization

### Lab : Create and manage Azure Active Directory

After completing this module, you will be able to:

- Create and manage Azure AD tenants, domains, and users.
- Manage Azure AD authentication and authorization.