

Course Specifications

Course: 10979

**Microsoft Azure
Fundamentals**

Duration:

2 days

Microsoft Azure Fundamentals

This course provides the underlying knowledge required by all individuals who will be evaluating Microsoft Azure, regardless of whether they are an administrator, developer, or database administrator. This course also provides the pre-requisite knowledge for students wishing to attend course 20532C Developing Microsoft Azure Solutions, or course 20533C Implementing Microsoft Azure Infrastructure Solutions.

During this course, students will be introduced to the principles of cloud computing and will become familiar with how these principles have been implemented in Microsoft Azure. In addition, this course will take students through the process of implementing 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 (VMs), Web Apps, and SQL Databases. The course will conclude by describing features of Azure Active Directory (Azure AD) and methods of integrating it with on-premises Active Directory.

About This Course

This 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 also provides the prerequisite knowledge for students wishing to attend *Course 20532D: Developing Microsoft Azure Solutions*, or *Course 20533D: Implementing Microsoft Azure Infrastructure Solutions*.

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 course will conclude by describing features of Azure AD and methods of integrating it with on-premises Active Directory.

Audience Profile

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 want to evaluate the migration of on-premises Active Directory roles and services to the cloud.
- IT professionals who want to evaluate the use of Azure to host websites and mobile app back-end services.
- Database administrators who want to evaluate the use of Azure to host SQL databases.

**A Division of Micro Market
Business Centre**

Kingston (Home Office)
700 Progress Avenue
866-553-4331
613-634-8126
training@learningbrick.com

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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.

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
- Viewing billing, usage, and quotas data

After completing this module, students will be able to:

- Describe cloud computing.
- Describe Azure.
- Manage Azure.
- Describe subscription management, support, 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, and explains their benefits and uses.

Lessons

- What is Azure PowerShell
- The Azure SDK and the Azure CLI

Lab : Using Microsoft Azure management tools

- Using the Azure PowerShell modules
- Use the Azure CLI

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After completing this module, students will be able to:

- Describe Azure PowerShell.
- Describe the Azure SDK and the Azure CLI.

Module 3: Virtual machines in Microsoft Azure

This module explains how to use Azure to deploy virtual machines. It also explains the highly available and scalable configuration of Azure virtual machines, and the management of virtual machine disks by using Azure.

Lessons

- Creating and configuring VMs
- Configure disks

Lab : Creating a VM in Azure

- Create a VM from the Azure Portal by using an Azure Marketplace image
- Verify the functionality of the VM
- Configure storage of a VM

After completing this module, students will be able to:

- Create and configure VMs.
- Configure disks.

Module 4: Web Apps and cloud services

This module explains how to create, configure, and monitor Web apps by using Azure. It also describes the creation and deployment of Cloud Services on Azure.

Lessons

- Creating and configuring web apps
- Deploying and monitoring web apps
- Creating and deploying PaaS cloud services

Lab : Web Apps and cloud services

- Creating and configuring a WordPress web app
- Create a cloud service

After completing this module, students will be able to:

- Create and configure web apps.
- Deploy and monitor web apps.
- Create and deploy PaaS cloud services.

Module 5: Creating and configuring virtual networks

This module explains Azure virtual networks and how to create them. It also covers variety of virtual network components, focusing in particular on Azure load balancers.

Lessons

- Getting started with virtual networks
- Creating a virtual network
- Getting started with Azure Load Balancers

Lab : Create a virtual network

- Creating a virtual network

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- Verifying virtual network functionality

After completing this module, students will be able to:

- Explain virtual networks.
- Create a virtual network.
- Describe Azure Load Balancers.

Module 6: Cloud storage

This module explains the use of cloud storage and its benefits. It also explains how to create, manage, and configure cloud storage in Azure.

Lessons

- Understanding cloud storage
- Create and manage storage

Lab : Configure Azure Storage

- Create an Azure Storage account
- Create and manage blobs

After completing this module, students will be able to:

- Understand cloud storage.
- Create and manage storage.

Module 7: Microsoft Azure databases

This module explains the options available for storing relational data in Azure. It also explains how to use Microsoft Azure SQL Database to create, configure, and manage SQL databases in Azure.

Lessons

- Understanding options for relational database deployment
- Creating and connecting to Azure SQL databases

Lab : Creating a SQL Database in Azure

- Create a new Azure SQL database in Azure and configure SQL Server firewall rules
- Manage content of an Azure SQL database by using SQL Server Management Studio

After completing this module, students will be able to:

- Understand relational database deployment options.
- Create and connect to Azure SQL Databases.

Module 8: Creating and managing Azure AD

This module explains how to use Azure AD and Azure Multi-Factor Authentication to enhance security. It explains how to create users, domains, and tenants in Azure AD, and how to use Multi-Factor Authentication and single sign-on (SSO).

Lessons

- Overview of Azure AD
- Manage Azure AD authentication

Lab : Create users in Azure Active Directory tenants

- Create users in Azure AD
- Create a new Azure AD Tenant and a custom DNS domain