

# Course AZ-300T01-A: Deploying and Configuring Infrastructure

## About this course

This course teaches IT Professionals how to manage their Azure resources, including deployment and configuration of virtual machines, virtual networks, storage accounts, and Azure AD that includes implementing and managing hybrid identities. You will also learn how cloud resources are managed in Azure through user and group accounts, and how to grant access to Azure AD users, groups, and services using Role-based access control (RBAC).

You will learn about the different storage accounts and services as well as basic data replication concepts and available replication schemes. Students are also introduced to Storage Explorer as a convenient way to work with Azure storage data. Students also learn the types of storage and how to work with managed and custom disks.

Azure blob storage is how Azure stores unstructured data in the cloud, and you will work with blobs and blob containers. In addition to blob storage, the course covers Table and Queue storage as storage options for structured data.

You will learn how to create and deploy virtual machines in Azure, using the Azure portal, PowerShell, and ARM templates. The course includes instruction on deploying custom images and Linux virtual machines. You will see how to configure the networking and storage components of virtual machines. Deploying highly available virtual machines is critical for planned and unplanned events, and you will learn how to use availability sets to ensure that virtual machine resources are available during downtime.

You will learn the monitoring tools and capabilities provided by Azure, including Azure Alerts and Activity Log. In addition to alerts and logs, you will be introduced to Log Analytics as an effective data analytics solution for understanding your system status and health. And perhaps the most exciting thing you will learn is how to use the Azure Resource Manager deployment model to work with resources, resource groups, and ARM templates.

Because this course is the first course in the series for the Azure Solutions Architect exams, there is a sizeable amount of introductory content presented to prepare students for the remaining courses in the curriculum. Students are provided with a lesson that covers tips and tricks for working in the Azure portal, as well as an introduction to key tools used in the Azure environment, such as the Cloud Shell and Resource Explorer. Emphasis is focused on PowerShell and the command line interface (CLI) as important skills to acquire not only in preparation for the exam but for the job role itself.

## Course Outline

### Module 1: Managing Azure Subscriptions and Resources

In this module you will explore Azure monitoring capabilities using Azure alerts, Azure activity logs, and Log Analytics. You will learn to query, analyze, and interpret the data viewed in Log Analytics.

After completing this module, students will be able to:

- Managing Azure Subscriptions and Resources

### Module 2: Implementing and Managing Storage

In this module you will learn about Azure storage accounts, data replication, how to use Azure Storage Explorer, and monitor storage.

After completing this module, students will be able to:

- Implementing and Managing Storage

### Module 3: Deploying and Managing Virtual Machines (VMs)



In this module you will learn how to do the following: • Create Virtual Machines (VM)s within the Azure Portal • Create Virtual Machines (VM)s using Azure PowerShell • Create Virtual Machines (VM)s using ARM templates • Deploy Linux Virtual Machines (VM)s • Monitor Virtual Machines (VM)s Additionally, you will learn how to protect data using backups at regular intervals, whether by snapshot, Azure Backup, or Azure Site Recovery.

After completing this module, students will be able to:

- Deploying and Managing VMs

#### **Module 4: Configuring and Managing Virtual Networks**

In this module you will create and implement virtual networks using the Azure Portal as well as Azure PowerShell and CLI. You will receive an overview on how to assign IP addresses to Azure resources to communicate with other Azure resources, your on-premises network, and the Internet.**Lessons**

- Network routing using routing tables and algorithms
- Inter-site connectivity using VNet-to-VNet connections and VPNs
- Virtual network peering for regional and global considerations
- Gateway transit

After completing this module, students will be able to:

- Configuring and Managing Virtual Networks

#### **Module 5: Managing Identities**

This module covers Azure Active Directory (Azure AD) for IT Admins and Developers with a focus on the Azure AD multi-tenant cloud-based directory and identity management service.**Lessons**

- Role-Based Access Control (RBAC)
- built-in roles
- Self-Service Password Reset (SSPR)
- authentication methods for password reset

After completing this module, students will be able to:

- Managing Identities using Azure Active Directory