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Course Outline :: AZ-101T03-A::

Module Title	:	AZ-101T03-A: Implement Advanced Virtual Networking
Duration	:	1 day

About this course

This course teaches IT Professionals how to implement and configure different Azure networking traffic distribution mechanisms, including Azure Load Balancer, Azure Traffic Manager, and Azure Application Gateway. Students will also learn how to implement site connectivity for multiple scenarios including cross-premises and hybrid configurations, as well as extending on-premises networks into the Microsoft cloud over a dedicated private connection, using Azure ExpressRoute. Lastly, students will learn how to use Network Watcher to monitor and troubleshoot Azure virtual networks. They will also learn how to troubleshoot and remediate common errors in Azure Application Gateway and Azure Load Balancer.

Audience profile

This course is for Azure Administrators. Azure Administrators manage the cloud services that span storage, networking, and compute cloud capabilities, with a deep understanding of each service across the full IT lifecycle. They take end-user requests for new cloud applications and make recommendations on services to use for optimal performance and scale, as well as provision, size, monitor and adjust as appropriate. This role requires communicating and coordinating with vendors. Cloud Administrators use the Azure Portal and as they become more proficient they use PowerShell and the Command Line Interface.

At course completion

After completing this course, students will be able to:

- Implement and configure Azure Load Balancer, Azure Traffic Manager, and Azure Application Gateway.
- Implement and configure Site-to-Site VPN connections and ExpressRoute.
- Implement and configure Network Watcher and troubleshooting common network issues.

Course Outline

Module 1: Distributing Network Traffic

In this module, you will learn about three ways to distribute network traffic: Azure Load Balancer, Azure Traffic Manager, and Azure Application Gateway. The Azure Load Balancer delivers high availability and network performance to your applications. The Azure Traffic Manager allows you to control the distribution of user traffic to your service

endpoints. The Azure Application Gateway is a web traffic load balancer that enables you to manage traffic to your web applications.

Lessons

- Overview of Network Traffic Distribution Options
- Azure Load Balancer
- Azure Traffic Manager
- Azure Application Gateway

After completing this module, students will be able to:

- Implement and configure Azure Load Balancer, Azure Traffic Manager, and Azure Application Gateway.

Module 2: Site Connectivity

In this module, you will learn and implement two ways to connect your virtual networks: Site-to-Site VPN Connections and ExpressRoute. Site-to-Site VPN connections provide secure tunneling for cross-premises and hybrid configurations. ExpressRoute extends your on-premises networks into the Microsoft cloud over a dedicated private connection facilitated by a connectivity provider.

Lessons

- Site-to-Site VPN Connections
- ExpressRoute

After completing this module, students will be able to:

- Implement and configure Site-to-Site VPN connections and ExpressRoute.

Module 3: Monitoring and Troubleshooting Network Connectivity

In this module, you will learn important skills around troubleshooting virtual network connectivity. The primary tool discussed is Azure Network Watcher. Azure Network Watcher provides IP flow verification, VPN diagnostics, NSG views and flows, and next hop analysis.

Lessons

- Introducing Network Watcher
- Implementing Network Watcher
- Network Troubleshooting Examples

After completing this module, students will be able to:

- Implement and configure Network Watcher and troubleshooting common network issues.

Prerequisites

Successful Azure Administrators start this role with experience on operating systems, virtualization, cloud infrastructure, storage structures, and networking.