**Azure fundamental assignment 5**

1. What is the Azure firewall? How to use the Azure firewall?

Ans- Azure Firewall is a cloud-based network security service provided by Microsoft Azure. It acts as a fully stateful firewall as a service with high availability and scalability. Azure Firewall is designed to protect Azure Virtual Network resources by controlling inbound and outbound traffic based on rules and policies. It offers features such as application and network-level filtering, threat intelligence integration, and centralized management.

Here are the general steps to use Azure Firewall:

Create an Azure Firewall:

In the Azure Portal, navigate to the desired resource group.

Click on "Add," search for "Firewall," and select "Azure Firewall."

Follow the wizard to configure settings like name, region, virtual network, and public IP.

Configure Network Rules:

Define network rules to allow or deny traffic based on source and destination IP addresses, ports, and protocols.

Configure application rules to allow or deny specific applications or services.

Route Network Traffic Through Azure Firewall:

Configure the route table for the virtual network to direct traffic through the Azure Firewall.

If needed, configure Network Address Translation (NAT) rules to map private IP addresses to a public IP address.

Enable integration with Azure Sentinel for threat intelligence, logging, and monitoring.

Logging and Monitoring:

Configure logging settings to capture data for analysis and compliance purposes.

Monitor the firewall's performance and security logs for insights into network traffic and potential threats.

Update and Maintenance:

Regularly update Azure Firewall to ensure it has the latest security features and patches.

Implement best practices for secure network configurations.

Review and Adjust Rules:

Periodically review and adjust network and application rules based on changes in the environment or security requirements.

1. Differentiate authentication and authorization?

Ans- Authentication is the process of verifying who someone is, whereas authorization is the process of verifying what specific applications, files, and data a user has access to in the application.

1. What is Azure Active Directory?

Ans- Azure Active Directory (Azure AD) is a cloud-based identity and access management service from Microsoft. It helps organizations manage identities for hybrid and multicloud environments.

Azure AD helps employees sign up for multiple services and access them anywhere over the cloud with a single set of login credentials. It also provides administrators with the ability to manage end-user identities and access privileges.

1. What are multifactor authentication and conditional access available in Azure?

Ans- Conditional Access policies can be applied to specific users, groups, and apps. The goal is to protect your organization while also providing the right levels of access to the users who need it. In this tutorial, we create a basic Conditional Access policy to prompt for MFA when a user signs in.

1. What is resource lock? Describe why resource lock should be used?

Ans- Resource locks can prevent accidental changes to resources. For example, in SQL Server, you can use a lock to prevent different transactions from modifying a row.

In Azure, resource locks can prevent the accidental deletion or modification of resources. They can be applied to subscriptions, resource groups, or individual resources. When applied, resource locks put restrictions on the resource for all users.

1. What is Azure policy? Write it Usage.

Ans- Azure Policy is a Microsoft Azure service that helps organizations enforce organizational standards and assess compliance. It defines rules and effects over resources, identities, and groups to ensure compliance and uphold security.

Azure Policy offers a compliance dashboard that provides an aggregated view to evaluate the overall state of the environment. It also allows users to drill down to the per-resource, per-policy granularity.

1. What is the Azure government? What is Azure China 21Vianet?

Ans- Microsoft Azure in China is a cloud service operated by 21Vianet. 21Vianet is an independent data center service provider that offers Microsoft Azure's services to clients and enterprises.

Azure China 21Vianet is a separate instance of Microsoft's cloud services located in mainland China. It is independently operated and sold by 21Vianet, a subsidiary of Beijing 21Vianet Broadband Data Center Co., Ltd..

Azure China 21Vianet offers high-class security for all systems and applications. It is the first foreign public cloud service provider offered in China in compliance with government regulations. Azure China 21Vianet supports data residency and compliance requirements. It allows you to manage, build, and deploy your applications on Azure in the Chinese region.