Module: 13- Networking with Windows Server

25. Discuss the role of Windows Firewall in Windows Server and how to configure it.

ANS.

**Windows Firewall** in Windows Server controls network traffic to protect the server from unauthorized access.

**Configuration**:

1. **Open Firewall Settings**: Go to *Control Panel* > *Windows Firewall* or *Advanced Security*.
2. **Create Rules**: In *Advanced Settings*, create inbound or outbound rules based on ports, programs, or IP addresses.
3. **Enable/Disable**: Turn the firewall on or off for private/public networks as needed.

26. What is Network Address Translation (NAT) in Windows Server, and how do you configure it?

ANS.

**Network Address Translation (NAT)** in Windows Server allows sharing a public IP with private network devices.

**Configuration**:

1. Install **Routing and Remote Access Service (RRAS)** via *Server Manager*.
2. Enable **NAT** in RRAS by selecting *Configure and Enable Routing and Remote Access*.
3. Configure private and public network interfaces.
4. Start the RRAS service to activate NAT.

27. Explain the concept of Dynamic Host Configuration Protocol (DHCP) and how to configure it in Windows Server 2016.

ANS.

**DHCP (Dynamic Host Configuration Protocol)** automatically assigns IP addresses and other network settings to devices on a network.

**Configuration in Windows Server 2016**:

1. **Install DHCP Role**: In *Server Manager*, go to *Add Roles and Features* and install the **DHCP Server** role.
2. **Authorize DHCP Server**: After installation, open *DHCP Management Console* and authorize the server.
3. **Create a Scope**: Define a DHCP scope (range of IP addresses) by specifying IP address range, subnet mask, and lease duration.
4. **Configure Options**: Set options like default gateway, DNS servers, and domain name.
5. **Activate Scope**: Activate the scope to begin assigning IP addresses to clients.

28. Describe the process of configuring DNS (Domain Name System) in Windows Server.

ANS.

**Configuring DNS in Windows Server**:

1. **Install DNS Role**: In *Server Manager*, go to *Add Roles and Features* and install the **DNS Server** role.
2. **Open DNS Manager**: After installation, open *DNS Manager* from *Server Manager* > *Tools*.
3. **Create a Forward Zone**: Right-click *Forward Lookup Zones*, select *New Zone*, and follow the wizard to create a zone (e.g., primary zone for your domain).
4. **Configure Records**: Add DNS records (A, MX, CNAME, etc.) for your domain.
5. **Test DNS**: Use the nslookup command to verify DNS resolution is working.

29. What is Server Manager, and how do you use it to manage servers in Windows Server?

ANS.

**Server Manager** is a management console in Windows Server that allows you to configure and manage server roles, features, and resources.

**Usage**:

1. **Access Server Manager**: Open from the Start menu or taskbar.
2. **Add Roles/Features**: Click *Manage* > *Add Roles and Features* to install server roles and features.
3. **Manage Servers**: Use the *Dashboard* to view server status and notifications, or click *Tools* to access specific management tools (e.g., DNS, DHCP).
4. **Monitor Performance**: View system performance, events, and logs from the *Local Server* section.

30. Discuss the role of Remote Desktop Services (RDS) in Windows Server 2016 or 2019 and how to configure it.

ANS.

**Remote Desktop Services (RDS)** in Windows Server 2016/2019 enables users to access desktops, applications, and data remotely.

**Role**:

* Provides remote access to virtual desktops and applications.
* Centralizes management of user sessions and applications.
* Supports multiple users connecting simultaneously.

**Configuration**:

1. **Install RDS Role**: In *Server Manager*, go to *Add Roles and Features* and install **Remote Desktop Services**.
2. **Configure RDS**: After installation, configure roles like **RD Session Host**, **RD Licensing**, and **RD Web Access**.
3. **Activate Licensing**: Use *RD Licensing Manager* to activate licenses.
4. **Enable Remote Access**: Set up *Remote Desktop Session Host* and allow users to connect remotely.