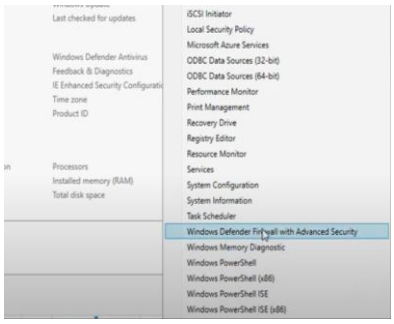
Module 12: Installation, Storage, and Compute with Windows Server

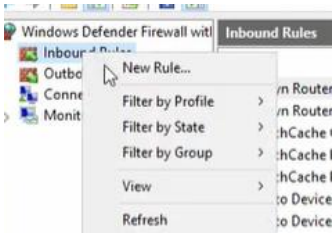
25. Discuss the role of Windows Firewall in Windows Server and how to configure it.

Ans:

- Select Windows Defender Firewall With Advanced Security



- **Open Inbound Rules** in the **Windows Firewall with Advanced Security** window.



- Click on **New Rule**.
- Choose **Port** and click **Next**.
- Choose **TCP** and specify port **3389** (used for Remote Desktop Protocol).
- Select **Allow the connection**.
- Choose the applicable profiles (Domain, Private, Public).
- Name the rule.
- Click **Finish**.

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

Ans :

Step :-1

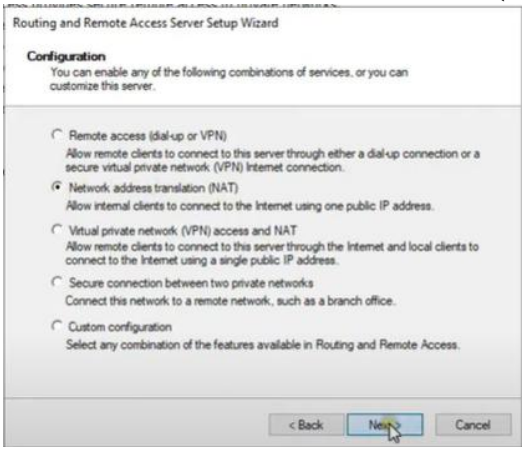
- **Open Server Manager** (click on the Windows icon, then select **Server Manager**).
- **Click on "Manage"** in the top-right corner and select **"Add Roles and Features"**.
- **Select "Role-based or feature-based installation"**, then click **Next**.
- **Choose your server** from the list, then click **Next**.
- **Under "Roles"**, scroll down and check **"Remote Access"**, then click **Next**.

- **Under "Role Services"**, check **"Routing"**, then click **Next** and **Install**.
- **Restart** your server if prompted.

Step :-2

- Click on **Tools** in **Server Manager**, then select **Routing and Remote Access**.
- In the **Routing and Remote Access** window, right-click your server name and choose **"Configure and Enable Routing and Remote Access"**.

- Choose **"Network Address Translation (NAT)"** and click **Next**.



- Select the Network Interface
- Click Next and then Finish
- Open cmd and then check given ping (IP address)

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

Ans: Step 1: Install DHCP Role

1. Open Server Manager > Manage > Add Roles and Features.
2. Select Role-based installation, choose your server, click Next.
3. Check DHCP Server, add features if prompted, click Next, then Install.

Step 2: Authorize DHCP Server

1. In Server Manager, go to Tools > DHCP.
2. Right-click the server name > Authorize. Refresh (F5) to confirm.

Step 3: Set Up a Scope

1. In DHCP console, right-click server > New Scope > Next.
2. Name it (e.g., "LAN Scope") > Next.
3. Enter IP range (e.g., 192.168.1.100 - 192.168.1.200), subnet mask (255.255.255.0) > Next.
4. Skip exclusions or add if needed > Next.
5. Set lease time (default 8 days) > Next.
6. Select Yes to configure options > Next.
7. Add default gateway (e.g., 192.168.1.1) > Next.
8. Add DNS server (e.g., 192.168.1.10) > Next.
9. Skip WINS > Next.
10. Activate scope > Next > Finish.

Step 4: Test It

1. Connect a client device, set to "Obtain IP automatically."
2. Verify it gets an IP from the scope (e.g., 192.168.1.100).

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

Ans:

Step 1: Install DNS Server Role

1. Open Server Manager > Manage > Add Roles and Features.
2. Select Role-based installation, choose your server, click Next.
3. Check DNS Server, add features if prompted, click Next, then Install.

Step 2: Open DNS Manager

1. In Server Manager, go to Tools > DNS.
2. The DNS Manager window opens, showing your server.

Step 3: Configure a Forward Lookup Zone

1. Right-click your server name > New Zone > Next.
2. Select Primary Zone (default) > Next.
3. Choose Forward Lookup Zone > Next.
4. Enter zone name (e.g., example.com) > Next.
5. Accept default zone file name > Next.
6. Select Do not allow dynamic updates (or configure as needed) > Next > Finish.

Step 4: Add DNS Records

1. Expand your server > expand Forward Lookup Zones > right-click your zone (e.g., example.com).
2. Select New Host (A or AAAA).
3. Enter:
    - Name: e.g., www (leave blank for the root domain).
    - IP Address: e.g., 192.168.1.10.
4. Click Add Host > OK > Done.

Step 5: Configure DNS Server Properties (Optional)

1. Right-click server name > Properties.
2. Forwarders Tab: Add external DNS servers (e.g., 8.8.8.8) for unresolved queries > Apply.
3. Interfaces Tab: Ensure it listens on the correct network interface > OK.

Step 6: Test the Configuration

1. On a client PC, set the DNS server to your server's IP (e.g., 192.168.1.10).
2. Run nslookup example.com or ping www.example.com to verify resolution.

Step 7: Verify and Save

1. In DNS Manager, check your zone for the new records.
2. Restart the DNS service (right-click server > All Tasks > Restart) if needed.

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

Ans:

- **Open Server Manager:** Click the **Server Manager** icon on the taskbar or search for it in the Start menu.
- **Add Servers:** Click **Manage** > **Add Servers** to add remote servers by name or IP.
- **Install Roles and Features:** Click **Add roles and features** to install or remove server roles (e.g., DNS, Web Server).
- **Monitor Server Health:** View server health (CPU, memory, disk) on the **Dashboard** and check for any alerts.
- **Manage Services**: Click **Manage** > **Services** to start, stop, or restart services on the server.
- **Remote Management:** Add remote servers and manage them just like local ones.
- **Server Settings:** Under **Local Server**, manage settings like computer name, network, and domain.

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

Ans:

How to Configure RDS in Windows Server 2016/2019

Step 1: Install RDS Role

1. Open Server Manager.
2. Click on Manage > Add Roles and Features.
3. In the wizard, choose Role-based or feature-based installation.
4. Select the Server you want to install RDS on and click Next.
5. On the Select Roles page, check Remote Desktop Services.
6. Click Next, then Install. The server will need to reboot after installation.

Step 2: Configure RDS Deployment

1. After the server reboots, open Server Manager again.
2. In Server Manager, click Remote Desktop Services in the left pane.
3. Click Quick Start to begin configuring RDS deployment.
4. Choose Standard Deployment (for a more flexible setup).
5. Click Next, and follow the prompts to configure:
    - Session Host: The server where users will connect.
    - Connection Broker: Manages user connections.
    - Web Access: Allows users to connect via a web browser.
6. Complete the wizard and click Deploy.

Step 3: Configure Licensing

1. In Server Manager, go to Remote Desktop Services > RD Licensing.
2. Right-click and choose Activate Server.
3. Follow the prompts to activate the RDS licensing server (you'll need a license key).

Step 4: Enable Remote Desktop on Server

1. Go to Control Panel > System and Security > System.
2. Click Remote settings.
3. In the Remote Desktop section, select Allow remote connections to this computer.
4. Click Apply and OK.

Step 5: Configure User Access

1. On the RDS server, go to Server Manager > Remote Desktop Services > Collections.
2. Click Tasks > Create Session Collection.
3. Follow the prompts to create a collection, which groups user sessions.
4. Add users to the collection to grant them access.

Step 6: Test Remote Desktop Connection

1. From a client computer, open Remote Desktop Connection.
2. Enter the IP address or name of the RDS server.
3. Log in with a user account that has remote access permissions.