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

1. What two options are provided in the type of installation window during Windows Server 2016 installation?

➢ During the installation of Windows Server 2016, the "Type of Installation" window gives you two options:

1. **Windows Server 2016 Standard** – This is the version of the server operating system designed for smaller businesses or environments where fewer features are needed. It's the basic edition that can run many types of workloads but has a limited number of virtual machines.
2. **Windows Server 2016 Datacenter** – This version is designed for larger organizations with higher demands. It includes all the features of the Standard edition, but it also offers unlimited virtual machines, making it ideal for environments with many virtualized servers.

In short, the two options are:

1) **Standard**: For basic usage with limited virtualization.
2) **Datacenter**: For advanced use with unlimited virtualization.

2. Write the step How to configure server step by step?

➢ Here's a simple step-by-step guide to configure a server after we have installed Windows Server 2016:

1. **Login to the Server**

- After the installation is complete, the server will restart and show the login screen.
- Login using the Administrator account you created during the installation.

2. **Set the Server's Name**

- Right-click This PC or Computer on the desktop or in File Explorer, and select Properties.
- Click on Change settings next to the computer name.
- In the System Properties window, click on Change.
- Enter a new Computer Name (e.g., "Server01") and click OK.
- You will be asked to restart the server to apply the name change.

3. Set the Time Zone

- Click on the **Start** button and then select the Control **Panel**.
- Go to **Clock and Region** > **Date and Time**.
- Click on **Change time zone**, select your appropriate time zone, and click **OK**.

4. **Configure Network Settings (IP Address)**

- Open the **Control Panel** and go to the Network **and Sharing Center**.
- Click on **Change adapter settings**.
- Right-click on your network connection (like **Ethernet**) and select **Properties**.
- Select **Internet Protocol Version 4 (TCP/IPv4)** and click **Properties**.
- Set a **static IP address** (if needed):

➔ Choose **Use the following IP address**.

➔ Enter your **IP Address**, **Subnet Mask**, and **Default Gateway** (these are provided by your network admin).
➔ For DNS, you can either use your router's IP or a public DNS like Google's (8.8.8.8 and 8.8.4.4).

5. **Install Windows Updates**

- Open **Settings** by clicking the **Start** button, then select **Settings** (the gear icon).
- Go to **Update & Security** and click on **Check for Updates**.
- Install any available updates, and restart the server as necessary.

6. **Add Server Roles**

- In Server Manager, click on Manage and select Add Roles and Features.
- Follow the wizard to add roles like Active Directory, DNS Server, DHCP, etc., depending on your server's role in the network.
- Click Next and follow the instructions to install the desired roles.

7.Create User Accounts

- Open **Server Manager**, go to **Tools** in the top-right corner, and select **Active Directory Users and Computers**.
- Right-click on the domain or **Users** folder, and select **New** > **User**.
- Fill in the details for the new user (username, password, etc.) and click **Next** to finish creating the account.

8.Configure Firewall Settings

- Open the Control **Panel** and go to **System and Security** > **Windows Firewall**.
- To allow specific programs or services, click **Advanced settings** and set inbound or outbound rules as necessary.
- For example, allow HTTP/HTTPS traffic for web servers by enabling the necessary rules.

9.Reboot the Server

After completing all configurations, restart the server to make sure all settings are applied correctly.

10.Check Server Status

- After rebooting, log back in and open Server Manager to check the status of the server.
- The Server Manager dashboard will show you useful information like system health, active roles, and alerts.

11.Backup and Security (Optional)

- We can set up regular backups using Windows Server Backup and ensure our server is secure by enabling features like Windows Defender or setting up a third-party antivirus.

3.What are the Pre installation tasks?

➢ Before we install **Windows Server 2016**, there are several **pre-installation tasks** we should complete to ensure the process goes smoothly. Here's a simple list of those tasks:

1. Check Hardware Requirements

- Make sure your server meets the **minimum hardware requirements**:
- **Processor**: 1.4 GHz 64-bit processor.
- **RAM**: At least 512 MB (2 GB or more is recommended).
- **Disk Space**: At least 32 GB (or more depending on installation type).
- **Network Adapter**: Required for network connectivity.

Before you install **Windows Server 2016**, there are several **pre-installation tasks** you should complete to ensure the process goes smoothly. Here's a simple list of those tasks:

1. Check Hardware Requirements

- Make sure your server meets the **minimum hardware requirements**:
    - **Processor**: 1.4 GHz 64-bit processor.
    - **RAM**: At least 512 MB (2 GB or more is recommended).
    - **Disk Space**: At least 32 GB (or more depending on installation type).
    - **Network Adapter**: Required for network connectivity.

2. Backup Existing Data

- If we are upgrading or replacing an old server, **back up your data** first! Use external drives or cloud storage to ensure important files aren't lost during the installation.

3. **Prepare the Installation Media**
- we will need a bootable USB drive, DVD, or ISO image to install the server.
- Download Windows Server 2016 from Microsoft's website (if we haven't already).
- Create a bootable USB drive or burn the ISO to a DVD.

4. **Choose the Installation Type (Standard or Datacenter)**
- Decide whether you need Windows Server 2016 Standard (for basic use) or Datacenter (for advanced use with more features and virtualization support).

5. **Plan the Server Role**
- Determine what the server will be used for, such as:
    - ☐ **File server** (storing files).
    - ☐ **Domain controller** (managing users and computers).
    - ☐ **Web server** (running websites).
    - ☐ **DNS/DHCP server** (managing network settings).
- This helps in selecting the right roles and features during installation.

6. **Set Up Network Configuration**
   - Plan your IP addressing scheme:
     - ☐ Decide whether the server will use a **static IP address** (recommended for most servers).
     - ☐ If the server will join a domain, ensure it can access the **DNS server**.
   - If you're using a domain, ensure the **domain controller** is available.
7. **Create a Backup Plan**
   - It's important to have a backup plan for your system and data.
   - You may want to configure Windows Server Backup after installation, but having an external backup before installation is crucial in case something goes wrong.

8. Check for Compatibility

- If you are upgrading from an older version of Windows Server, make sure your hardware and software are compatible with **Windows Server 2016**.
- Some older applications may not work correctly with newer versions of the server OS.