Security Policy Development Using GPO in Windows Server 2022 Lab

Task 1: Install Windows Server® 2022

1. Install VirtualBox.
2. Create a new virtual machine.
3. In the Actions pane, click Settings.
4. Under Hardware, click DVD Drive.
5. Click Image file, then click Browse.
6. Browse to the location of your Windows Server 2022 ISO file and select it.
7. Click Open, then OK.
8. In the Windows Setup Wizard, on the Windows Server 2022 page, verify the following settings, then click Next:
   - Language to install: English (United States)
   - Time and currency format: English (United States)
   - Keyboard or input method: US
9. Click Install now.
10. Select Windows Server 2022 Datacenter (Server with a GUI), then click Next.
11. Review and accept the license terms, then click Next.
12. Choose Custom: Install Windows only (advanced).
13. On the installation drive selection page, ensure there is enough space for the OS, then click Next.

Task 2: Change the Server Name

1. Sign in to the server as Administrator.
2. In Server Manager, click Local Server.
3. Click the computer name next to Computer name.
4. In System Properties, go to the Computer Name tab and click Change.
5. Enter the new name, e.g., CYSDC, in the Computer name text box, then click OK.
6. Confirm changes and restart the server.

Task 3: Change the Date and Time

1. Sign in to the server.
2. Click the time display in the taskbar.
3. In the pop-up, click Change date and time settings.
4. In the Date and Time dialog, select Change Time Zone, set your current time zone, then click OK.

5. Click Change Date and Time, confirm the settings, then click OK.

Task 4: Configure the Network

1. In Server Manager, click Local Server.
2. Next to Ethernet, click IPv4 Address Assigned by DHCP, IPv6 Enabled.
3. Right-click Ethernet and select Properties.
4. In Ethernet Properties, select Internet Protocol Version 4 (TCP/IPv4) and click Properties.
5. Select Use the following IP address and configure:
   - IP address: 172.16.0.10
   - Subnet Mask: 255.255.0.0
   - Default Gateway: 172.16.0.1
   - Preferred DNS server: 172.16.0.10
6. Save settings and close dialogs.

Task 5: Install Active Directory

1. Open Server Manager and select Add roles and features.
2. Select Role-based or feature-based installation.
3. Choose the server from the server pool.
4. Select Active Directory Domain Services.
5. Click Add Features when prompted.
6. Confirm selections, check the Restart box, and install.
7. After installation, click Promote this server to a domain controller.
8. Select Add a new forest and specify a domain name (e.g., cys.local).
9. Set the Domain Services Restore Mode (DSRM) password and complete setup.
10. Reboot the server and verify Active Directory installation.

Task 6: Join a Windows 10 Client to the Domain

1. Prepare the Windows 10 Client:
   - Ensure the Windows 10 client is connected to the same network as the Windows Server 2022 domain controller.
   - Set the DNS server on the client to point to the IP address of the domain controller (e.g., 172.16.0.10).
2. Set the Client's DNS Server:
   - Open Control Panel > Network and Sharing Center.
   - Click on Ethernet (or the network connection being used), then select Properties.
   - Select Internet Protocol Version 4 (TCP/IPv4) and click Properties.
   - Choose Use the following DNS server addresses and set the Preferred DNS server to the

domain controller's IP address (e.g., 172.16.0.10).
- Click OK to save and close the properties.
3. Join the Domain:
- Open Settings on the Windows 10 client and go to System > About.
- Under Related settings, select System info.
- In the System window, select Change settings next to Computer name.
- In the System Properties dialog, go to the Computer Name tab and click Change.
- Select Domain and enter the domain name (e.g., cys.local).
- Click OK and, when prompted, enter the credentials of a domain account (e.g., the Administrator account from the domain controller).
- Once the computer is successfully joined to the domain, you will be prompted to restart. Select Restart Now.
4. Verify Domain Membership:
- After the restart, sign in using domain credentials (e.g., cys\username).
- Open System Properties and verify that the Domain field shows the domain name (e.g., cys.local).

Practice Questions for Task 6

1. What is the purpose of setting the DNS server on the client to point to the domain controller?
2. How would you troubleshoot a situation where the Windows 10 client cannot join the domain?
3. What are the benefits of joining a client to a domain in an enterprise environment?

Task 7: Configure Group Policy Objects (GPO)

1. Open Group Policy Management Console (GPMC):
- Sign in as Administrator.
- Go to Server Manager > Tools > Group Policy Management.
2. Create a New GPO:
- In GPMC, right-click the domain (e.g., cys.local) and select Create a GPO in this domain, and Link it here…
- Name the GPO (e.g., "Security Settings") and click OK.
3. Edit the GPO:
- Right-click the new GPO and select Edit.
- Go to Computer Configuration > Policies > Windows Settings > Security Settings.
4. Configure Password Policies (Optional):
- In Security Settings, go to Account Policies > Password Policy.
- Configure settings like Minimum Password Length or Password Expiration as required.
5. Deploy the GPO:
- Close the editor.

- Right-click the domain and select Link an Existing GPO.
- Choose your GPO from the list, then click OK.

6. Verify GPO Application:
   - Run gpupdate /force on a client machine to apply settings immediately.
   - Use gpresult /r to confirm GPO settings are active.

Practice Questions for Task 7

1. Explain the purpose of Group Policy Objects in a networked environment.
2. How would you ensure GPO changes are applied promptly across client machines?
3. Describe a scenario where configuring a GPO would be advantageous in this setup.