Install RSAT and Join the Domain

Introduction and/or Background

TX-Rig Company wants all computers on the network to have a centrally managed security policy and for Administrators to be able to remotely manage company servers.

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Objectives

In this project/lab the student will:

- Install Remote Server Administration Tools (RSAT) on a Windows 10 client
- Install Dynamic Host Configuration Protocol (DHCP) and configure both IPv4 and IPv6 addresses to be assigned to clients
- Join your Windows 10 client to the domain

Equipment/Supplies Needed

- VMWare Workstation Pro
- Windows Server 2019 Virtual Machine

Assignment

As a member of the Server Administration Team, you want to be able to remotely manage your servers, assign IP addresses to workstations using DHCP, and ensure all workstations have a centrally managed security policy. To accomplish this, you will install the Remote Server Administration Tools, enable DHCP on your server, and join the workstation to the domain.

Part 1A: Install the Remote Server Administration Tools (RSAT) on newer versions of Windows 10

1. Make sure your Windows 10 computer VM is activated
2. Make sure you have VMWare Tools installed.
3. Your network adapter should be set to "NAT" in VMWare settings
4. The Windows 10 VM should be set to DHCP.
5. You must have Internet access to install Windows Features.

6. Power on and login to your Client computer VM.
7. Open a command prompt and type **Ping 8.8.8.8**, to confirm you have Internet access.
8. Type **Winver t**o confirm you are running Windows 10 version 1809 or later.
9. If you are running an earlier version of Windows, skip to Part 1B.
10. Right-click the **Start** button, select **Settings**, click **Apps**, then select **Optional Features**.
11. Select **Add a Feature.** Select each of the following features and click **Install:**
    a. RSAT: Active Directory Domain Services and Lightweight Directory Services Tools
    b. RSAT: DHCP Server Tools
    c. RSAT: DNS Server Tools
    d. RSAT: Group Policy Management Services
    e. RSAT: Server Manager
12. Click the Left-Arrow in the upper left corner of the Add a Feature screen to go back to the Optional Features Screen to watch the RSAT Tools installation. Once the installs are finished, scroll down to the RSAT Tools and take a screenshot. (PrtScr#1)
13. If the RSAT feature is not available, use the install method in Part 1B.
14. Shut down and power off your Windows 10 VM.
15. With the Windows 10 VM powered off, select **Edit Virtual Machine Settings**.
16. Change your network adapter from NAT to Host-Only", then click **OK.**
17. Power on and login to your Client computer.
18. Proceed to Part 2 of this lab.

Part 1B: Install the Remote Server Administration Tools (RSAT) on older versions of Windows 10

1. Login to your Client computer.as txrigXX\administrator.
2. **Drag and Drop** the RSAT install file to the Windows 10 VM from your host computer. (You could also download it from Microsoft) Right-click the .msi install file and select **Run as Administrator**. Follow the prompts to complete the install and then reboot, if needed.
3. (PrtScr#1) Take a screenshot of the installed RSAT Tools.
4. Shut down your Windows 10 client computer VM.
5. Change your network adapter from NAT to Host-Only", then click **OK.**
6. Power on and login to your client computer VM.

Part 2: Disable DHCP for the "Host-only" network in VMWare Workstation

1. Before we power on our client, we need to disable the VMWare DHCP service:
    a. On the VMWare Workstation menu, select **Edit**, then select **Virtual Network Editor…**
    b. In the lower right, click **Change Settings**, then click **Yes** on the UAC prompt
    c. Select the Host-only network, then uncheck **Use local DHCP service to distribute DHCP address to VMs** and click **OK**. *(You may want to revert this setting after this lab is completed.)*

Part 3: Install DHCP Role Service

1. Log on to your server as Administrator.
2. On the Server Manager screen, click on the **Manage** drop down menu and select **Add Roles and Features**.
3. On the **Before you begin** screen, click **Next**.
4. On the **Select installation type** screen, leave **Role-based or feature-based installation** checked and click **Next**.
5. On the **Select destination server** screen, make sure your server is selected and click **Next**.
6. In the **Select server roles** window, click **DHCP Server**, and then click **Next**.
7. A message box appears showing which features will be installed. Click **Add Features** and click **Next**.
8. On the **Select features** screen, click **Next**.
9. Click **Next** on the next screen.
10. Click Install.
11. Select to Complete DHCP Configuration
12. Click Next
13. Click Commit to Authorize the DHCP server
14. Click Close

Part 4: Configure DHCP for IPv4

1. In Server Manager, select Tools, then DHCP
2. Expand DHCP Server, right-click IPV4, select New Scope, follow the wizard prompts to configure the following items:
3. Name: V4Scope-your last name
4. IP Range: 172.17.3.101 to 172.17.3.200
5. Subnet mask: 255.255.255.0

6. Add exclusions: 172.17.3.125 and 172.17.3.126. Prevent these addresses from being assigned to a client
7. Lease Duration: Accept the default of 8 days
8. DHCP Options: Router/Gateway: Set to 172.17.3.1.
9. DNS: 172.17.3.10
10. WINS Server, Next (No WINS server in use)
11. Activate scope: Yes
12. Click on **Address Pool** and take a screenshot (PrtScr#2)

Part 5: Configure DHCP for IPv6

1. In Server Manager, select Tools, then DHCP
2. Expand DHCP Server, right-click IPV6, select New Scope, follow the wizard prompts to configure the following items:
3. Name: V6Scope-your last name
4. Scope Prefix: 2001:0:0:: /64
5. Add exclusion: Accept the default
6. Lease Duration: Accept the default
7. Activate scope: Yes
8. Take a screenshot of your IPv6 scope (PrtScr#3)

Part 6: Verify the Windows 10 Client computer VM can get a DHCP address

1. Power on the client computer and login.
2. Open a command prompt
3. Type **ipconfig** to verify you have obtained an IPv4 DHCP address from the address pool.
4. Switch to the server and open DHCP Manager in Server Manager.
5. Expand the IPV4 scope and select Address Leases
6. Take a screenshot of the address leased to the client (PrtScr#4)

Part 7: Deactivate the DHCP Scopes on your server

Misconfigured DHCP could possibly cause connectivity problems on your school network, so we will disable it at this time.

1. Log on to your server as Administrator.
2. Open DHCP Manager and expand the IPv4 and IPv6 scopes
3. Right-click your IPv4 scope and select Deactivate
4. Right-click your IPv6 scope and select Deactivate
5. (Notice how the Icons now have a red Down-Arrow)
6. Take a screenshot showing your DHCP scopes are deactivated (PrtScr#5)

Part 8: Configure your Windows 10 Client with a static IP

1. Set the following static IP address settings for Ethernet0 on the Windows 10 VM:
    a. IP Address = 172.17.3.15
    b. Subnet mask = 255.255.255.0
    c. Default Gateway = 172.17.3.1
    d. DNS = 172.17.3.10

Part 9: Join the workstation to the domain

1. Make sure your computer name is **ClientXX,** where XX is your initials.
2. Start your Windows 2019 Server and log on as Administrator.
3. Switch back to your Windows 10 computer.
4. Open a command prompt and type **ipconfig**.
5. Take a screenshot of your new Windows 10 IP address configuration. (PrtScr#6)
6. Make sure you can ping the server from the Windows 10 computer. At the command prompt, type **ping 172.17.3.10** and press **Enter**.
7. Right-click the **Start** button, select **Run**, type **control panel** and click **OK**.
8. Select **System and Security,** then select **System**.
9. Under Computer name, domain, and workgroup settings click on the **Change settings** link.
10. On the **System Properties** dialog box, click the **Change** button.
11. In the **Member of:** box type in TxRigXX.local and click **OK**. (Replace XX with your initials.)
12. On the **Computer Name/Domain Changes** screen, for the User name, type: **txrigXX\administrator** and the password and click **OK**.
13. On the "Welcome to the txrigXX.local domain" pop-up box, click **OK**
14. Click **OK** again, click **Close**, then click **Restart Now**.
15. After the computer restarts, select **Other user** from the bottom left of the screen.
16. Type **txrigXX\Administrator** in the User name box and **Itnw1354** for the password and press **Enter**.
17. Open the Control Panel, select System and Security, then System.
18. Take a screenshot showing the full computer name and domain name. (PrtScr#7)
19. Close the **System** window.
20. Open DNS Manager (under **Windows Administration Tools)** on the Windows 10 client computer.
21. On the **Connect to DNS Server** screen, Select **The following computer,** type **srv19XX,** and click **OK**.

22. In the left pane, expand **srv19XX**, then expand **Forward Lookup Zones**, then click **txrigXX.local.**
23. Take a screenshot of the A record for **clientXX** (PrtScr#8).

Part 10: Administrative Tasks – Using Server Manager on the Client Computer

1. Open Server Manager on the Client computer. Type **Server** in the Search box and select **Server Manager** from the list to open it.
2. Add your server to Server Manager. Right-click All Servers in the left pane and select Add Servers. Select your server from the list and click OK.
3. Take a screenshot as proof you are able to remotely manage your server (PrtScr#9).

Reflection

- What are the advantages and disadvantages of using the RSAT tools?
- Why do we join the client computer to the domain?

Rubric

Checklist/Single Point Mastery

Concerns Working Towards Proficiency	Criteria Standards for This Competency	Accomplished Evidence of Mastering Competency
	Criteria #1: PrtScr#1 Take a screenshot of the installed RSAT tools (10 points)	
	Criteria #2: PrtScr#2 Take a screenshot of your IPv4 DHCP scope (10 points)	
	Criteria #3: PrtScr#3 Take a screenshot of your IPv6 DHCP scope (10 points)	
	Criteria #4: PrtScr#4 Take a screenshot showing your client's new DHCP address (10 points)	
	Criteria #5: PrtScr#5 Take a screenshot showing the IPv4 and IPv6 scopes are disabled (10 points)	
	Criteria #6: PrtScr#6 Take a screenshot showing the new static IP on your client computer (10 points)	

	Criteria #7: PrtScr#7 Take a screenshot showing your client successfully joined to the domain (10 points)	
	Criteria #8: PrtScr#8 Take a screenshot of the DNS A record for your Windows 10 Client (10 points)	
	Criteria #9: PrtScr#9 Take a screenshot as proof you are able to remotely manage your server (10 points)	
	Criteria #10: Answer reflection questions (10 points)	