

## Setting up and configuring the DHCP service

### Target

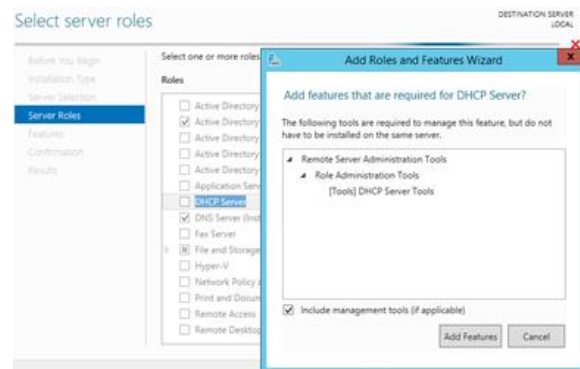
- Enabling and configuring the DHCP service.

### Tasks

1. If necessary, start the VirtualBox virtualization software.
2. If necessary, start the Apollo (Windows 2016) virtual machine.
3. Log in with your Administrator username and password to the PasswOrd\$ server.

#### Add a DHCP role.

4. In the Server Manager window (open if necessary), click Manage and select Add Roles and Features from the menu that opens.
5. Click Next.
6. Make sure the Role-based or feature-based installation option box is checked, and then click Next.
7. Make sure the Select a server from the server pool option box is checked, the server name is APOLLO and the ip address is 10.0.0.10. Click Next.
8. Select the DHCP Server check box.
9. In the window that opens, add the suggested advanced features by clicking Add Features. Click Next.
10. In the Select Features window, click Next.
11. In the DHCP Server window, read a description of DHCP behavior and what to consider before installing the DHCP role. Click Next.
12. Select the Restart the destination server automatically if required check box and click Yes in the confirmation dialog box. Click Install. Finally, click Close.



### DHCP installation completion

13. In the Server Manager window, under Notifications, click on the yellow triangle and in the menu that opens, click the Complete DHCP configuration link.
14. In the Description window, click Next.
15. In the Authorization window, make sure that the Use the following user's credentials check box is selected, and the User Name: field says CYBERSE\Administrator. Click Commit.
16. In the Summary window, click Close.

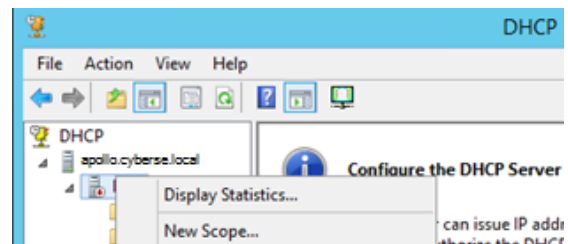


### Configuring DHCP

17. In the Server Manager window on the Apollo server, click Tools and select DHCP from the menu that opens, or in the ModernUI Apps window, click DHCP.



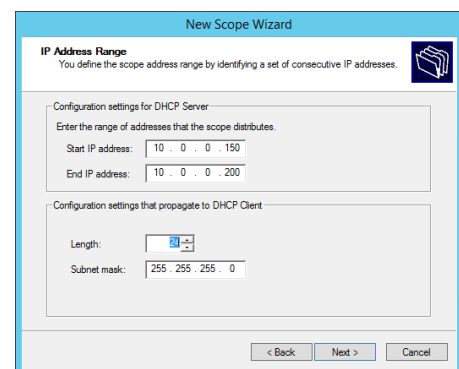
18. In the DHCP window, expand apollo.cyberse.local and right-click on IPv4, as well as in the menu that opens, select New Scope...



19. In the Welcome to the New Scope Wizard window, click Next.

20. In the Scope Name window, enter Pasila in the Name: field, and in the Description: field, enter your first name and Pasila scope (e.g. Pasila. Pekka's Pasila scope). Click Next.

21. In the IP Address Range window, enter 10.0.0.150 in the Start IP address: field and 10.0.0.200 in the End IP address: field. In the Subnet mask: field, enter 255.255.255.0 or change the value of the Length: field to 24. Click Next.

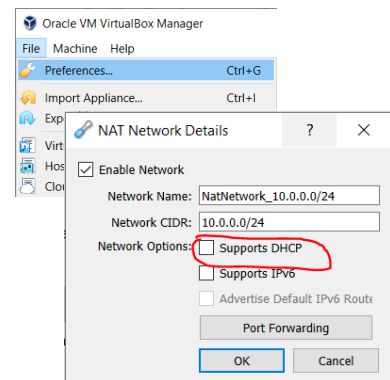


22. In the Add Exclusions and Delay window, specify address 10.0.0.159 as an exception (not a shareable address space) by typing 10.0.0.159 in the Start IP address: field and 10.0.0.159 in the End IP address: field. Click Next.
23. In the Lease Duration window, read in it a brief description of the effect of the item and change the duration of the loan period to 4 h by changing the value to 0 in the Days: menu and 4 to the Hours: menu. Click Next.
24. In the Configure DHCP Options window, make sure the Yes, I want to configure these options now option box is checked, and then click Next.

25. In the Router (Default Gateway) window, enter 10.0.0.1 in the IP address: field and click Add. Click Next.
26. In the Domain Name and DNS Servers window, enter Apollo in the Server name: field and click Resolve, and the IP address: field should enter 10.0.0.10. Click Add. Click Next.
27. In the WINS Servers window, click Next.
28. In the Activate Scope window, make sure that Yes, I want to activate this scope now check box and click Next.
29. Completing the New Scope Wizard -in the window click Finish.
30. Make sure that the scope is activated, and under IPv4, the red arrow will change to a green "trestle badge". If necessary, click F5 to refresh the window.

#### How to remove the DHCP role in VirtualBox NatNetwork

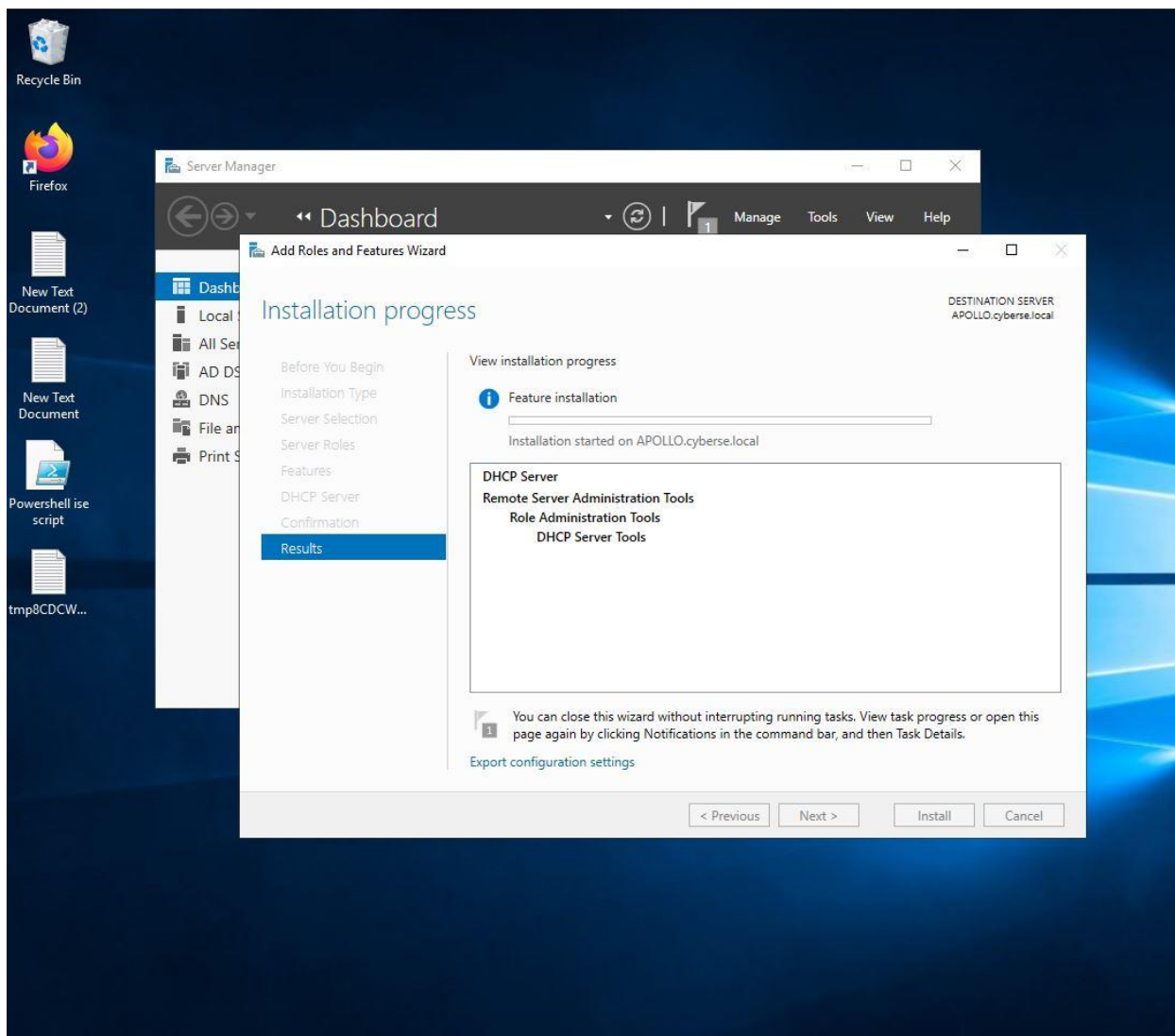
31. Open VirtualBox - File-Preferences...
32. In the window that opens, select Network.
33. Select the NatNetwork you specified for the training session and click the Edit selected NAT network icon on the right side of the screen
34. Uncheck the box next to Supports DHCP
35. Click OK

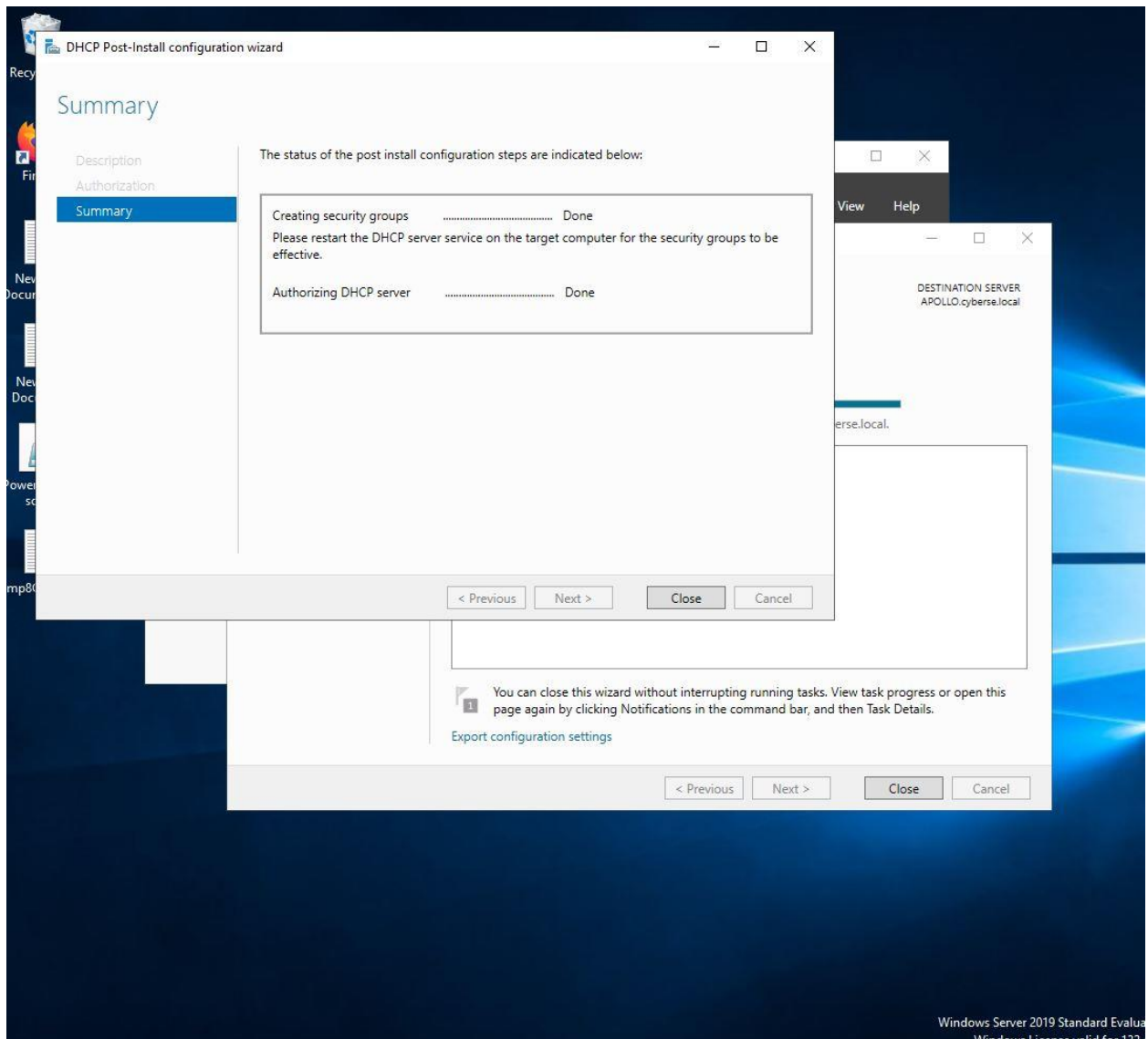


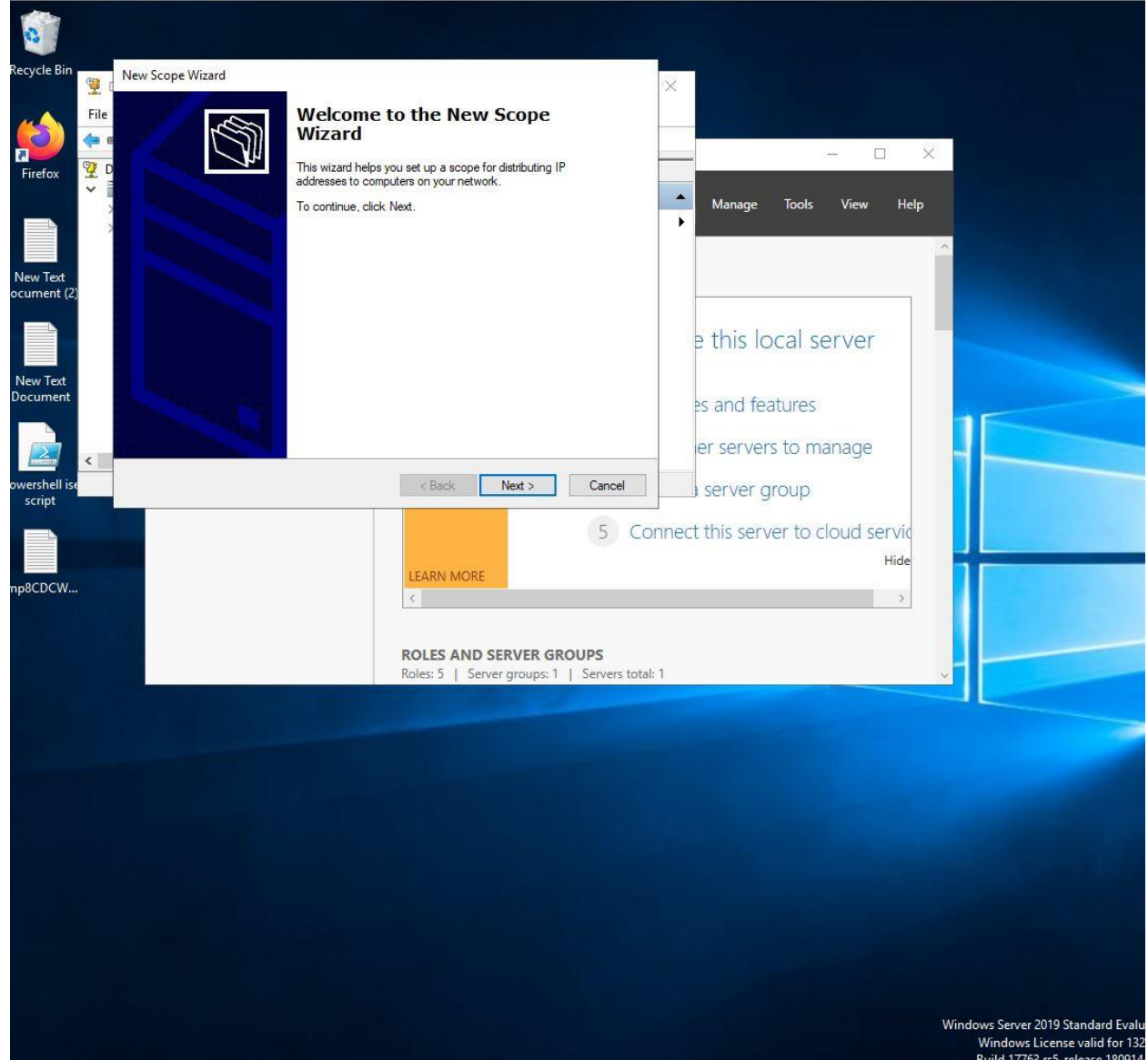
#### Configuring Win10 Network Settings

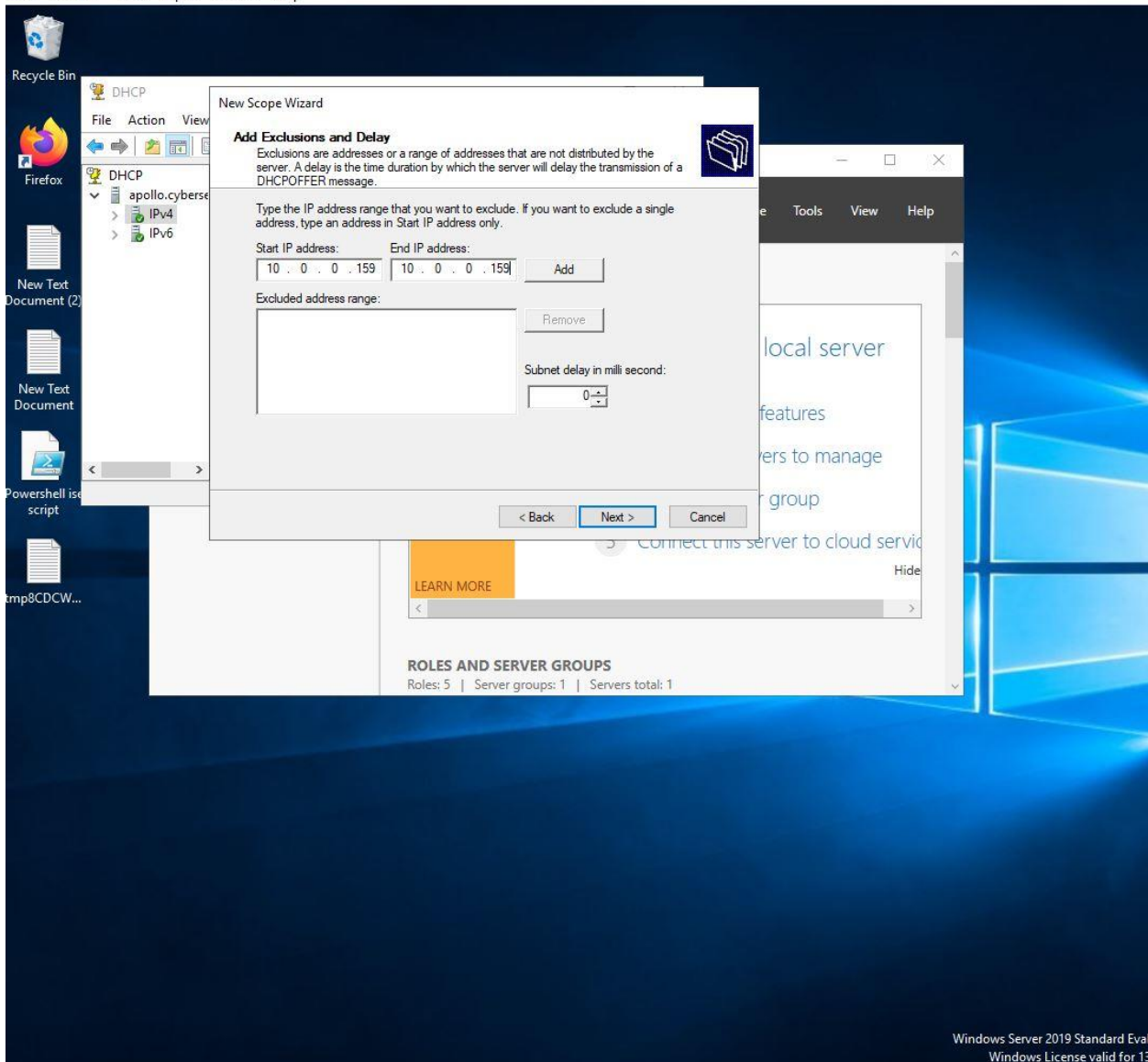
36. In the VirtualBox -hallinta console, start the Win10 virtual machine.
37. Log on to the Win10 workstation with your cyberse\Administrator user name.
38. In the lower left corner of the desktop, right-click on the Windows logo and select Network Connections from the menu that appears.
39. You can also use another way to open Network Connections.
40. Right-click on the Ethernet network icon and select Properties from the menu that opens.
41. In the Ethernet Properties window, select Internet Protocol Version 4 (TCP/IPv4) and click Properties.
42. In the Properties window, select the Obtain IP address automatically option box, and then select the Obtain DNS server address automatically option box. Click OK and a couple of times close.
43. Make sure that the Win10 workstation receives an ip address (10.0.0.15x) from the Apollo DHCP server.
  - If necessary, open a command prompt with administrator privileges and enter the command ipconfig /renew to renew the ip address.

- Use the `ipconfig /all` command to check if the machine was able to renew the address.

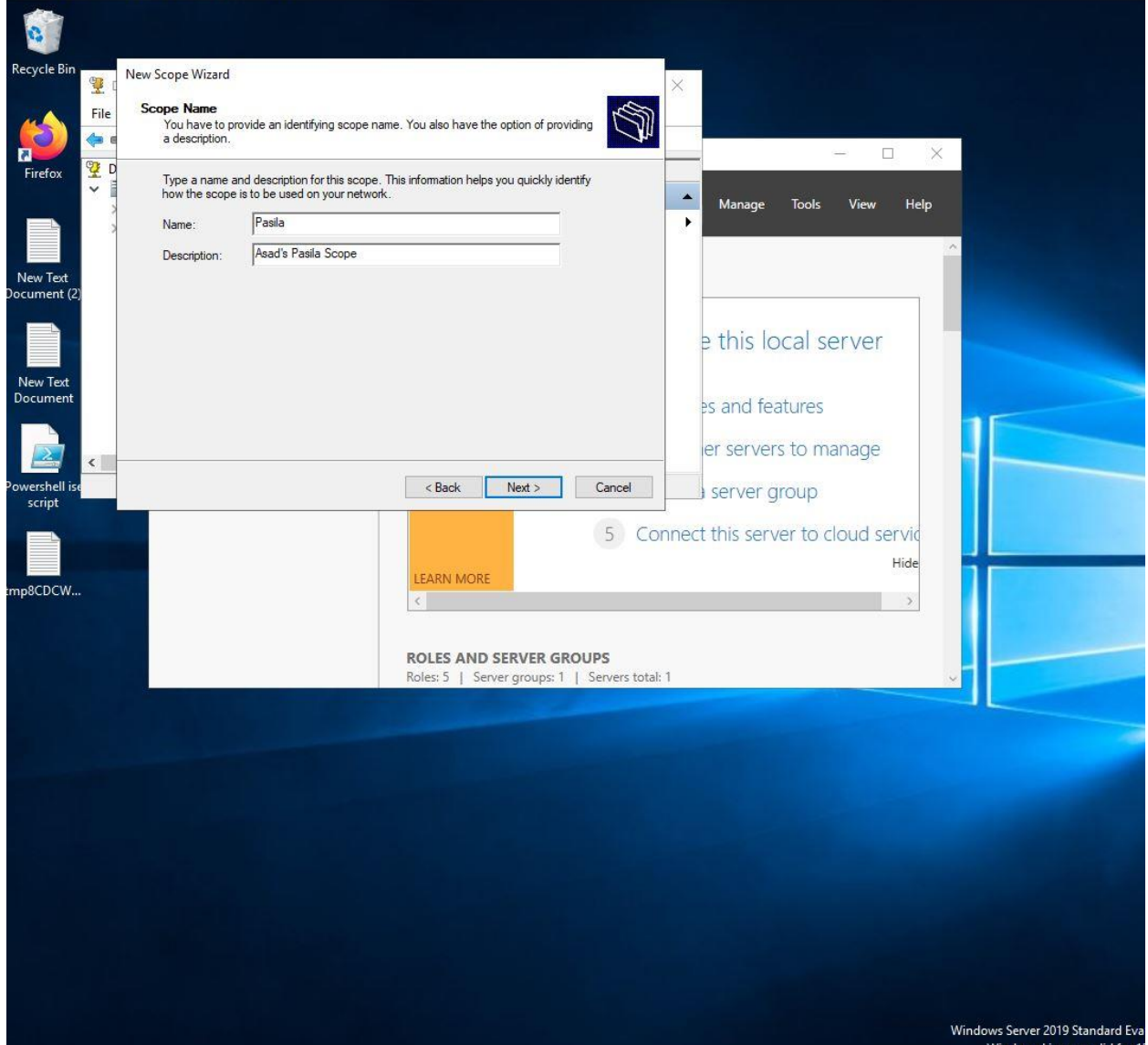


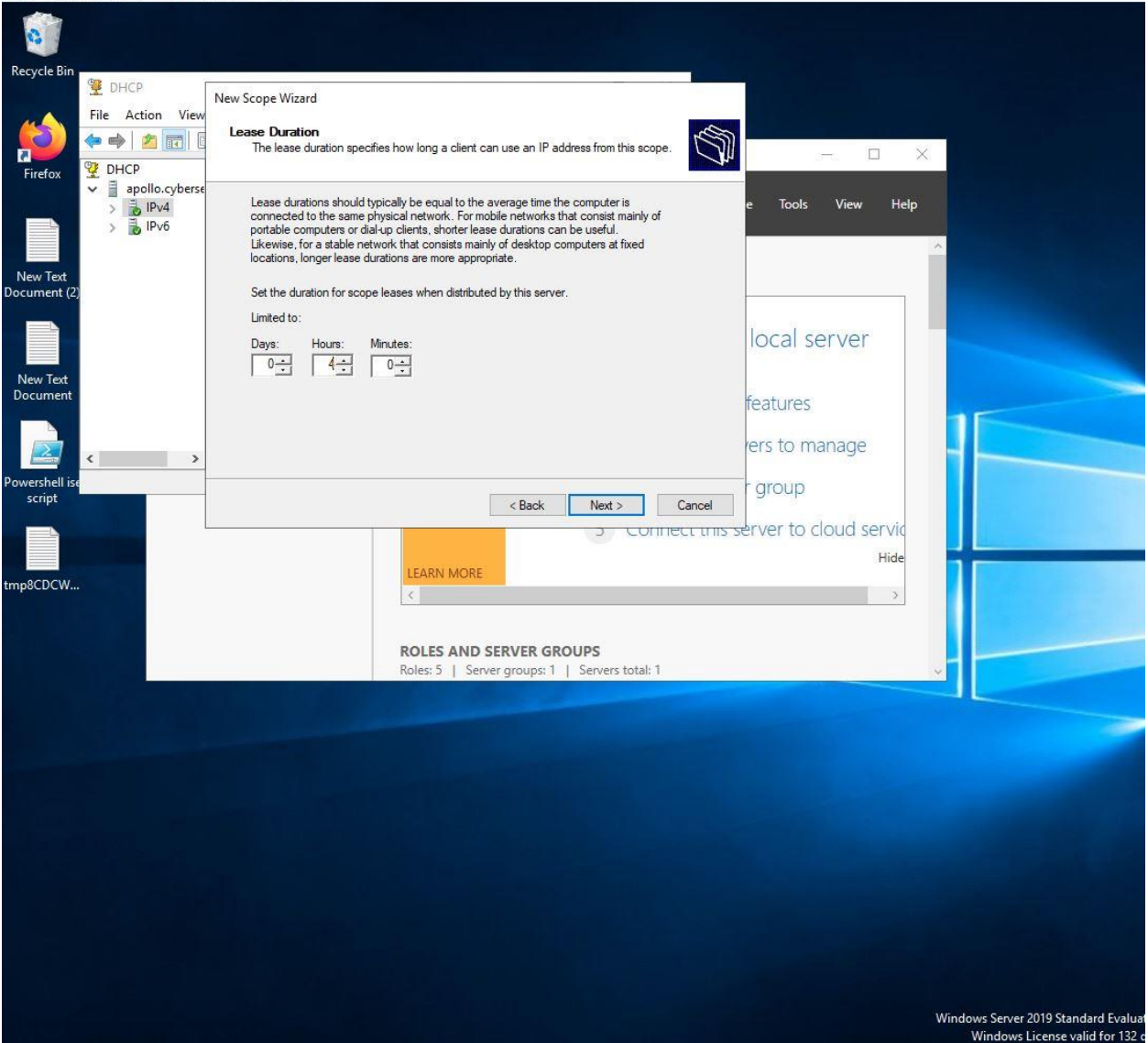


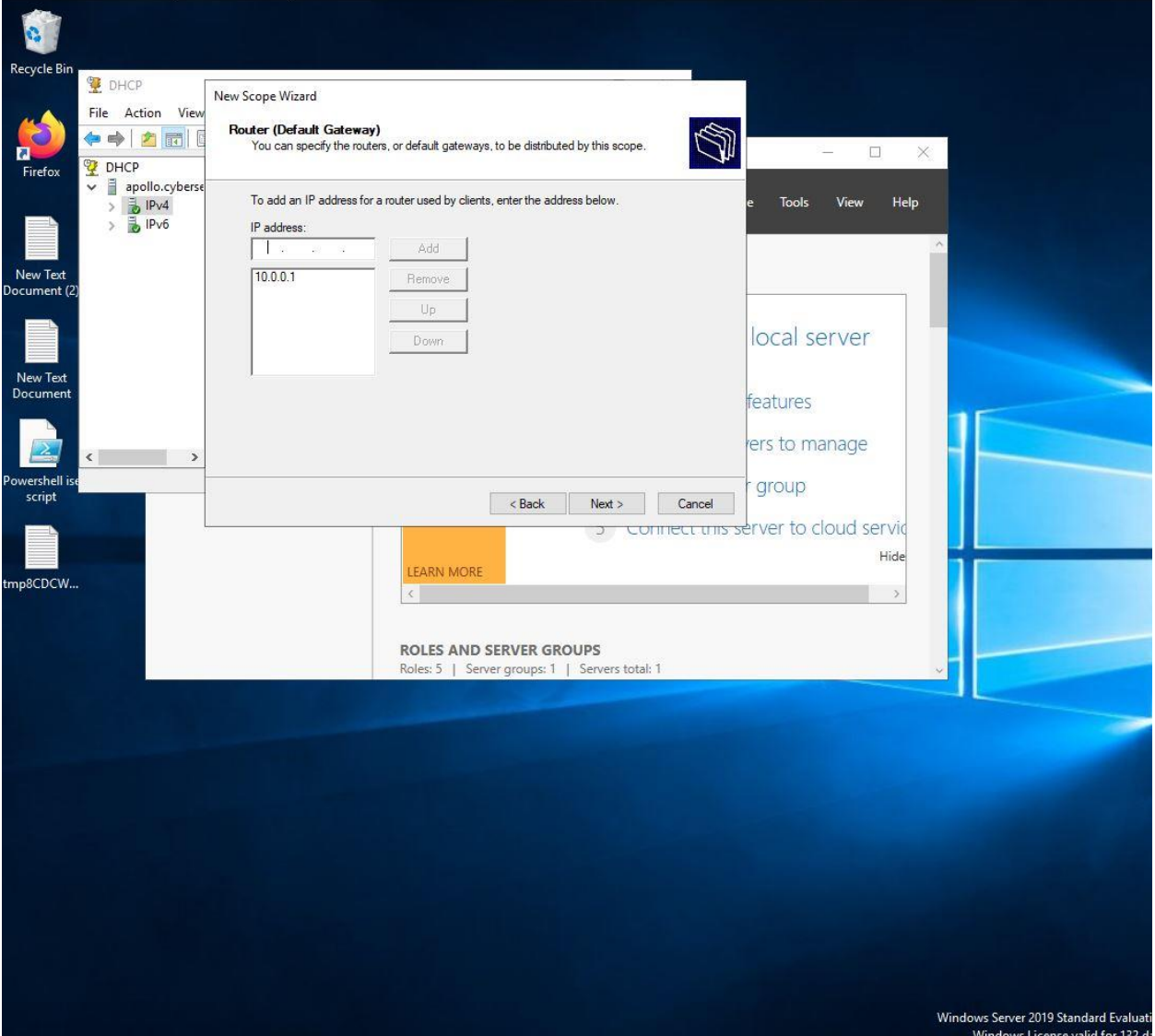












The screenshot displays a Windows Server 2019 Standard Evaluation desktop environment. The taskbar includes icons for Recycle Bin, Firefox, and several text documents. The DHCP console is open, showing a tree view with 'DHCP' expanded, 'apollo.cyberse.local' selected, and 'IPv4' and 'IPv6' sub-items. A 'New Scope Wizard' dialog box is in the foreground, titled 'Domain Name and DNS Servers'. It explains that the Domain Name System (DNS) maps domain names to IP addresses. The 'Parent domain' is set to 'cyberse.local'. Below, it prompts for DNS server IP addresses. A table lists the servers:

Server name	IP address
Apollo	10.0.0.10
	8.8.8.8
	10.0.0.10

Buttons for 'Add', 'Remove', 'Up', and 'Down' are next to the IP addresses. At the bottom of the wizard are '< Back', 'Next >', and 'Cancel' buttons. In the background, a 'Server Manager' window is partially visible, showing 'ROLES AND SERVER GROUPS' with 'Roles: 5', 'Server groups: 1', and 'Servers total: 1'. The system clock in the bottom right corner shows '12:44'.

