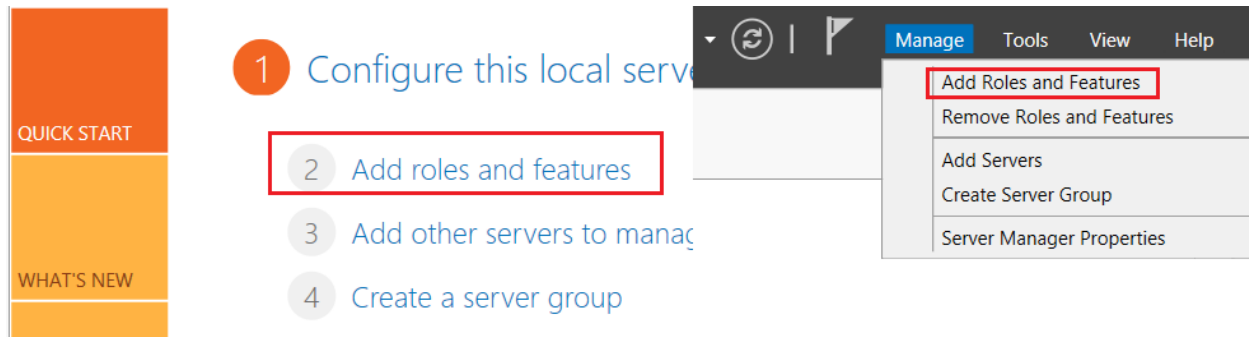
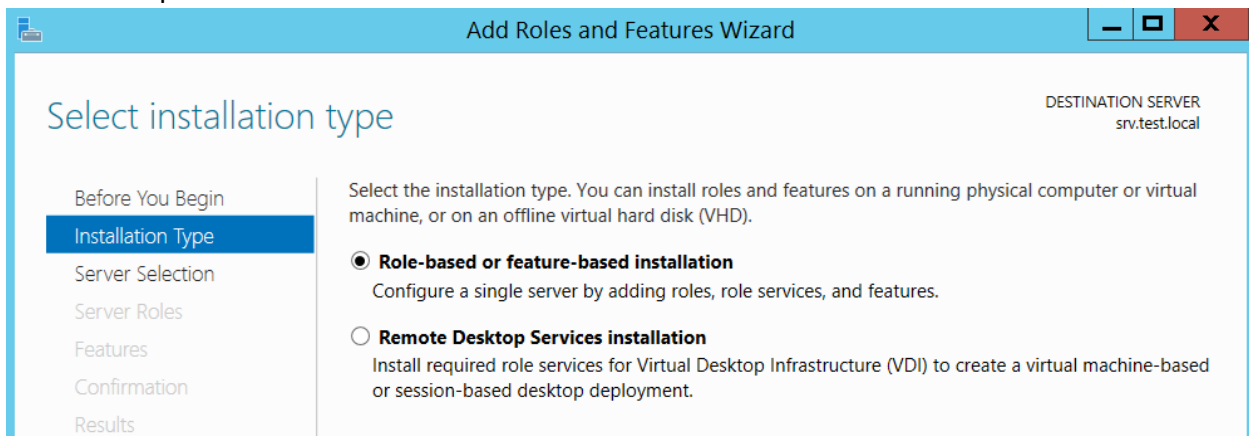


DHCP Server:

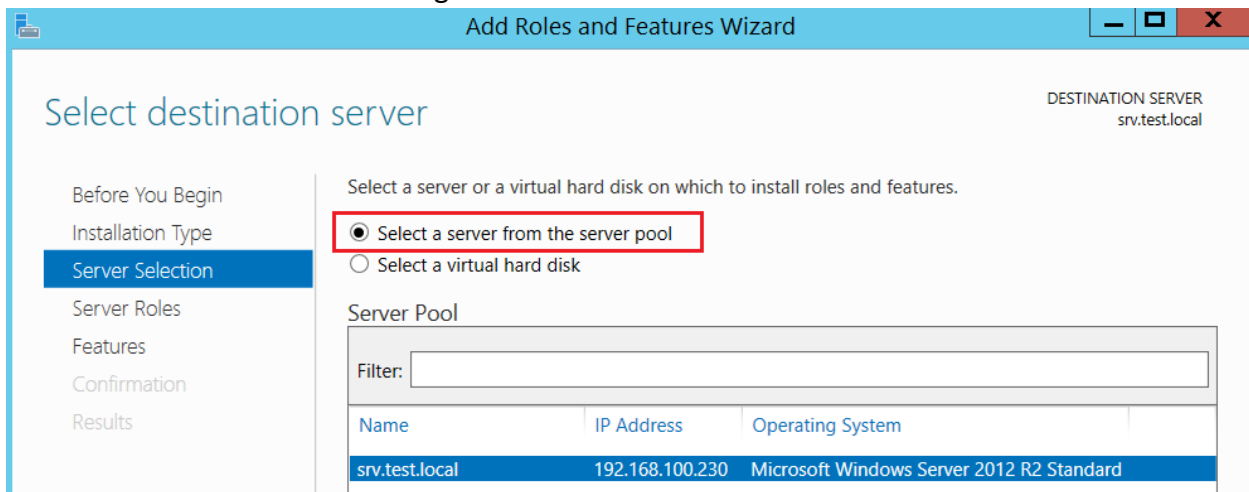
First, install DHCP server role. In Server 2012, install DHCP server role. Open **Server Manager**. On the menu, click **Manage** and click **Add Roles and Features**.



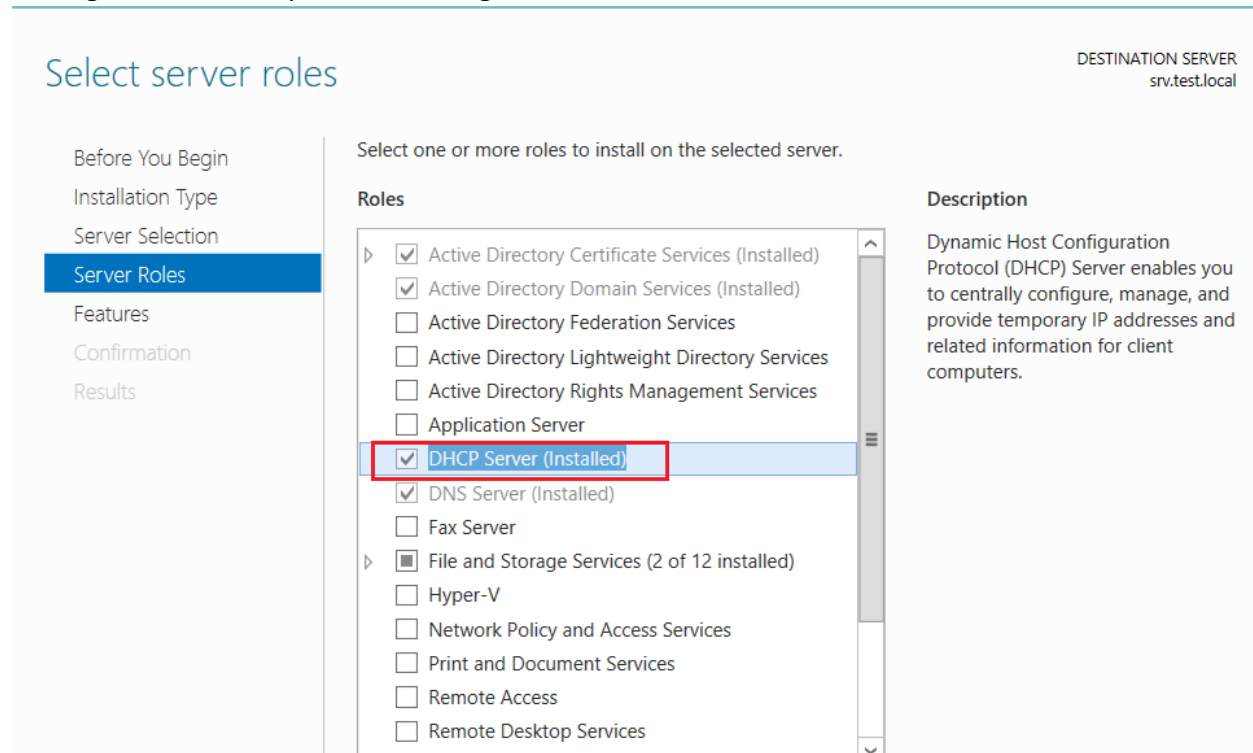
Select the option “**Role-based or feature-based installation**”. Click **Next** to continue.



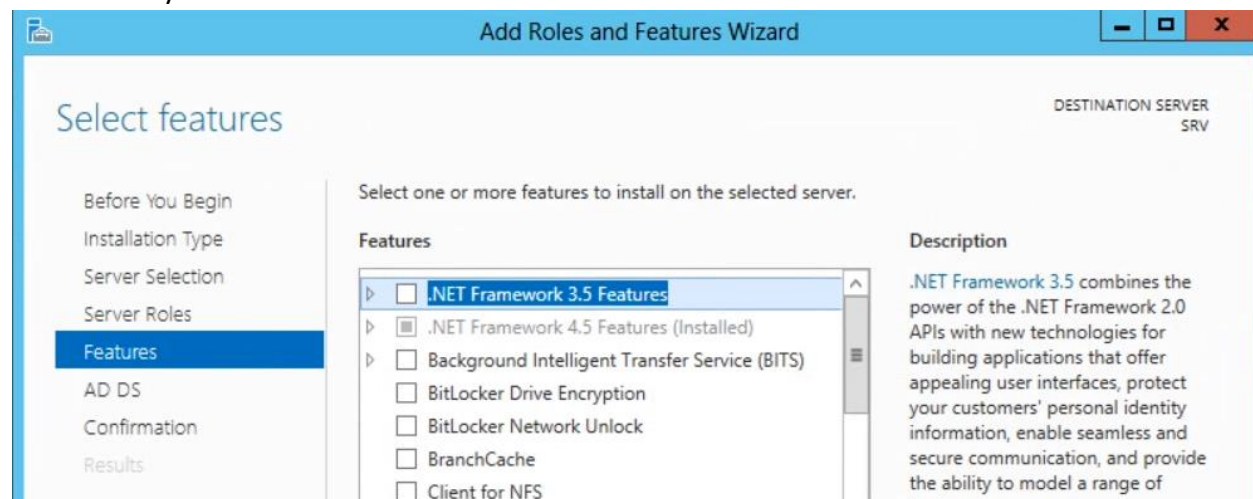
Select the server and click **Next** again.



In the “**Select Server Role**” window, select DHCP role. This would add additional features required for DHCP. Click on “Add Features” to add all the dependent features automatically. Moreover, please ensure that “Include Management tool” option is checked. This will install the management tool required to manager the role. Click **Next** to continue.



In the “**Select Feature**” window, all the dependent features are already selected. We don’t need to select any additional feature. Click **Next**.



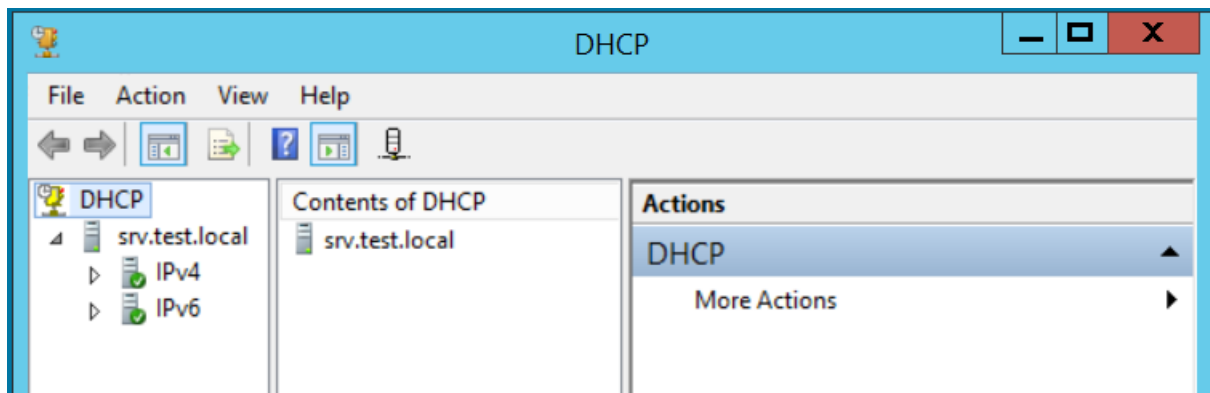
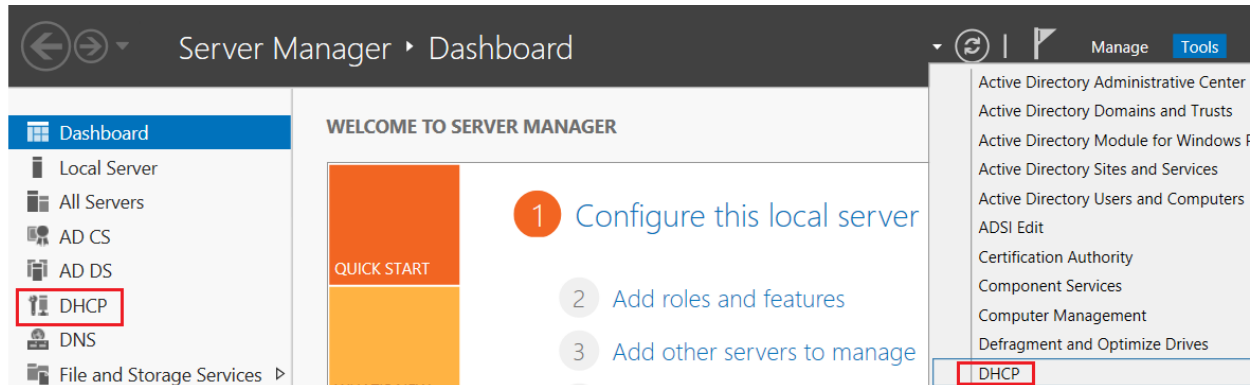
This window will explain you the functionality and advantages of DHCP.

Check the option “**Restart the destination server automatically if required**”, this would restart your Computer after role is successfully installed. Click on yes, if you are good to automatically restart the computer. Click on install to begin the installation process.

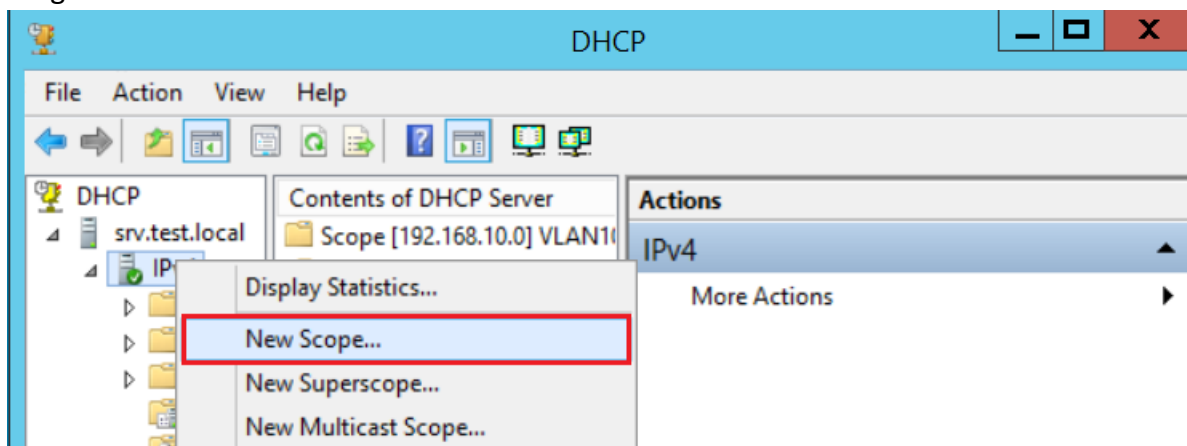
Installation progress can be reviewed in this window. You can even close this window; it would not interrupt the running task. Click **close** once the installation is completed.

Create DHCP Server Scopes:

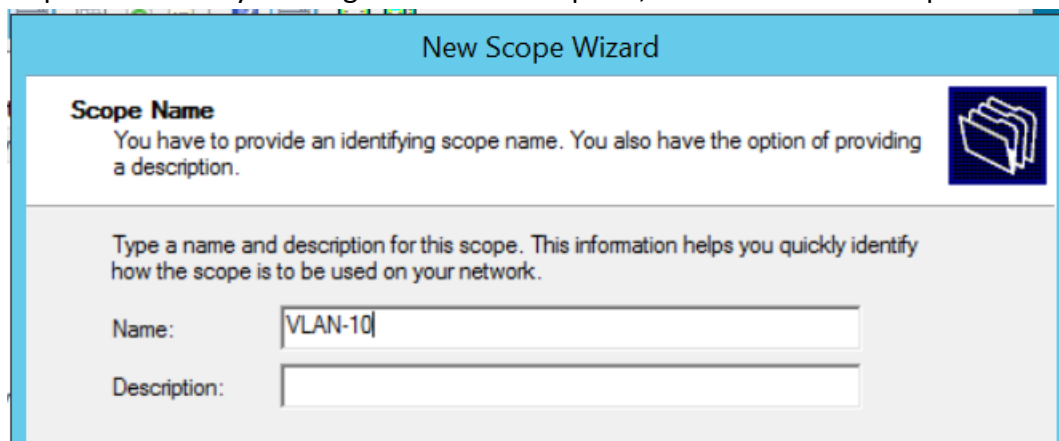
Login to DHCP server as administrator, run DHCP control console.



To create the new scope, right click on **IPV4** then select on **New Scope**. Scope is a group or range of IPs that DHCP would lease to clients.



It opens “the New Scope Wizard”. It defines the range of IPs DHCP will assign to client. To configure DHCP Scope, enter the name of the Scope you want to define as per your requirement and you can give a brief description, then click on next to proceed.



The screenshot shows the 'New Scope Wizard' window with the 'Scope Name' tab selected. The window has a blue title bar and a blue header bar. The main content area is white. It contains a section titled 'Scope Name' with a sub-header 'You have to provide an identifying scope name. You also have the option of providing a description.' and a blue folder icon. Below this, there is a text box for 'Name' containing 'VLAN-10' and an empty text box for 'Description'.

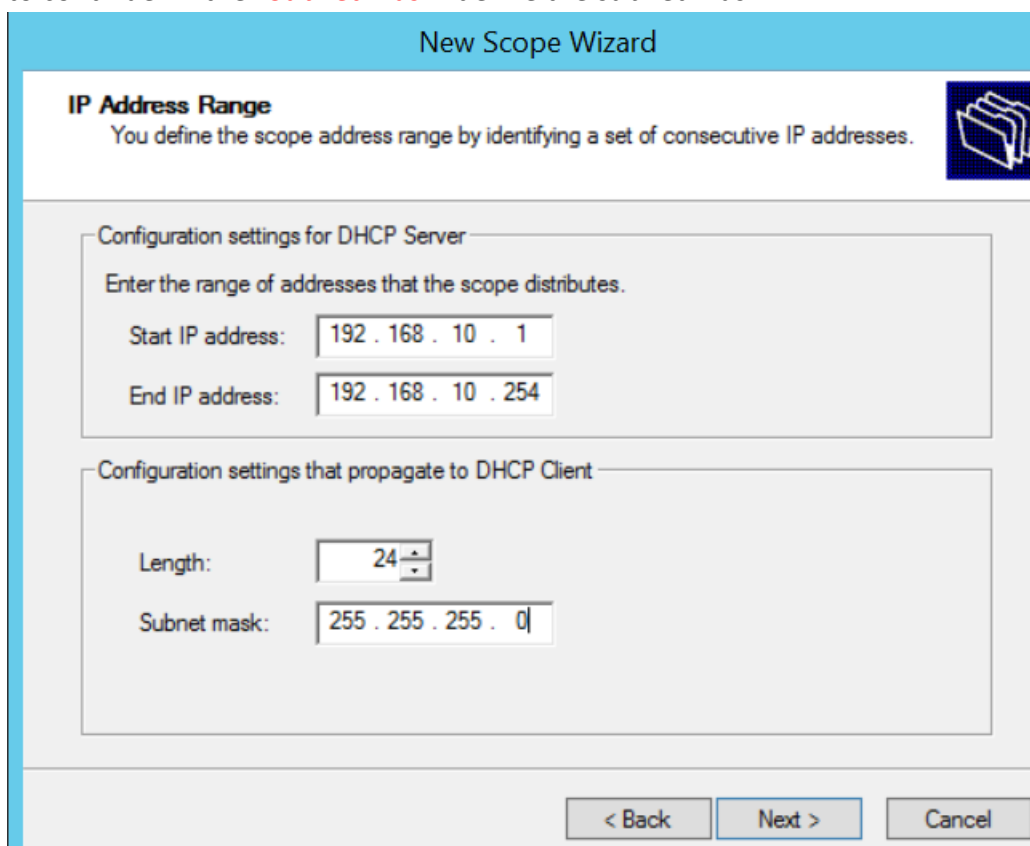
Scope Name
You have to provide an identifying scope name. You also have the option of providing a description.

Type a name and description for this scope. This information helps you quickly identify how the scope is to be used on your network.

Name:

Description:

On the “IP Address Range” window, we have to define the range of IPs for the scope. Click **Next** to continue. In the “Subnet mask” define the subnet mask.



The screenshot shows the 'New Scope Wizard' window with the 'IP Address Range' tab selected. The window has a blue title bar and a blue header bar. The main content area is white. It contains a section titled 'IP Address Range' with a sub-header 'You define the scope address range by identifying a set of consecutive IP addresses.' and a blue folder icon. Below this, there are two sections: 'Configuration settings for DHCP Server' and 'Configuration settings that propagate to DHCP Client'. The first section has two text boxes for 'Start IP address' (192 . 168 . 10 . 1) and 'End IP address' (192 . 168 . 10 . 254). The second section has a 'Length' dropdown menu set to 24 and a 'Subnet mask' text box (255 . 255 . 255 . 0). At the bottom, there are three buttons: '< Back', 'Next >', and 'Cancel'.

IP Address Range
You define the scope address range by identifying a set of consecutive IP addresses.

Configuration settings for DHCP Server

Enter the range of addresses that the scope distributes.

Start IP address:

End IP address:

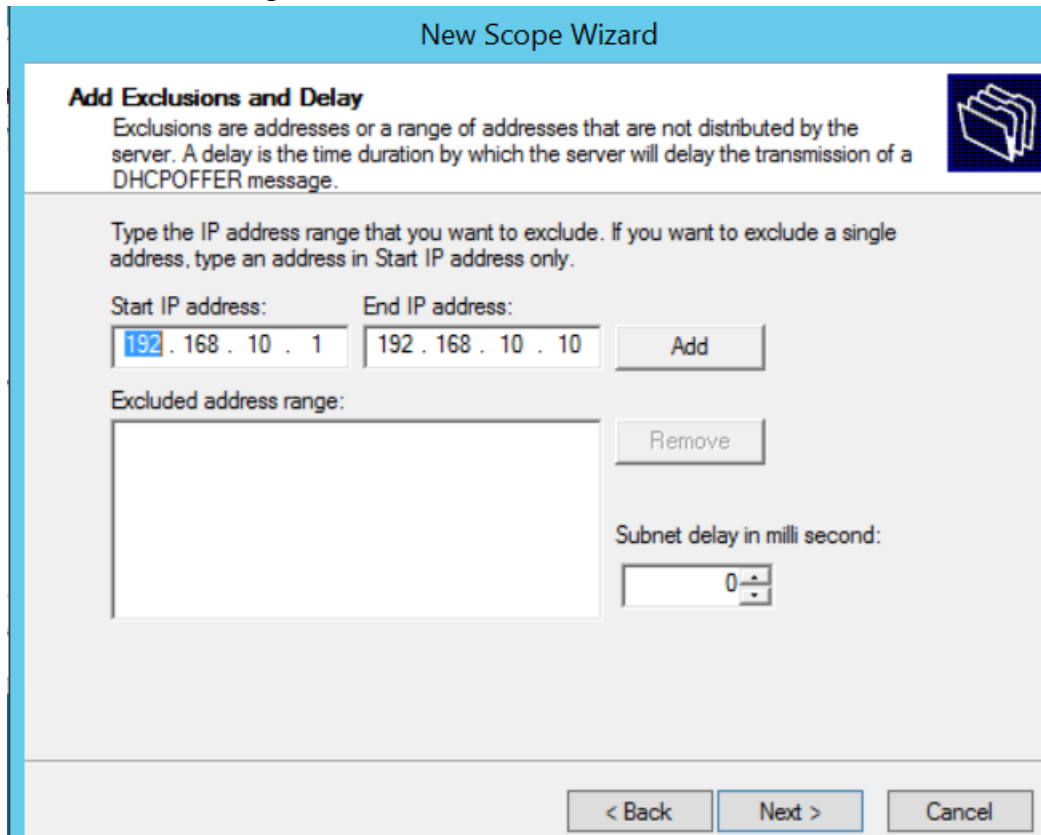
Configuration settings that propagate to DHCP Client

Length:

Subnet mask:

< Back Next > Cancel

On the "Add Exclusions and Delay" console we set the IP range that we want to exclude. In this console, we set the range from 192.168.10.1 to 192.168.10.10 as our excluded range and then click on ADD to set excluded address range. Exclusion defines the range of IP address that DHCP will not offer or assign to client machines. To continue, click **Next**.



New Scope Wizard

Add Exclusions and Delay

Exclusions are addresses or a range of addresses that are not distributed by the server. A delay is the time duration by which the server will delay the transmission of a DHCP OFFER message.

Type the IP address range that you want to exclude. If you want to exclude a single address, type an address in Start IP address only.

Start IP address: 192.168.10.1 End IP address: 192.168.10.10 Add

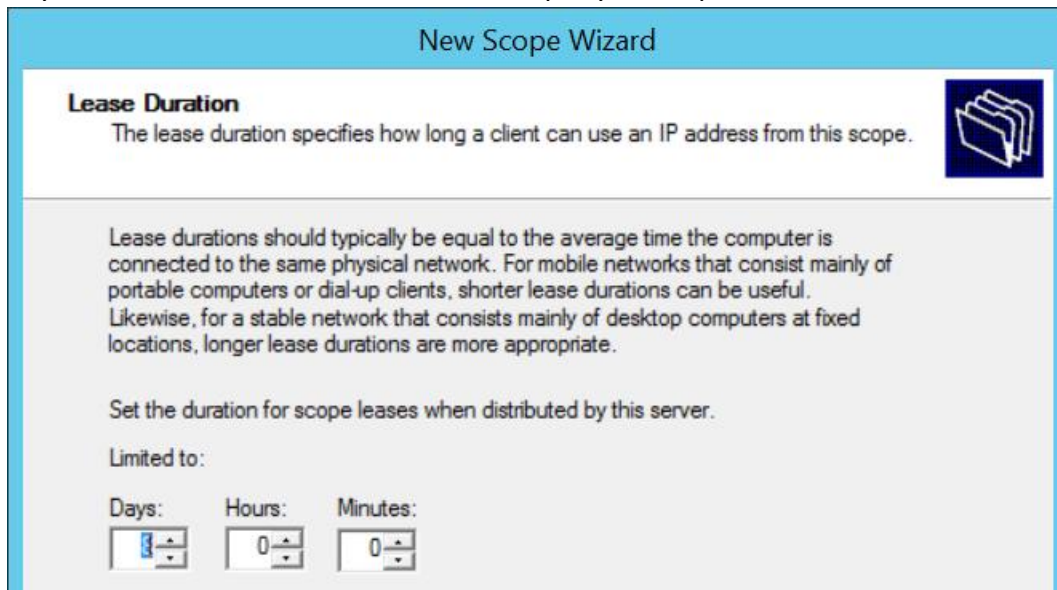
Excluded address range:

Remove

Subnet delay in milli second: 0

< Back Next > Cancel

On the "Lease Duration" console we can define the lease for the IP, by default the lease is for 8 days. It can be increased or decreased as per your requirement.



New Scope Wizard

Lease Duration

The lease duration specifies how long a client can use an IP address from this scope.

Lease durations should typically be equal to the average time the computer is connected to the same physical network. For mobile networks that consist mainly of portable computers or dial-up clients, shorter lease durations can be useful. Likewise, for a stable network that consists mainly of desktop computers at fixed locations, longer lease durations are more appropriate.

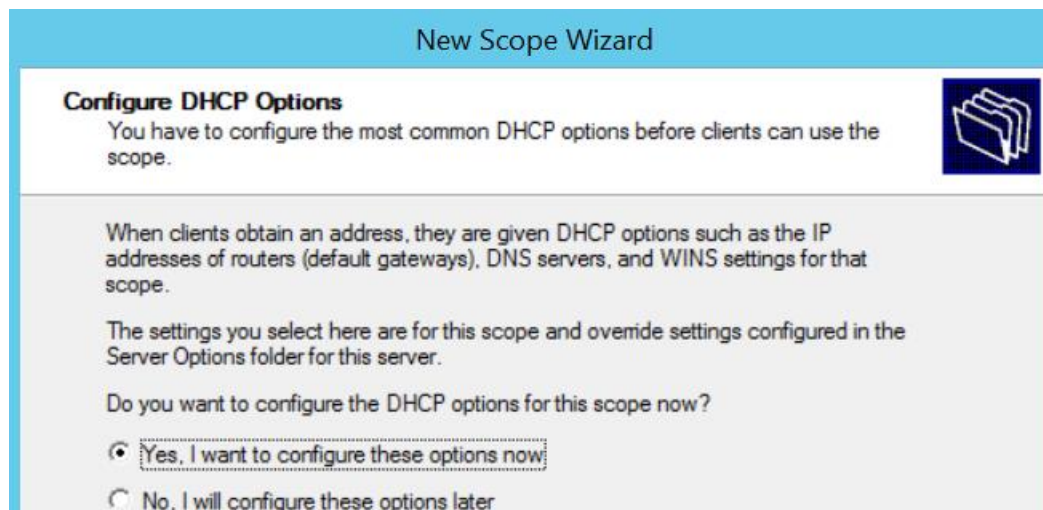
Set the duration for scope leases when distributed by this server.

Limited to:

Days: 8 Hours: 0 Minutes: 0

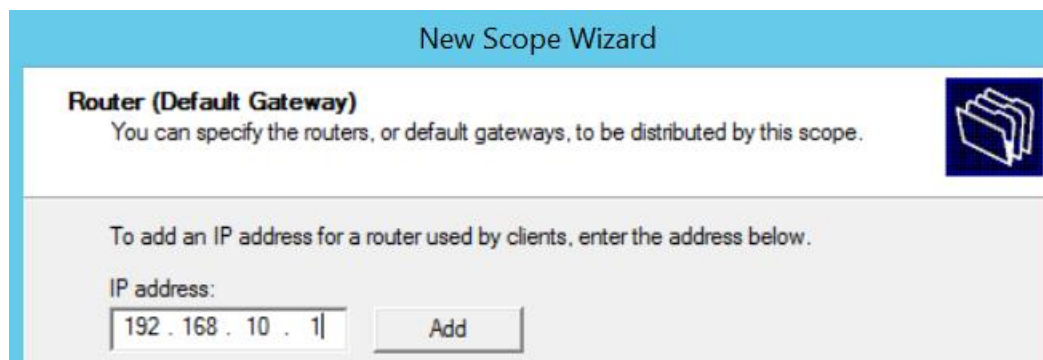
< Back Next > Cancel

On the Configure DHCP options select checkbox “Yes, I want to configure these options now” and click **Next** to continue.



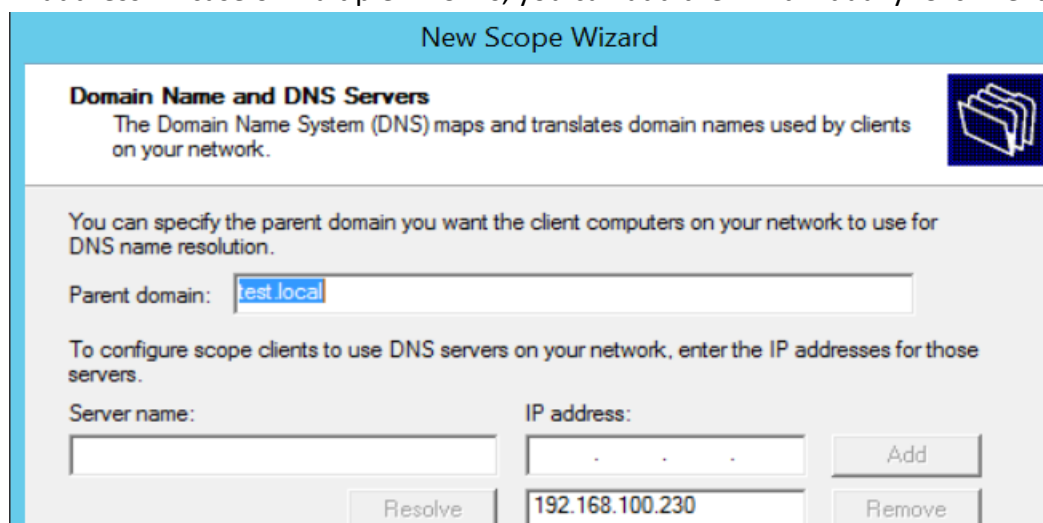
The screenshot shows the 'New Scope Wizard' window with the 'Configure DHCP Options' tab selected. The title bar is blue with the text 'New Scope Wizard'. Below the title bar, the tab is titled 'Configure DHCP Options' with a folder icon. The main text area contains the following information: 'You have to configure the most common DHCP options before clients can use the scope.', 'When clients obtain an address, they are given DHCP options such as the IP addresses of routers (default gateways), DNS servers, and WINS settings for that scope.', 'The settings you select here are for this scope and override settings configured in the Server Options folder for this server.', and 'Do you want to configure the DHCP options for this scope now?'. There are two radio buttons: 'Yes, I want to configure these options now' (which is selected) and 'No, I will configure these options later'.

To add an IP address for a **Router (Gateway)** used by clients, enter the address below otherwise click on Next to continue.



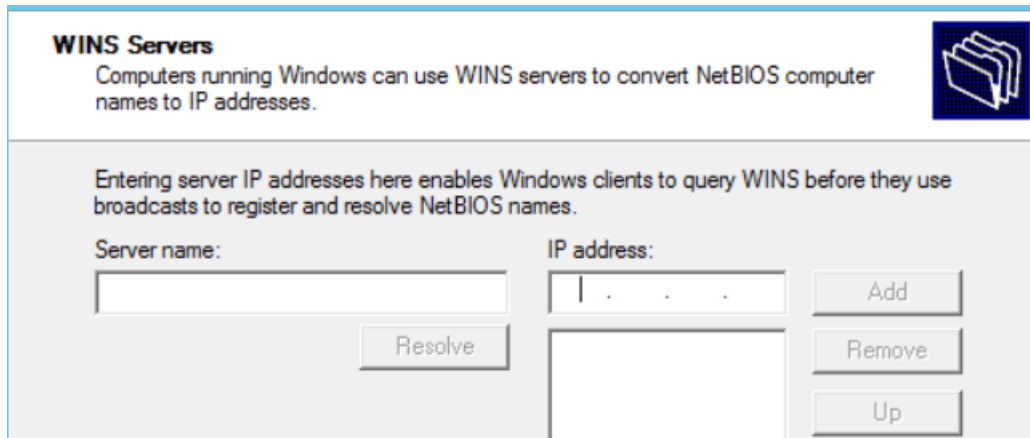
The screenshot shows the 'New Scope Wizard' window with the 'Router (Default Gateway)' tab selected. The title bar is blue with the text 'New Scope Wizard'. Below the title bar, the tab is titled 'Router (Default Gateway)' with a folder icon. The main text area contains the following information: 'You can specify the routers, or default gateways, to be distributed by this scope.', 'To add an IP address for a router used by clients, enter the address below.', and 'IP address:'. There is a text input field containing '192.168.10.1' and an 'Add' button.

On **Domain Name and DNS Servers** window enter parent domain and DNS server name and DNS IP address. In case of multiple DNS IPs, you can add them individually. Click next to continue.



The screenshot shows the 'New Scope Wizard' window with the 'Domain Name and DNS Servers' tab selected. The title bar is blue with the text 'New Scope Wizard'. Below the title bar, the tab is titled 'Domain Name and DNS Servers' with a folder icon. The main text area contains the following information: 'The Domain Name System (DNS) maps and translates domain names used by clients on your network.', 'You can specify the parent domain you want the client computers on your network to use for DNS name resolution.', and 'Parent domain:'. There is a text input field containing 'test.local'. Below this, there is a section for 'To configure scope clients to use DNS servers on your network, enter the IP addresses for those servers.' This section contains two rows of input fields: 'Server name:' and 'IP address:'. The first row has empty fields. The second row has a 'Server name' field and an 'IP address' field containing '192.168.100.230'. There are 'Add', 'Remove', and 'Resolve' buttons.

On **WINS Server** window enter details like Server name and IP address otherwise click on Next

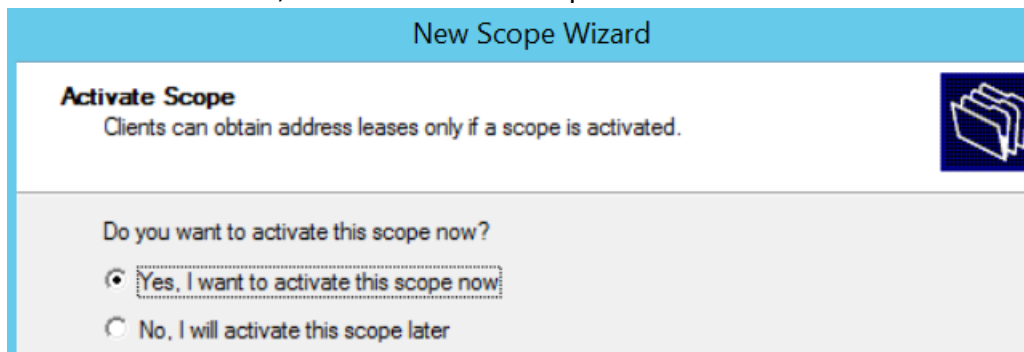


WINS Servers
Computers running Windows can use WINS servers to convert NetBIOS computer names to IP addresses.

Entering server IP addresses here enables Windows clients to query WINS before they use broadcasts to register and resolve NetBIOS names.

Server name: IP address:

On Activate Scope window select “Yes, I want to activate this scope now” to activate the scope otherwise select “No, I will activate this scope later” to activate it after sometime.



New Scope Wizard


Activate Scope
Clients can obtain address leases only if a scope is activated.

Do you want to activate this scope now?

☒ Yes, I want to activate this scope now

☐ No, I will activate this scope later

On “**Complete the New Scope Wizard**” click ‘Finish’ to close the console.



New Scope Wizard

Completing the New Scope Wizard

You have successfully completed the New Scope wizard.

To provide high availability for this scope, configure failover for the newly added scope by right clicking on the scope and clicking on configure failover.

To close this wizard, click Finish.

Similarly create two more Scopes **VLAN20** and **VLAN30** showing below image.

