

# Setting up of DHCP in Windows Server

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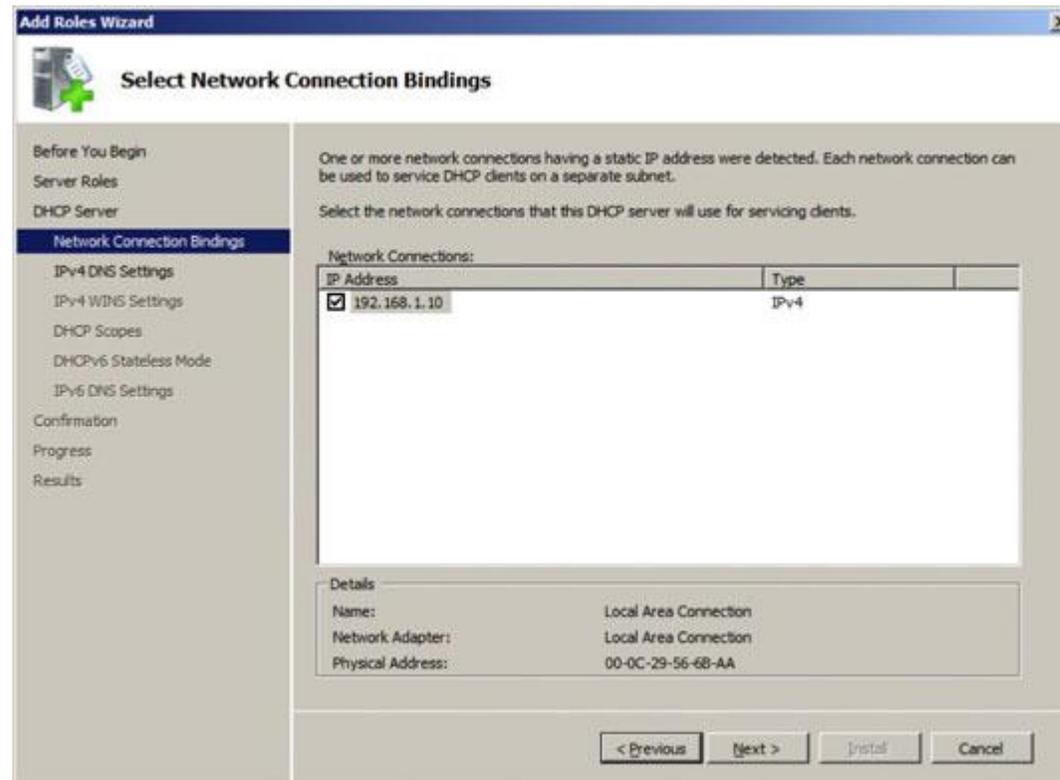
- Dynamic Host Configuration Protocol (DHCP) is a client/server protocol that automatically provides an Internet Protocol (IP) host with its IP address and other related configuration information such as the subnet mask and default gateway.
- RFCs 2131 and 2132 define DHCP as an Internet Engineering Task Force (IETF) standard based on Bootstrap Protocol (BOOTP), a protocol with which DHCP shares many implementation details. DHCP allows hosts to obtain required TCP/IP configuration information from a DHCP server.

- Windows Server 2016 includes DHCP Server, which is an optional networking server role that you can deploy on your network to lease IP addresses and other information to DHCP clients.
- All Windows-based client operating systems include the DHCP client as part of TCP/IP, and DHCP client is enabled by default.

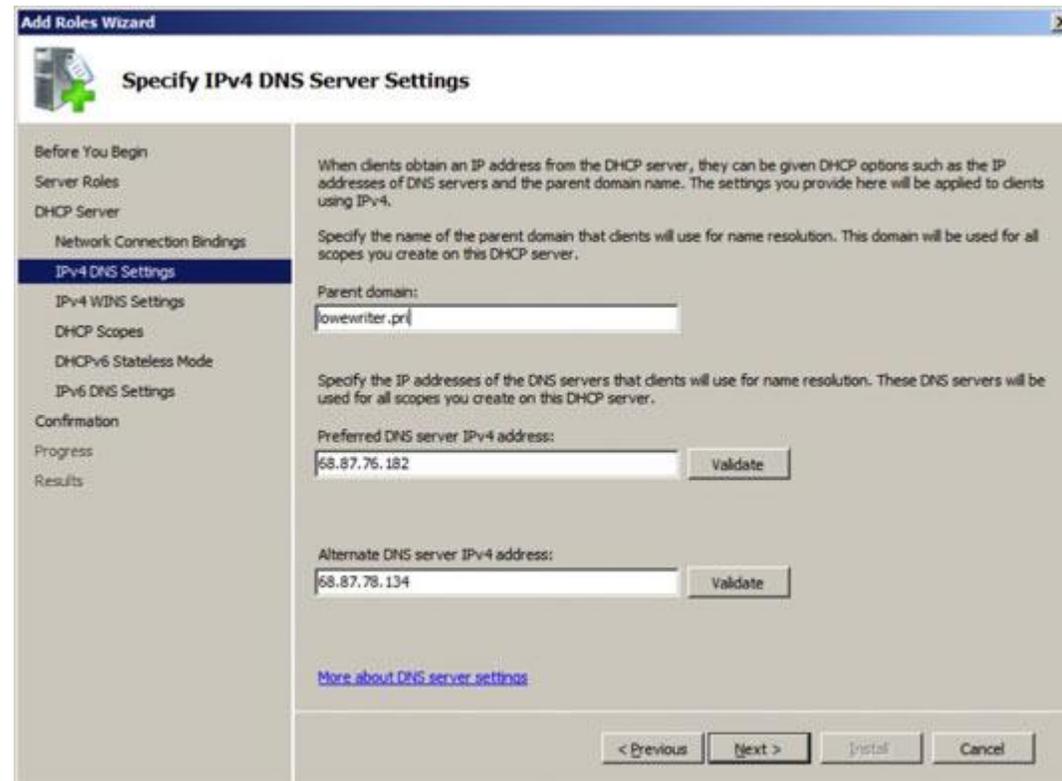
## **Step by Step Procedure to configure DHCP in Windows Server 2008**

- **Choose Start→Administrative Tools→Server Manager.**
- **The Manage Your Server application appears.**
- **Click the Roles link and then click Add a Role.**
- **The Add Roles Wizard appears.**

- Click Next to get the wizard started.
- The wizard displays a list of available server roles.
- Select DHCP Server from the list of roles and then click Next.
- The wizard displays an explanation of DHCP.
- Click Next.



- Select the static IP addresses you want to use for the DHCP server. Then click Next.
- The wizard asks for the DNS configuration information, as shown below.



The screenshot shows the 'Add Roles Wizard' window with the title 'Specify IPv4 DNS Server Settings'. The left sidebar contains a list of steps: 'Before You Begin', 'Server Roles', 'DHCP Server', 'Network Connection Bindings', 'IPv4 DNS Settings' (highlighted), 'IPv4 WINS Settings', 'DHCP Scopes', 'DHCPv6 Stateless Mode', 'IPv6 DNS Settings', 'Confirmation', 'Progress', and 'Results'. The main area contains the following text and fields:

When clients obtain an IP address from the DHCP server, they can be given DHCP options such as the IP addresses of DNS servers and the parent domain name. The settings you provide here will be applied to clients using IPv4.

Specify the name of the parent domain that clients will use for name resolution. This domain will be used for all scopes you create on this DHCP server.

Parent domain:

Specify the IP addresses of the DNS servers that clients will use for name resolution. These DNS servers will be used for all scopes you create on this DHCP server.

Preferred DNS server IPv4 address:

Alternate DNS server IPv4 address:

[More about DNS server settings](#)

At the bottom, there are four buttons: '< Previous', 'Next >', 'Install', and 'Cancel'.

- Enter the domain name and DNS servers. To enter a DNS server, type its address in the IP address text box and then click Add.
- You typically have more than one DNS server.
- Click Next.
- To create a new scope, click the Add Scope button.
  
- The wizard asks for a name and description for the new scope, as shown below.

**Add Scope** [X]

A scope is a range of possible IP addresses for a network. The DHCP server cannot distribute IP addresses to clients until a scope is created.

Configuration settings for DHCP Server

Scope name: Office

Starting IP address: 192.168.1.20

Ending IP address: 192.168.1.250

Subnet type: Wired (lease duration will be 8 days) ▼

Activate this scope

Configuration settings that propagate to DHCP client

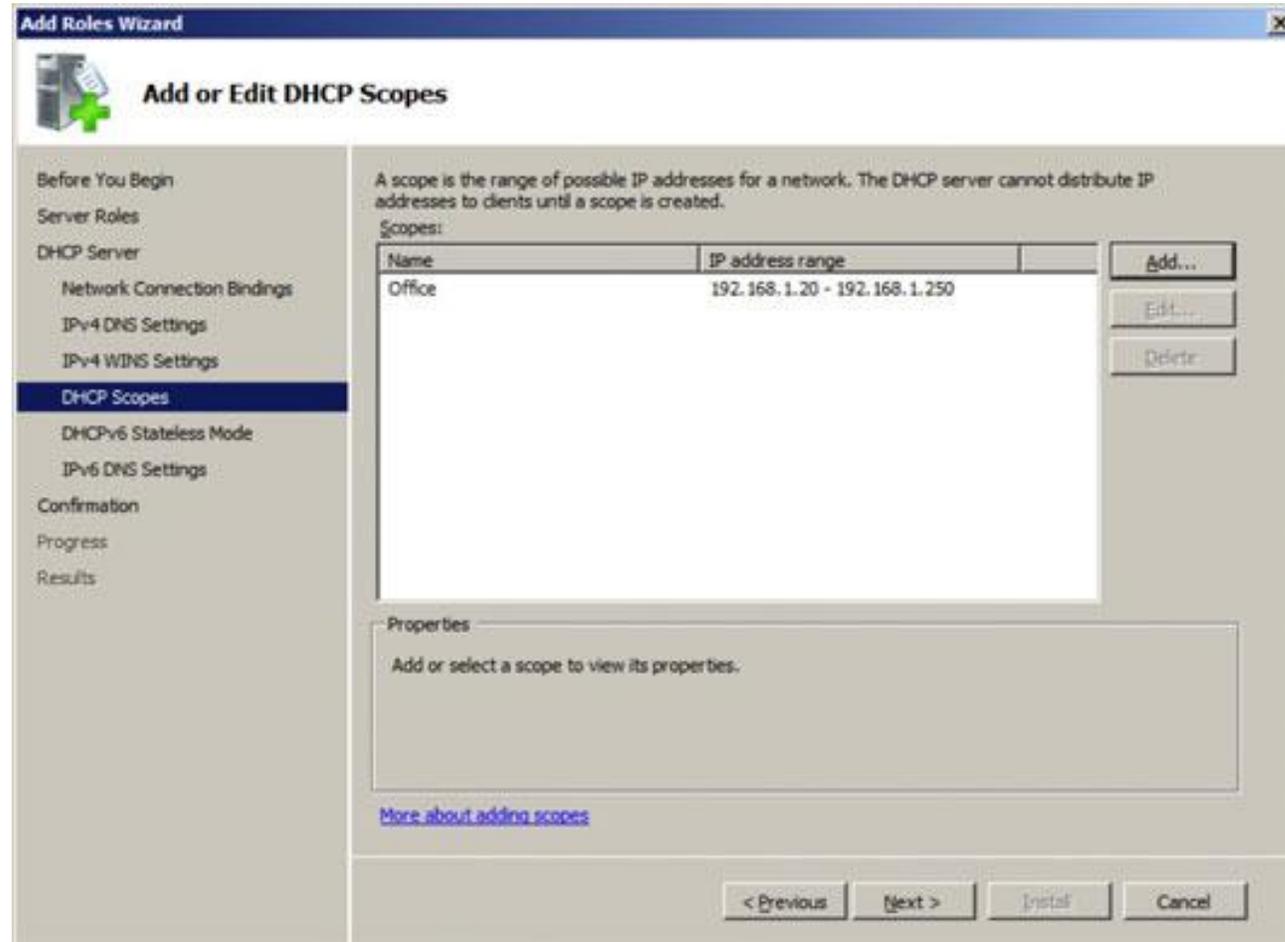
Subnet mask: 255.255.255.0

Default gateway (optional): 192.168.1.1

OK Cancel

- Enter the information for the new scope.
- You must enter the following information:
- Scope Name: The name can be anything you want. Use a generic name such as Office or your company name unless you're creating two or more scopes. Then, the names should indicate the function of each scope.
- Scope Starting IP Address: This is the lowest IP address that will be issued for this scope.
- Scope Ending IP Address: This is the highest IP address that will be issued for this scope.
- Subnet Mask: This is the subnet mask issued for IP addresses in this scope.
- Default Gateway: This is the default gateway address that will be used for this scope. This is usually the address of your router.
- Subnet type: Choose Wired or Wireless. The difference is how long the IP address will be valid. For wired networks, the addresses will be valid for six days. For wireless networks, the addresses will expire in eight hours.

- Select the Activate This Scope check box and then Click OK.
- The scope is created, as shown below.



- You can create as many scopes as you want for your DHCP server.
- When you finish creating scopes, click Next.
- The wizard asks whether you want to enable stateless mode, which is used for IPv6. Disable this mode unless dealing with IPv6 clients is important to your network.
- Click Next.
- The wizard asks for the credentials to use when creating this DHCP server. The default is to use your current login credentials.
- Click Next.
- The wizard displays a confirmation screen that summarizes the settings you've entered for the DHCP server.

- Click Install.
- The DHCP server is created. This might take a few minutes. When the server is finished, a final results page is displayed to confirm that the server was properly installed.
- Click Close.