

Knowledge Base

How to Use DHCP to Provide Routing and Remote Access Clients with Additional DHCP Options

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The information in this article applies to:

- Microsoft Windows 2000 Server
- Microsoft Windows 2000 Advanced Server
- Microsoft Windows Server 2003, Enterprise Edition
- Microsoft Windows Server 2003, Standard Edition

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SUMMARY

You can now use the DHCP Relay Agent with Routing and Remote Access to provide Dynamic Host Configuration Protocol (DHCP) scope options to dial-up clients or to virtual private network (VPN) clients. The dial-up or the VPN client will continue to receive an IP address from the Routing and Remote Access server, but it may use DHCPInform packets to obtain additional Windows Internet Naming Service (WINS) and Domain Name System (DNS) addresses, a DNS domain name, or other DHCP options. The purpose of DHCPInform messages is to obtain DHCP scope option information without getting an IP address.

Note It is particularly important that you send the DNS domain name by using DHCPInform because Point-to-Point Protocol (PPP) does not configure this information. The IPCP RFC specification that is used in PPP to negotiate IP settings between a dial-up or a VPN client and server only assigns an IP address, a primary and a secondary DNS server address, and a primary and a secondary NetBIOS/WINS server address.

DNS and WINS addresses that are received by using DHCPInform override addresses that are obtained from the Routing and Remote Access server. For additional information about how Routing and Remote Access assigns IP, DNS, and WINS settings to clients, click the following article number to view the article in the Microsoft Knowledge Base:

[160699](#) Understanding DHCP IP Address Assignment for RAS Clients

Currently, Windows 2000 and Microsoft Windows XP clients send a DHCPInform packet to obtain additional DHCP scope settings for DHCP options 06, 15, and 44. The DHCPInform packet is sent immediately after the dial-up or the VPN connection is established.

Microsoft Windows 95, Microsoft Windows 98, Microsoft Windows Millennium Edition (Me), and Microsoft Windows NT 4.0 or earlier cannot use DHCPInform over dial-up or VPN connections. For additional information about this limitation, click the following article number to view the article in the Microsoft Knowledge Base:

[200211](#) DUN Clients Do Not Receive DNS Domain Name over RAS/RRAS

MORE INFORMATION

To configure the DHCP Relay Agent to work over remote access:

1. Click **Start**, point to **Programs**, point to **Administrative Tools**, and then click **Routing and Remote Access**.
2. In the object tree, expand **Your_Server**, expand **IP Routing**, right-click **General**, and then click **New Routing Protocol**.
3. In the **Routing Protocols** list, click **DHCP Relay Agent**, and then click **OK**.
4. Right-click **DHCP Relay Agent**, and then click **Properties**.
5. In the **DHCP Relay Agent Properties** dialog box, type the IP addresses of your DHCP servers in the **Server Address** box, click **ADD**, and then click **OK**.
6. Right-click **DHCP Relay Agent**, and then click **New Interface**.
7. Click **Internal**.

Internal represents the virtual interface that is connected to all remote access clients.

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