

Topic: Running PXE and DHCP Servers on the Same Machine
Component(s) Affected: Image Manager, PowerQuest Control Center, DHCP Server
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OVERVIEW / ENVIRONMENT

Because PXE (Intel's Pre-eXecution Environment) and DHCP (Dynamic Host Configuration Protocol) typically communicate on the same UDP ports, this causes a conflict when both are running on the same machine. To run a PXE server and DHCP server on the same machine, you must make some configuration changes to your DHCP service.

DETAILED DESCRIPTION

The DHCP service should only be edited using the methods described below if a PXE server is installed on the same machine. The DHCP service should be edited if the PowerQuest Control Center ST installation program failed to configure your DHCP server automatically; this can happen with certain versions of Windows and different brands of DHCP servers.

RESOLUTION

When the DHCP service has been configured correctly for this situation, it will redirect the PXE client machine to communicate with the PXE server on an alternate port. To ensure that the DHCP service redirects PXE client machines to an alternate port to communicate with the PXE server, follow the instructions below for the appropriate operating system.

- Windows 2000: Using Microsoft's DHCP service, edit the DHCP configuration from a DOS prompt with these two `netsh` commands:

```
C:\netsh.exe dhcp server add optiondef 60 "Class ID" string 0 PXEClient  
C:\netsh.exe dhcp server set optionvalue 60 string PXEClient
```

- Windows NT 4.0 (Service Pack 6a): Using Microsoft's DHCP service, edit the DHCP configuration by following these steps:

1. Click **Start > Programs > Administrative Tools (Common) > DHCP Manager**.
2. In the **DHCP Servers** pane, double-click **Local Machine**.
3. Select any DHCP scope, and then click **DHCP Options > Defaults**.
4. Click **New**.
5. In the **Name** field, enter: Class ID
6. From the **Data Type** drop-down list, select **String**.
7. Deselect **Array**.
8. In the **Identifier** field, type: 60
9. Click **OK**.
10. The DHCP Options: Default Values dialog box appears.
11. From the **Option Name** drop-down list, select **060 Class ID**.

12. In the **Value String** field, enter: PXEClient
13. Click **OK**.
14. Select any scope, and then click **DHCP Options > Global**.
15. From the **Unused Options** list box, select **060 Class ID**.
16. Click **Add** to add the option to the **Active Options** list box.
17. Click **OK**.
18. Click **Server > Exit**.

Note: On either Windows platform, if you use a non-Microsoft DHCP service, refer to that service's documentation to complete the following:

1. Define DHCP's option 60.
2. Set option 60 to PXEClient.
3. Assign option 60 to all DHCP scopes, or at least to those scopes that contain PXE clients.

After configuring the DHCP service to redirect PXE clients, the PXE service must then be edited by doing the following:

1. Run REGEDIT and locate the following registry entry:

```
HKEY_LOCAL_MACHINE\Software\PowerQuest\PXE\ProxyDhcp
```

2. Double-click **UseDhcpPort** in the right pane.
3. If the value is 1, change it to 0.

For more information, please contact ClearCube technical support.

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