Never use DHCP or allow IP addresses to be assigned automatically from other sources on your network. Your ChemStation networking cards must use static IP addresses.

1. First we must determine the IP addresses used in the configuration. Each Network Interface Card (NIC) must have a unique IP address along with each instrument containing a LAN interface card.

   • Click **Start…Run**, then in the **Open** field type **cmd**. Click **OK**.
   • Type the following command to view your current NIC card IP configuration.
     
     **ipconfig** <Enter>  
   • Observe the IP address and the subnet mask settings for all NIC cards.
   • While still in the Command Prompt window, use the ping command with the IP address for the NIC card.
     
     example: **ping 10.1.1.100** <Enter>  
   • You should see 4 lines of replies, if it says 'Request Timed Out' 4 times, then your LAN card is not communicating. Reload the NIC card driver or investigate possible replacement of the NIC card.
   • If you see a error message 'Service Control Manager reported a error etc.' when you logon to Windows, this could indicate a bad NIC card or corrupt software driver for the NIC card. If this occurs, check the Windows **Event Viewer** program for details:

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o From NT, click **Start…Programs…Administrative Tools…Event Viewer**

o From Windows® 2000 or XP, click **Start-Settings…Control Panel…Administrative Tools…Event Viewer**

2. Next we determine the Instrument IP addresses, and in most cases we can get these from the Bootp Server or the Configuration Editor program.

- From Bootp Server window, Click 'Configure-Bootp Manager...' the IP addresses will be displayed.  Note: If using a 6890N you should press **Options-Communication** (then **Enter**) from the front GC keypad for IP address, as this instrument does not require the Bootp.

- From Configuration Editor, 'Start-Programs-ChemStations-Configuration Editor', you will see all configured instruments displayed and their corresponding IP addresses.

3. If the Ping test was successful in #1 above (i.e. your NIC card is working), next let’s use the same command for the instruments.

   example: **ping 10.1.1.101**

   Again we should see 4 successful reply messages; if not, then power cycle the instrument, insuring the Bootp server is running.  Repeat the Ping test for the IP address of the newly power cycled instrument.

4. If the ping test fails, and you see 'Request Timed Out' 4 times, then your LAN is not communicating somewhere from the computer NIC card through the instrument’s LAN card.

   - The most common reason for this is when a power failure occurs, the instruments power up before the computer boots up, therefore the Bootp server is not running when the instrument requests an address. To fix this, try cycling power on one of your instruments, while Bootp is running, and repeat the ping test. If successful then power cycle any additional instruments and startup your Online Instruments sessions, the instruments should communicate again. If not, then continue.

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- Reseat all LAN cables and look for the green Link light on each NIC card and on the LAN Hub if installed. Never use crossover cables with a network hub. Power off the hub and power it back on again, repeat the Instruments ping test. If you only have one instrument then you probably will have a crossover cable and no hub.

If the ping is successful then your network layers are communicating all the way to the instruments independent of the ChemStation software. The problem may reside in the ChemStation configuration, there may be some file corruption, or the LAN card could be defective in the instrument.

If you have 2 NIC cards installed in your ChemStation PC, please read on below.

Multi-Homed or Dual NIC Card Configuration Section

Multi-homed (Dual NIC) PCs – Windows® 2000 or XP Pro

It is important to have the Network Bindings set correctly for any Windows operating system; Windows® 2000 and XP are no exception. The following is applicable to LC, GC, UV & LC/MSD ChemStations.

Change the bindings order to ensure the Local Network Connection for the instrument (GC, LC, etc) is at the top of the Bindings order.

To change the Windows 2000 Network Bindings.

- Right click on My Network Places, select Properties.
- Click on Advanced menu then Advanced Settings... menu! This menu has the Adapters and Bindings settings panel.
- Move the Local Area Connection connected to the instrument to the Top of this list.

To change the Windows® XP Professional Network Bindings.

- Select Start–Settings–Network Connections.
- Click on Advanced menu then Advanced Settings... menu! This menu has the Adapters and Bindings settings panel.
- Move the Local Area Connection connected to the instrument to the Top of this list. Highlight the correct connection, then use the arrows to the right of the panel.

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Multi-homed NIC cards – *Windows® NT*

- Make sure the GC, LC, UV or LC/MSD is communicating with only one LAN card installed in the PC.
- Then add second card, this ensures Bootp server program binds to the first card -- the one associated with the instrument(s).

Note if you have 2 NIC cards:

On Windows NT, the first LAN card Adapter must be configured for the ChemStation and instrument control, not your company LAN. If this is not the case, remove the second LAN adapter, then reconfigure the first Adapter for the ChemStation.