

NETCONSOLE

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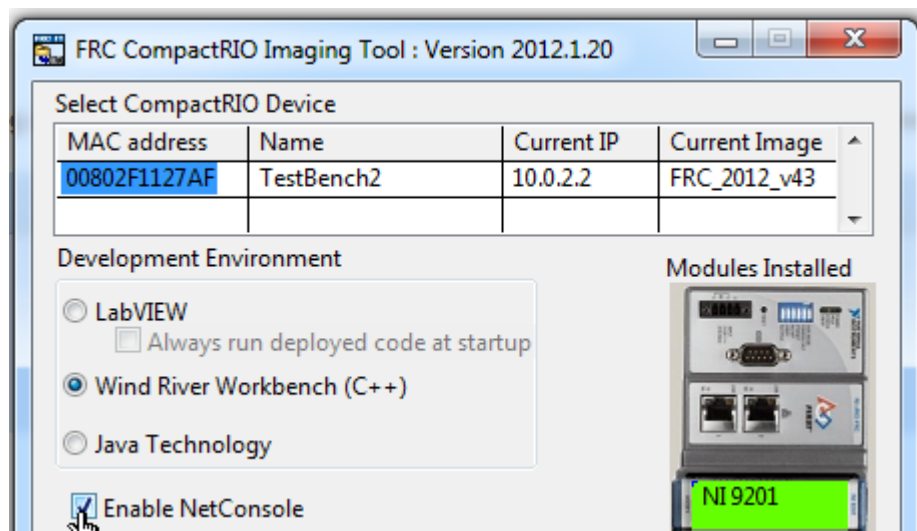
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NetConsole

Using Netconsole

The NetConsole is a way to remotely view the console output of the cRIO from any computer on the same network. This can be used to view debugging output from the cRIO, WPILib libraries, and/or from output statements in the user code (printf in C++, System.out.print in Java or RT Debug String VI in LabVIEW).

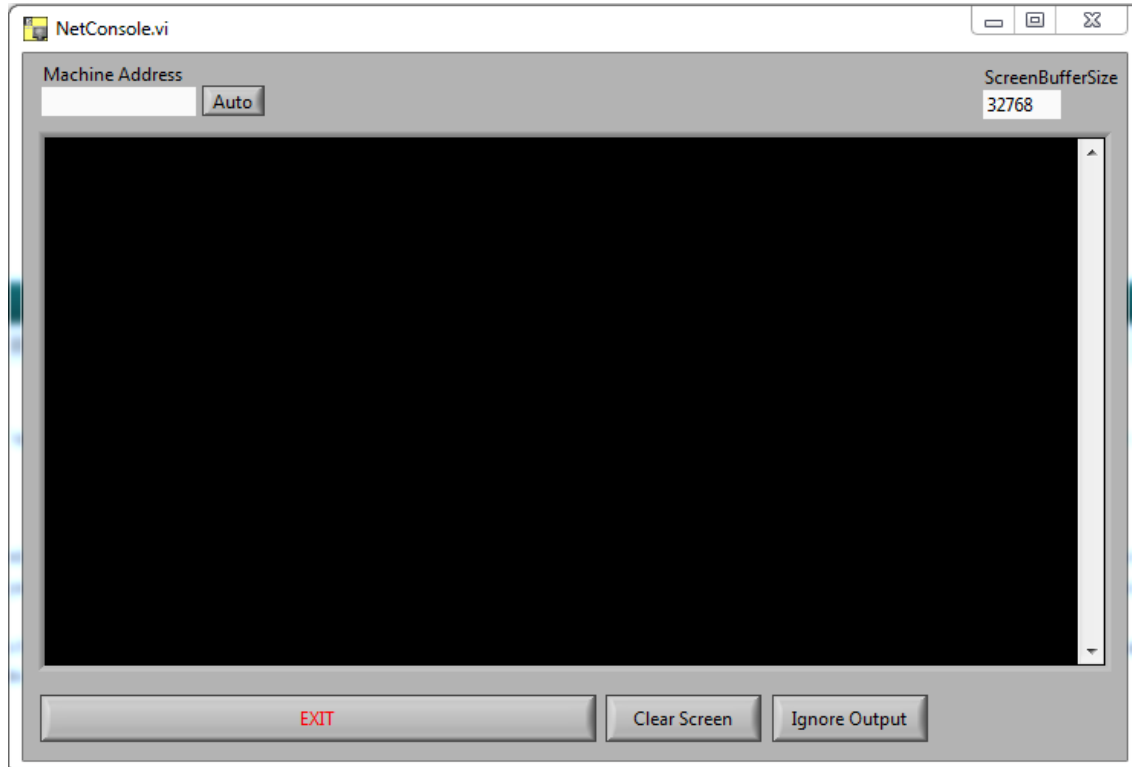
Enabling NetConsole



To use NetConsole, it must be enabled on your cRIO. To do this, open the cRIO Imaging Tool, check the Enable NetConsole box and click Apply.

NetConsole

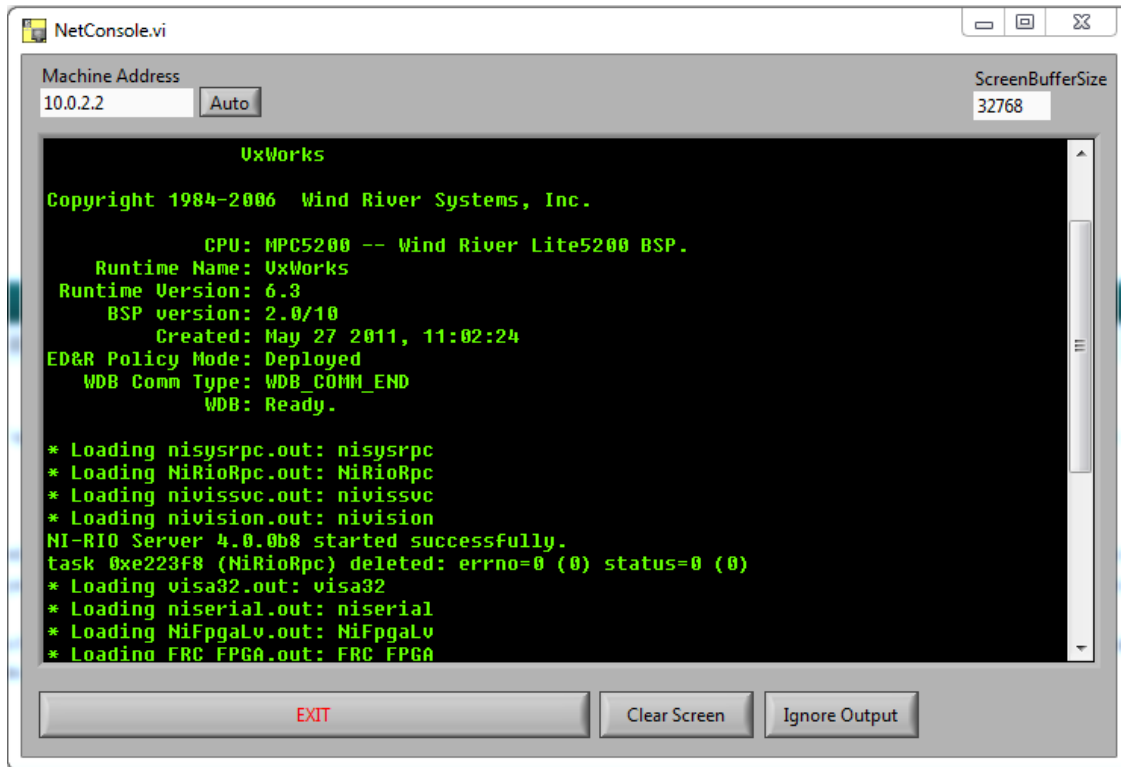
Opening NetConsole



The NetConsole can be found either in your Start->Programs menu or by browsing to Program Files\NetConsole for cRIO and double clicking NetConsole.exe *Note: for 64 bit users it will be located in Program Files (x86)*. When the NetConsole opens you should see a screen like the one shown here.

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Using NetConsole



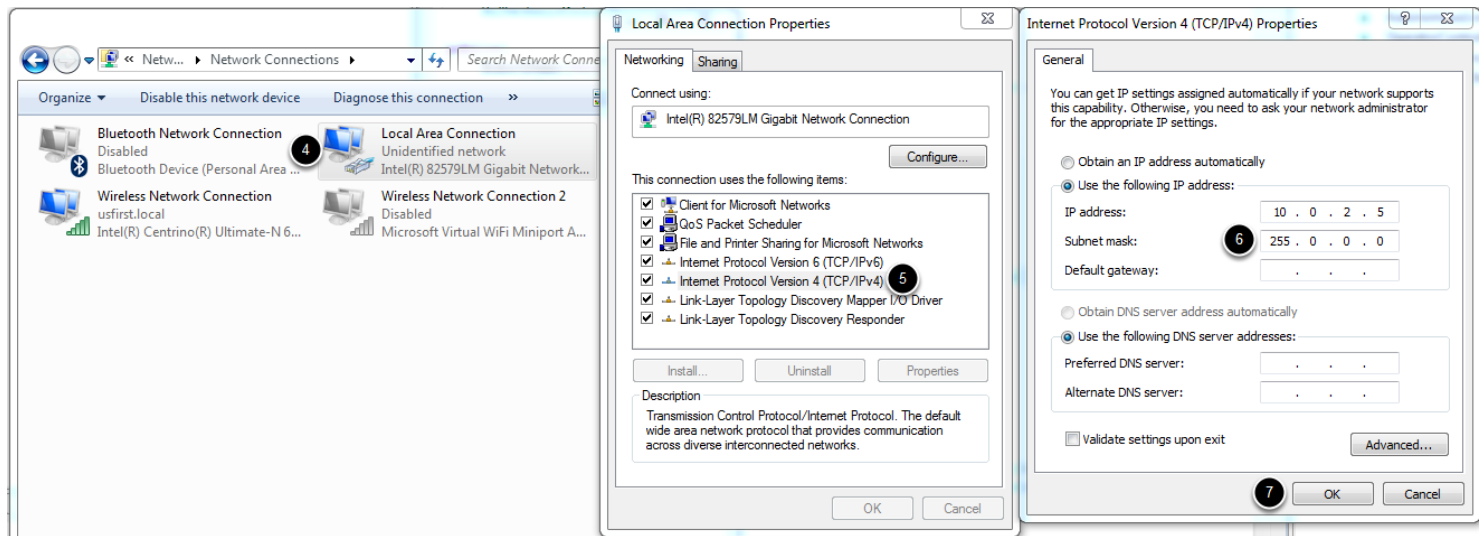
The NetConsole defaults to "Auto" mode, meaning it will automatically detect messages coming from your cRIO and begin displaying them in the window. You can verify this by resetting the cRIO using the Driver Station or the small reset button and you should begin seeing the cRIO startup messages displayed on the screen.

Tip: To copy text from NetConsole, triple-click in the window. This will copy all of the text in the buffer to the Clipboard.

Troubleshooting the Connection

If your NetConsole window does not automatically detect and display your cRIO startup messages, these steps should help you verify that your network configuration is correct

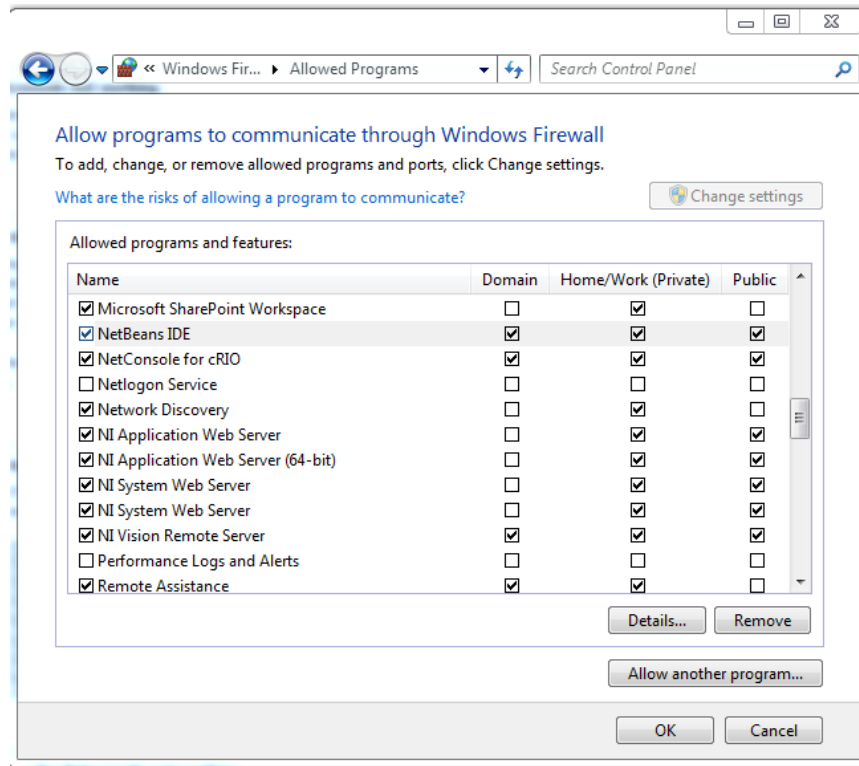
Subnet Mask Setup



The NetConsole requires that the Subnet Mask on the network adapter being used be set to 255.0.0.0 in order to work properly. To check this (on Windows 7):

1. Click Start->Control Panel
2. Click "Network and Internet" then "Network and Sharing Center" (or directly on "Network and Sharing Center" if using the icon view)
3. Click "Change adapter settings" in the pane on the left side.
4. Right click on the network adapter you are using and select Properties (generally "Wireless Network Connection" for wireless and "Local Area Connection" for wired)
5. Select the line "Internet Protocol Version 4 (TCP/IPv4)" but make sure not to uncheck it. Then click Properties.
6. In the box labeled "Subnet mask" make sure the mask is set to 255.0.0.0. You can also check to make sure your IP is set properly while you have the dialog up, it should be set to 10.XX.YY.ZZ where XX.YY is your 4 digit team number and ZZ is 5 if this machine is the Driver Station and any number 12 to 99 if not.
7. Click OK on each dialog to exit out.

Windows Firewall



One reason for the NetConsole to not properly display cRIO messages is that they are being blocked by a firewall. You may have to go in and add the appropriate exceptions to your firewall. To do this on Windows 7:

1. Open the Control Panel
2. If in Category View select System and Security then Windows Firewall. If in icon view click Windows Firewall.
3. Select "Allow a program or feature through Windows Firewall" from the right pane.
4. Locate the entry titled "NetConsole for cRIO" and verify that it has checkmarks for all of the appropriate network types.
5. If the entry is not present in Step 4, you can create the allowance by clicking the "Allow another program" clicking browse and locating NetConsole.exe in Program Files\NetConsole for cRIO