



Serial-to-Ethernet Manual

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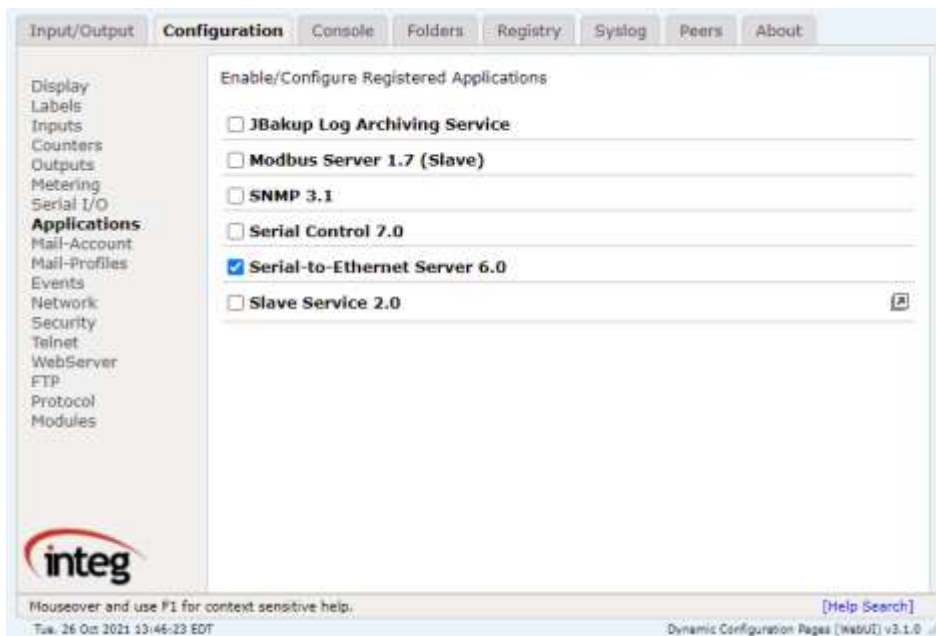
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1 What is Serial-to-Ethernet?

The Serial-to-Ethernet function for the JNIOR is a software application that runs on the JNIOR and allows the JNIOR to act as a converter between a serial device connected to the JNIOR and an external device communicating to the JNIOR via the Ethernet network using TCP/IP. The serial to Ethernet conversion is bi-directional meaning that the serial device can communicate to the PC and the PC can communicate to the serial device. The JNIOR acts as a converter in between the serial device and the PC sending and receiving packets of information between the two devices.

2 Enabling the Serial-to-Ethernet Software

The Serial-to-Ethernet software is pre-installed on all JNIORs. To activate the software so that it runs on boot up, please launch the main JNIOR web page in the JNIOR Support Tool, go to the Configuration tab and under the Applications section should the pre-downloaded applications should be. Check the Serial-to-Ethernet Converter box to enable it to run on boot.



Once you've selected the Serial-to-Ethernet application, you'll select the Console tab, start a session, and login with the username and password 'jniior'. After the login enter reboot and it'll prompt you if you wish to reboot, which then 'y' should be entered. The jnior will reboot, and once its done the Serial-to-Ethernet application should be running.

```

Welcome to the JNOR Model 410 (S/N 614070322) running JANOS v1.8.1-b1
Copyright (c) 2012-2019 INTEG Process Group, Inc., Gibsonia PA USA.
Local time: Tue Oct 22 08:37:48 EDT 2019   Process ID: 13
System up time: 22 Hours 03:23.343

Tony'sJnior2 login: jnior
Tony'sJnior2 password: *****

Tony'sJnior2 /> reboot
Warning: About to reboot the system.

OK to proceed? [Y/N]: y
Rebooting...

```

3 Configuring the Serial-to-Ethernet Software

Once the Serial-to-Ethernet program is running, it will be ready to accept clients on the default Ethernet TCP/IP port of 9201 or whatever TCP port you have set in the Serial-to-Ethernet registry. The serial device connected to the JNOR serial port must work with set serial settings under the configuration tab, otherwise you will have to change the serial settings on either the JNOR or your device.

The Registry tab on the JNOR Main Web page can be used to change any settings for the Serial-to-Ethernet software program. After you enable the Serial-to-Ethernet program and it is running after a reboot, you can edit keys in the registry under `appdata/TCP_to_Serial` as shown below:

Registry Configuration Page: `AppData/TCP_to_Serial/`

Key	Content
<code>\$BuildTime</code>	5/16/2019 4:26:36 PM
<code>\$JanosLibBuildTime</code>	05/06/19 13:55 -04:00
<code>\$JanosLibVersion</code>	6.0.2072.1905
<code>\$Version</code>	6.0.48
<code>HostAddress</code>	none
<code>MaintainConnection</code>	true
<code>Port</code>	9201
<code>SerialPort</code>	AUX

Dynamic Configuration Pages (DCP) v2.3

To modify any of the above keys, click on the appropriate key in the Registry and enter the change you want to make. Clicking away from the registry should save the change.

The configurable registry settings are as follows:

Key Name	Valid Settings	Comments
HostAddress	A valid IP address	Reboot required - allows connection to ethernet device that can only listen on TCP port
MaintainConnection	true or false	When a connection is made with this application, keeps connection rather than dropping the connection after a short duration
Port	Any valid TCP port not already used	Reboot required - The JNIOR must be rebooted for this change to take effect.
Serial Port	AUX or RS232	Reboot required – defines the serial port on the JNIOR that the serial device is connected to. (Please see Section 7 of this manual for important information.)

Once all the registry keys are configured, the application should now listen from the set serial port and TCP connection, and communicate data between them.

Options

The default setting for the Serial-to-Ethernet software is to utilize the Auxiliary Serial port located along the top edge of the JNIOR. However, it is possible to change this setting to utilize the RS-232 serial port located along the bottom edge of the JNIOR. It is important to understand that the primary purpose of the RS-232 port is to act as the command console for the JNIOR. The command console through the RS - 232 is supposed to allow the user to connect to the JNIOR like it does in the console tab on the Support Tool.

If you desire to use this port for your serial device, then you must start the Serial-to-Ethernet software as described above so that the Registry Keys are displayed. Using the main JNIOR web page, edit the SerialPort key and change the value to RS232. You must reboot the JNIOR (a soft reboot via the About tab or a Telnet window is preferred) and when it finishes, the Serial-to-Ethernet software will now use the RS-232 port.

IMPORTANT: Every time the JNIOR reboots, it waits 1 minute before taking over the RS-232 port for the Serial-to-Ethernet application. This would allow you some time to

connect to the JNIOR via command line for an emergency where you no longer knew the JNIOR IP address and had no other way to connect to the JNIOR. You would have 1 minute to log in and type 'ps' at the prompt to list all the running processes and then type 'kill X' where X is the process number for the serialethernet.jnior program.

The program will stop immediately and you will have time to change your ipconfig or go to the Command Line registry editor and delete the Run key for the Serial-to-Ethernet software program. When the Run key is deleted, the program will no longer automatically run after boot.

NOTE: You can have both Serial-to-Ethernet and Serial Control (see the Serial Control Manual) running on the same JNIOR at the same time as long as they are using different serial ports. You must start the application first that will be using the RS232 port and change its default setting from AUX to RS232. Then you can start the other application because it will now be able to run and use the Auxiliary Serial port. Having both programs running at the same time with both of them configured for the Auxiliary Serial port could cause unexpected operation of your JNIOR.

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