### **SNMP for the JNIOR**

Last Updated November 4, 2020

The following is an explanation of how to utilize the JNIOR SNMP (Simple Network Management Protocol) functionality.

Please contact INTEG support at <u>support@integpg.com</u> or via phone at 724-933-9350 with any questions. Please visit our website at <u>www.integpg.com</u> for any updates and manuals.

### **JNIOR Software Version**

Please download the All in One Update zip file, but do NOT unzip the file. Please use the JNIOR Support Tool (also available on the Downloads page) and go to the Update tab, click Open Project and then navigate to where you saved the zip file and select it. The JNIOR Support Tool will unzip it. Then click Publish Update to JNIOR.

### **Enabling SNMP**

The JNIOR can provide information using the SNMP protocol to an SNMP browser or application on the network. To utilize this feature, the user must enable the SNMP functionality on the JNIOR. This is easily done on the series 3 and 4 JNIORs.

### Series 3

Launch the Java Applet and click on the Configuration tab and then the Misc tab. As shown below, check the SNMP Enabled box and enter the IP address of the computer to receive the SNMP traps. You can enter a specific IP address and only that computer will receive the trap messages or you can enter 255.255.255.255 and all computers on the network will receive the trap message.

Click on Save Configuration at the top and then reboot your JNIOR by going to the About tab and clicking on the Reboot button. This will enable the SNMP functionality.

### Series 4

Launch the WebUI, then click on the Configuration tab, and in the applications page a list of all applications that that can be enabled. One of the available applications to enable should be the SNMP application, which you can enable with the checkbox next to the application.

## JNIOR Application Note

	Sa	ve Configuration Cancel Changes Refresh Current Tab
Display Input / Output Alarm	Management	Events Management Slaving IP Config Misc.
Title	Value	
General		
Device Description	jr211020155	
ServiceHost IP		
Enable logging to the /jniorio.log file	~	
Compression Enabled		
	clock.isc.org	
JNIOR Protocol		
JNIOR Server port number	9200	
JNIOR Server Login enabled	<b>v</b>	
JNIOR Server Anonymous User		
MODBUS		
Enable Mobus Server	~	
	502	
Modbus Server Login enabled	<b>v</b>	
SNMP		
SNMP Enabled	<b>v</b>	
SNMP Trap Address	10.0.0.102	
Email		
	jr211020155	
Domain Name		
	0.0.0.0	
SMTP Port	25	
SMTP Username		
SMTP Password		

#### Series 3 JNIOR Java Applet Interface

Input/Output	Configuration Console Folders Registry Syslog Peers About	
Display Labels Inputs Counters Outputs Metering Serial I/O <b>Applications</b> Mail-Account Mail-Profiles	Modbus Server 1.7 (Slave)	
Events	SNMP 2.6	
Security Telnet WebServer FTP Protocol Modules	Log Archiver 1.3	
	se F1 for context sensitive help. Current topic: Run/SNMP	
Wed, 04 Nov 2020 1	13:39:14 UTC Dynamic Configuration Pages (WebU	I) v3.0 🥢

Series 4 JNIOR WebUI Interface

### JNIOR MIB File

The JNIOR-MIB file is available for download from the INTEG website for loading into your SNMP browser.

The JNIOR-MIB file provides the user with the ability to query the JNIOR for various system information and I/O status.

The user can get the following System information:

- SysDescr returns the JNIOR serial number, OS version and sub-OS version
- sysObjectID returns the Object ID for the JNIOR (INTEG)
- sysUpTime returns the amount of time the JNIOR has been running since the last reboot
- sysContact returns contact information for INTEG
- sysName returns the Hostname for the JNIOR (configurable from the JNIOR Support Tool)



The user can also query specifically for the JNIOR serial number.



The user can query the status of each input and output either as a 'mask' (one number that represents the status of all inputs or outputs - decimal number based on binary representation of 1's and 0's for each input or output) or the status of each individual input or output.

The user can query for input number from 1 through 12 and outputs 1 through 16 whether the outputs are on the JNIOR (Models 310, 312, 314) or an expansion module (4ROUT).

Below is an example query for the status of input 5 (which is 'on').



### **Standard Trap Messages**

The JNIOR-MIB also generates several standard trap messages, including:

- JNIOR is rebooting
- JNIOR has rebooted successfully
- An application has started on the JNIOR (such as Cinema.JNIOR)
- A log file has been backed up because the primary log file is full
- A log file has been compressed (when compression is enabled)

Below is an example of a typical trap message.

0001         2011-12-20         11:00:54         0:00:54.78         reforesp.0.0         Trap(vt)         99/PPv1         10:0:0:245         2306           rep content         Trap info         Trap info         Trap info         If ap i	No Date	Time	Tinestanip Not	thication Type Message Typ	e Version	Agenit Address	Agent port
Bindings (1)     #0 info@reg     Did: 1.3.6.1.4.1.31976.1.0.1     Units:	2011-12-20	11:00:54	0:00:54.78 mFo	ofrep.0.0 Trap(v1)		10.0.0.245	
#0 info@rec: 211016760; Boot Complete Dearner: Info@rec: 211016760					Trapinfo		
Connucky: puble					Names	InfoTeap	
Units:		Boot Complete			Oid:	1.3.6.1.4.1.3197	6.1.0.1
Module: INFORMIB					Linite		
	Charles and the state of the second				i contrati		

## **Custom Trap Messages**

The user can generate custom 'traps' based on a change in an input or output going from off (low) to on (high). The individual I/O traps are set by adding the following Registry Keys.

**NOTE:** The easiest way to enter a <u>new</u> Registry Key is to go to the Command Line tab in the JNIOR web page or to open a Telnet session. An example of how the user types the command is as follows:

registry IO/Inputs/din5/SnmpTrap = enabled

**NOTE:** The command must be typed exactly as defined. It is case sensitive and there is a 'space' on each side of the equal sign. If the prompt is returned without any other text, then the command was accepted. Please see example screen pictures below.

## **Registry Keys for I/O Trap Messages**

IO/Inputs/din1/SnmpTrap = enabled where 1 can be replaced with any <u>input</u> number

IO/Outputs/rout1/SnmpTrap = enabled where 1 can be replaced with any <u>output</u> number

Or the user can enter the following Registry Key that contains a 'mask' indentifying all the inputs or outputs that will generate a trap message. Examples are:

IO/Inputs/SnmpTrapMask = 7 where 7 is a binary 111 so <u>inputs</u> 1, 2, 3 will be traps

IO/Outputs/SnmpTrapMask = 2 where 2 is a binary 010 so  $\underline{output}$  2 is a trap

NOTE: 7 and 2 are just examples and can be replaced with any other 'mask'.

**NOTE:** You do NOT need to reboot the JNIOR when you add or modify these Registry Keys. The trap will become active usually in less than a minute.

I/O Control	Configuration	Registry Editor	Command Line	Applications	About		
			Connect	Disconnec	ct Clear	Window	Help
Welcome to	the JNIOR Mode	1 310 (S/N 2110	)16760) running	OS v4.2.929.1	229		
JNIOR_SNMP	•						
JNIOR_SNMP	<pre>/&gt; registry IO /&gt; registry IO</pre>	//Inputs/din5/Sn //Outputs/SnmpTr		ed.			
JNIOR_SNMP	/>						

# Below is an example of some I/O traps.

lo	Date	Time	Timestamp	Notification Type	Message Type	Version	Agent Address	Agent port
001	2011-12-20	11:08:54	0:00:54.78	infoTrap.0.0	Trap(v1)	SNMPv1	10.0.0.245	2306
002	2011-12-20	12:29:40	1:21:41.73	inputState.5.0.0	Trap(v1)	SNMPv1	10.0.0.245	2306
003	2011-12-20	12:34:37	1:26:39.04	outputState.4.0.0	Trap(v1)	SNMPv1	10.0.0.245	2306
004	2011-12-20	12:35:12	1:27:13.38	inputState.5.0.0	Trap(v1)	SNMPv1	10.0.0.245	2306
ap content						Trap info		
ap concerne						napino		