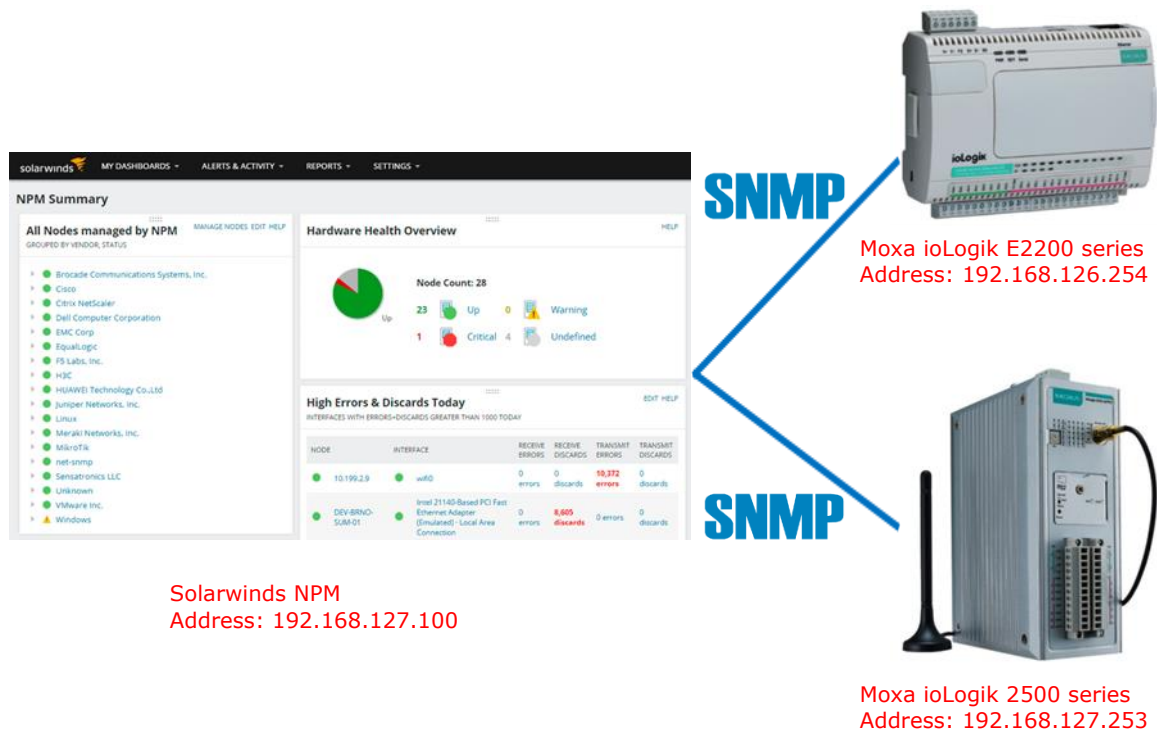


Connecting the ioLogik 2000 to a SolarWinds NPM

Moxa Technical Support Team

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The purpose of this note is to provide a detailed example of how to connect a Moxa Smart Remote I/O device, the ioLogik 2000 series, with the SolarWinds Network Performance Monitor (NPM) software via the SNMP protocol. In this example, the SolarWinds NPM receives traps and the ioLogik 2000 is an SNMP agent. The system architecture is illustrated in the following diagram.



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About Moxa

Moxa is a leading manufacturer of industrial networking, computing, and automation solutions. With over 25 years of industry experience, Moxa has connected more than 40 million devices worldwide and has a distribution and service network that reaches customers in more than 70 countries. Moxa delivers lasting business value by empowering industry with reliable networks and sincere service for automation systems. Information about Moxa's solutions is available at www.moxa.com. You may also contact Moxa by email at info@moxa.com.

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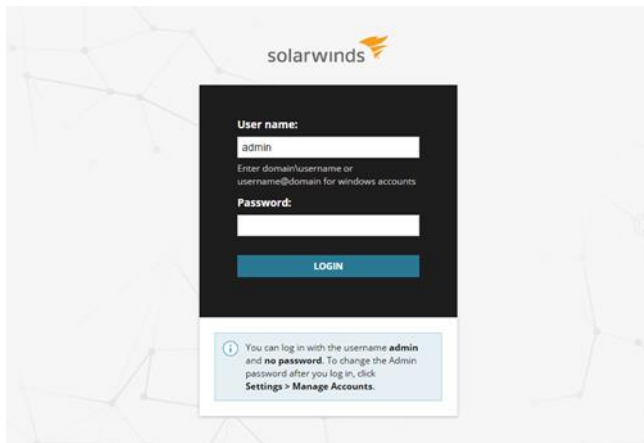
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Moxa Tech Note Connecting the ioLogik 2000 to a SolarWinds NPM

There are two sections in this document. The first section introduces how to connect the ioLogik 2000 to the SolarWinds NPM via the SNMP protocol, and second section introduces how to set up the SolarWinds NPM to receive SNMP traps from the ioLogik 2000 series.

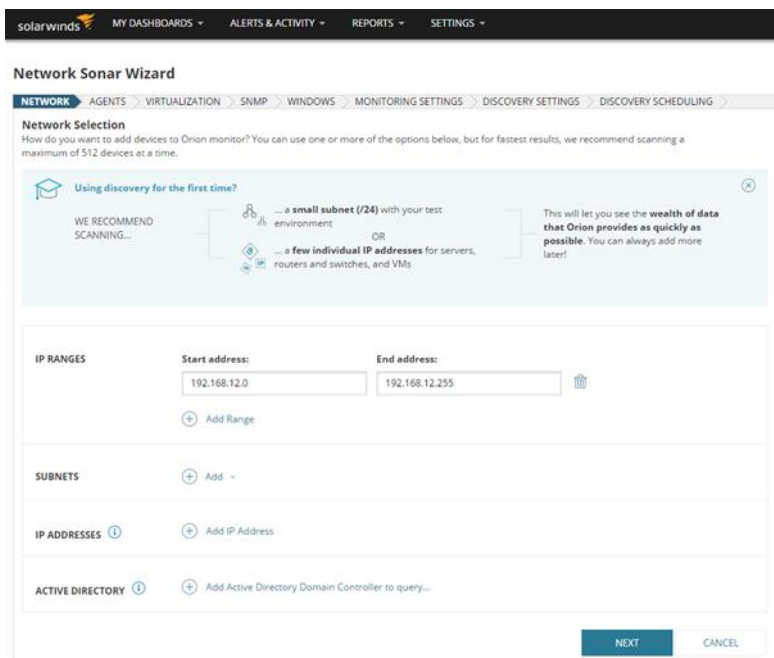
1 How to connect the ioLogik 2000 series to a SolarWinds NPM via the SNMP protocol

1. After installing the SolarWinds NPM, open the Orion Web Console and log in to your account (you may also log in as admin without using a password).



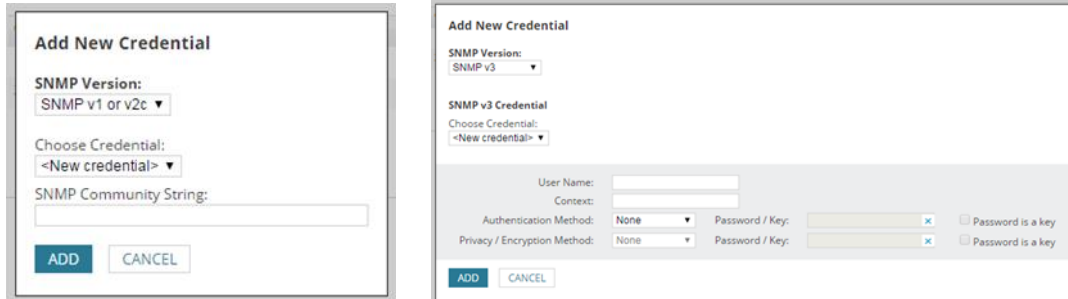
2. After logging in, use the step-by-step wizard to complete the settings.

Note: Make sure that the ioLogik 2000 series IP addresses are in the correct IP range.

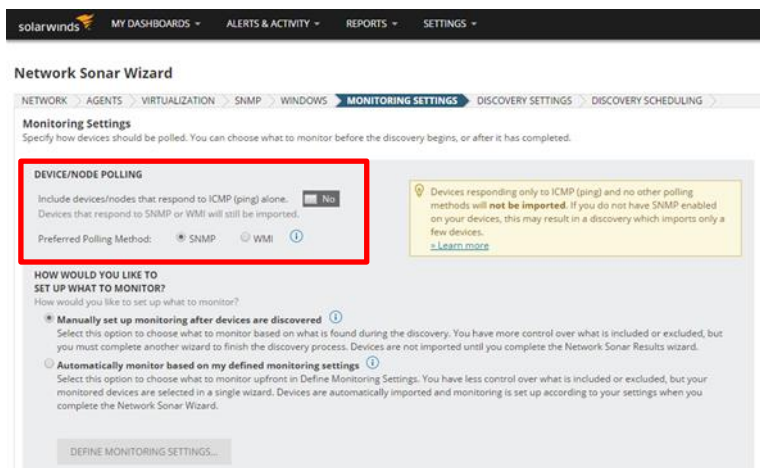


Moxa Tech Note Connecting the ioLogik 2000 to a SolarWinds NPM

- if you want to add new credentials under SNMP settings, add one of two versions of credentials: SNMP v1 or v2c, or SNMP v3.



- Under MONITORING SETTINGS, except for windows servers, SNMP is the recommended polling method for most network devices.



- Follow the wizard's instructions until the system configuration is completed.

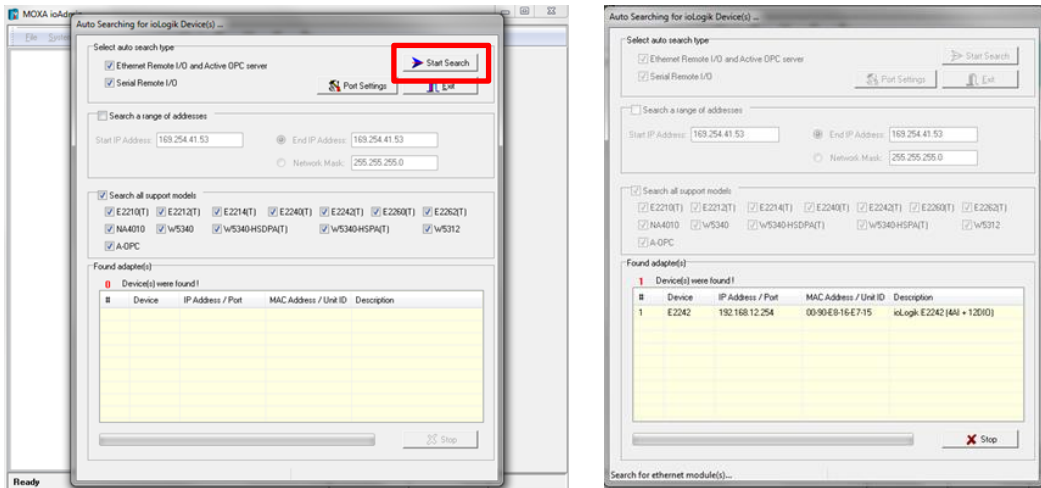
2 How to set up the SolarWinds NPM to receive SNMP traps from the ioLogik 2000

- If you're using the ioLogik 2200 series, refer to the [ioAdmin](#) section below for instructions. If you're using the ioLogik 2500 series, refer to the [IOexpress](#) section below for instructions.

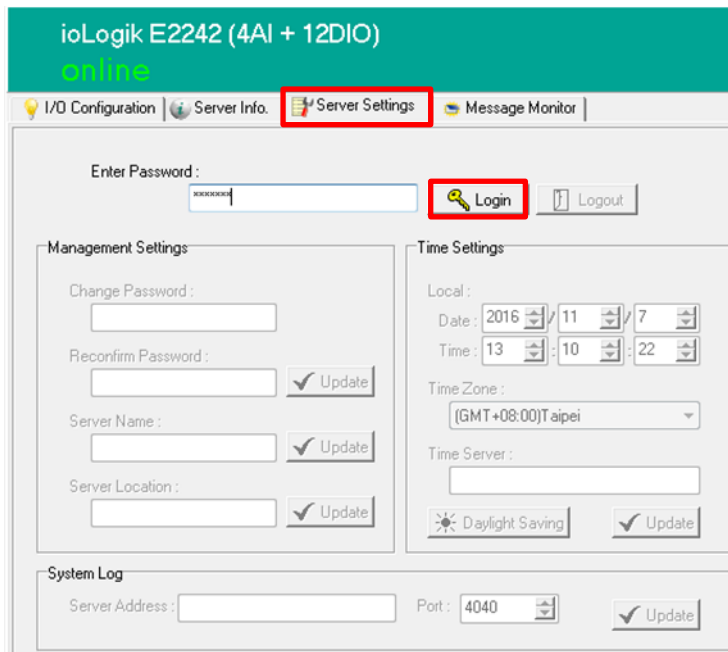
Moxa Tech Note Connecting the ioLogik 2000 to a SolarWinds NPM

ioAdmin

- A. Open ioAdmin and click **Start Search** to locate ioLogik 2200 series devices.

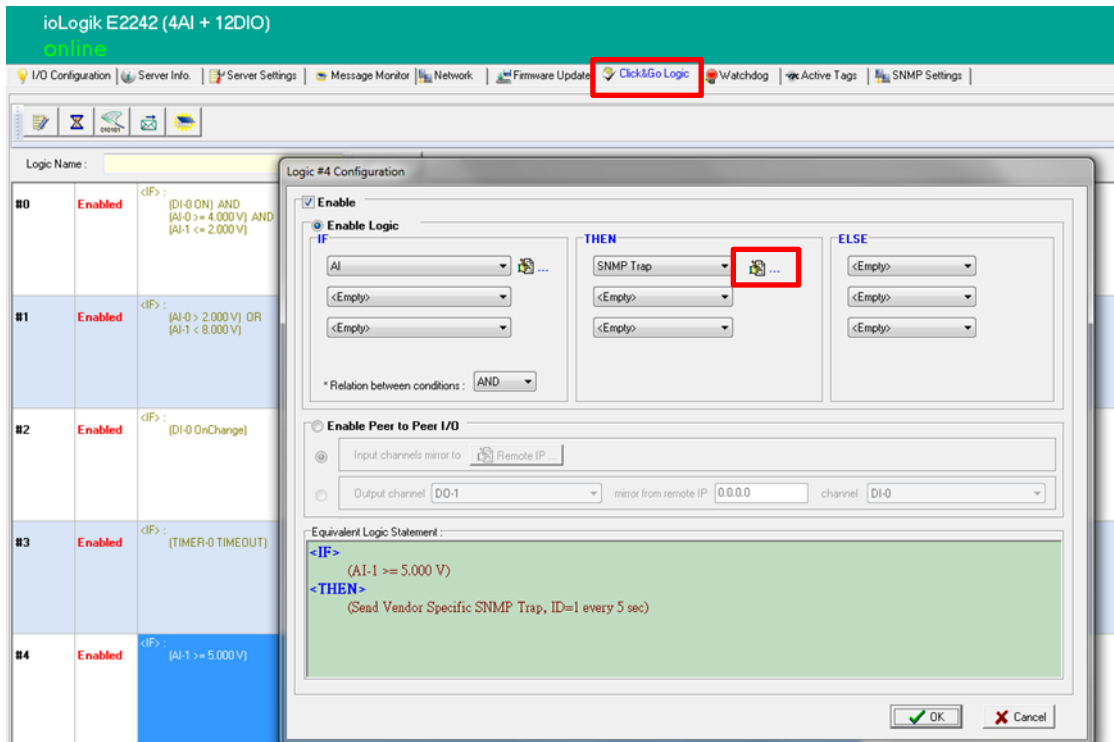


- B. Click the **Server Settings** tab and then click **Login**.

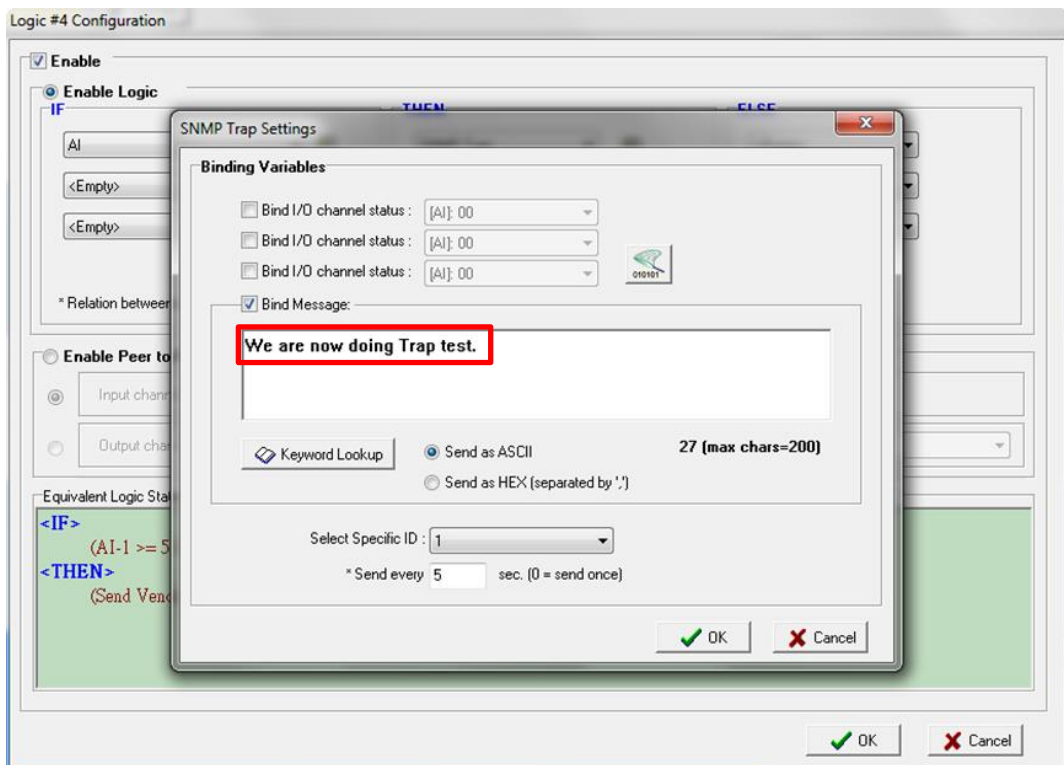


Moxa Tech Note Connecting the ioLogik 2000 to a SolarWinds NPM

- C. Click the **Click&Go Logic** tab to configure an IF-THEN-ELSE logic routine.

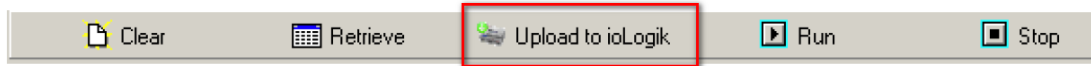


- D. In the THEN section, choose SNMP Trap, click on the setting buttons, and then customize your trap message.



Moxa Tech Note Connecting the ioLogik 2000 to a SolarWinds NPM

- E. After you complete the configuration, return to the **Click&Go Logic** tab and click on **Upload to ioLogik**; the rules will take effect after the system has been restarted.



Note: After logging back in as administrator and returning to the Click&Go Logic tab, click **Retrieve** to view the current ruleset. Click **Run** to activate the ruleset, and click **Stop** to deactivate it.

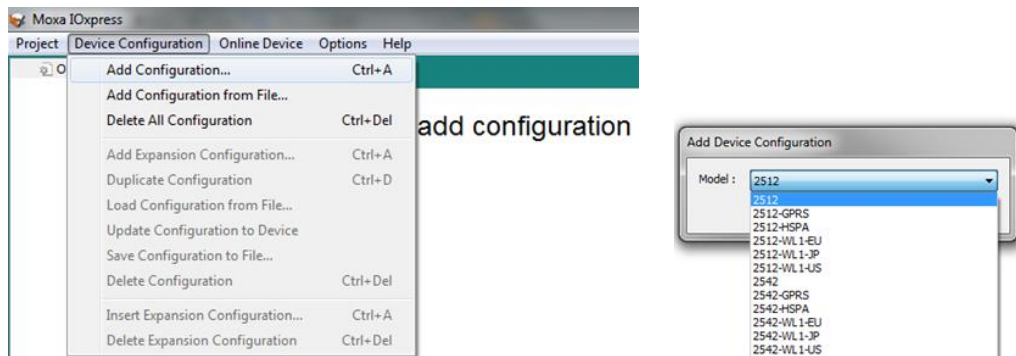
To learn more about the ioLogik 2200 series, ioAdmin, and Click&Go Logic, refer to the user's manual for details:

<http://www.moxa.com/support/DownloadFile.aspx?type=support&id=1422>

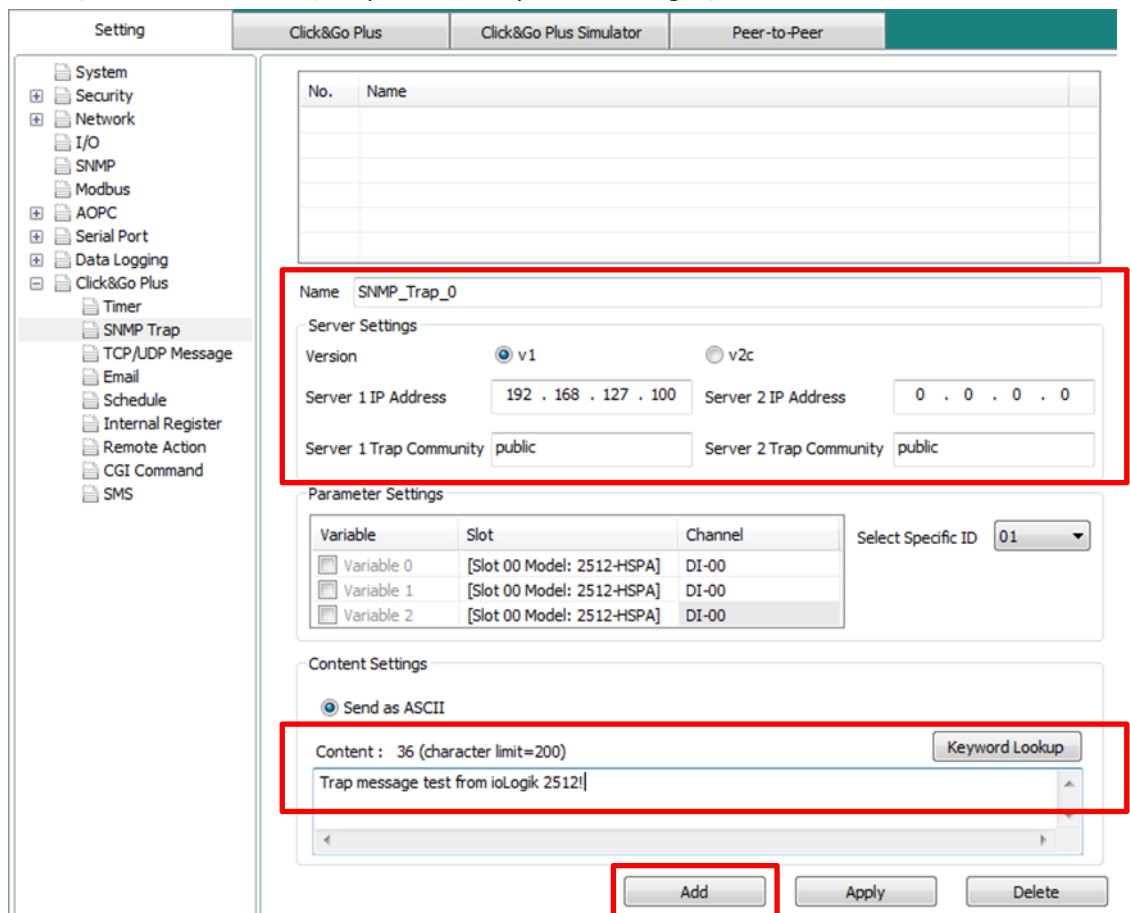
Moxa Tech Note Connecting the ioLogik 2000 to a SolarWinds NPM

IOxpress

- A. Open IOxpress and then click **Device Configuration** → **Add Configuration...** on the menu bar. Next, choose your device from the list of ioLogik 2500 series devices.

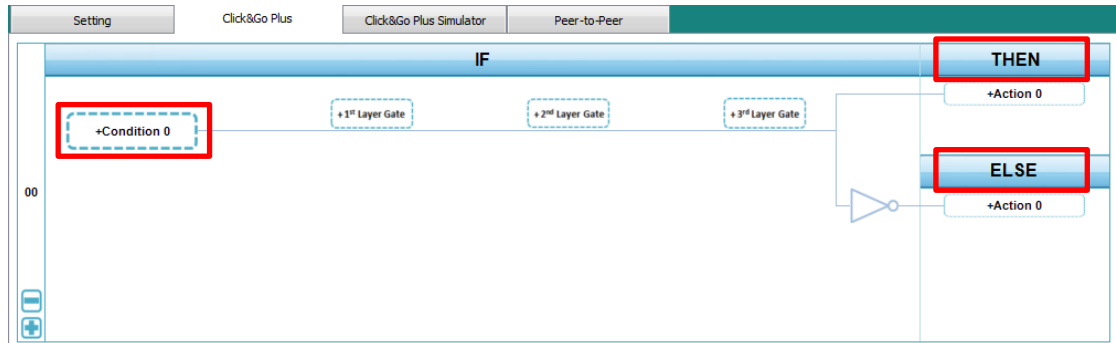


- B. Click **Settings** → **Click&Go Plus** → **SNMP Trap** on the menu bar, and then type in the Name, Server IP Address, Trap Community and messages, then click **Add**.



Moxa Tech Note Connecting the iLogik 2000 to a SolarWinds NPM

- C. Click the **Click&Go Plus** tab to configure an IF-THEN-ELSE logic routine:
Click on "Condition" to set the IF condition, and then click on "Action" for the THEN and/or ELSE condition.



- D. In **Action Settings**, click **ACTIVE MESSAGE**, select SNMP Trap under "Type", and then select a self-defined parameter under "Parameter".

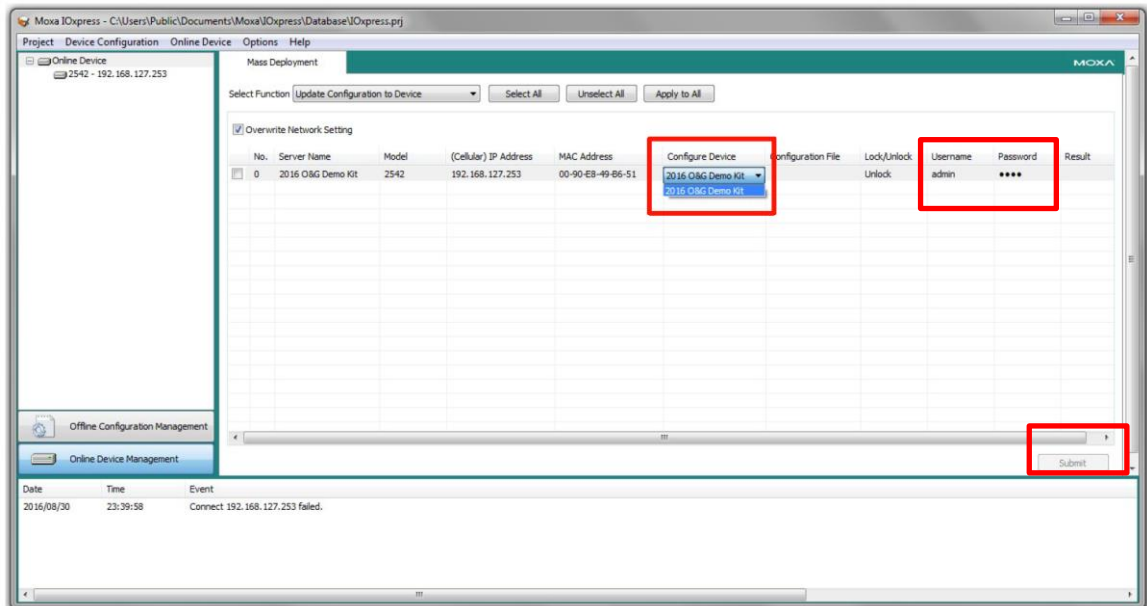
The screenshot shows the 'Action Settings' dialog box. At the top, the 'Name' field contains 'Action 0'. Below this is the 'Action Type Selection' section, which has two buttons: 'ACTION' and 'ACTIVE MESSAGE'. The 'ACTIVE MESSAGE' button is highlighted in blue. To the right of the 'Action Type Selection' is the 'Parameter Settings' section, which contains three dropdown menus: 'Type' (set to 'SNMP Trap'), 'Module' (set to '[Slot 00 Model: 2512-HSPA]'), and 'Parameter' (set to 'SNMP_Trap_0'). Below the 'Parameter Settings' is the 'Action' section, which contains a text field with the value '3' and the label '*Send every 3 sec(s) (0 = send once)'. At the bottom right of the dialog box are 'OK' and 'Cancel' buttons.

Moxa Tech Note Connecting the ioLogik 2000 to a SolarWinds NPM

E. Update the Configuration to the Device:

To update a configuration completed in **Offline Configuration Management**, click the **Configure Device** column and select the configuration you created. (The configuration name will be shown using the **Device Name** that was set during the offline configuration.)

Type in your username and password, and then click **Submit**.



Note: You can also update the configuration from a configuration file saved on your computer.

To learn more about the ioLogik 2500 series and IOxpress, refer to the user's manual for details:

<http://www.moxa.com/support/DownloadFile.aspx?type=support&id=7916>

For Click&Go Plus, refer to the following link:

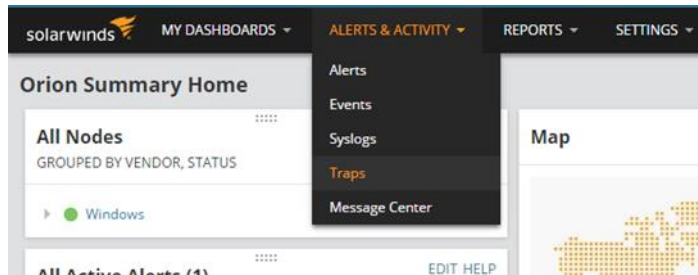
<http://www.moxa.com/support/DownloadFile.aspx?type=support&id=7892>

Moxa Tech Note Connecting the ioLogik 2000 to a SolarWinds NPM

2. You can see trap messages in one of two ways:

A. Via the SolarWinds web console.

Under **ALERTS & ACTIVITY** click **Traps**.



The trap messages will appear as illustrated in the following figure:

Traps
Traps From All Network Devices - Today

Network Object: All Network Objects | Type of Device: All Device Types

Trap Type: All Trap Types | Source IP Address: | Community String: All Community

Time Period: Today | Number of displayed traps: 250

REFRESH

TIME OF TRAP	IP ADDRESS	HOSTNAME	COMMUNITY	TRAP TYPE	TRAP DETAILS
2016/11/7 下午 02:01:48	192.168.12.254	192.168.12.254	public	MOXA-IO-E2242-MIB:e2242.0.1	<pre> messageTrap = We are now doing Trap test. snmpTrapOID = MOXA-IO-E2242-MIB:e2242.0.1 sysUpTime = 2 hours 29 minutes 33.21 seconds experimental.1057.1.0 = 192.168.12.254 snmpTrapEnterprise = MOXA-IO-E2242-MIB:e2242 messageTrap = We are now doing Trap test. snmpTrapOID = MOXA-IO-E2242-MIB:e2242.0.1 sysUpTime = 2 hours 26 minutes 8.27 seconds experimental.1057.1.0 = 192.168.12.254 snmpTrapEnterprise = MOXA-IO-E2242-MIB:e2242 </pre>
2016/11/7 下午 02:01:44	192.168.12.254	192.168.12.254	public	MOXA-IO-E2242-MIB:e2242.0.1	<pre> messageTrap = We are now doing Trap test. snmpTrapOID = MOXA-IO-E2242-MIB:e2242.0.1 sysUpTime = 2 hours 26 minutes 13.22 seconds experimental.1057.1.0 = 192.168.12.254 snmpTrapEnterprise = MOXA-IO-E2242-MIB:e2242 messageTrap = We are now doing Trap test. snmpTrapOID = MOXA-IO-E2242-MIB:e2242.0.1 sysUpTime = 2 hours 26 minutes 8.27 seconds experimental.1057.1.0 = 192.168.12.254 snmpTrapEnterprise = MOXA-IO-E2242-MIB:e2242 </pre>

Traps
Traps From All Network Devices - Today

Network Object: All Network Objects | Type of Device: All Device Types

Trap Type: All Trap Types | Source IP Address: | Community String: All Community

Time Period: Today | Number of displayed traps: 250

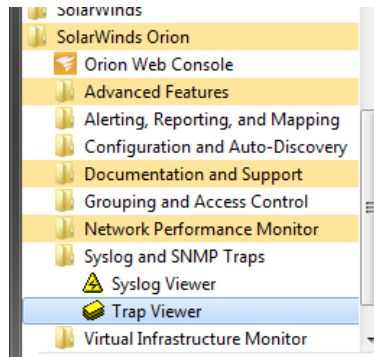
REFRESH

TIME OF TRAP	IP ADDRESS	HOSTNAME	COMMUNITY	TRAP TYPE	TRAP DETAILS
2016/11/7 下午 03:39:30	192.168.127.253	192.168.127.253	public	MOXA-IO-E1240-MIB:ioLogik.2500.0.1	<pre> ioLogik.2500.9.1.1.1 = Trap message test from ioLogik 2512! snmpTrapOID = MOXA-IO-E1240-MIB:ioLogik.2500.0.1 sysUpTime = 34.98 seconds experimental.1057.1.0 = 192.168.127.253 snmpTrapEnterprise = MOXA-IO-E1240-MIB:ioLogik.2500 </pre>

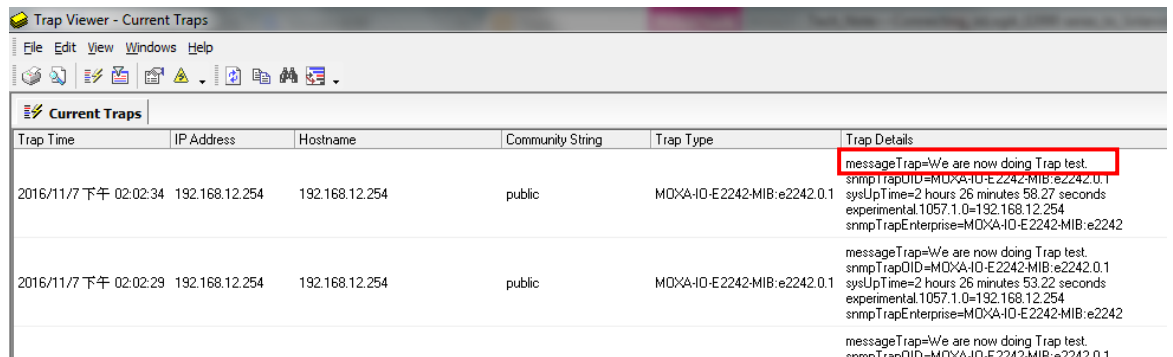
Moxa Tech Note Connecting the ioLogik 2000 to a SolarWinds NPM

B. Via the SolarWinds Trap Viewer.

Open the SolarWinds Trap Viewer, as shown below:



You will then see the trap messages:



A screenshot of the SolarWinds Trap Viewer interface. The window title is 'Trap Viewer - Current Traps'. The interface shows a table of current traps with the following columns: Trap Time, IP Address, Hostname, Community String, Trap Type, and Trap Details. The table contains three rows of trap messages. The first row has a red box around the 'messageTrap=We are now doing Trap test.' text in the Trap Details column.

Trap Time	IP Address	Hostname	Community String	Trap Type	Trap Details
2016/11/7 下午 02:02:34	192.168.12.254	192.168.12.254	public	MOXA-IO-E2242-MIB:e2242.0.1	messageTrap=We are now doing Trap test. snmpTrapOID=MOXA-IO-E2242-MIB:e2242.0.1 sysUpTime=2 hours 26 minutes 58.27 seconds experimental.1057.1.0=192.168.12.254 snmpTrapEnterprise=MOXA-IO-E2242-MIB:e2242
2016/11/7 下午 02:02:29	192.168.12.254	192.168.12.254	public	MOXA-IO-E2242-MIB:e2242.0.1	messageTrap=We are now doing Trap test. snmpTrapOID=MOXA-IO-E2242-MIB:e2242.0.1 sysUpTime=2 hours 26 minutes 53.22 seconds experimental.1057.1.0=192.168.12.254 snmpTrapEnterprise=MOXA-IO-E2242-MIB:e2242
					messageTrap=We are now doing Trap test. snmpTrapOID=MOXA-IO-E2242-MIB:e2242.0.1