



Purpose

This document describes how to monitor an AKCP sensorProbe2 device with Nagios XI in order to be alerted when temperature, humidity, or other environmental variables exceed specific thresholds.

This document outlines how to monitor the Dual Temperature/Humidity sensor connected to the sensorProbe2, however various AKCP intelligent sensors can be connected via the RJ45 connectors to the sensorProbe devices and then monitored in Nagios XI in a similar manor. This document will demonstrate how to monitor the device using Active or Passive monitoring.

The sensorProbe2, sensorProbe4, sensorProbe8 and Probe8-X20 are intelligent devices for monitoring environmental variables and notifies you through SNMP alerts to prevent any issues when environmental variables change.

Target Audience

This document is intended for use by Nagios XI Administrators who want to monitor an AKCP sensorProbe2 Dual Temperature/Humidity Sensor device via SNMP.

Prerequisites For Monitoring A Device Passively Via SNMP Traps

It is possible to monitor your AKCP sensorProbe2 actively or passively within your Nagios XI system. Active checks do not require any prerequisites for your Nagios XI system. Passive checks require you to set up your Nagios XI system to receive SNMP traps. This document assumes you have already set your Nagios XI system to receive SNMP traps. If you have not already done this, please refer to the following documentation:

[Integrating SNMP Traps With Nagios XI](#)

Download The AKCP MIB Into Nagios XI

Monitoring via SNMP requires the AKCP MIB definition. The first step is to download and install the correct MIB file. You can download the MIB for a AKCP device from the link below:

http://www.akcp.com/wp-content/uploads/2010/04/akcp_mib211210.zip

Once the MIB is downloaded, you need to unzip the `akcp_mib211210.zip` file which will provide you with the `akcp.mib` file that will be used in the next step.

Next, you will install the `akcp.mib` from the Nagios XI Web interface by navigating to **Admin > System Extensions > Manage MIBs**.

The screenshot shows the Nagios XI web interface. The top navigation bar includes 'Home', 'Views', 'Dashboards', 'Reports', 'Configure', 'Tools', 'Help', and 'Admin' (circled in blue). The left sidebar lists various system management options, with 'Manage MIBs' circled in blue. The main content area is titled 'Manage MIBs' and contains a form to upload a new MIB file. The form includes a 'Browse...' button, a 'Process trap' checkbox, and an 'Upload MIB' button. Below the form is a table listing existing MIBs.

MIB	File	Owner	Group	Permissions	Date	Actions
AGENTX-MIB	AGENTX-MIB.txt	root	nagios	rw-rw-r--	2016-08-24 04:47:50	
BRIDGE-MIB	BRIDGE-MIB.txt	root	nagios	rw-rw-r--	2016-08-24 04:47:50	
DISMAN-EVENT-MIB	DISMAN-EVENT-MIB.txt	root	nagios	rw-rw-r--	2016-08-24 04:47:51	
DISMAN-SCHEDULE-MIB	DISMAN-SCHEDULE-MIB.txt	root	nagios	rw-rw-r--	2016-08-24 04:47:51	

Click the **Browse** button and locate the `akcp.mib` file.

Check the **Process trap** check box.

This close-up shows the 'Upload a MIB' form. The 'Browse...' button is circled in blue. The 'Process trap' checkbox is checked. The 'Upload MIB' button is also circled in blue.

Click the **Upload MIB** button.

Manage MIBs

MIB file successfully processed.

Manage the MIBs installed on this server. There are hundreds of mibs available at [mibdepot](#) and [oidview](#).

Upload a MIB: Process trap

MIB	File	Owner	Group	Permissions	Date	Actions
AGENTX-MIB	AGENTX-MIB.txt	root	nagios	rw-rw-r--	2016-08-24 04:47:50	
akcp	akcp.mib	apache	apache	rw-rw-r--	2016-12-01 16:55:30	
DISMAN-EVENT-MIB	DISMAN-EVENT-MIB.txt	root	nagios	rw-rw-r--	2016-08-24 04:47:51	

You will receive a message to say the MIB file was successfully processed.

You can also verify that your MIB was processed by Nagios XI, on your Nagios server check to see that the `akcp.mib` file is located in the `/usr/share/snmp/mibs/` directory. In addition to this an extensive amount of SNMP Trap EVENTS will be put into the `/etc/snmp/snmpd.conf` file (these are for passive monitoring).

Run The SNMP Wizard To Set Up Active Checks

To begin using the SNMP wizard navigate via the top menu bar to **Configure > Run a configuring wizard** and select the **SNMP** wizard. In the following screenshot you can see how the search field allows you to quickly find a wizard.

Nagios XI Home Views Dashboards Reports **Configure** Tools Help Admin

Configuration Wizards - Select a Wizard

Start monitoring your infrastructure in minutes. Configuration wizards guide you through the process of setting up your devices, servers, applications, services, and more in Nagios XI. Select the appropriate wizard below to get started.

Show:

- Linux SNMP**
Monitor a Linux workstation or server using SNMP.
- SNMP**
Monitor a device, service, or application using SNMP.
- SNMP Trap**
Monitor SNMP Traps.
- SNMP Walk**
Scan an SNMP-enabled device for elements to monitor.

In Step 1 enter the address for the AKCP sensor in the **Device Address** box and click Next.

SNMP Configuration Wizard: SNMP - Step 1

SNMP Information

Device Address:

The IP address or fully qualified DNS name of the server or device you'd like to monitor.

In Step 2 you are required to enter a **SNMP Community** string (*it is not suggested to use the default of "public"*) and also the **SNMP Version**. For this example we used version 2.

SNMP Configuration Wizard: SNMP - Step 2

Device Details

Device Address:

Host Name:

The name you'd like to have associated with this server or device.

SNMP Settings

Specify the settings used to monitor the server or device via SNMP.

SNMP Community:

The SNMP community string required used to to query the device.

SNMP Version:

The SNMP protocol version used to communicate with the device.

SNMP Services

Specify any OIDs you'd like to monitor via SNMP. Sample entries have been provided as examples.

OID	Display Name	Data Label	Data Units	Match Type	Warning Range	Critical Range	String To Match	MIB To Use
<input type="checkbox"/> 1.4.1.3854.1.2.2.1.16.1.3.0	Temp Sensor 1	Temp	Deg. Fahrenheit	Numeric	60:85	60:85		akcp.mib
<input type="checkbox"/> 1.4.1.3854.1.2.2.1.17.1.3.0	Humidity Sensor 1	Humidity	%	Numeric	15:45	10:50		akcp.mib

[Add Row](#) | [Delete Row](#)

Finally, you will need to enter information in to the SNMP Service section. Create a row for each sensor. For example the SNMP OID for the temperature sensor on RJ45#1 is:

```
1.3.6.1.4.1.3854.1.2.2.1.16.1.3.0
```

The SNMP OID for the humidity sensor on RJ45#1 is:

```
1.3.6.1.4.1.3854.1.2.2.1.17.1.3.0
```

If you added an additional sensor in the second port (#2) their OID would be very similar to the temperature and humidity sensors. You will have to change the 0 (zero) at the end of the OID to 1 (one). These sensors would be added to the SNMP service section as:

```
1.3.6.1.4.1.3854.1.2.2.1.16.1.3.1 and 1.3.6.1.4.1.3854.1.2.2.1.17.1.3.1
```

Continue to fill in the remaining fields in the SNMP Service section. It is important to note the warning and critical values in this example are set up as ranges. A critical alert occurs when the temperature is outside of the range 60-85 degrees. Finally, select the check boxes next to the temperature sensor and humidity sensor OIDs and click Next.

Click Next and then complete the wizard by choosing the required options in Step 3 - Step 5. To finish up, click on **Finish** in the final step of the wizard. This will create the new host and services and begin monitoring.

Once the wizard applies the configuration, click the **View status details for your AKCP sensor** link to see the new service that was created.

Host	Service	Status	Duration	Attempt	Last Check	Status Information
192.168.5.199	Humidity Sensor 1	Warning	2m 54s	4/5	2015-09-08 15:44:48	SNMP WARNING - Humidity *49* %
	Temp Sensor 1	Critical	2m 31s	3/5	2015-09-08 15:44:17	SNMP CRITICAL - Temp *78* *F

This completes configuring Nagios XI to monitor the AKCP sensorProbe2 using **Active** monitoring.

Configuring The Sensor To Send Passive Checks Via SNMP To Nagios XI

Sending Passive Checks to Nagios requires some set up on the AKCP sensorProbe2. To do this we need to log into the AKCP Web interface by entering the IP address in to your browser. The web interface will require you to enter your user account and password.

First you will want to set up your check thresholds on each sensor, and for this example we will set up the Temperature sensor on Port 1. Click on the **Sensor** tab, then under **Environmental** select **Temperature**, and finally select the Temperature sensor on port 1. From this screen enter your threshold information for critical events.

Next click on the **Traps** tab to enter pertinent information for sending SNMP traps to Nagios XI. Enter the IP of your Nagios server for the Destination IP.

Next enter a community string. It is always a good idea to change the default community string from "public" to something else.

Click on the **Save** button and you are done with the set up required for the AKCP sensor.

The screenshot shows the 'AKCP sensorProbe2 v2.0' web interface. At the top, there are three tabs: 'Traps', 'Mail', and 'Network'. The 'Traps' tab is selected, and the page title is 'Trap Settings'. Below this, there are two sections for configuring traps: 'Trap 1' and 'Trap 2'. Each section has a 'Send Trap' dropdown set to 'On', a 'Destination IP' text input field, and a 'Community' text input field. For Trap 1, the Destination IP is '192.168.4.114' and the Community is 'nagiosprivate'. There is also a 'Send Keep Alive Trap' dropdown set to 'Off' and a 'Keep Alive Trap Resend Interval (mins)' field with a value of '3600' and a time display of '2 day 12 hrs'. For Trap 2, the Destination IP is '192.168.4.127' and the Community is 'nagiosprivate'. At the bottom of the interface, there is a 'Resend Warning and Error Traps' dropdown set to 'On' and a 'Resend Interval (secs)' field with a value of '3600' and a time display of '1 hrs, 0 secs'. Each section has 'Save' and 'Reset' buttons.

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Configuring Nagios XI To Receive Passive Checks

Once you have your Nagios server set up to receive SNMP Traps as outlined in the prerequisite section, you will be able to set up Nagios XI to receive passive checks from the AKCP sensorProbe2.

To begin using the SNMP Trap wizard navigate via the top menu bar to **Configure > Run a configuring wizard** and select the **SNMP Trap** wizard. In the following screenshot you can see how the search field allows you to quickly find a wizard.

The screenshot shows the Nagios XI interface. The top navigation bar includes 'Home', 'Views', 'Dashboards', 'Reports', 'Configure' (circled), 'Tools', 'Help', and 'Admin'. The left sidebar has a 'Configure' section with 'Configuration Wizards' circled. The main content area is titled 'Configuration Wizards - Select a Wizard'. Below the title is a search bar with 'SNMP' entered. A grid of wizard options is displayed, with 'SNMP Trap' highlighted by a blue border. The options include: Linux SNMP, SNMP, SNMP Trap, and SNMP Walk.

In Step 1 there are no options, click Next.

SNMP TRAP Configuration Wizard: SNMP Trap - Step 1

This wizard allows you to enable SNMP Traps for existing hosts that are being monitored.

◀ Back Next ▶

In Step 2 select the host you wish to enable SNMP traps for and click Next.

Click Next and then complete the wizard by choosing the required options in Step 3 - Step 5. To finish up, click on Finish in the final step of the wizard. This will create the new host and services and begin monitoring.



Configuration Wizard: SNMP Trap - Step 2



SNMP Trap Details

Select the hosts you would like to enable SNMP Traps for.

- Host Name
- 10.25.13.30
- 192.168.5.199
- localhost

< Back

Next >

Once the wizard applies the configuration, click the **View status details for your AKCP sensor** link to see the new service that was created.

Host	Service	Status	Duration	Attempt	Last Check	Status Information
192.168.5.199	Humidity Sensor 1	Warning	7m 7s	5/5	2015-09-08 15:45:48	SNMP WARNING - Humidity *50* %
	SNMP Traps	Ok	50s	1/1	2015-09-08 15:48:15	Waiting for trap...
	Temp Sensor 1	Critical	6m 44s	5/5	2015-09-08 15:46:15	SNMP CRITICAL - Temp *78* °F

This completes configuring Nagios XI to monitor the AKCP sensorProbe2 using **Passive** monitoring.

Troubleshooting

If for some reason you don't see SNMP traps changing the status of your service check in Nagios XI, check your **Unconfigured Objects** page (accessed via **Admin > Monitoring Config > Unconfigured Objects**).

Also, reviewing the logs created by SNMPTT can help you troubleshoot the issue as well.

```
tail /var/log/snmptt/snmptt.log
tail /var/log/snmptt/snmpttunknown.log
tail /var/log/messages
```

Finishing Up

This completes the documentation on configuring Nagios XI for monitoring the Dual Temperature/Humidity Sensor on AKCP sensorProbe2 device via SNMP (active monitoring) and SNMP Traps (passive monitoring).

If you have additional questions or other support related questions, please visit us at our Nagios Support Forums:

<https://support.nagios.com/forum>

The Nagios Support Knowledgebase is also a great support resource:

<https://support.nagios.com/kb>