Domotz Eyes
Configuring SNMP Sensors and TCP Service Monitors
This document will give you details on how to configure Domotz Eyes using SNMP Sensors and TCP Service monitors and set alerts on these Eyes. We will discuss the more complicated SNMP Sensors first and then TCP Service monitors after that. At the end of the document you will find examples of the alerts that are sent with the information contained in them.

**CONFIGURING SNMP SENSORS**

In order to begin monitoring SNMP details from your devices, it will be necessary to configure some SNMP sensors as well as configure Alerts based on those sensors. In this document we will discuss the various steps:

1. Determine OID for Sensor you want to Create
2. Create Sensor in Domotz
3. Create Alert based on Sensor values

### 1 – DETERMINE OID

It is very helpful to use an MIB Browser iReader like the following: [http://ireasoning.com/mibbrowser.shtml](http://ireasoning.com/mibbrowser.shtml) – free version for home users). Using this tool it is possible to navigate the OID tree for devices that support SNMP to find the OID sensor that you want to monitor.

**NOTE**: It is important to configure your MIB tool for SNMP version 2c

Once you have identified the OID that you want to monitor, inserting it into Domotz is quite simple.

We will use an example of a Sensor that will allow you to monitor the level of black ink level of my printer. In order to do this I will need to find some information in order to give me the data I am looking for:

1. Index number for Black cartridge
2. Maximum level for the black ink cartridge (to compare to current level in order to determine percentage consumed).
3. Current level of black ink cartridge

In order to do this, I will do the following:

1. I identify the reference index for the black cartridge (in this case the index is 4):
   Using this index, I can get other details for OIDs that are related to this cartridge, i.e. the Maximum level and actual level of the toner in that cartridge which I can then monitor and use to define my alerts.
2. From the OID of the SuppliesMaxCapacity (in my case 1.3.6.1.2.1.43.11.1.1.8.1.4): I get 2500. This is the MAX value of the black toner that is supported by my printer. I will need this later to set up the alert.

3. Then I get the l'OID of the SuppliesLevel (The OID for the Black cartridge in my case is 1.3.6.1.2.1.43.11.1.1.9.1.4):

This OID is what I will add to Domotz and will begin to monitor from the Eye tab of the device (1.3.6.1.2.1.43.11.1.1.9.1.4)
2 – **CONFIGURE SNMP SENSOR IN DOMOTZ**

In the Device Details screen go to the Eye tab and click on ‘Add an SNMP Sensor’

From this screen, you will need to add:

- **Sensor Name**
- **Assign to category (for sorting purposes)**

- **Insert OID**
- **Define output type of Sensor (String or Numeric)**

**NOTE:** at the moment, we don’t support the leading dot (.) in the OID tree. Once you have inserted the ‘Domotz Eye’, after a few minutes you will start receiving the value.
Once you have saved the SNMP sensor you will see it ‘Checking’ for the value on the device.

Once the value has been received you will see it shown next to the name of the Sensor.
3 – **Configure Alert for Sensor**

At this point, you can configure an alert based on this value. From the Alert tab, I select CUSTOM and click on Configure an SNMP alert and then select the Sensor that you want. In this case, Black Toner Level.

In our use case, the rule that makes the most sense is a trigger if the value is <250 (remember that the MAX value of the black toner for my printer is 2500):
Now I have an Alert configured which will notify me if the Black Toner goes below 10% (250 / 2500), I simply need to set up whether to receive a mobile ‘push’ message or an email. I can do this directly in this Alert Configuration screen by scrolling down and selecting the delivery method before clicking on Add Alert.

Once I have added this Alert it will appear on the Alerts Tab under the SNMP Sensors

From here you can change the alert delivery method and configure new alerts as well. You are not able to edit alerts but will need to delete with the red X and create a new one if you want to change the settings.

**NOTE:** An alert will only be sent when the value received from the SNMP Sensor meets the criteria of the alert trigger. (for example if you are monitoring the temperature of a server and the
temperature goes above the limit you will receive an alert, then once it cools down you will only receive another alert if it goes above the limit again.

CREATE TCP SERVICE ALERT

Adding TCP Service alerts is much more simple than the SNMP Sensor alerts. To do this you will simply need to:

1. Add the TCP Service to monitor
2. Set an alert for that service

1 - ADD TCP SERVICE TO MONITOR

From the Eyes tab, click on the Add a TCP service button:

This will give you the Add a service screen.
From here, enter in the name of the service or port number that you would like to monitor. The available services will be filtered to help you choose the one you want to monitor:

Click on the blue + button to add the service to the list of monitored services.

The service will then appear under TCP Services in the Eyes tab. Please note that you can also add TCP ports that are not pre-defined which will show up as Custom ports.
After a few minutes (following the next automatic scan) you will see the current status of the TCP Service in either green (up) or red (down).

2 - **Add Alert for TCP Service**

To add an Alert on these services, go to the Alerts tab and you will be able to select either Mobile or Email.
SAMPLE ALERTS

TCP email alert

Domotz 'Domotz Pisa Test' <alert@domotz.com>
Service on port 443 (https) on 'Lexmark Domotz' went UP - Agent 'Domotz Pisa Test'

The following service went UP at 15:27 PM CEST on Apr 12 2017 on device 'Lexmark Domotz'.

MAC: Lexmark International Inc.
Type: Printer & Fax
IP Address: 192.168.5.100
MAC Address: 00:21:B7:11:90:97

Port Protocol Description
443 https Secure World Wide Web HTTP (SSL)

Agent Name: Domotz Pisa Test
Home Owner: myemail@gmail.com - Brent Kennedy

Please do not reply to this message.

SNMP email alert (please note that to create these alerts for demonstration purposes only, I created a new alert with Alert threshold value of <2100 instead of the previously configured 250)

Domotz 'Domotz Pisa Test' <alert@domotz.com>
"Black Toner Low" on "Lexmark Domotz" - Agent "Domotz Pisa Test"

Black Toner Level is less than 2100 on Lexmark Domotz.

SNMP SENSOR ALERT: Black Toner Low
Current Value: 2000
Changed at: 15:46 PM CEST on Apr 13 2017
OID: 1.3.6.1.2.1.43.1.1.1.8.1.4
OID Name: Black Toner Level

Home Owner: myemail@gmail.com - Brent Kennedy
Agent: Domotz Pisa Test
Device: Lexmark Domotz
Make: Lexmark International Inc.
Type: Printer & Fax
IP Address: 192.168.5.100
MAC Address: 00:21:B7:11:90:97

Please do not reply to this message.

SNMP push Alert