Panoseti_SNMP User Manual V1.1

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03-11-2020

This document is about how to use the python script--panoseti_snmp.

1. Python package requirement

This python package is based on some other libraries and packages, so we need to install them first.

```
wei@wei-Berkeley:~$ sudo apt-get install snmp snmpd snmp-mibs-downloader
[sudo] password for wei:
Reading package lists... Done
Building dependency tree
Reading state information... Done
snmp-mibs-downloader is already the newest version (1.1+nmu1).
snmp is already the newest version (5.7.3+dfsg-1.8ubuntu3.3).
snmpd is already the newest version (5.7.3+dfsg-1.8ubuntu3.3).
0 upgraded, 0 newly installed, 0 to remove and 32 not upgraded.
```

```
wei@wei-Berkeley:~$ sudo apt-get install libsnmp30 libsnmp-dev libczmq-dev
Reading package lists... Done
Building dependency tree
Reading state information... Done
libczmq-dev is already the newest version (4.1.0-2).
libsnmp-dev is already the newest version (5.7.3+dfsg-1.8ubuntu3.3).
libsnmp30 is already the newest version (5.7.3+dfsg-1.8ubuntu3.3).
0 upgraded, 0 newly installed, 0 to remove and 32 not upgraded.
```

```
wei@wei-Berkeley:~$ pip3 install python3-netsnmp
Collecting python3-netsnmp
Installing collected packages: python3-netsnmp
Successfully installed python3-netsnmp-1.1a1
```

I tested it on python3.x, so it's better to use python 3.x.

```
wei@wei-Berkeley:~$ python3 -V
Python 3.6.9
```

One more thing, this script only works on Linux OS, but I will try to make it work on Windows later. **[**The key point is to install python3-netsnmp on Windows**]**

2. How to use panoseti_snmp

Before using the panoseti_snmp package, you have to make sure that WR-SWITCH-MIB.txt and WR-WRPC-MIB.txt is in the same folder.

In panoseti_snmp, there are two class : wrs_snmp and wre_snmp.

wrs_snmp is used to check sfp transceivers on White Rabbit Switch, and wre_snmp is used to check sfp transceivers on White Rabbit Endpoint.

2.1 wrs_snmp

You should import panoseti_snmp first, and then create an object. The switch_name here is the ip address of WR Switch.

```
In [1]: from panoseti_snmp import wrs_snmp

In [2]: wrs=wrs_snmp('10.1.1.121')
```

There are three methods you can use:

- help()

By using help(), you can get some information about the methods.

```
In [3]: wrs.help()
Help Information:
wrs_sfp      : get the sfp transceivers information on wr-switch
wrs_link     : get the link status of each port on wr-switch
```

- wrs_sfp()

You can get the sfp part number with this method.

Now, Only support "PS-FB-TX1310" and "PS-FB-RX1310" are supported.

So you will see the status is "FAIL", if the PN is not supported.

```
In [3]: wrs.wrs_sfp()
*****************WR-SWITCH SFP CHECK***********************
WR-SWITCH(10.1.1.121) : sfp 2 is SFP-T           [ FAIL ]
WR-SWITCH(10.1.1.121) : sfp 3 is PS-FB-RX1310    [ PASS ]
WR-SWITCH(10.1.1.121) : sfp 4 is SFP-GE-BX       [ FAIL ]
WR-SWITCH(10.1.1.121) : sfp 5 is SFP-GE-BX       [ FAIL ]
WR-SWITCH(10.1.1.121) : sfp 6 is SFP-GE-BX       [ FAIL ]
WR-SWITCH(10.1.1.121) : sfp12 is AXGE-3454-0531  [ FAIL ]
WR-SWITCH(10.1.1.121) : sfp16 is SFP-T           [ FAIL ]

Error : Please check the sfp transceivers!!
```

- wrs_link()

  You can get the link status with this method.

  If It's "LINK_DOWN", WR will not work, and you need to check the connection between WR Switch and WR Endpoint.

```
In [4]: wrs.wrs_link()
*****************WR-SWITCH LINK CHECK***********************
WR-SWITCH(10.1.1.121) : Port 1 LINK_DOWN
WR-SWITCH(10.1.1.121) : Port 2 LINK_DOWN
WR-SWITCH(10.1.1.121) : Port 3 LINK_UP
WR-SWITCH(10.1.1.121) : Port 4 LINK_DOWN
WR-SWITCH(10.1.1.121) : Port 5 LINK_DOWN
WR-SWITCH(10.1.1.121) : Port 6 LINK_DOWN
WR-SWITCH(10.1.1.121) : Port 7 LINK_DOWN
WR-SWITCH(10.1.1.121) : Port 8 LINK_DOWN
WR-SWITCH(10.1.1.121) : Port 9 LINK_DOWN
WR-SWITCH(10.1.1.121) : Port10 LINK_DOWN
WR-SWITCH(10.1.1.121) : Port11 LINK_DOWN
WR-SWITCH(10.1.1.121) : Port12 LINK_DOWN
WR-SWITCH(10.1.1.121) : Port13 LINK_DOWN
WR-SWITCH(10.1.1.121) : Port14 LINK_DOWN
WR-SWITCH(10.1.1.121) : Port15 LINK_DOWN
WR-SWITCH(10.1.1.121) : Port16 LINK_DOWN
WR-SWITCH(10.1.1.121) : Port17 LINK_DOWN
WR-SWITCH(10.1.1.121) : Port18 LINK_DOWN
```

2.2 wre_snmp

You should import panoseti_snmp first, and then create an object. The endpoint_name here is the ip address of WR Endpoint.

```
In [5]: from panoseti_snmp import wre_snmp

In [6]: wre=wre_snmp('192.168.1.99')
```

Only two methods can be used here.

- help()

```
In [7]: wre.help()
Help Information:
wre_sfp      : get the sfp transceivers information on wr-endpoint
```

- wre_sfp()

  You can get the sfp part number with this method.

  Now, Only support "PS-FB-TX1310" and "PS-FB-RX1310" are supported.

  So you will see the status is "FAIL", if the PN is not supported.