

Advantech AE Technical Share Document

Date	2015 / 04 / 08	SR#	
Category	<input type="checkbox"/> FAQ <input checked="" type="checkbox"/> SOP	Related OS	Win7/ WinXP
Abstract	How to Use SNMP client with Advantech SNMP Agent		
Keyword	SNMP		
Related Product	UNO-2362G-T2AE/ TPC-1840WP/ TPC-2140WP/ SPC-1840WP/ SPC-2140WP/ ADAM-5560 UNO-2272G-N2AE/ TPC-8100TR/ UNO-2473G-ExAE/ TPC-1251T-ExAE UNO-2174G-C54E/ UNO-2184G-Dx4E/ UNO-3083(85)G-D44E/ UNO-3083(85)G-D64E UNO-1483G-4xxAE/ UNO-2483G-4xxAE/ TPC-1582H-4xxAE/ TPC-1782H-4xxAE/ TPC-1581WP-4xxAE/ IPPC-6152A		

■ Problem Description:

■ Brief Solution - Step by Step:

We use 3-party snmp client tool for example in this document. Please download software from link:

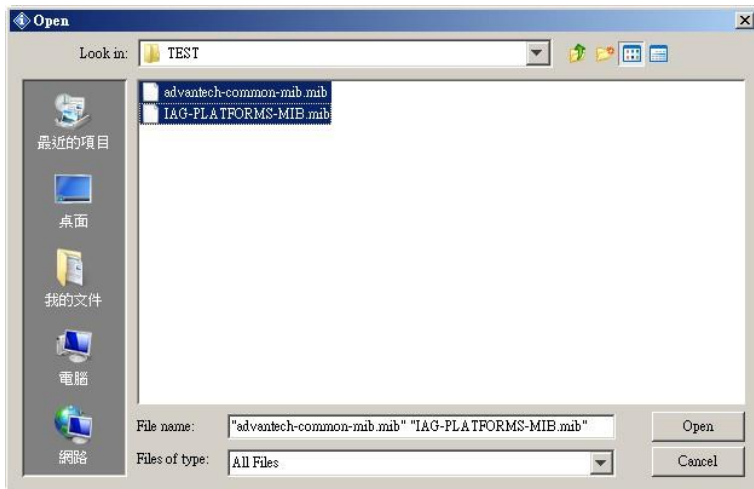
<http://ireasoning.com/mibbrowser.shtml>

NOTE. On SNMP Sub-Agent Device, you must select "Accept SNMP package from all host", please check setting in property of SNMP Service of Windows Service.

1. Once you installed and run iReasoning MIB browser, please load MIB.



2. The MIB files are available after you install SNMP agent. (C:\program files\Advantech\AdvSNMPAgent\Mib). So please copy these two files to your client platform in advance.



3. Please enter the IP address of SNMP server in MIB browser



- For example, you could find **sysDeviceName** as following photo, and there is also description in bottom of window.

The screenshot shows the iReasoning MIB Browser interface. The MIB Tree on the left displays the hierarchy: iso.org.dod.internet > mgmt > private > enterprises > advantech > advantechCommonMIB > atSystem > sysDeviceName. The details pane on the right shows the following information for sysDeviceName:

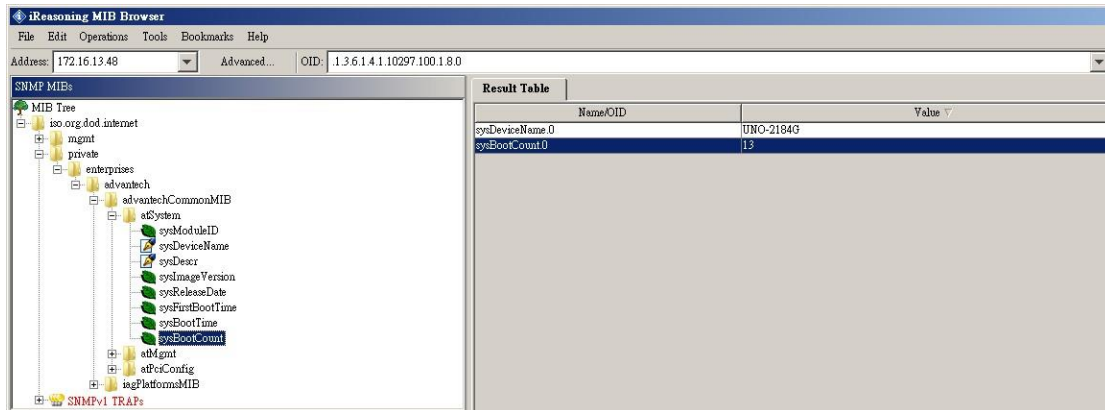
Name	sysDeviceName
OID	.1.3.6.1.4.1.10297.100.1.2
MIB	ADVANTECH-COMMON-MIB
Syntax	DISPLAYSTRING
Access	read-write
Status	current
DefVal	
Indexes	
Descr	The user defined name of the device, e.g. alias name, may be its device location.

- Please double click on sysDeviceName, and SNMP Server will reply the device name message at right side of window.

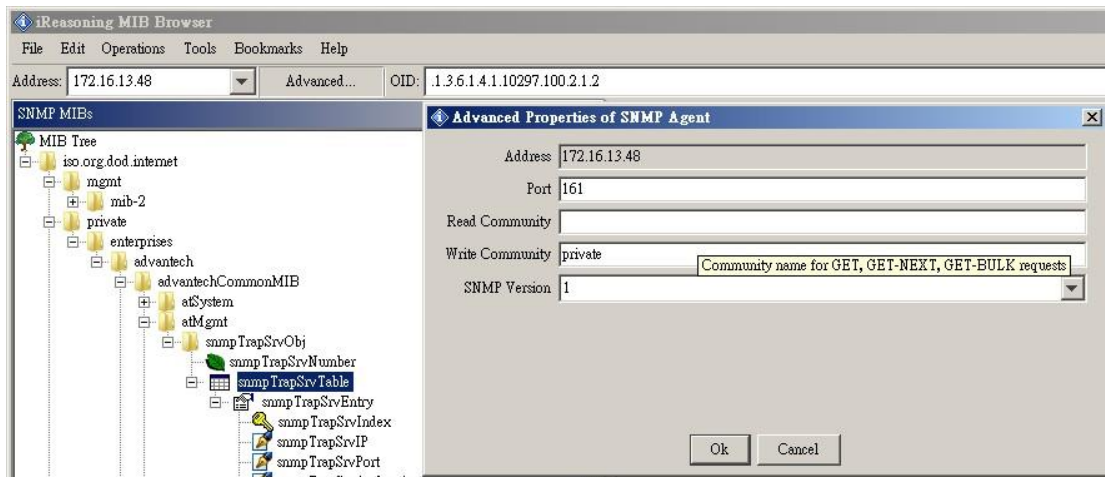
The screenshot shows the iReasoning MIB Browser interface after double-clicking on sysDeviceName. The Result Table on the right displays the following information:

Name/OID	Value
sysDeviceName 0	UNO-2184G

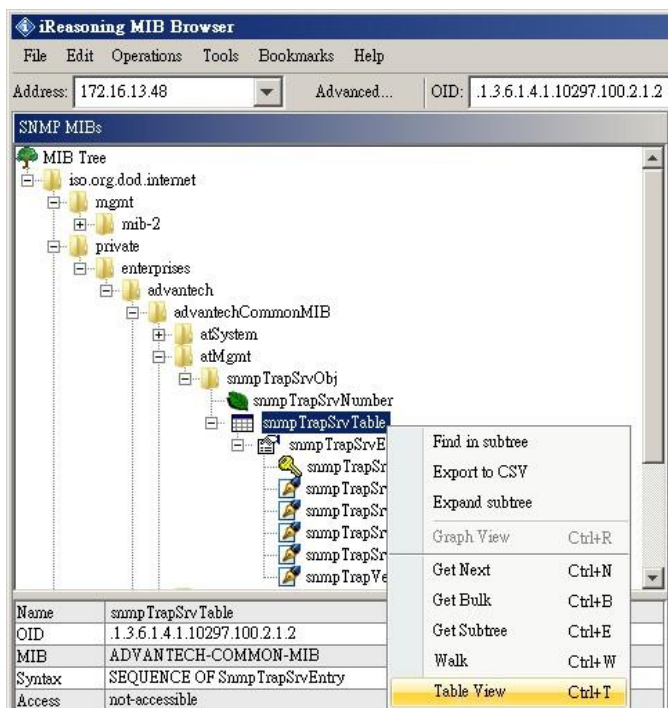
6. You could also double click **sysBootCount** to get reboot counter value from SNMP server for example.



7. We also have TRAP function which could notify SNMP client if there is alarm event. For example, if the voltage is abnormal, SNMP will send trap to notify user automatically. Before we start, please click **Advanced** button and enter **private** in "Write Community" filed.



8. Find **snmpTrapSrvTable** and right-click, then click Table View.



9. The Trap Server Table will show up in right side of window.

The screenshot shows the iReasoning MIB Browser interface. On the left, the MIB Tree is expanded to show the 'snmpTrapSrvTable' under the 'advantech' enterprise. On the right, the 'Result Table' for '172.16.13.48 - snmpTrapSrvTable' is displayed, showing a table with 6 rows and 5 columns: snmpTrapSrvIn..., snmpTrapSrvIP, snmpTrapSrvPort, snmpTrapSrvA..., and snmpTrapSrvC....

snmpTrapSrvIn...	snmpTrapSrvIP	snmpTrapSrvPort	snmpTrapSrvA...	snmpTrapSrvC...
1	127.0.0.1	162	enabled	public
2	0.0.0.0	162	enabled	public
3	0.0.0.0	162	enabled	public
4	0.0.0.0	162	enabled	public
5	0.0.0.0	162	enabled	public
6	0.0.0.0	162	enabled	public

10. At first, click one textfield of **snmpTrapSrvIP**, and click button “SNMP SET”

The screenshot shows the 'Result Table' for '172.16.13.48 - snmpTrapSrvTable'. The 'snmpTrapSrvIP' column is highlighted, and the 'SNMP SET' button is visible in the toolbar. The table contains 6 rows of data.

snmpTrapSrvIn...	snmpTrapSrvIP	snmpTrapSrvPort	snmpTrapSrvA...	snmpTrapSrvC...	snmpTrapVersi...	Index Value
1	127.0.0.1	162	enabled	public	v1	1
2	0.0.0.0	162	enabled	public	v1	2
3	0.0.0.0	162	enabled	public	v1	3
4	0.0.0.0	162	enabled	public	v1	4
5	0.0.0.0	162	enabled	public	v1	5
6	0.0.0.0	162	enabled	public	v1	6

11. Enter the IP address of client platform in Value field.

The screenshot shows the 'SNMP SET' dialog box. The 'OID' field is set to '.1.3.6.1.4.1.10297.100.2.1.2.1.2.2'. The 'Data Type' is set to 'IpAddress'. The 'Value' field is highlighted and contains the IP address '172.16.13.35'.

OID: .1.3.6.1.4.1.10297.100.2.1.2.1.2.2

Data Type: IpAddress

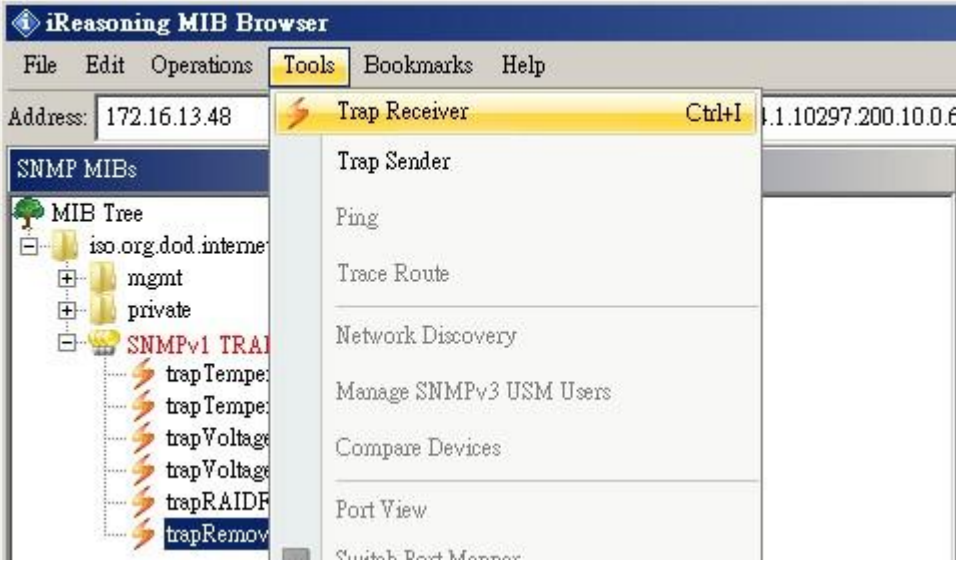
Value: 172.16.13.35

Buttons: Ok, Cancel

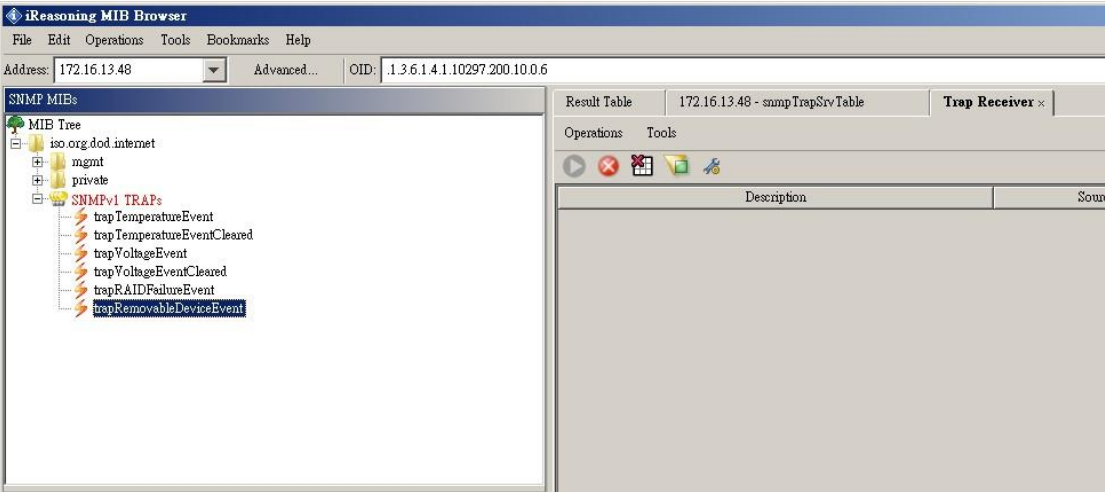
12. This message box is supposed to be showed up.



13. Tools → Trap Receiver



14.



15. There is a Trap could receive notification if any device changed on SNMP server.
Please plug/remove USB hard drive from SNMP server and verify if it works.

The screenshot shows the eReasoning MIB Browser interface. On the left, the MIB tree is expanded to show the trapRemoveDeviceEvent. The main pane displays the trap receiver configuration for 172.16.13.48. The trap receiver is named 'trapRemoveDeviceEvent' and is configured to receive traps from the source 172.16.13.48. The trap receiver is enabled and the trap type is set to 'trapRemoveDeviceEvent'.

Description	Source	Time	Severity
trapRemoveDeviceEvent	172.16.13.48	2014-10-16 15:03:37	
trapRemoveDeviceEvent	172.16.13.48	2014-10-16 15:03:37	

Source: 172.16.13.48 Timestamp: 28 minutes 57 seconds SNMP Version: 1

Enterprise: iso.org.dod.internet.private.enterprises.advantech.igPlatformMIB.platformTrapObjs

Specific: 6

Generic: enterpriseSpecific

Variable Bindings:

Name: iso.org.dod.internet.private.enterprises.advantech.igPlatformMIB.peripheralGroup.hardwareDetectObj.hwdTable.hwdEntry.hwdDeviceType 28
Value: [Integer] disk_device (2)

Name: iso.org.dod.internet.private.enterprises.advantech.igPlatformMIB.peripheralGroup.hardwareDetectObj.hwdTable.hwdEntry.hwdEvent 28
Value: [Integer] insert (1)

Name: iso.org.dod.internet.private.enterprises.advantech.igPlatformMIB.peripheralGroup.hardwareDetectObj.hwdTable.hwdEntry.hwdFriendlyName 28
Value: [OctetString] 0x38 9C 45 01 02

Description: "The device insertion/ removal event."

16. For example of temperature trap. Please set tpMax as 20 and enabled

The screenshot shows the eReasoning MIB Browser interface. On the left, the MIB tree is expanded to show the trap receiver configuration for temperature trap. The trap receiver is named 'temperatureTrap' and is configured to receive traps from the source 172.16.12.229. The trap receiver is enabled and the trap type is set to 'temperatureTrap'.

tpIndex	tpName	tpUnit	tpValue	tpMax	tpMin	tpGetTime	tpState
1	CPU #0 Core #0	degree(s) Celsius	44	20	0	0xd7 D7 01 1D 00...	enabled
2	Board temperature	degree(s) Celsius	28	255	0	0xd7 D7 01 1D 00...	disabled

(Zoom In)

The zoomed-in screenshot shows the trap receiver configuration table for temperature trap. The table has 8 columns: tpIndex, tpName, tpUnit, tpValue, tpMax, tpMin, tpGetTime, and tpState. There are 2 rows of data.

tpIndex	tpName	tpUnit	tpValue	tpMax	tpMin	tpGetTime	tpState
1	CPU #0 Core #0	degree(s) Celsius	44	20	0	0xd7 D7 01 1D 00...	enabled
2	Board temperature	degree(s) Celsius	28	255	0	0xd7 D7 01 1D 00...	disabled

17. Now you will receive a trap which notify the temperature is abnormal.

Result Table	172.16.12.229 - snmpTrapSrvTable	Trap Receiver x	172.16.12.229 - ewfObjTable	172.16.12.229 - tpTable
Operations Tools				
Description	Source	Time		
trapTemperatureEvent	172.16.12.229	2015-01-08 16:19:27		
Source: 172.16.12.229 Timestamp: 1 hour 27 minutes 55 seconds SNMP Version: Enterprise: .iso.org.dod.internet.private.enterprises.advantech.iagPlatformsMIB.platformTrapObjs Specific: 1 Generic: enterpriseSpecific Variable Bindings:				
Name:	.iso.org.dod.internet.private.enterprises.advantech.iagPlatformsMIB.monitorGroup.temperatureObj.tpTable.tpEntry.tpIndex.1			
Value:	[Integer] 1			
Name:	.iso.org.dod.internet.private.enterprises.advantech.iagPlatformsMIB.monitorGroup.temperatureObj.tpTable.tpEntry.tpValue.1			
Value:	[OctetString] 44			
Name:	.iso.org.dod.internet.private.enterprises.advantech.iagPlatformsMIB.monitorGroup.temperatureObj.tpTable.tpEntry.tpMax.1			
Value:	[OctetString] 20			
Name:	.iso.org.dod.internet.private.enterprises.advantech.iagPlatformsMIB.monitorGroup.temperatureObj.tpTable.tpEntry.tpMin.1			
Value:	[OctetString] 0			
Description:	"Critical Under-Temperature problem. tpIndex, tpValue, tpMax, tpMin"			

Reference:

N/A