Advantech iAutomation Systems & Solutions

Advantech

SNMP Subagent

User Guide

For Windows

Version <0.99>

Advantech SNMP Subagent	Version: <0.99>
User Guide	Date: <05/02/2018>

Revision History

Date	Version	Description	Author
2018/05/02	0.99	Add log file descriptions	Zhirong.Hsu
2017/08/29	0.98	Update powerObj to add pwr-v1-low(3), pwr- v2-low(4) status.	Zhirong.Hsu
2016/10/05	0.97	Update Screenshot	Zhirong.Hsu
2016/02/16	0.96	Add powerObj to monitorGroup. Add trapPowerStatusChanged	Zhirong.Hsu
2015/12/23	0.95	Fix typo	Zhirong.Hsu
2015/12/21	0.94	Update monitorGroup to introduce the new thresholds and severity. Add memoryInfo, storageInfo, memory usage traps, and storage usage traps.	Zhirong.Hsu
2015/08/20	0.93	ManageEngine Free SNMP MIB Browser	Zhirong.Hsu
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2014/10/23	0.90	Initial draft	Zhirong.Hsu

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User Guide

1. Introduction

1.1 Advantech SNMP Subagent

The Advantech SNMP Subagent allows you to communicate Simple Network Management Protocol (SNMP) with the common or platform Subagent on the managed system. With the Advantech SNMP Subagent, you can use SNMP SETs, GETs, and TRAPs to manage supported platforms.

1.2 Supported Advantech Platforms

The current version of Advantech SNMP Subagent supports the Advantech x86 hardware platform products. See the release notes to check the supported product list before using it.

1.3 Supported Operating Systems

The Advantech SNMP Subagent supports the following operating systems:

- Windows Embedded Standard 2009
- Windows Embedded Standard 7
- Windows Embedded 8 Standard
- Windows 7 SP1
- Windows 8
- Windows 8.1
- Windows 10

1.4 System Requirements

1.4.1 SNMP Master Agent

The Advantech SNMP Subagent is based on the Windows SNMP service. You must install the Windows SNMP service on the supported operating systems. You can check the service snap-in. Please refer to Figure 1-1 (found under Administrative Tools in Windows Control Panel).

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O ₆ Services						_ 🗆 🗙
File Action View	Help					
) 🛃 🔽 📷 🕨 🔲 💷 🕪					
Services (Local)	Services (Local)					
	SNMP Service	Name	Description	Status	Startup Type	Log On As 🔺
	Start the service Description: Enables Simple Network Management Protocol (SNMP) requests to be processed by this computer. If this service is stopped, the computer will be unable to process SNMP requests. If this service is disabled, any services that explicitly depend on it will fail to start.	 RIP Listener Routing and Rem RPC Endpoint Ma Secondary Logon Secure Socket Tun Security Accounts Security Center Server Shell Hardware De Simple TCP/IP Ser Smart Card Smart Card Remo 	Listens for r Offers routi Resolves RP Enables star Provides su The startup The WSCSV Supports fil Provides no Supports th Manages ac Allows the s	Started Started Started Started Started Started	Manual Disabled Automatic Automatic Manual Automatic (D Automatic Automatic Manual Manual Manual	Local Service Local Syste Network S Local Syste Local Service Local Service Local Syste Local Syste Local Service Local Service
	Extended (Standard /	SNMP Service SNMP Trap Software Protection SSDP Discovery Superfetch System Event Noti Tablet PC Input Se Task Scheduler	Enables Sim Receives tra Enables the Discovers n Maintains a Monitors sy Enables Tab Enables a us	Started Started Started III	Manual Manual Automatic (D Manual Automatic Automatic Automatic Automatic	Local Syste Local Service Network S Local Service Local Syste Local Syste Local Syste Local Syste Local Syste

Figure 1-1 Windows Services

If the SNMP service does not exist, you can turn on the *Simple Network Management Protocol* by the following steps. Here is a Windows 7 example.

- 1. Go to Control panel > Programs and Features. (Figure 1-2)
- 2. Click Turn Windows features on or off on the left panel.
- 3. In Windows Features window, check the checkbox Simple Network Management Protocol. (Figure 1-3)
- 4. Click **OK**.

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🚱 💿 🗢 💽 « All Control P I	Programs and Features Search Programs and Features	tures	<u>م</u>
Control Panel Home View installed updates View Turn Windows features on or off	Uninstall or change a program To uninstall a program, select it from the list and then click Uni Change, or Repair.	nstall,	
	Organize 🔻	= 🔹 🗸 🧕	
	Name	Publisher	
	Adobe Flash Plaver 15 ActiveX	Adobe Svs	
	Advantech DiagAnywhere Server	Advantech	
	Hadvantech Lmsensor Nuvoton Driver	Advantech	
	H Advantech SNMP Subagent	Advantech	
	Advantech Watchdog Driver	Advantech	
	CrystalDiskInfo 6.1.14 Crystal De		-
	💿 Google Chrome Google Inc.		
	Intel (R) Network Connections 17.1.55.0 Intel		
	intel® Control Center Intel Corp		
	State Intel® HD Graphics Driver Intel Corp		
	Management Engine Components Intel Corp		
	🔯 Intel® Rapid Storage Technology Intel Corp		
	Market SDK for OpenCL - CPU Only Runtime Package Intel Corp		
	Microsoft .NET Framework 4.5.1 Microsoft		
	< III.	+	
	Currently installed programs Total size: 166 MB 15 programs installed		

Figure 1-2 Programs and Features

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Windows Features	X
Turn Windows features on or off	0
To turn a feature on, select its check box. To turn a feature off, clear check box. A filled box means that only part of the feature is turned of	its on.
🗊 🔲 Services for NFS	
🕣 📝 🚹 Simple Network Management Protocol (SNMP)	
Simple TCPIP services (i.e. echo, daytime etc)	
Subsystem for UNIX-based Applications	
Tablet PC Components	
Telnet Client	
Telnet Server	
TFTP Client	=
Windows Gadget Platform	
⊞	
Windows Search	
Windows TIFF IFilter	-
OK Can	cel

Figure 1-3 Windows Features

1.4.2 Latest Drivers

The Advantech SNMP Subagent requires the latest Advantech drivers including the following.

- Advantech Lmsensor Drivers
- Advantech Watchdog Drivers
- Advantech Multi-level Watchdog Drivers (If applicable)
- Advantech Brightness Drivers (If applicable)
- Advantech UNODIO Drivers for embedded IO (If applicable)

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2. Advantech SNMP Subagents Overview

Advantech SNMP Subagents are SNMP extension agents that provide interfaces for retrieving Advantech x86 hardware and software information and monitoring the health status of the network using the SNMP protocol. Table 2-1 is the basic information of Advantech SNMP Subagents.

Name	MIB file	Supported Region
Advantech	advantech-common-mib.mib	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).advantech(102
Common Agent		97).advantechCommonMIB(100)
Advantech	ADVANTECH-PLATFORMS-	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).advantech(102
Platform Agent	MIB.mib	97).advantechPlatformsMIB(200)

Table 2-1 Advantech SNMP Subagents

2.1 MIB and OID

SNMP works with basic components OIDs (Object Identifier) and MIBs (Management Information Base). The user gets information by querying "Objects". A MIB (Management Information Base) is a database including many objects and it is a tree structure shown in Figure 2-1; each node is addressed through an object identifier (OID) and it maps to an entity in a communications network. OIDs are always written in a numerical form instead of a text one. Therefore, the top three object levels are written as "1.3.1" rather than "iso\org\dod" and the OIDs of Advantech is 1.3.6.1.4.1.10297



Figure 2-1 OIDs tree

2.2 Community Strings

Community Strings are similar to passwords. They are used to allow authorized you to access the SNMP agent on a device.

Community Strings can be configured as read-only (RO) or read-write (RW). As the name implies, read-only strings only allow information to be pulled from the agent. However, read-write strings are much more powerful and can allow reconfiguration of many device properties. In general, the default community strings are set to be "public" for read-only (RO), and "private" for read-write (RW).

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2.3 Architecture

Network Management Station (NMS) can communicate with subagents by the OIDs defined in the MIB files.



Figure 2-2 Architecture

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2.4 Advantech SNMP Subagents

The Advantech SNMP Subagents provides the functions as shown in Figure 2-3.



Figure 2-3 Advantech SNMP Subagent Functions

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2.4.1 Platform Information

You can **get** the system information of the managed device, such as *model name*, *image version*, *image release* date, system first boot time, system boot time, and boot count.

If there are multiple identical devices, you can **set** an *alias name* or a *description* of each device.



Figure 2-4 Platform Information

2.4.2 PCI Information

You **can** get the PCI information (table) of the managed device, such as *Vendor ID*, *Device ID*, *IRQ*, *Description*, *Base Address* ... etc.



Figure 2-5 PCI Information

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2.4.3 Trap Management

You can **set** the *destination IP* of NMS or trap management tool.



Figure 2-6 Trap Management

2.4.4 Software Group

You can get the EWF (Enhanced Write Filter) and FBWF (File Based Write Filter) current settings.



Figure 2-7 SW Group

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2.4.5 Monitor Group

- You can **get** the *Temperature*, *Voltage*, *Fan*, and Current information which are handled by *Advantech Driver*.
- You can set high, low, high-high, and low-low threshold values of each Temperature, Voltage, Fan, and Current. You can also set a null value to disable the threshold.
 When the threshold has been set, the monitored value will be divided into 5 levels, cleared(1), critical-low (2), low (3), high (4), and critical-high (5).
 - If the *Value* is greater than the *high-high* threshold and *high-high* threshold is not disabled (null), the level is **critical-high** (5).
 - If the *Value* is greater than the *high* threshold and less than or equal to the *high-high* threshold and *high* threshold is not disabled (null), the level is **high** (4).
 - If the *Value* is greater than *low* threshold and less than or equal to the *high* threshold and *low* threshold is not disabled (null), the level is **low**(3). If the *Value* is less than the *low-low* threshold and the *low-low* threshold is not disabled (null), the level is **critical-low**(2).
 - Otherwise, the level is **cleared** (1).
- You can also enable monitoring state when the value is out of bound, it will send a trap to NMS.
- You can get the current CPU Loading, current CPU Speed, CPU Maximum Speed, memory size, memory usage percentage, and storage usage percentage of the managed device. There are 4 threshold values UsageTh1 ~ UsageTh4 which splits the usage into 5 severities, cleared(1), notice(2), warning(3), critical(4), and emergency(5) if the threshold value is not disabled (-1).
 - If the *usage* is greater than *UsageTh1* and *UsageTh1* is not disabled(-1), the severity is **notice**(2)
 - If the *usage* is greater than *UsageTh2* and less than or equal to *UsageTh1* and *UsageTh2* is not disabled(-1), the severity is **warning**(3)
 - If the *usage* is greater than *UsageTh3* and less than or equal to *UsageTh2* and *UsageTh3* is not disabled(-1), the severity is **critical**(4)
 - If the *usage* is greater than *UsageTh4* and *UsageTh4* is not disabled(-1), the severity is **emergency**(5)
 - Otherwise, the severity is **cleared**(1)
- You can get the power state pwr-normal(1), pwr-redundancylost (2), pwr-v1-low (3) or pwr-v2-low (4) and the power state severity including cleared(1), notice(2), warning(3), critical(4), and emergency(5) if the target platform support these features. You can also enable the power monitoring state when the power state changed, it will send a trap to the NMS.

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Figure 2-8 Monitor Group

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2.4.6 Peripheral Group

You can **get** the current Watchdog/Multilevel Watchdog *configuration* and the current *state*. You can **get** the *current brightness level* of the HMI device. (If applicable)



2.4.7 Peripheral Group – Hard Disk

You can **get** the *hard disk information* and the *S.M.A.R.T.* (Self-Monitoring, Analysis, and Reporting Technology) information of it.



Figure 2-10 Peripheral Group – Hard Disk

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2.4.8 Peripheral Group - Hardware Detection

If hardware is inserted or removed, the SNMP subagent will record the information. If the "hardware detect trap" is **enabled**, the SNMP subagent will also send a trap (alarm) to the NMS. The hardwareDetectObj supports the below types of hardware with related hwdClassGUID

- USBRawDevice : {a5dcbf10-6530-11d2-901f-00c04fb951ed}
- DiskDevice : {53f56307-b6bf-11d0-94f2-00a0c91efb8b}
- NetworkCard : {ad498944-762f-11d0-8dcb-00c04fc3358c}
- HumanInterfaceDevice (HID) :{4d1e55b2-f16f-11cf-88cb-001111000030}



Figure 2-11 Peripheral Group – Hardware Detection

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2.4.9 Trap

The Advantech SNMP Subagents currently support 13 types of Traps.

- Temperature is out of range
- Temperature becomes normal
- Voltage is out of range
- Voltage becomes normal
- Hardware insertion and removal
- Fan Speed is out of range
- Fan Speed becomes normal
- Current is out of range
- Current becomes normal
- Memory Usage exceeds the threshold value
- Memory Usage becomes normal
- Storage Usage exceeds the threshold value
- Storage Usage becomes normal
- Power State is changed



Figure 2-12 Traps

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2.4.10 Log files

There are log files for *Advantech SNMP Subagents* to keep track of important events. The subagent defines the following commonly used *severity levels*: **none** = 0, **fatal** = 1, **error** = 2, **warning** = 3, **info** = 4, **debug** = 5, **verbose** = 6 and the default level is *error*.

These log files can be found in the C:\Windows\System32 (32-bit Windows) or C:\Windows\SysWOW64 (64-bit Windows) folder and the file names are **AdvCommonAgent.log** for *Advantech Common Agent* and **AdvPlatformAgent.log** for *Advantech Platform Agent*.

The subagent supports **Log Rotation**, and the log file is rolled over after a specified size **MaxLogFileSize** (in bytes) has been reached.

For example, if logging to a file named file.log, when the file size reaches the specified size limit, the contents are archived in a file named file.1.log and file.log is truncated. When the size limit is reached the second time, file.1.log is renamed to file.2.log; contents from file.log are archived to file.1.log and file.log is truncated.

This continues until the maximum backup index **MaxLogFileCount** is reached, after which the oldest log file is deleted on each rollover.

You can set LogSeverity (default is 2), MaxLogFileSize (default is 1048576 bytes) and MaxLogFileCount (default is 5) in the registry.

32-bit Windows:

HKEY_LOCAL_MACHINE\SOFTWARE\Advantech Corp.\SNMP

64-bit Windows:

HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Advantech Corp.\SNMP

Table 2-2 Log Parameters		
Entry name	Data type	Values
LogSeverity	REG_DWORD	none = 0, fatal = 1, error = 2 (default), warning = 3, info = 4, debug = 5,
		verbose = 6
MaxLogFileSize	REG_DWORD	Maximum allowed file size (in bytes) before rolling over; the lowest
		MaxLogFileSize is 1000 bytes. Default is 1048576 bytes (1 MB)
MaxLogFileCount	REG_DWORD	A number of log files to keep. Default is 5

Table 2-2 Log Parameters

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3. Installation and Uninstallation

3.1 Installation

3.1.1 Launch installation package

Launch the Advantech SNMP Subagent Installation Package and you can see the following wizard. Click Next to start the installation.



Figure 3-1 Advantech SNMP Subagent Installation Package

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You may see an error message below if the target platform has not installed *SNMP service* before.



Figure 3-2 Please install SNMP service

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3.1.2 Install Advantech Kernel Driver

The installation package will install the Advantech Kernel Driver which is needed by Advantech SNMP Subagent.



Figure 3-3 Advantech Kernel Driver

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The Installation may display the following message, check *Always trust software from "Advantech Co., Ltd."* and click **Install** to complete the driver installation.

Advantech SNMP Subagent
Windows Security
Would you like to install this device software?
Name: Advantech Corp. Publisher: Advantech Co., Ltd.
Always trust software from "Advantech Co., Ltd.". Install Don't Install
You should only install driver software from publishers you trust. <u>How can I decide</u> <u>which device software is safe to install?</u>
Cancel

Figure 3-4 Windows Security of Driver

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3.1.3 Install Advantech SNMP Subagent

To install the *Advantech SNMP Subagent*, the installation Wizard will display another installation wizard as shown in Figure 3-6.



Figure 3-5 Advantech SNMP Subagent

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Click **Next** to start the installation and you will see an *SNMP configuration* page as shown in Figure 3-7.



Figure 3-6 Advantech SNMP Subagent Setup Wizard

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3.1.4 SNMP Configuration

You can enter the *Read-Only, Read-Write*, and *Trap Community* which will be applied to the SNMP service. If you input an incorrect Community String, the installation wizard will show an error message as shown in Figure 3-8.

B Advantech SNMP Subagent	×
SNMP Configuration Please enter your SNMP information	
Read-Only Community: public Read- <u>W</u> rite Community: private <u>Trap Community:</u> public	
Back Nex	kt Cancel

Figure 3-7 SNMP Configuration

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SNMP Configuration Please enter your SNMP information
Please enter your SNMP information
Read-Only Comm
public* Read-Write Com Read-Write Com
private <u>T</u> rap Community: public 確定
<u>B</u> ack <u>N</u> ext Cancel

Figure 3-8 Incorrect Community String

After installation, the Read-Only and Read-Write community will be applied to the *Security tab* of SNMP Service Properties as shown in Figure 3-9.

SNMP Service Properties (Local Computer)	提 Advantech SNMP Subagent
General Log On Recovery Agent Traps Security Dependencies	SNMP Configuration Please enter your SNMP information
Accepted community names	
Community Rights	Read-Only Community:
public READ ONLY	public
private READ WRITE Add Edit Remove Accept SNMP packets from any host Accept SNMP packets from these hosts	Read- <u>Write Community:</u> private <u>Irap Community:</u> public
Add Edit Remove	Back Next Cancel

Figure 3-9 Community for Security of SNMP service

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The *Trap Community* will be applied to the *Traps* tab of *SNMP Service Properties* as shown in Figure 3-10. You can add more *Trap destinations* in the *Traps* tab of *SNMP Service Properties* if need.

SNMP Service Properties (Local Computer)	🔁 Advantech SNMP Subagent
General Log On Recovery Agent Traps Security Dependencies	SNMP Configuration Please enter your SNMP information
and IPX/SPX protocols. If traps are required, one or more community names must be specified. Trap destinations may be host names. IP addresses or IPX addresses.	Read-Only Community:
public Address	Read- <u>W</u> rite Community:
0000 0000 0000 5 default Trap 0000 destinations	public
Add Edit Remove	Back Next Cancel

Figure 3-10 Community for Traps of SNMP service

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3.1.5 Install the SNMP Subagent

After finishing SNMP configuration, you can continue to install SNMP subagent. During installation, it will install subagents to the system and restart the SNMP service as shown in Figure 3-12.

H Advantech SNMP Subagent Setup		X
Ready to install Advantech SNMP Subagent		Ð
Click Install to begin the installation. Click Back to review or change any of installation settings. Click Cancel to exit the wizard.	your	
<u>B</u> ack Install	Can	cel

Figure 3-11 Ready to Install SNMP Subagent

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Advantech SNMP Subagent Setup				
Installing Advantech SNMP Subagent				
Please wait while the Setup Wizard installs Advantech SNMP Subagent				
Status: Stopping services				
<u>B</u> ack <u>N</u> ext	Cancel			

Figure 3-12 Stop/Start Service



Figure 3-13 Installation Completed

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3.1.6 Restart Computer



Figure 3-14 Restart Required

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3.1.7 Security Settings

In order to communicate with Network Management Station (NMS), you need to add the NMS IP address to the Security tab of SNMP service properties as shown in Figure 3-15

SNMP Service Prop	erties (Loca	I Compu	iter)			x
General Log On	Recovery	Agent	Traps	Security	Dependenci	es
Send authent	ication trap					
Accepted com	munity <u>n</u> ame	s				- II
Community			Righ	nts		
public			RE/	AD ONLY		
private			RE/	AD WRITE		
A	<u>d</u> d	<u>E</u> dit]	<u>R</u> emo	ve	
Assert SNMP analysis from any bart						
Accept SNMP packets from any nost Accept SNMP packets from these hosts						
localhost						
A	dd <u>.</u>	Edit]	Re <u>m</u> o	ve	
Learn more abo	.tt <u>SNMP</u>					
		ОК		Cancel		ply

Figure 3-15 Add NMS IP address

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3.1.8 Get MIB files

After the installation finished, you can find the MIB Files from **Start menu > All Programs > Advantech > SNMP Subagent > SNMP Subagent MIB Files** as shown in Figure 3-16 or from the installation folder of *Advantech SNMP Subagent* as shown in Figure 3-17.



Figure 3-16 MIB Files

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r				_	_
					×
C:\Program	Files (x86)\Advantech\SNMP Subagent\MIB Files	✓ Search MIB F	iles		٩
Organize 🔻 Include in	n library 🔻 Share with 🔻 New folder				2
🚖 Favorites	Name	Date modified	Туре	Si	ze
🧮 Desktop	advantech-common-mib.mib	10/5/2016 2:44 PM	MIB File		
属 Downloads	ADVANTECH-PLATFORMS-MIB.mib	10/5/2016 2:42 PM	MIB File		
🖳 Recent Places					
E					
Desuments					
Music					
Pictures					
Videos					
_					
🖳 Computer					
🚢 Local Disk (C:)					
📭 Network					
	•				- F
2 items					

Figure 3-17 MIB Files Location

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3.2 Uninstallation

To uninstall the Advantech SNMP Subagent, you can follow the following steps.

3.2.1 Launch uninstallation wizard

Go to **Control panel > Programs and Features** and select the **Advantech SNMP Subagent**. Click **Uninstall** to launch uninstallation wizard as shown in Figure 3-19.

C C C C C C C C C C C C C C C C C C C	Programs and Features F Search Programs	s and Features 👂	
Control Panel Home	Uninstall or change a program		
View installed updates Turn Windows features on or off	To uninstall a program, select it from the list and then Change, or Repair.	click Uninstall,	
	Organize 🕶 Uninstall Change	≣ ▾ 🔞	
	Name	Publisher 🔺	
	Adobe Flash Player 15 ActiveX	Adobe Systems Incorpc	
	Advantech DiagAnywhere Server	Advantech	
	HAdvantech Lmsensor Nuvoton Driver Advantech		
	Advantech SNMP Subagent Advantech Co., Ltd.		
	Advantech Watchdog Driver	Advantech Automation	
	🚑 CrystalDiskInfo 6.1.14	Crystal Dew World	
	💽 Google Chrome	Google Inc.	
	Intel(R) Network Connections 17.1.55.0	Intel	
	🖹 Intel® Control Center	Intel Corporation	
	1 Intel® HD Graphics Driver	Intel Corporation	
	1 Intel® Management Engine Components	Intel Corporation	
	🔁 Intel® Rapid Storage Technology	Intel Corporation	
	Honorow Intel® SDK for OpenCL - CPU Only Runtime Package Intel Corporation		
	Microsoft .NET Framework 4.5.1 Microsoft Corporation		
	•	Þ	
	Advantech Co., Ltd. Product version: 0.12.00 Size: 744 KE	D4 3	

Figure 3-18 Uninstall or change a program

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Figure 3-19 Uninstallation Wizard

3.2.2 Uninstall the Advantech SNMP Subagent

Click **Uninstall** to continue the uninstallation process and wait the subagent has been uninstalled as shown in Figure 3-21.

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Figure 3-21 Uninstall Successful

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4. Appendix

4.1 Third-Party MIB Browser

The Advantech SNMP Subagent has been tested with the following MIB Browser.

- iReasoning MIB browser <u>http://ireasoning.com</u>
- ManageEngine Free SNMP MIB Browser <u>https://www.manageengine.com/products/mibbrowser-free-tool/</u>

4.1.1 iReasoning MIB browser

Download Link: <u>http://ireasoning.com/mibbrowser.shtml</u>

1. Once running iReasoning MIB browser in the *client platform*, please load MIB files first.

IReasoning MIB Browser						
File	Edit Operations	Tools	Bookmarks	Help		
Þ	Load MIBs	Ctrl+L	Advanced	OID: .1.3.6.1.4.1.10		
UnLoad MIBs						
MIB Modules						
Open Session						
	Save Session					
	Exit					

2. Load *ADVANTECH-PLATFORMS-MIB.mib* and *advantech-common-mib.mib*. They are available after you installed the *Advantech SNMP Subagent*. (e.g., C:\program files\Advantech\AdvSNMPAgent\Mib). Copy these two files to your *client platform* in advance.

🕤 Open					×
Look in	📗 MIB Files			🔹 🤌 💋	
Recent Items	advanteci ADVANTE	n-common-mib.mib CH-PLATFORMS-MIE	3.mib		
Desktop					
My Documents					
Computer					
Network	File <u>n</u> ame: Files of <u>typ</u> e:	ech-common-mib.mib" All Files	"ADVANTECH-PLATFOR	MS-MIB.mib"	Open Cancel

Figure 4-2 Advantech MIBs

Figure 4-1 Load MIBs

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3. Enter the IP address of the *target platform* where *Advantech SNMP Subagent* was installed.



Figure 4-3 Enter IP address

4. For example, you can find **sysModuleID** as following Figure 4-4, and there is also a description at the bottom of the window.

🚯 iReason	ing MIB Brows	er		Advantaci	Marris Linguest	
File Edit	Operations	Tools	Bookmarks	Help		
Address: 172	.16.12.87	•	Advanced	OID: .1.3.6	5.1.4.1.10297.100.1.1.	
SNMP MIBs						
MIB Tree	e rg.dod.internet ngmt invate enterprises in advantech in	echComr ystem sysDevi sysDes sysDes sysRele sysFirst sysBoo sysBoo	nonMIB uleID iceName ar geVersion aseDate BootTime tTime tCount			
Name	sysModuleID	7 100 1	1			
	ADVANTECH-C	0.100.1. 00MMOI	I N-MIR			
Syntax	DISPLAYSTRIN	G				
Access	read-only	-				
Status	mandatory					
DefVal						
Indexes						
Descr	The module nam should include th It is mandatory th printable ASCII of e.g. UNO-2184G	ne of the e full nar nat this or characters , TPC-18	device. This valu ne of the hardwa 11y contain 8. 840WP. etc.,	le re.		

Figure 4-5 sysModuleID

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5. Double click on sysModuleID. *Target platform* will reply the module/product name message at the right side of the window.



Figure 4-6 SNMP GET sysModuleID

6. You can also double click on **sysBootCount** to get reboot counter value from the *target platform*, for example.

IReasoning MIB Browser	100	-	-	and its second second
File Edit Operations Tools Bookmarks	Help			
Address: 172.16.12.87 - Advanced	OID: 1.3.6.1.4.1.10297.100.1.8.0			✓ Operations: Ge
SNMP MIBs		Result Table		
	*	Name/OID		Value
emerprises		sysModuleID.0	UNO-21740	G
advantechCommonMIB		sysBootCount.0	41	
🖶 🌗 atSystem				
sysModuleID				
- SysDeviceName				
SysDesci	=			
sysReleaseDate				
sysFirstBootTime				
sysBootTime				
sysBootCount				

Figure 4-7 sysBootCount

7. Advantech SNMP Subagent also provides TRAP functions which will notify the *client platform* if alarm events happened on the *target platform*. For example, if the voltage is abnormal, SNMP will automatically send a trap to notify the user. Before the start, click the **Advanced** button and enter 'private' in the "Write Community" field.

IReasoning MIB Browser	and and a second se
File Edit Operations Tools Bookmarks H	lelp
Address: 172.16.12.87 Advanced /	Advanced Properties of SNMP Agent
SNMP MIBs enterprises dvantech dvantech stystem stystem smp TrapSrvObj smp TrapSrvIble smp TrapSrvI smp T	Address 172.16.12.87 Port 161 Read Community
Mama ana Tan Sa Tabla	Ok Cancel

Figure 4-8 Write Community

Advantech SNMP Subagent	Version: <0.99>
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8. Find **snmpTrapSrvTable**, right-click on it then click **Table View**.

🔷 iRea	asonir	ng MIB Browse	er					
File	Edit	Operations	Tools	Во	okmarks	Help		
Address:	172.1	6.12.87	•	A	dvanced	OID:	.1.3.6.1.4.	1.10
SNMP N	4IBs							
		enterprises advantech advante advante advante ats ats ats ats	echCom ystem Igmt snmp T Som Som Som Som Som Som Som Som Som Som Som	monM rapSrv npTra nmpTi	IIB Obj pSrvNumber apSrvTable Find in su Export to Expand s	r btree CSV ubtree		A E
					Graph Vie	ew	Ctrl+F	۲.
		⊡… 퉲 atP	u ciConfi,		Get Next		Ctrl+1	N
	iagPlatformsM. Get Bulk Ctrl+B							
		⊡…∥ sw(froup nitorGn		Get Subtr	ee	Ctrl+E	
			1		Walk		Ctrl+\	N
Name OID	S	mmp TrapSrv Tab 1.3.6.1.4.1.1029	de 7.100.2		Table Vie	w	Ctrl+1	ſ

Figure 4-9 snmpTrapSrvTable

9. The Trap Server Table will show up at the right side of the window. There are **five** empty IP addresses **0.0.0.0** by default. You can update them with your *client platforms or NMS* IP addresses by *SNMP SET* command. You can also add/edit the snmpTrapSrvIP in the *Traps* tab of *SNMP Service Properties* as shown in Figure 3-10.



Figure 4-10 snmpTrapSrvTable with default IP addresses

Advantech SNMP Subagent	Version: <0.99>
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10. First, click one text field of snmpTrapSrvIP, and click "SNMP SET"

:					-	Operations: Get Next	6	📌 Go
	Result Table	172	.16.12.87 - snmp	TrapSrvTable ×				
	卢 Rotate		🐉 Refresh 💦 ,	🔓 Export 🛛	Poll 2. SNMP	SET Create I	Row Delete	Row
	snmp TrapSrv	/In	snmp TrapSrvIP	snmp TrapSrvPort	snmp TrapSrvA	snmp TrapSrvC	snmp Trap Versi	Index Valu
1	1	1.	0.0.0	162	enabled	public	v1	1
2	2		0.0.0	162	enabled	public	v1	2
3	3		0.0.0.0	162	enabled	public	v1	3
4	4		0.0.0	162	enabled	public	v1	4
5	5		0.0.0.0	162	enabled	public	v1	5

Figure 4-11 snmpTrapSrvIP and SNMP SET

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

esult Table	172 16 12 87 -	sumuTranSryTable ×	-	Operations: Get Nex	t 🔻	📌 Go
le Rotate	🧳 Refresh	Export	Poll SNMP	SET Create	Row Delete	Row
snimp Trapi	SrvIn snmp TrapSrv	/IP snmpTrapSrvPort	snmp TrapSrvA	snmp TrapSrvC	snmp Trap Versi	Index V
1	0.0.0.0	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
	0.0.0.0	102	enabled	public	VI	5
🚯 SNMP S	ET				×	
OID	.1.3.6.1.4.1.10297.10	0.2.1.2.1.2.1				
Data Tyme	IpAddress				•	
2000 1)po						

Figure 4-12 SNMP SET snmpTrapSrvIP

12. This message box "SET succeeded" is supposed to be showing up.



Figure 4-13 SET succeeded

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13. Tools \rightarrow Trap Receiver.



Figure 4-14 Trap Receiver

IReasoning MIB Browser	
File Edit Operations Tools Bookmarks	Help
Address: 172.16.12.87 - Advanced	OID: 1.3.6.1.4.1.10297.100.2
SNMP MIBs	Result Table Trap Receiver ×
advantechCommonMIB ▲	Operations Tools
in at <u>Mgmt</u> ⊕ 1a atPciConfig	🜔 🙆 🎦 🍹 🤞
iagPlatformsMIB	Description Source
trap Temperature Event	
trapVoltageEventCleared ≡	
trapRemovableDeviceEvent	
trapFanEventCleared	
trapCurrentEvent	

Figure 4-15 Trap Receiver Window

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• Now *client platform* can receive Traps/Notifications if any device was changed on *target platform*. Please plug/remove a USB hard drive from SNMP server to verify if it works.

iReason	ning MIB Brows	er				and the second					
File Edit	Operations	Tools	Bookmarks	Help							
Address: 172	.16.12.87	-	Advanced	OID: .1.3.6	1.4.1.10297.1	00.2			•	Operations:	Get Next
SNMP MIBs				Result Tab	le Tra	p Receiver ×					
	trap Temperatu	reEventC	leared	Operatio	ns Tools						
	→ trap∀oltageEve → trap∀oltageEve	mt mtCleare	d	00	X 👔	*					
	trapRemovable trapExpEvent	DeviceE	vent	Description				Source	Time		
	✓ trapFanEventC	leared	E	trapRemova	bleDeviceEve	nt		172.16.12.87	2015-07-28 16	37:14	
	trapCurrentEve	mt 		trapRemova	bleDeviceEve	at		172.16.12.87	2015-07-28 16	37:14	
Name OID	atMgmt .1.3.6.1.4.1.1029	7.100.2	u								
MIB Suntax	ADVANTECH-C	COMMO	N-MIB	Source:	172.16	12.87	Timestamp:	3	7 minutes 38 seconds	S	NMP Version
Access				Enterpri	se: .iso.orp	g dod internet private er	terprises advante	ch iagPlatforms	MIB.platformTrapObjs		
Status Def Val				Specific:	5						
Indexes				Generic	enterpr	iseSpecific					
Descr				Variable	Bindings:	-					
				Name: Value:	iso.org	g dod.internet private er r] disk-device (2)	terprises.advante	ch.iagPlatforms	MIB.peripheralGroup.hard	wareDetect	Obj.hwdTable
				Name: Value:	.iso.org [Intege	g dod internet private er r] insert (1)	iterprises advante	ch iagPlatforms	MIB. peripheralGroup. hard	wareDetect	Obj.hwdTable

Figure 4-16 Receive Traps

14. In the example of the temperature trap, set **tpMax** to **20** and set **tpState** to be **enabled**.

SNPII MILS			Result Table	172.10.12.87 - tp lat	ole ×					
n	nonitorGroup temperatureObi		P Rotate	👩 Refresh	Export	Poll SNMP	SET Create	Row Delete	Row	
	tpNumber		tpIndex	tpName	tpUnit	tp∀alue	tpMax	tpMin	tpGetTime	tpState
	🖮 🎹 tpTable	1	1	CPU Temperature	degree(s) Celsius	43.5	255	0	0x07 DF 07 1C 01	disabled
	🖮 🚮 tpEntry	2	2 2	Board Temperature	degree(s) Celsius	41	255	0	0x07 DF 07 1C 01	disabled
8	<pre> tplatex tplatex tplatex tplate tplat tplat</pre>									

Figure 4-17 Set tpMax and tpState

	(Zoom In)											
R	Result Table 172.16.12.87 - tpTable ×											
	卢 Rotate	🧳 Refresh	🛃 Export	Poll	SNM	P SET	Create	Row	Delet	e Row		
	tpIndex	tpName	tpUnit	tpValue	1.	tpMax		tpMin		tpGetTime	2.	tpState
1	1	CPU Temperature	degree(s) Celsius	39		20)		0x07 DF 07 1	C 01	enabled
2	2	Board Temperature	degree(s) Celsius	41		255		Ō		0x07 DF 07 1	C 01	disabled

Figure 4-18 Set tpMax and tpState (Zoom In)

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15. Now you will receive a trap which notifies you that the temperature is abnormal.

Result Table	172.16.12.87 - tpTable	Trap Receive	r × 172.16.12.87	tp Table			
Operations	Tools						
🜔 🔕 🎽	N 🚺 🔏						
Description			Source	Time		Severity	
trap Temperature	Event		172.16.12.87	2015-07-28	16:48:12		
Source:	172.16.12.87 Ti	mestamp:	5 minutes	30 seconds	SNMP Version:	1	
Enterprise:	.iso.org.dod.internet.private.ente	erprises advant	ech.iagPlatformsN	/IB.platformTrapO	bjs		
Specific:	1						
Generic:	enterpriseSpecific						
Variable Bir	dings:						
Name:	.iso.org.dod.internet.private.ente	erprises advant	ech iagPlatformsN	/IB.monitorGroup.	temperatureObj.tpTable	e.tpEntry.tpIndex.1	
Value:	[Integer] 1		-				
Name:	iso org dod internet private ente	erorises advant	ech iagPlatformsN	/IB monitorGroup	temperatureObi toTable	e tuEntry tuName 1	
Value:	[OctetString] CPU Temperature						-
			- I. i DI-t.C D	(ID	01:1-7-11		- 1
Name:	.1so.org.dod.internet.private.ente	erprises advan	ech lagelatiormsh	AIB.monitorGroup.	temperatureOoj.tp1aol	e.tpEntry.tpvalue.1	
value.	[Octerating] 40						- 11
Name:	.iso.org.dod.internet.private.ente	erprises advant	ech.iagPlatformsN	AIB.monitorGroup.	temperatureObj.tpTable	e. tpEntry. tpMax. 1	
Value:	[OctetString] 20						
Name:	.iso.org.dod.internet.private.ent	erprises advant	ech.iagPlatformsN	/IB.monitorGroup.	temperatureObj.tpTable	e. tpEntry. tpMin. 1	
Value:	[OctetString] 0						
Description:	"Critical Under-Temperature pro	oblem. tpIndex	, tpName, tpValue	, tpMax, tpMin"			- -

Figure 4-19 trapTemperatureEvent

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4.1.2 ManageEngine Free SNMP MIB Browser

Download Link: https://www.manageengine.com/products/mibbrowser-free-tool/download.html

1. Once running ManageEngine Free SNMP MIB Browser in the client platform, please load MIB files first.

I	ManageEngine MibBrowser	r Free Too	bl					
	File Edit View Operations	Help						
	Load MIB	Ctrl+O	P	h 💼	🔊 💩	15		
I	UnLoad MIB	Delete						
l	Load All MIBs	Ctrl+A	1	ocalho	st			-
l	UnLoad All MIBs	Ctrl+U	hity	*****				
	Save Results As	Ctrl+S						
l	Print Results	Ctrl+P						•
	IF-MIB		Туре					
l	RFC1213-MIB		Type Ident	tified	Not Available			
l	SNMP-FRAMEWORK-MIB		ted OIDs		None			
l	ADVANTECH-COMMON-MIB							
l	IAG-PLATFORMS-MIB							
I	Exit		MIBs .\mit	os\RFC	01213-MIB A	mibs\IF-I	MIB	
		MIB(s) L	oaded Sud	cessf	ully			

Figure 4-20 Free SNMP MIB Browser Load MIB

2. Load the *SNMP-FRAMEWORK-MIB* file from the MIB folder of the ManageEngine Free SNMP MIB Browser installation path. (e.g., C:\Program Files\ManageEngine\MibBrowser Free Tool\mibs)

🙆 Load a MIB File	
Open Mib Settin	gs Recent
Look in:	🔰 mibs
Recent Items	APPLICATION-MIB Oracle-database.mib BRIDGE-MIB CISCO-MIB CISCO-MIB CISCO-RTTMON-MIB CISCO-RTTMON-TC-MIB.my RFC1155-SMI
Desktop	EtherLike-MIB RFC1213-MIB.cds FDDI-SMT73-MIB RFC1213-MIB.cmi
My Documents	IANAifType-MIB RFC1315-MIB IANAifType-MIB.cds SNMP-FRAMEWORK-MIB IANAifType-MIB.cmi SNMP-FRAMEWORK-MIB.my
Computer	IF-MIB SNMP-USER-BASED-SM-MIB IF-MIB.cds SNMPv2-MIB IF-MIB.cmi SNMPv2-MIB.cds
	MSSQL-MIB SNMPv2-MIB.cmi
Network	File name: SNMP-FRAMEWORK-MIB Open Files of type: All Files Cancel

Figure 4-21 SNMP-FRAMEWORK-MIB

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3. Load *ADVANTECH-PLATFORMS-MIB.mib* and *advantech-common-mib.mib*. They are available after you installed the *Advantech SNMP Subagent*. (e.g., C:\program files\Advantech\AdvSNMPAgent\Mib). Copy these two files to your *client platform* in advance.

📔 Load a MIB File		2
Open Mib Setti	ngs Recent	
Look in:	🕌 MIB Files 👻	
Recent Items	 advantech-common-mib.mib ADVANTECH-PLATFORMS-MIB.mib 	
Desktop		
My Documents		
Computer		
Network		
	Files of type: All Files	

Figure 4-22 Advantech MIBs

4. Enter the IP address of the *target platform* where *Advantech SNMP Subagent* was installed in the **Host** field. Enter 'public' in the **Community** field and 'private' in the **Write Community** field.

ManageEngine MibBrowser	Free Tool
File Edit View Operations	s Help
، 🖬 🚯 🖻 🌦 🍝	🟐 🖻 🐚 🖏 🜮 🧠 🏹 🕸 🛅 🐞 🛫 🏧 🧇 🔯 🚺 nore Free Tools
Loaded MibModules 	Host 172.16.12.87 Port 161
Breat RFC1213-MIB	Community ****** Write Community ******
B - 4 IF-MIB B - 4 ADVANTECH-COMMO	Set Value
B SNMP-FRAMEWORK-I B SNMPv2-MIB	Device Type Identified Not Available C Reload
	Suggested OIDs None
	Object ID
	MIB(s) Loaded Successfully.
	Loading MIBs "C:\Program Files\Advantech\SNMP Subagent\MIB Files\advantech-common-mib.mib"
	MIB(s) Loaded Successfully
	Loading MIBs "C:\Program Files\Advantech\SNMP Subagent\MIB Files\IAG-PLATFORMS-MIB.mib"
	MIB(s) Loaded Successfully
	Description MultiVar
	Syntax Status
	Access Reference
	Index
	Object ID
	Description
Global View 📃	

Figure 4-23 Community and Write Community

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5. For example, you can find **sysModuleID** as the following Figure 4-24. Find **sysModuleID**, right-click on it then click **GET**



The target platform will reply the module/product name message at the result window.

6.

ManageEngine MibBrowser Free Tool					L-	. 🗆 X
File Edit View Operations Help						
🚴 💑 🗊 🍪 🖶 🎒 🐚	🐂 🗊 🔊	🎭 🏹 🖄	💷 👋 🛫	: 🔤 🔿 [More Free Toc	ls.
Loaded MibModules IAC-PLATFORMS-MIB IANAITYpe-MIB RFC1213-MIB IF-MIB ADVANTECH-COMMON-MIB IF-MIB ADVANTECH-COMMON-MIB IF-MIB Advantech IF-MIB Advantech IF-MIB Advantech IF-MIB System IF-MIB System IF-MIB	Host Community Set Value Device Type Suggested C Object ID Sent GET req sysModuleID.	172.16.12.87 ****** 0.0.0.0 Identified Windows DIDs .1.3.6.1 .iso.org.dod.inter uest to 172.16.12.8 0	×P .4.1.311.1.1.3.1 et.private.enterp ': 161 UNC	Port Write Commu Write Commu	161 inity ****** Release advantechCommonMIB.atSy	vad
B 3 SNMP+r Kawevork K*wild	Description M	ultiVar				
	Syntax	DisplayString		Status	mandatory	
	Access	read-only		Reference		
	Index					
	Object ID	.1.3.6.1.4.1.10297	100.1.1			
Global View 📃	Description	"The module include the f	name of the ull name o:	e device. T f the hardw	his value should are. It is mandat	cory 📮

Figure 4-26 sysModuleID.0

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7. You can also right-click on **sysBootCount**, and then click **GET** to get reboot counter value from *target platform*, for example.

ManageEngine MibBrowser Free Tool					
File Edit View Operations Help					
🚵 🎂 🗈 🚳 🖬 🗇 🐚 🖷	in 🛊 🔊	🎭 📉 🖄 📠	🛫 🔤 🧼	More Free Tools	
Loaded MibModules IAG-PLATFORMS-MIB IANAITYpe-MIB IF-MIB ADVANTECH-COMMON-MIB IF-MIB Advantech advantech advantech advantech advantech sysModuleID sysDeviceName sysDeviceName sysDeviceName sysDeviceName sysDeviceName sysDeviceName sysPeleaseDate sysFirstBootTime sysFirstBootTime sysDeviceName sysFirstBootTime sysDeviceName sysFirstBootTime sysFirstBootTime atMgmt	Host Community Set Value Device Type Device Type Suggested O Object ID Sent GET requ sysModuleID.I Sent GET requ sysBootCount	172.16.12.87 #***** 0.0.0 identified Windows XP IDS .1.3.6.1.4.1.311.1.1.4 .iso.org.dod.internet.private.ent test to 172.16.12.87 : 161 D U uest to 172.16.12.87 : 161 .0 4	Port Write Comm	aunity 161 ******* C Reload .advantechCommonMIB.atSystem	•
B- SNMP-FRAMEWORK-MIB					•
		ıltiVar			
	Syntax	Counter	Status	mandatory	
	Access	read-only	Reference		
	Index				
	Object ID	.1.3.6.1.4.1.10297.100.1.8			
	Description	"The boot count since	e the entity,	/device was first bo	ot."
Global View 🔄					

Figure 4-27 sysBootCount.0

8. *Advantech SNMP Subagent* also has TRAP functions which will notify the *client platform* if alarm events occurred on the *target platform*. For example, if the voltage is abnormal, SNMP will automatically send a trap to notify the user. Find **snmpTrapSrvTable**, click **View SNMP Data Table** on the toolbar.

ManageEngine MibBrowser Free Tool	ManageEngine MibBrowser Free Tool						
File Edit View Operations Help							
🚴 📥 🗈 ጰ 🖬 🐴	è 🐚 🗊 🖄	🇠 🍇 🖄 📾	: 🔤 🧼	Download More Free Tools			
Jed MibModules AG-PLATFORMS-MIB ANATType-MIB RFC1213-MIB F-MIB OVANTECH-COMMON-MIB enterprises advantech advantech advantechCommonMIB ad	Host Community Set Value Device Type Device Type Ide Suggested OID: Object ID	172.16.12.87 View SNMP Da ****** V ***** ****** ******** V ************************************	ta Table Ont Write Commun	161 ty ****** Reload fgmt.snmpTrapSrvObj.snmpTrapSrvTable			
	Description MultiV	ar					
	Syntax		Status r	nandatory			
	Access n	ot-accessible	Reference				
	Index						
· · · · · ·	Object ID .1	1.3.6.1.4.1.10297.100.2.1.2					
Global View 🗖	, Description SP	"The (conceptual) table li NMP Trap server acting as	sting the a trap rec	information of the remote eiver."			

Figure 4-28 View SNMP Data Table

Advantech SNMP Subagent	Version: <0.99>
User Guide	Date: <05/02/2018>

9. It will display an *SNMP Table* as below and then click **Start** to get the data.

	🗅 SNMP Tableiso.org.dod.internet.private.enterprises.advantech.advantechCommonMIB.atMgmt.snmpTrapSrv 🗔 💷 🕱							
	snmpTrapSrvIndex	snmpTrapSrvIP	snmpTrapSrvPort	snmpTrapSrvAuthen	snmpTrapSrvCommu			
I								
1								
1								
I								
I								
I								
I								
I	•							
	View from 💿 Origin 🦿) Index 0	Host 172.1	6.12.87 Page :0 Rows :	:0 Settings			
	Start	Next	Prev Start	Polling StopPolling	Refresh			
	Add	Delete	Graph Origin	alTable IndexEditor	Close			

Figure 4-29 SNMP Table

10. The snmpTrapSrvTable will show up as below figure. There are **five** empty IP addresses **0.0.0.0** by default. You can update it with your *client platform or NMS* IP address by *SNMP SET* command. You can also add/edit the snmpTrapSrvIP in the *Traps* tab of *SNMP Service Properties* as shown in Figure 3-10.

🗈 SNMP Tableiso.org.dod.internet.private.enterprises.advantech.advantechCommonMIB.atMgmt.snmpTrapSrv 📼 💷 🔀							
snmpTrapSrvIndex	snmpTrapSrvIP	snmp	TrapSrvPort	snmpTrap	SrvAuthen	snmpTrapSrvCommu	
1	0.0.0.0	162		enabled(1)	P	ublic	
2	0.0.0.0	162		enabled(1)	P	ublic	
3	0.0.0.0	162		enabled(1)	P	ublic	
4	0.0.0	162		enabled(1)	P	ublic	
5	0.0.0.0	162		enabled(1)	P	ublic	
View from 💿 Origin	View from Origin Index View from Origin View						
Start	Next	Prev	StartPol	ling	StopPolling	Refresh	
Add	Delete	Graph	OriginalT	able	IndexEditor	Close	

Figure 4-30 snmpTrapSrvTable data

Advantech SNMP Subagent	Version: <0.99>
User Guide	Date: <05/02/2018>

11. Click on the each snmpTrapSrvIP text field and enter the IP address of the *client platform or NMS* and then click the **Refresh** button to make sure the IP address has been updated.

snmpTrapSrvIndex snmpTrapSrvP snmpTrapSrvPort snmpTrapSrvAuthen snmpTrapSrvCommu 1 1. 172.16.12.219 162 enabled(1) public 2 0.0.0 162 enabled(1) public 3 0.0.0.0 162 enabled(1) public 4 0.0.0.0 162 enabled(1) public 5 0.0.0.0 162 enabled(1) public 5 0.0.0.0 162 enabled(1) public 5 0.0.0.0 162 enabled(1) public	🗈 SNMP Tableiso.org.dod.internet.private.enterprises.advantech.advantechCommonMIB.atMgmt.snmpTrapSrv							
1 1. 172.16.12.219 162 enabled(1) public 2 0.0.0.0 162 enabled(1) public 3 0.0.0.0 162 enabled(1) public 4 0.0.0.0 162 enabled(1) public 5 0.0.0.0 162 enabled(1) public 6 III IIII public IIIIIIIIII 6 IIII IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	snmpTrapSrvIndex	snmpTrapSrvIP	snmpTra	apSrvPort	snmpTra	apSrvAuthen	snmpTrapSrvCommu	
2 0.0.0 162 enabled(1) public 3 0.0.0.0 162 enabled(1) public 4 0.0.0.0 162 enabled(1) public 5 0.0.0.0 162 enabled(1) public 5 0.0.0.0 162 enabled(1) public 6 0.0.0.0 162 enabled(1) public 5 0.0.0.0 162 enabled(1) public 6 0.0.0.0 162 enabled(1) public 7 Image: Constant State Stat	1 1.	172.16.12.219	162		enabled(1)	F	ublic	
3 0.0.0.0 162 enabled(1) public 4 0.0.0.0 162 enabled(1) public 5 0.0.0.0 162 enabled(1) public 6 0.0.0.0 162 enabled(1) public 7 0.0.0.0 162 enabled(1) public 6 0 162 enabled(1) public 7 0.0.0.0 162 enabled(1) public 6 0 162 enabled(1) public 7 0.0.0.0 162 enabled(1) public 8 0.0.0.0 162 enabled(1) public 7 0.0.0.0 162 enabled(1) public 8 0.0.0.0 162 enabled(1) public 7 162 162 enabled(1) public 8 0.0.0.0 162 enabled(1) public 9 10.0.0 162 172.16.12.87 Page :1 Rows :5 Settings 8 Start Next Prev StartPolling S	2	0.0.0.0	162		enabled(1)	F	ublic	
4 0.0.0 162 enabled(1) public 5 0.0.0 162 enabled(1) public	3	0.0.0.0	162		enabled(1)	F	ublic	
5 0.0.0.0 162 enabled(1) public Image: start star	4	0.0.0.0	162		enabled(1)	F	ublic	
Image: start star	5	0.0.0	162		enabled(1)	F	ublic	
Start Next Prev StartPolling StopPolling 2. Refresh Add Delete Graph OriginalTable IndexEditor Close								
Start Next Prev StartPolling StopPolling 2. Refresh Add Delete Graph OriginalTable IndexEditor Close	View from Origin	jindex u	H	ost 1/2.16.12	87	Page :1 Rows ::	Settings	
Add Delete Graph OriginalTable IndexEditor Close	Start	Next	Prev	StartPoll	ing	StopPolling 2	. Refresh	
	Add	Delete	Graph	OriginalTa	able	IndexEditor	Close	

Figure 4-31 Set snmpTrapsrvIP

12. Click Trap Viewer UI icon on the toolbar.

🙆 ManageEngine MibBrowser Free Tool							
File Edit View Operations Help							
🚴 📥 🗉 🔲 🖬 🗂 🐚	è 🐂 🗊 💋) 🧠 🏹 🖄 🛅 👋 🛫	🔤 🥥	B Download More Free Tools			
bed MibModules AG-PLATFORMS-MIB ANAITType-MIB RFC1213-MIB F-MIB ADVANTECH-COMMON-MIB Penterprises advantech advantechCommonMIB Penterprises advantechCommonMIB AdvantechCommonMIB Penterprises advantechCommonMIB AdvantechCommonMIB AdvantechCommonMIB AdvantechCommonMIB AdvantechCommonMIB AdvantechCommonMIB AdvantechCommonMIB AdvantechCommonMIB AdvantechCommonMIB AdvantechCommonMIB AdvantechCommonMIB AdvantechCommonMIB AdvantechCommonMIB AdvantechCommonMIB AdvantechCommonMIB AdvantechCom	Host Community Set Value Device Type – Device Type Id Suggested Oll Object ID	172.16.1 Trap Viewer UI F ****** V ****** V entified Windows XP Ds .1.3.6.1.4.1.311.1.1.3.1.1 .private.enterprises.advantech.advantech	Port Vrite Commu CommonMIB.e	161			
	Description Mult	iVar					
	Syntax		Status	mandatory			
	Access	not-accessible	Reference				
	Index						
4 III +	Object ID	.1.3.6.1.4.1.10297.100.2.1.2					
Global View 🗌	Description	"The (conceptual) table li: SNMP Trap server acting as	sting the a trap re	e information of the remote eceiver."			

Figure 4-32 Click Trap Viewer UI

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13. Now *client platform* can receive Traps/Notifications if any device was changed on the *target platform*. Click Start to listen for Traps.

Ҟ TrapViewer		_			
Class	Туре	Source	Date	Message	
🔽 Authenticat	te v1/v2c traps (Con	nmunity)	🔲 Enable Logg	ng Log Format 💌	
📝 Authenticat	te v3 Trap		🔲 Enable Mail	Configure Mail	
Port	162	TrapList	- Add	Del	
Community	public	TrapParser		Load	
Start	Stop] Show Details	Delete Entry	ParserEditor	
Traps : 0 Inform : 0 Status : Not Listening for Traps					

Figure 4-33 TrapViewer

14. Please plug/remove a USB hard drive from SNMP server to verify if it works. Click Show Details

🔨 TrapViewer	1 TrapViewer							
Class	Туре	Source	Date	Message				
Clear	v1 Trap	172.16.12.87	Sat Apr 14 23:21:	33iso.org.dod.internet				
Clear	v1 Trap	172.16.12.87	Sat Apr 14 23:21:	33iso.org.dod.internet				
✓ Authenticate v1/v2c traps (Community) □ Enable Logging Log Format ▼ ✓ Authenticate v3 Tran								
Port	162	TrapList	162:public 💌	Add Del				
Community	public	TrapParser		Load				
Start	Stop	Show Details	Delete Entry	ParserEditor				
Trap	Traps : 2 Inform : 0 Status : Listening for Traps							

Figure 4-34 USB hard driver removed

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15. It will display a Trap Details window as Figure 4-35.

🁙 Trap Details	
TimeStamp	1 dem 21 hours 3 minutes 55 seconds
Enternrise	in any ded internet universe seconds.
Concerio Turno	.iso.org.dod.internet.private.enterprises.advante
Generic Type	Enterprise Specific
Specific Type	5
Message	.iso.org.dod.internet.private.enterprises.advante
	hardwareDetectObj.hwdTable.hwdEntry.hwdDeviceType
	.iso.org.dod.internet.private.enterprises.advante(
	nardwareDetectOp].nwdlable.nwdEntry.nwdEvent.121:
	hardwareDetectObi.hwdTable.hwdEntry.hwdFriendlyNa
	,
Severity	Clear
Entity	172.16.12.87
RemotePort	53574
LocalPort	162
Community	public
Node	172.16.12.87
Source	172.16.12.87
TimeReceived	Sat Apr 14 23:21:33 PDT 2012
HelpURL	6-5.html
•	4

Figure 4-36 Trap Details

16. In the example of the temperature trap. Find **tpTable**, click **View SNMP Data Table** on the toolbar. In the SNMP Table set **tpMax** to **20** and set **tpState** to be **enabled**.

SNMP Tableiso.or	g.dod.internet.private.ent	erprises.advanted	h.iagPlatformsMIB	.monitorGroup.tempera	atureO 🗆 💷 🔀
tpIndex	tpName	t	oUnit	tpValue	tpMax
1	CPU Temperature	degree(s) Ce	lsius 48		20
2	Board Temperature	degree(s) Ce	lsius 43.	5	255
					4
View from 💿 Origin	O Index 0		Host 172.16.12.87	Page :1 Rows	:2 Settings
Start	Next	Prev	StartPolling	StopPolling	Refresh
Add	Delete	Graph	OriginalTable	e IndexEditor	Close

Figure 4-37 Set tpMax

Advantech SNMP Subagent	Version: <0.99>
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tpValue	tpMax		tpMin	tpGetTime	tpState
18	20	0	201	5-7-30,15:0:59.1,+8:0	enabled(1)
3.5	255	0	201	5-7-30,15:0:59.1,+8:0	disabled(2)
4					
< View from	in 🔿 Index 0		Host 172.16.12.87	III Page :1 Rows	:2 Settings
 ✓ View from	in 💿 Index 0	Prev	Host 172.16.12.87	III Page :1 Rows	:2 Settings Refresh

Figure 4-38 Set tpState

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17. In the TrapViewer window, you can see a trap, click **Show Details** to get more information.

ManageEngine Mibl	Browser Free Tool					×
File Edit View Op	erations Help					
86 🗈 🎂 🏠	🖬 🎒 🐚	<u>e n 4 20</u>	🧙 🍝 I	🏛 👋 🛫 🍕	🖻 🧇 🖳 🚺	Download Nore Free Tools
Loaded MibModules E Loaded MibModules IAG-PLATFORM E Contentioned E Contentioned	🔨 TrapViewer	-	11111			
enterprises	Class	Туре	Source	Date	Message	*
ti ugr ti ⊡ s	Clear	v1 Trap	172.16.12.87	Sun Apr 15 03:06:4	10 iso.org.dod.internet	
⊖ (] ⊖(C Reload
						emperatureObj.tpTable
	Authenticate v1/	V2c traps (Community)	Enable L	ogging Log Format 💌	
	🗸 Authenticate v3	Trap		Enable M	tail Configure Mail	
	Port 162		TrapList 16	2:public 👻	Add Del	
	Community pub	lic	TrapParser		Load	j
	Start	Stop	Show Details	Delete Entry	ParserEditor	
	Traps :	1 Inform : 0	Statu	s : Listening for Tra	ıps	
lplatfo	сіаоданний	Object ID	.1.3.6.1.4.1.10297.3	200.2.1.2		
Global View 📃		Description	"The (concep target device	tual) table l ."	isting the temper	atures of the

Figure 4-39 TrapViewer

Advantech SNMP Subagent	Version: <0.99>
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🎂 Trap Details	
TimeStamp	O hours, 4 minutes, 27 seconds.
Enterprise	.iso.org.dod.internet.private.enterprises.advantech.iagPlatformsMIB.p
Generic Type	Enterprise Specific
Specific Type	1
Message	<pre>.iso.org.dod.internet.private.enterprises.advantech.iagPlatformsMIB.m peratureObj.tpTable.tpEntry.tpIndex.1: INTEGER: 1: .iso.org.dod.internet.private.enterprises.advantech.iagPlatformsMIB.m peratureObj.tpTable.tpEntry.tpName.1: CPU Temperature: .iso.org.dod.internet.private.enterprises.advantech.iagPlatformsMIB.m peratureObj.tpTable.tpEntry.tpValue.1: 48.5: .iso.org.dod.internet.private.enterprises.advantech.iagPlatformsMIB.m peratureObj.tpTable.tpEntry.tpValue.1: 20: .iso.org.dod.internet.private.enterprises.advantech.iagPlatformsMIB.m peratureObj.tpTable.tpEntry.tpMax.1: 20:</pre>
Severity	Clear
Entity	172.16.12.87
RemotePort	55944
LocalPort	162 🗸
•	4 III

Figure 4-40 Trap Details