Advantech IIoT Group

Advantech

SNMP Subagent

User Guide

For Windows

Version <1.2>

IIoT Edge & Control SW

Advantech SNMP Subagent	Version: <1.2>
User Guide	Date: <11/25/2022>

Revision History

Date	Version	Description	
2022/11/25	1.2	Support Intel Virtual RAID event, 4104, 4105, 4126, 4135, 4136, 4140, 4141, 4144, 4147, 4150, 4152, 4153, 4155	
2022/08/11	1.1	Add Intel RST RAID event, add raidEventType, raidEventID, raidEventMessage, raidEventTime to raidObj Event ID: 7000, 7201, 7209, 7214, 7217, 7223	
2019/08/27	1.0	Add trapCpuUsageEvent, trapCpuUsageEventCleared	
2018/05/02	0.99	Add log file descriptions	
2017/08/29	0.98	Update powerObj to add pwr-v1-low(3), pwr-v2-low(4) status.	
2016/10/05	0.97	Update Screenshot	
2016/02/16	0.96	Add powerObj to monitorGroup. Add trapPowerStatusChanged	
2015/12/23	0.95	Fix typo	
2015/12/21	0.94	Update monitorGroup to introduce the new thresholds and severity. Add memoryInfo, storageInfo, memory usage traps, and storage usage traps.	
2015/08/20	0.93	ManageEngine Free SNMP MIB Browser	
2015/04/01	0.92	Add Supported MIB Browser	
2014/12/12	0.91	Add Advantech SNMP Subagent Functions	
2014/10/23	0.90	Initial draft	

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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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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 	Enables star Provides su The startup The WSCSV Supports fil Provides no Supports th Manages ac	Started Started Started Started Started Started	Manual Disabled Automatic Automatic Manual Automatic Automatic Automatic Automatic Manual Manual Manual	Local Service Local Syste Network S Local Syste Local Service Local Syste Local Syste Local Syste Local Syste Local Service Local Service Local Syste
	Extended (Standard /	SNMP Service SNMP Trap Software Protection SSDP Discovery Superfetch System Event Noti Tablet PC Input Se Task Scheduler	Discovers n Maintains a Monitors sy Enables Tab Enables a us	Started	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

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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		_ 0 _ X	
🕒 🗢 🗖 « All Control P 1	 Programs and Features <i>search Programs and Features</i> 	atures 🔎	
Control Panel Home View installed updates Turn Windows features on or off	Uninstall or change a program To uninstall a program, select it from the list and then click Un Change, or Repair.	install,	
	Organize 🔻	=	
	Name	Publisher	
	Adobe Flash Player 15 ActiveX	Adobe Sys	
	Advantech DiagAnywhere Server	Advantech	
	🛃 Advantech Lmsensor Nuvoton Driver	Advantech	
	记 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	
	Untel® HD Graphics Driver Intel® HD Graphics Driver		
	3 Intel® Management Engine Components	Intel Corp	
	🔁 Intel® Rapid Storage Technology	Intel Corp	
	M Intel® SDK for OpenCL - CPU Only Runtime Package Intel		
	Microsoft .NET Framework 4.5.1 Microsoft		
	۲ (ال		
	Currently installed programs Total size: 166 MB 15 programs installed		

Figure 1-2 Programs and Features

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Windows Features	
Turn Windows features on or off	•
To turn a feature on, select its check box. To turn a feature off, cl check box. A filled box means that only part of the feature is turn	
🕀 🔲 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	
E Windows Process Activation Service	
🔽 🔒 Windows Search	
Windows TIFF IFilter	*
ОК	Cancel

Figure 1-3 Windows Features

1.4.2 Latest Drivers

The Advantech SNMP Subagent requires the latest Advantech drivers/SDK 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)
- Advantech PlatformSDK (EAPI) library or SUSI library

Depending on your device, load additional drivers such as Intel RST RAID driver or Intel Virtual RAID driver, power module driver.

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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	Comment
Advantech	advantech-common-mib.mib	iso(1).org(3).dod(6).internet(1).private(4)	General information for
Common Agent		.enterprises(1).advantech(10297)	Advantech device module
		.advantechCommonMIB(100)	and platforms.
Advantech	ADVANTECH-PLATFORMS-	iso(1).org(3).dod(6).internet(1).private(4)	Rich platform peripherals
Platform Agent	MIB.mib	.enterprises(1).advantech(10297)	of data, system
		.advantechPlatformsMIB(200)	information and alarms

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

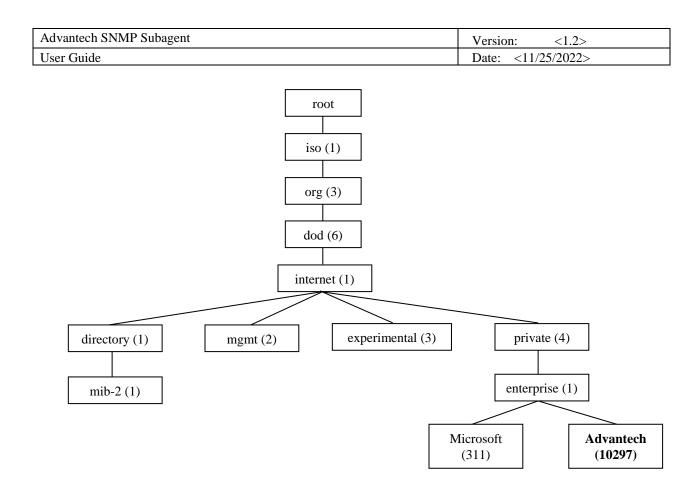


Figure 2-1 OIDs tree

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.

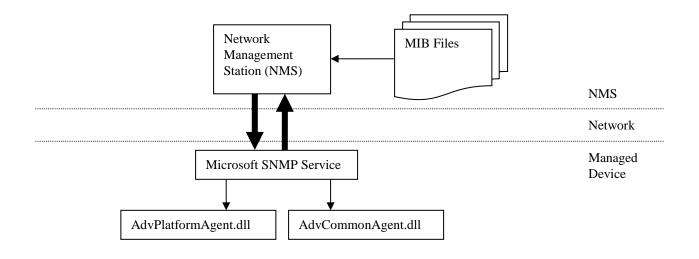


Figure 2-2 Architecture

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2.4 Advantech SNMP Subagents

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

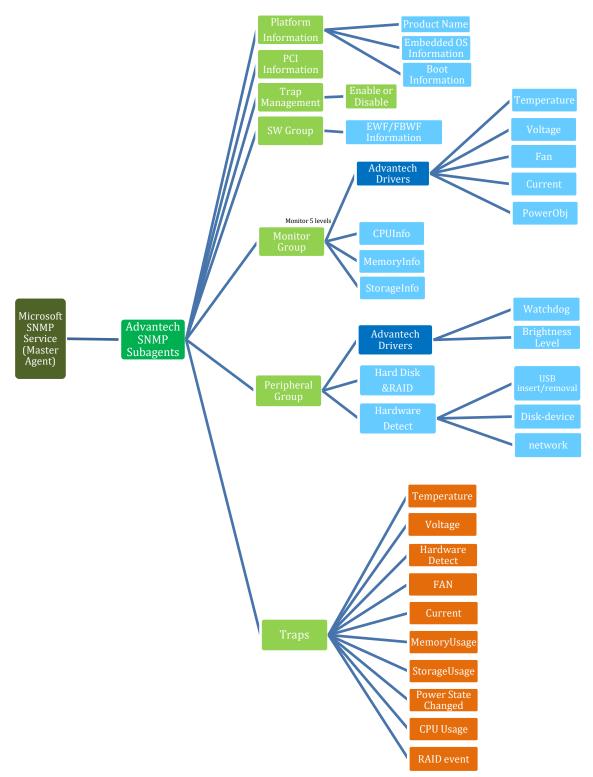


Figure 2-3 Advantech SNMP Subagent Functions

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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.

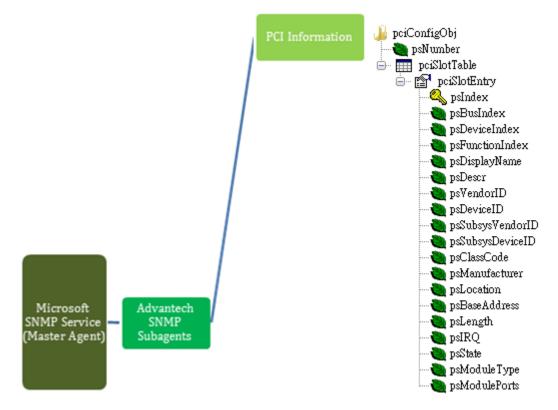
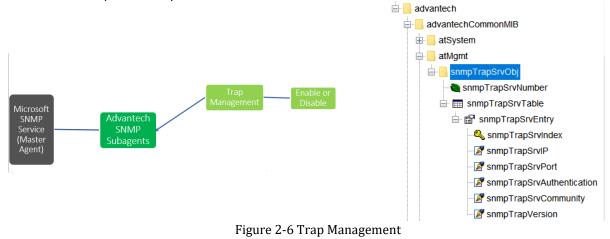


Figure 2-5 PCI Information

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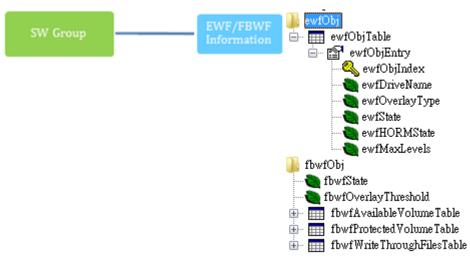
2.4.3 Trap Management

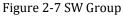
You can **set** the *destination IP, port, community string* of NMS server that would like to get trap message. Also need to set ReadOnly community and ReadWrite community for authentication used, and enable the authentication trap for security concern.



2.4.4 Software Group

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





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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 (CPU Usage), 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 \sim 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 *Usage Th2* 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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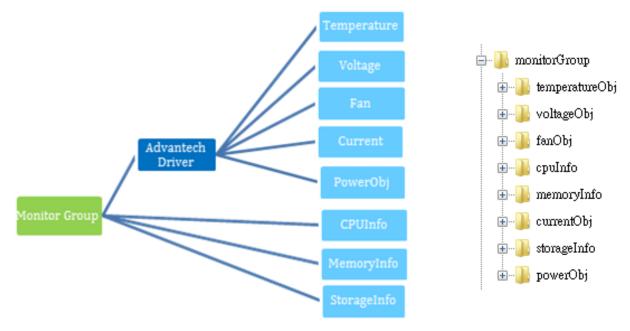
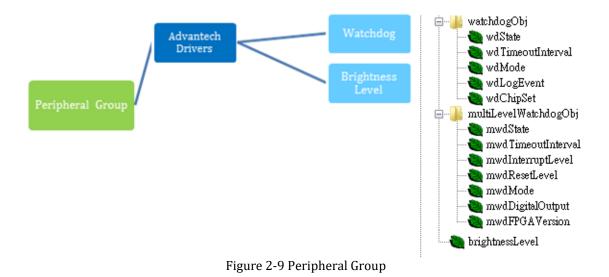


Figure 2-8 Monitor Group

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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.

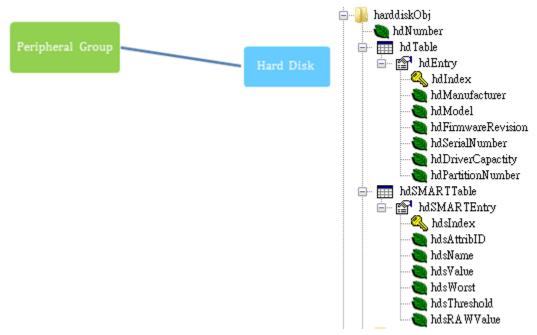


Figure 2-10 Peripheral Group – Hard Disk

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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}

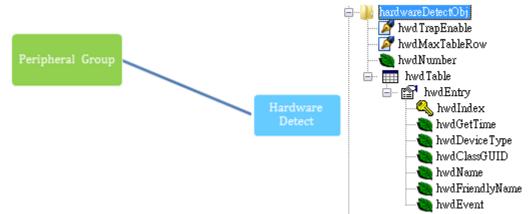


Figure 2-11 Peripheral Group – Hardware Detection

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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
- CPU Usage exceeds the threshold value
- CPU Usage becomes normal

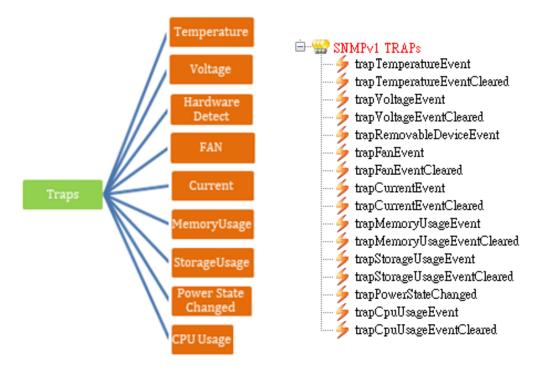


Figure 2-12 Traps

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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

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.

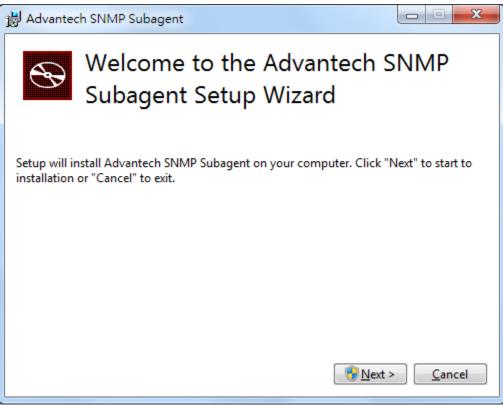


Figure 3-1 Advantech SNMP Subagent Installation Package

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

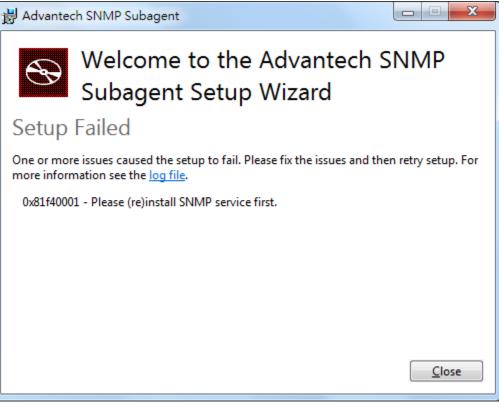


Figure 3-2 Please install SNMP service

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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.

🖟 Advanted	h SNMP Subagent	
Ð	Welcome to the Advanted Subagent Setup Wizard	h SNMP
Status:	Advantech Kernel Driver	
		Cancel

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.

H 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. How can I decide which device software is safe to install?	
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.

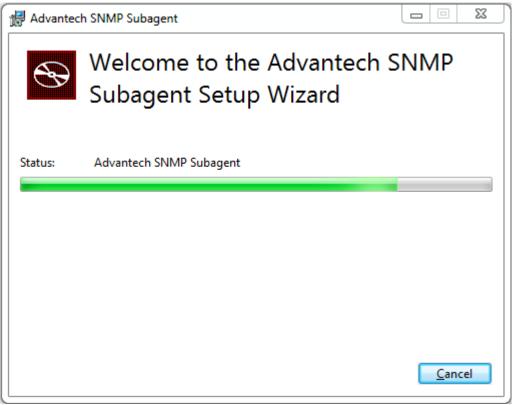


Figure 3-5 Advantech SNMP Subagent

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

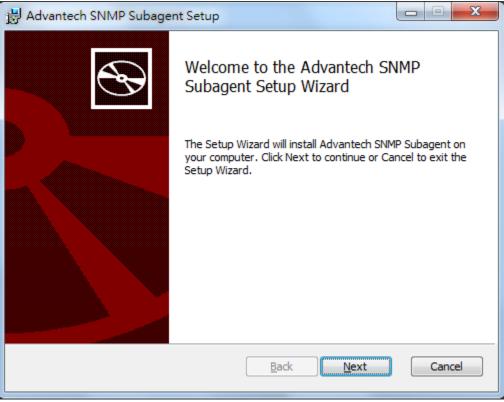


Figure 3-6 Advantech SNMP Subagent Setup Wizard

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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.

Advantech SNMP Subagent	×
SNMP Configuration Please enter your SNMP information	Ð
Read-Only Community: Dublic Read-Write Community: private Irap Community: public	
<u>B</u> ack Nex	ct Cancel

Figure 3-7 SNMP Configuration

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B Advantech SNMP Subagent	
Please enter your SNMP information	
Read-Only Comr public* Read- <u>W</u> rite Com private <u>T</u> rap Community: public	Non-numeric/letter character was found. 確定
	Back Next 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)	i∄ Advantech SNMP Subagent
General Log On Recovery Agent Traps Security Dependencies	SNMP Configuration Please enter your SNMP information
- Accepted community <u>n</u> ames	
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>W</u> rite Community: private <u>Irap Community:</u> public
Add Edit Remove	Back Next Cancel

Figure 3-9 Community for Security of SNMP service

Advantech SNMP Subagent	Version: <1.2>
User Guide	Date: <11/25/2022>

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 The SNMP Service provides network management over TCP/IP	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: private Trap 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

Advantech SNMP Subagent	Version: <1.2>
User Guide	Date: <11/25/2022>

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	Cane	cel

Figure 3-11 Ready to Install SNMP Subagent

Advantech SNMP Subagent	Version: <1.2>
User Guide	Date: <11/25/2022>

Advantech SNMP Subagent Setup						
Installing Advantech SNMP Subagent						
Please wait while the Setup Wizard installs Adva	intech SNMP Subagent.					
Status: Stopping services						
	Back Next Cancel					

Figure 3-12 Stop/Start Service

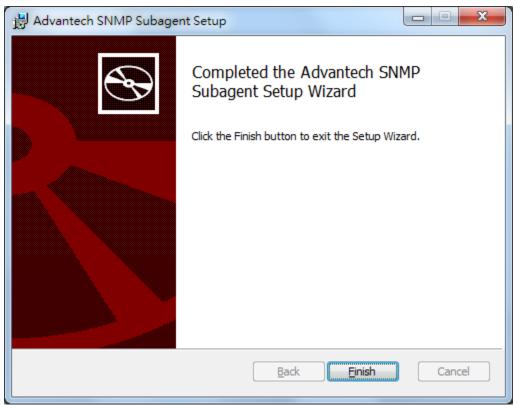


Figure 3-13 Installation Completed

Advantech SNMP Subagent	Version: <1.2>
User Guide	Date: <11/25/2022>

3.1.6 Restart Computer

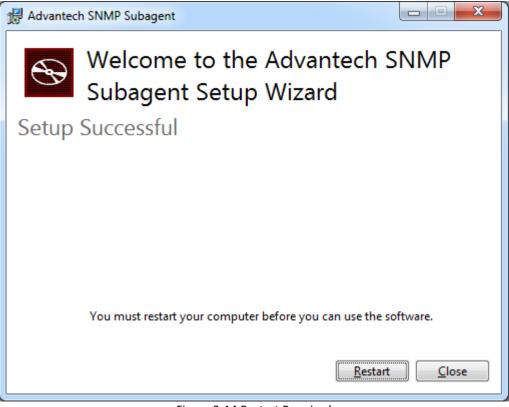


Figure 3-14 Restart Required

Advantech SNMP Subagent	Version: <1.2>
User Guide	Date: <11/25/2022>

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 Serv	vice Prop	erties (Loca	l Comp	uter)			x
General	Log On	Recovery	Agent	Traps	Security	Dependenci	es
Sen	d a <u>u</u> thenti	cation trap					
Acce	pted com	munity <u>n</u> ame	s				- II
Co	mmunity			Rig	nts		
pu	blic				AD ONLY		
priv	vate			RE/	AD WRITE		
	Ad	d	<u>E</u> dit		<u>R</u> emo	ve	
	ccent SN	MP packets	from any	host			1
		MP packets	-				
lo	calhost	-	-				
	Ad	d <u>.</u>	Edit		Re <u>m</u> o	ve	
Leam r	nore abou	t <u>SNMP</u>					
			OK		Cancel		ply

Figure 3-15 Add NMS IP address

Advantech SNMP Subagent	Version: <1.2>
User Guide	Date: <11/25/2022>

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.

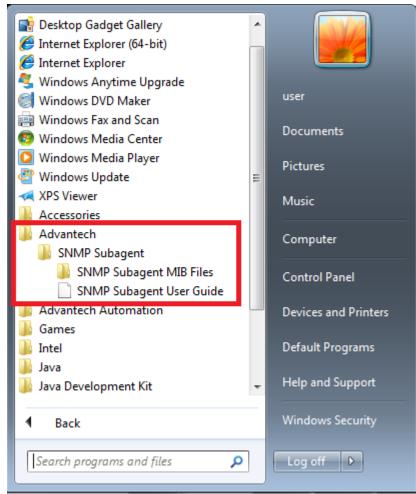


Figure 3-16 MIB Files

Advantech SNMP Subagent	Version: <1.2>
User Guide	Date: <11/25/2022>

C:\Program	Files (x86)\Advantech\SNMP Subagent\MIB Files	🛨 🍫 Search MIB Fi	iles	
Organize 👻 Include in	n library 🔻 Share with 👻 New folder			
 ★ Favorites ■ Desktop ▶ Downloads ™ Recent Places ◯ Libraries ⊇ Documents ↓ Music ■ Pictures 	Name advantech-common-mib.mib ADVANTECH-PLATFORMS-MIB.mib	Date modified 10/5/2016 2:44 PM 10/5/2016 2:42 PM	Type MIB File MIB File	Size
Videos Computer Local Disk (C:)				
• Network	< III			

Figure 3-17 MIB Files Location

Advantech SNMP Subagent	Version: <1.2>
User Guide	Date: <11/25/2022>

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.

🕞 🕞 🗢 🧱 « All Control P	Programs and Features Factor Search Program	os and Features 👂	
Control Panel Home View installed updates Turn Windows features on or off	Uninstall or change a program To uninstall a program, select it from the list and then Change, or Repair.	n click Uninstall,	
	Organize 🔻 Uninstall Change	:= - (2)	
	Name	Publisher	
	Adobe Flash Player 15 ActiveX Adobe Systems Ir Advantech DiagAnywhere Server Advantech		
	Advantech Lmsensor Nuvoton Driver Advantech Advantech SNMP Subagent Advantech Co., Ltd.		
	Advantech Watchdog Driver CrystalDiskInfo 6.1.14 Google Chrome Intel(R) Network Connections 17.1.55.0 Intel® Control Center Intel® HD Graphics Driver Intel® HD Graphics Driver Intel® Management Engine Components Intel® Rapid Storage Technology Intel® SDK for OpenCL - CPU Only Runtime Package Microsoft .NET Framework 4.5.1	Advantech Automation Crystal Dew World Google Inc. Intel Intel Corporation Intel Corporation Intel Corporation Intel Corporation Intel Corporation Microsoft Corporation	
	Advantech Co., Ltd. Product version: 0.12.0 Size: 744 K		

Figure 3-18 Uninstall or change a program

Advantech SNMP Subagent	Version: <1.2>
User Guide	Date: <11/25/2022>

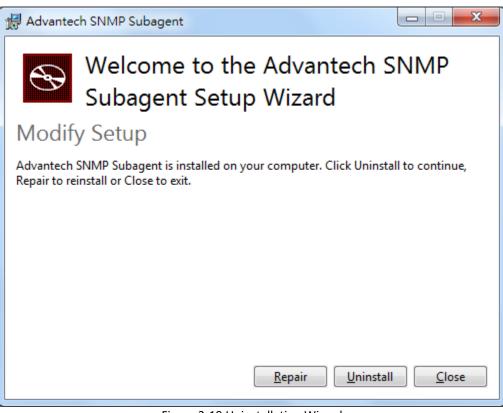


Figure 3-19 Uninstallation Wizard

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.

Advantech SNMP Subagent	Version: <1.2>
User Guide	Date: <11/25/2022>

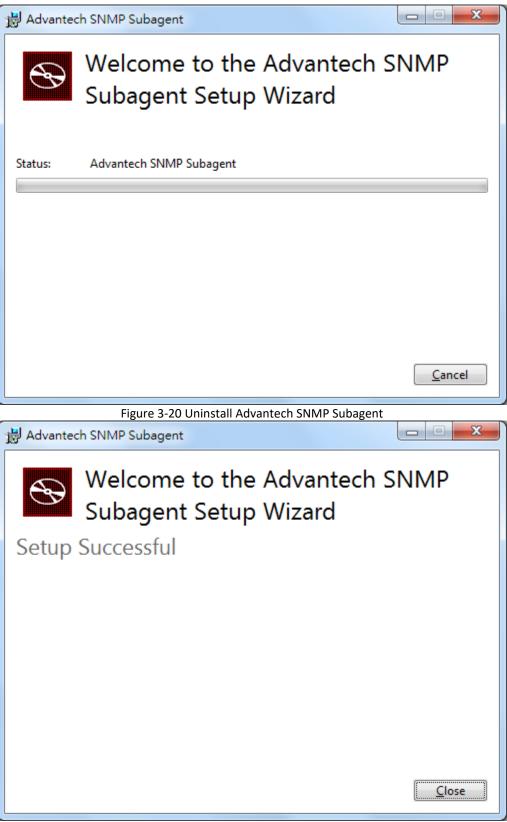


Figure 3-21 Uninstall Successful

Advantech SNMP Subagent	Version: <1.2>
User Guide	Date: <11/25/2022>

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.

<	🚯 iR	leasonii	ng MIB Brows	er		
ſ	File	Edit	Operations	Tools	Bookmarks	Help
ŀ	D	Load I	MIBs	Ctrl+L	Advanced	OID: .1.3.6.1.4.1.10
ľ		UnLoa	d MIBs			
		MIB M	lodules			
		Open	Session			
		Save S	ession			
		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.

Figure 4-1 Load MIBs

Advantech SNMP Subagent	Version: <1.2>
User Guide	Date: <11/25/2022>

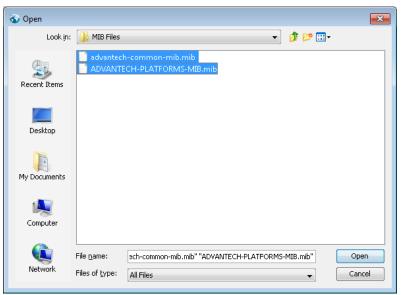


Figure 4-2 Advantech MIBs

Advantech SNMP Subagent	Version: <1.2>
User Guide	Date: <11/25/2022>

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

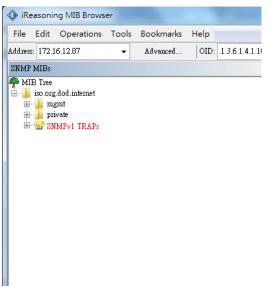


Figure 4-3 Enter IP address

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	🕼 iReasoning MIB Browser					
File Edit	Operations	Tools	Bookmarks	Help		
Address: 172	.16.12.87	•	Advanced	OID: .1.	3.6.1.4.1.10	0297.100.1.1.
SNMP MIBs	:					
	rg.dod.intermet ngmt rrivate advantech advantech advantech	sysDesc sysImag sysRele	uleID ceName r geVersion aseDate BootTime tTime			
Name OID	sysModuleID .1.3.6.1.4.1.1029	7 100 1	1			
MIB	ADVANTECH-0		-			
Syntax	DISPLAYSTRIN					
Access	read-only					
Status	mandatory					
DefVal						
Indexes						
Descr The module name of the device. This value should include the full name of the hardware. It is mandatory that this only contain printable ASCII characters. e.g. UNO-2184G, TPC-1840WP. etc,.						

Figure 4-5 sysModuleID

Advantech SNMP Subagent	Version: <1.2>
User Guide	Date: <11/25/2022>

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	110	-		Co. and the 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	1		✓ Operations: Ge
SNMP MIBs		Result Table		
- private	*	Name/OID		Value
enterprises		sysModuleID.0	UNO-2174G	
advantechCommonMIB		sysBootCount.0	41	
🖶 🌗 atSystem				
sysModuleID				
sysDescr	E			
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 the second se					
File Edit Operations Tools Bookmarks H	File Edit Operations Tools Bookmarks Help					
Address: 172.16.12.87 Advanced SNMP MIBs	Advanced Properties of SNMP Agent					
enterprises advantech advantechCommonMIB advantechCommon advantechCommonMIB advan	SRPT VEISON					
Name snmp TrapSrv Table						

Figure 4-8 Write Community

Advantech SNMP Subagent	Version: <1.2>
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8. Find **snmpTrapSrvTable**, right-click on it then click **Table View**.

🚯 iReasoning MIB Browser							
File Edit Operations Tools E	Bookmarks Help						
Address: 172.16.12.87 🗸	Advanced OID: .1.3.6.1	.4.1.102					
SNMP MIBs							
enterprises enterprises enterprises enterprises advantech advantechCommor enterprises enterprises enterprise	SrvObj rapSrvNumber	E					
	Graph View Ctrl	+R					
🖃 📲 iagPlatformsM. Get Bulk Ctrl+B							
😟 🔒 swGroup 🛛 Get Subtree Ctrl+E							
	Walk Ctrl	+W					
Name snmp TrapSrv Table OID .1.3.6.1.4.1.10297.100.2	Table View Ctrl	+T					
Figure 4-9 compt	ran Cru Tabla						

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.

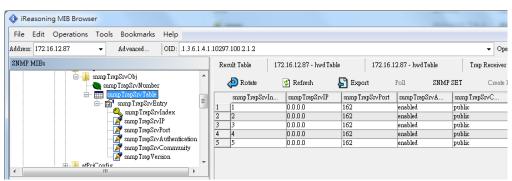


Figure 4-10 snmpTrapSrvTable with default IP addresses

Advantech SNMP Subagent	Version: <1.2>
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10. First, click one text field of snmpTrapSrvIP, and click "SNMP SET"

				•	Operations: Get Next	-	📬 Go	
Re	sult Table 172	.16.12.87 - snmp3	frapSrvTable ×		<u></u>			
	\land Rotate	🔊 Refresh 🛛 🛔	Export 1	Poll 2. SNMP :	SET Create l	Row Delete :	Row	
	snmp TrapSrvIn	snmp TrapSrvIP	snmp TrapSrvPort	snmp TrapSrv A	snmp TrapSrvC	snmp Trap Versi	Index Value	
1	1 1.	0.0.0.0	162	enabled	public	v1	1	
2	2	0.0.0.0	162	enabled	public	v1	2	
3	3	0.0.0.0	162	enabled	public	v1	3	
4	4	0.0.0.0	162	enabled	public	v1	4	
4								

Figure 4-11 snmpTrapSrvIP and SNMP SET

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

esult	t Table	172.16.12.87 - :	mmpTrapSrvT	able ×	✓ Operation	s: Get Next	-	📌 Go
¢	Rotate	🤣 Refresh	🔓 Export	Poll	SNMP SET	Create Row	Delete	Row
s	mmp TrapS:	rvIn snmp TrapSrvl	P snmp Trap	SrvPort snmpTrag	SrvA snmpTra	pSrvC snmp	TrapVersi	Index V
1		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	162 162	enabled enabled	public public	v1 v1		4 5
٩	SNMP S	ET					×)	
	OID	.1.3.6.1.4.1.10297.100).2.1.2.1.2.1					
Data Type IpAddress								
Value 172.16.12.1								

Figure 4-12 SNMP SET snmpTrapSrvIP

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

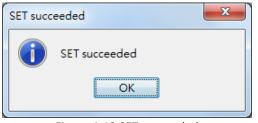


Figure 4-13 SET succeeded

Advantech SNMP Subagent	Version: <1.2>
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13. Tools \rightarrow Trap Receiver.

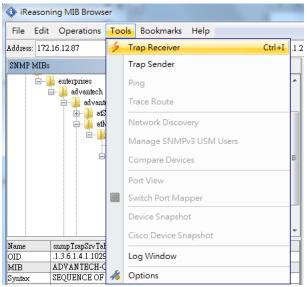


Figure 4-14 Trap Receiver

IReasoning MIB Browser	and the second sec	
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 ×	
i advantechCommonMIB ▲ ⊕]} atSystem	Operations Tools	
in atMgmt ⊕ 1a atPciConfig	🜔 😣 🕅 🏹 🦽	
iagPlatformsMIB	Description	Source
□		
trap TemperatureEventCleared		
trapVoltageEvent trapVoltageEventCleared		
trapRemovableDeviceEvent		
↓ trapFanEventCleared ↓ trapCurrentEvent		
trapCurrentEventCleared -		

Figure 4-15 Trap Receiver Window

Advantech SNMP Subagent	Version: <1.2>
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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 and the state of the state		-			
File Edi	it Operations	Tools	Bookmarks	Help						
Address: 17.	2.16.12.87	-	Advanced	OID: 1.3.6.1.4	1.1.10297.100.2			•	Operations:	Get Next
SNMP MIB	ls 🤝 trap i emperatu			Result Table	Trap Receiver ×					
	🍝 trap Temperatu	reEventC	leared	Operations	Tools					
	∳ trap∀oltageEv ↓ trap∀oltageEv		d		۹ 🚺 🔏					
	trapRemovable trapFanEvent	DeviceE	vent	Description			Source	Time		
	trapFanEventC	leared	=	trapRemovable	DeviceEvent		172.16.12.87	2015-07-28 16:	37:14	
	trapCurrentEv trapCurrentEv			trapRemovable	DeviceEvent		172.16.12.87	2015-07-28 16:	37:14	
Name	atMgmt	measure	α .							
OID	.1.3.6.1.4.1.102	97.100.2								
MIB Syntax	ADVANTECH-	соммо	N-MIB	Source:	172.16.12.87	Timestamp:	37 minutes	38 seconds	S	MP Version
Access				Enterprise	iso.org.dod.internet.private.ente	nrises advante	ch iagPlatformsMIB plat	formTranOhis		
Status				Specific:	5	F		ppp		
Def∀al Indexes				1 °	-					
Descr	_			Generic:	enterpriseSpecific					
				Variable B	indings:					
				Name:	.iso.org.dod.internet.private.ente	prises.advante	ch.iagPlatformsMIB.peri	pheralGroup hards	wareDetect	Obj.hwdTable
Value: [Integer] disk-device (2)										
				Name:	iso.org.dod.internet.private.ente	prises.advante	ch.iagPlatformsMIB.peri	pheralGroup hardy	wareDetect	Obj.hwdTable
				Value:	[Integer] insert (1)					-

Figure 4-16 Receive Traps

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

SNMP MIBs	Result	Table 172	2.16.12.87 - tpTal	ole ×					
e	^	Rotate [🤣 Refresh	Export	Poll SNMP	SET Create	Row Delete I	Row	
- mumber	t	pIndex	tpName	tpUnit	tp∀alue	tpMax	tpMin	tpGetTime	tpState
⊟- make	1 1		CPU Temperature	degree(s) Celsius	43.5	255	0	0x07 DF 07 1C 01	disabled
🖻 🖓 tpEntry	2 2		Board Temperature	degree(s) Celsius	41	255	0	0x07 DF 07 1C 01	disabled
- 🖏 tpIndex									
- 🕘 tpName									
	=								
− t pValue									
- ∰ tpMin									
- tpGetTime									
📝 tpState									
i⊕]]₀ voltageObj									
fanOhi									

Figure 4-17 Set tpMax and tpState

Result Table 172.16.12.87 - tp Table × Poll SNMP SET Create Row Delete Row tpIndex tpName tpUnit tpValue tpMax tpMin tpGetTime tpState 1 1 CPU Temperature degree(s) Celsius 39 20 0 0x07 DF 07 1C 01enabled 2 2 Board Temperature degree(s) Celsius 41 255 0 0x07 DF 07 1C 01disabled		(Zoom In)									
tpIndex tpName tpUnit tpValue tpMax tpMin tpGetTime tpState 1 1 CPU Temperature degree(s) Celsius 39 20 D 0x07 DF 07 1C 01enabled	F	sult Table 172.16.12.87 - tpTable ×									
1 1 CPU Temperature degree(s) Celsius 39 20 D 0x07 DF 07 1C 01enabled		Potate	🔹 Refresh	Export	Poll	P SET Creat	e Row Delet	e Row			
· · · · · · · · · · · · · · · · · · ·		tpIndex	tpName	tpUnit	tpValue 1.	tpMax	tpMin	tpGetTime 2.	tpState		
2 2 Board Temperature degree(s) Celsius 41 255 0 0x07 DF 07 1C 01disabled	1	1	CPU Temperature	degree(s) Celsius	39	20	þ	0x07 DF 07 1C 01	enabled		
	2	2	Board Temperature	degree(s) Celsius	41	255	0	0x07 DF 07 1C 01	disabled		

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

Advantech SNMP Subagent	Version: <1.2>
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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 Receiver × 172.16.12.	.87 - tpTable					
Operations	Tools							
🕞 🙆 🎦	V 🖌 🖌							
Description		Source	Time	Severity				
ap TemperatureE	ivent	172.16.12.87	2015-07-28 16:48:12					
Source:	172.16.12.87	Timestamp: 5 minut	es 30 seconds SNMP V	Version: 1				
		-						
-	.iso.org.dod.internet.private.enterprises.advantech.iagPlatformsMIB.platformTrapObjs							
•	enterpriseSpecific							
Variable Bind	dings:							
Name:	ing and dad internet prime	enterprises of motion in all of form	MIR monitorGroup temperature	Obi toToble toEnterr toInderr 1				
	.iso.org.dod.internet.private.enterprises.advantech.iagPlatformsMIB.monitorGroup.temperatureObj.tpTable.tpEntry.tpIndex.1 [Integer] 1							
value.	[meger] i							
	.iso.org dod internet private enterprises advantech iagPlatformsMIB monitorGroup.temperatureObj.tpTable.tpEntry.tpName.1							
Value:	[OctetString] CPU Tempera	ature						
Name:	.iso.org.dod.internet.private.	enterprises advantech iagPlatform	nsMIB.monitorGroup.temperature	Obj. tp Table. tpEntry. tpValue. 1				
Value:	[OctetString] 40							
Name:	ico ora dod internet privote	entermises advantach iagDlatform	nsMIB monitorGroup temperature	Obi toTable toEntry toMay 1				
	[OctetString] 20	enciprises.auvanteen.iagriationi	navino monitor or oup, temperature	ooj, ip raole, ipisati y, ipivias, r				
raiue.	[Octobring] 20							
Name:	.iso.org.dod.internet.private.	enterprises.advantech.iagPlatform	nsMIB.monitorGroup.temperature	Obj.tpTable.tpEntry.tpMin.1				
	[OctetString] 0							

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.

ManageEngine MibBrowse	r Free To	ol
File Edit View Operations	Help	
Load MIB	Ctrl+O	Pe m 🗣 🔊 🧠 🍏 🖾 🕅
UnLoad MIB	Delete	
Load All MIBs	Ctrl+A	localhost 👻
UnLoad All MIBs	Ctrl+U	nity ******
Save Results As	Ctrl+S	
Print Results	Ctrl+P	
IF-MIB		Туре
RFC1213-MIB		Fype Identified Not Available
SNMP-FRAMEWORK-MIB		ted OIDs None
ADVANTECH-COMMON-MIB)
IAG-PLATFORMS-MIB		
Exit		MIBs .\mibs\RFC1213-MIB .\mibs\IF-MIB
	MIB(s) L	.oaded Successfully

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	8 0 A 1 H						
Open Mib Settings Recent							
Look in:	\mu mibs						
S	APPLICATION-MIB BRIDGE-MIB CISCO-MIB	oracle-database.mib ORADB-MIB Printer-MIB					
Recent Items	CISCO-RTTMON-MIB CISCO-RTTMON-TC-MIB.my CISCO-SMI.my	RDBMS-MIB					
Desktop	EtherLike-MIB FDDI-SMT73-MIB	RFC1213-MIB.cds RFC1213-MIB.cmi					
My Documents	HOST-RESOURCES-MIB IANAifType-MIB IANAifType-MIB.cds	RFC1215-TRAP RFC1315-MIB SNMP-FRAMEWORK-MIB					
My Documents	IANAifType-MIB.cmi	SNMP-FRAMEWORK-MIB.my					
	IF-MIB.cds	SNMP-OSER-BASED-SIM-IMID					
Computer	IF-MIB.cmi	SNMPv2-MIB.cds					
	•	4					
Network	File name: SNMP-FRAMEWOR	K-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 l	MIB File
Open Mi	b Settings Recent
	Look in: 🕕 MIB Files 🔹 🔍
Recent I	advantech-common-mib.mib ADVANTECH-PLATFORMS-MIB.mib Items
Deskt	op
My Docu	menks
Compu	uter
Netwo	ork File name: 'ADVANTECH-PLATFORMS-MIB.mib" Open
	Files of type: All Files Cancel Cancel

Figure 4-22 Advantech MIBs

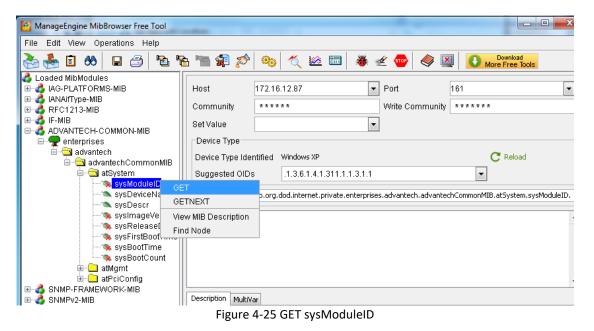
4. Enter the IP address of the *target platform* where *Advantech SNMP Subagent* was installed in the **Host** field. Enter 'public' in the **Community** field and 'private' in the **Write Community** field.

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Loaded MibModules 	Host 172.16.12.87 Port 161							
B- ARC1213-MIB	Community ****** Write Community ******							
B	SetValue							
B	Device Type Device Type Identified Not Available C Reload							
	Suggested OIDs None							
	Object ID							
	MIB(s) Loaded Successfully							
	Loading MIBs "C\Program Files\Advantech\SNMP SubagentMIB 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							
< <u> </u>	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**



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

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Loaded MibModules IAG-PLATFORMS-MIB IANAITYpe-MIB IANAITYpe-MIB IF	Host Community Set Value Device Type Suggested C Object ID Sent GET req sysModuleID.	Identified Windows DIDs .1.3.6.1 .iso.org.dod.inter uest to 172.16.12.8	.4.1.311.1.1.3 net.private.ent 7 : 161			Reload	
B-3 SNMP-PRAMEWORK-MIB	Description M	ultiVar					
	Syntax	DisplayString		Status	mandatory		
	Access	read-only		Reference	9		
	Index						
	Object ID	.1.3.6.1.4.1.10297	100.1.1				
Global View 🗐	Description				This value shou ware. It is man		

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.

File Edit View Operations Help					
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Loaded MibModules IAG-PLATFORMS-MIB IAG-PLATFORMS-MIB	Suggested O Object ID Sent GET requ	******* V 0.0.0.0 * dentified Windows XP IDs 1.3.6.1.4.1.311.1.1.3.1.1 .iso.org.dod.internet.private.enterprise est to 172.16.12.87 : 161 UNO-2' est to 172.16.12.87 : 161		C Reload	ysBool
	Description Mu	ltiVar			
	Syntax	Counter	Status	mandatory	
	Access	read-only	Reference		
	Index				
	Object ID	.1.3.6.1.4.1.10297.100.1.8			
		"The boot count since the	e entity/	device was first boot	."

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.

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Jed MibModules AG-PLATFORMS-MIB ANAIType-MIB RFC1213-MIB F-MIB AOVANTECH-COMMON-MIB enterprises advantech advante	Host Community Set Value Device Type I Suggested OI Object ID	tentified Windows XP	Vrite Communit	C Reload					
	Description Mul	tiVar							
	Syntax			andatory					
		not-accessible	Reference						
	Index								
	Object ID	.1.3.6.1.4.1.10297.100.2.1.2							
Global View 🗖	Description	"The (conceptual) table lis SNMP Trap server acting as a	-						

Figure 4-28 View SNMP Data Table

Advantech SNMP Subagent	Version: <1.2>
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9. It will display an *SNMP Table* as below and then click **Start** to get the data.

8	SNMP Tableiso.org.dod.internet.private.enterprises.advantech.advantechCommonMIB.atMgmt.snmpTrapSrv								
	snmpTrapSrvIndex	snmpTrapSrvIP	snmpTrapSrvPort	snmpTrapSrvAuthen	snmpTrapSrvCommu				
1									
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	View from 💿 Origin 🦿) Index 0	Host 172.16.12	2.87 Page :0 Rows :0	Settings				
	Start	Next	Prev StartPoll	ing StopPolling	Refresh				
	Add	Delete	Graph OriginalT:	able 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.

snmpTrapSrvIndex	snmpTrapSrvIP	sn	mpTrapSrvPort	snmpTrapSrvAuth	en snmpTrapSrvCommu.
	0.0.0.0	162		enabled(1)	public
	0.0.0.0	162		enabled(1)	public
	0.0.0.0	162		enabled(1)	public
	0.0.0.0	162		enabled(1)	public
	0.0.0.0	162		enabled(1)	public
iew from <a>Origin	O Index 0	III	Host 172.16	.12.87 Page :1	Rows :5 Settings
/iew from	Index I Next	III Prev	Host 172.16 StartP		

Figure 4-30 snmpTrapSrvTable data

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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	snmpTrapSrvIP	snmpTi	rapSrvPort snm	pTrapSrvAuthen	snmpTrapSrvCommu
1	. 172.16.12.219	162	enable	d(1)	public
2	0.0.0.0	162	enable	d(1)	public
}	0.0.0.0	162	enable		public
1	0.0.0.0	162	enable		public
	0.0.0.0	162	enable	d(1)	public
< [111			
< View from	Index 0		Host 172.16.12.87	Page :1 Rows	:5 Settings
< View from	Index Next		Host 172.16.12.87	Page :1 Rows	

Figure 4-31 Set snmpTrapsrvIP

12. Click Trap Viewer UI icon on the toolbar.

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bed MibModules AG-PLATFORMS-MIB ANAifType-MIB RFC1213-MIB F-MIB DVANTECH-COMMON-MIB enterprises enterprises advantech advan	Host Community Set Value Device Type Device Type Id Suggested OID Object ID	****** V entified Windows XP Ds 1.3.6.1.4.1.311.1.1.3.1.1	Port Write Commu nCommonMIB.a	161			
	Description Mult	War					
	Syntax		Status	mandatory			
		not-accessible	Reference				
	Index						
	Object ID	.1.3.6.1.4.1.10297.100.2.1.2					
Global View 🗐	Description	"The (conceptual) table li NMP Trap server acting as	-	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	e v1/v2c traps (Commu	nity)	Enable Logging Log Format Enable Mail		
📝 Authenticat	e v3 Trap				
Port	162	TrapList	- Add	Del	
Community	public	TrapParser		Load	
Start	Stop] Show Details	Delete Entry	ParserEditor	
Dee Tra	aps : O Inform : O	Not Listening for Trap	08		

Figure 4-33 TrapViewer

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

🔨 TrapViewer			_	
Class	Туре	Source	Date	Message
Clear	Clear v1 Trap 172.16.12.87 Sat Apr 14 23:21:		Sat Apr 14 23:21:3	3iso.org.dod.internet
Clear	Clear v1 Trap		Sat Apr 14 23:21:3	3iso.org.dod.internet
 ✓ Authenticate ✓ Authenticate 	v1/v2c traps (Community v3 Trap	0	Enable Lo	
Port	162	TrapList	162:public 💌	Add Del
Community	public	TrapParser		Load
Start	Stop	Show Details	Delete Entry	ParserEditor
Trap	os : 2 Inform : 0	St	atus : Listening for Tra	ps

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	t des Of house Orgination 55 seconds
	1 day, 21 hours, 3 minutes, 55 seconds.
Enterprise	.iso.org.dod.internet.private.enterprises.advante
Generic Type	Enterprise Specific
Specific Type	5
Message	.iso.org.dod.internet.private.enterprises.advanted
	hardwareDetectObj.hwdTable.hwdEntry.hwdDeviceType
	.iso.org.dod.internet.private.enterprises.advante
	hardwareDetectObj.hwdTable.hwdEntry.hwdEvent.121:
	.iso.org.dod.internet.private.enterprises.advantec hardwareDetectObj.hwdTable.hwdEntrv.hwdFriendlvNar
	hardwarebetectobj.nwdfabie.nwdrhtry.nwdrfiendiywar
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
•	4 111

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**.

SN SN	SNMP Tableiso.org.dod.internet.private.enterprises.advantech.iagPlatformsMIB.monitorGroup.temperatureO							
	tpIndex	tpName	tr	oUnit	tpValue	tpMax		
1	1 CPU Temperature		degree(s) Ce	Celsius 48		20		
2	2 Board Temperature		degree(s) Ce	lsius 43.5	2	:55		
Viev	v from 💿 Origin	O Index 0	ł	Host 172.16.12.87	Page :1 Rows :2	2 Settings		
	Start	Next	Prev	StartPolling	StopPolling	Refresh		
	Add	Delete	Graph	OriginalTable	IndexEditor	Close		

Figure 4-37 Set tpMax

Advantech SNMP Subagent	Version: <1.2>
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48 20 0 2015-7-30,15:0:59.1,+8:0 enabled(1) 43.5 255 0 2015-7-30,15:0:59.1,+8:0 disabled(2) 4	tpValue	tpMax		tpMin	tpGetTime	tpState
	48	20	0	2015-7	-30,15:0:59.1,+8:0	enabled(1)
	43.5	255	0	2015-7	-30,15:0:59.1,+8:0	disabled(2)
	∢ View from	gin 🔘 Index 0	Prev	Host 172.16.12.87	TT Page :1 Rows	:2 Settings

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.

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Loaded MibModules		1	1-1-1-1			
advanter advanter agP	Class	Туре	Source	Date	Message	*
😟 🛄 s	Clear	v1 Trap	172.16.12.87	Sun Apr 15 03:06:40	0iso.org.dod.internet	
⊖- € €	✓ Authenticate v1	N2c traps (Community)	Enable Lo		C Reload
	V Autrenticate va	i Trap				7
	Port 16	2	TrapList 16	2:public 👻	Add Del	
	Community pu	blic	TrapParser		Load	
.	Start	Stop	Show Details	Delete Entry	ParserEditor	
]… <u>∔</u> q [COO Traps	: 1 Inform : 0	Statu	s : Listening for Traj	ps	
	ејаодатни	Object ID	.1.3.6.1.4.1.10297.	200.2.1.2		
					isting the temper	atures of the
Global View 📃		Description	target device			

Figure 4-39 TrapViewer

Advantech SNMP Subagent	Version: <1.2>
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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 🗸
•	III F

Figure 4-40 Trap Details