Thecus_SNMP_MIB_Spec

Content:

History

Release Date	Content
2016-12-09	1. In module “nasSystem” --1.1 Change OID “systemFanStatus” from String to Integer. 2. In module “nasDisk” --2.1 Change OID “diskSMARTHealthCheck” from String to Integer. --2.2 Change OID “diskPartitionStatus” to “diskStatus” 3. In module “nasRaid” --3.1 Change OID “raidStatus” values from 1~10 to 0~11 4. Modify the description of some OID with details. 5. Change OID “networkstorage” to “nasstorage”
2016-11-02	1. Add the Notification.
2016-10-12	1. In module “nasDisk” --1.1 Remove OID “diskStatus” to “diskPartitionStatus
2016-10-11	1. In module “thecusDisk” --1.1 Remove OID “diskVendor” --1.2 Remove OID “diskInterface” --1.3 Add OID “diskSMARTHealthCheck” --1.4 Add OID “diskTrayNum” --1.5 Add OID “diskCapacity” 2. In module “thecusRaid” --2.1 Add OID “raidNum” 3. Change Thecus ModuleName /FileName to other general string for OEM requirement --3.1 FileName: THECUS-XXX-MIB.txt => NAS-XXX-MIB.txt --3.2 ModuleName: thecusXXX => nasXXX --3.3 OID: thecus=> networkstorage
2016-09-19	1. Remove module “thecusUPS” and move the OID “upsStatus” to the OID “systemMiniUPSStatus” of module “thecusSystem”. 2. In module “thecusDisk” --2.1 Change OID “diskType” to “diskInterface”. --2.2 Change OID “diskTemperature” to “diskSMARTAttr194”.

2016-09-14	1. Add new module “thecusUPS”. 2. Modify some OIDs of modules “thecusSystem”, “thecusDisk” and “thecusRaid”.
2014-02-27	1. First release 2. Included 3 modules: thecusSystem, thecusDisk, and thecusRaid

2. Summary

The OID of “Thecus” in SMI (Structure of Management Information) we defined here is “.1(iso).3(org).6(dod).1(internet).4(private).1(enterprises).**38243(nasstorage).1(nas)**”

Query PRIVATE ENTERPRISE NUMBERS
http://www.iana.org/assignments/enterprise-numbers

Register PRIVATE ENTERPRISE NUMBERS
http://www.iana.org/cgi-bin/enterprise.pl

SNMP MIB files

SNMP Standard MIB file	OID	Name	Comment
NOT discussed here	-	-	-
NAS Specific MIB file	OID	Name	Comment
NAS-SYSTEM-MIB.txt	.1	***nasSystem***	For NAS system information
NAS-DISK-MIB.txt	.2	***nasDisk***	For NAS disk information
NAS-RAID-MIB.txt	.3	***nasRaid***	For NAS raid information

3. Description of OID

OIDs in NAS { System, Disk, Raid } MIB files
(OID prefix = **.1.3.6.1.4.1.38243.1**)

OID	Name	Syntax	Value	Description
.1	***nasSystem***	Scalar	-	single instance data
.1.1	systemVendor	String	-	The vendor of hardware
.1.2	systemModel	String	-	The model name of hardware
.1.3	systemFirmware	String	-	The firmware version of hardware
.1.4	systemStatus	Integer	0 = Normal 1 = Failed	The status of hardware
.1.5	systemTemperature	Integer	-	The temperature (celsius) of hardware
.1.6	systemFanStatus	Integer	0 = Normal 1 = Failed	The fan status of hardware
.1.7	systemMiniUPSStatus	Integer	0 = Not Plugin 1 = Powered 2 = Full 3 = Charging 4 = Unknown 5 = No Mini-UPS	The mini-ups status of this hardware

OID	Name	Syntax	Value	Description
.2	***nasDisk***	Table	-	multiple instances data (table)
.2.1	diskIndex	Integer		The index of every connected disk. **NOTE:** **Used as the index of every entry and NOT responsed as OID.**
.2.2	diskTrayNum	Integer	-	The tray num of every connected disk
.2.3	diskID	String	ex. sda	The device node of every connected disk
.2.4	diskModel	String	-	The model name of every connected disk
.2.5	diskCapacity	String	ex. 485751808 KB	The capacity (KB) of every connected disk
.2.6	diskStatus	Integer	0 = Clean (The disk is NOT partitioned) 1 = Initialized (The disk has the standard partitions) 2 = Other (The disk has the other partitions) 3 = Error (Unknown Error)	The status of every connected disk
.2.7	diskSMARTHealthCheck	Integer	0 = Normal 1 = Failed	The S.M.A.R.T health check result of every connected disk
.2.8	diskSMARTAttr5	Integer	**NOTE: Please pay attention when this value > 0**	The value of S.M.A.R.T attribute id 5 (Reallocated_Sector_Ct) of every connected disk

.2.9	diskSMARTAttr9	Integer	-	The value of S.M.A.R.T attribute id 9 (Power_On_Hours) of every connected disk
.2.10	diskSMARTAttr184	Integer	**NOTE:** **1. Please pay attention when this value > 0** **2. Some disk may NOT has this attribute , so return -1 for this case.**	The value of S.M.A.R.T attribute id 184 (End-to-End_Error) of every connected disk
.2.11	diskSMARTAttr194	Integer	-	The value of S.M.A.R.T attribute id 194 (Temperature_Celsius) of every connected disk
.2.12	diskSMARTAttr197	Integer	**NOTE: Please pay attention when this value > 0**	The value of S.M.A.R.T attribute id 197 (Current_Pending_Sector) of every connected disk

OID	Name	Syntax	Value	Description
.3	***nasRaid***	Table	-	multiple instances data (table)
.3.1	raidIndex	Integer		The index of every existent raid **NOTE:** **Used as the index of every entry and NOT responsed as OID.**
.3.2	raidNum	Integer	0~9	The raid num of every existent raid
.3.3	raidID	String	-	The name of every existent raid
.3.4	raidLevel	String	{ JBOD, raid0, raid1, raid5, raid6, raid10, raid50, raid60 }	The raid level of every existent raid
.3.5	raidStatus	Integer	0 = Health 1 = Degraded 2 = Damaged 3 = Creating 4 = Formatting 5 = Building 6 = Waiting 7 = Recovering 8 = Migrating 9 = Unknown 10=Decrypt_Fail 11=Encrypt_Fail	The raid status of every existent raid
.3.6	raidUnit	String	ex. sda,sdb	The name of devices or partitions of every existent raid
.3.7	raidSize	String	ex. 485751808 KB	The raid size (KB) of every existent raid
.3.8	raidUsedPercentage	Integer	0~100	The used percentage (%) of every existent raid

4. Notification

1. The module "**nasDisk**" will query some disk information by **S.M.A.R.T**(Self-Monitoring, Analysis and Reporting Technology), and it will **resume the disk under 'spin down' status**.
2. In above case, it also needs more response time and sometimes will cause the **time-out of disk information requests** in your SNMP MIB browse program.