Net-SNMP *Current release: 5.7.3*

INTRODUCTION

This is a summary of information regarding objects below the **host** MIB object, which is defined within the **HOST-RESOURCES-MIB** MIB document as **.1.3.6.1.2.1.25**.

TABLE OF CONTENTS

SCALAR OBJECTS

Name	Type	Access	OID	Description
1 hrSystemUptime	TICKS	ReadOnly	.1.3.6.1.2.1.25.1.1	The amount of time since this host was last initialized. Note that this is different from sysUpTime in the SNMPv2-MIB [RFC1907] because sysUpTime is the uptime of the network management

			portion of the system. Note: this object is based on the DateAndTime TEXTUAL-CONVENTION.
2 hrSystemDate	OCTETSTR Legal Lengths: 8 , 11 DateAndTime	ReadWrite .1.3.6.1.2.1.25.1.2	The host's notion of the local date and time of day.
3 hrSystemInitialLoadDevice	INTEGER32 Legal values: 1 .. 2147483647	ReadWrite .1.3.6.1.2.1.25.1.3	The index of the hrDeviceEntry for the device from which this host is configured to load its initial operating system configuration (i.e., which operating system code and/or boot parameters). Note that writing to this object just changes the configuration that will be used the next time the operating system is loaded and does not actually cause the reload to occur.
4 hrSystemInitialLoadParameters	OCTETSTR Legal Lengths: 0 .. 128 InternationalDisplayString	ReadWrite .1.3.6.1.2.1.25.1.4	Note: this object is based on the InternationalDisplayString TEXTUAL-CONVENTION. This object contains the parameters (e.g. a pathname and parameter) supplied to the load device when requesting the initial operating system configuration from that device. Note that writing to this object just changes the configuration that will be used the next time the operating system is loaded and does not actually cause the reload to occur.
5 hrSystemNumUsers	GAUGE	ReadOnly .1.3.6.1.2.1.25.1.5	The number of user sessions for which this host is storing state information. A session is a collection of processes requiring a single act of user authentication and possibly subject to collective job control.
6 hrSystemProcesses	GAUGE	ReadOnly .1.3.6.1.2.1.25.1.6	The number of process contexts currently loaded or running on this system.
7 hrSystemMaxProcesses	INTEGER32 Legal values: 0 .. 2147483647	ReadOnly .1.3.6.1.2.1.25.1.7	The maximum number of process contexts this system can support. If there is no fixed maximum, the value should be zero. On systems that have a fixed maximum, this object can help diagnose failures that occur when this maximum is reached.

TABLE OBJECTS

Table hrStorageTable

Table Name	hrStorageTable
In MIB	HOST-RESOURCES-MIB
Registered at OID	.1.3.6.1.2.1.25.2.3
Table Description	The (conceptual) table of logical storage areas on the host. An entry shall be placed in the storage table for each logical area of storage that is allocated and has fixed resource limits. The amount of storage represented in an entity is the amount actually usable by the requesting entity, and excludes loss due to formatting or file system reference information. These entries are associated with logical storage areas, as might be seen by an application, rather than physical storage entities which are typically seen by an operating system. Storage such as tapes and floppies without file systems on them are typically not allocated in chunks by the operating system to requesting applications, and therefore shouldn't appear in this table. Examples of valid storage for this table include disk partitions, file systems, ram (for some architectures this is further segmented into regular memory, extended memory, and so on), backing store for virtual memory (`swap space').  This table is intended to be a useful diagnostic for `out of memory' and `out of buffers' types of failures. In addition, it can be a useful performance monitoring tool for tracking memory, disk, or buffer usage.
Row Description	A (conceptual) entry for one logical storage area on the host. As an example, an instance of the hrStorageType object might be named hrStorageType.3

hrStorageTable Indexes:

Name	Type	Access	Description
1 hrStorageIndex	INTEGER32 Legal values: 1 .. 2147483647	ReadOnly	A unique value for each logical storage area contained by the host.

Other hrStorageTable Columns:

Name	Type	Access	Description
2 hrStorageType	OBJECTID AutonomousType	ReadOnly	Note: this object is based on the AutonomousType TEXTUAL-CONVENTION. The type of storage represented by this entry.
3 hrStorageDescr	OCTETSTR Legal Lengths: 0 .. 255 DisplayString	ReadOnly	Note: this object is based on the DisplayString TEXTUAL-CONVENTION. A description of the type and instance of the storage described by this entry.
4 hrStorageAllocationUnits	INTEGER32 Legal values: 1 .. 2147483647	ReadOnly	The size, in bytes, of the data objects allocated from this pool. If this entry is monitoring sectors, blocks, buffers, or packets, for example, this number will commonly be greater than one. Otherwise this number will typically be one.
5 hrStorageSize	INTEGER32 Legal values: 0 .. 2147483647	ReadWrite	The size of the storage represented by this entry, in units of hrStorageAllocationUnits. This object is writable to allow remote configuration of the size of the storage area in those cases where such an operation makes sense and is possible on the underlying system. For example, the amount of main memory allocated to a buffer pool might be modified or the amount of disk space allocated to virtual memory might be modified.
6 hrStorageUsed	INTEGER32 Legal values: 0 .. 2147483647	ReadOnly	The amount of the storage represented by this entry that is allocated, in units of hrStorageAllocationUnits.
7 hrStorageAllocationFailures	COUNTER	ReadOnly	The number of requests for storage represented by this entry that could not be honored due to not enough storage. It should be noted that as this object has a SYNTAX of Counter32, that it does not have a defined initial value. However, it is recommended that this

	object be initialized to zero, even though management stations must not depend on such an initialization.

Table hrDeviceTable

Table Name	hrDeviceTable
In MIB	HOST-RESOURCES-MIB
Registered at OID	.1.3.6.1.2.1.25.3.2
Table Description	The (conceptual) table of devices contained by the host.
Row Description	A (conceptual) entry for one device contained by the host. As an example, an instance of the hrDeviceType object might be named hrDeviceType.3

hrDeviceTable Indexes:

Name	Type	Access	Description
1 hrDeviceIndex	INTEGER32 Legal values: 1 .. 2147483647	ReadOnly	A unique value for each device contained by the host. The value for each device must remain constant at least from one re-initialization of the agent to the next re-initialization.

Other hrDeviceTable Columns:

Name	Type	Access	Description
2 hrDeviceType	OBJECTID AutonomousType	ReadOnly	Note: this object is based on the AutonomousType TEXTUAL-CONVENTION. An indication of the type of device. If this value is `hrDeviceProcessor { hrDeviceTypes 3 }' then an entry exists in the hrProcessorTable which corresponds to this device. If this value is `hrDeviceNetwork { hrDeviceTypes 4 }', then an entry exists in the hrNetworkTable which corresponds to this device. If this value is `hrDevicePrinter { hrDeviceTypes 5 }', then an entry

			exists in the hrPrinterTable which corresponds to this device. If this value is `hrDeviceDiskStorage { hrDeviceTypes 6 }', then an entry exists in the hrDiskStorageTable which corresponds to this device. Note: this object is based on the DisplayString TEXTUAL-CONVENTION.
3 hrDeviceDescr	OCTETSTR Legal Lengths: 0 .. 64 DisplayString	ReadOnly	A textual description of this device, including the device's manufacturer and revision, and optionally, its serial number. Note: this object is based on the ProductID TEXTUAL-CONVENTION.
4 hrDeviceID	OBJECTID ProductID	ReadOnly	The product ID for this device.
5 hrDeviceStatus	INTEGER Value / Label/Meaning: 1 unknown 2 running 3 warning 4 testing 5 down	ReadOnly	The current operational state of the device described by this row of the table. A value unknown(1) indicates that the current state of the device is unknown. running(2) indicates that the device is up and running and that no unusual error conditions are known. The warning(3) state indicates that agent has been informed of an unusual error condition by the operational software (e.g., a disk device driver) but that the device is still 'operational'. An example would be a high number of soft errors on a disk. A value of testing(4), indicates that the device is not available for use because it is in the testing state. The state of down(5) is used only when the agent has been informed that the device is not available for any use.
6 hrDeviceErrors	COUNTER	ReadOnly	The number of errors detected on this device. It should be noted that as this object has a SYNTAX of Counter32, that it does not have a defined initial value. However, it is recommended that this object be initialized to zero, even though management stations must not depend on such an initialization.

Table hrProcessorTable

Table Name	hrProcessorTable
In MIB	HOST-RESOURCES-MIB

Registered at OID	.1.3.6.1.2.1.25.3.3
Table Description	The (conceptual) table of processors contained by the host. Note that this table is potentially sparse: a (conceptual) entry exists only if the correspondent value of the hrDeviceType object is `hrDeviceProcessor'.
Row Description	A (conceptual) entry for one processor contained by the host. The hrDeviceIndex in the index represents the entry in the hrDeviceTable that corresponds to the hrProcessorEntry. As an example of how objects in this table are named, an instance of the hrProcessorFrwID object might be named hrProcessorFrwID.3

hrProcessorTable Indexes:

Name	Type	Access	Description
1 hrDeviceIndex	INTEGER32 Legal values: 1 .. 2147483647	ReadOnly	A unique value for each device contained by the host. The value for each device must remain constant at least from one re-initialization of the agent to the next re-initialization.

Other hrProcessorTable Columns:

Name	Type	Access	Description
1 hrProcessorFrwID	OBJECTID ProductID	ReadOnly	Note: this object is based on the ProductID TEXTUAL-CONVENTION. The product ID of the firmware associated with the processor.
2 hrProcessorLoad	INTEGER32 Legal values: 0 .. 100	ReadOnly	The average, over the last minute, of the percentage of time that this processor was not idle. Implementations may approximate this one minute smoothing period if necessary.

Table hrNetworkTable

Table Name	hrNetworkTable
In MIB	HOST-RESOURCES-MIB
Registered at OID	.1.3.6.1.2.1.25.3.4
Table Description	The (conceptual) table of network devices contained by the host. Note that this table is potentially sparse: a (conceptual) entry exists only if the correspondent value of the hrDeviceType object is `hrDeviceNetwork'.
Row Description	A (conceptual) entry for one network device contained by the host. The hrDeviceIndex in the index represents the entry in the hrDeviceTable that corresponds to the hrNetworkEntry. As an example of how objects in this table are named, an instance of the hrNetworkIfIndex object might be named hrNetworkIfIndex.3

hrNetworkTable Indexes:

Name	Type	Access	Description
1 hrDeviceIndex	INTEGER32 Legal values: 1 .. 2147483647	ReadOnly	A unique value for each device contained by the host. The value for each device must remain constant at least from one re-initialization of the agent to the next re-initialization.

Other hrNetworkTable Columns:

Name	Type	Access	Description
1 hrNetworkIfIndex	INTEGER32 Legal values: 0 .. 2147483647 InterfaceIndexOrZero	ReadOnly	Note: this object is based on the InterfaceIndexOrZero TEXTUAL-CONVENTION. The value of ifIndex which corresponds to this network device. If this device is not represented in the ifTable, then this value shall be zero.

Table hrPrinterTable

Table Name	hrPrinterTable
In MIB	HOST-RESOURCES-MIB
Registered at OID	.1.3.6.1.2.1.25.3.5
Table Description	The (conceptual) table of printers local to the host. Note that this table is potentially sparse: a (conceptual) entry exists only if the correspondent value of the hrDeviceType object is `hrDevicePrinter'.
Row Description	A (conceptual) entry for one printer local to the host. The hrDeviceIndex in the index represents the entry in the hrDeviceTable that corresponds to the hrPrinterEntry. As an example of how objects in this table are named, an instance of the hrPrinterStatus object might be named hrPrinterStatus.3

hrPrinterTable Indexes:

Name	Type	Access	Description
1 hrDeviceIndex	INTEGER32 Legal values: 1 .. 2147483647	ReadOnly	A unique value for each device contained by the host. The value for each device must remain constant at least from one re-initialization of the agent to the next re-initialization.

Other hrPrinterTable Columns:

Name	Type	Access	Description
1 hrPrinterStatus	INTEGER Value / Label/Meaning: 1 other 2 unknown 3 idle 4 printing 5 warmup	ReadOnly	The current status of this printer device.

2	hrPrinterDetectedErrorState	OCTETSTR	ReadOnly	This object represents any error conditions detected by the printer. The error conditions are encoded as bits in an octet string, with the following definitions: Condition Bit # lowPaper 0 noPaper 1 lowToner 2 noToner 3 doorOpen 4 jammed 5 offline 6 serviceRequested 7 inputTrayMissing 8 outputTrayMissing 9 markerSupplyMissing 10 outputNearFull 11 outputFull 12 inputTrayEmpty 13 overduePreventMaint 14 Bits are numbered starting with the most significant bit of the first byte being bit 0, the least significant bit of the first byte being bit 7, the most significant bit of the second byte being bit 8, and so on. A one bit encodes that the condition was detected, while a zero bit encodes that the condition was not detected. This object is useful for alerting an operator to specific warning or error conditions that may occur, especially those requiring human intervention.

Table hrDiskStorageTable

Table Name	hrDiskStorageTable
In MIB	HOST-RESOURCES-MIB
Registered at OID	.1.3.6.1.2.1.25.3.6
Table Description	The (conceptual) table of long-term storage devices contained by the host. In particular, disk devices

	accessed remotely over a network are not included here. Note that this table is potentially sparse: a (conceptual) entry exists only if the correspondent value of the hrDeviceType object is `hrDeviceDiskStorage'.
Row Description	A (conceptual) entry for one long-term storage device contained by the host. The hrDeviceIndex in the index represents the entry in the hrDeviceTable that corresponds to the hrDiskStorageEntry. As an example, an instance of the hrDiskStorageCapacity object might be named hrDiskStorageCapacity.3

hrDiskStorageTable Indexes:

Name	Type	Access	Description
1 hrDeviceIndex	INTEGER32 Legal values: 1 .. 2147483647	ReadOnly	A unique value for each device contained by the host. The value for each device must remain constant at least from one re-initialization of the agent to the next re-initialization.

Other hrDiskStorageTable Columns:

Name	Type	Access	Description
1 hrDiskStorageAccess	INTEGER Value: Label/Meaning 1: readWrite 2: readOnly	ReadOnly	An indication if this long-term storage device is readable and writable or only readable. This should reflect the media type, any write-protect mechanism, and any device configuration that affects the entire device.
2 hrDiskStorageMedia	INTEGER Value: Label/Meaning 1: other 2: unknown 3: hardDisk 4: floppyDisk 5: opticalDiskROM	ReadOnly	An indication of the type of media used in this long-term storage device.

	6 opticalDiskWORM 7 opticalDiskRW 8 ramDisk			
3 hrDiskStorageRemoveble	INTEGER TruthValue (ENUM list below)	ReadOnly	Note: this object is based on the TruthValue TEXTUAL-CONVENTION. Denotes whether or not the disk media may be removed from the drive.	
4 hrDiskStorageCapacity	INTEGER32 Legal values: 0 .. 2147483647 KBytes	ReadOnly	Note: this object is based on the KBytes TEXTUAL-CONVENTION. The total size for this long-term storage device. If the media is removable and is currently removed, this value should be zero.	

Table hrPartitionTable

Table Name	hrPartitionTable
In MIB	HOST-RESOURCES-MIB
Registered at OID	.1.3.6.1.2.1.25.3.7
Table Description	The (conceptual) table of partitions for long-term storage devices contained by the host. In particular, partitions accessed remotely over a network are not included here.
Row Description	A (conceptual) entry for one partition. The hrDeviceIndex in the index represents the entry in the hrDeviceTable that corresponds to the hrPartitionEntry. As an example of how objects in this table are named, an instance of the hrPartitionSize object might be named hrPartitionSize.3.1

hrPartitionTable Indexes:

Name	Type	Access	Description
1 hrDeviceIndex	INTEGER32 Legal values: 1 .. 2147483647	ReadOnly	A unique value for each device contained by the host. The value for each device must remain constant at least from one re-initialization of the agent to the

			next re-initialization.
1 hrPartitionIndex	INTEGER32 Legal values: 1 .. 2147483647	ReadOnly	A unique value for each partition on this long-term storage device. The value for each long-term storage device must remain constant at least from one re-initialization of the agent to the next re-initialization.

Other hrPartitionTable Columns:

Name	Type	Access	Description
2 hrPartitionLabel	OCTETSTR Legal Lengths: 0 .. 128 InternationalDisplayString	ReadOnly	Note: this object is based on the InternationalDisplayString TEXTUAL-CONVENTION. A textual description of this partition.
3 hrPartitionID	OCTETSTR	ReadOnly	A descriptor which uniquely represents this partition to the responsible operating system. On some systems, this might take on a binary representation.
4 hrPartitionSize	INTEGER32 Legal values: 0 .. 2147483647 KBytes	ReadOnly	Note: this object is based on the KBytes TEXTUAL-CONVENTION. The size of this partition.
5 hrPartitionFSIndex	INTEGER32 Legal values: 0 .. 2147483647	ReadOnly	The index of the file system mounted on this partition. If no file system is mounted on this partition, then this value shall be zero. Note that multiple partitions may point to one file system, denoting that that file system resides on those partitions. Multiple file systems may not reside on one partition.

Table hrFSTable

Table Name	hrFSTable
In MIB	HOST-RESOURCES-MIB
Registered at OID	.1.3.6.1.2.1.25.3.8
Table Description	The (conceptual) table of file systems local to this host or remotely mounted from a file server. File systems that are in only one user's environment on a multi-user system will not be included in this table.

hrFSTable Indexes:

Name	Type	Access	Description
1 hrFSIndex	INTEGER32 Legal values: 1 .. 2147483647	ReadOnly	A unique value for each file system local to this host. The value for each file system must remain constant at least from one re-initialization of the agent to the next re-initialization.

Other hrFSTable Columns:

Name	Type	Access	Description
2 hrFSMountPoint	OCTETSTR Legal Lengths: 0 .. 128 InternationalDisplayString	ReadOnly	Note: this object is based on the InternationalDisplayString TEXTUAL-CONVENTION. The path name of the root of this file system.
3 hrFSRemoteMountPoint	OCTETSTR Legal Lengths: 0 .. 128 InternationalDisplayString	ReadOnly	Note: this object is based on the InternationalDisplayString TEXTUAL-CONVENTION. A description of the name and/or address of the server that this file system is mounted from. This may also include parameters such as the mount point on the remote file system. If this is not a remote file system, this string should have a length of zero.
4 hrFSType	OBJECTID AutonomousType	ReadOnly	Note: this object is based on the AutonomousType TEXTUAL-CONVENTION. The value of this object identifies the type of this file system.
5 hrFSAccess	INTEGER Value: Label/Meaning 1: readWrite 2: readOnly	ReadOnly	An indication if this file system is logically configured by the operating system to be readable and writable or only readable. This does not represent any local access-control policy, except one that is applied to the file system as a whole.
6 hrFSBootable	INTEGER TruthValue (ENUM list below)	ReadOnly	Note: this object is based on the TruthValue TEXTUAL-CONVENTION. A flag indicating whether this file system is bootable.
7 hrFSStorageIndex	INTEGER32 Legal values: 0 ..	ReadOnly	The index of the hrStorageEntry that represents

	2147483647		information about this file system. If there is no such information available, then this value shall be zero. The relevant storage entry will be useful in tracking the percent usage of this file system and diagnosing errors that may occur when it runs out of space. Note: this object is based on the DateAndTime TEXTUAL-CONVENTION.
8 hrFSLastFullBackupDate	OCTETSTR Legal Lengths: 8 , 11 DateAndTime	ReadWrite	The last date at which this complete file system was copied to another storage device for backup. This information is useful for ensuring that backups are being performed regularly. If this information is not known, then this variable shall have the value corresponding to January 1, year 0000, 00:00:00.0, which is encoded as (hex)'00 00 01 01 00 00 00 00'. Note: this object is based on the DateAndTime TEXTUAL-CONVENTION.
9 hrFSLastPartialBackupDate	OCTETSTR Legal Lengths: 8 , 11 DateAndTime	ReadWrite	The last date at which a portion of this file system was copied to another storage device for backup. This information is useful for ensuring that backups are being performed regularly. If this information is not known, then this variable shall have the value corresponding to January 1, year 0000, 00:00:00.0, which is encoded as (hex)'00 00 01 01 00 00 00 00'.

Table hrSWRunTable

Table Name	hrSWRunTable
In MIB	HOST-RESOURCES-MIB
Registered at OID	.1.3.6.1.2.1.25.4.2
Table Description	The (conceptual) table of software running on the host.
Row Description	A (conceptual) entry for one piece of software running on the host Note that because the installed software table only contains information for software stored locally on this host, not every piece of running software will be found in the installed

software table. This is true of software that was loaded and run from a non-local source, such as a network-mounted file system.

As an example of how objects in this table are named, an instance of the hrSWRunName object might be named hrSWRunName.1287

hrSWRunTable Indexes:

Name	Type	Access	Description
1 hrSWRunIndex	INTEGER32 Legal values: 1 .. 2147483647	ReadOnly	A unique value for each piece of software running on the host. Wherever possible, this should be the system's native, unique identification number.

Other hrSWRunTable Columns:

Name	Type	Access	Description
2 hrSWRunName	OCTETSTR Legal Lengths: 0 .. 64 InternationalDisplayString	ReadOnly	Note: this object is based on the InternationalDisplayString TEXTUAL-CONVENTION. A textual description of this running piece of software, including the manufacturer, revision, and the name by which it is commonly known. If this software was installed locally, this should be the same string as used in the corresponding hrSWInstalledName.
3 hrSWRunID	OBJECTID ProductID	ReadOnly	Note: this object is based on the ProductID TEXTUAL-CONVENTION. The product ID of this running piece of software.
4 hrSWRunPath	OCTETSTR Legal Lengths: 0 .. 128 InternationalDisplayString	ReadOnly	Note: this object is based on the InternationalDisplayString TEXTUAL-CONVENTION. A description of the location on long-term storage (e.g. a disk drive) from which this software was loaded.
5 hrSWRunParameters	OCTETSTR Legal Lengths: 0 .. 128 InternationalDisplayString	ReadOnly	Note: this object is based on the InternationalDisplayString TEXTUAL-CONVENTION. A description of the parameters supplied to this software when it was initially loaded.

6 hrSWRunType	INTEGER Value / Label/Meaning 1 unknown 2 operatingSystem 3 deviceDriver 4 application	ReadOnly	The type of this software.
7 hrSWRunStatus	INTEGER Value / Label/Meaning 1 running 2 runnable 3 notRunnable 4 invalid	ReadWrite	The status of this running piece of software. Setting this value to invalid(4) shall cause this software to stop running and to be unloaded. Sets to other values are not valid.

Table hrSWRunPerfTable

Table Name	hrSWRunPerfTable
In MIB	HOST-RESOURCES-MIB
Registered at OID	.1.3.6.1.2.1.25.5.1
Table Description	The (conceptual) table of running software performance metrics.
Row Description	A (conceptual) entry containing software performance metrics. As an example, an instance of the hrSWRunPerfCPU object might be named hrSWRunPerfCPU.1287

hrSWRunPerfTable Indexes:

Name	Type	Access	Description
1 hrSWRunIndex	INTEGER32 Legal values: 1 .. 2147483647	ReadOnly	A unique value for each piece of software running on the host. Wherever possible, this should be the system's native, unique identification number.

Other hrSWRunPerfTable Columns:

Name	Type	Access	Description
1 hrSWRunPerfCPU	INTEGER32 Legal values: 0 .. 2147483647	ReadOnly	The number of centi-seconds of the total system's CPU resources consumed by this process. Note that on a multi-processor system, this value may increment by more than one centi-second in one centi-second of real (wall clock) time. Note: this object is based on the KBytes TEXTUAL-CONVENTION.
2 hrSWRunPerfMem	INTEGER32 Legal values: 0 .. 2147483647 KBytes	ReadOnly	The total amount of real system memory allocated to this process.

Table hrSWInstalledTable

Table Name	hrSWInstalledTable
In MIB	HOST-RESOURCES-MIB
Registered at OID	.1.3.6.1.2.1.25.6.3
Table Description	The (conceptual) table of software installed on this host.
Row Description	A (conceptual) entry for a piece of software installed on this host. As an example of how objects in this table are named, an instance of the hrSWInstalledName object might be named hrSWInstalledName.96

hrSWInstalledTable Indexes:

Name	Type	Access	Description
1 hrSWInstalledIndex	INTEGER32 Legal values: 1 .. 2147483647	ReadOnly	A unique value for each piece of software installed on the host. This value shall be in the range from 1 to the number of pieces of software installed on the host.

Other hrSWInstalledTable Columns:

Name	Type	Access	Description

2 hrSWInstalledName	OCTETSTR Legal Lengths: 0 .. 64 InternationalDisplayString	ReadOnly	Note: this object is based on the InternationalDisplayString TEXTUAL-CONVENTION. A textual description of this installed piece of software, including the manufacturer, revision, the name by which it is commonly known, and optionally, its serial number.
3 hrSWInstalledID	OBJECTID ProductID	ReadOnly	Note: this object is based on the ProductID TEXTUAL-CONVENTION. The product ID of this installed piece of software.
4 hrSWInstalledType	INTEGER Value / Label/Meaning 1 unknown 2 operatingSystem 3 deviceDriver 4 application	ReadOnly	The type of this software.
5 hrSWInstalledDate	OCTETSTR Legal Lengths: 8 , 11 DateAndTime	ReadOnly	Note: this object is based on the DateAndTime TEXTUAL-CONVENTION. The last-modification date of this application as it would appear in a directory listing. If this information is not known, then this variable shall have the value corresponding to January 1, year 0000, 00:00:00.0, which is encoded as (hex)'00 00 01 01 00 00 00 00'.

DEPRECATED OR OBSOLETE OR HISTORIC OBJECTS

SCALAR OBJECTS

Name	Type	Access	OID	Description

TABLE OBJECTS

NOTIFICATIONS

TEXTUAL CONVENTIONS

These TEXTUAL-CONVENTIONS are used in other parts of the document above. They are SNMP's way of defining a datatype that is used repeatedly by other MIB objects. Any implementation implementing objects that use one of these definitions must follow its DESCRIPTION clause as well as the DESCRIPTION clause of the object itself.

Name	Type	Description
DisplayString	OCTETSTR	Represents textual information taken from the NVT ASCII character set, as defined in pages 4, 10-11 of RFC 854. To summarize RFC 854, the NVT ASCII repertoire specifies: - the use of character codes 0-127 (decimal) - the graphics characters (32-126) are interpreted as US ASCII - NUL, LF, CR, BEL, BS, HT, VT and FF have the special meanings specified in RFC 854 - the other 25 codes have no standard interpretation - the sequence 'CR LF' means newline - the sequence 'CR NUL' means carriage-return - an 'LF' not preceded by a 'CR' means moving to the same column on the next line. - the sequence 'CR x' for any x other than LF or NUL is illegal. (Note that this also means that a string may end with either 'CR LF' or 'CR NUL', but not with CR.) Any object defined using this syntax may not exceed 255 characters in length.
AutonomousType	OBJECTID	Represents an independently extensible type identification value. It may, for example, indicate a particular sub-tree with further MIB definitions, or define a particular type of protocol or hardware.
InternationalDisplayString	OCTETSTR	This data type is used to model textual information in some character set. A network management station should use a local algorithm to determine which character set is in use and how it should be displayed. Note that this character set may be encoded with more than one octet per symbol, but will most often be NVT ASCII. When a size clause is

		specified for an object of this type, the size refers to the length in octets, not the number of symbols. This textual convention is intended to identify the manufacturer, model, and version of a specific hardware or software product. It is suggested that these OBJECT IDENTIFIERs are allocated such that all products from a particular manufacturer are registered under a subtree distinct to that manufacturer. In addition, all versions of a product should be registered under a subtree distinct to that product. With this strategy, a management station may uniquely determine the manufacturer and/or model of a product
ProductID	OBJECTID	whose productID is unknown to the management station. Objects of this type may be useful for inventory purposes or for automatically detecting incompatibilities or version mismatches between various hardware and software components on a system. For example, the product ID for the ACME 4860 66MHz clock doubled processor might be: enterprises.acme.acmeProcessors.a4860DX2.MHz66 A software product might be registered as: enterprises.acme.acmeOperatingSystems.acmeDOS.six(6).one(1)
KBytes	INTEGER32	Storage size, expressed in units of 1024 bytes.
DateAndTime	OCTETSTR	A date-time specification. field octets contents range ----- ------ -------- ----- 1 1-2 year* 0..65536 2 3 month 1..12 3 4 day 1..31 4 5 hour 0..23 5 6 minutes 0..59 6 7 seconds 0..60 (use 60 for leap-second) 7 8 deci-seconds 0..9 8 9 direction from UTC '+' / '-' 9 10 hours from UTC* 0..13 10 11 minutes from UTC 0..59 * Notes: - the value of year is in network-byte order - daylight saving time in New Zealand is +13 For example, Tuesday May 26, 1992 at 1:30:15 PM EDT would be

		displayed as: 1992-5-26,13:30:15.0,-4:0 Note that if only local time is known, then timezone information (fields 8-10) is not present.
TruthValue	INTEGER Value / Label/Meaning 1 true 2 false	Represents a boolean value.
InterfaceIndexOrZero	INTEGER32	This textual convention is an extension of the InterfaceIndex convention. The latter defines a greater than zero value used to identify an interface or interface sub-layer in the managed system. This extension permits the additional value of zero. the value zero is object-specific and must therefore be defined as part of the description of any object which uses this syntax. Examples of the usage of zero might include situations where interface was unknown, or when none or all interfaces need to be referenced.

TREE VIEW

Tree view generated by running: snmptranslate -Tp HOST-RESOURCES-MIB::host

```
+--host(25)
   |
   +--hrSystem(1)
   |  |
   |  +-- -R-- TimeTicks hrSystemUptime(1)
   |  +-- -RW- String    hrSystemDate(2)
   |  |        Textual Convention: DateAndTime
   |  |        Size: 8 | 11
   |  +-- -RW- Integer32 hrSystemInitialLoadDevice(3)
   |  |        Range: 1..2147483647
   |  +-- -RW- String    hrSystemInitialLoadParameters(4)
   |  |        Textual Convention: InternationalDisplayString
   |  |        Size: 0..128
   |  +-- -R-- Gauge     hrSystemNumUsers(5)
   |  +-- -R-- Gauge     hrSystemProcesses(6)
   |  +-- -R-- Integer32 hrSystemMaxProcesses(7)
   |           Range: 0..2147483647
   |
   +--hrStorage(2)
   |  |
```

```
|  +--hrStorageTypes(1)
|  |
|  +-- -R-- Integer32 hrMemorySize(2)
|  |        Textual Convention: KBytes
|  |        Range: 0..2147483647
|  |
|  +--hrStorageTable(3)
|     |
|     +--hrStorageEntry(1)
|        |  Index: hrStorageIndex
|        |
|        +-- -R-- Integer32 hrStorageIndex(1)
|        |        Range: 1..2147483647
|        +-- -R-- ObjID     hrStorageType(2)
|        |        Textual Convention: AutonomousType
|        +-- -R-- String    hrStorageDescr(3)
|        |        Textual Convention: DisplayString
|        |        Size: 0..255
|        +-- -R-- Integer32 hrStorageAllocationUnits(4)
|        |        Range: 1..2147483647
|        +-- -RW- Integer32 hrStorageSize(5)
|        |        Range: 0..2147483647
|        +-- -R-- Integer32 hrStorageUsed(6)
|        |        Range: 0..2147483647
|        +-- -R-- Counter   hrStorageAllocationFailures(7)
|
+--hrDevice(3)
|  |
|  +--hrDeviceTypes(1)
|  |
|  +--hrDeviceTable(2)
|  |  |
|  |  +--hrDeviceEntry(1)
|  |     |  Index: hrDeviceIndex
|  |     |
|  |     +-- -R-- Integer32 hrDeviceIndex(1)
|  |     |        Range: 1..2147483647
|  |     +-- -R-- ObjID     hrDeviceType(2)
|  |     |        Textual Convention: AutonomousType
|  |     +-- -R-- String    hrDeviceDescr(3)
|  |     |        Textual Convention: DisplayString
|  |     |        Size: 0..64
|  |     +-- -R-- ObjID     hrDeviceID(4)
|  |     |        Textual Convention: ProductID
|  |     +-- -R-- EnumVal   hrDeviceStatus(5)
|  |     |        Values: unknown(1), running(2), warning(3), testing(4), down(5)
|  |     +-- -R-- Counter   hrDeviceErrors(6)
|  |
```

```
|  +--hrProcessorTable(3)
|  |  |
|  |  +--hrProcessorEntry(1)
|  |     |  Index: hrDeviceIndex
|  |     |
|  |     +-- -R-- ObjID     hrProcessorFrwID(1)
|  |     |        Textual Convention: ProductID
|  |     +-- -R-- Integer32 hrProcessorLoad(2)
|  |              Range: 0..100
|  |
|  +--hrNetworkTable(4)
|  |  |
|  |  +--hrNetworkEntry(1)
|  |     |  Index: hrDeviceIndex
|  |     |
|  |     +-- -R-- Integer32 hrNetworkIfIndex(1)
|  |              Textual Convention: InterfaceIndexOrZero
|  |              Range: 0..2147483647
|  |
|  +--hrPrinterTable(5)
|  |  |
|  |  +--hrPrinterEntry(1)
|  |     |  Index: hrDeviceIndex
|  |     |
|  |     +-- -R-- EnumVal   hrPrinterStatus(1)
|  |     |        Values: other(1), unknown(2), idle(3), printing(4), warmup(5)
|  |     +-- -R-- String    hrPrinterDetectedErrorState(2)
|  |
|  +--hrDiskStorageTable(6)
|  |  |
|  |  +--hrDiskStorageEntry(1)
|  |     |  Index: hrDeviceIndex
|  |     |
|  |     +-- -R-- EnumVal   hrDiskStorageAccess(1)
|  |     |        Values: readWrite(1), readOnly(2)
|  |     +-- -R-- EnumVal   hrDiskStorageMedia(2)
|  |     |        Values: other(1), unknown(2), hardDisk(3), floppyDisk(4), opticalDiskROM(5), opticalDiskWORM(6), opticalDiskRW(7), ramDisk(8)
|  |     +-- -R-- EnumVal   hrDiskStorageRemoveble(3)
|  |     |        Textual Convention: TruthValue
|  |     |        Values: true(1), false(2)
|  |     +-- -R-- Integer32 hrDiskStorageCapacity(4)
|  |              Textual Convention: KBytes
|  |              Range: 0..2147483647
|  |
|  +--hrPartitionTable(7)
|  |  |
|  |  +--hrPartitionEntry(1)
|  |     |  Index: hrDeviceIndex, hrPartitionIndex
```

```
|  |     |
|  |     +-- -R-- Integer32 hrPartitionIndex(1)
|  |     |        Range: 1..2147483647
|  |     +-- -R-- String    hrPartitionLabel(2)
|  |     |        Textual Convention: InternationalDisplayString
|  |     |        Size: 0..128
|  |     +-- -R-- String    hrPartitionID(3)
|  |     +-- -R-- Integer32 hrPartitionSize(4)
|  |     |        Textual Convention: KBytes
|  |     |        Range: 0..2147483647
|  |     +-- -R-- Integer32 hrPartitionFSIndex(5)
|  |              Range: 0..2147483647
|  |
|  +--hrFSTable(8)
|  |  |
|  |  +--hrFSEntry(1)
|  |     |  Index: hrFSIndex
|  |     |
|  |     +-- -R-- Integer32 hrFSIndex(1)
|  |     |        Range: 1..2147483647
|  |     +-- -R-- String    hrFSMountPoint(2)
|  |     |        Textual Convention: InternationalDisplayString
|  |     |        Size: 0..128
|  |     +-- -R-- String    hrFSRemoteMountPoint(3)
|  |     |        Textual Convention: InternationalDisplayString
|  |     |        Size: 0..128
|  |     +-- -R-- ObjID     hrFSType(4)
|  |     |        Textual Convention: AutonomousType
|  |     +-- -R-- EnumVal   hrFSAccess(5)
|  |     |        Values: readWrite(1), readOnly(2)
|  |     +-- -R-- EnumVal   hrFSBootable(6)
|  |     |        Textual Convention: TruthValue
|  |     |        Values: true(1), false(2)
|  |     +-- -R-- Integer32 hrFSStorageIndex(7)
|  |     |        Range: 0..2147483647
|  |     +-- -RW- String    hrFSLastFullBackupDate(8)
|  |     |        Textual Convention: DateAndTime
|  |     |        Size: 8 | 11
|  |     +-- -RW- String    hrFSLastPartialBackupDate(9)
|  |              Textual Convention: DateAndTime
|  |              Size: 8 | 11
|  |
|  +--hrFSTypes(9)
|
+--hrSWRun(4)
|  |
|  +-- -R-- Integer32 hrSWOSIndex(1)
|  |        Range: 1..2147483647
```

```
|  |
|  +--hrSWRunTable(2)
|     |
|     +--hrSWRunEntry(1)
|        |  Index: hrSWRunIndex
|        |
|        +-- -R-- Integer32 hrSWRunIndex(1)
|        |        Range: 1..2147483647
|        +-- -R-- String    hrSWRunName(2)
|        |        Textual Convention: InternationalDisplayString
|        |        Size: 0..64
|        +-- -R-- ObjID     hrSWRunID(3)
|        |        Textual Convention: ProductID
|        +-- -R-- String    hrSWRunPath(4)
|        |        Textual Convention: InternationalDisplayString
|        |        Size: 0..128
|        +-- -R-- String    hrSWRunParameters(5)
|        |        Textual Convention: InternationalDisplayString
|        |        Size: 0..128
|        +-- -R-- EnumVal   hrSWRunType(6)
|        |        Values: unknown(1), operatingSystem(2), deviceDriver(3), application(4)
|        +-- -RW- EnumVal   hrSWRunStatus(7)
|                 Values: running(1), runnable(2), notRunnable(3), invalid(4)
|
+--hrSWRunPerf(5)
|  |
|  +--hrSWRunPerfTable(1)
|     |
|     +--hrSWRunPerfEntry(1)
|        |
|        +-- -R-- Integer32 hrSWRunPerfCPU(1)
|        |        Range: 0..2147483647
|        +-- -R-- Integer32 hrSWRunPerfMem(2)
|                 Textual Convention: KBytes
|                 Range: 0..2147483647
|
+--hrSWInstalled(6)
|  |
|  +-- -R-- TimeTicks hrSWInstalledLastChange(1)
|  +-- -R-- TimeTicks hrSWInstalledLastUpdateTime(2)
|  |
|  +--hrSWInstalledTable(3)
|     |
|     +--hrSWInstalledEntry(1)
|        |  Index: hrSWInstalledIndex
|        |
|        +-- -R-- Integer32 hrSWInstalledIndex(1)
|        |        Range: 1..2147483647
```

```
|        +-- -R-- String    hrSWInstalledName(2)
|        |        Textual Convention: InternationalDisplayString
|        |        Size: 0..64
|        +-- -R-- ObjID     hrSWInstalledID(3)
|        |        Textual Convention: ProductID
|        +-- -R-- EnumVal   hrSWInstalledType(4)
|        |        Values: unknown(1), operatingSystem(2), deviceDriver(3), application(4)
|        +-- -R-- String    hrSWInstalledDate(5)
|                 Textual Convention: DateAndTime
|                 Size: 8 | 11
|
+--hrMIBAdminInfo(7)
   |
   +--hostResourcesMibModule(1)
   |
   +--hrMIBCompliances(2)
   |  |
   |  +--hrMIBCompliance(1)
   |
   +--hrMIBGroups(3)
      |
      +--hrSystemGroup(1)
      +--hrStorageGroup(2)
      +--hrDeviceGroup(3)
      +--hrSWRunGroup(4)
      +--hrSWRunPerfGroup(5)
      +--hrSWInstalledGroup(6)
```

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