Management Information Base (MIB) for the
Simple Network Management Protocol (SNMP)

Status of this Memo

This document specifies an Internet standards track protocol for the
Internet community, and requests discussion and suggestions for
improvements. Please refer to the current edition of the "Internet
Official Protocol Standards" (STD 1) for the standardization state
and status of this protocol. Distribution of this memo is unlimited.

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Abstract

This document defines managed objects which describe the behavior of
a Simple Network Management Protocol (SNMP) entity. This document
obsoletes RFC 1907, Management Information Base for Version 2 of the
Simple Network Management Protocol (SNMPv2).
1. The Internet-Standard Management Framework

For a detailed overview of the documents that describe the current Internet-Standard Management Framework, please refer to section 7 of RFC 3410 [RFC3410].

Managed objects are accessed via a virtual information store, termed the Management Information Base or MIB. MIB objects are generally accessed through the Simple Network Management Protocol (SNMP).

Objects in the MIB are defined using the mechanisms defined in the Structure of Management Information (SMI). This memo specifies a MIB module that is compliant to the SMIV2, which is described in STD 58, RFC 2578 [RFC2578], STD 58, RFC 2579 [RFC2579] and STD 58, RFC 2580 [RFC2580].

It is the purpose of this document to define managed objects which describe the behavior of an SNMP entity, as defined in the SNMP architecture STD 62, [RFC3411].

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in BCP 14, RFC 2119 [RFC2119].

2. Definitions

SNMPv2-MIB DEFINITIONS ::= BEGIN

IMPORTS
    Module-Identity, Object-Type, Notification-Type,
    TimeTicks, Counter32, snmpModules, mib-2
    FROM SNMPv2-SMI
    DisplayString, TestAndIncr, TimeStamp
FROM SNMPv2-TC
MODULE-COMPLIANCE, OBJECT-GROUP, NOTIFICATION-GROUP
FROM SNMPv2-CONF;

snmpMIB MODULE-IDENTITY
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DESCRIPTION
"The MIB module for SNMP entities.

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REVISION "2002101600000Z"
DESCRIPTION "This revision of this MIB module was published as RFC 3418."

REVISION "1995110900000Z"
DESCRIPTION
sysDescr OBJECT-TYPE
SYNTAX      DisplayString (SIZE (0..255))
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
"A textual description of the entity. This value should include the full name and version identification of the system's hardware type, software operating-system, and networking software."
 ::= { system 1 }

sysObjectID OBJECT-TYPE
SYNTAX      OBJECT IDENTIFIER
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
"The vendor's authoritative identification of the network management subsystem contained in the entity. This value is allocated within the SMI enterprises subtree (1.3.6.1.4.1) and provides an easy and unambiguous means for determining 'what kind of box' is being managed. For example, if vendor 'Flintstones, Inc.' was assigned the subtree 1.3.6.1.4.1.424242, it could assign the identifier 1.3.6.1.4.1.424242.1.1 to its 'Fred Router'."
 ::= { system 2 }

sysUpTime OBJECT-TYPE

SYNTAX      TimeTicks
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
 "The time (in hundredths of a second) since the
 network management portion of the system was last
 re-initialized."
 ::= { system 3 }

sysContact OBJECT-TYPE
SYNTAX      DisplayString (SIZE (0..255))
MAX-ACCESS  read-write
STATUS      current
DESCRIPTION
 "The textual identification of the contact person for
 this managed node, together with information on how
 to contact this person. If no contact information is
 known, the value is the zero-length string."
 ::= { system 4 }

sysName OBJECT-TYPE
SYNTAX      DisplayString (SIZE (0..255))
MAX-ACCESS  read-write
STATUS      current
DESCRIPTION
 "An administratively-assigned name for this managed
 node. By convention, this is the node's fully-qualified
 domain name. If the name is unknown, the value is
 the zero-length string."
 ::= { system 5 }

sysLocation OBJECT-TYPE
SYNTAX      DisplayString (SIZE (0..255))
MAX-ACCESS  read-write
STATUS      current
DESCRIPTION
 "The physical location of this node (e.g., 'telephone
 closet, 3rd floor'). If the location is unknown, the
 value is the zero-length string."
 ::= { system 6 }

sysServices OBJECT-TYPE
SYNTAX      INTEGER (0..127)
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
 "A value which indicates the set of services that this
 entity may potentially offer. The value is a sum.
This sum initially takes the value zero. Then, for each layer, \( L \), in the range 1 through 7, that this node performs transactions for, \( 2^{(L - 1)} \) is added to the sum. For example, a node which performs only routing functions would have a value of 4 (\( 2^{(3-1)} \)). In contrast, a node which is a host offering application services would have a value of 72 (\( 2^{(4-1)} + 2^{(7-1)} \)). Note that in the context of the Internet suite of protocols, values should be calculated accordingly:

\[
\begin{array}{|c|c|}
\hline
\text{layer} & \text{functionality} \\
\hline
1 & \text{physical (e.g., repeaters)} \\
2 & \text{datalink/subnetwork (e.g., bridges)} \\
3 & \text{internet (e.g., supports the IP)} \\
4 & \text{end-to-end (e.g., supports the TCP)} \\
7 & \text{applications (e.g., supports the SMTP)} \\
\hline
\end{array}
\]

For systems including OSI protocols, layers 5 and 6 may also be counted.

::= { system 7 }

-- object resource information
--
-- a collection of objects which describe the SNMP entity’s
-- (statically and dynamically configurable) support of
-- various MIB modules.

sysORLastChange OBJECT-TYPE
SYNTAX     TimeStamp
MAX-ACCESS read-only
STATUS     current
DESCRIPTION
"The value of sysUpTime at the time of the most recent
change in state or value of any instance of sysORID."
::= { system 8 }

sysORTable OBJECT-TYPE
SYNTAX     SEQUENCE OF SysOREntry
MAX-ACCESS not-accessible
STATUS     current
DESCRIPTION
"The (conceptual) table listing the capabilities of
the local SNMP application acting as a command
responder with respect to various MIB modules.
SNMP entities having dynamically-configurable support
of MIB modules will have a dynamically-varying number
of conceptual rows."
::= { system 9 }
sysOREntry object-type
  syntax  SysOREntry
  max-access not-accessible
  status  current
  description
   "An entry (conceptual row) in the sysORTable."
  index  { sysORIndex }
::= { sysORTable 1 }

SysOREntry ::= SEQUENCE {
  sysORIndex       INTEGER,
  sysORID          OBJECT IDENTIFIER,
  sysORDescr       DisplayString,
  sysORUpTime       TimeStamp
}

sysORIndex object-type
  syntax  INTEGER (1..2147483647)
  max-access not-accessible
  status  current
  description
   "The auxiliary variable used for identifying instances
  of the columnar objects in the sysORTable."
::= { sysOREntry 1 }

sysORID object-type
  syntax  OBJECT IDENTIFIER
  max-access read-only
  status  current
  description
   "An authoritative identification of a capabilities
  statement with respect to various MIB modules supported
  by the local SNMP application acting as a command
  responder."
::= { sysOREntry 2 }

sysORDescr object-type
  syntax  DisplayString
  max-access read-only
  status  current
  description
   "A textual description of the capabilities identified
  by the corresponding instance of sysORID."
::= { sysOREntry 3 }

sysORUpTime object-type
  syntax  TimeStamp
  max-access read-only
STATUS     current
DESCRIPTION
"The value of sysUpTime at the time this conceptual row was last instantiated."
::= { sysOREntry 4 }

-- the SNMP group
-- a collection of objects providing basic instrumentation and control of an SNMP entity.

snmp     OBJECT IDENTIFIER ::= { mib-2 11 }

snmpInPkts OBJECT-TYPE
SYNTAX     Counter32
MAX-ACCESS read-only
STATUS     current
DESCRIPTION
"The total number of messages delivered to the SNMP entity from the transport service."
::= { snmp 1 }

snmpInBadVersions OBJECT-TYPE
SYNTAX     Counter32
MAX-ACCESS read-only
STATUS     current
DESCRIPTION
"The total number of SNMP messages which were delivered to the SNMP entity and were for an unsupported SNMP version."
::= { snmp 3 }

snmpInBadCommunityNames OBJECT-TYPE
SYNTAX     Counter32
MAX-ACCESS read-only
STATUS     current
DESCRIPTION
"The total number of community-based SNMP messages (for example, SNMPv1) delivered to the SNMP entity which used an SNMP community name not known to said entity. Also, implementations which authenticate community-based SNMP messages using check(s) in addition to matching the community name (for example, by also checking whether the message originated from a transport address allowed to use a specified community name) MAY include in this value the number of messages which failed the additional check(s). It is strongly RECOMMENDED that
the documentation for any security model which is used
to authenticate community-based SNMP messages specify
the precise conditions that contribute to this value."
 ::= { snmp 4 }

snmpInBadCommunityUses OBJECT-TYPE
 SYNTAX Countert32
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION
 "The total number of community-based SNMP messages (for
 example, SNMPv1) delivered to the SNMP entity which
 represented an SNMP operation that was not allowed for
 the SNMP community named in the message. The precise
 conditions under which this counter is incremented
 (if at all) depend on how the SNMP entity implements
 its access control mechanism and how its applications
 interact with that access control mechanism. It is
 strongly RECOMMENDED that the documentation for any
 access control mechanism which is used to control access
to and visibility of MIB instrumentation specify the
 precise conditions that contribute to this value."
 ::= { snmp 5 }

snmpInASNParseErrs OBJECT-TYPE
 SYNTAX Countert32
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION
 "The total number of ASN.1 or BER errors encountered by
 the SNMP entity when decoding received SNMP messages." 
 ::= { snmp 6 }

snmpEnableAuthenTraps OBJECT-TYPE
 SYNTAX INTEGER { enabled(1), disabled(2) }
 MAX-ACCESS read-write
 STATUS current
 DESCRIPTION
 "Indicates whether the SNMP entity is permitted to
 generate authenticationFailure traps. The value of this
 object overrides any configuration information; as such,
it provides a means whereby all authenticationFailure
 traps may be disabled.

Note that it is strongly recommended that this object
be stored in non-volatile memory so that it remains
constant across re-initializations of the network
management system."
::= { snmp 30 }

snmpSilentDrops OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The total number of Confirmed Class PDUs (such as
GetRequest-PDUs, GetNextRequest-PDUs,
GetBulkRequest-PDUs, SetRequest-PDUs, and
InformRequest-PDUs) delivered to the SNMP entity which
were silently dropped because the size of a reply
containing an alternate Response Class PDU (such as a
Response-PDU) with an empty variable-bindings field
was greater than either a local constraint or the
maximum message size associated with the originator of
the request."
::= { snmp 31 }

snmpProxyDrops OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The total number of Confirmed Class PDUs
(such as GetRequest-PDUs, GetNextRequest-PDUs,
GetBulkRequest-PDUs, SetRequest-PDUs, and
InformRequest-PDUs) delivered to the SNMP entity which
were silently dropped because the transmission of
the (possibly translated) message to a proxy target
failed in a manner (other than a time-out) such that
no Response Class PDU (such as a Response-PDU) could
be returned."
::= { snmp 32 }

-- information for notifications
--
-- a collection of objects which allow the SNMP entity, when
-- supporting a notification originator application,
-- to be configured to generate SNMPv2-Trap-PDUs.

snmpTrap          OBJECT IDENTIFIER ::= { snmpMIBObjects 4 }

snmpTrapOID OBJECT-TYPE
SYNTAX OBJECT IDENTIFIER
MAX-ACCESS accessible-for-notify
STATUS current
DESCRIPTION
"The authoritative identification of the notification currently being sent.  This variable occurs as the second varbind in every SNMPv2-Trap-PDU and InformRequest-PDU."
::= { snmpTrap 1 }

--  ::= { snmpTrap 2 }   this OID is obsolete

snmpTrapEnterprise OBJECT-TYPE
SYNTAX OBJECT IDENTIFIER
MAX-ACCESS accessible-for-notify
STATUS current
DESCRIPTION
"The authoritative identification of the enterprise associated with the trap currently being sent. When an SNMP proxy agent is mapping an RFC1157 Trap-PDU into a SNMPv2-Trap-PDU, this variable occurs as the last varbind."
::= { snmpTrap 3 }

--  ::= { snmpTrap 4 }   this OID is obsolete

-- well-known traps

snmpTraps OBJECT IDENTIFIER ::= { snmpMIBObjects 5 }

coldStart NOTIFICATION-TYPE
STATUS current
DESCRIPTION
"A coldStart trap signifies that the SNMP entity, supporting a notification originator application, is reinitializing itself and that its configuration may have been altered."
::= { snmpTraps 1 }

warmStart NOTIFICATION-TYPE
STATUS current
DESCRIPTION
"A warmStart trap signifies that the SNMP entity, supporting a notification originator application, is reinitializing itself such that its configuration is unaltered."
::= { snmpTraps 2 }

-- Note the linkDown NOTIFICATION-TYPE ::= { snmpTraps 3 }
-- and the linkUp NOTIFICATION-TYPE ::= { snmpTraps 4 }
-- are defined in RFC 2863 [RFC2863]
authenticationFailure NOTIFICATION-TYPE
   STATUS current
   DESCRIPTION
   "An authenticationFailure trap signifies that the SNMP
   entity has received a protocol message that is not
   properly authenticated. While all implementations
   of SNMP entities MAY be capable of generating this
   trap, the snmpEnableAuthenTraps object indicates
   whether this trap will be generated."
   ::= { snmpTraps 5 }

-- Note the egpNeighborLoss notification is defined
-- as { snmpTraps 6 } in RFC 1213

-- the set group
--
-- a collection of objects which allow several cooperating
-- command generator applications to coordinate their use of the
-- set operation.

snmpSet OBJECT IDENTIFIER ::= { snmpMIBObjects 6 }

snmpSetSerialNo OBJECT-TYPE
   SYNTAX   TestAndIncr
   MAX-ACCESS read-write
   STATUS   current
   DESCRIPTION
   "An advisory lock used to allow several cooperating
   command generator applications to coordinate their
   use of the SNMP set operation.

   This object is used for coarse-grain coordination.
   To achieve fine-grain coordination, one or more similar
   objects might be defined within each MIB group, as
   appropriate."
   ::= { snmpSet 1 }

-- conformance information

snmpMIBConformance OBJECT IDENTIFIER ::= { snmpMIB 2 }

snmpMIBCompliances OBJECT IDENTIFIER ::= { snmpMIBConformance 1 }
snmpMIBGroups OBJECT IDENTIFIER ::= { snmpMIBConformance 2 }

-- compliance statements
snmpBasicCompliance MODULE-COMPLIANCE
STATUS deprecated
DESCRIPTION
"The compliance statement for SNMPv2 entities which
implement the SNMPv2 MIB.

This compliance statement is replaced by
snmpBasicComplianceRev2."
MODULE -- this module
MANDATORY-GROUPS { snmpGroup, snmpSetGroup, systemGroup,
snmpBasicNotificationsGroup }

GROUP snmpCommunityGroup
DESCRIPTION
"This group is mandatory for SNMPv2 entities which
support community-based authentication."

::= { snmpMIBCompliances 2 }

snmpBasicComplianceRev2 MODULE-COMPLIANCE
STATUS current
DESCRIPTION
"The compliance statement for SNMP entities which
implement this MIB module."
MODULE -- this module
MANDATORY-GROUPS { snmpGroup, snmpSetGroup, systemGroup,
snmpBasicNotificationsGroup }

GROUP snmpCommunityGroup
DESCRIPTION
"This group is mandatory for SNMP entities which
support community-based authentication."

GROUP snmpWarmStartNotificationGroup
DESCRIPTION
"This group is mandatory for an SNMP entity which
supports command responder applications, and is
able to reinitialize itself such that its
configuration is unaltered."

::= { snmpMIBCompliances 3 }

-- units of conformance

-- ::= { snmpMIBGroups 1 } this OID is obsolete
-- ::= { snmpMIBGroups 2 } this OID is obsolete
-- ::= { snmpMIBGroups 3 } this OID is obsolete
this OID is obsolete

snmpGroup OBJECT-GROUP

OBJECTS { snmpInPkts,
            snmpInBadVersions,
            snmpInASNParseErrs,
            snmpSilentDrops,
            snmpProxyDrops,
            snmpEnableAuthenTraps }

STATUS current

DESCRIPTION
"A collection of objects providing basic instrumentation
and control of an SNMP entity."

::= { snmpMIBGroups 8 }

snmpCommunityGroup OBJECT-GROUP

OBJECTS { snmpInBadCommunityNames,
            snmpInBadCommunityUses }

STATUS current

DESCRIPTION
"A collection of objects providing basic instrumentation
of a SNMP entity which supports community-based
authentication."

::= { snmpMIBGroups 9 }

snmpSetGroup OBJECT-GROUP

OBJECTS { snmpSetSerialNo }

STATUS current

DESCRIPTION
"A collection of objects which allow several cooperating
command generator applications to coordinate their
use of the set operation."

::= { snmpMIBGroups 5 }

systemGroup OBJECT-GROUP

OBJECTS { sysDescr, sysObjectID, sysUpTime,
            sysContact, sysName, sysLocation,
            sysServices,
            sysORLastChange, sysORID,
            sysORUpTime, sysORDescr }

STATUS current

DESCRIPTION
"The system group defines objects which are common to all
managed systems."

::= { snmpMIBGroups 6 }

snmpBasicNotificationsGroup NOTIFICATION-GROUP

NOTIFICATIONS { coldStart, authenticationFailure }
status  current

description  
"The basic notifications implemented by an SNMP entity 
supporting command responder applications."
::= { snmpMIBGroups 7 }

snmpWarmStartNotificationGroup NOTIFICATION-GROUP
NOTIFICATIONS { warmStart }
status  current

description  
"An additional notification for an SNMP entity supporting 
command responder applications, if it is able to reinitialize 
itself such that its configuration is unaltered."
::= { snmpMIBGroups 11 }

snmpNotificationGroup OBJECT-GROUP
OBJECTS { snmpTrapOID, snmpTrapEnterprise }
status  current

description  
"These objects are required for entities 
which support notification originator applications."
::= { snmpMIBGroups 12 }

-- definitions in RFC 1213 made obsolete by the inclusion of a 
-- subset of the snmp group in this MIB

snmpOutPkts OBJECT-TYPE  
syntax  Counter32
max-access  read-only
status  obsolete

description  
"The total number of SNMP Messages which were 
passed from the SNMP protocol entity to the 
transport service."
::= { snmp 2 }

-- { snmp 7 } is not used

snmpInTooBigs OBJECT-TYPE  
syntax  Counter32
max-access  read-only
status  obsolete

description  
"The total number of SNMP PDUs which were 
delivered to the SNMP protocol entity and for 
which the value of the error-status field was 
'tooBig'."
::= { snmp 8 }
snmpInNoSuchNames OBJECT-TYPE
   SYNTAX     Counter32
   MAX-ACCESS read-only
   STATUS     obsolete
   DESCRIPTION
      "The total number of SNMP PDUs which were
      delivered to the SNMP protocol entity and for
      which the value of the error-status field was
      'noSuchName'."
   ::= { snmp 9 }

snmpInBadValues OBJECT-TYPE
   SYNTAX     Counter32
   MAX-ACCESS read-only
   STATUS     obsolete
   DESCRIPTION
      "The total number of SNMP PDUs which were
      delivered to the SNMP protocol entity and for
      which the value of the error-status field was
      'badValue'."
   ::= { snmp 10 }

snmpInReadOnlys OBJECT-TYPE
   SYNTAX     Counter32
   MAX-ACCESS read-only
   STATUS     obsolete
   DESCRIPTION
      "The total number valid SNMP PDUs which were delivered
      to the SNMP protocol entity and for which the value
      of the error-status field was 'readOnly'.  It should
      be noted that it is a protocol error to generate an
      SNMP PDU which contains the value 'readOnly' in the
      error-status field, as such this object is provided
      as a means of detecting incorrect implementations of
      the SNMP."
   ::= { snmp 11 }

snmpInGenErrs OBJECT-TYPE
   SYNTAX     Counter32
   MAX-ACCESS read-only
   STATUS     obsolete
   DESCRIPTION
      "The total number of SNMP PDUs which were delivered
      to the SNMP protocol entity and for which the value
      of the error-status field was 'genErr'."
   ::= { snmp 12 }

snmpInTotalReqVars OBJECT-TYPE
SYNTAX      Counter32  
MAX-ACCESS  read-only  
STATUS      obsolete  

DESCRIPTION  
"The total number of MIB objects which have been retrieved successfully by the SNMP protocol entity as the result of receiving valid SNMP Get-Request and Get-Next PDUs."
::= { snmp 13 }

snmpInTotalSetVars OBJECT-TYPE
SYNTAX      Counter32  
MAX-ACCESS  read-only  
STATUS      obsolete  

DESCRIPTION  
"The total number of MIB objects which have been altered successfully by the SNMP protocol entity as the result of receiving valid SNMP Set-Request PDUs."
::= { snmp 14 }

snmpInGetRequests OBJECT-TYPE
SYNTAX      Counter32  
MAX-ACCESS  read-only  
STATUS      obsolete  

DESCRIPTION  
"The total number of SNMP Get-Request PDUs which have been accepted and processed by the SNMP protocol entity."
::= { snmp 15 }

snmpInGetNexts OBJECT-TYPE
SYNTAX      Counter32  
MAX-ACCESS  read-only  
STATUS      obsolete  

DESCRIPTION  
"The total number of SNMP Get-Next PDUs which have been accepted and processed by the SNMP protocol entity."
::= { snmp 16 }

snmpInSetRequests OBJECT-TYPE
SYNTAX      Counter32  
MAX-ACCESS  read-only  
STATUS      obsolete  

DESCRIPTION  
"The total number of SNMP Set-Request PDUs which have been accepted and processed by the SNMP protocol entity."
::= { snmp 17 }
snmpInGetResponses OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS obsolete
DESCRIPTION "The total number of SNMP Get-Response PDUs which have been accepted and processed by the SNMP protocol entity."
::= { snmp 18 }

snmpInTraps OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS obsolete
DESCRIPTION "The total number of SNMP Trap PDUs which have been accepted and processed by the SNMP protocol entity."
::= { snmp 19 }

snmpOutTooBigs OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS obsolete
DESCRIPTION "The total number of SNMP PDUs which were generated by the SNMP protocol entity and for which the value of the error-status field was 'tooBig.'"
::= { snmp 20 }

snmpOutNoSuchNames OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS obsolete
DESCRIPTION "The total number of SNMP PDUs which were generated by the SNMP protocol entity and for which the value of the error-status was 'noSuchName'."
::= { snmp 21 }

snmpOutBadValues OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS obsolete
DESCRIPTION "The total number of SNMP PDUs which were generated by the SNMP protocol entity and for which the value of the error-status field was 'badValue'."
::= { snmp 22 }
-- ( snmp 23 ) is not used

snmpOutGenErrs OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS obsolete
DESCRIPTION
"The total number of SNMP PDUs which were generated
by the SNMP protocol entity and for which the value
of the error-status field was ‘genErr’.”
 ::= { snmp 24 }

snmpOutGetRequests OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS obsolete
DESCRIPTION
"The total number of SNMP Get-Request PDUs which
have been generated by the SNMP protocol entity.”
 ::= { snmp 25 }

snmpOutGetNexts OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS obsolete
DESCRIPTION
"The total number of SNMP Get-Next PDUs which have
been generated by the SNMP protocol entity.”
 ::= { snmp 26 }

snmpOutSetRequests OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS obsolete
DESCRIPTION
"The total number of SNMP Set-Request PDUs which
have been generated by the SNMP protocol entity.”
 ::= { snmp 27 }

snmpOutGetResponses OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS obsolete
DESCRIPTION
"The total number of SNMP Get-Response PDUs which
have been generated by the SNMP protocol entity.”
 ::= { snmp 28 }
snmpOutTraps OBJECT-TYPE
SYNTAX       Counter32
MAX-ACCESS   read-only
STATUS       obsolete
DESCRIPTION  
"The total number of SNMP Trap PDUs which have
been generated by the SNMP protocol entity."
 ::= { snmp 29 }

snmpObsoleteGroup OBJECT-GROUP
OBJECTS { snmpOutPkts, snmpInTooBigs, snmpInNoSuchNames,
           snmpInBadValues, snmpInReadOnlys, snmpInGenErrs,
           snmpInTotalReqVars, snmpInTotalSetVars,
           snmpInGetRequests, snmpInGetNexts, snmpInSetRequests,
           snmpInGetResponses, snmpInTraps, snmpOutTooBigs,
           snmpOutNoSuchNames, snmpOutBadValues,
           snmpOutGenErrs, snmpOutGetRequests, snmpOutGetNexts,
           snmpOutSetRequests, snmpOutGetResponses, snmpOutTraps }
STATUS obsolete
DESCRIPTION  
"A collection of objects from RFC 1213 made obsolete
by this MIB module."
 ::= { snmpMIBGroups 10 }

END

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5. Security Considerations

There are a number of management objects defined in this MIB that have a MAX-ACCESS clause of read-write. Such objects may be considered sensitive or vulnerable in some network environments. The support for SET operations in a non-secure environment without proper protection can have a negative effect on network operations.

SNMPv1 by itself is not a secure environment. Even if the network itself is secure (for example by using IPSec), even then, there is no control as to who on the secure network is allowed to access and GET/SET (read/change) the objects in this MIB.
It is recommended that the implementors consider the security features as provided by the SNMPv3 framework. Specifically, the use of the User-based Security Model STD 62, RFC 3414 [RFC3414] and the View-based Access Control Model STD 62, RFC 3415 [RFC3415] is recommended.

It is then a customer/user responsibility to ensure that the SNMP entity giving access to an instance of this MIB is properly configured to give access to the objects only to those principals (users) that have legitimate rights to indeed GET or SET (change) them.

6. References

6.1. Normative References


6.1. Informative References


7. Changes from RFC 1907

These are the changes from RFC 1907:

- Corrected typo in copyright statement;
- Updated copyright date;
- Updated with new editor's name and contact information;
- Cosmetic fixes to layout and typography;
- Changed title;
- Replace introduction with current MIB boilerplate;
- Updated references;
- Fixed typo in sysORUpTime;
- Re-worded description of snmpSilentDrops;
- Updated reference to RFC 1573 to 2863;
- Added IPR boilerplate as required by RFC 2026;
- Weakened authenticationFailure description from MUST to MAY, clarified that it pertains to all SNMP entities;
- Clarified descriptions of snmpInBadCommunityNames and snmpInBadCommunityUses;

- Updated module-identity and contact information;

- Updated the acknowledgments section;

- Replaced references to "manager role", "agent role" and "SNMPv2 entity" with appropriate terms from RFC 2571;

- Updated document headers and footers;

- Added security considerations, based on current recommendations for MIB modules;

- Added NOTIFICATION-GROUP and OBJECT-GROUP constructs for NOTIFICATION-TYPEs and OBJECT-TYPEs that were left unreferenced in RFC 1907;

- Fixed typos in sysServices DESCRIPTION;

- Changed description of snmpProxyDrops to use terms from architecture;

- Changed value used in example for sysObjectID;

- Added an abstract;

- Deprecated the snmpBasicCompliance MODULE-COMPLIANCE, and added the snmpBasicComplianceRev2 MODULE-COMPLIANCE to take its place;

- Updated working group mailing list address;

- Added co-chair’s address.

8. Editor’s Address

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