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SNMPv2 Working Group
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Management Information Base
for Version 2 of the
Simple Network Management Protocol (SNMPv2)

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.

Table of Contents

1. Introduction	2
1.1 A Note on Terminology	2
2. Definitions	2
2.1 The System Group	3
2.2 The SNMP Group	7
2.4 Information for Notifications	9
2.4.1 Well-known Traps	10
2.5 The Set Group	11
2.6 Conformance Information	11
2.6.1 Compliance Statements	11
2.6.2 Units of Conformance	12
2.6.3 Obsolete Definitions	13
3. Security Considerations	18
4. Editor's Address	19
5. Acknowledgements	19
6. References	20

1. Introduction

A management system contains: several (potentially many) nodes, each with a processing entity, termed an agent, which has access to management instrumentation; at least one management station; and, a management protocol, used to convey management information between the agents and management stations. Operations of the protocol are carried out under an administrative framework which defines authentication, authorization, access control, and privacy policies.

Management stations execute management applications which monitor and control managed elements. Managed elements are devices such as hosts, routers, terminal servers, etc., which are monitored and controlled via access to their management information.

Management information is viewed as a collection of managed objects, residing in a virtual information store, termed the Management Information Base (MIB). Collections of related objects are defined in MIB modules. These modules are written using a subset of OSI's Abstract Syntax Notation One (ASN.1) [1], termed the Structure of Management Information (SMI) [2].

The management protocol, SNMPv2 [3], provides for the exchange of messages which convey management information between the agents and the management stations. It is the purpose of this document to define managed objects which describe the behavior of a SNMPv2 entity.

1.1. A Note on Terminology

For the purpose of exposition, the original Internet-standard Network Management Framework, as described in RFCs 1155 (STD 16), 1157 (STD 15), and 1212 (STD 16), is termed the SNMP version 1 framework (SNMPv1). The current framework is termed the SNMP version 2 framework (SNMPv2).

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

LAST-UPDATED "9511090000Z"

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DESCRIPTION

"The MIB module for SNMPv2 entities."

REVISION "9304010000Z"

DESCRIPTION

"The initial revision of this MIB module was published as
RFC 1450."

::= { snmpModules 1 }

snmpMIBObjects OBJECT IDENTIFIER ::= { snmpMIB 1 }

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

-- the System group

--

-- a collection of objects common to all managed systems.

system OBJECT IDENTIFIER ::= { mib-2 1 }

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 1.3.6.1.4.1.4242, it could assign the identifier 1.3.6.1.4.1.4242.1.1 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 offers. 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:

layer	functionality
1	physical (e.g., repeaters)
2	datalink/subnetwork (e.g., bridges)
3	internet (e.g., supports the IP)
4	end-to-end (e.g., supports the TCP)
7	applications (e.g., supports the SMTP)

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 SNMPv2 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 SNMPv2 entity acting in an agent role with respect to various MIB modules. SNMPv2 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 SNMPv2 entity acting in an agent role."

```
 ::= { 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 SNMP messages delivered to the SNMP
    entity which used a SNMP community name not known to said
    entity."
 ::= { snmp 4 }
```

snmpInBadCommunityUses OBJECT-TYPE

```
SYNTAX      Counter32
MAX-ACCESS read-only
STATUS      current
DESCRIPTION
    "The total number of SNMP messages delivered to the SNMP
    entity which represented an SNMP operation which was not
    allowed by the SNMP community named in the message."
 ::= { snmp 5 }
```

snmpInASNParseErrs OBJECT-TYPE

```
SYNTAX      Counter32
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 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-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 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-PDU could be returned."
 ::= { snmp 32 }

-- information for notifications
--
-- a collection of objects which allow the SNMPv2 entity, when
-- acting in an agent role, 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 a SNMPv2 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 SNMPv2 entity, acting in an agent role, 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 SNMPv2 entity, acting in an agent role, 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 1573

authenticationFailure NOTIFICATION-TYPE

STATUS current

DESCRIPTION

"An authenticationFailure trap signifies that the SNMPv2 entity, acting in an agent role, has received a protocol message that is not properly authenticated. While all implementations of the SNMPv2 must be capable of generating this trap, the snmpEnableAuthenTraps object indicates whether this trap will be generated."

::= { snmpTraps 5 }

-- Note the egpNeighborLoss NOTIFICATION-TYPE ::= { snmpTraps 6 }

-- is defined in RFC 1213

```
-- the set group
--
-- a collection of objects which allow several cooperating
-- SNMPv2 entities, all acting in a manager role, to
-- coordinate their use of the SNMPv2 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 SNMPv2
        entities, all acting in a manager role, to coordinate their
        use of the SNMPv2 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

--      ::= { snmpMIBCompliances 1 }      this OID is obsolete

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

-- units of conformance

-- ::= { snmpMIBGroups 1 } this OID is obsolete
-- ::= { snmpMIBGroups 2 } this OID is obsolete
-- ::= { snmpMIBGroups 3 } this OID is obsolete
-- ::= { snmpMIBGroups 4 } 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 SNMPv2 entity."

::= { snmpMIBGroups 8 }

snmpCommunityGroup OBJECT-GROUP

OBJECTS { snmpInBadCommunityNames,
 snmpInBadCommunityUses }

STATUS current

DESCRIPTION

"A collection of objects providing basic instrumentation of a SNMPv2 entity which supports community-based authentication."

::= { snmpMIBGroups 9 }

snmpSetGroup OBJECT-GROUP

OBJECTS { snmpSetSerialNo }

STATUS current

DESCRIPTION

"A collection of objects which allow several cooperating SNMPv2 entities, all acting in a manager role, to coordinate their use of the SNMPv2 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 two notifications which an SNMPv2 entity is required to
    implement."
 ::= { snmpMIBGroups 7 }

-- 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 is
    '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 is '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 is '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 is '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 is '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 is  
'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 is  
'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 is '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 is '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."

::= { snmpMIBGroups 10 }

END

3. Security Considerations

Security issues are not discussed in this memo.

4. Editor's Address

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6. References

- [1] Information processing systems - Open Systems Interconnection - Specification of Abstract Syntax Notation One (ASN.1), International Organization for Standardization. International Standard 8824, (December, 1987).
- [2] SNMPv2 Working Group, Case, J., McCloghrie, K., Rose, M., and S. Waldbusser, "Structure of Management Information for Version 2 of the Simple Network Management Protocol (SNMPv2)", RFC 1902, January 1996.
- [3] SNMPv2 Working Group, Case, J., McCloghrie, K., Rose, M., and S. Waldbusser, "Protocol Operations for Version 2 of the Simple Network Management Protocol (SNMPv2)", RFC 1905, January 1996.
- [4] J.D. Case, C. Partridge, Case Diagrams: A First Step to Diagrammed Management Information Bases. Computer Communications Review, Volume 19, Number 1, (January, 1989).

