Network Working Group Request for Comments: 1907 Obsoletes: 1450 Category: Standards Track SNMPv2 Working Group J. Case SNMP Research, Inc. K. McCloghrie Cisco Systems, Inc. M. Rose Dover Beach Consulting, Inc. S. Waldbusser International Network Services January 1996

## 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.

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## 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;

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```
snmpMIB MODULE-IDENTITY
    LAST-UPDATED "9511090002"
    ORGANIZATION "IETF SNMPv2 Working Group"
    CONTACT-INFO
                      Marshall T. Rose
              Postal: Dover Beach Consulting, Inc.
                      420 Whisman Court
                      Mountain View, CA 94043-2186
                      US
                 Tel: +1 415 968 1052
              E-mail: mrose@dbc.mtview.ca.us"
    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
```

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```
OBJECT IDENTIFIER
    SYNTAX
   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
              DisplayString (SIZE (0..255))
   SYNTAX
   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
```

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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 INTEGER (0..127) SYNTAX 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 raised to (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: functionality layer physical (e.g., repeaters) 1 datalink/subnetwork (e.g., bridges) 2 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 Standards Track [Page 5] SNMPv2 Working Group

```
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 IDENTIF
sysORDescr DisplayString,
sysORUpTime TimeStamp
                  OBJECT IDENTIFIER,
}
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."
```

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```
::= { 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 instanciated."
    ::= { sysOREntry 4 }
-- the SNMP group
_ _
-- a collection of objects providing basic instrumentation and
-- control of an SNMP entity.
        OBJECT IDENTIFIER ::= { mib-2 11 }
snmp
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."
    ::= \{ \text{snmp } 1 \}
snmpInBadVersions OBJECT-TYPE
    SYNTAX Counter32
   MAX-ACCESS read-only
           current
   STATUS
   DESCRIPTION
            "The total number of SNMP messages which were delivered to
            the SNMP entity and were for an unsupported SNMP version."
    ::= \{ \text{snmp } 3 \}
snmpInBadCommunityNames OBJECT-TYPE
   SYNTAX
           Counter32
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```

```
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."
    ::= \{ \text{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."
    ::= \{ \text{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
           Counter32
    SYNTAX
   MAX-ACCESS read-only
   STATUS current
   DESCRIPTION
```

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"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. OBJECT IDENTIFIER ::= { snmpMIBObjects 4 } snmpTrap 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 SNMPv2 Working Group Standards Track [Page 9]

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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 OBJECT IDENTIFIER ::= { snmpMIBObjects 5 } snmpTraps 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

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```
-- 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.
              OBJECT IDENTIFIER ::= { snmpMIBObjects 6 }
snmpSet
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."
    ::= \{ \text{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
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                                                               [Page 11]
```

```
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 }
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,
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```

```
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
```

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```
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
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                                                             [Page 14]
```

```
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."
```

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```
::= \{ 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
```

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```
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 \}
```

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```
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.

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5. Acknowledgements

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