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## Internet Group Management Protocol MIB

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### Abstract

This memo defines a portion of the Management Information Base (MIB) for use with network management protocols in the Internet community. In particular, it describes objects used for managing the Internet Group Management Protocol (IGMP).

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## Internet Group Management Protocol MIB

### [1. Introduction](#)

This memo defines a portion of the Management Information Base (MIB) for use with network management protocols in the Internet community. In particular, it describes objects used for managing the Internet Group Management Protocol (IGMP), version 1 [[17](#)], version 2 [[18](#)] or version 3 [[19](#)]. This version of the MIB is an update to [rfc2933](#) incorporating IGMPv3 changes to enable "source filtering" in routers and hosts. All of this MIB module is applicable to IPv4 multicast routers; a subset is applicable to hosts implementing IGMP. Since IGMP is specific to IPv4, this MIB does not support management of equivalent functionality for other address families, such as IPv6. Such management may be supported by other MIBs.

### [2. The SNMP Management Framework](#)

The SNMP Management Framework presently consists of five major components:

- . An overall architecture, described in [RFC 2571](#) [[RFC2571](#)].
- . Mechanisms for describing and naming objects and events for the purpose of management. The first version of this Structure of Management Information (SMI) is called SMIV1 and described in STD 16, [RFC 1155](#) [[1](#)], STD 16, [RFC 1212](#) [[3](#)] and [RFC 1215](#) [[4](#)]. The second version, called SMIV2, is described in STD 58, [RFC 2578](#) [[5](#)], STD 58, [RFC 2579](#) [[6](#)] and STD 58, [RFC 2580](#) [[7](#)].
- . Message protocols for transferring management information. The first version of the SNMP message protocol is called SNMPv1 and described in STD 15, [RFC 1157](#) [[8](#)]. A second version of the SNMP message protocol, which is not an Internet standards track protocol, is called SNMPv2c and described in [RFC 1901](#) [[9](#)] and [RFC 1906](#) [[10](#)]. The third version of the message protocol is called SNMPv3 and described in [RFC 1906](#) [[10](#)], [RFC 2572](#) [[11](#)] and [RFC 2574](#) [[12](#)].
- . Protocol operations for accessing management information. The first set of protocol operations and associated PDU formats is described in STD 15, [RFC 1157](#) [[8](#)]. A second set of protocol operations and associated PDU formats is described in [RFC 1905](#)

[13].

- . A set of fundamental applications described in [RFC 2573](#) [14] and the view-based access control mechanism described in [RFC 2575](#) [15].

A more detailed introduction to the current SNMP Management Framework can be found in [RFC 2570](#) [16].

Managed objects are accessed via a virtual information store, termed the Management Information Base or MIB. Objects in the MIB are defined using the mechanisms defined in the SMI.

## Internet Group Management Protocol MIB

This memo specifies a MIB module that is compliant to the SMIV2. A MIB conforming to the SMIV1 can be produced through the appropriate translations. The resulting translated MIB must be semantically equivalent, except where objects or events are omitted because no translation is possible (use of Counter64). Some machine readable information in SMIV2 will be converted into textual descriptions in SMIV1 during the translation process. However, this loss of machine readable information is not considered to change the semantics of the MIB.

### 3. Overview

This MIB module contains three tables:

1. the IGMP Interface Table which contains one row for each interface on which IGMP is enabled,
2. the IGMP Cache Table which contains one row for each IP multicast group for which there are members on a particular interface, and
3. the IGMP SrcList Table which contains one row for each entry in the source filter record for an interface and multicast group pair.

All tables are intended to be implemented by hosts and routers, but some columnar objects in the first and second tables apply only to routers.

### 4. Definitions

IGMP-STD-MIB DEFINITIONS ::= BEGIN

## IMPORTS

```
MODULE-IDENTITY, OBJECT-TYPE, mib-2, Counter32, Gauge32,
Unsigned32, IpAddress, TimeTicks FROM SNMPv2-SMI
RowStatus, TruthValue          FROM SNMPv2-TC
MODULE-COMPLIANCE, OBJECT-GROUP FROM SNMPv2-CONF
InterfaceIndexOrZero,
InterfaceIndex                  FROM IF-MIB;
```

## igmpStdMIB MODULE-IDENTITY

```
LAST-UPDATED "200206140000Z" -- June 14, 2002
ORGANIZATION "IETF MAGMA Working Group."
CONTACT-INFO
```

```
    " Dave Thaler
      Microsoft Corporation
      One Microsoft Way
      Redmond, WA  98052-6399
      US
```

```
    Phone: +1 425 703 8835
    Email: dthaler@microsoft.com
```

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## Internet Group Management Protocol MIB

```
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US
```

```
Phone: +1 650 330 7762
Email: julian@research.att.com"
```

## DESCRIPTION

```
"The MIB module for IGMP Management."
```

```
REVISION      "200009280000Z" -- September 28, 2000
```

## DESCRIPTION

```
"Initial version, published as RFC 2933."
```

```
REVISION      "200206140000Z" -- June 14, 2002
```

## DESCRIPTION

```
"RFC 2933 revised 6/02 to incorporate IGMPv3 changes."
```

```
::= { mib-2 85 }
```

```

igmpMIBObjects      OBJECT IDENTIFIER ::= { igmpStdMIB 1 }

--
-- The IGMP Interface Table
--

igmpInterfaceTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF IgmpInterfaceEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "The (conceptual) table listing the interfaces on which IGMP
         is enabled."
    ::= { igmpMIBObjects 1 }

igmpInterfaceEntry OBJECT-TYPE
    SYNTAX      IgmpInterfaceEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "An entry (conceptual row) representing an interface on
         which IGMP is enabled."
    INDEX       { igmpInterfaceIfIndex }
    ::= { igmpInterfaceTable 1 }

IgmpInterfaceEntry ::= SEQUENCE {
    igmpInterfaceIfIndex      InterfaceIndex,
    igmpInterfaceQueryInterval Unsigned32,
    igmpInterfaceStatus      RowStatus,
    igmpInterfaceVersion      Unsigned32,
    igmpInterfaceQuerier      IpAddress,

```

#### Internet Group Management Protocol MIB

```

igmpInterfaceQueryMaxResponseTime Unsigned32,
igmpInterfaceQuerierUpTime         TimeTicks,
igmpInterfaceQuerierExpiryTime     TimeTicks,
igmpInterfaceVersion1QuerierTimer  TimeTicks,
igmpInterfaceWrongVersionQueries   Counter32,
igmpInterfaceJoins                 Counter32,
igmpInterfaceProxyIfIndex          InterfaceIndexOrZero,
igmpInterfaceGroups                Gauge32,
igmpInterfaceRobustness             Unsigned32,
igmpInterfaceLastMembQueryIntvl    Unsigned32,
igmpInterfaceVersion2QuerierTimer  TimeTicks

```

}

igmpInterfaceIfIndex OBJECT-TYPE

SYNTAX InterfaceIndex

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"The ifIndex value of the interface for which IGMP is enabled."

::= { igmpInterfaceEntry 1 }

igmpInterfaceQueryInterval OBJECT-TYPE

SYNTAX Unsigned32

UNITS "seconds"

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The frequency at which IGMP Host-Query packets are transmitted on this interface."

DEFVAL { 125 }

::= { igmpInterfaceEntry 2 }

igmpInterfaceStatus OBJECT-TYPE

SYNTAX RowStatus

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The activation of a row enables IGMP on the interface. The destruction of a row disables IGMP on the interface."

::= { igmpInterfaceEntry 3 }

igmpInterfaceVersion OBJECT-TYPE

SYNTAX Unsigned32

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The version of IGMP which is running on this interface. This object can be used to configure a router capable of running either value. For IGMP to function correctly, all routers on a LAN must be configured to run the same version of IGMP on that LAN."

DEFVAL { 2 }

igmpInterfaceQuerier OBJECT-TYPE

SYNTAX       IpAddress

MAX-ACCESS read-only

STATUS       current

DESCRIPTION

      "The address of the IGMP Querier on the IP subnet to which  
      this interface is attached."

::= { igmpInterfaceEntry 5 }

igmpInterfaceQueryMaxResponseTime OBJECT-TYPE

SYNTAX       Unsigned32 (0..255)

UNITS        "tenths of seconds"

MAX-ACCESS read-create

STATUS       current

DESCRIPTION

      "The maximum query response time advertised in IGMPv2  
      queries on this interface."

DEFVAL       { 100 }

::= { igmpInterfaceEntry 6 }

igmpInterfaceQuerierUpTime OBJECT-TYPE

SYNTAX       TimeTicks

MAX-ACCESS read-only

STATUS       current

DESCRIPTION

      "The time since igmpInterfaceQuerier was last changed."

::= { igmpInterfaceEntry 7 }

igmpInterfaceQuerierExpiryTime OBJECT-TYPE

SYNTAX       TimeTicks

MAX-ACCESS read-only

STATUS       current

DESCRIPTION

      "The amount of time remaining before the Other Querier  
      Present Timer expires. If the local system is the querier,  
      the value of this object is zero."

::= { igmpInterfaceEntry 8 }

igmpInterfaceVersion1QuerierTimer OBJECT-TYPE

SYNTAX       TimeTicks

MAX-ACCESS read-only

STATUS       current

DESCRIPTION

      "The time remaining until the host assumes that there are no  
      IGMPv1 routers present on the interface. While this is non-  
      zero, the host will reply to all queries with version 1  
      membership reports."

::= { igmpInterfaceEntry 9 }

igmpInterfaceWrongVersionQueries OBJECT-TYPE

SYNTAX Counter32  
MAX-ACCESS read-only

---

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STATUS current  
DESCRIPTION

"The number of queries received whose IGMP version does not match igmpInterfaceVersion, over the lifetime of the row entry. IGMP requires that all routers on a LAN be configured to run the same version of IGMP. Thus, if any queries are received with the wrong version, this indicates a configuration error."

::= { igmpInterfaceEntry 10 }

igmpInterfaceJoins OBJECT-TYPE

SYNTAX Counter32  
MAX-ACCESS read-only  
STATUS current  
DESCRIPTION

"The number of times a group membership has been added on this interface; that is, the number of times an entry for this interface has been added to the Cache Table. This object gives an indication of the amount of IGMP activity over the lifetime of the row entry."

::= { igmpInterfaceEntry 11 }

igmpInterfaceProxyIfIndex OBJECT-TYPE

SYNTAX InterfaceIndexOrZero  
MAX-ACCESS read-create  
STATUS current  
DESCRIPTION

"Some devices implement a form of IGMP proxying whereby memberships learned on the interface represented by this row, cause IGMP Host Membership Reports to be sent on the interface whose ifIndex value is given by this object. Such a device would implement the igmpV2RouterMIBGroup only on its router interfaces (those interfaces with non-zero igmpInterfaceProxyIfIndex). Typically, the value of this object is 0, indicating that no proxying is being done."

DEFVAL { 0 }

::= { igmpInterfaceEntry 12 }

igmpInterfaceGroups OBJECT-TYPE

SYNTAX Gauge32  
MAX-ACCESS read-only



STATUS current  
DESCRIPTION  
    "The current number of entries for this interface in the  
    Cache Table."  
 ::= { igmpInterfaceEntry 13 }

igmpInterfaceRobustness OBJECT-TYPE  
SYNTAX Unsigned32 (1..255)  
MAX-ACCESS read-create

STATUS current  
DESCRIPTION

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"The Robustness Variable allows tuning for the expected packet loss on a subnet. If a subnet is expected to be lossy, the Robustness Variable may be increased. IGMP is robust to (Robustness Variable-1) packet losses."

DEFVAL { 2 }  
 ::= { igmpInterfaceEntry 14 }

igmpInterfaceLastMembQueryIntvl OBJECT-TYPE

SYNTAX Unsigned32 (0..255)  
UNITS "tenths of seconds"  
MAX-ACCESS read-create  
STATUS current  
DESCRIPTION

"The Last Member Query Interval is the Max Response Time inserted into Group-Specific Queries sent in response to Leave Group messages, and is also the amount of time between Group-Specific Query messages. This value may be tuned to modify the leave latency of the network. A reduced value results in reduced time to detect the loss of the last member of a group. The value of this object is irrelevant if igmpInterfaceVersion is 1."

DEFVAL { 10 }  
 ::= { igmpInterfaceEntry 15 }

igmpInterfaceVersion2QuerierTimer OBJECT-TYPE

SYNTAX TimeTicks  
MAX-ACCESS read-only  
STATUS current  
DESCRIPTION

"The time remaining until the host assumes that there are no IGMPv2 routers present on the interface. While this is non-zero, the host will reply to all queries with version 1 or 2

```

        membership reports."
 ::= { igmpInterfaceEntry 16 }

--
-- The IGMP Cache Table
--

igmpCacheTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF IgmpCacheEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "The (conceptual) table listing the IP multicast groups for
         which there are members on a particular interface."
    ::= { igmpMIBObjects 2 }

igmpCacheEntry OBJECT-TYPE
    SYNTAX      IgmpCacheEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "An entry (conceptual row) in the igmpCacheTable."

```

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## Internet Group Management Protocol MIB

```

INDEX      { igmpCacheAddress, igmpCacheIfIndex }
 ::= { igmpCacheTable 1 }

IgmpCacheEntry ::= SEQUENCE {
    igmpCacheAddress      IpAddress,
    igmpCacheIfIndex      InterfaceIndex,
    igmpCacheSelf         TruthValue,
    igmpCacheLastReporter IpAddress,
    igmpCacheUpTime       TimeTicks,
    igmpCacheExpiryTime   TimeTicks,
    igmpCacheStatus       RowStatus,
    igmpCacheVersion1HostTimer TimeTicks,
    igmpCacheVersion2HostTimer TimeTicks,
    igmpCacheSourceFilterMode Integer32
}

igmpCacheAddress OBJECT-TYPE
    SYNTAX      IpAddress
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION

```

"The IP multicast group address for which this entry  
        contains information."  
 ::= { igmpCacheEntry 1 }

igmpCacheIfIndex OBJECT-TYPE

SYNTAX InterfaceIndex

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

        "The interface for which this entry contains information for  
        an IP multicast group address."

::= { igmpCacheEntry 2 }

igmpCacheSelf OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-create

STATUS current

DESCRIPTION

        "An indication of whether the local system is a member of  
        this group address on this interface."

DEFVAL { true }

::= { igmpCacheEntry 3 }

igmpCacheLastReporter OBJECT-TYPE

SYNTAX IPAddress

MAX-ACCESS read-only

STATUS current

DESCRIPTION

        "The IP address of the source of the last membership report  
        received for this IP Multicast group address on this  
        interface. If no membership report has been received, this  
        object has the value 0.0.0.0."

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::= { igmpCacheEntry 4 }

igmpCacheUpTime OBJECT-TYPE

SYNTAX TimeTicks

MAX-ACCESS read-only

STATUS current

DESCRIPTION

        "The time elapsed since this entry was created."

::= { igmpCacheEntry 5 }

igmpCacheExpiryTime OBJECT-TYPE

SYNTAX        TimeTicks  
MAX-ACCESS read-only  
STATUS        current  
DESCRIPTION

"The minimum amount of time remaining before this entry will be aged out. A value of 0 indicates that the entry is only present because igmpCacheSelf is true and that if the router left the group, this entry would be aged out immediately. Note that some implementations may process membership reports from the local system in the same way as reports from other hosts, so a value of 0 is not required."

::= { igmpCacheEntry 6 }

igmpCacheStatus OBJECT-TYPE

SYNTAX        RowStatus  
MAX-ACCESS read-create  
STATUS        current  
DESCRIPTION

"The status of this entry."

::= { igmpCacheEntry 7 }

igmpCacheVersion1HostTimer OBJECT-TYPE

SYNTAX        TimeTicks  
MAX-ACCESS read-only  
STATUS        current  
DESCRIPTION

"The time remaining until the local router will assume that there are no longer any IGMP version 1 members on the IP subnet attached to this interface. Upon hearing any IGMPv1 Membership Report, this value is reset to the group membership timer. While this time remaining is non-zero, the local router ignores any IGMPv2 Leave messages for this group that it receives on this interface."

::= { igmpCacheEntry 8 }

igmpCacheVersion2HostTimer OBJECT-TYPE

SYNTAX        TimeTicks  
MAX-ACCESS read-only  
STATUS        current  
DESCRIPTION

"The time remaining until the local router will assume that there are no longer any IGMP version 2 members on the IP

```

        membership timer."
 ::= { igmpCacheEntry 9 }

igmpCacheSourceFilterMode OBJECT-TYPE
    SYNTAX      Integer32 {include (1),
                           exclude (2) }
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The state in which the interface is currently set. The
        value indicates the relevance of the corresponding source
        list entries in the SrcList Table for IGMPv3 interfaces."
 ::= { igmpCacheEntry 10 }

--
-- The IGMP Source list Table
--

igmpSrcListTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF IgmpSrcListEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "The (conceptual) table listing the Source List entries
        corresponding to each Interface filter mode record."
 ::= { igmpMIBObjects 3 }

igmpSrcListEntry OBJECT-TYPE
    SYNTAX      IgmpSrcListEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "An entry (conceptual row) in the igmpSrcListTable."
    INDEX       { igmpSrcListAddress, igmpSrcListIfIndex,
igmpSrcListHostAddress }
 ::= { igmpSrcListTable 1 }

IgmpSrcListEntry ::= SEQUENCE {
    igmpSrcListAddress      IpAddress,
    igmpSrcListIfIndex      InterfaceIndex,
    igmpSrcListHostAddress  IpAddress,
    igmpSrcListStatus       RowStatus
}

igmpSrcListAddress OBJECT-TYPE
    SYNTAX      IpAddress
    MAX-ACCESS  not-accessible
    STATUS      current

```

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## DESCRIPTION

"The IP multicast group address for which this entry contains information."

::= { igmpSrcListEntry 1 }

## igmpSrcListIfIndex OBJECT-TYPE

SYNTAX InterfaceIndex

MAX-ACCESS not-accessible

STATUS current

## DESCRIPTION

"The interface for which this entry contains information for an IP multicast group address."

::= { igmpSrcListEntry 2 }

## igmpSrcListHostAddress OBJECT-TYPE

SYNTAX IpAddress

MAX-ACCESS not-accessible

STATUS current

## DESCRIPTION

"The host address to which this entry corresponds. The CacheSourceFilterMode value for this Group address and interface indicates whether this Host address is included or excluded."

::= { igmpSrcListEntry 3 }

## igmpSrcListStatus OBJECT-TYPE

SYNTAX RowStatus

MAX-ACCESS read-create

STATUS current

## DESCRIPTION

"The status of this entry."

::= { igmpSrcListEntry 4 }

-- conformance information

## igmpMIBConformance

OBJECT IDENTIFIER ::= { igmpStdMIB 2 }

## igmpMIBCompliances

OBJECT IDENTIFIER ::= { igmpMIBConformance 1 }

igmpMIBGroups OBJECT IDENTIFIER ::= { igmpMIBConformance 2 }

-- compliance statements

```

igmpV1HostMIBCompliance MODULE-COMPLIANCE
    STATUS    current
    DESCRIPTION
        "The compliance statement for hosts running IGMPv1 and
        implementing the IGMP MIB."
    MODULE -- this module
    MANDATORY-GROUPS { igmpBaseMIBGroup }

    OBJECT     igmpInterfaceStatus

```

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```

MIN-ACCESS read-only
DESCRIPTION
    "Write access is not required."

```

```

OBJECT     igmpCacheStatus
MIN-ACCESS read-only
DESCRIPTION
    "Write access is not required."

```

```

 ::= { igmpMIBCompliances 1 }

```

```

igmpV1RouterMIBCompliance MODULE-COMPLIANCE
    STATUS    current
    DESCRIPTION
        "The compliance statement for routers running IGMPv1 and
        implementing the IGMP MIB."
    MODULE -- this module
    MANDATORY-GROUPS { igmpBaseMIBGroup,
                        igmpRouterMIBGroup
                      }

```

```

OBJECT     igmpInterfaceStatus
MIN-ACCESS read-only
DESCRIPTION
    "Write access is not required."

```

```

OBJECT     igmpCacheStatus
MIN-ACCESS read-only
DESCRIPTION
    "Write access is not required."

```

```

 ::= { igmpMIBCompliances 2 }

```

```

igmpV2HostMIBCompliance MODULE-COMPLIANCE
    STATUS    current

```

```

DESCRIPTION
    "The compliance statement for hosts running IGMPv2 and
    implementing the IGMP MIB."
MODULE -- this module
MANDATORY-GROUPS { igmpBaseMIBGroup,
                    igmpV2HostMIBGroup
                  }

OBJECT      igmpInterfaceStatus
MIN-ACCESS  read-only
DESCRIPTION
    "Write access is not required."

OBJECT      igmpCacheStatus
MIN-ACCESS  read-only
DESCRIPTION
    "Write access is not required."

 ::= { igmpMIBCompliances 3 }

```

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```

igmpV2RouterMIBCompliance MODULE-COMPLIANCE
    STATUS current
    DESCRIPTION
        "The compliance statement for routers running IGMPv2 and
        implementing the IGMP MIB."
    MODULE -- this module
    MANDATORY-GROUPS { igmpBaseMIBGroup,
                        igmpRouterMIBGroup,
                        igmpV2RouterMIBGroup
                      }

    OBJECT      igmpInterfaceStatus
    MIN-ACCESS  read-only
    DESCRIPTION
        "Write access is not required."

    OBJECT      igmpCacheStatus
    MIN-ACCESS  read-only
    DESCRIPTION
        "Write access is not required."

 ::= { igmpMIBCompliances 4 }

igmpV3HostMIBCompliance MODULE-COMPLIANCE
    STATUS current

```



DESCRIPTION  
    "The compliance statement for hosts running IGMPv3 and  
    implementing the IGMP MIB."

MODULE -- this module

MANDATORY-GROUPS { igmpBaseMIBGroup,  
                    igmpV2HostMIBGroup,  
                    igmpV3HostMIBGroup  
                    }

OBJECT igmpInterfaceStatus

MIN-ACCESS read-only

DESCRIPTION

    "Write access is not required."

OBJECT igmpCacheStatus

MIN-ACCESS read-only

DESCRIPTION

    "Write access is not required."

::= { igmpMIBCompliances 5 }

igmpV3RouterMIBCompliance MODULE-COMPLIANCE

STATUS current

DESCRIPTION

    "The compliance statement for routers running IGMPv3 and  
    implementing the IGMP MIB."

MODULE -- this module

MANDATORY-GROUPS { igmpBaseMIBGroup,  
                    igmpRouterMIBGroup,  
                    igmpV2RouterMIBGroup,

---

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    igmpV3RouterMIBGroup  
}

OBJECT igmpInterfaceStatus

MIN-ACCESS read-only

DESCRIPTION

    "Write access is not required."

OBJECT igmpCacheStatus

MIN-ACCESS read-only

DESCRIPTION

    "Write access is not required."

::= { igmpMIBCompliances 6 }

-- units of conformance

igmpBaseMIBGroup OBJECT-GROUP

OBJECTS { igmpCacheSelf,  
          igmpCacheStatus, igmpInterfaceStatus  
          }

STATUS current

DESCRIPTION

"The basic collection of objects providing management of  
IGMP version 1, 2 or 3."

::= { igmpMIBGroups 1 }

igmpRouterMIBGroup OBJECT-GROUP

OBJECTS { igmpCacheUpTime, igmpCacheExpiryTime,  
          igmpInterfaceJoins, igmpInterfaceGroups,  
          igmpCacheLastReporter, igmpInterfaceQuerierUpTime,  
          igmpInterfaceQuerierExpiryTime,  
          igmpInterfaceQueryInterval  
          }

STATUS current

DESCRIPTION

"A collection of additional objects for management of IGMP  
version 1, 2 or 3 in routers."

::= { igmpMIBGroups 2 }

igmpV2HostMIBGroup OBJECT-GROUP

OBJECTS { igmpInterfaceVersion1QuerierTimer }

STATUS current

DESCRIPTION

"A collection of additional objects for management of IGMP  
version 2 in hosts."

::= { igmpMIBGroups 3 }

igmpHostOptMIBGroup OBJECT-GROUP

OBJECTS { igmpCacheLastReporter, igmpInterfaceQuerier }

STATUS current

DESCRIPTION

"A collection of optional objects for IGMP hosts."

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Supporting this group can be especially useful in an  
environment with a router which does not support the IGMP  
MIB."

::= { igmpMIBGroups 4 }

```

igmpV2RouterMIBGroup OBJECT-GROUP
    OBJECTS { igmpInterfaceVersion, igmpInterfaceQuerier,
              igmpInterfaceQueryMaxResponseTime,
              igmpInterfaceRobustness,
              igmpInterfaceWrongVersionQueries,
              igmpInterfaceLastMembQueryIntvl,
              igmpCacheVersion1HostTimer
            }
    STATUS current
    DESCRIPTION
        "A collection of additional objects for management of IGMP
        version 2 in routers."
    ::= { igmpMIBGroups 5 }

igmpV2ProxyMIBGroup OBJECT-GROUP
    OBJECTS { igmpInterfaceProxyIfIndex }
    STATUS current
    DESCRIPTION
        "A collection of additional objects for management of IGMP
        proxy devices."
    ::= { igmpMIBGroups 6 }

igmpV3HostMIBGroup OBJECT-GROUP
    OBJECTS { igmpCacheSourceFilterMode,
              igmpInterfaceVersion2QuerierTimer,
              igmpSrcListAddress,
              igmpSrcListIfIndex,
              igmpSrcListHostAddress
            }
    STATUS current
    DESCRIPTION
        "A collection of additional objects for management of IGMP
        version 3 in hosts."
    ::= { igmpMIBGroups 7 }

igmpV3RouterMIBGroup OBJECT-GROUP
    OBJECTS { igmpCacheSourceFilterMode,
              igmpCacheVersion2HostTimer,
              igmpSrcListAddress,
              igmpSrcListIfIndex,
              igmpSrcListHostAddress
            }
    STATUS current
    DESCRIPTION
        "A collection of additional objects for management of IGMP
        version 3 in routers."
    ::= { igmpMIBGroups 8 }

```

END

---

## Internet Group Management Protocol MIB

### 5. Security Considerations

This MIB contains readable objects whose values provide information related to multicast sessions. Some of these objects could contain sensitive information. In particular, the `igmpCacheSelf` and `igmpCacheLastReporter` can be used to identify machines which are listening to a given group address. There are also a number of objects that have a MAX-ACCESS clause of read-write and/or read-create, which allow an administrator to configure IGMP in the router.

While unauthorized access to the readable objects is relatively innocuous, unauthorized access to the write-able objects could cause a denial of service. Hence, 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 such an insecure 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 SET (change/create/delete) the objects in this MIB.

It is recommended that the implementers consider the security features as provided by the SNMPv3 framework. Specifically, the use of the User-based Security Model [RFC 2574](#) [12] and the View-based Access Control Model [RFC 2575](#) [15] is recommended.

It is then a customer/user responsibility to ensure that the SNMP entity giving access to this MIB, is properly configured to give access to those objects only to those principals (users) that have legitimate rights to access them.

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