

## RSVP Management Information Base using SMIV2

### 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.

### Abstract

This memo defines a portion of the Management Information Base (MIB) for use with network management protocols in TCP/IP-based internets. In particular, it defines objects for managing the Resource Reservation Protocol (RSVP) within the interface attributes defined in the Integrated Services Model. Thus, the Integrated Services MIB is directly relevant to and cross-referenced by this MIB. Comments should be made to the RSVP Working Group, [rsvp@isi.edu](mailto:rsvp@isi.edu).

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## [1.](#) The SNMPv2 Network Management Framework

The SNMPv2 Network Management Framework consists of four major components. They are:

- o [RFC 1441](#) which defines the SMI, the mechanisms used for describing and naming objects for the purpose of management.
- o STD 17, [RFC 1213](#) defines MIB-II, the core set of managed objects for the Internet suite of protocols.
- o [RFC 1445](#) which defines the administrative and other architectural aspects of the framework.
- o [RFC 1448](#) which defines the protocol used for network access to managed objects.

The Framework permits new objects to be defined for the purpose of experimentation and evaluation.

### [1.1.](#) Object Definitions

Managed objects are accessed via a virtual information store, termed the Management Information Base or MIB. Objects in the MIB are defined using the subset of Abstract Syntax Notation One (ASN.1) defined in the SMI. In particular, each object type is named by an OBJECT IDENTIFIER, an administratively assigned name. The object type together with an object instance serves to uniquely identify a specific instantiation of the object. For human convenience, we often use a textual string, termed the descriptor, to refer to the object type.

## 2. Overview

### 2.1. Textual Conventions

Several new data types are introduced as a textual convention in this MIB document. These textual conventions enhance the readability of the specification and can ease comparison with other specifications if appropriate. It should be noted that the introduction of these textual conventions has no effect on either the syntax nor the semantics of any managed objects. The use of these is merely an artifact of the explanatory method used. Objects defined in terms of one of these methods are always encoded by means of the rules that define the primitive type. Hence, no changes to the SMI or the SNMP are necessary to accommodate these textual conventions which are adopted merely for the convenience of readers and writers in pursuit of the elusive goal of clear, concise, and unambiguous MIB documents.

### 2.2. Structure of MIB

The MIB is composed of the following sections:

- General Objects
- Session Statistics Table
- Session Sender Table
- Reservation Requests Received Table
- Reservation Requests Forwarded Table
- RSVP Interface Attributes Table
- RSVP Neighbor Table

As a general rule, it is difficult in SNMP to describe arbitrarily long or complex messages; this MIB therefore seeks to describe the Path State Database and the Reservation State Database as though each flow and filter description received in an aggregate message had been received in a separate reservation message.

Thus, if a RESV message is received for session 224.1.2.3+UDP+4455 with two filter/flow spec groups describing a sender 1.2.3.4 and another sender 1.2.7.8, these two will show in the MIB as two separate rows: one for 224.1.2.3+UDP+4455 from 1.2.3.4 and the other for 224.1.2.3+UDP+4455 from 1.2.7.8.

### 2.3. Semantics of Writing the Path and Reservation State Databases

The path and reservation state tables are writeable. Writing into the Path and Reservation State databases allows one to perform RSVP reservations without authenticating through RSVP mechanisms, but

rather through SNMP mechanisms. State created in this way by SNMP does not time out and cannot be deleted by receiving an RSVP teardown message; it can only be deleted by SNMP. Deletion is accomplished by writing 'destroy' to the associated Row Status object, and this will initiate a teardown message as if the state had timed out.

## 2.4. Intended use of Flow Notifications

### 2.4.1. The lostFlow Notification

The Lost Flow notification is an asynchronous event that signifies that a flow is no longer being observed.

### 2.4.2. The newFlow Notification

The newFlow Notification defined in this MIB can be used to advise a network management system of the state of a flow.

## 3. Definitions

RSVP-MIB DEFINITIONS ::= BEGIN

### IMPORTS

```
MODULE-IDENTITY, OBJECT-TYPE, Gauge32,
NOTIFICATION-TYPE, Integer32, mib-2
                                FROM SNMPv2-SMI
TEXTUAL-CONVENTION, TruthValue, RowStatus,
TimeStamp, TestAndIncr, TimeInterval
                                FROM SNMPv2-TC
MODULE-COMPLIANCE, OBJECT-GROUP,
NOTIFICATION-GROUP              FROM SNMPv2-CONF
Port, SessionNumber, SessionType,
Protocol, QosService, intSrvFlowStatus,
MessageSize, BitRate, BurstSize
                                FROM INTEGRATED-SERVICES-MIB
ifIndex, InterfaceIndex        FROM IF-MIB;
```

### rsvp MODULE-IDENTITY

```
LAST-UPDATED "9511030500Z" -- Thu Aug 28 09:03:53 PDT 1997
ORGANIZATION "IETF RSVP Working Group"
CONTACT-INFO
"      Fred Baker
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        519 Lado Drive
        Santa Barbara, California 93111
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 San Jose, California 95134  
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 E-Mail: arun@cisco.com"

## DESCRIPTION

"The MIB module to describe the RSVP Protocol"  
 ::= { mib-2 51 }

rsvpObjects	OBJECT IDENTIFIER ::= { rsvp 1 } -- tables
rsvpGenObjects	OBJECT IDENTIFIER ::= { rsvp 2 } -- global objects
rsvpNotificationsPrefix	OBJECT IDENTIFIER ::= { rsvp 3 } -- traps
rsvpConformance	OBJECT IDENTIFIER ::= { rsvp 4 } -- conformance

RsvpEncapsulation ::= TEXTUAL-CONVENTION

STATUS current

## DESCRIPTION

"This indicates the encapsulation that an RSVP Neighbor is perceived to be using."

SYNTAX INTEGER {  
     ip (1),     -- IP Protocol 46  
     udp (2),    -- UDP Encapsulation  
     both (3)    -- neighbor is using both encapsulations  
 }

RefreshInterval ::= TEXTUAL-CONVENTION

DISPLAY-HINT "d"

STATUS current

## DESCRIPTION

"The number of milliseconds that are expected to elapse between refreshes of path or reservation state. Unrefreshed Path or reservation state is removed after a small multiple of this period."

SYNTAX INTEGER (0..'7FFFFFFF'h)

```
-- The RSVP Session Statistics Database displays statistics
-- relating to the number of senders and receivers in each
-- session.
```

```
rsvpSessionTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF RsvpSessionEntry
    MAX-ACCESS   not-accessible
    STATUS      current
    DESCRIPTION
        "A table of all sessions seen by a given sys-
        tem."
    ::= { rsvpObjects 1 }
```

```
rsvpSessionEntry OBJECT-TYPE
    SYNTAX      RsvpSessionEntry
    MAX-ACCESS   not-accessible
    STATUS      current
    DESCRIPTION
        "A single session seen by a given system."
    INDEX { rsvpSessionNumber }
    ::= { rsvpSessionTable 1 }
```

```
RsvpSessionEntry ::=
    SEQUENCE {
        rsvpSessionNumber      SessionNumber,
        rsvpSessionType        SessionType,
        rsvpSessionDestAddr     OCTET STRING,
        rsvpSessionDestAddrLength INTEGER,
        rsvpSessionProtocol     Protocol,
        rsvpSessionPort         Port,
        rsvpSessionSenders      Gauge32,
        rsvpSessionReceivers    Gauge32,
        rsvpSessionRequests     Gauge32
    }
```

```
rsvpSessionNumber OBJECT-TYPE
    SYNTAX      SessionNumber
    MAX-ACCESS   not-accessible
    STATUS      current
    DESCRIPTION
        "The number of this session. This is for SNMP
```

Indexing purposes only and has no relation to any protocol value."  
 ::= { rsvpSessionEntry 1 }

rsvpSessionType OBJECT-TYPE  
SYNTAX SessionType  
MAX-ACCESS read-only  
STATUS current  
DESCRIPTION  
"The type of session (IP4, IP6, IP6 with flow information, etc)."  
 ::= { rsvpSessionEntry 2 }

rsvpSessionDestAddr OBJECT-TYPE  
SYNTAX OCTET STRING (SIZE(4..16))  
MAX-ACCESS read-only  
STATUS current  
DESCRIPTION  
"The destination address used by all senders in this session. This object may not be changed when the value of the RowStatus object is 'active'. "  
 ::= { rsvpSessionEntry 3 }

rsvpSessionDestAddrLength OBJECT-TYPE  
SYNTAX INTEGER(0..128)  
MAX-ACCESS read-only  
STATUS current  
DESCRIPTION  
"The CIDR prefix length of the session address, which is 32 for IP4 host and multicast addresses, and 128 for IP6 addresses. This object may not be changed when the value of the RowStatus object is 'active'. "  
 ::= { rsvpSessionEntry 4 }

rsvpSessionProtocol OBJECT-TYPE  
SYNTAX Protocol  
MAX-ACCESS read-only  
STATUS current  
DESCRIPTION  
"The IP Protocol used by this session. This object may not be changed when the value of the RowStatus object is 'active'. "  
 ::= { rsvpSessionEntry 5 }

```
::= { rsvpSessionEntry 5 }
```

```
rsvpSessionPort OBJECT-TYPE
```

```
SYNTAX      Port
```

```
MAX-ACCESS  read-only
```

```
STATUS      current
```

```
DESCRIPTION
```

```
"The UDP or TCP port number used as a destination port for all senders in this session. If the IP protocol in use, specified by rsvpSenderProtocol, is 50 (ESP) or 51 (AH), this represents a virtual destination port number. A value of zero indicates that the IP protocol in use does not have ports. This object may not be changed when the value of the RowStatus object is 'active'."
```

```
::= { rsvpSessionEntry 6 }
```

```
rsvpSessionSenders OBJECT-TYPE
```

```
SYNTAX      Gauge32
```

```
MAX-ACCESS  read-only
```

```
STATUS      current
```

```
DESCRIPTION
```

```
"The number of distinct senders currently known to be part of this session."
```

```
::= { rsvpSessionEntry 7 }
```

```
rsvpSessionReceivers OBJECT-TYPE
```

```
SYNTAX      Gauge32
```

```
MAX-ACCESS  read-only
```

```
STATUS      current
```

```
DESCRIPTION
```

```
"The number of reservations being requested of this system for this session."
```

```
::= { rsvpSessionEntry 8 }
```

```
rsvpSessionRequests OBJECT-TYPE
```

```
SYNTAX      Gauge32
```

```
MAX-ACCESS  read-only
```

```
STATUS      current
```

```
DESCRIPTION
```

```
"The number of reservation requests this system is sending upstream for this session."
```

```
::= { rsvpSessionEntry 9 }
```



```

rsvpBadPackets OBJECT-TYPE
    SYNTAX      Gauge32
    MAX-ACCESS   read-only
    STATUS       current
    DESCRIPTION
        "This object keeps a count of the number of bad
        RSVP packets received."
    ::= { rsvpGenObjects 1 }

--      The RSVP Session Sender Database contains the information
--      displayed by senders regarding their potential contribution
--      to session data content. It is in essence a list of the
--      valid PATH messages that the RSVP Router or Host is receiving.

rsvpSenderNewIndex OBJECT-TYPE
    SYNTAX      TestAndIncr
    MAX-ACCESS   read-write
    STATUS       current
    DESCRIPTION
        "This object is used to assign values to
        rsvpSenderNumber as described in 'Textual Con-
        ventions for SNMPv2'. The network manager
        reads the object, and then writes the value
        back in the SET that creates a new instance of
        rsvpSenderEntry. If the SET fails with the
        code 'inconsistentValue', then the process must
        be repeated; If the SET succeeds, then the ob-
        ject is incremented, and the new instance is
        created according to the manager's directions."
    ::= { rsvpGenObjects 2 }

rsvpSenderTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF RsvpSenderEntry
    MAX-ACCESS   not-accessible
    STATUS       current
    DESCRIPTION
        "Information describing the state information
        displayed by senders in PATH messages."
    ::= { rsvpObjects 2 }

rsvpSenderEntry OBJECT-TYPE
    SYNTAX      RsvpSenderEntry
    MAX-ACCESS   not-accessible
    STATUS       current
```

## DESCRIPTION

"Information describing the state information displayed by a single sender's PATH message."

INDEX { rsvpSessionNumber, rsvpSenderNumber }  
 ::= { rsvpSenderTable 1 }

RsvpSenderEntry ::=

```
SEQUENCE {
    rsvpSenderNumber          SessionNumber,
    rsvpSenderType            SessionType,
    rsvpSenderDestAddr        OCTET STRING,
    rsvpSenderAddr            OCTET STRING,
    rsvpSenderDestAddrLength  INTEGER,
    rsvpSenderAddrLength      INTEGER,
    rsvpSenderProtocol        Protocol,
    rsvpSenderDestPort        Port,
    rsvpSenderPort            Port,
    rsvpSenderFlowId          INTEGER,
    rsvpSenderHopAddr         OCTET STRING,
    rsvpSenderHopLih          Integer32,
    rsvpSenderInterface       InterfaceIndex,
    rsvpSenderTSpecRate       BitRate,
    rsvpSenderTSpecPeakRate   BitRate,
    rsvpSenderTSpecBurst      BurstSize,
    rsvpSenderTSpecMinTU      MessageSize,
    rsvpSenderTSpecMaxTU      MessageSize,
    rsvpSenderInterval        RefreshInterval,
    rsvpSenderRSVPHop         TruthValue,
    rsvpSenderLastChange      TimeStamp,
    rsvpSenderPolicy           OCTET STRING,
    rsvpSenderAdspecBreak     TruthValue,
    rsvpSenderAdspecHopCount  INTEGER,
    rsvpSenderAdspecPathBw    BitRate,
    rsvpSenderAdspecMinLatency Integer32,
    rsvpSenderAdspecMtu       INTEGER,
    rsvpSenderAdspecGuaranteedSvc TruthValue,
    rsvpSenderAdspecGuaranteedBreak TruthValue,
    rsvpSenderAdspecGuaranteedCtot Integer32,
    rsvpSenderAdspecGuaranteedDt看 Integer32,
    rsvpSenderAdspecGuaranteedCsum Integer32,
    rsvpSenderAdspecGuaranteedDsum Integer32,
    rsvpSenderAdspecGuaranteedHopCount INTEGER,
    rsvpSenderAdspecGuaranteedPathBw BitRate,
    rsvpSenderAdspecGuaranteedMinLatency Integer32,
    rsvpSenderAdspecGuaranteedMtu INTEGER,
    rsvpSenderAdspecCtrlLoadSvc TruthValue,
```

rsvpSenderAdspecCtrlLoadBreak	TruthValue,
rsvpSenderAdspecCtrlLoadHopCount	INTEGER,
rsvpSenderAdspecCtrlLoadPathBw	BitRate,
rsvpSenderAdspecCtrlLoadMinLatency	Integer32,
rsvpSenderAdspecCtrlLoadMtu	INTEGER,
rsvpSenderStatus	RowStatus,
rsvpSenderTTL	INTEGER
}	

```

rsvpSenderNumber OBJECT-TYPE
    SYNTAX      SessionNumber
    MAX-ACCESS   not-accessible
    STATUS       current
    DESCRIPTION
        "The number of this sender. This is for SNMP
        Indexing purposes only and has no relation to
        any protocol value."
    ::= { rsvpSenderEntry 1 }

```

```

rsvpSenderType OBJECT-TYPE
    SYNTAX      SessionType
    MAX-ACCESS   read-create
    STATUS       current
    DESCRIPTION
        "The type of session (IP4, IP6, IP6 with flow
        information, etc)."
    ::= { rsvpSenderEntry 2 }

```

```

rsvpSenderDestAddr OBJECT-TYPE
    SYNTAX      OCTET STRING (SIZE(4..16))
    MAX-ACCESS   read-create
    STATUS       current
    DESCRIPTION
        "The destination address used by all senders in
        this session. This object may not be changed
        when the value of the RowStatus object is 'ac-
        tive'."
    ::= { rsvpSenderEntry 3 }

```

```

rsvpSenderAddr OBJECT-TYPE
    SYNTAX      OCTET STRING (SIZE(4..16))
    MAX-ACCESS   read-create
    STATUS       current

```

## DESCRIPTION

"The source address used by this sender in this session. This object may not be changed when the value of the RowStatus object is 'active'."

::= { rsvpSenderEntry 4 }

## rsvpSenderDestAddrLength OBJECT-TYPE

SYNTAX INTEGER(0..128)

MAX-ACCESS read-create

STATUS current

## DESCRIPTION

"The length of the destination address in bits. This is the CIDR Prefix Length, which for IP4 hosts and multicast addresses is 32 bits. This object may not be changed when the value of the RowStatus object is 'active'."

::= { rsvpSenderEntry 5 }

## rsvpSenderAddrLength OBJECT-TYPE

SYNTAX INTEGER(0..128)

MAX-ACCESS read-create

STATUS current

## DESCRIPTION

"The length of the sender's address in bits. This is the CIDR Prefix Length, which for IP4 hosts and multicast addresses is 32 bits. This object may not be changed when the value of the RowStatus object is 'active'."

::= { rsvpSenderEntry 6 }

## rsvpSenderProtocol OBJECT-TYPE

SYNTAX Protocol

MAX-ACCESS read-create

STATUS current

## DESCRIPTION

"The IP Protocol used by this session. This object may not be changed when the value of the RowStatus object is 'active'."

::= { rsvpSenderEntry 7 }

## rsvpSenderDestPort OBJECT-TYPE

SYNTAX Port

MAX-ACCESS read-create

STATUS current

## DESCRIPTION

"The UDP or TCP port number used as a destination port for all senders in this session. If the IP protocol in use, specified by rsvpSenderProtocol, is 50 (ESP) or 51 (AH), this represents a virtual destination port number. A value of zero indicates that the IP protocol in use does not have ports. This object may not be changed when the value of the RowStatus object is 'active'."

::= { rsvpSenderEntry 8 }

## rsvpSenderPort OBJECT-TYPE

SYNTAX Port

MAX-ACCESS read-create

STATUS current

## DESCRIPTION

"The UDP or TCP port number used as a source port for this sender in this session. If the IP protocol in use, specified by rsvpSenderProtocol is 50 (ESP) or 51 (AH), this represents a generalized port identifier (GPI). A value of zero indicates that the IP protocol in use does not have ports. This object may not be changed when the value of the RowStatus object is 'active'."

::= { rsvpSenderEntry 9 }

## rsvpSenderFlowId OBJECT-TYPE

SYNTAX INTEGER (0..16777215)

MAX-ACCESS read-only

STATUS current

## DESCRIPTION

"The flow ID that this sender is using, if this is an IPV6 session."

::= { rsvpSenderEntry 10 }

## rsvpSenderHopAddr OBJECT-TYPE

SYNTAX OCTET STRING (SIZE(4..16))

MAX-ACCESS read-create

STATUS current

## DESCRIPTION

"The address used by the previous RSVP hop (which may be the original sender)."

::= { rsvpSenderEntry 11 }

**rsvpSenderHopLih OBJECT-TYPE**

SYNTAX Integer32

MAX-ACCESS read-create

STATUS current

## DESCRIPTION

"The Logical Interface Handle used by the previous RSVP hop (which may be the original sender)."

::= { rsvpSenderEntry 12 }

**rsvpSenderInterface OBJECT-TYPE**

SYNTAX InterfaceIndex

MAX-ACCESS read-create

STATUS current

## DESCRIPTION

"The ifIndex value of the interface on which this PATH message was most recently received."

::= { rsvpSenderEntry 13 }

**rsvpSenderTSpecRate OBJECT-TYPE**

SYNTAX BitRate

UNITS "bits per second"

MAX-ACCESS read-create

STATUS current

## DESCRIPTION

"The Average Bit Rate of the sender's data stream. Within a transmission burst, the arrival rate may be as fast as rsvpSenderTSpecPeakRate (if supported by the service model); however, averaged across two or more burst intervals, the rate should not exceed rsvpSenderTSpecRate.

Note that this is a prediction, often based on the general capability of a type of codec or particular encoding; the measured average rate may be significantly lower."

::= { rsvpSenderEntry 14 }

**rsvpSenderTSpecPeakRate OBJECT-TYPE**

SYNTAX BitRate

UNITS "bits per second"

MAX-ACCESS read-create

STATUS current

## DESCRIPTION

"The Peak Bit Rate of the sender's data stream. Traffic arrival is not expected to exceed this rate at any time, apart from the effects of jitter in the network. If not specified in the TSpec, this returns zero or noSuchValue."  
 ::= { rsvpSenderEntry 15 }

rsvpSenderTSpecBurst OBJECT-TYPE

SYNTAX BurstSize  
UNITS "bytes"  
MAX-ACCESS read-create  
STATUS current  
DESCRIPTION  
"The size of the largest burst expected from the sender at a time."  
 ::= { rsvpSenderEntry 16 }

rsvpSenderTSpecMinTU OBJECT-TYPE

SYNTAX MessageSize  
MAX-ACCESS read-create  
STATUS current  
DESCRIPTION  
"The minimum message size for this flow. The policing algorithm will treat smaller messages as though they are this size."  
 ::= { rsvpSenderEntry 17 }

rsvpSenderTSpecMaxTU OBJECT-TYPE

SYNTAX MessageSize  
MAX-ACCESS read-create  
STATUS current  
DESCRIPTION  
"The maximum message size for this flow. The admission algorithm will reject TSspecs whose Maximum Transmission Unit, plus the interface headers, exceed the interface MTU."  
 ::= { rsvpSenderEntry 18 }

rsvpSenderInterval OBJECT-TYPE

SYNTAX RefreshInterval  
MAX-ACCESS read-create  
STATUS current  
DESCRIPTION  
"The interval between refresh messages as ad-

vertised by the Previous Hop."  
 ::= { rsvpSenderEntry 19 }

rsvpSenderRSVPHop OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"If TRUE, the node believes that the previous IP hop is an RSVP hop. If FALSE, the node believes that the previous IP hop may not be an RSVP hop."

::= { rsvpSenderEntry 20 }

rsvpSenderLastChange OBJECT-TYPE

SYNTAX TimeStamp

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The time of the last change in this PATH message; This is either the first time it was received or the time of the most recent change in parameters."

::= { rsvpSenderEntry 21 }

rsvpSenderPolicy OBJECT-TYPE

SYNTAX OCTET STRING (SIZE(4..65536))

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The contents of the policy object, displayed as an uninterpreted string of octets, including the object header. In the absence of such an object, this should be of zero length."

::= { rsvpSenderEntry 22 }

rsvpSenderAdspecBreak OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The global break bit general characterization parameter from the ADSPEC. If TRUE, at least one non-IS hop was detected in the path. If



```
FALSE, no non-IS hops were detected."
 ::= { rsvpSenderEntry 23 }
```

**rsvpSenderAdspecHopCount OBJECT-TYPE**

SYNTAX INTEGER (0..65535)

MAX-ACCESS read-create

STATUS current

**DESCRIPTION**

"The hop count general characterization parameter from the ADSPEC. A return of zero or noSuchValue indicates one of the following conditions:

the invalid bit was set

the parameter was not present"

```
 ::= { rsvpSenderEntry 24 }
```

**rsvpSenderAdspecPathBw OBJECT-TYPE**

SYNTAX BitRate

UNITS "bits per second"

MAX-ACCESS read-create

STATUS current

**DESCRIPTION**

"The path bandwidth estimate general characterization parameter from the ADSPEC. A return of zero or noSuchValue indicates one of the following conditions:

the invalid bit was set

the parameter was not present"

```
 ::= { rsvpSenderEntry 25 }
```

**rsvpSenderAdspecMinLatency OBJECT-TYPE**

SYNTAX Integer32

UNITS "microseconds"

MAX-ACCESS read-create

STATUS current

**DESCRIPTION**

"The minimum path latency general characterization parameter from the ADSPEC. A return of zero or noSuchValue indicates one of the following conditions:

the invalid bit was set

the parameter was not present"

::= { rsvpSenderEntry 26 }

rsvpSenderAdspecMtu OBJECT-TYPE

SYNTAX INTEGER (0..65535)

UNITS "bytes"

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The composed Maximum Transmission Unit general characterization parameter from the ADSPEC. A return of zero or noSuchValue indicates one of the following conditions:

the invalid bit was set

the parameter was not present"

::= { rsvpSenderEntry 27 }

rsvpSenderAdspecGuaranteedSvc OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"If TRUE, the ADSPEC contains a Guaranteed Service fragment. If FALSE, the ADSPEC does not contain a Guaranteed Service fragment."

::= { rsvpSenderEntry 28 }

rsvpSenderAdspecGuaranteedBreak OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"If TRUE, the Guaranteed Service fragment has its 'break' bit set, indicating that one or more nodes along the path do not support the guaranteed service. If FALSE, and rsvpSenderAdspecGuaranteedSvc is TRUE, the 'break' bit is not set.

If rsvpSenderAdspecGuaranteedSvc is FALSE, this returns FALSE or noSuchValue."

::= { rsvpSenderEntry 29 }

rsvpSenderAdspecGuaranteedCtot OBJECT-TYPE

SYNTAX        Integer32  
UNITS         "bytes"  
MAX-ACCESS    read-create  
STATUS        current  
DESCRIPTION

"If rsvpSenderAdspecGuaranteedSvc is TRUE, this is the end-to-end composed value for the guaranteed service 'C' parameter. A return of zero or noSuchValue indicates one of the following conditions:

the invalid bit was set  
the parameter was not present

If rsvpSenderAdspecGuaranteedSvc is FALSE, this returns zero or noSuchValue."

::= { rsvpSenderEntry 30 }

rsvpSenderAdspecGuaranteedDtot OBJECT-TYPE

SYNTAX        Integer32  
UNITS         "microseconds"  
MAX-ACCESS    read-create  
STATUS        current  
DESCRIPTION

"If rsvpSenderAdspecGuaranteedSvc is TRUE, this is the end-to-end composed value for the guaranteed service 'D' parameter. A return of zero or noSuchValue indicates one of the following conditions:

the invalid bit was set  
the parameter was not present

If rsvpSenderAdspecGuaranteedSvc is FALSE, this returns zero or noSuchValue."

::= { rsvpSenderEntry 31 }

rsvpSenderAdspecGuaranteedCsum OBJECT-TYPE

SYNTAX        Integer32  
UNITS         "bytes"  
MAX-ACCESS    read-create  
STATUS        current  
DESCRIPTION

"If rsvpSenderAdspecGuaranteedSvc is TRUE, this is the composed value for the guaranteed ser-

vice 'C' parameter since the last reshaping point. A return of zero or noSuchValue indicates one of the following conditions:

the invalid bit was set  
the parameter was not present

If rsvpSenderAdspecGuaranteedSvc is FALSE, this returns zero or noSuchValue."

::= { rsvpSenderEntry 32 }

rsvpSenderAdspecGuaranteedDsum OBJECT-TYPE

SYNTAX Integer32  
UNITS "microseconds"  
MAX-ACCESS read-create  
STATUS current  
DESCRIPTION

"If rsvpSenderAdspecGuaranteedSvc is TRUE, this is the composed value for the guaranteed service 'D' parameter since the last reshaping point. A return of zero or noSuchValue indicates one of the following conditions:

the invalid bit was set  
the parameter was not present

If rsvpSenderAdspecGuaranteedSvc is FALSE, this returns zero or noSuchValue."

::= { rsvpSenderEntry 33 }

rsvpSenderAdspecGuaranteedHopCount OBJECT-TYPE

SYNTAX INTEGER (0..65535)  
MAX-ACCESS read-create  
STATUS current  
DESCRIPTION

"If rsvpSenderAdspecGuaranteedSvc is TRUE, this is the service-specific override of the hop count general characterization parameter from the ADSPEC. A return of zero or noSuchValue indicates one of the following conditions:

the invalid bit was set  
the parameter was not present

If rsvpSenderAdspecGuaranteedSvc is FALSE, this

returns zero or noSuchValue."  
 ::= { rsvpSenderEntry 34 }

rsvpSenderAdspecGuaranteedPathBw OBJECT-TYPE

SYNTAX        BitRate  
UNITS         "bits per second"  
MAX-ACCESS    read-create  
STATUS        current

DESCRIPTION

"If rsvpSenderAdspecGuaranteedSvc is TRUE, this is the service-specific override of the path bandwidth estimate general characterization parameter from the ADSPEC. A return of zero or noSuchValue indicates one of the following conditions:

the invalid bit was set  
the parameter was not present

If rsvpSenderAdspecGuaranteedSvc is FALSE, this returns zero or noSuchValue."

::= { rsvpSenderEntry 35 }

rsvpSenderAdspecGuaranteedMinLatency OBJECT-TYPE

SYNTAX        Integer32  
UNITS         "microseconds"  
MAX-ACCESS    read-create  
STATUS        current

DESCRIPTION

"If rsvpSenderAdspecGuaranteedSvc is TRUE, this is the service-specific override of the minimum path latency general characterization parameter from the ADSPEC. A return of zero or noSuchValue indicates one of the following conditions:

the invalid bit was set  
the parameter was not present

If rsvpSenderAdspecGuaranteedSvc is FALSE, this returns zero or noSuchValue."

::= { rsvpSenderEntry 36 }

rsvpSenderAdspecGuaranteedMtu OBJECT-TYPE

SYNTAX        INTEGER (0..65535)

UNITS "bytes"  
MAX-ACCESS read-create  
STATUS current  
DESCRIPTION  
"If rsvpSenderAdspecGuaranteedSvc is TRUE, this is the service-specific override of the composed Maximum Transmission Unit general characterization parameter from the ADSPEC. A return of zero or noSuchValue indicates one of the following conditions:  
  
the invalid bit was set  
the parameter was not present  
  
If rsvpSenderAdspecGuaranteedSvc is FALSE, this returns zero or noSuchValue."  
::= { rsvpSenderEntry 37 }

rsvpSenderAdspecCtrlLoadSvc OBJECT-TYPE  
SYNTAX TruthValue  
MAX-ACCESS read-create  
STATUS current  
DESCRIPTION  
"If TRUE, the ADSPEC contains a Controlled Load Service fragment. If FALSE, the ADSPEC does not contain a Controlled Load Service fragment."  
::= { rsvpSenderEntry 38 }

rsvpSenderAdspecCtrlLoadBreak OBJECT-TYPE  
SYNTAX TruthValue  
MAX-ACCESS read-create  
STATUS current  
DESCRIPTION  
"If TRUE, the Controlled Load Service fragment has its 'break' bit set, indicating that one or more nodes along the path do not support the controlled load service. If FALSE, and rsvpSenderAdspecCtrlLoadSvc is TRUE, the 'break' bit is not set.  
  
If rsvpSenderAdspecCtrlLoadSvc is FALSE, this returns FALSE or noSuchValue."  
::= { rsvpSenderEntry 39 }

**rsvpSenderAdspecCtrlLoadHopCount OBJECT-TYPE**

SYNTAX INTEGER (0..65535)

MAX-ACCESS read-create

STATUS current

**DESCRIPTION**

"If rsvpSenderAdspecCtrlLoadSvc is TRUE, this is the service-specific override of the hop count general characterization parameter from the ADSPEC. A return of zero or noSuchValue indicates one of the following conditions:

the invalid bit was set  
the parameter was not present

If rsvpSenderAdspecCtrlLoadSvc is FALSE, this returns zero or noSuchValue."

::= { rsvpSenderEntry 40 }

**rsvpSenderAdspecCtrlLoadPathBw OBJECT-TYPE**

SYNTAX BitRate

UNITS "bits per second"

MAX-ACCESS read-create

STATUS current

**DESCRIPTION**

"If rsvpSenderAdspecCtrlLoadSvc is TRUE, this is the service-specific override of the path bandwidth estimate general characterization parameter from the ADSPEC. A return of zero or noSuchValue indicates one of the following conditions:

the invalid bit was set  
the parameter was not present

If rsvpSenderAdspecCtrlLoadSvc is FALSE, this returns zero or noSuchValue."

::= { rsvpSenderEntry 41 }

**rsvpSenderAdspecCtrlLoadMinLatency OBJECT-TYPE**

SYNTAX Integer32

UNITS "microseconds"

MAX-ACCESS read-create

STATUS current

**DESCRIPTION**

"If rsvpSenderAdspecCtrlLoadSvc is TRUE, this

is the service-specific override of the minimum path latency general characterization parameter from the ADSPEC. A return of zero or noSuchValue indicates one of the following conditions:

the invalid bit was set  
the parameter was not present

If rsvpSenderAdspecCtrlLoadSvc is FALSE, this returns zero or noSuchValue."

::= { rsvpSenderEntry 42 }

rsvpSenderAdspecCtrlLoadMtu OBJECT-TYPE

SYNTAX INTEGER (0..65535)

UNITS "bytes"

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"If rsvpSenderAdspecCtrlLoadSvc is TRUE, this is the service-specific override of the composed Maximum Transmission Unit general characterization parameter from the ADSPEC. A return of zero or noSuchValue indicates one of the following conditions:

the invalid bit was set  
the parameter was not present

If rsvpSenderAdspecCtrlLoadSvc is FALSE, this returns zero or noSuchValue."

::= { rsvpSenderEntry 43 }

rsvpSenderStatus OBJECT-TYPE

SYNTAX RowStatus

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"'active' for all active PATH messages. This object may be used to install static PATH information or delete PATH information."

::= { rsvpSenderEntry 44 }

rsvpSenderTTL OBJECT-TYPE

SYNTAX INTEGER (0..255)



```

MAX-ACCESS    read-only
STATUS        current
DESCRIPTION
    "The TTL value in the RSVP header that was last
    received."
::= { rsvpSenderEntry 45 }

```

```

rsvpSenderOutInterfaceTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF RsvpSenderOutInterfaceEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "List of outgoing interfaces that PATH messages
        use. The ifIndex is the ifIndex value of the
        egress interface."
    ::= { rsvpObjects 3 }

```

```

rsvpSenderOutInterfaceEntry OBJECT-TYPE
    SYNTAX      RsvpSenderOutInterfaceEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "List of outgoing interfaces that a particular
        PATH message has."
    INDEX { rsvpSessionNumber, rsvpSenderNumber, ifIndex }
    ::= { rsvpSenderOutInterfaceTable 1 }

```

```

RsvpSenderOutInterfaceEntry ::=
    SEQUENCE {
        rsvpSenderOutInterfaceStatus          RowStatus
    }

```

```

rsvpSenderOutInterfaceStatus OBJECT-TYPE
    SYNTAX      RowStatus
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "'active' for all active PATH messages."
    ::= { rsvpSenderOutInterfaceEntry 1 }

```

```

--      The RSVP Reservation Requests Received Table contains the
--      information displayed by receivers regarding their needs with
--      respect to sessions and senders. It is in essence a list of the
--      valid RESV messages that the RSVP Router or Host is receiving.

```

## rsvpResvNewIndex OBJECT-TYPE

SYNTAX TestAndIncr

MAX-ACCESS read-write

STATUS current

## DESCRIPTION

"This object is used to assign values to rsvpResvNumber as described in 'Textual Conventions for SNMPv2'. The network manager reads the object, and then writes the value back in the SET that creates a new instance of rsvpResvEntry. If the SET fails with the code 'inconsistentValue', then the process must be repeated; If the SET succeeds, then the object is incremented, and the new instance is created according to the manager's directions."

::= { rsvpGenObjects 3 }

## rsvpResvTable OBJECT-TYPE

SYNTAX SEQUENCE OF RsvpResvEntry

MAX-ACCESS not-accessible

STATUS current

## DESCRIPTION

"Information describing the state information displayed by receivers in RESV messages."

::= { rsvpObjects 4 }

## rsvpResvEntry OBJECT-TYPE

SYNTAX RsvpResvEntry

MAX-ACCESS not-accessible

STATUS current

## DESCRIPTION

"Information describing the state information displayed by a single receiver's RESV message concerning a single sender."

INDEX { rsvpSessionNumber, rsvpResvNumber }

::= { rsvpResvTable 1 }

## RsvpResvEntry ::=

## SEQUENCE {

rsvpResvNumber	SessionNumber,
rsvpResvType	SessionType,
rsvpResvDestAddr	OCTET STRING,
rsvpResvSenderAddr	OCTET STRING,
rsvpResvDestAddrLength	INTEGER,

rsvpResvSenderAddrLength	INTEGER,
rsvpResvProtocol	Protocol,
rsvpResvDestPort	Port,
rsvpResvPort	Port,
rsvpResvHopAddr	OCTET STRING,
rsvpResvHopLih	Integer32,
rsvpResvInterface	InterfaceIndex,
rsvpResvService	QosService,
rsvpResvTSpecRate	BitRate,
rsvpResvTSpecPeakRate	BitRate,
rsvpResvTSpecBurst	BurstSize,
rsvpResvTSpecMinTU	MessageSize,
rsvpResvTSpecMaxTU	MessageSize,
rsvpResvRSpecRate	BitRate,
rsvpResvRSpecSlack	Integer32,
rsvpResvInterval	RefreshInterval,
rsvpResvScope	OCTET STRING,
rsvpResvShared	TruthValue,
rsvpResvExplicit	TruthValue,
rsvpResvRSVPHop	TruthValue,
rsvpResvLastChange	TimeStamp,
rsvpResvPolicy	OCTET STRING,
rsvpResvStatus	RowStatus,
rsvpResvTTL	INTEGER,
rsvpResvFlowId	INTEGER

}

rsvpResvNumber OBJECT-TYPE  
 SYNTAX SessionNumber  
 MAX-ACCESS not-accessible  
 STATUS current  
 DESCRIPTION  
 "The number of this reservation request. This  
 is for SNMP Indexing purposes only and has no  
 relation to any protocol value."  
 ::= { rsvpResvEntry 1 }

rsvpResvType OBJECT-TYPE  
 SYNTAX SessionType  
 MAX-ACCESS read-create  
 STATUS current  
 DESCRIPTION  
 "The type of session (IP4, IP6, IP6 with flow  
 information, etc)."  
 ::= { rsvpResvEntry 2 }

```
rsvpResvDestAddr OBJECT-TYPE
    SYNTAX      OCTET STRING (SIZE(4..16))
    MAX-ACCESS   read-create
    STATUS       current
    DESCRIPTION
        "The destination address used by all senders in
        this session.  This object may not be changed
        when the value of the RowStatus object is 'ac-
        tive'."
    ::= { rsvpResvEntry 3 }

rsvpResvSenderAddr OBJECT-TYPE
    SYNTAX      OCTET STRING (SIZE(4..16))
    MAX-ACCESS   read-create
    STATUS       current
    DESCRIPTION
        "The source address of the sender selected by
        this reservation.  The value of all zeroes in-
        dicates 'all senders'.  This object may not be
        changed when the value of the RowStatus object
        is 'active'."
    ::= { rsvpResvEntry 4 }

rsvpResvDestAddrLength OBJECT-TYPE
    SYNTAX      INTEGER(0..128)
    MAX-ACCESS   read-create
    STATUS       current
    DESCRIPTION
        "The length of the destination address in bits.
        This is the CIDR Prefix Length, which for IP4
        hosts and multicast addresses is 32 bits.  This
        object may not be changed when the value of the
        RowStatus object is 'active'."
    ::= { rsvpResvEntry 5 }

rsvpResvSenderAddrLength OBJECT-TYPE
    SYNTAX      INTEGER(0..128)
    MAX-ACCESS   read-create
    STATUS       current
    DESCRIPTION
        "The length of the sender's address in bits.
        This is the CIDR Prefix Length, which for IP4
        hosts and multicast addresses is 32 bits.  This
        object may not be changed when the value of the
        RowStatus object is 'active'."
```

```
::= { rsvpResvEntry 6 }
```

rsvpResvProtocol OBJECT-TYPE

SYNTAX Protocol

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The IP Protocol used by this session. This object may not be changed when the value of the RowStatus object is 'active'."

```
::= { rsvpResvEntry 7 }
```

rsvpResvDestPort OBJECT-TYPE

SYNTAX Port

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The UDP or TCP port number used as a destination port for all senders in this session. If the IP protocol in use, specified by rsvpResvProtocol, is 50 (ESP) or 51 (AH), this represents a virtual destination port number. A value of zero indicates that the IP protocol in use does not have ports. This object may not be changed when the value of the RowStatus object is 'active'."

```
::= { rsvpResvEntry 8 }
```

rsvpResvPort OBJECT-TYPE

SYNTAX Port

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The UDP or TCP port number used as a source port for this sender in this session. If the IP protocol in use, specified by rsvpResvProtocol is 50 (ESP) or 51 (AH), this represents a generalized port identifier (GPI). A value of zero indicates that the IP protocol in use does not have ports. This object may not be changed when the value of the RowStatus object is 'active'."

```
::= { rsvpResvEntry 9 }
```

```
rsvpResvHopAddr OBJECT-TYPE
    SYNTAX      OCTET STRING (SIZE(4..16))
    MAX-ACCESS   read-create
    STATUS       current
    DESCRIPTION
        "The address used by the next RSVP hop (which
         may be the ultimate receiver)."
```

::= { rsvpResvEntry 10 }

```
rsvpResvHopLih OBJECT-TYPE
    SYNTAX      Integer32
    MAX-ACCESS   read-create
    STATUS       current
    DESCRIPTION
        "The Logical Interface Handle received from the
         previous RSVP hop (which may be the ultimate
         receiver)."
```

::= { rsvpResvEntry 11 }

```
rsvpResvInterface OBJECT-TYPE
    SYNTAX      InterfaceIndex
    MAX-ACCESS   read-create
    STATUS       current
    DESCRIPTION
        "The ifIndex value of the interface on which
         this RESV message was most recently received."
```

::= { rsvpResvEntry 12 }

```
rsvpResvService OBJECT-TYPE
    SYNTAX      QosService
    MAX-ACCESS   read-create
    STATUS       current
    DESCRIPTION
        "The QoS Service classification requested by
         the receiver."
```

::= { rsvpResvEntry 13 }

```
rsvpResvTSpecRate OBJECT-TYPE
    SYNTAX      BitRate
    UNITS        "bits per second"
    MAX-ACCESS   read-create
    STATUS       current
    DESCRIPTION
        "The Average Bit Rate of the sender's data
```

stream. Within a transmission burst, the arrival rate may be as fast as rsvpResvTSpecPeakRate (if supported by the service model); however, averaged across two or more burst intervals, the rate should not exceed rsvpResvTSpecRate.

Note that this is a prediction, often based on the general capability of a type of codec or particular encoding; the measured average rate may be significantly lower."

::= { rsvpResvEntry 14 }

rsvpResvTSpecPeakRate OBJECT-TYPE

SYNTAX BitRate

UNITS "bits per second"

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The Peak Bit Rate of the sender's data stream. Traffic arrival is not expected to exceed this rate at any time, apart from the effects of jitter in the network. If not specified in the TSpec, this returns zero or noSuchValue."

::= { rsvpResvEntry 15 }

rsvpResvTSpecBurst OBJECT-TYPE

SYNTAX BurstSize

UNITS "bytes"

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The size of the largest burst expected from the sender at a time.

If this is less than the sender's advertised burst size, the receiver is asking the network to provide flow pacing beyond what would be provided under normal circumstances. Such pacing is at the network's option."

::= { rsvpResvEntry 16 }

rsvpResvTSpecMinTU OBJECT-TYPE

SYNTAX MessageSize

MAX-ACCESS read-create

```
STATUS      current
DESCRIPTION
    "The minimum message size for this flow. The
    policing algorithm will treat smaller messages
    as though they are this size."
::= { rsvpResvEntry 17 }
```

```
rsvpResvTSpecMaxTU OBJECT-TYPE
SYNTAX      MessageSize
MAX-ACCESS  read-create
STATUS      current
DESCRIPTION
    "The maximum message size for this flow. The
    admission algorithm will reject TSspecs whose
    Maximum Transmission Unit, plus the interface
    headers, exceed the interface MTU."
::= { rsvpResvEntry 18 }
```

```
rsvpResvRSpecRate OBJECT-TYPE
SYNTAX      BitRate
UNITS       "bits per second"
MAX-ACCESS  read-create
STATUS      current
DESCRIPTION
    "If the requested service is Guaranteed, as
    specified by rsvpResvService, this is the
    clearing rate that is being requested. Other-
    wise, it is zero, or the agent may return
    noSuchValue."
::= { rsvpResvEntry 19 }
```

```
rsvpResvRSpecSlack OBJECT-TYPE
SYNTAX      Integer32
UNITS       "microseconds"
MAX-ACCESS  read-create
STATUS      current
DESCRIPTION
    "If the requested service is Guaranteed, as
    specified by rsvpResvService, this is the delay
    slack. Otherwise, it is zero, or the agent may
    return noSuchValue."
::= { rsvpResvEntry 20 }
```

```
rsvpResvInterval OBJECT-TYPE
```



SYNTAX RefreshInterval  
MAX-ACCESS read-create  
STATUS current  
DESCRIPTION  
    "The interval between refresh messages as advertised by the Next Hop."  
::= { rsvpResvEntry 21 }

rsvpResvScope OBJECT-TYPE

SYNTAX OCTET STRING (SIZE(0..65536))  
MAX-ACCESS read-create  
STATUS current  
DESCRIPTION

    "The contents of the scope object, displayed as an uninterpreted string of octets, including the object header. In the absence of such an object, this should be of zero length.

    If the length is non-zero, this contains a series of IP4 or IP6 addresses."

::= { rsvpResvEntry 22 }

rsvpResvShared OBJECT-TYPE

SYNTAX TruthValue  
MAX-ACCESS read-create  
STATUS current  
DESCRIPTION

    "If TRUE, a reservation shared among senders is requested. If FALSE, a reservation specific to this sender is requested."

::= { rsvpResvEntry 23 }

rsvpResvExplicit OBJECT-TYPE

SYNTAX TruthValue  
MAX-ACCESS read-create  
STATUS current  
DESCRIPTION

    "If TRUE, individual senders are listed using Filter Specifications. If FALSE, all senders are implicitly selected. The Scope Object will contain a list of senders that need to receive this reservation request for the purpose of routing the RESV message."

::= { rsvpResvEntry 24 }

```
rsvpResvRSVPHop OBJECT-TYPE
    SYNTAX      TruthValue
    MAX-ACCESS   read-create
    STATUS      current
    DESCRIPTION
        "If TRUE, the node believes that the previous
         IP hop is an RSVP hop. If FALSE, the node be-
         lieves that the previous IP hop may not be an
         RSVP hop."
    ::= { rsvpResvEntry 25 }
```

```
rsvpResvLastChange OBJECT-TYPE
    SYNTAX      TimeStamp
    MAX-ACCESS   read-only
    STATUS      current
    DESCRIPTION
        "The time of the last change in this reserva-
         tion request; This is either the first time it
         was received or the time of the most recent
         change in parameters."
    ::= { rsvpResvEntry 26 }
```

```
rsvpResvPolicy OBJECT-TYPE
    SYNTAX      OCTET STRING (SIZE(0..65536))
    MAX-ACCESS   read-create
    STATUS      current
    DESCRIPTION
        "The contents of the policy object, displayed
         as an uninterpreted string of octets, including
         the object header. In the absence of such an
         object, this should be of zero length."
    ::= { rsvpResvEntry 27 }
```

```
rsvpResvStatus OBJECT-TYPE
    SYNTAX      RowStatus
    MAX-ACCESS   read-create
    STATUS      current
    DESCRIPTION
        "'active' for all active RESV messages. This
         object may be used to install static RESV in-
         formation or delete RESV information."
    ::= { rsvpResvEntry 28 }
```

```
rsvpResvTTL OBJECT-TYPE
```

```
SYNTAX      INTEGER (0..255)
MAX-ACCESS   read-only
STATUS       current
DESCRIPTION
    "The TTL value in the RSVP header that was last
    received."
::= { rsvpResvEntry 29 }
```

```
rsvpResvFlowId OBJECT-TYPE
    SYNTAX      INTEGER (0..16777215)
    MAX-ACCESS   read-only
    STATUS       current
    DESCRIPTION
        "The flow ID that this receiver is using, if
        this is an IPv6 session."
    ::= { rsvpResvEntry 30 }
```

```
--      The RSVP Reservation Requests Forwarded Table contains the
--      information displayed by receivers regarding their needs with
--      respect to sessions and senders. It is in essence a list of the
--      valid RESV messages that the RSVP Router or Host is sending
--      to its upstream neighbors.
```

```
rsvpResvFwdNewIndex OBJECT-TYPE
    SYNTAX      TestAndIncr
    MAX-ACCESS   read-write
    STATUS       current
    DESCRIPTION
        "This object is used to assign values to
        rsvpResvFwdNumber as described in 'Textual Con-
        ventions for SNMPv2'. The network manager
        reads the object, and then writes the value
        back in the SET that creates a new instance of
        rsvpResvFwdEntry. If the SET fails with the
        code 'inconsistentValue', then the process must
        be repeated; If the SET succeeds, then the ob-
        ject is incremented, and the new instance is
        created according to the manager's directions."
    ::= { rsvpGenObjects 4 }
```

```
rsvpResvFwdTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF RsvpResvFwdEntry
    MAX-ACCESS   not-accessible
    STATUS       current
```

## DESCRIPTION

"Information describing the state information displayed upstream in RESV messages."

::= { rsvpObjects 5 }

## rsvpResvFwdEntry OBJECT-TYPE

SYNTAX RsvpResvFwdEntry

MAX-ACCESS not-accessible

STATUS current

## DESCRIPTION

"Information describing the state information displayed upstream in an RESV message concerning a single sender."

INDEX { rsvpSessionNumber, rsvpResvFwdNumber }

::= { rsvpResvFwdTable 1 }

## RsvpResvFwdEntry ::=

## SEQUENCE {

rsvpResvFwdNumber	SessionNumber,
rsvpResvFwdType	SessionType,
rsvpResvFwdDestAddr	OCTET STRING,
rsvpResvFwdSenderAddr	OCTET STRING,
rsvpResvFwdDestAddrLength	INTEGER,
rsvpResvFwdSenderAddrLength	INTEGER,
rsvpResvFwdProtocol	Protocol,
rsvpResvFwdDestPort	Port,
rsvpResvFwdPort	Port,
rsvpResvFwdHopAddr	OCTET STRING,
rsvpResvFwdHopLih	Integer32,
rsvpResvFwdInterface	InterfaceIndex,
rsvpResvFwdService	QosService,
rsvpResvFwdTSpecRate	BitRate,
rsvpResvFwdTSpecPeakRate	BitRate,
rsvpResvFwdTSpecBurst	BurstSize,
rsvpResvFwdTSpecMinTU	MessageSize,
rsvpResvFwdTSpecMaxTU	MessageSize,
rsvpResvFwdRSpecRate	BitRate,
rsvpResvFwdRSpecSlack	Integer32,
rsvpResvFwdInterval	RefreshInterval,
rsvpResvFwdScope	OCTET STRING,
rsvpResvFwdShared	TruthValue,
rsvpResvFwdExplicit	TruthValue,
rsvpResvFwdRSVPHop	TruthValue,
rsvpResvFwdLastChange	TimeStamp,
rsvpResvFwdPolicy	OCTET STRING,
rsvpResvFwdStatus	RowStatus,

```
        rsvpResvFwdTTL                INTEGER,
        rsvpResvFwdFlowId             INTEGER
    }

rsvpResvFwdNumber OBJECT-TYPE
    SYNTAX      SessionNumber
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "The number of this reservation request.  This
         is for SNMP Indexing purposes only and has no
         relation to any protocol value."
    ::= { rsvpResvFwdEntry 1 }

rsvpResvFwdType OBJECT-TYPE
    SYNTAX      SessionType
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The type of session (IP4, IP6, IP6 with flow
         information, etc)."
```

```
    ::= { rsvpResvFwdEntry 2 }
```

```
rsvpResvFwdDestAddr OBJECT-TYPE
    SYNTAX      OCTET STRING (SIZE(4..16))
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The destination address used by all senders in
         this session.  This object may not be changed
         when the value of the RowStatus object is 'ac-
         tive'."
```

```
    ::= { rsvpResvFwdEntry 3 }
```

```
rsvpResvFwdSenderAddr OBJECT-TYPE
    SYNTAX      OCTET STRING (SIZE(4..16))
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The source address of the sender selected by
         this reservation.  The value of all zeroes in-
         dicates 'all senders'.  This object may not be
         changed when the value of the RowStatus object
         is 'active'."
```

```
::= { rsvpResvFwdEntry 4 }
```

```
rsvpResvFwdDestAddrLength OBJECT-TYPE
```

```
SYNTAX      INTEGER(0..128)
```

```
MAX-ACCESS  read-only
```

```
STATUS      current
```

```
DESCRIPTION
```

```
"The length of the destination address in bits.
This is the CIDR Prefix Length, which for IP4
hosts and multicast addresses is 32 bits. This
object may not be changed when the value of the
RowStatus object is 'active'."
```

```
::= { rsvpResvFwdEntry 5 }
```

```
rsvpResvFwdSenderAddrLength OBJECT-TYPE
```

```
SYNTAX      INTEGER(0..128)
```

```
MAX-ACCESS  read-only
```

```
STATUS      current
```

```
DESCRIPTION
```

```
"The length of the sender's address in bits.
This is the CIDR Prefix Length, which for IP4
hosts and multicast addresses is 32 bits. This
object may not be changed when the value of the
RowStatus object is 'active'."
```

```
::= { rsvpResvFwdEntry 6 }
```

```
rsvpResvFwdProtocol OBJECT-TYPE
```

```
SYNTAX      Protocol
```

```
MAX-ACCESS  read-only
```

```
STATUS      current
```

```
DESCRIPTION
```

```
"The IP Protocol used by a session. for secure
sessions, this indicates IP Security. This ob-
ject may not be changed when the value of the
RowStatus object is 'active'."
```

```
::= { rsvpResvFwdEntry 7 }
```

```
rsvpResvFwdDestPort OBJECT-TYPE
```

```
SYNTAX      Port
```

```
MAX-ACCESS  read-only
```

```
STATUS      current
```

```
DESCRIPTION
```

```
"The UDP or TCP port number used as a destina-
tion port for all senders in this session. If
```

the IP protocol in use, specified by rsvpResvFwdProtocol, is 50 (ESP) or 51 (AH), this represents a virtual destination port number. A value of zero indicates that the IP protocol in use does not have ports. This object may not be changed when the value of the RowStatus object is 'active'."

::= { rsvpResvFwdEntry 8 }

rsvpResvFwdPort OBJECT-TYPE

SYNTAX Port

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The UDP or TCP port number used as a source port for this sender in this session. If the IP protocol in use, specified by rsvpResvFwdProtocol is 50 (ESP) or 51 (AH), this represents a generalized port identifier (GPI). A value of zero indicates that the IP protocol in use does not have ports. This object may not be changed when the value of the RowStatus object is 'active'."

::= { rsvpResvFwdEntry 9 }

rsvpResvFwdHopAddr OBJECT-TYPE

SYNTAX OCTET STRING (SIZE(4..16))

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The address of the (previous) RSVP that will receive this message."

::= { rsvpResvFwdEntry 10 }

rsvpResvFwdHopLih OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The Logical Interface Handle sent to the (previous) RSVP that will receive this message."

::= { rsvpResvFwdEntry 11 }

rsvpResvFwdInterface OBJECT-TYPE

```
SYNTAX      InterfaceIndex
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
    "The ifIndex value of the interface on which
    this RESV message was most recently sent."
::= { rsvpResvFwdEntry 12 }
```

rsvpResvFwdService OBJECT-TYPE

```
SYNTAX      QoSService
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
    "The QoS Service classification requested."
::= { rsvpResvFwdEntry 13 }
```

rsvpResvFwdTSpecRate OBJECT-TYPE

```
SYNTAX      BitRate
UNITS       "bits per second"
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
    "The Average Bit Rate of the sender's data
    stream. Within a transmission burst, the ar-
    rival rate may be as fast as rsvpResvFwdTSpec-
    PeakRate (if supported by the service model);
    however, averaged across two or more burst in-
    tervals, the rate should not exceed
    rsvpResvFwdTSpecRate.
```

Note that this is a prediction, often based on the general capability of a type of codec or particular encoding; the measured average rate may be significantly lower."

```
::= { rsvpResvFwdEntry 14 }
```

rsvpResvFwdTSpecPeakRate OBJECT-TYPE

```
SYNTAX      BitRate
UNITS       "bits per second"
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
    "The Peak Bit Rate of the sender's data stream
    Traffic arrival is not expected to exceed this
    rate at any time, apart from the effects of
```



jitter in the network. If not specified in the TSpec, this returns zero or noSuchValue."  
 ::= { rsvpResvFwdEntry 15 }

rsvpResvFwdTSpecBurst OBJECT-TYPE

SYNTAX BurstSize

UNITS "bytes"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The size of the largest burst expected from the sender at a time.

If this is less than the sender's advertised burst size, the receiver is asking the network to provide flow pacing beyond what would be provided under normal circumstances. Such pacing is at the network's option."

::= { rsvpResvFwdEntry 16 }

rsvpResvFwdTSpecMinTU OBJECT-TYPE

SYNTAX MessageSize

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The minimum message size for this flow. The policing algorithm will treat smaller messages as though they are this size."

::= { rsvpResvFwdEntry 17 }

rsvpResvFwdTSpecMaxTU OBJECT-TYPE

SYNTAX MessageSize

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The maximum message size for this flow. The admission algorithm will reject TSspecs whose Maximum Transmission Unit, plus the interface headers, exceed the interface MTU."

::= { rsvpResvFwdEntry 18 }

rsvpResvFwdRSpecRate OBJECT-TYPE

SYNTAX BitRate

UNITS "bytes per second"

```
MAX-ACCESS    read-only
STATUS        current
DESCRIPTION
    "If the requested service is Guaranteed, as
    specified by rsvpResvService, this is the
    clearing rate that is being requested.  Other-
    wise, it is zero, or the agent may return
    noSuchValue."
::= { rsvpResvFwdEntry 19 }
```

```
rsvpResvFwdRSpecSlack OBJECT-TYPE
    SYNTAX      Integer32
    UNITS       "microseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "If the requested service is Guaranteed, as
        specified by rsvpResvService, this is the delay
        slack.  Otherwise, it is zero, or the agent may
        return noSuchValue."
    ::= { rsvpResvFwdEntry 20 }
```

```
rsvpResvFwdInterval OBJECT-TYPE
    SYNTAX      RefreshInterval
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The interval between refresh messages adver-
        tised to the Previous Hop."
    ::= { rsvpResvFwdEntry 21 }
```

```
rsvpResvFwdScope OBJECT-TYPE
    SYNTAX      OCTET STRING (SIZE(0..65536))
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The contents of the scope object, displayed as
        an uninterpreted string of octets, including
        the object header.  In the absence of such an
        object, this should be of zero length."
    ::= { rsvpResvFwdEntry 22 }
```

```
rsvpResvFwdShared OBJECT-TYPE
    SYNTAX      TruthValue
```

```
MAX-ACCESS    read-only
STATUS        current
DESCRIPTION
    "If TRUE, a reservation shared among senders is
    requested.  If FALSE, a reservation specific to
    this sender is requested."
::= { rsvpResvFwdEntry 23 }
```

```
rsvpResvFwdExplicit OBJECT-TYPE
SYNTAX        TruthValue
MAX-ACCESS    read-only
STATUS        current
DESCRIPTION
    "If TRUE, individual senders are listed using
    Filter Specifications.  If FALSE, all senders
    are implicitly selected.  The Scope Object will
    contain a list of senders that need to receive
    this reservation request for the purpose of
    routing the RESV message."
::= { rsvpResvFwdEntry 24 }
```

```
rsvpResvFwdRSVPHop OBJECT-TYPE
SYNTAX        TruthValue
MAX-ACCESS    read-only
STATUS        current
DESCRIPTION
    "If TRUE, the node believes that the next IP
    hop is an RSVP hop.  If FALSE, the node be-
    lieves that the next IP hop may not be an RSVP
    hop."
::= { rsvpResvFwdEntry 25 }
```

```
rsvpResvFwdLastChange OBJECT-TYPE
SYNTAX        TimeStamp
MAX-ACCESS    read-only
STATUS        current
DESCRIPTION
    "The time of the last change in this request;
    This is either the first time it was sent or
    the time of the most recent change in parame-
    ters."
::= { rsvpResvFwdEntry 26 }
```

```
rsvpResvFwdPolicy OBJECT-TYPE
```

```
SYNTAX      OCTET STRING (SIZE(0..65536))
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
    "The contents of the policy object, displayed
    as an uninterpreted string of octets, including
    the object header. In the absence of such an
    object, this should be of zero length."
::= { rsvpResvFwdEntry 27 }
```

```
rsvpResvFwdStatus OBJECT-TYPE
    SYNTAX      RowStatus
    MAX-ACCESS  read-write
    STATUS      current
    DESCRIPTION
        "'active' for all active RESV messages. This
        object may be used to delete RESV information."
    ::= { rsvpResvFwdEntry 28 }
```

```
rsvpResvFwdTTL OBJECT-TYPE
    SYNTAX      INTEGER (0..255)
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The TTL value in the RSVP header that was last
        received."
    ::= { rsvpResvFwdEntry 29 }
```

```
rsvpResvFwdFlowId OBJECT-TYPE
    SYNTAX      INTEGER (0..16777215)
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The flow ID that this receiver is using, if
        this is an IPv6 session."
    ::= { rsvpResvFwdEntry 30 }
```

```
-- The RSVP Interface Attributes Database contains the
-- RSVP-specific information for an interface. Information
-- that is shared with other reservation procedures such
-- as ST-II is in the Integrated Interface Attributes
-- Database.
```

```

rsvpIfTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF RsvpIfEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "The RSVP-specific attributes of the system's
        interfaces."
    ::= { rsvpObjects 6 }

```

```

rsvpIfEntry OBJECT-TYPE
    SYNTAX      RsvpIfEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "The RSVP-specific attributes of the a given
        interface."
    INDEX { ifIndex }
    ::= { rsvpIfTable 1 }

```

```

RsvpIfEntry ::=
    SEQUENCE {
        rsvpIfUdpNbrs          Gauge32,
        rsvpIfIpNbrs           Gauge32,
        rsvpIfNbrs             Gauge32,
        rsvpIfEnabled          TruthValue,
        rsvpIfUdpRequired       TruthValue,
        rsvpIfRefreshBlockadeMultiple INTEGER,
        rsvpIfRefreshMultiple  INTEGER,
        rsvpIfTTL              INTEGER,
        rsvpIfRefreshInterval   TimeInterval,
        rsvpIfRouteDelay        TimeInterval,
        rsvpIfStatus           RowStatus
    }

```

```

rsvpIfUdpNbrs OBJECT-TYPE
    SYNTAX      Gauge32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The number of neighbors perceived to be using
        only the RSVP UDP Encapsulation."
    ::= { rsvpIfEntry 1 }

```

```

rsvpIfIpNbrs OBJECT-TYPE
    SYNTAX      Gauge32

```

```
MAX-ACCESS    read-only
STATUS        current
DESCRIPTION
    "The number of neighbors perceived to be using
    only the RSVP IP Encapsulation."
::= { rsvpIfEntry 2 }
```

```
rsvpIfNbrs OBJECT-TYPE
    SYNTAX      Gauge32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The number of neighbors currently perceived;
        this will exceed rsvpIfIpNbrs + rsvpIfUdpNbrs
        by the number of neighbors using both encapsu-
        lations."
    ::= { rsvpIfEntry 3 }
```

```
rsvpIfRefreshBlockadeMultiple OBJECT-TYPE
    SYNTAX      INTEGER (1..65536)
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
        "The value of the RSVP value 'Kb', which is the
        minimum number of refresh intervals that
        blockade state will last once entered."
    DEFVAL      { 4 }
    ::= { rsvpIfEntry 4 }
```

```
rsvpIfRefreshMultiple OBJECT-TYPE
    SYNTAX      INTEGER (1..65536)
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
        "The value of the RSVP value 'K', which is the
        number of refresh intervals which must elapse
        (minimum) before a PATH or RESV message which
        is not being refreshed will be aged out."
    DEFVAL      { 3 }
    ::= { rsvpIfEntry 5 }
```

```
rsvpIfTTL OBJECT-TYPE
    SYNTAX      INTEGER (0..255)
    MAX-ACCESS  read-create
```

```
STATUS      current
DESCRIPTION
    "The value of SEND_TTL used on this interface
    for messages this node originates. If set to
    zero, the node determines the TTL via other
    means."
DEFVAL { 0 } -- which is to say, no override
::= { rsvpIfEntry 6 }
```

rsvpIfRefreshInterval OBJECT-TYPE

```
SYNTAX      TimeInterval
UNITS       "milliseconds"
MAX-ACCESS  read-create
STATUS      current
DESCRIPTION
    "The value of the RSVP value 'R', which is the
    minimum period between refresh transmissions of
    a given PATH or RESV message on an interface."
DEFVAL      { 3000 } -- 30 seconds
::= { rsvpIfEntry 7 }
```

rsvpIfRouteDelay OBJECT-TYPE

```
SYNTAX      TimeInterval
UNITS       "hundredths of a second"
MAX-ACCESS  read-create
STATUS      current
DESCRIPTION
    "The approximate period from the time a route
    is changed to the time a resulting message ap-
    pears on the interface."
DEFVAL      { 200 } -- 2 seconds
::= { rsvpIfEntry 8 }
```

rsvpIfEnabled OBJECT-TYPE

```
SYNTAX      TruthValue
MAX-ACCESS  read-create
STATUS      current
DESCRIPTION
    "If TRUE, RSVP is enabled on this Interface.
    If FALSE, RSVP is not enabled on this inter-
    face."
::= { rsvpIfEntry 9 }
```

rsvpIfUdpRequired OBJECT-TYPE

```

SYNTAX      TruthValue
MAX-ACCESS  read-create
STATUS      current
DESCRIPTION
    "If TRUE, manual configuration forces the use
    of UDP encapsulation on the interface. If
    FALSE, UDP encapsulation is only used if rsvpI-
    fUdpNbrs is not zero."

 ::= { rsvpIfEntry 10 }

rsvpIfStatus OBJECT-TYPE
    SYNTAX      RowStatus
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
        "'active' on interfaces that are configured for
        RSVP."
    ::= { rsvpIfEntry 11 }

--      The RSVP Neighbor Database lists the neighbors the RSVP
--      process currently is receiving messages from.

rsvpNbrTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF RsvpNbrEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "Information describing the Neighbors of an
        RSVP system."
    ::= { rsvpObjects 7 }

rsvpNbrEntry OBJECT-TYPE
    SYNTAX      RsvpNbrEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "Information describing a single RSVP Neigh-
        bor."
    INDEX { ifIndex, rsvpNbrAddress }
    ::= { rsvpNbrTable 1 }

RsvpNbrEntry ::=
    SEQUENCE {

```



```
rsvpNbrAddress      OCTET STRING,  
rsvpNbrProtocol     RsvpEncapsulation,  
rsvpNbrStatus       RowStatus  
}
```

```
rsvpNbrAddress OBJECT-TYPE  
    SYNTAX      OCTET STRING (SIZE(4..16))  
    MAX-ACCESS   not-accessible  
    STATUS       current  
    DESCRIPTION  
        "The IP4 or IP6 Address used by this neighbor.  
        This object may not be changed when the value  
        of the RowStatus object is 'active'.  
    ::= { rsvpNbrEntry 1 }
```

```
rsvpNbrProtocol OBJECT-TYPE  
    SYNTAX      RsvpEncapsulation  
    MAX-ACCESS   read-create  
    STATUS       current  
    DESCRIPTION  
        "The encapsulation being used by this neighbor."  
    ::= { rsvpNbrEntry 2 }
```

```
rsvpNbrStatus OBJECT-TYPE  
    SYNTAX      RowStatus  
    MAX-ACCESS   read-create  
    STATUS       current  
    DESCRIPTION  
        "'active' for all neighbors. This object may  
        be used to configure neighbors. In the presence  
        of configured neighbors, the implementation may  
        (but is not required to) limit the set of valid  
        neighbors to those configured."  
    ::= { rsvpNbrEntry 3 }
```

```
--  
--      Notifications used to signal events  
--
```

```
rsvpNotifications OBJECT IDENTIFIER  
    ::= { rsvpNotificationsPrefix 0 }
```

```
newFlow NOTIFICATION-TYPE
```

```
OBJECTS {
    intSrvFlowStatus, rsvpSessionDestAddr,
    rsvpResvFwdStatus, rsvpResvStatus, rsvpSenderStatus
}
STATUS current
DESCRIPTION
    "The newFlow trap indicates that the originating system has installed a new flow in its classifier, or (when reservation authorization is in view) is prepared to install such a flow in the classifier and is requesting authorization. The objects included with the Notification may be used to read further information using the Integrated Services and RSVP MIBs. Authorization or non-authorization may be enacted by a write to the variable intSrvFlowStatus."
::= { rsvpNotifications 1 }

lostFlow NOTIFICATION-TYPE
    OBJECTS {
        intSrvFlowStatus, rsvpSessionDestAddr,
        rsvpResvFwdStatus, rsvpResvStatus, rsvpSenderStatus
    }
    STATUS current
    DESCRIPTION
        "The lostFlow trap indicates that the originating system has removed a flow from its classifier."
    ::= { rsvpNotifications 2 }

-- conformance information

rsvpGroups      OBJECT IDENTIFIER ::= { rsvpConformance 1 }
rsvpCompliances OBJECT IDENTIFIER ::= { rsvpConformance 2 }

-- compliance statements

rsvpCompliance MODULE-COMPLIANCE
    STATUS current
    DESCRIPTION
        "The compliance statement. Note that the implementation of this module requires implementation of the Integrated Services MIB as well."
```

```
MODULE -- this module
MANDATORY-GROUPS {
    rsvpSessionGroup, rsvpSenderGroup, rsvpResvGroup,
    rsvpIfGroup, rsvpNbrGroup
}

GROUP rsvpResvFwdGroup
DESCRIPTION
    "The Reservation Requests table is appropriate
    in implementations that store upstream reserva-
    tion messages, but not appropriate in implemen-
    tations which calculate them on each transmis-
    sion."

GROUP rsvpNotificationGroup
DESCRIPTION
    "The notifications in this module may be used to
    advise a network management station of changes in
    flow status, and are required when this use is in
    view."

OBJECT      rsvpSessionRequests
MIN-ACCESS  not-accessible
DESCRIPTION
    "This object is optional."

OBJECT      rsvpSenderType
MIN-ACCESS  read-only
DESCRIPTION
    "read-create access is not required. This may be
    read-only."

OBJECT      rsvpSenderDestAddr
MIN-ACCESS  read-only
DESCRIPTION
    "read-create access is not required. This may be
    read-only."

OBJECT      rsvpSenderAddr
MIN-ACCESS  read-only
DESCRIPTION
    "read-create access is not required. This may be
    read-only."

OBJECT      rsvpSenderDestAddrLength
MIN-ACCESS  read-only
DESCRIPTION
    "read-create access is not required. This may be
```

read-only."

OBJECT            rsvpSenderAddrLength  
MIN-ACCESS read-only  
DESCRIPTION  
  "read-create access is not required. This may be  
  read-only."

OBJECT            rsvpSenderProtocol  
MIN-ACCESS read-only  
DESCRIPTION  
  "read-create access is not required. This may be  
  read-only."

OBJECT            rsvpSenderDestPort  
MIN-ACCESS read-only  
DESCRIPTION  
  "read-create access is not required. This may be  
  read-only."

OBJECT            rsvpSenderPort  
MIN-ACCESS read-only  
DESCRIPTION  
  "read-create access is not required. This may be  
  read-only."

OBJECT            rsvpSenderHopAddr  
MIN-ACCESS read-only  
DESCRIPTION  
  "read-create access is not required. This may be  
  read-only."

OBJECT            rsvpSenderHopLih  
MIN-ACCESS read-only  
DESCRIPTION  
  "read-create access is not required. This may be  
  read-only."

OBJECT            rsvpSenderInterface  
MIN-ACCESS read-only  
DESCRIPTION  
  "read-create access is not required. This may be  
  read-only."

OBJECT            rsvpSenderTSpecRate  
MIN-ACCESS read-only  
DESCRIPTION  
  "read-create access is not required. This may be

read-only."

OBJECT            rsvpSenderTSpecPeakRate  
MIN-ACCESS read-only  
DESCRIPTION  
  "read-create access is not required. This may be  
  read-only."

OBJECT            rsvpSenderTSpecBurst  
MIN-ACCESS read-only  
DESCRIPTION  
  "read-create access is not required. This may be  
  read-only."

OBJECT            rsvpSenderTSpecMinTU  
MIN-ACCESS read-only  
DESCRIPTION  
  "read-create access is not required. This may be  
  read-only."

OBJECT            rsvpSenderTSpecMaxTU  
MIN-ACCESS read-only  
DESCRIPTION  
  "read-create access is not required. This may be  
  read-only."

OBJECT            rsvpSenderInterval  
MIN-ACCESS read-only  
DESCRIPTION  
  "read-create access is not required. This may be  
  read-only."

OBJECT            rsvpSenderRSVPHop  
MIN-ACCESS read-only  
DESCRIPTION  
  "read-create access is not required. This may be  
  read-only."

OBJECT            rsvpSenderPolicy  
MIN-ACCESS read-only  
DESCRIPTION  
  "read-create access is not required. This may be  
  read-only."

OBJECT            rsvpSenderAdspecBreak  
MIN-ACCESS read-only  
DESCRIPTION  
  "read-create access is not required. This may be

read-only."

OBJECT            rsvpSenderAdspecHopCount  
MIN-ACCESS read-only  
DESCRIPTION  
  "read-create access is not required. This may be  
  read-only."

OBJECT            rsvpSenderAdspecPathBw  
MIN-ACCESS read-only  
DESCRIPTION  
  "read-create access is not required. This may be  
  read-only."

OBJECT            rsvpSenderAdspecMinLatency  
MIN-ACCESS read-only  
DESCRIPTION  
  "read-create access is not required. This may be  
  read-only."

OBJECT            rsvpSenderAdspecMtu  
MIN-ACCESS read-only  
DESCRIPTION  
  "read-create access is not required. This may be  
  read-only."

OBJECT            rsvpSenderAdspecGuaranteedSvc  
MIN-ACCESS not-accessible  
DESCRIPTION  
  "This may be not-accessible if the system does not  
  support Guaranteed Service."

OBJECT            rsvpSenderAdspecGuaranteedBreak  
MIN-ACCESS not-accessible  
DESCRIPTION  
  "This may be not-accessible if the system does not  
  support Guaranteed Service."

OBJECT            rsvpSenderAdspecGuaranteedCtot  
MIN-ACCESS not-accessible  
DESCRIPTION  
  "This may be not-accessible if the system does not  
  support Guaranteed Service."

OBJECT            rsvpSenderAdspecGuaranteedDt看  
MIN-ACCESS not-accessible  
DESCRIPTION  
  "This may be not-accessible if the system does not

support Guaranteed Service."

OBJECT            rsvpSenderAdspecGuaranteedCsum  
MIN-ACCESS not-accessible  
DESCRIPTION  
  "This may be not-accessible if the system does not  
  support Guaranteed Service."

OBJECT            rsvpSenderAdspecGuaranteedDsum  
MIN-ACCESS read-only  
DESCRIPTION  
  "This may be not-accessible if the system does not  
  support Guaranteed Service."

OBJECT            rsvpSenderAdspecGuaranteedHopCount  
MIN-ACCESS not-accessible  
DESCRIPTION  
  "This may be not-accessible if the system does not  
  support Guaranteed Service."

OBJECT            rsvpSenderAdspecGuaranteedPathBw  
MIN-ACCESS not-accessible  
DESCRIPTION  
  "This may be not-accessible if the system does not  
  support Guaranteed Service."

OBJECT            rsvpSenderAdspecGuaranteedMinLatency  
MIN-ACCESS not-accessible  
DESCRIPTION  
  "This may be not-accessible if the system does not  
  support Guaranteed Service."

OBJECT            rsvpSenderAdspecGuaranteedMtu  
MIN-ACCESS not-accessible  
DESCRIPTION  
  "This may be not-accessible if the system does not  
  support Guaranteed Service."

OBJECT            rsvpSenderAdspecCtrlLoadSvc  
MIN-ACCESS not-accessible  
DESCRIPTION  
  "This may be not-accessible if the system does not  
  support Controlled Load."

OBJECT            rsvpSenderAdspecCtrlLoadBreak  
MIN-ACCESS not-accessible  
DESCRIPTION  
  "This may be not-accessible if the system does not

support Controlled Load."

OBJECT            rsvpSenderAdspecCtrlLoadHopCount  
MIN-ACCESS not-accessible  
DESCRIPTION  
  "This may be not-accessible if the system does not  
  support Controlled Load."

OBJECT            rsvpSenderAdspecCtrlLoadPathBw  
MIN-ACCESS not-accessible  
DESCRIPTION  
  "This may be not-accessible if the system does not  
  support Controlled Load."

OBJECT            rsvpSenderAdspecCtrlLoadMinLatency  
MIN-ACCESS not-accessible  
DESCRIPTION  
  "This may be not-accessible if the system does not  
  support Controlled Load."

OBJECT            rsvpSenderAdspecCtrlLoadMtu  
MIN-ACCESS not-accessible  
DESCRIPTION  
  "This may be not-accessible if the system does not  
  support Controlled Load."

OBJECT            rsvpSenderStatus  
MIN-ACCESS read-only  
DESCRIPTION  
  "read-create access is not required. This may be  
  read-only."

OBJECT            rsvpSenderFlowId  
MIN-ACCESS not-accessible  
DESCRIPTION  
  "This object is needed only in a system that imple-  
  ments IPv6."

OBJECT            rsvpResvType  
MIN-ACCESS read-only  
DESCRIPTION  
  "read-create access is not required. This may be  
  read-only."

OBJECT            rsvpResvDestAddr  
MIN-ACCESS read-only  
DESCRIPTION



"read-create access is not required. This may be read-only."

OBJECT            rsvpResvSenderAddr

MIN-ACCESS read-only

DESCRIPTION

"read-create access is not required. This may be read-only."

OBJECT            rsvpResvDestAddrLength

MIN-ACCESS read-only

DESCRIPTION

"read-create access is not required. This may be read-only."

OBJECT            rsvpResvSenderAddrLength

MIN-ACCESS read-only

DESCRIPTION

"read-create access is not required. This may be read-only."

OBJECT            rsvpResvProtocol

MIN-ACCESS read-only

DESCRIPTION

"read-create access is not required. This may be read-only."

OBJECT            rsvpResvDestPort

MIN-ACCESS read-only

DESCRIPTION

"read-create access is not required. This may be read-only."

OBJECT            rsvpResvPort

MIN-ACCESS read-only

DESCRIPTION

"read-create access is not required. This may be read-only."

OBJECT            rsvpResvHopAddr

MIN-ACCESS read-only

DESCRIPTION

"read-create access is not required. This may be read-only."

OBJECT            rsvpResvHopLih

MIN-ACCESS read-only

DESCRIPTION

"read-create access is not required. This may be read-only."

OBJECT rsvpResvInterface

MIN-ACCESS read-only

DESCRIPTION

"read-create access is not required. This may be read-only."

OBJECT rsvpResvService

MIN-ACCESS read-only

DESCRIPTION

"read-create access is not required. This may be read-only."

OBJECT rsvpResvTSpecRate

MIN-ACCESS read-only

DESCRIPTION

"read-create access is not required. This may be read-only."

OBJECT rsvpResvTSpecPeakRate

MIN-ACCESS read-only

DESCRIPTION

"read-create access is not required. This may be read-only."

OBJECT rsvpResvTSpecBurst

MIN-ACCESS read-only

DESCRIPTION

"read-create access is not required. This may be read-only."

OBJECT rsvpResvTSpecMinTU

MIN-ACCESS read-only

DESCRIPTION

"read-create access is not required. This may be read-only."

OBJECT rsvpResvTSpecMaxTU

MIN-ACCESS read-only

DESCRIPTION

"read-create access is not required. This may be read-only."

OBJECT rsvpResvRSpecRate

MIN-ACCESS read-only

DESCRIPTION

"read-create access is not required. This may be read-only."

OBJECT            rsvpResvRSpecSlack

MIN-ACCESS read-only

DESCRIPTION

"read-create access is not required. This may be read-only."

OBJECT            rsvpResvInterval

MIN-ACCESS read-only

DESCRIPTION

"read-create access is not required. This may be read-only."

OBJECT            rsvpResvScope

MIN-ACCESS read-only

DESCRIPTION

"read-create access is not required. This may be read-only."

OBJECT            rsvpResvShared

MIN-ACCESS read-only

DESCRIPTION

"read-create access is not required. This may be read-only."

OBJECT            rsvpResvExplicit

MIN-ACCESS read-only

DESCRIPTION

"read-create access is not required. This may be read-only."

OBJECT            rsvpResvRSVPHop

MIN-ACCESS read-only

DESCRIPTION

"read-create access is not required. This may be read-only."

OBJECT            rsvpResvPolicy

MIN-ACCESS read-only

DESCRIPTION

"read-create access is not required. This may be read-only."

OBJECT            rsvpResvStatus

MIN-ACCESS read-only

DESCRIPTION

```
    "read-create access is not required. This may be
    read-only."
OBJECT      rsvpResvFlowId
MIN-ACCESS  not-accessible
DESCRIPTION
    "This object is needed only in a system that imple-
    ments IPv6."

OBJECT      rsvpResvFwdStatus
MIN-ACCESS  read-only
DESCRIPTION
    "read-create access is not required. This may be
    read-only."

OBJECT      rsvpResvFwdFlowId
MIN-ACCESS  not-accessible
DESCRIPTION
    "This object is needed only in a system that imple-
    ments IPv6."

 ::= { rsvpCompliances 1 }

rsvpSessionGroup OBJECT-GROUP
    OBJECTS {
        rsvpSessionType, rsvpSessionDestAddr,
        rsvpSessionDestAddrLength, rsvpSessionProtocol,
        rsvpSessionPort, rsvpSessionSenders, rsvpSessionReceivers,
        rsvpSessionRequests
    }
    STATUS   current
    DESCRIPTION
        "These objects are required for RSVP Systems."
    ::= { rsvpGroups 1 }

rsvpSenderGroup OBJECT-GROUP
    OBJECTS {
        rsvpSenderType, rsvpSenderDestAddr, rsvpSenderAddr,
        rsvpSenderDestAddrLength, rsvpSenderAddrLength,
        rsvpSenderProtocol, rsvpSenderDestPort, rsvpSenderPort,
        rsvpSenderHopAddr, rsvpSenderHopLih, rsvpSenderInterface,
        rsvpSenderTSpecRate, rsvpSenderTSpecPeakRate,
        rsvpSenderTSpecBurst, rsvpSenderTSpecMinTU,
        rsvpSenderTSpecMaxTU, rsvpSenderInterval,
        rsvpSenderLastChange, rsvpSenderStatus,
        rsvpSenderRSVPHop, rsvpSenderPolicy,
        rsvpSenderAdspecBreak, rsvpSenderAdspecHopCount,
        rsvpSenderAdspecPathBw, rsvpSenderAdspecMinLatency,
```

```

    rsvpSenderAdspecMtu, rsvpSenderAdspecGuaranteedSvc,
    rsvpSenderAdspecGuaranteedBreak,
    rsvpSenderAdspecGuaranteedCtot,
    rsvpSenderAdspecGuaranteedDtot,
    rsvpSenderAdspecGuaranteedCsum,
    rsvpSenderAdspecGuaranteedDsum,
    rsvpSenderAdspecGuaranteedHopCount,
    rsvpSenderAdspecGuaranteedPathBw,
    rsvpSenderAdspecGuaranteedMinLatency,
    rsvpSenderAdspecGuaranteedMtu, rsvpSenderAdspecCtrlLoadSvc,
    rsvpSenderAdspecCtrlLoadBreak,
    rsvpSenderAdspecCtrlLoadHopCount,
    rsvpSenderAdspecCtrlLoadPathBw,
    rsvpSenderAdspecCtrlLoadMinLatency,
    rsvpSenderAdspecCtrlLoadMtu, rsvpSenderNewIndex
}
STATUS current
DESCRIPTION
    "These objects are required for RSVP Systems."
 ::= { rsvpGroups 2 }

```

#### rsvpResvGroup OBJECT-GROUP

```

    OBJECTS {
        rsvpResvType, rsvpResvDestAddr, rsvpResvSenderAddr,
        rsvpResvDestAddrLength, rsvpResvSenderAddrLength,
        rsvpResvProtocol, rsvpResvDestPort, rsvpResvPort,
        rsvpResvHopAddr, rsvpResvHopLih, rsvpResvInterface,
        rsvpResvService, rsvpResvTSpecRate, rsvpResvTSpecBurst,
        rsvpResvTSpecPeakRate, rsvpResvTSpecMinTU,
        rsvpResvTSpecMaxTU, rsvpResvRSpecRate,
        rsvpResvRSpecSlack, rsvpResvInterval,
        rsvpResvScope, rsvpResvShared, rsvpResvExplicit,
        rsvpResvRSVPHop, rsvpResvLastChange, rsvpResvPolicy,
        rsvpResvStatus, rsvpResvNewIndex
    }
STATUS current
DESCRIPTION
    "These objects are required for RSVP Systems."
 ::= { rsvpGroups 3 }

```

#### rsvpResvFwdGroup OBJECT-GROUP

```

    OBJECTS {
        rsvpResvFwdType, rsvpResvFwdDestAddr, rsvpResvFwdSenderAddr,
        rsvpResvFwdDestAddrLength, rsvpResvFwdSenderAddrLength,
        rsvpResvFwdProtocol, rsvpResvFwdDestPort, rsvpResvFwdPort,
        rsvpResvFwdHopAddr, rsvpResvFwdHopLih, rsvpResvFwdInterface,

```

```
    rsvpResvFwdNewIndex, rsvpResvFwdService,
    rsvpResvFwdTSspecPeakRate, rsvpResvFwdTSspecMinTU,
    rsvpResvFwdTSspecMaxTU, rsvpResvFwdTSspecRate,
    rsvpResvFwdTSspecBurst, rsvpResvFwdRSspecRate,
    rsvpResvFwdRSspecSlack, rsvpResvFwdInterval,
    rsvpResvFwdScope, rsvpResvFwdShared, rsvpResvFwdExplicit,
    rsvpResvFwdRSVPHop, rsvpResvFwdLastChange,
    rsvpResvFwdPolicy, rsvpResvFwdStatus
}
STATUS current
DESCRIPTION
    "These objects are optional, used for some RSVP
    Systems."
::= { rsvpGroups 4 }

rsvpIfGroup OBJECT-GROUP
    OBJECTS {
        rsvpIfUdpNbrs, rsvpIfIpNbrs, rsvpIfNbrs, rsvpIfEnabled,
        rsvpIfUdpRequired, rsvpIfRefreshBlockadeMultiple,
        rsvpIfRefreshMultiple, rsvpIfRefreshInterval, rsvpIfTTL,
        rsvpIfRouteDelay, rsvpIfStatus
    }
STATUS current
DESCRIPTION
    "These objects are required for RSVP Systems."
::= { rsvpGroups 6 }

rsvpNbrGroup OBJECT-GROUP
    OBJECTS {
        rsvpNbrProtocol, rsvpNbrStatus
    }
STATUS current
DESCRIPTION
    "These objects are required for RSVP Systems."
::= { rsvpGroups 7 }

rsvpNotificationGroup NOTIFICATION-GROUP
    NOTIFICATIONS { newFlow, lostFlow }
STATUS current
DESCRIPTION
    "This notification is required for Systems sup-
    porting the RSVP Policy Module using an SNMP
    interface to the Policy Manager."
::= { rsvpGroups 8 }
```

END

#### 4. Security Considerations

The use of an SNMP SET results in an RSVP or Integrated Services reservation under rules that are different compared to if the reservation was negotiated using RSVP. However, no other security considerations exist other than those imposed by SNMP itself.

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#### 6. Acknowledgements

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## 7. References

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