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.

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1. The SNMPv2 Network Management Framework

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

- RFC 1441 which defines the SMI, the mechanisms used for describing and naming objects for the purpose of management.
- STD 17, RFC 1213 defines MIB-II, the core set of managed objects for the Internet suite of protocols.
- RFC 1445 which defines the administrative and other architectural aspects of the framework.
- 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 of 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
Tel: +1 805 681 0115
E-Mail: fred@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 reserva-
 tion 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 system."
 ::= { 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 }

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 Conventions 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 object 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,
  rsvpSenderAdspecGuaranteedDtot          Integer32,
  rsvpSenderAdspecGuaranteedCsum          Integer32,
  rsvpSenderAdspecGuaranteedDsum          Integer32,
  rsvpSenderAdspecGuaranteedHopCount      INTEGER,
  rsvpSenderAdspecGuaranteedPathBw        BitRate,
  rsvpSenderAdspecGuaranteedMinLatency    Integer32,
  rsvpSenderAdspecGuaranteedMtu           INTEGER,
  rsvpSenderAdspecCtrlLoadSvc             TruthValue,

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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 'active'."
::= { 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 TSpecs 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 be-
 lieves 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 mes-
  sage; This is either the first time it was re-
  ceived 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"
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"

rsvpSenderAdspecGuaranteedSvc OBJECT-TYPE
SYNTAX TruthValue
MAX-ACCESS read-create
STATUS current
DESCRIPTION
"If TRUE, the ADSPEC contains a Guaranteed Ser-
vice fragment. If FALSE, the ADSPEC does not
contain a Guaranteed Service fragment."

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 rsvpSen-
derAdspecGuaranteedSvc is TRUE, the 'break' bit
is not set.

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

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)
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."

```
rsvpSenderAdspecCtrlLoadSvc 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."
```
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 ::=
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 Conven-
tions 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 ‘active’.
::= { 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 indicates ‘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 \texttt{rsvpResvTSpecPeakRate} (if supported by the service model); however, averaged across two or more burst intervals, the rate should not exceed \texttt{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.

\begin{verbatim}
::= { rsvpResvEntry 14 }

\texttt{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 }

\texttt{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 }

\texttt{rsvpResvTSpecMinTU} OBJECT-TYPE
SYNTAX MessageSize
MAX-ACCESS read-create
\end{verbatim}
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 TSpecs 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. Otherwise, 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 Conventions 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 object 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,
}
rsrpResvFwdTTL
rsrpResvFwdFlowId
)}

rsrpResvFwdNumber 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 }

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

rsrpResvFwdDestAddr 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 }

rsrpResvFwdSenderAddr 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 object 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 destination 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 arrival rate may be as fast as rsvpResvFwdTSpecPeakRate (if supported by the service model); however, averaged across two or more burst intervals, 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 pac-
ing 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 TSpecs 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. Otherwise, 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 advertised 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 {
    rsnvIfUdpNbrs                       Gauge32,
    rsnvIfIpNbrs                        Gauge32,
    rsnvIfNbrs                          Gauge32,
    rsnvIfEnabled                       TruthValue,
    rsnvIfUdpRequired                   TruthValue,
    rsnvIfRefreshBlockadeMultiple       INTEGER,
    rsnvIfRefreshMultiple               INTEGER,
    rsnvIfTTL                           INTEGER,
    rsnvIfRefreshInterval               TimeInterval,
    rsnvIfRouteDelay                    TimeInterval,
    rsnvIfStatus                        RowStatus
  }

rsnvIfUdpNbrs 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 }

rsnvIfIpNbrs 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 encap-
  sulations."
::= { 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 appears 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 interface."
 ::= { 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 rsvpIfUdpNbrs 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 Neighbor."
INDEX { ifIndex, rsvpNbrAddress }
 ::= { rsvpNbrTable 1 }

RsvpNbrEntry ::= 
     SEQUENCE {

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rsvpNbrAddress OBJECT-TYPE
SYNTAX OCTET STRING
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 reservation messages, but not appropriate in implementations which calculate them on each transmission."

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."
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  rsvpSenderAdspecGuaranteedDtot
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."

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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 implements 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 implements 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 implements IPv6."

::= { rsvpCompliances 1 }
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,
rsvpResvFwdTSpecPeakRate, rsvpResvFwdTSpecMinTU,
rsvpResvFwdTSpecMaxTU, rsvpResvFwdTSpecRate,
rsvpResvFwdTSpecBurst, rsvpResvFwdRSpecRate,
rsvpResvFwdRSpecSlack, 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 }
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

This document was produced by the RSVP Working Group.
7. References

