

IP over Infiniband
Internet Draft

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Infiniband Subnet Manager(SM) MIB

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Status of this Memo

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<http://www.ietf.org/ietf/1id-guidelines.txt>

Abstract

This memo defines a portion of the Management Information Base (MIB) for use with network management protocols in the Internet community. In particular, it defines objects for the InfiniBand Subnet Manager(SM) (<http://www.infinibandta.org>).

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[1](#) Introduction[2](#) Terminology

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in [RFC 2119](#) [[RFC2119](#)].

For an introduction to the concepts of InfiniBand, see [[IBTAArch](#)].

[3](#) The Internet-Standard Management Framework

For a detailed overview of the documents that describe the current Internet-Standard Management Framework, please refer to section 7 of [RFC 3410](#) [[RFC3410](#)].

Managed objects are accessed via a virtual information store, termed the Management Information Base or MIB. MIB objects are generally accessed through the Simple Network Management Protocol (SNMP). Objects in the MIB are defined using the mechanisms defined in the Structure of Management Information (SMI). This memo specifies a MIB module that is compliant to the SMIV2, which is described in STD 58, [RFC 2578](#) [[RFC2578](#)], STD 58, [RFC 2579](#) [[RFC2579](#)] and STD 58, [RFC 2580](#) [[RFC2580](#)].

[4](#) Overview

The Infiniband Architecture [[IBTAArch](#)] is defined by the Infiniband Trade Association. Infiniband is designed to provide low latency high bandwidth interconnect in a computing environment. This document will define the objects related to managing the Subnet Manager, which are responsible for configuring and monitoring of Infiniband subnet.

[4.1](#) IB Subnet Manager Configuration Group

This group contains all Subnet Managers that are active on this device. An IB device can be attached to one or more IB subnets. If the IB device is hosting a Subnet Manager, responsible for managing the attached IB subnet, a row is present in ibSmConfigTable.

[4.2](#) IB Subnet Manager Node Information Group

This table contains the node information for the IB nodes that are managed by the Subnet Managers active on this device.

[4.3](#) IB Subnet Manager Port Information Group

This table contains the port information for the IB ports that are managed by the Subnet Managers active on this device.

[4.4](#) IB Subnet Manager Switch Information Group

This table contains the switch information for the IB switches that are managed by the Subnet Managers active on this device.

4.5 IB Subnet Manager Partition Group

This table contains the partition groups that are managed by the Subnet Managers active on this device.

4.6 IB Subnet Manager Multicast Information Group

This groups contains the information for the IB multicast groups that are managed by the Subnet Managers active on this device.

4.7 IB Subnet Manager Path Group

This table contains the path information between two IB end-nodes that are managed by the Subnet Managers active on this device.

4.8 IB Subnet Manager Information Group

This group contains a table of information regarding other Subnet Managers that are on the same IB subnet as the Subnet Managers active on this device.

4.9 IB Subnet Manager Link Information Group

This group contains a table of information regarding to the physical link topology of the IB subnets.

4.10 IB Subnet Manager Path Information Group

This group contains two tables for accessing IB Path records:
ibSmPathReqTable should be used to initiate query of Path records, and
then ibSmPathResultTable should be used to retrieve the query results.

4.11 IB Subnet Manager MultiPath Information Group

This group contains two tables for accessing IB MultiPath records:
ibSmMultiPathReqTable should be used to initiate query of MultiPath

records, and then `ibSmMultiPathResultTable` should be used to retrieve the query results.

4.12 IB Subnet Manager Trace Information Group

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This group contains two tables for accessing IB Trace records: `ibSmTraceReqTable` should be used to initiate query of Trace records, and then `ibSmTraceResultTable` should be used to retrieve the query results.

4.13 IB Subnet Manager Service Information Group

This group contains two tables: `ibSmServiceTable` should be used to retrieve Service records, and `ibSmServiceAssociationTable` should be used to manage Service Key to Service Name mappings.

4.14 IB Subnet Manager GUID Information Group

This group contains a table of port GUIDs for each IB node which is managed by the Subnet Managers active on this device. This helps to map the topology of the IB network.

4.15 IB Notification/Trap Group

This group contains a list of notifications/traps that are being delivered by the Subnet Managers active on this device.

5 Next Steps

This draft should be considered a work in progress. Currently, this draft is missing:

1. Security Consideration to be finished.

6 Definitions

IB-SM-MIB DEFINITIONS ::= BEGIN

IMPORTS

 MODULE-IDENTITY, OBJECT-TYPE,
 Counter32, Integer32, Unsigned32, Gauge32,
 NOTIFICATION-TYPE, TimeTicks FROM SNMPv2-SMI

MODULE-COMPLIANCE, OBJECT-GROUP,
NOTIFICATION-GROUP FROM SNMPv2-CONF
TEXTUAL-CONVENTION,
TruthValue, RowStatus FROM SNMPv2-TC
SnmpAdminString FROM SNMP-FRAMEWORK-MIB
IbDataPort, IbUnicastLid,
IbMulticastLid, IbGuid,
IbSmSubnetPrefix, IbSmState,
IbNodeType, IbMtu, IbPartitionKey,

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IbTransportTime,
infinibandMIB FROM IB-TC-MIB;

ibSmMIB MODULE-IDENTITY

LAST-UPDATED "200403030000Z" -- 3 March 2004

ORGANIZATION "IETF IP over IB Working Group"

CONTACT-INFO

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<http://www.sun.com>"

DESCRIPTION

"The managed objects for Infiniband Subnet Managers(SM)."

REVISION "200403030000Z" -- 3 March 2004

DESCRIPTION "Second revision of this MIB."

REVISION "200310200000Z" -- 20 October 2003

DESCRIPTION "Complete revision of this MIB. "

REVISION "200110220000Z"
DESCRIPTION "Initial version of this MIB."

::={ infinibandMIB 7 }

-- Objects

ibSmMIBObjects	OBJECT IDENTIFIER ::= { ibSmMIB 1 }
ibSmConfigInfo	OBJECT IDENTIFIER ::= { ibSmMIBObjects 1 }
ibSmNodeInfo	OBJECT IDENTIFIER ::= { ibSmMIBObjects 2 }
ibSmPortInfo	OBJECT IDENTIFIER ::= { ibSmMIBObjects 3 }
ibSmSwitchInfo	OBJECT IDENTIFIER ::= { ibSmMIBObjects 4 }
ibSmPartitionInfo	OBJECT IDENTIFIER ::= { ibSmMIBObjects 5 }
ibSmMcastInfo	OBJECT IDENTIFIER ::= { ibSmMIBObjects 6 }

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ibSmSMInfo	OBJECT IDENTIFIER ::= { ibSmMIBObjects 7 }
ibSmLinkInfo	OBJECT IDENTIFIER ::= { ibSmMIBObjects 8 }
ibSmPathInfo	OBJECT IDENTIFIER ::= { ibSmMIBObjects 9 }
ibSmMultiPathInfo	OBJECT IDENTIFIER ::= { ibSmMIBObjects 10 }
ibSmTraceInfo	OBJECT IDENTIFIER ::= { ibSmMIBObjects 11 }
ibSmServiceInfo	OBJECT IDENTIFIER ::= { ibSmMIBObjects 12 }
ibSmGUIDInfo	OBJECT IDENTIFIER ::= { ibSmMIBObjects 13 }
ibSmMIBTrap	OBJECT IDENTIFIER ::= { ibSmMIB 2 }
ibSmTrapData	OBJECT IDENTIFIER ::= { ibSmMIBTrap 1 }
ibSmGenericTraps	OBJECT IDENTIFIER ::= { ibSmMIBTrap 2 }
ibSmVendorTraps	OBJECT IDENTIFIER ::= { ibSmMIBTrap 3 }
ibSmMIBConformance	OBJECT IDENTIFIER ::= { ibSmMIB 3 }
ibSmMIBCompliances	OBJECT IDENTIFIER ::= { ibSmMIBConformance 1 }
ibSmMIBGroups	OBJECT IDENTIFIER ::= { ibSmMIBConformance 2 }

-- Textual Conventions

IbSmVendorID ::= TEXTUAL-CONVENTION

DISPLAY-HINT "1x:"

STATUS current

DESCRIPTION

"Device vendor ID, per IEEE.

see www.standards.ieee.org/regauth/oui/oui.txt for details."

SYNTAX OCTET STRING (SIZE(3))

-- Subnet Manager Configuration Table

ibSmConfigTable	OBJECT-TYPE
SYNTAX	SEQUENCE OF IbSmConfigEntry
MAX-ACCESS	not-accessible

```

STATUS          current
DESCRIPTION
    "A table used to list all configured Subnet Managers on this
    node."
 ::= { ibSmConfigInfo 1 }

```

```

ibSmConfigEntry    OBJECT-TYPE
    SYNTAX          IbSmConfigEntry
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "Table entry for ibSmConfigTable."
    INDEX { ibSmConfigSubnetPrefix }
    ::= { ibSmConfigTable 1 }

```

```

IbSmConfigEntry ::= SEQUENCE {
    ibSmConfigSubnetPrefix      IbSmSubnetPrefix,

```

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```

ibSmConfigSubnetGUID      IbGuid,
ibSmConfigPriority        Unsigned32,
ibSmConfigSMKey           OCTET STRING,
ibSmConfigAdminSMState    INTEGER,
ibSmConfigSMState         IbSmState,
ibSmConfigActCount        Counter32,
ibSmConfigStatus          RowStatus,
ibSmConfigSweepInterval   Unsigned32,
ibSmConfigResponseTimeout Unsigned32,
ibSmConfigPortAgingTime   Unsigned32,
ibSmConfigMinUnicastLID   IbUnicastLid,
ibSmConfigMaxUnicastLID   IbUnicastLid,
ibSmConfigDefaultLMC      Unsigned32,
ibSmConfigMasterPollInterval Unsigned32,
ibSmConfigMasterPollRetries Unsigned32,
ibSmConfigMKeyLeasePeriod Unsigned32
}

```

```

ibSmConfigSubnetPrefix    OBJECT-TYPE
    SYNTAX          IbSmSubnetPrefix
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "Subnet prefix of this IB subnet."
    ::= { ibSmConfigEntry 1 }

```

```

ibSmConfigSubnetGUID OBJECT-TYPE
    SYNTAX          IbGuid

```


MAX-ACCESS read-create
STATUS current
DESCRIPTION
 "PortGUID of the port where the SM resides."
 ::= { ibSmConfigEntry 2 }

ibSmConfigPriority OBJECT-TYPE
SYNTAX Unsigned32(0..15)
MAX-ACCESS read-create
STATUS current
DESCRIPTION
 "Assigned priority for this Subnet Manager. It is used as one of
 parameters in selecting the master Subnet Manager in an IB subnet."
 ::= { ibSmConfigEntry 3 }

ibSmConfigSMKey OBJECT-TYPE
SYNTAX OCTET STRING (SIZE(8))
MAX-ACCESS read-create
STATUS current
DESCRIPTION
 "SM_Key of the SM. SM Key exclusively identifies an SM on the

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subnet. User should take extra caution when setting this value."
 ::= { ibSmConfigEntry 4 }

ibSmConfigAdminSMState OBJECT-TYPE
SYNTAX INTEGER { enable(1), disable(2) }
MAX-ACCESS read-create
STATUS current
DESCRIPTION
 "Administrative state of the Subnet Manager."
 ::= { ibSmConfigEntry 5 }

ibSmConfigSMState OBJECT-TYPE
SYNTAX IbSmState
MAX-ACCESS read-only
STATUS current
DESCRIPTION
 "Subnet Manager's State:
 0: notActive; 1: discovering; 2: standby; 3: master(3);"
 ::= { ibSmConfigEntry 6 }

ibSmConfigActCount OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current

DESCRIPTION

"Activity counter that increments each time the SM issues an SMP or performs other management activities. Used as a heartbeat indicator by standby SMs."

::= { ibSmConfigEntry 7 }

ibSmConfigStatus OBJECT-TYPE

SYNTAX RowStatus

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"Used to create or delete a row in this table. Creating a row has the effect of assigning a Subnet Manager to an IB subnet. Depending on the negotiation process the Subnet Manager can take the role of a master or standby Subnet Manager for the IB subnet. Deleting a row has the effect of removing the Subnet Manager from the IB subnet."

::= { ibSmConfigEntry 8 }

ibSmConfigSweepInterval OBJECT-TYPE

SYNTAX Unsigned32(0..255)

UNITS "seconds"

MAX-ACCESS read-create

STATUS current

DESCRIPTION

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"Used to configure the interval the SM should sweep the IB network. The value is specified in seconds."

::= { ibSmConfigEntry 9 }

ibSmConfigResponseTimeout OBJECT-TYPE

SYNTAX Unsigned32

UNITS "milliseconds"

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"Used to configure the time-out interval for that SM should wait for a response before the SM declares a port to be unresponsive."

::= { ibSmConfigEntry 10 }

ibSmConfigPortAgingTime OBJECT-TYPE

SYNTAX Unsigned32

UNITS "minutes"

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"Used to configure the time interval for that SM should retain a port's configuration after the port is unresponsive."
 ::= { ibSmConfigEntry 11 }

ibSmConfigMinUnicastLID OBJECT-TYPE
SYNTAX IbUnicastLid
MAX-ACCESS read-create
STATUS current

DESCRIPTION

"Used to configure unicast LID range for the Subnet Manager.
This is the low limit of the LID and its value must be less than the value of ibSmConfigMaxUnicastLID."
 ::= { ibSmConfigEntry 12 }

ibSmConfigMaxUnicastLID OBJECT-TYPE
SYNTAX IbUnicastLid
MAX-ACCESS read-create
STATUS current

DESCRIPTION

"Used to configure unicast LID range for the Subnet Manager.
This is the high limit of the LID and its value must be greater Than the value of ibSmConfigMinUnicastLID."
 ::= { ibSmConfigEntry 13 }

ibSmConfigDefaultLMC OBJECT-TYPE
SYNTAX Unsigned32(0..7)
MAX-ACCESS read-create
STATUS current

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DESCRIPTION

"Used to configure how many LID to be assigned per port. The user should take extra caution when setting this value because the change affects the routing of the packets and existing LID assignments."
 ::= { ibSmConfigEntry 14 }

ibSmConfigMasterPollInterval OBJECT-TYPE
SYNTAX Unsigned32
UNITS "seconds"
MAX-ACCESS read-create
STATUS current

DESCRIPTION

"Used to configure the time interval the Standby Subnet Manager will use to poll the Master Subnet Manager."
 ::= { ibSmConfigEntry 15 }

```

ibSmConfigMasterPollRetries    OBJECT-TYPE
    SYNTAX                      Unsigned32
    UNITS                       "seconds"
    MAX-ACCESS                  read-create
    STATUS                      current
    DESCRIPTION
        "Used to configure the number of retries the Standby Subnet Manager
        will retry its poll of the Master Subnet Manager."
    ::= { ibSmConfigEntry 16 }

```

```

ibSmConfigMKeyLeasePeriod    OBJECT-TYPE
    SYNTAX                      Unsigned32(0..65535)
    UNITS                       "seconds"
    MAX-ACCESS                  read-create
    STATUS                      current
    DESCRIPTION
        "Used to configure the MKey lease period."
    ::= { ibSmConfigEntry 17 }

```

-- node information table

```

ibSmNodeInfoTable    OBJECT-TYPE
    SYNTAX              SEQUENCE OF IbSmNodeInfoEntry
    MAX-ACCESS          not-accessible
    STATUS              current
    DESCRIPTION
        "A table used to list all IB nodes that are actively managed
        by the Subnet Managers on this device."
    ::= { ibSmNodeInfo 1 }

```

```

ibSmNodeInfoEntry    OBJECT-TYPE
    SYNTAX              IbSmNodeInfoEntry
    MAX-ACCESS          not-accessible

```

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```

    STATUS              current
    DESCRIPTION
        "Table entry for ibSmNodeInfoTable."
    INDEX { ibSmNodeInfoSubnetPrefix, ibSmNodeInfoNodeGUID }
    ::= { ibSmNodeInfoTable 1 }

```

```

IbSmNodeInfoEntry ::= SEQUENCE {
    ibSmNodeInfoSubnetPrefix    IbSmSubnetPrefix,
    ibSmNodeInfoNodeGUID       IbGuid,
    ibSmNodeInfoBaseVersion     Unsigned32,
    ibSmNodeInfoClassVersion    Unsigned32,
    ibSmNodeInfoType            IbNodeType,

```

```

ibSmNodeInfoNumPorts      Unsigned32,
ibSmNodeInfoSystemImageGUID  IbGuid,
ibSmNodeInfoPartitionCap   Unsigned32,
ibSmNodeInfoDeviceID       OCTET STRING,
ibSmNodeInfoRevision        OCTET STRING,
ibSmNodeInfoVendorID        IbSmVendorID,
ibSmNodeInfoDescription     SnmpAdminString
}

```

```

ibSmNodeInfoSubnetPrefix   OBJECT-TYPE
    SYNTAX                  IbSmSubnetPrefix
    MAX-ACCESS               not-accessible
    STATUS                   current
    DESCRIPTION
        "Subnet prefix of this IB subnet."
    ::= { ibSmNodeInfoEntry 1 }

```

```

ibSmNodeInfoNodeGUID       OBJECT-TYPE
    SYNTAX                  IbGuid
    MAX-ACCESS               not-accessible
    STATUS                   current
    DESCRIPTION
        "The GUID of this node."
    ::= { ibSmNodeInfoEntry 2 }

```

```

ibSmNodeInfoBaseVersion    OBJECT-TYPE
    SYNTAX                  Unsigned32(0..255)
    MAX-ACCESS               read-only
    STATUS                   current
    DESCRIPTION
        "Supported base management datagram version."
    ::= { ibSmNodeInfoEntry 3 }

```

```

ibSmNodeInfoClassVersion   OBJECT-TYPE
    SYNTAX                  Unsigned32(0..255)
    MAX-ACCESS               read-only
    STATUS                   current

```

```

DESCRIPTION
    "Supported subnet management class."
    ::= { ibSmNodeInfoEntry 4 }

```

```

ibSmNodeInfoType           OBJECT-TYPE
    SYNTAX                  IbNodeType
    MAX-ACCESS               read-only
    STATUS                   current

```

DESCRIPTION

"Type of node being managed:
reserved(0), channelAdapter(1), switch(2), router(3),error(4)."
::= { ibSmNodeInfoEntry 5 }

ibSmNodeInfoNumPorts OBJECT-TYPE

SYNTAX Unsigned32(1..254)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Number of physical ports on this node."
::= { ibSmNodeInfoEntry 6 }

ibSmNodeInfoSystemImageGUID OBJECT-TYPE

SYNTAX IbGuid

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"GUID associating this node with other nodes controlled by common supervisory code. Provides a means for system software to indicate the availability of multiple paths to the same destination via multiple nodes. All zero indicates that node association is not desired. The SystemImageGUID may be the NodeGUID of one of the associated nodes if that node is not field-replaceable."
::= { ibSmNodeInfoEntry 7 }

ibSmNodeInfoPartitionCap OBJECT-TYPE

SYNTAX Unsigned32(1..65535)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Number of entries in the partition table for CA, router, and the switch management port. This is at a minimum set to 1 for all nodes including switch."
::= { ibSmNodeInfoEntry 8 }

ibSmNodeInfoDeviceID OBJECT-TYPE

SYNTAX OCTET STRING (SIZE(2))

MAX-ACCESS read-only

STATUS current

DESCRIPTION

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"Device ID information as assigned by device manufacturer."
::= { ibSmNodeInfoEntry 9 }

ibSmNodeInfoRevision OBJECT-TYPE

SYNTAX OCTET STRING (SIZE(4))
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION
 "Device revision, assigned by manufacturer."
 ::= { ibSmNodeInfoEntry 10 }

ibSmNodeInfoVendorID OBJECT-TYPE

SYNTAX IbSmVendorID
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION
 "Device vendor ID, per IEEE.
 see www.standards.ieee.org/regauth/oui/oui.txt for details."
 ::= { ibSmNodeInfoEntry 11 }

ibSmNodeInfoDescription OBJECT-TYPE

SYNTAX SnmpAdminString
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION
 "A vendor specific optional text string describing this node."
 ::= { ibSmNodeInfoEntry 12 }

-- Subnet Manager port information table

ibSmPortInfoTable OBJECT-TYPE

SYNTAX SEQUENCE OF IbSmPortInfoEntry
 MAX-ACCESS not-accessible
 STATUS current
 DESCRIPTION
 "A table used to list all IB ports that are actively managed by
 the Subnet Managers on this device."
 ::= { ibSmPortInfo 1 }

ibSmPortInfoEntry OBJECT-TYPE

SYNTAX IbSmPortInfoEntry
 MAX-ACCESS not-accessible
 STATUS current
 DESCRIPTION
 "Table entry for ibSmPortInfoTable."
 INDEX { ibSmPortInfoSubnetPrefix, ibSmPortInfoNodeGUID,
 ibSmPortInfoPortNum }
 ::= { ibSmPortInfoTable 1 }

IbSmPortInfoEntry ::= SEQUENCE {

ibSmPortInfoSubnetPrefix	IbSmSubnetPrefix,
ibSmPortInfoNodeGUID	IbGuid,
ibSmPortInfoPortNum	IbDataPort,
ibSmPortInfoMKey	OCTET STRING,
ibSmPortInfoGIDPrefix	OCTET STRING,
ibSmPortInfoLID	IbUnicastLid,
ibSmPortInfoMasterSmLID	IbUnicastLid,
ibSmPortInfoCapMask	BITS,
ibSmPortInfoDiagCode	OCTET STRING,
ibSmPortInfoMKeyLeasePeriod	Unsigned32,
ibSmPortInfoLinkWidthEnabled	Unsigned32,
ibSmPortInfoLinkWidthSupported	Unsigned32,
ibSmPortInfoLinkWidthActive	Unsigned32,
ibSmPortInfoLinkSpeedSupported	Unsigned32,
ibSmPortInfoState	Unsigned32,
ibSmPortInfoPhyState	Unsigned32,
ibSmPortInfoLinkDownDefState	Unsigned32,
ibSmPortInfoMKeyProtBits	Unsigned32,
ibSmPortInfoLMC	Unsigned32,
ibSmPortInfoLinkSpeedActive	Unsigned32,
ibSmPortInfoLinkSpeedEnabled	Unsigned32,
ibSmPortInfoNeighborMTU	IbMtu,
ibSmPortInfoMasterSmSL	Unsigned32,
ibSmPortInfoVLCap	Unsigned32,
ibSmPortInfoVLHighLimit	Unsigned32,
ibSmPortInfoVLArbHighCap	Unsigned32,
ibSmPortInfoVLArbLowCap	Unsigned32,
ibSmPortInfoMTUCap	IbMtu,
ibSmPortInfoVLStallCount	Unsigned32,
ibSmPortInfoHOQLife	Unsigned32,
ibSmPortInfoOperVL	Unsigned32,
ibSmPortInfoInPartEnforce	TruthValue,
ibSmPortInfoOutPartEnforce	TruthValue,
ibSmPortInfoInFilterRawPktEnf	TruthValue,
ibSmPortInfoOutFilterRawPktEnf	TruthValue,
ibSmPortInfoMKeyViolation	Gauge32,
ibSmPortInfoPKeyViolation	Gauge32,
ibSmPortInfoQKeyViolation	Gauge32,
ibSmPortInfoGUIDCap	Unsigned32,
ibSmPortInfoSubnetTimeout	IbTransportTime,
ibSmPortInfoRespTime	IbTransportTime,
ibSmPortInfoLocalPhyError	Gauge32,
ibSmPortInfoOverrunError	Gauge32,
ibSmPortInfoInitType	OCTET STRING,
ibSmPortInfoInitTypeReply	OCTET STRING
}	

ibSmPortInfoSubnetPrefix OBJECT-TYPE

SYNTAX IbSmSubnetPrefix
MAX-ACCESS not-accessible
STATUS current

DESCRIPTION

"Subnet prefix of this IB subnet."

::= { ibSmPortInfoEntry 1 }

ibSmPortInfoNodeGUID OBJECT-TYPE

SYNTAX IbGuid
MAX-ACCESS not-accessible
STATUS current

DESCRIPTION

"The 64-bit GUID of the node that contains this port."

::= { ibSmPortInfoEntry 2 }

ibSmPortInfoPortNum OBJECT-TYPE

SYNTAX IbDataPort
MAX-ACCESS not-accessible
STATUS current

DESCRIPTION

"The port number of this port."

::= { ibSmPortInfoEntry 3 }

ibSmPortInfoMKey OBJECT-TYPE

SYNTAX OCTET STRING (SIZE(8))
MAX-ACCESS read-only
STATUS current

DESCRIPTION

"The 64-bit management Key for this port."

::= { ibSmPortInfoEntry 4 }

ibSmPortInfoGIDPrefix OBJECT-TYPE

SYNTAX OCTET STRING (SIZE(8))
MAX-ACCESS read-only
STATUS current

DESCRIPTION

"The 64-bit GID prefix for this port."

::= { ibSmPortInfoEntry 5 }

ibSmPortInfoLID OBJECT-TYPE

SYNTAX IbUnicastLid
MAX-ACCESS read-only
STATUS current

DESCRIPTION

"The 16-bit base LID of this port."

::= { ibSmPortInfoEntry 6 }

ibSmPortInfoMasterSmLID OBJECT-TYPE

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MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The 16-bit base LID of the master SM that is managing this port."

```
::= { ibSmPortInfoEntry 7 }
```

ibSmPortInfoCapMask

OBJECT-TYPE

SYNTAX

```
BITS {
    reserved(0),
    isSM(1),
    isNoticeSupported(2),
    isTrapSupported(3),
    isResetSupported(4),
    isAutomaticMigrationSupported(5),
    isSLMappingSupported(6),
    isMKeyNVRAM(7),
    isPKeyNVRAM(8),
    isLEDInfoSupported(9),
    isSMDisabled(10),
    isSystemImageGUIDSupported(11),
    isPKeySwitchExternalPortTrapSupported(12),
    reserved1(13), reserved2(14), reserved3(15),
    isConnectionManagerSupported(16),
    isSNMPTunnelingSupported(17),
    isReinitSupported(18),
    issDeviceManagementSupported(19),
    isVendorClassSupported(20),
    isDRNoticeSupported(21),
    isCapabilityMaskNoticeSupported(22),
    isBootManagementSupported(23),
    reserved4(24), reserved5(25), reserved6(26),
    reserved7(27), reserved8(28), reserved9(29),
    reserved10(30), reserved11(31)
}
```

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Supported capabilities of this node. A bit set to 1 for affirmation of supported capability:

0: Reserved, shall be zero

1: IsSM

2: IsNoticeSupported

3: IsTrapSupported
4: IsResetSupported
5: IsAutomaticMigrationSupported
6: IsSLMappingSupported
7: IsMKeyNVRAM

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8: IsPKeyNVRAM
9: IsLEDInfoSupported
10: IsSMDisabled
11: IsSystemImageGUIDSupported
12: IsPKeySwitchExternalPortTrapSupported
13-15: Reserved, shall be zero
16: IsConnectionManagerSupported
17: IsSNMPTunnelingSupported
18: Reserved, shall be zero
19: IsDeviceManagementSupported
20: IsVendorClassSupported
21: IsDRNoticeSupported,
22: IsCapabilityMaskNoticeSupported
23: IsBootManagementSupported(23),
24-31: Reserved, shall be zero"
 ::= { ibSmPortInfoEntry 8 }

ibSmPortInfoDiagCode OBJECT-TYPE
SYNTAX OCTET STRING (SIZE(2))
MAX-ACCESS read-only
STATUS current
DESCRIPTION
 "Diagnostic code:
 Bits 3-0:
 0x0: Port Ready; 0x1: Performing Self Test; 0x2: Initializing;
 0x3: soft error - port has a non-fatal error and may be used;
 0x4: hard error -port may not be used;
 0x5-0xF: Reserved.
 Bits 14-4: for vender specific information."
 ::= { ibSmPortInfoEntry 9 }

ibSmPortInfoMKeyLeasePeriod OBJECT-TYPE
SYNTAX Unsigned32(0..65535)
UNITS "seconds"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
 "Specifies the initial value of the lease period timer in seconds.
 It's the length of time that the M_Key Protection bits are to remain
 non zero after a SubnSet(PortInfo) fails a M_Key check."

::= { ibSmPortInfoEntry 10 }

ibSmPortInfoLinkWidthEnabled OBJECT-TYPE
SYNTAX Unsigned32(0..255)
MAX-ACCESS read-write
STATUS current
DESCRIPTION
 "Enabled link width. Indicated as follows:

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 0: No state change; 1: 1x; 2: 4x; 3: 1x or 4x; 8: 12x;
 9: 1x or 12x; 10: 4x or 12x; 11: 1x, 4x or 12x;
 1-7, 12-254: reserved;
 255: Set to ibSmPortInfoLinkWidthSupported value."
::= { ibSmPortInfoEntry 11 }

ibSmPortInfoLinkWidthSupported OBJECT-TYPE
SYNTAX Unsigned32(0..255)
MAX-ACCESS read-only
STATUS current
DESCRIPTION
 "Supported link width. Indicated as follows:
 1: 1x; 3: 1x or 4x; 11: 1x, 4x or 12x; other values reserved."
::= { ibSmPortInfoEntry 12 }

ibSmPortInfoLinkWidthActive OBJECT-TYPE
SYNTAX Unsigned32(0..255)
MAX-ACCESS read-only
STATUS current
DESCRIPTION
 "Currently active link width. Indicated as follows:
 1: 1x; 2: 4x; 8: 12x; other values reserved."
::= { ibSmPortInfoEntry 13 }

ibSmPortInfoLinkSpeedSupported OBJECT-TYPE
SYNTAX Unsigned32(0..15)
MAX-ACCESS read-only
STATUS current
DESCRIPTION
 "Supported link speed. Indicated as follows:
 1: 2.5Gps; other values reserved."
::= { ibSmPortInfoEntry 14 }

ibSmPortInfoState OBJECT-TYPE
SYNTAX Unsigned32(0..5)
MAX-ACCESS read-write
STATUS current

DESCRIPTION

"Port state. When writing to this field, only legal transitions are valid:

0: noStateChange; 1: down; 2: initialize; 3: armed; 4: active;
5: reserved. "

::= { ibSmPortInfoEntry 15 }

ibSmPortInfoPhyState OBJECT-TYPE
SYNTAX Unsigned32(0..7)
MAX-ACCESS read-write
STATUS current
DESCRIPTION

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"When writing this field, only legal transition are valid.
noStateChange(0), sleep(1), polling(2), disabled(3),
portConfigurationTraining(4), linkup(5),linkErrorRecovery(6),
reserved(7). "

::= { ibSmPortInfoEntry 16 }

ibSmPortInfoLinkDownDefState OBJECT-TYPE
SYNTAX Unsigned32(0..3)
MAX-ACCESS read-write
STATUS current
DESCRIPTION

"When writing this field, only legal transitions are valid.
noStateChange(0), sleep(1), polling(2), reserved(3) "

::= { ibSmPortInfoEntry 17 }

ibSmPortInfoMKeyProtBits OBJECT-TYPE
SYNTAX Unsigned32(0..3)
MAX-ACCESS read-write
STATUS current
DESCRIPTION

"The bits are described below:

0: SubnGet() shall succeed for any Key in the
MADHeader:M_Key and SubnGetResp(PortInfo) shall return
the contents of the PortInfo:M_Key component.

1: SubnGet() shall succeed for any Key in the
MADHeader:M_Key and SubnGetResp(PortInfo) shall return
the contents of the PortInfo:M_Key component set to zero
if MADHeader:M_Key does not match the PortInfo:M Key
component of the port.

2: SubnGet() and SubnSet() shall fail if MADHeader:M_Key
does not match the PortInfo:M_Key component in the port.

3: SubnGet() and SubnSet() shall fail if MADHeader:M_Key does not match the PortInfo:M_Key component in the port."
 ::= { ibSmPortInfoEntry 18 }

ibSmPortInfoLMC OBJECT-TYPE
SYNTAX Unsigned32(0..7)
MAX-ACCESS read-write
STATUS current
DESCRIPTION
 "LID mask for multipath support. User should take extra caution when setting this value, since any change will effect packet routing."
 ::= { ibSmPortInfoEntry 19 }

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ibSmPortInfoLinkSpeedActive OBJECT-TYPE
SYNTAX Unsigned32(0..15)
MAX-ACCESS read-only
STATUS current
DESCRIPTION
 "Current active link speed, indicated as follows:
 1: 2.5Gps; other values reserved."
 ::= { ibSmPortInfoEntry 20 }

ibSmPortInfoLinkSpeedEnabled OBJECT-TYPE
SYNTAX Unsigned32(0..15)
MAX-ACCESS read-write
STATUS current
DESCRIPTION
 "Enabled link speed, indicated as follows:
 0: No state change; 1: 2.5Gps; 2-14: reserved;
 15: Set to ibSmPortLinkSpeedSupported value.

 When writing this field only legal transitions are valid."
 ::= { ibSmPortInfoEntry 21 }

ibSmPortInfoNeighborMTU OBJECT-TYPE
SYNTAX IbMtu
UNITS "bytes"
MAX-ACCESS read-write
STATUS current
DESCRIPTION
 "Active maximum MTU enabled on this port for transmit.
 1: 256; 2: 512; 3: 1024; 4: 2048; 5: 4096"
 ::= { ibSmPortInfoEntry 22 }

```

ibSmPortInfoMasterSmSL      OBJECT-TYPE
    SYNTAX                    Unsigned32(0..15)
    MAX-ACCESS                read-only
    STATUS                    current
    DESCRIPTION
        "The administrative SL of the master SM that is managing this
        port."
    ::= { ibSmPortInfoEntry 23 }

```

```

ibSmPortInfoVLCap           OBJECT-TYPE
    SYNTAX                    Unsigned32(0..15)
    MAX-ACCESS                read-only
    STATUS                    current
    DESCRIPTION
        "Virtual Lanes supported on this port:
        1:VL0, 2:VL0-VL1, 3:VL0-VL3, 4:VL0-VL7, 5:VL0-VL14,
        0, 6-15: reserved."

```

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```

::= { ibSmPortInfoEntry 24 }

```

```

ibSmPortInfoVLHighLimit    OBJECT-TYPE
    SYNTAX                    Unsigned32(0..255)
    MAX-ACCESS                read-write
    STATUS                    current
    DESCRIPTION
        "Limit of high priority component of VL arbitration table."
    ::= { ibSmPortInfoEntry 25 }

```

```

ibSmPortInfoVLArbHighCap   OBJECT-TYPE
    SYNTAX                    Unsigned32(0..255)
    MAX-ACCESS                read-only
    STATUS                    current
    DESCRIPTION
        "VL/Weight pairs supported on this port in the smVLArbTable for
        high priority."
    ::= { ibSmPortInfoEntry 26 }

```

```

ibSmPortInfoVLArbLowCap    OBJECT-TYPE
    SYNTAX                    Unsigned32(0..255)
    MAX-ACCESS                read-only
    STATUS                    current
    DESCRIPTION
        "VL/Weight pairs supported on this port in the smVLArbTable for
        low priority."
    ::= { ibSmPortInfoEntry 27 }

```

SYNTAX	IbMtu
UNITS	"bytes"
MAX-ACCESS	read-only
STATUS	current

DESCRIPTION

```
"Maximum MTU supported by this port:
```

1: 256; 2: 512; 3: 1024; 4: 2048; 5: 4096"

```
 ::= { ibSmPortInfoEntry 28 }
```

ibSmPortInfoVLStallCount OBJECT-TYPE

SYNTAX `Unsigned32(0..7)`

UNITS "packets"

```
MAX-ACCESS      read-write
```

STATUS	current
--------	---------

DESCRIPTION

"Specifies the number of sequential packets dropped that causes the port to enter the VLStalled state."

```
 ::= { ibSmPortInfoEntry 29 }
```

ibSmPortInfoHOQLife	OBJECT-TYPE
---------------------	-------------

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SYNTAX Unsigned32(0..31)

```
MAX-ACCESS      read-write
```

STATUS	current
--------	---------

DESCRIPTION

"Sets the time a packet can live at the head of a VL queue."

```
::= { ibSmPortInfoEntry 30 }
```

ibSmPortInfo0perVL	OBJECT-TYPE
--------------------	-------------

SYNTAX Unsigned32(0..15)

MAX-ACCESS read-write

STATUS	current
--------	---------

DESCRIPTION

```
"Virtual Lanes operational on this port:
```

1:VL0, 2:VL0-VL1, 3:VL0-VL3, 4:VL0-VL7, 5:VL0-VL14,

```
0, 6-15: reserved."
```

```
::= { ibSmPortInfoEntry 31 }
```

ibSmPortInfoInPartEnforce OBJECT-TYPE

SYNTAX TruthValue

```
MAX-ACCESS      read-write
```

STATUS	current
--------	---------

DESCRIPTION

"Indicates support of optional partition enforcement on packets received from this port."

::= { ibSmPortInfoEntry 32 }

ibSmPortInfoOutPartEnforce OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"Indicates support of optional partition enforcement on packets transmitted from this port."

::= { ibSmPortInfoEntry 33 }

ibSmPortInfoInFilterRawPktEnf OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"Indicates support of optional raw packet enforcement on raw packets received from this port."

::= { ibSmPortInfoEntry 34 }

ibSmPortInfoOutFilterRawPktEnf OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-write

STATUS current

DESCRIPTION

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"Indicates support of optional raw packet enforcement on raw packets transmitted from this port."

::= { ibSmPortInfoEntry 35 }

ibSmPortInfoMKeyViolation OBJECT-TYPE

SYNTAX Gauge32(0..65535)

UNITS "packets"

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"Counts the number of SMP packets that have been received on the port that have had invalid M_Key, since power on or reset. Increments till count reaches all 1s and then must be set back to zero to re-able incrementing."

::= { ibSmPortInfoEntry 36 }

ibSmPortInfoPKeyViolation OBJECT-TYPE

SYNTAX Gauge32(0..65535)

UNITS "packets"

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"Counts the number of packets that have been received on the port that have had invalid P_Key, since power on or reset. Increments till count reaches all 1s and then must be set back to zero to re-able incrementing."

::= { ibSmPortInfoEntry 37 }

ibSmPortInfoQKeyViolation OBJECT-TYPE

SYNTAX Gauge32(0..65535)

UNITS "packets"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Counts the number of packets that have been received on the port that have had invalid Q_Key, since power on or reset. Increments till count reaches all 1s and then must be set back to zero to re-able incrementing."

::= { ibSmPortInfoEntry 38 }

ibSmPortInfoGUIDCap OBJECT-TYPE

SYNTAX Unsigned32(0..255)

UNITS "GUIDs"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Number of GUID entries supported in the GUIDInfo attribute for this port."

::= { ibSmPortInfoEntry 39 }

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ibSmPortInfoSubnetTimeout OBJECT-TYPE

SYNTAX IbTransportTime

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"Specifies the maximum expected subnet propagation delay, which depends upon the configuration of the switches, to reach any other port in the subnet and shall also be used to determine the maximum rate which SubnTraps() can be sent from this port.

The duration of time is calculated based on
(4.096 microsecond * 2 ^ object value)"

::= { ibSmPortInfoEntry 40 }

ibSmPortInfoRespTime OBJECT-TYPE

SYNTAX IbTransportTime

MAX-ACCESS read-only
STATUS current
DESCRIPTION

"Specifies the expected maximum time between the port reception of a SMP and the transmission of the associated response.

The duration of time is calculated based on
(4.096 microsecond * 2 ^ object value)"

::= { ibSmPortInfoEntry 41 }

ibSmPortInfoLocalPhyError OBJECT-TYPE

SYNTAX Gauge32(0..15)
MAX-ACCESS read-write
STATUS current
DESCRIPTION

"Threshold value. When the count of marginal link errors exceeds this threshold, the local link integrity error shall be generated."

::= { ibSmPortInfoEntry 42 }

ibSmPortInfoOverrunError OBJECT-TYPE

SYNTAX Gauge32(0..15)
MAX-ACCESS read-write
STATUS current
DESCRIPTION

"Threshold value. When the count of buffer overruns over consecutive flow control update periods exceeds this threshold, the excessive buffer overrun error shall be generated."

::= { ibSmPortInfoEntry 43 }

ibSmPortInfoInitType OBJECT-TYPE

SYNTAX BITS {
noLoad(0),
preserveContent(1),
preservePresense(2),

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doNotResuscitate(3)
}

MAX-ACCESS read-only
STATUS current
DESCRIPTION

"Optional; shall be 0 if not implemented. Type of initialization requested by this port before SM moves it to Active or Armed state.

Bit 0: NoLoad. 0 = Port is requesting that its attributes be initialized. 1 = Port is requesting that no data be loaded into its attributes at all, asserting that the last-loaded data still exists and is valid.

Bit 1: PreserveContent. 0 = Port makes no request regarding content of the data that is loaded into its attributes. 1 = Port is requesting that all such data, if loaded, be set to the most recent content loaded by the SM.

Bit 2: PreservePresence. 0 = Port is requesting that all settable SA attributes referencing this port be removed prior to activating this port and Report()s of in/out of service (trap numbers 64/65) be sent. 1 = Port is requesting that all such data be preserved, and Report()s of in/out of service (trap numbers 64/65) not be sent for this port.

Bit 3: DoNotResuscitate. 0 = bits 0, 1, and 2 of this field are valid; initialization of this port should begin based on their values. 1 = bits 0, 1, and 2 are not valid; port is requesting that reinitialization of this port, and any Report()s of in/out of service (trap numbers 64/65) be delayed until this bit is set to 0.

Other Bits: Reserved. "

::= { ibSmPortInfoEntry 44 }

ibSmPortInfoInitTypeReply	OBJECT-TYPE
SYNTAX	BITS {
	noLoadReply(0),
	preserveContentReply(1),
	preservePresenceReply(2)
	}
MAX-ACCESS	read-write
STATUS	current
DESCRIPTION	"Written by the SM prior to changing the port to Active or

Armed state. Optional; shall be set to all 0s if not implemented. Indicates the type of initialization performed.

Bit 0: NoLoadReply. 0 = Port attributes were initialized. 1 = No data was loaded into the port attributes.

Bit 1: PreserveContentReply. 0 = No information is available regarding content of the data loaded into the port attributes. 1 = The data loaded into

the port attributes was set to the content most recently loaded by the SM.

Bit 2: PreservePresenceReply. 0 = All settable SA attributes referencing this port were removed prior to activating this port and Report()s of in/out of service (trap numbers 64/65) were sent. 1 = All such data existing when this port was last active was not removed and Report()s of in/out of service (trap numbers 64/65) were not sent.

Other Bits: Reserved. "

::= { ibSmPortInfoEntry 45 }

-- switch information table

ibSmSwitchInfoTable OBJECT-TYPE
 SYNTAX SEQUENCE OF IbSmSwitchInfoEntry
 MAX-ACCESS not-accessible
 STATUS current
 DESCRIPTION
 "A table used to list all IB switches that are actively
 managed by the Subnet Managers on this device."
 ::= { ibSmSwitchInfo 1 }

ibSmSwitchInfoEntry OBJECT-TYPE
 SYNTAX IbSmSwitchInfoEntry
 MAX-ACCESS not-accessible
 STATUS current
 DESCRIPTION
 "Table entry for ibSmSwitchInfoTable."
 INDEX { ibSmSwitchInfoSubnetPrefix, ibSmSwitchInfoNodeGUID }
 ::= { ibSmSwitchInfoTable 1 }

IbSmSwitchInfoEntry ::= SEQUENCE {
 ibSmSwitchInfoSubnetPrefix IbSmSubnetPrefix,
 ibSmSwitchInfoNodeGUID IbGuid,
 ibSmSwitchInfoLinearFdbCap Unsigned32,
 ibSmSwitchInfoRandomFdbCap Unsigned32,

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ibSmSwitchInfoMcastFdbCap Unsigned32,
ibSmSwitchInfoLinearFdbTop Unsigned32,
ibSmSwitchInfoDefaultPort Unsigned32,
ibSmSwitchInfoDefPriMcastPort Unsigned32,
ibSmSwitchInfoDefNonPriMcastPort Unsigned32,
ibSmSwitchInfoLifeTimeValue Unsigned32,

ibSmSwitchInfoPortStateChange	Unsigned32,
ibSmSwitchInfoLIDsPerPort	Unsigned32,
ibSmSwitchInfoPartitionEnfCap	Unsigned32,
ibSmSwitchInfoInEnfCap	TruthValue,
ibSmSwitchInfoOutEnfCap	TruthValue,
ibSmSwitchInfoInFilterRawPktCap	TruthValue,
ibSmSwitchInfoOutFilterRawPktCap	TruthValue,
ibSmSwitchInfoEnhanced0	TruthValue
}	

ibSmSwitchInfoSubnetPrefix OBJECT-TYPE

SYNTAX	IbSmSubnetPrefix
MAX-ACCESS	not-accessible
STATUS	current
DESCRIPTION	"Subnet prefix of this IB subnet."
::= {	ibSmSwitchInfoEntry 1 }

ibSmSwitchInfoNodeGUID OBJECT-TYPE

SYNTAX	IbGuid
MAX-ACCESS	not-accessible
STATUS	current
DESCRIPTION	"The GUID of this node."
::= {	ibSmSwitchInfoEntry 2 }

ibSmSwitchInfoLinearFdbCap OBJECT-TYPE

SYNTAX	Unsigned32(0..65535)
UNITS	"entries"
MAX-ACCESS	read-only
STATUS	current
DESCRIPTION	"Number of entries supported in the Linear Unicast Forwarding table. Zero indicates that there is no Linear Forwarding Database."
::= {	ibSmSwitchInfoEntry 3 }

ibSmSwitchInfoRandomFdbCap OBJECT-TYPE

SYNTAX	Unsigned32(0..65535)
UNITS	"entries"
MAX-ACCESS	read-only
STATUS	current
DESCRIPTION	

"Number of entries supported in the Random Unicast Forwarding table. Zero indicates that there is no Random Forwarding

```

        Database."
 ::= { ibSmSwitchInfoEntry 4 }

ibSmSwitchInfoMcastFdbCap OBJECT-TYPE
    SYNTAX      Unsigned32(0..65535)
    UNITS        "entries"
    MAX-ACCESS   read-only
    STATUS       current
    DESCRIPTION
        "Number of entries supported in the Multicast Forwarding table."
 ::= { ibSmSwitchInfoEntry 5 }

ibSmSwitchInfoLinearFdbTop OBJECT-TYPE
    SYNTAX      Unsigned32(0..65535)
    MAX-ACCESS   read-write
    STATUS       current
    DESCRIPTION
        "Indicates the top of the linear forwarding table.  Packets
         received with unicast DLIDs greater than this value are discarded
         by the switch.  This component applies only to switches that
         implement linear forwarding tables and is ignored by switches
         that implement random forwarding tables."
 ::= { ibSmSwitchInfoEntry 6 }

ibSmSwitchInfoDefaultPort OBJECT-TYPE
    SYNTAX      Unsigned32(0..255)
    MAX-ACCESS   read-write
    STATUS       current
    DESCRIPTION
        "Forward to this port all the unicast packets from the other
         ports whose DLID does not exist in the random forwarding table."
 ::= { ibSmSwitchInfoEntry 7 }

ibSmSwitchInfoDefPriMcastPort OBJECT-TYPE
    SYNTAX      Unsigned32(0..255)
    MAX-ACCESS   read-write
    STATUS       current
    DESCRIPTION
        "Forward to this port all the multicast packets from the other
         ports whose DLID does not exist in the forwarding table."
 ::= { ibSmSwitchInfoEntry 8 }

ibSmSwitchInfoDefNonPriMcastPort OBJECT-TYPE
    SYNTAX      Unsigned32(0..255)
    MAX-ACCESS   read-write
    STATUS       current
    DESCRIPTION

```

"Forward to this port all the multicast packets from the smDefPriMcastPort port whose DLID does not exist in the forwarding table."
 ::= { ibSmSwitchInfoEntry 9 }

ibSmSwitchInfoLifeTimeValue OBJECT-TYPE
SYNTAX Unsigned32(0..31)
MAX-ACCESS read-write
STATUS current
DESCRIPTION
 "The time a packet can live in the switch."
 ::= { ibSmSwitchInfoEntry 10 }

ibSmSwitchInfoPortStateChange OBJECT-TYPE
SYNTAX Unsigned32(0..1)
MAX-ACCESS read-only
STATUS current
DESCRIPTION
 "It is set to PortInTransition(1) anytime the PortState component in the PortInfo of any ports transition from Down to Initialize, Initialize to Down, Armed to Down, or Active to Down as a result of link state machine logic:
 0: portNotInTransition; 1: portInTransition."
 ::= { ibSmSwitchInfoEntry 11 }

ibSmSwitchInfoLIDsPerPort OBJECT-TYPE
SYNTAX Unsigned32(0..65535)
MAX-ACCESS read-only
STATUS current
DESCRIPTION
 "Number of LID/LMC combinations that may be assigned to a given external port for switches that support the random forwarding table."
 ::= { ibSmSwitchInfoEntry 12 }

ibSmSwitchInfoPartitionEnfCap OBJECT-TYPE
SYNTAX Unsigned32(0..65535)
MAX-ACCESS read-only
STATUS current
DESCRIPTION
 "The number of entries in this partition enforcement table per physical port. Zero indicates that partition enforcement is not supported by the switch"
 ::= { ibSmSwitchInfoEntry 13 }

ibSmSwitchInfoInEnfCap OBJECT-TYPE
SYNTAX TruthValue
MAX-ACCESS read-only
STATUS current

DESCRIPTION

"Indicates switch is capable of partition enforcement on received packets."

::= { ibSmSwitchInfoEntry 14 }

ibSmSwitchInfoOutEnfCap OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Indicates switch is capable of partition enforcement on transmitted packets."

::= { ibSmSwitchInfoEntry 15 }

ibSmSwitchInfoInFilterRawPktCap OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Indicates switch is capable of raw packet enforcement on received packets."

::= { ibSmSwitchInfoEntry 16 }

ibSmSwitchInfoOutFilterRawPktCap OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Indicates switch is capable of raw packet enforcement on transmitted packets."

::= { ibSmSwitchInfoEntry 17 }

ibSmSwitchInfoEnhanced0 OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Indicates whether switch port 0 supports enhanced functions."

::= { ibSmSwitchInfoEntry 18 }

-- Subnet Manager Network Partition table

ibSmPartitionTable OBJECT-TYPE

SYNTAX SEQUENCE OF IbSmPartitionEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"A table used to list all partitions that are managed by the Subnet Managers on this device."

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::= { ibSmPartitionInfo 1 }

ibSmPartitionEntry OBJECT-TYPE

SYNTAX IbSmPartitionEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Table entry for ibSmPartitionTable."

INDEX { ibSmPartitionSubnetPrefix, ibSmPartitionKey,
ibSmPartitionVectorIndex }

::= { ibSmPartitionTable 1 }

IbSmPartitionEntry ::= SEQUENCE {

ibSmPartitionSubnetPrefix IbSmSubnetPrefix,

ibSmPartitionKey IbPartitionKey,

ibSmPartitionVectorIndex Integer32,

ibSmPartitionVector OCTET STRING,

ibSmPartitionVectorSize Integer32,

ibSmPartitionVectorElementSize Integer32,

ibSmPartitionLastChange TimeTicks

}

ibSmPartitionSubnetPrefix OBJECT-TYPE

SYNTAX IbSmSubnetPrefix

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Subnet prefix of this IB subnet."

::= { ibSmPartitionEntry 1 }

ibSmPartitionKey OBJECT-TYPE

SYNTAX IbPartitionKey

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"The 16-bit P-Key of this Partition entry."

::= { ibSmPartitionEntry 2 }

ibSmPartitionVectorIndex OBJECT-TYPE

SYNTAX Integer32 (0..2147483647)

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"An index indentifying a particular vector of the partition table."

::= { ibSmPartitionEntry 3 }

ibSmPartitionVector	OBJECT-TYPE
SYNTAX	OCTET STRING (SIZE(0..255))

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MAX-ACCESS read-only

STATUS current

DESCRIPTION

"A vector containing a portion of the partition table. To retrieve the entire table, the user must perform consecutive GET operations to read one vector at a time."

::= { ibSmPartitionEntry 4 }

ibSmPartitionVectorSize	OBJECT-TYPE
-------------------------	-------------

SYNTAX	Integer32
--------	-----------

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

STATUS	current
--------	---------

DESCRIPTION

"Indicates the size (in bytes) of the current vector."

::= { ibSmPartitionEntry 5 }

ibSmPartitionVectorElementSize	OBJECT-TYPE
--------------------------------	-------------

SYNTAX	Integer32
--------	-----------

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

STATUS	current
--------	---------

DESCRIPTION

"Indicates the size (in bytes) of each element in the vector. Each GET operation on the 'ibSmPartitionVector' variable will return zero or more elements. Each element is ten(10) bytes long. This is how the ten bytes are coded (in network byte order):

byte	description
------	-------------

----	-----
------	-------

1-8	Node-GUID of the member
-----	-------------------------

9	Port number (0..255)
---	----------------------

10	Partition type (1=full-membership, 2=limited-membership)
----	--

The number of elements in 'ibSmPartitionVector' can be calculated by dividing 'ibSmPartitionVectorSize' by 'ibSmPartitionVectorElementSize'."

::= { ibSmPartitionEntry 6 }

ibSmPartitionLastChange	OBJECT-TYPE
-------------------------	-------------

SYNTAX	TimeTicks
MAX-ACCESS	read-only
STATUS	current
DESCRIPTION	
"Indicates the time stamp when the partition table was last changed. To verify the entire partition table was read without any changes to the table in between GET operations, the user can do a comparion on this time stamp."	
::= { ibSmPartitionEntry 7 }	

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-- Subnet Manager Network Partition Configuration Group

ibSmPartitionConfig OBJECT IDENTIFIER ::= { ibSmPartitionInfo 2 }

-- The ibSmPartitionConfigSubnetPrefix, ibSmPartitionConfigKey and
 -- ibSmPartitionConfigAction are mandatory for all configuration
 operations.

--

-- The ibSmPartitionConfigMemberNodeGUID,
 ibSmPartitionConfigMemberPortNum
 -- and ibSmPartitionConfigMemberType are required depending on the
 specific
 -- configuration operations (see below for details).

--

-- This group can be used to perform the following operations :

--

-- (1) Create a new partition or delete an existing partition.

--

-- (2) Add a port or ports to a partition.

-- The ibSmPartitionConfigMemberNodeGUID, and
 -- ibSmPartitionConfigMemberType are required.
 -- The ibSmPartitionConfigMemberPortNum is optional.
 -- If the ibSmPartitionConfigMemberPortNum is not specified,
 -- all ports on IB device will be added to the partition.
 -- If ibSmPartitionConfigMemberPortNum is specified, only
 -- the specified port is added to the partition.

--

-- (3) Remove a port or ports from a partition.

-- The ibSmPartitionConfigMemberNodeGUID is required.
 -- The ibSmPartitionConfigMemberPortNum is optional.
 -- If the ibSmPartitionConfigMemberPortNum is not
 -- specified, all ports on IB device will be removed from the partition.
 -- If ibSmPartitionConfigMemberPortNum is specified,
 -- only the specified port is removed from the partition.

--

```
-- (4) Update the membership type for a particular member.
--     The ibSmPartitionConfigMemberNodeGUID,
--     ibSmPartitionConfigMemberPortNum and
ibSmPartitionConfigMemberType
--     are mandatory.
--
-- Each operation must be performed within one single SNMP set operation,
-- to ensure data integrity.  If any of required fields is missing,
-- the agent must reject the request.
```

```
ibSmPartitionConfigSubnetPrefix  OBJECT-TYPE
    SYNTAX                      IbSmSubnetPrefix
    MAX-ACCESS                  read-write
    STATUS                      current
```

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DESCRIPTION

```
"Subnet prefix of an IB subnet."
 ::= { ibSmPartitionConfig 1 }
```

```
ibSmPartitionConfigKey          OBJECT-TYPE
    SYNTAX                      IbPartitionKey
    MAX-ACCESS                  read-write
    STATUS                      current
    DESCRIPTION
        "The 16-bit P-Key of an IB partition."
    ::= { ibSmPartitionConfig 2 }
```

```
ibSmPartitionConfigAction      OBJECT-TYPE
    SYNTAX                      INTEGER {
                                none(1),
                                createPartition(2),
                                deletePartition(3),
                                addMember(4),
                                removeMember(5),
                                updateMemberType(6)
                                }
    MAX-ACCESS                  read-write
    STATUS                      current
    DESCRIPTION
        "Used to specify an action to perform on a specified
        IB Subnet Partition."
    DEFVAL                      { none }
    ::= { ibSmPartitionConfig 3 }
```

```
ibSmPartitionConfigMemberNodeGUIDOBJECT-TYPE
    SYNTAX                      IbGuid
```

```

MAX-ACCESS          read-write
STATUS              current
DESCRIPTION
    "Used to specify the Node GUID of a member."
 ::= { ibSmPartitionConfig 4 }

```

```

ibSmPartitionConfigMemberPortNum OBJECT-TYPE
    SYNTAX              IbDataPort
    MAX-ACCESS          read-write
    STATUS              current
    DESCRIPTION
        "Used to specify the local port number of a member."
 ::= { ibSmPartitionConfig 5 }

```

```

ibSmPartitionConfigMemberType OBJECT-TYPE
    SYNTAX              INTEGER {
                        fullMembership(1),
                        limitedMembership(2)
    }

```

```

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```

```

    }
MAX-ACCESS          read-write
STATUS              current
DESCRIPTION
    "Used to specify the type of membership of a member."
 ::= { ibSmPartitionConfig 6 }

```

-- Subnet Manager Multicast group table

```

ibSmMcastGroupTable OBJECT-TYPE
    SYNTAX              SEQUENCE OF IbSmMcastGroupEntry
    MAX-ACCESS          not-accessible
    STATUS              current
    DESCRIPTION
        "A table used to list all multicast groups actively managed by
        the Subnet Managers on this device."
 ::= { ibSmMcastInfo 1 }

```

```

ibSmMcastGroupEntry OBJECT-TYPE
    SYNTAX              IbSmMcastGroupEntry
    MAX-ACCESS          not-accessible
    STATUS              current
    DESCRIPTION
        "Table entry for ibSmMcastGroupTable."
    INDEX               { ibSmMcastGroupSubnetPrefix, ibSmMcastGroupMGID }
 ::= { ibSmMcastGroupTable 1 }

```

```

IbSmMcastGroupEntry ::= SEQUENCE {

```

```

ibSmMcastGroupSubnetPrefix    IbSmSubnetPrefix,
ibSmMcastGroupMGID            OCTET STRING,
ibSmMcastGroupQKey            OCTET STRING,
ibSmMcastGroupMLID            IbMulticastLid,
ibSmMcastGroupMTU             IbMtu,
ibSmMcastGroupTClass          Unsigned32,
ibSmMcastGroupPKey            IbPartitionKey,
ibSmMcastGroupRate            Unsigned32,
ibSmMcastGroupPacketLifeTime  Unsigned32,
ibSmMcastGroupSL              Unsigned32,
ibSmMcastGroupFlowLabel       OCTET STRING,
ibSmMcastGroupHopLimit        Unsigned32,
ibSmMcastGroupScope           Unsigned32
}

```

```

ibSmMcastGroupSubnetPrefix OBJECT-TYPE
    SYNTAX                IbSmSubnetPrefix
    MAX-ACCESS             not-accessible
    STATUS                 current
    DESCRIPTION
        "Subnet prefix of this IB subnet."

```

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```

 ::= { ibSmMcastGroupEntry 1 }

```

```

ibSmMcastGroupMGID    OBJECT-TYPE
    SYNTAX                OCTET STRING (SIZE(16))
    MAX-ACCESS             not-accessible
    STATUS                 current
    DESCRIPTION
        "The 128-bit multicast GID address for this multicast group."
 ::= { ibSmMcastGroupEntry 2 }

```

```

ibSmMcastGroupQKey    OBJECT-TYPE
    SYNTAX                OCTET STRING (SIZE(4))
    MAX-ACCESS             read-only
    STATUS                 current
    DESCRIPTION
        "The 16-bit Q-Key of this multicast group."
 ::= { ibSmMcastGroupEntry 3 }

```

```

ibSmMcastGroupMLID    OBJECT-TYPE
    SYNTAX                IbMulticastLid
    MAX-ACCESS             read-only
    STATUS                 current
    DESCRIPTION
        "The 16-bit LID of this multicast group."

```

::= { ibSmMcastGroupEntry 4 }

ibSmMcastGroupMTU OBJECT-TYPE
SYNTAX IbMtu
UNITS "bytes"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
 "The MTU of this multicast group:
 1: 256; 2: 512; 3: 1024; 4: 2048; 5: 4096"
 ::= { ibSmMcastGroupEntry 5 }

ibSmMcastGroupTClass OBJECT-TYPE
SYNTAX Unsigned32(0..255)
MAX-ACCESS read-only
STATUS current
DESCRIPTION
 "The Tclass to be used in the GRH if GRH is used."
 ::= { ibSmMcastGroupEntry 6 }

ibSmMcastGroupPKey OBJECT-TYPE
SYNTAX IbPartitionKey
MAX-ACCESS read-only
STATUS current
DESCRIPTION

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"The 16-bit Partition Key for this multicast group."
 ::= { ibSmMcastGroupEntry 7 }

ibSmMcastGroupRate OBJECT-TYPE
SYNTAX Unsigned32(0..63)
MAX-ACCESS read-only
STATUS current
DESCRIPTION
 "Traffic rate of this multicast group:
 2: 2.5 Gb/sec; 3: 10 Gb/sec; 4: 30 Gb/sec; 0, 1, 5-63: reserved."
 ::= { ibSmMcastGroupEntry 8 }

ibSmMcastGroupPacketLifeTime OBJECT-TYPE
SYNTAX Unsigned32(0..63)
MAX-ACCESS read-only
STATUS current
DESCRIPTION
 "Packet life time of this multicast group."
 ::= { ibSmMcastGroupEntry 9 }

ibSmMcastGroupSL OBJECT-TYPE

SYNTAX Unsigned32(0..15)
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION
 "Service level of this multicast group."
 ::= { ibSmMcastGroupEntry 11 }

ibSmMcastGroupFlowLabel OBJECT-TYPE
 SYNTAX OCTET STRING (SIZE(3))
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION
 "Flow label to be used on this multicast group if GRH Is used."
 ::= { ibSmMcastGroupEntry 12 }

ibSmMcastGroupHopLimit OBJECT-TYPE
 SYNTAX Unsigned32(0..255)
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION
 "Hop limit to be used on this multicast group if GRH Is used."
 ::= { ibSmMcastGroupEntry 13 }

ibSmMcastGroupScope OBJECT-TYPE
 SYNTAX Unsigned32(0..15)
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION

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 "Scope of this multicast group:
 2: link local; 5: site local; 8: organization local; 14: global;
 other values reserved."
 ::= { ibSmMcastGroupEntry 14 }

-- Subnet Manager Multicast Member table

ibSmMcastMemberTable OBJECT-TYPE
 SYNTAX SEQUENCE OF IbSmMcastMemberEntry
 MAX-ACCESS not-accessible
 STATUS current
 DESCRIPTION
 "A table used to list all members of multicast groups managed
 by the Subnet Managers on this device."
 ::= { ibSmMcastInfo 2 }

ibSmMcastMemberEntry OBJECT-TYPE
 SYNTAX IbSmMcastMemberEntry

```

MAX-ACCESS          not-accessible
STATUS              current
DESCRIPTION
    "Table entry for ibSmMcastMemberTable."
INDEX { ibSmMcastMemberSubnetPrefix, ibSmMcastMemberMGID,
        ibSmMcastMemberVectorIndex }
 ::= { ibSmMcastMemberTable 1 }

IbSmMcastMemberEntry ::= SEQUENCE {
    ibSmMcastMemberSubnetPrefix    IbSmSubnetPrefix,
    ibSmMcastMemberMGID           OCTET STRING,
    ibSmMcastMemberVectorIndex    Integer32,
    ibSmMcastMemberVector         OCTET STRING,
    ibSmMcastMemberVectorSize     Integer32,
    ibSmMcastMemberVectorElementSize Integer32,
    ibSmMcastMemberLastChange     TimeTicks
}

```

```

ibSmMcastMemberSubnetPrefix  OBJECT-TYPE
    SYNTAX                    IbSmSubnetPrefix
    MAX-ACCESS                not-accessible
    STATUS                    current
    DESCRIPTION
        "Subnet prefix of this IB subnet."
    ::= { ibSmMcastMemberEntry 1 }

```

```

ibSmMcastMemberMGID         OBJECT-TYPE
    SYNTAX                    OCTET STRING (SIZE(16))
    MAX-ACCESS                not-accessible
    STATUS                    current
    DESCRIPTION

```

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```

    "The 128-bit multicast GID address for this multicast group."
    ::= { ibSmMcastMemberEntry 2 }

```

```

ibSmMcastMemberVectorIndex  OBJECT-TYPE
    SYNTAX                    Integer32 (0..2147483647)
    MAX-ACCESS                not-accessible
    STATUS                    current
    DESCRIPTION
        "An index indentifying a particular vector of the multicast member
        table."
    ::= { ibSmMcastMemberEntry 3 }

```

```

ibSmMcastMemberVector       OBJECT-TYPE
    SYNTAX                    OCTET STRING (SIZE(0..255))

```

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"A vector containing a portion of the multicast member table. To retrieve the entire table, the user must perform consecutive GET operations to read one vector at a time."

::= { ibSmMcastMemberEntry 4 }

ibSmMcastMemberVectorSize OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Indicates the size (in bytes) of the current vector."

::= { ibSmMcastMemberEntry 5 }

ibSmMcastMemberVectorElementSize OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Indicates the size (in bytes) of each element in the vector. Each GET operation on the 'ibSmMcastMemberVector' variable will return zero or more elements. Each element is eighteen(18) bytes long. This is how the eighteen bytes are coded (in network byte order):

byte description

1-16 Member port GID

17 Member join state (bitmask bit 0=fullMember,
bit 1=nonMember,
bit 2=sendOnlyMember)

18 Member proxy join status (1=true, 2=false)

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The number of elements in 'ibSmMcastMemberVector' can be calculated by dividing 'ibSmMcastMemberVectorSize' by 'ibSmMcastMemberVectorElementSize'."

::= { ibSmMcastMemberEntry 6 }

ibSmMcastMemberLastChange OBJECT-TYPE

SYNTAX TimeTicks

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Indicates the time stamp when the multicast member table was last changed. To verify the entire table was read without any changes to the table in between GET operations, the user can do a comparison on this time stamp."

::= { ibSmMcastMemberEntry 7 }

-- Subnet Manager Information table

ibSmSMInfoTable OBJECT-TYPE
 SYNTAX SEQUENCE OF IbSmSMInfoEntry
 MAX-ACCESS not-accessible
 STATUS current
 DESCRIPTION
 "A table used to list other Subnet Managers that are on the same
 IB subnet as the Subnet Managers on this device."
 ::= { ibSmSMInfo 1 }

ibSmSMInfoEntry OBJECT-TYPE
 SYNTAX IbSmSMInfoEntry
 MAX-ACCESS not-accessible
 STATUS current
 DESCRIPTION
 "Table entry for ibSmSMInfoTable."
 INDEX { ibSmSMInfoSubnetPrefix, ibSmSMInfoGUID }
 ::= { ibSmSMInfoTable 1 }

IbSmSMInfoEntry ::= SEQUENCE {
 ibSmSMInfoSubnetPrefix IbSmSubnetPrefix,
 ibSmSMInfoGUID IbGuid,
 ibSmSMInfoSMKey OCTET STRING,
 ibSmSMInfoActCount Counter32,
 ibSmSMInfoPriority Unsigned32,
 ibSmSMInfoSMState IbSmState
 }

ibSmSMInfoSubnetPrefix OBJECT-TYPE
 SYNTAX IbSmSubnetPrefix
 MAX-ACCESS not-accessible

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STATUS current
 DESCRIPTION
 "Subnet prefix of this IB subnet."
 ::= { ibSmSMInfoEntry 1 }

ibSmSMInfoGUID OBJECT-TYPE
 SYNTAX IbGuid

MAX-ACCESS not-accessible
 STATUS current
 DESCRIPTION
 "PortGUID of the port where the SM resides."
 ::= { ibSmSMInfoEntry 2 }

ibSmSMInfoSMKey OBJECT-TYPE
 SYNTAX OCTET STRING (SIZE(8))
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION
 "Subnet management Key of this subnet manager."
 ::= { ibSmSMInfoEntry 3 }

ibSmSMInfoActCount OBJECT-TYPE
 SYNTAX Counter32
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION
 "Activity counter of this subnet manager. The counter
 increments each time the SM issues an SMP or perform other
 management activities."
 ::= { ibSmSMInfoEntry 4 }

ibSmSMInfoPriority OBJECT-TYPE
 SYNTAX Unsigned32(0..15)
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION
 "The Priority of this Subnet Manager."
 ::= { ibSmSMInfoEntry 5 }

ibSmSMInfoSMState OBJECT-TYPE
 SYNTAX IbSmState
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION
 "The state of this Subnet Manager:
 0: not active; 1: discovering; 2: standby; 3: master"
 ::= { ibSmSMInfoEntry 6 }

-- Physical Link Table

ibSmLinkTable OBJECT-TYPE
 SYNTAX SEQUENCE OF IbSmLinkEntry
 MAX-ACCESS not-accessible

```

STATUS          current
DESCRIPTION
    "A table used to list physical link topology of the subnet."
 ::= { ibSmLinkInfo 1 }

ibSmLinkEntry   OBJECT-TYPE
    SYNTAX       IbSmLinkEntry
    MAX-ACCESS   not-accessible
    STATUS       current
    DESCRIPTION
        "Table entry for ibSmLinkTable."
    INDEX { ibSmLinkSubnetPrefix, ibSmLinkFromNodeGUID,
            ibSmLinkFromPortNum}
    ::= { ibSmLinkTable 1 }

IbSmLinkEntry ::= SEQUENCE {
    ibSmLinkSubnetPrefix    IbSmSubnetPrefix,
    ibSmLinkFromNodeGUID    IbGuid,
    ibSmLinkFromPortNum     IbDataPort,
    ibSmLinkToNodeGUID      IbGuid,
    ibSmLinkToPortNum       IbDataPort
}

ibSmLinkSubnetPrefix OBJECT-TYPE
    SYNTAX       IbSmSubnetPrefix
    MAX-ACCESS   not-accessible
    STATUS       current
    DESCRIPTION
        "Subnet prefix of this IB subnet."
    ::= { ibSmLinkEntry 1 }

ibSmLinkFromNodeGUID OBJECT-TYPE
    SYNTAX       IbGuid
    MAX-ACCESS   not-accessible
    STATUS       current
    DESCRIPTION
        "From Node GUID"
    ::= { ibSmLinkEntry 2 }

ibSmLinkFromPortNum      OBJECT-TYPE
    SYNTAX       IbDataPort
    MAX-ACCESS   not-accessible
    STATUS       current
    DESCRIPTION
        "From Port Number"

```

```
::= { ibSmLinkEntry 3 }
```

```
ibSmLinkToNodeGUID    OBJECT-TYPE
    SYNTAX              IbGuid
    MAX-ACCESS           read-only
    STATUS               current
    DESCRIPTION
        "To Node GUID"
    ::= { ibSmLinkEntry 4 }
```

```
ibSmLinkToPortNum     OBJECT-TYPE
    SYNTAX              IbDataPort
    MAX-ACCESS           read-only
    STATUS               current
    DESCRIPTION
        "To Port Number"
    ::= { ibSmLinkEntry 5 }
```

```
-- Subnet Manager Path Tables
```

```
--
-- In order to query IB PathRecords, management client should
-- create a row in ibSmPathReqTable, with the proper values of:
-- ibSmPathReqSubnetPrefix, ibSmPathReqSessionId, ibSmPathReqRowStatus
-- ibSmPathReqRowCompMask, and other relevant PathRecord attribute
-- values.
--
-- ibSmPathReqSessionId is a positive pseudo-random 32-bit integer
-- generated by the client. This number should be based on per request,
-- and should not be reused by the client. Before the client creates
-- the row, it should try to do a GET operation to ensure the number is
-- not being used currently. If it detects a conflict, the client should
-- re-generate another random value and try again. When a row is
-- successfully created in ibSmPathReqTable, that means a request of the
-- path has been issued.
--
-- ibSmPathResultTable is used to retrieve the query results. The client
-- should use the same value of ibSmPathReqSessionId as
-- ibSmPathResultSessionId to retrieve the results.
--
-- The management application should delete the row it created from
-- ibSmPathReqTable after it finishes retrieving the results.
-- This will effectively remove the results from ibSmPathResultTable.
-- It is suggested that the MIB agent remove the row after a timeout
-- period, to avoid resource leak.
```

```
ibSmPathReqTable      OBJECT-TYPE
    SYNTAX              SEQUENCE OF IbSmPathReqEntry
    MAX-ACCESS           not-accessible
```

STATUS current

DESCRIPTION

"A table used to list all the path entries that satisfy the multi path request."

::= { ibSmPathInfo 1 }

ibSmPathReqEntry OBJECT-TYPE

SYNTAX IbSmPathReqEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Table entry for ibSmPathReqTable."

INDEX { ibSmPathReqSubnetPrefix, ibSmPathReqSessionId }

::= { ibSmPathReqTable 1 }

IbSmPathReqEntry ::= SEQUENCE {

ibSmPathReqSubnetPrefix IbSmSubnetPrefix,

ibSmPathReqSessionId Integer32,

ibSmPathReqRowStatus RowStatus,

ibSmPathReqCreationTime TimeTicks,

ibSmPathReqRowCompMask OCTET STRING,

ibSmPathReqDstGID OCTET STRING,

ibSmPathReqSrcGID OCTET STRING,

ibSmPathReqNumbPath Unsigned32,

ibSmPathReqDstLID Unsigned32,

ibSmPathReqSrcLID Unsigned32,

ibSmPathReqRawTraffic Unsigned32,

ibSmPathReqFlowLabel OCTET STRING,

ibSmPathReqHopLimit Unsigned32,

ibSmPathReqTClass Unsigned32,

ibSmPathReqPKey IbPartitionKey,

ibSmPathReqSL Unsigned32,

ibSmPathReqMTUSel INTEGER,

ibSmPathReqMTU IbMtu,

ibSmPathReqRateSel INTEGER,

ibSmPathReqRate Unsigned32,

ibSmPathReqPktLifeTimeSel INTEGER,

ibSmPathReqPktLifeTime Unsigned32,

ibSmPathReqPreference Unsigned32

}

ibSmPathReqSubnetPrefix OBJECT-TYPE

SYNTAX IbSmSubnetPrefix

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Subnet prefix of this IB subnet."

::= { ibSmPathReqEntry 1 }

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ibSmPathReqSessionId OBJECT-TYPE

SYNTAX Integer32(0..2147483647)

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"pseudo-random 32 bit number provided by the client."

::= { ibSmPathReqEntry 2 }

ibSmPathReqRowStatus OBJECT-TYPE

SYNTAX RowStatus

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"RowStatus for row creation/deletion."

::= { ibSmPathReqEntry 3 }

ibSmPathReqCreationTime OBJECT-TYPE

SYNTAX TimeTicks

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Time stamp when this row is created."

::= { ibSmPathReqEntry 4 }

ibSmPathReqRowCompMask OBJECT-TYPE

SYNTAX OCTET STRING(SIZE(8))

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"64-bit Component Mask for the request."

::= { ibSmPathReqEntry 5 }

ibSmPathReqDstGID OBJECT-TYPE

SYNTAX OCTET STRING (SIZE(16))

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The 128-bit destination GID of this path entry."

::= { ibSmPathReqEntry 6 }

ibSmPathReqSrcGID OBJECT-TYPE

SYNTAX OCTET STRING (SIZE(16))

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The 128-bit source GID of this path entry."
::= { ibSmPathReqEntry 7 }

ibSmPathReqNumbPath OBJECT-TYPE

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SYNTAX Unsigned32(0..127)

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"Number of path between this source and destination GID pair."
::= { ibSmPathReqEntry 8 }

ibSmPathReqDstLID OBJECT-TYPE

SYNTAX Unsigned32(1..65535)

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"A 16-bit destination LID."
::= { ibSmPathReqEntry 9 }

ibSmPathReqSrcLID OBJECT-TYPE

SYNTAX Unsigned32(1..65535)

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"A 16-bit source LID."
::= { ibSmPathReqEntry 10 }

ibSmPathReqRawTraffic OBJECT-TYPE

SYNTAX Unsigned32(0..1)

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The type of traffic that is on this path:
0: IB Packet; 1: Raw Packet."
::= { ibSmPathReqEntry 11 }

ibSmPathReqFlowLabel OBJECT-TYPE

SYNTAX OCTET STRING (SIZE(3))

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"Flow label used on this path if GRH is used."
::= { ibSmPathReqEntry 12 }

ibSmPathReqHopLimit OBJECT-TYPE

SYNTAX Unsigned32(0..255)
 MAX-ACCESS read-create
 STATUS current
 DESCRIPTION
 "Hop limit used on this path if GRH is used."
 ::= { ibSmPathReqEntry 13 }

ibSmPathReqTClass OBJECT-TYPE

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SYNTAX Unsigned32(0..255)
 MAX-ACCESS read-create
 STATUS current
 DESCRIPTION
 "TClass used on this path if GRH is used."
 ::= { ibSmPathReqEntry 14 }

ibSmPathReqPKey OBJECT-TYPE

SYNTAX IbPartitionKey
 MAX-ACCESS read-create
 STATUS current
 DESCRIPTION
 "The 16-bit P-Key used on this path."
 ::= { ibSmPathReqEntry 15 }

ibSmPathReqSL OBJECT-TYPE

SYNTAX Unsigned32(0..15)
 MAX-ACCESS read-create
 STATUS current
 DESCRIPTION
 "Service level used on this path."
 ::= { ibSmPathReqEntry 16 }

ibSmPathReqMTUSe1 OBJECT-TYPE

SYNTAX INTEGER{
 greater(0),
 less(1),
 exact(2),
 largestAvailable(3)}
 MAX-ACCESS read-create
 STATUS current
 DESCRIPTION
 "MTU selector used on this path:
 0: greater; 1: less; 2: exact; 3: largest available."
 ::= { ibSmPathReqEntry 17 }

ibSmPathReqMTU OBJECT-TYPE

SYNTAX IbMtu
 UNITS "bytes"
 MAX-ACCESS read-create
 STATUS current
 DESCRIPTION
 "MTU used on this path:
 1: 256; 2: 512; 3: 1024; 4: 2048; 5: 4096"
 ::= { ibSmPathReqEntry 18 }

ibSmPathReqRateSel OBJECT-TYPE
 SYNTAX INTEGER{
 greater(0),

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 less(1),
 exact(2),
 largestAvailable(3)}
 MAX-ACCESS read-create
 STATUS current
 DESCRIPTION
 "Rate selector used on this path.
 0: greater; 1: less; 2: exact; 3: largest available."
 ::= { ibSmPathReqEntry 19 }

ibSmPathReqRate OBJECT-TYPE
 SYNTAX Unsigned32(0..63)
 MAX-ACCESS read-create
 STATUS current
 DESCRIPTION
 "Rate used on this path. Specified as follows:
 1: 1Gps; 2: 2.5Gps; 3: 10Gps; 4: 30Gps; other values reserved."
 ::= { ibSmPathReqEntry 20 }

ibSmPathReqPktLifeTimeSel OBJECT-TYPE
 SYNTAX INTEGER{
 greater(0),
 less(1),
 exact(2),
 smallestAvailable(3)}
 MAX-ACCESS read-create
 STATUS current
 DESCRIPTION
 "Packet life time selector used on this path:
 0: greater; 1: less; 2: exact; 3: smallest available."
 ::= { ibSmPathReqEntry 21 }

ibSmPathReqPktLifeTime OBJECT-TYPE

ibSmPathResultHopLimit	Unsigned32,
ibSmPathResultTClass	Unsigned32,
ibSmPathResultPKey	IbPartitionKey,
ibSmPathResultSL	Unsigned32,
ibSmPathResultMTUSel	INTEGER,
ibSmPathResultMTU	IbMtu,
ibSmPathResultRateSel	INTEGER,
ibSmPathResultRate	Unsigned32,
ibSmPathResultPktLifeTimeSel	INTEGER,
ibSmPathResultPktLifeTime	Unsigned32,
ibSmPathResultPreference	Unsigned32

}

ibSmPathResultSubnetPrefix OBJECT-TYPE

SYNTAX	IbSmSubnetPrefix
MAX-ACCESS	not-accessible
STATUS	current

DESCRIPTION

"Subnet prefix of this IB subnet."

::= { ibSmPathResultEntry 1 }

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ibSmPathResultSessionId OBJECT-TYPE

SYNTAX	Integer32(0..2147483647)
MAX-ACCESS	not-accessible
STATUS	current

DESCRIPTION

"pseudo-random 32 bit number provided by the client."

::= { ibSmPathResultEntry 2 }

ibSmPathResultIndex OBJECT-TYPE

SYNTAX	Integer32(0..2147483647)
MAX-ACCESS	not-accessible
STATUS	current

DESCRIPTION

"The index of Path Records."

::= { ibSmPathResultEntry 3 }

ibSmPathResultDstGID OBJECT-TYPE

SYNTAX	OCTET STRING (SIZE(16))
MAX-ACCESS	read-only
STATUS	current

DESCRIPTION

"The 128-bit destination GID of this path entry."

::= { ibSmPathResultEntry 4 }

ibSmPathResultSrcGID OBJECT-TYPE
 SYNTAX OCTET STRING (SIZE(16))
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION
 "The 128-bit source GID of this path entry."
 ::= { ibSmPathResultEntry 5 }

ibSmPathResultNumbPath OBJECT-TYPE
 SYNTAX Unsigned32(0..127)
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION
 "Number of path between this source and destination GID pair."
 ::= { ibSmPathResultEntry 6 }

ibSmPathResultDstLID OBJECT-TYPE
 SYNTAX Unsigned32(1..65535)
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION
 "A 16-bit destination LID."
 ::= { ibSmPathResultEntry 7 }

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ibSmPathResultSrcLID OBJECT-TYPE
 SYNTAX Unsigned32(1..65535)
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION
 "A 16-bit source LID."
 ::= { ibSmPathResultEntry 8 }

ibSmPathResultRawTraffic OBJECT-TYPE
 SYNTAX Unsigned32(0..1)
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION
 "The type of traffic that is on this path.
 0: IB Packet; 1: Raw Packet."
 ::= { ibSmPathResultEntry 9 }

ibSmPathResultFlowLabel OBJECT-TYPE
 SYNTAX OCTET STRING (SIZE(3))
 MAX-ACCESS read-only
 STATUS current

DESCRIPTION

"Flow label used on this path if GRH is used."
 ::= { ibSmPathResultEntry 10 }

ibSmPathResultHopLimit OBJECT-TYPE
SYNTAX Unsigned32(0..255)
MAX-ACCESS read-only
STATUS current
DESCRIPTION
 "Hop limit used on this path if GRH is used."
 ::= { ibSmPathResultEntry 11 }

ibSmPathResultTClass OBJECT-TYPE
SYNTAX Unsigned32(0..255)
MAX-ACCESS read-only
STATUS current
DESCRIPTION
 "TClass used on this path if GRH is used."
 ::= { ibSmPathResultEntry 12 }

ibSmPathResultPKey OBJECT-TYPE
SYNTAX IbPartitionKey
MAX-ACCESS read-only
STATUS current
DESCRIPTION
 "The 16-bit P-Key used on this path."
 ::= { ibSmPathResultEntry 13 }

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ibSmPathResultSL OBJECT-TYPE
SYNTAX Unsigned32(0..15)
MAX-ACCESS read-only
STATUS current
DESCRIPTION
 "Service level used on this path."
 ::= { ibSmPathResultEntry 14 }

ibSmPathResultMTUSe1 OBJECT-TYPE
SYNTAX INTEGER{
 greater(0),
 less(1),
 exact(2),
 largestAvailable(3)}
MAX-ACCESS read-only
STATUS current
DESCRIPTION

"MTU selector used on this path.
0: greater; 1: less; 2: exact; 3: largest available."
::= { ibSmPathResultEntry 15 }

ibSmPathResultMTU OBJECT-TYPE
SYNTAX IbMtu
UNITS "bytes"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"MTU used on this path.
1: 256; 2: 512; 3: 1024; 4: 2048; 5: 4096."
::= { ibSmPathResultEntry 16 }

ibSmPathResultRateSel OBJECT-TYPE
SYNTAX INTEGER{
greater(0),
less(1),
exact(2),
largestAvailable(3)}
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Rate selector used on this path.
0: greater; 1: less; 2: exact; 3: largest available."
::= { ibSmPathResultEntry 17 }

ibSmPathResultRate OBJECT-TYPE
SYNTAX Unsigned32(0..63)
MAX-ACCESS read-only
STATUS current
DESCRIPTION

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"Rate used on this path. Specified as follows:
1: 1Gps; 2: 2.5Gps; 3: 10Gps; 4: 30Gps; other values reserved."
::= { ibSmPathResultEntry 18 }

ibSmPathResultPktLifeTimeSel OBJECT-TYPE
SYNTAX INTEGER{
greater(0),
less(1),
exact(2),
smallestAvailable(3)}
MAX-ACCESS read-only
STATUS current
DESCRIPTION

"Packet life time selector used on this path.
0: greater; 1: less; 2: exact; 3: smallest available."
::= { ibSmPathResultEntry 19 }

ibSmPathResultPktLifeTime OBJECT-TYPE
SYNTAX Unsigned32(0..63)
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Packet life time used on this path"
::= { ibSmPathResultEntry 20 }

ibSmPathResultPreference OBJECT-TYPE
SYNTAX Unsigned32(0..255)
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The preference of the path, larger number indicates worse paths."
::= { ibSmPathResultEntry 21 }

-- Subnet Manager MultiPath Tables

--

-- In order to query IB MultiPathRecords, management client should
-- create a row in ibSmMultiPathReqTable, with the proper values of:
-- ibSmMultiPathReqSubnetPrefix, ibSmMultiPathReqSessionId,
-- ibSmMultiPathReqRowStatus, ibSmMultiPathReqRowCompMask, and other
-- relevant MultiPathRecord attribute values.
--
-- ibSmMultiPathReqSessionId is a positive pseudo-random 32-bit integer
-- generated by the client. This number should be based on per request,
-- and should not be reused by the client. Before the client creates
-- the row, it should try to do a GET operation to ensure the number is
-- not being used currently. If it detects a conflict, the client should
-- re-generate another random value and try again. When a row is
-- successfully created in ibSmMultiPathReqTable, that means a request
-- of the path has been issued.

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--

-- ibSmMultiPathResultTable is used to retrieve the query results. The
-- client should use the same value of ibSmMultiPathReqSessionId as
-- ibSmMultiPathResultSessionId to retrieve the results.

--

-- The management application should delete the row it created from
-- ibSmMultiPathReqTable after it finishes retrieving the results.
-- This will effectively remove the results from
-- ibSmMultiPathResultTable. It is suggested that the MIB agent remove

-- the row after a timeout period, to avoid resource leak.

```
ibSmMultiPathReqTable          OBJECT-TYPE
    SYNTAX                      SEQUENCE OF IbSmMultiPathReqEntry
    MAX-ACCESS                  not-accessible
    STATUS                      current
    DESCRIPTION
        "A table used to specify multipath request to the Subnet Managers
        on this device."
    ::= { ibSmMultiPathInfo 1 }
```

```
ibSmMultiPathReqEntry          OBJECT-TYPE
    SYNTAX                      IbSmMultiPathReqEntry
    MAX-ACCESS                  not-accessible
    STATUS                      current
    DESCRIPTION
        "Table entry for ibSmMultiPathReqTable."
    INDEX { ibSmMultiPathReqSubnetPrefix, ibSmMultiPathReqSessionId }
    ::= { ibSmMultiPathReqTable 1 }
```

```
IbSmMultiPathReqEntry ::= SEQUENCE {
    ibSmMultiPathReqSubnetPrefix      IbSmSubnetPrefix,
    ibSmMultiPathReqSessionId        Integer32,
    ibSmMultiPathReqRowStatus        RowStatus,
    ibSmMultiPathReqCreationTime     TimeTicks,
    ibSmMultiPathReqCompMask         OCTET STRING,
    ibSmMultiPathReqRawTraffic       Unsigned32,
    ibSmMultiPathReqFlowLabel        OCTET STRING,
    ibSmMultiPathReqHopLimit         Unsigned32,
    ibSmMultiPathReqTClass           Unsigned32,
    ibSmMultiPathReqNumbPath         Unsigned32,
    ibSmMultiPathReqPKey             IbPartitionKey,
    ibSmMultiPathReqSL               Unsigned32,
    ibSmMultiPathReqMTUSel           Unsigned32,
    ibSmMultiPathReqMTU              IbMtu,
    ibSmMultiPathReqRateSel          Unsigned32,
    ibSmMultiPathReqRate             Unsigned32,
    ibSmMultiPathReqPktLifeTimeSel   Unsigned32,
    ibSmMultiPathReqPktLifeTime      Unsigned32,
    ibSmMultiPathReqIndepSel         Unsigned32,
```

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```
ibSmMultiPathReqSGIDCount        Unsigned32,
ibSmMultiPathReqDGIDCount        Unsigned32,
ibSmMultiPathReqSDGIDBlock1      OCTET STRING,
ibSmMultiPathReqSDGIDBlock2      OCTET STRING,
ibSmMultiPathReqSDGIDBlock3      OCTET STRING,
```

ibSmMultiPathReqSDGIDBlock4	OCTET STRING,
ibSmMultiPathReqSDGIDBlock5	OCTET STRING,
ibSmMultiPathReqSDGIDBlock6	OCTET STRING,
ibSmMultiPathReqSDGIDBlock7	OCTET STRING,
ibSmMultiPathReqSDGIDBlock8	OCTET STRING,
ibSmMultiPathReqSDGIDBlock9	OCTET STRING,
ibSmMultiPathReqSDGIDBlock10	OCTET STRING,
ibSmMultiPathReqSDGIDBlock11	OCTET STRING,
ibSmMultiPathReqSDGIDBlock12	OCTET STRING,
ibSmMultiPathReqSDGIDBlock13	OCTET STRING,
ibSmMultiPathReqSDGIDBlock14	OCTET STRING,
ibSmMultiPathReqSDGIDBlock15	OCTET STRING,
ibSmMultiPathReqSDGIDBlock16	OCTET STRING,
ibSmMultiPathReqSDGIDBlock17	OCTET STRING,
ibSmMultiPathReqSDGIDBlock18	OCTET STRING,
ibSmMultiPathReqSDGIDBlock19	OCTET STRING,
ibSmMultiPathReqSDGIDBlock20	OCTET STRING,
ibSmMultiPathReqSDGIDBlock21	OCTET STRING,
ibSmMultiPathReqSDGIDBlock22	OCTET STRING,
ibSmMultiPathReqSDGIDBlock23	OCTET STRING,
ibSmMultiPathReqSDGIDBlock24	OCTET STRING,
ibSmMultiPathReqSDGIDBlock25	OCTET STRING,
ibSmMultiPathReqSDGIDBlock26	OCTET STRING,
ibSmMultiPathReqSDGIDBlock27	OCTET STRING,
ibSmMultiPathReqSDGIDBlock28	OCTET STRING,
ibSmMultiPathReqSDGIDBlock29	OCTET STRING,
ibSmMultiPathReqSDGIDBlock30	OCTET STRING,
ibSmMultiPathReqSDGIDBlock31	OCTET STRING,
ibSmMultiPathReqSDGIDBlock32	OCTET STRING

}

ibSmMultiPathReqSubnetPrefix OBJECT-TYPE

SYNTAX IbSmSubnetPrefix

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Subnet prefix of this IB subnet."

::= { ibSmMultiPathReqEntry 1 }

ibSmMultiPathReqSessionId OBJECT-TYPE

SYNTAX Integer32(0..2147483647)

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"pseudo-random 32 bit number provided by the client."

::= { ibSmMultiPathReqEntry 2 }

```

ibSmMultiPathReqRowStatus  OBJECT-TYPE
    SYNTAX          RowStatus
    MAX-ACCESS       read-create
    STATUS           current
    DESCRIPTION
        "RowStatus for row creation/deletion."
    ::= { ibSmMultiPathReqEntry 3 }

ibSmMultiPathReqCreationTime  OBJECT-TYPE
    SYNTAX          TimeTicks
    MAX-ACCESS       read-only
    STATUS           current
    DESCRIPTION
        "Time stamp when this row is created."
    ::= { ibSmMultiPathReqEntry 4 }

ibSmMultiPathReqCompMask  OBJECT-TYPE
    SYNTAX OCTET STRING(SIZE(8))
    MAX-ACCESS read-create
    STATUS current
    DESCRIPTION
        "64-bit Component Mask for the request."
    ::= { ibSmMultiPathReqEntry 5 }

ibSmMultiPathReqRawTraffic  OBJECT-TYPE
    SYNTAX          Unsigned32(0..1)
    MAX-ACCESS       read-create
    STATUS           current
    DESCRIPTION
        "The type of traffic that is on this path.
        0: IB Packet; 1: Raw Packet."
    ::= { ibSmMultiPathReqEntry 6 }

ibSmMultiPathReqFlowLabel  OBJECT-TYPE
    SYNTAX          OCTET STRING (SIZE(3))
    MAX-ACCESS       read-create
    STATUS           current
    DESCRIPTION
        "Flow label used on this path if GRH is used."
    ::= { ibSmMultiPathReqEntry 7 }

ibSmMultiPathReqHopLimit  OBJECT-TYPE
    SYNTAX          Unsigned32(0..255)
    MAX-ACCESS       read-create
    STATUS           current
    DESCRIPTION
        "Hop limit used on this path if GRH is used."

```

```
 ::= { ibSmMultiPathReqEntry 8 }
```

```
ibSmMultiPathReqTClass            OBJECT-TYPE
    SYNTAX            Unsigned32(0..255)
    MAX-ACCESS        read-create
    STATUS            current
    DESCRIPTION
        "TClass used on this path if GRH is used."
 ::= { ibSmMultiPathReqEntry 9 }
```

```
ibSmMultiPathReqNumbPath OBJECT-TYPE
    SYNTAX            Unsigned32(0..127)
    MAX-ACCESS        read-create
    STATUS            current
    DESCRIPTION
        "Number of path between this source and destination GID pair."
 ::= { ibSmMultiPathReqEntry 10 }
```

```
ibSmMultiPathReqPKey            OBJECT-TYPE
    SYNTAX            IbPartitionKey
    MAX-ACCESS        read-create
    STATUS            current
    DESCRIPTION
        "The 16-bit P-Key used on this path."
 ::= { ibSmMultiPathReqEntry 11 }
```

```
ibSmMultiPathReqSL            OBJECT-TYPE
    SYNTAX            Unsigned32(0..15)
    MAX-ACCESS        read-create
    STATUS            current
    DESCRIPTION
        "Service level used on this path."
 ::= { ibSmMultiPathReqEntry 12 }
```

```
ibSmMultiPathReqMTUSel        OBJECT-TYPE
    SYNTAX            Unsigned32(0..3)
    MAX-ACCESS        read-create
    STATUS            current
    DESCRIPTION
        "MTU selector used on this path.
         0: greater; 1: less; 2: exact; 3: largest available."
 ::= { ibSmMultiPathReqEntry 13 }
```

```
ibSmMultiPathReqMTU            OBJECT-TYPE
    SYNTAX            IbMtu
    UNITS            "bytes"
    MAX-ACCESS        read-create
    STATUS            current
```

DESCRIPTION

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"MTU used on this path.
1: 256; 2: 512; 3: 1024; 4: 2048; 5: 4096."
::= { ibSmMultiPathReqEntry 14 }

ibSmMultiPathReqRateSel OBJECT-TYPE

SYNTAX Unsigned32(0..3)

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"Rate selector used on this path.
0: greater; 1: less; 2: exact; 3: largest available."
::= { ibSmMultiPathReqEntry 15 }

ibSmMultiPathReqRate OBJECT-TYPE

SYNTAX Unsigned32(0..63)

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"Rate used on this path. Specified as follows:
1: 1Gps; 2: 2.5Gps; 3: 10Gps; 4: 30Gps; other values reserved."
::= { ibSmMultiPathReqEntry 16 }

ibSmMultiPathReqPktLifeTimeSel OBJECT-TYPE

SYNTAX Unsigned32(0..3)

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"Packet life time selector used on this path.
0: greater; 1: less; 2: exact; 3: smallest available."
::= { ibSmMultiPathReqEntry 17 }

ibSmMultiPathReqPktLifeTime OBJECT-TYPE

SYNTAX Unsigned32(0..63)

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"Packet life time used on this path"
::= { ibSmMultiPathReqEntry 18 }

ibSmMultiPathReqIndepSel OBJECT-TYPE

SYNTAX Unsigned32(0..3)

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"1: paths that are as fault-independent as possible.
other values reserved. "
 ::= { ibSmMultiPathReqEntry 19 }

ibSmMultiPathReqSGIDCount OBJECT-TYPE

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SYNTAX Unsigned32(0..255)
MAX-ACCESS read-create
STATUS current
DESCRIPTION
 "Number of SGIDs. "
 ::= { ibSmMultiPathReqEntry 20 }

ibSmMultiPathReqDGIDCount OBJECT-TYPE
SYNTAX Unsigned32(0..255)
MAX-ACCESS read-create
STATUS current
DESCRIPTION
 "Number of DGIDs. "
 ::= { ibSmMultiPathReqEntry 21 }

ibSmMultiPathReqSDGIDBlock1 OBJECT-TYPE
SYNTAX OCTET STRING(SIZE(0..256))
MAX-ACCESS read-create
STATUS current
DESCRIPTION
 "May contain a block of 0 to 16 SGIDs or DGIDs. Empty if not set"
 ::= { ibSmMultiPathReqEntry 22 }

ibSmMultiPathReqSDGIDBlock2 OBJECT-TYPE
SYNTAX OCTET STRING(SIZE(0..256))
MAX-ACCESS read-create
STATUS current
DESCRIPTION
 "May contain a block of 0 to 16 SGIDs or DGIDs. Empty if not set"
 ::= { ibSmMultiPathReqEntry 23 }

ibSmMultiPathReqSDGIDBlock3 OBJECT-TYPE
SYNTAX OCTET STRING(SIZE(0..256))
MAX-ACCESS read-create
STATUS current
DESCRIPTION
 "May contain a block of 0 to 16 SGIDs or DGIDs. Empty if not set"
 ::= { ibSmMultiPathReqEntry 24 }

ibSmMultiPathReqSDGIDBlock4 OBJECT-TYPE
SYNTAX OCTET STRING(SIZE(0..256))

MAX-ACCESS read-create
STATUS current
DESCRIPTION
"May contain a block of 0 to 16 SGIDs or DGIDs. Empty if not set"
::= { ibSmMultiPathReqEntry 25 }

ibSmMultiPathReqSDGIDBlock5 OBJECT-TYPE
SYNTAX OCTET STRING(SIZE(0..256))

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MAX-ACCESS read-create
STATUS current
DESCRIPTION
"May contain a block of 0 to 16 SGIDs or DGIDs. Empty if not set"
::= { ibSmMultiPathReqEntry 26 }

ibSmMultiPathReqSDGIDBlock6 OBJECT-TYPE
SYNTAX OCTET STRING(SIZE(0..256))
MAX-ACCESS read-create
STATUS current
DESCRIPTION
"May contain a block of 0 to 16 SGIDs or DGIDs. Empty if not set"
::= { ibSmMultiPathReqEntry 27 }

ibSmMultiPathReqSDGIDBlock7 OBJECT-TYPE
SYNTAX OCTET STRING(SIZE(0..256))
MAX-ACCESS read-create
STATUS current
DESCRIPTION
"May contain a block of 0 to 16 SGIDs or DGIDs. Empty if not set"
::= { ibSmMultiPathReqEntry 28 }

ibSmMultiPathReqSDGIDBlock8 OBJECT-TYPE
SYNTAX OCTET STRING(SIZE(0..256))
MAX-ACCESS read-create
STATUS current
DESCRIPTION
"May contain a block of 0 to 16 SGIDs or DGIDs. Empty if not set"
::= { ibSmMultiPathReqEntry 29 }

ibSmMultiPathReqSDGIDBlock9 OBJECT-TYPE
SYNTAX OCTET STRING(SIZE(0..256))
MAX-ACCESS read-create
STATUS current
DESCRIPTION
"May contain a block of 0 to 16 SGIDs or DGIDs. Empty if not set"
::= { ibSmMultiPathReqEntry 30 }

ibSmMultiPathReqSDGIDBlock10 OBJECT-TYPE
SYNTAX OCTET STRING(SIZE(0..256))
MAX-ACCESS read-create
STATUS current
DESCRIPTION
 "May contain a block of 0 to 16 SGIDs or DGIDs. Empty if not set"
 ::= { ibSmMultiPathReqEntry 31 }

ibSmMultiPathReqSDGIDBlock11 OBJECT-TYPE
SYNTAX OCTET STRING(SIZE(0..256))
MAX-ACCESS read-create

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STATUS current
DESCRIPTION
 "May contain a block of 0 to 16 SGIDs or DGIDs. Empty if not set"
 ::= { ibSmMultiPathReqEntry 32 }

ibSmMultiPathReqSDGIDBlock12 OBJECT-TYPE
SYNTAX OCTET STRING(SIZE(0..256))
MAX-ACCESS read-create
STATUS current
DESCRIPTION
 "May contain a block of 0 to 16 SGIDs or DGIDs. Empty if not set"
 ::= { ibSmMultiPathReqEntry 33 }

ibSmMultiPathReqSDGIDBlock13 OBJECT-TYPE
SYNTAX OCTET STRING(SIZE(0..256))
MAX-ACCESS read-create
STATUS current
DESCRIPTION
 "May contain a block of 0 to 16 SGIDs or DGIDs. Empty if not set"
 ::= { ibSmMultiPathReqEntry 34 }

ibSmMultiPathReqSDGIDBlock14 OBJECT-TYPE
SYNTAX OCTET STRING(SIZE(0..256))
MAX-ACCESS read-create
STATUS current
DESCRIPTION
 "May contain a block of 0 to 16 SGIDs or DGIDs. Empty if not set"
 ::= { ibSmMultiPathReqEntry 35 }

ibSmMultiPathReqSDGIDBlock15 OBJECT-TYPE
SYNTAX OCTET STRING(SIZE(0..256))
MAX-ACCESS read-create
STATUS current
DESCRIPTION

"May contain a block of 0 to 16 SGIDs or DGIDs. Empty if not set"
 ::= { ibSmMultiPathReqEntry 36 }

ibSmMultiPathReqSDGIDBlock16 OBJECT-TYPE
SYNTAX OCTET STRING(SIZE(0..256))
MAX-ACCESS read-create
STATUS current
DESCRIPTION

"May contain a block of 0 to 16 SGIDs or DGIDs. Empty if not set"
 ::= { ibSmMultiPathReqEntry 37 }

ibSmMultiPathReqSDGIDBlock17 OBJECT-TYPE
SYNTAX OCTET STRING(SIZE(0..256))
MAX-ACCESS read-create
STATUS current

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DESCRIPTION

"May contain a block of 0 to 16 SGIDs or DGIDs. Empty if not set"
 ::= { ibSmMultiPathReqEntry 38 }

ibSmMultiPathReqSDGIDBlock18 OBJECT-TYPE
SYNTAX OCTET STRING(SIZE(0..256))
MAX-ACCESS read-create
STATUS current
DESCRIPTION

"May contain a block of 0 to 16 SGIDs or DGIDs. Empty if not set"
 ::= { ibSmMultiPathReqEntry 39 }

ibSmMultiPathReqSDGIDBlock19 OBJECT-TYPE
SYNTAX OCTET STRING(SIZE(0..256))
MAX-ACCESS read-create
STATUS current
DESCRIPTION

"May contain a block of 0 to 16 SGIDs or DGIDs. Empty if not set"
 ::= { ibSmMultiPathReqEntry 40 }

ibSmMultiPathReqSDGIDBlock20 OBJECT-TYPE
SYNTAX OCTET STRING(SIZE(0..256))
MAX-ACCESS read-create
STATUS current
DESCRIPTION

"May contain a block of 0 to 16 SGIDs or DGIDs. Empty if not set"
 ::= { ibSmMultiPathReqEntry 41 }

ibSmMultiPathReqSDGIDBlock21 OBJECT-TYPE
SYNTAX OCTET STRING(SIZE(0..256))
MAX-ACCESS read-create

STATUS current
DESCRIPTION
"May contain a block of 0 to 16 SGIDs or DGIDs. Empty if not set"
::= { ibSmMultiPathReqEntry 42 }

ibSmMultiPathReqSDGIDBlock22 OBJECT-TYPE
SYNTAX OCTET STRING(SIZE(0..256))
MAX-ACCESS read-create
STATUS current
DESCRIPTION
"May contain a block of 0 to 16 SGIDs or DGIDs. Empty if not set"
::= { ibSmMultiPathReqEntry 43 }

ibSmMultiPathReqSDGIDBlock23 OBJECT-TYPE
SYNTAX OCTET STRING(SIZE(0..256))
MAX-ACCESS read-create
STATUS current
DESCRIPTION

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"May contain a block of 0 to 16 SGIDs or DGIDs. Empty if not set"
::= { ibSmMultiPathReqEntry 44 }

ibSmMultiPathReqSDGIDBlock24 OBJECT-TYPE
SYNTAX OCTET STRING(SIZE(0..256))
MAX-ACCESS read-create
STATUS current
DESCRIPTION
"May contain a block of 0 to 16 SGIDs or DGIDs. Empty if not set"
::= { ibSmMultiPathReqEntry 45 }

ibSmMultiPathReqSDGIDBlock25 OBJECT-TYPE
SYNTAX OCTET STRING(SIZE(0..256))
MAX-ACCESS read-create
STATUS current
DESCRIPTION
"May contain a block of 0 to 16 SGIDs or DGIDs. Empty if not set"
::= { ibSmMultiPathReqEntry 46 }

ibSmMultiPathReqSDGIDBlock26 OBJECT-TYPE
SYNTAX OCTET STRING(SIZE(0..256))
MAX-ACCESS read-create
STATUS current
DESCRIPTION
"May contain a block of 0 to 16 SGIDs or DGIDs. Empty if not set"
::= { ibSmMultiPathReqEntry 47 }

ibSmMultiPathReqSDGIDBlock27 OBJECT-TYPE

SYNTAX OCTET STRING(SIZE(0..256))
MAX-ACCESS read-create
STATUS current
DESCRIPTION

"May contain a block of 0 to 16 SGIDs or DGIDs. Empty if not set"
::= { ibSmMultiPathReqEntry 48 }

ibSmMultiPathReqSDGIDBlock28 OBJECT-TYPE
SYNTAX OCTET STRING(SIZE(0..256))
MAX-ACCESS read-create
STATUS current
DESCRIPTION

"May contain a block of 0 to 16 SGIDs or DGIDs. Empty if not set"
::= { ibSmMultiPathReqEntry 49 }

ibSmMultiPathReqSDGIDBlock29 OBJECT-TYPE
SYNTAX OCTET STRING(SIZE(0..256))
MAX-ACCESS read-create
STATUS current
DESCRIPTION

"May contain a block of 0 to 16 SGIDs or DGIDs. Empty if not set"

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::= { ibSmMultiPathReqEntry 50 }

ibSmMultiPathReqSDGIDBlock30 OBJECT-TYPE
SYNTAX OCTET STRING(SIZE(0..256))
MAX-ACCESS read-create
STATUS current
DESCRIPTION

"May contain a block of 0 to 16 SGIDs or DGIDs. Empty if not set"
::= { ibSmMultiPathReqEntry 51 }

ibSmMultiPathReqSDGIDBlock31 OBJECT-TYPE
SYNTAX OCTET STRING(SIZE(0..256))
MAX-ACCESS read-create
STATUS current
DESCRIPTION

"May contain a block of 0 to 16 SGIDs or DGIDs. Empty if not set"
::= { ibSmMultiPathReqEntry 52 }

ibSmMultiPathReqSDGIDBlock32 OBJECT-TYPE
SYNTAX OCTET STRING(SIZE(0..256))
MAX-ACCESS read-create
STATUS current
DESCRIPTION

"May contain a block of 0 to 16 SGIDs or DGIDs. Empty if not set"

```
::= { ibSmMultiPathReqEntry 53 }
```

```
ibSmMultiPathResultTable          OBJECT-TYPE
    SYNTAX          SEQUENCE OF IbSmMultiPathResultEntry
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "A table used to list all the path entries that satisfy the
        multi path request."
    ::= { ibSmMultiPathInfo 2 }
```

```
ibSmMultiPathResultEntry          OBJECT-TYPE
    SYNTAX          IbSmMultiPathResultEntry
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "Table entry for ibSmMultiPathResultTable."
    INDEX { ibSmMultiPathResultSubnetPrefix,
            ibSmMultiPathResultSessionId, ibSmMultiPathResultIndex }

    ::= { ibSmMultiPathResultTable 1 }
```

```
IbSmMultiPathResultEntry ::= SEQUENCE {
    ibSmMultiPathResultSubnetPrefix    IbSmSubnetPrefix,
    ibSmMultiPathResultSessionId      Integer32,
```

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```
    ibSmMultiPathResultIndex          Integer32,
    ibSmMultiPathResultDstGID         OCTET STRING,
    ibSmMultiPathResultSrcGID         OCTET STRING,
    ibSmMultiPathResultNumbPath       Unsigned32,
    ibSmMultiPathResultDstLID         Unsigned32,
    ibSmMultiPathResultSrcLID         Unsigned32,
    ibSmMultiPathResultRawTraffic     Unsigned32,
    ibSmMultiPathResultFlowLabel      OCTET STRING,
    ibSmMultiPathResultHopLimit       Unsigned32,
    ibSmMultiPathResultTClass         Unsigned32,
    ibSmMultiPathResultPKey           IbPartitionKey,
    ibSmMultiPathResultSL             Unsigned32,
    ibSmMultiPathResultMTUSel         INTEGER,
    ibSmMultiPathResultMTU            IbMtu,
    ibSmMultiPathResultRateSel        INTEGER,
    ibSmMultiPathResultRate           Unsigned32,
    ibSmMultiPathResultPktLifeTimeSel INTEGER,
    ibSmMultiPathResultPktLifeTime    Unsigned32,
    ibSmMultiPathResultPreference     Unsigned32
}
```

ibSmMultiPathResultSubnetPrefix OBJECT-TYPE

SYNTAX IbSmSubnetPrefix

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Subnet prefix of this IB subnet."

::= { ibSmMultiPathResultEntry 1 }

ibSmMultiPathResultSessionId OBJECT-TYPE

SYNTAX Integer32(0..2147483647)

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"pseudo-random 32 bit number provided by the client."

::= { ibSmMultiPathResultEntry 2 }

ibSmMultiPathResultIndex OBJECT-TYPE

SYNTAX Integer32(0..2147483647)

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"The index of Path Records."

::= { ibSmMultiPathResultEntry 3 }

ibSmMultiPathResultDstGID OBJECT-TYPE

SYNTAX OCTET STRING (SIZE(16))

MAX-ACCESS read-only

STATUS current

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DESCRIPTION

"The 128-bit destination GID of this path entry."

::= { ibSmMultiPathResultEntry 4 }

ibSmMultiPathResultSrcGID OBJECT-TYPE

SYNTAX OCTET STRING (SIZE(16))

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The 128-bit source GID of this path entry."

::= { ibSmMultiPathResultEntry 5 }

ibSmMultiPathResultNumbPath OBJECT-TYPE

SYNTAX Unsigned32(0..127)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Number of path between this source and destination GID pair."
 ::= { ibSmMultiPathResultEntry 6 }

ibSmMultiPathResultDstLID OBJECT-TYPE
SYNTAX Unsigned32(1..65535)
MAX-ACCESS read-only
STATUS current
DESCRIPTION
 "A 16-bit destination LID."
 ::= { ibSmMultiPathResultEntry 7 }

ibSmMultiPathResultSrcLID OBJECT-TYPE
SYNTAX Unsigned32(1..65535)
MAX-ACCESS read-only
STATUS current
DESCRIPTION
 "A 16-bit source LID."
 ::= { ibSmMultiPathResultEntry 8 }

ibSmMultiPathResultRawTraffic OBJECT-TYPE
SYNTAX Unsigned32(0..1)
MAX-ACCESS read-only
STATUS current
DESCRIPTION
 "The type of traffic that is on this path.
 0: IB Packet; 1: Raw Packet."
 ::= { ibSmMultiPathResultEntry 9 }

ibSmMultiPathResultFlowLabel OBJECT-TYPE
SYNTAX OCTET STRING (SIZE(3))
MAX-ACCESS read-only
STATUS current

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DESCRIPTION
 "Flow label used on this path if GRH is used."
 ::= { ibSmMultiPathResultEntry 10 }

ibSmMultiPathResultHopLimit OBJECT-TYPE
SYNTAX Unsigned32(0..255)
MAX-ACCESS read-only
STATUS current
DESCRIPTION
 "Hop limit used on this path if GRH is used."
 ::= { ibSmMultiPathResultEntry 11 }

ibSmMultiPathResultTClass OBJECT-TYPE
SYNTAX Unsigned32(0..255)

MAX-ACCESS read-only
 STATUS current
 DESCRIPTION
 "TClass used on this path if GRH is used."
 ::= { ibSmMultiPathResultEntry 12 }

ibSmMultiPathResultPKey OBJECT-TYPE
 SYNTAX IbPartitionKey
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION
 "The 16-bit P-Key used on this path."
 ::= { ibSmMultiPathResultEntry 13 }

ibSmMultiPathResultSL OBJECT-TYPE
 SYNTAX Unsigned32(0..15)
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION
 "Service level used on this path."
 ::= { ibSmMultiPathResultEntry 14 }

ibSmMultiPathResultMTUSel OBJECT-TYPE
 SYNTAX INTEGER {
 greater(0),
 less(1),
 exact(2),
 largestAvailable(3)}
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION
 "MTU selector used on this path.
 0: greater; 1: less; 2: exact; 3: largest available."
 ::= { ibSmMultiPathResultEntry 15 }

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ibSmMultiPathResultMTU OBJECT-TYPE
 SYNTAX IbMtu
 UNITS "bytes"
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION
 "MTU used on this path.
 1: 256; 2: 512; 3: 1024; 4: 2048; 5: 4096; other values reserved."
 ::= { ibSmMultiPathResultEntry 16 }

ibSmMultiPathResultRateSel OBJECT-TYPE

SYNTAX INTEGER{
greater(0),
less(1),
exact(2),
largestAvailable(3)}

MAX-ACCESS read-only

STATUS current

DESCRIPTION
"Rate selector used on this path.
0: greater; 1: less; 2: exact; 3: largest available."
::= { ibSmMultiPathResultEntry 17 }

ibSmMultiPathResultRate OBJECT-TYPE

SYNTAX Unsigned32(0..63)

MAX-ACCESS read-only

STATUS current

DESCRIPTION
"Rate used on this path. Specified as follows:
1: 1Gps; 2: 2.5Gps; 3: 10Gps; 4: 30Gps; other values reserved."
::= { ibSmMultiPathResultEntry 18 }

ibSmMultiPathResultPktLifeTimeSel OBJECT-TYPE

SYNTAX INTEGER {
greater(0),
less(1),
exact(2),
smallestAvailable(3)}

MAX-ACCESS read-only

STATUS current

DESCRIPTION
"Packet life time selector used on this path.
0: greater; 1: less; 2: exact; 3: smallest available."
::= { ibSmMultiPathResultEntry 19 }

ibSmMultiPathResultPktLifeTime OBJECT-TYPE

SYNTAX Unsigned32(0..63)

MAX-ACCESS read-only

STATUS current

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DESCRIPTION
"Packet life time used on this path"
::= { ibSmMultiPathResultEntry 20 }

ibSmMultiPathResultPreference OBJECT-TYPE

SYNTAX Unsigned32(0..255)

MAX-ACCESS	read-only
STATUS	current
DESCRIPTION	
"The preference of the path, larger number indicates worse paths."	
::= { ibSmMultiPathResultEntry 21 }	

```
-- Subnet Manager Trace Tables
--
-- In order to query IB TraceRecords, management client should
-- create a row in ibSmTraceReqTable, with the proper values of:
-- ibSmTraceReqSubnetPrefix, ibSmTraceReqSessionId,
-- ibSmTraceReqRowStatus, ibSmTraceReqRowCompMask, and other
-- relevant TraceRecord attribute values.
--
-- ibSmTraceReqSessionId is a positive pseudo-random 32-bit integer
-- generated by the client. This number should be based on per request,
-- and should not be reused by the client. Before the client creates
-- the row, it should try to do a GET operation to ensure the number is
-- not being used currently. If it detects a conflict, the client should
-- re-generate another random value and try again. When a row is
-- successfully created in ibSmTraceReqTable, that means a request
-- of the path has been issued.
--
-- ibSmTraceResultTable is used to retrieve the query results. The
-- client should use the same value of ibSmTraceReqSessionId as
-- ibSmTraceResultSessionId to retrieve the results.
--
-- The management application should delete the row it created from
-- ibSmTraceReqTable after it finishes retrieving the results. This will
-- effectively remove the results from ibSmTraceResultTable. It is
-- suggested that the MIB agent remove the row after a timeout period,
-- to avoid resource leak.
```

ibSmTraceReqTable	OBJECT-TYPE
SYNTAX	SEQUENCE OF IbSmTraceReqEntry
MAX-ACCESS	not-accessible
STATUS	current
DESCRIPTION	
"A table used to specify trace request to the Subnet Managers on this device."	
::= { ibSmTraceInfo 1 }	

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ibSmTraceReqEntry	OBJECT-TYPE
SYNTAX	IbSmTraceReqEntry

```

MAX-ACCESS          not-accessible
STATUS              current
DESCRIPTION
    "Table entry for ibSmTraceReqTable."
INDEX { ibSmTraceReqSubnetPrefix, ibSmTraceReqSessionId }
 ::= { ibSmTraceReqTable 1 }

```

```

IbSmTraceReqEntry ::= SEQUENCE {
    ibSmTraceReqSubnetPrefix      IbSmSubnetPrefix,
    ibSmTraceReqSessionId        Integer32,
    ibSmTraceReqRowStatus        RowStatus,
    ibSmTraceReqCreationTime      TimeTicks,
    ibSmTraceReqCompMask         OCTET STRING,
    ibSmTraceReqIDGeneration     Unsigned32,
    ibSmTraceReqNodeType         IbNodeType,
    ibSmTraceReqNodeID           OCTET STRING,
    ibSmTraceReqChassisID        OCTET STRING,
    ibSmTraceReqEntryPortID      OCTET STRING,
    ibSmTraceReqExitPortID       OCTET STRING,
    ibSmTraceReqEntryPort        Unsigned32,
    ibSmTraceReqExitPort         Unsigned32
}

```

```

ibSmTraceReqSubnetPrefix OBJECT-TYPE
    SYNTAX          IbSmSubnetPrefix
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "Subnet prefix of this IB subnet."
    ::= { ibSmTraceReqEntry 1 }

```

```

ibSmTraceReqSessionId OBJECT-TYPE
    SYNTAX          Integer32(0..2147483647)
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "pseudo-random 32 bit number provided by the client."
    ::= { ibSmTraceReqEntry 2 }

```

```

ibSmTraceReqRowStatus OBJECT-TYPE
    SYNTAX          RowStatus
    MAX-ACCESS      read-create
    STATUS          current
    DESCRIPTION
        "RowStatus for row creation/deletion."
    ::= { ibSmTraceReqEntry 3 }

```

ibSmTraceReqCreationTimeOBJECT-TYPE

SYNTAX TimeTicks

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Time stamp when this row is created."

::= { ibSmTraceReqEntry 4 }

ibSmTraceReqCompMask OBJECT-TYPE

SYNTAX OCTET STRING(SIZE(8))

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"64-bit Component Mask for the request."

::= { ibSmTraceReqEntry 5 }

ibSmTraceReqIDGeneration OBJECT-TYPE

SYNTAX Unsigned32(0..65535)

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"Generation of the IDs used in this attribute."

::= { ibSmTraceReqEntry 6 }

ibSmTraceReqNodeType OBJECT-TYPE

SYNTAX IbNodeType

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"Type of node being managed:

reserved(0), channelAdapter(1), switch(2), router(3),error(4)."

::= { ibSmTraceReqEntry 7 }

ibSmTraceReqNodeID OBJECT-TYPE

SYNTAX OCTET STRING(SIZE(8))

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"ID of the Node."

::= { ibSmTraceReqEntry 8 }

ibSmTraceReqChassisID OBJECT-TYPE

SYNTAX OCTET STRING(SIZE(8))

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"ID of the chassis or power domain, or 0 if ChassisGUID or equivalent information is unavailable."

::= { ibSmTraceReqEntry 9 }

ibSmTraceReqEntryPortID OBJECT-TYPE

SYNTAX OCTET STRING(SIZE(8))

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"If NodeType is CA: ID of the port used.

If NodeType is router: ID of Entry Port.

Otherwise reserved."

::= { ibSmTraceReqEntry 10 }

ibSmTraceReqExitPortID OBJECT-TYPE

SYNTAX OCTET STRING(SIZE(8))

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"If NodeType is router and path continues past this router:

ID of the exit port of the router. Otherwise reserved."

::= { ibSmTraceReqEntry 11 }

ibSmTraceReqEntryPort OBJECT-TYPE

SYNTAX Unsigned32(0..255)

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"If NodeType is switch: number of the entry port.

Otherwise: reserved."

::= { ibSmTraceReqEntry 12 }

ibSmTraceReqExitPort OBJECT-TYPE

SYNTAX Unsigned32(0..255)

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"If NodeType is switch: number of the exit port.

Otherwise: reserved."

::= { ibSmTraceReqEntry 13 }

ibSmTraceResultTable OBJECT-TYPE

SYNTAX SEQUENCE OF IbSmTraceResultEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"A table used to list all the path entries that are actively managed by the Subnet Managers on this device."

::= { ibSmTraceInfo 2 }

ibSmTraceResultEntry	OBJECT-TYPE
SYNTAX	IbSmTraceResultEntry

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MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Table entry for ibSmTraceResultTable."

INDEX { ibSmTraceResultSubnetPrefix, ibSmTraceResultSessionId,
ibSmTraceResultIndex }

::= { ibSmTraceResultTable 1 }

IbSmTraceResultEntry ::= SEQUENCE {
ibSmTraceResultSubnetPrefix IbSmSubnetPrefix,
ibSmTraceResultSessionId Integer32,
ibSmTraceResultIndex Integer32,
ibSmTraceResultIDGeneration Unsigned32,
ibSmTraceResultNodeType IbNodeType,
ibSmTraceResultNodeID OCTET STRING,
ibSmTraceResultChassisID OCTET STRING,
ibSmTraceResultEntryPortID OCTET STRING,
ibSmTraceResultExitPortID OCTET STRING,
ibSmTraceResultEntryPort Unsigned32,
ibSmTraceResultExitPort Unsigned32
}

ibSmTraceResultSubnetPrefix	OBJECT-TYPE
SYNTAX	IbSmSubnetPrefix
MAX-ACCESS	not-accessible
STATUS	current
DESCRIPTION	"Subnet prefix of this IB subnet."
::= { ibSmTraceResultEntry 1 }	

ibSmTraceResultSessionId	OBJECT-TYPE
SYNTAX	Integer32(0..2147483647)
MAX-ACCESS	not-accessible
STATUS	current
DESCRIPTION	"pseudo-random 32 bit number provided by the client."
::= { ibSmTraceResultEntry 2 }	

ibSmTraceResultIndex	OBJECT-TYPE
SYNTAX	Integer32(0..2147483647)
MAX-ACCESS	not-accessible

STATUS current
DESCRIPTION
"Index for the results."
::= { ibSmTraceResultEntry 3 }

ibSmTraceResultIDGeneration OBJECT-TYPE
SYNTAX Unsigned32(0..65535)

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MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Generation of the IDs used in this attribute."
::= { ibSmTraceResultEntry 4 }

ibSmTraceResultNodeType OBJECT-TYPE
SYNTAX IbNodeType
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Type of node being managed:
reserved(0), channelAdapter(1), switch(2), router(3),error(4)."
::= { ibSmTraceResultEntry 5 }

ibSmTraceResultNodeID OBJECT-TYPE
SYNTAX OCTET STRING(SIZE(8))
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"ID of the Node."
::= { ibSmTraceResultEntry 6 }

ibSmTraceResultChassisID OBJECT-TYPE
SYNTAX OCTET STRING(SIZE(8))
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"ID of the chassis or power domain, or 0 if ChassisGUID or equivalent
information is unavailable."
::= { ibSmTraceResultEntry 7 }

ibSmTraceResultEntryPortID OBJECT-TYPE
SYNTAX OCTET STRING(SIZE(8))
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"If NodeType is CA: ID of the port used.

If NodeType is router: ID of Entry Port.
Otherwise reserved."
::= { ibSmTraceResultEntry 8 }

ibSmTraceResultExitPortID OBJECT-TYPE
SYNTAX OCTET STRING(SIZE(8))
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"If NodeType is router and path continues past this router:
ID of the exit port of the router. Otherwise reserved."

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::= { ibSmTraceResultEntry 9 }

ibSmTraceResultEntryPort OBJECT-TYPE
SYNTAX Unsigned32(0..255)
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"If NodeType is switch: number of the entry port.
Otherwise: reserved."
::= { ibSmTraceResultEntry 10 }

ibSmTraceResultExitPort OBJECT-TYPE
SYNTAX Unsigned32(0..255)
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"If NodeType is switch: number of the exit port.
Otherwise: reserved."
::= { ibSmTraceResultEntry 11 }

-- Subnet Manager Service table

ibSmServiceTable OBJECT-TYPE
SYNTAX SEQUENCE OF IbSmServiceEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"A table used to list services managed by the Subnet
Managers on this device."
::= { ibSmServiceInfo 1 }

ibSmServiceEntry OBJECT-TYPE
SYNTAX IbSmServiceEntry
MAX-ACCESS not-accessible
STATUS current

DESCRIPTION

"Table entry for ibSmServiceTable."

INDEX { ibSmServiceSubnetPrefix, ibSmServiceID,
ibSmServiceGID, ibSmServicePKey }
::= { ibSmServiceTable 1 }

IbSmServiceEntry ::= SEQUENCE {
ibSmServiceSubnetPrefix IbSmSubnetPrefix,
ibSmServiceID OCTET STRING,
ibSmServiceGID OCTET STRING,
ibSmServicePKey IbPartitionKey,
ibSmServiceLease Unsigned32,
ibSmServiceKey OCTET STRING,
ibSmServiceName SnmpAdminString,

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ibSmServiceData OCTET STRING
}

ibSmServiceSubnetPrefix OBJECT-TYPE

SYNTAX IbSmSubnetPrefix
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION

"Subnet prefix of this IB subnet."

::= { ibSmServiceEntry 1 }

ibSmServiceID OBJECT-TYPE

SYNTAX OCTET STRING (SIZE(8))
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION

"The 64-bit ID of the service."

::= { ibSmServiceEntry 2 }

ibSmServiceGID OBJECT-TYPE

SYNTAX OCTET STRING (SIZE(16))
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION

"The 128-bit multicast GID address."

::= { ibSmServiceEntry 3 }

ibSmServicePKey OBJECT-TYPE

SYNTAX IbPartitionKey
MAX-ACCESS not-accessible
STATUS current

DESCRIPTION

"The 16-bit P-Key."
 ::= { ibSmServiceEntry 4 }

ibSmServiceLease OBJECT-TYPE

SYNTAX Unsigned32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Lease period remaining (in seconds) for this service.
 A value of 4294967295 means the lease is indefinite."
 ::= { ibSmServiceEntry 5 }

ibSmServiceKey OBJECT-TYPE

SYNTAX OCTET STRING (SIZE(16))

MAX-ACCESS read-only

STATUS current

DESCRIPTION

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"The 64-bit service key."
 ::= { ibSmServiceEntry 6 }

ibSmServiceName OBJECT-TYPE

SYNTAX SnmpAdminString(SIZE(0..64))

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The name of this service."
 ::= { ibSmServiceEntry 7 }

ibSmServiceData OBJECT-TYPE

SYNTAX OCTET STRING (SIZE(64))

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Data associated with this service."
 ::= { ibSmServiceEntry 8 }

-- Subnet Manager Service Association table

--

-- When a row of this table is created or deleted, a pair of
-- { Service Key, Service Name } mapping is being added or removed on
-- the device.

--

ibSmServiceAssocTable OBJECT-TYPE

SYNTAX SEQUENCE OF IbSmServiceAssocEntry

MAX-ACCESS not-accessible
 STATUS current
 DESCRIPTION
 "A table used to list service associations managed by the
 Subnet Managers on this device."
 ::= { ibSmServiceInfo 2 }

ibSmServiceAssocEntry OBJECT-TYPE
 SYNTAX IbSmServiceAssocEntry
 MAX-ACCESS not-accessible
 STATUS current
 DESCRIPTION
 "Table entry for ibSmServiceAssocTable."
 INDEX { ibSmServiceAssocSubnetPrefix, ibSmServiceAssocKey,
 IMPLIED ibSmServiceName}
 ::= { ibSmServiceAssocTable 1 }

IbSmServiceAssocEntry ::= SEQUENCE {
 ibSmServiceAssocSubnetPrefix IbSmSubnetPrefix,
 ibSmServiceAssocKey OCTET STRING,
 ibSmServiceAssocName SnmpAdminString,

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ibSmServiceAssocRowStatus RowStatus
 }

ibSmServiceAssocSubnetPrefix OBJECT-TYPE
 SYNTAX IbSmSubnetPrefix
 MAX-ACCESS not-accessible
 STATUS current
 DESCRIPTION
 "Subnet prefix of this IB subnet."
 ::= { ibSmServiceAssocEntry 1 }

ibSmServiceAssocKey OBJECT-TYPE
 SYNTAX OCTET STRING (SIZE(16))
 MAX-ACCESS not-accessible
 STATUS current
 DESCRIPTION
 "The 64-bit service key."
 ::= { ibSmServiceAssocEntry 2 }

ibSmServiceAssocName OBJECT-TYPE
 SYNTAX SnmpAdminString(SIZE(0..64))
 MAX-ACCESS not-accessible
 STATUS current
 DESCRIPTION

"The name of this service."
 ::= { ibSmServiceAssocEntry 3 }

ibSmServiceAssocRowStatus OBJECT-TYPE

SYNTAX RowStatus
MAX-ACCESS read-create
STATUS current

DESCRIPTION

"The RowStatus for row creation and deletion."
 ::= { ibSmServiceAssocEntry 4 }

-- GUID Info table

ibSmGUIDInfoTable OBJECT-TYPE

SYNTAX SEQUENCE OF IbSmGUIDInfoEntry
MAX-ACCESS not-accessible
STATUS current

DESCRIPTION

"A table used to list Guid information of ports on CA, routers and switches that are managed by the Subnet Managers on this device."
 ::= { ibSmGUIDInfo 1 }

ibSmGUIDInfoEntry OBJECT-TYPE

SYNTAX IbSmGUIDInfoEntry
MAX-ACCESS not-accessible

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STATUS current

DESCRIPTION

"Table entry for ibSmGUIDInfoTable."
 INDEX { ibSmGUIDInfoSubnetPrefix, ibSmGUIDInfoNodeGUID,
 ibSmGUIDInfoPortNum, ibSmGUIDInfoBlockNum }
 ::= { ibSmGUIDInfoTable 1 }

IbSmGUIDInfoEntry ::= SEQUENCE {

ibSmGUIDInfoSubnetPrefix IbSmSubnetPrefix,
ibSmGUIDInfoNodeGUID IbGuid,
ibSmGUIDInfoPortNum IbDataPort,
ibSmGUIDInfoBlockNum Unsigned32,
ibSmGUIDInfoBlock OCTET STRING

}

ibSmGUIDInfoSubnetPrefix OBJECT-TYPE

SYNTAX IbSmSubnetPrefix
MAX-ACCESS not-accessible
STATUS current

DESCRIPTION

"Subnet prefix of this IB subnet."

```
::= { ibSmGUIDInfoEntry 1 }
```

```
ibSmGUIDInfoNodeGUID OBJECT-TYPE
```

```
SYNTAX          IbGuid
```

```
MAX-ACCESS      not-accessible
```

```
STATUS          current
```

```
DESCRIPTION
```

```
    "The 64-bit Node GUID of this Guid Info entry."
```

```
::= { ibSmGUIDInfoEntry 2 }
```

```
ibSmGUIDInfoPortNum OBJECT-TYPE
```

```
SYNTAX          IbDataPort
```

```
MAX-ACCESS      not-accessible
```

```
STATUS          current
```

```
DESCRIPTION
```

```
    "The port number of this Guid Info entry."
```

```
::= { ibSmGUIDInfoEntry 3 }
```

```
ibSmGUIDInfoBlockNum OBJECT-TYPE
```

```
SYNTAX          Unsigned32(0..31)
```

```
MAX-ACCESS      not-accessible
```

```
STATUS          current
```

```
DESCRIPTION
```

```
    "The port number of this Guid Info entry."
```

```
::= { ibSmGUIDInfoEntry 4 }
```

```
ibSmGUIDInfoBlock OBJECT-TYPE
```

```
SYNTAX          OCTET STRING(SIZE(64))
```

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

```
STATUS          current
```

```
DESCRIPTION
```

```
    "The GUIDInfo block."
```

```
::= { ibSmGUIDInfoEntry 5 }
```

```
-- Notification data objects
```

```
ibSmTrapSubnetPrefix OBJECT-TYPE
```

```
SYNTAX IbSmSubnetPrefix
```

```
MAX-ACCESS accessible-for-notify
```

```
STATUS current
```

```
DESCRIPTION
```

```
    "Subnet prefix of the source of the trap."
```

```
::= { ibSmTrapData 1 }
```

```
ibSmTrapType OBJECT-TYPE
```

```
SYNTAX INTEGER {
```

```

        fatal(0),
        urgent(1),
        security(2),
        subnetMgmt(3),
        informational(4)
    }
    MAX-ACCESS accessible-for-notify
    STATUS current
    DESCRIPTION
        "Enumeration indicates the type of the trap."
    ::= { ibSmTrapData 2 }

```

```

ibSmTrapProducerType OBJECT-TYPE
    SYNTAX INTEGER {
        channelAdapter(1),
        switch(2),
        router(3),
        subnetMgmt(4)
    }
    MAX-ACCESS accessible-for-notify
    STATUS current
    DESCRIPTION
        "Type of node producing the trap:
         1: channelAdapter; 2: switch; 3: router; 4: subnet management."
    ::= { ibSmTrapData 3 }

```

```

ibSmTrapNodeGUID1 OBJECT-TYPE
    SYNTAX IbGuid
    MAX-ACCESS accessible-for-notify
    STATUS current
    DESCRIPTION

```

```

        "Node GUID of the related node."
    ::= { ibSmTrapData 4 }

```

```

ibSmTrapPortNum1 OBJECT-TYPE
    SYNTAX IbDataPort
    MAX-ACCESS accessible-for-notify
    STATUS current
    DESCRIPTION
        "Local port number of the related port."
    ::= { ibSmTrapData 5 }

```

```

ibSmTrapNodeGUID2 OBJECT-TYPE
    SYNTAX IbGuid
    MAX-ACCESS accessible-for-notify

```

STATUS current
DESCRIPTION
 "Node GUID of the related node."
 ::= { ibSmTrapData 6 }

ibSmTrapPortNum2 OBJECT-TYPE
 SYNTAX IbDataPort
 MAX-ACCESS accessible-for-notify
 STATUS current
 DESCRIPTION
 "Local port number of the related port."
 ::= { ibSmTrapData 7 }

ibSmTrapMCGid OBJECT-TYPE
 SYNTAX OCTET STRING(SIZE(16))
 MAX-ACCESS accessible-for-notify
 STATUS current
 DESCRIPTION
 "Related Multicast GID."
 ::= { ibSmTrapData 8 }

ibSmTrapSwitchGUID OBJECT-TYPE
 SYNTAX IbGuid
 MAX-ACCESS accessible-for-notify
 STATUS current
 DESCRIPTION
 "Related Switch node guid."
 ::= { ibSmTrapData 9 }

ibSmTrapSwitchPortNum OBJECT-TYPE
 SYNTAX IbDataPort
 MAX-ACCESS accessible-for-notify
 STATUS current
 DESCRIPTION
 "Related Switch port number."

::= { ibSmTrapData 10 }

ibSmTrapCapabilityMask OBJECT-TYPE
 SYNTAX OCTET STRING(SIZE(4))
 MAX-ACCESS accessible-for-notify
 STATUS current
 DESCRIPTION
 "Related port capability mask."
 ::= { ibSmTrapData 11 }

ibSmTrapSystemImageGUID OBJECT-TYPE

SYNTAX IbGuid
MAX-ACCESS accessible-for-notify
STATUS current
DESCRIPTION
 "Related system image guid."
 ::= { ibSmTrapData 12 }

ibSmTrapMethod OBJECT-TYPE
 SYNTAX Unsigned32(0..65535)
 MAX-ACCESS accessible-for-notify
 STATUS current
 DESCRIPTION
 "Related MAD method."
 ::= { ibSmTrapData 13 }

ibSmTrapAttribId OBJECT-TYPE
 SYNTAX Unsigned32(0..65535)
 MAX-ACCESS accessible-for-notify
 STATUS current
 DESCRIPTION
 "Related MAD attribute ID."
 ::= { ibSmTrapData 14 }

ibSmTrapAttribModifier OBJECT-TYPE
 SYNTAX Unsigned32
 MAX-ACCESS accessible-for-notify
 STATUS current
 DESCRIPTION
 "Related MAD attribute modifier."
 ::= { ibSmTrapData 15 }

ibSmTrapMKey OBJECT-TYPE
 SYNTAX OCTET STRING(SIZE(8))
 MAX-ACCESS accessible-for-notify
 STATUS current
 DESCRIPTION
 "Related violating M Key."
 ::= { ibSmTrapData 16 }

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ibSmTrapDRSLid OBJECT-TYPE
 SYNTAX Unsigned32(0..65535)
 MAX-ACCESS accessible-for-notify
 STATUS current
 DESCRIPTION
 "Directed Route LID of the SMP causing this trap."

::= { ibSmTrapData 17 }

ibSmTrapDRNotice OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS accessible-for-notify

STATUS current

DESCRIPTION

"Indicates whether this event results from a directed
route SMP."

::= { ibSmTrapData 18 }

ibSmTrapDRPathTruncated OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS accessible-for-notify

STATUS current

DESCRIPTION

"Indicates whether the return path has been truncated."

::= { ibSmTrapData 19 }

ibSmTrapDRHopCount OBJECT-TYPE

SYNTAX Unsigned32(0..63)

MAX-ACCESS accessible-for-notify

STATUS current

DESCRIPTION

"Number of hops in the route."

::= { ibSmTrapData 20 }

ibSmTrapDRReturnPath OBJECT-TYPE

SYNTAX OCTET STRING(SIZE(0..30))

MAX-ACCESS accessible-for-notify

STATUS current

DESCRIPTION

"Return path from the directed route SMP."

::= { ibSmTrapData 21 }

ibSmTrapPKey OBJECT-TYPE

SYNTAX IbPartitionKey

MAX-ACCESS accessible-for-notify

STATUS current

DESCRIPTION

"The violating partition key."

::= { ibSmTrapData 22 }

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ibSmTrapQueuePair1 OBJECT-TYPE

SYNTAX Unsigned32(0..16777215)

MAX-ACCESS accessible-for-notify

STATUS current
DESCRIPTION
 "The related queue pair."
 ::= { ibSmTrapData 23 }

ibSmTrapQueuePair2 OBJECT-TYPE
SYNTAX Unsigned32(0..16777215)
MAX-ACCESS accessible-for-notify
STATUS current
DESCRIPTION
 "The related queue pair."
 ::= { ibSmTrapData 24 }

ibSmTrapServiceLevel OBJECT-TYPE
SYNTAX Unsigned32(0..15)
MAX-ACCESS accessible-for-notify
STATUS current
DESCRIPTION
 "The related service level."
 ::= { ibSmTrapData 25 }

ibSmTrapQKey OBJECT-TYPE
SYNTAX OCTET STRING(SIZE(4))
MAX-ACCESS accessible-for-notify
STATUS current
DESCRIPTION
 "The violating Q key."
 ::= { ibSmTrapData 26 }

ibSmTrapDataValid OBJECT-TYPE
SYNTAX BITS {
 lidAddr1(0),
 lidAddr2(1),
 pKey(2),
 sl(3),
 qp1(4),
 qp2(5),
 gidAddr1(6),
 gidAddr2(7),
 reserved(8)
}
MAX-ACCESS accessible-for-notify
STATUS current
DESCRIPTION
 "Indicates validity of the optional data fields of

```

        ibSmTrapSwitchExternalPortsBadPKey."
    ::= { ibSmTrapData 27 }

ibSmTrapVendorID OBJECT-TYPE
    SYNTAX IbSmVendorID
    MAX-ACCESS accessible-for-notify
    STATUS current
    DESCRIPTION
        "Device vendor ID, per IEEE.
        see www.standards.ieee.org/regauth/oui/oui.txt for details."
    ::= { ibSmTrapData 28 }

ibSmTrapDeviceID OBJECT-TYPE
    SYNTAX OCTET STRING (SIZE(2))
    MAX-ACCESS accessible-for-notify
    STATUS current
    DESCRIPTION
        "Device ID information as assigned by device manufacturer."
    ::= { ibSmTrapData 29 }

ibSmTrapVendorDetailedData OBJECT-TYPE
    SYNTAX OCTET STRING (SIZE(54))
    MAX-ACCESS accessible-for-notify
    STATUS current
    DESCRIPTION
        "Vendor specific detailed notification data."
    ::= { ibSmTrapData 30 }

-- generic notifications(traps) --

-- to make the notifications reversible
ibSmGenericTrapsPrefix OBJECT IDENTIFIER
    ::= { ibSmGenericTraps 0 }

ibSmTrapInService NOTIFICATION-TYPE
    OBJECTS {
        ibSmTrapSubnetPrefix,
        ibSmTrapType,
        ibSmTrapProducerType,
        ibSmTrapNodeGUID1,
        ibSmTrapPortNum1
    }
    STATUS current
    DESCRIPTION
        "Port is now in service."
    ::= { ibSmGenericTrapsPrefix 1 }

ibSmTrapOutOfService NOTIFICATION-TYPE
    OBJECTS {

```

```
        ibSmTrapSubnetPrefix,
        ibSmTrapType,
        ibSmTrapProducerType,
        ibSmTrapNodeGUID1,
        ibSmTrapPortNum1
    }
    STATUS      current
    DESCRIPTION
        "Port is now out of service."
    ::= { ibSmGenericTrapsPrefix 2 }

ibSmTrapMCGroupCreated NOTIFICATION-TYPE
    OBJECTS {
        ibSmTrapSubnetPrefix,
        ibSmTrapType,
        ibSmTrapProducerType,
        ibSmTrapMCGid
    }
    STATUS      current
    DESCRIPTION
        "A multicast group has been created."
    ::= { ibSmGenericTrapsPrefix 3 }

ibSmTrapMCGroupDeleted NOTIFICATION-TYPE
    OBJECTS {
        ibSmTrapSubnetPrefix,
        ibSmTrapType,
        ibSmTrapProducerType,
        ibSmTrapMCGid
    }
    STATUS      current
    DESCRIPTION
        "A multicast group has been deleted."
    ::= { ibSmGenericTrapsPrefix 4 }

ibSmTrapSwitchLinkStateChanged NOTIFICATION-TYPE
    OBJECTS {
        ibSmTrapSubnetPrefix,
        ibSmTrapType,
        ibSmTrapProducerType,
        ibSmTrapSwitchGUID,
        ibSmTrapSwitchPortNum
    }
    STATUS      current
    DESCRIPTION
        "A switch port's link state has changed."
    ::= { ibSmGenericTrapsPrefix 5 }
```

ibSmTrapLinkIntegrityThresholdReached NOTIFICATION-TYPE

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```
OBJECTS {
    ibSmTrapSubnetPrefix,
    ibSmTrapType,
    ibSmTrapProducerType,
    ibSmTrapNodeGUID1,
    ibSmTrapPortNum1
}
STATUS    current
DESCRIPTION
    "A port's link integrity threshold has been reached."
 ::= { ibSmGenericTrapsPrefix 6 }
```

ibSmTrapBufferOverflowThresholdReached NOTIFICATION-TYPE

```
OBJECTS {
    ibSmTrapSubnetPrefix,
    ibSmTrapType,
    ibSmTrapProducerType,
    ibSmTrapNodeGUID1,
    ibSmTrapPortNum1
}
STATUS    current
DESCRIPTION
    "A port's buffer overflow threshold has been reached."
 ::= { ibSmGenericTrapsPrefix 7 }
```

ibSmTrapFlowControlUpdateWatchdogTimerExpired NOTIFICATION-TYPE

```
OBJECTS {
    ibSmTrapSubnetPrefix,
    ibSmTrapType,
    ibSmTrapProducerType,
    ibSmTrapNodeGUID1,
    ibSmTrapPortNum1
}
STATUS    current
DESCRIPTION
    "A port's flow control update watchdog timer has expired."
 ::= { ibSmGenericTrapsPrefix 8 }
```

ibSmTrapCapabilityMaskChanged NOTIFICATION-TYPE

```
OBJECTS {
    ibSmTrapSubnetPrefix,
    ibSmTrapType,
    ibSmTrapProducerType,
```

```

        ibSmTrapNodeGUID1,
        ibSmTrapPortNum1,
        ibSmTrapCapabilityMask
    }
    STATUS    current
    DESCRIPTION

```

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```

        "A port's capability mask has changed."
        ::= { ibSmGenericTrapsPrefix 9 }

```

ibSmTrapSystemImageGUIDChanged NOTIFICATION-TYPE

```

    OBJECTS {
        ibSmTrapSubnetPrefix,
        ibSmTrapType,
        ibSmTrapProducerType,
        ibSmTrapNodeGUID1,
        ibSmTrapSystemImageGUID
    }
    STATUS    current
    DESCRIPTION
        "A node's system image guid has changed."
        ::= { ibSmGenericTrapsPrefix 10 }

```

ibSmTrapBadMKey NOTIFICATION-TYPE

```

    OBJECTS {
        ibSmTrapSubnetPrefix,
        ibSmTrapType,
        ibSmTrapProducerType,
        ibSmTrapNodeGUID1,
        ibSmTrapPortNum1,
        ibSmTrapNodeGUID2,
        ibSmTrapPortNum2,
        ibSmTrapMethod,
        ibSmTrapAttribId,
        ibSmTrapAttribModifier,
        ibSmTrapMKey,
        ibSmTrapDRSLid,
        ibSmTrapDRNotice,
        ibSmTrapDRPathTruncated,
        ibSmTrapDRHopCount,
        ibSmTrapDRReturnPath
    }
    STATUS    current
    DESCRIPTION
        "An invalid M Key has been encountered."
        ::= { ibSmGenericTrapsPrefix 11 }

```

ibSmTrapBadPKey NOTIFICATION-TYPE

```
OBJECTS {
    ibSmTrapSubnetPrefix,
    ibSmTrapType,
    ibSmTrapProducerType,
    ibSmTrapNodeGUID1,
    ibSmTrapPortNum1,
    ibSmTrapNodeGUID2,
    ibSmTrapPortNum2,
```

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```
    ibSmTrapPKey,
    ibSmTrapQueuePair1,
    ibSmTrapQueuePair2,
    ibSmTrapServiceLevel
}
```

STATUS current

DESCRIPTION

```
"An invalid Partition Key has been encountered."
 ::= { ibSmGenericTrapsPrefix 12 }
```

ibSmTrapBadQKey NOTIFICATION-TYPE

```
OBJECTS {
    ibSmTrapSubnetPrefix,
    ibSmTrapType,
    ibSmTrapProducerType,
    ibSmTrapNodeGUID1,
    ibSmTrapPortNum1,
    ibSmTrapNodeGUID2,
    ibSmTrapPortNum2,
    ibSmTrapQKey,
    ibSmTrapQueuePair1,
    ibSmTrapQueuePair2,
    ibSmTrapServiceLevel
}
```

STATUS current

DESCRIPTION

```
"An invalid Partition Key has been encountered."
 ::= { ibSmGenericTrapsPrefix 13 }
```

ibSmTrapSwitchExternalPortsBadPKey NOTIFICATION-TYPE

```
OBJECTS {
    ibSmTrapSubnetPrefix,
    ibSmTrapType,
    ibSmTrapProducerType,
    ibSmTrapSwitchGUID,
```



```

        ibSmTrapSwitchPortNum,
        ibSmTrapDataValid,
        ibSmTrapNodeGUID1,
        ibSmTrapPortNum1,
        ibSmTrapNodeGUID2,
        ibSmTrapPortNum2,
        ibSmTrapPKey,
        ibSmTrapQueuePair1,
        ibSmTrapQueuePair2,
        ibSmTrapServiceLevel
    }
STATUS    current
DESCRIPTION
    "An invalid Partition Key has been encountered by switch."

```

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```

 ::= { ibSmGenericTrapsPrefix 14 }

-- Vendor specific notifications(traps) --

-- to make notifications reversible
ibSmVendorTrapsPrefix OBJECT IDENTIFIER
 ::= { ibSmVendorTraps 0 }

ibSmTrapVendorSpecific NOTIFICATION-TYPE
OBJECTS {
    ibSmTrapSubnetPrefix,
    ibSmTrapType,
    ibSmTrapVendorID,
    ibSmTrapDeviceID,
    ibSmTrapNodeGUID1,
    ibSmTrapPortNum1,
    ibSmTrapVendorDetailedData
}
STATUS    current
DESCRIPTION
    "Vendor specific notification."
 ::= { ibSmVendorTrapsPrefix 1 }

-- compliance statements
ibSmMIBCompliance MODULE-COMPLIANCE
STATUS current
DESCRIPTION
    "The compliance statement for SNMP entities which implement
    version 1 of the IB SM MIB."
MODULE -- this module
MANDATORY-GROUPS {

```

```

        ibSmConfigInfoGroup,
        ibSmNodeInfoGroup,
        ibSmPortInfoGroup,
        ibSmSwitchInfoGroup,
        ibSmPartitionInfoGroup,
        ibSmSMInfoGroup,
        ibSmPathInfoGroup,
        ibSmServiceInfoGroup,
        ibSmGenericTrapsObjGroup,
        ibSmGenericTrapsGroup
    }
GROUP ibSmMcastInfoGroup
DESCRIPTION
    "The ibSmMcastInfoGroup will be implemented only on those
    Subnet Manager where MCMemeberRecord is supported."

GROUP ibSmGUIDInfoGroup
DESCRIPTION

```

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```

    "The ibSmGUIDInfoGroup will be implemented only on those
    Subnet Manager where GUIDInfoRecord is supported."

```

```

GROUP ibSmLinkInfoGroup
DESCRIPTION
    "The ibSmLinkInfoGroup will be implemented only on those
    Subnet Manager where LinkRecord is supported."

```

```

GROUP ibSmTraceInfoGroup
DESCRIPTION
    "The ibSmTraceInfoGroup will be implemented only on those
    Subnet Manager where TraceRecord is supported."

```

```

GROUP ibSmMultiPathInfoGroup
DESCRIPTION
    "The ibSmMultiPathInfoGroup will be implemented only on those
    Subnet Manager where MultiPathRecord is supported."

```

```

OBJECT ibSmConfigResponseTimeout
MIN-ACCESS not-accessible
DESCRIPTION
    "Read and write access is not required for agents which
    cannot provide a mechanism to manage this object."

```

```

OBJECT ibSmConfigDefaultLMC
MIN-ACCESS read-only
DESCRIPTION
    "Write access is not required for agents which

```

cannot provide a mechanism to manage this object."

OBJECT ibSmPortInfoLMC

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required for agents which
cannot provide a mechanism to modify this value safely."

OBJECT ibSmPartitionLastChange

MIN-ACCESS not-accessible

DESCRIPTION

"Read access is not required for agents which
cannot provide a reliable mechanism to manage this object."

GROUP ibSmVendorSpecificTrapsObjGroup

DESCRIPTION

"The ibSmVendorSpecificTrapsObjGroup will be implemented only on
those

Subnet Manager where vendor specific traps are supported."

GROUP ibSmVendorSpecificTrapsGroup

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DESCRIPTION

"The ibSmVendorSpecificTrapsGroup will be implemented only on
those

Subnet Manager where vendor specific traps are supported."

::= { ibSmMIBCompliances 1 }

ibSmConfigInfoGroup OBJECT-GROUP

OBJECTS {

ibSmConfigSubnetGUID,
ibSmConfigPriority,
ibSmConfigSMKey,
ibSmConfigAdminSMState,
ibSmConfigSMState,
ibSmConfigActCount,
ibSmConfigStatus,
ibSmConfigSweepInterval,
ibSmConfigResponseTimeout,
ibSmConfigPortAgingTime,
ibSmConfigMinUnicastLID,
ibSmConfigMaxUnicastLID,
ibSmConfigDefaultLMC,
ibSmConfigMasterPollInterval,
ibSmConfigMasterPollRetries,

```

        ibSmConfigMKeyLeasePeriod
    }
    STATUS current
    DESCRIPTION
        "The collection of objects which configures the subnet manager."
    ::= { ibSmMIBGroups 1 }

ibSmNodeInfoGroup OBJECT-GROUP
    OBJECTS {
        ibSmNodeInfoBaseVersion,
        ibSmNodeInfoClassVersion,
        ibSmNodeInfoType,
        ibSmNodeInfoNumPorts,
        ibSmNodeInfoSystemImageGUID,
        ibSmNodeInfoPartitionCap,
        ibSmNodeInfoDeviceID,
        ibSmNodeInfoRevision,
        ibSmNodeInfoVendorID,
        ibSmNodeInfoDescription
    }
    STATUS current
    DESCRIPTION
        "The collection of objects which represent ib nodes."
    ::= { ibSmMIBGroups 2 }

```

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```

ibSmPortInfoGroup OBJECT-GROUP
    OBJECTS {
        ibSmPortInfoMKey,
        ibSmPortInfoGIDPrefix,
        ibSmPortInfoLID,
        ibSmPortInfoMasterSmLID,
        ibSmPortInfoCapMask,
        ibSmPortInfoDiagCode,
        ibSmPortInfoMKeyLeasePeriod,
        ibSmPortInfoLinkWidthEnabled,
        ibSmPortInfoLinkWidthSupported,
        ibSmPortInfoLinkWidthActive,
        ibSmPortInfoLinkSpeedSupported,
        ibSmPortInfoState,
        ibSmPortInfoPhyState,
        ibSmPortInfoLinkDownDefState,
        ibSmPortInfoMKeyProtBits,
        ibSmPortInfoLMC,
        ibSmPortInfoLinkSpeedActive,
        ibSmPortInfoLinkSpeedEnabled,
    }

```

```

    ibSmPortInfoNeighborMTU,
    ibSmPortInfoMasterSmSL,
    ibSmPortInfoVLCap,
    ibSmPortInfoVLHighLimit,
    ibSmPortInfoVLArbHighCap,
    ibSmPortInfoVLArbLowCap,
    ibSmPortInfoMTUCap,
    ibSmPortInfoVLStallCount,
    ibSmPortInfoHOQLife,
    ibSmPortInfoOperVL,
    ibSmPortInfoInPartEnforce,
    ibSmPortInfoOutPartEnforce,
    ibSmPortInfoInFilterRawPktEnf,
    ibSmPortInfoOutFilterRawPktEnf,
    ibSmPortInfoMKeyViolation,
    ibSmPortInfoPKeyViolation,
    ibSmPortInfoQKeyViolation,
    ibSmPortInfoGUIDCap,
    ibSmPortInfoSubnetTimeout,
    ibSmPortInfoRespTime,
    ibSmPortInfoLocalPhyError,
    ibSmPortInfoOverrunError,
    ibSmPortInfoInitType,
    ibSmPortInfoInitTypeReply
}

```

```

}
STATUS current
DESCRIPTION

```

"The collection of objects which represent ib ports."

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```

 ::= { ibSmMIBGroups 3 }

```

```

ibSmSwitchInfoGroup OBJECT-GROUP

```

```

OBJECTS {

```

```

    ibSmSwitchInfoLinearFdbCap,
    ibSmSwitchInfoRandomFdbCap,
    ibSmSwitchInfoMcastFdbCap,
    ibSmSwitchInfoLinearFdbTop,
    ibSmSwitchInfoDefaultPort,
    ibSmSwitchInfoDefPriMcastPort,
    ibSmSwitchInfoDefNonPriMcastPort,
    ibSmSwitchInfoLifeTimeValue,
    ibSmSwitchInfoPortStateChange,
    ibSmSwitchInfoLIDsPerPort,
    ibSmSwitchInfoPartitionEnfCap,
    ibSmSwitchInfoInEnfCap,
    ibSmSwitchInfoOutEnfCap,

```

```

        ibSmSwitchInfoInFilterRawPktCap,
        ibSmSwitchInfoOutFilterRawPktCap,
        ibSmSwitchInfoEnhanced0
    }
    STATUS current
    DESCRIPTION
        "The collection of objects which represent ib switches."
    ::= { ibSmMIBGroups 4 }

```

ibSmPartitionInfoGroup OBJECT-GROUP

```

    OBJECTS {
        ibSmPartitionVector,
        ibSmPartitionVectorSize,
        ibSmPartitionVectorElementSize,
        ibSmPartitionLastChange,
        ibSmPartitionConfigSubnetPrefix,
        ibSmPartitionConfigKey,
        ibSmPartitionConfigAction,
        ibSmPartitionConfigMemberNodeGUID,
        ibSmPartitionConfigMemberPortNum,
        ibSmPartitionConfigMemberType
    }
    STATUS current
    DESCRIPTION
        "The collection of objects for partition management."
    ::= { ibSmMIBGroups 5 }

```

ibSmMcastInfoGroup OBJECT-GROUP

```

    OBJECTS {
        ibSmMcastGroupQKey,
        ibSmMcastGroupMLID,
        ibSmMcastGroupMTU,

```

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```

        ibSmMcastGroupTCClass,
        ibSmMcastGroupPKey,
        ibSmMcastGroupRate,
        ibSmMcastGroupPacketLifeTime,
        ibSmMcastGroupSL,
        ibSmMcastGroupFlowLabel,
        ibSmMcastGroupHopLimit,
        ibSmMcastGroupScope,
        ibSmMcastMemberVector,
        ibSmMcastMemberVectorSize,
        ibSmMcastMemberVectorElementSize,
        ibSmMcastMemberLastChange
    }

```

```
STATUS current
DESCRIPTION
    "The collection of objects for multicast management."
::= { ibSmMIBGroups 6 }
```

ibSmSMInfoGroup OBJECT-GROUP

```
OBJECTS {
    ibSmSMInfoSMKey,
    ibSmSMInfoActCount,
    ibSmSMInfoPriority,
    ibSmSMInfoSMState
}
```

STATUS current

DESCRIPTION

```
    "The collection of objects which represent IB subnet managers."
::= { ibSmMIBGroups 7 }
```

ibSmLinkInfoGroup OBJECT-GROUP

```
OBJECTS {
    ibSmLinkToNodeGUID,
    ibSmLinkToPortNum
}
```

STATUS current

DESCRIPTION

```
    "The collection of objects which represent IB links."
::= { ibSmMIBGroups 8 }
```

ibSmPathInfoGroup OBJECT-GROUP

```
OBJECTS {
    ibSmPathReqRowStatus,
    ibSmPathReqCreationTime,
    ibSmPathReqRowCompMask,
    ibSmPathReqDstGID,
    ibSmPathReqSrcGID,
    ibSmPathReqNumbPath,
    ibSmPathReqDstLID,
```

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```
    ibSmPathReqSrcLID,
    ibSmPathReqRawTraffic,
    ibSmPathReqFlowLabel,
    ibSmPathReqHopLimit,
    ibSmPathReqTClass,
    ibSmPathReqPKey,
    ibSmPathReqSL,
    ibSmPathReqMTUSel,
    ibSmPathReqMTU,
```

```

    ibSmPathReqRateSel,
    ibSmPathReqRate,
    ibSmPathReqPktLifeTimeSel,
    ibSmPathReqPktLifeTime,
    ibSmPathReqPreference,
    ibSmPathResultDstGID,
    ibSmPathResultSrcGID,
    ibSmPathResultNumbPath,
    ibSmPathResultDstLID,
    ibSmPathResultSrcLID,
    ibSmPathResultRawTraffic,
    ibSmPathResultFlowLabel,
    ibSmPathResultHopLimit,
    ibSmPathResultTCClass,
    ibSmPathResultPKey,
    ibSmPathResultSL,
    ibSmPathResultMTUSel,
    ibSmPathResultMTU,
    ibSmPathResultRateSel,
    ibSmPathResultRate,
    ibSmPathResultPktLifeTimeSel,
    ibSmPathResultPktLifeTime,
    ibSmPathResultPreference
}
STATUS current
DESCRIPTION
    "The collection of objects for path management."
 ::= { ibSmMIBGroups 9 }

```

ibSmMultiPathInfoGroup OBJECT-GROUP

```

OBJECTS {
    ibSmMultiPathReqRowStatus,
    ibSmMultiPathReqCreationTime,
    ibSmMultiPathReqCompMask,
    ibSmMultiPathReqRawTraffic,
    ibSmMultiPathReqFlowLabel,
    ibSmMultiPathReqHopLimit,
    ibSmMultiPathReqTCClass,
    ibSmMultiPathReqNumbPath,
    ibSmMultiPathReqPKey,

```

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```

    ibSmMultiPathReqSL,
    ibSmMultiPathReqMTUSel,
    ibSmMultiPathReqMTU,
    ibSmMultiPathReqRateSel,
    ibSmMultiPathReqRate,

```


ibSmMultiPathReqPktLifeTimeSel,
ibSmMultiPathReqPktLifeTime,
ibSmMultiPathReqIndepSel,
ibSmMultiPathReqSGIDCount,
ibSmMultiPathReqDGIDCount,
ibSmMultiPathReqSDGIDBlock1,
ibSmMultiPathReqSDGIDBlock2,
ibSmMultiPathReqSDGIDBlock3,
ibSmMultiPathReqSDGIDBlock4,
ibSmMultiPathReqSDGIDBlock5,
ibSmMultiPathReqSDGIDBlock6,
ibSmMultiPathReqSDGIDBlock7,
ibSmMultiPathReqSDGIDBlock8,
ibSmMultiPathReqSDGIDBlock9,
ibSmMultiPathReqSDGIDBlock10,
ibSmMultiPathReqSDGIDBlock11,
ibSmMultiPathReqSDGIDBlock12,
ibSmMultiPathReqSDGIDBlock13,
ibSmMultiPathReqSDGIDBlock14,
ibSmMultiPathReqSDGIDBlock15,
ibSmMultiPathReqSDGIDBlock16,
ibSmMultiPathReqSDGIDBlock17,
ibSmMultiPathReqSDGIDBlock18,
ibSmMultiPathReqSDGIDBlock19,
ibSmMultiPathReqSDGIDBlock20,
ibSmMultiPathReqSDGIDBlock21,
ibSmMultiPathReqSDGIDBlock22,
ibSmMultiPathReqSDGIDBlock23,
ibSmMultiPathReqSDGIDBlock24,
ibSmMultiPathReqSDGIDBlock25,
ibSmMultiPathReqSDGIDBlock26,
ibSmMultiPathReqSDGIDBlock27,
ibSmMultiPathReqSDGIDBlock28,
ibSmMultiPathReqSDGIDBlock29,
ibSmMultiPathReqSDGIDBlock30,
ibSmMultiPathReqSDGIDBlock31,
ibSmMultiPathReqSDGIDBlock32,
ibSmMultiPathResultDstGID,
ibSmMultiPathResultSrcGID,
ibSmMultiPathResultNumbPath,
ibSmMultiPathResultDstLID,
ibSmMultiPathResultSrcLID,
ibSmMultiPathResultRawTraffic,
ibSmMultiPathResultFlowLabel,

ibSmMultiPathResultHopLimit,

```

        ibSmMultiPathResultTClass,
        ibSmMultiPathResultPKey,
        ibSmMultiPathResultSL,
        ibSmMultiPathResultMTUSel,
        ibSmMultiPathResultMTU,
        ibSmMultiPathResultRateSel,
        ibSmMultiPathResultRate,
        ibSmMultiPathResultPktLifeTimeSel,
        ibSmMultiPathResultPktLifeTime,
        ibSmMultiPathResultPreference
    }
    STATUS current
    DESCRIPTION
        "The collection of objects for multipath management."
    ::= { ibSmMIBGroups 10 }

ibSmTraceInfoGroup OBJECT-GROUP
    OBJECTS {
        ibSmTraceReqRowStatus,
        ibSmTraceReqCreationTime,
        ibSmTraceReqCompMask,
        ibSmTraceReqIDGeneration,
        ibSmTraceReqNodeType,
        ibSmTraceReqNodeID,
        ibSmTraceReqChassisID,
        ibSmTraceReqEntryPortID,
        ibSmTraceReqExitPortID,
        ibSmTraceReqEntryPort,
        ibSmTraceReqExitPort,
        ibSmTraceResultIDGeneration,
        ibSmTraceResultNodeType,
        ibSmTraceResultNodeID,
        ibSmTraceResultChassisID,
        ibSmTraceResultEntryPortID,
        ibSmTraceResultExitPortID,
        ibSmTraceResultEntryPort,
        ibSmTraceResultExitPort
    }
    STATUS current
    DESCRIPTION
        "The collection of objects for trace management."
    ::= { ibSmMIBGroups 11 }

ibSmServiceInfoGroup OBJECT-GROUP
    OBJECTS {
        ibSmServiceLease,
        ibSmServiceKey,
        ibSmServiceName,

```

```
        ibSmServiceData,
        ibSmServiceAssocRowStatus
    }
    STATUS current
    DESCRIPTION
        "The collection of objects for service management."
    ::= { ibSmMIBGroups 12 }
```

```
ibSmGUIDInfoGroup OBJECT-GROUP
    OBJECTS {
        ibSmGUIDInfoBlock
    }
    STATUS current
    DESCRIPTION
        "The collection of objects for GUID information management."
    ::= { ibSmMIBGroups 13 }
```

```
ibSmGenericTrapsObjGroup OBJECT-GROUP
    OBJECTS {
        ibSmTrapSubnetPrefix,
        ibSmTrapType,
        ibSmTrapProducerType,
        ibSmTrapNodeGUID1,
        ibSmTrapPortNum1,
        ibSmTrapNodeGUID2,
        ibSmTrapPortNum2,
        ibSmTrapMCGid,
        ibSmTrapSwitchGUID,
        ibSmTrapSwitchPortNum,
        ibSmTrapCapabilityMask,
        ibSmTrapSystemImageGUID,
        ibSmTrapMethod,
        ibSmTrapAttribId,
        ibSmTrapAttribModifier,
        ibSmTrapMKey,
        ibSmTrapDRSLid,
        ibSmTrapDRNotice,
        ibSmTrapDRPathTruncated,
        ibSmTrapDRHopCount,
        ibSmTrapDRReturnPath,
        ibSmTrapPKey,
        ibSmTrapQueuePair1,
        ibSmTrapQueuePair2,
        ibSmTrapServiceLevel,
        ibSmTrapQKey,
        ibSmTrapDataValid,
        ibSmTrapVendorID,
        ibSmTrapDeviceID
    }
```

}

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STATUS current

DESCRIPTION

"The collection of objects contained in generic notifications."

::= { ibSmMIBGroups 15 }

ibSmGenericTrapsGroup NOTIFICATION-GROUP

NOTIFICATIONS {

ibSmTrapInService,

ibSmTrapOutOfService,

ibSmTrapMCGroupCreated,

ibSmTrapMCGroupDeleted,

ibSmTrapSwitchLinkStateChanged,

ibSmTrapLinkIntegrityThresholdReached,

ibSmTrapBufferOverrunThresholdReached,

ibSmTrapFlowControlUpdateWatchdogTimerExpired,

ibSmTrapCapabilityMaskChanged,

ibSmTrapSystemImageGUIDChanged,

ibSmTrapBadMKey,

ibSmTrapBadPKey,

ibSmTrapBadQKey,

ibSmTrapSwitchExternalPortsBadPKey

}

STATUS current

DESCRIPTION

"The collection of generic notifications."

::= { ibSmMIBGroups 16 }

ibSmVendorSpecificTrapsObjGroup OBJECT-GROUP

OBJECTS {

ibSmTrapVendorDetailedData

}

STATUS current

DESCRIPTION

"The collection of objects contained in vendor specific notifications."

::= { ibSmMIBGroups 17 }

ibSmVendorSpecificTrapsGroup NOTIFICATION-GROUP

NOTIFICATIONS {

ibSmTrapVendorSpecific

}

STATUS current

DESCRIPTION

"The collection of vendor specific notifications."

::= { ibSmMIBGroups 18 }

END

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7 Revision History

This section should be removed when this document is published as an RFC.

7.1 Changes from <[draft-yang-ib-subnet-management-mib-00.txt](#)>

Cheng Yang joined as a co-author of the draft.

Most tables have been revised.

ibSmPathInfo group has been remodeled.

ibSmMultiPathInfo group has been added.

ibSmTraceInfo group has been added.

ibSmServiceAssociationTable has been added.

ibsmLinkTable has been added.

Linear Forwarding, Random Forwarding and Multicast Forwarding tables have been removed because of no interest.

Revision History section has been added to keep track of updates to the MIB.

MIB has been updated to reflect changes in InfiniBand Architecture Specification Volume 1, Release 1.1 [[IBTAArch](#)]

7.2 Changes from <[draft-yang-ib-subnet-management-mib-01.txt](#)>

Notifications/Traps have been added.

Compliance statements have been added.

GUID Information table has been added.

CA SL to VL map table, Switch SL to VL map table and VL arbitration table

has been removed because of no interest.

MIB has been resynchronized with IB-TC-MIB.

Draft name has been changed to [draft-ietf-subnet-manager-mib-00.txt](#)

8 Security Considerations

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There are a number of management objects defined in this MIB module with a MAX-ACCESS clause of read-write and/or read-create. Such objects may be considered sensitive or vulnerable in some network environments. The support for SET operations in a non-secure environment without proper protection can have a negative effect on network operations. These are the tables and objects and their sensitivity/vulnerability:

TBD: <list the tables and objects and state why they are sensitive>

Some of the readable objects in this MIB module (i.e., objects with a MAX-ACCESS other than not-accessible) may be considered sensitive or vulnerable in some network environments. It is thus important to control even GET and/or NOTIFY access to these objects and possibly to even encrypt the values of these objects when sending them over the network via SNMP. These are the tables and objects and their sensitivity/vulnerability:

TBD: <list the tables and objects and state why they are sensitive>

SNMP versions prior to SNMPv3 did not include adequate security. Even if the network itself is secure (for example by using IPsec), even then, there is no control as to who on the secure network is allowed to access and GET/SET (read/change/create/delete) the objects in this MIB module.

It is RECOMMENDED that implementers consider the security features as provided by the SNMPv3 framework (see [\[RFC3410\]](#), [section 8](#)), including full support for the SNMPv3 cryptographic mechanisms (for authentication and privacy).

Further, deployment of SNMP versions prior to SNMPv3 is NOT RECOMMENDED. Instead, it is RECOMMENDED to deploy SNMPv3 and to enable cryptographic security. It is then a customer/operator responsibility to ensure that the SNMP entity giving access to an instance of this MIB module is properly configured to give access to the objects only to those principals (users) that have legitimate rights to indeed GET or SET (change/create/delete) them.

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11 Normative References

[RFC2578] McCloghrie, K., Perkins, D., Schoenwaelder, J., Case, J., Rose, M. and S. Waldbusser, "Structure of Management Information Version 2 (SMIv2)", STD 58, [RFC 2578](#), April 1999.

[RFC2579] McCloghrie, K., Perkins, D., Schoenwaelder, J., Case, J., Rose, M. and S. Waldbusser, "Textual Conventions for SMIv2", STD 58, [RFC 2579](#), April 1999.

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SMIv2", STD 58, [RFC 2580](#), April 1999.

[IBTAArch] InfiniBand Architecture Specification Volume 1, Release 1.1, November 6, 2002.

12 Informative References

[RFC3410] Case, J., Mundy, R., Partain, D. and B. Stewart, "Introduction and Applicability Statements for Internet-Standard Management Framework", [RFC 3410](#), December 2002.

13 Acknowledgments

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