

INTERNET-DRAFT

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**Definitions of Managed Objects for the
InfiniBand Subnet Management Agent (SMA)**

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Abstract

InfiniBand Architecture (IBA) specifies a high speed, channel based, switched fabric architecture that delivers scalable performance in data centers.

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 managing InfiniBand Subnet Management Agents (SMA).

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1. Introduction

This document defines a MIB for the InfiniBand Subnet Management Agent (SMA).

The InfiniBand Architecture [[INFINIV1](#)] 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 Management Agent on each device in an InfiniBand Fabric.

Each InfiniBand node -- switch, channel adapter (CA), or router -- includes a managed entity called the Subnet Management Agent (SMA). All SMAs in an InfiniBand subnet are managed by the master Subnet Manager (SM).

The SMA receives and transmits the class of Management Datagrams (MAD) called Subnet Management Packets (SMP) when it communicates with the SM. Note: SMPs never travel beyond the boundaries of its local InfiniBand subnet. Also, SMPs always use Virtual Lane 15 (VL15) and are exclusively addressed to Queue Pair 0 (QP0).

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](#)].

2. 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](#)].

3. Structure of the MIB

This section describes the structure of the IPOIB SMA MIB.

3.1. Overview

The SNMP management of the SMA involves the monitoring of key subnet management attributes.

3.2. Discussion of MIB Groups

The SMA MIB is divided into three basic groups: MIB objects, events (notifications), and the conformance section.

3.3. The SMA MIB Objects

The SMA MIB objects primarily correlate to the Subnet Management Attributes as defined in Table 116 Subnet Management Attributes (Summary) from InfiniBand Architecture Release 1.1. Vol. 1. [[INFINIV1](#)].

These attributes are organized into fourteen major SMA MIB groups. These are: The Node Info Group, The Switch Info Group, The GUID Info Group, the Management Port Info Group, the Data Port Info Group, the Partition Key Group, the Service-Level-to-Virtual-Lane-Mapping Group, the Virtual Lane Arbitration Group, the Linear Forwarding Group, the Random Forwarding Group, the Multicast Forwarding Group, the Subnet Manager Info Group, the Vendor Diagnostics Group, and the LED Info Group.

3.3.1. The Node Info Group

This group provides node-level information common to any InfiniBand node (switch, router, or CA).

3.3.2. The Switch Info Group

This group contains management information about InfiniBand switches.

3.3.3. The GUID Info Group

This group contains the assigned local scope EUI-64 IEEE-defined 64-bit extended unique identifier (EUI-64) identifiers for CAs, routers, and switch management ports.

3.3.4. The Management Port Info Group

This group contains management information about the management port.

3.3.5. The Data Port Info Group

This group contains management information about the data ports.

3.3.6. The Partition Key Group

This group contains a table with information about the Partition Keys (P-Keys).

3.3.7. The Service-Level-to-Virtual-Lane (SLToVL) Mapping Group

This group contains the SLToVL Mapping Table that allows the mapping of Virtual Lanes to Service Levels.

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3.3.8. The Virtual Lane Arbitration Group

This group contains the table that can be used to examine the VL arbitration for the node's ports.

3.3.9. The Linear Forwarding Group

This group contains information about the Linear Unicast Forwarding Table.

3.3.10. The Random Forwarding Group

This group contains information about the Random Unicast Forwarding Table.

3.3.11. The Multicast Forwarding Group

This group contains information about the Multicast Forwarding Table.

3.3.12. The Subnet Manager Info Group

This group contains information that the Subnet Manager can use for its tasks of subnet discovery, polling, etc.

3.3.13. The Vendor Diagnostics Group

This group contains vendor-specific diagnostic information.

3.3.14. The LED Info Group

This group contains information about the node's LEDs.

3.4. The SMA Notifications Group

The SMA Notifications Group contains the definitions for the agent events.

3.4.1. SMA Notifications

Currently, there are several notifications which are specific for the SMA MIB. These include the mapping of the InfiniBand Traps to SNMP notifications. The InfiniBand traps are summarized in Table 118 Traps ([Section 14.2.5.1](#)) from InfiniBand Architecture Release 1.1 Vol. 1. [[INFINIV1](#)]

3.5. The SMA Conformance Group

The SMA Conformance Group lists the possible compliances for various types of InfiniBand nodes (basic, full switch and full router/channel adapter), and the units of conformance which define the constituent

object groups.

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3.5.1. SMA Compliance Groups

The Compliance Groups list acceptable MIB implementation requirements.

4. IPOIB SMA MIB Definitions

IB-SMA-MIB DEFINITIONS ::= BEGIN

IMPORTS

MODULE-IDENTITY, OBJECT-TYPE,
Counter32, NOTIFICATION-TYPE, Unsigned32 FROM SNMPv2-SMI
TruthValue FROM SNMPv2-TC
SnmpAdminString FROM SNMP-FRAMEWORK-MIB
MODULE-COMPLIANCE, OBJECT-GROUP,
NOTIFICATION-GROUP FROM SNMPv2-CONF
IbDataPort, IbDataPortAndInvalid, IbGuid,
IbUnicastLid, IbMulticastLid,
IbSmPortList, infinibandMIB FROM IB-TC-MIB;

ibSmaMIB MODULE-IDENTITY

LAST-UPDATED "200509011200Z" -- 1 September 2005 12:00:00 GMT
ORGANIZATION "IETF IP Over IB (IPOIB) Working Group"
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ipoverib@ietf.org."

DESCRIPTION

"Copyright (C) The Internet Society (2005). The initial version of this MIB module was published in RFC XXXX; for full legal notices see the RFC itself. Supplementary information may be available on <http://www.ietf.org/copyrights/ianamib.html>.

This module contains managed object definitions for the Subnet Management Agent instrumentation for an InfiniBand Subnet Management Agent (SMA)."

REVISION

"200509011200Z" -- 1 September 2005 12:00:00 GMT

DESCRIPTION

"Initial version published as part of RFC XXXX."
::= { infinibandMIB 3 }

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```

-- *****
-- Object Identifiers for the IPOIB SMA MIB
-- *****
    ibSmaObjects OBJECT IDENTIFIER ::= { ibSmaMIB 1 }
    ibSmaNotifications OBJECT IDENTIFIER ::= { ibSmaMIB 2 }
    ibSmaConformance OBJECT IDENTIFIER ::= { ibSmaMIB 3 }

-- *****
-- Node Info Group
-- *****
    ibSmaNodeInfo OBJECT IDENTIFIER ::= { ibSmaObjects 1 }

-- *****
-- NodeInfo Scalars Group
--
-- DESCRIPTION: This group contains scalar variables that describe
-- information about the node. It also contains objects that can
-- be used to monitor the behavior of this node via information
-- provided by the SMA.
-- *****
ibSmaNodeString OBJECT-TYPE
    SYNTAX SnmpAdminString(SIZE(1..64))
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The node description. This is the Node description string
        from the NodeDescription attribute. The contents of the
        NodeDescription attribute is the same for all ports on a
        node."
    REFERENCE
        "InfiniBand Architecture Release 1.1. Vol. 1.
        Section 14.2.5.2; Table 127 NodeDescription."
    ::= { ibSmaNodeInfo 1 }

ibSmaNodeBaseVersion OBJECT-TYPE
    SYNTAX Unsigned32(1..255)
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The supported Management Datagram (MAD) base version.
        This value indicates that the node supports up to and
        including this version. This value is the same for all
        ports on a node. (NOTE: for InfiniBand Release 1 this
        value should be set to 1.)"
    REFERENCE
        "InfiniBand Architecture Release 1.1. Vol. 1.
        Section 14.2.5.3; Table 128 NodeInfo."
    ::= { ibSmaNodeInfo 2 }

```

ibSmaNodeClassVersion OBJECT-TYPE
SYNTAX Unsigned32(1..255)
MAX-ACCESS read-only
STATUS current

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DESCRIPTION

"The supported Subnet Management Class (SMP) version.
This value indicates that the node supports up to and
including this version. This value is the same for all
ports on a node. (NOTE: for InfiniBand Release 1 this
value should be set to 1.)"

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.3](#); Table 128 NodeInfo."

::= { ibSmaNodeInfo 3 }

ibSmaNodeType OBJECT-TYPE

SYNTAX INTEGER

```
{
    channelAdapter(1),
    switch(2),
    router(3),
    reserved(4)
}
```

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Type of IBA device this SMA is supporting. InfiniBand types
are

1: Channel Adapter
2: Switch
3: Router

0,4-255: reserved"

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.3](#); Table 128 NodeInfo."

::= { ibSmaNodeInfo 4 }

ibSmaNodeNumPorts OBJECT-TYPE

SYNTAX Unsigned32(0..254)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The number of physical InfiniBand ports on this node."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.3](#); Table 128 NodeInfo."

::= { ibSmaNodeInfo 5 }

ibSmaSystemImageGuid OBJECT-TYPE

SYNTAX IbGuid

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The GUID of this node that associates this node with other nodes in the same administrative domain. These nodes are controlled by common supervisory code. This object provides a way for system software to indicate the availability of multiple paths to the

same destination via multiple nodes. If this value is 0, there is no association. This object may be equal to the `ibSmaNodeGuid` of one of the associated nodes if that node is not field-replaceable."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.3](#); Table 128 NodeInfo."

::= { `ibSmaNodeInfo` 6 }

`ibSmaNodeGuid` OBJECT-TYPE

SYNTAX `IbGuid`

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The GUID of this node. The node can be a Host Channel Adpater (HCA), Terminal Channel Adapter (TCA), switch, or router. All ports on the same node shall report the same NodeGUID value. This provides a means for uniquely identifying a node within a subnet and helps to determine the co-location of the ports."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.3](#); Table 128 NodeInfo."

::= { `ibSmaNodeInfo` 7 }

`ibSmaNodePortGuid` OBJECT-TYPE

SYNTAX `IbGuid`

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The node port GUID. One port within a node can return the NodeGUID as its PortGUID if the port is an integral part of the node and is not field-replaceable."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.3](#); Table 128 NodeInfo."

::= { `ibSmaNodeInfo` 8 }

`ibSmaNodePartitionTableNum` 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 switches. This value shall be the same for all ports on a node."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.3](#); Table 128 NodeInfo."
::= { ibSmaNodeInfo 9 }

ibSmaNodeDeviceId OBJECT-TYPE

SYNTAX OCTET STRING(SIZE(2))

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Device ID information as assigned by the device manufacturer.
This value shall be the same for all ports on a node."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.3](#); Table 128 NodeInfo."

::= { ibSmaNodeInfo 10 }

ibSmaNodeRevision OBJECT-TYPE

SYNTAX OCTET STRING(SIZE(4))

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Manufacturer assigned device revision. This value shall be
the same for all ports on a node."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.3](#); Table 128 NodeInfo."

::= { ibSmaNodeInfo 11 }

ibSmaNodeLocalPortNumOrZero OBJECT-TYPE

SYNTAX Unsigned32(0..254)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The number of the IBA port which received this SNMP request.
If the port is unknown a 0 is returned."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.3](#); Table 128 NodeInfo."

::= { ibSmaNodeInfo 12 }

ibSmaNodeVendorId OBJECT-TYPE

SYNTAX OCTET STRING(SIZE(3))

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"IEEE specified device vendor identifier. This value shall be
the same for all ports on a node."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.3](#); Table 128 NodeInfo."

::= { ibSmaNodeInfo 13 }

--
-- Objects required for Notification variable binding lists.
--

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ibSmaNodeLid OBJECT-TYPE

SYNTAX Unsigned32(0..65535)

MAX-ACCESS accessible-for-notify

STATUS current

DESCRIPTION

"Local Identifier value. Used for notification var bind list object. Retrieved from InfiniBand traps 128, 129, 130, 131, 144, 145, 256, 257, 258, and 259."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.1](#); Tables 119 -- 126 Traps and Notice Data Details For Traps nnn."

::= { ibSmaNodeInfo 14 }

ibSmaNodePortNum OBJECT-TYPE

SYNTAX IbDataPort

MAX-ACCESS accessible-for-notify

STATUS current

DESCRIPTION

"Port number. Used for notification var bind list object. Retrieved from InfiniBand traps 129, 130, 131, and 259."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.1](#); Tables 119 -- 126 Traps and Notice Data Details For Traps nnn."

::= { ibSmaNodeInfo 15 }

ibSmaNodeMethod OBJECT-TYPE

SYNTAX Unsigned32(0..255)

MAX-ACCESS accessible-for-notify

STATUS current

DESCRIPTION

"Method. Used for notification var bind list object. Retrieved from InfiniBand trap 256."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.1](#); Tables 119 -- 126 Traps and Notice Data Details For Traps nnn."

::= { ibSmaNodeInfo 16 }

ibSmaNodeAttributeId OBJECT-TYPE

SYNTAX Unsigned32(0..65535)

MAX-ACCESS accessible-for-notify

STATUS current

DESCRIPTION

"Attribute ID. Used for notification var bind list object. Retrieved from InfiniBand trap 256."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.1](#); Tables 119 -- 126 Traps and Notice Data
Details For Traps nnn."
::= { ibSmaNodeInfo 17 }

ibSmaNodeAttributeModifier OBJECT-TYPE

SYNTAX Unsigned32(0..4294967295)

MAX-ACCESS accessible-for-notify

STATUS current

DESCRIPTION

"Attribute Modifier. Used for notification var bind list object.
Retrieved from InfiniBand trap 256."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.1](#); Tables 119 -- 126 Traps and Notice Data

Details For Traps nnn."

::= { ibSmaNodeInfo 18 }

ibSmaNodeKey OBJECT-TYPE

SYNTAX OCTET STRING(SIZE(8))

MAX-ACCESS accessible-for-notify

STATUS current

DESCRIPTION

"M_Key, Q_Key or P_Key. Used for notification var bind list
object. Retrieved from InfiniBand traps 256, 257, 258, and 259.
Note: If it is a P_Key, the 16 most significant bits of the field
shall be set to 0 and the least significant bits of the field
will be set to the P_Key."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1. [Section 14.2.5.1](#);
Tables 119 -- 126 Traps and Notice Data Details For Traps nnn."

::= { ibSmaNodeInfo 19 }

ibSmaNodeLid2 OBJECT-TYPE

SYNTAX Unsigned32(0..65535)

MAX-ACCESS accessible-for-notify

STATUS current

DESCRIPTION

"To Local Identifier (LID). Used for notification var bind list
object. Retrieved from InfiniBand traps 257, 258, and 259."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.1](#); Tables 119 -- 126 Traps and Notice Data

Details For Traps nnn."

::= { ibSmaNodeInfo 20 }

ibSmaNodeServiceLevel OBJECT-TYPE

SYNTAX Unsigned32(0..15)

MAX-ACCESS accessible-for-notify

STATUS current

DESCRIPTION

"Service Level. Used for notification var bind list object.
Retrieved from InfiniBand traps 257, 258, and 259."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.1](#); Tables 119 -- 126 Traps and Notice Data
Details For Traps nnn."

::= { ibSmaNodeInfo 21 }

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ibSmaNodeQueuePair1 OBJECT-TYPE

SYNTAX Unsigned32(0..16777215)

MAX-ACCESS accessible-for-notify

STATUS current

DESCRIPTION

"Queue Pair (QP) 1. Used for notification var bind list object.
Retrieved from InfiniBand traps 257, 258, and 259."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.1](#); Tables 119 -- 126 Traps and Notice Data

Details For Traps nnn."

::= { ibSmaNodeInfo 22 }

ibSmaNodeQueuePair2 OBJECT-TYPE

SYNTAX Unsigned32(0..16777215)

MAX-ACCESS accessible-for-notify

STATUS current

DESCRIPTION

"Queue Pair (QP) 2. Used for notification var bind list object.
Retrieved from InfiniBand traps 257, 258, and 259."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.1](#); Tables 119 -- 126 Traps and Notice Data

Details For Traps nnn."

::= { ibSmaNodeInfo 23 }

ibSmaNodeGid1 OBJECT-TYPE

SYNTAX OCTET STRING(SIZE(16))

MAX-ACCESS accessible-for-notify

STATUS current

DESCRIPTION

"Global Identifier 1. Used for notification var bind list object.
Retrieved from InfiniBand traps 64, 65, 66, 67, 257, 258, and
259. Note: If no Global Routing Header (GRH) is present in the
offending packet, this value will be all zeros."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.1](#); Tables 119 -- 126 Traps and Notice Data

Details For Traps nnn."

::= { ibSmaNodeInfo 24 }

ibSmaNodeGid2 OBJECT-TYPE

SYNTAX OCTET STRING(SIZE(16))

MAX-ACCESS accessible-for-notify

STATUS current

DESCRIPTION

"Global Identifier 2. Used for notification var bind list object.
Retrieved from InfiniBand traps 257, 258, and 258. Note: If no

GRH is present in the offending packet, this value will be all zeros."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.1](#); Tables 119 -- 126 Traps and Notice Data

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Details For Traps nnn."
::= { ibSmaNodeInfo 25 }

ibSmaNodeCapMask OBJECT-TYPE

SYNTAX OCTET STRING(SIZE(4))

MAX-ACCESS accessible-for-notify

STATUS current

DESCRIPTION

"Contents of Capability Mask. Retrieved from InfiniBand trap
144."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.1](#); Tables 119 -- 126 Traps and Notice Data

Details For Traps nnn."

::= { ibSmaNodeInfo 26 }

ibSmaNodeSwitchLid OBJECT-TYPE

SYNTAX Unsigned32(0..65535)

MAX-ACCESS accessible-for-notify

STATUS current

DESCRIPTION

"The switch Local Identifier (LID). Used for notification var
bind list object. Retrieved from InfiniBand traps 259."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.1](#); Tables 119 -- 126 Traps and Notice Data

Details For Traps nnn."

::= { ibSmaNodeInfo 27 }

ibSmaNodeDataValid OBJECT-TYPE

SYNTAX BITS {

lidaddr1(0),

lidaddr2(1),

pkey(2),

sl(3),

qp1(4),

qp2(5),

gidaddr1(6),

gidaddr2(7)

}

MAX-ACCESS accessible-for-notify

STATUS current

DESCRIPTION

"Data valid field retrieved from InfiniBand trap 259.

It is a bit mask. If the bit is set, the field is valid.

bit 0: LIDADDR1

bit 1: LIDADDR2

bit 2: PKEY

bit 3: SL
bit 4: QP1
bit 5: QP2
bit 6: GIDADDR1
bit 7: GIDADDR2

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bit 8-15: reserved (0)."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.1](#); Tables 119 -- 126 Traps and Notice Data

Details For Traps nnn."

::= { ibSmaNodeInfo 28 }

-- *****

-- Switch Info Group

-- *****

ibSmaSwitchInfo OBJECT IDENTIFIER ::= { ibSmaObjects 2 }

-- *****

-- SwitchInfo Scalars Group

--

-- DESCRIPTION: This group contains scalar variables that describe

-- information about an InfiniBand switch. This group shall be

-- implemented by all switches.

-- *****

ibSmaSwLinearFdbTableNum OBJECT-TYPE

SYNTAX Unsigned32(0..49151)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Number of entries in the Linear Forwarding Data Base. This is the number of entries supported in the Linear Unicast

Forwarding Table (starting at LID=0x0000 and going up).

The InfiniBand SwitchInfo component is called LinearFDBCcap.

When the count is 0, this indicates that there is no Linear Forwarding Database present."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.4](#); Table 129 SwitchInfo."

::= { ibSmaSwitchInfo 1 }

ibSmaSwRandomFdbTableNum OBJECT-TYPE

SYNTAX Unsigned32(0..49151)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Number of entries in the Random Forwarding Data Base. This is the number of entries supported in the Random Unicast

Forwarding Table. The InfiniBand SwitchInfo component is

called RandomFDBCcap. When the count is 0, this indicates

that there is no Random Forwarding Database present."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.4](#); Table 129 SwitchInfo."
::= { ibSmaSwitchInfo 2 }

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ibSmaSwMulticastFdbTableNum OBJECT-TYPE

SYNTAX Unsigned32(0..16383)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Number of entries in the Multicast Forwarding Data Base. This is the number of entries supported in the Multicast Forwarding Table (starting at LID=0xC000 and going up). The InfiniBand SwitchInfo component is called MulticastFDBCap."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.4](#); Table 129 SwitchInfo."

::= { ibSmaSwitchInfo 3 }

ibSmaSwLinearFdbTop OBJECT-TYPE

SYNTAX Unsigned32(0..49151)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Indicates the top of the linear forwarding database. Packets received with unicast DLIDs greater than this value are discarded by the switch. A valid LinearFdbTop is less than LinearFdbCap. This component applies only to switches that implement linear forwarding tables and is ignored by switches that implement random forwarding tables. For the latter cases a 0 is returned."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.4](#); Table 129 SwitchInfo."

::= { ibSmaSwitchInfo 4 }

ibSmaSwDefaultPort OBJECT-TYPE

SYNTAX Unsigned32(0..254)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Default forwarding port for unicast packets from the other ports whose DLID does not exist in the random forwarding table. If the port number is unknown, a 0 is returned."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.4](#); Table 129 SwitchInfo."

::= { ibSmaSwitchInfo 5 }

ibSmaSwDefMcastPriPort OBJECT-TYPE

SYNTAX Unsigned32(0..254)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Default forwarding port for multicast packets from the other ports whose DLID does not exist in the forwarding table. If port number is unknown, a 0 is returned."

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REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.4](#); Table 129 SwitchInfo. Also [section 18.2.4.3.3](#) on Required Multicast Relay."

::= { ibSmaSwitchInfo 6 }

ibSmaSwDefMcastNotPriPort OBJECT-TYPE

SYNTAX Unsigned32(0..254)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Forward to this port all the multicast packets from the Default Primary port whose DLID does not exist in the forwarding table. If it is unknown, a 0 is returned."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.4](#); Table 129 SwitchInfo. Also [section 18.2.4.3.3](#) on Required Multicast Relay."

::= { ibSmaSwitchInfo 7 }

ibSmaSwLifeTimeValue OBJECT-TYPE

SYNTAX Unsigned32(0..20)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Reports the time a packet can live in the switch. This Lifetime Value (LV) is used as a parameter to calculate Switch Lifetime Limit (SLL) value. To calculate a valid SLL, the LV must be between 0 and 19, inclusive. If the LV value is greater than 19, the SLL is to be interpreted as infinite."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.4](#); Table 129 SwitchInfo. Also [section 18.2.5.4](#) on Transmitter Queueing."

::= { ibSmaSwitchInfo 8 }

ibSmaSwPortStateChange OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object is set to true(1) whenever the PortState component makes any of the following state changes in the link finite state machine (FSM):

Down --> Initialize,
Initialize --> Down,
Armed --> Down, or

Active --> Down"

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.4](#); Table 129 SwitchInfo."

::= { ibSmaSwitchInfo 9 }

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ibSmaSwLidsPerPort OBJECT-TYPE

SYNTAX Unsigned32(0..65535)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Specifies the number of LID/Link Mask Control (LMC) combinations that may be assigned to a given external port for switches that support the Random Forwarding table."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.4](#); Table 129 SwitchInfo."

::= { ibSmaSwitchInfo 10 }

ibSmaSwPartitionEnforceNum OBJECT-TYPE

SYNTAX Unsigned32(0..65535)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Specifies the number of entries in the partition enforcement table per physical IBA port. The 0 value indicates that partition enforcement is not supported by the switch."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.4](#); Table 129 SwitchInfo."

::= { ibSmaSwitchInfo 11 }

ibSmaSwInboundEnforceCap OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Flag that indicates whether the switch is capable of partition enforcement on received packets."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.4](#); Table 129 SwitchInfo."

::= { ibSmaSwitchInfo 12 }

ibSmaSwOutboundEnforceCap OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Flag that indicates whether the switch is capable of partition enforcement on transmitted packets."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.4](#); Table 129 SwitchInfo."

```
::= { ibSmaSwitchInfo 13 }
```

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ibSmaSwFilterRawPktInputCap OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Flag to indicate whether the switch is capable of
raw packet enforcement on received packets."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.4](#); Table 129 SwitchInfo."

::= { ibSmaSwitchInfo 14 }

ibSmaSwFilterRawPktOutputCap OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Flag to indicate whether the switch is capable of
raw packet enforcement on transmitted packets."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.4](#); Table 129 SwitchInfo."

::= { ibSmaSwitchInfo 15 }

ibSmaSwEnhancedPort0 OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Flag to indicate whether switch port 0 supports enhanced
functions (TCA port). If false, switch port 0 is a base
switch port 0."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.4](#); Table 129 SwitchInfo."

::= { ibSmaSwitchInfo 16 }

```
-- *****
-- The GUID Info Group
-- *****
ibSmaGuidIdInfo OBJECT IDENTIFIER ::= { ibSmaObjects 3 }

-- *****
-- The Global Unique Identifier (GUID) Info Group
--
-- DESCRIPTION: The Global Unique Identifier Table.
-- *****
```

ibSmaGuidInfoTable OBJECT-TYPE
SYNTAX SEQUENCE OF IbSmaGuidInfoEntry
MAX-ACCESS not-accessible
STATUS current

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DESCRIPTION

"A table containing SMA GUID information."
::= { ibSmaGuidInfo 1 }

ibSmaGuidInfoEntry OBJECT-TYPE

SYNTAX IbSmaGuidInfoEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"A conceptual row of the ibSmaGuidInfoTable containing information about a particular GUID entry."

INDEX { ibSmaGuidPortIndex, ibSmaGuidIndex }

::= { ibSmaGuidInfoTable 1 }

IbSmaGuidInfoEntry ::= SEQUENCE {

ibSmaGuidPortIndex IbDataPort,

ibSmaGuidIndex Unsigned32,

ibSmaGuidVal IbGuid

}

ibSmaGuidPortIndex OBJECT-TYPE

SYNTAX IbDataPort

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Index that identifies IB port associated with this GUID table."

::= { ibSmaGuidInfoEntry 1 }

ibSmaGuidIndex OBJECT-TYPE

SYNTAX Unsigned32(1..255)

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Index that identifies the GUID entry for this port. For any IB port there can be multiple 64 bit GUIDs assigned. The maximum number is implementation dependent (up to 255). If the port does not have a GUID assigned to it, the row will have 1 entry with a ibSmaGuidVal value of zeroes."

::= { ibSmaGuidInfoEntry 2 }

ibSmaGuidVal OBJECT-TYPE

SYNTAX IbGuid

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"A Global Unique Identifier (GUID) for this port entity."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1. [Section 14.2.5.5](#);

Table 130 GUIDInfo and Table 131 GUID Block Element."
 ::= { ibSmaGuidInfoEntry 3 }

```

_ _*****
-- The Port Info Group
_ _*****

_ _*****
-- PortInfo Management Port Scalars Group
--
-- DESCRIPTION: This Group contains Subnet Management Information
--               about the Management Port (InfiniBand Port 0).
_ _*****

```

ibSmaMgmtPortInfo OBJECT IDENTIFIER ::= { ibSmaObjects 4 }

ibSmaPortMKey OBJECT-TYPE

SYNTAX OCTET STRING(SIZE(8))

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The 8-byte management key that is kept locally for the management port. If the value is 0's, no authentication is done."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.6](#); Table 132 PortInfo. Also
 see [Section 14.2.4](#)."

::= { ibSmaMgmtPortInfo 1 }

ibSmaPortGidPrefix OBJECT-TYPE

SYNTAX OCTET STRING(SIZE(8))

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"GID prefix for this port."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.6](#); Table 132 PortInfo."

::= { ibSmaMgmtPortInfo 2 }

ibSmaPortLid OBJECT-TYPE

SYNTAX Unsigned32(0..49151)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The base LID of this port."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.6](#); Table 132 PortInfo."

::= { ibSmaMgmtPortInfo 3 }

ibSmaPortMasterSmLid OBJECT-TYPE
SYNTAX Unsigned32(0..49151)
MAX-ACCESS read-only
STATUS current

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DESCRIPTION

"The LID of the master SM that is managing this port."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.6](#); Table 132 PortInfo."

::= { ibSmaMgmtPortInfo 4 }

ibSmaPortIsSubnetManager OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Capability flag for this node: Is Subnet Manager?"

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.6](#); Table 132 PortInfo."

::= { ibSmaMgmtPortInfo 5 }

ibSmaPortIsNoticeSupported OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Capability flag for this node: Are Notices Supported?"

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.6](#); Table 132 PortInfo."

::= { ibSmaMgmtPortInfo 6 }

ibSmaPortIsTrapSupported OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Capability flag for this node: Are IBA Traps Supported?"

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.6](#); Table 132 PortInfo."

::= { ibSmaMgmtPortInfo 7 }

ibSmaPortIsAutoMigrateSupported OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Capability flag for this node: Is Automatic Migration Supported?"

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.6](#); Table 132 PortInfo."
::= { ibSmaMgmtPortInfo 8 }

ibSmaPortIsSlMappingSupported OBJECT-TYPE

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SYNTAX TruthValue
MAX-ACCESS read-only
STATUS current
DESCRIPTION
 "Capability flag for this node: Is SL Mapping Supported?"
REFERENCE
 "InfiniBand Architecture Release 1.1. Vol. 1.
 [Section 14.2.5.6](#); Table 132 PortInfo."
::= { ibSmaMgmtPortInfo 9 }

ibSmaPortIsMKeyNvram OBJECT-TYPE
SYNTAX TruthValue
MAX-ACCESS read-only
STATUS current
DESCRIPTION
 "Capability flag for this node: Is M_Key in NVRAM?"
REFERENCE
 "InfiniBand Architecture Release 1.1. Vol. 1.
 [Section 14.2.5.6](#); Table 132 PortInfo."
::= { ibSmaMgmtPortInfo 10 }

ibSmaPortIsPKeyNvram OBJECT-TYPE
SYNTAX TruthValue
MAX-ACCESS read-only
STATUS current
DESCRIPTION
 "Capability flag for this node: Is P_Key in NVRAM?"
REFERENCE
 "InfiniBand Architecture Release 1.1. Vol. 1.
 [Section 14.2.5.6](#); Table 132 PortInfo."
::= { ibSmaMgmtPortInfo 11 }

ibSmaPortIsLedInfoSupported OBJECT-TYPE
SYNTAX TruthValue
MAX-ACCESS read-only
STATUS current
DESCRIPTION
 "Capability flag for this node: Is LED Information
 Supported?"
REFERENCE
 "InfiniBand Architecture Release 1.1. Vol. 1.
 [Section 14.2.5.6](#); Table 132 PortInfo."
::= { ibSmaMgmtPortInfo 12 }

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

DESCRIPTION

"Capability flag for this node: Is Subnet Manager Disabled?"

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.6](#); Table 132 PortInfo."

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```
::= { ibSmaMgmtPortInfo 13 }
```

ibSmaPortIsSysImgGuidSupported OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Capability flag for this node: Is System Image GUID Supported?"

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.6](#); Table 132 PortInfo."

```
::= { ibSmaMgmtPortInfo 14 }
```

ibSmaPortIsPKeyExtPortTrapSup OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Capability flag for this node: Is P_Key Switch External Port
Trap supported?"

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.6](#); Table 132 PortInfo."

```
::= { ibSmaMgmtPortInfo 15 }
```

ibSmaPortIsCommManageSupported OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Capability flag for this node: Is Communication Management
Supported?"

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.6](#); Table 132 PortInfo."

```
::= { ibSmaMgmtPortInfo 16 }
```

ibSmaPortIsSnmpTunnelSupported OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Capability flag for this node: Is SNMP Tunneling
Supported?"

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.6](#); Table 132 PortInfo."

```
::= { ibSmaMgmtPortInfo 17 }
```

ibSmaPortIsReinitSupported OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

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DESCRIPTION

"Capability flag for this node: Is Reinitialization Supported?"

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.6](#); Table 132 PortInfo."

::= { ibSmaMgmtPortInfo 18 }

ibSmaPortIsDevManageSupported OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Capability flag for this node: Is Device Management Supported?"

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.6](#); Table 132 PortInfo."

::= { ibSmaMgmtPortInfo 19 }

ibSmaPortIsVendorClassSupported OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Capability flag for this node: Is Vendor Class Supported?"

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.6](#); Table 132 PortInfo."

::= { ibSmaMgmtPortInfo 20 }

ibSmaPortIsDrNoticeSupported OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Capability flag for this node: Is DR Notice Supported?"

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.6](#); Table 132 PortInfo."

::= { ibSmaMgmtPortInfo 21 }

ibSmaPortIsCapMaskNoticSupported OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Capability flag for this node: Is Capability Mask Notice Supported?"

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.6](#); Table 132 PortInfo."
::= { ibSmaMgmtPortInfo 22 }

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ibSmaPortIsBootMgmtSupported OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Capability flag for this node: Is Boot Management Supported?"

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.6](#); Table 132 PortInfo."

::= { ibSmaMgmtPortInfo 23 }

ibSmaPortMKeyLeasePeriod 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). The lease period is the length of time that the M_Key Protection bits are to remain non-zero after a SubnSet(PortInfo) fails the M_Key authentication check. When the value is 0, the lease period shall never expire."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.6](#); Table 132 PortInfo; Also [Section 14.2.4.2](#)."

::= { ibSmaMgmtPortInfo 24 }

ibSmaPortMKeyProtectBits OBJECT-TYPE

```
SYNTAX INTEGER {  
    noMKeyProtection(1),  
    succeedWithReturnKey(2),  
    succeedWithReturnZeroes(3),  
    failOnNoMatch(4)  
}
```

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Management Key (M_Key) protection bits."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1. [Section 14.2.5.6](#); Table 132 PortInfo; Also [Section 14.2.4.1](#); Table 115 explains the Protection Levels."

::= { ibSmaMgmtPortInfo 25 }

ibSmaPortMasterSmS1 OBJECT-TYPE

SYNTAX Unsigned32(0..15)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The administrative Service Level of the master SM that
is managing this port."

REFERENCE

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"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.6](#); Table 132 PortInfo."

::= { ibSmaMgmtPortInfo 26 }

ibSmaPortInitTypeLoad OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The initialization type flags indicate the type of initialization requested by this port before SM moves it to Active or Armed state.

Initialization Type flag: NoLoad. If the value is false(2), the attributes should be initialized. If the value is true(1), no data should be loaded into the attributes at all, asserting that the last-loaded data still exists and is valid."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.6](#); Table 132 PortInfo."

::= { ibSmaMgmtPortInfo 27 }

ibSmaPortInitTypeContent OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Initialization Type flag: PreserveContent. If the value is false(2), the port makes no request regarding the content of the data that is loaded into its attributes. If it is true(1), the port is requesting that all such data, if loaded, be set to the most recent content loaded by the SM."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.6](#); Table 132 PortInfo."

::= { ibSmaMgmtPortInfo 28 }

ibSmaPortInitTypePresence OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Initialization Type flag: PreservePresence. If the value is false(2), the port is requesting that all settable SA attributes referencing this port be removed prior to activating this port and Traps 64/65 be sent. If the value is true(1), the port is requesting that all such data be preserved, and that the traps not be sent."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.6](#); Table 132 PortInfo."
::= { ibSmaMgmtPortInfo 29 }

ibSmaPortInitTypeResuscitate OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Initialization Type flag: DoNotResuscitate. If the value is false(2), ibSmaPortInitTypeLoad, ibSmaPortInitTypeContent, and ibSmaPortInitTypePresence ARE valid. If the value is true(1), ibSmaPortInitTypeLoad, ibSmaPortInitTypeContent, and ibSmaPortInitTypePresence ARE NOT valid. The port is requesting that reinitialization of this port and the in/out of service traps (64/65) be delayed until this flag is set to false(1)."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.6](#); Table 132 PortInfo."

::= { ibSmaMgmtPortInfo 30 }

ibSmaPortInitNoLoadReply OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The Init Reply flags are written by the SM prior to changing the port to Active or Armed state.

Initialization Type Reply flag: NoLoadReply. If this value is false(2), the port attributes were initialized. If the value is true(1), no data was loaded into the port attributes."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.6](#); Table 132 PortInfo."

::= { ibSmaMgmtPortInfo 31 }

ibSmaPortInitPreserveContReply OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Initialization Type flag: PreserveContentReply. If this value is false(2), no information is available regarding the content of the data loaded into the port attributes. If the value is true(1), the data loaded into the port attributes was set to the content most recently loaded by the SM."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.6](#); Table 132 PortInfo."

::= { ibSmaMgmtPortInfo 32 }

ibSmaPortInitPreservePresReply OBJECT-TYPE
SYNTAX TruthValue
MAX-ACCESS read-only
STATUS current
DESCRIPTION

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"Initialization Type Reply flag: PreservePresenceReply. If this value is false(2), all settable SA attributes referencing this port were removed prior to activating this port and the in/out service traps 64 and 65 were sent. If the value is true(1), all such data existing when this port was last active was not removed and the traps 64/65 were not sent."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.6](#); Table 132 PortInfo."

::= { ibSmaMgmtPortInfo 33 }

ibSmaPortMKeyViolations OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Counts the number of SMP packets that have been received at this port that have invalid M_Keys. This object is a latching gauge, in that whenever the maximum gauge value is encountered (i.e., the count reaches all 1's), the SMA must reset the gauge to 0, before this object begins incrementing its count again."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.6](#); Table 132 PortInfo."

::= { ibSmaMgmtPortInfo 34 }

ibSmaPortPKeyViolations OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Counts the number of SMP packets that have been received at this port that have invalid P_Keys. This object is a latching gauge, in that whenever the maximum gauge value is encountered (i.e., the count reaches all 1's), the SMA must reset the gauge to 0, before this object begins incrementing its count again."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.6](#); Table 132 PortInfo; Also [Section 10.9.4](#)."

::= { ibSmaMgmtPortInfo 35 }

ibSmaPortQKeyViolations OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Counts the number of SMP packets that have been received at this port that have invalid Q_Keys. This object is a latching gauge, in that whenever the maximum gauge value is encountered (i.e., the count reaches all 1's), the SMA must reset the gauge to 0, before this object begins incrementing

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its count again."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.6](#); Table 132 PortInfo; Also see [Section 10.2.4](#)."

::= { ibSmaMgmtPortInfo 36 }

ibSmaPortNumGuid OBJECT-TYPE

SYNTAX Unsigned32(0..255)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

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

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.6](#); Table 132 PortInfo."

::= { ibSmaMgmtPortInfo 37 }

ibSmaPortSubnetTimeout OBJECT-TYPE

SYNTAX Unsigned32(0..31)

MAX-ACCESS read-only

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 by the SMA."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.6](#); Table 132 PortInfo."

::= { ibSmaMgmtPortInfo 38 }

ibSmaPortResponseTimeValue OBJECT-TYPE

SYNTAX Unsigned32(0..31)

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."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.6](#); Table 132 PortInfo."

::= { ibSmaMgmtPortInfo 39 }

_ _ *****

```
-- PortInfo InfiniBand Data Port Group
--
-- DESCRIPTION: This Group contains a table that contains the Subnet
--      Management Information about each InfiniBand data port.
-- *****
```

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```
ibSmaDataPortInfo OBJECT IDENTIFIER ::= { ibSmaObjects 5 }
```

```
ibSmaPortInfoTable OBJECT-TYPE
```

```
    SYNTAX SEQUENCE OF IbSmaPortInfoEntry
```

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

```
    STATUS current
```

```
    DESCRIPTION
```

```
        "A table containing SMA PortInfo information."
```

```
    ::= { ibSmaDataPortInfo 1 }
```

```
ibSmaPortInfoEntry OBJECT-TYPE
```

```
    SYNTAX IbSmaPortInfoEntry
```

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

```
    STATUS current
```

```
    DESCRIPTION
```

```
        "A conceptual row of the ibSmaPortInfoTable containing  
        information about a particular data port and its attributes."
```

```
    INDEX { ibSmaPortIndex }
```

```
    ::= { ibSmaPortInfoTable 1 }
```

```
IbSmaPortInfoEntry ::= SEQUENCE {
```

```
    ibSmaPortIndex IbDataPort,
```

```
    ibSmaPortLinkWidthEnabled INTEGER,
```

```
    ibSmaPortLinkWidthSupported INTEGER,
```

```
    ibSmaPortLinkWidthActive INTEGER,
```

```
    ibSmaPortLinkSpeedSupported INTEGER,
```

```
    ibSmaPortLinkState INTEGER,
```

```
    ibSmaPortPhysState INTEGER,
```

```
    ibSmaPortLinkDownDefaultState INTEGER,
```

```
    ibSmaPortLidMaskCount Unsigned32,
```

```
    ibSmaPortLinkSpeedActive INTEGER,
```

```
    ibSmaPortLinkSpeedEnabled INTEGER,
```

```
    ibSmaPortNeighborMtu INTEGER,
```

```
    ibSmaPortVirtLaneSupport INTEGER,
```

```
    ibSmaPortVlHighPriorityLimit Unsigned32,
```

```
    ibSmaPortVlArbHighCapacity Unsigned32,
```

```
    ibSmaPortVlArbLowCapacity Unsigned32,
```

```
    ibSmaPortMtuCapacity INTEGER,
```

```
    ibSmaPortVlStallCount Unsigned32,
```

```
    ibSmaPortHeadOfQueueLife Unsigned32,
```

```
    ibSmaPortOperationalVls INTEGER,
```

```
    ibSmaPortPartEnforceInbound TruthValue,
```

```
    ibSmaPortPartEnforceOutbound TruthValue,
```

```
    ibSmaPortFilterRawPktInbound TruthValue,
```

```
    ibSmaPortFilterRawPktOutbound TruthValue,
```

```
    ibSmaPortLocalPhysErrorThreshold Unsigned32,
```

```
    ibSmaPortOverrunErrorThreshold Unsigned32
```

```
}
```

ibSmaPortIndex OBJECT-TYPE
SYNTAX IbDataPort
MAX-ACCESS not-accessible
STATUS current

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DESCRIPTION

"Index that identifies the InfiniBand data port."
::= { ibSmaPortInfoEntry 1 }

ibSmaPortLinkWidthEnabled OBJECT-TYPE

SYNTAX INTEGER {
 oneX(1),
 fourX(2),
 oneXOr4X(3),
 twelveX(4),
 oneXOr12X(5),
 fourXOr12X(6),
 oneX4XOr12X(7),
 linkWidthSupported(8),
 other(9)
}

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Enabled link width, indicated as follows:

0: No State Change (NOP)

1: 1x

2: 4x

3: 1x or 4x

8: 12x

9: 1x or 12x

10: 4x or 12x

11: 1x, 4x or 12x

4 - 7, 12 - 254: Reserved (Ignored)

255: Set to LinkWidthSupported value."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.6](#); Table 132 PortInfo."

::= { ibSmaPortInfoEntry 2 }

ibSmaPortLinkWidthSupported OBJECT-TYPE

SYNTAX INTEGER {
 oneX(1),
 oneXOr4X(2),
 oneX4XOr12X(3),
 other(4)
}

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Supported link width for this port.

This is indicated as follows by the SMA:

1: 1x

3: 1x or 4x

11: 1x, 4x or 12x

0, 2, 4-10, 12-255: Reserved."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

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[Section 14.2.5.6](#); Table 132 PortInfo."

::= { ibSmaPortInfoEntry 3 }

ibSmaPortLinkWidthActive OBJECT-TYPE

SYNTAX INTEGER {
 oneX(1),
 fourX(2),
 twelveX(3),
 other(4)
}

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Currently active link width on this port.
This is indicated as follows by the SMA:

1: 1x
2: 4x
8: 12x
0, 3, 4-7, 9-255: Reserved."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.6](#); Table 132 PortInfo."

::= { ibSmaPortInfoEntry 4 }

ibSmaPortLinkSpeedSupported OBJECT-TYPE

SYNTAX INTEGER {
 twoPoint5Gbps(1),
 other(2)
}

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Supported link speed, indicated as follows:

1: 2.5Gbps
0, 2 - 15: reserved "

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.6](#); Table 132 PortInfo."

::= { ibSmaPortInfoEntry 5 }

ibSmaPortLinkState OBJECT-TYPE

SYNTAX INTEGER {
 down(1),
 init(2),
 armed(3),
 active(4),
 other(5)
}

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The state of the link on this port.

0: No state change

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1: Down (includes failed links)
2: Initialize
3: Armed
4: Active
5-15: Reserved"

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.6](#); Table 132 PortInfo."

::= { ibSmaPortInfoEntry 6 }

ibSmaPortPhysState OBJECT-TYPE

SYNTAX INTEGER {
 sleep(1),
 polling(2),
 disabled(3),
 portConfigTraining(4),
 linkUp(5),
 linkErrorRecovery(6),
 other(7)
}

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Physical Port State. Enumerated as:

0: No state change
1: Sleep
2: Polling
3: Disabled
4: PortConfigurationTraining
5: LinkUp
6: LinkErrorRecovery
7 - 15: Reserved"

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.6](#); Table 132 PortInfo."

::= { ibSmaPortInfoEntry 7 }

ibSmaPortLinkDownDefaultState OBJECT-TYPE

SYNTAX INTEGER {
 sleep(1),
 polling(2),
 other(3)
}

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"LinkDownDefault-State

0: No state change

1: Sleep
2: Polling
3-15: Reserved"

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

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[Section 14.2.5.6](#); Table 132 PortInfo."

::= { ibSmaPortInfoEntry 8 }

ibSmaPortLidMaskCount OBJECT-TYPE

SYNTAX Unsigned32(0..7)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"LID Mask Control count for multipath support for CA
and router ports."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.6](#); Table 132 PortInfo. Also [Section](#)

[7.11.1](#) Multipathing Requirements on End Node."

::= { ibSmaPortInfoEntry 9 }

ibSmaPortLinkSpeedActive OBJECT-TYPE

SYNTAX INTEGER {

twoPoint5Gbps(1),

other(2)

}

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Currently active link speed, indicated as follows:

1: 2.5Gbps

0, 2 - 15: reserved."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.6](#); Table 132 PortInfo."

::= { ibSmaPortInfoEntry 10 }

ibSmaPortLinkSpeedEnabled OBJECT-TYPE

SYNTAX INTEGER {

twoPoint5Gbps(1),

linkSpeedSupported(2),

other(3)

}

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Enabled link speed, indicated as follows:

0: No State Change (NOP)

1: 2.5 Gbps

2 - 14: Reserved (Ignored)

15: Set to LinkSpeedSupported value."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.6](#); Table 132 PortInfo."
::= { ibSmaPortInfoEntry 11 }

ibSmaPortNeighborMtu OBJECT-TYPE
SYNTAX INTEGER {

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```
mtu256(1),
mtu512(2),
mtu1024(3),
mtu2048(4),
mtu4096(5),
other(6)
}
```

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Active maximum MTU enabled on this port for transmit:

```
1: 256 bytes
2: 512 bytes
3: 1024 bytes
4: 2048 bytes
5: 4096 bytes
0, 6 - 15: reserved "
```

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.6](#); Table 132 PortInfo."

::= { ibSmaPortInfoEntry 12 }

ibSmaPortVirtLaneSupport OBJECT-TYPE

SYNTAX INTEGER {

```
vl0(1),
vl0ToVl1(2),
vl0ToVl3(3),
vl0ToVl7(4),
vl0ToVl14(5),
other(6)
}
```

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Virtual Lane configuration supported on this port.

Indicated as follows by the SMA:

```
1: VL0
2: VL0, VL1
3: VL0 - VL3
4: VL0 - VL7
5: VL0 - VL14
0, 6 - 15: reserved."
```

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.6](#); Table 132 PortInfo."

::= { ibSmaPortInfoEntry 13 }

ibSmaPortVlHighPriorityLimit OBJECT-TYPE

SYNTAX Unsigned32(0..255)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Limit of High Priority component of VL Arbitration Table.

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This object indicates the amount of high priority packets that can be transmitted without an opportunity to send a low priority packet. Specifically, the number of bytes that can be sent is this value times 4K bytes. A 255 value means the byte limit is unbounded and a value of 0 means that only a single packet from the high-priority table may be sent before an opportunity is given to the low-priority table."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.6](#); Table 132 PortInfo; See also [Section 7.6.9](#)."

::= { ibSmaPortInfoEntry 14 }

ibSmaPortVlArbHighCapacity OBJECT-TYPE

SYNTAX Unsigned32(0..64)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"VL/Weight pairs supported on this port in the VLArbitration table (ibSmaHiPriVlArbTable) for high priority. Shall be 1 to 64 if more than one data VL is supported on this port, 0 otherwise."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.6](#); Table 132 PortInfo; Also [Section 7.6.9](#)."

::= { ibSmaPortInfoEntry 15 }

ibSmaPortVlArbLowCapacity OBJECT-TYPE

SYNTAX Unsigned32(0..64)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"VL/Weight pairs supported on this port in the VLArbitration table (ibSmaLoPriVlArbTable) for low priority. Shall be N to 64 if more than one data VL is supported on this port, 0 otherwise, N being the number of data VLs supported."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.6](#); Table 132 PortInfo; Also see [Section 7.6.9](#)."

::= { ibSmaPortInfoEntry 16 }

ibSmaPortMtuCapacity OBJECT-TYPE

SYNTAX INTEGER {

mtu256(1),
mtu512(2),
mtu1024(3),
mtu2048(4),
mtu4096(5),

```
        other(6)
    }
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
```

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"Maximum MTU supported by this port.

- 1: 256 bytes
- 2: 512 bytes
- 3: 1024 bytes
- 4: 2048 bytes
- 5: 4096 bytes
- 0, 6 - 15: reserved "

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.6](#); Table 132 PortInfo."

::= { ibSmaPortInfoEntry 17 }

ibSmaPortVlStallCount OBJECT-TYPE

SYNTAX Unsigned32(0..7)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Specifies the number of sequential packets dropped that causes the port to enter the VLStalled state. The result of setting this value to 0 is undefined."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.6](#); Table 132 PortInfo; [Section 18.2.4.4](#)."

::= { ibSmaPortInfoEntry 18 }

ibSmaPortHeadOfQueueLife OBJECT-TYPE

SYNTAX Unsigned32(0..20)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Sets the time a packet can live at the head of a Virtual Lane queue. This variable (HL) is used to compute the Head of the Queue Lifetime Limit (HLL). It is used in the formula when the HL value is between 0 and 19, inclusive. When HL is greater than 19, the HLL is to be interpreted as infinite."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.6](#); Table 132 PortInfo; Also [Section 18.2.5.4](#)."

::= { ibSmaPortInfoEntry 19 }

ibSmaPortOperationalVls OBJECT-TYPE

SYNTAX INTEGER {

- v10(1),
- v10ToV11(2),
- v10ToV13(3),
- v10ToV17(4),
- v10ToV114(5),

```
        other(6)
    }
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
```

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"Virtual Lanes operational on this port, indicated as follows:

- 0: No change
- 1: VL0
- 2: VL0 - VL1
- 3: VL0 - VL3
- 4: VL0 - VL7
- 5: VL0 - VL14
- 6 - 15: reserved"

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.6](#); Table 132 PortInfo."

::= { ibSmaPortInfoEntry 20 }

ibSmaPortPartEnforceInbound OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Indicates support of optional inbound partition enforcement. If true, partition enforcement on packets received on this port is enabled. If false partition enforcement on packets received from this port is disabled."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.6](#); Table 132 PortInfo."

::= { ibSmaPortInfoEntry 21 }

ibSmaPortPartEnforceOutbound OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Indicates support of optional outbound partition enforcement. If true, partition enforcement on packets transmitted on this port is enabled. If false partition enforcement on packets transmitted from this port is disabled."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.6](#); Table 132 PortInfo."

::= { ibSmaPortInfoEntry 22 }

ibSmaPortFilterRawPktInbound OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Indicates support of optional inbound raw packet enforcement. If true, raw packets arriving on this port are discarded. If false, raw enforcement on packets received from this port is disabled."

REFERENCE

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"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.6](#); Table 132 PortInfo."
::= { ibSmaPortInfoEntry 23 }

ibSmaPortFilterRawPktOutbound OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Indicates support of optional outbound raw packet enforcement. If true, raw packets departing on this port are discarded. If false, raw enforcement on packets leaving from this port is disabled."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.6](#); Table 132 PortInfo."

::= { ibSmaPortInfoEntry 24 }

ibSmaPortLocalPhysErrorThreshold OBJECT-TYPE

SYNTAX Unsigned32(0..15)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Local Physical Error threshold value. When the count of marginal link errors exceeds this threshold, the local link integrity error shall be detected."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.6](#); Table 132 PortInfo; Also [Section 7.12.2](#)."

::= { ibSmaPortInfoEntry 25 }

ibSmaPortOverrunErrorThreshold OBJECT-TYPE

SYNTAX Unsigned32(0..15)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

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

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.6](#); Table 132 PortInfo; Also [Section 7.12.2](#)."

::= { ibSmaPortInfoEntry 26 }

-- *****
-- The Partition Key Group

_ _*****
ibSmaPKeyInfo OBJECT IDENTIFIER ::= { ibSmaObjects 6 }

```
-- *****
-- The Partition Key (P_Key) Table
--
-- DESCRIPTION: This table contains SMA information about the
-- Partition Key Table.
-- *****
```

```
ibSmaPKeyTable OBJECT-TYPE
    SYNTAX SEQUENCE OF IbSmaPKeyEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "This table contains SMA Partition Key information for
        this port."
    ::= { ibSmaPKeyInfo 1 }
```

```
ibSmaPKeyEntry OBJECT-TYPE
    SYNTAX IbSmaPKeyEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "A conceptual row of the ibSmaPKeyTable containing
        information about the partition keys."
    INDEX { ibSmaPKeyIBAPortIndex, ibSmaPKeyIndex }
    ::= { ibSmaPKeyTable 1 }
```

```
IbSmaPKeyEntry ::= SEQUENCE {
    ibSmaPKeyIBAPortIndex IbDataPortAndInvalid,
    ibSmaPKeyIndex Unsigned32,
    ibSmaPKeyMembership INTEGER,
    ibSmaPKeyBase Unsigned32
}
```

```
ibSmaPKeyIBAPortIndex OBJECT-TYPE
    SYNTAX IbDataPortAndInvalid
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "The IB data port index for the switch data ports.
        For switch management port 0 and for CAs and routers,
        the index value should be 255. This indicates that
        the entry is not referring to a valid switch
        data port."
    ::= { ibSmaPKeyEntry 1 }
```

```
ibSmaPKeyIndex OBJECT-TYPE
    SYNTAX Unsigned32(0..65504)
    MAX-ACCESS not-accessible
```

STATUS current

DESCRIPTION

"The entry Identifier for each Partition Key
defined on a port. (The IB spec specifies 0..2047
blocks of 32 entries each for a total of 65,504 maximum

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entries, although the implemented limit is defined by PartitionCap for CAs, routers, and switch port 0, and by PartitionEnforcementCap for the switch data ports)."

::= { ibSmaPKeyEntry 2 }

ibSmaPKeyMembership OBJECT-TYPE

SYNTAX INTEGER {
 none(1),
 limited(2),
 full(3)
}

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"If the P_Key type is limited(2), the switch may accept a packet with a matching full P_Key, but may not accept a packet with a matching limited key. If the P_Key type is full(3), the switch can accept packets with either a full or limited P_Key. If the P_Key type is none(1), there is no associated Key Base value."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.7](#); Table 134 P_KeyTable and
Table 135 P_Key Block Element."

::= { ibSmaPKeyEntry 3 }

ibSmaPKeyBase OBJECT-TYPE

SYNTAX Unsigned32(0..65527)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"15-bit base value of the P_Key that the switch will use to check against incoming packets."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.7](#); Table 134 P_KeyTable and
Table 135 P_Key Block Element."

::= { ibSmaPKeyEntry 4 }

```
-- *****
-- The Service-Level-to-Virtual-Lane-Mapping Group
-- *****
ibSmaSlToVlMapInfo OBJECT IDENTIFIER ::= { ibSmaObjects 7 }
```

```
-- *****
-- The Service Level to Virtual Lane Configuration Mapping Table
--
```

-- DESCRIPTION: This table reflects the current Service Level
-- value for the input port/output port/virtual lane.
-- *****

ibSmaSL2VLMapTable OBJECT-TYPE

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SYNTAX SEQUENCE OF IbSmaSL2VlMapEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"This table provides the virtual lane value for the output port/input port/service level mapping. Each output port contains a VL mapping for the next hop based on the input port the packet arrived on and its SL value."

::= { ibSmaSlToVlMapInfo 1 }

ibSmaSL2VlMapEntry OBJECT-TYPE

SYNTAX IbSmaSL2VlMapEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Column definitions for the VL from output/input/SL entry."

INDEX { ibSmaIBAOutPortIndex, ibSmaIBAINPortIndex,
ibSmaServiceLevelIndex }

::= { ibSmaSL2VlMapTable 1 }

```
IbSmaSL2VlMapEntry ::= SEQUENCE {  
    ibSmaIBAOutPortIndex IbDataPortAndInvalid,  
    ibSmaIBAINPortIndex IbDataPortAndInvalid,  
    ibSmaServiceLevelIndex Unsigned32,  
    ibSmaVirtualLane Unsigned32  
}
```

ibSmaIBAOutPortIndex OBJECT-TYPE

SYNTAX IbDataPortAndInvalid

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"The egress port index for the service level mapping. A value of 255 indicates the switch management port 0."

::= { ibSmaSL2VlMapEntry 1 }

ibSmaIBAINPortIndex OBJECT-TYPE

SYNTAX IbDataPortAndInvalid

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"The ingress port index for the service level mapping. A value of 255 indicates the switch management port 0."

::= { ibSmaSL2VlMapEntry 2 }

ibSmaServiceLevelIndex OBJECT-TYPE

SYNTAX Unsigned32(0..15)

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"The Service Level value index for this mapping."

::= { ibSmaSL2VLMapEntry 3 }

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ibSmaVirtualLane OBJECT-TYPE

SYNTAX Unsigned32(0..15)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The outgoing packet's Virtual Lane value for this Service Level Mapping."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.8](#); Table 136 SLtoVLMappingTable."

::= { ibSmaSL2VLMAPEntry 4 }

-- *****

-- The Virtual Lane Arbitration Group

-- *****

ibSmaVLArbInfo OBJECT IDENTIFIER ::= { ibSmaObjects 8 }

-- *****

-- The Virtual Lane High Priority Arbitration Table

--

-- DESCRIPTION: This table contains the VL High Priority

-- Arbitration Table. The second index is the list index

-- that allows for the viewing of the configuration of the

-- VL/weight pairs configured by the SM.

-- *****

ibSmaHiPriVlArbTable OBJECT-TYPE

SYNTAX SEQUENCE OF IbSmaHiPriVlArbEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"This table provides visibility into the High Priority Arbitration process for configuring VL/Weight pairs for the IB data ports."

::= { ibSmaVLArbInfo 1 }

ibSmaHiPriVlArbEntry OBJECT-TYPE

SYNTAX IbSmaHiPriVlArbEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Column definitions for High Priority Arbitration Table."

INDEX { ibSmaHiPriIBAPortIndex, ibSmaHiPriNIndex }

::= { ibSmaHiPriVlArbTable 1 }

IbSmaHiPriVlArbEntry ::= SEQUENCE {
 ibSmaHiPriIBAPortIndex IbDataPort,
 ibSmaHiPriNIndex Unsigned32,

```
    ibSmaHiPriVirtLane Unsigned32,  
    ibSmaHiPriWeight Unsigned32  
}
```

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ibSmaHiPriIBAPortIndex OBJECT-TYPESYNTAX **IbDataPort**MAX-ACCESS **not-accessible**STATUS **current**

DESCRIPTION

"The index for the configured IBA port."

::= { **ibSmaHiPriVlArbEntry 1** }**ibSmaHiPriNIndex OBJECT-TYPE**SYNTAX **Unsigned32(1..64)**MAX-ACCESS **not-accessible**STATUS **current**

DESCRIPTION

"The High Priority list index."

::= { **ibSmaHiPriVlArbEntry 2** }**ibSmaHiPriVirtLane OBJECT-TYPE**SYNTAX **Unsigned32(0..14)**MAX-ACCESS **read-only**STATUS **current**

DESCRIPTION

"The virtual lane this entry applies to."

::= { **ibSmaHiPriVlArbEntry 3** }**ibSmaHiPriWeight OBJECT-TYPE**SYNTAX **Unsigned32(0..255)**MAX-ACCESS **read-only**STATUS **current**

DESCRIPTION

"Number of 64-byte units that may be transmitted from this
VL when its turn in the arbitration process occurs. A weight
of 0 indicates that the entry should be skipped."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.9](#); Table 137 VLArbitrationTable."

::= { **ibSmaHiPriVlArbEntry 4** }

```
-- *****
-- The Virtual Lane Low Priority Arbitration Table
--
-- DESCRIPTION: This table contains the VL Low Priority Arbitration
-- Table. The second index is the list index that allows for the
-- viewing of the configuration of the VL/weight pairs done by SM.
-- *****
```

ibSmaLowPriVlArbTable OBJECT-TYPESYNTAX **SEQUENCE OF IbSmaLowPriVlArbEntry**MAX-ACCESS **not-accessible**

STATUS current

DESCRIPTION

"This table provides visibility into the Low Priority Arbitration process."

::= { ibSmaVLArbitInfo 2 }

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ibSmaLowPriVlArbEntry OBJECT-TYPE

SYNTAX IbSmaLowPriVlArbEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Column definitions for Low Priority Arbitration Table."

INDEX { ibSmaLowPriIBAPortIndex, ibSmaLowPriNIndex }

::= { ibSmaLowPriVlArbTable 1 }

```
IbSmaLowPriVlArbEntry ::= SEQUENCE {  
    ibSmaLowPriIBAPortIndex IbDataPort,  
    ibSmaLowPriNIndex Unsigned32,  
    ibSmaLowPriVirtLane Unsigned32,  
    ibSmaLowPriWeight Unsigned32  
}
```

ibSmaLowPriIBAPortIndex OBJECT-TYPE

SYNTAX IbDataPort

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"The index for the configured IB data port."

::= { ibSmaLowPriVlArbEntry 1 }

ibSmaLowPriNIndex OBJECT-TYPE

SYNTAX Unsigned32(1..64)

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"The Low Priority list index."

::= { ibSmaLowPriVlArbEntry 2 }

ibSmaLowPriVirtLane OBJECT-TYPE

SYNTAX Unsigned32(0..14)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The Virtual Lane this entry applies to."

::= { ibSmaLowPriVlArbEntry 3 }

ibSmaLowPriWeight OBJECT-TYPE

SYNTAX Unsigned32(0..255)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Number of 64-byte units that may be transmitted from this VL when its turn in the arbitration process occurs. A weight of 0 indicates that the entry should be skipped."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.9](#); Table 137 VLArbitrationTable."
::= { ibSmaLowPriVlArbEntry 4 }

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```

-- *****
-- The Linear Forwarding Group
-- *****
ibSmaLFTInfo OBJECT IDENTIFIER ::= { ibSmaObjects 9 }

-- *****
-- Linear Forwarding Table Group: ibSmaLinForTable
--
-- DESCRIPTION: This table contains information about the Linear
--               Forwarding Table.
-- *****

ibSmaLinForTable OBJECT-TYPE
    SYNTAX SEQUENCE OF IbSmaLinForEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "A table containing information about the Linear Forwarding
        Table."
    ::= { ibSmaLFTInfo 1 }

ibSmaLinForEntry OBJECT-TYPE
    SYNTAX IbSmaLinForEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "Current unicast forwarding Table entry configured by the
        Subnet Manager based on destination LID."
    INDEX { ibSmaLinDestDLIDIndex }
    ::= { ibSmaLinForTable 1 }

IbSmaLinForEntry ::= SEQUENCE {
    ibSmaLinDestDLIDIndex IbUnicastLid,
    ibSmaLinForwEgressPort IbDataPortAndInvalid
}

ibSmaLinDestDLIDIndex OBJECT-TYPE
    SYNTAX IbUnicastLid
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "Index that identifies Destination Local Identifier (DLID)
        that the forwarding entry refers to in the Linear Forwarding
        Table."
    REFERENCE
        "InfiniBand Architecture Release 1.1 Vol. 1.
        Section 14.2.5.10 LinearForwardingTable; Table 139 and
        Table 140."

```

```
::= { ibSmaLinForEntry 1 }
```

```
ibSmaLinForwEgressPort OBJECT-TYPE  
    SYNTAX IbDataPortAndInvalid  
    MAX-ACCESS read-only
```

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STATUS current

DESCRIPTION

"The port to which packets with the LID corresponding to this entry are to be forwarded."

REFERENCE

"InfiniBand Architecture Release 1.1 Vol. 1.

[Section 14.2.5.10](#) LinearForwardingTable; Table 139 and Table 140."

::= { ibSmaLinForEntry 2 }

_ _*****

-- The Random Forwarding Group

_ _*****

ibSmaRFTInfo OBJECT IDENTIFIER ::= { ibSmaObjects 10 }

_ _*****

-- Random Forwarding Table

--

-- DESCRIPTION: This Table contains Subnet Management Information
-- about the Random Forwarding Table.

_ _*****

ibSmaRandomForwardingTable OBJECT-TYPE

SYNTAX SEQUENCE OF IbSmaRandomForwardingEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"A table containing SMA Random Forwarding information."

::= { ibSmaRFTInfo 1 }

ibSmaRandomForwardingEntry OBJECT-TYPE

SYNTAX IbSmaRandomForwardingEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"A conceptual row of the ibSmaRandomForwardingTable
containing information about the Random Forwarding Table."

INDEX { ibSmaRandomForwardingPortIndex }

::= { ibSmaRandomForwardingTable 1 }

IbSmaRandomForwardingEntry ::= SEQUENCE {

ibSmaRandomForwardingPortIndex IbDataPort,

ibSmaRandomDestLID Unsigned32,

ibSmaRandomForwEgressPort IbDataPort,

ibSmaRandomLMC Unsigned32,

ibSmaRandomIsValid TruthValue

}

ibSmaRandomForwardingPortIndex OBJECT-TYPE
SYNTAX IbDataPort
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION

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"The port index value."
 ::= { ibSmaRandomForwardingEntry 1 }

ibSmaRandomDestLID OBJECT-TYPE

SYNTAX Unsigned32(1..49152)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Identifies Destination Local Identifier (DLID) that the forwarding entry refers to."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.11](#) RandomForwardingTable; Table 141 and Table 142."

::= { ibSmaRandomForwardingEntry 2 }

ibSmaRandomForwEgressPort OBJECT-TYPE

SYNTAX IbDataPort

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The port to which packets with the LID corresponding to this entry are to be forwarded."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.11](#) RandomForwardingTable; Table 141 and Table 142."

::= { ibSmaRandomForwardingEntry 3 }

ibSmaRandomLMC OBJECT-TYPE

SYNTAX Unsigned32(0..7)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The LID Mask Control (LMC) of this LID. The LMC specifies the number of Path Bits in the Local Identifier."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.11](#) RandomForwardingTable; Table 141 and Table 142."

::= { ibSmaRandomForwardingEntry 4 }

ibSmaRandomIsValid OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"If true, this LID/Port pair is valid. Note that when the SMA

sets this parameter to false(2), entries can be removed."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.11](#) RandomForwardingTable; Table 141 and
Table 142."

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```
 ::= { ibSmaRandomForwardingEntry 5 }
```

```

_*****
-- The Multicast Forwarding Group
_*****
ibSmaMFTInfo          OBJECT IDENTIFIER ::= { ibSmaObjects 11 }

_*****
-- Multicast Forwarding Table Group: ibMulForTable
--
-- DESCRIPTION: This table contains information about the Multicast
--               Forwarding Table.
_*****
```

```

ibSmaMulForTable OBJECT-TYPE
    SYNTAX SEQUENCE OF IbSmaMulForEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "A table containing information about the Multicast Forwarding
        Table."
    ::= { ibSmaMFTInfo 1 }
```

```

ibSmaMulForEntry OBJECT-TYPE
    SYNTAX IbSmaMulForEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "Current multicast forwarding table entry as configured by the
        Subnet Manager based on destination LID."
    INDEX { ibSmaMulDestDLIDIndex }
    ::= { ibSmaMulForTable 1 }
```

```

IbSmaMulForEntry ::= SEQUENCE {
    ibSmaMulDestDLIDIndex IbMulticastLid,
    ibSmaMulForwMask IbSmPortList
}
```

```

ibSmaMulDestDLIDIndex OBJECT-TYPE
    SYNTAX IbMulticastLid
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "Identifies Destination Local Identifier (DLID) that the
        forwarding entry refers to in the Multicast Forwarding Table."
    ::= { ibSmaMulForEntry 1 }
```

```

ibSmaMulForwMask OBJECT-TYPE
```

SYNTAX IbSmPortList
MAX-ACCESS read-only
STATUS current
DESCRIPTION

"A 256-bit mask that represents the port list. An incoming

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packet with this LID table entry will be forwarded to all ports for which the bit in the port mask is set to 1."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.12](#) MulticastForwardingTable; Table 143 and Table 144."

::= { ibSmaMulForEntry 2 }

```

_*****
-- The Subnet Manager Info Group
_*****
ibSmaSMInfo OBJECT IDENTIFIER ::= { ibSmaObjects 12 }

_*****
-- Subnet Manager Information Table Group
_*****
ibSmaSubMgrInfo OBJECT IDENTIFIER ::= { ibSmaSMInfo 1 }

_*****
-- Subnet Manager Information Table
--
-- DESCRIPTION: This Table contains Subnet Management Information
--               about the Subnet Managers on this subnet. This information
--               is available on a port where a Subnet Manager resides.
--               This information is used by SMs to exchange information
--               during subnet discovery and polling.
_*****

```

ibSmaSmInfoTable OBJECT-TYPE

SYNTAX SEQUENCE OF IbSmaSmInfoEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"A table containing SMA Subnet Manager information."

::= { ibSmaSubMgrInfo 1 }

ibSmaSmInfoEntry OBJECT-TYPE

SYNTAX IbSmaSmInfoEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"A conceptual row of the ibSmaSmInfoTable containing information about the Subnet Manager Table."

INDEX { ibSmaSmInfoPortIndex }

::= { ibSmaSmInfoTable 1 }

IbSmaSmInfoEntry ::= SEQUENCE {

ibSmaSmInfoPortIndex IbDataPort,

```
ibSmaSmGuid IbGuid,  
ibSmaSmSmKey OCTET STRING,  
ibSmaSmSmpCount Counter32,  
ibSmaSmPriority Unsigned32,  
ibSmaSmState INTEGER
```

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```
}
```

ibSmaSmInfoPortIndex OBJECT-TYPE

SYNTAX IbDataPort

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"The port index value."

::= { ibSmaSmInfoEntry 1 }

ibSmaSmGuid OBJECT-TYPE

SYNTAX IbGuid

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The Port GUID of the port where the SM resides."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.13](#); Table 145 SMInfo Table."

::= { ibSmaSmInfoEntry 2 }

ibSmaSmSmKey OBJECT-TYPE

SYNTAX OCTET STRING (SIZE(8))

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Key for this SM. This is shown as zeroes unless the
requesting SM is proven to be the master, or the
requester is otherwise authenticated."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.13](#); Table 145 SMInfo Table."

::= { ibSmaSmInfoEntry 3 }

ibSmaSmSmpCount OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Counter that increments each time the SM issues an
SMP or performs other management activities. This
counter is used as a heartbeat indicator by standby SMS."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.13](#); Table 145 SMInfo Table."

::= { ibSmaSmInfoEntry 4 }

ibSmaSmPriority OBJECT-TYPE

SYNTAX Unsigned32(0..15)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Administratively assigned priority for this SM. This

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can be reset by master SM. 0 is the lowest priority.
 An out-of-band mechanism shall be provided to set this
 value. The default value SHALL be 0."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.13](#); Table 145 SMInfo Table."

::= { ibSmaSmInfoEntry 5 }

ibSmaSmState OBJECT-TYPE

SYNTAX INTEGER

```
{
    notActive(1),
    discovering(2),
    standby(3),
    master(4),
    unknown(5)
}
```

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Enumerated value indicating this SM's state.

The InfiniBand enumeration values are:

0 - not active

1 - discovering

2 - standby

3 - master

4-15 - reserved.

Note: a value of reserved returns unknown(5)."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.13](#); Table 145 SMInfo Table."

::= { ibSmaSmInfoEntry 6 }

```
_ _*****
-- The Vendor Diagnostics Group
_ _*****
ibSmaVendDiagInfo OBJECT IDENTIFIER ::= { ibSmaObjects 13 }

_ _*****
-- Vendor Diagnostics Information Table
--
-- DESCRIPTION: This Table contains Subnet Management Information
-- about the Vendor Diagnostics.
_ _*****
```

ibSmaVendDiagInfoTable OBJECT-TYPE

SYNTAX SEQUENCE OF IbSmaVendDiagInfoEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"A table containing SMA Vendor Diagnostic Info information."
::= { ibSmaVendDiagInfo 1 }

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ibSmaVendDiagInfoEntry OBJECT-TYPE

SYNTAX IbSmaVendDiagInfoEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"A conceptual row of the ibSmaVendDiagInfoTable containing information about a particular data port's diagnostic status."

INDEX { ibSmaVendDiagPortIndex }

::= { ibSmaVendDiagInfoTable 1 }

IbSmaVendDiagInfoEntry ::= SEQUENCE {

ibSmaVendDiagPortIndex IbDataPortAndInvalid,

ibSmaPortGenericDiagCode INTEGER,

ibSmaPortVendorDiagCode Unsigned32,

ibSmaPortVendorDiagIndexFwd TruthValue,

ibSmaPortVendorDiagData OCTET STRING

}**ibSmaVendDiagPortIndex OBJECT-TYPE**

SYNTAX IbDataPortAndInvalid

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Index that identifies the port for the diagnostics. If the index value is 255, information about the management port is returned."

::= { ibSmaVendDiagInfoEntry 1 }

ibSmaPortGenericDiagCode OBJECT-TYPE

SYNTAX INTEGER {

portReady(1),

performingSelfTest(2),

initializing(3),

softError(4),

hardError(5),

other(6)

}

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The generic portion of the Port Info Diagnostic code."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.6](#); Table 132 PortInfo. Also see [Section](#)

[14.2.5.6.1](#); Table 133: Standard Encoding of DiagCode

Bits 3-0."

::= { ibSmaVendDiagInfoEntry 2 }

ibSmaPortVendorDiagCode OBJECT-TYPE
SYNTAX Unsigned32(0..2047)
MAX-ACCESS read-only
STATUS current

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DESCRIPTION

"The vendor specific portion of the Port Info Diagnostic code."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.6](#); Table 132 PortInfo. Also see [Section 14.2.5.6.1](#) and Figure 188."

::= { ibSmaVendDiagInfoEntry 3 }

ibSmaPortVendorDiagIndexFwd OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Flag to control ibSmaPortVendorDiagData data buffer. If this boolean is true(1), the data buffer contains meaningful vendor-supplied additional diagnostic information. If this object is false(2), the buffer is empty."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.14](#) and Table 146 VendorDiag."

::= { ibSmaVendDiagInfoEntry 4 }

ibSmaPortVendorDiagData OBJECT-TYPE

SYNTAX OCTET STRING (SIZE(124))

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Data buffer that can contain additional vendor-specific diagnostic information. The ibSmaPortVendorDiagIndexFwd flag controls whether this object contains meaningful data. Note: in IB, this buffer comprises n number of 62 byte buffers. This object defines a buffer that can hold up to 2 of these IB chained buffers."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.6](#); Table 132 PortInfo. Also see [Section 14.2.5.6.1](#) and Figure 188."

::= { ibSmaVendDiagInfoEntry 5 }

```
-- *****  
-- The LED Info Group  
-- *****  
ibSmaLedInfo OBJECT IDENTIFIER ::= { ibSmaObjects 14 }
```

```
-- *****  
-- LED Information Table  
--
```

-- DESCRIPTION: This Table contains Subnet Management Information
-- about the LEDs. Note that a CA, router, or switch indicates
-- support for this attribute in the PortInfo::CapabilityMask
-- object.
-- *****

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ibSmaLedInfoTable OBJECT-TYPE

SYNTAX SEQUENCE OF IbSmaLedInfoEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"A table containing SMA LED Info information."

::= { ibSmaLedInfo 1 }

ibSmaLedInfoEntry OBJECT-TYPE

SYNTAX IbSmaLedInfoEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"A conceptual row of the ibSmaLedInfoTable containing
information about a particular data port's LED status."

INDEX { ibSmaLedIndex }

::= { ibSmaLedInfoTable 1 }

IbSmaLedInfoEntry ::= SEQUENCE {

ibSmaLedIndex IbDataPort,

ibSmaLedState INTEGER

}**ibSmaLedIndex OBJECT-TYPE**

SYNTAX IbDataPort

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Index that identifies the IB data port with its LED."

::= { ibSmaLedInfoEntry 1 }

ibSmaLedState OBJECT-TYPE

SYNTAX INTEGER

{
unknown(1),
on(2),
off(3)
}

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"State of the LED."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.

[Section 14.2.5.15](#) LedInfo; Table 147 LedInfo Table."

::= { ibSmaLedInfoEntry 2 }

_ _ *****

```
-- Notifications Group
-- *****
ibSmaNotificationPrefix OBJECT IDENTIFIER ::= { ibSmaNotifications 0 }
```

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```
-- *****  
-- Notifications  
--  
-- DESCRIPTION: The Notifications Group contains the set of SMA  
--   Traps that will be translated into SNMP notifications and  
--   sent to the registered NMS managers.  
-- *****
```

ibSmaPortLinkStateChange NOTIFICATION-TYPE

OBJECTS

```
{  
  ibSmaNodeLid  
}
```

STATUS current

DESCRIPTION

"This notification translates InfiniBand SMA Trap 128:
Link State of at least one port of switch at <LIDADDR>
has changed."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.1](#); Table 118 and 120."

::= { ibSmaNotificationPrefix 1 }

ibSmaLinkIntegrityThresReached NOTIFICATION-TYPE

OBJECTS

```
{  
  ibSmaNodeLid,  
  ibSmaNodePortNum  
}
```

STATUS current

DESCRIPTION

"This notification translates InfiniBand SMA Trap 129:
Local Link Integrity threshold reached at <LIDADDR><PORTNO>."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.1](#); Table 118 and 121."

::= { ibSmaNotificationPrefix 2 }

ibSmaExcessBuffOverrunThres NOTIFICATION-TYPE

OBJECTS

```
{  
  ibSmaNodeLid,  
  ibSmaNodePortNum  
}
```

STATUS current

DESCRIPTION

"This notification translates InfiniBand SMA Trap 130:
Excessive Buffer Overrun threshold reached at

<LIDADDR><PORTNO>."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.1](#); Table 118 and 121."

::= { ibSmaNotificationPrefix 3 }

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ibSmaFlowCntrlUpdateTimerExpire NOTIFICATION-TYPE**OBJECTS**

```
{  
  ibSmaNodeLid,  
  ibSmaNodePortNum  
}
```

STATUS current

DESCRIPTION

"This notification translates InfiniBand SMA Trap 131:
Switch Flow Control Update watchdog timer expired at
<LIDADDR><PORTNO>."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.1](#); Table 118 and 121."

::= { ibSmaNotificationPrefix 4 }

ibSmaCapabilityMaskModified NOTIFICATION-TYPE**OBJECTS**

```
{  
  ibSmaNodeLid,  
  ibSmaNodeCapMask  
}
```

STATUS current

DESCRIPTION

"This notification translates InfiniBand SMA Trap 144:
The capability mask at <LIDADDR> has been modified to
<CAPMASK>."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.1](#); Table 118 and 122."

::= { ibSmaNotificationPrefix 5 }

ibSmaSysImageGuidModified NOTIFICATION-TYPE**OBJECTS**

```
{  
  ibSmaNodeLid,  
  ibSmaSystemImageGuid  
}
```

STATUS current

DESCRIPTION

"This notification translates InfiniBand SMA Trap 145:
The System Image GUID at <LIDADDR> has been modified to
<SYSTEMIMAGEGUID>."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.1](#); Table 118 and 123."

::= { ibSmaNotificationPrefix 6 }

ibSmaBadManagementKey NOTIFICATION-TYPE

OBJECTS

```
{  
  ibSmaNodeKey,  
  ibSmaNodeLid,
```

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```
    ibSmaNodeMethod,  
    ibSmaNodeAttributeId,  
    ibSmaNodeAttributeModifier  
  }
```

STATUS current

DESCRIPTION

"This notification translates InfiniBand SMA Trap 256:
Bad M_Key, <KEY> from <LIDADDR> attempted <METHOD>
with <ATTRIBUTEID> and <ATTRIBUTEMODIFIER>."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.1](#); Table 118 and 124."

::= { ibSmaNotificationPrefix 7 }

ibSmaBadPartitionKey NOTIFICATION-TYPE

OBJECTS

```
{  
  ibSmaNodeKey,  
  ibSmaNodeLid,  
  ibSmaNodeGid1,  
  ibSmaNodeQueuePair1,  
  ibSmaNodeLid2,  
  ibSmaNodeGid2,  
  ibSmaNodeQueuePair2,  
  ibSmaNodeServiceLevel  
}
```

STATUS current

DESCRIPTION

"This notification translates InfiniBand SMA Trap 257:
Bad P_Key, <KEY> from <LIDADDR1> /<GIDADDR1>/<QP1> to
<LIDADDR2>/<GIDADDR2>/<QP2> on <SL>."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.1](#); Table 118 and 125."

::= { ibSmaNotificationPrefix 8 }

ibSmaBadQueueKey NOTIFICATION-TYPE

OBJECTS

```
{  
  ibSmaNodeKey,  
  ibSmaNodeLid,  
  ibSmaNodeGid1,  
  ibSmaNodeQueuePair1,  
  ibSmaNodeLid2,  
  ibSmaNodeGid2,  
  ibSmaNodeQueuePair2,  
  ibSmaNodeServiceLevel  
}
```

STATUS current

DESCRIPTION

"This notification translates InfiniBand SMA Trap 258:
Bad Q_Key, <KEY> from <LIDADDR1>/<GIDADDR1>/<QP1> to
<LIDADDR2>/<GIDADDR2>/<QP2> on <SL>."

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REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.1](#); Table 118 and 125."

::= { ibSmaNotificationPrefix 9 }

ibSmaBadPKeyAtSwitchPort NOTIFICATION-TYPE

OBJECTS

```
{
  ibSmaNodeKey,
  ibSmaNodeLid,
  ibSmaNodeGid1,
  ibSmaNodeQueuePair1,
  ibSmaNodeLid2,
  ibSmaNodeGid2,
  ibSmaNodeQueuePair2,
  ibSmaNodeServiceLevel,
  ibSmaNodeSwitchLid,
  ibSmaNodeDataValid
}
```

STATUS current

DESCRIPTION

"This notification translates InfiniBand SMA Trap 259:
 Bad P_Key, <KEY> from <LIDADDR1> /<GIDADDR1>/<QP1> to
 <LIDADDR2>/<GIDADDR2>/<QP2> on <SL> at switch <LIDADDR>
 external port <PORTNO>, where the validity of the fields
 is indicated by <DataValid>."

REFERENCE

"InfiniBand Architecture Release 1.1. Vol. 1.
[Section 14.2.5.1](#); Table 118 and 126."

::= { ibSmaNotificationPrefix 10 }

-- *****

-- Module Conformance Statement

--

-- DESCRIPTION: The module conformance statement includes the
 -- compliance statements and the units of conformance
 -- section.

-- *****

ibSmaCompliances OBJECT IDENTIFIER ::= { ibSmaConformance 1 }

ibSmaGroups OBJECT IDENTIFIER ::= { ibSmaConformance 2 }

-- *****

-- Compliance Statements

-- *****

ibSmaBasicNodeCompliance MODULE-COMPLIANCE

STATUS current

DESCRIPTION

"The basic node implementation requirements for agents that support the IPOIB SMA MIB."

MODULE -- this module

MANDATORY-GROUPS {

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```
        ibSmaNodeGroup
    }
    ::= { ibSmaCompliances 1 }

ibSmaFullSwitchCompliance MODULE-COMPLIANCE
    STATUS current
    DESCRIPTION
        "The full node implementation requirements for agents that
        support the IPOIB SMA MIB for InfiniBand switches."
    MODULE -- this module
        MANDATORY-GROUPS {
            ibSmaNodeGroup,
            ibSmaSwitchGroup,
            ibSmaGuidGroup,
            ibSmaMgmtPortGroup,
            ibSmaDataPortGroup,
            ibSmaPKeyGroup,
            ibSmaSlToVlMapGroup,
            ibSmaVlArbitGroup,
            ibSmaLFTGroup,
            ibSmaRFTGroup,
            ibSmaMFTGroup,
            ibSmaSMGroup,
            ibSmaVendDiagGroup,
            ibSmaLedGroup,
            ibSmaNotificationsGroup
        }
    ::= { ibSmaCompliances 2 }

ibSmaFullRouterCACompliance MODULE-COMPLIANCE
    STATUS current
    DESCRIPTION
        "The full node implementation requirements for agents that
        support the IPOIB SMA MIB for InfiniBand CAs and routers."
    MODULE -- this module
        MANDATORY-GROUPS {
            ibSmaNodeGroup,
            ibSmaGuidGroup,
            ibSmaMgmtPortGroup,
            ibSmaDataPortGroup,
            ibSmaPKeyGroup,
            ibSmaSlToVlMapGroup,
            ibSmaVlArbitGroup,
            ibSmaSMGroup,
            ibSmaVendDiagGroup,
            ibSmaLedGroup,
            ibSmaNotificationsGroup
        }
}
```

```
 ::= { ibSmaCompliances 3 }
```

```
_ _*****  
-- Units Of Conformance  
_ _*****
```

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ibSmaNodeGroup OBJECT-GROUP

OBJECTS {

ibSmaNodeString,
ibSmaNodeBaseVersion,
ibSmaNodeClassVersion,
ibSmaNodeType,
ibSmaNodeNumPorts,
ibSmaSystemImageGuid,
ibSmaNodeGuid,
ibSmaNodePortGuid,
ibSmaNodePartitionTableNum,
ibSmaNodeDeviceId,
ibSmaNodeRevision,
ibSmaNodeLocalPortNumOrZero,
ibSmaNodeVendorId,
ibSmaNodeLid,
ibSmaNodePortNum,
ibSmaNodeMethod,
ibSmaNodeAttributeId,
ibSmaNodeAttributeModifier,
ibSmaNodeKey,
ibSmaNodeLid2,
ibSmaNodeServiceLevel,
ibSmaNodeQueuePair1,
ibSmaNodeQueuePair2,
ibSmaNodeGid1,
ibSmaNodeGid2,
ibSmaNodeCapMask,
ibSmaNodeSwitchLid,
ibSmaNodeDataValid

}

STATUS current

DESCRIPTION

"The ibSmaNodeGroup defines the MIB objects that describe
this InfiniBand subnet node."

::= { ibSmaGroups 1 }

ibSmaSwitchGroup OBJECT-GROUP

OBJECTS {

ibSmaSwLinearFdbTableNum,
ibSmaSwRandomFdbTableNum,
ibSmaSwMulticastFdbTableNum,
ibSmaSwLinearFdbTop,
ibSmaSwDefaultPort,
ibSmaSwDefMcastPriPort,
ibSmaSwDefMcastNotPriPort,
ibSmaSwLifeTimeValue,
ibSmaSwPortStateChange,

ibSmaSwLidsPerPort,
ibSmaSwPartitionEnforceNum,
ibSmaSwInboundEnforceCap,
ibSmaSwOutboundEnforceCap,
ibSmaSwFilterRawPktInputCap,

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```
        ibSmaSwFilterRawPktOutputCap,  
        ibSmaSwEnhancedPort0  
    }
```

```
STATUS current
```

```
DESCRIPTION
```

```
    "The ibSmaSwitchGroup defines the MIB objects that describe  
    this InfiniBand switch."
```

```
::= { ibSmaGroups 2 }
```

```
ibSmaGuidGroup OBJECT-GROUP
```

```
OBJECTS {
```

```
    ibSmaGuidVal
```

```
}
```

```
STATUS current
```

```
DESCRIPTION
```

```
    "The ibSmaGuidGroup defines the MIB object that describes  
    the GUIDs associated with this node."
```

```
::= { ibSmaGroups 3 }
```

```
ibSmaMgmtPortGroup OBJECT-GROUP
```

```
OBJECTS {
```

```
    ibSmaPortMKey,  
    ibSmaPortGidPrefix,  
    ibSmaPortLid,  
    ibSmaPortMasterSmLid,  
    ibSmaPortIsSubnetManager,  
    ibSmaPortIsNoticeSupported,  
    ibSmaPortIsTrapSupported,  
    ibSmaPortIsAutoMigrateSupported,  
    ibSmaPortIsSlMappingSupported,  
    ibSmaPortIsMKeyNvram,  
    ibSmaPortIsPKeyNvram,  
    ibSmaPortIsLedInfoSupported,  
    ibSmaPortIsSmDisabled,  
    ibSmaPortIsSysImgGuidSupported,  
    ibSmaPortIsPKeyExtPortTrapSup,  
    ibSmaPortIsCommManageSupported,  
    ibSmaPortIsSnmpTunnelSupported,  
    ibSmaPortIsReinitSupported,  
    ibSmaPortIsDevManageSupported,  
    ibSmaPortIsVendorClassSupported,  
    ibSmaPortIsDrNoticeSupported,  
    ibSmaPortIsCapMaskNoticSupported,  
    ibSmaPortIsBootMgmtSupported,  
    ibSmaPortMKeyLeasePeriod,  
    ibSmaPortMKeyProtectBits,  
    ibSmaPortMasterSmSl,  
    ibSmaPortInitTypeLoad,
```

ibSmaPortInitTypeContent,
ibSmaPortInitTypePresence,
ibSmaPortInitTypeResuscitate,
ibSmaPortInitNoLoadReply,
ibSmaPortInitPreserveContReply,

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```
    ibSmaPortInitPreservePresReply,  
    ibSmaPortMKeyViolations,  
    ibSmaPortPKeyViolations,  
    ibSmaPortQKeyViolations,  
    ibSmaPortNumGuid,  
    ibSmaPortSubnetTimeout,  
    ibSmaPortResponseTimeValue  
}
```

STATUS current

DESCRIPTION

"The ibSmaMgmtPortGroup defines the MIB objects that describe
the management port."

::= { ibSmaGroups 4 }

ibSmaDataPortGroup OBJECT-GROUP

OBJECTS {

```
    ibSmaPortLinkWidthEnabled,  
    ibSmaPortLinkWidthSupported,  
    ibSmaPortLinkWidthActive,  
    ibSmaPortLinkSpeedSupported,  
    ibSmaPortLinkState,  
    ibSmaPortPhysState,  
    ibSmaPortLinkDownDefaultState,  
    ibSmaPortLidMaskCount,  
    ibSmaPortLinkSpeedActive,  
    ibSmaPortLinkSpeedEnabled,  
    ibSmaPortNeighborMtu,  
    ibSmaPortVirtLaneSupport,  
    ibSmaPortVlHighPriorityLimit,  
    ibSmaPortVlArbHighCapacity,  
    ibSmaPortVlArbLowCapacity,  
    ibSmaPortMtuCapacity,  
    ibSmaPortVlStallCount,  
    ibSmaPortHeadOfQueueLife,  
    ibSmaPortOperationalVls,  
    ibSmaPortPartEnforceInbound,  
    ibSmaPortPartEnforceOutbound,  
    ibSmaPortFilterRawPktInbound,  
    ibSmaPortFilterRawPktOutbound,  
    ibSmaPortLocalPhysErrorThreshold,  
    ibSmaPortOverrunErrorThreshold
```

}

STATUS current

DESCRIPTION

"The ibSmaDataPortGroup defines MIB objects for IB data ports."

::= { ibSmaGroups 5 }

ibSmaPKeyGroup OBJECT-GROUP

```
OBJECTS {  
    ibSmaPKeyMembership,  
    ibSmaPKeyBase  
}  
STATUS current
```

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DESCRIPTION

"The ibSmaPKeyGroup defines the MIB objects that describe the Partition Keys."

::= { ibSmaGroups 6 }

ibSmaSlToVlMapGroup OBJECT-GROUP

OBJECTS {

ibSmaVirtualLane

}

STATUS current

DESCRIPTION

"The ibSmaSlToVlMapGroup defines the MIB objects that describe the Service Level to Virtual Lane mapping."

::= { ibSmaGroups 7 }

ibSmaVLArbitGroup OBJECT-GROUP

OBJECTS {

ibSmaHiPriVirtLane,

ibSmaHiPriWeight,

ibSmaLowPriVirtLane,

ibSmaLowPriWeight

}

STATUS current

DESCRIPTION

"The ibSmaVLArbitGroup defines the MIB objects that describe the Virtual Lane High and Low Arbitrations."

::= { ibSmaGroups 8 }

ibSmaLFTGroup OBJECT-GROUP

OBJECTS {

ibSmaLinForwEgressPort

}

STATUS current

DESCRIPTION

"The ibSmaLFTGroup defines the MIB objects that describe the Linear Forwarding Table."

::= { ibSmaGroups 9 }

ibSmaRFTGroup OBJECT-GROUP

OBJECTS {

ibSmaRandomDestLID,

ibSmaRandomForwEgressPort,

ibSmaRandomLMC,

ibSmaRandomIsValid

}

STATUS current

DESCRIPTION

"The ibSmaRFTGroup defines the MIB objects that describe

```
the Random Forwarding Table."  
::= { ibSmaGroups 10 }
```

```
ibSmaMFTGroup OBJECT-GROUP  
OBJECTS {
```

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```
        ibSmaMulForwMask
    }
    STATUS current
    DESCRIPTION
        "The ibSmaMFTGroup defines the MIB objects that describe
        the Multicast Forwarding Table."
    ::= { ibSmaGroups 11 }

ibSmaSMGroup OBJECT-GROUP
    OBJECTS {
        ibSmaSmGuid,
        ibSmaSmSmKey,
        ibSmaSmSmpCount,
        ibSmaSmPriority,
        ibSmaSmState
    }
    STATUS current
    DESCRIPTION
        "The ibSmaSMGroup defines the MIB objects that describe
        the Subnet Manager Information Table."
    ::= { ibSmaGroups 12 }

ibSmaVendDiagGroup OBJECT-GROUP
    OBJECTS {
        ibSmaPortGenericDiagCode,
        ibSmaPortVendorDiagCode,
        ibSmaPortVendorDiagIndexFwd,
        ibSmaPortVendorDiagData
    }
    STATUS current
    DESCRIPTION
        "The ibSmaVendDiagGroup defines the MIB objects that describe
        the vendor diagnostics table."
    ::= { ibSmaGroups 13 }

ibSmaLedGroup OBJECT-GROUP
    OBJECTS {
        ibSmaLedState
    }
    STATUS current
    DESCRIPTION
        "The ibSmaSMGroup defines the MIB objects that describe
        the LED table."
    ::= { ibSmaGroups 14 }

ibSmaNotificationsGroup NOTIFICATION-GROUP
    NOTIFICATIONS {
        ibSmaPortLinkStateChange,
```

ibSmaLinkIntegrityThresReached,
ibSmaExcessBuffOverrunThres,
ibSmaFlowCntrlUpdateTimerExpire,
ibSmaCapabilityMaskModified,
ibSmaSysImageGuidModified,

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```
        ibSmaBadManagementKey,  
        ibSmaBadPartitionKey,  
        ibSmaBadQueueKey,  
        ibSmaBadPKeyAtSwitchPort  
    }  
    STATUS current  
    DESCRIPTION  
        "The notifications that an IPOIB SNMP agent transmits  
        on the behalf of the SMA Trap message implementation."  
    ::= { ibSmaGroups 15 }
```

END

5. Acknowledgments

The author [Bill Swortwood] would like to acknowledge Anne Marie Merritt who authored the VIA MIB on which this document was initially based.

6. Security Considerations

SNMPv1 by itself is not a secure environment. Even if the network itself is secure (for example by using IPSec), even then, there is no control as to who on the secure network is allowed to access and GET/SET (read/change/create/delete) the objects in this MIB.

It is recommended that the implementers consider the security features as provided by the SNMPv3 framework. Specifically, the use of the User-based Security Model [RFC 2574](#) [[RFC2574](#)] and the View-based Access Control Model [RFC 2575](#) [[RFC2575](#)] is recommended.

It is then a customer/user responsibility to ensure that the SNMP entity giving access to an instance of this MIB, 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.

7. IANA Considerations

IANA is requested to make a MIB OID assignment under the transmission branch, that is, assign the infinibandMIB under { transmission 199 }. This sub-id is requested because 199 is the ifType for infiniband(199) and is available under transmission.

In the future, IPOIB related standards track MIB modules should be rooted under the infinibandMIB subtree. The IANA is requested to manage that namespace. New assignments can only be made via a

Standards Action as specified in [[RFC2434](#)].

This document also requests IANA to assign { infinibandMIB 3 } to the

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IB-SMA-MIB specified in this document.

8. References

8.1. Normative References

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- [INFINIV1] InfiniBand Architecture Specification Volume 1, Release 1.1, November 6, 2002.

8.2. 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.

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