IEEE8023-ETHER-WIS-MIB DEFINITIONS ::= BEGIN

IMPORTS

MODULE-IDENTITY, OBJECT-TYPE,

Gauge32, org

FROM SNMPv2-SMI

ifIndex

FROM IF-MIB

MODULE-COMPLIANCE, OBJECT-GROUP

FROM SNMPv2-CONF

sonetMediumStuff2, sonetSectionStuff2,

sonetLineStuff2, sonetFarEndLineStuff2,

sonetPathStuff2, sonetFarEndPathStuff2,

sonetMediumType, sonetMediumLineCoding,

sonetMediumLineType, sonetMediumCircuitIdentifier,

sonetMediumLoopbackConfig, sonetSESthresholdSet,

sonetPathCurrentWidth

FROM SONET-MIB;

ieee8023etherWisMIB MODULE-IDENTITY

LAST-UPDATED "202307310000Z" – July 31, 2023

ORGANIZATION

"IEEE 802.3 Working Group"

CONTACT-INFO

" WG-URL: http://www.ieee802.org/3/index.html

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DESCRIPTION

"The objects in this MIB module are used in conjunction

with objects in the SONET-MIB module and the MAU-MIB module to manage

the Ethernet WAN Interface Sublayer (WIS) defined in

IEEE Std 802.3.

Of particular interest are IEEE Std 802.3, Clause 50, 'WAN Interface

Sublayer (WIS), type 10GBASE-W', Clause 30, '10 Mb/s,

100 Mb/s, 1000 Mb/s, and 10 Gb/s Management, and Link

Aggregation Management', and Clause 45, 'Management

Data Input/Output (MDIO) Interface'."

REVISION "202307310000Z" – July 31, 2023

DESCRIPTION

"Revision, based on an earlier version in IEEE Std 802.3.1-2013

addressing changes from IEEE Std 802.3 revisions 2012, 2015, 2018,

and 2022."

REVISION "201304110000Z" -- April 11, 2013

DESCRIPTION

"Revision, based on an earlier version in IEEE Std 802.3.1-2011."

REVISION "201102020000Z" -- February 2, 2011

DESCRIPTION

"Initial version, based on an earlier version published

as RFC 3637."

::= { org ieee(111) standards-association-numbers-series-standards(2)

lan-man-stds(802) ieee802dot3(3) ieee802dot3dot1mibs(1) 12 }

-- The main sections of the module

etherWisObjects OBJECT IDENTIFIER ::= { ieee8023etherWisMIB 1 }

etherWisObjectsPath OBJECT IDENTIFIER ::= { ieee8023etherWisMIB 2 }

etherWisConformance OBJECT IDENTIFIER ::= { ieee8023etherWisMIB 3 }

-- groups in the Ethernet WIS MIB module

etherWisDevice OBJECT IDENTIFIER ::= { etherWisObjects 1 }

etherWisSection OBJECT IDENTIFIER ::= { etherWisObjects 2 }

etherWisPath OBJECT IDENTIFIER ::= { etherWisObjectsPath 1 }

etherWisFarEndPath OBJECT IDENTIFIER ::= { etherWisObjectsPath 2 }

-- The Device group

-- These objects provide WIS extensions to

-- the SONET-MIB Medium Group.

etherWisDeviceTable OBJECT-TYPE

SYNTAX SEQUENCE OF EtherWisDeviceEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"The table for Ethernet WIS devices"

::= { etherWisDevice 1 }

etherWisDeviceEntry OBJECT-TYPE

SYNTAX EtherWisDeviceEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"An entry in the Ethernet WIS device table. For each

instance of this object there shall be a corresponding

instance of sonetMediumEntry."

INDEX { ifIndex }

::= { etherWisDeviceTable 1 }

EtherWisDeviceEntry ::=

SEQUENCE {

etherWisDeviceTxTestPatternMode INTEGER,

etherWisDeviceRxTestPatternMode INTEGER,

etherWisDeviceRxTestPatternErrors Gauge32

}

etherWisDeviceTxTestPatternMode OBJECT-TYPE

SYNTAX INTEGER {

none(1),

squareWave(2),

prbs31(3),

mixedFrequency(4)

}

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"This variable controls the transmit test pattern mode.

The value none(1) puts the the WIS transmit path into

the normal operating mode. The value squareWave(2) puts

the WIS transmit path into the square wave test pattern

mode described in IEEE Std 802.3, 50.3.8.1.

The value prbs31(3) puts the WIS transmit path into the

PRBS31 test pattern mode described in IEEE Std 802.3

50.3.8.2. The value mixedFrequency(4) puts the

WIS transmit path into the mixed frequency test pattern

mode described in IEEE Std 802.3, 50.3.8.3.

Any attempt to set this object to a value other than

none(1) when the corresponding instance of ifAdminStatus

has the value up(1) shall be rejected with the error

inconsistentValue, and any attempt to set the corresponding

instance of ifAdminStatus to the value up(1) when an

instance of this object has a value other than none(1)

shall be rejected with the error inconsistentValue."

REFERENCE

"IEEE Std 802.3, 50.3.8, 45.2.2.6, 45.2.2.7.2"

::= { etherWisDeviceEntry 1 }

etherWisDeviceRxTestPatternMode OBJECT-TYPE

SYNTAX INTEGER {

none(1),

prbs31(3),

mixedFrequency(4)

}

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"This variable controls the receive test pattern mode.

The value none(1) puts the the WIS receive path into the

normal operating mode. The value prbs31(3) puts the WIS

receive path into the PRBS31 test pattern mode described

in IEEE Std 802.3, 50.3.8.2. The value

mixedFrequency(4) puts the WIS receive path into the mixed

frequency test pattern mode described in IEEE Std 802.3,

50.3.8.3. Any attempt to set this object to a

value other than none(1) when the corresponding instance

of ifAdminStatus has the value up(1) shall be rejected with

the error inconsistentValue, and any attempt to set the

corresponding instance of ifAdminStatus to the value up(1)

when an instance of this object has a value other than

none(1) shall be rejected with the error inconsistentValue."

REFERENCE

"IEEE Std 802.3, 50.3.8, 45.2.2.6, and 45.2.2.7.2"

::= { etherWisDeviceEntry 2 }

etherWisDeviceRxTestPatternErrors OBJECT-TYPE

SYNTAX Gauge32 ( 0..65535 )

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"This object counts the number of errors detected when the

WIS receive path is operating in the PRBS31 test pattern

mode. It is reset to zero when the WIS receive path

initially enters that mode, and it increments each time

the PRBS pattern checker detects an error as described in

IEEE Std 802.3, 50.3.8.2 unless its value is

65535, in which case it remains unchanged. This object is

writeable so that it may be reset upon explicit request

of a command generator application while the WIS receive

path continues to operate in PRBS31 test pattern mode."

REFERENCE

"IEEE Std 802.3, 50.3.8, 45.2.2.7.2, and 45.2.2.8"

::= { etherWisDeviceEntry 3 }

-- The Section group

-- These objects provide WIS extensions to

-- the SONET-MIB Section Group.

etherWisSectionCurrentTable OBJECT-TYPE

SYNTAX SEQUENCE OF EtherWisSectionCurrentEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"The table for the current state of Ethernet WIS sections."

::= { etherWisSection 1 }

etherWisSectionCurrentEntry OBJECT-TYPE

SYNTAX EtherWisSectionCurrentEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"An entry in the etherWisSectionCurrentTable. For each

instance of this object there shall be a corresponding

instance of sonetSectionCurrentEntry."

INDEX { ifIndex }

::= { etherWisSectionCurrentTable 1 }

EtherWisSectionCurrentEntry ::=

SEQUENCE {

etherWisSectionCurrentJ0Transmitted OCTET STRING,

etherWisSectionCurrentJ0Received OCTET STRING

}

etherWisSectionCurrentJ0Transmitted OBJECT-TYPE

SYNTAX OCTET STRING (SIZE (16))

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"This is the 16-octet section trace message that

is transmitted in the J0 byte. The value should

be '89'h followed by fifteen octets of '00'h

(or some cyclic shift thereof) when the section

trace function is not used, and the implementation

should use that value (or a cyclic shift thereof)

as a default if no other value has been set."

REFERENCE

"IEEE Std 802.3, 30.8.1.1.8"

::= { etherWisSectionCurrentEntry 1 }

etherWisSectionCurrentJ0Received OBJECT-TYPE

SYNTAX OCTET STRING (SIZE (16))

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This is the 16-octet section trace message that

was most recently received in the J0 byte."

REFERENCE

"IEEE Std 802.3, 30.8.1.1.9"

::= { etherWisSectionCurrentEntry 2 }

-- The Path group

-- These objects provide WIS extensions to

-- the SONET-MIB Path Group.

etherWisPathCurrentTable OBJECT-TYPE

SYNTAX SEQUENCE OF EtherWisPathCurrentEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"The table for the current state of Ethernet WIS paths."

::= { etherWisPath 1 }

etherWisPathCurrentEntry OBJECT-TYPE

SYNTAX EtherWisPathCurrentEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"An entry in the etherWisPathCurrentTable. For each

instance of this object there shall be a corresponding

instance of sonetPathCurrentEntry."

INDEX { ifIndex }

::= { etherWisPathCurrentTable 1 }

EtherWisPathCurrentEntry ::=

SEQUENCE {

etherWisPathCurrentStatus BITS,

etherWisPathCurrentJ1Transmitted OCTET STRING,

etherWisPathCurrentJ1Received OCTET STRING

}

etherWisPathCurrentStatus OBJECT-TYPE

SYNTAX BITS {

etherWisPathLOP(0),

etherWisPathAIS(1),

etherWisPathPLM(2),

etherWisPathLCD(3)

}

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This variable indicates the current status of the

path payload with a bit map that can indicate multiple

defects at once. The bit positions are assigned as

follows:

etherWisPathLOP(0)

This bit is set to indicate that an

LOP-P (Loss of Pointer - Path) defect

is being experienced. When this

bit is set, sonetPathSTSLOP shall be set

in the corresponding instance of

sonetPathCurrentStatus.

etherWisPathAIS(1)

This bit is set to indicate that an

AIS-P (Alarm Indication Signal - Path)

defect is being experienced. When

this bit is set, sonetPathSTSAIS shall be

set in the corresponding instance of

sonetPathCurrentStatus.

etherWisPathPLM(1)

This bit is set to indicate that a

PLM-P (Payload Label Mismatch - Path)

defect is being experienced. When

this bit is set, sonetPathSignalLabelMismatch

shall be set in the corresponding instance of

sonetPathCurrentStatus.

etherWisPathLCD(3)

This bit is set to indicate that an

LCD-P (Loss of Codegroup Delination - Path)

defect is being experienced. Since this

defect is detected by the PCS and not by

the path layer itself, there is no

corresponding bit in sonetPathCurrentStatus."

REFERENCE

"IEEE Std 802.3, 30.8.1.1.18"

::= { etherWisPathCurrentEntry 1 }

etherWisPathCurrentJ1Transmitted OBJECT-TYPE

SYNTAX OCTET STRING (SIZE (16))

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"This is the 16-octet path trace message that

is transmitted in the J1 byte. The value should

be '89'h followed by fifteen octets of '00'h

(or some cyclic shift thereof) when the path

trace function is not used, and the implementation

should use that value (or a cyclic shift thereof)

as a default if no other value has been set."

REFERENCE

"IEEE Std 802.3, 30.8.1.1.23"

::= { etherWisPathCurrentEntry 2 }

etherWisPathCurrentJ1Received OBJECT-TYPE

SYNTAX OCTET STRING (SIZE (16))

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This is the 16-octet path trace message that

was most recently received in the J1 byte."

REFERENCE

"IEEE Std 802.3, 30.8.1.1.24"

::= { etherWisPathCurrentEntry 3 }

-- The Far End Path group

-- These objects provide WIS extensions to

-- the SONET-MIB Far End Path Group.

etherWisFarEndPathCurrentTable OBJECT-TYPE

SYNTAX SEQUENCE OF EtherWisFarEndPathCurrentEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"The table for the current far-end state of Ethernet WIS

paths."

::= { etherWisFarEndPath 1 }

etherWisFarEndPathCurrentEntry OBJECT-TYPE

SYNTAX EtherWisFarEndPathCurrentEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"An entry in the etherWisFarEndPathCurrentTable. For each

instance of this object there shall be a corresponding

instance of sonetFarEndPathCurrentEntry."

INDEX { ifIndex }

::= { etherWisFarEndPathCurrentTable 1 }

EtherWisFarEndPathCurrentEntry ::=

SEQUENCE {

etherWisFarEndPathCurrentStatus BITS

}

etherWisFarEndPathCurrentStatus OBJECT-TYPE

SYNTAX BITS {

etherWisFarEndPayloadDefect(0),

etherWisFarEndServerDefect(1)

}

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This variable indicates the current status at the

far end of the path using a bit map that can indicate

multiple defects at once. The bit positions are

assigned as follows:

etherWisFarEndPayloadDefect(0)

A far end payload defect (i.e., far end

PLM-P or LCD-P) is currently being signaled

in G1 bits 5-7.

etherWisFarEndServerDefect(1)

A far end server defect (i.e., far end

LOP-P or AIS-P) is currently being signaled

in G1 bits 5-7. When this bit is set,

sonetPathSTSRDI shall be set in the corresponding

instance of sonetPathCurrentStatus."

REFERENCE

"IEEE Std 802.3, 30.8.1.1.25"

::= { etherWisFarEndPathCurrentEntry 1 }

--

-- Conformance Statements

--

etherWisGroups OBJECT IDENTIFIER ::= { etherWisConformance 1 }

etherWisCompliances OBJECT IDENTIFIER ::= { etherWisConformance 2 }

-- Object Groups

etherWisDeviceGroupBasic OBJECT-GROUP

OBJECTS {

etherWisDeviceTxTestPatternMode,

etherWisDeviceRxTestPatternMode

}

STATUS current

DESCRIPTION

"A collection of objects that support test

features required of all WIS devices."

::= { etherWisGroups 1 }

etherWisDeviceGroupExtra OBJECT-GROUP

OBJECTS {

etherWisDeviceRxTestPatternErrors

}

STATUS current

DESCRIPTION

"A collection of objects that support

optional WIS device test features."

::= { etherWisGroups 2 }

etherWisSectionGroup OBJECT-GROUP

OBJECTS {

etherWisSectionCurrentJ0Transmitted,

etherWisSectionCurrentJ0Received

}

STATUS current

DESCRIPTION

"A collection of objects that provide

required information about a WIS section."

::= { etherWisGroups 3 }

etherWisPathGroup OBJECT-GROUP

OBJECTS {

etherWisPathCurrentStatus,

etherWisPathCurrentJ1Transmitted,

etherWisPathCurrentJ1Received

}

STATUS current

DESCRIPTION

"A collection of objects that provide

required information about a WIS path."

::= { etherWisGroups 4 }

etherWisFarEndPathGroup OBJECT-GROUP

OBJECTS {

etherWisFarEndPathCurrentStatus

}

STATUS current

DESCRIPTION

"A collection of objects that provide required

information about the far end of a WIS path."

::= { etherWisGroups 5 }

-- Compliance Statements

etherWisCompliance MODULE-COMPLIANCE

STATUS current

DESCRIPTION

"The compliance statement for interfaces that include

the Ethernet WIS. Compliance with the following

external compliance statements is prerequisite:

MIB module Compliance Statement

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

IF-MIB ifCompliance3

IF-INVERTED-STACK-MIB ifInvCompliance

IEEE8023-EtherLike-MIB dot3Compliance2

MAU-MIB mauModIfCompl3"

MODULE -- this module

MANDATORY-GROUPS {

etherWisDeviceGroupBasic,

etherWisSectionGroup,

etherWisPathGroup,

etherWisFarEndPathGroup

}

OBJECT etherWisDeviceTxTestPatternMode

SYNTAX INTEGER {

none(1),

squareWave(2),

mixedFrequency(4)

}

DESCRIPTION

"Support for values other than none(1),

squareWave(2), and mixedFrequency(4)

is not required."

OBJECT etherWisDeviceRxTestPatternMode

SYNTAX INTEGER {

none(1),

mixedFrequency(4)

}

DESCRIPTION

"Support for values other than none(1)

and mixedFrequency(4) is not required."

GROUP etherWisDeviceGroupExtra

DESCRIPTION

"Implementation of this group, along with support for

the value prbs31(3) for etherWisDeviceTxTestPatternMode

and etherWisDeviceRxTestPatternMode, is necessary if the

optional PRBS31 test pattern mode is to be supported."

OBJECT etherWisDeviceRxTestPatternErrors

WRITE-SYNTAX Gauge32 ( 0 )

DESCRIPTION

"An implementation is not required to

allow values other than zero to be

written to this object."

MODULE SONET-MIB

MANDATORY-GROUPS {

sonetMediumStuff2,

sonetSectionStuff2,

sonetLineStuff2,

sonetFarEndLineStuff2,

sonetPathStuff2,

sonetFarEndPathStuff2

}

OBJECT sonetMediumType

SYNTAX INTEGER {

sonet(1)

}

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required, nor is support

for any value other than sonet(1)."

OBJECT sonetMediumLineCoding

SYNTAX INTEGER {

sonetMediumNRZ(4)

}

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required, nor is support

for any value other than sonetMediumNRZ(4)."

OBJECT sonetMediumLineType

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT sonetMediumCircuitIdentifier

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT sonetMediumLoopbackConfig

SYNTAX BITS {

sonetNoLoop(0),

sonetFacilityLoop(1)

}

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required, nor is support for values

other than sonetNoLoop(0) and sonetFacilityLoop(1)."

OBJECT sonetSESthresholdSet

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required, and only one

of the enumerated values need be supported."

OBJECT sonetPathCurrentWidth

SYNTAX INTEGER {

sts192cSTM64(6)

}

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required, nor is support

for any value other than sts192cSTM64(6)."

::= { etherWisCompliances 1 }

END