

```

IEEE8023-DOT3-OAM-MIB DEFINITIONS ::= BEGIN
IMPORTS
    MODULE-IDENTITY, OBJECT-TYPE, Counter32, Unsigned32,
        Integer32, NOTIFICATION-TYPE, org
    FROM SNMPv2-SMI
    -- from [RFC2578]
    TEXTUAL-CONVENTION, MacAddress, TimeStamp, TruthValue
    FROM SNMPv2-TC
    -- from [RFC2579]
    CounterBasedGauge64
    FROM HCNUM-TC
    -- from [RFC2856]
ifIndex
    FROM IF-MIB
    -- from [RFC2863]
MODULE-COMPLIANCE, OBJECT-GROUP, NOTIFICATION-GROUP
    FROM SNMPv2-CONF;
    -- from [RFC2580]
ieee8023dot3OamMIB MODULE-IDENTITY
    LAST-UPDATED "201304110000Z" -- April 11, 2013
    ORGANIZATION
        "IEEE 802.3 working group"
    CONTACT-INFO
        "WG-URL: http://www.ieee802.org/3/index.html
        WG-EMail: STDS-802-3-MIB@LISTSERV.IEEE.ORG

        Contact: Howard Frazier
        Postal: 3151 Zanker Road
              San Jose, CA 95134
              USA
        Tel: +1.408.922.8164
        E-mail: hfrazier@broadcom.com"
DESCRIPTION
    "The MIB module for managing the new Ethernet OAM features
    introduced by the Ethernet in the First Mile Task Force (IEEE
    802.3ah). The functionality presented here is based on IEEE
    Std 802.3ah, released in October, 2004, which was prepared as
    an addendum to IEEE Std 802.3. Since then, IEEE Std 802.3ah
    has been merged into the base IEEE 802.3 standard.

    In particular, this MIB focuses on the new OAM functions
    introduced in Clause 57 of IEEE Std 802.3. The OAM functionality
    of Clause 57 is controlled by new management attributes
    introduced in Clause 30 of IEEE Std 802.3. The OAM functions are
    not specific to any particular Ethernet Physical Layer, and
    can be generically applied to any Ethernet interface.

    An Ethernet OAM protocol data unit is a valid Ethernet frame
    with a destination MAC address equal to the reserved MAC
    address for Slow Protocols (See Annex 57A of IEEE Std 802.3), a
    lengthOrType field equal to the reserved type for Slow
    Protocols, and a Slow Protocols subtype equal to that of the
    subtype reserved for Ethernet OAM. OAMPDU is used throughout
    this document as an abbreviation for Ethernet OAM protocol
    data unit."

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 in RFC 4878."

 ::= { org ieee(111)
        standards-association-numbers-series-standards(2)
        lan-man-stds(802) ieee802dot3(3) ieee802dot3dot1mibs(1) 6 }

--
-- Sections of the Ethernet OAM MIB
--
dot3OamNotifications OBJECT IDENTIFIER ::= { ieee8023dot3OamMIB 0 }
dot3OamObjects        OBJECT IDENTIFIER ::= { ieee8023dot3OamMIB 1 }

```

```

dot3OamConformance OBJECT IDENTIFIER ::= { ieee8023Dot3OamMIB 2 }

--
-- Textual conventions for the OAM MIB
--
EightOTwoOui ::= TEXTUAL-CONVENTION
  DISPLAY-HINT "3x:"
  STATUS current
  DESCRIPTION
    "24-bit Organizationally Unique Identifier. Information on
    OUIs can be found in IEEE 802-2001 [802-2001], Clause 9."
  SYNTAX OCTET STRING(SIZE(3))

-- *****
--
-- Ethernet OAM Control group
--

dot3OamTable OBJECT-TYPE
  SYNTAX SEQUENCE OF Dot3OamEntry
  MAX-ACCESS not-accessible
  STATUS current
  DESCRIPTION
    "This table contains the primary controls and status for the
    OAM capabilities of an Ethernet-like interface. There will be
    one row in this table for each Ethernet-like interface in the
    system that supports the OAM functions defined in IEEE Std 802.3."
  ::= { dot3OamObjects 1 }

dot3OamEntry OBJECT-TYPE
  SYNTAX Dot3OamEntry
  MAX-ACCESS not-accessible
  STATUS current
  DESCRIPTION
    "An entry in the table that contains information on the
    Ethernet OAM function for a single Ethernet like interface.
    Entries in the table are created automatically for each
    interface supporting Ethernet OAM. The status of the row
    entry can be determined from dot3OamOperStatus.

    A dot3OamEntry is indexed in the dot3OamTable by the ifIndex
    object of the Interfaces Group MIB.
    "
  INDEX { ifIndex }
  ::= { dot3OamTable 1 }

Dot3OamEntry ::=
  SEQUENCE {
    dot3OamAdminState INTEGER,
    dot3OamOperStatus INTEGER,
    dot3OamMode INTEGER,
    dot3OamMaxOamPduSize Unsigned32,
    dot3OamConfigRevision Unsigned32,
    dot3OamFunctionsSupported BITS
  }

dot3OamAdminState OBJECT-TYPE
  SYNTAX INTEGER {
    enabled(1),
    disabled(2)
  }
  MAX-ACCESS read-write
  STATUS current
  DESCRIPTION
    "This object is used to provision the default administrative
    OAM mode for this interface. This object represents the
    desired state of OAM for this interface.

    The dot3OamAdminState starts in the disabled(2) state
    until an explicit management action or configuration
    information retained by the system causes a transition to the
    enabled(1) state. When enabled(1), Ethernet OAM will attempt
    to operate over this interface."

```

REFERENCE "IEEE Std 802.3, 30.3.6.1.2"
 ::= { dot3OamEntry 1 }

dot3OamOperStatus OBJECT-TYPE

SYNTAX INTEGER {
 disabled(1),
 linkFault(2),
 passiveWait(3),
 activeSendLocal(4),
 sendLocalAndRemote(5),
 sendLocalAndRemoteOk(6),
 oamPeeringLocallyRejected(7),
 oamPeeringRemotelyRejected(8),
 operational(9),
 nonOperHalfDuplex(10)
 }

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"At initialization and failure conditions, two OAM entities on the same full-duplex Ethernet link begin a discovery phase to determine what OAM capabilities may be used on that link. The progress of this initialization is controlled by the OAM sublayer.

This value is disabled(1) if OAM is disabled on this interface via the dot3OamAdminState.

If the link has detected a fault and is transmitting OAMPDUs with a link fault indication, the value is linkFault(2). Also, if the interface is not operational (ifOperStatus is not up(1)), linkFault(2) is returned. Note that the object ifOperStatus may not be up(1) as a result of link failure or administrative action (ifAdminState being down(2) or testing(3)).

The passiveWait(3) state is returned only by OAM entities in passive mode (dot3OamMode) and reflects the state in which the OAM entity is waiting to see if the peer device is OAM capable. The activeSendLocal(4) value is used by active mode devices (dot3OamMode) and reflects the OAM entity actively trying to discover whether the peer has OAM capability but has not yet made that determination.

The state sendLocalAndRemote(5) reflects that the local OAM entity has discovered the peer but has not yet accepted or rejected the configuration of the peer. The local device can, for whatever reason, decide that the peer device is unacceptable and decline OAM peering. If the local OAM entity rejects the peer OAM entity, the state becomes oamPeeringLocallyRejected(7). If the OAM peering is allowed by the local device, the state moves to sendLocalAndRemoteOk(6). Note that both the sendLocalAndRemote(5) and oamPeeringLocallyRejected(7) states fall within the state SEND_LOCAL_REMOTE of the Discovery state diagram (see IEEE Std 802.3, Figure 57-5), with the difference being whether the local OAM client has actively rejected the peering or has just not indicated any decision yet. Whether a peering decision has been made is indicated via the local flags field in the OAMPDU (reflected in the aOAMLocalFlagsField of IEEE Std 802.3_u 30.3.6.1.10).

If the remote OAM entity rejects the peering, the state becomes oamPeeringRemotelyRejected(8). Note that both the sendLocalAndRemoteOk(6) and oamPeeringRemotelyRejected(8) states fall within the state SEND_LOCAL_REMOTE_OK of the Discovery state diagram (see IEEE Std 802.3, Figure 57-5), with the difference being whether the remote OAM client has rejected the peering or has just not yet decided. This is indicated via the remote flags field in the OAMPDU (reflected in the aOAMRemoteFlagsField of IEEE Std 802.3_u 30.3.6.1.11).

When the local OAM entity learns that both it and the remote OAM entity have accepted the peering, the state moves to operational(9) corresponding to the SEND_ANY state of the Discovery state diagram (see IEEE Std 802.3, Figure 57-5).

Since Ethernet OAM functions are not designed to work completely over half-duplex interfaces, the value nonOperHalfDuplex(10) is returned whenever Ethernet OAM is enabled (dot3OamAdminState is enabled(1)), but the interface is in half-duplex operation."

REFERENCE "IEEE Std 802.3, 30.3.6.1.4, 30.3.6.1.10, 30.3.6.1.11"
 ::= { dot3OamEntry 2 }

dot3OamMode OBJECT-TYPE

SYNTAX INTEGER {
 passive(1),
 active(2)
 }

MAX-ACCESS read-write
STATUS current

DESCRIPTION

"This object configures the mode of OAM operation for this Ethernet-like interface. OAM on Ethernet interfaces may be in 'active' mode or 'passive' mode. These two modes differ in that active mode provides additional capabilities to initiate monitoring activities with the remote OAM peer entity, while passive mode generally waits for the peer to initiate OAM actions with it. As an example, an active OAM entity can put the remote OAM entity in a loopback state, where a passive OAM entity cannot.

The default value of dot3OamMode is dependent on the type of system on which this Ethernet-like interface resides. The default value should be 'active(2)' unless it is known that this system should take on a subservient role to the other device connected over this interface.

Changing this value results in incrementing the configuration revision field of locally generated OAMPDUs (IEEE Std 802.3, 30.3.6.1.12) and potentially rerunning the OAM discovery process if the dot3OamOperStatus was already operational(9)."

REFERENCE "IEEE Std 802.3, 30.3.6.1.3"
 ::= { dot3OamEntry 3 }

dot3OamMaxOamPduSize OBJECT-TYPE

SYNTAX Unsigned32 (64..1518)
UNITS "octets"

MAX-ACCESS read-only
STATUS current

DESCRIPTION

"The largest OAMPDU that the OAM entity supports. OAM entities exchange maximum OAMPDU sizes and negotiate to use the smaller of the two maximum OAMPDU sizes between the peers. This value is determined by the local implementation."

REFERENCE "IEEE Std 802.3, 30.3.6.1.8"
 ::= { dot3OamEntry 4 }

dot3OamConfigRevision OBJECT-TYPE

SYNTAX Unsigned32 (0..65535)
MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The configuration revision (see IEEE Std 802.3, 57.5.2.1) of the OAM entity as reflected in the latest OAMPDU sent by the OAM entity. The config revision is used by OAM entities to indicate that configuration changes have occurred, which might require the peer OAM entity to

```

- -----re-evaluate whether OAM peering
- -----is allowed."

REFERENCE "IEEE Std 802.3, 30.3.6.1.12"
::= { dot3OamEntry 5 }

dot3OamFunctionsSupported OBJECT-TYPE
SYNTAX BITS {
    unidirectionalSupport (0),
    loopbackSupport(1),
    eventSupport(2),
    variableSupport(3)
}
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The OAM functions supported on this Ethernet-like interface.
OAM consists of separate functional sets beyond the basic
discovery process that is required. These functional
groups can be supported independently by any implementation.
These values are communicated to the peer via the local
configuration field of Information OAMPDUs.

Setting 'unidirectionalSupport(0)' indicates that the OAM
entity supports the transmission of OAMPDUs on links that are
operating in unidirectional mode (traffic flowing in one
direction only). Setting 'loopbackSupport(1)' indicates that
the OAM entity can initiate and respond to loopback commands.
Setting 'eventSupport(2)' indicates that the OAM entity can
send and receive Event Notification OAMPDUs. Setting
'variableSupport(3)' indicates that the OAM entity can send
and receive Variable Request and Response OAMPDUs."

REFERENCE "IEEE Std 802.3, 30.3.6.1.6"
::= { dot3OamEntry 6 }

-- *****
--
-- Ethernet OAM Peer group
--

dot3OamPeerTable OBJECT-TYPE
SYNTAX SEQUENCE OF Dot3OamPeerEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"This table contains information about the OAM peer for a
particular Ethernet-like interface. OAM entities communicate
with a single OAM peer entity on Ethernet links on which OAM
is enabled and operating properly. There is one entry in this
table for each entry in the dot3OamTable for which information
on the peer OAM entity is available."

::= { dot3OamObjects 2 }

dot3OamPeerEntry OBJECT-TYPE
SYNTAX Dot3OamPeerEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"An entry in the table containing information on the peer OAM
entity for a single Ethernet-like interface.

Note that there is at most one OAM peer for each Ethernet-like
interface. Entries are automatically created when information
about the OAM peer entity becomes available, and automatically
deleted when the OAM peer entity is no longer in
communication. Peer information is not available when
dot3OamOperStatus is disabled(1), linkFault(2),
passiveWait(3), activeSendLocal(4), or nonOperHalfDuplex(10)."
```

```

INDEX { ifIndex }
::= { dot3OamPeerTable 1 }
```

```

Dot3OamPeerEntry ::=
SEQUENCE {
    dot3OamPeerMacAddress      MacAddress,
    dot3OamPeerVendorOui      EightOTwoOui,
    dot3OamPeerVendorInfo     Unsigned32,
    dot3OamPeerMode           INTEGER,
    dot3OamPeerMaxOamPduSize  Unsigned32,
    dot3OamPeerConfigRevision Unsigned32,
    dot3OamPeerFunctionsSupported BITS
}

dot3OamPeerMacAddress OBJECT-TYPE
SYNTAX      MacAddress
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
    "The MAC address of the peer OAM entity. The MAC address is
    derived from the most recently received OAMPDU.
    This value is updated on reception of a valid frame with
    (1) a destinationField equal to the reserved multicast address
    for Slow Protocols specified in IEEE Std 802.3, Table 57A-1,
    (2) lengthOrType field value equal to the reserved Type for
    Slow Protocols as specified in IEEE Std 802.3, Table 57A-2,
    (3) a Slow Protocols subtype value equal to the subtype reserved
    for OAM as specified in IEEE Std 802.3, Table 57A-3.;"

REFERENCE   "IEEE Std 802.3, 30.3.6.1.5."
::= { dot3OamPeerEntry 1 }

dot3OamPeerVendorOui OBJECT-TYPE
SYNTAX      EightOTwoOui
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
    "The OUI/CID of the OAM peer as reflected in the latest
    Information OAMPDU received with a Local Information TLV. The
    OUI can be used to identify the vendor of the remote OAM
    entity. This value is initialized to three octets of zero
    before any Local Information TLV is received
    (see IEEE Std 802.3, 57.5.2.1)."

REFERENCE   "IEEE Std 802.3, 30.3.6.1.16."
::= { dot3OamPeerEntry 2 }

dot3OamPeerVendorInfo OBJECT-TYPE
SYNTAX      Unsigned32
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
    "The Vendor Info of the OAM peer as reflected in the latest
    Information OAMPDU received with a Local Information TLV.
    The semantics of the Vendor Information field is proprietary
    and specific to the vendor (identified by the
    dot3OamPeerVendorOui). This information could, for example,
    be used to identify a specific product or product family.
    This value is initialized to zero before any Local
    Information TLV is received
    (see IEEE Std 802.3, 57.5.2.1)."

REFERENCE   "IEEE Std 802.3, 30.3.6.1.17."
::= { dot3OamPeerEntry 3 }

dot3OamPeerMode OBJECT-TYPE
SYNTAX      INTEGER {
        passive(1),
        active(2),
        unknown(3)
    }
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
    "The mode of the OAM peer as reflected in the latest

```

Information OAMPDU received with a Local Information TLV. The mode of the peer can be determined from the Configuration field in the Local Information TLV of the last Information OAMPDU received from the peer. The value is unknown(3) whenever no Local Information TLV has been received. The values of active(2) and passive(1) are returned when a Local Information TLV has been received indicating that the peer is in active or passive mode, respectively."

REFERENCE "IEEE Std 802.3, 30.3.6.1.7."
 ::= { dot3OamPeerEntry 4 }

Commented [MH1]: Cannot find this element anywhere

dot3OamPeerMaxOamPduSize OBJECT-TYPE
SYNTAX Unsigned32 (0 | 64..1518)
UNITS "octets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The maximum size of OAMPDU supported by the peer as reflected in the latest Information OAMPDU received with a Local Information TLV. Ethernet OAM on this interface shall not use OAMPDUs that exceed this size. The maximum OAMPDU size can be determined from the PDU Configuration field of the Local Information TLV of the last Information OAMPDU received from the peer. A value of zero is returned if no Local Information TLV has been received. Otherwise, the value of the OAM peer's maximum OAMPDU size is returned in this value."

REFERENCE "IEEE Std 802.3, 30.3.6.1.9."
 ::= { dot3OamPeerEntry 5 }

dot3OamPeerConfigRevision OBJECT-TYPE
SYNTAX Unsigned32(0..65535)
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The configuration revision ([see IEEE Std 802.3, 57.5.2.1](#)) of the OAM peer as reflected in the latest OAMPDU. This attribute is changed by the peer whenever it has a local configuration change for Ethernet OAM on this interface. The configuration revision can be determined from the Revision field of the Local Information TLV of the most recently received Information OAMPDU with a Local Information TLV. A value of zero is returned if no Local Information TLV has been received."

REFERENCE "IEEE Std 802.3, 30.3.6.1.13."
 ::= { dot3OamPeerEntry 6 }

dot3OamPeerFunctionsSupported OBJECT-TYPE
SYNTAX BITS {
 unidirectionalSupport(0),
 loopbackSupport(1),
 eventSupport(2),
 variableSupport(3)
 }
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The OAM functions supported on this Ethernet-like interface. OAM consists of separate functionality sets above the basic discovery process. This value indicates the capabilities of the peer OAM entity with respect to these functions. This value is initialized so all bits are clear.

If unidirectionalSupport(0) is set, then the peer OAM entity supports sending OAM frames on Ethernet interfaces when the

receive path is known to be inoperable. If loopbackSupport(1) is set, then the peer OAM entity can send and receive OAM loopback commands. If eventSupport(2) is set, then the peer OAM entity can send and receive event OAMPDUs to signal various error conditions. If variableSupport(3) is set, then the peer OAM entity can send and receive variable requests to monitor the attribute value as described ~~in Clause in 57 of~~ IEEE Std 802.3, Clause 57.

The capabilities of the OAM peer can be determined from the configuration field of the Local Information TLV of the most recently received Information OAMPDU with a Local Information TLV. All zeros are returned if no Local Information TLV has yet been received."

REFERENCE "IEEE Std 802.3_ 30.3.6.1.7."
::= { dot3OamPeerEntry 7 }

-- *****
--
-- Ethernet OAM Loopback group
--

dot3OamLoopbackTable OBJECT-TYPE

SYNTAX SEQUENCE OF Dot3OamLoopbackEntry
MAX-ACCESS not-accessible
STATUS current

DESCRIPTION

"This table contains controls for the loopback state of the local link as well as indicates the status of the loopback function. There is one entry in this table for each entry in dot3OamTable that supports loopback functionality (where dot3OamFunctionsSupported includes the loopbackSupport bit set).

Loopback can be used to place the remote OAM entity in a state where every received frame (except OAMPDUs) is echoed back over the same interface on which they were received. In this state, at the remote entity, 'normal' traffic is disabled as only the looped back frames are transmitted on the interface. Loopback is thus an intrusive operation that prohibits normal data flow and should be used accordingly."

::= { dot3OamObjects 3 }

dot3OamLoopbackEntry OBJECT-TYPE

SYNTAX Dot3OamLoopbackEntry
MAX-ACCESS not-accessible
STATUS current

DESCRIPTION

"An entry in the table, containing information on the loopback status for a single Ethernet-like interface. Entries in the table are automatically created whenever the local OAM entity supports loopback capabilities. The loopback status on the interface can be determined from the dot3OamLoopbackStatus object."

INDEX { ifIndex }
::= { dot3OamLoopbackTable 1 }

Dot3OamLoopbackEntry ::=

SEQUENCE {
dot3OamLoopbackStatus INTEGER,
dot3OamLoopbackIgnoreRx INTEGER
}

dot3OamLoopbackStatus OBJECT-TYPE

SYNTAX INTEGER {
-- all values, except where noted, can be read
-- but cannot be written
noLoopback (1),

-- initiatingLoopback can be read or written


```

        initiatingLoopback (2),
        remoteLoopback (3),

        -- terminatingLoopback can be read or written
        terminatingLoopback (4),
        localLoopback (5),
        unknown (6)
    }
MAX-ACCESS read-write
STATUS current
DESCRIPTION

```

"The loopback status of the OAM entity. This status is determined by a combination of the local parser and multiplexer states, the remote parser and multiplexer states, as well as by the actions of the local OAM client. When operating in normal mode with no loopback in progress, the status reads noLoopback(1).

The values initiatingLoopback(2) and terminatingLoopback(4) can be read or written. The other values can only be read - they can never be written. Writing initiatingLoopback causes the local OAM entity to start the loopback process with its peer. This value can only be written when the status is noLoopback(1). Writing the value initiatingLoopback(2) in any other state has no effect. When in remoteLoopback(3), writing terminatingLoopback(4) causes the local OAM entity to initiate the termination of the loopback state. Writing terminatingLoopback(4) in any other state has no effect.

If the OAM client initiates a loopback and has sent a Loopback OAMPDU and is waiting for a response, where the local parser and multiplexer states are DISCARD (see IEEE Std 802.3, 57.2.11.1), the status is 'initiatingLoopback'. In this case, the local OAM entity has yet to receive any acknowledgment that the remote OAM entity has received its loopback command request.

If the local OAM client knows that the remote OAM entity is in loopback mode (via the remote state information as described in IEEE Std 802.3, 57.2.11.1, 30.3.6.1.15), the status is remoteLoopback(3). If the local OAM client is in the process of terminating the remote loopback (see IEEE Std 802.3, 57.2.11.3, 30.3.6.1.14) with its local multiplexer and parser states in DISCARD, the status is terminatingLoopback(4). If the remote OAM client has put the local OAM entity in loopback mode as indicated by its local parser state, the status is localLoopback(5).

The unknown(6) status indicates that the parser and multiplexer combination is unexpected. This status may be returned if the OAM loopback is in a transition state but should not persist.

The values of this attribute correspond to the following values of the local and remote parser and multiplexer states.

value	LclPrsr	LclMux	RmtPrsr	RmtMux
noLoopback	FWD	FWD	FWD	FWD
initLoopback	DISCARD	DISCARD	FWD	FWD
rmtLoopback	DISCARD	FWD	LPBK	DISCARD
tmtnLoopback	DISCARD	DISCARD	LPBK	DISCARD
lclLoopback	LPBK	DISCARD	DISCARD	FWD
unknown	***	any other	combination	***

REFERENCE "IEEE Std 802.3, 57.2.11, 30.3.6.1.14, 30.3.6.1.15"
 ::= { dot3OamLoopbackEntry 1 }

```

dot3OamLoopbackIgnoreRx OBJECT-TYPE
SYNTAX INTEGER {
    ignore(1),
    process(2)
}
MAX-ACCESS read-write
STATUS current

```

```

DESCRIPTION
"Since OAM loopback is a disruptive operation (user traffic
does not pass), this attribute provides a mechanism to provide
controls over whether received OAM loopback commands are
processed or ignored. When the value is ignore(1), received
loopback commands are ignored. When the value is process(2),
OAM loopback commands are processed. The default value is to
ignore loopback commands (ignore(1))."

REFERENCE "IEEE Std 802.3, 57.2.11, 30.3.6.1.14, 30.3.6.1.15"
::= { dot3OamLoopbackEntry 2 }
-- *****
--
-- Ethernet OAM Statistics group
--

dot3OamStatsTable OBJECT-TYPE
SYNTAX SEQUENCE OF Dot3OamStatsEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"This table contains statistics for the OAM function on a
particular Ethernet-like interface. There is an entry in the
table for every entry in the dot3OamTable.

The counters in this table are defined as 32-bit entries to
match the counter size as defined in IEEE Std 802.3. Given that
the OAM protocol is a slow protocol, the counters increment at
a slow rate."

::= { dot3OamObjects 4 }

dot3OamStatsEntry OBJECT-TYPE
SYNTAX Dot3OamStatsEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"An entry in the table containing statistics information on
the Ethernet OAM function for a single Ethernet-like
interface. Entries are automatically created for every entry
in the dot3OamTable. Counters are maintained across
transitions in dot3OamOperStatus."

INDEX { ifIndex }
::= { dot3OamStatsTable 1 }

Dot3OamStatsEntry ::=
SEQUENCE {
    dot3OamInformationTx Counter32,
    dot3OamInformationRx Counter32,
    dot3OamUniqueEventNotificationTx Counter32,
    dot3OamUniqueEventNotificationRx Counter32,
    dot3OamDuplicateEventNotificationTx Counter32,
    dot3OamDuplicateEventNotificationRx Counter32,
    dot3OamLoopbackControlTx Counter32,
    dot3OamLoopbackControlRx Counter32,
    dot3OamVariableRequestTx Counter32,
    dot3OamVariableRequestRx Counter32,
    dot3OamVariableResponseTx Counter32,
    dot3OamVariableResponseRx Counter32,
    dot3OamOrgSpecificTx Counter32,
    dot3OamOrgSpecificRx Counter32,
    dot3OamUnsupportedCodesTx Counter32,
    dot3OamUnsupportedCodesRx Counter32,
    dot3OamFramesLostDueToOam Counter32
}

dot3OamInformationTx OBJECT-TYPE
SYNTAX Counter32
UNITS "frames"
MAX-ACCESS read-only
STATUS current
DESCRIPTION

```

"A count of the number of Information OAMPDUs transmitted on this interface.

Discontinuities of this counter can occur at re-initialization of the management system, and at other times as indicated by the value of the ifCounterDiscontinuityTime."

REFERENCE "IEEE Std 802.3, 30.3.6.1.20."
 ::= { dot3OamStatsEntry 1 }

dot3OamInformationRx OBJECT-TYPE

SYNTAX Counter32
UNITS "frames"
MAX-ACCESS read-only
STATUS current

DESCRIPTION

"A count of the number of Information OAMPDUs received on this interface.

Discontinuities of this counter can occur at re-initialization of the management system, and at other times as indicated by the value of the ifCounterDiscontinuityTime."

REFERENCE "IEEE Std 802.3, 30.3.6.1.21."
 ::= { dot3OamStatsEntry 2 }

dot3OamUniqueEventNotificationTx OBJECT-TYPE

SYNTAX Counter32
UNITS "frames"
MAX-ACCESS read-only
STATUS current

DESCRIPTION

"A count of the number of unique Event OAMPDUs transmitted on this interface. Event Notifications may be sent in duplicate to increase the probability of successfully being received, given the possibility that a frame may be lost in transit. Duplicate Event Notification transmissions are counted by dot3OamDuplicateEventNotificationTx.

A unique Event Notification OAMPDU is indicated as an Event Notification OAMPDU with a Sequence Number field that is distinct from the previously transmitted Event Notification OAMPDU Sequence Number.

Discontinuities of this counter can occur at re-initialization of the management system, and at other times as indicated by the value of the ifCounterDiscontinuityTime."

REFERENCE "IEEE Std 802.3, 30.3.6.1.22."
 ::= { dot3OamStatsEntry 3 }

dot3OamUniqueEventNotificationRx OBJECT-TYPE

SYNTAX Counter32
UNITS "frames"
MAX-ACCESS read-only
STATUS current

DESCRIPTION

"A count of the number of unique Event OAMPDUs received on this interface. Event Notification OAMPDUs may be sent in duplicate to increase the probability of successfully being received, given the possibility that a frame may be lost in transit. Duplicate Event Notification receptions are counted by dot3OamDuplicateEventNotificationRx.

A unique Event Notification OAMPDU is indicated as an Event Notification OAMPDU with a Sequence Number field that is distinct from the previously received Event Notification OAMPDU Sequence Number.

Discontinuities of this counter can occur at re-initialization of the management system, and at other times as indicated by the value of the ifCounterDiscontinuityTime."

REFERENCE "IEEE Std 802.3, 30.3.6.1.24."
 ::= { dot3OamStatsEntry 4 }

dot3OamDuplicateEventNotificationTx OBJECT-TYPE

SYNTAX Counter32
UNITS "frames"
MAX-ACCESS read-only
STATUS current

DESCRIPTION

"A count of the number of duplicate Event OAMPDUs transmitted on this interface. Event Notification OAMPDUs may be sent in duplicate to increase the probability of successfully being received, given the possibility that a frame may be lost in transit.

A duplicate Event Notification OAMPDU is indicated as an Event Notification OAMPDU with a Sequence Number field that is identical to the previously transmitted Event Notification OAMPDU Sequence Number.

Discontinuities of this counter can occur at re-initialization of the management system, and at other times as indicated by the value of the ifCounterDiscontinuityTime."

REFERENCE "IEEE Std 802.3, 30.3.6.1.23."
 ::= { dot3OamStatsEntry 5 }

dot3OamDuplicateEventNotificationRx OBJECT-TYPE

SYNTAX Counter32
UNITS "frames"
MAX-ACCESS read-only
STATUS current

DESCRIPTION

"A count of the number of duplicate Event OAMPDUs received on this interface. Event Notification OAMPDUs may be sent in duplicate to increase the probability of successfully being received, given the possibility that a frame may be lost in transit.

A duplicate Event Notification OAMPDU is indicated as an Event Notification OAMPDU with a Sequence Number field that is identical to the previously received Event Notification OAMPDU Sequence Number.

Discontinuities of this counter can occur at re-initialization of the management system, and at other times as indicated by the value of the ifCounterDiscontinuityTime."

REFERENCE "IEEE Std 802.3, 30.3.6.1.25."
 ::= { dot3OamStatsEntry 6 }

dot3OamLoopbackControlTx OBJECT-TYPE

SYNTAX Counter32
UNITS "frames"
MAX-ACCESS read-only
STATUS current

DESCRIPTION

"A count of the number of Loopback Control OAMPDUs transmitted on this interface.

Discontinuities of this counter can occur at re-initialization of the management system, and at other times as indicated by the value of the ifCounterDiscontinuityTime."

REFERENCE "IEEE Std 802.3, 30.3.6.1.26."
 ::= { dot3OamStatsEntry 7 }

dot3OamLoopbackControlRx OBJECT-TYPE

SYNTAX Counter32
UNITS "frames"
MAX-ACCESS read-only
STATUS current

DESCRIPTION

"A count of the number of Loopback Control OAMPDUs received on this interface.

Discontinuities of this counter can occur at re-initialization of the management system, and at other times as indicated by the value of the ifCounterDiscontinuityTime."

REFERENCE "IEEE Std 802.3, 30.3.6.1.27."
 ::= { dot3OamStatsEntry 8 }

dot3OamVariableRequestTx OBJECT-TYPE

SYNTAX Counter32
UNITS "frames"
MAX-ACCESS read-only
STATUS current

DESCRIPTION

"A count of the number of Variable Request OAMPDUs transmitted on this interface.

Discontinuities of this counter can occur at re-initialization of the management system, and at other times as indicated by the value of the ifCounterDiscontinuityTime."

REFERENCE "IEEE Std 802.3, 30.3.6.1.28."
 ::= { dot3OamStatsEntry 9 }

dot3OamVariableRequestRx OBJECT-TYPE

SYNTAX Counter32
UNITS "frames"
MAX-ACCESS read-only
STATUS current

DESCRIPTION

"A count of the number of Variable Request OAMPDUs received on this interface.

Discontinuities of this counter can occur at re-initialization of the management system, and at other times as indicated by the value of the ifCounterDiscontinuityTime."

REFERENCE "IEEE Std 802.3, 30.3.6.1.29."
 ::= { dot3OamStatsEntry 10 }

dot3OamVariableResponseTx OBJECT-TYPE

SYNTAX Counter32
UNITS "frames"
MAX-ACCESS read-only
STATUS current

DESCRIPTION

"A count of the number of Variable Response OAMPDUs transmitted on this interface.

Discontinuities of this counter can occur at re-initialization of the management system, and at other times as indicated by the value of the ifCounterDiscontinuityTime."

REFERENCE "IEEE Std 802.3, 30.3.6.1.30."
 ::= { dot3OamStatsEntry 11 }

dot3OamVariableResponseRx OBJECT-TYPE

SYNTAX Counter32
UNITS "frames"
MAX-ACCESS read-only
STATUS current

DESCRIPTION

"A count of the number of Variable Response OAMPDUs received on this interface.

Discontinuities of this counter can occur at re-initialization of the management system, and at other times as indicated by the value of the ifCounterDiscontinuityTime."

REFERENCE "IEEE Std 802.3, 30.3.6.1.31."
 ::= { dot3OamStatsEntry 12 }

```

dot3OamOrgSpecificTx OBJECT-TYPE
SYNTAX      Counter32
UNITS       "frames"
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
  "A count of the number of Organization Specific OAMPDUS
  transmitted on this interface.

  Discontinuities of this counter can occur at re-initialization
  of the management system, and at other times as indicated by
  the value of the ifCounterDiscontinuityTime."

REFERENCE   "IEEE Std 802.3, 30.3.6.1.32."
 ::= { dot3OamStatsEntry 13 }

dot3OamOrgSpecificRx OBJECT-TYPE
SYNTAX      Counter32
UNITS       "frames"
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
  "A count of the number of Organization Specific OAMPDUS
  received on this interface.

  Discontinuities of this counter can occur at re-initialization
  of the management system, and at other times as indicated by
  the value of the ifCounterDiscontinuityTime."

REFERENCE   "IEEE Std 802.3, 30.3.6.1.33."
 ::= { dot3OamStatsEntry 14 }

dot3OamUnsupportedCodesTx OBJECT-TYPE
SYNTAX      Counter32
UNITS       "frames"
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
  "A count of the number of OAMPDUS transmitted on this
  interface with an unsupported op-code.

  Discontinuities of this counter can occur at re-initialization
  of the management system, and at other times as indicated by
  the value of the ifCounterDiscontinuityTime."

REFERENCE   "IEEE Std 802.3, 30.3.6.1.18."
 ::= { dot3OamStatsEntry 15 }

dot3OamUnsupportedCodesRx OBJECT-TYPE
SYNTAX      Counter32
UNITS       "frames"
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
  "A count of the number of OAMPDUS received on this interface
  with an unsupported op-code.

  Discontinuities of this counter can occur at re-initialization
  of the management system, and at other times as indicated by
  the value of the ifCounterDiscontinuityTime."

REFERENCE   "IEEE Std 802.3, 30.3.6.1.19."
 ::= { dot3OamStatsEntry 16 }

dot3OamFramesLostDueToOam OBJECT-TYPE
SYNTAX      Counter32
UNITS       "frames"
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
  "A count of the number of frames that were dropped by the OAM
  multiplexer. Since the OAM multiplexer has multiple inputs

```

and a single output, there may be cases where frames are dropped due to transmit resource contention. This counter is incremented whenever a frame is dropped by the OAM layer. Note that any Ethernet frame, not just OAMPDUs, may be dropped by the OAM layer. This can occur when an OAMPDU takes precedence over a 'normal' frame resulting in the 'normal' frame being dropped.

When this counter is incremented, no other counters in this MIB are incremented.

Discontinuities of this counter can occur at re-initialization of the management system, and at other times as indicated by the value of the ifCounterDiscontinuityTime."

REFERENCE "IEEE Std 802.3, 30.3.6.1.46."
 ::= { dot3OamStatsEntry 17 }

-- *****
--
-- Ethernet OAM Event Configuration group
--

dot3OamEventConfigTable OBJECT-TYPE

SYNTAX SEQUENCE OF Dot3OamEventConfigEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Ethernet OAM includes the ability to generate and receive Event Notification OAMPDUs to indicate various link problems. This table contains the mechanisms to enable Event Notifications and configure the thresholds to generate the standard Ethernet OAM events. There is one entry in the table for every entry in dot3OamTable that supports OAM events (where dot3OamFunctionsSupported includes the eventSupport bit set). The values in the table are maintained across changes to dot3OamOperStatus.

The standard threshold crossing events are:

- Errored Symbol Period Event. Generated when the number of symbol errors exceeds a threshold within a given window defined by a number of symbols (for example, 1,000 symbols out of 1,000,000 had errors).
- Errored Frame Period Event. Generated when the number of frame errors exceeds a threshold within a given window defined by a number of frames (for example, 10 frames out of 1000 had errors).
- Errored Frame Event. Generated when the number of frame errors exceeds a threshold within a given window defined by a period of time (for example, 10 frames in 1 second had errors).
- Errored Frame Seconds Summary Event. Generated when the number of errored frame seconds exceeds a threshold within a given time period (for example, 10 errored frame seconds within the last 100 seconds). An errored frame second is defined as a 1 second interval which had >0 frame errors.

There are other events (dying gasp, critical events) that are not threshold crossing events but that can be enabled/disabled via this table."

::= { dot3OamObjects 5 }

dot3OamEventConfigEntry OBJECT-TYPE

SYNTAX Dot3OamEventConfigEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Entries are automatically created and deleted from this table, and exist whenever the OAM entity supports Ethernet OAM events (as indicated by the eventSupport bit in dot3OamFunctionsSupported). Values in the table are maintained across changes to the value of dot3OamOperStatus.

Event configuration controls when the local management entity sends Event Notification OAMPDUs to its OAM peer, and when certain event flags are set or cleared in OAMPDUs."

```
INDEX      { ifIndex }  
 ::= { dot3OamEventConfigTable 1 }
```

Dot3OamEventConfigEntry ::=

```
SEQUENCE {  
    dot3OamErrSymPeriodWindowHi      Unsigned32,  
    dot3OamErrSymPeriodWindowLo      Unsigned32,  
    dot3OamErrSymPeriodThresholdHi   Unsigned32,  
    dot3OamErrSymPeriodThresholdLo   Unsigned32,  
    dot3OamErrSymPeriodEvNotifEnable TruthValue,  
    dot3OamErrFramePeriodWindow      Unsigned32,  
    dot3OamErrFramePeriodThreshold   Unsigned32,  
    dot3OamErrFramePeriodEvNotifEnable TruthValue,  
    dot3OamErrFrameWindow             Unsigned32,  
    dot3OamErrFrameThreshold          Unsigned32,  
    dot3OamErrFrameEvNotifEnable      TruthValue,  
    dot3OamErrFrameSecsSummaryWindow  Integer32,  
    dot3OamErrFrameSecsSummaryThreshold Integer32,  
    dot3OamErrFrameSecsEvNotifEnable  TruthValue,  
    dot3OamDyingGaspEnable            TruthValue,  
    dot3OamCriticalEventEnable        TruthValue  
}
```

dot3OamErrSymPeriodWindowHi OBJECT-TYPE

```
SYNTAX      Unsigned32  
UNITS       "2^32 symbols"  
MAX-ACCESS  read-write  
STATUS      current  
DESCRIPTION
```

"The two objects dot3OamErrSymPeriodWindowHi and dot3OamErrSymPeriodLo together form an unsigned 64-bit integer representing the number of symbols over which this threshold event is defined. This is defined as
$$\text{dot3OamErrSymPeriodWindow} = ((2^{32}) * \text{dot3OamErrSymPeriodWindowHi}) + \text{dot3OamErrSymPeriodWindowLo}$$

If dot3OamErrSymPeriodThreshold symbol errors occur within a window of dot3OamErrSymPeriodWindow symbols, an Event Notification OAMPDU should be generated with an Errored Symbol Period Event TLV indicating that the threshold has been crossed in this window.

The default value for dot3OamErrSymPeriodWindow is the number of symbols in one second for the underlying Physical Layer."

```
REFERENCE   "IEEE Std 802.3, 30.3.6.1.34"
```

```
::= { dot3OamEventConfigEntry 1 }
```

dot3OamErrSymPeriodWindowLo OBJECT-TYPE

```
SYNTAX      Unsigned32  
UNITS       "symbols"  
MAX-ACCESS  read-write  
STATUS      current  
DESCRIPTION
```

"The two objects dot3OamErrSymPeriodWindowHi and dot3OamErrSymPeriodWindowLo together form an unsigned 64-bit integer representing the number of symbols over which this threshold event is defined. This is defined as

$$\text{dot3OamErrSymPeriodWindow} = ((2^{32}) * \text{dot3OamErrSymPeriodWindowHi}) + \text{dot3OamErrSymPeriodWindowLo}$$

If dot3OamErrSymPeriodThreshold symbol errors occur within a window of dot3OamErrSymPeriodWindow symbols, an Event Notification OAMPDU should be generated with an Errored Symbol Period Event TLV indicating that the threshold has been crossed in this window.

The default value for dot3OamErrSymPeriodWindow is the number

of symbols in one second for the underlying Physical Layer."

REFERENCE "IEEE Std 802.3, 30.3.6.1.34"
::= { dot3OamEventConfigEntry 2 }

dot3OamErrSymPeriodThresholdHi OBJECT-TYPE

SYNTAX Unsigned32
UNITS "2^32 symbols"
MAX-ACCESS read-write
STATUS current

DESCRIPTION

"The two objects dot3OamErrSymPeriodThresholdHi and dot3OamErrSymPeriodThresholdLo together form an unsigned 64-bit integer representing the minimum number of symbol errors occurring within a given window to cause an Errored Symbol Period Event.

This is defined as

$$\text{dot3OamErrSymPeriodThreshold} = (2^{32}) * \text{dot3OamErrSymPeriodThresholdHi} + \text{dot3OamErrSymPeriodThresholdLo}$$

If dot3OamErrSymPeriodThreshold symbol errors occur within a window of dot3OamErrSymPeriodWindow symbols, an Event Notification OAMPDU is generated with an Errored Symbol Period Event TLV indicating that the threshold has been crossed in this window.

The default value for dot3OamErrSymPeriodThreshold is one symbol errors. If the threshold value is zero, then an Event Notification OAMPDU is sent periodically (at the end of every window). This can be used as an asynchronous notification to the peer OAM entity of the statistics related to this threshold crossing alarm."

REFERENCE "IEEE Std 802.3, 30.3.6.1.34"
::= { dot3OamEventConfigEntry 3 }

dot3OamErrSymPeriodThresholdLo OBJECT-TYPE

SYNTAX Unsigned32
UNITS "symbols"
MAX-ACCESS read-write
STATUS current

DESCRIPTION

"The two objects dot3OamErrSymPeriodThresholdHi and dot3OamErrSymPeriodThresholdLo together form an unsigned 64-bit integer representing the minimum number of symbol errors occurring within a given window to cause an Errored Symbol Period Event.

This is defined as

$$\text{dot3OamErrSymPeriodThreshold} = (2^{32}) * \text{dot3OamErrSymPeriodThresholdHi} + \text{dot3OamErrSymPeriodThresholdLo}$$

If dot3OamErrSymPeriodThreshold symbol errors occur within a window of dot3OamErrSymPeriodWindow symbols, an Event Notification OAMPDU is generated with an Errored Symbol Period Event TLV indicating that the threshold has been crossed in this window.

The default value for dot3OamErrSymPeriodThreshold is one symbol error. If the threshold value is zero, then an Event Notification OAMPDU is sent periodically (at the end of every window). This can be used as an asynchronous notification to the peer OAM entity of the statistics related to this threshold crossing alarm."

REFERENCE "IEEE Std 802.3, 30.3.6.1.34"
::= { dot3OamEventConfigEntry 4 }

dot3OamErrSymPeriodEvNotifEnable OBJECT-TYPE

SYNTAX TruthValue

```

MAX-ACCESS read-write
STATUS current
DESCRIPTION
  "If true, the OAM entity sends an Event Notification
  OAMPDU when an Errored Symbol Period Event occurs.

  The default value for this object is true for
  Ethernet-like interfaces that support OAM. If the OAM layer
  does not support Event Notifications (as indicated via the
  dot3OamFunctionsSupported attribute), this value is ignored."

 ::= { dot3OamEventConfigEntry 5 }

dot3OamErrFramePeriodWindow OBJECT-TYPE
SYNTAX Unsigned32
UNITS "frames"
MAX-ACCESS read-write
STATUS current
DESCRIPTION
  "The number of frames over which the threshold is defined.
  The default value of the window is the number of minimum size
  Ethernet frames that can be received over the Physical Layer
  in one second.

  If dot3OamErrFramePeriodThreshold frame errors occur within a
  window of dot3OamErrFramePeriodWindow frames, an Event
  Notification OAMPDU should be generated with an Errored Frame
  Period Event TLV indicating that the threshold has been
  crossed in this window."

REFERENCE "IEEE Std 802.3, 30.3.6.1.38"
 ::= { dot3OamEventConfigEntry 6 }

dot3OamErrFramePeriodThreshold OBJECT-TYPE
SYNTAX Unsigned32
UNITS "frames"
MAX-ACCESS read-write
STATUS current
DESCRIPTION
  "The minimum number of frame errors that cause an Errored Frame
  Period Event. The default value is one frame error. If the
  threshold value is zero, then an Event Notification OAMPDU is
  sent periodically (at the end of every window). This can be
  used as an asynchronous notification to the peer OAM entity of
  the statistics related to this threshold crossing alarm.

  If dot3OamErrFramePeriodThreshold frame errors occur within a
  window of dot3OamErrFramePeriodWindow frames, an Event
  Notification OAMPDU is generated with an Errored Frame
  Period Event TLV indicating that the threshold has been
  crossed in this window."

REFERENCE "IEEE Std 802.3, 30.3.6.1.38"
 ::= { dot3OamEventConfigEntry 7 }

dot3OamErrFramePeriodEvNotifEnable OBJECT-TYPE
SYNTAX TruthValue
MAX-ACCESS read-write
STATUS current
DESCRIPTION
  "If true, the OAM entity should send an Event Notification
  OAMPDU when an Errored Frame Period Event occurs.

  By default, this object should have the value true for
  Ethernet-like interfaces that support OAM. If the OAM layer
  does not support Event Notifications (as indicated via the
  dot3OamFunctionsSupported attribute), this value is ignored."

 ::= { dot3OamEventConfigEntry 8 }

dot3OamErrFrameWindow OBJECT-TYPE
SYNTAX Unsigned32
UNITS "tenths of a second"

```

```
MAX-ACCESS read-write
STATUS current
DESCRIPTION
"The amount of time (in 100 ms increments) over which the
threshold is defined. The default value is 10 (1 second).

If dot3OamErrFrameThreshold frame errors occur within a window
of dot3OamErrFrameWindow seconds (measured in tenths of
seconds), an Event Notification OAMPDU should be generated
with an Errored Frame Event TLV indicating that the threshold
has been crossed in this window."

REFERENCE "IEEE Std 802.3, 30.3.6.1.36"
DEFVAL { 10 }
::= { dot3OamEventConfigEntry 9 }

dot3OamErrFrameThreshold OBJECT-TYPE
SYNTAX Unsigned32
UNITS "frames"
MAX-ACCESS read-write
STATUS current
DESCRIPTION
"The minimum number of frame errors that cause an Errored Frame
Event. The default value is one frame error. If the
threshold value is zero, then an Event Notification OAMPDU is
sent periodically (at the end of every window). This can be
used as an asynchronous notification to the peer OAM entity of
the statistics related to this threshold crossing alarm.

If dot3OamErrFrameThreshold frame errors occur within a window
of dot3OamErrFrameWindow (in tenths of seconds), an Event
Notification OAMPDU is generated with an Errored Frame
Event TLV indicating the threshold has been crossed in this
window."

REFERENCE "IEEE Std 802.3, 30.3.6.1.36"
DEFVAL { 1 }
::= { dot3OamEventConfigEntry 10 }

dot3OamErrFrameEvNotifEnable OBJECT-TYPE
SYNTAX TruthValue
MAX-ACCESS read-write
STATUS current
DESCRIPTION
"If true, the OAM entity should send an Event Notification
OAMPDU when an Errored Frame Event occurs.

By default, this object should have the value true for
Ethernet-like interfaces that support OAM. If the OAM layer
does not support Event Notifications (as indicated via the
dot3OamFunctionsSupported attribute), this value is ignored."

DEFVAL { true }
::= { dot3OamEventConfigEntry 11 }

dot3OamErrFrameSecsSummaryWindow OBJECT-TYPE
SYNTAX Integer32 (100..9000)
UNITS "tenths of a second"
MAX-ACCESS read-write
STATUS current
DESCRIPTION
"The amount of time (in 100 ms intervals) over which the
threshold is defined. The default value is 100 (10 seconds).

If dot3OamErrFrameSecsSummaryThreshold frame errors occur
within a window of dot3OamErrFrameSecsSummaryWindow (in tenths
of seconds), an Event Notification OAMPDU should be generated
with an Errored Frame Seconds Summary Event TLV indicating
that the threshold has been crossed in this window."

REFERENCE "IEEE Std 802.3, 30.3.6.1.40"
DEFVAL { 100 }
::= { dot3OamEventConfigEntry 12 }
```

```

dot3OamErrFrameSecsSummaryThreshold OBJECT-TYPE
SYNTAX      Integer32 (1..900)
UNITS       "errored frame seconds"
MAX-ACCESS  read-write
STATUS      current
DESCRIPTION
    "The minimum number of errored frame seconds that cause an Errored
    Frame Seconds Summary Event. The default value is one errored frame
    second. If the threshold value is zero, then an Event
    Notification OAMPDU is sent periodically (at the end of every
    window). This can be used as an asynchronous notification to
    the peer OAM entity of the statistics related to this
    threshold crossing alarm.

    If dot3OamErrFrameSecsSummaryThreshold frame errors occur
    within a window of dot3OamErrFrameSecsSummaryWindow (in tenths
    of seconds), an Event Notification OAMPDU is generated
    with an Errored Frame Seconds Summary Event TLV indicating
    that the threshold has been crossed in this window."

REFERENCE   "IEEE Std 802.3, 30.3.6.1.40"
DEFVAL { 1 }
 ::= { dot3OamEventConfigEntry 13 }

dot3OamErrFrameSecsEvNotifEnable OBJECT-TYPE
SYNTAX      TruthValue
MAX-ACCESS  read-write
STATUS      current
DESCRIPTION
    "If true, the local OAM entity sends an Event Notification
    OAMPDU when an Errored Frame Seconds Event occurs.

    The default value for this object is true for
    Ethernet-like interfaces that support OAM. If the OAM layer
    does not support Event Notifications (as indicated via the
    dot3OamFunctionsSupported attribute), this value is ignored."

DEFVAL { true }
 ::= { dot3OamEventConfigEntry 14 }

dot3OamDyingGaspEnable OBJECT-TYPE
SYNTAX      TruthValue
MAX-ACCESS  read-write
STATUS      current
DESCRIPTION
    "If true, the local OAM entity should attempt to indicate a
    dying gasp via the OAMPDU flags field to its peer OAM entity
    when a dying gasp event occurs. The exact definition of a
    dying gasp event is implementation dependent. If the system
    does not support dying gasp capability, setting this object
    has no effect, and reading the object returns 'false'.

    The default value for this object is true for
    Ethernet-like interfaces that support OAM. If the OAM layer
    does not support Event Notifications (as indicated via the
    dot3OamFunctionsSupported attribute), this value is ignored."

DEFVAL { true }
 ::= { dot3OamEventConfigEntry 15 }

dot3OamCriticalEventEnable OBJECT-TYPE
SYNTAX      TruthValue
MAX-ACCESS  read-write
STATUS      current
DESCRIPTION
    "If true, the local OAM entity should attempt to indicate a
    critical event via the OAMPDU flags to its peer OAM entity
    when a critical event occurs. The exact definition of a
    critical event is implementation dependent. If the system
    does not support critical event capability, setting this
    object has no effect, and reading the object should
    result in 'false'."

```

```

By default, this object should have the value true for
Ethernet-like interfaces that support OAM. If the OAM layer
does not support Event Notifications (as indicated via the
dot3OamFunctionsSupported attribute), this value is ignored."

DEFVAL { true }
::= { dot3OamEventConfigEntry 16 }

-- *****
--
-- Ethernet OAM Event Log group
--

dot3OamEventLogTable OBJECT-TYPE
SYNTAX      SEQUENCE OF Dot3OamEventLogEntry
MAX-ACCESS  not-accessible
STATUS      current
DESCRIPTION
    "This table records a history of the events that have occurred
    at the Ethernet OAM level. These events can include locally
    detected events, which may result in locally generated
    OAMPDUs, and remotely detected events, which are detected by
    the OAM peer entity and signaled to the local entity via
    Ethernet OAM. Ethernet OAM events can be signaled by Event
    Notification OAMPDUs or by the flags field in any OAMPDU.

    This table contains both threshold crossing events and
    non-threshold crossing events. The parameters for the
    threshold window, threshold value, and actual value
    (dot3OamEventLogWindowXX, dot3OamEventLogThresholdXX,
    dot3OamEventLogValue) are only applicable to threshold
    crossing events, and are returned as all F's (2^32 - 1) for
    non-threshold crossing events.

    Entries in the table are automatically created when such
    events are detected. The size of the table is implementation
    dependent. When the table reaches its maximum size, older
    entries are automatically deleted to make room for newer
    entries."

    ::= { dot3OamObjects 6 }

dot3OamEventLogEntry OBJECT-TYPE
SYNTAX      Dot3OamEventLogEntry
MAX-ACCESS  not-accessible
STATUS      current
DESCRIPTION
    "An entry in the dot3OamEventLogTable. Entries are
    automatically created whenever Ethernet OAM events occur at
    the local OAM entity, and when Event Notification OAMPDUs are
    received at the local OAM entity (indicating that events have
    occurred at the peer OAM entity). The size of the table is
    implementation dependent, but when the table becomes full,
    older events are automatically deleted to make room for newer
    events. The table index dot3OamEventLogIndex increments for
    each new entry, and when the maximum value is reached, the
    value restarts at zero."

INDEX      { ifIndex, dot3OamEventLogIndex }
::= { dot3OamEventLogTable 1 }

Dot3OamEventLogEntry ::=
SEQUENCE {
    dot3OamEventLogIndex      Unsigned32,
    dot3OamEventLogTimestamp  TimeStamp,
    dot3OamEventLogOui        EightOTwoOui,
    dot3OamEventLogType       Unsigned32,
    dot3OamEventLogLocation   INTEGER,
    dot3OamEventLogWindowHi   Unsigned32,
    dot3OamEventLogWindowLo   Unsigned32,
    dot3OamEventLogThresholdHi Unsigned32,
    dot3OamEventLogThresholdLo Unsigned32,
}

```

```

dot3OamEventLogValue      CounterBasedGauge64,
dot3OamEventLogRunningTotal CounterBasedGauge64,
dot3OamEventLogEventTotal Unsigned32
}

dot3OamEventLogIndex      OBJECT-TYPE
SYNTAX      Unsigned32(1..4294967295)
MAX-ACCESS  not-accessible
STATUS      current
DESCRIPTION
  "An arbitrary integer for identifying individual events
  within the event log."
 ::= { dot3OamEventLogEntry 1 }

dot3OamEventLogTimestamp  OBJECT-TYPE
SYNTAX      TimeStamp
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
  "The value of sysUpTime at the time of the logged event. For
  locally generated events, the time of the event can be
  accurately retrieved from sysUpTime. For remotely generated
  events, the time of the event is indicated by the reception of
  the Event Notification OAMPDU indicating that the event
  occurred on the peer. A system may attempt to adjust the
  timestamp value to more accurately reflect the time of the
  event at the peer OAM entity by using other information, such
  as that found in the timestamp found of the Event Notification
  TLVs, which provides an indication of the relative time
  between events at the peer entity."
 ::= { dot3OamEventLogEntry 2 }

dot3OamEventLogOui        OBJECT-TYPE
SYNTAX      EightOTwoOui
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
  "The OUI of the entity defining the object type. All IEEE
  802.3 defined events (as appearing in IEEE Std 802.3 except for the
  Organizationally Unique Event TLVs) use the IEEE 802.3 OUI of
  0x0180C2. Organizations defining their own Event Notification
  TLVs include their OUI in the Event Notification TLV that
  gets reflected here."
 ::= { dot3OamEventLogEntry 3 }

dot3OamEventLogType       OBJECT-TYPE
SYNTAX      Unsigned32
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
  "The type of event that generated this entry in the event log.
  When the OUI is the IEEE 802.3 OUI of 0x0180C2, the following
  event types are defined:
    erroredSymbolEvent(1),
    erroredFramePeriodEvent(2),
    erroredFrameEvent(3),
    erroredFrameSecondsEvent(4),
    linkFault(256),
    dyingGaspEvent(257),
    criticalLinkEvent(258)
  The first four are considered threshold crossing events, as
  they are generated when a metric exceeds a given value within
  a specified window. The other three are not threshold
  crossing events.

  When the OUI is not 71874 (0x0180C2 in hex), then some other
  organization has defined the event space. If event subtyping
  is known to the implementation, it may be reflected here.
  Otherwise, this value should return all F's (2^32 - 1)."
```

REFERENCE "IEEE Std 802.3, 30.3.6.1.10 and 57.5.3."

```

 ::= { dot3OamEventLogEntry 4 }
```

```

dot3OamEventLogLocation OBJECT-TYPE
SYNTAX      INTEGER { local(1), remote(2) }
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
  "Whether this event occurred locally (local(1)), or was
  received from the OAM peer via Ethernet OAM (remote(2))."

 ::= { dot3OamEventLogEntry 5 }

dot3OamEventLogWindowHi  OBJECT-TYPE
SYNTAX      Unsigned32
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
  "If the event represents a threshold crossing event, the two
  objects dot3OamEventWindowHi and dot3OamEventWindowLo, form
  an unsigned 64-bit integer yielding the window over which the
  value was measured for the threshold crossing event (for
  example, 5, when 11 occurrences happened in 5 seconds while
  the threshold was 10). The two objects are combined as:
  dot3OamEventLogWindow = ((2^32) * dot3OamEventLogWindowHi)
                        + dot3OamEventLogWindowLo

  Otherwise, this value is returned as all F's (2^32 - 1) and
  adds no useful information."

REFERENCE   "IEEE Std 802.3, 30.3.6.1.37 and 57.5.3.2."
 ::= { dot3OamEventLogEntry 6 }

dot3OamEventLogWindowLo  OBJECT-TYPE
SYNTAX      Unsigned32
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
  "If the event represents a threshold crossing event, the two
  objects dot3OamEventWindowHi and dot3OamEventWindowLo form an
  unsigned 64-bit integer yielding the window over which the
  value was measured for the threshold crossing event (for
  example, 5, when 11 occurrences happened in 5 seconds while
  the threshold was 10). The two objects are combined as:

  dot3OamEventLogWindow = ((2^32) * dot3OamEventLogWindowHi)
                        + dot3OamEventLogWindowLo

  Otherwise, this value is returned as all F's (2^32 - 1) and
  adds no useful information."

REFERENCE   "IEEE Std 802.3, 30.3.6.1.37 and 57.5.3.2."
 ::= { dot3OamEventLogEntry 7 }

dot3OamEventLogThresholdHi  OBJECT-TYPE
SYNTAX      Unsigned32
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
  "If the event represents a threshold crossing event, the two
  objects dot3OamEventThresholdHi and dot3OamEventThresholdLo
  form an unsigned 64-bit integer yielding the value that was
  crossed for the threshold crossing event (for example, 10,
  when 11 occurrences happened in 5 seconds while the threshold
  was 10). The two objects are combined as:

  dot3OamEventLogThreshold = ((2^32) * dot3OamEventLogThresholdHi)
                        + dot3OamEventLogThresholdLo

  Otherwise, this value is returned as all F's (2^32 -1) and
  adds no useful information."

REFERENCE   "IEEE Std 802.3, 30.3.6.1.37 and 57.5.3.2."
 ::= { dot3OamEventLogEntry 8 }

dot3OamEventLogThresholdLo  OBJECT-TYPE

```

```

SYNTAX      Unsigned32
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
  "If the event represents a threshold crossing event, the two
  objects dot3OamEventThresholdHi and dot3OamEventThresholdLo
  form an unsigned 64-bit integer yielding the value that was
  crossed for the threshold crossing event (for example, 10,
  when 11 occurrences happened in 5 seconds while the threshold
  was 10). The two objects are combined as:

dot3OamEventLogThreshold = ((2^32) * dot3OamEventLogThresholdHi)
                          + dot3OamEventLogThresholdLo

  Otherwise, this value is returned as all F's (2^32 - 1) and
  adds no useful information."

REFERENCE   "IEEE Std 802.3, 30.3.6.1.37 and 57.5.3.2."
 ::= { dot3OamEventLogEntry 9 }

dot3OamEventLogValue      OBJECT-TYPE
SYNTAX      CounterBasedGauge64
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
  "If the event represents a threshold crossing event, this
  value indicates the value of the parameter within the given
  window that generated this event (for example, 11, when 11
  occurrences happened in 5 seconds while the threshold was 10).

  Otherwise, this value is returned as all F's
  (2^64 - 1) and adds no useful information."

REFERENCE   "IEEE Std 802.3, 30.3.6.1.37 and 57.5.3.2."
 ::= { dot3OamEventLogEntry 10 }

dot3OamEventLogRunningTotal  OBJECT-TYPE
SYNTAX      CounterBasedGauge64
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
  "Each Event Notification TLV contains a running total of the
  number of times an event has occurred, as well as the number
  of times an Event Notification for the event has been
  transmitted. For non-threshold crossing events, the number of
  events (dot3OamLogRunningTotal) and the number of resultant
  Event Notifications (dot3OamLogEventTotal) should be
  identical.

  For threshold crossing events, since multiple occurrences may
  be required to cross the threshold, these values are likely
  different. This value represents the total number of times
  this event has happened since the last reset (for example,
  3253, when 3253 symbol errors have occurred since the last
  reset, which has resulted in 51 symbol error threshold
  crossing events since the last reset)."
```

```

REFERENCE   "IEEE Std 802.3, 30.3.6.1.37 and 57.5.3.2."
 ::= { dot3OamEventLogEntry 11 }

dot3OamEventLogEventTotal  OBJECT-TYPE
SYNTAX      Unsigned32
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
  "Each Event Notification TLV contains a running total of the
  number of times an event has occurred, as well as the number
  of times an Event Notification for the event has been
  transmitted. For non-threshold crossing events, the number of
  events (dot3OamLogRunningTotal) and the number of resultant
  Event Notifications (dot3OamLogEventTotal) should be
  identical.
```


For threshold crossing events, since multiple occurrences may be required to cross the threshold, these values are likely different. This value represents the total number of times one or more of these occurrences have resulted in an Event Notification (for example, 51 when 3253 symbol errors have occurred since the last reset, which has resulted in 51 symbol error threshold crossing events since the last reset)."

REFERENCE "IEEE Std 802.3, 30.3.6.1.37 and 57.5.3.2."
::= { dot3OamEventLogEntry 12 }

-- *****
--
-- Ethernet OAM Notifications
--

dot3OamThresholdEvent NOTIFICATION-TYPE

OBJECTS { dot3OamEventLogTimestamp,
dot3OamEventLogOui,
dot3OamEventLogType,
dot3OamEventLogLocation,
dot3OamEventLogWindowHi,
dot3OamEventLogWindowLo,
dot3OamEventLogThresholdHi,
dot3OamEventLogThresholdLo,
dot3OamEventLogValue,
dot3OamEventLogRunningTotal,
dot3OamEventLogEventTotal
}

STATUS current

DESCRIPTION

"A dot3OamThresholdEvent notification is sent when a local or remote threshold crossing event is detected. A local threshold crossing event is detected by the local entity, while a remote threshold crossing event is detected by the reception of an Ethernet OAM Event Notification OAMPDU that indicates a threshold event.

This notification should not be sent more than once per second.

The OAM entity can be derived from extracting the ifIndex from the variable bindings. The objects in the notification correspond to the values in a row instance in the dot3OamEventLogTable.

The management entity should periodically check dot3OamEventLogTable to detect any missed events."

::= { dot3OamNotifications 1 }

dot3OamNonThresholdEvent NOTIFICATION-TYPE

OBJECTS { dot3OamEventLogTimestamp,
dot3OamEventLogOui,
dot3OamEventLogType,
dot3OamEventLogLocation,
dot3OamEventLogEventTotal
}

STATUS current

DESCRIPTION

"A dot3OamNonThresholdEvent notification is sent when a local or remote non-threshold crossing event is detected. A local event is detected by the local entity, while a remote event is detected by the reception of an Ethernet OAM Event Notification OAMPDU that indicates a non-threshold crossing event.

This notification should not be sent more than once per second.

The OAM entity can be derived from extracting the ifIndex from the variable bindings. The objects in the notification correspond to the values in a row instance of the dot3OamEventLogTable.

```

    The management entity should periodically check
    dot3OamEventLogTable to detect any missed events."
::= { dot3OamNotifications 2 }

-- *****
--
-- Conformance statements
--

dot3OamGroups OBJECT IDENTIFIER ::= { dot3OamConformance 1 }
dot3OamCompliances OBJECT IDENTIFIER ::= { dot3OamConformance 2 }

-- Compliance statements

dot3OamCompliance MODULE-COMPLIANCE
STATUS          current
DESCRIPTION     "The compliance statement for managed entities
                supporting OAM on Ethernet-like interfaces."

MODULE -- this module
MANDATORY-GROUPS { dot3OamControlGroup,
                   dot3OamPeerGroup,
                   dot3OamStatsBaseGroup
                 }

GROUP          dot3OamLoopbackGroup
DESCRIPTION
"This group is mandatory for all IEEE 802.3 OAM
implementations that support loopback functionality."

GROUP          dot3OamErrSymbolPeriodEventGroup
DESCRIPTION
"This group is mandatory for all IEEE 802.3 OAM
implementations that support event functionality."

GROUP          dot3OamErrFramePeriodEventGroup
DESCRIPTION
"This group is mandatory for all IEEE 802.3 OAM
implementations that support event functionality."

GROUP          dot3OamErrFrameEventGroup
DESCRIPTION
"This group is mandatory for all IEEE 802.3 OAM
implementations that support event functionality."

GROUP          dot3OamErrFrameSecsSummaryEventGroup
DESCRIPTION
"This group is mandatory for all IEEE 802.3 OAM
implementations that support event functionality."

GROUP          dot3OamFlagEventGroup
DESCRIPTION
"This group is optional for all IEEE 802.3 OAM
implementations. The ability to send critical events or dying
gasp events is not required in any system."

GROUP          dot3OamEventLogGroup
DESCRIPTION
"This group is optional for all IEEE 802.3 OAM
implementations. Entries in this table are dependent on what
event functionality is supported in the local OAM
implementation. At least one type of event shall be supported
for entries to appear in this table."

GROUP          dot3OamNotificationGroup
DESCRIPTION
"This group is optional for all IEEE 802.3 OAM
implementations. Since the information in the notifications
is dependent on the dot3OamEventLogTable, that table shall be
implemented for notifications."

::= { dot3OamCompliances 1 }

```

```

dot3OamControlGroup OBJECT-GROUP
OBJECTS      {  dot3OamAdminState,
                dot3OamOperStatus,
                dot3OamMode,
                dot3OamMaxOamPduSize,
                dot3OamConfigRevision,
                dot3OamFunctionsSupported
              }
STATUS      current
DESCRIPTION
  "A collection of objects providing the abilities,
  configuration, and status of an Ethernet OAM entity."
 ::= { dot3OamGroups 1 }

dot3OamPeerGroup OBJECT-GROUP
OBJECTS      {  dot3OamPeerMacAddress,
                dot3OamPeerVendorOui,
                dot3OamPeerVendorInfo,
                dot3OamPeerMode,
                dot3OamPeerFunctionsSupported,
                dot3OamPeerMaxOamPduSize,
                dot3OamPeerConfigRevision
              }
STATUS      current
DESCRIPTION
  "A collection of objects providing the abilities,
  configuration, and status of a peer Ethernet OAM entity."
 ::= { dot3OamGroups 2 }

dot3OamStatsBaseGroup OBJECT-GROUP
OBJECTS      {  dot3OamInformationTx,
                dot3OamInformationRx,
                dot3OamUniqueEventNotificationTx,
                dot3OamUniqueEventNotificationRx,
                dot3OamDuplicateEventNotificationTx,
                dot3OamDuplicateEventNotificationRx,
                dot3OamLoopbackControlTx,
                dot3OamLoopbackControlRx,
                dot3OamVariableRequestTx,
                dot3OamVariableRequestRx,
                dot3OamVariableResponseTx,
                dot3OamVariableResponseRx,
                dot3OamOrgSpecificTx,
                dot3OamOrgSpecificRx,
                dot3OamUnsupportedCodesTx,
                dot3OamUnsupportedCodesRx,
                dot3OamFramesLostDueToOam
              }
STATUS      current
DESCRIPTION
  "A collection of objects providing the statistics for the
  number of various transmit and receive events for OAM on an
  Ethernet-like interface. Note that all of these counters shall
  be supported even if the related function (as described in
  dot3OamFunctionsSupported) is not supported."
 ::= { dot3OamGroups 3 }

dot3OamLoopbackGroup OBJECT-GROUP
OBJECTS      {  dot3OamLoopbackStatus,
                dot3OamLoopbackIgnoreRx
              }
STATUS      current
DESCRIPTION
  "A collection of objects for controlling the OAM remote
  loopback function."
 ::= { dot3OamGroups 4 }

dot3OamErrrSymbolPeriodEventGroup OBJECT-GROUP
OBJECTS      {  dot3OamErrrSymPeriodWindowHi,
                dot3OamErrrSymPeriodWindowLo,
                dot3OamErrrSymPeriodThresholdHi,
                dot3OamErrrSymPeriodThresholdLo,
              }

```

```

        dot3OamErrSymPeriodEvNotifEnable
    }
STATUS    current
DESCRIPTION
    "A collection of objects for configuring the thresholds for an
    Errored Symbol Period Event.

    Each IEEE Std 802.3 defined Event Notification TLV has its own
    conformance group because each event can be implemented
    independently of any other."
 ::= { dot3OamGroups 5 }

dot3OamErrFramePeriodEventGroup OBJECT-GROUP
OBJECTS   { dot3OamErrFramePeriodWindow,
            dot3OamErrFramePeriodThreshold,
            dot3OamErrFramePeriodEvNotifEnable
          }
STATUS    current
DESCRIPTION
    "A collection of objects for configuring the thresholds for an
    Errored Frame Period Event.

    Each IEEE Std 802.3 defined Event Notification TLV has its own
    conformance group because each event can be implemented
    independently of any other."
 ::= { dot3OamGroups 6 }

dot3OamErrFrameEventGroup OBJECT-GROUP
OBJECTS   { dot3OamErrFrameWindow,
            dot3OamErrFrameThreshold,
            dot3OamErrFrameEvNotifEnable
          }
STATUS    current
DESCRIPTION
    "A collection of objects for configuring the thresholds for an
    Errored Frame Event.

    Each IEEE Std 802.3 defined Event Notification TLV has its own
    conformance group because each event can be implemented
    independently of any other."
 ::= { dot3OamGroups 7 }

dot3OamErrFrameSecsSummaryEventGroup OBJECT-GROUP
OBJECTS   { dot3OamErrFrameSecsSummaryWindow,
            dot3OamErrFrameSecsSummaryThreshold,
            dot3OamErrFrameSecsEvNotifEnable
          }
STATUS    current
DESCRIPTION
    "A collection of objects for configuring the thresholds for an
    Errored Frame Seconds Summary Event.

    Each IEEE Std 802.3 defined Event Notification TLV has its own
    conformance group because each event can be implemented
    independently of any other."
 ::= { dot3OamGroups 8 }

dot3OamFlagEventGroup OBJECT-GROUP
OBJECTS   { dot3OamDyingGaspEnable,
            dot3OamCriticalEventEnable
          }
STATUS    current
DESCRIPTION
    "A collection of objects for configuring the sending OAMPDUS
    with the critical event flag or dying gasp flag enabled."
 ::= { dot3OamGroups 9 }

dot3OamEventLogGroup OBJECT-GROUP
OBJECTS { dot3OamEventLogTimestamp,
          dot3OamEventLogOui,
          dot3OamEventLogType,
          dot3OamEventLogLocation,
          dot3OamEventLogWindowHi,

```

```
        dot3OamEventLogWindowLo,
        dot3OamEventLogThresholdHi,
        dot3OamEventLogThresholdLo,
        dot3OamEventLogValue,
        dot3OamEventLogRunningTotal,
        dot3OamEventLogEventTotal
    }
STATUS      current
DESCRIPTION
    "A collection of objects for configuring the thresholds for an
    Errored Frame Seconds Summary Event and maintaining the event
    information."
 ::= { dot3OamGroups 10 }

dot3OamNotificationGroup NOTIFICATION-GROUP
NOTIFICATIONS {
    dot3OamThresholdEvent,
    dot3OamNonThresholdEvent
}
STATUS      current
DESCRIPTION
    "A collection of notifications used by Ethernet OAM to signal
    to a management entity that local or remote events have
    occurred on a specified Ethernet link."
 ::= { dot3OamGroups 11 }

END
```