

# **PacketCable™ 1.5 Specifications**

## **Management Event MIB Specification**

### **PKT-SP-EVEMIB1.5-C01-191120**

**CLOSED**

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### Key to Document Status Codes:

<b>Work in Progress</b>	An incomplete document, designed to guide discussion and generate feedback that may include several alternative requirements for consideration.
<b>Draft</b>	A document in specification format considered largely complete, but lacking review by Members and vendors. Drafts are susceptible to substantial change during the review process.
<b>Issued</b>	A generally public document that has undergone Member and Technology Supplier review, cross-vendor interoperability, and is for Certification testing if applicable. Issued Specifications are subject to the Engineering Change Process.
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# 1 SCOPE

## 1.1 Introduction and Overview

The Management Event MIB provides a common data and format definition for events (informative, alarm, etc.). It also specifies by what means events are transmitted. Use of a common event mechanism facilitates management of the MTA in a multi-vendor environment and provides a standard means to implement PacketCable™ specified events.

## 1.2 Purpose of document

This document describes an SNMP MIB in SMIV2, to support the management event mechanism as described in [1]. It is intended to be implemented in the MTA and management devices.

## 1.3 Organization of document

The Management Event MIB defined in this document provides a set of objects required for the management of PacketCable compliant MultiMedia Terminal Adapter (MTA) devices. The mechanisms to control the event reporting are defined in this specification.

This MIB itself is structured as six groups:

- Management information that controls the event reporting (pkcDevEventControl).
- Management information that configures the reporting of the various programmable events (pkcDevEventConfig).
- Management information that configures the event throttling control (pkcDevEventThrottle).
- Management information that configures that allows the retrieval of events via SNMP (pkcDevEventLocal).
- Management information that specifies the information sent in traps and informs (pkcDevEventNotify).
- Management information that defines the trap and inform messages (pkcDevEventNotification).

## 1.4 Requirements

Throughout this document, the words that are used to define the significance of particular requirements are capitalized. These words are:

- |            |  |
|------------|--|
| "MUST"     | This word or the adjective "REQUIRED" means that the item is an absolute requirement of this specification.  |
| "MUST NOT" | This phrase means that the item is an absolute prohibition of this specification.  |
| "SHOULD"   | This word or the adjective "RECOMMENDED" means that there may exist valid reasons in particular circumstances to ignore this item, but the full implications should be understood and the case carefully weighed before choosing a different course. |

"SHOULD NOT"	This phrase means that there may exist valid reasons in particular circumstances when the listed behavior is acceptable or even useful, but the full implications should be understood and the case carefully weighed before implementing any behavior described with this label.
"MAY"	This word or the adjective "OPTIONAL" means that this item is truly optional. One vendor may choose to include the item because a particular marketplace requires it or because it enhances the product, for example; another vendor may omit the same item.

## 2 REFERENCES

### 2.1 Normative

In order to claim compliance with this specification, it is necessary to conform to the following standards and other works as indicated, in addition to the other requirements of this specification. Notwithstanding, intellectual property rights may be required to use or implement such normative references.

- [1] PacketCable 1.5 Management Event Mechanism, PKT-SP-MEM1.5-C01-191120, November 20, 2019, Cable Television Laboratories, Inc.
- [2] IETF RFC 1034/STD0013, Domain names - concepts and facilities, November, 1987.
- [3] IETF RFC 2578/STD0058, Structure of Management Information Version 2 (SMIv2), April 1999.
- [4] IETF RFC 2579, Textual Conventions for SMIv2, April 1999.
- [5] IETF RFC 2580/STD0058, Conformance Statements for SMIv2, April 1999.
- [6] IETF RFC 3550, RTP: A Transport Protocol for Real-Time Applications, July 2003.
- [7] PacketCable 1.5 MTA Device Provisioning Specification, PKT-SP-PROV1.5-C01-191120, November 20, 2019, Cable Television Laboratories, Inc.

### 2.2 Informative

- [8] PacketCable 1.5 MTA MIB, PKT-SP-MIB-MTA1.5-C01-191120, November 20, 2019, Cable Television Laboratories, Inc.
- [9] PacketCable 1.5 Signaling MIB, PKT-SP-MIB-SIG1.5-C01-191120, November 20, 2019, Cable Television Laboratories, Inc.
- [10] PacketCable 1.5 Network-Based Call Signaling Protocol Specification, PKT-SP-NCS1.5-C01-191120, November 20, 2019, Cable Television Laboratories, Inc.
- [11] PacketCable 1.5 Security Specification, PKT-SP-SEC1.5-C01-191120, November 20, 2019, Cable Television Laboratories, Inc.

### 2.3 Reference Acquisition

- Cable Television Laboratories, Inc., 858 Coal Creek Circle, Louisville, CO 80027; Phone 303-661-9100; Fax 303-661-9199; Internet: <http://www.cablelabs.com>
- Internet Engineering Task Force (IETF) Secretariat c/o Corporation for National Research Initiatives, 1895 Preston White Drive, Suite 100, Reston, VA 20191-5434, Phone 703-620-8990, Fax 703-620-9071, Internet <http://www.ietf.org/>

### 3 TERMS AND DEFINITIONS

This PacketCable specification uses the following terms and definitions:

<b>Endpoint</b>	A Terminal, Gateway or MCU
-----------------	----------------------------

### 4 ABBREVIATIONS AND ACRONYMS

This PacketCable specification uses the following abbreviations:

<b>E-MTA</b>	Embedded MTA – a single node which contains both an MTA and a cable modem.
<b>FQDN</b>	Fully Qualified Domain Name. Refer to IETF RFC 1594 for details.
<b>IANA</b>	Internet Assigned Numbered Authority. See <a href="http://www.ietf.org">www.ietf.org</a> for details.
<b>IETF</b>	Internet Engineering Task Force. A body responsible, among other things, for developing standards used in the Internet.
<b>IP</b>	Internet Protocol. An Internet network-layer protocol.
<b>MAC</b>	Media Access Control. It is a sublayer of the Data Link Layer. It normally runs directly over the physical layer.
<b>MTA</b>	Multimedia Terminal Adapter.
<b>OSS</b>	Operations Systems Support. The back office software used for configuration, performance, fault, accounting and security management.
<b>SNMP</b>	Simple Network Management Protocol.

## 5 PACKETCABLE MANAGEMENT EVENT MIB

The PacketCable 1.5 Management Event MIB MUST be implemented as defined below.

```

PKTC-EVENT-MIB DEFINITIONS ::= BEGIN

IMPORTS
    MODULE-IDENTITY,
    OBJECT-TYPE,
    Unsigned32,
    NOTIFICATION-TYPE,
    BITS
        FROM SNMPv2-SMI
    DateAndTime
        FROM SNMPv2-TC
    clabProjPacketCable
    SnmpAdminString
        FROM CLAB-DEF-MIB
    OBJECT-GROUP,
    MODULE-COMPLIANCE,
    NOTIFICATION-GROUP
        FROM SNMPv2-CONF
    ifPhysAddress
    InetAddressType,
    InetAddress,
    InetPortNumber
        FROM INET-ADDRESS-MIB ;

pktcEventMib MODULE-IDENTITY
    LAST-UPDATED      "200508120000Z" -- August 12, 2005
    ORGANIZATION      "Cable Television Laboratories, Inc"
    CONTACT-INFO
        "Sumanth Channabasappa
        Postal: Cable Television Laboratories, Inc.
           858 Coal Creek Circle
           Louisville, Colorado 80027
           U.S.A.
        Phone: +1 303-661-9100
        Fax:   +1 303-661-9199
        E-mail: mibs@cablelabs.com"

    DESCRIPTION
        "This MIB module supplies the basic management objects
        for event reporting

        Acknowledgements:
            Eugene Nechamkin      - Broadcom Corp
            John Berg             - CableLabs, Inc.
            Kevin Marez           - Motorola, Inc.
            Satish Kumar          - Texas Instruments
            Venkatesh Sunkad      - CableLabs, Inc."

    ::= { clabProjPacketCable 3 }

--
--
pktcDevEventControl OBJECT IDENTIFIER ::= { pktcEventMib 1 }
pktcDevEventThrottle OBJECT IDENTIFIER ::= { pktcEventMib 2 }
pktcDevEventStatus OBJECT IDENTIFIER ::= { pktcEventMib 3 }
pktcDevEventDescr OBJECT IDENTIFIER ::= { pktcEventMib 4 }
pktcDevEventLog OBJECT IDENTIFIER ::= { pktcEventMib 5 }
pktcDevEvNotification OBJECT IDENTIFIER ::= { pktcEventMib 6 }
--
--
---
--- Event Reporting control objects
---
pktcDevEvControl OBJECT-TYPE
    SYNTAX      BITS {

```

```

        resetEventLogTable(0),
        resetEventDescrTable(1)
    }    MAX-ACCESS    read-write
STATUS    current
DESCRIPTION
    "This MIB object defines the actions related to the event
    log configuration.

    The MTA MUST take the appropriate action whenever
    a bit is set to a value of '1'.

    Setting the resetEventLogTable(0) bit to
    a value of '1' clears the entire event log
    (Deletes all entries in pktcDevEventLogTable).

    Setting resetEventDescrTable(1) to a value of '1'
    resets the pktcDevEventDescrTable to the
    factory default values.

    Setting a control bit to a value of '0' MUST not result in
    any action.

    Reading this MIB object MUST always return '00'."
 ::= { pktcDevEventControl 1 }

```

```

pktcDevEvSyslogAddressType    OBJECT-TYPE
SYNTAX    InetAddressType
MAX-ACCESS    read-write
STATUS    current
DESCRIPTION
    "This MIB Object defines the address type of the
    Syslog server.
    PacketCable devices implementing this MIB MUST
    support an InetAddressType of ipv4(1).
    PacketCable devices MAY optionally implement other
    address types.

    If an unsupported InetAddressType is used to set
    this object, the PacketCable device MUST reject it
    and report an SNMP error stating 'wrong value'.

    If an SNMP SET results in a type that does not match
    the value contained in the MIB Object
    pktcDevEvSyslogAddress, the PacketCable device MUST
    reject the SNMP SET with an 'inconsistent value'
    error."
 ::= { pktcDevEventControl 2 }

```

```

pktcDevEvSyslogAddress    OBJECT-TYPE
SYNTAX    InetAddress
MAX-ACCESS    read-write
STATUS    current
DESCRIPTION
    "This MIB Object contains the IP address of the
    Syslog server. If this is set to either 0.0.0.0 or
    255.255.255.255 the device MUST inhibit syslog
    transmission.
    The use of FQDNs is syntactically allowed, but
    discouraged since a failure to resolve them in a
    timely manner may leave the device without access to
    the Syslog daemon during critical network events.
    The type of address this object represents is defined
    by the MIB Object pktcDevEvSyslogAddressType.

```

```

        If an SNMP SET results in a type that does not match
        that indicated by the MIB Object
        pktcDevEvSyslogAddressType, the PacketCable device MUST
        reject the SNMP SET with an 'inconsistent value'
        error."
 ::= { pktcDevEventControl 3 }

pktcDevEvSyslogUdpPort OBJECT-TYPE
    SYNTAX      InetPortNumber
    MAX-ACCESS  read-write
    STATUS      current
    DESCRIPTION
        "This MIB Object contains the UDP Port Number of the Syslog
        Server. The PacketCable device must send the Syslog
        messages to this port on the Syslog Server."
    DEFVAL { 514 }
 ::= { pktcDevEventControl 4 }

--
-- Event throttling control
--

pktcDevEvThrottleAdminStatus OBJECT-TYPE
    SYNTAX      INTEGER {
                unconstrained(1),
                maintainBelowThreshold(2),
                stopAtThreshold(3),
                inhibited(4)
                }
    MAX-ACCESS  read-write
    STATUS      current
    DESCRIPTION

        "This MIB Object controls the throttling of the
        transmitted messages upon generation of an event
        (SNMP/Syslog).

        A value of unconstrained(1) causes event messages
        to be transmitted without regard to the threshold
        settings.

        A value of maintainBelowThreshold(2) causes event
        messages to be suppressed if the number of transmissions
        would otherwise exceed the threshold.
        A value of stopAtThreshold(3) causes event message
        transmission to cease at the threshold, and not
        resume until directed to do so.

        A value of inhibited(4) causes all event message
        Transmission to be suppressed.

        An event causing both an SNMP and a Syslog message
        is still treated as a single event.

        Writing to this object resets the thresholding state.

        Refer to MIB Objects pktcDevEvThrottleThreshold and
        pktcDevEvThrottleInterval for information on throttling."
    DEFVAL { unconstrained }
 ::= { pktcDevEventThrottle 1 }

```

```
pktcDevEvThrottleThreshold OBJECT-TYPE
    SYNTAX      Unsigned32
    MAX-ACCESS  read-write
    STATUS      current
    DESCRIPTION
        "This MIB Object contains the number of events per
        pktcDevEvThrottleInterval to be transmitted before
        throttling.

        An event causing both a SNMP and a syslog message is
        still treated as a single event."
    DEFVAL { 2 }
    ::= { pktcDevEventThrottle 2 }

pktcDevEvThrottleInterval OBJECT-TYPE
    SYNTAX      Unsigned32
    UNITS       "seconds"
    MAX-ACCESS  read-write
    STATUS      current
    DESCRIPTION
        "This MIB Object contains the interval over which
        the throttle threshold applies."    DEFVAL { 1 }
    ::= { pktcDevEventThrottle 3 }

---
-- Status Reporting
---

pktcDevEvTransmissionStatus OBJECT-TYPE

    SYNTAX      BITS {
        syslogThrottled(0),
        snmpThrottled(1),
        validSyslogServerAbsent(2),
        validSnmpManagerAbsent(3),
        syslogTransmitError(4),
        snmpTransmitError(5)
        }
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "This MIB Object reflects the status of the event
        transmission.

        If a bit corresponding to a state is set to a value
        of:
            '1', it indicates that the state is true
            '0', it indicates that the state is false

        'Event throttling' is based on thresholds and the current
        setting of pktcDevEvThrottleAdminStatus.

        'Server/Manager' indicators must be based on the
        availability of valid Syslog server/SNMP managers.

        'Transmit Errors' must only be used in cases where the
        PacketCable Device can identify unavailable servers."

    ::= { pktcDevEventStatus 1 }
```

```

---
-- Event Descriptions
---

pktcDevEventDescrTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF PktcDevEventDescrEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "This MIB table contains all the possible events
         that can be generated by the device. This includes
         both PacketCable defined and vendor-specific events."
    ::= { pktcDevEventDescr 1 }

pktcDevEventDescrEntry OBJECT-TYPE
    SYNTAX      PktcDevEventDescrEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "An entry in this table is created for each
         event the PacketCable Device implementing this
         MIB is capable of reporting."
    INDEX { pktcDevEventDescrId, pktcDevEventDescrEnterprise }
    ::= { pktcDevEventDescrTable 1 }

PktcDevEventDescrEntry ::= SEQUENCE {
    pktcDevEventDescrId      Unsigned32,
    pktcDevEventDescrEnterprise Unsigned32,
    pktcDevEventDescrFacility INTEGER,
    pktcDevEventDescrLevel   INTEGER,
    pktcDevEventDescrReporting BITS,
    pktcDevEventDescrText    SnmpAdminString
}

pktcDevEventDescrId OBJECT-TYPE
    SYNTAX      Unsigned32
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "This MIB Object contains the event identifier for the
         specific event to which the priority and display
         strings belong.
         The event identifier can either be PacketCable defined
         or vendor-specific."
    ::= { pktcDevEventDescrEntry 1 }

pktcDevEventDescrEnterprise OBJECT-TYPE
    SYNTAX      Unsigned32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "This MIB Object provides the IANA enterprise number of
         the Organization defining the event. Thus, all PacketCable
         defined events will contain the CableLabs IANA enterprise
         number and for vendor-specific events it will contain
         the IANA enterprise number of the defining organization."
    ::= { pktcDevEventDescrEntry 2 }

pktcDevEventDescrFacility OBJECT-TYPE

```

```

SYNTAX      INTEGER {
              kernel(0),
              user(1),
              mail(2),
              daemon(3),
              auth(4),
              syslog(5),
              lpr(6),
              news(7),
              uucp(8),
              cron(9),
              authPriv(10),
              ftp(11),
              ntp(12),
              security(13),
              console(14),
              clockDaemon(15),
              local0(16),
              local1(17),
              local2(18),
              local3(19),
              local4(20),
              local5(21),
              local6(22),
              local7(23)
            }
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
    "This MIB Object contains the facility
    for the event.
    For PacketCable events this MUST be set to
    local0(16)."
```

::= { pktcDevEventDescrEntry 3 }

pktcDevEventDescrLevel OBJECT-TYPE

```

SYNTAX      INTEGER {
              emergency(0),
              alert(1),
              critical(2),
              error(3),
              warning(4),
              notice(5),
              info(6),
              debug(7)
            }
MAX-ACCESS  read-write
STATUS      current
DESCRIPTION
    "This MIB Object contains the priority level that
    is controlled by this entry.
    The levels are described as:

    emergency(0) - A condition that makes the system unusable.
    alert(1)     - A service-affecting condition for which
                  immediate action must be taken.
    critical(2)  - A service-affecting critical condition.
    error(3)    - An error condition.
    warning(4)  - A warning condition.
    notice(5)   - A normal but significant condition.
    info(6)     - An informational message.
    debug(7)    - A debug message."
```

::= { pktcDevEventDescrEntry 4 }

```

pktcDevEventDescrReporting OBJECT-TYPE
    SYNTAX      BITS {
                local(0),
                syslog(1),
                snmpTrap(2),
                snmpInform(3)
                }
    MAX-ACCESS  read-write
    STATUS      current
    DESCRIPTION
        "This MIB Object defines the action to be taken on
        occurrence of this event class.

        Setting a bit to a value of '1' indicates that the
        corresponding action will be taken upon occurrence of
        this event, provided the required parameters are present.
        (e.g.: Syslog Server for Syslog messages, SNMP targets for
        SNMP traps and SNMP INFORMs etc). If none of the bits
        are set then no action is taken upon occurrence of the
        event.

        The default value of this MIB Object is dependent on the
        value of the MIB Object 'pktcDevEventDescrLevel', for the
        corresponding event.

        For the following values of 'pktcDevEventDescrLevel':
            emergency(0), alert(1), critical(2) and error(3),
        the PacketCable device MUST set the bits for local(0),
        syslog(1) and snmpInform(3) to a value of '1' and the rest
        to a value of '0'.

        For all the remaining values of 'pktcDevEventDescrLevel',
        the PacketCable device MUST set the bits for local(0) and
        syslog(1) to a value of '1' and the rest to a value of
        '0'."
    ::= { pktcDevEventDescrEntry 5 }

pktcDevEventDescrText OBJECT-TYPE
    SYNTAX      SnmpAdminString(SIZE (0..127))
    MAX-ACCESS  read-write
    STATUS      current
    DESCRIPTION
        "This MIB Object contains event display
        string providing a human-readable description of the
        event."
    ::= { pktcDevEventDescrEntry 6 }

---
-- Events generated
---

pktcDevEventLogTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF PktcDevEventLogEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "This MIB table contains a log of the events
        generated by the PacketCable device.
        A description of all the events that can be
        generated by the device can be obtained from the
        MIB table 'pktcDevEventDescrTable'."
    ::= { pktcDevEventLog 1 }

```

```

pktcDevEventLogEntry OBJECT-TYPE
    SYNTAX      PktcDevEventLogEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "Each entry in this table describes an event that
        has occurred, indexed in the chronological order of
        generation. The details of the event are borrowed
        from the parameters associated with the corresponding
        event entry in 'pktcDevEventDescrTable', at the
        time of the event generation.
        While all entries created as such can be cleared using
        the MIB Object pktcDevEvControl, the Event entries
        themselves cannot be individually deleted."

    INDEX { pktcDevEvLogIndex }
    ::= { pktcDevEventLogTable 1 }

PktcDevEventLogEntry ::= SEQUENCE {
    pktcDevEvLogIndex      Unsigned32,
    pktcDevEvLogTime       DateAndTime,
    pktcDevEvLogEnterprise Unsigned32,
    pktcDevEvLogId         Unsigned32,
    pktcDevEvLogText       SnmpAdminString,
    pktcDevEvLogEndpointName SnmpAdminString,
    pktcDevEvLogType       BITS,
    pktcDevEvLogTargetInfo SnmpAdminString,
    pktcDevEvLogCorrelationId Unsigned32,
    pktcDevEvLogAdditionalInfo SnmpAdminString
}

pktcDevEvLogIndex OBJECT-TYPE
    SYNTAX      Unsigned32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "This MIB Object provides relative ordering of the
        objects in the event log.
        This object will always increase except when
        (a) the log is reset via pktcDevEvControl,
        (b) the device reboots and does not implement non-volatile
        storage for this log,
        (c) it reaches the value 2^31.
        The next entry for all the above cases is 0.
        This also serves as an indicator of event sequence."
    ::= { pktcDevEventLogEntry 1 }

pktcDevEvLogTime OBJECT-TYPE
    SYNTAX      DateAndTime
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "This MIB Object provides a human-readable description
        of the time at which the event occurred."
    ::= { pktcDevEventLogEntry 2 }

pktcDevEvLogEnterprise OBJECT-TYPE
    SYNTAX      Unsigned32
    MAX-ACCESS  read-only
    STATUS      current

```

## DESCRIPTION

"This MIB Object provides the IANA enterprise number of the Organization defining the event. Thus, all PacketCable defined events will contain the CableLabs IANA enterprise number and for vendor-specific events it will contain the IANA enterprise number of the defining organization."

```
::= { pktcDevEventLogEntry 3 }
```

```
pktcDevEvLogId OBJECT-TYPE
SYNTAX      Unsigned32
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
```

"This MIB Object contains the event identifier for the specific event to which the priority and display strings belong. The event identifier can either be PacketCable defined or vendor-specific."

```
::= { pktcDevEventLogEntry 4 }
```

```
pktcDevEvLogText OBJECT-TYPE
SYNTAX      SnmpAdminString
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
```

"This MIB Object contains the contents of pktcDevEventDescrText, corresponding to the event, at the moment of generation."

```
::= { pktcDevEventLogEntry 5 }
```

```
pktcDevEvLogEndpointName OBJECT-TYPE
SYNTAX      SnmpAdminString
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
```

"This MIB Object provides the endpoint identifier followed by the PacketCable MTA's Fully Qualified Domain Name (FQDN) and the IP Address (IP) of the PacketCable MTA device.

This will be denoted as follows:  
aaln/n:<FQDN>/<IP>, where 'n' is the Endpoint number.  
or  
<FQDN>/<IP> if it is not specific to an endpoint."

```
::= { pktcDevEventLogEntry 6 }
```

```
pktcDevEvLogType OBJECT-TYPE
SYNTAX      BITS {
                local(0),
                syslog(1),
                trap(2),
                inform(3)
            }
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
```

"This MIB Object contains the kind of actions taken by the PacketCable device when the event under consideration

occurred.

A bit with a value of 1 indicates the corresponding action was taken. Setting it to a value of 0 indicates that the corresponding action was not taken.

An event may trigger one or more actions (e.g.: Syslog and SNMP) or may remain as a local event since transmissions could be disabled or inhibited as defined by the Throttle MIB Objects."

```
::= { pktcDevEventLogEntry 7 }
```

```
pktcDevEvLogTargetInfo OBJECT-TYPE
```

```
SYNTAX      SnmpAdminString
```

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

```
STATUS      current
```

```
DESCRIPTION
```

"This MIB Object contains a comma separated list of the actions taken, along with the target IP address for the generated event.

The syntax is as:

```
<action-1/IP:port>,<action-2/IP:port>,<action-3/IP:port>
```

Where <action-n/IP> is to be denoted as follows:

For Syslog events:

```
syslog/<IP address of the Syslog Server:port>
```

For SNMP traps:

```
snmpTrap/<IP address of the SNMP Server:port>
```

For SNMP INFORMS:

```
snmpInform/<IP address of the SNMP Server:port>
```

If there are multiple targets for the same type (SNMP Traps sent to multiple IP addresses) or if there are multiple messages sent to the same IP (Syslog and SNMP sent to the same IP address) they need to be reported individually."

```
::= { pktcDevEventLogEntry 8 }
```

```
pktcDevEvLogCorrelationId OBJECT-TYPE
```

```
SYNTAX      Unsigned32
```

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

```
STATUS      current
```

```
DESCRIPTION
```

" This MIB Object contains the correlation ID generated by the MTA as per section 5.4.5 of [7] that was being used by the MTA when the event was generated."

```
::= { pktcDevEventLogEntry 9 }
```

```
pktcDevEvLogAdditionalInfo OBJECT-TYPE
```

```
SYNTAX      SnmpAdminString
```

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

```
STATUS      current
```

```
DESCRIPTION
```

"This MIB Object contains additional, useful information in relation to the corresponding event that a PacketCable device might wish to report (for example: parameterized data or debugging information). The format is vendor-specific.

However, the PacketCable device is not required to implement this functionality."

```

 ::= { pktcDevEventLogEntry 10 }

---
-- Notifications
---

pktcDevEvNotificationIndex OBJECT IDENTIFIER ::=
    { pktcDevEvNotification 0 }

pktcDevEvInform NOTIFICATION-TYPE
    OBJECTS {pktcDevEvLogIndex, pktcDevEvLogTime,
    pktcDevEvLogEnterprise,pktcDevEvLogId,
    pktcDevEvLogEndpointName,pktcDevEvLogCorrelationId,ifPhysAddress}
    STATUS current
    DESCRIPTION
        "This Notification MIB Objects contains the Inform
        contents for event reporting "
    ::= { pktcDevEvNotificationIndex 1 }

pktcDevEvTrap NOTIFICATION-TYPE
    OBJECTS {pktcDevEvLogIndex, pktcDevEvLogTime,
    pktcDevEvLogEnterprise,pktcDevEvLogId,
    pktcDevEvLogEndpointName,pktcDevEvLogCorrelationId,ifPhysAddress}
    STATUS current
    DESCRIPTION
        "This Notification MIB Objects contains the Trap contents
        for event reporting "
    ::= { pktcDevEvNotificationIndex 2 }

---
-- Conformance/Compliance
---

pktcEventConformance OBJECT IDENTIFIER ::= { pktcEventMib 7 }
pktcEventCompliances OBJECT IDENTIFIER ::= { pktcEventConformance 1 }
pktcEventGroups OBJECT IDENTIFIER ::= { pktcEventConformance 2 }

pktcEventBasicCompliance MODULE-COMPLIANCE
    STATUS current
    DESCRIPTION
        "The compliance statement for devices that implement
        Event reporting feature."
    MODULE --pktcEventMib

MANDATORY-GROUPS {
    pktcEventGroup,
    pktcEventNotificationGroup
}
-- units of conformance
::= { pktcEventCompliances 3 }

pktcEventGroup OBJECT-GROUP
    OBJECTS {
        pktcDevEvControl,
        pktcDevEvSyslogAddressType,
        pktcDevEvSyslogAddress,
        pktcDevEvSyslogUdpPort,
        pktcDevEvThrottleAdminStatus,
        pktcDevEvThrottleThreshold,
        pktcDevEvThrottleInterval,
        pktcDevEvTransmissionStatus,

```

```
    pktcDevEventDescrEnterprise,
    pktcDevEventDescrFacility,
    pktcDevEventDescrLevel,
    pktcDevEventDescrReporting,
    pktcDevEventDescrText,
    pktcDevEvLogIndex,
    pktcDevEvLogTime,
    pktcDevEvLogEnterprise,
    pktcDevEvLogId,
    pktcDevEvLogText,
    pktcDevEvLogEndpointName,
    pktcDevEvLogType,
    pktcDevEvLogTargetInfo,
    pktcDevEvLogCorrelationId,
    pktcDevEvLogAdditionalInfo
}

STATUS      current
DESCRIPTION
    "Group of MIB objects for PacketCable Management Event
    MIB."
 ::= { pktcEventGroups 1 }

pktcEventNotificationGroup NOTIFICATION-GROUP
NOTIFICATIONS { pktcDevEvInform, pktcDevEvTrap }
STATUS      current
DESCRIPTION
    "Group of MIB objects for notifications related to
    change in status of the MTA Device."
 ::= { pktcEventGroups 2 }
END
```

## Appendix A Acknowledgements

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## Appendix B Revision History

The following ECN was incorporated in PKT-SP-EVEMIB1.5-I02-050812.

<b>ECN</b>	<b>Date Approved</b>	<b>Summary</b>
EVEMIB1.5-N-05.0282-1	7/13/05	Event MIB Objects definitions clarification