PacketCable™ 1.5 Specifications

MTA Extension MIB

PKT-SP-MIB-EXMTA1.5-C01-191120

CLOSED

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Key to Document Status Codes:

Work in Progress	An incomplete document, designed to guide discussion and generate feedback that may include several alternative requirements for consideration.
Draft	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.
Issued	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.
Closed	A static document, reviewed, tested, validated, and closed to further engineering change requests to the specification through CableLabs.

Trademarks

Contents

1 SCOPE

1.1 Purpose of the Document

New objects that are being introduced beyond PacketCable 1.0 for MTA MIBS are being grouped in this document so that the additional changes made can be tracked easily.

1.2 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 References

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 MTA Device Provisioning Specification, PKT-SP-PROV1.5-C01-191120, November 20, 2019, Cable Television Laboratories, Inc.

[2] IETF STD 62, Simple Network Management Protocol Version 3 (SNMPv3), December 2002.

[3] IETF RFC 2669, Cable Device Management Information Base for DOCSIS Compliant Cable Modems and Cable Modem Termination Systems.

[4] Data-Over-Cable Service Interface Specifications, DOCSIS 1.1, Operations Support System Interface, CM-SP-OSSIv1.1-C01-050907, September 7, 2005, Cable Television Laboratories, Inc.

[5] IETF STD 5, Internet Protocol, September 1981.

[6] IETF RFC 2011, SNMPv2 Management Information Base for the Internet Protocol using SMIv2, November 1996.

[7] IETF RFC 2863, The Interfaces Group MIB, June 2000

[8] eDOCSIS™ Specification, SP-eDOCSIS-I30-190213, February 13, 2019, Cable Television Laboratories, Inc.

[9] CableLabs Definition MIB Specification, CL-SP-MIB-CLABDEF-I12-160325, March 25, 2016, Cable Television Laboratories, Inc.

[10] Data-Over-Cable Service Interface Specifications, DOCSIS 2.0, Operations Support System Interface Specification, SP-OSSIv2.0-C01-081104, November 4, 2008, Cable Television Laboratories, Inc.

[11] PacketCable 1.5 MTA MIB Specification, PKT-SP-MIB-MTA1.5-C01-191120, November 20, 2019, Cable Television Laboratories, Inc.

[12] PacketCable 1.5 Signaling MIB Specification, PKT-SP-MIB-SIG1.5-C01-191120, November 20, 2019, Cable Television Laboratories, Inc.

[13] PacketCable 1.5 MIBs Framework, PKT-SP-MIBS1.5-C01-191120, November 20, 2019, Cable Television Laboratories, Inc.

[14] IETF RFC 2833, RTP Payload for DTMF Digits, May 2000.

[15] PacketCable 1.5 Audio/Video Codecs Specification, PKT-SP-C01-191120, November 20, 2019, Cable Television Laboratories, Inc.

[16] PacketCable 1.5 Network-Based Call Signaling Protocol Specification, PKT-SP-NCS1.5-C01-191120, November 20, 2019, Cable Television Laboratories, Inc.

2.2 Informative References

[17] Data-Over-Cable Service Interface Specifications, Cable Modem to Customer Premise Equipment Interface Specification, CM-SP-CMCI-C01-081104, November 4, 2008, Cable Television Laboratories, Inc.

[18] IETF RFC 3417, Transport Mappings for the Simple Network Management Protocol (SNMP), December 2002.

[19] IETF RFC 2579, Textual Conventions for SMIv2, April 1999.

[20] IETF RFC 3410, Introduction and Applicability Statements for Internet-Standard Management Framework, December 2002.

[21] IETF RFC 3411, An Architecture for Describing Simple Network Management Protocol (SNMP) Management Frameworks, December 2002.

[22] IETF RFC 3412, Message Processing and Dispatching for the Simple Network Management Protocol (SNMP), December 2002.

[23] IETF RFC 2821, Simple Mail Transfer Protocol, April 2001.

[24] PacketCable 1.5 Dynamic Quality of Service Specification, PKT-SP-DQOS1.5-C01-191120, November 20, 2019, Cable Television Laboratories, Inc.

[25] IETF RFC 3594, PacketCable Security Ticket Control Sub-Option for the DHCP CableLabs Client Configuration (CCC) Option, September 2003

[26] IETF RFC 2782, A DNS RR for specifying the location of services (DNS SRV), February 2000.

[27] IETF RFC 3584, Coexistence between Version 1, Version 2, and Version 3 of the Internet-standard Network Management Framework, August 2003

[28] PacketCable 1.5 Management Event MIB Specification, PKT-SP-EVEMIB1.5-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: https://www.cablelabs.com/
- IETF RFCs: www.ietf.org/
- ITU-T Recommendations: www.itu.int/ITU-T/publications/recs.html

3 ABBREVIATIONS

There are no abbreviations used in this document.

4 REQUIREMENTS

The PacketCable™ Extension MTA MIB MUST be implemented as defined below.

```
PKTC-EN-MTA-MIB DEFINITIONS ::= BEGIN

IMPORTS
      MODULE-IDENTITY, OBJECT-TYPE          FROM SNMPv2-SMI
      OBJECT-GROUP, MODULE-COMPLIANCE       FROM SNMPv2-CONF
      pktcEnhancements                      FROM CLAB-DEF-MIB;


pktcEnMtaMib MODULE-IDENTITY
    LAST-UPDATED    "200501280000Z - January 28, 2005"
    ORGANIZATION    "Cable Television Laboratories, Inc"

    CONTACT-INFO
            "Sumanth Channabasappa
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             Phone: +1 303-661-9100
             Fax: +1 303-661-9199
             E-mail: mibs@cablelabs.com"

    DESCRIPTION
            "This MIB module enhances the basic management objects
             defined for the PacketCable MTA Device device by
             the MIB group pktcMtaMib.

            Acknowledgements:
            Rodney Osborne        -      Arris Interactive
            Eugene Nechamkin      -      BroadCom Corporation
            Satish Kumar          -      Texas Instruments
            Jean-Francois Mule    -      CableLabs
            Venkatesh Sunkad      -      CableLabs


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      REVISION "200501280000Z"
      DESCRIPTION
            "This revision is being published as part of the PacketCable
             MTA MIBs enhancements for PacketCable 1.5."
```

```
      ::=  { pktcEnhancements 1 }


--
--  PacketCable Enhanced MTA MIB Objects
--
pktcEnMtaMibObjects       OBJECT IDENTIFIER ::= { pktcEnMtaMib 1 }
pktcEnMtaDevBase          OBJECT IDENTIFIER ::= { pktcEnMtaMibObjects 1 }
pktcEnMtaDevServer        OBJECT IDENTIFIER ::= { pktcEnMtaMibObjects 2 }
pktcEnMtaDevSecurity      OBJECT IDENTIFIER ::= { pktcEnMtaMibObjects 3 }


--
--  Enhanced notification group.
--

pktcEnMtaNotificationPrefix OBJECT IDENTIFIER ::= { pktcEnMtaMib 2 }
pktcEnMtaNotification OBJECT IDENTIFIER       ::= { pktcEnMtaNotificationPrefix
0 }
pktcEnMtaConformance  OBJECT IDENTIFIER       ::= { pktcEnMtaMib 3 }
pktcEnMtaCompliances  OBJECT IDENTIFIER       ::= { pktcEnMtaConformance 1 }
pktcEnMtaGroups       OBJECT IDENTIFIER       ::= { pktcEnMtaConformance 2 }

--
--  Enhancement MIB Objects
--
pktcEnMtaDevMltplGrantsPerInterval     OBJECT-TYPE
      SYNTAX INTEGER {
             enablemgpifunctionality(1),
             disablemgpifunctionality(2)
      }
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            " This object is used to control the Multiple grants functionality
              on a PacketCable MTA.
              To indicate enabling of this functionality, a value of
              enablemgpifunctionality(1) is used.
              To indicate disabling of this functionality, a value of
              disablemgpifunctionality(2) is used."
      DEFVAL  {disablemgpifunctionality}
      ::= { pktcEnMtaDevBase 1}


--
--  Compliance statements
--
pktcEnMtaBasicCompliance MODULE-COMPLIANCE
      STATUS     current
      DESCRIPTION
            "The compliance statement for devices that implement
            MTA feature."
      MODULE   --PKTC-EN-MTA-MIB

--
--  Mandatory groups
--
      MANDATORY-GROUPS {
              pktcEnMtaGroup
          }
      ::= { pktcEnMtaCompliances 3 }

pktcEnMtaGroup OBJECT-GROUP
```

```
      OBJECTS {
        pktcEnMtaDevMltplGrantsPerInterval
      }
      STATUS    current
      DESCRIPTION
            "Group of Enhanced objects for the PacketCable MTA MIB."
      ::= { pktcEnMtaGroups 1 }
END
```

Appendix A Acknowledgements

On behalf of CableLabs and its participating member companies, we would like to extend our thanks to all those who contributed to the development of this specification. Certainly all the participants of the provisioning focus team have added value to this effort by participating in the review and weekly conference calls. Particular thanks are given to:

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