

**CableLabs<sup>®</sup> Definition MIB Specification**

**Superseded**

**CL-SP-MIB-CLABDEF-I05-050408**

**Issued**

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## Document Status Sheet

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### Key to Document Status Codes:

<b>Work in Progress</b>	An incomplete document, designed to guide discussion and generate feedback, which 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 stable document, which has undergone rigorous member and vendor review and is suitable for product design and development, cross-vendor interoperability, and for certification testing.
<b>Closed</b>	A static document, reviewed, tested, validated, and closed to further engineering change requests to the specification through CableLabs.

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## 1 SCOPE

This specification describes the namespace organization for the CableLabs enterprise MIB. It defines the CableLabs Definition MIB module (CLAB-DEF-MIB), whose purpose is to be the central registry of OIDs for CableLabs, and as such, to provide the private layout of the CableLabs Object Identifier (OID) structure.

## 2 REFERENCES

This specification is referenced by several CableLabs projects including DOCSIS®, CableHome®, and PacketCable™. It defines the CableLabs OID registry from which each project assigns its own MIB information modules. As such, the CableLabs Definition MIB constitutes a normative reference to several CableLabs specifications, including those listed below.

### **DOCSIS Specifications** (<http://www.cablemodem.com/specifications/>)

- DOCSIS Set-top Gateway (DSG) Interface Specification: SP-DSG
- DOCSIS Test MIB
- Software Loopback for eDOCSIS (SLED) MIB

### **CableHome Specifications** (<http://www.cablelabs.com/projects/cablehome/specifications/>)

- CableHome 1.0 Specification: CH-SP-CH1.0
- CableHome 1.1 Specification: CH-SP-CH1.1
- CableHome PS Device MIB: CH-SP-MIB-PSDEV
- CableHome Security MIB: CH-SP-MIB-SEC
- CableHome Addressing Portal MIB: CH-SP-MIB-CAP
- CableHome DHCP Portal MIB: CH-SP-MIB-CDP
- CableHome Test Portal MIB: CH-SP-MIB-CTP
- CableHome Quality of Service MIB: CH-SP-MIB-QOS

### **PacketCable Specifications** (<http://www.packetcable.com/specifications/>)

- PacketCable Multimedia Terminal Adapter (MTA) MIB: PKTC-MTA-MIB
- PacketCable Signaling MIB: PKTC-SIG-MIB
- PacketCable Event Management MIB: PKTC-SP-EVEMIB
- PacketCable Security Specification: PKT-SP-SEC
- PacketCable Electronic Surveillance Specification: PKT-SP-ESP

The CableLabs Definition MIB Specification follows the Internet Standard Management Framework described in IETF RFC 3410 [2]. The CableLabs Definition MIB module also imports its X.509 textual convention from the IETF DOCSIS BPI Plus MIB document [1].

## 2.1 Normative References

- [1] IETF Internet-Draft, draft-ietf-ipcdn-bpiplus-mib-12, S. Green, K. Ozawa, A. Katsnelson, E. Cardona, "Management Information Base for DOCSIS Cable Modems and Cable Modem Termination Systems for Baseline Privacy Plus", October, 2003

## 2.2 Informative References

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

## 2.3 Reference Acquisition

IPCDN Internet Drafts, <http://www.ipcdn.org/ipcdn-ids.html>

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/iesg/1rfc\\_index.txt](http://www.ietf.org/iesg/1rfc_index.txt)

## 3 ACRONYMS

This specification uses the following acronyms:

<b>CA</b>	Certificate Authority
<b>CMS</b>	Call Management Server
<b>CVC</b>	Code Verification Certificate
<b>DER</b>	Distinguished Encoding Rules
<b>DOCSIS</b>	Data Over Cable Service Interface Specification
<b>eDOCSIS</b>	Embedded DOCSIS
<b>KDC</b>	Key Distribution Center
<b>MIB</b>	Management Information Base
<b>OID</b>	Object Identifier
<b>PS</b>	Portal Services
<b>X509</b>	ITU-T Recommendation X.509: Information Technology – Open Systems Interconnection – The Directory: Authentication Framework

## 4 REQUIREMENTS

The CableLabs Definition MIB MUST be implemented as defined below.

```

CLAB-DEF-MIB DEFINITIONS ::= BEGIN
IMPORTS
    MODULE-IDENTITY,
    OBJECT-TYPE,
    enterprises
        FROM SNMPv2-SMI
    DocsX509ASN1DEREncodedCertificate
        FROM DOCS-IETF-BPI2-MIB;

cableLabs MODULE-IDENTITY
    LAST-UPDATED "200504081700Z" -- April 8, 2005
    ORGANIZATION "Cable Television Laboratories, Inc."
    CONTACT-INFO
        "Editor: Jean-Francois Mule
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        Phone: +1 303-661-9100
        Fax: +1 303-661-9199
        E-mail: jfm@cablelabs.com
        mibs@cablelabs.com"

    DESCRIPTION
        "This MIB module defines the namespace organization for the
        CableLabs enterprise OID registry.

        Copyright 1999-2005 Cable Television Laboratories, Inc.
        All rights reserved."

    REVISION "200504081700Z" -- April 8, 2005
    DESCRIPTION
        "This revision, published as CL-SP-MIB-CLABDEF-I05."
    ::= { enterprises 4491 }

-- Sub-tree for Registrations
clabFunction          OBJECT IDENTIFIER ::= { cableLabs 1 }
clabFuncMib2          OBJECT IDENTIFIER ::= { clabFunction 1 }
clabFuncProprietary  OBJECT IDENTIFIER ::= { clabFunction 2 }

-- Sub-tree for Project Definitions
clabProject           OBJECT IDENTIFIER ::= { cableLabs 2 }
clabProjDocsis        OBJECT IDENTIFIER ::= { clabProject 1 }
clabProjPacketCable  OBJECT IDENTIFIER ::= { clabProject 2 }
clabProjOpenCable     OBJECT IDENTIFIER ::= { clabProject 3 }
clabProjCableHome     OBJECT IDENTIFIER ::= { clabProject 4 }

-- Sub-tree for Global Security Definitions
clabSecurity          OBJECT IDENTIFIER ::= { cableLabs 3 }
clabSecCertObject     OBJECT IDENTIFIER ::= { clabSecurity 1 }

-- Sub tree for CableLabs cross project common MIB definitions
clabCommonMibs        OBJECT IDENTIFIER ::= { cableLabs 4 }

--
-- CableLabs DOCSIS Project Sub-tree Definitions
--

```

```
dsgMIB OBJECT IDENTIFIER
-- DOCSIS Set-top Gateway (DSG) MIB module
-- This object identifier points to the MIB module
-- DOCSIS-SETTOP-GATEWAY-MIB, which is being deprecated by
-- DSG-IF-MIB MIB module (dsgIfMib).
-- Reference:
-- CableLabs DOCSIS Set-top Gateway (DSG) Interface Specification
 ::= { clabProjDocsis 1 }

docsLoadBalMib OBJECT IDENTIFIER
-- DOCSIS MIB module defining the CMTS configuration parameters to
-- support Load Balancing requirements."
 ::= { clabProjDocsis 2 }

dsgIfMIB OBJECT IDENTIFIER
-- DOCSIS Set-top Gateway (DSG) MIB module
-- Obsoletes DOCSIS-SETTOP-GATEWAY-MIB Module (dsgMib)
-- defined initially in DOCSIS Set-top Gateway (DSG) Interface
-- Specification SP-DSG-I01-020228.
-- Reference:
-- CableLabs DOCSIS Set-top Gateway (DSG) Interface Specification
 ::= { clabProjDocsis 3 }

dsgIfStdMib OBJECT IDENTIFIER
-- DOCSIS Set-top Device (DSG) MIB module.
-- Reference:
-- CableLabs DOCSIS Set-top Gateway (DSG) Interface Specification
 ::= { clabProjDocsis 4 }

docsIfExt2Mib OBJECT IDENTIFIER
-- This MIB module contains the management objects that enhance
-- DOCSIS RFI Interface Extensions. Contains Enhancements to
-- DOCSIS RFI interface MIB module.
-- Reference:
-- CableLabs DOCSIS RFI Interface Specification.
 ::= { clabProjDocsis 5 }

docsTestMIB OBJECT IDENTIFIER
-- DOCSIS Test MIB module supporting programmable test features
-- for DOCSIS 2.0 compliant Cable Modems (CM) and Cable Modems
-- Termination Systems (CMTS).
-- Reference:
-- CableLabs DOCSIS 2.0 Testing MIB Specification
 ::= { clabProjDocsis 12 }

sledMib OBJECT IDENTIFIER
-- eDOCSIS MIB module supporting the Software Loopback Application
-- for eDOCSIS (SLED).
-- Reference:
-- CableLabs eDOCSIS Specification
 ::= { clabProjDocsis 13 }

--
-- CableLabs CableHome Project Sub-tree Definitions
-- Reference
-- CableLabs CableHome Specification
--
cabhPsDevMib OBJECT IDENTIFIER
-- CableHome MIB module defining the basic management objects for
-- the Portal Services logical element of a CableHome compliant
-- Residential Gateway device. The PS device parameters describe
-- general PS Device attributes and behavior characteristics
 ::= { clabProjCableHome 1 }
```

```
cabhSecMib OBJECT IDENTIFIER
-- CableHome MIB module defining the basic management objects for
-- the firewall and other security features of the Portal Services
-- element.
 ::= { clabProjCableHome 2 }

cabhCapMib OBJECT IDENTIFIER
-- CableHome MIB module defining the basic management objects for
-- the CableHome Addressing Portal (CAP) function of the Portal
-- Services element.
 ::= { clabProjCableHome 3 }

cabhCdpMib OBJECT IDENTIFIER
-- This MIB module supplies the basic management objects for the
-- CableHome DHCP Portal (CDP) function of the Portal Services
-- element.
 ::= { clabProjCableHome 4 }

cabhCtpMib OBJECT IDENTIFIER
-- CableHome MIB module supporting the remote LAN diagnostic
-- features provided by the CableHome Test Portal (CTP) function
-- of the Portal Services element.
 ::= { clabProjCableHome 5 }

cabhQosMib OBJECT IDENTIFIER
-- CABLEHOME QOS MIB Module (cabhQosMib).
-- This object identifier points to the MIB module
-- CABH-QOS-MIB, which is being deprecated by
-- CABH-QOS2-MIB module (cabhQos2Mib).
-- Reference:
-- CableLabs CableHome 1.1 Specification
 ::= { clabProjCableHome 6 }

cabhCsaMib OBJECT IDENTIFIER
-- CableHome MIB module defining management objects for the
-- configuration and monitoring of CableHome Commercial Services
-- Annex.
-- Reference:
-- CableLabs CableOffice Commercial Services Annex MIB
-- Specification
 ::= { clabProjCableHome 7 }

cabhQos2Mib OBJECT IDENTIFIER
-- Obsoletes CABH-QOS-MIB module (cabhQosMib)
-- defined initially in CABLEHOME 1.1 Interface Specification.
-- This MIB module defines the Quality of Service Management
-- Information Base (MIUB) for CableHome UPnP QOS-compliant
-- devices.
-- Reference:
-- CableLabs CableHome 1.1 Specification
 ::= { clabProjCableHome 8 }

--
-- CableLabs PacketCable Project Sub-tree Definitions
--
pktcMtaMib OBJECT IDENTIFIER
-- PacketCable MIB module defining the basic management object for
-- the Multimedia Terminal Adapter (MTA) devices compliant with
-- PacketCable requirements.
-- Reference
-- CableLabs PacketCable MTA Device Provisioning Specification
 ::= { clabProjPacketCable 1 }
```

```
pktcSigMib OBJECT IDENTIFIER
-- PacketCable MIB module defining the basic management object for
-- the PacketCable MTA Signaling protocols. This version of the MIB
-- includes common signaling and Network Call Signaling (NCS)
-- related signaling objects.
-- Reference
-- CableLabs PacketCable MTA Device Provisioning Specification
 ::= { clabProjPacketCable 2 }

pktcEventMib OBJECT IDENTIFIER
-- PacketCable MIB module defining the basic management objects for
-- event reporting.
-- Reference
-- CableLabs PacketCable Management Event Specification
 ::= { clabProjPacketCable 3 }

pktcSecurity OBJECT IDENTIFIER
-- CableLabs OID reserved for security and used to specify errors
-- that can be returned for the Kerberos KDC - Provisioning
-- Server interface, or the MTA-CMS Kerberized IPsec interface, or
-- the MTA-Provisioning Server Kerberized SNMPv3 interface.
-- CableLabs PacketCable Security Specification
 ::= { clabProjPacketCable 4 }

pktcLawfulIntercept OBJECT IDENTIFIER
-- CableLabs OID reserved for the PacketCable Electronic
-- Surveillance Protocol (PCESP) between the Delivery Function
-- and Collection Function. This OID is used to define the ASN.1
-- PCESP messages.
-- CableLabs PacketCable Electronic Surveillance Protocol
-- Specification
 ::= { clabProjPacketCable 5 }

--
-- Sub-tree for PacketCable MIB Enhancements
--

pktcEnhancements OBJECT IDENTIFIER ::= { clabProjPacketCable 6 }

-- The following MIB OBJECTS are being introduced for
-- incorporation of new MIB objects (MIB enhancements)
-- proposed to the PacketCable MIB group.
-- This includes new MIB objects being introduced
-- as part of the PacketCable MIB Enhancement efforts
-- and as a place holder for future revisions.
-- This sub-division would facilitate easier incorporation
-- of proposed IETF Drafts/RFCs by keeping enhancements
-- independent of RFC/Draft changes.
-- For new MIB tables that use previously used indices, it is
-- recommended that the AUGMENT CLAUSE be used to aid SNMP Operations,
-- as deemed necessary.

pktcEnMtaMib OBJECT IDENTIFIER
-- PacketCable MIB module enhancements to the basic management
-- objects defined by the MIB group pktcMtaMib for the Multimedia
-- Terminal Adapter (MTA) devices compliant with PacketCable
-- requirements.
-- Reference:
-- CableLabs PacketCable MTA Device Provisioning Specification.
 ::= { pktcEnhancements 1 }
```

```
pktcEnSigMib OBJECT IDENTIFIER
  -- PacketCable MIB module enhancements to the basic management
  -- objects defined by the MIB group pktcSigMib for the
  -- PacketCable MTA Signaling protocols.
  -- Reference:
  -- CableLabs PacketCable MTA Device Provisioning Specification.
  ::= { pktcEnhancements 2 }

pktcEnEventMib OBJECT IDENTIFIER
  -- PacketCable MIB module enhancements to the basic management
  -- objects defined by the MIB group pktcEventMib for event reporting.
  -- Reference:
  -- CableLabs PacketCable Management Event Specification.
  ::= { pktcEnhancements 3 }

pktcEnSecurityMib OBJECT IDENTIFIER
  -- PacketCable MIB module enhancements to the basic management
  -- objects defined by the reserved MIB group pktcSecurity.
  -- Reference:
  -- CableLabs PacketCable Security Specification.
  ::= { pktcEnhancements 4 }

--
--
-- Definition of CableLabs Security Certificate Objects
--
clabSrvCPrvdrRootCACert OBJECT-TYPE
  SYNTAX      DocsX509ASN1DEREncodedCertificate
  MAX-ACCESS  read-only
  STATUS      current
  DESCRIPTION
    "The X509 DER-encoded CableLabs Service Provider Root CA
    Certificate."
  REFERENCE
    "CableLabs CableHome Specification;
    CableLabs PacketCable Security Specification."
  ::= { clabSecCertObject 1 }

clabCVCRootCACert OBJECT-TYPE
  SYNTAX      DocsX509ASN1DEREncodedCertificate
  MAX-ACCESS  read-only
  STATUS      current
  DESCRIPTION
    "The X509 DER-encoded CableLabs CVC Root CA Certificate."
  REFERENCE
    "CableLabs CableHome Specification;
    CableLabs PacketCable Security Specification."
  ::= { clabSecCertObject 2 }

clabCVCCACert OBJECT-TYPE
  SYNTAX      DocsX509ASN1DEREncodedCertificate
  MAX-ACCESS  read-only
  STATUS      current
  DESCRIPTION
    "The X509 DER-encoded CableLabs CVC CA Certificate."
  REFERENCE
    "CableLabs CableHome Specification;
    CableLabs PacketCable Security Specification."
  ::= { clabSecCertObject 3 }

clabMfgCVCCert OBJECT-TYPE
  SYNTAX      DocsX509ASN1DEREncodedCertificate
```

```
MAX-ACCESS read-only
STATUS current
DESCRIPTION
    "The X509 DER-encoded Manufacturer CVC Certificate."
REFERENCE
    "CableLabs CableHome Specification;
    CableLabs PacketCable Security Specification."
 ::= { clabSecCertObject 4 }

clabMfgCACert OBJECT-TYPE
SYNTAX DocsX509ASN1DEREncodedCertificate
MAX-ACCESS read-only
STATUS current
DESCRIPTION
    "The X509 DER-encoded Manufacturer CA Certificate."
REFERENCE
    "CableLabs CableHome Specification;
    CableLabs PacketCable Security Specification."
 ::= { clabSecCertObject 5 }

--
-- CableLabs cross project common MIB sub-tree definitions
--

clabUpsMib OBJECT IDENTIFIER
    -- CableLabs cross project MIB module defining the basic management
    -- objects for the configuration and monitoring of the battery
    -- backup and UPS functionality for CableLabs compliant devices.
    ::= { clabCommonMibs 1 }

END
```

## Appendix I Revision History

The following Engineering Change Notices were incorporated into CL-SP-MIB-CLABDEF-I02-020920:

ECN	ECN Date	Summary
CH1-N-02016	7/25/02	Add a new branch into the CLABDEF MIB for CableLabs Security for CableLabs certificates.

The following Engineering Change Notices were incorporated into CL-SP-MIB-CLABDEF-I03-040113:

ECN	ECN Date	Summary
MIB-CLABDEF-N-03.0017-3	1/8/04	Clear SMICng compilation errors and properly register some OID branches. Addition of new TC for X509 certificates.

The following Engineering Change Notices were incorporated into CL-SP-MIB-CLABDEF-I04-040804:

ECN	ECN Date	Summary
MIB-CLABDEF-N-04.0018-3	7/14/04	Add OBJECT IDENTITY place holder for DOCS-LOADBALANCING-MIB. Add Object Entity for CableHome CSA. Updated docsLoadBalMib definition. Add dsgifMib, eSafe branch, typo corrections, add clabMfgCACert MIB object

The following Engineering Change Notices were incorporated into CL-SP-MIB-CLABDEF-I05-050408:

ECN	ECN Date	Summary
MIB-CLABDEF-N-04.0019-4	2/22/05	Addition of PacketCable MIB Extensions
MIB-CLABDEF-N-05.0020-1	3/23/05	New Object Identifiers for CLAB-DEF-MIB MIB Module