

Superseded

CableHome™ CAP MIB Specification

CH-SP-MIB-CAP-I01-020405

Issued

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Document Status Sheet

Document Control Number:	CH-SP-MIB-CAP-I01-020405		
Document Title:	CableHome™ CAP MIB Specification		
Revision History:	I01 – April 5, 2002 D03 – March 21, 2002 D02 – January 31, 2002 D01 — January 8, 2002		
Date:	April 5, 2002		
Status:	Work in Progress	Draft	Issued
Distribution Restrictions:	Author Only	CL/Member	CL/ CableHome/Ve ndor
			Closed
			Public

Key to Document Status Codes:

Work in Progress	An incomplete document, designed to guide discussion and generate feedback, which 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 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.
Closed	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 CableHome Addressing Portal (CAP) MIB requirement.

2 REFERENCES

The following references contain provisions that, through verbiage, attempt to constitute a provision of this recommendation. For the time of publication, the editions indicated are valid. All references are subject to revisions; all users of this recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the references listed below.

2.1 NORMATIVE REFERENCE

- [1] “CableHome 1.0 Specification,” CH-SP-I01-020405, Cable Television Laboratories, Inc., April 5, 2002. <http://www.CableLabs.com/CableHome>

2.2 INFORMATIVE REFERENCE

There are no informative references required for this document.

3 ABBREVIATIONS

There are no abbreviations used in this document.

4 REQUIREMENTS

The CableHome™ CAP MIB MUST be implemented as defined below.

CABH-CAP-MIB DEFINITIONS ::= BEGIN

IMPORTS

MODULE-IDENTITY,
OBJECT-TYPE,
 Unsigned32

FROM SNMPv2-SMI

 TimeStamp,
 TruthValue,
 RowStatus,
 PhysAddress

FROM SNMPv2-TC

OBJECT-GROUP,
MODULE-COMPLIANCE

FROM SNMPv2-CONF

InetAddressType,
InetAddress,
InetAddressIPv4,
InetAddressIPv6

FROM INET-ADDRESS-MIB

clabProjCableHome

FROM CLAB-DEF-MIB;

```

=====
--
-- History:
--
-- Date      Modified by      Reason
-- 09/26/01  Roy Spitzer      Initial Version
-- 10/05/01  Roy Spitzer      Incorporated comments from Mike Mannette and
--                                     NMP team
-- 10/12/01  Roy Spitzer      Incorporated DHCP protocol options table
-- 10/15/01  Roy Spitzer      Moved lease time definition to cabhCdpMapTable
-- 10/24/01  Roy Spitzer      Incorporate new CAP tables
-- 10/25/01  Roy Spitzer      Added DHCP Relay Agent Option Code (topology
--                               information), reworked CMP Route Template
-- 11/02/01  Roy Spitzer      Added WAN side parameters, Delete Template
--                               Route Type Parameters, changed
--                               cabhCapRouteElapsedTime to
--                               cabhCapRouteExpirationTime based on October
--                               26, 2001 review.
-- 11/26/01  Roy Spitzer      Updated to reflect NAT and CDP/DHCP discussions
-- 11/27/01  Roy Spitzer      Incorporated default interconnect options
-- 12/03/01  Roy Spitzer      Bring into alignment with Provisioning Tools
--                               Section (CDP) of CableHome Specification
-- 12/04/01  Roy Spitzer      Incorporate changes discussed in 12/03/01
--                               Conference Call (Mike Mannette, Rick Vetter,
--                               Kevin Luehrs, Chris Zacker)
-- 12/07/01  Roy Spitzer      Incorporate changes discussed in 12/06/01
--                               Conference Call (Mike Mannette, Rick Vetter,

```

```

--                                     Kevin Luehrs, Chris Zacker, John Bevilacqua).
--                                     Split into cdp.mi2 and cap.mi2.
--      12/17/01      Roy Spitzer      Incorporate comments from December 10, 2001.
--      12/19/01      Roy Spitzer      Incorporate comments since December 17, 2001.
--      01/07/02      Chris Zacker     Incorporate changes from John Belilacqua
--      01/07/02      Chris Zacker     Remove Template Table for 1.0 Spec
--      03/21/02      Kevin Luehrs     Incorporate changes from CableHome 1.0 D01
--                                     specification vendor review
--      04/05/02                                     Issued
--

```

```

=====
cabhCapMib MODULE-IDENTITY

```

```

  LAST-UPDATED "0203210000Z" – March 21, 2002

```

```

  ORGANIZATION "CableLabs Broadband Access Department"

```

```

  CONTACT-INFO

```

```

    "Kevin Luehrs

```

```

      Postal: Cable Television Laboratories, Inc.

```

```

              400 Centennial Parkway

```

```

              Louisville, Colorado 80027-1266

```

```

    U.S.A.

```

```

    Phone: +1 303-661-9100

```

```

    Fax: +1 303-661-9199

```

```

    E-mail: k.luehrs@cablelabs.com"

```

```

  DESCRIPTION

```

```

    "This MIB module supplies the basic management objects
    for the CDP and the CAP portions of the PS database.

```

```

  Acknowledgements:

```

```

  Roy Spitzer      -      Consultant to CableLabs

```

```

  Mike Mannette   -      Consultant to Cable Labs

```

```

  Randy Dunton    -      Intel

```

```

  Dmitrii Loukianov - Intel

```

```

  Itay Sherman    -      Texas Instruments

```

```

  Chris Zacker    -      Broadcom

```

```

  Rick Vetter     -      Consultant to Cable Labs

```

```

  John Bevilacqua -      YAS"

```

```

 ::= { clabProjCableHome 3 }

```

```

-- Textual conventions

```

```

CabhCapPacketMode ::= TEXTUAL-CONVENTION

```

```

  STATUS      current

```

```

  DESCRIPTION

```

```

    "The data type established when
    a binding/mapping is established."

```

```

  SYNTAX      INTEGER {
                    napt          (1),  -- NAT with port translation
                    nat           (2),  -- Basic NAT
                    passthrough   (3)  -- Pass Through External Address
                    }

```

```

cabhCapObjects OBJECT IDENTIFIER ::= { cabhCapMib 1 }

```

```

cabhCapBase OBJECT IDENTIFIER ::= { cabhCapObjects 1 }

```

```

cabhCapMap OBJECT IDENTIFIER ::= { cabhCapObjects 2 }

```

```

=====
--
--      General CAP Parameters
--
=====

cabhCapTcpTimeWait OBJECT-TYPE
    SYNTAX      Unsigned32
                UNITS          "seconds"
    MAX-ACCESS  read-write
    STATUS      current
    DESCRIPTION
        "The maximum time to wait before assuming TCP
        session is terminated."
    REFERENCE
        ""
    DEFVAL { 240 }          -- 4 minutes
    ::= { cabhCapBase 1 }

cabhCapUdpTimeWait OBJECT-TYPE
    SYNTAX      Unsigned32
                UNITS          "seconds"
    MAX-ACCESS  read-write
    STATUS      current
    DESCRIPTION
        "The maximum time to wait before assuming UDP
        session is terminated."
    REFERENCE
        ""
    DEFVAL { 86400 }       -- 1 day
    ::= { cabhCapBase 2 }

cabhCapIcmpTimeWait OBJECT-TYPE
    SYNTAX      Unsigned32
                UNITS          "seconds"
    MAX-ACCESS  read-write
    STATUS      current
    DESCRIPTION
        "The maximum time to wait before assuming Icmp
        session is terminated."
    REFERENCE
        ""
    DEFVAL { 86400 }       -- 1 day
    ::= { cabhCapBase 3 }

cabhCapPrimaryMode OBJECT-TYPE
    SYNTAX      CabhCapPacketMode
    MAX-ACCESS  read-write
    STATUS      current
    DESCRIPTION
        "The Primary Packet Handling Mode to be used."
    DEFVAL { napt }
    ::= { cabhCapBase 4 }

```

```

cabhCapSetToFactory OBJECT-TYPE
    SYNTAX      TruthValue
    MAX-ACCESS  read-write
    STATUS      current
    DESCRIPTION
        "Setting this object to true(1) causes the all the tables in the CAP
        to be cleared, and all CAP objects with defaults to be reset back to
        their default values."
    ::= { cabhCapBase 5 }

```

```

-----
--
--      cabhCapMappingTable (CAP Mapping Table)
--
--      The cabhCapMappingTable contains the mappings for all CAP mappings.
--
-----

```

```

cabhCapMappingTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF CabhCapMappingEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "This table contains IP address mapping for all CAP mappings."
    ::= { cabhCapMap 1 }

```

```

cabhCapMappingEntry OBJECT-TYPE
    SYNTAX      CabhCapMappingEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "List of CAP IP mappings."
    INDEX { cabhCapMappingIndex }
    ::= { cabhCapMappingTable 1 }

```

```

CabhCapMappingEntry ::= SEQUENCE {
    cabhCapMappingWanAddrType  InetAddressType,
    cabhCapMappingIndex        INTEGER,
    cabhCapMappingWanAddr      InetAddress,
    cabhCapMappingWanPort      INTEGER,
    cabhCapMappingLanAddrType  InetAddressType,
    cabhCapMappingLanAddr      InetAddress,
    cabhCapMappingLanPort      INTEGER,
    cabhCapMappingMode         CabhCapPacketMode,
    cabhCapMappingMethod       INTEGER,
    cabhCapMappingProtocol     INTEGER,
    cabhCapMappingRowStatus    RowStatus
}

```

```

CabhCapMappingEntry ::= SEQUENCE {
    cabhCapMappingWanAddrType  InetAddressType,
    cabhCapMappingIndex        INTEGER,
    cabhCapMappingWanAddr      InetAddress,

```

```

cabhCapMappingWanPort    INTEGER,
cabhCapMappingLanAddrType InetAddressType,
cabhCapMappingLanAddr    InetAddress,
cabhCapMappingLanPort    INTEGER,
cabhCapMappingMode       CabhCapPacketMode,
cabhCapMappingMethod     INTEGER,
cabhCapMappingProtocol   INTEGER,
cabhCapMappingRowStatus  RowStatus
}

```

cabhCapMappingIndex OBJECT-TYPE

SYNTAX INTEGER (1..65535)

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"The Index into the CAP Mapping Table."

::= { cabhCapMappingEntry 1 }

cabhCapMappingWanAddrType OBJECT-TYPE

SYNTAX InetAddressType

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The IP address type assigned on the WAN side. IP version 4 is typically used."

DEFVAL { ipv4 }

::= { cabhCapMappingEntry 2 }

cabhCapMappingWanAddr OBJECT-TYPE

SYNTAX InetAddress

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The IP address assigned on the WAN side. IP version 4 is typically used."

::= { cabhCapMappingEntry 3 }

cabhCapMappingWanPort OBJECT-TYPE

SYNTAX INTEGER (1..65535)

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The TCP/UDP port number on the WAN side."

DEFVAL { 0 }

::= { cabhCapMappingEntry 4 }

cabhCapMappingLanAddrType OBJECT-TYPE

SYNTAX InetAddressType

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The IP address type assigned on the LAN side. IP version 4 is typically used."

DEFVAL { ipv4 }

::= { cabhCapMappingEntry 5 }

cabhCapMappingLanAddr OBJECT-TYPE

SYNTAX InetAddress
 MAX-ACCESS read-create
 STATUS current
 DESCRIPTION
 "The IP address assigned on the LAN side. IP version 4 is typically used."
 ::= { cabhCapMappingEntry 6 }

cabhCapMappingLanPort OBJECT-TYPE

SYNTAX INTEGER (1..65535)
 MAX-ACCESS read-create
 STATUS current
 DESCRIPTION
 "The TCP/UDP port number on the LAN side."
 DEFVAL { 0 }
 ::= { cabhCapMappingEntry 7 }

cabhCapMappingMode OBJECT-TYPE

SYNTAX CabhCapPacketMode
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION
 "The type of packet handling mode for this mapping. Note, this information could be gleaned from the IP address and Port information for this mapping"
 ::= { cabhCapMappingEntry 8 }

cabhCapMappingMethod OBJECT-TYPE

SYNTAX INTEGER {
 static (1),
 dynamic (2)
 }
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION
 "Indicates how this mapping was created. Static means that it was provisioned, and dynamic means that it was handled by the PS itself."
 ::= { cabhCapMappingEntry 9 }

cabhCapMappingProtocol OBJECT-TYPE

SYNTAX INTEGER {
 other (1), -- not specified
 icmp (2),
 udp (3),
 tcp (4)
 }
 MAX-ACCESS read-create
 STATUS current
 DESCRIPTION
 "The protocol for this mapping."
 ::= { cabhCapMappingEntry 10 }

cabhCapMappingRowStatus OBJECT-TYPE

SYNTAX RowStatus
 MAX-ACCESS read-create
 STATUS current

DESCRIPTION

"The RowStatus interlock for creation and deletion of cabhCapMappingTable entry."

::={ cabhCapMappingEntry 11 }

```

=====
--
--      cabhCapPassthroughTable (CAP Passthrough Table)
--
--      The cabhCapPassthroughTable contains the MAC Addresses for all LAN-IP Devices
--      which will be configured as passthrough.
--
=====

```

cabhCapPassthroughTable OBJECT-TYPE

SYNTAX SEQUENCE OF CabhCapPassthroughEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"This table contains MAC addresses for LAN-IP Devices which are configured as passthrough mode."

::= { cabhCapMap 2 }

cabhCapPassthroughEntry OBJECT-TYPE

SYNTAX CabhCapPassthroughEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"List of MAC addresses for LAN-IP Devices which are configured as passthrough mode."

INDEX {cabhCapPassthroughMACAddr }

::= { cabhCapPassthroughTable 1 }

CabhCapPassthroughEntry ::= SEQUENCE {

cabhCapPassthroughMACAddr	PhysAddress,
cabhCapPassthroughRowStatus	RowStatus

}

cabhCapPassthroughMACAddr OBJECT-TYPE

SYNTAX PhysAddress

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"MAC Address of LAN-IP Device to be configured as passthrough mode."

::= {cabhCapPassthroughEntry 1 }

cabhCapPassthroughRowStatus OBJECT-TYPE

SYNTAX RowStatus

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The RowStatus interlock for creation and deletion of cabhCapPassthroughTable entry."

::= { cabhCapPassthroughEntry 2 }

```

--
-- notification group is for future extension.

```

```
--  
  
cabhCapNotification OBJECT IDENTIFIER ::= { cabhCapMib 2 0 }  
cabhCapConformance OBJECT IDENTIFIER ::= { cabhCapMib 3 }  
cabhCapCompliances OBJECT IDENTIFIER ::= { cabhCapConformance 1 }  
cabhCapGroups OBJECT IDENTIFIER ::= { cabhCapConformance 2 }  
  
--  
-- Notification Group  
--  
  
-- compliance statements  
  
cabhCapBasicCompliance MODULE-COMPLIANCE  
    STATUS current  
    DESCRIPTION  
        "The compliance statement for devices that implement  
        MTA feature."  
    MODULE --cabhCapMib  
  
  
-- unconditionally mandatory groups  
  
    MANDATORY-GROUPS {  
        cabhCapGroup  
    }  
  
::= { cabhCapCompliances 3 }  
  
cabhCapGroup OBJECT-GROUP  
    OBJECTS {  
        cabhCapTcpTimeWait,  
        cabhCapUdpTimeWait,  
        cabhCapIcmpTimeWait,  
        cabhCapPrimaryMode,  
  
--        cabhCapMappingIndex  
        cabhCapMappingWanAddrType,  
        cabhCapMappingWanAddr,  
        cabhCapMappingWanPort,  
        cabhCapMappingLanAddrType,  
        cabhCapMappingLanAddr,  
        cabhCapMappingLanPort,  
        cabhCapMappingMode,  
        cabhCapMappingMethod,  
        cabhCapMappingProtocol,  
        cabhCapMappingRowStatus,  
  
--        cabhCapPassthroughMacAddr  
        cabhCapPassthroughRowStatus  
    }  
}
```

STATUS current
DESCRIPTION
"Group of objects for CableHome CAP MIB."
::= { cabhCapGroups 1 }

END

The following Engineering Change Notices were incorporated into CH-SP-MIB-CAP-I01-020405:

ECN Number	ECN Date	Summary