

CableHome™ CTP MIB Specification

Superseded

CH-SP-MIB-CTP-I04-030801

Issued

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- Work in Progress** An incomplete document, designed to guide discussion and generate feedback, that may include several alternative requirements for consideration.
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1 SCOPE

This specification describes CableHome Test Portal (CTP) MIB requirement.

Superseded

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] CableHome 1.0 Specification, CH-SP-CH1.0-I05-030801, August 1, 2003.
- [2] CableHome 1.1 Specification, CH-SP-CH1.1-I02-030801, August 1, 2003.

2.2 Reference Acquisition

CableLabs Specifications:

- Cable Television Laboratories, Inc., <http://www.cablelabs.com/>

3 ACRONYMS

This specification uses the following acronyms:

CTP	CableHome Test Portal
ICMP	Internet Control Message Protocol
TCP	Transmission Control Protocol

4 REQUIREMENTS

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

```

CABH-CTP-MIB DEFINITIONS ::= BEGIN
IMPORTS
    MODULE-IDENTITY,
    OBJECT-TYPE          FROM SNMPv2-SMI
    TimeStamp,
    TruthValue           FROM SNMPv2-TC
    OBJECT-GROUP,
    MODULE-COMPLIANCE   FROM SNMPv2-CONF
    InetAddressType,
    InetAddress,
    InetAddressIPv4,
    InetAddressIPv6     FROM INET-ADDRESS-MIB
    clabProjCableHome   FROM CLAB-DEF-MIB;

cabhCtpMib MODULE-IDENTITY
    LAST-UPDATED "2003080100000Z" -- August 1, 2003
    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 or mibs@cablelabs.com"
    DESCRIPTION
        "This MIB module defines control and monitoring objects
        for remote diagnostic tools for a CableHome LAN
        supported by the CableHome Test Portal (CTP) as
        defined and described in CableLabs' CableHome
        specifications."
    REFERENCE
        "CableHome 1.0 Specification, CH-SP-CH1.0-I05-030801,
        6.4 and CableHome 1.1 Specification,
        CH-SP-CH1.1-I02-030801, 6.4."
    ::= { clabProjCableHome 5 }

-- Textual conventions

cabhCtpObjects OBJECT IDENTIFIER ::= { cabhCtpMib 1 }
cabhCtpBase    OBJECT IDENTIFIER ::= { cabhCtpObjects 1 }
cabhCtpConnSpeed OBJECT IDENTIFIER ::= { cabhCtpObjects 2 }
cabhCtpPing    OBJECT IDENTIFIER ::= { cabhCtpObjects 3 }

--
-- The following group describes the base objects in the CableHome
-- Management Portal.
--

cabhCtpSetToFactory OBJECT-TYPE
    SYNTAX      TruthValue
    MAX-ACCESS  read-write
    STATUS      current
    DESCRIPTION

```

```

        "Setting this object to true(1) causes all the tables
        in the CTP MIB to be cleared, and all CTP MIB objects
        with default values set back to those default values.
        Reading this object always returns false(2)."
```

::= { cabhCtpBase 1 }

cabhCtpLastSetToFactory OBJECT-TYPE

```

    SYNTAX      TimeStamp
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The value of sysUpTime when cabhCtpSetToFactory
        was last set to true. Zero if never reset."
```

::= { cabhCtpBase 2 }

--

-- Parameter and results from Connection Speed Command

--

cabhCtpConnSrcIpType OBJECT-TYPE

```

    SYNTAX      InetAddressType
    MAX-ACCESS  read-write
    STATUS      current
    DESCRIPTION
        "The IP Address type used as the source address for the
        Connection Speed Test."
```

DEFVAL { ipv4 }

::= { cabhCtpConnSpeed 1 }

cabhCtpConnSrcIp OBJECT-TYPE

```

    SYNTAX      InetAddress
    MAX-ACCESS  read-write
    STATUS      current
    DESCRIPTION
        "The IP Address used as the source address for the
        Connection Speed Test. The default value is the value
        of cabhCdpServerRouter (192.168.0.1). The type of
        this address is specified by cabhCtpConnSrcIpType."
```

REFERENCE

```

        "CableHome 1.0 Specification, CH-SP-CH1.0-I05-030801,
        6.4.4.1 and CableHome 1.1 Specification,
        CH-SP-CH1.1-I02-030801, 6.4.3.1."
```

DEFVAL { 'c0a80001'h } -- 192.168.0.1

::= { cabhCtpConnSpeed 2 }

cabhCtpConnDestIpType OBJECT-TYPE

```

    SYNTAX      InetAddressType
    MAX-ACCESS  read-write
    STATUS      current
    DESCRIPTION
        "The IP Address Type for the CTP Connection Speed Tool
        destination address."
```

DEFVAL { ipv4 }

::= { cabhCtpConnSpeed 3 }

cabhCtpConnDestIp OBJECT-TYPE

```

    SYNTAX      InetAddress
    MAX-ACCESS  read-write
    STATUS      current
    DESCRIPTION
        "The IP Address used as the destination address for the
        Connection Speed Test. The type of this address is specified
        by cabhCtpConnDestIpType."
```

```

 ::= { cabhCtpConnSpeed 4 }

cabhCtpConnProto OBJECT-TYPE
    SYNTAX      INTEGER {
                    udp(1),
                    tcp(2)
                }
    MAX-ACCESS  read-write
    STATUS      current
    DESCRIPTION
        "The protocol used in the Connection Speed Test. TCP
        testing is optional."
    DEFVAL { udp }
    ::= { cabhCtpConnSpeed 5 }

cabhCtpConnNumPkts OBJECT-TYPE
    SYNTAX      INTEGER (1..65535)
    MAX-ACCESS  read-write
    STATUS      current
    DESCRIPTION
        "The number of packets the CTP is to send when
        triggered to execute the Connection Speed Tool."
    DEFVAL { 100 }
    ::= { cabhCtpConnSpeed 6 }

cabhCtpConnPktSize OBJECT-TYPE
    SYNTAX      INTEGER (64..1518)
    MAX-ACCESS  read-write
    STATUS      current
    DESCRIPTION
        "The size of each OSI Layer 2 frame to be
        sent by the PS CableHome Test Portal
        function when configured to execute the
        Connection Speed remote diagnostic tool."
    REFERENCE
        "CableHome 1.0 Specification, CH-SP-CH1.0-I05-030801,
        6.4.4.1 and CableHome 1.1 Specification,
        CH-SP-CH1.1-I02-030801, 6.4.3.1."
    DEFVAL { 1518 }
    ::= { cabhCtpConnSpeed 7 }

cabhCtpConnTimeOut OBJECT-TYPE
    SYNTAX      INTEGER (0..600000)          -- Max 10 minutes
    UNITS       "milliseconds"
    MAX-ACCESS  read-write
    STATUS      current
    DESCRIPTION
        "The timeout value for the response. A value of zero
        indicates no time out and can be used for TCP only."
    DEFVAL {30000} -- 30 seconds
    ::= { cabhCtpConnSpeed 8 }

cabhCtpConnControl OBJECT-TYPE
    SYNTAX      INTEGER {
                    start(1),
                    abort(2)
                }
    MAX-ACCESS  read-write
    STATUS      current
    DESCRIPTION
        "The control for the Connection Speed Tool. Setting this
        object to start(1) causes the Connection Speed Tool to
        execute. Setting this object to abort(2) causes the

```

```

        Connection Speed Tool to stop running. This parameter
        should only be set via SNMP."
DEFVAL {abort }
::={ cabhCtpConnSpeed 9 }

cabhCtpConnStatus OBJECT-TYPE
    SYNTAX      INTEGER {
                    notRun(1),
                    running(2),
                    complete(3),
                    aborted(4),
                    timedOut(5)
                }
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The status of the Connection Speed Tool."
    DEFVAL { notRun }
    ::= { cabhCtpConnSpeed 10 }

cabhCtpConnPktsSent OBJECT-TYPE
    SYNTAX      INTEGER (0..65535)
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The number of packets the CTP sent after it was
        triggered to execute the Connection Speed Tool."
    ::= { cabhCtpConnSpeed 11 }

cabhCtpConnPktsRecv OBJECT-TYPE
    SYNTAX      INTEGER (0..65535)
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The number of packets the CTP received after it
        executed the Connection Speed Tool."
    ::= { cabhCtpConnSpeed 12 }

cabhCtpConnRTT OBJECT-TYPE
    SYNTAX      INTEGER (0..600000)
    UNITS       "millisec"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The resulting round trip time for the set of
        packets sent to and received from the target
        LAN IP Device."
    ::= { cabhCtpConnSpeed 13 }

cabhCtpConnThroughput OBJECT-TYPE
    SYNTAX      INTEGER (0..65535)
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The average round-trip throughput measured in
        kilobits per second."
    ::= { cabhCtpConnSpeed 14 }

--
-- Parameters and Results for Ping Command
--

cabhCtpPingSrcIpType OBJECT-TYPE

```

```

SYNTAX      InetAddressType
MAX-ACCESS  read-write
STATUS      current
DESCRIPTION
    "The IP Address Type for CTP Ping Tool source address."
DEFVAL { ipv4 }
 ::= { cabhCtpPing 1 }

cabhCtpPingSrcIp OBJECT-TYPE
SYNTAX      InetAddress
MAX-ACCESS  read-write
STATUS      current
DESCRIPTION
    "The IP Address used as the source address for the Ping
    Test. The default value is the value of
    CabhCdpServerRouter (192.168.0.1). The type of this
    address is specified by cabhCtpPingSrcIpType."
REFERENCE
    "CableHome 1.0 Specification, CH-SP-CH1.0-I05-030801,
    6.4.4.2 and CableHome 1.1 Specification,
    CH-SP-CH1.1-I02-030801, 6.4.3.2."
DEFVAL { 'c0a80001'h } --192.168.0.1
 ::= { cabhCtpPing 2 }

cabhCtpPingDestIpType OBJECT-TYPE
SYNTAX      InetAddressType
MAX-ACCESS  read-write
STATUS      current
DESCRIPTION
    "The IP Address Type for the CTP Ping Tool destination
    address."
DEFVAL { ipv4 }
 ::= { cabhCtpPing 3 }

cabhCtpPingDestIp OBJECT-TYPE
SYNTAX      InetAddress
MAX-ACCESS  read-write
STATUS      current
DESCRIPTION
    "The Destination IP Address used as the destination
    address for the Ping Test."
 ::= { cabhCtpPing 4 }

cabhCtpPingNumPkts OBJECT-TYPE
SYNTAX      INTEGER (1..4)
MAX-ACCESS  read-write
STATUS      current
DESCRIPTION
    "The number of packets to send to each host."
DEFVAL { 1 }
 ::= { cabhCtpPing 5 }

cabhCtpPingPktSize OBJECT-TYPE
SYNTAX      INTEGER (64..1518)
MAX-ACCESS  read-write
STATUS      current
DESCRIPTION
    "The size of the test frames."
DEFVAL { 64 }
 ::= { cabhCtpPing 6 }

cabhCtpPingTimeBetween OBJECT-TYPE
SYNTAX      INTEGER (0..600000)

```

```
UNITS          "milliseconds"
MAX-ACCESS    read-write
STATUS        current
DESCRIPTION   "The time between sending one ping and the next."
DEFVAL { 1000 }
 ::= { cabhCtpPing 7 }

cabhCtpPingTimeOut OBJECT-TYPE
SYNTAX        INTEGER (1..600000)
UNITS          "milliseconds"
MAX-ACCESS    read-write
STATUS        current
DESCRIPTION   "The time out for ping response (ICMP reply) for a
              single transmitted ping message (ICMP request)."
DEFVAL { 1000 } -- 1 second
 ::= { cabhCtpPing 8 }

cabhCtpPingControl OBJECT-TYPE
SYNTAX        INTEGER {
              start(1),
              abort(2)
              }
MAX-ACCESS    read-write
STATUS        current
DESCRIPTION   "The control for the Ping Tool. Setting this object
              to start(1) causes the Ping Tool to execute. Setting
              this object to abort(2) causes the Ping Tool to stop
              running. This parameter should only be set via SNMP."
DEFVAL { abort }
 ::= { cabhCtpPing 9 }

cabhCtpPingStatus OBJECT-TYPE
SYNTAX        INTEGER {
              notRun(1),
              running(2),
              complete(3),
              aborted(4),
              timedOut(5)
              }
MAX-ACCESS    read-only
STATUS        current
DESCRIPTION   "The status of the Ping Tool."
DEFVAL { notRun }
 ::= { cabhCtpPing 10 }

cabhCtpPingNumSent OBJECT-TYPE
SYNTAX        INTEGER (0..4)
MAX-ACCESS    read-only
STATUS        current
DESCRIPTION   "The number of Pings sent."
 ::= { cabhCtpPing 11 }

cabhCtpPingNumRecv OBJECT-TYPE
SYNTAX        INTEGER (0..255)
MAX-ACCESS    read-only
STATUS        current
DESCRIPTION   "The number of pings received."
```

```

 ::= { cabhCtpPing 12 }

cabhCtpPingAvgRTT OBJECT-TYPE
    SYNTAX      INTEGER (0..600000)
    UNITS       "millisec"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The resulting average of round trip times for
         acknowledged packets."
 ::= { cabhCtpPing 13 }

cabhCtpPingMaxRTT OBJECT-TYPE
    SYNTAX      INTEGER (0..600000)
    UNITS       "millisec"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The resulting maximum of round trip times for
         acknowledged packets."
 ::= { cabhCtpPing 14 }

cabhCtpPingMinRTT OBJECT-TYPE
    SYNTAX      INTEGER (0..600000)
    UNITS       "millisec"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The resulting minimum of round trip times for
         acknowledged packets."
 ::= { cabhCtpPing 15 }

cabhCtpPingNumIcmpError OBJECT-TYPE
    SYNTAX      INTEGER (0..255)
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "Number of ICMP errors."
 ::= { cabhCtpPing 16 }

cabhCtpPingIcmpError OBJECT-TYPE
    SYNTAX      INTEGER (0..255)
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The last ICMP error."
 ::= { cabhCtpPing 17 }

-----

--
-- notification group is for future extension.
--

cabhCtpNotification OBJECT IDENTIFIER ::= { cabhCtpMib 2 }
cabhCtpNotifications OBJECT IDENTIFIER ::= { cabhCtpNotification 0 }
cabhCtpConformance OBJECT IDENTIFIER ::= { cabhCtpMib 3 }
cabhCtpCompliances OBJECT IDENTIFIER ::= { cabhCtpConformance 1 }
cabhCtpGroups OBJECT IDENTIFIER ::= { cabhCtpConformance 2 }

--
-- Notification Group
--

```

```
-- compliance statements

cabhCtpBasicCompliance MODULE-COMPLIANCE
    STATUS          current
    DESCRIPTION
        "The compliance statement for devices that implement
        Portal Service feature."
    MODULE          --cabhCtpMib

-- unconditionally mandatory groups

    MANDATORY-GROUPS {
        cabhCtpGroup
    }

    ::= { cabhCtpCompliances 3 }

cabhCtpGroup OBJECT-GROUP
    OBJECTS {

        cabhCtpSetToFactory,
        cabhCtpLastSetToFactory,
        cabhCtpConnSrcIpType,
        cabhCtpConnSrcIp,
        cabhCtpConnDestIpType,
        cabhCtpConnDestIp,
        cabhCtpConnProto,
        cabhCtpConnNumPkts,
        cabhCtpConnPktSize,
        cabhCtpConnTimeOut,
        cabhCtpConnControl,
        cabhCtpConnStatus,
        cabhCtpConnPktsSent,
        cabhCtpConnPktsRecv,
        cabhCtpConnRTT,
        cabhCtpConnThroughput,

        cabhCtpPingSrcIpType,
        cabhCtpPingSrcIp,
        cabhCtpPingDestIpType,
        cabhCtpPingDestIp,
        cabhCtpPingNumPkts,
        cabhCtpPingPktSize,
        cabhCtpPingTimeBetween,
        cabhCtpPingTimeOut,
        cabhCtpPingControl,
        cabhCtpPingStatus,
        cabhCtpPingNumSent,
        cabhCtpPingNumRecv,
        cabhCtpPingAvgRTT,
        cabhCtpPingMinRTT,
        cabhCtpPingMaxRTT,
        cabhCtpPingNumIcmpError,
        cabhCtpPingIcmpError
    }
    STATUS          current
    DESCRIPTION
        "Group of objects for CableHome CTP MIB."
    ::= { cabhCtpGroups 1 }

END
```

5 ACKNOWLEDGEMENTS

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Appendix I Revision History

The following Engineering Change Notices were incorporated into CH-SP-MIB-CTP-I02-020920:

ECN Number	ECN Date	Summary
CH1-N-02001	6/20/02	MIB CabhCtpConnThroughput is defined as R/W in MIB code, should be read only, as per the specification.
CH1-N-02006	6/20/02	<p>Correct single dash in the LAST-UPDATED line of the MODULE-IDENTITY</p> <p>Change the options for the cabhCtpConnControl object</p> <p>Change the options for the cabhCtpConnStatus object</p> <p>Correct the range for the cabhCtpPingTimeOut object</p> <p>Specify a default value (DEFVAL) of IPv4 for all IP address Type objects</p> <p>Rename the cabhCtpReset object to cabhCtpSetToFactory and change the description.</p> <p>Modify the ranges (SYNTAX) for cabhCtpPingNumSent to be consistent with cabhCtpPingNumPkts</p> <p>Change the options for the cabhCtpPingControl object</p> <p>Change the options for the cabhCtpPingStatus object</p>

The following Engineering Change Notices were incorporated into CH-SP-MIB-CTP-I03-030411:

ECN Number	ECN Date	Summary
CH1-N-02067	1/23/03	Change cabhCtpPingTimeOut DEFVAL to 1 second.

The following Engineering Change Notices were incorporated into CH-SP-MIB-CTP-I04-030801:

ECN Number	ECN Date	Summary
CH-MIB-N-03055	7/3/03	Update CTP MIB to incorporate changes needed to align the CableLabs version with the version submitted to the IETF.