

Superseded

CableHome™ CTP MIB Specification

CH-SP-MIB-CTP-I02-020920

Issued

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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 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 Test Portal (CTP) MIB requirement.

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] CableHome 1.0 Specification, CH-SP-I02-020920, September 20, 2002.

2.2 Reference Acquisition

CableLabs Specifications:

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

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
    TruthValue,
    TEXTUAL-CONVENTION
        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
--      04/05/02      [redacted]            Issued I01
--      09/20/02      [redacted]            Issued I02
--
-----

cabhCtpMib MODULE-IDENTITY
    LAST-UPDATED "0209200000Z" -- September 20, 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 defines the diagnostic controls
        offered by the CableHome Test Portal (CTP).

Acknowledgements:
Roy Spitzer - Consultant to CableLabs
Mike Mannette - Consultant to CableLabs
Randy Dunton - Intel
Dmitrii Loukianov - Intel
    Wes Peters - DoBox, Inc.
    Chris Zacker - Broadcom"
    ::= { 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 Cable Home
--      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 }

```

--
--      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)."
```

REFERENCE

"CableHome Specification Section 6.4.4"

```

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."
    ::= { 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 the test frames."
    REFERENCE
        ""
    DEFVAL { 1518 }
    ::= { cabhCtpConnSpeed 7 }

cabhCtpConnTimeOut OBJECT-TYPE
    SYNTAX INTEGER (0..60000) -- 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)."
```

REFERENCE

```

    "CableHome 1.0 Specification Section 6.4.4"
DEFVAL { 'c0a80001'h }
::= { 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 { 5000 } -- 5 seconds
 ::= { 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 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,
        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

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	<ol style="list-style-type: none"> 1. Correct single dash in the LAST-UPDATED line of the MODULE-IDENTITY 2. Change the options for the cabhCtpConnControl object 3. Change the options for the cabhCtpConnStatus object 4. Correct the range for the cabhCtpPingTimeOut object 5. Specify a default value (DEFVAL) of IPv4 for all IP address Type objects 6. Rename the cabhCtpReset object to cabhCtpSetToFactory and change the description. 7. Modify the ranges (SYNTAX) for cabhCtpPingNumSent to be consistent with cabhCtpPingNumPkts 8. Change the options for the cabhCtpPingControl object 9. Change the options for the cabhCtpPingStatus object