

-- extracted from rfc2925.txt  
-- at Wed Oct 4 07:11:20 2000

DISMAN-PING-MIB DEFINITIONS ::= BEGIN

IMPORTS

MODULE-IDENTITY,  
OBJECT-TYPE,  
Integer32,  
Unsigned32,  
mib-2,  
NOTIFICATION-TYPE,  
OBJECT-IDENTITY  
    FROM SNMPv2-SMI  
TEXTUAL-CONVENTION,  
RowStatus,  
StorageType,  
DateAndTime,  
TruthValue  
    FROM SNMPv2-TC  
MODULE-COMPLIANCE,  
OBJECT-GROUP,  
NOTIFICATION-GROUP  
    FROM SNMPv2-CONF  
InterfaceIndexOrZero  
    FROM IF-MIB  
SnmAdminString  
    FROM SNMP-FRAMEWORK-MIB  
InetAddressType,  
InetAddress  
    FROM INET-ADDRESS-MIB;

-- RFC2851

pingMIB MODULE-IDENTITY

LAST-UPDATED "200009210000Z" -- Sep 21, 2000 12:00:00 AM  
ORGANIZATION "IETF Distributed Management Working Group"  
CONTACT-INFO  
    "Kenneth White

    International Business Machines Corporation  
    Network Computing Software Division  
    Research Triangle Park, NC, USA

    E-mail: wkenneth@us.ibm.com"

DESCRIPTION

"The Ping MIB (DISMAN-PING-MIB) provides the capability of  
controlling the use of the ping function at a remote  
host."

REVISION "200009210000Z" -- Sep 21, 2000 12:00:00 AM

DESCRIPTION

"Initial version, published as RFC 2925."

-- 1.3.6.1.2.1.80 -- ::= { mib-2 80 }

-- Textual Conventions

OperationResponseStatus ::= TEXTUAL-CONVENTION

STATUS current

DESCRIPTION

"Used to report the result of an operation:

responseReceived(1) - Operation completes successfully.  
unknown(2) - Operation failed due to unknown error.  
internalError(3) - An implementation detected an error  
    in its own processing that caused an operation  
    to fail.  
requestTimedOut(4) - Operation failed to receive a  
    valid reply within the time limit imposed on it.  
unknownDestinationAddress(5) - Invalid destination  
    address.

noRouteToTarget(6) - Could not find a route to target.  
 interfaceInactiveToTarget(7) - The interface to be used in sending a probe is inactive without an alternate route existing.  
 arpFailure(8) - Unable to resolve a target address to a media specific address.  
 maxConcurrentLimitReached(9) - The maximum number of concurrent active operations would have been exceeded if the corresponding operation was allowed.  
 unableToResolveDnsName(10) - The DNS name specified was unable to be mapped to an IP address.  
 invalidHostAddress(11) - The IP address for a host has been determined to be invalid. Examples of this are broadcast or multicast addresses."

```
SYNTAX      INTEGER {
                responseReceived(1),
                unknown(2),
                internalError(3),
                requestTimedOut(4),
                unknownDestinationAddress(5),
                noRouteToTarget(6),
                interfaceInactiveToTarget(7),
                arpFailure(8),
                maxConcurrentLimitReached(9),
                unableToResolveDnsName(10),
                invalidHostAddress(11) }
```

-- Top level structure of the MIB

```
pingNotifications OBJECT IDENTIFIER
-- 1.3.6.1.2.1.80.0 -- ::= { pingMIB 0 }
```

```
pingObjects OBJECT IDENTIFIER
-- 1.3.6.1.2.1.80.1 -- ::= { pingMIB 1 }
```

```
pingConformance OBJECT IDENTIFIER
-- 1.3.6.1.2.1.80.2 -- ::= { pingMIB 2 }
-- The registration node (point) for ping implementation types
```

```
pingImplementationTypeDomains OBJECT IDENTIFIER
-- 1.3.6.1.2.1.80.3 -- ::= { pingMIB 3 }
```

```
pingIcmpEcho OBJECT-IDENTITY
STATUS      current
DESCRIPTION
    "Indicates that an implementation is using the Internet
    Control Message Protocol (ICMP) 'ECHO' facility."
```

```
-- 1.3.6.1.2.1.80.3.1 -- ::= { pingImplementationTypeDomains 1 }
```

```
pingUdpEcho OBJECT-IDENTITY
STATUS      current
DESCRIPTION
    "Indicates that an implementation is using the UDP echo
    port (7)."
```

REFERENCE "RFC 862, 'Echo Protocol'."

```
-- 1.3.6.1.2.1.80.3.2 -- ::= { pingImplementationTypeDomains 2 }
```

```
pingSnmpQuery OBJECT-IDENTITY
STATUS      current
DESCRIPTION
    "Indicates that an implementation is an SNMP query to
    calculate a round trip time."
```

```
-- 1.3.6.1.2.1.80.3.3 -- ::= { pingImplementationTypeDomains 3 }
```

```
pingTcpConnectionAttempt OBJECT-IDENTITY
STATUS      current
DESCRIPTION
```

*"Indicates that an implementation is attempting to connect to a TCP port in order to calculate a round trip time."*

```
-- 1.3.6.1.2.1.80.3.4 -- ::= { pingImplementationTypeDomains 4 }  
-- Simple Object Definitions
```

**pingMaxConcurrentRequests OBJECT-TYPE**

**SYNTAX** Unsigned32  
**UNITS** "requests"  
**MAX-ACCESS** read-write  
**STATUS** current  
**DESCRIPTION**

*"The maximum number of concurrent active ping requests that are allowed within an agent implementation. A value of 0 for this object implies that there is no limit for the number of concurrent active requests in effect."*

**DEFVAL** { 10 }

```
-- 1.3.6.1.2.1.80.1.1 -- ::= { pingObjects 1 }  
-- Ping Control Table
```

**pingCtlTable OBJECT-TYPE**

**SYNTAX** SEQUENCE OF PingCtlEntry  
**MAX-ACCESS** not-accessible  
**STATUS** current  
**DESCRIPTION**

*"Defines the ping Control Table for providing, via SNMP, the capability of performing ping operations at a remote host. The results of these operations are stored in the pingResultsTable and the pingProbeHistoryTable."*

```
-- 1.3.6.1.2.1.80.1.2 -- ::= { pingObjects 2 }
```

**pingCtlEntry OBJECT-TYPE**

**SYNTAX** PingCtlEntry  
**MAX-ACCESS** not-accessible  
**STATUS** current  
**DESCRIPTION**

*"Defines an entry in the pingCtlTable. The first index element, pingCtlOwnerIndex, is of type SnmpAdminString, a textual convention that allows for use of the SNMPv3 View-Based Access Control Model (RFC 2575 [11], VACM) and allows a management application to identify its entries. The second index, pingCtlTestName (also an SnmpAdminString), enables the same management application to have multiple outstanding requests."*

**INDEX** {  
    pingCtlOwnerIndex,  
    pingCtlTestName  
}

```
-- 1.3.6.1.2.1.80.1.2.1 -- ::= { pingCtlTable 1 }
```

**PingCtlEntry ::= SEQUENCE** {

    pingCtlOwnerIndex SnmpAdminString,  
    pingCtlTestName SnmpAdminString,  
    pingCtlTargetAddressType InetAddressType,  
    pingCtlTargetAddress InetAddress,  
    pingCtlDataSize Unsigned32,  
    pingCtlTimeOut Unsigned32,  
    pingCtlProbeCount Unsigned32,  
    pingCtlAdminStatus INTEGER,  
    pingCtlDataFill OCTET STRING,  
    pingCtlFrequency Unsigned32,  
    pingCtlMaxRows Unsigned32,  
    pingCtlStorageType StorageType,  
    pingCtlTrapGeneration BITS,  
    pingCtlTrapProbeFailureFilter Unsigned32,  
    pingCtlTrapTestFailureFilter Unsigned32,  
    pingCtlType OBJECT IDENTIFIER,

```

    pingCtlDescr                SnmpAdminString,
    pingCtlSourceAddressType    InetAddressType,
    pingCtlSourceAddress        InetAddress,
    pingCtlIfIndex              InterfaceIndexOrZero,
    pingCtlByPassRouteTable     TruthValue,
    pingCtlDSField              Unsigned32,
    pingCtlRowStatus            RowStatus
}

```

**pingCtlOwnerIndex OBJECT-TYPE**

```

SYNTAX      SnmpAdminString (SIZE (0..32))
MAX-ACCESS  not-accessible
STATUS      current
DESCRIPTION

```

*"To facilitate the provisioning of access control by a security administrator using the View-Based Access Control Model (RFC 2575, VACM) for tables in which multiple users may need to independently create or modify entries, the initial index is used as an 'owner index'. Such an initial index has a syntax of SnmpAdminString, and can thus be trivially mapped to a securityName or groupName as defined in VACM, in accordance with a security policy.*

*When used in conjunction with such a security policy all entries in the table belonging to a particular user (or group) will have the same value for this initial index. For a given user's entries in a particular table, the object identifiers for the information in these entries will have the same subidentifiers (except for the 'column' subidentifier) up to the end of the encoded owner index. To configure VACM to permit access to this portion of the table, one would create vacmViewTreeFamilyTable entries with the value of vacmViewTreeFamilySubtree including the owner index portion, and vacmViewTreeFamilyMask 'wildcarding' the column subidentifier. More elaborate configurations are possible."*

```
-- 1.3.6.1.2.1.80.1.2.1.1 -- ::= { pingCtlEntry 1 }
```

**pingCtlTestName OBJECT-TYPE**

```

SYNTAX      SnmpAdminString (SIZE (0..32))
MAX-ACCESS  not-accessible
STATUS      current
DESCRIPTION

```

*"The name of the ping test. This is locally unique, within the scope of an pingCtlOwnerIndex."*

```
-- 1.3.6.1.2.1.80.1.2.1.2 -- ::= { pingCtlEntry 2 }
```

**pingCtlTargetAddressType OBJECT-TYPE**

```

SYNTAX      InetAddressType
MAX-ACCESS  read-create
STATUS      current
DESCRIPTION

```

*"Specifies the type of host address to be used at a remote host for performing a ping operation."*

```
DEFVAL      { unknown }
```

```
-- 1.3.6.1.2.1.80.1.2.1.3 -- ::= { pingCtlEntry 3 }
```

**pingCtlTargetAddress OBJECT-TYPE**

```

SYNTAX      InetAddress
MAX-ACCESS  read-create
STATUS      current
DESCRIPTION

```

*"Specifies the host address to be used at a remote host for performing a ping operation. The host address type is determined by the object value of corresponding pingCtlTargetAddressType.*

*A value for this object MUST be set prior to transitioning*

its corresponding pingCtlEntry to active(1) via pingCtlRowStatus."

DEFVAL { 'H' }

-- 1.3.6.1.2.1.80.1.2.1.4 -- ::= { pingCtlEntry 4 }

pingCtlDataSize OBJECT-TYPE

SYNTAX Unsigned32 (0..65507)

UNITS "octets"

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"Specifies the size of the data portion to be transmitted in a ping operation in octets. A ping request is usually an ICMP message encoded into an IP packet. An IP packet has a maximum size of 65535 octets. Subtracting the size of the ICMP or UDP header (both 8 octets) and the size of the IP header (20 octets) yields a maximum size of 65507 octets."

DEFVAL { 0 }

-- 1.3.6.1.2.1.80.1.2.1.5 -- ::= { pingCtlEntry 5 }

pingCtlTimeOut OBJECT-TYPE

SYNTAX Unsigned32 (1..60)

UNITS "seconds"

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"Specifies the time-out value, in seconds, for a remote ping operation."

DEFVAL { 3 }

-- 1.3.6.1.2.1.80.1.2.1.6 -- ::= { pingCtlEntry 6 }

pingCtlProbeCount OBJECT-TYPE

SYNTAX Unsigned32 (1..15)

UNITS "probes"

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"Specifies the number of times to perform a ping operation at a remote host."

DEFVAL { 1 }

-- 1.3.6.1.2.1.80.1.2.1.7 -- ::= { pingCtlEntry 7 }

pingCtlAdminStatus OBJECT-TYPE

SYNTAX INTEGER {  
    enabled(1), -- test should be started  
    disabled(2) -- test should be stopped  
}

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"Reflects the desired state that a pingCtlEntry should be in:

enabled(1) - Attempt to activate the test as defined by this pingCtlEntry.

disabled(2) - Deactivate the test as defined by this pingCtlEntry.

Refer to the corresponding pingResultsOperStatus to determine the operational state of the test defined by this entry."

DEFVAL { disabled }

-- 1.3.6.1.2.1.80.1.2.1.8 -- ::= { pingCtlEntry 8 }

pingCtlDataFill OBJECT-TYPE

SYNTAX OCTET STRING (SIZE (0..1024))

MAX-ACCESS read-create

STATUS current

DESCRIPTION

*"The content of this object is used together with the corresponding pingCtlDataSize value to determine how to fill the data portion of a probe packet. The option of selecting a data fill pattern can be useful when links are compressed or have data pattern sensitivities. The contents of pingCtlDataFill should be repeated in a ping packet when the size of the data portion of the ping packet is greater than the size of pingCtlDataFill."*

DEFVAL { '00'H }

-- 1.3.6.1.2.1.80.1.2.1.9 -- ::= { pingCtlEntry 9 }

pingCtlFrequency OBJECT-TYPE

SYNTAX Unsigned32

UNITS "seconds"

MAX-ACCESS read-create

STATUS current

DESCRIPTION

*"The number of seconds to wait before repeating a ping test as defined by the value of the various objects in the corresponding row.*

*A single ping test consists of a series of ping probes. The number of probes is determined by the value of the corresponding pingCtlProbeCount object. After a single test completes the number of seconds as defined by the value of pingCtlFrequency MUST elapse before the next ping test is started.*

*A value of 0 for this object implies that the test as defined by the corresponding entry will not be repeated."*

DEFVAL { 0 }

-- 1.3.6.1.2.1.80.1.2.1.10 -- ::= { pingCtlEntry 10 }

pingCtlMaxRows OBJECT-TYPE

SYNTAX Unsigned32

UNITS "rows"

MAX-ACCESS read-create

STATUS current

DESCRIPTION

*"The maximum number of entries allowed in the pingProbeHistoryTable. An implementation of this MIB will remove the oldest entry in the pingProbeHistoryTable to allow the addition of a new entry once the number of rows in the pingProbeHistoryTable reaches this value.*

*Old entries are not removed when a new test is started. Entries are added to the pingProbeHistoryTable until pingCtlMaxRows is reached before entries begin to be removed.*

*A value of 0 for this object disables creation of pingProbeHistoryTable entries."*

DEFVAL { 50 }

-- 1.3.6.1.2.1.80.1.2.1.11 -- ::= { pingCtlEntry 11 }

pingCtlStorageType OBJECT-TYPE

SYNTAX StorageType

MAX-ACCESS read-create

STATUS current

DESCRIPTION

*"The storage type for this conceptual row. Conceptual rows having the value 'permanent' need not allow write-access to any columnar objects in the row."*

DEFVAL { nonVolatile }

-- 1.3.6.1.2.1.80.1.2.1.12 -- ::= { pingCtlEntry 12 }

**pingCtlTrapGeneration OBJECT-TYPE**

**SYNTAX**       **BITS** {  
                  probeFailure(0),  
                  testFailure(1),  
                  testCompletion(2) }

**MAX-ACCESS**   read-create

**STATUS**       current

**DESCRIPTION**

*"The value of this object determines when and if to generate a notification for this entry:*

*probeFailure(0) - Generate a pingProbeFailed notification subject to the value of pingCtlTrapProbeFailureFilter. The object pingCtlTrapProbeFailureFilter can be used to specify the number of successive probe failures that are required before a pingProbeFailed notification can be generated.*

*testFailure(1) - Generate a pingTestFailed notification. In this instance the object pingCtlTrapTestFailureFilter can be used to determine the number of probe failures that signal when a test fails.*

*testCompletion(2) - Generate a pingTestCompleted notification.*

*The value of this object defaults to zero, indicating that none of the above options have been selected."*

-- 1.3.6.1.2.1.80.1.2.1.13 -- ::= { pingCtlEntry 13 }

**pingCtlTrapProbeFailureFilter OBJECT-TYPE**

**SYNTAX**       **Unsigned32** (0..15)

**MAX-ACCESS**   read-create

**STATUS**       current

**DESCRIPTION**

*"The value of this object is used to determine when to generate a pingProbeFailed NOTIFICATION.*

*Setting pingCtlTrapGeneration to probeFailure(0) implies that a pingProbeFailed NOTIFICATION is generated only when the number of successive probe failures as indicated by the value of pingCtlTrapPrbfailureFilter fail within a given ping test."*

**DEFVAL**       { 1 }

-- 1.3.6.1.2.1.80.1.2.1.14 -- ::= { pingCtlEntry 14 }

**pingCtlTrapTestFailureFilter OBJECT-TYPE**

**SYNTAX**       **Unsigned32** (0..15)

**MAX-ACCESS**   read-create

**STATUS**       current

**DESCRIPTION**

*"The value of this object is used to determine when to generate a pingTestFailed NOTIFICATION.*

*Setting pingCtlTrapGeneration to testFailure(1) implies that a pingTestFailed NOTIFICATION is generated only when the number of ping failures within a test exceed the value of pingCtlTrapTestFailureFilter."*

**DEFVAL**       { 1 }

-- 1.3.6.1.2.1.80.1.2.1.15 -- ::= { pingCtlEntry 15 }

**pingCtlType OBJECT-TYPE**

**SYNTAX**       **OBJECT IDENTIFIER**

**MAX-ACCESS**   read-create

**STATUS**       current

**DESCRIPTION**

*"The value of this object is used to either report or select the implementation method to be used for calculating a ping response time. The value of this object MAY be selected from pingImplementationTypeDomains."*

*Additional implementation types SHOULD be allocated as required by implementers of the DISMAN-PING-MIB under their enterprise specific registration point and not beneath pingImplementationTypeDomains."*

DEFVAL { pingIcmpEcho }

-- 1.3.6.1.2.1.80.1.2.1.16 -- ::= { pingCtlEntry 16 }

#### pingCtlDescr OBJECT-TYPE

SYNTAX SnmpAdminString

MAX-ACCESS read-create

STATUS current

#### DESCRIPTION

*"The purpose of this object is to provide a descriptive name of the remote ping test."*

DEFVAL { '00'H }

-- 1.3.6.1.2.1.80.1.2.1.17 -- ::= { pingCtlEntry 17 }

#### pingCtlSourceAddressType OBJECT-TYPE

SYNTAX InetAddressType

MAX-ACCESS read-create

STATUS current

#### DESCRIPTION

*"Specifies the type of the source address, pingCtlSourceAddress, to be used at a remote host when performing a ping operation."*

DEFVAL { ipv4 }

-- 1.3.6.1.2.1.80.1.2.1.18 -- ::= { pingCtlEntry 18 }

#### pingCtlSourceAddress OBJECT-TYPE

SYNTAX InetAddress

MAX-ACCESS read-create

STATUS current

#### DESCRIPTION

*"Use the specified IP address (which must be given in numeric form, not as a hostname) as the source address in outgoing probe packets. On hosts with more than one IP address, this option can be used to force the source address to be something other than the primary IP address of the interface the probe packet is sent on. If the IP address is not one of this machine's interface addresses, an error is returned and nothing is sent. A zero length octet string value for this object disables source address specification."*

*The address type (InetAddressType) that relates to this object is specified by the corresponding value of pingCtlSourceAddressType."*

DEFVAL { 'H' }

-- 1.3.6.1.2.1.80.1.2.1.19 -- ::= { pingCtlEntry 19 }

#### pingCtlIfIndex OBJECT-TYPE

SYNTAX InterfaceIndexOrZero

MAX-ACCESS read-create

STATUS current

#### DESCRIPTION

*"Setting this object to an interface's ifIndex prior to starting a remote ping operation directs the ping probes to be transmitted over the specified interface. A value of zero for this object means that this option is not enabled."*

DEFVAL { 0 }

-- 1.3.6.1.2.1.80.1.2.1.20 -- ::= { pingCtlEntry 20 }

**pingCtlByPassRouteTable OBJECT-TYPE**

**SYNTAX** TruthValue  
**MAX-ACCESS** read-create  
**STATUS** current  
**DESCRIPTION**

"The purpose of this object is to optionally enable bypassing the route table. If enabled, the remote host will bypass the normal routing tables and send directly to a host on an attached network. If the host is not on a directly-attached network, an error is returned. This option can be used to perform the ping operation to a local host through an interface that has no route defined (e.g., after the interface was dropped by routed)."

**DEFVAL** { false }

-- 1.3.6.1.2.1.80.1.2.1.21 -- ::= { pingCtlEntry 21 }

**pingCtlDSField OBJECT-TYPE**

**SYNTAX** Unsigned32 (0..255)  
**MAX-ACCESS** read-create  
**STATUS** current  
**DESCRIPTION**

"Specifies the value to store in the Differentiated Services (DS) Field in the IP packet used to encapsulate the ping probe. The DS Field is defined as the Type of Service (TOS) octet in a IPv4 header or as the Traffic Class octet in a IPv6 header.

The value of this object must be a decimal integer in the range from 0 to 255. This option can be used to determine what effect an explicit DS Field setting has on a ping response. Not all values are legal or meaningful. A value of 0 means that the function represented by this option is not supported. DS Field usage is often not supported by IP implementations and not all values are supported. Refer to RFC 2474 for guidance on usage of this field."

**REFERENCE** "Refer to RFC 2474 for the definition of the Differentiated Services Field and to RFC 1812 Section 5.3.2 for Type of Service (TOS)."

**DEFVAL** { 0 }

-- 1.3.6.1.2.1.80.1.2.1.22 -- ::= { pingCtlEntry 22 }

**pingCtlRowStatus OBJECT-TYPE**

**SYNTAX** RowStatus  
**MAX-ACCESS** read-create  
**STATUS** current  
**DESCRIPTION**

"This object allows entries to be created and deleted in the pingCtlTable. Deletion of an entry in this table results in all corresponding (same pingCtlOwnerIndex and pingCtlTestName index values) pingResultsTable and pingProbeHistoryTable entries being deleted.

A value *MUST* be specified for pingCtlTargetAddress prior to a transition to active(1) state being accepted.

Activation of a remote ping operation is controlled via pingCtlAdminStatus and not by changing this object's value to active(1).

Transitions in and out of active(1) state are not allowed while an entry's pingResultsOperStatus is active(1) with the exception that deletion of an entry in this table by setting its RowStatus object to destroy(6) will stop an active

*ping operation.*

*The operational state of a ping operation can be determined by examination of its pingResultsOperStatus object."*

**REFERENCE** "See definition of RowStatus in RFC 2579, 'Textual Conventions for SMIV2.'"

```
-- 1.3.6.1.2.1.80.1.2.1.23 -- ::= { pingCtlEntry 23 }  
-- Ping Results Table
```

**pingResultsTable OBJECT-TYPE**

**SYNTAX** SEQUENCE OF PingResultsEntry

**MAX-ACCESS** not-accessible

**STATUS** current

**DESCRIPTION**

*"Defines the Ping Results Table for providing the capability of performing ping operations at a remote host. The results of these operations are stored in the pingResultsTable and the pingPastProbeTable.*

*An entry is added to the pingResultsTable when an pingCtlEntry is started by successful transition of its pingCtlAdminStatus object to enabled(1). An entry is removed from the pingResultsTable when its corresponding pingCtlEntry is deleted."*

```
-- 1.3.6.1.2.1.80.1.3 -- ::= { pingObjects 3 }
```

**pingResultsEntry OBJECT-TYPE**

**SYNTAX** PingResultsEntry

**MAX-ACCESS** not-accessible

**STATUS** current

**DESCRIPTION**

*"Defines an entry in the pingResultsTable. The pingResultsTable has the same indexing as the pingCtlTable in order for a pingResultsEntry to correspond to the pingCtlEntry that caused it to be created."*

**INDEX** {  
    pingCtlOwnerIndex,  
    pingCtlTestName  
}

```
-- 1.3.6.1.2.1.80.1.3.1 -- ::= { pingResultsTable 1 }
```

**PingResultsEntry ::= SEQUENCE** {

    pingResultsOperStatus          INTEGER,  
    pingResultsIpTargetAddressType  InetAddressType,  
    pingResultsIpTargetAddress      InetAddress,  
    pingResultsMinRtt               Unsigned32,  
    pingResultsMaxRtt               Unsigned32,  
    pingResultsAverageRtt           Unsigned32,  
    pingResultsProbeResponses       Unsigned32,  
    pingResultsSentProbes           Unsigned32,  
    pingResultsRttSumOfSquares      Unsigned32,  
    pingResultsLastGoodProbe        DateAndTime

}

**pingResultsOperStatus OBJECT-TYPE**

**SYNTAX** INTEGER {  
    enabled(1),                      -- test is in progress  
    disabled(2)                      -- test has stopped  
}

**MAX-ACCESS** read-only

**STATUS** current

**DESCRIPTION**

*"Reflects the operational state of a pingCtlEntry:  
enabled(1) - Test is active.  
disabled(2) - Test has stopped."*

```
-- 1.3.6.1.2.1.80.1.3.1.1 -- ::= { pingResultsEntry 1 }
```

```

pingResultsIpTargetAddressType OBJECT-TYPE
    SYNTAX      InetAddressType
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "This objects indicates the type of address stored
        in the corresponding pingResultsIpTargetAddress
        object."
    DEFVAL      { unknown }
-- 1.3.6.1.2.1.80.1.3.1.2 -- ::= { pingResultsEntry 2 }

pingResultsIpTargetAddress OBJECT-TYPE
    SYNTAX      InetAddress
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "This objects reports the IP address associated
        with a pingCtlTargetAddress value when the destination
        address is specified as a DNS name. The value of
        this object should be a zero length octet string
        when a DNS name is not specified or when a
        specified DNS name fails to resolve."
    DEFVAL      { 'H' }
-- 1.3.6.1.2.1.80.1.3.1.3 -- ::= { pingResultsEntry 3 }

pingResultsMinRtt OBJECT-TYPE
    SYNTAX      Unsigned32
    UNITS       "milliseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The minimum ping round-trip-time (RTT) received. A value
        of 0 for this object implies that no RTT has been received."
-- 1.3.6.1.2.1.80.1.3.1.4 -- ::= { pingResultsEntry 4 }

pingResultsMaxRtt OBJECT-TYPE
    SYNTAX      Unsigned32
    UNITS       "milliseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The maximum ping round-trip-time (RTT) received. A value
        of 0 for this object implies that no RTT has been received."
-- 1.3.6.1.2.1.80.1.3.1.5 -- ::= { pingResultsEntry 5 }

pingResultsAverageRtt OBJECT-TYPE
    SYNTAX      Unsigned32
    UNITS       "milliseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The current average ping round-trip-time (RTT)."
```

```

-- 1.3.6.1.2.1.80.1.3.1.6 -- ::= { pingResultsEntry 6 }

pingResultsProbeResponses OBJECT-TYPE
    SYNTAX      Unsigned32
    UNITS       "responses"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "Number of responses received for the corresponding
        pingCtlEntry and pingResultsEntry. The value of this object
        MUST be reported as 0 when no probe responses have been
        received."
-- 1.3.6.1.2.1.80.1.3.1.7 -- ::= { pingResultsEntry 7 }

pingResultsSentProbes OBJECT-TYPE
    SYNTAX      Unsigned32
```

**UNITS**            *"probes"*  
**MAX-ACCESS**    read-only  
**STATUS**         current  
**DESCRIPTION**  
                   *"The value of this object reflects the number of probes sent for the corresponding pingCtlEntry and pingResultsEntry. The value of this object MUST be reported as 0 when no probes have been sent."*

-- 1.3.6.1.2.1.80.1.3.1.8 -- ::= { pingResultsEntry 8 }

**pingResultsRttSumOfSquares OBJECT-TYPE**

**SYNTAX**            Unsigned32  
**UNITS**             *"milliseconds"*  
**MAX-ACCESS**    read-only  
**STATUS**         current  
**DESCRIPTION**  
                   *"This object contains the sum of the squares for all ping responses received. Its purpose is to enable standard deviation calculation. The value of this object MUST be reported as 0 when no ping responses have been received."*

-- 1.3.6.1.2.1.80.1.3.1.9 -- ::= { pingResultsEntry 9 }

**pingResultsLastGoodProbe OBJECT-TYPE**

**SYNTAX**            DateAndTime  
**MAX-ACCESS**    read-only  
**STATUS**         current  
**DESCRIPTION**  
                   *"Date and time when the last response was received for a probe."*

-- 1.3.6.1.2.1.80.1.3.1.10 -- ::= { pingResultsEntry 10 }

-- Ping Probe History Table

**pingProbeHistoryTable OBJECT-TYPE**

**SYNTAX**            SEQUENCE OF PingProbeHistoryEntry  
**MAX-ACCESS**    not-accessible  
**STATUS**         current  
**DESCRIPTION**  
                   *"Defines a table for storing the results of a ping operation. Entries in this table are limited by the value of the corresponding pingCtlMaxRows object.*  
  
                   *An entry in this table is created when the result of a ping probe is determined. The initial 2 instance identifier index values identify the pingCtlEntry that a probe result (pingProbeHistoryEntry) belongs to. An entry is removed from this table when its corresponding pingCtlEntry is deleted.*  
  
                   *An implementation of this MIB will remove the oldest entry in the pingProbeHistoryTable to allow the addition of an new entry once the number of rows in the pingProbeHistoryTable reaches the value specified by pingCtlMaxRows."*

-- 1.3.6.1.2.1.80.1.4 -- ::= { pingObjects 4 }

**pingProbeHistoryEntry OBJECT-TYPE**

**SYNTAX**            PingProbeHistoryEntry  
**MAX-ACCESS**    not-accessible  
**STATUS**         current  
**DESCRIPTION**  
                   *"Defines an entry in the pingProbeHistoryTable. The first two index elements identify the pingCtlEntry that a pingProbeHistoryEntry belongs to. The third index element selects a single probe result."*

**INDEX** {  
           pingCtlOwnerIndex,

```

        pingCtlTestName,
        pingProbeHistoryIndex
    }
-- 1.3.6.1.2.1.80.1.4.1 -- ::= { pingProbeHistoryTable 1 }

PingProbeHistoryEntry ::= SEQUENCE {
    pingProbeHistoryIndex      Unsigned32,
    pingProbeHistoryResponse   Unsigned32,
    pingProbeHistoryStatus     OperationResponseStatus,
    pingProbeHistoryLastRC     Integer32,
    pingProbeHistoryTime       DateAndTime
}

pingProbeHistoryIndex OBJECT-TYPE
    SYNTAX      Unsigned32 (1..4294967295)
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "An entry in this table is created when the result of
        a ping probe is determined. The initial 2 instance
        identifier index values identify the pingCtlEntry
        that a probe result (pingProbeHistoryEntry) belongs
        to.

        An implementation MUST start assigning
        pingProbeHistoryIndex values at 1 and wrap after
        exceeding the maximum possible value as defined by
        the limit of this object ('ffffffff'h)."
-- 1.3.6.1.2.1.80.1.4.1.1 -- ::= { pingProbeHistoryEntry 1 }

pingProbeHistoryResponse OBJECT-TYPE
    SYNTAX      Unsigned32
    UNITS       "milliseconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The amount of time measured in milliseconds from when
        a probe was sent to when its response was received or
        when it timed out. The value of this object is reported
        as 0 when it is not possible to transmit a probe."
-- 1.3.6.1.2.1.80.1.4.1.2 -- ::= { pingProbeHistoryEntry 2 }

pingProbeHistoryStatus OBJECT-TYPE
    SYNTAX      OperationResponseStatus
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The result of a particular probe done by a remote host."
-- 1.3.6.1.2.1.80.1.4.1.3 -- ::= { pingProbeHistoryEntry 3 }

pingProbeHistoryLastRC OBJECT-TYPE
    SYNTAX      Integer32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The last implementation method specific reply code received.
        If the ICMP Echo capability is being used then a successful
        probe ends when an ICMP response is received that contains
        the code ICMP_ECHOREPLY(0). The ICMP responses are defined
        normally in the ip_icmp include file."
-- 1.3.6.1.2.1.80.1.4.1.4 -- ::= { pingProbeHistoryEntry 4 }

pingProbeHistoryTime OBJECT-TYPE
    SYNTAX      DateAndTime
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "Timestamp for when this probe result was determined."

```

```
-- 1.3.6.1.2.1.80.1.4.1.5 -- ::= { pingProbeHistoryEntry 5 }
-- Notification Definition section
```

**pingProbeFailed NOTIFICATION-TYPE**

```
OBJECTS {
    pingCtlTargetAddressType,
    pingCtlTargetAddress,
    pingResultsOperStatus,
    pingResultsIpTargetAddressType,
    pingResultsIpTargetAddress,
    pingResultsMinRtt,
    pingResultsMaxRtt,
    pingResultsAverageRtt,
    pingResultsProbeResponses,
    pingResultsSentProbes,
    pingResultsRttSumOfSquares,
    pingResultsLastGoodProbe
}
```

**STATUS** current

**DESCRIPTION**

*"Generated when a probe failure is detected when the corresponding pingCtlTrapGeneration object is set to probeFailure(0) subject to the value of pingCtlTrapProbeFailureFilter. The object pingCtlTrapProbeFailureFilter can be used to specify the number of successive probe failures that are required before this notification can be generated."*

```
-- 1.3.6.1.2.1.80.0.1 -- ::= { pingNotifications 1 }
```

**pingTestFailed NOTIFICATION-TYPE**

```
OBJECTS {
    pingCtlTargetAddressType,
    pingCtlTargetAddress,
    pingResultsOperStatus,
    pingResultsIpTargetAddressType,
    pingResultsIpTargetAddress,
    pingResultsMinRtt,
    pingResultsMaxRtt,
    pingResultsAverageRtt,
    pingResultsProbeResponses,
    pingResultsSentProbes,
    pingResultsRttSumOfSquares,
    pingResultsLastGoodProbe
}
```

**STATUS** current

**DESCRIPTION**

*"Generated when a ping test is determined to have failed when the corresponding pingCtlTrapGeneration object is set to testFailure(1). In this instance pingCtlTrapTestFailureFilter should specify the number of probes in a test required to have failed in order to consider the test as failed."*

```
-- 1.3.6.1.2.1.80.0.2 -- ::= { pingNotifications 2 }
```

**pingTestCompleted NOTIFICATION-TYPE**

```
OBJECTS {
    pingCtlTargetAddressType,
    pingCtlTargetAddress,
    pingResultsOperStatus,
    pingResultsIpTargetAddressType,
    pingResultsIpTargetAddress,
    pingResultsMinRtt,
    pingResultsMaxRtt,
    pingResultsAverageRtt,
    pingResultsProbeResponses,
    pingResultsSentProbes,
    pingResultsRttSumOfSquares,
    pingResultsLastGoodProbe
}
```

```

STATUS          current
DESCRIPTION
    "Generated at the completion of a ping test when the
    corresponding pingCtlTrapGeneration object is set to
    testCompletion(4)."
-- 1.3.6.1.2.1.80.0.3 -- ::= { pingNotifications 3 }
-- Conformance information
-- Compliance statements

pingCompliances OBJECT IDENTIFIER
-- 1.3.6.1.2.1.80.2.1 -- ::= { pingConformance 1 }

pingGroups OBJECT IDENTIFIER
-- 1.3.6.1.2.1.80.2.2 -- ::= { pingConformance 2 }
-- Compliance statements

pingCompliance MODULE-COMPLIANCE
STATUS          current
DESCRIPTION
    "The compliance statement for the DISMAN-PING-MIB."
MODULE
MANDATORY-GROUPS {
    pingGroup,
    pingNotificationsGroup
}
VARIATION       pingTimeStampGroup
DESCRIPTION
    "This group is mandatory for implementations that have
    access to a system clock and are capable of setting
    the values for DateAndTime objects. It is RECOMMENDED
    that when this group is not supported that the values
    for the objects in this group be reported as
    '0000000000000000'H."
OBJECT          pingMaxConcurrentRequests
MIN-ACCESS      read-only
DESCRIPTION
    "The agent is not required to support set
    operations to this object."
OBJECT          pingCtlStorageType
MIN-ACCESS      read-only
DESCRIPTION
    "Write access is not required. It is also allowed
    for implementations to support only the volatile
    StorageType enumeration."
OBJECT          pingCtlType
MIN-ACCESS      read-only
DESCRIPTION
    "Write access is not required. In addition, the only
    value that MUST be supported by an implementation is
    pingIcmpEcho."
OBJECT          pingCtlByPassRouteTable
MIN-ACCESS      read-only
DESCRIPTION
    "This object is not required by implementations that
    are not capable of its implementation. The function
    represented by this object is implementable if the
    setsockopt SOL_SOCKET SO_DONTROUTE option is
    supported."
OBJECT          pingCtlSourceAddressType
SYNTAX          InetAddressType {
    unknown(0),
    ipv4(1),
    ipv6(2) }
MIN-ACCESS      read-only
DESCRIPTION
    "This object is not required by implementations that
    are not capable of binding the send socket with a
    source address. An implementation is only required to
    support IPv4 and IPv6 addresses."

```

```

OBJECT      pingCtlSourceAddress
SYNTAX      InetAddress (SIZE (0 | 4 | 16))
MIN-ACCESS  read-only
DESCRIPTION
    "This object is not required by implementations that
    are not capable of binding the send socket with a
    source address. An implementation is only required to
    support IPv4 and globally unique IPv6 addresses."
OBJECT      pingCtlIfIndex
MIN-ACCESS  read-only
DESCRIPTION
    "Write access is not required.  When write access is
    not supported return a 0 as the value of this object.
    A value of 0 means that the function represented by
    this option is not supported."
OBJECT      pingCtlDSField
MIN-ACCESS  read-only
DESCRIPTION
    "Write access is not required.  When write access is
    not supported return a 0 as the value of this object.
    A value of 0 means that the function represented by
    this option is not supported."
OBJECT      pingResultsIpTargetAddressType
SYNTAX      InetAddressType {
                unknown(0),
                ipv4(1),
                ipv6(2) }
DESCRIPTION
    "An implementation is only required to
    support IPv4 and IPv6 addresses."
OBJECT      pingResultsIpTargetAddress
SYNTAX      InetAddress (SIZE (0 | 4 | 16))
DESCRIPTION
    "An implementation is only required to
    support IPv4 and globally unique IPv6 addresses."
-- 1.3.6.1.2.1.80.2.1.1 -- ::= { pingCompliances 1 }
-- MIB groupings

```

**pingGroup OBJECT-GROUP**

```

OBJECTS {
    pingMaxConcurrentRequests,
    pingCtlTargetAddressType,
    pingCtlTargetAddress,
    pingCtlDataSize,
    pingCtlTimeOut,
    pingCtlProbeCount,
    pingCtlAdminStatus,
    pingCtlDataFill,
    pingCtlFrequency,
    pingCtlMaxRows,
    pingCtlStorageType,
    pingCtlTrapGeneration,
    pingCtlTrapProbeFailureFilter,
    pingCtlTrapTestFailureFilter,
    pingCtlType,
    pingCtlDescr,
    pingCtlByPassRouteTable,
    pingCtlSourceAddressType,
    pingCtlSourceAddress,
    pingCtlIfIndex,
    pingCtlDSField,
    pingCtlRowStatus,
    pingResultsOperStatus,
    pingResultsIpTargetAddressType,
    pingResultsIpTargetAddress,
    pingResultsMinRtt,
    pingResultsMaxRtt,
    pingResultsAverageRtt,
    pingResultsProbeResponses,

```

```

        pingResultsSentProbes,
        pingResultsRttSumOfSquares,
        pingProbeHistoryResponse,
        pingProbeHistoryStatus,
        pingProbeHistoryLastRC
    }
    STATUS          current
    DESCRIPTION
        "The group of objects that comprise the remote ping
        capability."
-- 1.3.6.1.2.1.80.2.2.1 -- ::= { pingGroups 1 }

pingTimeStampGroup OBJECT-GROUP
    OBJECTS {
        pingResultsLastGoodProbe,
        pingProbeHistoryTime
    }
    STATUS          current
    DESCRIPTION
        "The group of DateAndTime objects."
-- 1.3.6.1.2.1.80.2.2.2 -- ::= { pingGroups 2 }

pingNotificationsGroup NOTIFICATION-GROUP
    NOTIFICATIONS {
        pingProbeFailed,
        pingTestFailed,
        pingTestCompleted
    }
    STATUS          current
    DESCRIPTION
        "The notification which are required to be supported by
        implementations of this MIB."
-- 1.3.6.1.2.1.80.2.2.3 -- ::= { pingGroups 3 }

```

END

```

--
-- Copyright (C) The Internet Society (2000). All Rights Reserved.
--
-- This document and translations of it may be copied and furnished to
-- others, and derivative works that comment on or otherwise explain it
-- or assist in its implementation may be prepared, copied, published
-- and distributed, in whole or in part, without restriction of any
-- kind, provided that the above copyright notice and this paragraph are
-- included on all such copies and derivative works. However, this
-- document itself may not be modified in any way, such as by removing
-- the copyright notice or references to the Internet Society or other
-- Internet organizations, except as needed for the purpose of
-- developing Internet standards in which case the procedures for
-- copyrights defined in the Internet Standards process must be
-- followed, or as required to translate it into languages other than
-- English.
--
-- The limited permissions granted above are perpetual and will not be
-- revoked by the Internet Society or its successors or assigns.
--
-- This document and the information contained herein is provided on an
-- "AS IS" basis and THE INTERNET SOCIETY AND THE INTERNET ENGINEERING
-- TASK FORCE DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING
-- BUT NOT LIMITED TO ANY WARRANTY THAT THE USE OF THE INFORMATION
-- HEREIN WILL NOT INFRINGE ANY RIGHTS OR ANY IMPLIED WARRANTIES OF
-- MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.
--

```