

DISMAN-SCHEDULE-MIB DEFINITIONS ::= BEGIN

IMPORTS

```
MODULE-IDENTITY,
OBJECT-TYPE,
NOTIFICATION-TYPE,
Integer32,
Unsigned32,
Counter32,
mib-2
    FROM SNMPv2-SMI
TEXTUAL-CONVENTION,
DateAndTime,
RowStatus,
StorageType,
VariablePointer
    FROM SNMPv2-TC
MODULE-COMPLIANCE,
OBJECT-GROUP,
NOTIFICATION-GROUP
    FROM SNMPv2-CONF
SnmpAdminString
    FROM SNMP-FRAMEWORK-MIB;
```

schedMIB MODULE-IDENTITY

```
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ORGANIZATION "IETF Distributed Management Working Group"
CONTACT-INFO
```

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```

DESCRIPTION

```
"This MIB module defines a MIB which provides mechanisms
to schedule SNMP set operations periodically or at
specific points in time."
```

```
-- 1.3.6.1.2.1.63 -- ::= { mib-2 63 }
```

--

-- The various groups defined within this MIB definition:

--

schedObjects OBJECT IDENTIFIER

```
-- 1.3.6.1.2.1.63.1 -- ::= { schedMIB 1 }
```

schedNotifications OBJECT IDENTIFIER

```
-- 1.3.6.1.2.1.63.2 -- ::= { schedMIB 2 }
```

schedConformance OBJECT IDENTIFIER

```
-- 1.3.6.1.2.1.63.3 -- ::= { schedMIB 3 }
```

--

-- Textual Conventions:

--

SnmpPduErrorStatus ::= TEXTUAL-CONVENTION

```
STATUS current
```

DESCRIPTION

```
"This TC enumerates the SNMPv1 and SNMPv2 PDU error status
codes as defined in RFC 1157 and RFC 1905. It also adds a
```

pseudo error status code 'noResponse' which indicates a timeout condition."

```
SYNTAX      INTEGER {
              noResponse(-1),
              noError(0),
              tooBig(1),
              noSuchName(2),
              badValue(3),
              readOnly(4),
              genErr(5),
              noAccess(6),
              wrongType(7),
              wrongLength(8),
              wrongEncoding(9),
              wrongValue(10),
              noCreation(11),
              inconsistentValue(12),
              resourceUnavailable(13),
              commitFailed(14),
              undoFailed(15),
              authorizationError(16),
              notWritable(17),
              inconsistentName(18) }
```

```
--
-- Some scalars which provide information about the local time
-- zone.
--
```

schedLocalTime OBJECT-TYPE

```
SYNTAX      DateAndTime (SIZE (11))
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
```

"The local time used by the scheduler. Schedules which refer to calendar time will use the local time indicated by this object. An implementation MUST return all 11 bytes of the DateAndTime textual-convention so that a manager may retrieve the offset from GMT time."

```
-- 1.3.6.1.2.1.63.1.1 -- ::= { schedObjects 1 }
```

```
--
-- The schedule table which controls the scheduler.
--
```

schedTable OBJECT-TYPE

```
SYNTAX      SEQUENCE OF SchedEntry
MAX-ACCESS  not-accessible
STATUS      current
DESCRIPTION
```

"This table defines scheduled actions triggered by SNMP set operations."

```
-- 1.3.6.1.2.1.63.1.2 -- ::= { schedObjects 2 }
```

schedEntry OBJECT-TYPE

```
SYNTAX      SchedEntry
MAX-ACCESS  not-accessible
STATUS      current
DESCRIPTION
```

"An entry describing a particular scheduled action."

```
INDEX {
  schedOwner,
  schedName
}
```

```
-- 1.3.6.1.2.1.63.1.2.1 -- ::= { schedTable 1 }
```

```
SchedEntry ::= SEQUENCE {
  schedOwner      SnmpAdminString,
  schedName       SnmpAdminString,
  schedDescr      SnmpAdminString,
  schedInterval   Unsigned32,
```

```

    schedWeekDay      BITS,
    schedMonth        BITS,
    schedDay          BITS,
    schedHour         BITS,
    schedMinute       BITS,
    schedContextName SnmpAdminString,
    schedVariable     VariablePointer,
    schedValue        Integer32,
    schedType         INTEGER,
    schedAdminStatus INTEGER,
    schedOperStatus  INTEGER,
    schedFailures    Counter32,
    schedLastFailure SnmpPduErrorStatus,
    schedLastFailed  DateAndTime,
    schedStorageType StorageType,
    schedRowStatus   RowStatus
}

```

schedOwner OBJECT-TYPE

```

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

```

"The owner of this scheduling entry. The exact semantics of this string are subject to the security policy defined by the security administrator."

```
-- 1.3.6.1.2.1.63.1.2.1.1 -- ::= { schedEntry 1 }
```

schedName OBJECT-TYPE

```

SYNTAX      SnmpAdminString (SIZE (1..32))
MAX-ACCESS  not-accessible
STATUS      current
DESCRIPTION

```

"The locally-unique, administratively assigned name for this scheduling entry. This object allows a schedOwner to have multiple entries in the schedTable."

```
-- 1.3.6.1.2.1.63.1.2.1.2 -- ::= { schedEntry 2 }
```

schedDescr OBJECT-TYPE

```

SYNTAX      SnmpAdminString
MAX-ACCESS  read-create
STATUS      current
DESCRIPTION

```

"The human readable description of the purpose of this scheduling entry."

```
DEFVAL      { 'H' }
```

```
-- 1.3.6.1.2.1.63.1.2.1.3 -- ::= { schedEntry 3 }
```

schedInterval OBJECT-TYPE

```

SYNTAX      Unsigned32
UNITS       "seconds"
MAX-ACCESS  read-create
STATUS      current
DESCRIPTION

```

"The number of seconds between two action invocations of a periodic scheduler. Implementations must guarantee that action invocations will not occur before at least schedInterval seconds have passed."

The scheduler must ignore all periodic schedules that have a schedInterval value of 0. A periodic schedule with a scheduling interval of 0 seconds will therefore never invoke an action.

Implementations may be forced to delay invocations in the face of local constraints. A scheduled management function should therefore not rely on the accuracy provided by the scheduler implementation."

```
DEFVAL { 0 }
-- 1.3.6.1.2.1.63.1.2.1.4 -- ::= { schedEntry 4 }
```

schedWeekDay OBJECT-TYPE

```
SYNTAX BITS {
    sunday(0),
    monday(1),
    tuesday(2),
    wednesday(3),
    thursday(4),
    friday(5),
    saturday(6) }
```

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The set of weekdays on which the scheduled action should take place. Setting multiple bits will include several weekdays in the set of possible weekdays for this schedule. Setting all bits will cause the scheduler to ignore the weekday."

```
DEFVAL { {} }
```

```
-- 1.3.6.1.2.1.63.1.2.1.5 -- ::= { schedEntry 5 }
```

schedMonth OBJECT-TYPE

```
SYNTAX BITS {
    january(0),
    february(1),
    march(2),
    april(3),
    may(4),
    june(5),
    july(6),
    august(7),
    september(8),
    october(9),
    november(10),
    december(11) }
```

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The set of months during which the scheduled action should take place. Setting multiple bits will include several months in the set of possible months for this schedule. Setting all bits will cause the scheduler to ignore the month."

```
DEFVAL { {} }
```

```
-- 1.3.6.1.2.1.63.1.2.1.6 -- ::= { schedEntry 6 }
```

schedDay OBJECT-TYPE

```
SYNTAX BITS {
    d1(0),
    d2(1),
    d3(2),
    d4(3),
    d5(4),
    d6(5),
    d7(6),
    d8(7),
    d9(8),
    d10(9),
    d11(10),
    d12(11),
    d13(12),
    d14(13),
    d15(14),
    d16(15),
    d17(16),
    d18(17),
    d19(18),
```

```

d20(19),
d21(20),
d22(21),
d23(22),
d24(23),
d25(24),
d26(25),
d27(26),
d28(27),
d29(28),
d30(29),
d31(30),
r1(31),
r2(32),
r3(33),
r4(34),
r5(35),
r6(36),
r7(37),
r8(38),
r9(39),
r10(40),
r11(41),
r12(42),
r13(43),
r14(44),
r15(45),
r16(46),
r17(47),
r18(48),
r19(49),
r20(50),
r21(51),
r22(52),
r23(53),
r24(54),
r25(55),
r26(56),
r27(57),
r28(58),
r29(59),
r30(60),
r31(61) }

```

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The set of days in a month on which a scheduled action should take place. There are two sets of bits one can use to define the day within a month:

Enumerations starting with the letter 'd' indicate a day in a month relative to the first day of a month. The first day of the month can therefore be specified by setting the bit d1(0) and d31(30) means the last day of a month with 31 days.

Enumerations starting with the letter 'r' indicate a day in a month in reverse order, relative to the last day of a month. The last day in the month can therefore be specified by setting the bit r1(31) and r31(61) means the first day of a month with 31 days.

Setting multiple bits will include several days in the set of possible days for this schedule. Setting all bits will cause the scheduler to ignore the day within a month. Setting all bits starting with the letter 'd' or the letter 'r' will also cause the scheduler to ignore the day within a month."

DEFVAL { {} }

```
-- 1.3.6.1.2.1.63.1.2.1.7 -- ::= { schedEntry 7 }
```

schedHour OBJECT-TYPE

```
SYNTAX BITS {  
    h0(0),  
    h1(1),  
    h2(2),  
    h3(3),  
    h4(4),  
    h5(5),  
    h6(6),  
    h7(7),  
    h8(8),  
    h9(9),  
    h10(10),  
    h11(11),  
    h12(12),  
    h13(13),  
    h14(14),  
    h15(15),  
    h16(16),  
    h17(17),  
    h18(18),  
    h19(19),  
    h20(20),  
    h21(21),  
    h22(22),  
    h23(23) }
```

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The set of hours within a day during which the scheduled action should take place."

DEFVAL { {} }

```
-- 1.3.6.1.2.1.63.1.2.1.8 -- ::= { schedEntry 8 }
```

schedMinute OBJECT-TYPE

```
SYNTAX BITS {  
    m0(0),  
    m1(1),  
    m2(2),  
    m3(3),  
    m4(4),  
    m5(5),  
    m6(6),  
    m7(7),  
    m8(8),  
    m9(9),  
    m10(10),  
    m11(11),  
    m12(12),  
    m13(13),  
    m14(14),  
    m15(15),  
    m16(16),  
    m17(17),  
    m18(18),  
    m19(19),  
    m20(20),  
    m21(21),  
    m22(22),  
    m23(23),  
    m24(24),  
    m25(25),  
    m26(26),  
    m27(27),  
    m28(28),  
    m29(29),  
    m30(30),
```

```

        m31(31),
        m32(32),
        m33(33),
        m34(34),
        m35(35),
        m36(36),
        m37(37),
        m38(38),
        m39(39),
        m40(40),
        m41(41),
        m42(42),
        m43(43),
        m44(44),
        m45(45),
        m46(46),
        m47(47),
        m48(48),
        m49(49),
        m50(50),
        m51(51),
        m52(52),
        m53(53),
        m54(54),
        m55(55),
        m56(56),
        m57(57),
        m58(58),
        m59(59) }
MAX-ACCESS read-create
STATUS current
DESCRIPTION
    "The set of minutes within an hour when the scheduled action
    should take place."
DEFVAL { {} }
-- 1.3.6.1.2.1.63.1.2.1.9 -- ::= { schedEntry 9 }

schedContextName OBJECT-TYPE
SYNTAX SnmpAdminString (SIZE (0..32))
MAX-ACCESS read-create
STATUS current
DESCRIPTION
    "The context which contains the local MIB variable pointed
    to by schedVariable."
-- 1.3.6.1.2.1.63.1.2.1.10 -- ::= { schedEntry 10 }

schedVariable OBJECT-TYPE
SYNTAX VariablePointer
MAX-ACCESS read-create
STATUS current
DESCRIPTION
    "An object identifier pointing to a local MIB variable
    which resolves to an ASN.1 primitive type of INTEGER."
-- 1.3.6.1.2.1.63.1.2.1.11 -- ::= { schedEntry 11 }

schedValue OBJECT-TYPE
SYNTAX Integer32
MAX-ACCESS read-create
STATUS current
DESCRIPTION
    "The value which is written to the MIB object pointed to by
    schedVariable when the scheduler invokes an action. The
    implementation shall enforce the use of access control
    rules when performing the set operation on schedVariable.
    This is accomplished by calling the isAccessAllowed abstract
    service interface as defined in RFC 2271."
-- 1.3.6.1.2.1.63.1.2.1.12 -- ::= { schedEntry 12 }

schedType OBJECT-TYPE

```

```
SYNTAX      INTEGER {
                periodic(1),
                calendar(2),
                oneshot(3) }
```

```
MAX-ACCESS  read-create
```

```
STATUS      current
```

DESCRIPTION

"The type of this schedule. The value periodic(1) indicates that this entry specifies a periodic schedule. A periodic schedule is defined by the value of schedInterval. The values of schedWeekDay, schedMonth, schedDay, schedHour and schedMinute are ignored.

The value calendar(2) indicates that this entry describes a calendar schedule. A calendar schedule is defined by the values of schedWeekDay, schedMonth, schedDay, schedHour and schedMinute. The value of schedInterval is ignored. A calendar schedule will trigger on all local times that satisfy the bits set in schedWeekDay, schedMonth, schedDay, schedHour and schedMinute.

The value oneshot(3) indicates that this entry describes a one-shot schedule. A one-shot schedule is similar to a calendar schedule with the additional feature that it disables itself by changing in the 'finished' schedOperStatus once the schedule triggers an action.

Changing a schedule's type is equivalent to deleting the old-type schedule and creating a new-type one."

```
DEFVAL      { periodic }
```

```
-- 1.3.6.1.2.1.63.1.2.1.13 -- ::= { schedEntry 13 }
```

schedAdminStatus OBJECT-TYPE

```
SYNTAX      INTEGER {
                enabled(1),
                disabled(2) }
```

```
MAX-ACCESS  read-create
```

```
STATUS      current
```

DESCRIPTION

"The desired state of the schedule."

```
DEFVAL      { disabled }
```

```
-- 1.3.6.1.2.1.63.1.2.1.14 -- ::= { schedEntry 14 }
```

schedOperStatus OBJECT-TYPE

```
SYNTAX      INTEGER {
                enabled(1),
                disabled(2),
                finished(3) }
```

```
MAX-ACCESS  read-only
```

```
STATUS      current
```

DESCRIPTION

"The current operational state of this schedule. The state enabled(1) indicates this entry is active and that the scheduler will invoke actions at appropriate times. The disabled(2) state indicates that this entry is currently inactive and ignored by the scheduler. The finished(3) state indicates that the schedule has ended. Schedules in the finished(3) state are ignored by the scheduler. A one-shot schedule enters the finished(3) state when it deactivates itself."

```
-- 1.3.6.1.2.1.63.1.2.1.15 -- ::= { schedEntry 15 }
```

schedFailures OBJECT-TYPE

```
SYNTAX      Counter32
```

```
MAX-ACCESS  read-only
```

```
STATUS      current
```

DESCRIPTION

"This variable counts the number of failures while invoking the scheduled action."


```

-- 1.3.6.1.2.1.63.1.2.1.16 -- ::= { schedEntry 16 }

schedLastFailure OBJECT-TYPE
    SYNTAX      SnmpPduErrorStatus
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The most recent error that occurred during the invocation of
        a scheduled action. The value noError(0) is returned
        if no errors have occurred yet."
    DEFVAL      { noError }
-- 1.3.6.1.2.1.63.1.2.1.17 -- ::= { schedEntry 17 }

schedLastFailed OBJECT-TYPE
    SYNTAX      DateAndTime
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The date and time when the most recent failure occurred. The
        value '0000000000000000'H is returned if no failure occurred
        since the last re-initialization of the scheduler."
    DEFVAL      { '0000000000000000'H }
-- 1.3.6.1.2.1.63.1.2.1.18 -- ::= { schedEntry 18 }

schedStorageType OBJECT-TYPE
    SYNTAX      StorageType
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
        "This object defines whether this scheduled action is kept
        in volatile storage and lost upon reboot or if this row is
        backed up by non-volatile or permanent storage.
        Conceptual rows having the value `permanent' must allow
        write access to the columnar objects schedDescr,
        schedInterval, schedContextName, schedVariable, schedValue,
        and schedAdminStatus. If an implementation supports the
        schedCalendarGroup, write access must be also allowed to
        the columnar objects schedWeekDay, schedMonth, schedDay,
        schedHour, schedMinute."
    DEFVAL      { volatile }
-- 1.3.6.1.2.1.63.1.2.1.19 -- ::= { schedEntry 19 }

schedRowStatus OBJECT-TYPE
    SYNTAX      RowStatus
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
        "The status of this scheduled action. A control that allows
        entries to be added and removed from this table.

        The minimum number of objects that need to be set during
        row creation before a row can be set to `active' are
        schedContextName, schedVariable and schedValue."
-- 1.3.6.1.2.1.63.1.2.1.20 -- ::= { schedEntry 20 }
--
-- Notifications that are emitted to indicate failures. The
-- definition of schedTraps makes notification registrations
-- reversible (see STD 58, RFC 2578).
--

schedTraps OBJECT IDENTIFIER
-- 1.3.6.1.2.1.63.2.0 -- ::= { schedNotifications 0 }

schedActionFailure NOTIFICATION-TYPE
    OBJECTS {
        schedLastFailure,
        schedLastFailed
    }
    STATUS      current

```

```

DESCRIPTION
    "This notification is generated whenever the invocation of a
    scheduled action fails."
-- 1.3.6.1.2.1.63.2.0.1 -- ::= { schedTraps 1 }
-- conformance information

schedCompliances OBJECT IDENTIFIER
-- 1.3.6.1.2.1.63.3.1 -- ::= { schedConformance 1 }

schedGroups OBJECT IDENTIFIER
-- 1.3.6.1.2.1.63.3.2 -- ::= { schedConformance 2 }
-- compliance statements

schedCompliance MODULE-COMPLIANCE
    STATUS          current
    DESCRIPTION
        "The compliance statement for SNMP entities which implement
        the scheduling MIB."
    MODULE
    MANDATORY-GROUPS {
        schedGroup,
        schedNotificationsGroup
    }
    VARIATION      schedCalendarGroup
    DESCRIPTION
        "The schedCalendarGroup is mandatory only for those
        implementations that support calendar based schedules."
    OBJECT         schedType
    DESCRIPTION
        "The values calendar(2) or oneshot(3) are not valid for
        implementations that do not implement the
        schedCalendarGroup. Such an implementation must return
        inconsistentValue error responses for attempts to set
        schedAdminStatus to calendar(2) or oneshot(3)."
-- 1.3.6.1.2.1.63.3.1.1 -- ::= { schedCompliances 1 }

schedGroup OBJECT-GROUP
    OBJECTS {
        schedDescr,
        schedInterval,
        schedContextName,
        schedVariable,
        schedValue,
        schedType,
        schedAdminStatus,
        schedOperStatus,
        schedFailures,
        schedLastFailure,
        schedLastFailed,
        schedStorageType,
        schedRowStatus
    }
    STATUS          current
    DESCRIPTION
        "A collection of objects providing scheduling capabilities."
-- 1.3.6.1.2.1.63.3.2.1 -- ::= { schedGroups 1 }

schedCalendarGroup OBJECT-GROUP
    OBJECTS {
        schedLocalTime,
        schedWeekDay,
        schedMonth,
        schedDay,
        schedHour,
        schedMinute
    }
    STATUS          current
    DESCRIPTION
        "A collection of objects providing calendar based schedules."

```

```
-- 1.3.6.1.2.1.63.3.2.2 -- ::= { schedGroups 2 }  
  
schedNotificationsGroup NOTIFICATION-GROUP  
  NOTIFICATIONS {  
    schedActionFailure  
  }  
  STATUS          current  
  DESCRIPTION  
    "The notifications emitted by the scheduler."  
-- 1.3.6.1.2.1.63.3.2.3 -- ::= { schedGroups 3 }
```

END