How to configure TIME.mib via Net-SNMP (DES-3028/52)

Show system current time

snmpwalk -v2C -c private 10.90.90.90 1.3.6.1.4.1.171.12.10.2.0

Format of swCurrentClock.

1st-2st octet: year

3st   octet: month

4st   octet: monthday

5st   octet: hour

6st   octet: minute

7st   octet: second

8st   octet: reserved

"07 D9 04 09 0C 08 2B 00" means " 2009 year, 4 month, 9 monthday , 12 hour , 8 min, 43 sec"

The command example in CLI mode

enable sntp

config time_zone operator + hour 3 min 0

config sntp primary 10.207.254.10 secondary 80.252.128.2 poll-interval 30

config dst repeating s_week last s_day sun s_mth 3 s_time 2:0 e_week last e_day sun e_mth 10 e_time 2:0 offset 60

Enable SNTP

snmpset -v2C -c private 10.90.90.90 1.3.6.1.4.1.171.12.10.11.1.0 i 3

Configure time zone

snmpset -v2C -c private 10.90.90.90 1.3.6.1.4.1.171.12.10.10.4.0 i 180

SNTP configuration example

SNTP Primary Server 10.207.254.10

snmpset -v2C -c private 10.90.90.90 1.3.6.1.4.1.171.12.10.11.3.0 a 10.207.254.10

SNTP Secondary Server 80.252.128.2

snmpset -v2C -c private 10.90.90.90 1.3.6.1.4.1.171.12.10.11.4.0 a 80.252.128.2

snmpset -v2C -c private 10.90.90.90 1.3.6.1.4.1.171.12.10.11.5.0 i 30

Configure DST

snmpset -v2C -c private 10.90.90.90 1.3.6.1.4.1.171.12.10.12.1.0 i 1 1.3.6.1.4.1.171.12.10.12.2.0 i 60 1.3.6.1.4.1.171.12.10.12.3.0 x 000001030200 1.3.6.1.4.1.171.12.10.12.4.0 x 0000010A0200

Format of swRepeatSummerTimeStart & swRepeatSummerTimeEnd

1st   octet: the start week number

2st-3st octet: day
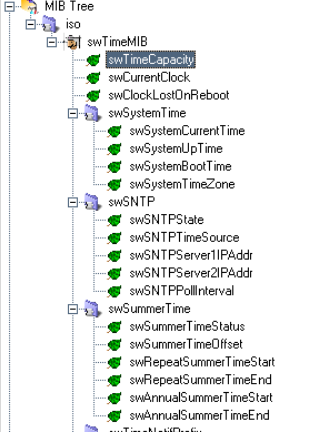
4st   octet: month

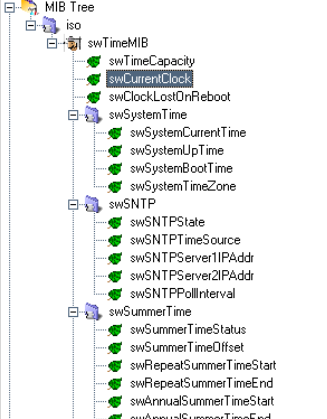5st   octet: hour

6st   octet: min

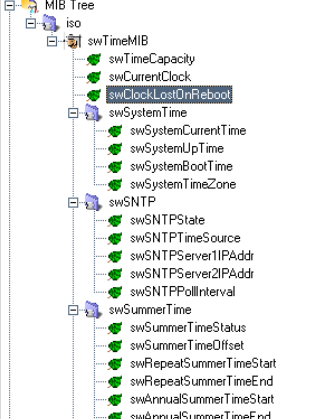"00 00 01 03 02 00" means " last week, Sunday , 3 month , 2 hour , 0 min"

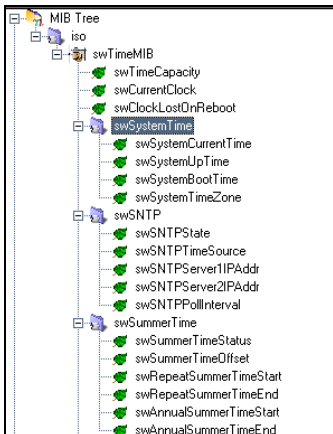"00 00 01 0A 02 00" means " last week, Sunday , 10 month , 2 hour , 0 min"
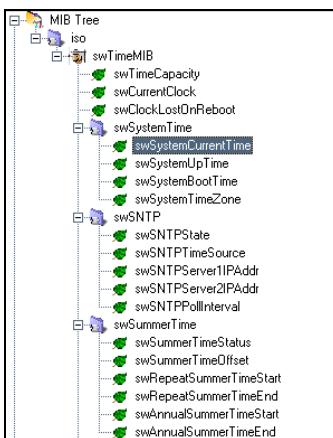
The OID relative to time.mib

swTimeCapacity

```
Object name        swTimeCapacity
Object ID          1.3.6.1.4.1.171.12.10.1
Module             TIME-MIB

Base syntax        Module Identity
Composed syntax    BITS
Access             Read-Only
Status             Current

Parent node        swTimeMIB
First child        None
Description         Indicates the time capacity supported in the system .
                   If sntp bit is 1 , indicate the SNTP is supported else if sntp bit is 0, the SNTP
                   is not supported and the subtree swSNTP will not supported also.
                   If summerTime bit is 1 ,indicate the SummerTime is supported else if sntp bit is 0,
                   the SummerTime is not supported and the subtree swSummerTime will not supported
                   also.
                   If realTimeClock bit is 1 , indicate the real time clock is supported else if the
                   bit is 0, the real time clock is not supported .
```
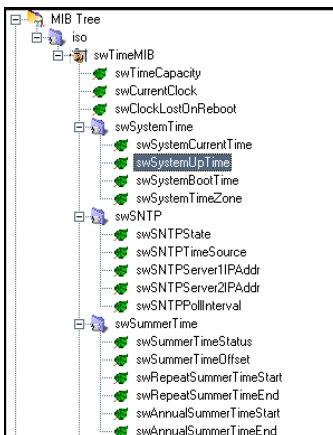
MIB Tree
- iso
  - swTimeMIB
    - **swTimeCapacity**
    - swCurrentClock
    - swClockLostOnReboot
    - swSystemTime
      - swSystemCurrentTime
      - swSystemUpTime
      - swSystemBootTime
      - swSystemTimeZone
    - swSNTP
      - swSNTPState
      - swSNTPTimeSource
      - swSNTPServer1IPAddr
      - swSNTPServer2IPAddr
      - swSNTPPollInterval
    - swSummerTime
      - swSummerTimeStatus
      - swSummerTimeOffset
      - swRepeatSummerTimeStart
      - swRepeatSummerTimeEnd
      - swAnnualSummerTimeStart
      - swAnnualSummerTimeEnd
    - swTimeNotifPrefix

swCurrentClock
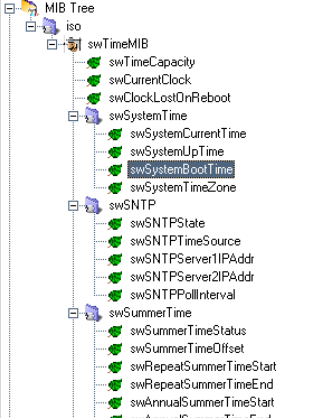
```
Object name        swCurrentClock
Object ID          1.3.6.1.4.1.171.12.10.2
Module             TIME-MIB

Base syntax        Octet String
Composed syntax    DateAndTime
Access             Read-Write
Status             Current
Value list         1 : 8..8
                   2 : 11..11

Parent node        swTimeMIB
First child        None
Description         The current local date and time for the system.
                   Setting this object is equivalent to setting an automated
                   clock and calendar.  The value of the object will track the
                   date and time from the value set.  Note that due to hardware
                   limitations some systems may not be able to preserve such
                   meaning across reboots of the system, as indicated by
                   swClockLostOnReboot.
                   A constant value of all zeros and length 8 indicates the
                   system is not aware of the present date and time.
                   This object may be read-only on some systems.
```

MIB Tree
- iso
  - swTimeMIB
    - swTimeCapacity
    - **swCurrentClock**
    - swClockLostOnReboot
    - swSystemTime
      - swSystemCurrentTime
      - swSystemUpTime
      - swSystemBootTime
      - swSystemTimeZone
    - swSNTP
      - swSNTPState
      - swSNTPTimeSource
      - swSNTPServer1IPAddr
      - swSNTPServer2IPAddr
      - swSNTPPollInterval
    - swSummerTime
      - swSummerTimeStatus
      - swSummerTimeOffset
      - swRepeatSummerTimeStart
      - swRepeatSummerTimeEnd
      - swAnnualSummerTimeStart
      - swAnnualSummerTimeEnd

swClockLostOnReboot

```
Object name        swClockLostOnReboot
Object ID          1.3.6.1.4.1.171.12.10.3
Module             TIME-MIB

Base syntax        Integer
Composed syntax    TruthValue
Access             Read-Only
Status             Current
Value list         1 : true(1)
                   2 : false(2)

Parent node        swTimeMIB
First child        None
Description         Indication of whether the system can preserve knowledge of
                   current date and time across a system reboot.
                   A value of 'true' indicates the clock must be reset from some
                   external source each time the system reboots.
                   A value of 'false' indicates the system has the ability to
                   keep time across reboots.
```

MIB Tree
- iso
  - swTimeMIB
    - swTimeCapacity
    - swCurrentClock
    - **swClockLostOnReboot**
    - swSystemTime
      - swSystemCurrentTime
      - swSystemUpTime
      - swSystemBootTime
      - swSystemTimeZone
    - swSNTP
      - swSNTPState
      - swSNTPTimeSource
      - swSNTPServer1IPAddr
      - swSNTPServer2IPAddr
      - swSNTPPollInterval
    - swSummerTime
      - swSummerTimeStatus
      - swSummerTimeOffset
      - swRepeatSummerTimeStart
      - swRepeatSummerTimeEnd
      - swAnnualSummerTimeStart
      - swAnnualSummerTimeEnd

```
Object name      swSystemTime
Object ID        1.3.6.1.4.1.171.12.10.10
Module           TIME-MIB

Base syntax      Object Identifier
Access           Not_Accessible
Status           Mandatory

Parent node      swTimeMIB
First child      swSystemCurrentTime
```
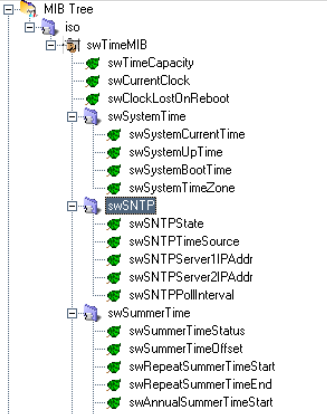


```
Object name      swSystemCurrentTime
Object ID        1.3.6.1.4.1.171.12.10.10.1
Module           TIME-MIB

Base syntax      Octet String
Composed syntax  DisplayString
Access           Read-Only
Status           Current
Value list       1 : 0..32

Parent node      swSystemTime
First child      None
Description       the mandatory network time was got from the SNTP server
```



```
Object name      swSystemUpTime
Object ID        1.3.6.1.4.1.171.12.10.10.2
Module           TIME-MIB

Base syntax      Octet String
Composed syntax  DisplayString
Access           Read-Only
Status           Current
Value list       1 : 0..32

Parent node      swSystemTime
First child      None
Description       The time (in second) since the network management portion
                 of the system was last re-initialized. It is the same as
                 sysUptime.
```

MIB Tree
iso
  swTimeMIB
    swTimeCapacity
    swCurrentClock
    swClockLostOnReboot
    swSystemTime
      swSystemCurrentTime
      swSystemUpTime
      swSystemBootTime
      swSystemTimeZone
    swSNTP
      swSNTPState
      swSNTPTimeSource
      swSNTPServer1IPAddr
      swSNTPServer2IPAddr
      swSNTPPollInterval
    swSummerTime
      swSummerTimeStatus
      swSummerTimeOffset
      swRepeatSummerTimeStart
      swRepeatSummerTimeEnd
      swAnnualSummerTimeStart
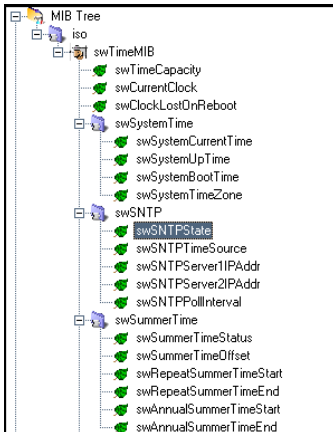   swAnnualSummerTimeEnd
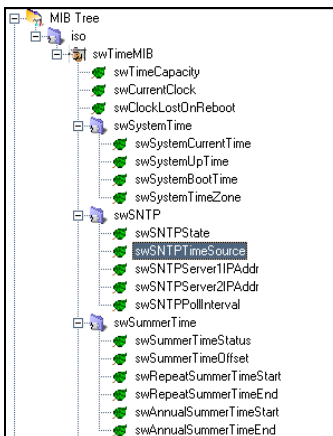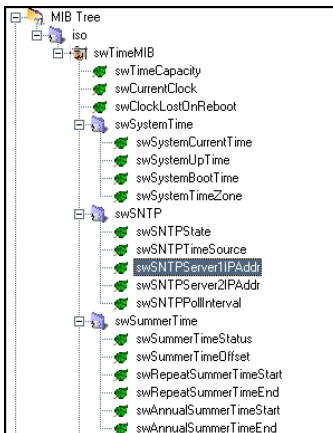
Object name   swSystemBootTime
Object ID   1.3.6.1.4.1.171.12.10.10.3
Module   TIME-MIB

Base syntax   Octet String
Composed syntax DisplayString
Access   Read-Only
Status   Current
Value list   1 : 0..32

Parent node   swSystemTime
First child   None
Description   The boot time of the switch is equal to subtract systemUpTime
                 from swSNTPCurrentTime

MIB Tree
iso
  swTimeMIB
    swTimeCapacity
    swCurrentClock
    swClockLostOnReboot
    swSystemTime
      swSystemCurrentTime
      swSystemUpTime
      swSystemBootTime
      swSystemTimeZone
    swSNTP
      swSNTPState
      swSNTPTimeSource
      swSNTPServer1IPAddr
      swSNTPServer2IPAddr
      swSNTPPollInterval
    swSummerTime
      swSummerTimeStatus
      swSummerTimeOffset
      swRepeatSummerTimeStart
      swRepeatSummerTimeEnd
      swAnnualSummerTimeStart
      swAnnualSummerTimeEnd

Object name   swSystemTimeZone
Object ID   1.3.6.1.4.1.171.12.10.10.4
Module   TIME-MIB

Base syntax   Integer
Composed syntax INTEGER
Access   Read-Write
Status   Current
Value list   1 : -779..839

Parent node   swSystemTime
First child   None
Description   Local time offset in minutes from GMT.

MIB Tree
iso
  swTimeMIB
    swTimeCapacity
    swCurrentClock
    swClockLostOnReboot
    swSystemTime
      swSystemCurrentTime
      swSystemUpTime
      swSystemBootTime
      swSystemTimeZone
    swSNTP
      swSNTPState
      swSNTPTimeSource
      swSNTPServer1IPAddr
      swSNTPServer2IPAddr
      swSNTPPollInterval
    swSummerTime
      swSummerTimeStatus
      swSummerTimeOffset
      swRepeatSummerTimeStart
      swRepeatSummerTimeEnd
      swAnnualSummerTimeStart
      swAnnualSummerTimeEnd

Object name   swSNTP
Object ID   1.3.6.1.4.1.171.12.10.11
Module   TIME-MIB

Base syntax   Object Identifier
Access   Not_Accessible
Status   Mandatory

Parent node   swTimeMIB
First child   swSNTPState

```
Object name        swSNTPState
Object ID          1.3.6.1.4.1.171.12.10.11.1
Module             TIME-MIB

Base syntax        Integer
Composed syntax    INTEGER
Access             Read-Write
Status             Current
Value list         1 : other(1)
                   2 : disabled(2)
                   3 : enabled(3)

Parent node        swSNTP
First child        None
Description        This object enable/disable the SNTP function.
```



```
Object name        swSNTPTimeSource
Object ID          1.3.6.1.4.1.171.12.10.11.2
Module             TIME-MIB

Base syntax        Integer
Composed syntax    INTEGER
Access             Read-Only
Status             Current
Value list         1 : system(0)
                   2 : server1(1)
                   3 : server2(2)

Parent node        swSNTP
First child        None
Description        the SNTP server status for time source changing
```



```
Object name        swSNTPServer1IPAddr
Object ID          1.3.6.1.4.1.171.12.10.11.3
Module             TIME-MIB

Base syntax        IP Address
Composed syntax    IpAddress
Access             Read-Write
Status             Current

Parent node        swSNTP
First child        None
Description        Configure the SNTP server #1 IP address
```

```
MIB Tree                              Object name      swSNTPServer2IPAddr
  iso                                 Object ID        1.3.6.1.4.1.171.12.10.11.4
    swTimeMIB                         Module           TIME-MIB
      swTimeCapacity
      swCurrentClock                  Base syntax      IP Address
      swClockLostOnReboot             Composed syntax  IpAddress
      swSystemTime                    Access           Read-Write
        swSystemCurrentTime           Status           Current
        swSystemUpTime
        swSystemBootTime              Parent node      swSNTP
        swSystemTimeZone              First child      None
      swSNTP                          Description      Configure the SNTP server #2 IP address
        swSNTPState
        swSNTPTimeSource
        swSNTPServer1IPAddr
        swSNTPServer2IPAddr
        swSNTPPollInterval
      swSummerTime
        swSummerTimeStatus
        swSummerTimeOffset
        swRepeatSummerTimeStart
        swRepeatSummerTimeEnd
        swAnnualSummerTimeStart
        swAnnualSummerTimeEnd
```



```
MIB Tree                              Object name      swSNTPPollInterval
  iso                                 Object ID        1.3.6.1.4.1.171.12.10.11.5
    swTimeMIB                         Module           TIME-MIB
      swTimeCapacity
      swCurrentClock                  Base syntax      Integer
      swClockLostOnReboot             Composed syntax  INTEGER
      swSystemTime                    Access           Read-Write
        swSystemCurrentTime           Status           Current
        swSystemUpTime                Value list       1 : 30..99999
        swSystemBootTime
        swSystemTimeZone              Parent node      swSNTP
      swSNTP                          First child      None
        swSNTPState                   Description      Update time in seconds from SNTP server.
        swSNTPTimeSource
        swSNTPServer1IPAddr
        swSNTPServer2IPAddr
        swSNTPPollInterval
      swSummerTime
        swSummerTimeStatus
        swSummerTimeOffset
        swRepeatSummerTimeStart
        swRepeatSummerTimeEnd
        swAnnualSummerTimeStart
        swAnnualSummerTimeEnd
```



```
MIB Tree                              Object name      swSummerTime
  iso                                 Object ID        1.3.6.1.4.1.171.12.10.12
    swTimeMIB                         Module           TIME-MIB
      swTimeCapacity
      swCurrentClock                  Base syntax      Object Identifier
      swClockLostOnReboot             Access           Not_Accessible
      swSystemTime                    Status           Mandatory
        swSystemCurrentTime
        swSystemUpTime                Parent node      swTimeMIB
        swSystemBootTime              First child      swSummerTimeStatus
        swSystemTimeZone
      swSNTP
        swSNTPState
        swSNTPTimeSource
        swSNTPServer1IPAddr
        swSNTPServer2IPAddr
        swSNTPPollInterval
      swSummerTime
        swSummerTimeStatus
        swSummerTimeOffset
        swRepeatSummerTimeStart
        swRepeatSummerTimeEnd
        swAnnualSummerTimeStart
        swAnnualSummerTimeEnd
```

Screenshot 1:

```
MIB Tree
 iso
  swTimeMIB
   swTimeCapacity
   swCurrentClock
   swClockLostOnReboot
   swSystemTime
    swSystemCurrentTime
    swSystemUpTime
    swSystemBootTime
    swSystemTimeZone
   swSNTP
    swSNTPState
    swSNTPTimeSource
    swSNTPServer1IPAddr
    swSNTPServer2IPAddr
    swSNTPPollInterval
   swSummerTime
    swSummerTimeStatus
    swSummerTimeOffset
    swRepeatSummerTimeStart
    swRepeatSummerTimeEnd
    swAnnualSummerTimeStart
    swAnnualSummerTimeEnd
```

```
Object name      swSummerTimeStatus
Object ID        1.3.6.1.4.1.171.12.10.12.1
Module           TIME-MIB

Base syntax      Integer
Composed syntax  INTEGER
Access           Read-Write
Status           Current
Value list       1 : disable(0)
                 2 : repeating(1)
                 3 : annual(2)

Parent node      swSummerTime
First child      None
Description       An indication of whether the summertime feature
                 is disabled or enabled in reprating or annual mode on this device.
                 When this object is set to repeating,then the summertime frature
                 is enabled and swSummerTimeOffset,swSummerTimeRepeatingStart
                 ,swSummerTimeRepeatingEnd objects are work effectively .
                 When this object is set to annual, then the summertime frature
                 is enabled and swSummerTimeOffset, swAnnualSummerTimeStart,
                 swAnnualSummerTimeEnd objects are work effectively.
```

Screenshot 2:

```
MIB Tree
 iso
  swTimeMIB
   swTimeCapacity
   swCurrentClock
   swClockLostOnReboot
   swSystemTime
    swSystemCurrentTime
    swSystemUpTime
    swSystemBootTime
    swSystemTimeZone
   swSNTP
    swSNTPState
    swSNTPTimeSource
    swSNTPServer1IPAddr
    swSNTPServer2IPAddr
    swSNTPPollInterval
   swSummerTime
    swSummerTimeStatus
    swSummerTimeOffset
    swRepeatSummerTimeStart
    swRepeatSummerTimeEnd
    swAnnualSummerTimeStart
    swAnnualSummerTimeEnd
```

```
Object name      swSummerTimeOffset
Object ID        1.3.6.1.4.1.171.12.10.12.2
Module           TIME-MIB

Base syntax      Integer
Composed syntax  INTEGER
Access           Read-Write
Status           Current
Value list       1 : 0..1440

Parent node      swSummerTime
First child      None
Description       The value of this object indicates number of minutes to add
                 or to subtract during summertime. This object is not instantiated
                 when swSummerTimeStatus object is set to disable.
```

Screenshot 3:

```
MIB Tree
 iso
  swTimeMIB
   swTimeCapacity
   swCurrentClock
   swClockLostOnReboot
   swSystemTime
    swSystemCurrentTime
    swSystemUpTime
    swSystemBootTime
    swSystemTimeZone
   swSNTP
    swSNTPState
    swSNTPTimeSource
    swSNTPServer1IPAddr
    swSNTPServer2IPAddr
    swSNTPPollInterval
   swSummerTime
    swSummerTimeStatus
    swSummerTimeOffset
    swRepeatSummerTimeStart
    swRepeatSummerTimeEnd
    swAnnualSummerTimeStart
    swAnnualSummerTimeEnd
   swTimeNotifPrefix
 SNMPv1 Traps
  No Traps
```

```
Object name      swRepeatSummerTimeStart
Object ID        1.3.6.1.4.1.171.12.10.12.3
Module           TIME-MIB

Base syntax      Octet String
Composed syntax  OCTET STRING
Access           Read-Write
Status           Current
Value list       1 : 6..6

Parent node      swSummerTime
First child      None
Description       Indicates summertime starts at this time every year.
                 octets     contents       range
                 1          week           1..5,ff last = ff
                 2-3        day            1..7
                 where sunday = 1 saturday = 7
                 4          month          1..12
                 where january = 1 december = 12
                 5          hour           0..23
                 6          min            0..59

                 For example, the first Monday in Feb at 13:30pm
                 should be given as 01 00 02 02 0e 1e
                 For the last Tuesday in dec at 1:20am should be
                 given as ff 00 03 0c 01 14
                 This object is not instantiated when
                 swSummerTimeStatus object is not set to repeating.
```

swRepeatSummerTimeEnd

```
Object name       swRepeatSummerTimeEnd
Object ID         1.3.6.1.4.1.171.12.10.12.4
Module            TIME-MIB

Base syntax       Octet String
Composed syntax   OCTET STRING
Access            Read-Write
Status            Current
Value list        1 : 6..6

Parent node       swSummerTime
First child       None
Description        Indicates summertime ends at this time every year.
                  octets    contents      range
                  1         week          1..5,ff where ff = last
                  2-3       day           1..7
                  where sunday = 1 saturday = 7
                  4         month         1..12
                  where january = 1 december = 12
                  5         hour          0..23
                  6         min           0..59

                  For example, the third friday in February at 3:30am
                  should be given as 03 00 06 02 03 1e
                  For the first Tuesday in May at 1:20am  should
                  be given as 01 00 03 05 01 14
                  This object is not instantiated when
                  swSummerTimeStatus object is not set to repeating.
```

swAnnualSummerTimeStart

```
Object name       swAnnualSummerTimeStart
Object ID         1.3.6.1.4.1.171.12.10.12.5
Module            TIME-MIB

Base syntax       Octet String
Composed syntax   OCTET STRING
Access            Read-Write
Status            Current
Value list        1 : 4..4

Parent node       swSummerTime
First child       None
Description        Indicates summertime starts at this time every year.
                  octets    contents      range
                  1         monthDay      1..31,
                  2         month         1..12
                  where january = 1 december = 12
                  3         hour          0..23
                  4         min           0..59

                  For example, the first Feb at 13:30pm
                  should be given as 01 02 0e 1e
                  For the tenth dec at 1:20am should be
                  given as ff 00 03 0c 01 14
                  This object is not instantiated when
                  swSummerTimeStatus object is not set to annual.
```

swAnnualSummerTimeEnd

```
Object name       swAnnualSummerTimeEnd
Object ID         1.3.6.1.4.1.171.12.10.12.6
Module            TIME-MIB

Base syntax       Octet String
Composed syntax   OCTET STRING
Access            Read-Write
Status            Current
Value list        1 : 4..4

Parent node       swSummerTime
First child       None
Description        Indicates summertime ends at this time every year.
                  octets    contents      range
                  1         monthDay      1..31,
                  2         month         1..12
                  where january = 1 december = 12
                  3         hour          0..23
                  4         min           0..59

                  For example, the third February at 3:30am
                  should be given as 03 02 03 1e
                  For the first May at 1:20am  should
                  be given as 01 05 01 14
                  This object is not instantiated when
                  swSummerTimeStatus object is not set to annual.
```