

Date and Time System Variables

This chapter covers the following topics:

- Usage
 - *DAT* - Date System Variables
 - *TIM* - Time System Variables
 - Example of Date and Time System Variables
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Usage

The date and time system variables listed below may be specified in the following places:

- statements:
 - COMPUTE
 - DISPLAY
 - MOVE
 - PRINT
 - WRITE
- logical condition criteria

The contents of date and time system variables as generated by Natural are *non-modifiable*, which means that in a Natural program you cannot assign another value to any of them.

DAT - Date System Variables

All date system variables contain the current date. The format of the date is different for each date variable, as indicated below.

Date Variable	Format/Length	Date Format *
*DATD	A8	DD.MM.YY
*DAT4D	A10	DD.MM.YYYY
*DATE	A8	DD/MM/YY
*DAT4E	A10	DD/MM/YYYY
*DATG	A15	DD <i>monthname</i> YYYY (Gregorian date)
*DATI	A8	YY-MM-DD
*DAT4I	A10	YYYY-MM-DD
*DATJ	A5	YYDDD (Julian date)
*DAT4J	A7	YYYYDDD (Julian date)
*DATN	N8	YYYYMMDD
*DATU	A8	MM/DD/YY
*DAT4U	A10	MM/DD/YYYY
*DATV	A11	DD-MON-YYYY
*DATVS	A9	DDMONYYYY
*DATX	D	internal date format

* D = day, M = month, Y = year, MON = leading three bytes of the month's name as in *DATG

TIM - Time System Variables

At runtime, the content of a time system variable is evaluated anew each time the variable is referenced in a Natural program. The format of the time is different for each time variable, as indicated below.

Time Variable	Format/Length	Explanation
TIMD (<i>r</i>)	N7	Can only be used in conjunction with a previous SETTIME statement. Contains the time that has elapsed after the SETTIME statement was executed (in format HHISST ()). (<i>r</i>) represents the statement label or source-code line number of the SETTIME statement used as the basis for *TIMD.
TIME	A10	Contains the time of day in format HH:II:SS.T ().
*TIME-OUT	N5	Contains the number of seconds remaining before the current transaction will be timed out (only available with Natural Security). *TIME-OUT is 0 if transaction mode has not been entered. Transaction mode is entered with the execution of a FIND, READ or GET statement that reads a database record for the purpose of updating or deleting the record. *TIME-OUT is reset to 0 when an END TRANSACTION or BACKOUT TRANSACTION statement is executed.
*TIMESTMP	B8	Machine-internal store clock value.
TIMN	N7	Contains the time of day in format HHISST ().
*TIMX	T	Contains the time of day in internal time format.

* H = hour, I = minute, S = second, T = tenth of a second.

Example of Date and Time System Variables

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** Example 'DATIVAR': Date and time system variables
*****
DEFINE DATA LOCAL
1 #DATE (D)
1 #TIME (T)
END-DEFINE
*
WRITE NOTITLE
' DATE IN FORMAT DD.MM.YYYY ' *DAT4D /
' DATE IN FORMAT DD/MM/YYYY ' *DAT4E /
' DATE IN FORMAT DD-MON-YYYY ' *DATV /
' DATE IN FORMAT DDMONYYYY ' *DATVS /
' DATE IN GREGORIAN FORM ' *DATG /
' DATE IN FORMAT YYYY-MM-DD ' *DAT4I /
' DATE IN FORMAT YYYYDDD ' *DAT4J /
' DATE IN FORMAT YYYYMMDD ' *DATN (AD=L) /
' DATE IN FORMAT MM/DD/YYYY ' *DAT4U /
' DATE IN INTERNAL FORMAT ' *DATX (DF=L) ///
' TIME IN FORMAT HH:II:SS.T ' *TIME /
' TIME IN FORMAT HHISST ' *TIMN (AD=L) /
' TIME IN INTERNAL FORMAT ' *TIMX /
*
MOVE *DATX TO #DATE
    
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ADD 14 TO #DATE
WRITE 'CURRENT DATE'           *DATX (DF=L) 3X
      'CURRENT DATE + 14 DAYS'  ' #DATE (DF=L)
*
MOVE *TIMX TO #TIME
ADD 100 TO #TIME
WRITE 'CURRENT TIME'          *TIMX 5X
      'CURRENT TIME + 10 SECONDS' #TIME
*
END

```

Output of program DATIVAR:

```

DATE IN FORMAT DD.MM.YYYY      11.01.2005
DATE IN FORMAT DD/MM/YYYY      11/01/2005
DATE IN FORMAT DD-MON-YYYY     11-Jan-2005
DATE IN FORMAT DDMONYYYY      11Jan2005
DATE IN GREGORIAN FORM         11January 2005
DATE IN FORMAT YYYY-MM-DD      2005-01-11
DATE IN FORMAT YYYYDDD         2005011
DATE IN FORMAT YYYYMMDD        20050111
DATE IN FORMAT MM/DD/YYYY      01/11/2005
DATE IN INTERNAL FORMAT        2005-01-11

TIME IN FORMAT HH:II:SS.T      14:42:05.4
TIME IN FORMAT HHIISST         1442054
TIME IN INTERNAL FORMAT        14:42:05

CURRENT DATE 2005-01-11      CURRENT DATE + 14 DAYS      2005-01-25
CURRENT TIME 14:42:05        CURRENT TIME + 10 SECONDS  14:42:15

```