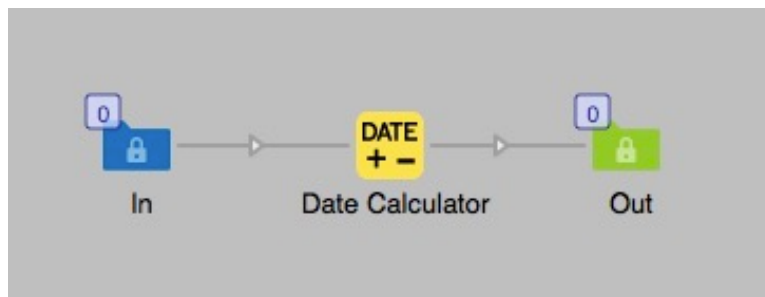# Date Calculator v7

Description
This app will give you the possibility to do simple calculations on dates and hours, you can add or subtract a number of days from a given date.
The resulting date will be stored in the job as Private Data.
New in version 5, Now you can set the calculated date to be on a next weekday.
New in version 6, Now you can get the Unix timestamp to be used in calculations.
New in version 7, Added property to get week number in locale format.

Compatibility
Switch 2020 fall and higher. Windows or Mac OSX.

Connections
This app can have several input or output connections. No settings are available of the outgoing connection.

Properties detailed info
You can calculate days or hours with the selection in dropdown menu. If you want to go back in time you write a negative value (-2).

Property	Value
Element type	Date Calculator
Name	Date Calculator
Description	
Calculate days or hours	Days
Date to change (yyyy-MM-dd)	Automatic
Type of calculation	Number of days
Number of days	1
Only Monday to Friday	No
Private data key for Date	newDate
Private data key for Year	newYear
Private data key for Month	newMonth
Private data key for Date number	newDateNumber
Private data key for Week Day number	newWeekDayNumber
Private data key for Date to change	dateToChange
Private data key for week number	newWeekNumber
Private data key for week number (local)	newLocalWeekNumber
Private data key for date number	newDateTimeNumber

Flow element properties
   Calculate days
- Date to change (yyyy-MM-dd)
  - **Automatic** will use the current date on the system, this is default
  - **Inline value** here you can set a specific date.
    Enter a specific date or use Switch variables to pick up the information in the job. The format of the date has to be yyyy-MM-dd (2017-01-01) if it is in any other format the calculation will fail.
- Type of calculation, drop down with two choices.
  - **Number of days,** Enter the number of days that needs to be added or subtracted to the date. This value can use Switch variables. A negative value will give you a date earlier than entered in "Date to change".
  - **Next weekday,** Select the next weekday will calculate the date of the next upcoming day you select in the dropdown menu. It will only work for one week ahead. If today is Tuesday next day will be from Wednesday to next Tuesday.
- Only Monday to Friday
  - This setting will skip weekend days and continue on the Monday. If your calculated day end up on a Saturday or Sunday the result will be the Monday. Default is "No".

Resulting date value
The calculated date will be stored as a private data Switch variable in the job. The job can have several private data entries and they are labeled with a key, in this case the key is "newDate"

If you want to build your own date format you can access the year, month and date of the calculated date from private data with the following keys:
[Job.PrivateData:Key="newDate"] give you the date (yyyy-MM-dd)
[Job.PrivateData:Key="newYear"] give you the year (yyyy)
[Job.PrivateData:Key="newMonth"] give you the months number (1-12)
[Job.PrivateData:Key="newDateNumber"] give you the day number (1-31)
[Job.PrivateData:Key="newWeekDayNumber"] give you the week day number (1-7), week starts with Monday.
[Job.PrivateData:Key="dateToChange"] give you the date you calculate from.
[Job.PrivateData:Key="newWeekNumber"] give you the ISO week number for the calculated date.
[Job.PrivateData:Key="newLocalWeekNumber"] give you the week number in locale for the calculated date.
[Job.PrivateData:Key="newDateTimeNumber"] give the Unix Timestamp in seconds. This can be useful to compare to dates for a job. You then use the Switch Calculations to get a day number that you compare to a value.

Human-readable time	Seconds
1 hour	3600 seconds
1 day	86400 seconds
1 week	604800 seconds

Property	Value
Element type	Date Calculator
Name	Date Calculator
Description	
Calculate days or hours	Hours
Number of hours	1
Private data key for new hour	newHour
Private data key for new time	newTime
Private data key for new time and date	newHourDate

Calculating hours
- Number of hours
    - Enter the number of hours that needs to be added or subtracted to the date/time value. This calculation starts from current time on system. This value can use Switch variables. A negative value will give you a time earlier than current time.
- Private data keys
    - Private data key for new hour
      The calculated hour from current time
    - Private data key for new time
      The calculated time HH.MM.SS from current time
    - Private data key for new time and date
      The calculated time and date yyyy-MM-ddTHH:MM:SS from current date and time

Version 2
Added option to name the Private Data keys.
Version 3
Added Private data key for week day number.
Version 4
Added calculation of hours and private data keys for that.
Also private date key for ISO week number of the calculated date.
The app is now written in Node.js and uses the package "Moment" for the date calculations.
Version 5
Added function to select the next weekday for the calculated new date.
Corrected bug that gave the wrong day number format in *Private data key for Week Day number* it is now in the correct ISO-format 1-7.
Version 6
Added a private data tag for the Unix Timestamp in seconds.
Version 7
Added a private data tag for the week number in locale format.