WORKDAYINTL Function

Contents:

Calculates the work date that is before or after a start date, as specified by a number of days. You can also specify which days of the week are working days and a list of holidays via parameters.

- Input can be a column reference or the output of the DATE or TIME function.
  - See *DATE Function*.
  - See *TIME Function*.
- The first value is used as the baseline.
- The second value is the number of days before or after the start date.
  - If the second value is negative, the function returns the number of days before the start date.

Wrangle vs. SQL: This function is part of Wrangle , a proprietary data transformation language. Wrangle is not SQL. For more information, see *Wrangle Language*.

Basic Usage

```
workdayintl(StartDate, 5,'0000001')
```

Output: Returns the working date that is five days after the `StartDate`, assuming that every day except for Sunday is a working day.

Syntax and Arguments

```
workdayintl(date1,numDays[,str_workingdays][,array_holiday])
```

Argument	Required?	Data Type	Description
date1	Y	datetime	Starting date to compare
numDays	Y	integer	Number of days before or after starting date
str_workingdays	N	string	Seven-character string identifying the weekend days.
array_holiday	N	array	An array of string values representing the valid dates of holidays.

For more information on syntax standards, see *Language Documentation Syntax Notes*.

date1

Date value can be a column reference or output of the `DATE` function or the `TIME` function.

- For more information, see *DATE Function*.
- For more information, see *TIME Function*.

Usage Notes:

Required?	Data Type	Example Value
Yes	Datetime (Column reference or date output of DATE or TIME function)	`LastContactDate`

numDays

An Integer that defines the number of working days distance from the start date. The function returns the start date plus or minus the number of working days represented in this Integer.

If the integer is less than zero, the number of working days are counted backward from the start date.

Usage Notes:

Required?	Data Type	Example Value
Yes	integer	10

str_workingdays

A seven-character string identifying the days of the week that are working days.

- String value must be seven characters long and contain only `0` or `1` characters. All other values are ignored.
- First character in the string represents Monday and last character in the string represents Sunday.
- If the string is not specified, then a Monday - Friday workweek is used.

Examples:

str_workingdays	Weekend days
`'0000011'`	Saturday and Sunday (default)
`'1000011'`	Monday, Saturday, and Sunday
`'0000000'`	None.

Usage Notes:

Required?	Data Type	Example Value
Yes	Array	['1000011']

array_holiday

An array containing the list of holidays, which are factored in the calculation of working days.

Values in the array must be in either of the following formats:

```
['2020-12-24','2020-12-25']
['2020/12/24','2020/12/25']
```

Usage Notes:

Required?	Data Type	Example Value
Yes	Array	['2018-12-24','2018-12-25','2018-12-31','2019-01-01']

Examples

> **Tip:** For additional examples, see *Common Tasks*.

Example - Date diffing functions

This example shows you the functions that can be used to calculate the number of days between two input dates:

- `DATEDIF` - Calculates difference between two input dates for a specified unit of measure. In this example, the unit of measure is day. See *DATEDIF Function*.
- `NETWORKDAYS` - Calculates number of working days between two input dates, assuming a Monday - Friday workweek. See *NETWORKDAYS Function*.
- `NETWORKDAYSINTL` - Calculates number of working days between two input dates with optional specified workweek. see *NETWORKDAYSINTL Function*.
- `WORKDAY` - Calculates the date of a working day that is a specified number of working days before or after a specified date. See *WORKDAY Function*.
- `WORKDAYINTL` - Calculates the date of a working day that is a specified number of working days before or after a specified date, factoring in an optional set of workday schedule for the week. See *WORKDAYINTL Function*.

Source:

The following dataset contains two columns of dates.

- The first column values are constant. This date falls on a Monday.

Date1	Date2
2020-03-09	2020-03-13
2020-03-09	2020-03-06
2020-03-09	2020-03-16
2020-03-09	2020-03-23
2020-03-09	2020-04-10
2020-03-09	2021-03-10

Transformation:

The first transformation calculates the number of raw days between the two dates:

Transformation Name	`New formula`

Parameter: Formula type	`Single row formula`
Parameter: Formula	`datedif(Date1, Date2, day)`
Parameter: New column name	`'datedif'`

This step computes the number of working days between the two dates. Assumptions:

- Workweek is Monday - Friday.
- There are no holidays.

Transformation Name	`New formula`
Parameter: Formula type	`Single row formula`
Parameter: Formula	`networkdays(Date1, Date2, [])`
Parameter: New column name	`'networkDays'`

For some, March 17 is an important date, especially if you are Irish. To add St. Patrick's Day to the list of holidays, you could add the following transformation:

Transformation Name	`New formula`
Parameter: Formula type	`Single row formula`
Parameter: Formula	`networkdays(Date1, Date2, ['2020-03-17'])`
Parameter: New column name	`'networkDaysStPatricks'`

In the following transformation, the NETWORKDAYSINTL function is applied so that you can specify the working days in the week:

Transformation Name	`New formula`
Parameter: Formula type	`Single row formula`
Parameter: Formula	`networkdaysintl(Date1, Date2, '1000011', [])`
Parameter: New column name	`'networkDaysIntl'`

The following two functions enable you to calculate a specific working date based on an input date and integer number of days before or after it. In the following, the date that is five working days before the `Date2` column is computed:

Transformation Name	`New formula`
Parameter: Formula type	`Single row formula`
Parameter: Formula	`workday(Date2, -5)`
Parameter: New column name	`'workday'`

Suppose you wish to factor in a four-day workweek, in which Friday through Sunday is considered the weekend:

Transformation Name	`New formula`
Parameter: Formula type	`Single row formula`
Parameter: Formula	`workdayintl(Date2, -5,'0000111')`
Parameter: New column name	`'workdayintl'`

Results:

Date1	Date2	workdayintl	workday	networkDaysIntl	networkDaysStPatricks	networkDays	datedif
2020-03-09	2020-03-13	2020-03-05	2020-03-06	4	5	5	4
2020-03-09	2020-03-06	2020-02-27	2020-02-28	*null*	*null*	*null*	-3
2020-03-09	2020-03-16	2020-03-15	2020-03-09	4	6	6	7
2020-03-09	2020-03-23	2020-03-12	2020-03-16	8	10	11	14
2020-03-09	2020-04-10	2020-04-02	2020-04-03	20	24	25	32
2020-03-09	2021-03-10	2021-03-02	2021-03-03	210	262	263	366