

# Dates and times

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All date-time values are **numeric** values representing the number of **milliseconds** elapsed since **January 1, 1970, 00:00:00 GMT**.

JWT for Jira Cloud offers various ways of displaying or calculating with date-time values.

## General information

Time values can be manipulated and might depend on certain factors. See the lists below.

## Time Constants

While the number of milliseconds might be useful in some cases, usually you want to retrieve values that are more readable.

Constants are **aliases for fixed values**. They are often used to convert milliseconds to a more accessible value.

Constant	Equivalent value
SECOND	1000
MINUTE	1000 * 60
HOUR	1000 * 60 * 60
DAY	1000 * 60 * 60 * 24
WEEK	1000 * 60 * 60 * 24 * 7
MONTH	1000 * 60 * 60 * 24 * 30
YEAR	1000 * 60 * 60 * 24 * 365

The following constants return the **day** of the **week**:

Constant	Equivalent value
SUNDAY	1
MONDAY	2
TUESDAY	3
WEDNESDAY	4
THURSDAY	5
FRIDAY	6
SATURDAY	7

Use these constants for instance with the following functions:

[dayOfTheWeek\(\)](#)

[dayOfTheMonth\(\)](#)

The following constants return the **month**:

Constant	Equivalent value
<b>JANUARY</b>	1
<b>FEBRUARY</b>	2
<b>MARCH</b>	3
<b>APRIL</b>	4
<b>MAY</b>	5
<b>JUNE</b>	6
<b>JULY</b>	7
<b>AUGUST</b>	8
<b>SEPTEMBER</b>	9
<b>OCTOBER</b>	10
<b>NOVEMBER</b>	11
<b>DECEMBER</b>	12

Use these constants for instance with the following functions:

[dayOfTheMonth\(\)](#)

## Date and Time Literals

Explicit time and date values can also be used as constants. Time literals have the form HH:MM, e.g. **09:15** or **23:30**. Date literals are available in the form YYYY-MM-DD or YYYY/MM/DD (optionally extended by a time literal like **2020-03-22 14:45**). Those values are internally interpreted as numbers representing the denoted date/time value in milliseconds.

## Time zones

Fields of type **date** and **date-time** contain a **numeric value** with the **milliseconds elapsed since January 1, 1970, 00:00:00 GMT**.

The **number** that will be returned by any function using a **date** or **date-time timestamp** depends on a time zone.

The following time zone constant is currently available in JWT for Jira Cloud:

Time zone constant	Output
<b>RUN_AS_LOCAL</b>	Returns the time zone of the selected <b>Run as</b> user.

In addition to the time zone constant above, you can specify a timezone directly as text.  
Valid timezones are the ones listed in column "TZ Database Name" in [List of tz database time zones](#), e.g. "Pacific/Auckland"

## Languages

When dealing with **times** and **time zones** sometimes you need to convert them to text. The text returned depends on the selected language.

Currently JWT for Jira Cloud offers the following language constant:

Language constant	Output
<b>RUN_AS_LANG</b>	Returns the language of the selected <b>Run as</b> user.

In addition to the language constant above, you can specify a language directly as text.

The most common [ISO 639-1 Code](#) locales like the two-letter version "en", or the four-letter version "en-gb" etc. are supported. The string is not case sensitive, so "EN" is valid as well. You don't have to use the hyphen(-), an underscore will work as well, i.e. "en-gb" is equivalent to "en\_GB". If the language is not available (e.g. "english"), an error is returned.



## Available functions

Function	Short description	Output
<a href="#">addDays()</a>	<b>Adds</b> or <b>subtracts days</b> to or from <b>any given date</b> .	NUMBER
<a href="#">datePart()</a>	Returns the <b>date part</b> of any given date.	NUMBER
<a href="#">dateTimeToString()</a>	Returns the timestamp of <b>any given date</b> in <b>text form</b> .	TEXT
<a href="#">dateToString()</a>	Converts <b>any given date</b> to a <b>text</b> .	TEXT
<a href="#">dayOfTheMonth()</a>	Returns the <b>day of the month</b> of <b>any given timestamp</b> .	NUMBER
<a href="#">dayOfTheWeek()</a>	Returns the <b>day of the week</b> of any given timestamp.	NUMBER
<a href="#">hour()</a>	Returns the <b>hour</b> part of any given <b>timestamp</b> .	NUMBER
<a href="#">minute()</a>	Returns the <b>minutes</b> part of a given timestamp.	NUMBER
<a href="#">month()</a>	Returns the <b>month</b> part of a given timestamp.	NUMBER
<a href="#">second()</a>	Returns the <b>second</b> part of a given <b>timestamp</b> .	NUMBER
<a href="#">stringToDate()</a>	Converts a <b>text</b> into a <b>date</b> .	NUMBER
<a href="#">timePart()</a>	Returns the <b>time part</b> of any given date.	NUMBER
<a href="#">year()</a>	Returns the <b>year</b> part of a timestamp.	NUMBER

If you still have questions, feel free to refer to our [support](#) team.