

Validation and condition based on time expressions

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Features used to implement the examples

- [Boolean validator with math, date-time or text-string terms](#)
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Example 1: Due Date should be at least 5 workdays posterior to Creation Date and Time

We want to ensure that "**Due date**" is at least 5 workdays later than issue date and time of creation. To do it we use validator [Boolean validator with math, date-time or text-string terms](#) with the following configuration:

Boolean expression to be evaluated:

[Line 1 / Col 55]

Syntax Specification and Examples?

1 {00012} >= addDaysSkippingWeekends({00009}, 5, LOCAL)

Logical connectives: **and**, **or** and **not**. Alternatively you can also use **&**, **|** and **!**.

Comparison operators: **=**, **!=**, **>**, **>=**, **<** and **<=**. Operators **~**, **!~**, **in**, **not in**, **any in** and **none in** can be used with **strings**, **multi-valued fields** and **lists**.

Logical literals: **true** and **false**. Literal **null** is used with **=** and **!=** to check whether a field is initialized, e.g. **{00012} != null** checks whether **Due Date** is initialized.

Check Syntax

NUMERICAL AND DATE-TIME TERMS

Numeric and Date-Time field values: insert field codes with format {nnnnn}.

Original estimate (minutes) - [Number] - {00068}

Insert Numeric Value

Valid date-time literal formats: **yyyy/MM/dd [hh:mm]** or **yyyy-MM-dd [hh:mm]**. Time literals use format: **hh:mm**. There is a set of **mathematical functions** and **time macros and functions** available to be used in your expression.

TEXT-STRING TERMS

Text-String field values: insert field codes with format %{nnnnn} or %{nnnnn.i} for referencing levels in cascading select fields (*i* = 0 for base level).

Summary - [Text] - %{00000}

Insert String Value

String literals: written in **double quotes**, e.g., "This is a string literal."

String concatenation: use operator '+' to concatenate string values, e.g., "The summary of issue with key " + %{00015} + " is \" + %{00000} + "\"."

Escape character: character '\ ' is used with characters '"', '\', 'n', 'r', 't', 'f' and 'b' to invoke an alternative interpretation. There is a set of **string functions** available to be used in your expression.

Skip validation when:

Inhibit the validator under selected circumstances.

☐ Transition is triggered by a **bulk operation**.

☐ Transition is triggered by a **JIRA Workflow Toolbox post-function**.

☐ Current issue is being created by cloning. Only makes sense in *Create Issue* transition.

Message to show when validation fails:

Due date must be at least 5 work days posterior to issue creation.

Field code injector:

Summary - [Text] - %{00000}

Field codes with format %{nnnnn} can be inserted in the failure message and its translations, and they will be replaced with actual field values at runtime.

Hide translations for installed languages

Language

Validation Failure Message Translations

alemán (Alemania)

coreano (Corea del Sur)

español (España)

La fecha de entrega debe ser al menos 5 días laborables posterior a la creación de la incidencia.

francés (Francia)

inglés (Estados Unidos)

inglés (UK)

japonés (Japón)

portugués (Brasil)

ruso (Rusia)

Boolean expression used is: {00012} >= addDaysSkippingWeekends({00009}, 5, LOCAL)

Note that:

- **{00012}** is code for numeric value of "**Due date**"
- **{00009}** is code for numeric value of "**Date and time of creation**"
- **LOCAL** represents server's timezone. Timezone is needed to determine weekend time periods. Use **USER_LOCAL** for using current user's timezone

Once configured, the transition "**Create Issue**" will look like this:

Create

▶ **TO DO**

This is the **initial** transition in the workflow.

Screen: None - initial transition does not have a view.

Validators **2**

Post Functions **3**

The transition requires the following criteria to be valid

Add validator

Only users with **Create Issues** permission can execute this transition.

Only if the following boolean expression is true: **{Due date} >= addDaysSkippingWeekends ({Date and time of creation}, 5, LOCAL)**

Message to show when validation fails: "**Due date must be at least 5 work days posterior to issue creation.**", providing translations for the following languages: **español (España)**.

Example 2: Define a time frame where transition execution is allowed

We want to allow the execution of a transition only **Mondays to Thursdays: from 9:00 to 14:00 and from 17:00 to 20:30**.

We can use **Boolean condition and validator with math, date-time or text-string terms** condition or validator depending on whether we want to **hide the transition**, or **show a custom error message** to the user when transition execution was not done in a valid time frame. In this example we are going to use the validator:

Boolean expression to be evaluated:
[Line 3 / Col 149]
Syntax Specification and Examples
?

```

1 dayOfTheWeek({00057}, LOCAL) >= {MONDAY} AND
2 dayOfTheWeek({00057}, LOCAL) <= {THURSDAY} AND
3 (timePart({00057}, LOCAL) >= 9:00 AND timePart({00057}, LOCAL) <= 14:00 OR timePart({00057}, LOCAL) >= 17:00 AND
timePart({00057}, LOCAL) <= 20:00)

```

Logical connectives: **and**, **or** and **not**. Alternatively you can also use **&**, **|** and **!**.

Comparison operators: **=**, **!=**, **>**, **>=**, **<** and **<=**. Operators **~**, **!~**, **in**, **not in**, **any in** and **none in** can be used with **strings**, **multi-valued fields** and **lists**.

Logical literals: **true** and **false**. Literal **null** is used with **=** and **!=** to check whether a field is initialized, e.g. **{00012} != null** checks whether **Due Date** is initialized.

CHECK SYNTAX

NUMERICAL AND DATE-TIME TERMS

Numeric and Date-Time field values: insert field codes with format **{nnnnn}**.

Original estimate (minutes) - [Number] - {00068}
Insert Numeric Value

Valid date-time literal formats: **yyyy/MM/dd [hh:mm]** or **yyyy-MM-dd [hh:mm]**. Time literals use format: **hh:mm**. There is a set of **mathematical functions** and **time macros and functions** available to be used in your expression.

TEXT-STRING TERMS

Text-String field values: insert field codes with format **%{nnnnn}** or **%{nnnnn.i}** for referencing levels in cascading select fields (*i* = 0 for base level).

Summary - [Text] - %{00000}
Insert String Value

String literals: written in **double quotes**, e.g., "This is a string literal."

String concatenation: use operator **+** to concatenate string values, e.g., "The summary of issue with key " + %{00015} + " is \" + %{00000} + "\"."

Escape character: character **** is used with characters **"**, ****, **n**, **r**, **t**, **f** and **b** to invoke an alternative interpretation. There is a set of **string functions** available to be used in your expression.

Skip validation when:

Inhibit the validator under selected circumstances.

☐ Transition is triggered by a bulk operation.
☐ Transition is triggered by a JIRA Workflow Toolbox post-function.
☐ Current issue is being created by cloning. Only makes sense in *Create Issue* transition.

Message to show when validation fails:

This transition can only be executed Mondays to Thursdays from 9:00 to 14:00 or from 17:00 to 20:00.

Field code injector:

Summary - [Text] - %{00000}

Field codes with format **%{nnnnn}** can be inserted in the failure message and its translations, and they will be replaced with actual field values at runtime.

[Set translations for installed languages](#)

Boolean expression used is: `dayOfTheWeek({00057}, LOCAL) >= {MONDAY} AND dayOfTheWeek({00057}, LOCAL) <= {THURSDAY} AND (timePart({00057}, LOCAL) >= 9:00 AND timePart({00057}, LOCAL) <= 14:00 OR timePart({00057}, LOCAL) >= 17:00 AND timePart({00057}, LOCAL) <= 20:00)`

Note that:

- {00057}** is code for numeric value of "Current date and time"
- LOCAL** represents server's timezone. Use **USER_LOCAL** for using current user's timezone

Once configured, the transition will look like this:

The transition requires the following criteria to be valid

[Add validator](#)

Only if the following boolean expression is true: `dayOfTheWeek({Current date and time}, LOCAL) >= {MONDAY} AND dayOfTheWeek({Current date and time}, LOCAL) <= {THURSDAY} AND (timePart({Current date and time}, LOCAL) >= 9:00 AND timePart({Current date and time}, LOCAL) <= 14:00 OR timePart({Current date and time}, LOCAL) >= 17:00 AND timePart({Current date and time}, LOCAL) <= 20:00)`

Message to show when validation fails: **"This transition can only be executed Mondays to Thursdays from 9:00 to 14:00 or from 17:00 to 20:00."**

Calculation Using Custom Schedules

Since version [2.2.39](#) time calculations on custom defined schedules can be carried out using [Schedules Definition Grammar](#).

For example, you can define your work-schedule as Mondays to Fridays from 8:00 to 15:00, and from 16:00 to 20:00. Then you can calculate time differences, or add time durations to a base instant within that particular custom schedule.

Much more complex schedules than the one described in the example above are possible. You can define common and personal holidays, you can define different work-times for summer and winter seasons, change your work-times from a certain date on, keeping the older work-time definitions for previous instants. Almost any requirement you might think of is possible.

Other examples of that function

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