# FileDate constraints

## Summary

FileDate constraints check the last-modified property of the target resource. Checks are comparisons with literal strings (greater than, equal to, etc.) or attempts to match the timestamp against string patterns or regular expressions.

## Element

<fileDate>

## Examples

<fileDate le="2020-07-08" leMsg="File from 2020-07-08 or later"  
 gt="2020-04-01" gtMsg="File from before 2020-04-01"/>

<fileDate ne="2020-04-11T00:11:17.142Z" neMsg="This file version must not be used"/>

<fileDate like="2020\*" likeMsg="File not from 2020"/>

<fileDate like="2020-05-29\*" likeMsg="File not from May 29 2020"/>

<fileDate like="\*T23\*" likeMsg="File not updated between 23:00 and 00:00"/>

<fileDate notLike="2020-05\*" notLikeMsg="File from May 2020"/>

<fileDate matches="T04|T05" matchesMsg="File not updated between 04:00 and 06:00"/>

<fileDate notMatches="T(21|22|23)" notMatchesMsg="File not updated between 21:00 and 00:00"/>

## Example schemas

See:

$greenfox/example-schemas/constraint-components/FileDate

## Constraint nodes

The constraints are specified by attributes on <fileDate>, summarized in the following table.

**Table 1.** Constraint nodes supported by FileDate constraints. All nodes are attributes on the <fileDate> element.

|  |  |  |  |
| --- | --- | --- | --- |
| **Check node** | **Expectation** | **Example** | **Notes** |
| @eq, @ne,  @lt, @le,  @gt, @ge | Last-modified date eq/ne/lt/le/gt/ge the attribute value | eq="2020-08-11T09:39:47.552Z"  lt="2020-08-11T10:00"  gt="2020-08-11"  lt="2020-09" | Compares as strings, thus leading substrings like “2020-09” can be used |
| @like | Last-modified date matches the text pattern | like="2020-08-11T10\*" | Wildcards are \* and ? |
| @notLike | Last-modified date does not match the text pattern | notLike="2020-08-11\*" | Wildcards are \* and ? |
| @matches | Last-modified date matches the regex | matches="T(23|00)" | The regex is not anchored – it may describe a substring |
| @notMatches | Last-modified date does not match the regex | notMatches="T(05|06)" | The regex is not anchored – it may describe a substring |

## Option nodes

There is a single option node, represented in the following table.

**Table 2**: The only option node supported by FileDate constraints. The node is an attribute on the <fileDate> element.

|  |  |  |  |
| --- | --- | --- | --- |
| **Check node** | **Semantics** | **Example** | **Notes** |
| @flags | The attribute value supplies flags used when evaluating regular expressions or string patterns. | @flags="i"  @flags="x" | Flag semantics as described in the XPath functions spec ([XP flags](https://www.w3.org/TR/xpath-functions-31/#flags)); “x” can be useful when ignorable whitespace makes the regex more readible |

## Message nodes

For each constraint node (see table 1), two message nodes are supported – an error message and a message commenting a pass, as summarized in the following table.

**Table 3**: Message nodes of FileDate constraints. The nodes are attributes on the <FileDate> element.

|  |  |  |
| --- | --- | --- |
| **Message node** | **Semantics** | **Example** |
| constraint-node-name + „Msg“ | Error message, displayed in a red result describing constraint violation | gtMsg="File stale" |
| constraint-node-name + „MsgOK“ | Success message, displayed in a green result describing conformance | gtMsgOK="File fresh" |