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# Spring Cron syntax

Cron is a software utility that specifies commands to run on a given schedule. This schedule is defined by a Cron pattern, which has a specific syntax.

**Warning** If you create an invalid Cron pattern, Collibra Data Intelligence Platform stops responding.

**Note** By default, Collibra Console uses Spring Cron expressions to schedule back-ups, while you use [Quartz Cron expressions](#), for example, to schedule your mail, LDAP synchronizations, Purge cycles, Tableau and S3 synchronizations or to create a statistics cron map.

The Cron pattern consists of 6 space-separated fields:

<second> <minute> <hour> <day of month> <month> <day of week>

Position	Field	Allowed values	Allowed special characters	Examples
1	second	0 <div><b>Note</b> Collibra transforms this pattern into a Unix Cron pattern. Because Unix Cron expressions don't include seconds, set this value to 0.</div>	N/A	N/A
2	minute	0-59	, - * /	<ul style="list-style-type: none"><li>30: at the 30th minute.</li><li>*/15: every 15 minutes.</li><li>5/10: every 10 minutes starting at the 5th minute after the hour</li></ul>
3	hour	0-23	, - * /	<ul style="list-style-type: none"><li>10: at 10 o'clock.</li><li>8-10: at 8,9 and 10 AM.</li><li>6,18: at 6 AM and at 6 PM.</li></ul>
4	day of the month	1-31	, - * ? / L W	<ul style="list-style-type: none"><li>3: on the 3rd day of the month.</li><li>1-4: every first four days of the month.</li><li>1,15: the first day of the month and the 15th day of the month.</li></ul>
5	month	1-12 or JAN-DEC	, - * /	<ul style="list-style-type: none"><li>12: in December.</li><li>1-3: every first three months of the year.</li><li>JUL,AUG: every July and August.</li></ul> <div><b>Tip</b> The names of the months are not case-sensitive.</div>
6	day of the week	0-7 or MON-SUN where 0 and 7 is Sunday.	, - * ? / L #	<ul style="list-style-type: none"><li>TUE: every Tuesday.</li><li>1-5: every weekday, Monday to Friday.</li><li>MON,WED,FRI: every Monday, Wednesday and Friday.</li></ul>

Position	Field	Allowed values	Allowed special characters	Examples
				<ul style="list-style-type: none"><li><code>L</code>: only in combination with a digit or short day notation indicating the last day of the month. For example, <code>7L</code> or <code>SUNL</code> indicates the last Sunday of the month, <code>3L</code> or <code>WEDL</code> indicates the last Wednesday of the month.</li><li><code>5#3</code>: on the 3rd Friday of the month.</li></ul> <div><b>Tip</b> The names of the days are not case-sensitive.</div>

For more information, see the [Spring Cron documentation](#).

## Special characters

Character	Description
<code>*</code>	Used to select all values within a field. <div><b>Example</b> <code>*</code> in the minute field corresponds with every minute.</div>
<code>?</code>	Used to specify something in one of the two fields in which the character is allowed, but not the other, mainly used for days of the week. <div><b>Example</b> If you want your trigger to fire on a particular day of the month, for example the 10th, but don't care what day of the week that happens to be, you could put "10" in the day-of-month field, and "?" in the day of the week field.</div>
<code>-</code>	Used to specify ranges. <div><b>Example</b> <code>10-12</code> in the hour field means "the hours 10, 11 and 12".</div>
<code>,</code>	Used to specify additional values. <div><b>Example</b> <code>MON,WED,FRI</code> in the day-of-week field means "the days Monday, Wednesday, and Friday".</div>
<code>/</code>	Used to specify increments. <div><b>Example</b> <code>0/15</code> in the minutes field means "the minutes 0, 15, 30, and 45". And <code>5/15</code> in the minutes field means "the minutes 5, 20, 35, and 50". You can also leave out the number before <code>/</code>, which is equivalent to having 0 before <code>/</code>. <code>1/3</code> in the day-of-month field means "every 3 days starting on the first day of the month".</div>
<code>L</code>	The value <code>L</code> in the <b>day-of-month field</b> means "the last day of the month" - day 31 for January, day 28 for February on non-leap years. You can also specify an offset from the last day of the month, such as "L-3" which would mean the third-to-last day of the calendar month.  You cannot use <code>L</code> in the <b>day-of-week field</b> by itself, you always have to prefix it by a digit (0-7) or the short day notation (MON-SUN). This combination means "the last xxx day of the month" - for example "6L" or "SATL" means "the last Saturday of the month".
<code>W</code>	Used to specify the weekday (Monday-Friday) nearest the given day. <div><b>Example</b> <code>15W</code> in the value for the day-of-month field, means the nearest weekday to the 15th of the month:<ul style="list-style-type: none"><li>If the 15th is a Saturday, the trigger will fire on Friday the 14th.</li><li>If the 15th is a Sunday, the trigger will fire on Monday the 16th.</li><li>If the 15th is a Tuesday, then it will fire on Tuesday the 15th.</li></ul></div>

Character	Description
	<p>However if you specify <code>1W</code> as the value for day-of-month, and the 1st is a Saturday, the trigger will fire on Monday the 3rd, as it will not 'jump' over the boundary of a month's days. The 'W' character can only be specified when the value in the day-of-month field specifies a single day, not a range or list of days.</p> <div><p><b>Tip</b> The 'L' and 'W' characters can also be combined in the day-of-month field to yield 'LW', which translates to "last weekday of the month".</p></div>
#	<p>Used to specify "the nth" XXX day of the month.</p> <div><p><b>Example</b> <code>6#3</code> in the day-of-week field means "the third Saturday of the month" (day 6 = Saturday and "#3" = the third one in the month).</p><p>Other examples: <code>2#1</code> is the first Tuesday of the month and <code>4#5</code> is the fifth Thursday of the month. Note that if you specify <code>#5</code> and there is not 5 of the given day-of-week in the month, then no firing will occur that month.</p></div>

Example

- `0 0 * * * *` = the top of every hour of every day.
- `0 0 8-10 * * *` = 8, 9 and 10 o'clock of every day.
- `0 0 6,19 * * *` = 6:00 AM and 7:00 PM every day.
- `0 0/30 8-10 * * *` = 8:00, 8:30, 9:00, 9:30, 10:00 and 10:30 every day.
- `0 0 9-17 * * MON-FRI` = on the hour nine-to-five weekdays.
- `0 0 0 25 12 ?` = every Christmas Day at midnight, no matter what weekday it is.