

ADAMS

Advanced **D**ata mining **A**nd **M**achine learning **S**ystem

Module: adams-cron



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Chapter 1

Cron jobs

Cron jobs are a very convenient way of performing background jobs that are only executed once in a while at specific times. For instance, a “clean up” job could run once every night, or a “backup” job every Friday night.

The *Cron* standalone can be used to *trigger* and execute these jobs. You can either place the actors that the job consists of below the *Cron* itself¹ or place them under a *Flow* control actor inside the *Events* standalone and call this event then using the *TriggerEvent* control actor.²

Since the cron jobs get executed at fixed times, we need to have a flow that is running forever, unless stopped by the user (or the cron job itself). This can be implemented using the *WhileLoop* control actor with an enclosed *Sleep actor*. To simplify this setup, there is already a sub-flow template available that generates such a flow: *EndlessLoop*.

The format for the cron job execution is not very intuitive when you look at it for the first time. In order to make it easier, you can use the editor that ADAMS offers (see Figure 1.1). This editor allows you to check the current input as well as opening a web page with a detailed description of the format (see [2]).

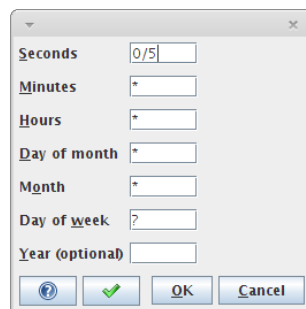
A screenshot of a cron job editor dialog box. The dialog has a title bar with a close button. Inside, there are several input fields with labels: 'Seconds' (with '0/5' entered), 'Minutes' (with '*' entered), 'Hours' (with '*' entered), 'Day of month' (with '*' entered), 'Month' (with '*' entered), 'Day of week' (with '?' entered), and 'Year (optional)' (empty). At the bottom, there are four buttons: a help button (question mark icon), a confirmation button (green checkmark icon), an 'OK' button, and a 'Cancel' button.

Figure 1.1: The editor for entering the execution time of a cron job.

¹adams-cron_displaying_directory_contents1.flow

²adams-cro_displaying_directory_contents2.flow

Bibliography

- [1] *ADAMS* – Advanced Data mining and Machine learning System
<https://adams.cms.waikato.ac.nz/>
- [2] *Cron format* – detailed explanation of format
<http://www.quartz-scheduler.org/docs/tutorials/crontrigger.html>