

## Configuring

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# Setting estimated durations for steps in a workflow

You can set the estimated durations for each step in a workflow and use these values to track the progress of jobs through the workflow. Using the estimated durations, the system provides a predicted completion time. The system also provides a predicted path of the job.

Before you do this procedure:

- Decide which steps need estimated durations. We recommend that you set estimated durations for all the steps in a workflow through the last step that you want to track. You can set an estimated duration of 1 second for a step like **DetectInputDataStream**, which takes almost no time to complete. You should always specify estimated durations for steps like **RunExternalProgram** and **PrintJobs**, which can take a long time to process. In general, steps that process PDF documents, like **ReversePDFPageOrder** and **PreparePDFOutputForFinishing**, can take a long time. You should also set estimated durations for manual steps.

 **Note:**

- If you are tracking to a schedule and a deadline, we recommend that you give the step that you select as the **Deadline step** an estimated duration. The estimated duration helps RICOH ProcessDirector track the **Predicted outcome** for the jobs in the workflow.

- Make sure you account for the total time required by a step. For example, you have a 100-page per minute printer. You can estimate the duration of the **PrintJobs** step for that printer in pages per minute. When you account for paper and toner changes, the actual print speed in your environment might be 50 pages per minute. Set the estimated duration to the actual print speed: 50 pages per minute.
- To determine how long a step takes to process, you can look at the start and stop times for the step in the job log. Filter on state changes to see each job's processing time.
- The last time-sensitive step in your workflow should be the last step with an estimated duration. If the last time-sensitive step is **PrintJobs**, make that the last step with an estimated duration. Do not set an estimated duration for a step like **RetainCompletedJobs**.

To set estimated durations for the steps in a workflow:

- Click the **Workflow** tab.
- Click the name of the workflow you want to modify.
- Optional:** Disable the workflow by clicking the switch to the left of the workflow name.  
If you do not disable the workflow while you edit it, jobs that use this workflow continue to move through steps. When you save, the workflow is momentarily disabled then enabled again. Jobs that are processing in the workflow could move into error.
- Right-click in the workflow editor and select **Estimated durations**.
- Select one or more steps that you want to set an estimated duration for. Do these steps:
  - For the **Volume** and **Volume unit** properties, specify the number of jobs or pages that are used to calculate the estimated duration.  
If the estimated duration is for one job, type 1 and select **Job(s)**. If the estimated duration is for 100 pages, type 100 and select **Page(s)**.
  - For the **Time** and **Time unit** properties, specify the estimated duration.  
If the estimated duration is five minutes, type 5 and select **minutes**. If the estimated duration is two hours, type 2 and select **hours**.
  - Set the value for the **Include** property to **Yes**.  
If you do not want to include the estimated duration for the step in the calculation of the estimated duration for the job, set the property to **No**.
  - If you updated the property values for multiple steps using **Edit Multiple**, click **Apply to Selected** to apply the changes.
  - Repeat for these steps for each step that you want to set an estimated duration for.  
If you have multiple copies of a long-running step in a workflow and you want their estimates to be the same, sort the table by the **Step template** column so that all those steps are together. Select the steps and use the **Edit multiple** area to set the properties for all the steps at once.
  - When you finish, click **OK**.
- Save the workflow.

After you have set estimated durations for steps, you can set up one or more email notifications that watch for the **Tracking status** or **Predicted outcome** properties for a job to **Behind schedule** or **May miss** and send an email to one or more users to alert them that a job is in danger of missing its schedule.

Parent topic: [Setting up Deadline Tracker](#)