



Work and duration

Guides for Merlin Project Express

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Work and duration - as of November 2020

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In Merlin Project Express you can schedule activities by work, duration, start and end date constrains.

Simply select an activity, use the **Plan** inspector and define your activity as required. Alternatively you can use related columns in the outline.



For flexible planning and easier adjustment throughout the life of your project, we recommend that you define as few start and finish dates as possible and as many as needed.

Work

If you want to schedule your activity by the **effort** it will need to be completed, use the **Plan** inspector or enter the effort in the **Given work** outline column.

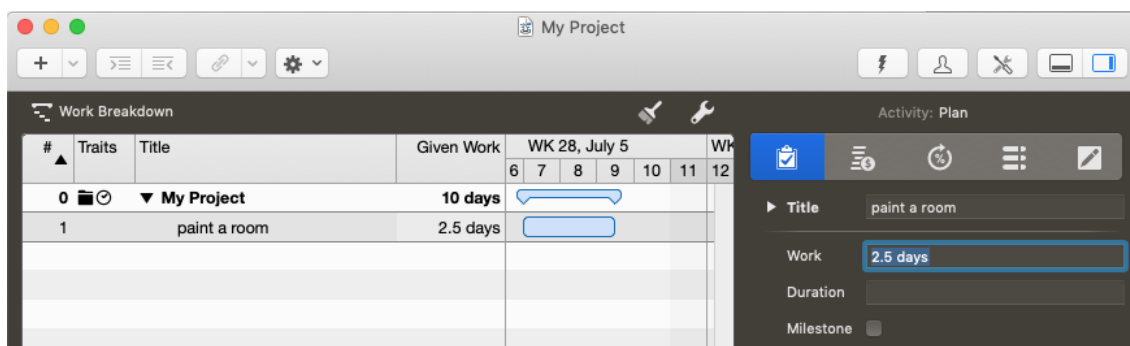
Example

You want to schedule the painting of a room. You estimate the required **effort** for the activity as *2.5 working days*. You expect that when assigning this activity to let's say two resources, each resource's effort will be half as much.

- So you create a new activity.
- Select it.
- Check in **Plan** inspector.
- Change the **Work** value to **2.5 days**.
- Leave the value in the **Duration** field empty.



You can adjust the *Default Value* '1 day ?' for work in *Settings > General > Work* The ? indicates that the value is estimated. Remove it when you are sure about the value or don't need so much detail in your planning.



Alternatively: You can edit the **Given Work** value in the outline column.

Duration

If you want to schedule your activity by the **duration** it will need to be completed, use the **Plan** inspector or enter the effort in the **Given duration** outline column.

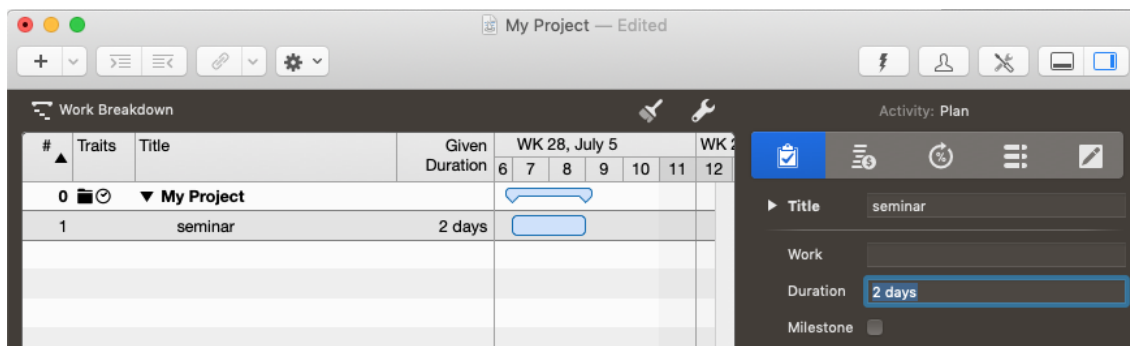
Example

You want to schedule a seminar. The **duration** for this seminar is *2 working days*. You expect that when assigning it to your trainer personnel, all assigned trainers will work throughout the complete duration of this seminar.

- So you create a new activity.
- Select it.
- Check in **Plan** inspector.
- Blank the **Work** value.
- Enter **2 days** in the **Duration** field.



You can adjust the *Default Value* for duration in *Settings > General > Duration*



Alternatively: You can edit the **Given Duration** value in the outline column.

Example team meeting

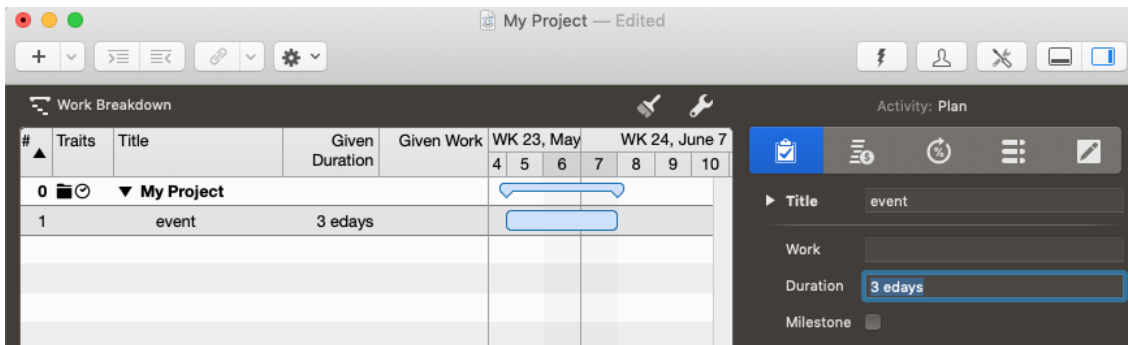
You schedule a team meeting on a remote location. You want to plan with *1.5 working days*. But also need to block 3 working days of your team for the overall duration. Within those 3 days, your team transfers to the remote location, works for those 1.5 working days and transfers back to its base.

- So you create a new activity.
- Select it.
- Check in **Plan** inspector.
- Change the **Work** value to **1.5 days**.
- Enter **3 days** in the **Duration** field.

Example 72hours event

You want to schedule an event for which you know it will be 3 calendar days long. It starts on Friday and the weekend (which is usually non working time) should be included in the overall duration.

- So you create a new activity.
- Select it.
- Check in **Plan** inspector.
- Blank the **Work** value.
- Enter **3 edays** in the **Duration** field.



Alternatively: You can edit the **Given Duration** value in the outline column.



Such an event starting first thing on Friday and ending on first thing on Monday, includes only working times on Friday. If you want to adjust the included effort, modify the **Work** value accordingly.

Example placing a concrete slab

You want to schedule the placing of a concrete slab. You estimate the required **effort** for the activity as *1.5 working days*. You know concrete starts drying directly as you pour it and requires at least *1 calendar week* of overall drying time.

- So you create a new activity.
- Select it.
- Check in **Plan** inspector.
- Change the **Work** value to **1.5 days**.
- Enter **1 ework** in the **Duration** field.

Alternatively: You can edit the **Given Work** and **Given Duration** values in the outline columns.

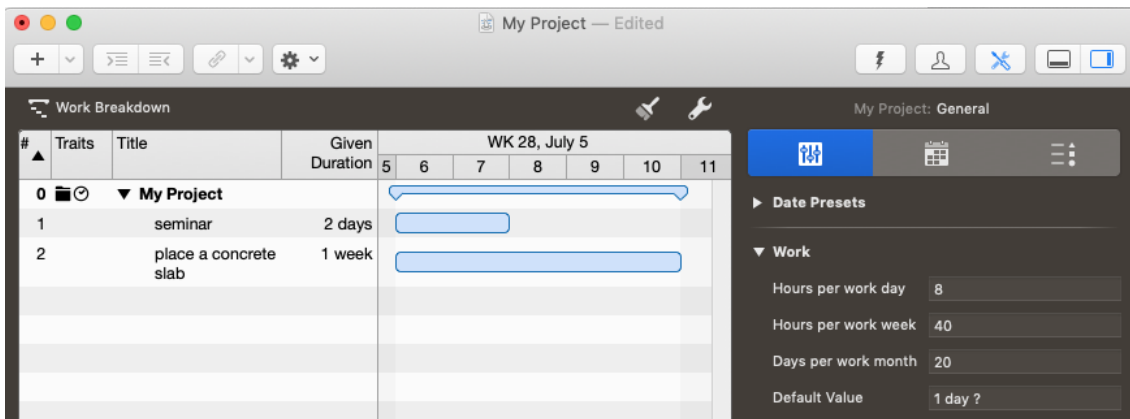
Working times

In the above examples we used the terms *working days*, *working week*.

For simplicity reasons, we enter them in Merlin Project Express as '2 days' or '1 week'.

How does this calculate in other units?

Let's check the defaults in *Settings > General > Work*



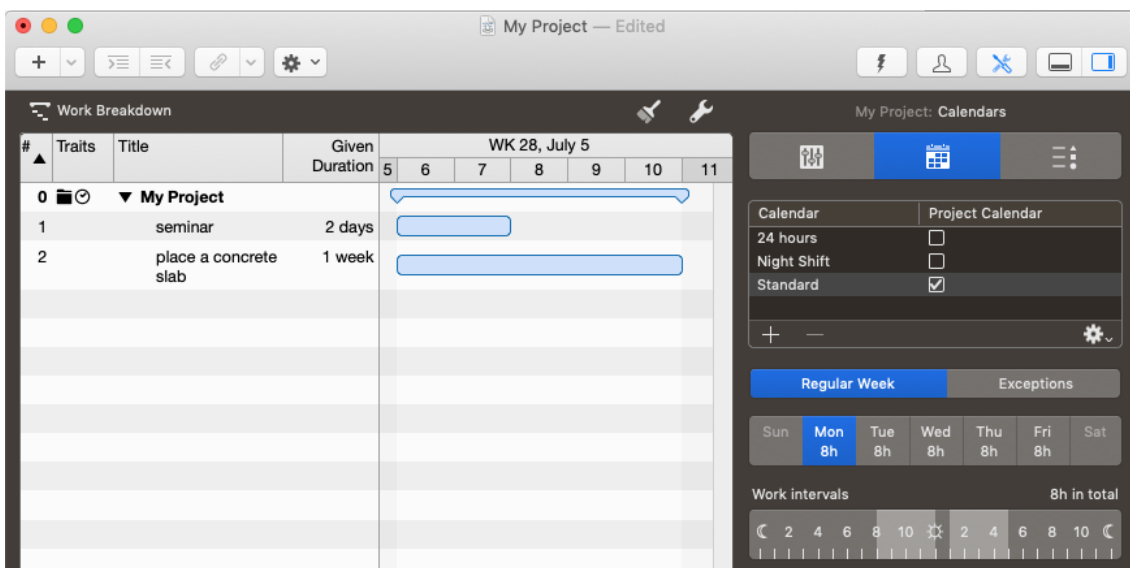
Per default, 1 working day are 8 working hours, 40 working hours make a week and 20 days a month.

So '2 days' are those '2 working days' of '8 working hours' each. '1 week' means '40 working hours' which calculates as '5 working days' or '8 working hours' each.

When do working times start or end?

Let's check the defaults *Settings > Calendars*

- Select the calendar on which the checkbox **Project Calendar** is enabled
- Check the **Regular Week** tab



Per default, there are 5 work days: Monday to Friday. Each work day includes work intervals from 8am to 12pm and 1pm to 5pm.

So the working time on Monday starts at 8am and ends at 5pm.



Should you choose to adjust your regular week or work intervals in **Settings > Calendars** make sure you also adjust your defaults in **Settings > General > Work** to match the new values.

How long are working times really?

Let's select an activity of '2.5 days' work and open the **Plan** inspector.

We see in the *Expected*

The screenshot shows a project management interface. On the left, a 'Work Breakdown' table is visible. The table has columns for '#', 'Traits', 'Title', 'Given Work', and a grid for weeks. The first row under 'My Project' shows an activity 'paint a room' with a 'Given Work' of '2.5 days'. On the right, the 'Activity: Plan' inspector is open, showing details for the selected activity. The 'Work' is set to '2.5 days'. The 'Expected' section shows the activity is 'Unscheduled', starting on 'Jul 1, 2020 at 8:00 AM' and ending on 'Jul 3, 2020 at 12:00 PM', with a total duration of '2.5 days (2.17 edays)'.

#	Traits	Title	Given Work	WK 27, June 28					WK 28, July	
				30	1	2	3	4	5	6
0		My Project								
1		paint a room	2.5 days							

Activity: Plan

Title: paint a room

Work: 2.5 days

Duration: []

Milestone: []

Start: Unrestricted

End: Unrestricted

Alignment: ASAP

Expected

Status: Unscheduled

Start: Jul 1, 2020 at 8:00 AM

End: Jul 3, 2020 at 12:00 PM

Work: 2.5 days

Duration: 2.5 days (2.17 edays)

- Work: 2.5 days
- Duration: 2.5 days (2.17 edays)

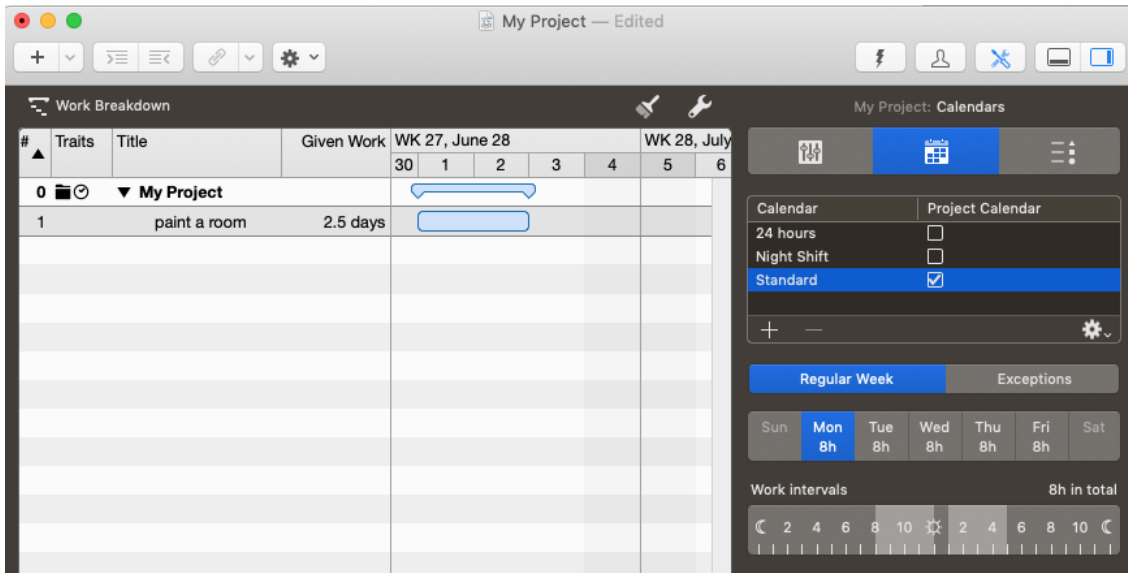
We know that 2.5 days are 2.5 working days, 20 working hours. This activity has the same amount of effort and duration.

2.17 edays is the elapsed calendar time and time period to expect the activity to be completed. The prefix "e" denotes "elapsed".

How do elapsed e-durations calculate?

The elapsed duration is the duration plus the free time contained.

By default and according to the settings (**Settings > Calendars**) a regular work day starts at 8am, contains a lunch break between 12pm and 1pm and ends at 5pm.



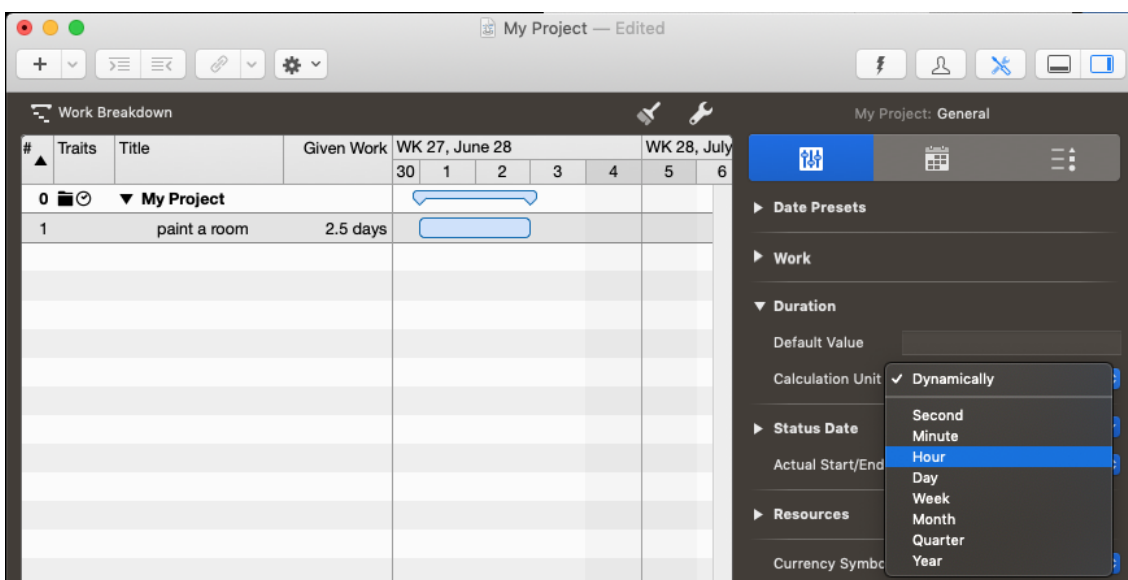
An activity with the planned **2.5 days** of work, which starts at 8am requires for the first 8 hours (four in the morning, four in the afternoon) 9 consecutive hours (*ehours*) on the first day.

The works stop at 5pm and start next day at 8am. So there are 15 hours of **free time**. From 8am until 5pm on the second day there are further 8 hours (9 ehours), until once again at 5pm 15 hours of free time start again.

The remaining 4 hours can be scheduled on the third day to start at 8am and finish at 12pm. So to the 20 hours of work, you add 32 hours of free time which calculates as 52 ehours.

52 ehours divided by 24 ehours equals 2.16666 edays, or 2.17 edays.

Should you change the **Calculation Unit** to **Hour** in **Settings > General > Duration ...**



And select again your activity, you'll see expected values in hours thus:

- Work: 20 hours
- Duration: 20 hours (52 ehours)

The screenshot shows a project management application window titled "My Project — Edited". The main view is a Gantt chart under the heading "Work Breakdown". The chart has columns for "WK 27, June 28" (days 30, 1, 2, 3, 4) and "WK 28, July" (days 5, 6). A task named "paint a room" is shown as a bar spanning from the start of June 30 to the end of July 3, with a duration of "2.5 days".

On the right side, there is a "Task Details" panel for the selected task "paint a room". The details include:

- Title:** paint a room
- Work:** 2.5 days
- Duration:** (empty field)
- Milestone:**
- Start:** Unrestricted
- End:** Unrestricted
- Alignment:** ←ASAP
- Expected:**
 - Status:** Unscheduled
 - Start:** Jul 1, 2020 at 8:00 AM
 - End:** Jul 3, 2020 at 12:00 PM
 - Work:** 20 hours
 - Duration:** 20 hours (52 ehours)
 - Utilization:** 100%