MS Project Professional 2021

Tutorial #4 – Resource Pool

CS 587 – Software Project Management
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Resource pool project and Sharer project

- **Resource pool project** - The project containing the resources that you want to share.

- **Sharer project** - The project that will share resources from another project.

Tasks for both projects

Resource pool project

|		Task Mode	Task Name	WBS	Duration	Start	Finish
1			**Project1_ResourcePool**	**1**	**149 days**	**Wed 9/11/24**	**Mon 4/7/25**
2			**⊿ Project Plan**	**1.1**	**11 days**	**Wed 9/11/24**	**Wed 9/25/24**
3			Write Plan	1.1.1	5 days	Wed 9/11/24	Tue 9/17/24
4			**⊿ Review Plan**	**1.1.2**	**5 days**	**Wed 9/18/24**	**Tue 9/24/24**
5			Preparation for review	1.1.2.1	3 days	Wed 9/18/24	Fri 9/20/24
6			Review Meeting	1.1.2.2	2 days	Mon 9/23/24	Tue 9/24/24
7			Rework	1.1.3	1 day	Wed 9/25/24	Wed 9/25/24
8			**⊿ Risk Mitigation and Contingency Plan**	**1.2**	**8 days**	**Thu 9/26/24**	**Mon 10/7/24**
9			Write Plan	1.2.1	2 days	Thu 9/26/24	Fri 9/27/24
10			**⊿ Review Plan**	**1.2.2**	**5 days**	**Mon 9/30/24**	**Fri 10/4/24**
11			Preparation for review	1.2.2.1	3 days	Mon 9/30/24	Wed 10/2/24
12			Review Meeting	1.2.2.2	2 days	Thu 10/3/24	Fri 10/4/24
13			Rework	1.2.3	1 day	Mon 10/7/24	Mon 10/7/24
14			**⊿ Requirement**	**1.3**	**18 days**	**Tue 10/8/24**	**Thu 10/31/24**
15			Write requirements	1.3.1	3 days	Tue 10/8/24	Thu 10/10/24
16			Write Use Case Model	1.3.2	2 days	Fri 10/11/24	Mon 10/14/24
17			**⊿ Review Requirements/ Use Case Model**	**1.3.3**	**11 days**	**Tue 10/15/24**	**Tue 10/29/24**
18			Preparation for review(Requirements)	1.3.3.1	3 days	Tue 10/15/24	Thu 10/17/24
19			Preparation for review(UseCases)	1.3.3.2	4 days	Fri 10/18/24	Wed 10/23/24
20			Review Meeting(Requirements)	1.3.3.3	2 days	Thu 10/24/24	Fri 10/25/24
21			Review Meeting(UseCases)	1.3.3.4	2 days	Mon 10/28/24	Tue 10/29/24
22			Rework	1.3.4	2 days	Wed 10/30/24	Thu 10/31/24
23			**⊿ Analysis**	**1.4**	**13 days**	**Fri 11/1/24**	**Tue 11/19/24**
24			Write Analysis Document	1.4.1	1 day	Fri 11/1/24	Fri 11/1/24
25			**⊿ Review Analysis Document**	**1.4.2**	**7 days**	**Mon 11/4/24**	**Tue 11/12/24**
26			Preparation for Analysis Document	1.4.2.1	3 days	Mon 11/4/24	Wed 11/6/24

Sharer project

		Task Mode	Task Name	WBS	Duration	Start	Finish
1			**⊿ Project2_Sharer**	**1**	**179 days**	**Tue 10/3/23**	**Fri 6/7/24**
2			**⊿ Project Plan**	**1.1**	**10 days**	**Tue 10/3/23**	**Mon 10/16/23**
3			Write Plan	1.1.1	3 days	Tue 10/3/23	Thu 10/5/23
4			**⊿ Review Plan**	**1.1.2**	**5 days**	**Fri 10/6/23**	**Thu 10/12/23**
5			Preparation for review	1.1.2.1	2 days	Fri 10/6/23	Mon 10/9/23
6			Review Meeting	1.1.2.2	3 days	Tue 10/10/23	Thu 10/12/23
7			Rework	1.1.3	2 days	Fri 10/13/23	Mon 10/16/23
8			**⊿ Requirement**	**1.2**	**16 days**	**Tue 10/17/23**	**Tue 11/7/23**
9			Write requirements	1.2.1	4 days	Tue 10/17/23	Fri 10/20/23
10			**⊿ Review Requirements**	**1.2.2**	**9 days**	**Mon 10/23/23**	**Thu 11/2/23**
11			Preparation for review	1.2.2.1	5 days	Mon 10/23/23	Fri 10/27/23
12			Review Meeting	1.2.2.2	4 days	Mon 10/30/23	Thu 11/2/23
13			Rework	1.2.3	3 days	Fri 11/3/23	Tue 11/7/23
14			**⊿ Lab and Environment Setup**	**1.3**	**20 days**	**Wed 11/8/23**	**Tue 12/5/23**
15			**⊿ Hardware**	**1.3.1**	**13 days**	**Wed 11/8/23**	**Fri 11/24/23**
16			**⊿ Install Network Elements**	**1.3.1.1**	**7 days**	**Wed 11/8/23**	**Thu 11/16/23**
17			Routers	1.3.1.1.1	3 days	Wed 11/8/23	Fri 11/10/23
18			Bridge	1.3.1.1.2	4 days	Mon 11/13/23	Thu 11/16/23
19			Install Server	1.3.1.2	3 days	Fri 11/17/23	Tue 11/21/23
20			Install Clients	1.3.1.3	3 days	Wed 11/22/23	Fri 11/24/23
21			**⊿ Software**	**1.3.2**	**7 days**	**Mon 11/27/23**	**Tue 12/5/23**
22			Install Development Tools	1.3.2.1	4 days	Mon 11/27/23	Thu 11/30/23
23			Install Testing Tools	1.3.2.2	3 days	Fri 12/1/23	Tue 12/5/23
24			**⊿ Analysis/Design Document**	**1.4**	**12 days**	**Wed 12/6/23**	**Thu 12/21/23**
25			Write DD	1.4.1	2 days	Wed 12/6/23	Thu 12/7/23

Step to create a resource pool

- **<u>Step 1</u>**: Click the sharer project, remember to have the resource pool project also open.

- **<u>Step 2</u>**: On the Resource Tab, click **Resource Pool**, and then click **Share Resources**.

- **<u>Step 3</u>**: Specify the **resources** and **precedence** in the pop-up window, and then click OK.

- If your project already had resources entered, the resources from both the projects are combined.
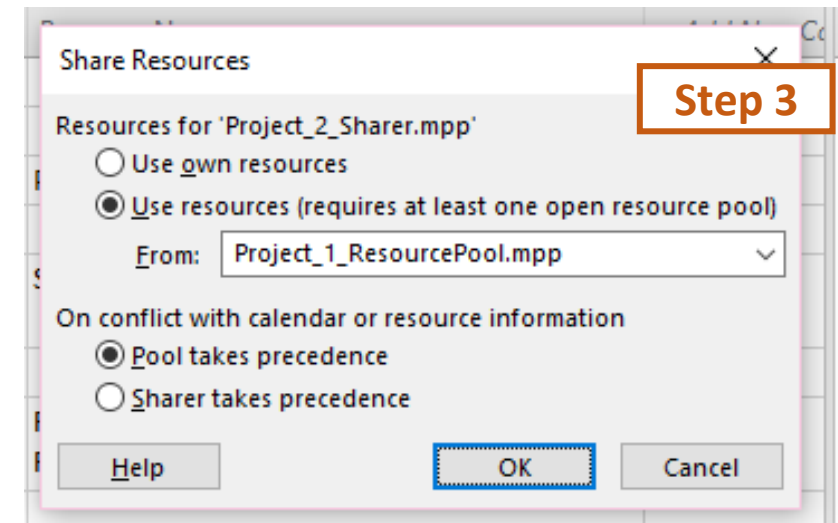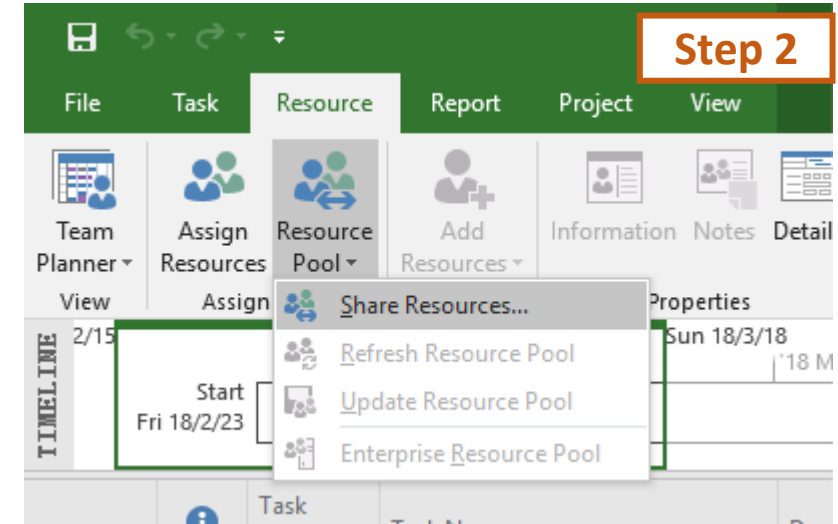
Handle conflicts

Pool takes precedence

- Resource information in the resource pool project to override any conflicting information from the sharer project (default).

- For example, if the resource named Karen Berg has maximum units of 100% in the sharer project, and 75% in the resource pool project. If the pool takes precedence, then the value of 75% is retained as the maximum units for Karen Berg.

Sharer takes precedence

- Resource information in the sharer project to override any conflicting information from the resource pool project.

- For example, if Karen Berg has a standard rate of $50 in the sharer project, and a standard rate of $45 in the resource pool project. If sharer takes precedence, the value of $50 is retained as the standard rate for Karen Berg.

Resources for both projects

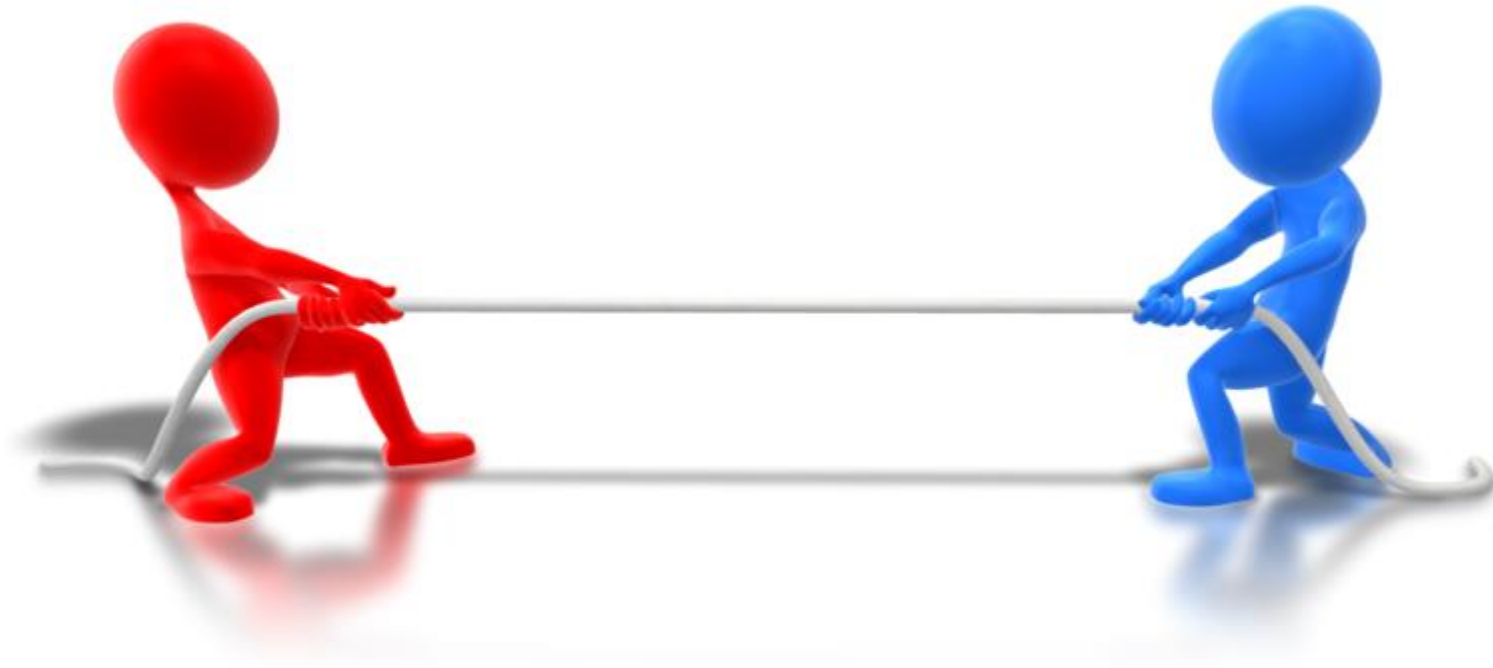**Resource pool project**

Sharer project

Open the projects

Open the resource pool
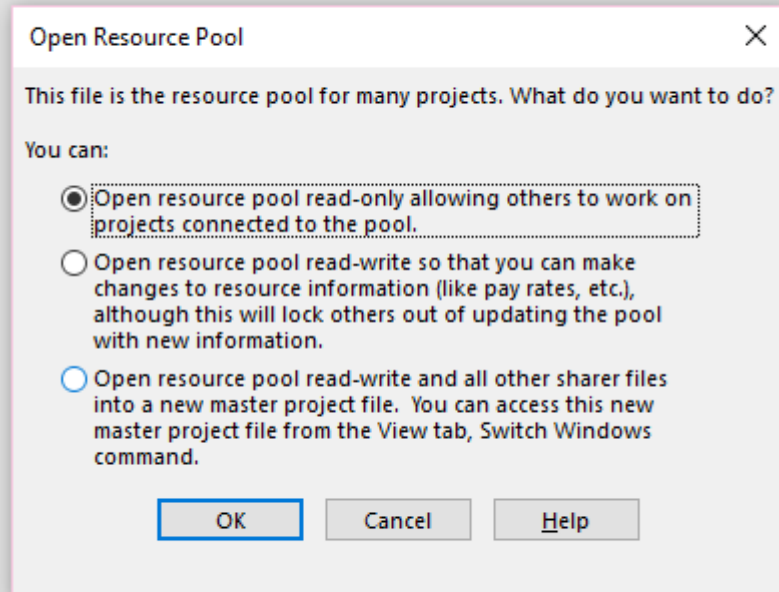
Open the sharer
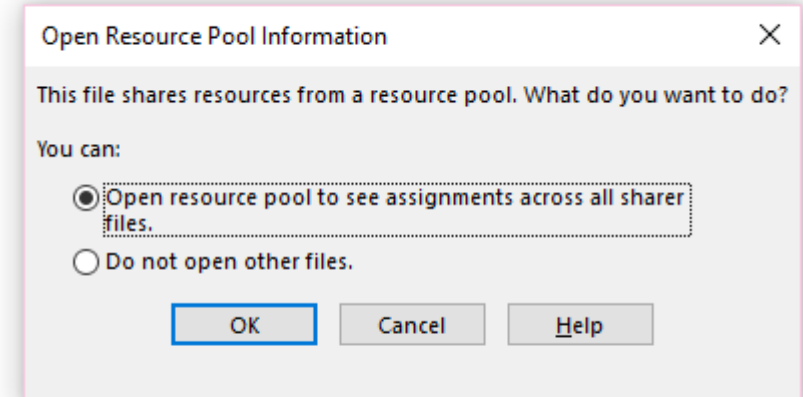
Handle the conflicts

Conflicts can happen when two or more tasks are done in parallel, and the same resource is assigned to work on all the tasks simultaneously.

Handle the conflicts

- View conflicts

	Task Mode	Task Name	WBS	Duration	Start	Finish	Predecessors	Resource
1		⊿**Project1_ResourcePool**	**1**	**149 days**	**Thu 9/21/23**	**Tue 4/16/24**		
2		⊿**Project Plan**	**1.1**	**11 days**	**Thu 9/21/23**	**Thu 10/5/23**		
3		Write Plan	1.1.1	5 days	Thu 9/21/23	Wed 9/27/23		SE13,PM2
4		⊿**Review Plan**	**1.1.2**	**5 days**	**Thu 9/28/23**	**Wed 10/4/23**	3	
5		Preparation for review	1.1.2.1	3 days	Thu 9/28/23	Mon 10/2/23	3	PE1,PE22,!
6		Review Meeting	1.1.2.2	2 days	Tue 10/3/23	Wed 10/4/23	5	DE1,PE1,P
7		Rework	1.1.3	1 day	Thu 10/5/23	Thu 10/5/23	6	SE13
8		⊿**Risk Mitigation and Contingency Plan**	**1.2**	**8 days**	**Fri 10/6/23**	**Tue 10/17/23**	7	
9		Write Plan	1.2.1	2 days	Fri 10/6/23	Mon 10/9/23	7	SE13
10		⊿**Review Plan**	**1.2.2**	**5 days**	**Tue 10/10/23**	**Mon 10/16/2**	9	
11		Preparation for review	1.2.2.1	3 days	Tue 10/10/23	Thu 10/12/23	9	DE1,PE1,P
12		Review Meeting	1.2.2.2	2 days	Fri 10/13/23	Mon 10/16/2	11	DE1,PE1,P
13		Rework	1.2.3	1 day	Tue 10/17/23	Tue 10/17/23	12	SE13
14		⊿**Requirement**	**1.3**	**18 days**	**Wed 10/18/2**	**Fri 11/10/23**	13,7	
15		Write requirements	1.3.1	3 days	Wed 10/18/2	Fri 10/20/23	13,7	PE22,RE2,!
16		Write Use Case Model	1.3.2	2 days	Mon 10/23/2	Tue 10/24/23	15	RE8,PE22,!
17		⊿**Review Requirements/ Use Case Model**	**1.3.3**	**11 days**	**Wed 10/25/2**	**Wed 11/8/23**	16	
18		Preparation for review(Requirements)	1.3.3.1	3 days	Wed 10/25/2	Fri 10/27/23	16	DE1,PE1,SI
19		Preparation for review(UseCases)	1.3.3.2	4 days	Mon 10/30/2	Thu 11/2/23	18	DE2,PE2,SI
20		Review Meeting(Requirements)	1.3.3.3	2 days	Fri 11/3/23	Mon 11/6/23	19	DE1,PE1,SI
21		Review Meeting(UseCases)	1.3.3.4	2 days	Tue 11/7/23	Wed 11/8/23	20	DE2,PE2,SI
22		Rework	1.3.4	2 days	Thu 11/9/23	Fri 11/10/23	21	PE22,RE2,!
23		⊿**Analysis**	**1.4**	**13 days**	**Mon 11/13/2**	**Wed 11/29/2**	22	
24		Write Analysis Document	1.4.1	1 day	Mon 11/13/2	Mon 11/13/2	22	SE1,SE2,SE
25		⊿**Review Analysis Document**	**1.4.2**	**7 days**	**Tue 11/14/23**	**Wed 11/22/2**	24	

View in Gantt Chart

Handle the conflicts

- View conflicts

		Resource Name	Type	Material	Initials	Group	Max.	Std. Rate	Ovt. Rate	Cost/Use	Accrue	Base
19		SE13	Work		SE13		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard
20	👤	PE1	Work		PE1		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard
21		PE2	Work		PE2		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard
22		PE3	Work		PE3		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard
23		PE4	Work		PE4		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard
24		PE22	Work		PE22		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard
25	👤	PE23	Work		PE23		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard
26		PE24	Work		PE24		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard
27		PE25	Work		PE25		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard
28		PE26	Work		PE26		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard
29		PE27	Work		PE27		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard
30		TE1	Work		TE1		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard
31		TE2	Work		TE2		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard
32		TE3	Work		TE3		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard
33	👤	TE4	Work		TE4		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard
34		TE44	Work		TE44		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard
35		TE45	Work		TE45		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard
36		TE46	Work		TE46		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard
37		TE47	Work		TE47		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard
38		DE1	Work		DE1		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard
39	👤	DE2	Work		DE2		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard
40		DE3	Work		DE3		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard
41		DE4	Work		DE4		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard
42		DE5	Work		DE5		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard
43		RE50	Work		RE50		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard
44		RE51	Work		RE51		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard
45		RE52	Work		RE52		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard
46		RE53	Work		RE53		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard

View in Resource Sheet

How to resolve conflicts ?

There are two ways to solve conflicts:

- **Strategy 1**

  Allocate 50% (or any %) units of resource to one project and the remaining units to the other project.

- **Strategy 2**

  Assign 100% units of resource to both projects, but at different time slots.

Note: The above strategies can be used for solving conflicts within the same project.
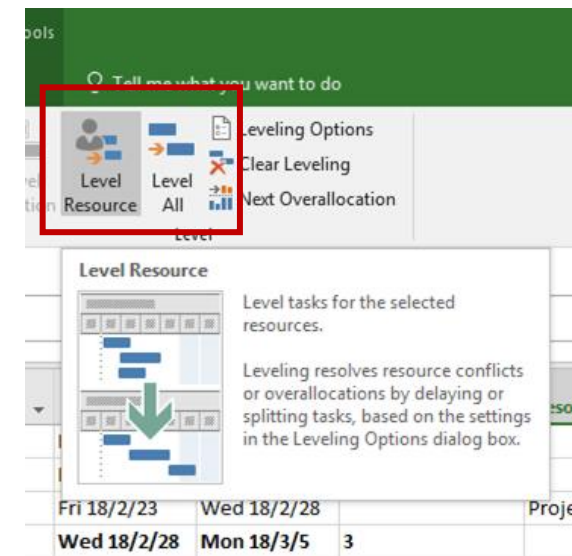
Strategy 1

- **Step 1**: Select the task that has conflicts
- **Step 2**: Double click the resources
- **Step 3**: Change the percentage

Strategy 2

- **Step 1:** Select the task that has a conflict.
- **Step 2:** On the Resource Tab, click on "Level Resource".
- **Step 3:** Select the responsible resources.
- **Step 4:** Click on "Level now".

Note: The tasks in the project having precedence will start at the scheduled time. The tasks in the project **NOT** having precedence will be delayed until the resource is available to work on that task.

Questions ?