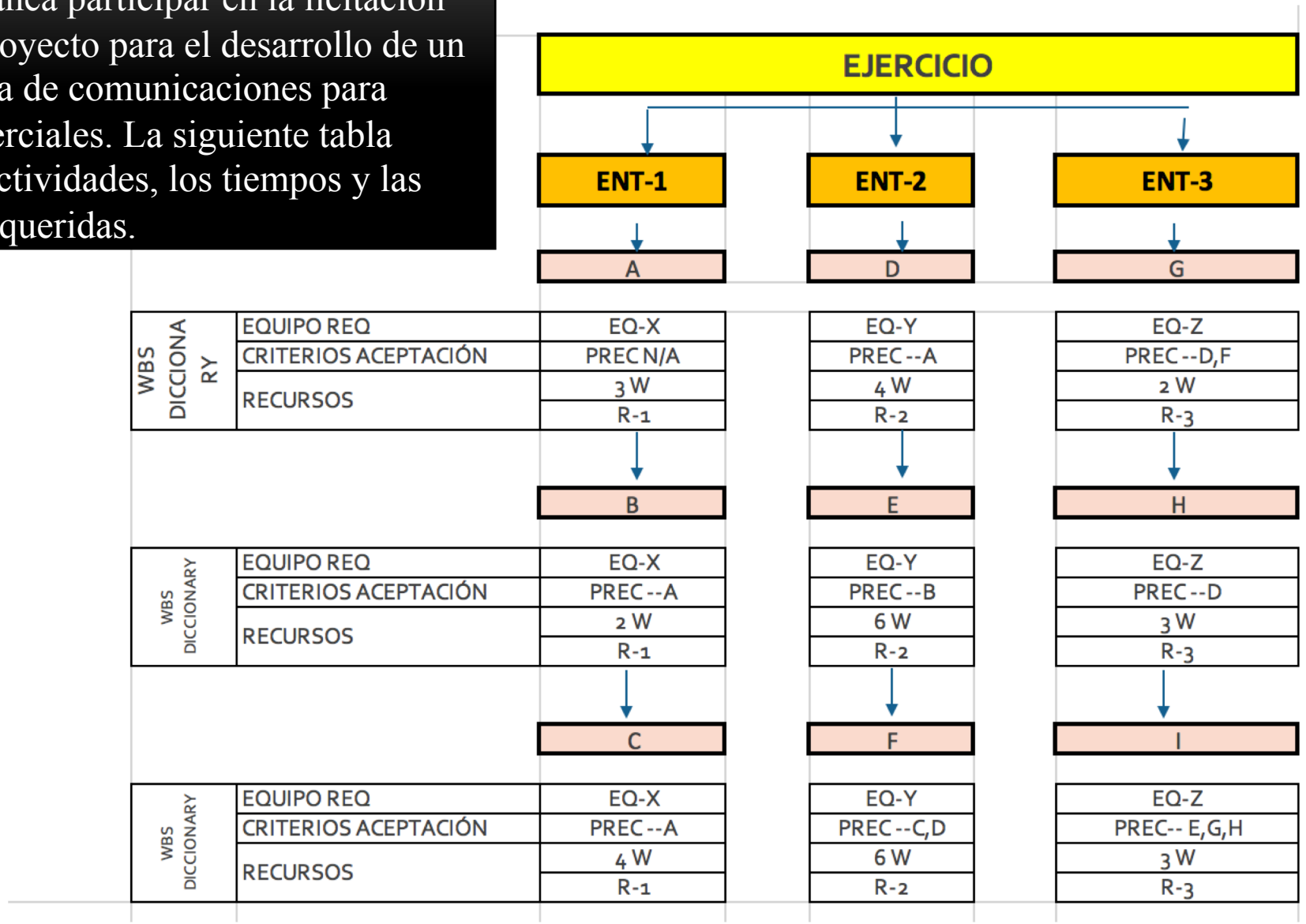
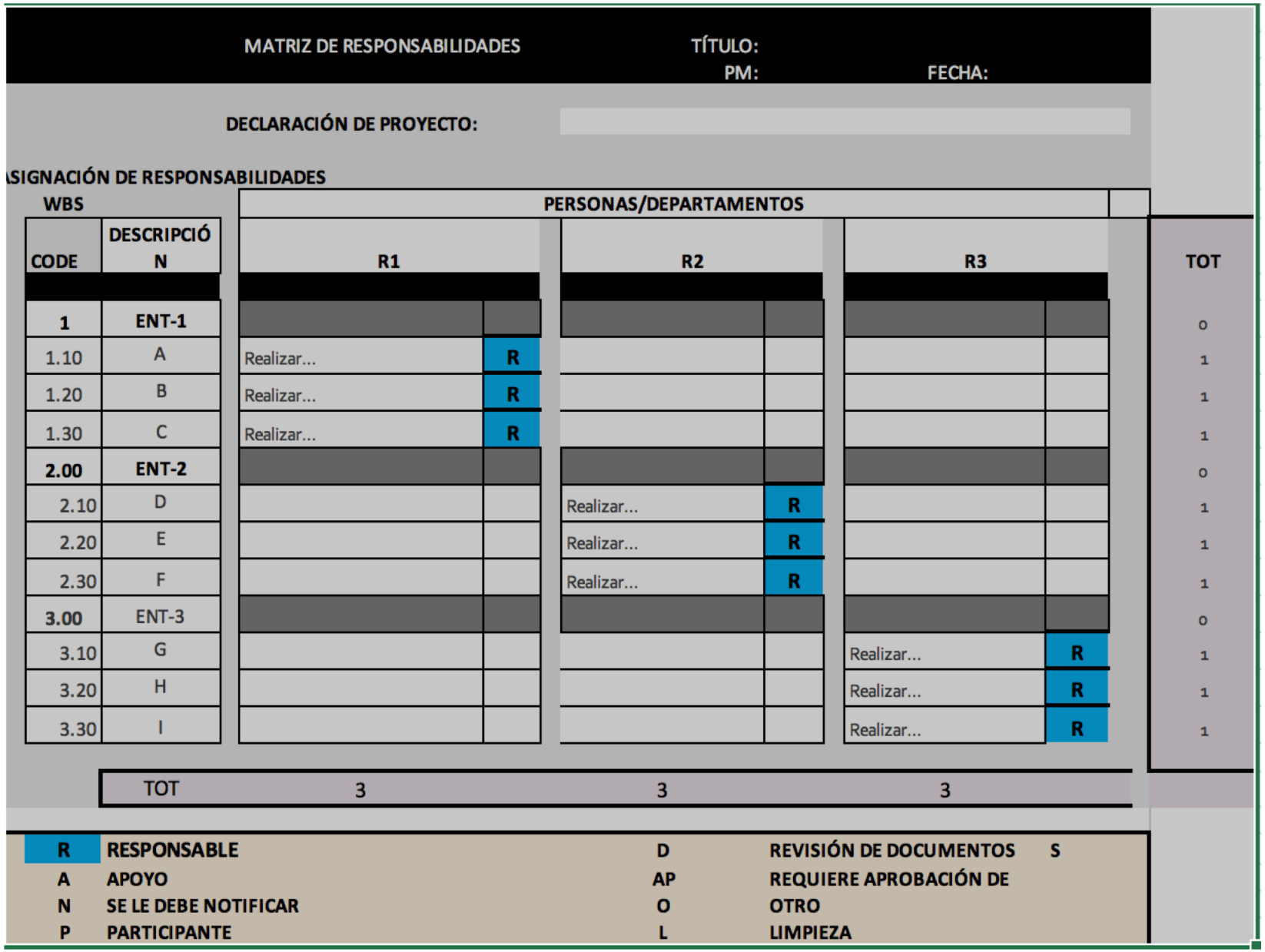
El departamento de investigación y desarrollo planea participar en la licitación de un gran proyecto para el desarrollo de un nuevo sistema de comunicaciones para aviones comerciales. La siguiente tabla muestra las actividades, los tiempos y las secuencias requeridas.





MATRIZ DE RESPONSABILIDADES

TÍTULO:

PM: FECHA:

DECLARACIÓN DE PROYECTO:

ASIGNACIÓN DE RESPONSABILIDADES

WBS		PERSONAS/DEPARTAMENTOS						
CODE	DESCRIPCIÓN	R1		R2		R3		TOT
1	ENT-1							0
1.10	A	Realizar...	R					1
1.20	B	Realizar...	R					1
1.30	C	Realizar...	R					1
2.00	ENT-2							0
2.10	D			Realizar...	R			1
2.20	E			Realizar...	R			1
2.30	F			Realizar...	R			1
3.00	ENT-3							0
3.10	G					Realizar...	R	1
3.20	H					Realizar...	R	1
3.30	I					Realizar...	R	1
	TOT	3		3		3		

R	RESPONSABLE	D	REVISIÓN DE DOCUMENTOS	S
A	APOYO	AP	REQUIERE APROBACIÓN DE	
N	SE LE DEBE NOTIFICAR	O	OTRO	
P	PARTICIPANTE	L	LIMPIEZA	

PLANEACIÓN DEL PROYECTO *ESTIMACIÓN DE COSTOS*	TÍTULO: PM:		FECHA: PÁG:		PLANEACIÓN DEL PROYECTO *ESTIMACIÓN DE COSTOS*	

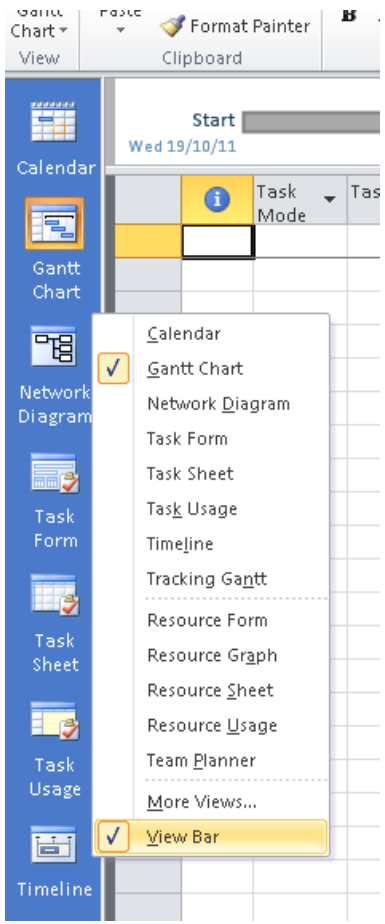
PROYECTO

WBS Code		Conocimiento/Habilidades								EQUIPO								
Code	Descripción	Tipo / Descripción	Cant	SEM	Horas	Costo Unitario/ Hr TABLA A	Costo/uso	Costo Total	Comentarios	Tipo / Descripción	Cant	Costo/uso	Costo Unitario	Costo Total	Comentarios		TOTAL	Code	TOT CODE
1	**ENT-1**							H16*G16+I16						Q18*O18+P18			AK16+AG16+ AB16+J16	**1**	AK16+AG16+ AB16+J16
1.10	A	R1	1	3	120	100		**12000**		**EQ-X**	1		50	**50**	EQUIPO PROTECCIÓN		**12050**	1.10	12050
1.20	B	R1	1	2	80	100		**8000**		**EQ-X**	2		50	**100**	EQUIPO PROTECCIÓN		**8100**	1.20	8100
1.30	C	R1	1	4	160	100		**16000**		**EQ-X**	3		50	**150**	EQUIPO PROTECCIÓN		**16150**	1.30	16150
2.00	**ENT-2**				0			**0**						**0**			**0**	**2.00**	0
2.10	D	R2	1	4	160	150		**24000**		**EQ-Y**	1		75	**75**	EQUIPO P/CULTIVO		**24075**	2.10	24075
2.20	E	R2	1	6	240	150		**36000**		**EQ-Y**	2		75	**150**	EQUIPO P/CULTIVO		**36150**	2.20	36150
2.30	F	R2	1	6	240	150		**36000**		**EQ-Y**	3		75	**225**	EQUIPO P/CULTIVO		**36225**	2.30	36225
3.00	ENT-3				0			**0**						**0**			**0**	**3.00**	0
3.10	G	R3	1	2	80	200		**16000**		**EQ-Z**	1		125	**125**	GAGE MEDICIÓN		**16125**	3.10	16125
3.20	H	R3	1	3	120	200		**24000**		**EQ-Z**	2		125	**250**	GAGE MEDICIÓN		**24250**	3.20	24250
3.30	I	R3	1	3	120	200		**24000**		**EQ-Z**	3		125	**375**	GAGE MEDICIÓN		**24375**	3.30	24375
		COSTO						**$196,000.00**			COSTO				**$1,500.00**				**$197,500.00**

Revisar número de horas por dia
OVERHEAD - No se carga a este proyecto

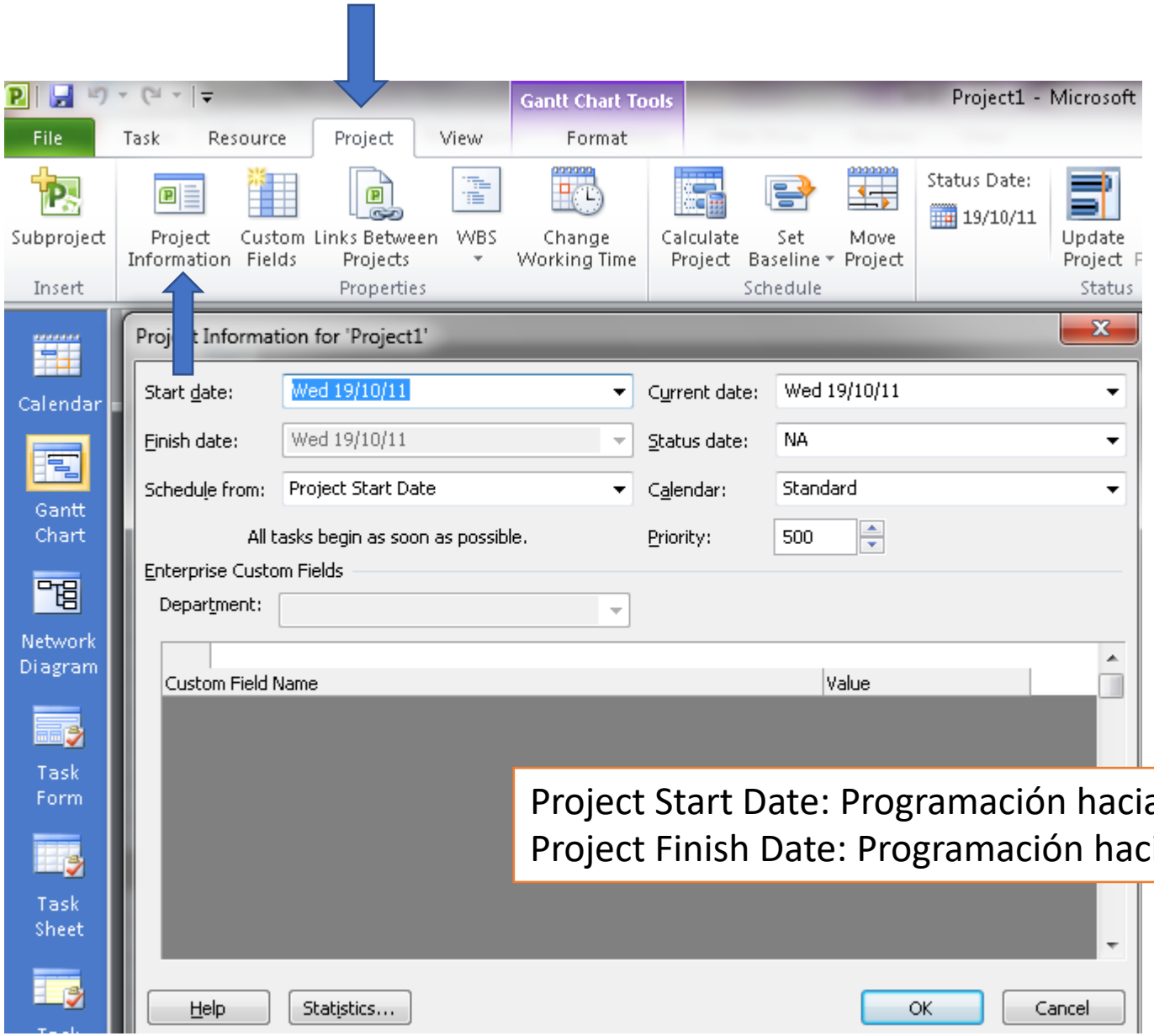
	PRESUPUESTO	200,000.00
	COSTO TOTAL	197,500.00
1.25%	MARGEN	2,500.00

Conceptos Básicos de MsProject



VIEW – VIEW BAR

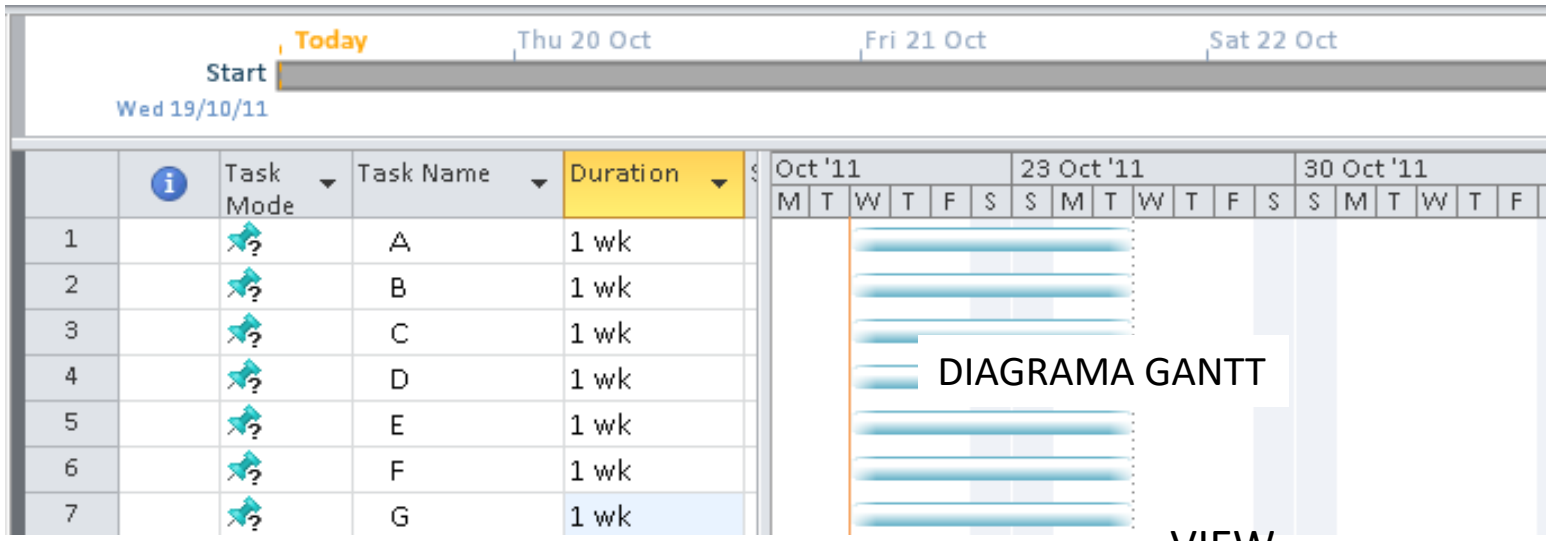
Project START & Finish Dates:



Project Start Date: Programación hacia adelante.
Project Finish Date: Programación hacia atrás.

TASK MODE

DURACION:
D – días
W- semanas
M - meses



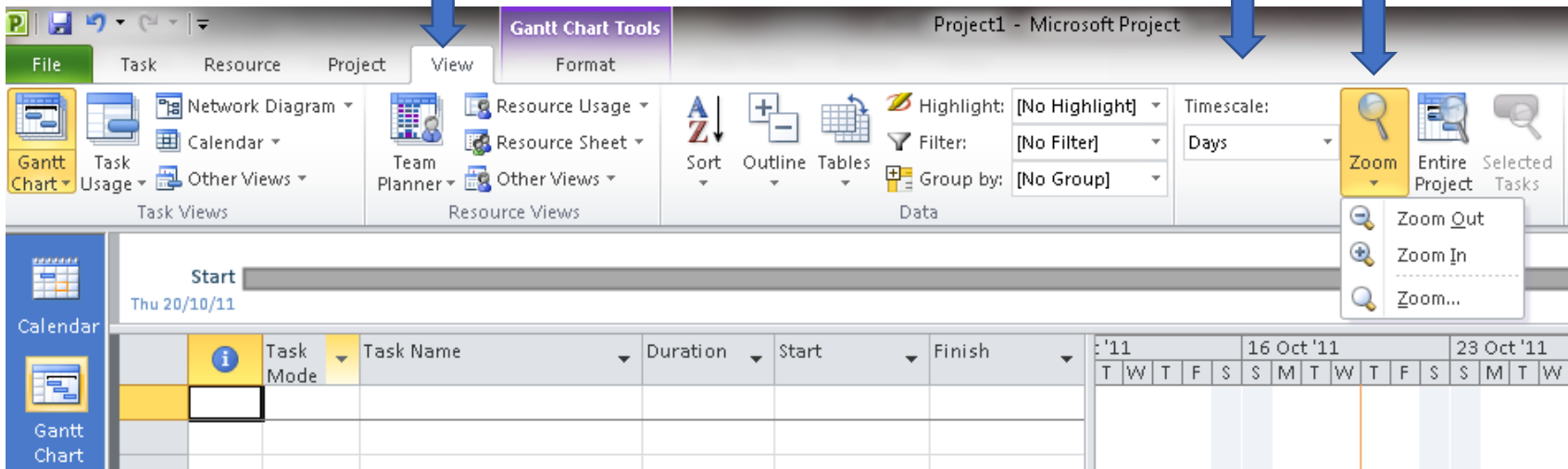
ACTV #

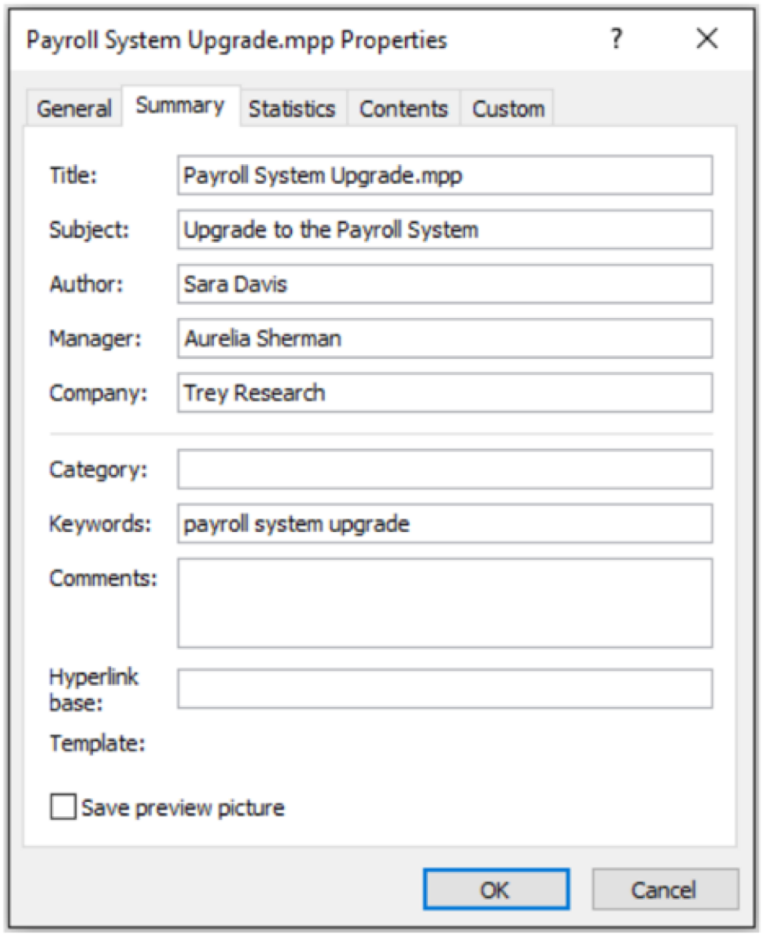
NOMBRE DE LA ACTIVIDAD

Modificar ESCALA TEMPORAL

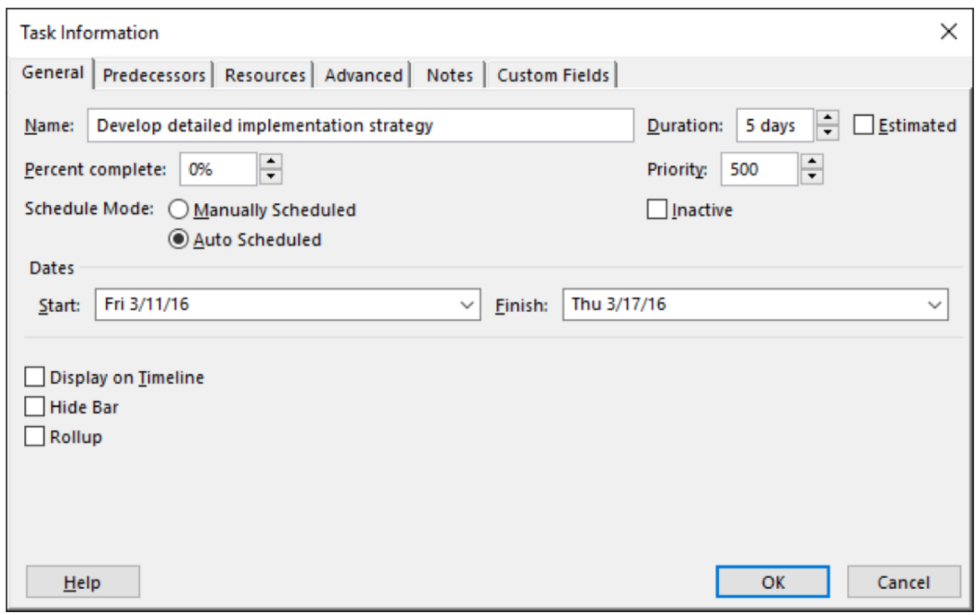
VIEW

TIMESCALE



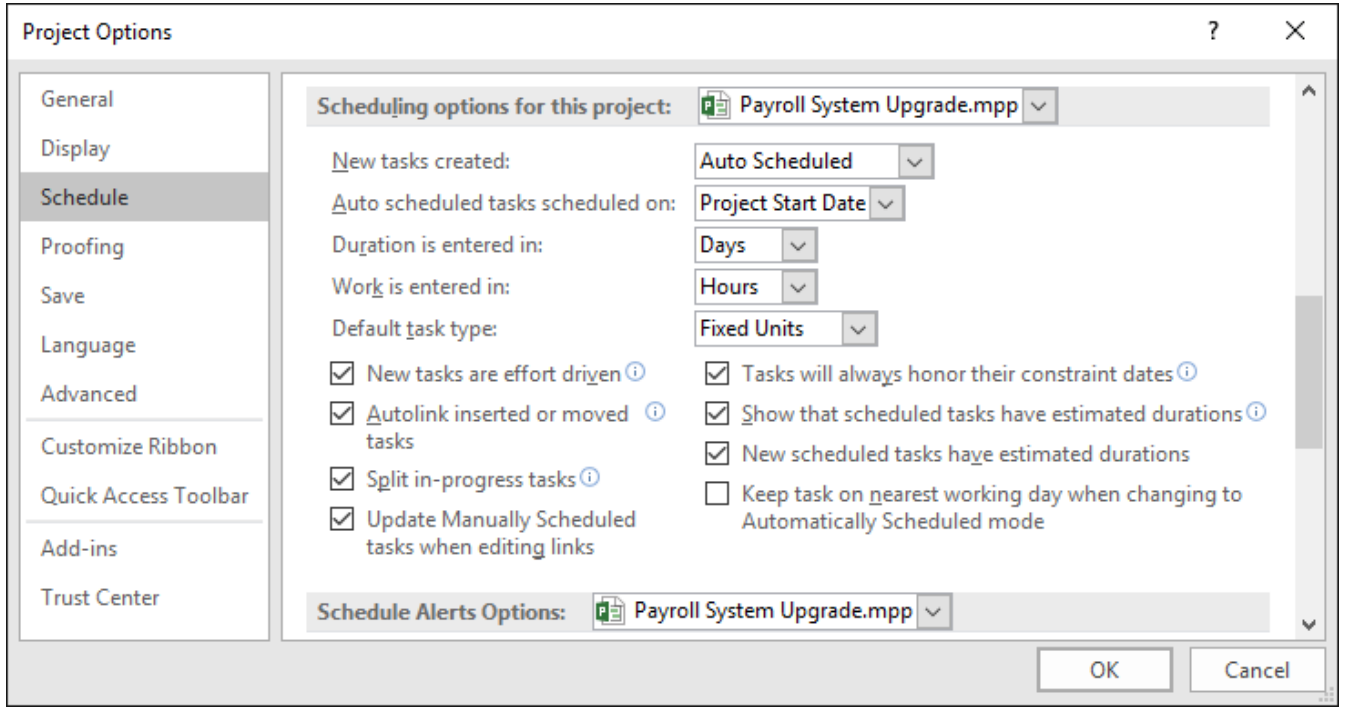


When you open a task from the **Gantt Chart** view, the **Task Information** dialog box displays.



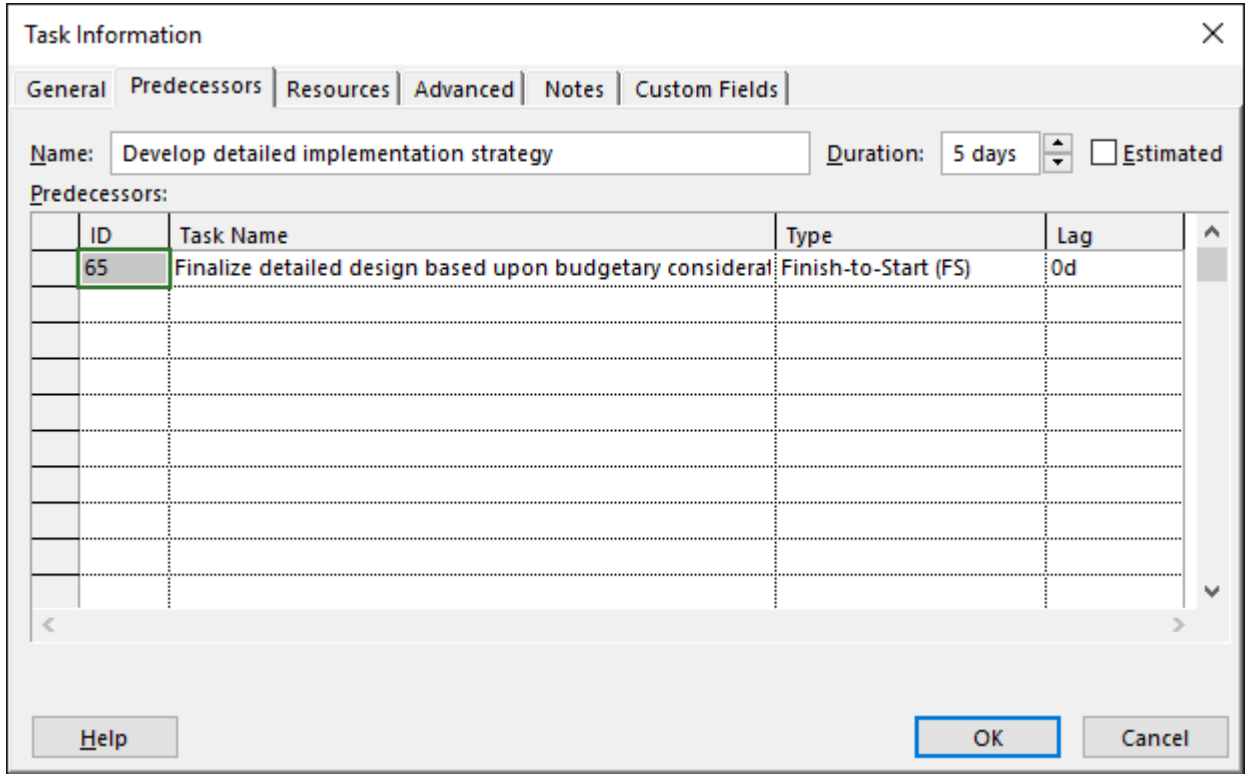
Throughout your project planning, you may need to add tasks to your project plan to account for the work that needs to be completed—especially if you used a template as a basis for your plan and now you need to modify it to include your project's specific details. Before you insert any new tasks into an existing task list, it's a good idea to modify the schedule options for the project to ensure that new tasks are properly scheduled.

You can access these options by selecting the **File** tab, and then selecting **Options** on the **Backstage**; in the **Project Options** dialog box, select the **Schedule** tab. In the **New tasks created** field, make sure that **Auto Scheduled** has been selected in order to automatically calculate the task's parameters in the schedule. Then, make sure that the **Autolink inserted or moved tasks** check box is checked, so that Microsoft Project will automatically manage the dependencies between the tasks for you.

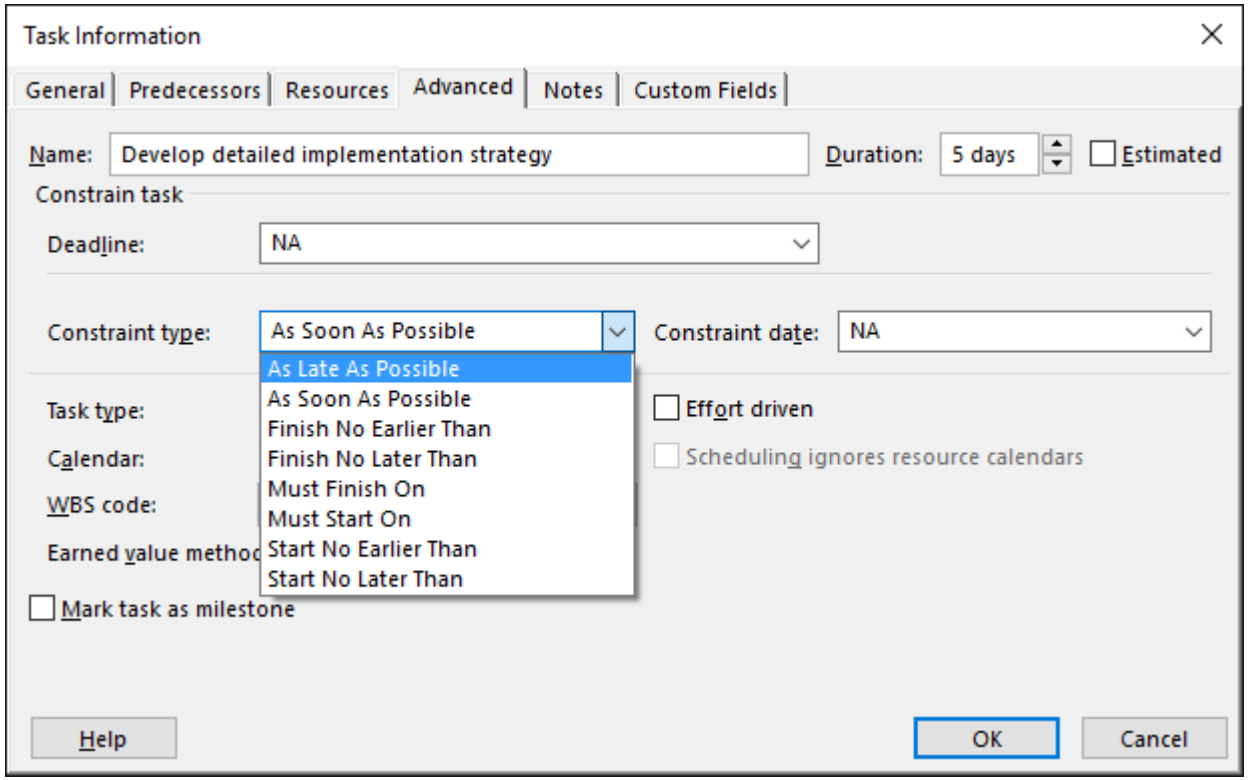


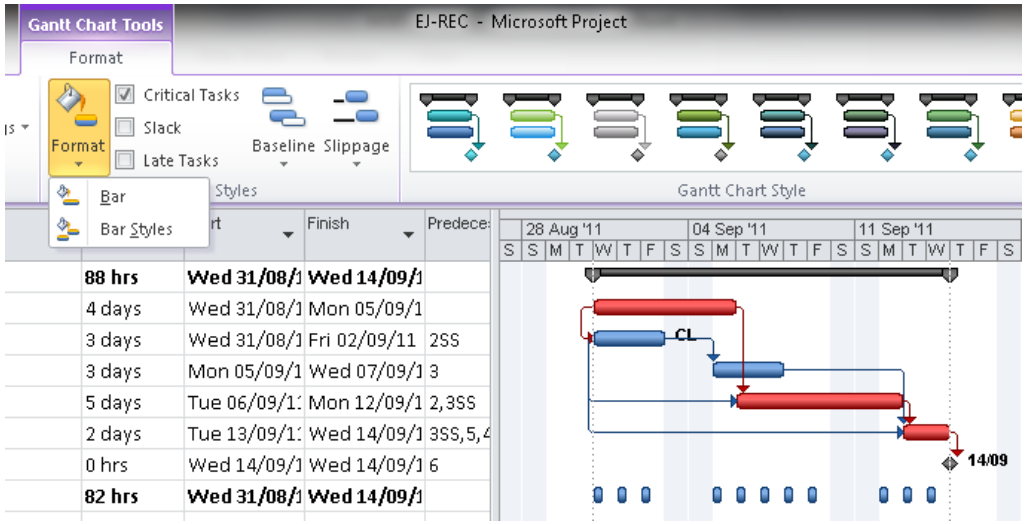
In project management, the concepts of duration and work are not the same thing. ***Duration*** is the amount of working time it will take to perform a task from start to finish, measured in a specific unit of time (minutes, hours, days, weeks, etc.). ***Work*** is the amount of time it will take to complete the task (the duration), multiplied by the level of effort that will be given to the task by the resources assigned to it. For example, if the task “secure work permit” has a duration of 3 days and the resource “Jack” will give 50% of effort to the task, then the work for the task is 1.5 days.
For tasks with a fixed amount of work, then, you can decrease the duration of the task by increasing the effort level through more resources. For instance, if the task “perform quality testing” has a duration of 6 days and a single quality controller is assigned to the task with 100% effort level, assigning another quality controller to the same task with 100% effort level would reduce the duration to 3 days.

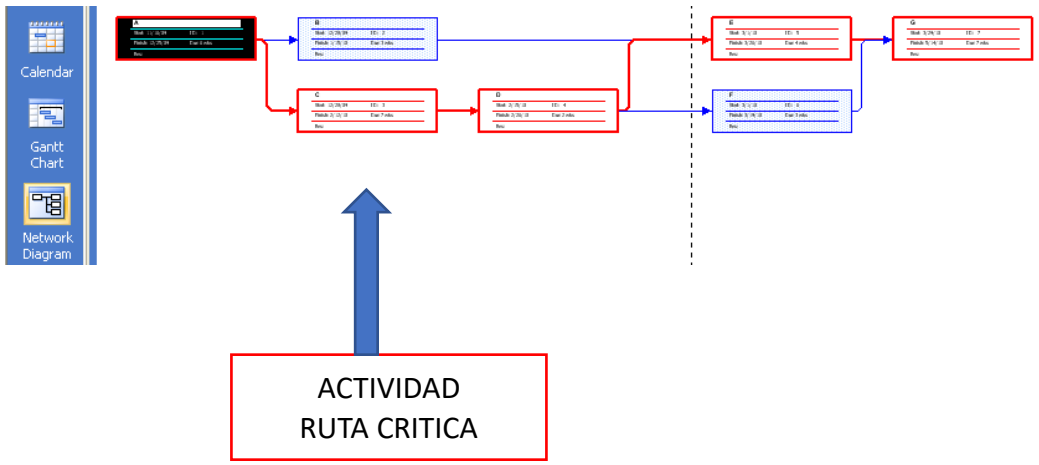
A ***dependency*** is a relationship between a task and its predecessor. All of these relationships are displayed on the **Predecessors** tab of the **Task Information** dialog box.



A ***task constraint*** is a date-based limitation placed on a task in order to control the start and finish dates. The constraint parameters are selected from the **Advanced** tab of the **Task Information** dialog box.



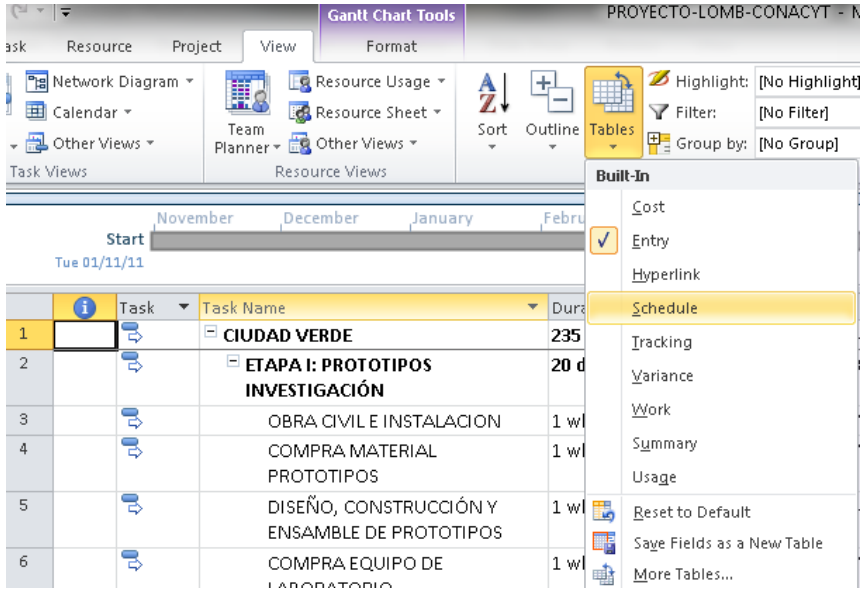




- The ***critical path*** is the longest path of linked tasks in a project, calculated by adding all of the durations of the individual tasks in the path, which determines the total duration of the project. The critical tasks in this path drive the end date of the project.
- In short, the project duration cannot be shorter than the total duration of all of the tasks in the critical path. In general, a project will only have a single critical path, though some more complex projects could have more than one.
- Microsoft Project automatically calculates the critical path for you, but does not display it for you by default. In the **Gantt Chart** view, check the **Critical Tasks** check box from the **Bar Styles** command group on the **Gantt Chart Tools Format** tab. Then, tasks in the critical path will be displayed in red in the Gantt Chart.

Holgura total = LS(a) – ES(a) = LF(a) – EF (a)
Holgura libre = mín. (Es (todas las sucesoras de a)) – EF(a)
Holgura total: Cantidad de tiempo en que se puede incrementar la duración de una actividad sin retrasar la terminación del proyecto.
Holgura libre: Cantidad de tiempo en que se puede incrementar el tiempo de una actividad sin retrasar el inicio de la actividad inmediatamente siguiente.

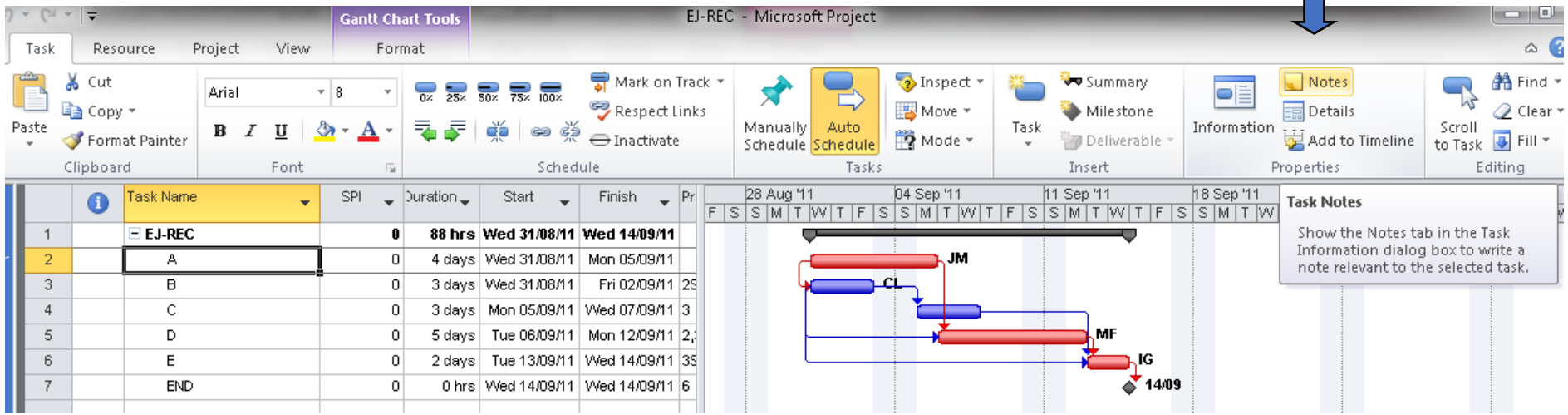
Nota: El uso de la holgura total en una actividad puede afectar las fechas de inicio de las actividades sucesoras a todo lo largo de la red, pero no se afectará la fecha de terminación del proyecto. Si se emplea la holgura libre no se afectarán las fechas de inicio de la red.



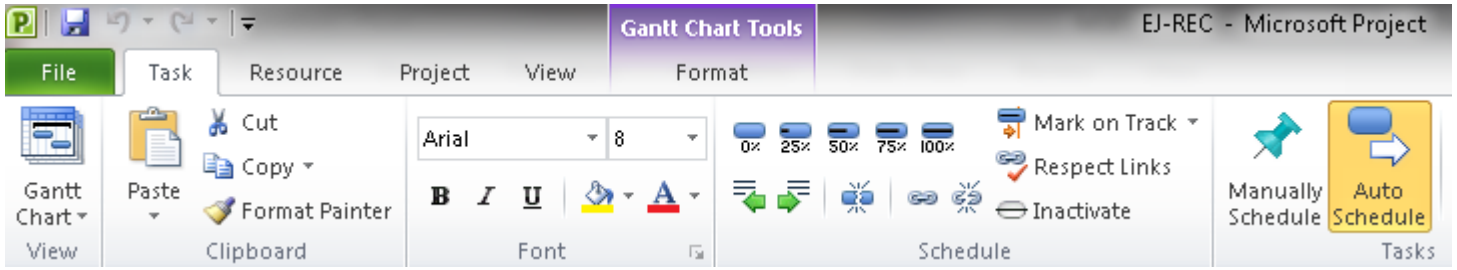
Free Slack	Total Slack
0 hrs	**0 hrs**
0 days	0 days
0 days	3 days
3 days	3 days
0 days	0 days
0 days	0 days

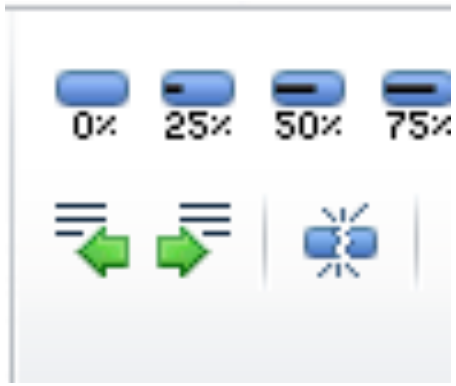
Notas

- Creación de notas en el diagrama de Gantt



Agrupación de tareas

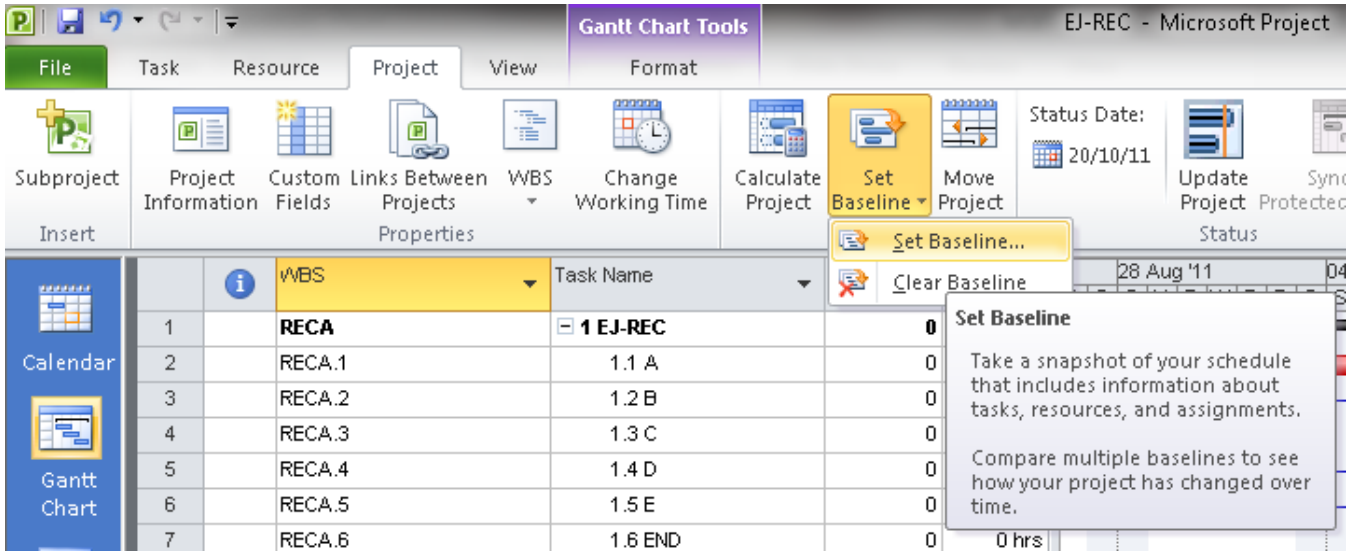




Indentación

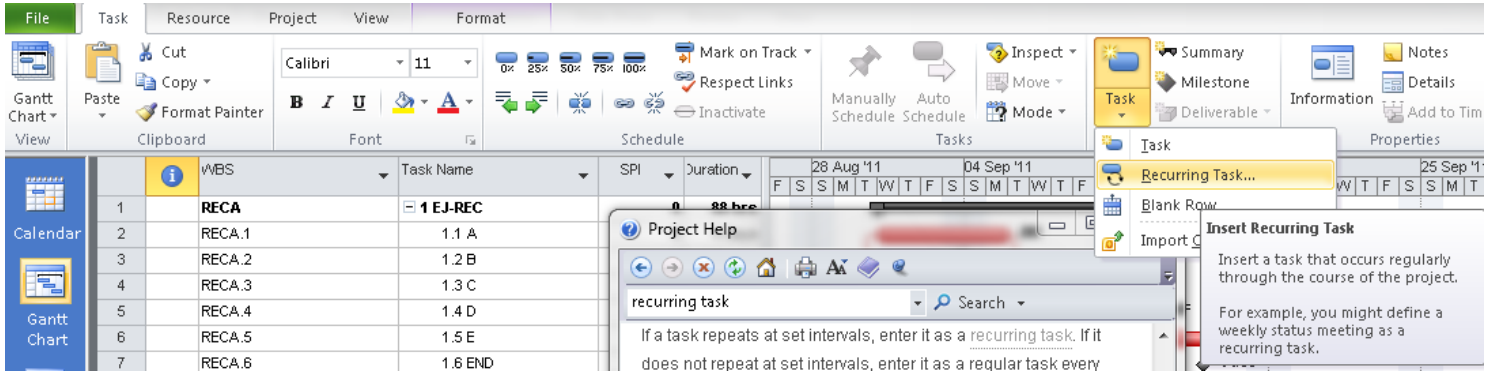
Baselines

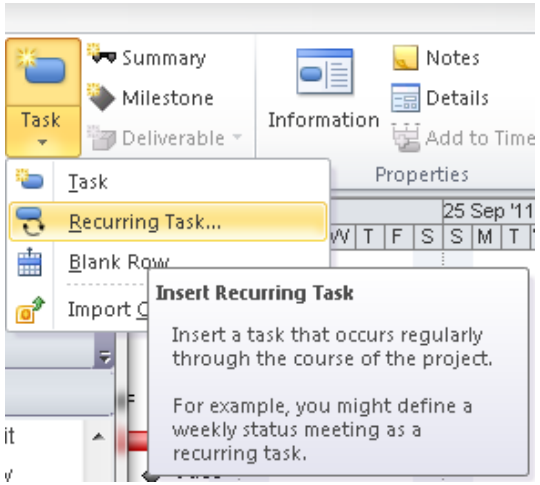
- A ***baseline*** is a specific measurement, calculation, or point on some sort of scale that is used as a basis for comparison. Your ***project baseline*** is a snapshot of the planned scope, time, and cost of the project according to the approved project plan. As the project is then executed, you can compare your actual scope, time, and cost against the baseline to measure how the project is performing.
- There are a number of questions that you can pose to determine if your project is on track as compared to the baseline.
- For scope:
- Are we performing the tasks we planned?
- Are we performing different tasks than we anticipated?
- Are we performing more or fewer tasks than we anticipated?
- For time:
- Are we on schedule?
- Are we behind schedule?
- Are we ahead of schedule?
- For cost:
- Are we on budget?
- Are we under budget?
- Are we over budget?

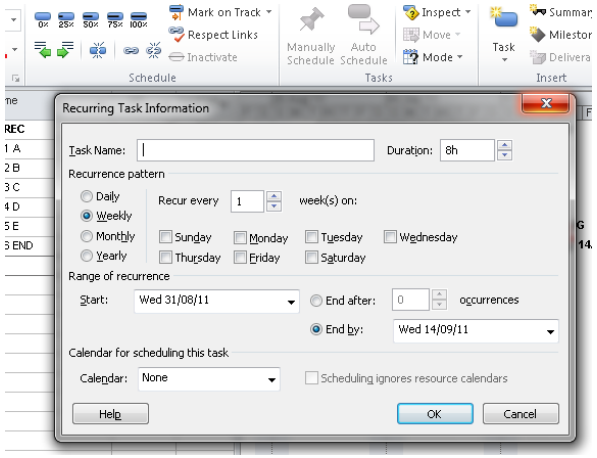


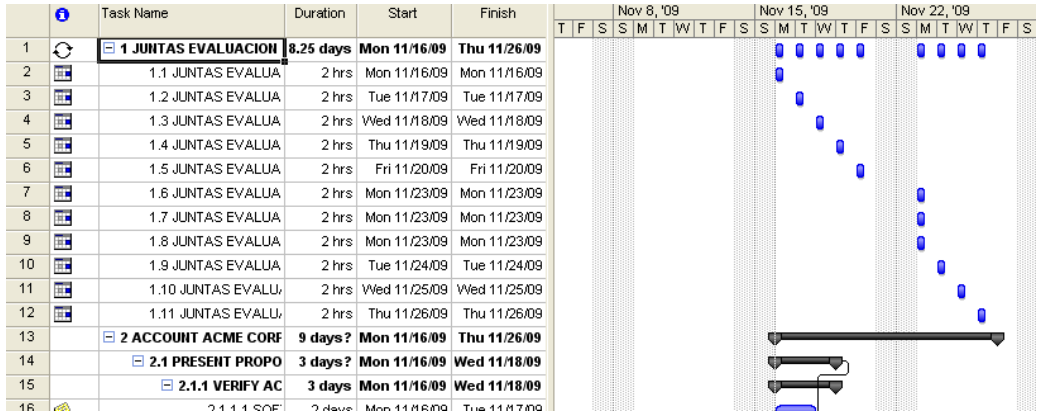
Recurring Task

El equipo se reunirá cada viernes para revisar el avance del proyecto.
Incluir una tarea repetitiva por los siguientes 20 días
Insertar - Tarea repetitiva
Juntas 2h

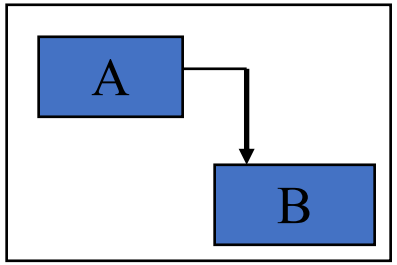






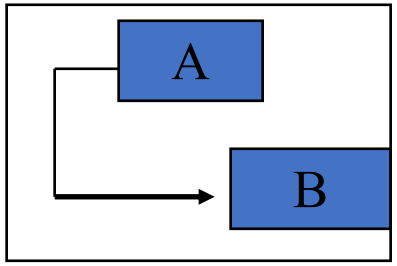


Dependencias



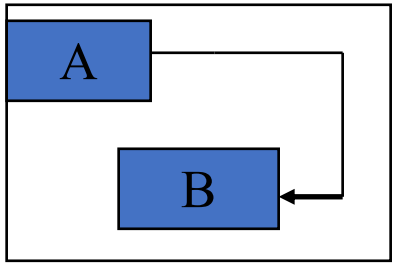
- Fin a comienzo [Finish to start (FC)]

El término de una tarea marca el inicio de la siguiente



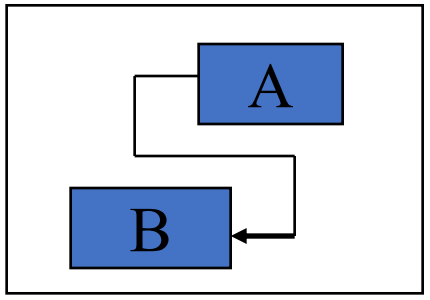
- Comienzo a comienzo [Start-to-start (CC)]

Las dos tareas empiezan simultáneamente



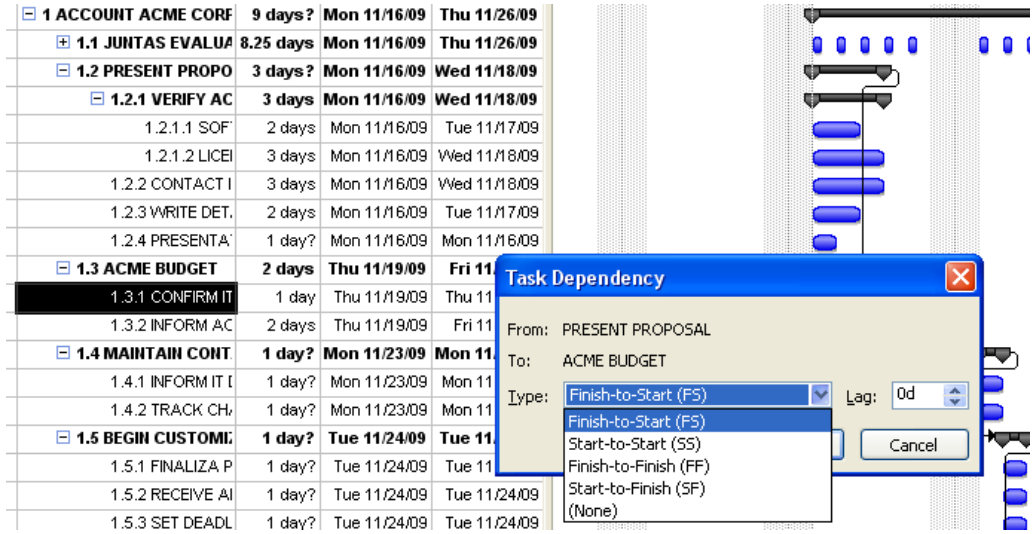
- Fin a fin [Finish-to-finist (FF)]

Las dos tareas terminan simultáneamente



- Comienzo a Fin [Start-to-finish (CF)]

El inicio de una tarea marca el final de la otra



- Tipos de dependencias que se pueden definir en MsProject

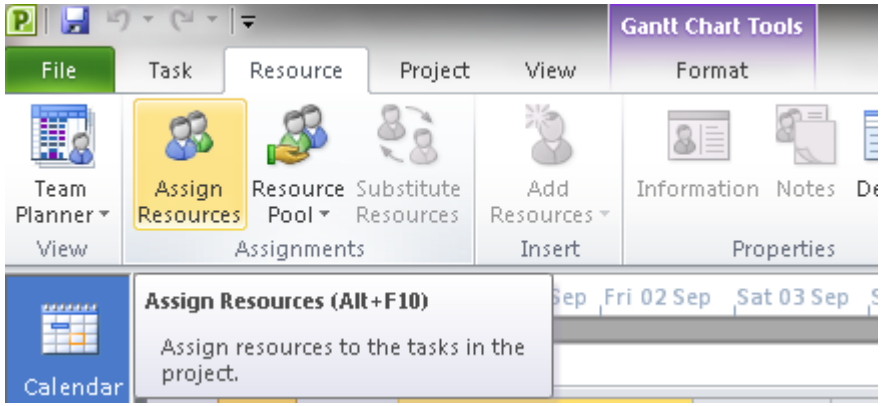
• Administrar los recursos del proyecto

Objetivo:

•Aprender a gestionar recursos: las personas, equipos, facilitadores y material necesarios para llevar a cabo las tareas del proyecto.
• Introducir los recursos en el proyecto y asignarlos a las tareas.
•Asignar costos a los recursos
•Presentación de la información de recursos

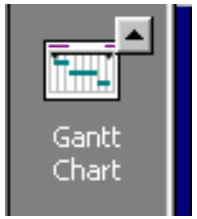
•Seleccionar el botón de asignación de recursos

•Asignar los recursos :

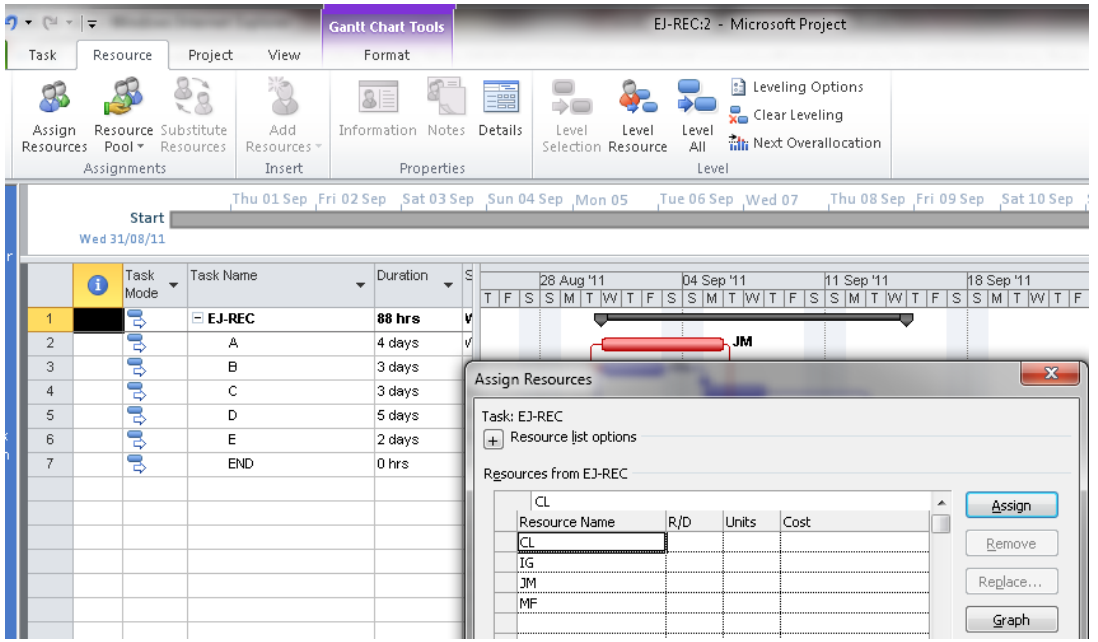


•En la barra izquierda seleccionar “hoja de recursos”

	Nombre del recurso	Iniciales	Grupo	Capacidad máxima	Tasa estándar	Tasa horas extra	Costo/Uso	Acumul
	administrative assistant	a		100%	$0.00/hr	$0.00/hr	$0.00	Prorrate
	operations manager	o		100%	$0.00/hr	$0.00/hr	$0.00	Prorrate
	architect	a		100%	$0.00/hr	$0.00/hr	$0.00	Prorrate

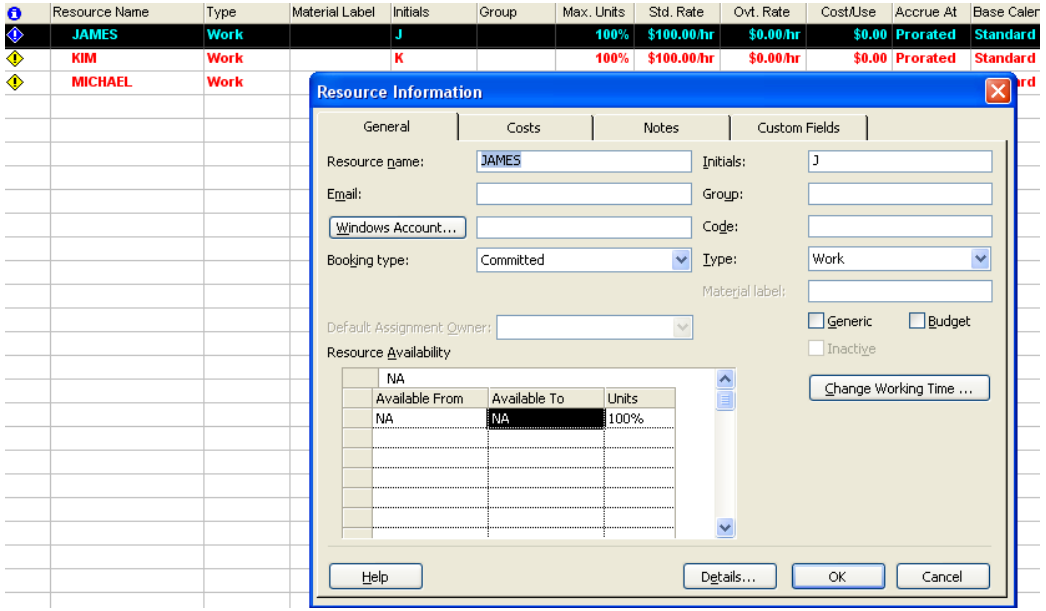


• Asignar recursos a una tarea



- Seleccionar el icono de la gráfica de Gantt de la barra izquierda
- Seleccionar tarea y el botón de asignación de recursos

• Dar doble “click” en un recurso de la hoja de recursos.
Incluir la información de e-mail
Seleccionar la disponibilidad del recurso, del día actual al 30 de octubre.



Métodos de acumulación de costos:

Inicio .- Se acumulan tan pronto como comienza la tarea que usa el recurso
Fin .- Si los costos no se acumulan hasta que la tarea finaliza (costos fijos siempre son acumulados al final de cada tarea)
Prorrateo .- Se acumulan conforme avanza la tarea que utiliza el recurso, basándose en el trabajo realizado (método utilizado por omisión)

Overallocation

- As you may already know, ***allocation*** is the act of scheduling tasks and the resources to perform them, taking into account both resource availability and project duration. ***Overallocation*** occurs when a resource has been assigned to do more work a project than it can within its normal working capacity.
- For example, if you schedule Jan Kolas to spend 100% of her time on the task to develop the detailed hardware design and 50% of her time on the task to develop the detailed software design, and those tasks occur simultaneously in the project schedule, then she is an overallocated resource.
- In the **Gantt Chart** view, tasks with overallocated resources will display an overallocation icon—sometimes referred to as the burning man icon—in the **Indicators** column.

	Task Mode	Task Name	Duration	Start	Finish	Predecessors
47		**Develop Detailed Infrastructure Design Documents**	**10 days**	**Thu 1/14/16**	**Wed 1/27/16**	
48		Develop detailed hardware design	10 days	Thu 1/14/16	Wed 1/27/16	46
49		Develop detailed software design	10 days	Thu 1/14/16	Wed 1/27/16	46

	Resource Name	Type	Material	Initials	Group	Max.	Std.	Ovt.	Cost/Use	Accrue At	Base
1	Sara Davis	Work		S	Sales & Marketing	100%	$65.00/hr	$75.00/hr	$0.00	Prorated	Standard
2	Jan Kotas	Work		J		100%	$50.00/hr	$60.00/hr	$0.00	Prorated	Standard
3	Shammi Mohamed	Work		S		100%	$45.00/hr	$55.00/hr	$0.00	Prorated	Standard
4	Software Engineer	Work		S		100%	$125.00/hr	$150.00/hr	$0.00	Prorated	Standard
5	Cloud Services	Cost		C						Prorated	
6	Server Blades	Material		S			$5,000.00		$0.00	Prorated	

Methods of Resolving Resource Conflicts

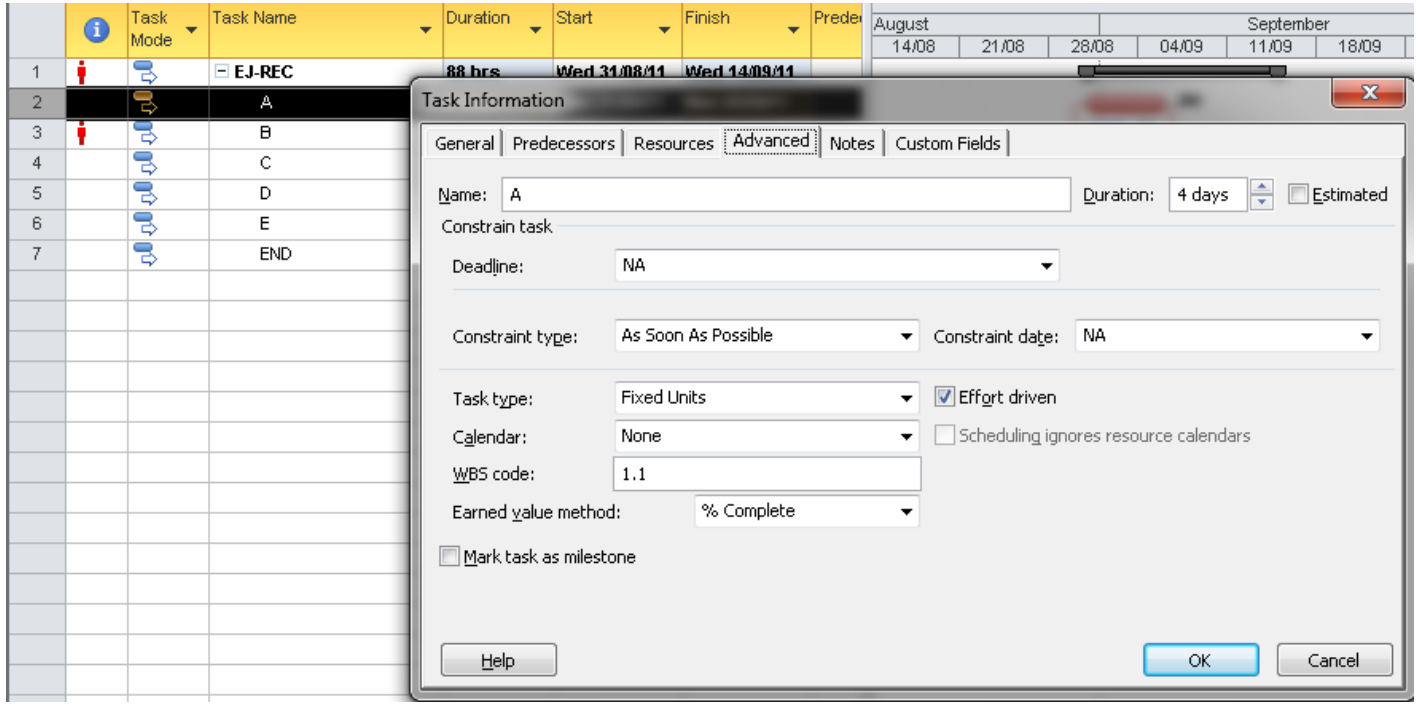
When you identify that there are overallocated work resources in your project plan, you need to level them. ***Leveling*** refers to the modifications made to a task to resolve resource overallocation.

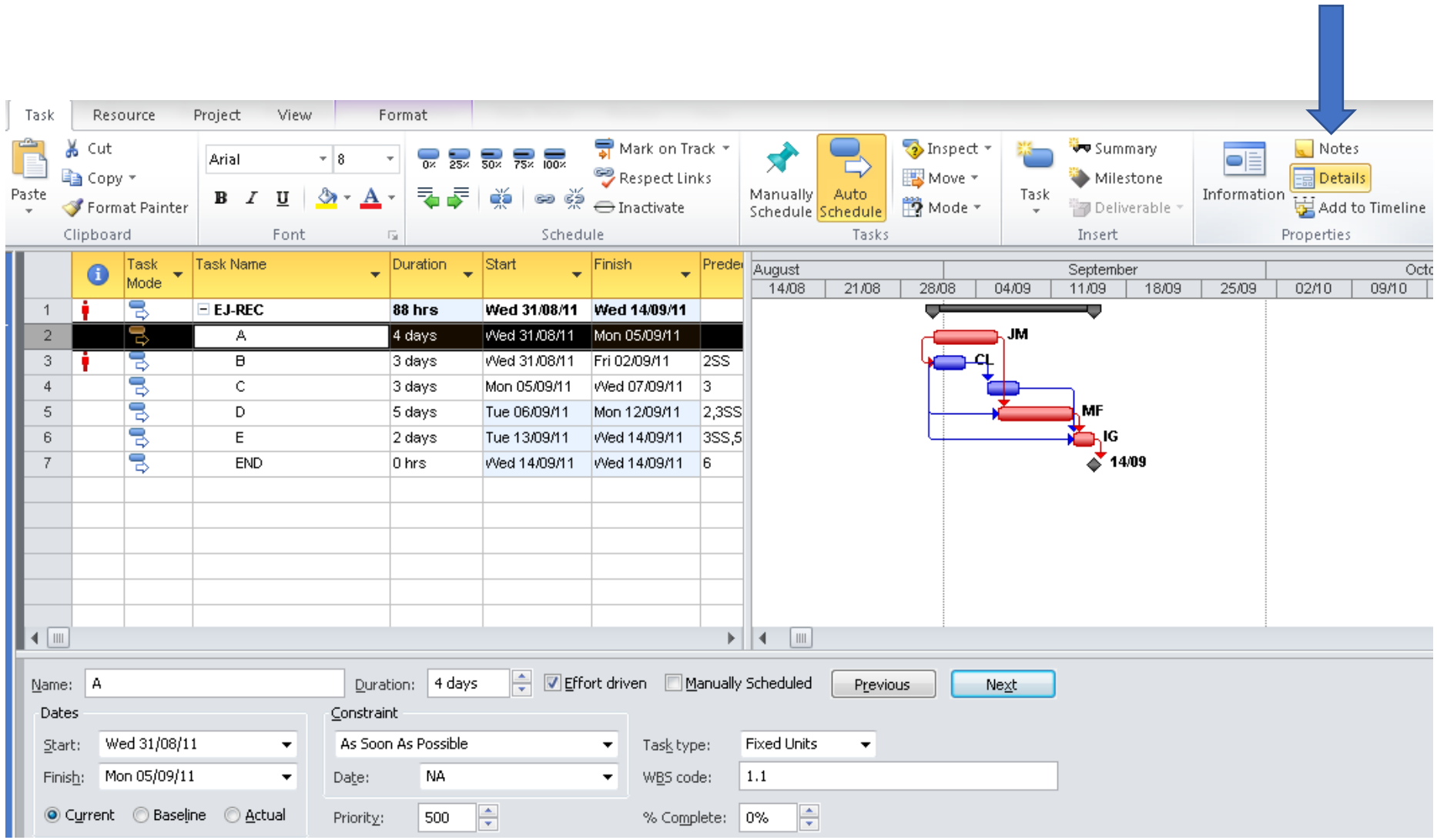
- There are a number of methods you can use to level resource allocation for a task:
- Increase the duration of a task. (This approach is used when resources are fixed.)
- Increase the number of resources assigned to a task. (This approach is used when task duration is fixed.)
- Reassign the task to another resource that is available.
- Reschedule the task to a time when the resource is available.
- Note: Project managers typically use a combination of these methods to achieve a level project.

- **Work duration, units**

Work = Duration * Units (Units = Resources)
Duration = Work/Units

(Adding additional resource units after the initial resource Assignment, the work will remain constant ➔ “effort-driven”)




Task
Resource
Project
View
Format
Paste
Cut
Copy
Format Painter
Clipboard
Arial
8
Font
Mark on Track
Respect Links
Inactivate
Schedule
Manually Schedule
Auto Schedule
Inspect
Move
Mode
Tasks
Task
Summary
Milestone
Deliverable
Insert
Information
Notes
Details
Add to Timeline
Properties
Task Mode
Task Name
Duration
Start
Finish
1 EJ-REC 88 hrs Wed 31/08/11 Wed 14/09/11
2 A 4 days Wed 31/08/11 Mon 05/09/11
3 B 3 days Wed 31/08/11 Fri 02/09/11 2SS
4 C 3 days Mon 05/09/11 Wed 07/09/11 3
5 D 5 days Tue 06/09/11 Mon 12/09/11 2,3SS
6 E 2 days Tue 13/09/11 Wed 14/09/11 3SS,5
7 END 0 hrs Wed 14/09/11 Wed 14/09/11 6
August
September
14/08
21/08
28/08
04/09
11/09
18/09
25/09
02/10
09/10
JM
CL
MF
IG
14/09
Name: A
Duration: 4 days
Effort driven
Manually Scheduled
Previous
Next
Dates
Start: Wed 31/08/11
Finish: Mon 05/09/11
Current
Baseline
Actual
Constraint
As Soon As Possible
Date: NA
Priority: 500
Task type: Fixed Units
WBS code: 1.1
% Complete: 0%

Effort driven

When you assign or remove people from a task, Project lengthens or shortens the duration of the task based on the number of resources that are assigned to it, but Project does not change the total work for the task. This is called effort-driven scheduling and is the setting Project typically uses when you assign resources to tasks.

1.Double-click the task.

2.In the **Task Information** box, click the **Advanced** tab.

3.Uncheck the **Effort driven** check box.

You can add the Effort Driven column to a sheet view. Right-click a column heading and then click **Insert Column**.

Although effort-driven scheduling works most of the time, you may want to change this to more accurately reflect what happens when resources are added or removed for a particular task. For example, you may want to see the total work increase as you add more people to a task.

Here are some exceptions to watch out for when you change the effort-driven setting.

Exception	Explanation
First assignment	Effort-driven calculations apply only after resources are initially assigned to the task. After the first resources are assigned, the work value doesn't change as new resources are assigned or removed from the same task.
Fixed work tasks	You can’t remove effort-driven scheduling from fixed-work tasks. Fixed work tasks do not have flexible work values, and are therefore always effort-driven.
Fixed unit tasks	If the assigned task type is fixed units, assigning additional resources shortens the duration of the task.
Fixed duration tasks	If the assigned task type is fixed duration, assigning additional resources decreases the individual unit values for resources.
Summary tasks	Summary tasks and inserted projects can’t be set to effort-driven.
Inserted projects	Inserted projects can’t be set to effort-driven.

When Effort Driven is set to:	And the Fixed field (task Type) is:	If enter the value - deliberately change:	Then the field that will recalculate is:	Any notes or comments:
Yes	Fixed Duration	Work	Units (Resources)	If Effort Driven is Yes, then the Work should not be changing
Yes	Fixed Duration	Units (Resources)	Work	
Yes	Fixed Duration	Duration	Work	If changing the Duration field, then the duration is not fixed and so this setting is least appropriate when changing the duration field
Yes	Fixed Work	Units (Resources)	Duration	
Yes	Fixed Work	Duration	Units	
Yes	Fixed Work	Work	Duration	If changing the Work field, then the work is not fixed and so this setting is least appropriate when changing the work field. If Effort Driven is Yes, then the Work should not be changing.
Yes	Fixed Units	Duration	Work	This does not make sense if Effort Driven means total amount of work on a task stays the same regardless of number of resources assigned

Yes	Fixed Units	Work	Duration	If Effort Driven is Yes, then the Work should not be changing
Yes	Fixed Units	Units (Resources)	Duration	If changing the Units field, then the units are not fixed and so this setting is least appropriate when changing the Units field
No	Fixed Duration	Work	Units	
No	Fixed Duration	Units (Resources)	Work	
No	Fixed Duration	Duration	Work	If changing the Duration field, then the duration is not fixed and so this setting is least appropriate when changing the duration field
No	Fixed Work	Units (Resources)	NA	Impossible – Fixed Work can't be non-effort-driven
No	Fixed Work	Duration	NA	Impossible – Fixed Work can't be non-effort-driven
No	Fixed Work	Work	NA	Impossible – Fixed Work can't be non-effort-driven
No	Fixed Units	Duration	Work	
No	Fixed Units	Work	Duration	
No	Fixed Units	Units (Resources)	Work	If changing the Units field, then the units are not fixed and so this setting is least appropriate when changing the Units field

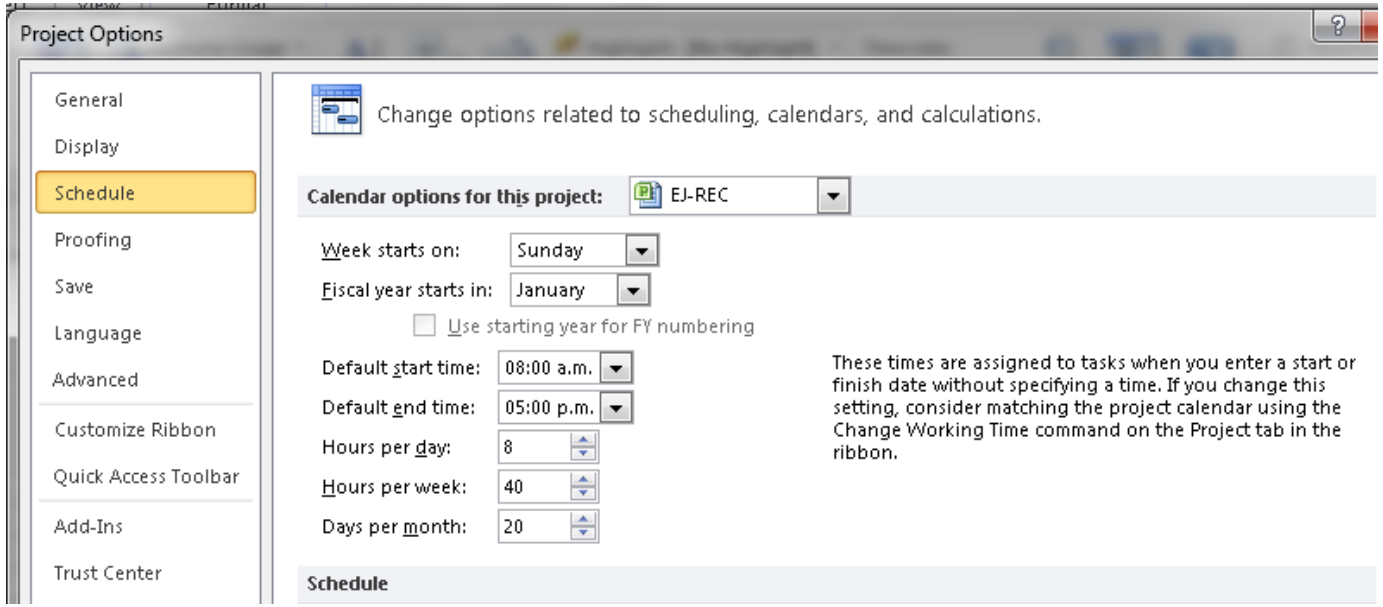
Calendarios

Objetivo:

- Introducir vacaciones
- Crear nuevos calendarios bases
- Modificar los días de trabajo estándar
- Modificar la jornada laboral estándar
- Asignar recursos a un nuevo calendario base
- Editar calendarios de recursos

- **Ver opciones de calendario**

File - Options



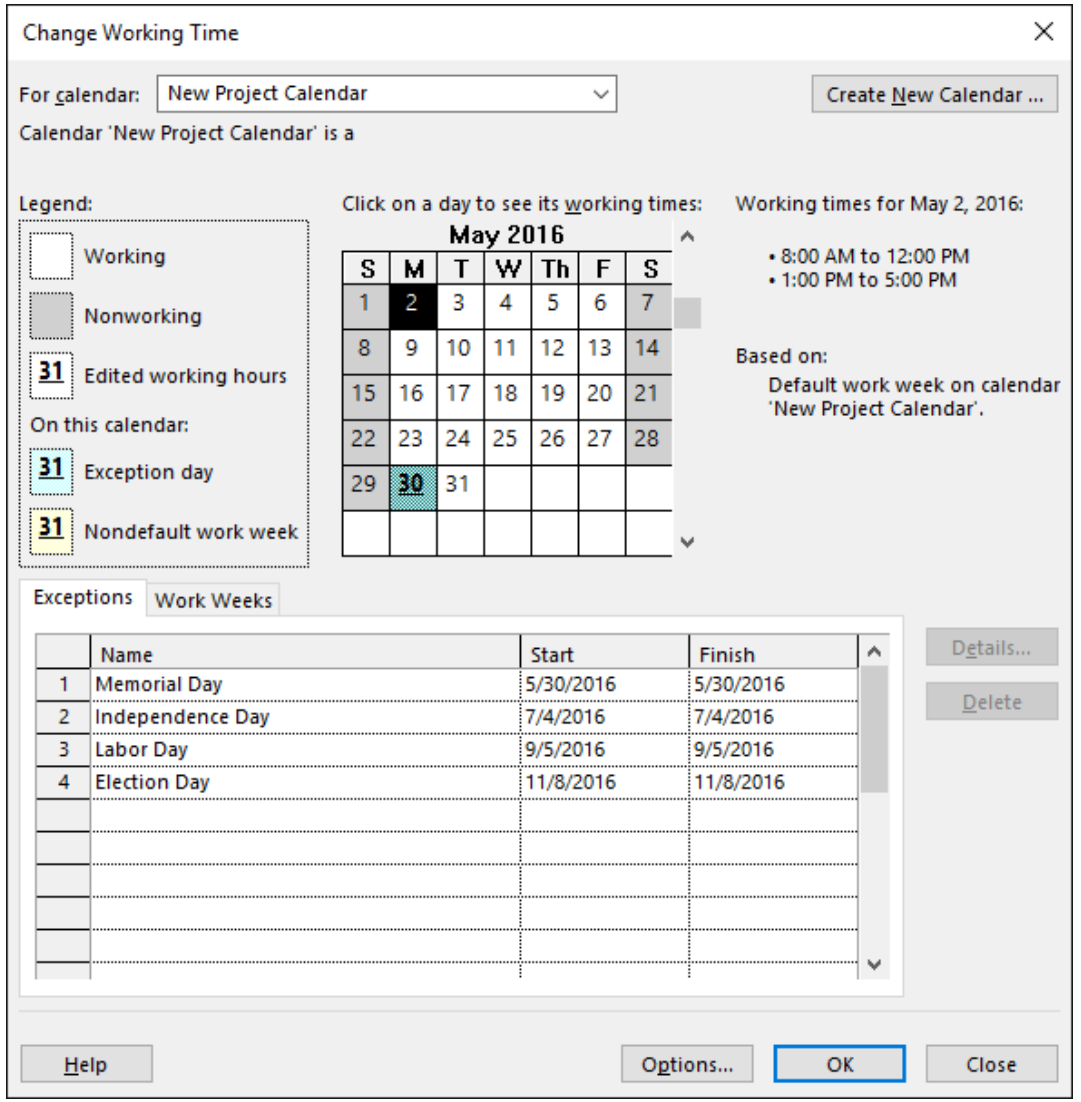
Base Calendars

- A ***base calendar*** defines the working days and working hours that can be used when assigning tasks and resources to the project. The base calendar that is assigned to your project can be viewed in the **Calendar** field in the **Project Information** dialog box. The **Standard** base calendar is the default for all new files you create, but you can change it to one of the other built-in base calendar options from the **Calendar** drop-down.
- The base calendar options include the following.

Base Calendar	Description
Standard	Monday through Friday 8:00 AM to 12:00 PM 1:00 PM to 5:00 PM
Night Shift	Tuesday through Friday 12:00 AM to 3:00 AM 4:00 AM to 8:00 AM 11:00 PM to 12:00 AM Saturday 12:00 AM to 3:00 AM 4:00 AM to 8:00 AM
24 Hours	24 hours a day 7 days a week

Working time refers to any time when labor is being performed on a task or by a resource in order to complete the project. Nonworking time refers to any time when labor is not being performed. Depending on your organization's typical work schedule, you may have different working and nonworking time than what is defined in the default hours of Microsoft Project's base calendar. If so, you can create a base calendar that defines your organization's working and nonworking dates and times, including any holidays that the company observes, and apply it to the project.

To modify working time, select the **Project** tab on the ribbon, and then select the **Change Working Time** button in the **Properties** command group. In the **Change Working Time** dialog box, you can view and change working time via the calendar that is displayed.

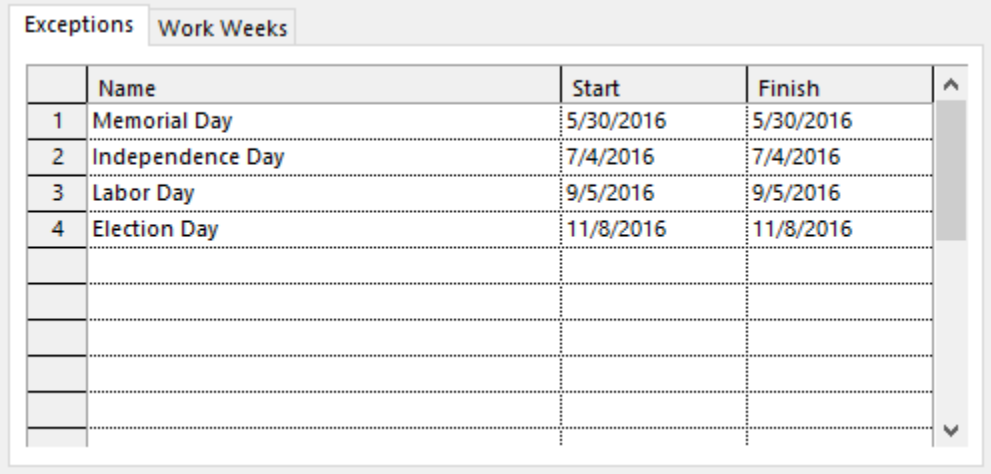


The **Legend** on the left side of the calendar provides a brief explanation of how each type of time appears in the calendar, and the table below provides a more detailed description of each classification.

Appearance	Meaning
Working	Labor will be performed during the defined working hours on this date.
Nonworking	Labor will not be performed during the defined working hours on this date. This typically includes weekends and holidays.
Edited working hours	The hours during which labor will be performed on this date have been changed to something other than the normal working hours.
Exception day	The hours during which labor will be performed on this date are different than the normal working hours. For instance, an organization may only be operating during the morning on the day before a major holiday.
Nondefault work week	The hours during which labor will be performed during this entire week are different than the normal working hours. For instance, an organization may shut down operations for an entire week if a majority of employees will be out on vacation.

Exceptions

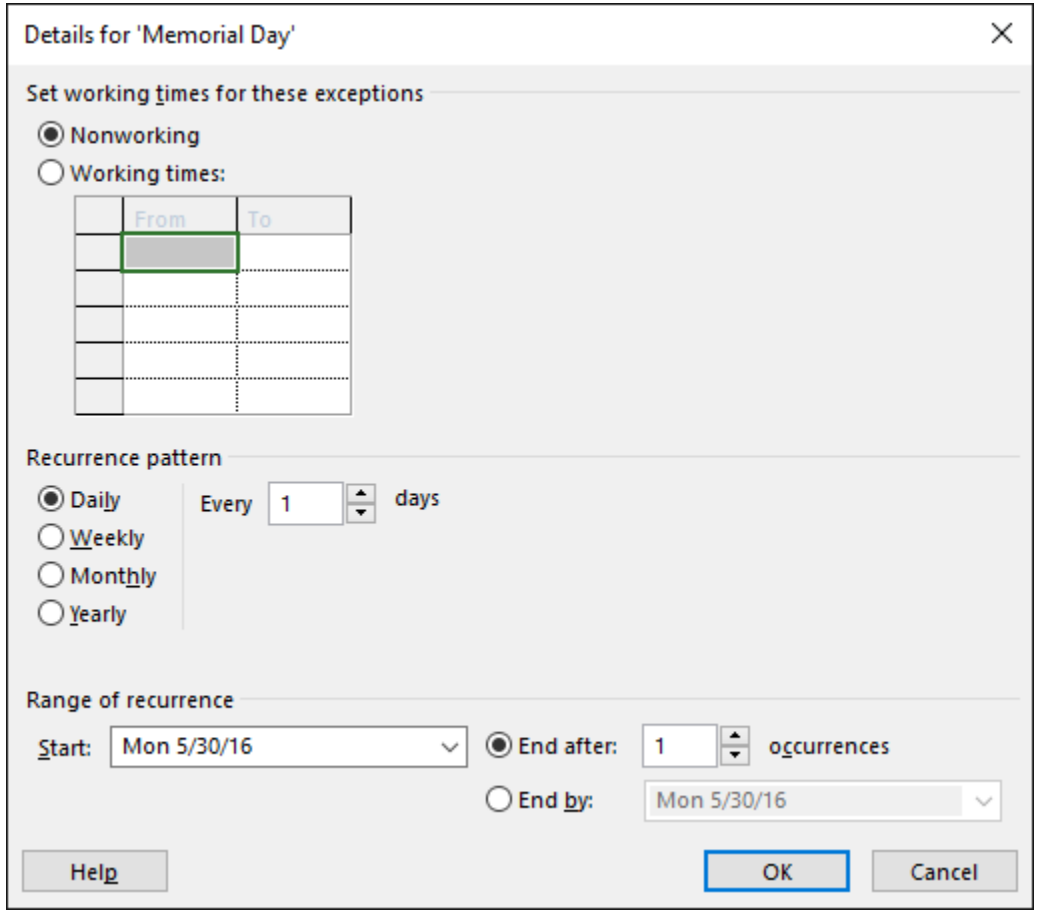
- In Microsoft Project, an ***exception*** is any date (or dates) when the defined working time is different than the normal working time in the base calendar. Often, an exception will be a holiday that you have added to your base calendar. All of the exceptions for the selected base calendar are displayed in the **Exceptions** table below the calendar in the **Change Working Time** dialog box.
- You can add an exception to the base calendar by selecting a date in the calendar in the **Change Working Time** dialog box and entering a name for the exception in a blank row in the **Exceptions** table.

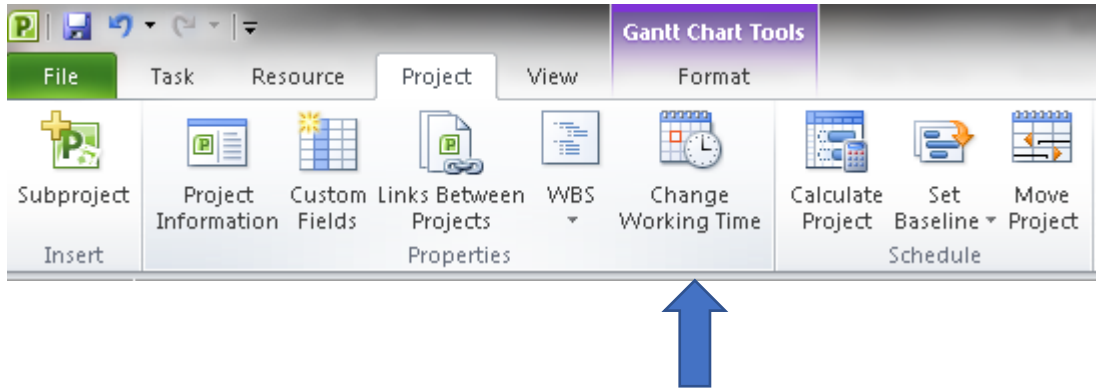


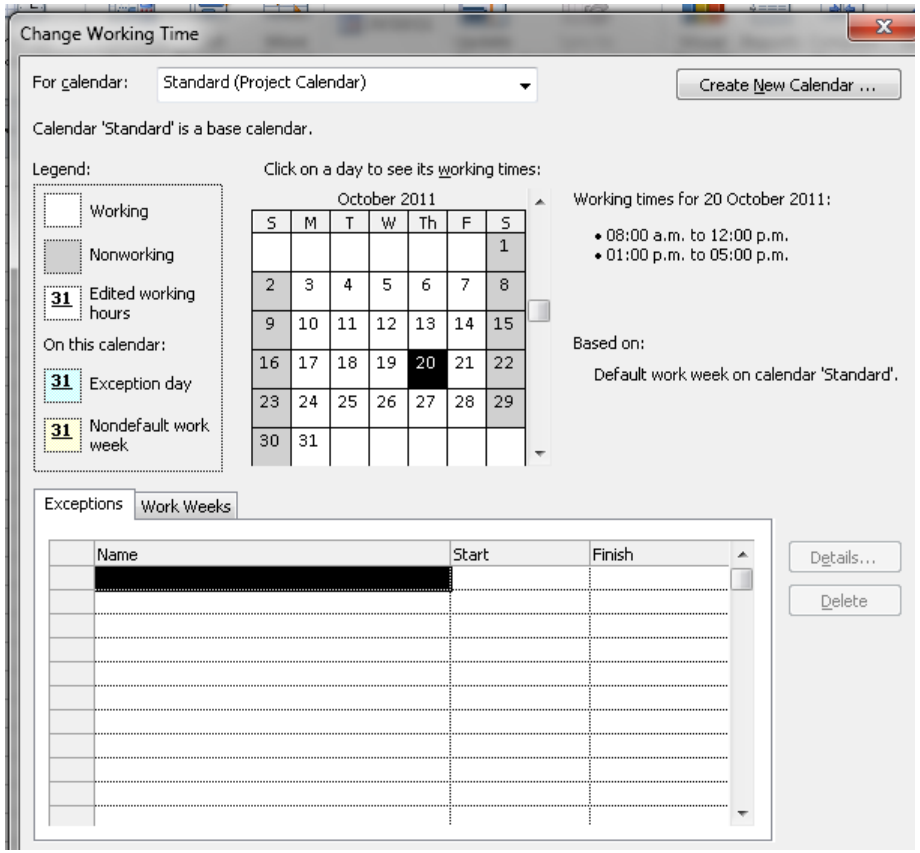
Working Time vs. Non-Working Time for Exceptions

By default, when you add an exception to your base calendar, it is automatically added as an entire day of nonworking time. However, if the organization will actually be working some of the day—say, just the morning of the day before a major holiday—you can make part of the day working time and part of the day nonworking time. You can do so by selecting the exception in the **Exceptions** table and then selecting the **Details** button.

In the **Details** dialog box, you can view and modify the specific details for the selected exception. Here, you can set the desired working times for the exception and even set up a recurrence for the exception. For instance, if your organization needs to stay open for a few nights in a row to perform an inventory, you may extend the working times for the exception date and set up a recurrence to repeat daily for the next three days. The recurrence feature is also useful for a holiday that does not change from year to year (for example, Labor Day is the first Monday in September).



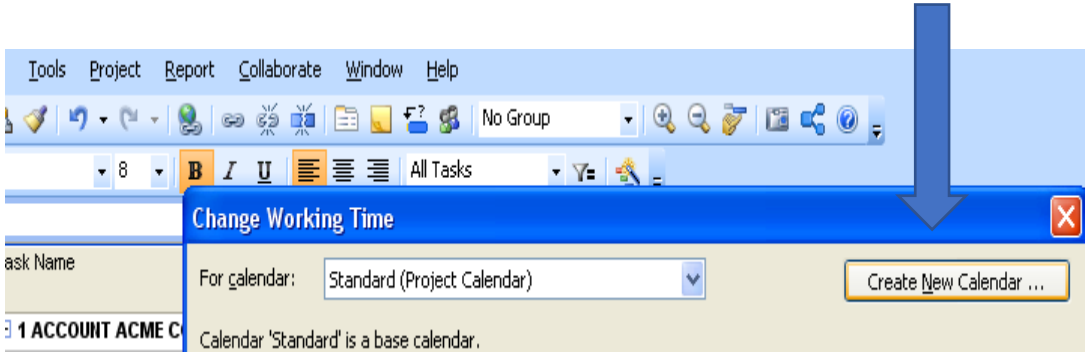




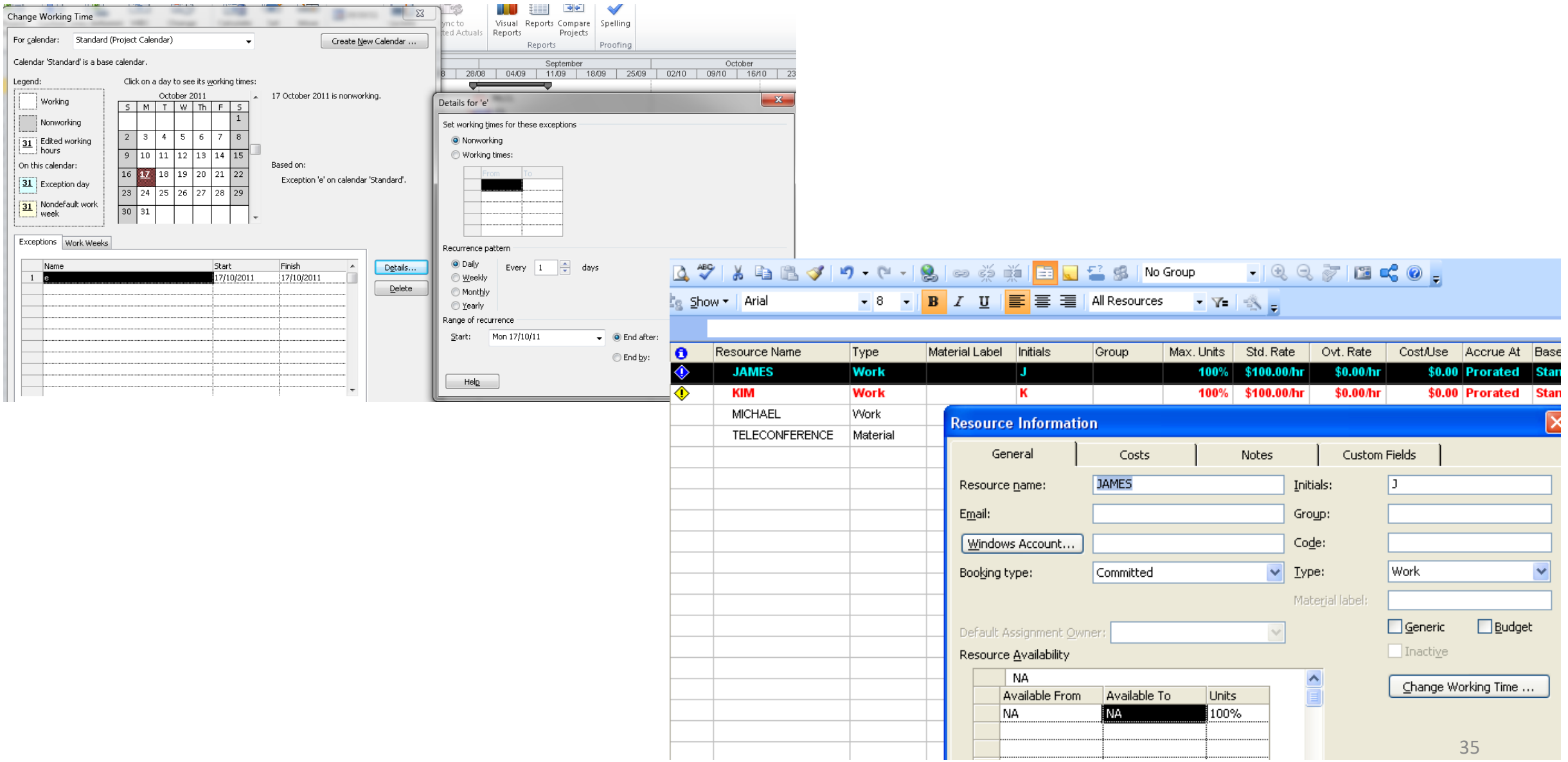
- Crear un nuevo calendario base

Tools – Change working time

- Nombre : Late Shift



- Revisar que esté la opción de copiar del calendario estándar
- Cambiar el horario en este calendario de Lunes a Viernes de 3 pm a 7 pm y de 7:30 pm a 11:30 pm


Change Working Time
For calendar: Standard (Project Calendar)
Create New Calendar ...
Calendar 'Standard' is a base calendar.
Legend:
Working
Nonworking
Edited working hours
On this calendar:
Exception day
Nondefault work week
Click on a day to see its working times:
October 2011
17 October 2011 is nonworking.
Based on:
Exception 'e' on calendar 'Standard'.
Exceptions
Work Weeks
Name
Start
Finish
e
17/10/2011
17/10/2011
Details...
Delete
Visual Reports
Reports
Compare Projects
Spelling
Reports
Proofing
September
October
Details for 'e'
Set working times for these exceptions
Nonworking
Working times:
From
To
Recurrence pattern
Daily
Weekly
Monthly
Yearly
Every 1 days
Range of recurrence
Start: Mon 17/10/11
End after:
End by:
Help
No Group
Show
Arial
8
All Resources
Resource Name
Type
Material Label
Initials
Group
Max. Units
Std. Rate
Ovt. Rate
Cost/Use
Accrue At
JAMES
Work
J
100%
$100.00/hr
$0.00/hr
$0.00
Prorated
KIM
Work
K
100%
$100.00/hr
$0.00/hr
$0.00
Prorated
MICHAEL
Work
TELECONFERENCE
Material
Resource Information
General
Costs
Notes
Custom Fields
Resource name: JAMES
Initials: J
Email:
Group:
Windows Account...
Code:
Booking type: Committed
Type: Work
Material label:
Default Assignment Owner:
Generic
Budget
Inactive
Resource Availability
NA
Available From
Available To
Units
NA
NA
100%
Change Working Time ...

• Asignar recursos a diferentes calendarios base

Abrir la “hoja de recursos”

Seleccionar un recurso

Seleccionar “Horario de trabajo”

Seleccionar el calendario para Late Shift

Resource Name	Type	Material Label	Initials	Group	Max. Units	Std. Rate	Ovt. Rate	Cost/Use	Accrue At	Base Calendar
JAMES	Work		J		100%	$100.00/hr	$0.00/hr	$0.00	Prorated	Standard
KIM	Work		K		100%	$100.00/hr	$0.00/hr	$0.00	Pro	
MICHAEL	Work		M		100%	$100.00/hr	$0.00/hr	$0.00	Pror	
TELECONFERENCE	Material		T	I		$0.00		$300.00	Pror	

24 Hours
LATE SHIFT
Night Shift
Standard

• Presentar el proyecto en forma de calendario

Ver - Calendario

Cargas de trabajo

• Ver recursos de cargas de trabajo nos permite saber si hemos planeado más capacidad de la disponible en algunos recursos o cuales recursos están planeados por debajo de su capacidad.

•Cuando un curso tiene planeada más capacidad de la disponible nos aparecerá en rojo

	Resource Name	Type	Material Label	Initials	Group	Max. Units	Std. Rate	Ovt. Rate	Cost/Use	Accrue At	Base Calendar
1	JAMES	Work		J		100%	$100.00/hr	$0.00/hr	$0.00	Prorated	Standard
2	KIM	Work		K		100%	$100.00/hr	$0.00/hr	$0.00	Prorated	Standard
3	MICHAEL	Work		M		100%	$100.00/hr	$0.00/hr	$0.00	Prorated	Standard
4	TELECONFERENCE	Material		T	I		$0.00		$300.00	Prorated	

•Seleccionar la vista de “uso de recursos”
• Seleccionar un recurso
• Ir a la tarea seleccionada
• Con F5 seleccionar ir a una fecha determinada

Resource Name	Work	Details	9 M	T	W	T
Unassigned	0 hrs	Work				
JAMES	120 hrs	Work	24h	8h	8h	
CONTACT ID	24 hrs	Work	8h	8h	8h	
WRITE DETA	8 hrs	Work	8h			
PRESENTATI	8 hrs	Work	8h			
MAINTAIN CC	16 hrs	Work				
BEGIN CUSTI	24 hrs	Work				
KEY ITEMS	16 hrs	Work				
APPROVAL	24 hrs	Work				
KIM	96 hrs	Work	17.6h	14.4h	14.4h	1.6h
SOFTWARE I	16 hrs	Work	1.6h	6.4h	6.4h	1.6h
LICENSES	24 hrs	Work	8h	8h	8h	
WRITE DETA	8 hrs	Work	8h			
ACME BUDGI	16 hrs	Work				
CALL IT DIRE	16 hrs	Work				
SEND INVOIC	8 hrs	Work				
SET UP FOLL	8 hrs	Work				

Automatic Resource Leveling

- In Microsoft Project, you can also automatically level overallocations. Leveling works by splitting tasks or adding a delay to tasks until the resources that are assigned to them are no longer overallocated. When performing this automatic leveling, Microsoft Project does not change who is assigned to each task and does not level the material resources, cost resources, or proposed resources; it only levels the work resources, generic resources and committed resources. Because of these changes, leveling can delay the finish date of some tasks and, consequently, also delay the project's finish date.
- **Note:** Prior to leveling, you may want to set the task priorities in the **Task Information** dialog box. The priority sets the task's importance in the schedule and its availability for leveling. Tasks that have lower priority are delayed or split before those that have a higher priority.

Command	Function
Level Selection	The selected tasks will be leveled according to the settings configured in the **Leveling Options** dialog box. This command is only active when you select two or more tasks.
Level Resource	The selected resource will be leveled according to the settings configured in the **Leveling Options** dialog box.
Level All	All overallocated resources will be leveled according to the settings configured in the **Leveling Options** dialog box.
Leveling Options	The **Leveling Options** dialog box opens, where you can choose how Microsoft Project will level your resources.
Clear Leveling	Any leveling you previously applied to the project plan will be undone. If two or more tasks were selected, only the leveling for those tasks will be cleared.
Next Overallocation	The next overallocated resource in the project plan is selected.

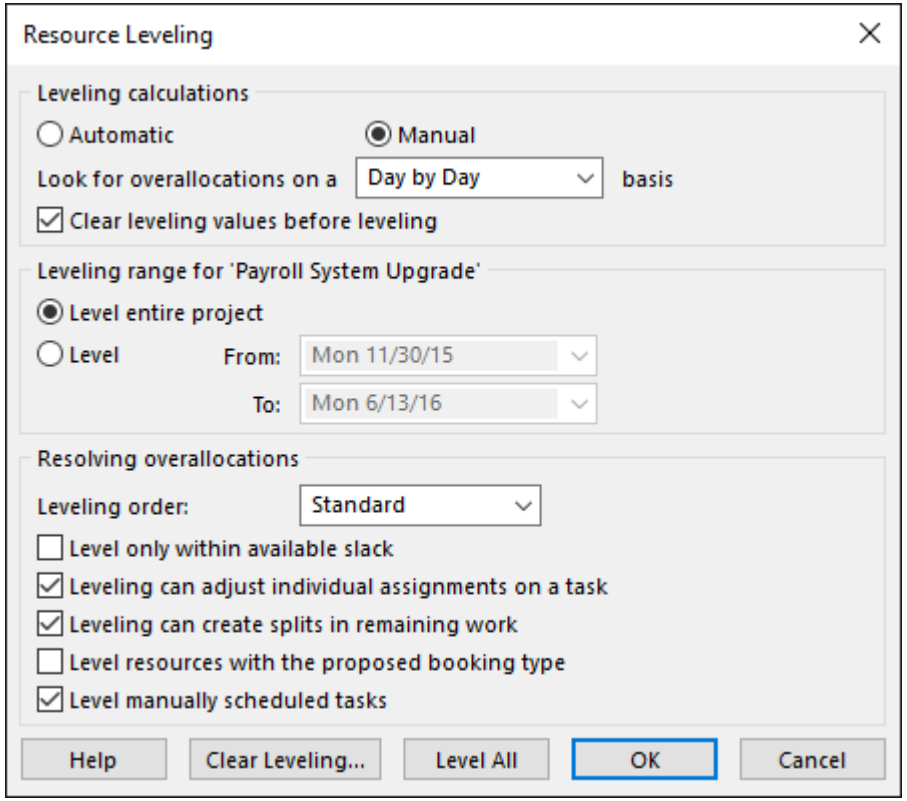
The Resource Leveling Dialog Box

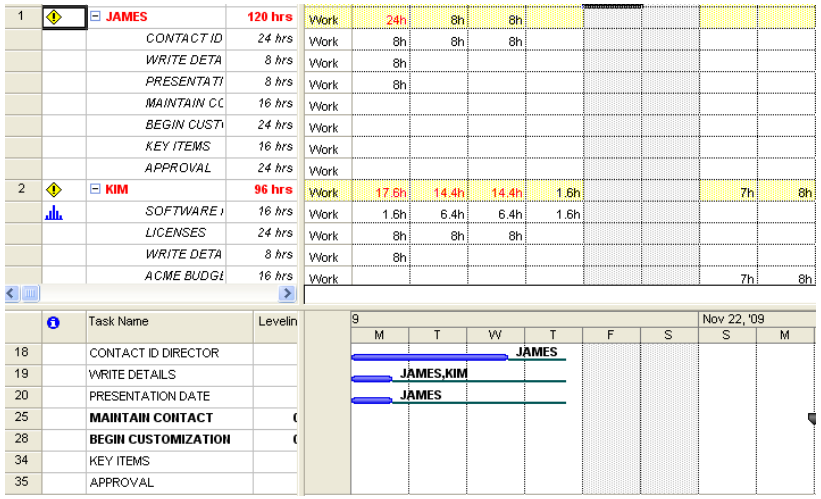
You can control how Microsoft Project levels your resources by selecting Leveling Options and then setting the leveling parameters in the **Resource Leveling** dialog box.

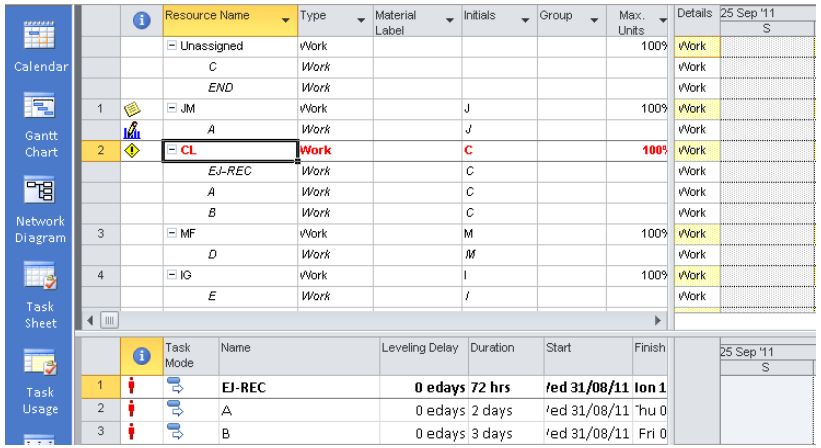
There are many options that can be configured from the dialog box:

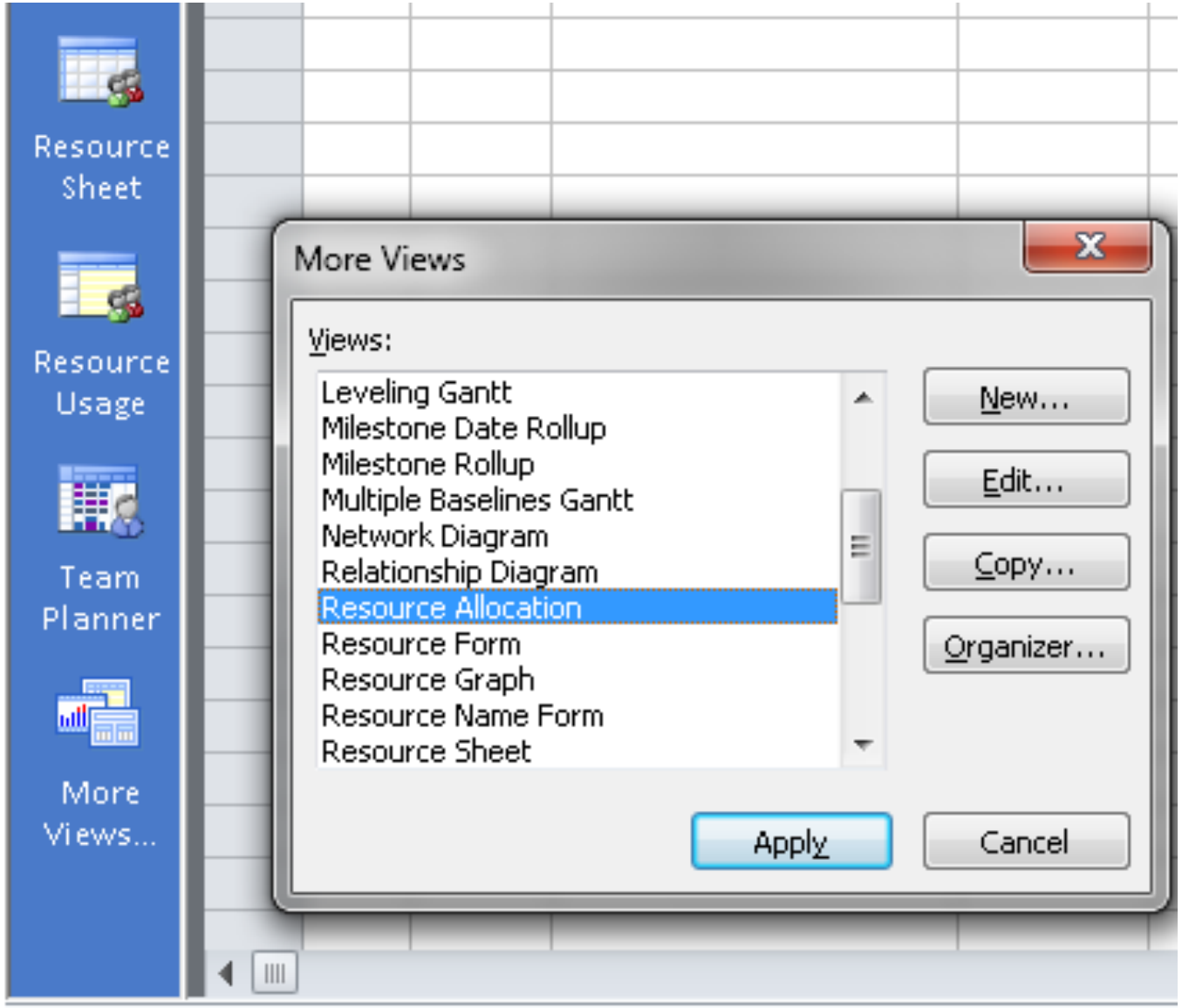
- You can choose between **Automatic** and **Manual** for how leveling calculations will be made.
- You can choose by which unit of time that overallocations will be identified. The default is **Day by Day, but you can also choose from Minute by Minute, Hour by Hour, Week by Week, or Month by Month.**
- You can choose whether to clear old leveling values before applying the new leveling calculations.
- You can choose whether to level the entire project or only for a specific period of time that you select.
- You can choose the order in which tasks will be leveled. The default is **Standard, but you can also choose from ID Only or Priority, Standard.**
- You can choose which built-in leveling rules are followed when resolving overallocations.

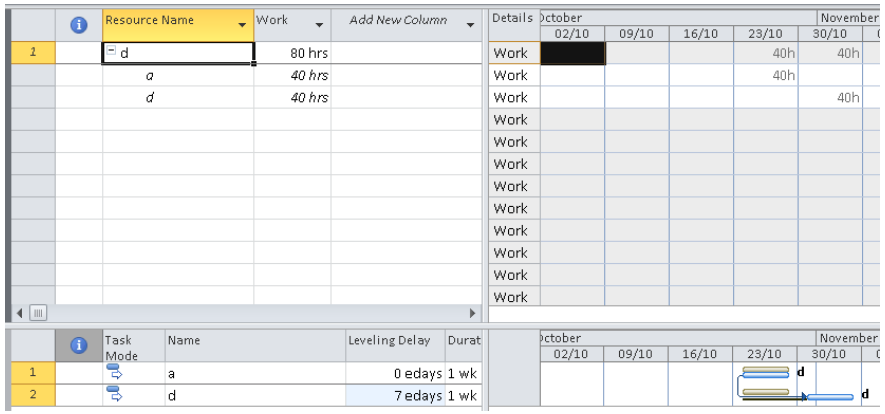
From within the dialog box you can also choose to clear any leveling you have already applied to the project plan or choose to level all overallocated resources using the parameters you just set.

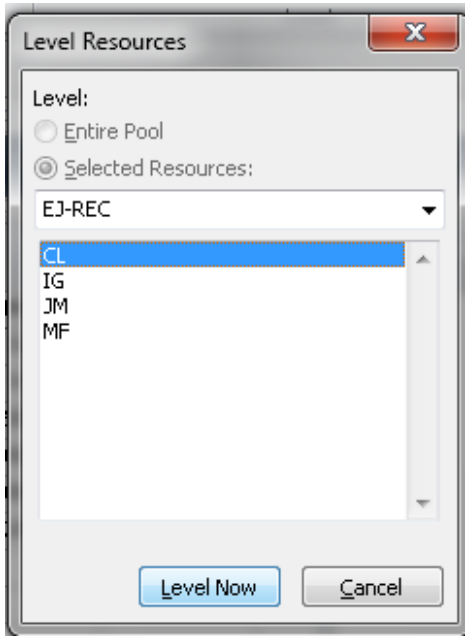


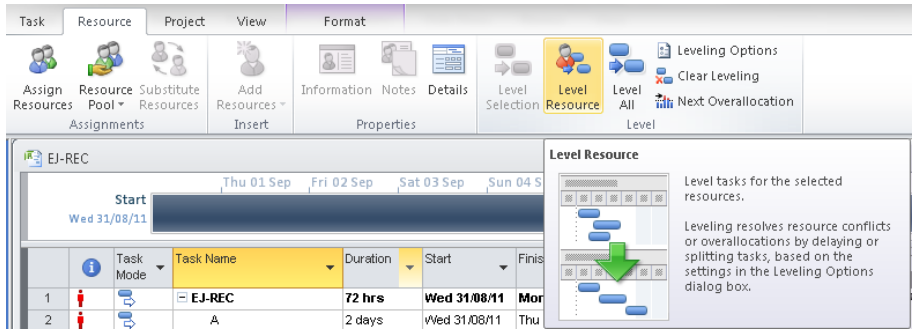

JAMES
CONTACT ID
WRITE DETA
PRESENTATI
MAINTAIN CC
BEGIN CUST
KEY ITEMS
APPROVAL
KIM
SOFTWARE
LICENSES
WRITE DETA
ACME BUDGI
Task Name
CONTACT ID DIRECTOR
WRITE DETAILS
PRESENTATION DATE
MAINTAIN CONTACT
BEGIN CUSTOMIZATION
KEY ITEMS
APPROVAL
Nov 22, '09
JAMES
JAMES,KIM
JAMES

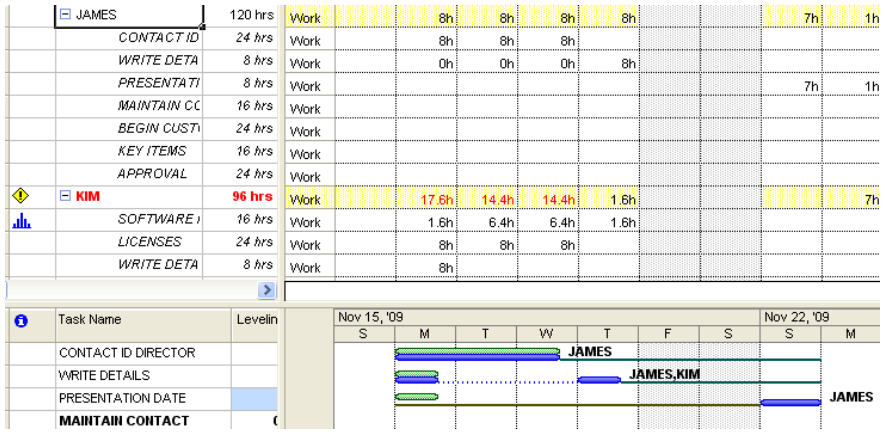

Calendar
Gantt Chart
Network Diagram
Task Sheet
Task Usage
Resource Name
Type
Material Label
Initials
Group
Max. Units
Unassigned
C
END
JM
A
CL
EJ-REC
A
B
MF
D
IG
E
Task Mode
Name
Leveling Delay
Duration
Start
Finish
EJ-REC
A
B
25 Sep '11


Resource Sheet
Resource Usage
Team Planner
More Views...
More Views
Views:
Leveling Gantt
Milestone Date Rollup
Milestone Rollup
Multiple Baselines Gantt
Network Diagram
Relationship Diagram
Resource Allocation
Resource Form
Resource Graph
Resource Name Form
Resource Sheet
New...
Edit...
Copy...
Organizer...
Apply
Cancel


Resource Name
Work
Add New Column
d
80 hrs
a
40 hrs
d
40 hrs
Details
October
November
02/10
09/10
16/10
23/10
30/10
Work
40h
Task Mode
Name
Leveling Delay
Durat
a
0 edays
1 wk
d
7 edays
1 wk


Level Resources
Level:
Entire Pool
Selected Resources:
EJ-REC
CL
IG
JM
MF
Level Now
Cancel

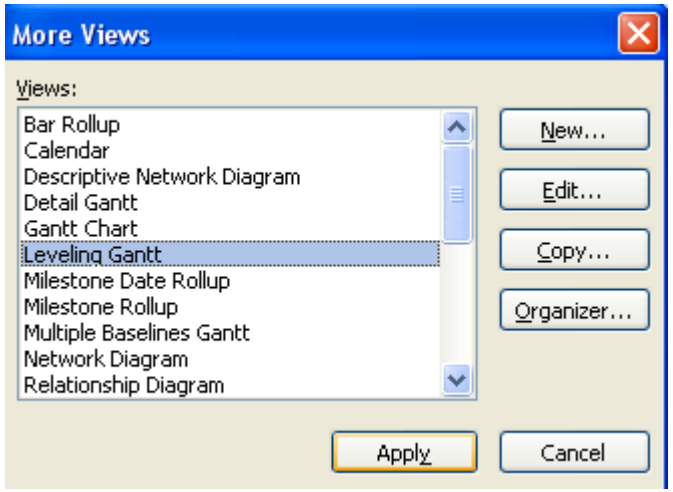

Task
Resource
Project
View
Format
Assign Resources
Resource Pool
Substitute Resources
Add Resources
Information
Notes
Details
Level Selection
Level Resource
Level All
Leveling Options
Clear Leveling
Next Overallocation
Assignments
Insert
Properties
Level
EJ-REC
Start
Wed 31/08/11
Thu 01 Sep
Fri 02 Sep
Sat 03 Sep
Sun 04 S
Task Mode
Task Name
Duration
Start
1
EJ-REC
72 hrs
Wed 31/08/11
2
A
2 days
Wed 31/08/11
Level Resource
Level tasks for the selected resources.
Leveling resolves resource conflicts or overallocations by delaying or splitting tasks, based on the settings in the Leveling Options dialog box.

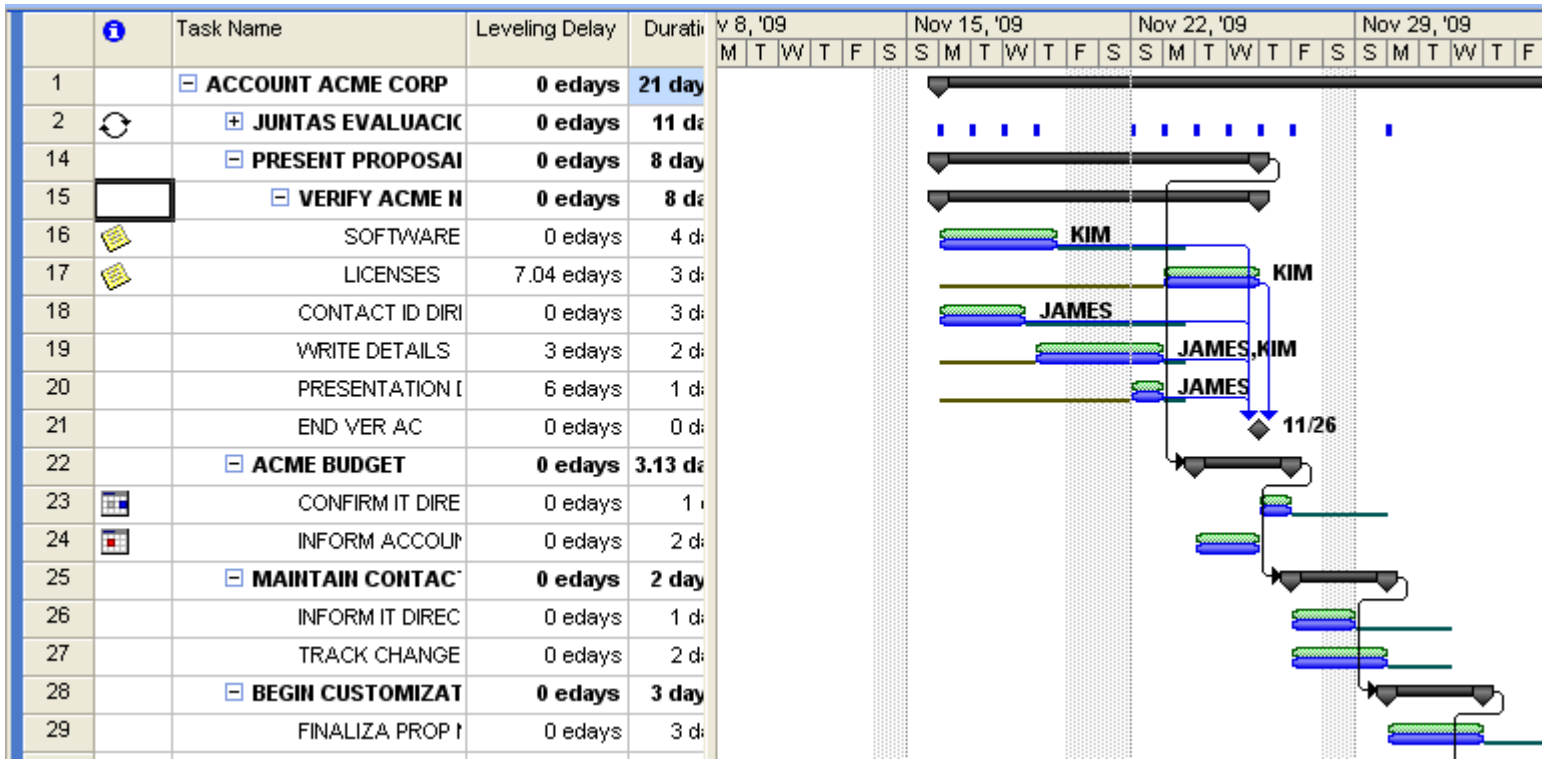

JAMES
120 hrs
CONTACT ID
24 hrs
WRITE DETA
8 hrs
PRESENTATI
8 hrs
MAINTAIN CC
16 hrs
BEGIN CUST
24 hrs
KEY ITEMS
16 hrs
APPROVAL
24 hrs
KIM
96 hrs
SOFTWARE
16 hrs
LICENSES
24 hrs
WRITE DETA
8 hrs
Work
Task Name
Levelin
Nov 15, '09
Nov 22, '09
S
M
T
W
T
F
S
S
M
CONTACT ID DIRECTOR
WRITE DETAILS
PRESENTATION DATE
MAINTAIN CONTACT
JAMES
JAMES,KIM
JAMES

Nivelación de cargas de trabajo

Revisar cambios automáticos de nivelación

Los días originales de la tarea aparecen en verde mientras la nueva calendarización aparece en azul



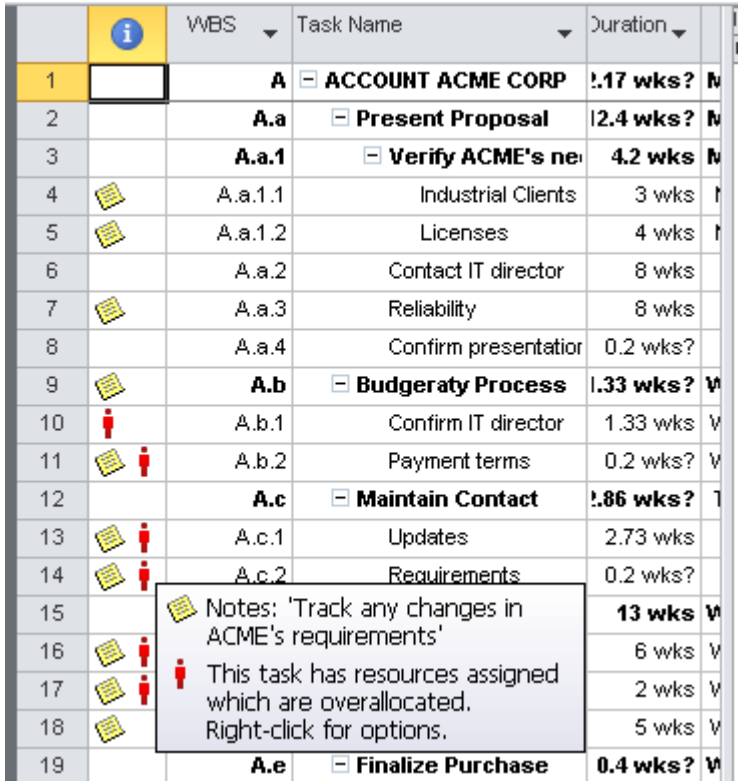


Tarea con un recurso sobre-asignado.

• Incrementar las unidades máximas de los recursos

•Seleccionar un recurso
Ir a la sobreasignación
Dar doble click a un recurso
•Aumentar las unidades a 200%
Se resolvió el problema de sobre asignación

• Cambiar trabajo en una tarea asignada
Eliminar las horas de trabajo de una tarea

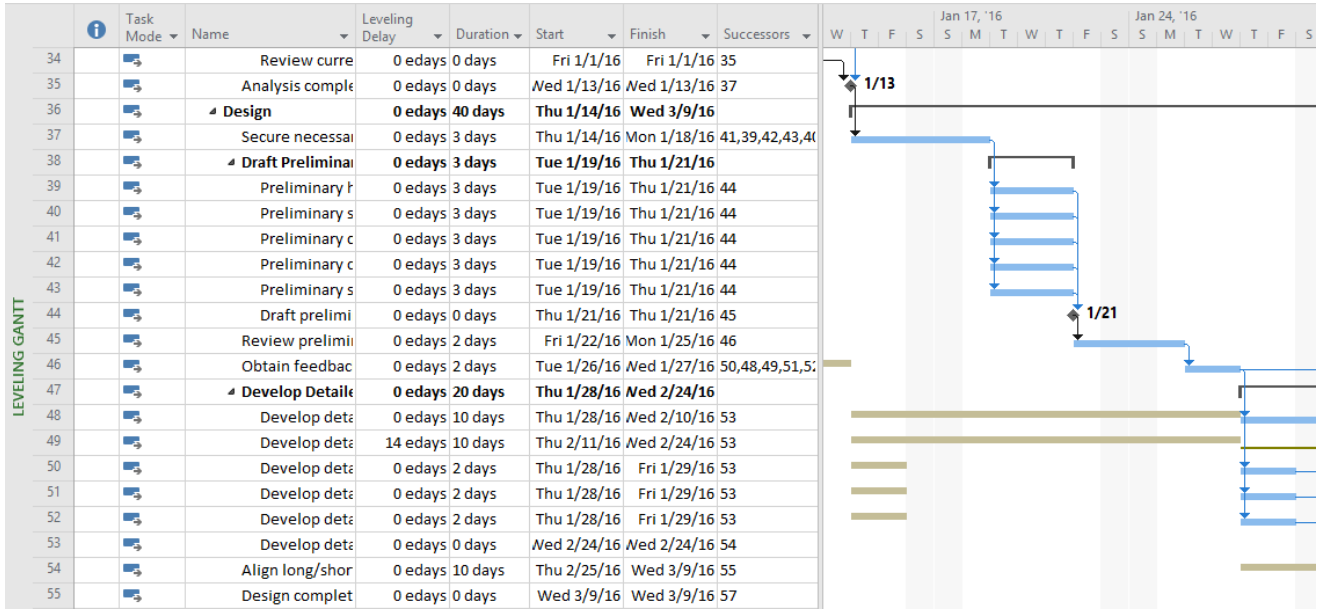


- When you identify that there are overallocated work resources in your project plan, you need to level them. ***Leveling*** refers to the modifications made to a task to resolve resource overallocation.
- There are a number of methods you can use to level resource allocation for a task:
- Increase the duration of a task. (This approach is used when resources are fixed.)
- Increase the number of resources assigned to a task. (This approach is used when task duration is fixed.)
- Reassign the task to another resource that is available.
- Reschedule the task to a time when the resource is available.
- Note: Project managers typically use a combination of these methods to achieve a level project.

The Leveling Gantt Chart

When you utilize Microsoft Project's automatic leveling function, many changes will be made to your project plan without you seeing them. It may be useful to review these modifications using the Leveling Gantt Chart, which shows you a comparison of your project plan before leveling and after leveling. In the Leveling Gantt Chart, each task will appear with two different colored bars, one for its placement in the project schedule before leveling and for after leveling. You can also view the delay caused by leveling in the Leveling Delay column.

If you are not happy with the changes made through automatic leveling, you can clear the changes and either make adjustments to the **Leveling Options** and try again or you identify which tasks need adjustments and make them manually.

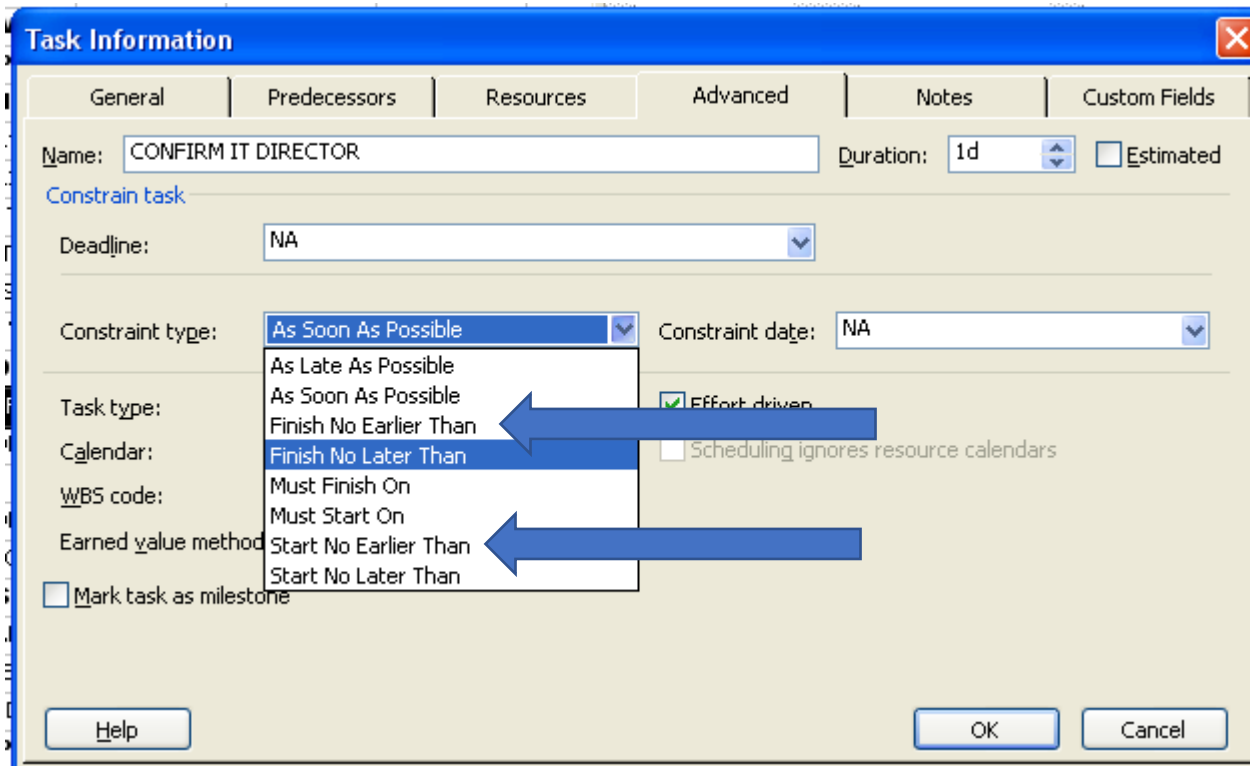


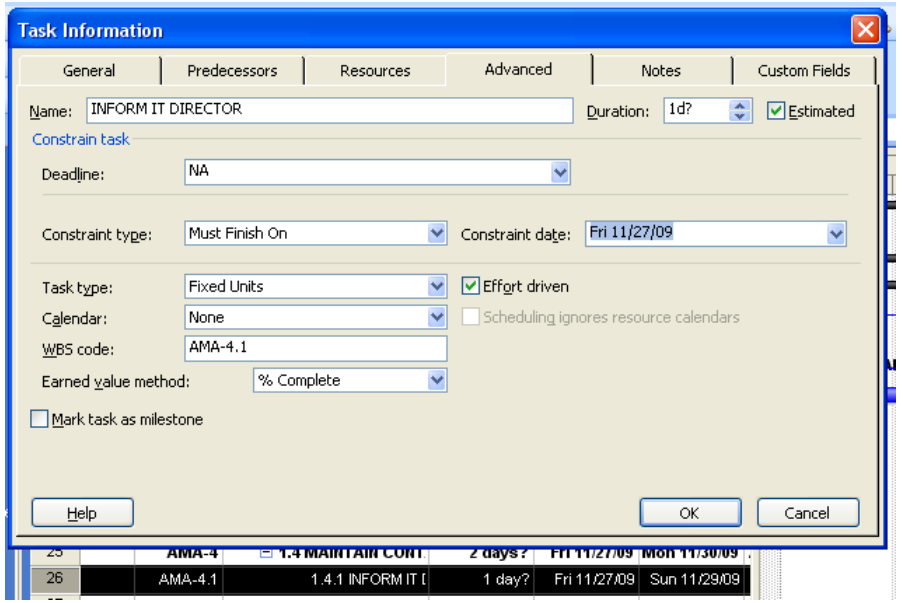
	Task Mode	Name	Leveling Delay	Duration	Start	Finish	Successors
34		Review curre	0 edays	0 days	Fri 1/1/16	Fri 1/1/16	35
35		Analysis comple	0 edays	0 days	Wed 1/13/16	Wed 1/13/16	37
36		**Design**	**0 edays**	**40 days**	**Thu 1/14/16**	**Wed 3/9/16**	
37		Secure necessar	0 edays	3 days	Thu 1/14/16	Mon 1/18/16	41,39,42,43,4(
38		**Draft Preliminar**	**0 edays**	**3 days**	**Tue 1/19/16**	**Thu 1/21/16**	
39		Preliminary h	0 edays	3 days	Tue 1/19/16	Thu 1/21/16	44
40		Preliminary s	0 edays	3 days	Tue 1/19/16	Thu 1/21/16	44
41		Preliminary c	0 edays	3 days	Tue 1/19/16	Thu 1/21/16	44
42		Preliminary c	0 edays	3 days	Tue 1/19/16	Thu 1/21/16	44
43		Preliminary s	0 edays	3 days	Tue 1/19/16	Thu 1/21/16	44
44		Draft prelimi	0 edays	0 days	Thu 1/21/16	Thu 1/21/16	45
45		Review prelimi	0 edays	2 days	Fri 1/22/16	Mon 1/25/16	46
46		Obtain feedbac	0 edays	2 days	Tue 1/26/16	Wed 1/27/16	50,48,49,51,5
47		**Develop Detaile**	**0 edays**	**20 days**	**Thu 1/28/16**	**Wed 2/24/16**	
48		Develop deta	0 edays	10 days	Thu 1/28/16	Wed 2/10/16	53
49		Develop deta	14 edays	10 days	Thu 2/11/16	Wed 2/24/16	53
50		Develop deta	0 edays	2 days	Thu 1/28/16	Fri 1/29/16	53
51		Develop deta	0 edays	2 days	Thu 1/28/16	Fri 1/29/16	53
52		Develop deta	0 edays	2 days	Thu 1/28/16	Fri 1/29/16	53
53		Develop deta	0 edays	0 days	Wed 2/24/16	Wed 2/24/16	54
54		Align long/shor	0 edays	10 days	Thu 2/25/16	Wed 3/9/16	55
55		Design complet	0 edays	0 days	Wed 3/9/16	Wed 3/9/16	57

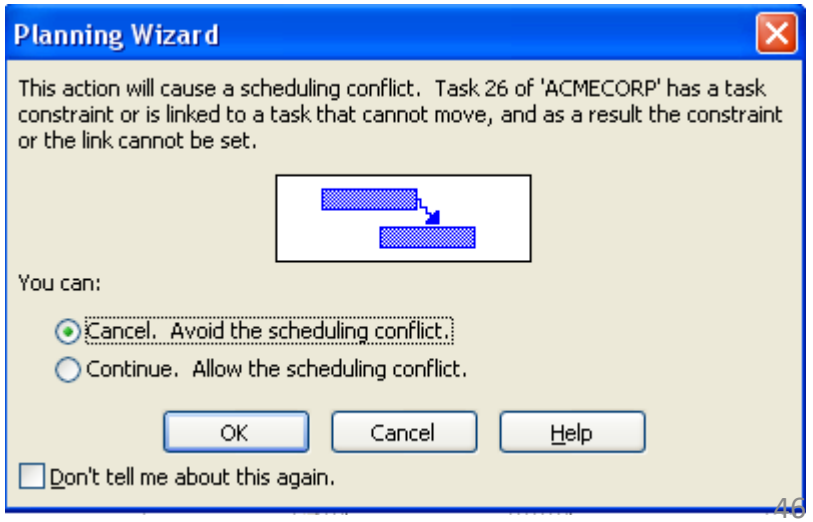
Restricciones

Calendarizar tareas con restricciones

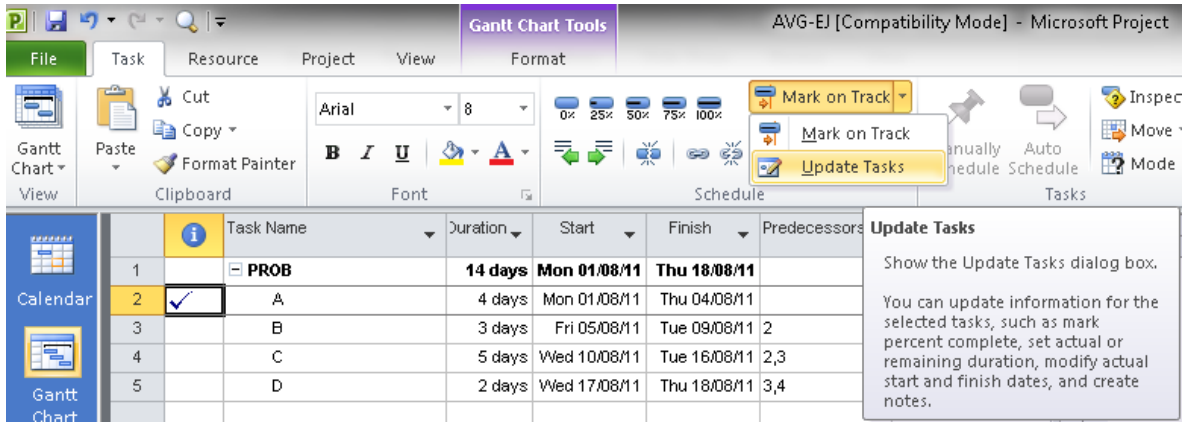
- Aplicar una restricción flexible

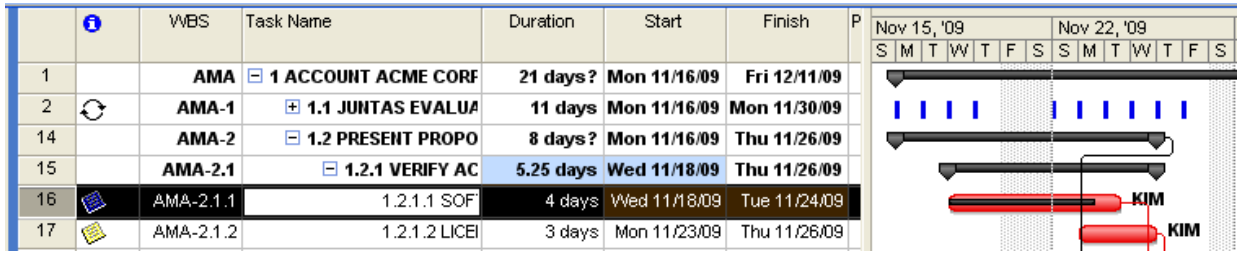


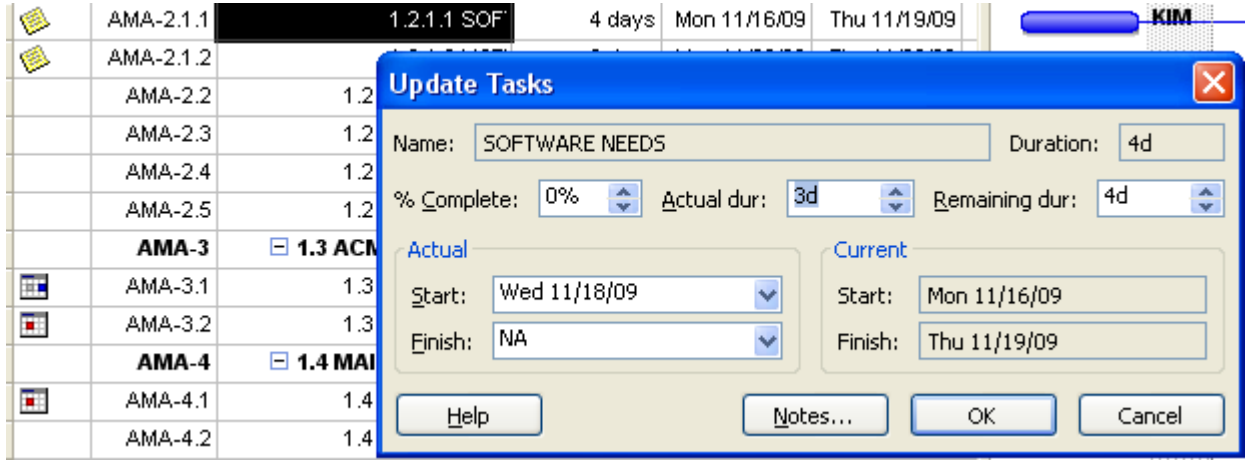




Seguimiento



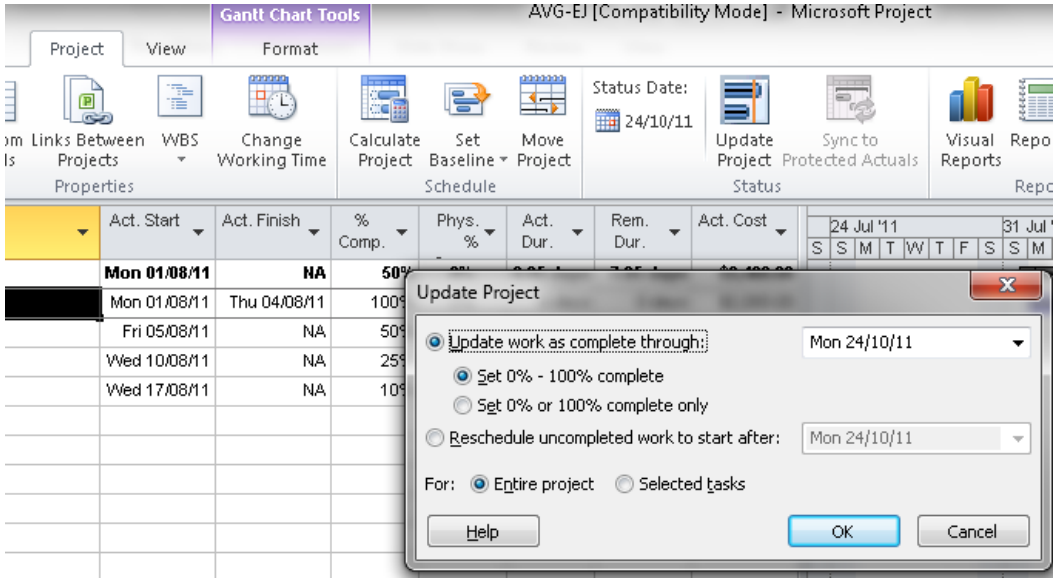


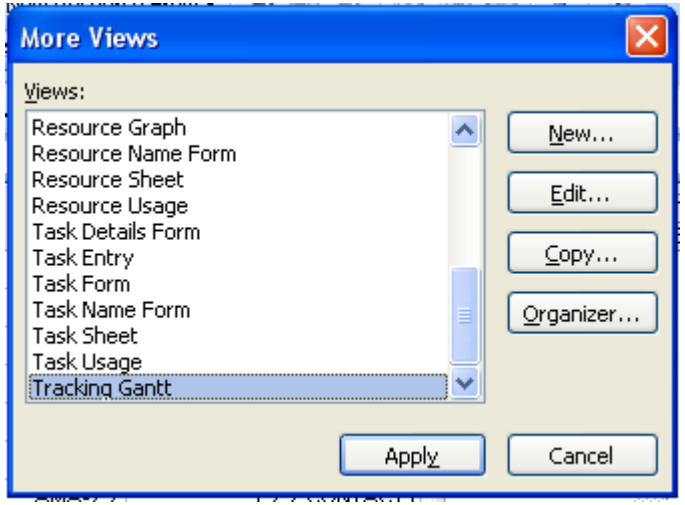


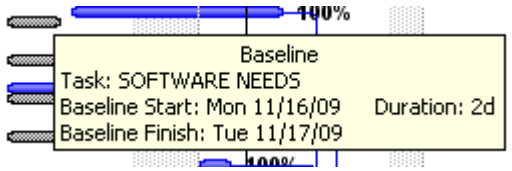
Tracking: Línea de seguimiento

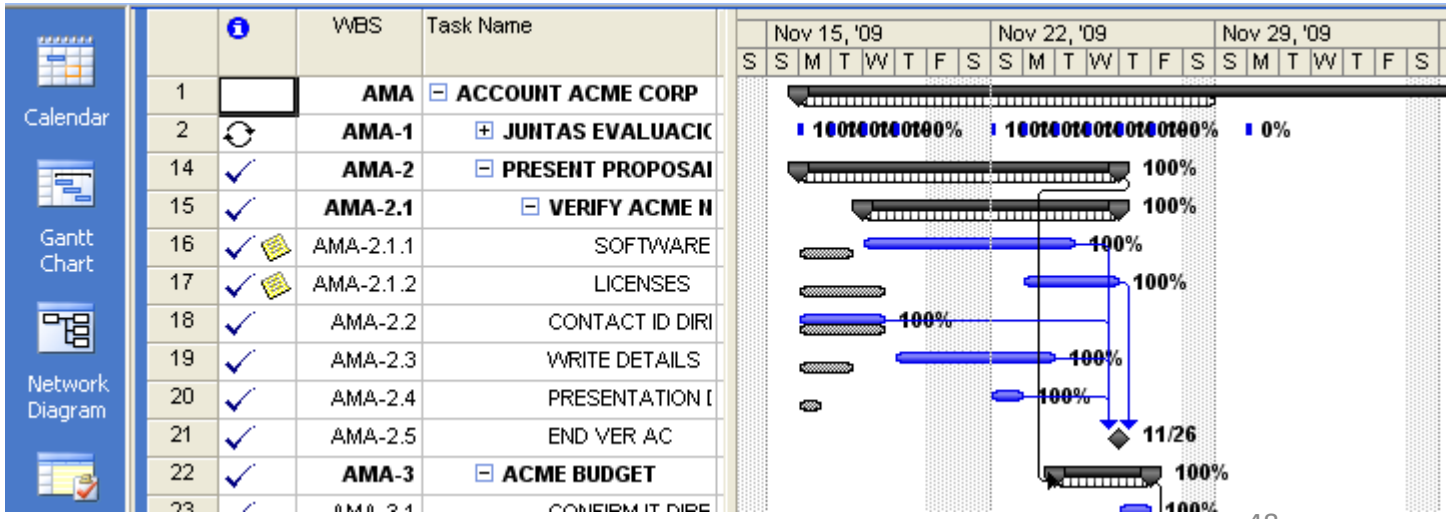
- Meter información del progreso actual

Actualizar el proyecto según la calendarización

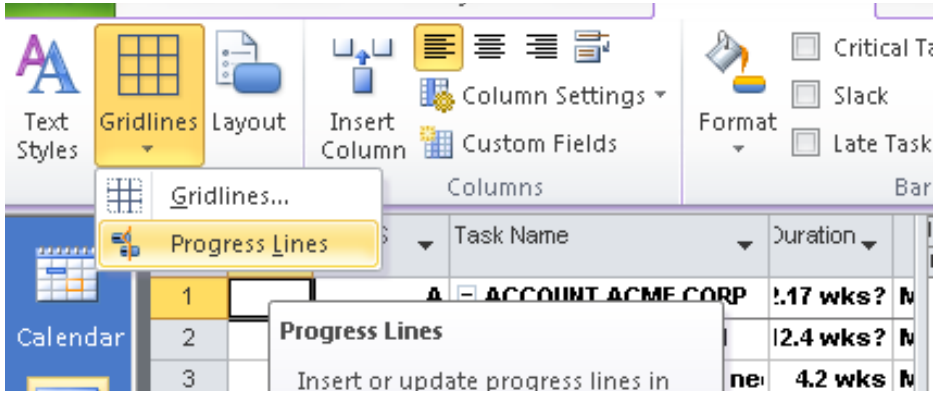


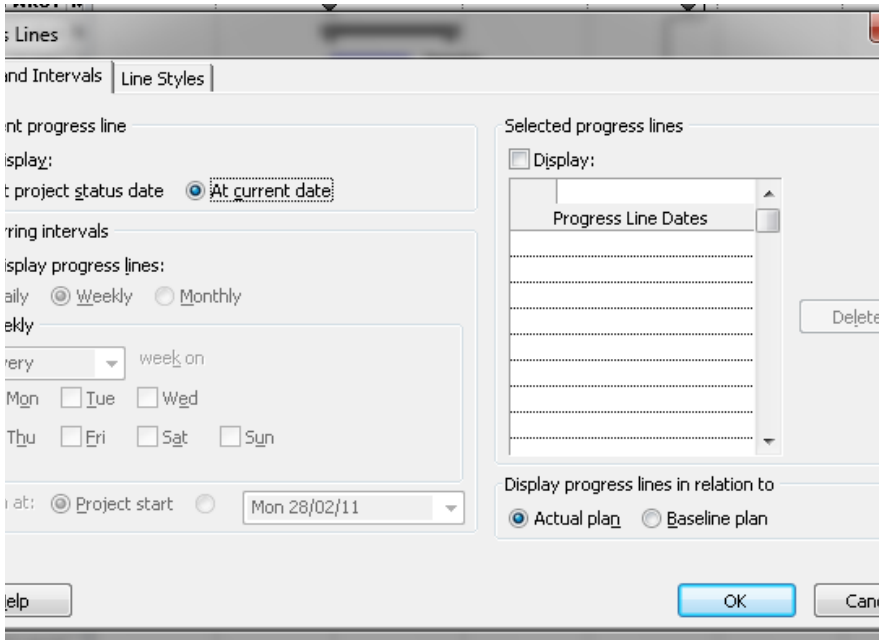


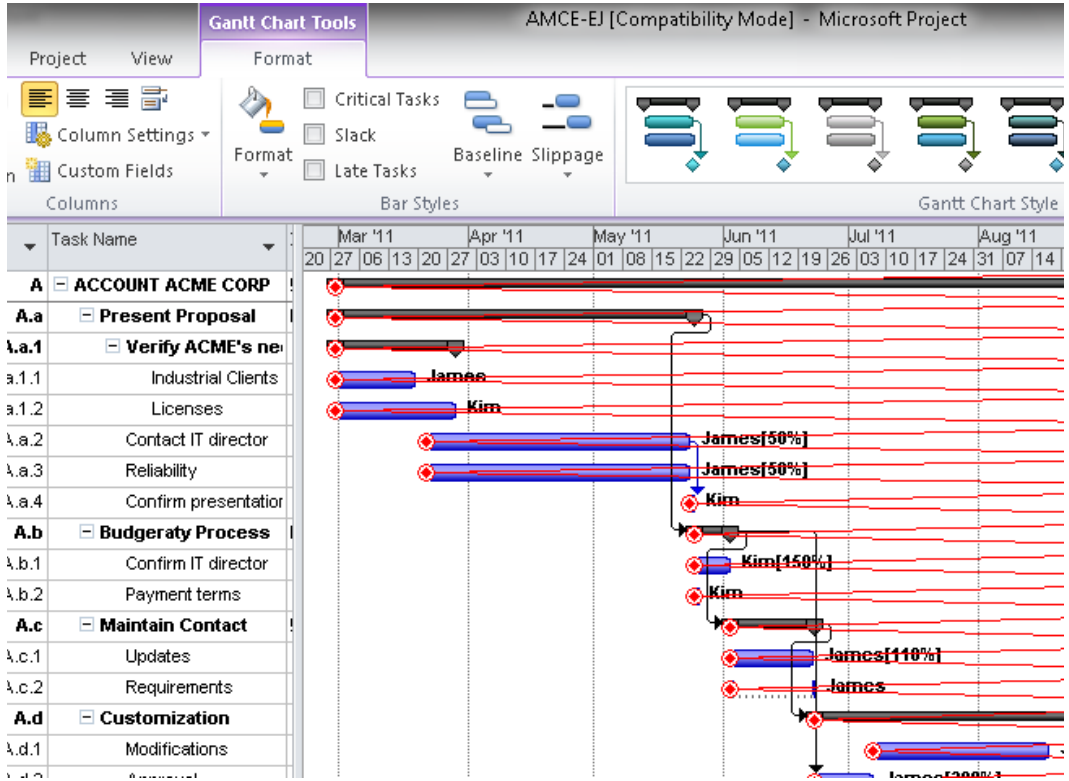




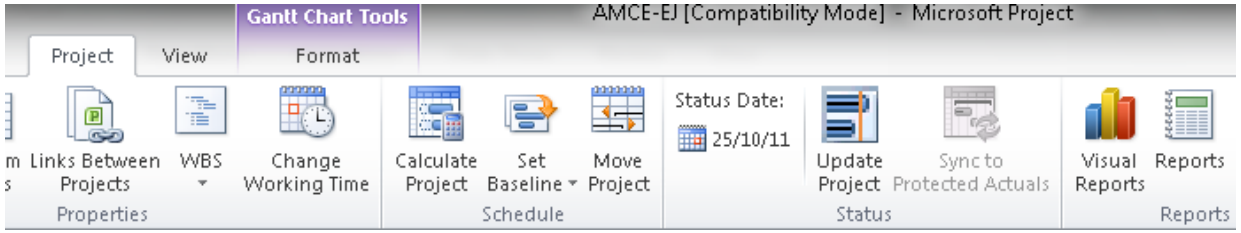
Línea de progreso

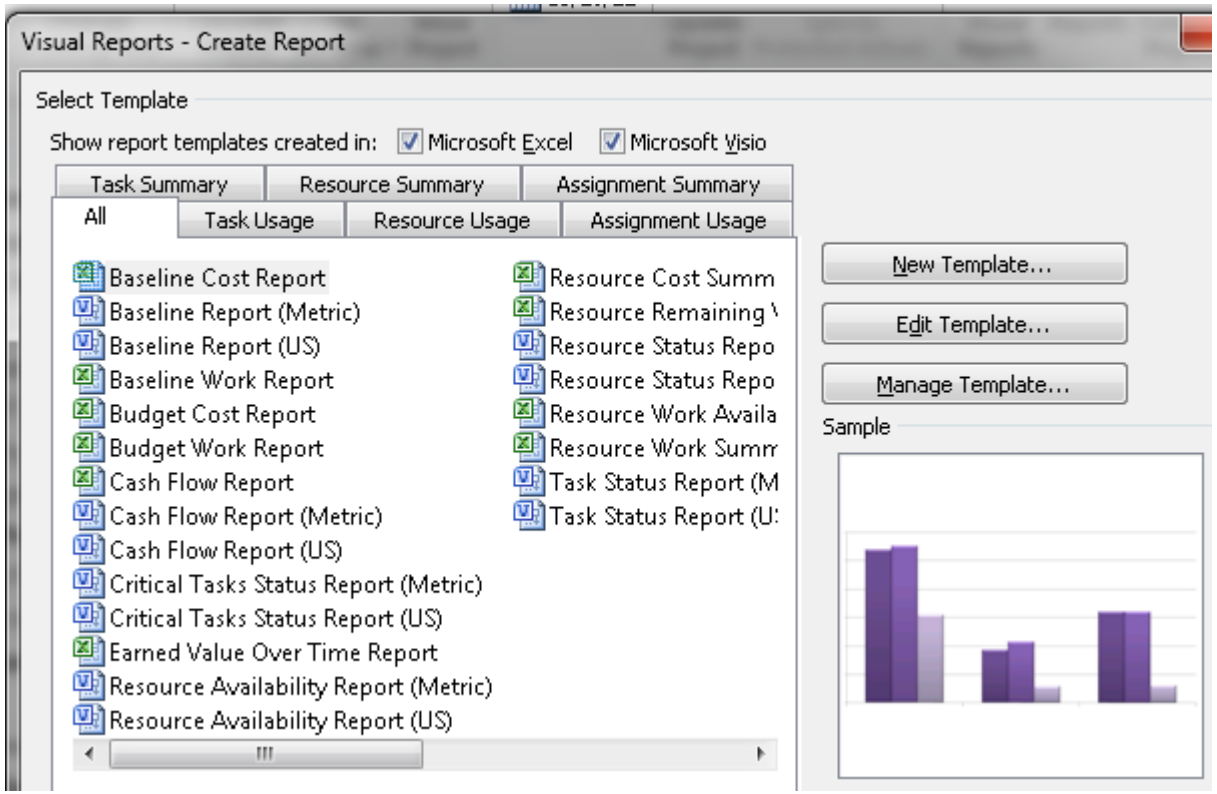


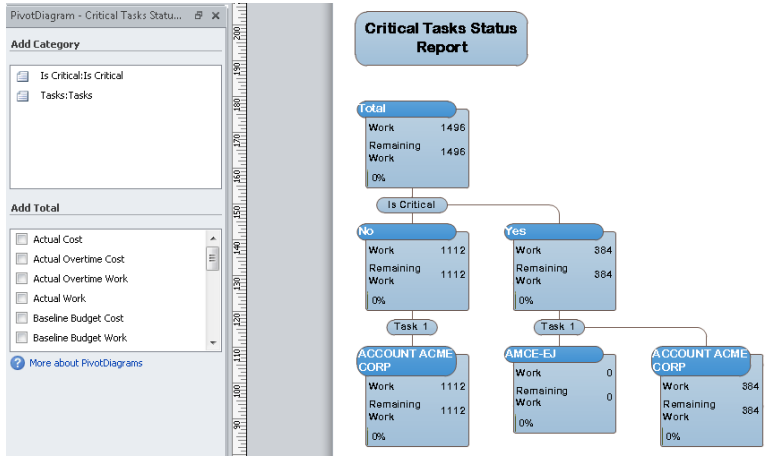


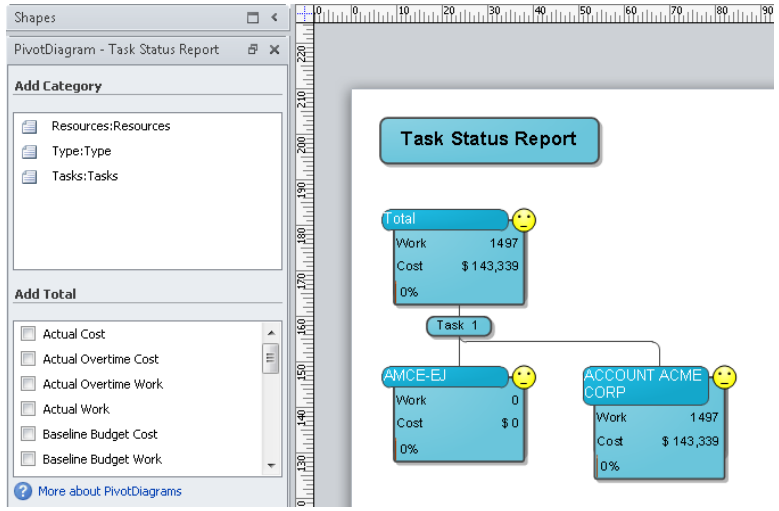


Reportes


Gantt Chart Tools
AMCE-EJ [Compatibility Mode] - Microsoft Project
Project
View
Format
Links Between Projects
WBS
Change Working Time
Properties
Calculate Project
Set Baseline
Move Project
Schedule
Status Date:
25/10/11
Update Project
Sync to Protected Actuals
Status
Visual Reports
Reports
Reports


Visual Reports - Create Report
Select Template
Show report templates created in:
Microsoft Excel
Microsoft Visio
Task Summary
Resource Summary
Assignment Summary
All
Task Usage
Resource Usage
Assignment Usage
Baseline Cost Report
Baseline Report (Metric)
Baseline Report (US)
Baseline Work Report
Budget Cost Report
Budget Work Report
Cash Flow Report
Cash Flow Report (Metric)
Cash Flow Report (US)
Critical Tasks Status Report (Metric)
Critical Tasks Status Report (US)
Earned Value Over Time Report
Resource Availability Report (Metric)
Resource Availability Report (US)
Resource Cost Summ
Resource Remaining
Resource Status Repo
Resource Status Repo
Resource Work Availa
Resource Work Summ
Task Status Report (M
Task Status Report (U
New Template...
Edit Template...
Manage Template...
Sample


PivotDiagram - Critical Tasks Statu...
Add Category
Is Critical:Is Critical
Tasks:Tasks
Add Total
Actual Cost
Actual Overtime Cost
Actual Overtime Work
Actual Work
Baseline Budget Cost
Baseline Budget Work
More about PivotDiagrams
Critical Tasks Status Report
Total
Work 1496
Remaining Work 1496
0%
Is Critical
No
Work 1112
Remaining Work 1112
0%
Yes
Work 384
Remaining Work 384
0%
Task 1
ACCOUNT ACME CORP
Work 1112
Remaining Work 1112
0%
AMCE-EJ
Work 0
Remaining Work 0
0%
ACCOUNT ACME CORP
Work 384
Remaining Work 384
0%

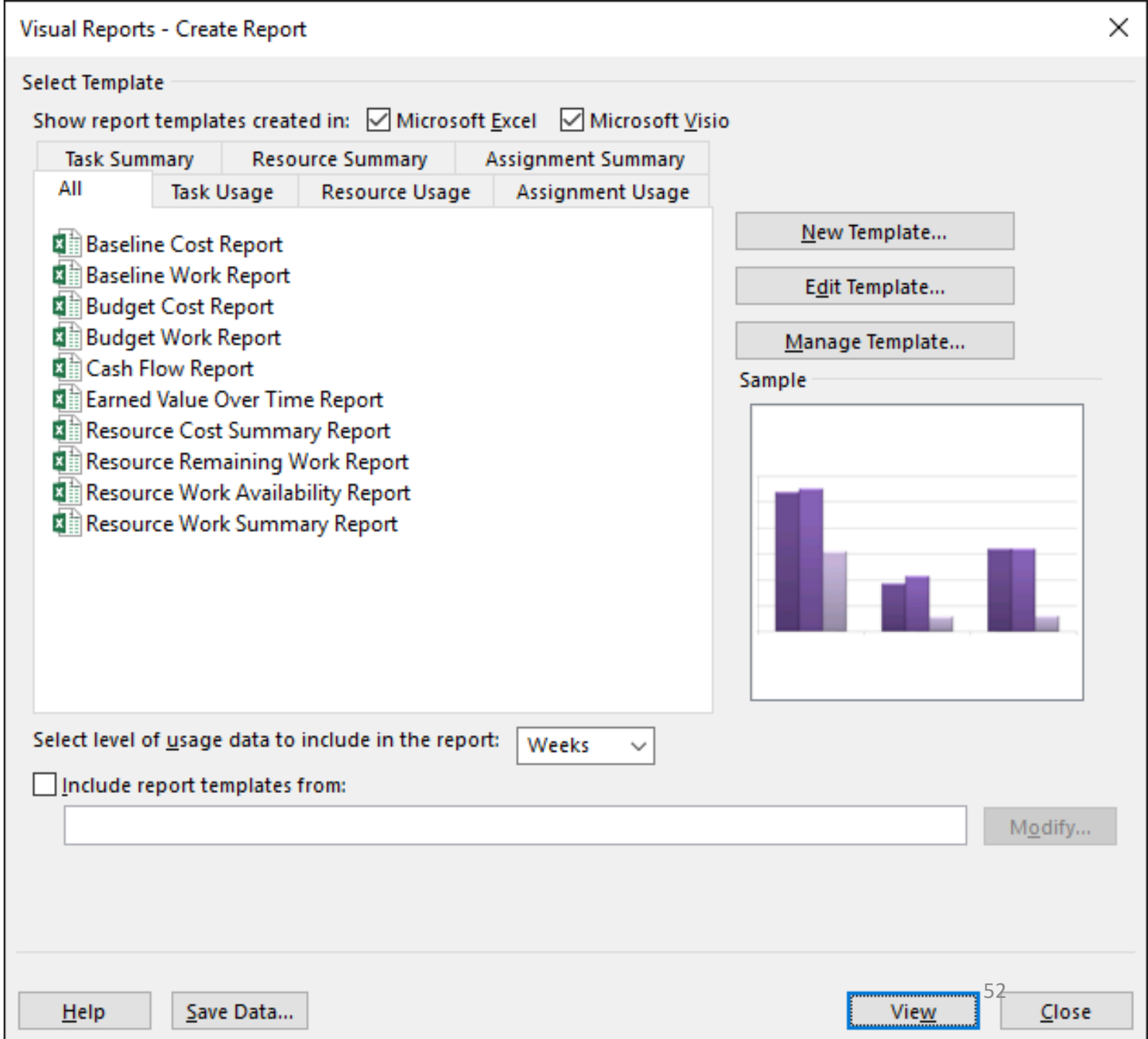

Shapes
PivotDiagram - Task Status Report
Add Category
Resources:Resources
Type:Type
Tasks:Tasks
Add Total
Actual Cost
Actual Overtime Cost
Actual Overtime Work
Actual Work
Baseline Budget Cost
Baseline Budget Work
More about PivotDiagrams
Task Status Report
Total
Work 1497
Cost $ 143,339
0%
Task 1
AMCE-EJ
Work 0
Cost $ 0
0%
ACCOUNT ACME CORP
Work 1497
Cost $ 143,339
0%

Visual Reports

- With the **Visual Reports** feature, you can export your project data to another application that can display it in a more visual manner, such as Excel or Visio. You can choose what fields (including custom fields) to display in a visual report while viewing it and modify how it is displayed directly in the application, without having to run the report in Microsoft Project again.
- When a visual report is generated in Excel it displays as a PivotTable, which contains data from the project plan; and a PivotChart, which is an interactive chart that graphically represents that data in the PivotTable. The PivotChart can help you visualize your project data so that you can easily see patterns and make comparisons. Once the report has been generated, you can make changes directly to it by filtering the content or changing the layout.
- When a visual report is generated in Visio it displays as a PivotDiagram, which is a collection of shapes arranged in a tree structure that helps summarize data in a visual, easy to understand format. The PivotDiagram can be manipulated to display your data in various ways, and is especially useful for viewing hierarchies like the work breakdown structure. Once the report has been generated, you can customize the diagram and perform calculations directly in the application.

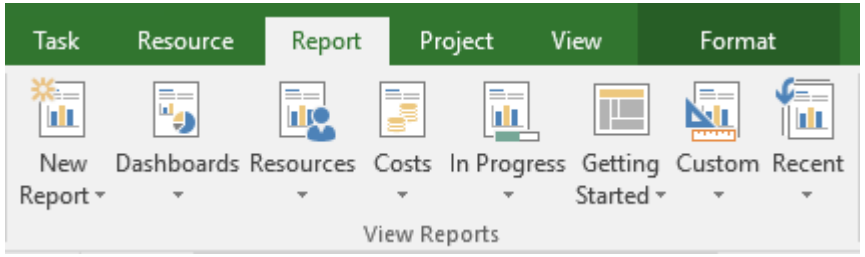
5.2.11 The Visual Reports Dialog Box

- The **Visual Reports** command is found on the **Export** command group on the **Report** tab. When you select it, the **Visual Reports - Create Report** dialog box opens, where you can choose which built-in Excel or Visio template you want to use and what timescale to include in the report. The report that is generated will automatically open as a new file in its respective application. You can then view and modify the file to suit your needs, and save it in the generated file format.



Built-In Reports

- Microsoft Project has a number of built-in reports, which you access from the **View Reports** command group on the **Report** tab. The built-in reports are grouped into four types, and can be found on their respective command drop-downs: **Dashboards**, **Resources**, **Costs**, and **In Progress**.
-



Dashboard Reports

Dashboards are dynamic reports that show project status and important indicators. There are five dashboard reports, each of which provides a different eye-catching view of project information.

Report Type	Description	Use
Burndown	Displays two side-by-side line charts. The **Work Breakdown** chart shows how much work has been completed and how much is left. The **Task Burndown** chart shows how many tasks have been completed and how many are left.	To see if your project is ahead of schedule, on schedule, or behind schedule. For instance, if either the **Remaining Cumulative Work** or **Remaining Tasks** line is steeper than the others, then the project might be tracking behind schedule.

Cost Overview	Displays three widgets showing the total cost, remaining cost, and percent complete, and two charts and a table illustrating the status of project costs. The **Progress Versus Cost** shows progress made versus the cost spent over time. The **Cost Status** table shows the cost status for the top-level tasks in a table format, while the **Cost Status** chart shows it graphically.	To see if your project is under budget, on budget, or over budget. For instance, if the **Cumulative Percent Complete** line is below the **Cumulative Cost** line, your project may be over budget.
Project Overview	Displays a widget showing the percent complete, and a chart and two tables illustrating the status of project tasks. The **% Complete** chart shows the status for all the top-level tasks. The **Milestone Due** table shows milestone tasks that are due to be completed soon. The **Late Tasks**table shows tasks that are past due.	To see how much of your project is complete.
Upcoming Tasks	Displays a widget showing the percent of work complete, and a chart and a table illustrating tasks that are starting or finishing within the next week. The **Tasks Starting Soon** table shows the status of tasks scheduled to start in the next 7 days, while the **Remaining Tasks** chart shows the status of tasks scheduled to finish in the next 7 days.	To see how much of your project still needs to be completed, and which tasks are scheduled to be completed soon.
Work Overview	Displays three widgets showing the percent of work complete, the remaining work, and the actual work and four charts illustrating work and resource data. The **Work Burndown** chart shows how much work has been completed and how much is left. The **Work Stats** chart shows how much work has been completed and how much is left for the top-level tasks. The **Resource Stats** chart shows how much work has been completed and how much is left for each resource. The **Remaining Availability**chart shows the remaining work availability for each resource.	To see how much work has been completed and how much work still needs to be completed.

Resource Reports

- Resource reports show important information about the resources assigned to your project. There are two resource reports, each of which provides a different view of your resource information.

Report Type	Description	Use
Overallocated Resources	Displays two charts illustrating information about your overallocated resources. The **Work Status** chart shows the actual and remaining work for overallocated resources. The **Overallocation** chart shows surplus work assigned to overallocated resources.	To see which resources are assigned more work than they can accomplish in the time allotted.
Resource Overview	Displays two charts and a table illustrating information about your project resources. The **Resource Stats** chart shows how much work has been completed and how much is left for each resource. The **Work Status** chart show the percent of work completed by each resource. The **Resource Status** table shows the amount of remaining work for each resource.	To see the status of all project resources.

Cost Reports

- Cost reports show important information about the costs associated with your project. There are five cost reports, each of which provides a different view of your cost information.

Report Type	Description	Use
Cash Flow	Displays four widgets showing the actual, baseline, and remaining costs and the cost variance, and a chart and a table illustrating the overall project costs. The chart shows the project's cumulative cost and cost per quarter. The table shows cost information for all top-level tasks.	To see how much has been spent on the project to date.
Cost Overruns	Displays two charts and two tables illustrating how much has been overspent on project tasks and resources. The **Task Cost Variance** chart and table show cost variance for all top-level tasks. The **Resource Cost Variance** chart and table show cost variance for each resource.	To see which tasks and resources are over budget.
Earned Value Report	Displays three widgets showing the estimated cost at completion (EAC), the actual cost of work performed (ACWP), and the budgeted cost of work performed (BCWP) and three charts illustrating the earned value for the project. The **Earned Value Over Time** chart shows the project's earned value over the life of the project to date. The **Variance Over Time** chart shows cost and schedule variances over the life of the project to date. The **Indices Over Time** chart shows cost and schedule performance indicators over the life of the project to date.	To see if the project is behind schedule or over budget.

Resource Cost Overview	Displays two charts and a table illustrating overall resource costs. The **Cost Status** chart shows the current cost associated with each resource. The **Cost Distribution** chart shows how costs are spread out over the different types of resources. The **Cost Details** table shows cost details for each resource.	To see the cost status for all project resources.
Task Cost Overview	Displays two charts and a table illustrating overall task costs. The **Cost Status** chart shows the current cost associated with each task. The **Cost Distribution** chart shows how costs are spread out over the tasks in the project plan. The **Cost Details** table shows cost details for the top-level tasks.	To see the cost status for all project tasks.

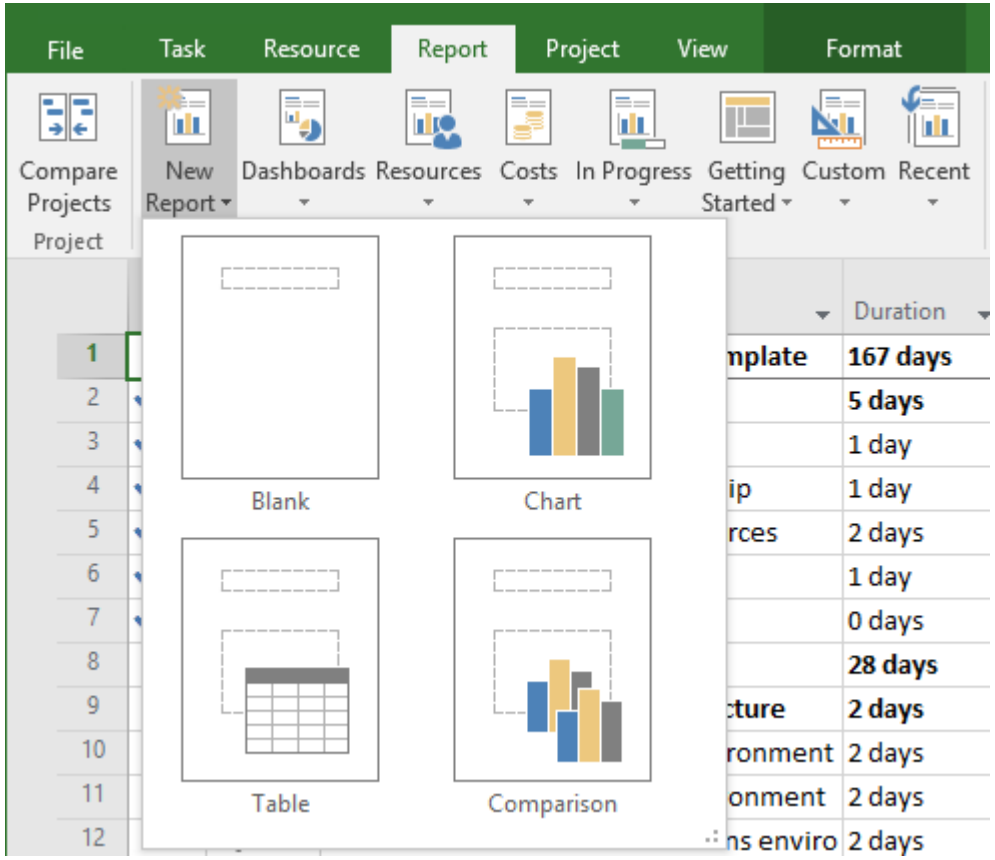
In Progress Reports

- In Progress reports show how your active tasks and pending milestone tasks are currently performing. There are four in progress reports, each of which provide a different view of your project's progress.

Report Type	Description	Use
Critical Tasks	Displays a pie chart and a table illustrating the current status of all tasks on the critical path.	To see the progress of all tasks on the critical path.
Late Tasks	Displays a pie chart and a table illustrating all the tasks that are currently tracking late according to the schedule.	To see which tasks are behind schedule.
Milestone Report	Displays three tables and a chart illustrating the current status of the project's milestones. The **Late Milestone** table shows milestones that are past due. The **Milestones Up Next** table shows milestones that are due in the next 30 days. The **Completed Milestones** table shows milestones that are 100% complete. The chart tracks the remaining scheduled tasks against the remaining actual tasks.	To see the status of all milestones for the project.
Slipping Tasks	Displays a chart and a table illustrating all tasks that are currently behind schedule. The chart tracks the remaining cumulative work against the remaining cumulative actual work. The table shows slipped tasks (where the finish date is beyond the baseline finish date).	To see which tasks have been or will be completed later than planned.

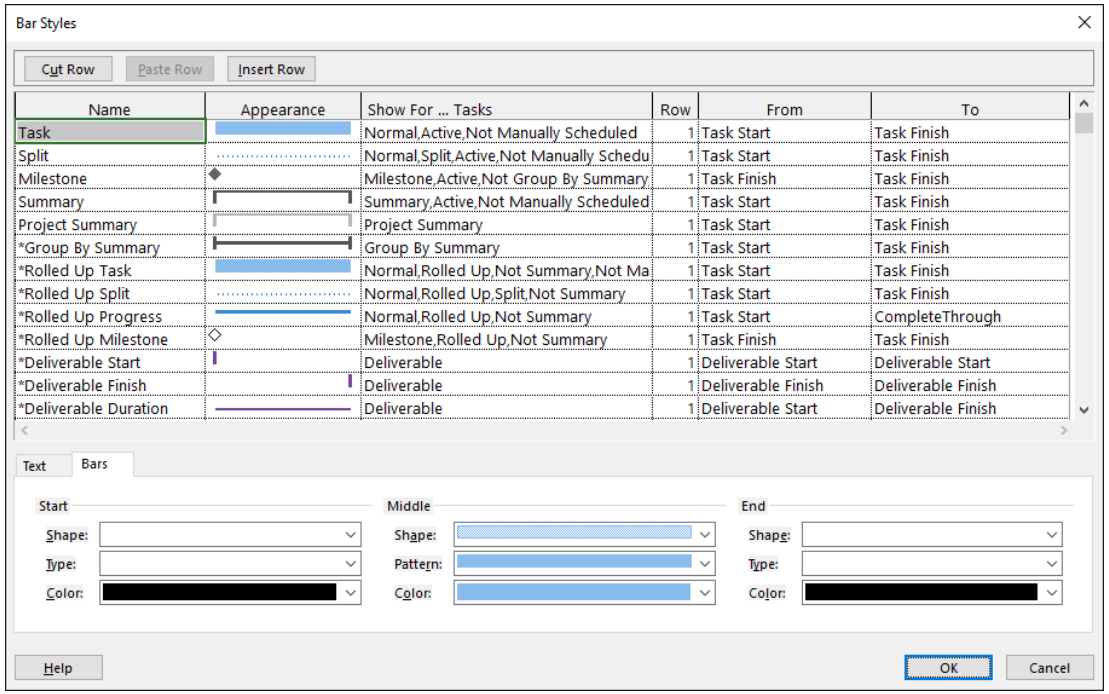
The New Report Command

- In addition to the numerous built-in reports in Microsoft Project, you can also create your own custom reports to meet your specific needs. You start by selecting the **New Report** command in the **View Reports** command group, which provides you with four types of reports that you can create: **Blank**, **Chart**, **Table**, or **Comparison**.



Format Bar Styles

- To call attention to specific tasks in your project plan, such as a milestone or summary task, you can customize how they appear in the Gantt Chart using the **Format Bar Styles** command from the **Format Bar Styles** drop-down in the **Bar Styles** command group. In the **Bar Styles** dialog box, you can select from a variety of customization options to change the appearance of the task bars—such as their color, shape, or pattern—for specific types of tasks, in order to distinguish them from each other in the Gantt Chart.

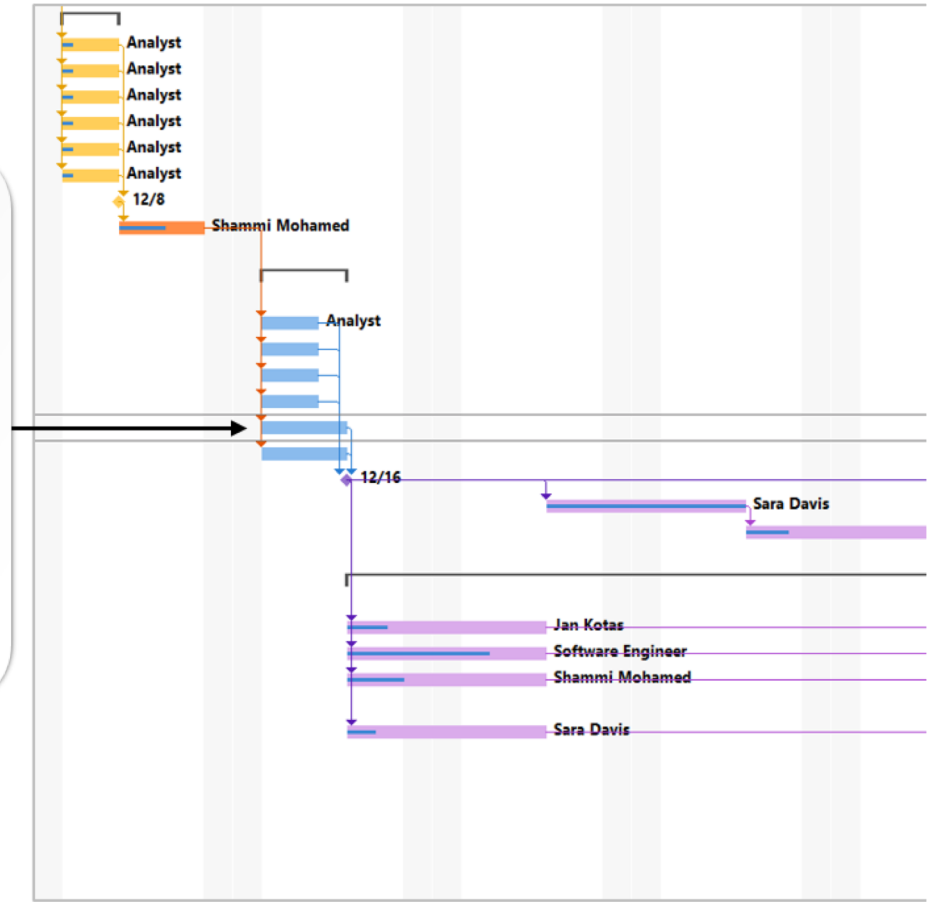


Note: You can also change the appearance of just a single, selected task using the **Format Bar** command from the **Format Bar Stylesdrop-down.**

Task Path

- With a more complex project, the information displayed in the Gantt Chart might start to get a little overwhelming with so many multi-colored bars and task link lines. To help you sort this out visually, Microsoft Project has included the **Task Path** feature, which highlights how tasks are linked to each other in the schedule.
- With Task Path, you can select any task in the task list and then view the chain of predecessor tasks and successor tasks that are linked to it. You can also differentiate between and view driving predecessors and driven successors, whose scheduling is driven by the selected task. You can choose to display one, all, or any combination of these task types for the selected task in the Gantt Chart. With the task selected, simply choose the type of tasks you want to see in the connected chain from the **Highlight Task Path** drop-down from the **Bar Styles** command group on the **Gantt Chart Tools Format** tab.

The Task Path is displayed for all tasks connected to this selected task: predecessors are yellow, driving predecessors are orange, successors are light purple, and driven successors are dark purple.

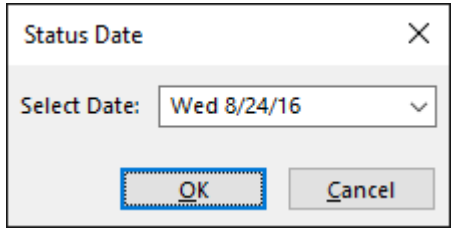


Task Progress

- When the project is in the execution phase and work is being performed against the tasks, you need to capture your ***task progress*** in order to keep the project plan up to date. Task progress can include the actual start date that work began, the percentage of work that has been completed, and the actual or projected finish date of the task given the other two factors.
- When you update the progress on a task, Microsoft Project may automatically update the amount of work completed and the associated cost depending on the task's settings. Additionally, any auto-scheduled successor tasks that are dependent on the task you are updating will be automatically rescheduled if the update causes a change in the dependency date. For example, if you complete a predecessor task a day early, Microsoft Project may assume that the successor task that is supposed to start when the predecessor finishes can also start a day early.

The Status Date Dialog Box

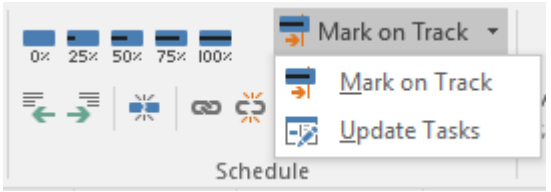
- A ***status date*** is a date that you set within Microsoft Project that you will use to report on your project's status. When you update your task status, you can specify whether that status is as of the current date or as of the status date. For example, if your team reports their task status to you on Friday and you enter your updates on the following Monday, you can set the status date to the previous Friday's date so that your reporting and estimates are accurate.
- You can use the **Status Date** dialog box to change the status date for the project. You can access it from the **Status** command group on the **Project** tab.



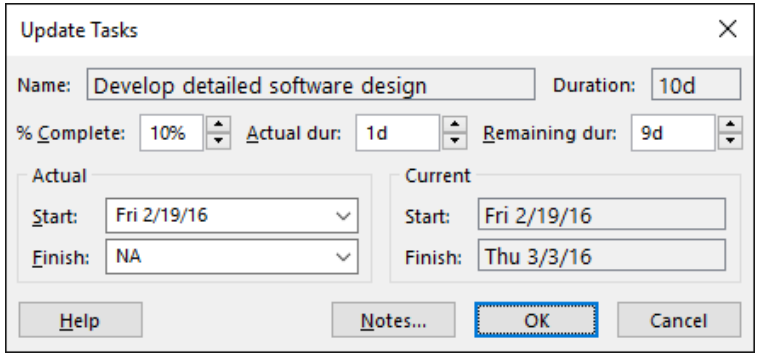
The Mark On Track Command

- The **Mark on Track** command will update a selected task so that it is on schedule as of the status date. Based on the dates and durations for the task and the amount of work that could have been completed for the task in that time frame, it will update the percent that a task is complete and the actual (or already utilized) and remaining amount of time in the task's duration. For example, if you have a task that is scheduled to last two weeks and work is progressing as it should after the first week, selecting the **Mark on Track**command will update the progress to 50% complete as of the status date. You can even select multiple tasks and mark them as on track as of the status date all at once.
- The **Mark on Track** command is accessed from the **Mark on Track** drop-down in the **Schedule** command group on the **Task** tab.

The Update Tasks Dialog Box



- If you need or want even more control over updating a task, you can use the **Update Tasks** command from the **Mark on Track** drop-down in the **Schedule** command group. The command opens the **Update Tasks** dialog box, where you can update the task progress manually, at a much more detailed level.
- One of the task progress updates that you can make in the **Update Tasks** dialog box is to a task's actual start and finish dates. For instance, if a task did not start on the date in which it was supposed to according to the project plan, you should update the actual start date of the task in order to prevent its delay from affecting the entire project (as would possibly happen if you just marked the task on track) and to maintain an accurate record of the project's progress. Or, if a task that started on schedule ends before or after the planned finish date, you should update the actual finish date of the task.



Tracking Progress Against Duration

- There are a number of values that you can update for a task within the **Update Tasks** dialog box in order to track its progress against its duration.

Value	Description
Percent complete	The ***percent complete*** is the amount of the task that has been completed, as a percentage of total completion. A task that has not been started is 0% complete and a task that is finished is 100% complete. When a task is in progress and you want to update its progress in the project plan, you can enter a percentage value between 0 and 100 to represent the task's status. This amount is displayed and updated in the **% Complete**field. For example, you could specify that the **Develop detailed software design** task is 80% complete based on the amount of time that has passed in the schedule for that task. If you enter a value in the **% Complete** field, Microsoft Project will automatically calculate and update the actual duration and remaining durations values.
Actual duration	The ***actual duration*** is the amount of the scheduled duration that has been spent on a task to date, calculated as the scheduled duration multiplied by the percent of duration complete. This value is displayed and updated in the **Actual dur** field. For example, if the task **Review hardware vendors** has a scheduled duration of 5 days and the task is 20% complete, the actual duration is 1 day. If you enter a value in the **Actual dur** field, Microsoft Project will automatically calculate and update the percent complete and remaining duration values.

Note: Values in the Update Tasks dialog box fields are not updated in real time. In order for Microsoft Project to perform its calculations and update the other fields accordingly, you need to click OK in the dialog box. When you open the Update Tasks dialog box for that same task again, the fields will all be updated to reflect the appropriate values.

Remaining duration	The ***remaining duration*** is the amount of the scheduled duration that is left for the task to be completed. If you enter a value for actual duration, it is calculated as the scheduled duration minus the actual duration. If you enter a value for percent complete, it is calculated as the scheduled duration minus the actual duration multiplied by the percent complete. This value is displayed and updated in the **Remaining dur** field. For example, if the task **Secure necessary architectural resources** has a scheduled duration of 3 days and 2 days have been spent on the task, the remaining duration is 1 day. Or, if 50% of the task has been completed, the remaining duration is 1.5 days. If you enter or edit a value in the **Remaining dur** field manually, Microsoft Project calculates a new task duration and updates the percent complete. If time has already been spent on the task, the actual duration would not change. For example, the task **Obtain feedback/input on design** has a scheduled duration of 4 days, and 3 days of the task have already passed but the reviewers need an additional 2 days. You would need to update the task by adding 2 days to the remaining duration value. The actual duration would stay the same, but the percent complete will update to reflect the amount of the task that has been finished according to the duration and the project schedule will change to reflect the additional time needed for the task.

The Work Table

- The **Work** table displays information about the work that is scheduled for your project.
- **Note:** You can insert columns in the table to show additional fields, such as **Actual Overtime Work**, which you can use to track your progress again

	Task Name	Work	Baseline	Variance	Actual	Actual Overtime Work	Remaining	% W. Comp.
1	**Infrastructure Deployment Template**	**2,328 hrs**	**2,328 hrs**	**0 hrs**	**206 hrs**	**8 hrs**	**2,122 hrs**	**9%**
2	**Scope**	**72 hrs**	**72 hrs**	**0 hrs**	**72 hrs**	**0 hrs**	**0 hrs**	**100%**
8	**Analysis**	**616 hrs**	**616 hrs**	**0 hrs**	**134 hrs**	**8 hrs**	**482 hrs**	**22%**
9	**Review Current Infrastructure**	**96 hrs**	**96 hrs**	**0 hrs**	**9.6 hrs**	**0 hrs**	**86.4 hrs**	**10%**
17	Review business goals/direction/vision	24 hrs	24 hrs	0 hrs	14.4 hrs	0 hrs	9.6 hrs	60%
18	**Identify Target Areas for Improvement**	**216 hrs**	**216 hrs**	**0 hrs**	**0 hrs**	**0 hrs**	**216 hrs**	**0%**
26	Define system requirements	40 hrs	40 hrs	0 hrs	40 hrs	8 hrs	0 hrs	100%
27	Define target performance metrics	40 hrs	40 hrs	0 hrs	12 hrs	0 hrs	28 hrs	30%
28	**Review Current Market Solution Vendors**	**200 hrs**	**200 hrs**	**0 hrs**	**58 hrs**	**0 hrs**	**142 hrs**	**29%**
29	Hardware vendors	40 hrs	40 hrs	0 hrs	10 hrs	0 hrs	30 hrs	25%
30	Software vendors	40 hrs	40 hrs	0 hrs	24 hrs	0 hrs	16 hrs	60%
31	Communications vendors	40 hrs	40 hrs	0 hrs	16 hrs	0 hrs	24 hrs	40%
32	Design partners	40 hrs	40 hrs	0 hrs	0 hrs	0 hrs	40 hrs	0%
33	Implementation partners	40 hrs	40 hrs	0 hrs	8 hrs	0 hrs	32 hrs	20%
34	Review current market solution vendors complete	0 hrs	0 hrs	0 hrs	0 hrs	0 hrs	0 hrs	0%
35	Analysis complete	0 hrs	0 hrs	0 hrs	0 hrs	0 hrs	0 hrs	0%

Tracking Progress Against Work

Value	Description
Actual work	***Actual work*** is the amount of work that has already been completed by your resources for the assigned task. This amount is displayed and updated in the **Actual Work** field. For example, the resource assigned to the **Review software vendors** task may have worked 24 hours on the task during that status week, and that needs to be captured as progress against the scheduled work for the task and the project. If you enter a value in the **Actual Work** field, Microsoft Project calculates and updates the amount of actual work for the summary task(s) and project summary task, the amount of work remaining for the task, the percent of work complete on the task.
Actual overtime work	***Actual overtime work*** is the amount of overtime work—work scheduled to take place beyond the resource's normal working hours— that has already been spent by your resources for the assigned task. This amount is displayed in the **Actual Overtime Work**field, if it has been added. For example, the resource assigned to the **Define system requirements** task may have worked 8 overtime hours in order to complete the task, above and beyond the 40 hours that was originally scheduled for the task. **Note:** Overtime work and actual overtime work are assigned and updated in the **Task Usage** table. Once added there, you can insert the respective columns in the **Work** table and the associated values will display. Assigning and utilizing overtime will affect your costs.
Remaining work	***Remaining work*** is the amount of work still scheduled and/or required for the task to be completed. It is calculated as the amount of work scheduled minus the amount of actual work already completed. This amount is displayed in the **Remaining Work** field. For example, if the resource assigned to the **Define target performance metrics** task has already performed 12 hours of the 40 hours of work assigned to them, the task has 28 hours remaining.

The Cost Table

- The **Cost** table displays information about the costs associated with the tasks and resources for your project. There are a number of values that you can view—and, in the case of the fixed costs and accrual methods, update—for a task within the **Cost** table in order to track its progress against project costs. You do not enter any values into this table when tracking project progress; Microsoft Project enters them based upon changes you have made to duration and work.

	Task Name	Fixed Cost	Fixed Cost Accrual	Total Cost	Baseline	Variance	Actual	Remaining
1	**Infrastructure Deployment Template**	**$1,612,960.00**	**Prorated**	**$3,903,600.00**	**$3,903,520.00**	**$80.00**	**$629,234.40**	**$3,274,365.60**
2	**Scope**	**$1,440.00**	**Prorated**	**$6,320.00**	**$6,320.00**	**$0.00**	**$6,320.00**	**$0.00**
8	**Analysis**	**$1,744,000.00**	**Prorated**	**$1,865,960.00**	**$1,865,880.00**	**$80.00**	**$477,748.00**	**$1,388,212.00**
9	**Review Current Infrastructure**	**$18,000.00**	**Prorated**	**$36,000.00**	**$36,000.00**	**$0.00**	**$3,600.00**	**$32,400.00**
17	Review business goals/direction/vision	$3,600.00	Prorated	$4,680.00	$4,680.00	$0.00	$2,808.00	$1,872.00
18	**Identify Target Areas for Improvement**	**$18,000.00**	**Prorated**	**$36,000.00**	**$36,000.00**	**$0.00**	**$0.00**	**$36,000.00**
26	Define system requirements	$3,000.00	Prorated	$5,680.00	$5,600.00	$80.00	$5,680.00	$0.00
27	Define target performance metrics	$3,000.00	Prorated	$5,600.00	$5,600.00	$0.00	$1,680.00	$3,920.00
28	**Review Current Market Solution Vendors**	**$10,000.00**	**Prorated**	**$34,000.00**	**$34,000.00**	**$0.00**	**$10,540.00**	**$23,460.00**
29	Hardware vendors	$2,000.00	Prorated	$4,000.00	$4,000.00	$0.00	$1,000.00	$3,000.00
30	Software vendors	$2,000.00	Prorated	$7,000.00	$7,000.00	$0.00	$4,200.00	$2,800.00
31	Communications vendors	$2,000.00	Prorated	$3,800.00	$3,800.00	$0.00	$1,520.00	$2,280.00
32	Design partners	$2,000.00	Prorated	$4,600.00	$4,600.00	$0.00	$0.00	$4,600.00
33	Implementation partners	$2,000.00	Prorated	$4,600.00	$4,600.00	$0.00	$920.00	$3,680.00
34	Review current market solution vendors complete	$0.00	Prorated	$0.00	$0.00	$0.00	$0.00	$0.00
35	Analysis complete	$0.00	Prorated	$0.00	$0.00	$0.00	$0.00	$0.00

Variance

- In project management, ***variance*** is the difference between the baseline and the actual performance for any of the key constraints for a project—scope, time, and cost. Variance can be positive, indicating that the project is exceeding the plan; or it can be negative, indicating that the project is under the plan.
- Microsoft Project includes a number of built-in tools that will display variance for the three key factors for your project:
- The **Variance** table shows variances in planned and actual dates and duration.
- The **Work** table shows variances in planned and actual work.
- The **Cost** table shows variance between planned and actual costs.
- You can view their respective commands in the **Tables** drop-down from the **Data** command group on the **View** tab.
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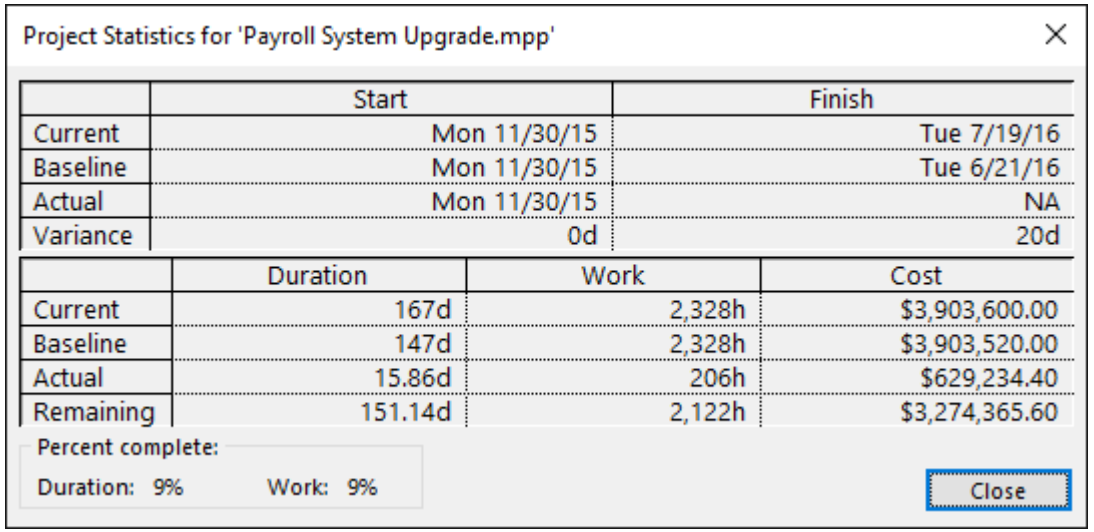
	Task Mode	Task Name	Start	Finish	Baseline Start	Baseline Finish	Start Var.	Finish Var.
1		**Infrastructure Deployment Template**	**Mon 11/30/15**	**Tue 7/19/16**	**Mon 11/30/15**	**Tue 6/21/16**	**0 days**	**20 days**
2		**Scope**	**Mon 11/30/15**	**Fri 12/4/15**	**Mon 11/30/15**	**Fri 12/4/15**	**0 days**	**0 days**
8		**Analysis**	**Mon 12/7/15**	**Wed 1/13/16**	**Mon 12/7/15**	**Wed 12/30/15**	**0 days**	**10 days**
36		**Design**	**Thu 1/14/16**	**Thu 3/17/16**	**Thu 12/31/15**	**Thu 2/18/16**	**10 days**	**20 days**
37		Secure necessary architectural resources	Thu 1/14/16	Mon 1/18/16	Thu 12/31/15	Mon 1/4/16	10 days	10 days
38		**Draft Preliminary Infrastructure Design Documents**	**Tue 1/19/16**	**Mon 2/8/16**	**Tue 1/5/16**	**Mon 1/11/16**	**10 days**	**20 days**
39		Preliminary hardware design	Tue 1/19/16	Mon 1/25/16	Tue 1/5/16	Mon 1/11/16	10 days	10 days
40		Preliminary software design	Tue 1/26/16	Mon 2/1/16	Tue 1/5/16	Mon 1/11/16	15 days	15 days
41		Preliminary communications design	Tue 1/19/16	Mon 1/25/16	Tue 1/5/16	Mon 1/11/16	10 days	10 days
42		Preliminary connectivity LAN/WAN design	Tue 2/2/16	Mon 2/8/16	Tue 1/5/16	Mon 1/11/16	20 days	20 days
43		Preliminary support environment design	Tue 1/19/16	Mon 1/25/16	Tue 1/5/16	Mon 1/11/16	10 days	10 days
44		Draft preliminary infrastructure design document complete	Mon 2/8/16	Mon 2/8/16	Mon 1/11/16	Mon 1/11/16	20 days	20 days
45		Review preliminary design documents	Tue 2/9/16	Fri 2/12/16	Tue 1/12/16	Fri 1/15/16	20 days	20 days
46		Obtain feedback/input on design	Mon 2/15/16	Thu 2/18/16	Mon 1/18/16	Thu 1/21/16	20 days	20 days
47		**Develop Detailed Infrastructure Design Documents**	**Fri 2/19/16**	**Thu 3/3/16**	**Fri 1/22/16**	**Thu 2/4/16**	**20 days**	**20 days**
54		Align long/short term infrastructure design with business goals	Fri 3/4/16	Thu 3/17/16	Fri 2/5/16	Thu 2/18/16	20 days	20 days
55		Design complete	Thu 3/17/16	Thu 3/17/16	Thu 2/18/16	Thu 2/18/16	20 days	20 days

The Project Statistics Dialog Box

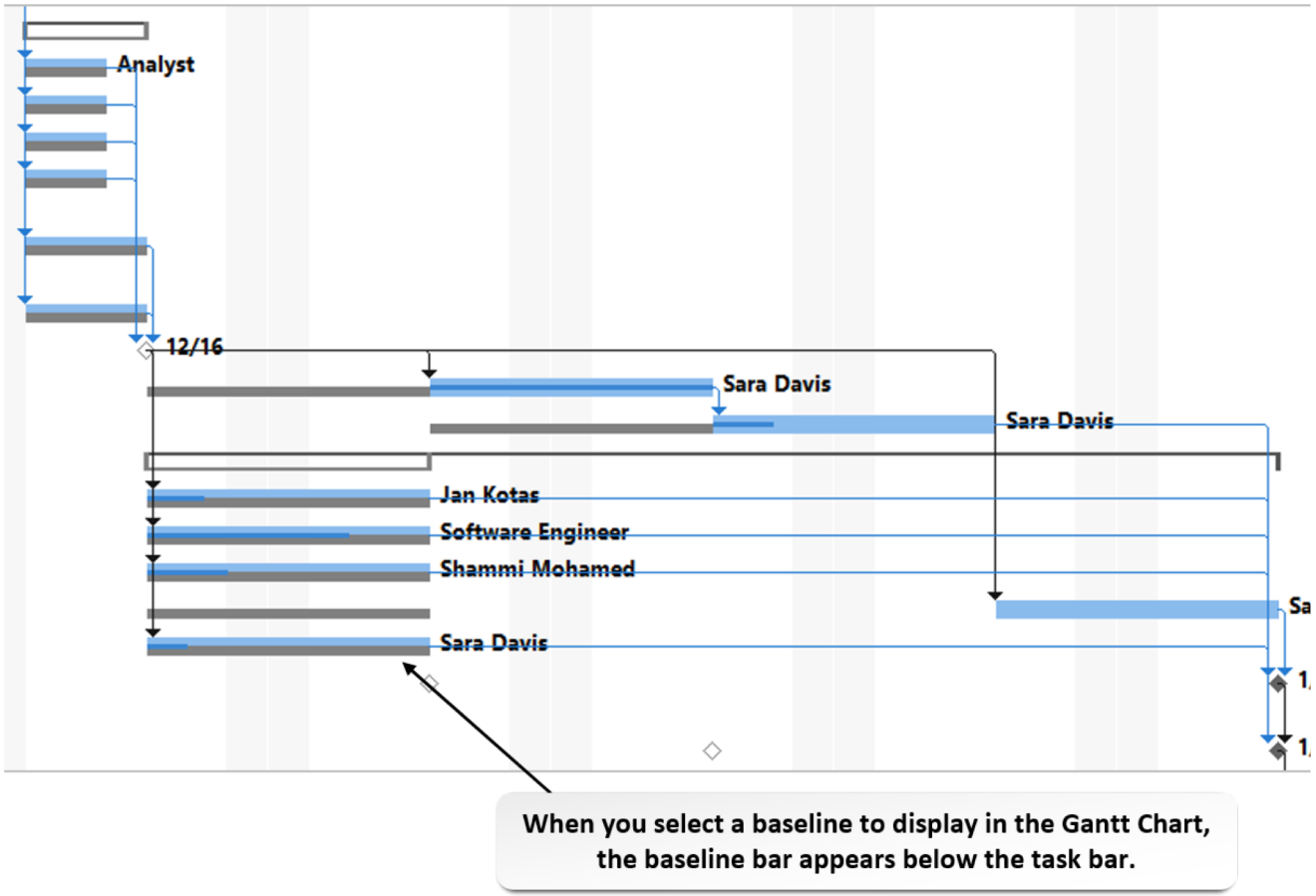
- The **Project Statistics** dialog box displays overall statistics for five key categories for your project: start and finish dates, duration, work, and cost.
- For start and finish dates, it displays the current start and finish dates, the start and finish dates set in the initial baseline, the actual start and finish dates (if your project is in progress, only a value for the start date will display), and the variance between the baseline start and finish dates and the actual start and finish dates.
- For duration, work, and cost, it displays the current amounts of scheduled time, work hours, and costs that exist in the project plan; the scheduled time, work hours, and costs as set in the initial baseline; the actual amount of time, work hours, and cost already spent on the project; and the remaining amount of time, work hours, and cost left on the project.



You can open the **Project Statistics** dialog box by selecting the **Project Information** command from the **Properties** command group on the **Project** tab, and then selecting the **Statistics** button.

Baselines in the Gantt Chart

- To compare your current project status to any of the baselines you have created for your project, you can view the baseline in the Gantt Chart. In the **Gantt Chart** view, select the baseline that you want to view from the **Baseline** drop-down from the **Bar Styles** command group on the **Gantt Chart Tools Format** tab. Microsoft Project will display baseline bars below the task bar in a different color, to show the tasks as they were initially scheduled in the selected baseline.



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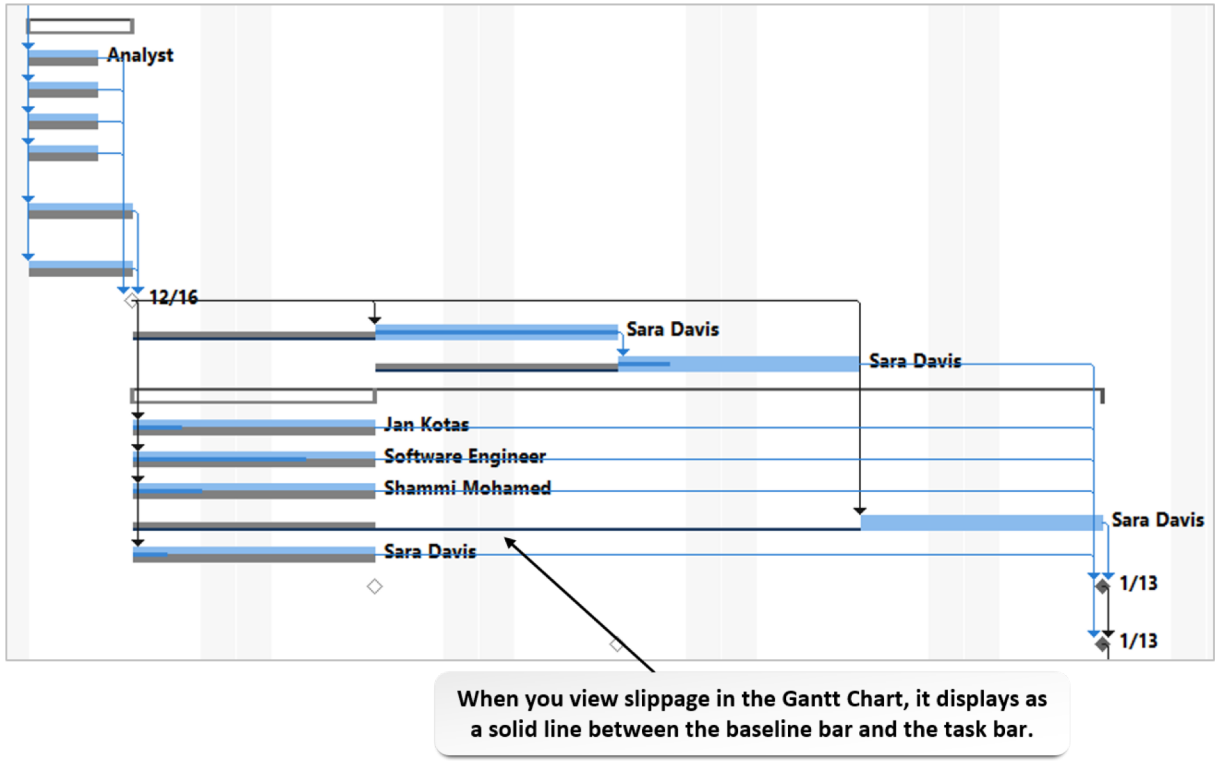
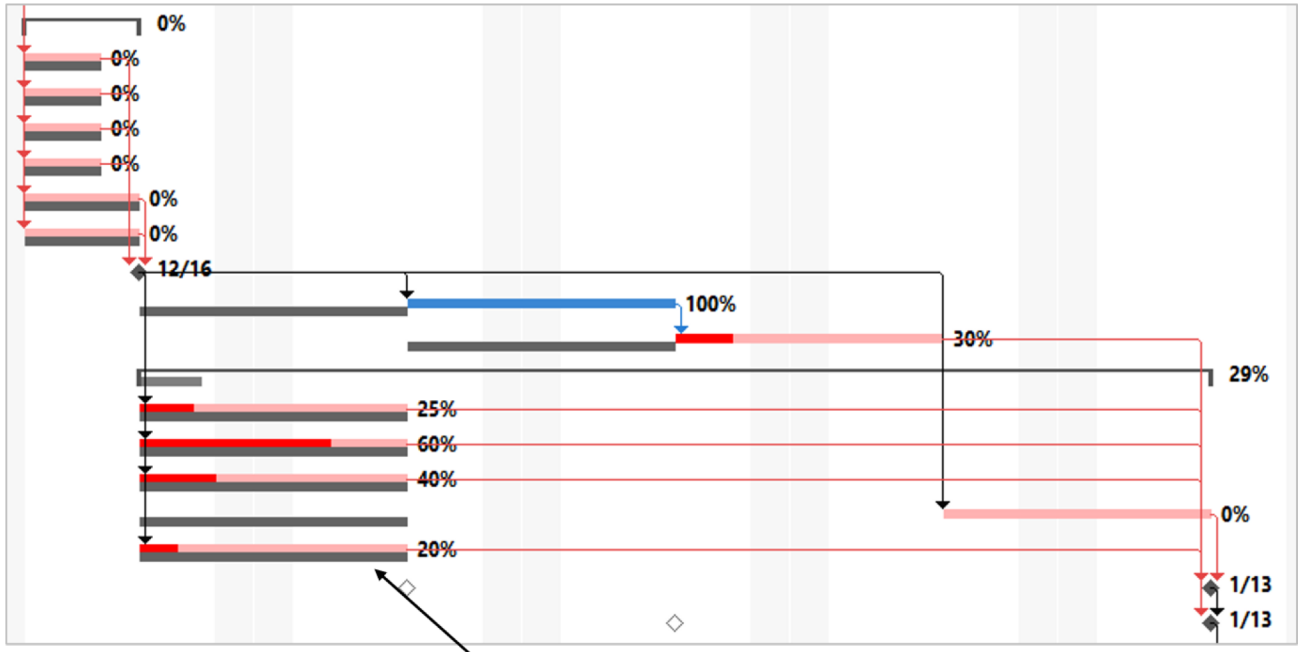
Slippage

- ***Slippage*** is the amount of additional schedule duration caused by failing to meet a scheduled date in the project plan. For example, missing the deadline for a milestone because a task took a week longer than planned could cause an additional two weeks of slippage in the project plan when all affected subsequent tasks and resources are accounted for.
- You can view slippage to see which tasks have slipped from their initial schedule in the baseline. In the **Gantt Chart** view, select the baseline you want to view slippage against from the **Slippage** command drop-down in the **Bar Styles** command group on the **Gantt Chart Tools Format** tab. Microsoft Project will display the slippage for any slipped tasks as a line between the baseline bar and the task bar



The Tracking Gantt View

- Using the **Tracking Gantt** view, you can view how your tasks are progressing over time and whether their start and finish dates are slipping. The Tracking Gantt compares the start and finish dates for your tasks as they were initially planned in the selected baseline and the scheduled or actual start and finish dates for your tasks as they exist in the current project schedule.
- To view the difference between your initial plan and the current schedule, select **Tracking Gantt** from any of the **View** command drop-downs. Microsoft Project will display the baseline bar below the task bar, with tasks that are part of the critical path in red.



When you view the Tracking Gantt, the baseline bar appears below the task bar. Tasks in the critical path display in red.

Views

- ***Views*** in Microsoft Project provide a visual representation of project data that can be useful for tracking your project throughout its lifecycle. You can use a specific view to focus on specific aspects of your project or view specific types of data. For instance, there is a view that helps you track your progress and a view that shows you how your resources are being utilized. Typically, views contain a combination or two or more tables and/or charts.

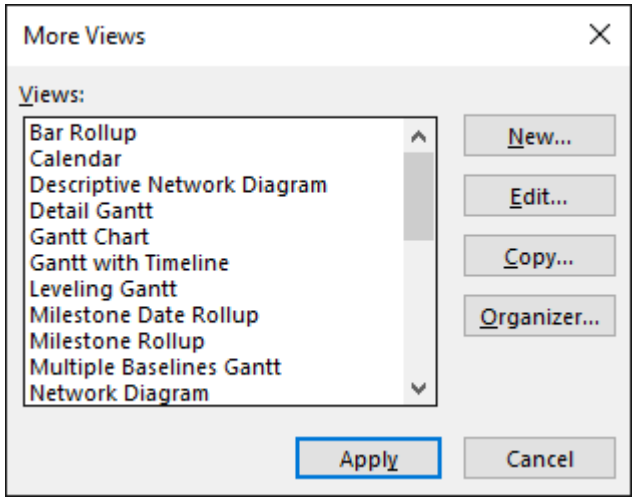
Default Views

- There are a number of built-in views that are considered the most commonly used views; they are accessible from the various view commands on the various ribbon tabs. The **View** drop-down lists them all on the **Task** and **Resource** tabs, and they are found in the various commands of the **Task Views** and **Resource Views** command groups on the **View** tab.

View	Description	Use
Calendar	Shows the tasks in the project schedule in calendar format. You can view tasks by month, week, or a custom time period you select.	To see which tasks are scheduled for a particular time period.
Gantt Chart	Shows project tasks in two ways: as a list and as bars plotted against the project timeline.	To see a list of your tasks and a graphical representation of when they are scheduled to occur.

The More Views Dialog Box

- In addition to the built-in views provided from the view commands, there are a number of other views from which you can choose to display your data in Microsoft Project. These additional view are listed in the **More Views** dialog box, which you can access by selecting **More Views** from any of the view command drop-downs.



View	Description	Use
Bar Rollup	Shows a simplified, high-level view of all tasks in the project plan.	To see a high-level summary of the project.
Descriptive Network Diagram	Shows more information for each node than in the regular network diagram view.	To see a more detailed graphical representation of how tasks are sequenced.