

TECH TIP

FORECASTING MAN-HOURS AND FTE TRACKING IN P6 ORACLE PRIMAVERA P6

Primavera P6 allows users to forecast man-hours and track FTE (full-time equivalent) in the Resource Assignment Window and Resource Usage Profile. Forecasting man-hours is important to any project schedule. It lets the P6 User know the cost of the resources and how many manhours are needed to complete a task. FTE is the number of hours worked by a resource in a given time period. This standardizes the measurements for the time, money, and resources that are used in the schedule. FTE can be helpful in a project if the hours of work are known but how many resources are needed is not known.

Forecasting Man-Hours

Before the Tech Tip further explains how to forecast man-hours and track FTE in Primavera P6 the following data fields are defined:

Remaining Early Units

The remaining units of work to be performed by a particular resource on a particular activity

Cumulative Remaining Early Units

The Cumulative amount of remaining units of work to be performed by a particular resource on a particular activity

Forecasting Man-Hours in Primavera P6 is done under the Resource Assignment window and can also be displayed as a graph on the Resource Usage Profile.

To navigate to the Resource Assignments window Project>Resource Assignments as shown in the figure below.

<u>E</u> dit <u>V</u> iev	Project Enterprise Tools	Admin Help												
🗞 🗸 🛛 🗉	Activities	🛛 🖻 🖳 🛍 🖄 🕯	📰 💷 - 📼 🝸 - 🖻	• # 💶 🛛	- 😪 % 🖇 🖥	b I	■ 🚬 🔍 🔍 🔍	8		P (9 😗			
Resourc	e 🙅 Resource Assignments													
Project	• <u>w</u> bs	ssignments												
	📆 Assign Baselines													
	n, 📅 Maintain Baselines						🖙 Display							
Activity I	D 🧱 Expenses	Name	Resource ID Name	Budgeted Units	ludgeted Cost	<u> </u>	Early Units				Jul 12			
	WPs & Docs							Sun	Mon	Tue		Thr	Fri	Sat S
-		struction/Foundations (P	CCFG.Final Grading	540h	\$135,000.00		Cum Remaining							
-							Remaining							
	Risks	struction/Foundations (P	CCGR.Grading	540h	\$135,000.00		Cum Remaining							
	<u>.</u>	1.Com to a firm	CCIBE Iron Worker Foreman	100	400 500 00		Remaining							
	Set Default Project	al Construction	CUMP. Iron Worker Foreman	180h	\$22,500.00		Cum Remaining Remaining							
	A302 Elect	rical Construction	CCMAS. Masons	360h	\$32,400.00	- III-	Cum Remaining							
2	A302 E1600	incar construction	CCMA3.Mdsons	3001	\$32,400.00		Remaining							
	A302 Elect	rical Construction	CCMASF.Mason Foreman	180h	\$19,800.00	- III-	Cum Remaining							
	1002 2000		Control and Control Control	10011	\$10,000.00		n ::							

Once in the Resource Assignment window, the left side of the screen displays the Resources and can be filtered, group, and sorted by specific items.

On the right side is the Resource Usage Spreadsheet which will be used in this Tech Tip to forecast Man-Hours.



Right-click on the Resource Usage Spreadsheet to bring up options such as Timescale, Spreadsheet Options, Zoom In/Out, and Spreadsheet Fields. Under Spreadsheet Fields click customize and the dialog box above will appear. Since Man-Hours are being forecasted bring over Remaining Early Units and Cumulative Remaining Early Units to the Selected Options side.



FORECASTING MAN-HOURS AND FTE TRACKING IN P6

✓ Display													2020												
Early Units				Jun 28							Jul 05		2020					Jul 12							Jul 19
	Sun	Mon	Tue	Wed	Thr	Fri	Sat	Sun	Mon	Tue	Wed	Thr	Fri	Sat	Sun	Mon	Tue	Wed	Thr	Fri	Sat	Sun	Mon	Tue	Wed
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Cum Remaining		8h	16h	24h	32h	40h	40h	40h	48h	56h	64h	72h	80h	80h	80h	88h	96h	104h	112h	112h	112h	112h	112h	112h	112
Remaining		8h	8h	8h	8h	8h			8h	8h	8h	8h	8h			8h	8h	8h	8h						
Cum Remaining		4h	8h	12h	16h	20h	20h	20h	24h	28h	32h	36h	40h	40h	40h	44h	48h	52h	56h	56h	56h	56h	56h	56h	56
Remaining		4h	4h	4h	4h	4h			4h	4h	4h	4h	4h			4h	4h	4h	4h						
Cum Remaining																									
Remaining																									
Cum Remaining																									
Remaining																									
Cum Remaining		2h	3h	5h	7h	8h	8h	8h	10h	12h	13h	15h	17h	17h	17h	18h	20h	22h	23h	23h	23h	23h	23h	23h	23
Remaining		2h	2h	2h	2h	2h			2h	2h	2h	2h	2h			2h	2h	2h	2h						
Cum Remaining																									
Remaining																									
Cum Remaining		8h	16h	24h	32h	40h	40h	40h	48h	56h	64h	72h	80h	80h	80h	88h	96h	104h	112h	120h	120h	120h	120h	120h	120
Remaining		8h	8h	8h	8h	8h			8h	8h	8h	8h	8h			8h	8h	8h	8h	8h					
Cum Remaining																									
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Click OK and the final results should look like the figure above. Shown here are the Cumulative Remaining Units and the Remaining Early Units. Using the spreadsheet it is possible to forecast how many Man-hours a specific activity will need based on the Cumulative Remaining Units for that activity.



FORECASTING MAN-HOURS AND FTE TRACKING IN P6

To show this forecast in a graphical representation navigate to the Resource Usage Profile (Assuming the reader has a basic understanding of the Resource Usage Profile)



To ensure that the forecasting for Man-Hours is displayed on the graph above right click on the Resource Histogram and click Resource Usage Profile Options to confirm that Units is displaying. From here the Resource Histogram shows the Remaining Early Units in green, and the Cumulative Early Units are represented with the green curve. This is a graphical representation of forecasting Man-Hours for a project.

FTE Tracking

To display FTE Tracking in Primavera P6 ensure that the Resource Assignments window is open. Right-click on the Resource Usage Spreadsheet and click Spreadsheet Options.

						Jun 20							JULIO							JULIZ						_	JULIS
			Sun	Mon	Tue	Wed	Thr	Fri	Sat	Sun	Mon	Tue	Wed	Thr	Fri	Sat	Sun	Mon	Tue	Wed	Thr	Fri	Sat	Sun	Mon	Tue	Wed
360h	\$32,400.00	Cum Remaining																									
		Remaining																									
180h	\$19,800.00	Cum Remaining																									
		Remaining																									
540h	\$297,000.00	Cum Remaining																									
		Remaining																									
540h	\$94,500.00	Cum Remaining																									
		Remaining																									
120h	\$10,800.00	Cum Remaining																									
		Remaining																									
144h	\$12,960.00	Cum Remaining		8h	16h	24h	32h	40h	40h	40h	48h	56h	64h	72h	80h	80h	80h	88h	96h	104h	112h	112h	112h	112h	112h	112h	112
		Remaining		8h	8h	8h	8h	8h			8h	8h	8h	8h	8h			8h	8h	8h	8h	_					
72h	\$7,200.00	Cum Remaining		4h	8h	12h	16h	20h	20h	20h	24h	28h	32h	36h	40h	40h	40h	44h	48h	52h	56h	56h	56h	56h	56h	56h	56
		Remaining		4h	4h	4h	4h	4h			4h	4h	4h	4h	4h			4h	4h	4h	4h			[]			
100h 🕞				1									-1														
	P6 Spreadsheel	Options										Þ	<														
30h	Calculate Aver	age									0	ĸ	1														
	Divide inter	val totals by:								L.X.			4														
30h	1	📕 🔲 Base on Hours pe	er Time Pe	riod						0	Can	icel	13h	15h	17h	17h	17h	18h	20h	22h	23h	23h	23h	23h	23h	23h	23
	, Unit of Mea	n mar																									
	Of its Of Meda												2h	2h	2h			2h	2h	2h	2h			1 1		·	
120h II											l n	olu.	2h	2h	2h			2h	2h	2h	2h						
120h										₽	Ap	ply	2h	2h	2h			2h	2h	2h	2h						
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120h 120h										1	Ap He		64h	72h	80h	80h	80h	88h	96h	104h	112h	120h	120h	120h	120h	120h	
120h																80h	80h					120h 8h	120h	120h	120h	120h	
													64h	72h	80h	80h	80h	88h	96h	104h	112h	_	120h	120h	120h	120h	
120h 240h_	*16.000.00	Remaining											64h	72h	80h	80h	80h	88h	96h	104h	112h	_	120h	120h	120h	120h	
120h	\$16,000.00	Remaining Cum Remaining											64h	72h	80h	80h	80h	88h	96h	104h	112h	_	120h	120h	120h	120h	
120h 240h 160h		Remaining Cum Remaining Remaining			06	126	164	201	2016	3	He	lp	64h 8h	72h 8h	80h 8h			88h 8h	96h 8h	104h 8h	112h 8h	8h					120
120h 240h_	\$16,000.00	Remaining Cum Remaining		4h 4h	8h 4h	12h	16h 4h	20h 4h	20h				64h	72h	80h	80h 40h		88h	96h	104h	112h	_	120h	120h		120h	



The dialog box in the figure above will display. Check the Calculate Average Box. In the Divide interval totals by field put 8. (Assuming a full-time employee is 40h) Then click the box Base on Hours per Time Period. Click OK.

The result is shown in the figure below.

✓ Layout: Remaining v					✓ Display																								
Activity ID	Activity Name	Resource ID Name	Budgeted Units	ludgeted Cost	 Early Units 			Juni	20						Jul 05		2020					Jul 12							Jul 1
						Sun M	on Tu	e We	d Thr	Fri	Sat	Sun	Moo	Tue		Thr	Fri	Sat	Sun	Mon			Thr	Fri	Sat	Sun	Mon		
S A302	Electrical Construction	CCIRF.Iron Worker Foreman	180.0h	\$22,500.00	Cum Remaining Remaining																								
S A302	Electrical Construction	CCMAS.Masons	360.0h	\$32,400.00	Cum Remaining Remaining																								
🙎 A302	Electrical Construction	CCMASF.Mason Foreman	180.0h	\$19,800.00	Cum Remaining Remaining																								
🙎 A298	Civil Construction/Foundations (P	CCP.Paving	540.0h	\$297,000.00	Cum Remaining Remaining																								
A298	Civil Construction/Foundations (P	CCT.Trenching	540.0h	\$94,500.00	Cum Remaining Remaining					-																			
A103	30% Civil Design	CV1.Civil Engineer - Level 1	120.0h	\$10,800.00	Cum Remaining Remaining					+																			
A144	60% Civil Design	CV1.Civil Engineer - Level 1	144.0h	\$12,960.00	Cum Remaining Remaining					1.0 5.		5.0					10.0		10.0						14.0	14.0	14.0	14.0	•
A144	60% Civil Design	CV2.Civil Enigeer - Level 2	72.0h	\$7,200.00	Cum Remaining Remaining		0.5	1.0	1.5 2	1.0 1. 2.0 2.	5 2.5	2.5		3.5	4.0	4.5	1.0 5.0 0.5	5.0	5.0		6.0	6.5	7.0	7.0	7.0	7.0	7.0	7.0	
A149	Grading Permit	CV3.Senior Civil Engineer	100.0h	\$11,000.00	Cum Remaining Remaining		0.5	0.5 (0.5 ().5 0.	0		0.5	0.5	0.5	0.5	U.S			0.5	0.5	0.5	0.5						
A103	30% Civil Design	CV3.Senior Civil Engineer	30.0h	\$3,300.00	Cum Remaining Remaining					-																			
A144	60% Civil Design	CV3.Senior Civil Engineer	30.0h	\$3,300.00	Cum Remaining Remaining).8 1.).2 0.		1.0	1.2				2.1 0.2	2.1	21	2.3 0.2					2.9	2.9	2.9	2.9	
A101	30% Electrical Design	EL1.Electrical Engineer - Level 1	120.0h	\$12,000.00	Cum Remaining Remaining		0.2	0.2 1	u.2 (J.Z U.	2		0.2	0.2	0.2	0.2	0.2			0.2	0.2	0.2	0.2						
🤦 ^{A142}	60% Electrical Design	EL1.Electrical Engineer - Level 1	120.0h	\$12,000.00	Cum Remaining Remaining		1.0 1.0				0 5.0	5.0		7.0 1.0		9.0 1.0			10.0		12.0 1.0		14.0 1.0		15.0	15.0	15.0	15.0	
A305	SCADA / C&P Installation	EL1.Electrical Engineer - Level 1	240.0h	\$24,000.00	Cum Remaining Remaining		1.0	1.0					1.0	1.0	1.0	1.0	1.0			1.0	1.0	1.0	1.0	1.0					
A314	SCADA / C&P Checkout	EL1.Electrical Engineer - Level 1	160.0h	\$16,000.00	Cum Remaining					-																			
A142	60% Electrical Design	EL2.Electrical Engineer - Level 2	60.0h	\$7,500.00	Remaining																		[]						-

Any field that had 8h per day in the cell on the Resource Usage Spreadsheet was replaced with a FTE of 1.0. In the highlighted activity 60% Electrical Design (1) Full Time Employee is needed for each day of the week for the week of June 28. In addition please note that activities in which a FTE was not needed the FTE is measured in decimals which represent a Part-time employee.



Primavera P6 also allows users to show FTE tracking in a graphical representation. Navigate to the Resource Usage Profile. Right-click on Resource Histogram to show options. Click Resource Usage Profile Options.

	✓ Display: Open Projects Only		
ry Role			
		Resource Usage Profile Options	×
		Data Graph	🖌 ок
		Vertical Lines	O Cancel
	· 50.0h	Major	
		Minor	Apply
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rical		A defiliered Diseley Online	
es		Additional Display Options	
	· 30.0h	Show Legend Background Color	
		Calculate Average Divide interval totals by:	
		1 Base on Hours per Time Period	
	• 20.0h	Unit of Measure:	
	· 10.0h		

Once the dialog box screen is open it will show the figure above. Under Additional Display Options in the Graph Tab check the Calculate Average and in the Divide Interval totals by field input 8.



Results are shown below

✓ Layout: Analyzing th	es Resource Assignments												
	he Budget MAA	Filter Alt Labor Units											
<u>۸</u> .	Activity Name	Total Cost Cost	-	1	July 28 05 12 19	August 26 02 09 16 23	September 30 06 13 20 2	020 0ctober 27 04 11 18 25	November 01 08 15 22 2	December 29 06 13 20 27	January 03 10 17 24	2021 February 31 07 14 21	March 28 07 14 2
-		\$1,000,840.00 \$1,000,840.00			onlat sbor (),7h ()3,3h ()6,3h (4,7h (5.6h 30.4h 35.1h 39.9h 34		18 5h 23 2h 28 0h 32 8h 37	5h 12.3h 17.0h ji 1.8h ji 6.6	hội. 3hộ6. 1h 70. 9h 74. 7h	8.8h 58.8h 58.8h 58.8h 8.8h 37.5h 06.3h 75.0h 5 4.7h 54.7h 94.7h 94.7h 7	13.8h 93.8h 93.8h 93.8 8.8h 52.5h 56.3h 50.1 4.7h 14.7h 54.7h 94.7
Rock Creel	k Substation Build	\$1,000,840.00 \$1,000,840.00) \$24,365.00 \$1,02	Remaining Labor Remaining Nonlab Cum Remaining No			1.0h 4.8h 4.8h 4.8h 4	.8h 4.8h 4.8h 4.8h 4.8h	4.8h 4.8h 4.8h 4.8h 4	8h 4.8h 4.8h 4.8h 4.8	5	0.0h 40.0h 40.0h 40.0h 4 8.8h 58.8h 58.8h 58.8h 5 8.8h 37.5h 06.3h 75.0h 5	13.8h 93.8h 93.8h 93.1
				Cum Remaining La	ibor 3.7h (3.3h)6.3h 74.7h ?	4.7h74.7h74.7h74.7h	5.6h 30.4h 35.1h 39.9h 34.	.7h 39.4h)4.2h)9.0h 3.7h	18.5h 23.2h 28.0h 32.8h 37.	5h 12.3h 17.0h 51.8h 56.6			
✓ Display: Current Proj	oject's Resources			✓ Display: Open	Projects Only					· · · ·			
Resource ID	Resource Name	Resource Type Unit (of Measure Primary Role										
CCFG CCGR CCGR CCGR CCGR CCMAS CCMASF CCP CCP CV CV CV CV CV CV3 EL1 EL2	Final Grading Grading Irom Worker Foreman Masone Paving Trenching Chill Engineer - Level 1 Chill Engineer - Level 2 Senior Civil Engineer Electricial Engineer - Level 1 Electricial Engineer - Level 1	Nonlabor Nonlabor Labor Labor Nonlabor Nonlabor Labor Labor Labor Labor Labor Labor		• 5.0 - Ren	tual Units naining Early Units erallocated Early Units	Total Cumulat 0.0 2.4 1.0 2.1 0.0 0.0 5.0 0.0							4.4
EL2 El2 Elc Elc MECH1 Mech2 Mech3 OP1	Electrical Engineer Cerete E Servici (Level Engineer Electrician Ironworker Mechanical Engineer - Level 1 Mechanical Engineer - Level 2 Servici Mechanical Engineer Operatio Level 1	Labor Labor Labor Labor Labor Labor Labor	Electrical Trades	• 30									
OP2	Operator Level 2	Labor		· 2.0									
۱			у	-1.0									
Display Activities for se	elected					00 000 000 000 000			01 00 45 55			or 1 oz 1 rr 1 oz 1	20 0 0 1 44 7 21
Time Period	Resource			31 07 14 2 June	21 28 05 12 19 July	26 02 09 16 23 August	30 06 13 20 2 September	27 04 11 18 25 October	01 08 15 22 2 November	29 06 13 20 27 December	03 10 17 24 January	31 07 14 21 February	28 07 14 21 March

The resource Senior Mechanical Engineer for the Week of Jul 05 is assigned as a FTE. This statement is true because the Remaining Early Units Total is showing a FTE value of 1.0.

Conclusion

Forecasting Man-hours and FTE tracking can be beneficial throughout the project life cycle. Forecasting Man-hours can show P6 Users how many hours a particular activity may need to complete it. Which can give clients time to plan staffing and plan accordingly. FTE is a useful tool to measure how many resources a project requires, assuming that employees are fulltime. If a part-time resource is needed then the FTE value will be broken down into decimals and reflect on the Resource Usage Spreadsheet / Profile in Primavera P6.

