

## Progress

### Primavera and percent complete

Given that every Activity has a Cost, Time and Resource dimension – when we say that an activity is “forty per cent complete” – what do we mean?

Every activity in Primavera has a percent complete type, chosen from the list of Duration, Physical and Units – which do we use and what does it do?

Percent Complete Type	Updates Cost	Updates Time	Updates Resources	Updates Earned Value
Duration		X		If required
Physical				If required
Units	X			If required

Notice anything missing?

Primavera HAS NO native way of interpreting a percent complete as the answer to “What proportion of the man-hours have been achieved/ how much work have we done”

This is an unwelcome surprise.

Which to use?

Use Duration % complete type when a single value for % complete is both “how much work have we done” and “how much of the duration of the task is left”

Use Physical % complete type when the % complete is “how much work have we done”

Then we can use Global Change scripts to take the values recorded and apply them to the budget man-hours to create the remaining man-hours.

There are four Global Changes

Name	Available To	User
EV-01 Save Current Actual Hours	Current User	david.kelly
EV-02 set Units% =Duration%	Current User	david.kelly
EV-03 Calculate remaining units	Current User	david.kelly
EV-04 Set actual hours back	Current User	david.kelly
Increase Cost by 10% for Field Eng	All Users	
Increase Durations	All Users	
KGK - Actual [Earned] Hours	All Users	
KGK - Remaining Hours	All Users	
Late Plan for dates Ekofisk	All Users	
Overall % Complete	All Users	
Remaining Labour Manhours	All Users	
Remove Progress from All Activities	All Users	
Remove Progress from Resource Assignm	All Users	
Reset "Last Cut-Off Progress %" Field	All Users	
SD Duration=Physical % Complete	All Users	
SD Units=Physical % Complete	All Users	
Set B Planned Start and Finish from BL2	All Users	
Store Baseline Dates on Activities	All Users	
Store Budget Cost for Activities	All Users	
Store Budget Cost for Resource Assgnm	All Users	

The four Global changes EV-01,02,03, and 04 must be run in sequence. Primavera has no way of batch running these.

While it is not necessary to understand what they actually do, they will be explained in detail below.

## EV-01 Save Current Actual Hours

Modify Global Change

Select Subject Area: Activity Resource Assignments

Global Change Name: EV-01 Save Current Hours

If	Parameter	Is	Value	High Value
-	(All of the following)			
Where	Actual Start	is not equal to		
And	Actual Finish	equals		

Then	Parameter	Is	Parameter/Value	Operator	Parameter/Value
	user_number8	=	Actual Regular Labor Units		
And	user_number7	=	Actual This Period Labor Units		
And	user_number6	=	Budgeted Labor Units		
And	Actual Regular Labor Units	=	1h		
And	Budgeted Labor Units	=	1h		
And	Remaining Labor Units	=	1h		

Else	Parameter	Is	Parameter/Value	Operator	Parameter/Value

Toolbar: OK, Cancel, Change, Add, Delete, Cut, Copy, Paste, Help

Global change scripts have an “if, then, else” structure. **IF** the following conditions are true, **THEN** these instructions will be executed, **ELSE** these instructions will be executed.

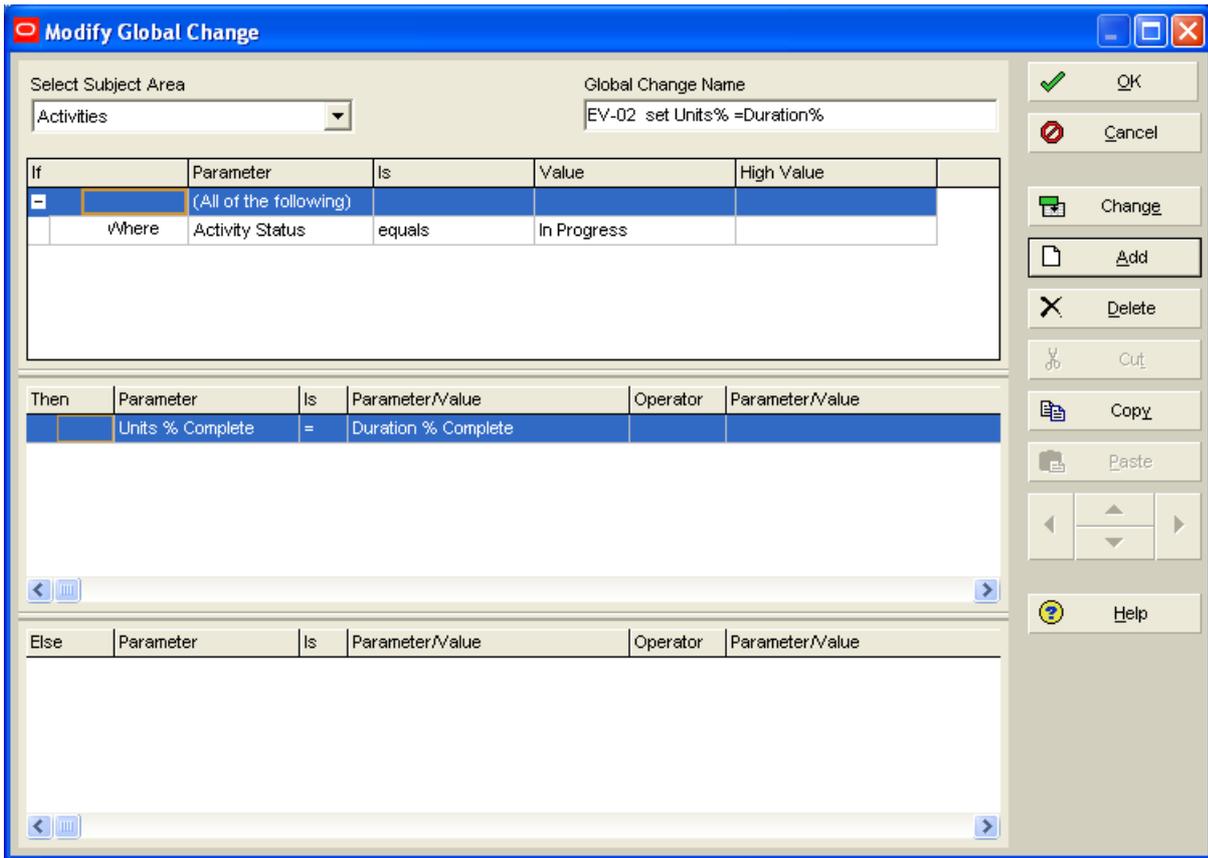
**Note:** Global change executes on the currently open project(s) AND the currently filtered activities. BE CAREFUL, the above IF instruction is not the only filter.

The “Select Subject Area” pick list at the top left forces us to choose between Activities and Activity Resource Assignments. This is VERY unhelpful, as this Global Change sequence would be much simpler if we could use the Duration % complete or the Physical % complete from the Activities table, and apply it to the remaining Labour units in the Activity Resource Assignment table.

The “if” statement selects in progress activities only.

The “Then” section makes three user defined fields equal to The Actual to date and Actual this Period labour units and Budgeted units. This is just a backup before we start. Then we set these to 1 hour.

EV-02 set Units% = Duration %



Note we are in the “Activities” subject area. The field Units % Complete is the only numeric field that is present in both tables. It is the only way to get the Duration % complete or the Physical % complete into anywhere in the Activity Resource Assignment table. The Units % complete value is “pro-rated” across each of the resource assignments BUT we just set the budget to 1 hour for each of them in the last Global change.

There is a filter instruction - we cannot update a % complete in an activity that is not in progress

We will use this value in the next Global Change

Note that we could use Physical % complete in the above Global Change rather than Duration % complete.

If you are using Physical % complete type activities, the above Global change would set the Units % complete equal to the Physical % complete. It might also set the Duration % complete equal to the Physical % complete, after such a Global Change individual activities could have their Remaining Duration (aka Duration % complete) modified without changing either their Earned Value or Remaining Man-hours

EV-03 Calculate Remaining Units

**Modify Global Change**

Select Subject Area:  Global Change Name:

If	Parameter	Is	Value	High Value
	(All of the following			
Where	Actual Start	is not equal to		
And	Actual Finish	equals		

Then	Parameter	Is	Parameter/Value	Operator	Parameter/Value
	Budgeted Labor Units	=	user_number8		
And	Remaining Labor Units	=	Budgeted Labor Units	*	Units % Complete
And	Remaining Labor Units	=	Remaining Labor Units	/	100
And	Remaining Labor Units	=	Budgeted Labor Units	-	Remaining Labor Units

Else	Parameter	Is	Parameter/Value	Operator	Parameter/Value

Buttons: OK, Cancel, Change, Add, Delete, Cut, Copy, Paste, Help

Now we switch back to the Activity Resource Assignments table. We use the Budgeted Labour units and the Units % complete to calculate the remaining labour units.

## EV-04 Set Actual Hours Back

Select Subject Area: Activity Resource Assignments

Global Change Name: EV-04 Set hours back

If	Parameter	Is	Value	High Value
=	(All of the following)			
Where	Actual Start	is not equal to		
And	Actual Finish	equals		

Then	Parameter	Is	Parameter/Value	Operator	Parameter/Value
	Actual Regular Labor Units	=	user_number8		
And	Actual This Period Labor Units	=	user_number7		
And	Budgeted Labor Units	=	user_number6		

Else	Parameter	Is	Parameter/Value	Operator	Parameter/Value
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Now we reset the actual hours in case of any accidents!

**Note:** when we run these Global Change scripts we should always run them from the main Global Change dialogue with Apply change. This means we never run a Global Change whose script has not been saved.