

Redmine - Defect #23511

Progress of parent task should be calculated using total estimated hours of children

2016-08-04 22:59 - Zouheir Najai

Status:	Closed	Start date:	
Priority:	Normal	Due date:	
Assignee:	Jean-Philippe Lang	% Done:	0%
Category:	Issues	Estimated time:	0.00 hour
Target version:	3.4.0	Affected version:	3.2.3
Resolution:	Fixed		
Description			
Problem of calculating the percentage of completion of a Issue(see the attached file).			
When "child" has "sub-child": estimated_hours is nil, therefore is not accounted in "average" (line 1534).			
Issue.total_estimated_hours has to be accounted in this estimate.			
app/model/issue.rb:			
<pre>1511 def recalculate_attributes_for(issue_id) 1512 if issue_id && p = Issue.find_by_id(issue_id) 1513 if p.priority_derived? 1514 # priority = highest priority of children 1515 if priority_position = p.children.joins(:priority).maximum("#{IssuePriority. table_name}.position") 1516 p.priority = IssuePriority.find_by_position(priority_position) 1517 end 1518 end 1519 end 1520 if p.dates_derived? 1521 # start/due dates = lowest/highest dates of children 1522 p.start_date = p.children.minimum(:start_date) 1523 p.due_date = p.children.maximum(:due_date) 1524 if p.start_date && p.due_date && p.due_date < p.start_date 1525 p.start_date, p.due_date = p.due_date, p.start_date 1526 end 1527 end 1528 if p.done_ratio_derived? 1529 # done ratio = weighted average ratio of leaves 1530 unless Issue.use_status_for_done_ratio? && p.status && p.status.default_done_ratio 1531 child_count = p.children.count 1532 if child_count > 0 1533 average = p.children.where("estimated_hours > 0").average(:estimated_hours). to_f 1534 if average == 0 1535 average = 1 1536 end 1537 done = p.children.joins(:status). sum("COALESCE(CASE WHEN estimated_hours > 0 THEN estimated_hours ELSE NULL END, #{average}) " + 1540 "*" (CASE WHEN is_closed = #{self.class.connection.quoted_true} THEN 100 ELSE COALESCE(done_ratio, 0) END) ").to_f 1541 progress = done / (average * child_count) 1542 p.done_ratio = progress.round 1543 end 1544 end 1545 end 1546 # ancestors will be recursively updated 1547 p.save(:validate => false) 1548 end</pre>			

1550 end

Possible Fix:

```
--- issue.rb.ori      2016-08-01 11:44:53.220332666 -0400
+++ issue.rb         2016-08-01 11:45:07.395332666 -0400
@@ -1531,13 +1531,12 @@
      unless Issue.use_status_for_done_ratio? && p.status && p.status.default_done_ratio
        child_count = p.children.count
        if child_count > 0
-         average = p.children.where("estimated_hours > 0").average(:estimated_hours).to_f
+         average = p.total_estimated_hours / child_count
          if average == 0
            average = 1
          end
-         done = p.children.joins(:status).
-         sum("COALESCE(CASE WHEN estimated_hours > 0 THEN estimated_hours ELSE NULL END, #{a
verage}) " +
-           "*" (CASE WHEN is_closed = #{self.class.connection.quoted_true} THEN 100 ELSE CO
ALESCE(done_ratio, 0) END)").to_f
+         done = 0
+         p.children.each { |c| done += (c.total_estimated_hours * c.done_ratio) }
+         progress = done / (average * child_count)
+         p.done_ratio = progress.round
        end
      end
```

When one manually enter the estimated time.

In the original program, based on the average of other tasks to calculate progress. I keep the same approach in the patch :

```
--- issue.rb.ori      2016-08-01 11:44:53.220332666 -0400
+++ issue.rb         2016-08-01 13:42:18.138330460 -0400
@@ -1531,13 +1531,19 @@
      unless Issue.use_status_for_done_ratio? && p.status && p.status.default_done_ratio
        child_count = p.children.count
        if child_count > 0
-         average = p.children.where("estimated_hours > 0").average(:estimated_hours).to_f
+         average = (p.total_estimated_hours||=0) / child_count
          if average == 0
            average = 1
          end
-         done = p.children.joins(:status).
-         sum("COALESCE(CASE WHEN estimated_hours > 0 THEN estimated_hours ELSE NULL END, #{a
verage}) " +
-           "*" (CASE WHEN is_closed = #{self.class.connection.quoted_true} THEN 100 ELSE CO
ALESCE(done_ratio, 0) END)").to_f
+         done = 0
+         p.children.each do |c|
+           dr = c.closed_on.nil? ? (c.done_ratio||=0) : 100
+           unless c.total_estimated_hours.nil? || c.total_estimated_hours == 0
+             done += (c.total_estimated_hours * c.done_ratio)
+           else
+             done += average * c.done_ratio
+           end
+         end
+         progress = done / (average * child_count)
+         p.done_ratio = progress.round
        end
      end
```

Related issues:

Related to Redmine - Defect #20995: Automatic done ratio calculation in issue...	Closed
Related to Redmine - Defect #24457: Progress of version should be calculated ...	Closed
Has duplicate Redmine - Defect #24213: % Done is not correct for parent to pa...	Closed
Has duplicate Redmine - Defect #23151: done_ratio calculation with multi-leve...	Closed

Associated revisions

Revision 15802 - 2016-09-01 19:03 - Jean-Philippe Lang

Fixed that progress of parent should be calculated with total estimated hours of children (#23511).

History

#1 - 2016-08-23 04:41 - Jens Krämer

- File 0001-test-case-for-grandchildren-s-done-percentages.patch added
- File 0002-fix-attempt-for-23511.patch added

This is a valid problem.

Given

```
Settings.issue_done_ratio == 'issue_field'
Settings.parent_issue_done_ratio == 'derived'
```

and issues like this:

- parent issue
 - child 1 (2h estd, 0% done)
 - child 2
 - child a (2h estd, 50% done)
 - child b (2h estd, 50% done)

so in total 2h of 6h are done, which means the parent should have a done ratio of 33%. Redmine 3.2 and current master show 25% instead (average of 50% from child 2 and 0% from child 1).

It looks like this new issue has been introduced with my fix for [#20995](#) which changed the calculation from leaves to children in the first place to solve another problem.

I don't have an idea how to solve this without breaking anything else right now. For now I'll attach a failing test case illustrating the problem and a second patch containing the fix attempt from this issue's description, which solves the problem at hand but breaks some other test cases.

#2 - 2016-08-23 15:20 - Toshi MARUYAMA

- Description updated

#3 - 2016-08-23 15:24 - Toshi MARUYAMA

- Related to Defect #20995: Automatic done ratio calculation in issue tree is wrong in some cases added

#4 - 2016-08-23 15:24 - Toshi MARUYAMA

- Target version set to 3.4.0

#5 - 2016-09-01 19:05 - Jean-Philippe Lang

- Subject changed from Problem of calculating the percentage of completion of a Issue to Progress of parent task should be calculated using total estimated hours of children
- Status changed from New to Closed
- Assignee set to Jean-Philippe Lang
- Resolution set to Fixed

Fixed in [r15802](#) by calculating the progress of parent task using the total estimated hours of children as proposed by Zouheir Najai. I've included the test provided by Jens.
Thanks to both of you.

#6 - 2016-11-21 14:02 - Toshi MARUYAMA

- Has duplicate Defect #24213: % Done is not correct for parent to parents when calculated from subtasks added

#7 - 2016-11-25 15:41 - Toshi MARUYAMA

- Related to Defect #24457: Progress of version should be calculated the same way as parent tasks added

#8 - 2017-07-09 05:24 - Go MAEDA

- Has duplicate Defect #23151: done_ratio calculation with multi-level sub tasks and estimated hours added

Files

Problem in calculating percentage.pdf	96 KB	2016-08-04	Zouheir Najai
0001-test-case-for-grandchildren-s-done-percentages.patch	1.29 KB	2016-08-23	Jens Krämer
0002-fix-attempt-for-23511.patch	1.76 KB	2016-08-23	Jens Krämer