

Redmine - Patch #40000

Optimize gantt chart rendering for issues without subtasks

2024-01-03 08:22 - Go MAEDA

Status:	Closed	Start date:	
Priority:	Normal	Due date:	
Assignee:	Go MAEDA	% Done:	0%
Category:	Performance	Estimated time:	0.00 hour
Target version:	6.0.0		

Description

This patch introduces an optimization to the gantt chart rendering process. We can improve the performance by avoiding unnecessary database queries for issues that do not have subtasks, especially when rendering gantt with large numbers of issues.

The current implementation in the Gantt chart helper performs a database query to fetch children for every issue, regardless of whether the issue has subtasks.

```
Issue Load (0.4ms) SELECT "issues".* FROM "issues" WHERE "issues"."parent_id" = $1 ORDER BY "issues"."lft" ASC [["parent_id", 1]]
↳ lib/redmine/helpers/gantt.rb:768:in `html_subject'
Issue Load (0.3ms) SELECT "issues".* FROM "issues" WHERE "issues"."parent_id" = $1 ORDER BY "issues"."lft" ASC [["parent_id", 15]]
↳ lib/redmine/helpers/gantt.rb:768:in `html_subject'
Issue Load (0.4ms) SELECT "issues".* FROM "issues" WHERE "issues"."parent_id" = $1 ORDER BY "issues"."lft" ASC [["parent_id", 16]]
↳ lib/redmine/helpers/gantt.rb:768:in `html_subject'
Issue Load (0.2ms) SELECT "issues".* FROM "issues" WHERE "issues"."parent_id" = $1 ORDER BY "issues"."lft" ASC [["parent_id", 17]]
↳ lib/redmine/helpers/gantt.rb:768:in `html_subject'
Issue Load (0.1ms) SELECT "issues".* FROM "issues" WHERE "issues"."parent_id" = $1 ORDER BY "issues"."lft" ASC [["parent_id", 18]]
```

With the patch applied, it first checks if the issue has children by using `object.leaf?`. If the issue has no children, it avoids the database query to retrieve children. This check can reduce a considerable number of SQL queries.

Below is the test result with 500 issues. All issues don't have subtasks.

Without the patch:

```
$ hey -n 50 -c 1 http://localhost:3000/projects/ecookbook/issues/gantt
```

Summary:

```
Total:      19.2706 secs
Slowest:    0.5254 secs
Fastest:    0.3520 secs
Average:    0.3854 secs
Requests/sec: 2.5946
```

```
Total data: 61809550 bytes
Size/request: 1236191 bytes
```

With the patch applied:

```
$ hey -n 50 -c 1 http://localhost:3000/projects/ecookbook/issues/gantt
```

Summary:

```
Total:      13.4183 secs
Slowest:    0.2972 secs
Fastest:    0.2455 secs
Average:    0.2684 secs
Requests/sec: 3.7263
```

Total data: 61809550 bytes
Size/request: 1236191 bytes

Associated revisions

Revision 22589 - 2024-01-03 13:14 - Go MAEDA

Optimize gantt chart rendering for issues without subtasks (#40000).

Patch by Go MAEDA (@maeda).

History

#1 - 2024-01-03 09:44 - Go MAEDA

- File 40000.patch added

Attaching a patch.

#2 - 2024-01-03 12:57 - Go MAEDA

- Target version set to 6.0.0

#3 - 2024-01-03 13:15 - Go MAEDA

- Status changed from New to Closed

- Assignee set to Go MAEDA

Committed the patch in [r22589](#).

Files

40000.patch	687 Bytes	2024-01-03	Go MAEDA
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