

## Foreman - Bug #4565

### Foreman consumes all available memory and start swapping.

03/06/2014 10:07 AM - Peter Gustafsson

<b>Status:</b> Closed	
<b>Priority:</b> High	
<b>Assignee:</b> Lukas Zapletal	
<b>Category:</b> Search	
<b>Target version:</b> 1.4.2	
<b>Difficulty:</b>	<b>Fixed in Releases:</b>
<b>Triaged:</b>	<b>Found in Releases:</b>
<b>Bugzilla link:</b>	<b>Red Hat JIRA:</b>
<b>Pull request:</b>	
<b>Description</b>	
Hi,	
My foreman 1.4.1 system consumes all available memory 8GB and start swapping and that in turn leads to Foreman respond slowly. I think that all the memory is consumed when an search on an puppet module is triggered on the puppet classes page. when doing a search on an puppet module no result is shown even after up to 20 min.	
Doing an strace on the process hogging all memory just shows:	
1. strace -p 20055 Process 20055 attached - interrupt to quit select(10, [0 9], NULL, NULL, NULL	
Below is the output from passenger-memory-stats, the private memory usage is extremely high:	
----- Apache processes -----	
PID PPID VMSize Private Name	
-----	
19798 1 199.5 MB 0.0 MB /usr/sbin/httpd	
19817 19798 202.0 MB 0.2 MB /usr/sbin/httpd	
19818 19798 202.0 MB 0.1 MB /usr/sbin/httpd	
19819 19798 202.0 MB 0.3 MB /usr/sbin/httpd	
19820 19798 202.0 MB 0.2 MB /usr/sbin/httpd	
19821 19798 202.0 MB 0.1 MB /usr/sbin/httpd	
19822 19798 202.0 MB 0.1 MB /usr/sbin/httpd	
19823 19798 202.0 MB 0.2 MB /usr/sbin/httpd	
19824 19798 202.0 MB 0.1 MB /usr/sbin/httpd	
20064 19798 202.0 MB 0.4 MB /usr/sbin/httpd	
20295 19798 202.0 MB 0.4 MB /usr/sbin/httpd	
21523 19798 201.8 MB ? /usr/sbin/httpd	
22798 19798 202.0 MB 0.3 MB /usr/sbin/httpd	
22891 19798 201.8 MB 0.2 MB /usr/sbin/httpd	
22950 19798 202.0 MB 0.3 MB /usr/sbin/httpd	
22957 19798 202.0 MB 0.2 MB /usr/sbin/httpd	
1. Processes: 16	
2. Total private dirty RSS: 3.18 MB (?)	
----- Nginx processes -----	
1. Processes: 0	
2. Total private dirty RSS: 0.00 MB	
----- Passenger processes -----	
PID VMSize Private Name	
-----	
19800 209.0 MB 0.0 MB PassengerWatchdog	
19803 1143.2 MB 0.4 MB PassengerHelperAgent	

19808	148.5 MB	0.0 MB	PassengerLoggingAgent
19946	176.2 MB	2.8 MB	Passenger RackApp: /etc/puppet/rack
19964	920.6 MB	155.1 MB	Passenger RackApp: /usr/share/foreman
19989	600.8 MB	63.0 MB	Passenger RackApp: /usr/share/foreman
20031	983.4 MB	375.8 MB	Passenger RackApp: /usr/share/foreman
20055	7672.2 MB	5421.3 MB	Passenger RackApp: /usr/share/foreman
22921	468.0 MB	0.0 MB	Passenger RackApp: /usr/share/foreman

1. Processes: 9
2. Total private dirty RSS: 6018.36 MB

## Associated revisions

### Revision 0126385b - 03/11/2014 08:53 AM - Lukas Zapletal

fixes #4565 - puppet class free-text search is now significantly faster

### Revision 2041a83b - 03/12/2014 10:42 AM - Lukas Zapletal

fixes #4565 - puppet class free-text search is now significantly faster

(cherry picked from commit 0126385b4469accf2474ab3db0ef43f8d7b63558)

## History

### #1 - 03/06/2014 06:11 PM - Peter Gustafsson

This occur when an free text search is performed. I can see in the production.log that LIMIT 20 and ORDER BY puppetclasses.name is used on the db query and we have 1200+ puppet modules. searching on an module starting with a e.g apache goes relative fast but if i search on e.g pulp the search query use all available memory on the system and foreman freeze. This foreman installation has 100+ users so free text searches on modules will occur and every time it's done it hangs the foreman server.

I can also see that it takes ~80 Sec to retrieve 20 rows and the time is increasing per every 20 rows retrieved and since we have 1200+ rows the search query takes ~60+ min, if not the memory runs out first.

```
%ipa%)) ORDER BY puppetclasses.name LIMIT 20 OFFSET 0
Puppetclass Load (79723.1ms) SELECT DISTINCT "puppetclasses".id, puppetclasses.name AS alias_0 FROM "puppetclasses" LEFT OUTER JOIN
"environment_classes" ON "environment_classes"."puppetclass_id" = "puppetclasses"."id" LEFT OUTER JOIN "environments" ON
"environments"."id" = "environment_classes"."environment_id" LEFT OUTER JOIN "hostgroup_classes" ON "hostgroup_classes"."puppetclass_id" =
"puppetclasses"."id" LEFT OUTER JOIN "hostgroups" ON "hostgroups"."id" = "hostgroup_classes"."hostgroup_id" LEFT OUTER JOIN
"environment_classes" "environment_classes_puppetclasses_join" ON "environment_classes_puppetclasses_join"."puppetclass_id" =
"puppetclasses"."id" LEFT OUTER JOIN "lookup_keys" ON "lookup_keys"."id" = "environment_classes_puppetclasses_join"."lookup_key_id" AND
environment_classes.lookup_key_id is NOT NULL WHERE (("puppetclasses"."name" ILIKE '%ipa%' OR "environments"."name" ILIKE '%ipa%' OR
"hostgroups"."name" ILIKE '%ipa%' OR "lookup_keys"."key" ILIKE '%ipa%')) ORDER BY puppetclasses.name LIMIT 20 OFFSET 0
Puppetclass Load (80497.4ms) SELECT DISTINCT "puppetclasses".id, puppetclasses.name AS alias_0 FROM "puppetclasses" LEFT OUTER JOIN
"environment_classes" ON "environment_classes"."puppetclass_id" = "puppetclasses"."id" LEFT OUTER JOIN "environments" ON
"environments"."id" = "environment_classes"."environment_id" LEFT OUTER JOIN "hostgroup_classes" ON "hostgroup_classes"."puppetclass_id" =
"puppetclasses"."id" LEFT OUTER JOIN "hostgroups" ON "hostgroups"."id" = "hostgroup_classes"."hostgroup_id" LEFT OUTER JOIN
"environment_classes" "environment_classes_puppetclasses_join" ON "environment_classes_puppetclasses_join"."puppetclass_id" =
"puppetclasses"."id" LEFT OUTER JOIN "lookup_keys" ON "lookup_keys"."id" = "environment_classes_puppetclasses_join"."lookup_key_id" AND
environment_classes.lookup_key_id is NOT NULL WHERE (("puppetclasses"."name" ILIKE '%ipa%' OR "environments"."name" ILIKE '%ipa%' OR
"hostgroups"."name" ILIKE '%ipa%' OR "lookup_keys"."key" ILIKE '%ipa%')) ORDER BY puppetclasses.name LIMIT 20 OFFSET 0
Puppetclass Load (80924.2ms) SELECT DISTINCT "puppetclasses".id, puppetclasses.name AS alias_0 FROM "puppetclasses" LEFT OUTER JOIN
"environment_classes" ON "environment_classes"."puppetclass_id" = "puppetclasses"."id" LEFT OUTER JOIN "environments" ON
"environments"."id" = "environment_classes"."environment_id" LEFT OUTER JOIN "hostgroup_classes" ON "hostgroup_classes"."puppetclass_id" =
"puppetclasses"."id" LEFT OUTER JOIN "hostgroups" ON "hostgroups"."id" = "hostgroup_classes"."hostgroup_id" LEFT OUTER JOIN
"environment_classes" "environment_classes_puppetclasses_join" ON "environment_classes_puppetclasses_join"."puppetclass_id" =
"puppetclasses"."id" LEFT OUTER JOIN "lookup_keys" ON "lookup_keys"."id" = "environment_classes_puppetclasses_join"."lookup_key_id" AND
environment_classes.lookup_key_id is NOT NULL WHERE (("puppetclasses"."name" ILIKE '%ipa%' OR "environments"."name" ILIKE '%ipa%' OR
"hostgroups"."name" ILIKE '%ipa%' OR "lookup_keys"."key" ILIKE '%ipa%')) ORDER BY puppetclasses.name LIMIT 20 OFFSET 0
Puppetclass Load (82233.8ms) SELECT DISTINCT "puppetclasses".id, puppetclasses.name AS alias_0 FROM "puppetclasses" LEFT OUTER JOIN
"environment_classes" ON "environment_classes"."puppetclass_id" = "puppetclasses"."id" LEFT OUTER JOIN "environments" ON
"environments"."id" = "environment_classes"."environment_id" LEFT OUTER JOIN "hostgroup_classes" ON "hostgroup_classes"."puppetclass_id" =
"puppetclasses"."id" LEFT OUTER JOIN "hostgroups" ON "hostgroups"."id" = "hostgroup_classes"."hostgroup_id" LEFT OUTER JOIN
"environment_classes" "environment_classes_puppetclasses_join" ON "environment_classes_puppetclasses_join"."puppetclass_id" =
"puppetclasses"."id" LEFT OUTER JOIN "lookup_keys" ON "lookup_keys"."id" = "environment_classes_puppetclasses_join"."lookup_key_id" AND
environment_classes.lookup_key_id is NOT NULL WHERE (("puppetclasses"."name" ILIKE '%ipa%' OR "environments"."name" ILIKE '%ipa%' OR
"hostgroups"."name" ILIKE '%ipa%' OR "lookup_keys"."key" ILIKE '%ipa%')) ORDER BY puppetclasses.name LIMIT 20 OFFSET 0
```

Br, Peter

### #2 - 03/07/2014 09:21 AM - Lukas Zapletal

Hello,

are you able to measure how fast is the query when you paste it to the SQL server directly (e.g. without Rails and ActiveRecord involved)?

In other words, is this Rails bug/leak or not optimized SQL?

### #3 - 03/07/2014 09:40 AM - Peter Gustafsson

Hello,

Seems like an Rails bug/leak:

```
$ time psql <<EOF
```

```
SELECT DISTINCT "puppetclasses".id, puppetclasses.name AS alias_0 FROM "puppetclasses" LEFT OUTER JOIN "environment_classes" ON
"environment_classes"."puppetclass_id" = "puppetclasses"."id" LEFT OUTER JOIN "environments" ON "environments"."id" =
"environment_classes"."environment_id" LEFT OUTER JOIN "hostgroup_classes" ON "hostgroup_classes"."puppetclass_id" =
"puppetclasses"."id" LEFT OUTER JOIN "hostgroups" ON "hostgroups"."id" = "hostgroup_classes"."hostgroup_id" LEFT OUTER JOIN
"environment_classes" "environment_classes_puppetclasses_join" ON "environment_classes_puppetclasses_join"."puppetclass_id" =
"puppetclasses"."id" LEFT OUTER JOIN "lookup_keys" ON "lookup_keys"."id" = "environment_classes_puppetclasses_join"."lookup_key_id"
AND environment_classes.lookup_key_id is NOT NULL WHERE (("puppetclasses"."name" ILIKE '%ipa%' OR "environments"."name" ILIKE
'%ipa%' OR "hostgroups"."name" ILIKE '%ipa%' OR "lookup_keys"."key" ILIKE '%ipa%')) ORDER BY puppetclasses.name LIMIT 20 OFFSET 0;
EOF
```

```
id |      alias_0
-----+-----
485 | certmonger
1480 | foreman_hooks
380 | ipa
45 | ipa::client
385 | ipa::client::ad_trust
387 | ipa::client::autofs
388 | ipa::client::base
384 | ipa::client::install
389 | ipa::client::package
383 | ipa::client::services
386 | ipa::client::sudo
87 | ipa::params
381 | ipa::replica::base
382 | ipa::replica::package
77 | ipa::server
(15 rows)
```

```
real 0m26.541s
user 0m0.004s
sys 0m0.019s
```

### #4 - 03/07/2014 09:42 AM - Peter Gustafsson

but 26s is long time for the query as well.

Br, Peter

### #5 - 03/10/2014 09:52 AM - Ohad Levy

Peter Gustafsson wrote:

but 26s is long time for the query as well.

you can use EXPLAIN before the select to get more info where its spending time, but i agree.

### #6 - 03/10/2014 11:10 AM - Lukas Zapletal

- Category set to Search
- Status changed from New to Assigned
- Assignee set to Lukas Zapletal
- Target version set to 1.9.0

```
amos_ | lzap, puppetclass model scoped_search :in => :class_params, :on => :key, :complete_value => :true, :o
nly_explicit => true
```

### #7 - 03/10/2014 11:16 AM - Lukas Zapletal

- Status changed from Assigned to Ready For Testing

<https://github.com/theforeman/foreman/pull/1281>

**#8 - 03/11/2014 08:54 AM - Dominic Cleal**

- translation missing: en.field\_release set to 7

**#9 - 03/11/2014 10:31 AM - Lukas Zapletal**

- Status changed from Ready For Testing to Closed

- % Done changed from 0 to 100

Applied in changeset [0126385b4469accf2474ab3db0ef43f8d7b63558](#).