OpenNebula - Bug #1889
onedb fsck removes users quotas for VMS/MEMORY/CPU

04/09/2013 01:08 PM - Rolandas Naujikas

Status:	Closed		**Start date:**	04/09/2013
Priority:	High		**Due date:**	
Assignee:	Carlos Martín		**% Done:**	0%
Category:	Core & System		**Estimated time:**	0.00 hour
Target version:	Release 4.2			
Resolution:	fixed		**Pull request:**	
Affected Versions:	OpenNebula 4.0			

Description

I found that after running "onedb fsck" VMS/MEMORY/CPU quotas are reset to unlimited for users without running VMs.
Something wrong in fsck.rb at lines

```
   ...
      def calculate_quotas(doc, where_filter, resource)
   ...
         # VM quotas

         vm_elem = nil
         doc.root.each_element("VM_QUOTA/VM") { |e| vm_elem = e }

         if vm_elem.nil?
            doc.root.delete_element("VM_QUOTA")

            vm_quota  = doc.root.add_element("VM_QUOTA")
            vm_elem   = vm_quota.add_element("VM")

            vm_elem.add_element("CPU").text        = "0"
            vm_elem.add_element("CPU_USED").text   = "0"

            vm_elem.add_element("MEMORY").text     = "0"
            vm_elem.add_element("MEMORY_USED").text = "0"

            vm_elem.add_element("VMS").text        = "0"
            vm_elem.add_element("VMS_USED").text   = "0"
         end
   ...
```

but I cannot understand without good ruby language/opennebula data structures knowledge.

Associated revisions

Revision c26b857d - 04/11/2013 10:51 AM - Carlos Martín

Bug #1889: fix in fsck, thanks to Rolandas Naujikas

Revision 6380514c - 04/11/2013 10:56 AM - Carlos Martín

Bug #1889: fix in fsck, thanks to Rolandas Naujikas

(cherry picked from commit c26b857d5423eb3eada83500dfc349ad899e1e80)

Revision 567ed57a - 07/16/2013 11:22 AM - Carlos Martín

Bug #1889: Fsck creates new quota entries with default -1

Revision 6f43cbff - 07/16/2013 11:22 AM - Carlos Martín

Bug #1889: Fsck creates new quota entries with default -1

(cherry picked from commit 28899ec37965e3d193358897fa4ab39c75ef183c)

History

#1 - 04/09/2013 02:01 PM - Rolandas Naujikas

- File fsck.patch added

After some investigation I found in fsck.rb

```
   ...
      def calculate_quotas(doc, where_filter, resource)
   ...
         if ( cpu_used == 0.0 && mem_used == 0 && vms_used == 0 )
            doc.root.delete_element("VM_QUOTA")
            doc.root.add_element("VM_QUOTA")
         end
   ...
```


So those lines removes quota entry for user if it doesn't use any resources.

#2 - 04/10/2013 09:19 AM - Ruben S. Montero

- Assignee set to Carlos Martín

- Target version set to Release 4.0

#3 - 04/11/2013 10:59 AM - Carlos Martín

- Status changed from New to Closed

- Resolution set to fixed

Good catch, thanks a lot Rolandas.

#4 - 05/17/2013 06:46 PM - Rolandas Naujikas

This bug reappears in opennebula 4.0.0 and it looks like the original code quoted could be a problem.

When an user dosn't have any VM running its VM quotas are set to 0, what means unlimited instead of -1.

We should check this logic better to make it work with unlimited and default quotas.

#5 - 05/17/2013 06:52 PM - Ruben S. Montero

- Status changed from Closed to Pending

- Target version deleted (Release 4.0)

- Resolution deleted (fixed)

#6 - 05/22/2013 05:55 AM - Rolandas Naujikas

fsck should solve problems, not create new one.

We had to solve it in 4.0.1.

#7 - 06/04/2013 08:33 AM - Carlos Martín

- Status changed from Pending to New

- Priority changed from Normal to High

- Affected Versions OpenNebula 4.0 added

#8 - 07/16/2013 11:04 AM - Carlos Martín

- Target version set to Release 4.2

#9 - 07/16/2013 11:26 AM - Carlos Martín

- Status changed from New to Closed

- Resolution set to fixed

Should be fixed now... again. Thanks!

#10 - 07/16/2013 03:42 PM - Rolandas Naujikas

It is not solved.

If I understand correctly all your changes, now if an user doesn't use any resources, then his custom quotas are replaced by default quotas, what is not right.

Probably it would be better to replace quota values by current quota values if they exists, then by default quotas.

#11 - 07/16/2013 03:44 PM - Carlos Martín

- Status changed from Closed to New

- Resolution deleted (fixed)

#12 - 07/16/2013 09:44 PM - Ruben S. Montero

- Category set to Core & System

#13 - 07/18/2013 04:24 PM - Carlos Martín

Rolandas Naujikas wrote:

> *It is not solved.*
>
> *If I understand correctly all your changes, now if an user doesn't use any resources, then his custom quotas are replaced by default quotas, what is not right.*
>
> *Probably it would be better to replace quota values by current quota values if they exists, then by default quotas.*

Can you point to the lines where this is happening?

Looking for example at the Image quotas section, if the user doesn't have any Image in use:

The first loop will go through the existing quotas. If a quota has a RVMS_USED different to 0, then it will be replaced with 0. The current quota limits (RVMS) are not replaced in any case.

```
img_quota.each_element("IMAGE") { |img_elem|
    img_id = img_elem.get_text("ID").to_s

    rvms = img_usage.delete(img_id)

    rvms = 0 if rvms.nil?

    img_elem.each_element("RVMS_USED") { |e|
      if e.text != rvms.to_s
        log_error("#{resource} #{oid} quotas: Image #{img_id}\tRVMS has #{e.text} \tis\t#{rvms}")
        e.text = rvms.to_s
      end
    }
}
```

The second loop will do nothing, since the user is not using any image. But if he were using images, this loop iterates over the images that are in use, but don't have a quota reflecting this usage currently. So the RVMS = "-1" is not replacing any existing quota limit here either.

```
img_usage.each { |img_id, rvms|
    log_error("#{resource} #{oid} quotas: Image #{img_id}\tRVMS has 0 \tis\t#{rvms}")

    new_elem = img_quota.add_element("IMAGE")

    new_elem.add_element("ID").text = img_id
    new_elem.add_element("RVMS").text = "-1"
    new_elem.add_element("RVMS_USED").text = rvms.to_s
}
```

Regards

#14 - 07/18/2013 05:32 PM - Rolandas Naujikas

It's about original bug description lines, related to CPU, MEMORY, VMS quotas.
I didn't check about others, probably they are OK.

#15 - 07/18/2013 06:24 PM - Rolandas Naujikas

I just tested this version of fsck.rb against our testbed on 4.0.1 (with version changed to 4.0.1).
It looks much better and those accounts, with missing quotas (as in sunstone 4.0.1 when I try set to default) after "onedb fsck" it is changed to default quotas.
Sorry for my mistake. Before saying something, it is better to test it.

#16 - 07/19/2013 07:46 AM - Ruben S. Montero

- Status changed from New to Closed

- Resolution set to fixed

#17 - 07/19/2013 09:54 AM - Carlos Martín

Rolandas Naujikas wrote:

> *I just tested this version of fsck.rb against our testbed on 4.0.1 (with version changed to 4.0.1).*
>
> *It looks much better and those accounts, with missing quotas (as in sunstone 4.0.1 when I try set to default) after "onedb fsck" it is changed to default quotas.*
>
> *Sorry for my mistake. Before saying something, it is better to test it.*

Great! Thanks for keeping an eye on our commits.

Files

fsck.patch	534 Bytes	04/09/2013	Rolandas Naujikas