Foreman - Bug #15306

Orchestration does not roll back queued actions if DB error occurs

06/06/2016 08:28 AM - Shimon Shtein

Status:	Closed		
Priority:	Normal		
Assignee:	Shimon Shtein		
Category:	Orchestration		
Target version:	1.13.0		
Difficulty:		**Fixed in Releases:**	
Triaged:		**Found in Releases:**	
Bugzilla link:	1343058	**Red Hat JIRA:**	
Pull request:	https://github.com/theforeman/foreman/pull/3574		

Description

Cloned from https://bugzilla.redhat.com/show_bug.cgi?id=1343058
Description of problem:

If an SQL error occurs upon saving a host, the orchestration actions will still occur.

How reproducible:

Create a host with a missing foreign key (for example environment_id = 999), observe an exception thrown and orchestration leftovers.

Steps to Reproduce:

```
# hammer host create --name my-cli-host-1 --partition-table-id 61 --domain-id 1 --operatingsystem-
id 3 --architecture-id 1 --compute-resource-id 1 --environment-id 999 --puppet-proxy-id 1 --locati
on-id 1 --organization-id 1 --root-password changeme --medium-id 9
[Foreman] Password for admin:
Could not create the host:
  ERROR:  insert or update on table "hosts" violates foreign key constraint "hosts_environment_id_
fk"
  DETAIL:  Key (environment_id)=(999) is not present in table "environments".
[root@sat6 dhcp]#
[root@sat6 dhcp]#
[root@sat6 dhcp]# hammer host create --name my-cli-host-1 --partition-table-id 61 --domain-id 1 --
operatingsystem-id 3 --architecture-id 1 --compute-resource-id 1 --environment-id 999 --puppet-pro
xy-id 1 --location-id 1 --organization-id 1 --root-password changeme --medium-id 9
[Foreman] Password for admin:
Could not create the host:
  Failed to create a compute my_libvirt_cr_1 (Libvirt) instance my-cli-host-1.domain.com: Error sa
ving the server: Call to virDomainDefineXML failed: operation failed: domain 'my-cli-host-1.domain
.com' already exists with uuid 3d1ac10d-fb73-fb16-a3a3-503d7625e042
```

Expected results:

The second request succeeds.

Related issues:

Related to Foreman - Bug #15644: import_facts assumes orchestration is available	**Closed**	**07/11/2016**
Related to Discovery - Bug #15645: Change in core leads to undefined method `...	**Duplicate**	**07/11/2016**
Related to Foreman - Bug #17041: Orchestration not skipped when importing facts	**Closed**	**10/20/2016**
Related to Foreman - Bug #16866: Facts import doesn't work with unattended=false	**Closed**	**10/11/2016**
Related to Foreman - Bug #12425: Fact import triggers ip conflicts checks, wh...	**Closed**	

Associated revisions

Revision d6bc6b86 - 06/29/2016 11:42 AM - Shimon Shtein

Fixes #15306 - Catches exceptions in the orchestration

History

#1 - 06/06/2016 08:32 AM - Dominic Cleal

- Description updated

- Category set to Orchestration

- Status changed from New to Assigned

Please include server logs when filing tickets and fill in the category.

#2 - 06/06/2016 08:35 AM - Dominic Cleal

- Status changed from Assigned to Need more information

This looks like a possible duplicate of [#14004](#) assuming the FK failure happens during commit, but there's not enough information in this ticket without corresponding error logs.

#3 - 06/06/2016 08:45 AM - Shimon Shtein

Not exactly a dup: [#14004](#) talks about actions in post_commit queue.

This one talks about the ones in the before_save queue.

The production log is not very informative, it records the FK failure during save and then it records a failure from libvirt provider that fails to create a VM with the same name:

```
2016-06-05 18:44:08 [app] [I] Started POST "/api/hosts" for ::1 at 2016-06-05 18:44:08 +0000
2016-06-05 18:44:08 [app] [I] Processing by Api::V2::HostsController#create as JSON
2016-06-05 18:44:08 [app] [I]   Parameters: {"host"=>{"name"=>"my-cli-host-1", "location_id"=>2, "organization
_id"=>1, "environment_id"=>999, "architecture_id"=>1, "domain_i
d"=>2, "puppet_proxy_id"=>1, "operatingsystem_id"=>3, "medium_id"=>1, "ptable_id"=>61, "compute_resource_id"=>
1, "build"=>true, "enabled"=>true, "managed"=>true, "compute_at
tributes"=>{"volumes_attributes"=>{}}, "content_facet_attributes"=>{}, "subscription_facet_attributes"=>{}, "o
verwrite"=>true, "host_parameters_attributes"=>{}, "interfaces_
attributes"=>{}, "root_pass"=>"[FILTERED]"}, "apiv"=>"v2"}
2016-06-05 18:44:08 [app] [I] Authorized user admin(Admin User)
2016-06-05 18:44:08 [app] [W] Action failed
 | PG::Error: ERROR:  insert or update on table "hosts" violates foreign key constraint "hosts_environment_id_
fk"
 | DETAIL:  Key (environment_id)=(999) is not present in table "environments".
 |
 | /opt/rh/rh-ror41/root/usr/share/gems/gems/activerecord-4.1.5/lib/active_record/connection_adapters/postgres
ql_adapter.rb:834:in `get_last_result'
 | /opt/rh/rh-ror41/root/usr/share/gems/gems/activerecord-4.1.5/lib/active_record/connection_adapters/postgres
ql_adapter.rb:834:in `block in exec_cache'
 | /opt/rh/rh-ror41/root/usr/share/gems/gems/activerecord-4.1.5/lib/active_record/connection_adapters/abstract
_adapter.rb:373:in `block in log'
 | /opt/rh/rh-ror41/root/usr/share/gems/gems/activesupport-4.1.5/lib/active_support/notifications/instrumenter
.rb:20:in `instrument'
 | /opt/rh/rh-ror41/root/usr/share/gems/gems/activerecord-4.1.5/lib/active_record/connection_adapters/abstract
_adapter.rb:367:in `log'
 | /opt/rh/rh-ror41/root/usr/share/gems/gems/activerecord-4.1.5/lib/active_record/connection_adapters/postgres
ql_adapter.rb:831:in `exec_cache'
 | /opt/rh/rh-ror41/root/usr/share/gems/gems/activerecord-4.1.5/lib/active_record/connection_adapters/postgres
ql/database_statements.rb:138:in `exec_query'
 | /opt/rh/rh-ror41/root/usr/share/gems/gems/activerecord-4.1.5/lib/active_record/connection_adapters/postgres
ql/database_statements.rb:177:in `exec_insert'
 | /opt/rh/rh-ror41/root/usr/share/gems/gems/activerecord-4.1.5/lib/active_record/connection_adapters/abstract
/database_statements.rb:95:in `insert'
 | /opt/rh/rh-ror41/root/usr/share/gems/gems/activerecord-4.1.5/lib/active_record/connection_adapters/abstract
/query_cache.rb:14:in `insert'
 | /opt/rh/rh-ror41/root/usr/share/gems/gems/activerecord-4.1.5/lib/active_record/relation.rb:64:in `insert'
 | /opt/rh/rh-ror41/root/usr/share/gems/gems/activerecord-4.1.5/lib/active_record/persistence.rb:502:in `_crea
te_record'
 | /opt/rh/rh-ror41/root/usr/share/gems/gems/activerecord-4.1.5/lib/active_record/attribute_methods/dirty.rb:8
7:in `_create_record'
 | /opt/rh/rh-ror41/root/usr/share/gems/gems/activerecord-4.1.5/lib/active_record/callbacks.rb:306:in `block i
n _create_record'
 | /opt/rh/rh-ror41/root/usr/share/gems/gems/activesupport-4.1.5/lib/active_support/callbacks.rb:113:in `call'
 | /opt/rh/rh-ror41/root/usr/share/gems/gems/activesupport-4.1.5/lib/active_support/callbacks.rb:113:in `call'
```

```
  | /opt/rh/rh-ror41/root/usr/share/gems/gems/activesupport-4.1.5/lib/active_support/callbacks.rb:215:in `block
 in halting_and_conditional'
...
  | /opt/rh/rh-ror41/root/usr/share/gems/gems/activerecord-4.1.5/lib/active_record/callbacks.rb:302:in `create_
or_update'
  | /opt/rh/rh-ror41/root/usr/share/gems/gems/activerecord-4.1.5/lib/active_record/persistence.rb:103:in `save'
  | /opt/rh/rh-ror41/root/usr/share/gems/gems/activerecord-4.1.5/lib/active_record/validations.rb:51:in `save'
  | /opt/rh/rh-ror41/root/usr/share/gems/gems/activerecord-4.1.5/lib/active_record/attribute_methods/dirty.rb:2
1:in `save'
  | /opt/rh/rh-ror41/root/usr/share/gems/gems/activerecord-4.1.5/lib/active_record/transactions.rb:268:in `bloc
k (2 levels) in save'
  | /opt/rh/rh-ror41/root/usr/share/gems/gems/activerecord-4.1.5/lib/active_record/transactions.rb:329:in `bloc
k in with_transaction_returning_status'
  | /opt/rh/rh-ror41/root/usr/share/gems/gems/activerecord-4.1.5/lib/active_record/connection_adapters/abstract
/database_statements.rb:201:in `block in transaction'
  | /opt/rh/rh-ror41/root/usr/share/gems/gems/activerecord-4.1.5/lib/active_record/connection_adapters/abstract
/database_statements.rb:209:in `within_new_transaction'
  | /opt/rh/rh-ror41/root/usr/share/gems/gems/activerecord-4.1.5/lib/active_record/connection_adapters/abstract
/database_statements.rb:201:in `transaction'
  | /opt/rh/rh-ror41/root/usr/share/gems/gems/activerecord-4.1.5/lib/active_record/transactions.rb:208:in `tran
saction'
  | /opt/rh/rh-ror41/root/usr/share/gems/gems/activerecord-4.1.5/lib/active_record/transactions.rb:326:in `with
_transaction_returning_status'
  | /opt/rh/rh-ror41/root/usr/share/gems/gems/activerecord-4.1.5/lib/active_record/transactions.rb:268:in `bloc
k in save'
  | /opt/rh/rh-ror41/root/usr/share/gems/gems/activerecord-4.1.5/lib/active_record/transactions.rb:283:in `roll
back_active_record_state!'
  | /opt/rh/rh-ror41/root/usr/share/gems/gems/activerecord-4.1.5/lib/active_record/transactions.rb:267:in `save
'
...
2016-06-05 18:45:48 [app] [I] Processing by Api::V2::HostsController#create as JSON
2016-06-05 18:45:48 [app] [I]   Parameters: {"host"=>{"name"=>"my-cli-host-1", "location_id"=>2, "organization
_id"=>1, "environment_id"=>1, "architecture_id"=>1, "domain_id"=>2, "puppet_proxy_id"=>1, "operatingsystem_id"
=>3, "medium_id"=>1, "ptable_id"=>61, "compute_resource_id"=>1, "build"=>true, "enabled"=>true, "managed"=>tru
e, "compute_attributes"=>{"volumes_attributes"=>{}}, "content_facet_attributes"=>{}, "subscription_facet_attri
butes"=>{}, "overwrite"=>true, "host_parameters_attributes"=>{}, "interfaces_attributes"=>{}, "root_pass"=>"[F
ILTERED]"}, "apiv"=>"v2"}
2016-06-05 18:45:48 [app] [I] Authorized user admin(Admin User)
2016-06-05 18:45:48 [app] [W] Unhandled Libvirt error
 | Fog::Errors::Error: Error saving the server: Call to virDomainDefineXML failed: operation failed: domain 'm
y-cli-host-1.inner' already exists with uuid dc6adce1-00ff-4abb-a96f-65a0ce0e3ec1
 | /opt/theforeman/tfm/root/usr/share/gems/gems/fog-libvirt-0.0.2/lib/fog/libvirt/models/compute/server.rb:68:
in `rescue in save'
 | /opt/theforeman/tfm/root/usr/share/gems/gems/fog-libvirt-0.0.2/lib/fog/libvirt/models/compute/server.rb:61:
in `save'
 | /usr/share/foreman/app/models/compute_resources/foreman/model/libvirt.rb:143:in `create_vm'
 | /usr/share/foreman/app/models/concerns/orchestration/compute.rb:82:in `setCompute'
 | /usr/share/foreman/app/models/concerns/orchestration.rb:162:in `execute'
 | /usr/share/foreman/app/models/concerns/orchestration.rb:107:in `block in process'
 | /usr/share/foreman/app/models/concerns/orchestration.rb:99:in `each'
 | /usr/share/foreman/app/models/concerns/orchestration.rb:99:in `process'
 | /usr/share/foreman/app/models/concerns/orchestration.rb:35:in `on_save'
```

#4 - 06/06/2016 08:49 AM - Shimon Shtein

- Status changed from Need more information to Assigned

#5 - 06/06/2016 08:59 AM - Dominic Cleal

Not exactly a dup: #14004 talks about actions in post_commit queue.
This one talks about the ones in the before_save queue.

It's not before_save triggering the FK exception, it's the save itself. The same thing is happening - the save or post_commit is failing, but the items in
before_save are not rolled back.

#6 - 06/06/2016 09:28 AM - Shimon Shtein

#14004 is by far more complicated. We can simplify our orchestration to three stages:
1. before_save orchestration queue
2. ActiveRecord's save action
3. after_commit orchestration queue

Right now the system handles a rollback only in stage 1. My bug is about exceptions in stage 2, here the ActiveRecord is rolled back by the DB, but we need to take care of all actions inside stage 2. #14004 is talking about a failure in stage 3, this is far more complicated, since we need to compensate both stage 1 and 2. In this case we don't even know what was the previous state of the record to run some kind of compensation update to it.

Probably the solution to this issue would be easier and could be used as a part of the more general problem.

#7 - 06/07/2016 04:25 AM - The Foreman Bot

- Status changed from Assigned to Ready For Testing

- Pull request https://github.com/theforeman/foreman/pull/3574 added

#8 - 06/29/2016 12:02 PM - Shimon Shtein

- Status changed from Ready For Testing to Closed

- % Done changed from 0 to 100

Applied in changeset d6bc6b86148e3f48c102dcc285fd95b3cd30f9d1.

#9 - 06/30/2016 10:50 AM - Dominic Cleal

- translation missing: en.field_release set to 161

#10 - 07/11/2016 10:13 AM - Daniel Lobato Garcia

- Related to Bug #15644: import_facts assumes orchestration is available added

#11 - 07/11/2016 10:21 AM - Lukas Zapletal

- Related to Bug #15645: Change in core leads to undefined method `enable_orchestration!' added

#12 - 07/12/2016 08:11 AM - Dominic Cleal

- translation missing: en.field_release changed from 161 to 160

Too many API changes between this and #15644, bumping to major release.

#13 - 10/20/2016 07:15 AM - Timo Goebel

- Related to Bug #17041: Orchestration not skipped when importing facts added

#14 - 10/28/2016 04:33 AM - Dominic Cleal

- Related to Bug #16866: Facts import doesn't work with unattended=false added

#15 - 02/13/2020 02:45 PM - Lukas Zapletal

- Related to Bug #12425: Fact import triggers ip conflicts checks, which drives cpu utilization to 100% on smart-proxy added