Foreman - Bug #1954

Puppet report status incorrectly set to failed

11/16/2012 12:22 PM - Frederik Nosi

Status:	Resolved		
Priority:	Normal		
Assignee:			
Category:	Reporting		
Target version:			
Difficulty:		**Fixed in Releases:**	
Triaged:		**Found in Releases:**	
Bugzilla link:		**Red Hat JIRA:**	
Pull request:			

Description

Hi,

i'm using RedHat Enterprise Linux Server release 5.8 fully patched, with this aditional repositories:
epel, puppetlabs and foreman's yum repo.

Relevant software versions used are:

```
[root@puppet-test ~]# rpm -qa | egrep 'ruby|puppet|foreman'
rubygem-ruby_parser-2.3.1-1.el5
rubygem-ruby2ruby-1.3.1-1.el5
rubygem-mail-2.3.3-2.el5
rubygem-activerecord-3.0.15-1.el5
rubygem-rails-3.0.15-1.el5
rubygem-hirb-0.6.2-1.el5
rubygem-foremancli-1.0-1.el5
foreman-console-1.0.1-1.el5
rubygem-passenger-native-3.0.12-1
puppetlabs-release-5-6
puppet-2.7.19-1.el5
libselinux-ruby-1.33.4-5.7.el5
rubygem-json-1.6.6-2.el5
rubygem-rack-1.2.5-4.el5
rubygem-mime-types-1.18-1.el5
rubygem-uuidtools-2.1.1-2.el5
rubygem-actionmailer-3.0.15-1.el5
rubygem-bundler-1.0.15-1.el5
rubygem-net-ssh-2.3.0-1.el5
rubygem-awesome_print-1.0.2-1.el5
rubygem-fog-1.4.0-1.el5
foreman-sqlite-1.0.1-1.el5
puppetdb-terminus-1.0.2-1.el5
ruby-1.8.7.370-1.el5
ruby-irb-1.8.7.370-1.el5
rubygem-thor-0.14.6-2.el5
rubygem-builder-2.1.2-2.el5
rubygem-rest-client-1.6.7-1.el5
rubygem-rack-mount-0.6.14-1.el5
rubygem-polyglot-0.3.3-1.el5
rubygem-abstract-1.0.0-2.el5
rubygem-audited-3.0.0.rc1-1.el5
rubygem-scoped_search-2.3.7-1.el5
rubygem-rdoc-3.12-2.el5
rubygem-jquery-rails-1.0.19-1.el5
rubygem-sqlite3-1.3.5-2.el5
rubygem-mysql-2.8.1-2.el5
rubygem-multi_json-1.2.0-1.el5
```

rubygem-formatador-0.2.1-1.el5
foreman-ec2-1.0.1-1.el5
rubygem-rbvmomi-1.5.1-1.el5
foreman-release-1.0.1-1.el5
foreman-vmware-1.0.1-1.el5
rubygem-daemon_controller-0.2.5-1
ruby-augeas-0.4.1-1.el5
ruby-rdoc-1.8.7.370-1.el5
rubygem-activesupport-3.0.15-1.el5
rubygem-sexp_processor-3.1.0-1.el5
rubygem-activemodel-3.0.15-1.el5
rubygem-activeresource-3.0.15-1.el5
rubygem-rack-test-0.5.7-2.el5
rubygem-treetop-1.4.10-1.el5
rubygem-erubis-2.6.6-1.el5
rubygem-arel-2.0.10-1.el5
rubygem-ancestry-1.2.5-1.el5
rubygem-railties-3.0.15-1.el5
foreman-1.0.1-1.el5
rubygem-net-scp-1.0.4-1.el5
rubygem-unicode-display_width-0.1.1-1.el5
rubygem-sinatra-1.0-2.el5
rubygem-net-ping-1.3.7-1.el5
rubygem-wirb-0.4.2-1.el5
foreman-mysql-1.0.1-1.el5
foreman-proxy-1.0.0-3.el5
ruby-libs-1.8.7.370-1.el5
ruby-devel-1.8.7.370-1.el5
rubygem-passenger-3.0.12-1
puppetdb-1.0.2-1.el5
rubygem-pg-0.13.2-2.el5
ruby-shadow-1.4.1-7.el5
rubygems-1.8.10-1.el5
rubygem-i18n-0.5.0-1.el5
rubygem-tzinfo-0.3.32-1.el5
rubygem-net-ldap-0.3.1-1.el5
rubygem-actionpack-3.0.15-1.el5
rubygem-has_many_polymorphs-3.0.0.beta1-3.el5
rubygem-nokogiri-1.5.2-1.el5
rubygem-excon-0.14.0-1.el5
rubygem-ruby-hmac-0.4.0-1.el5
foreman-cli-1.0.1-1.el5
rubygem-fastthread-1.0.7-1.el5
foreman-postgresql-1.0.1-1.el5
ruby-libs-1.8.7.370-1.el5
rubygem-rake-0.9.2.2-2.el5
rubygem-safemode-1.0.1-1.el5
rubygem-will_paginate-3.0.3-1.el5
rubygem-audited-activerecord-3.0.0.rc1-1.el5
rubygem-acts_as_audited-2.0.0-1.el5
rubygem-mysql2-0.2.18-1.el5
rubygem-hirb-unicode-0.0.5-1.el5
rubygem-trollop-1.16.2-1.el5
foreman-mysql2-1.0.1-1.el5
ruby-devel-1.8.7.370-1.el5
rubygem-passenger-native-libs-3.0.12-1_1.8.7.370
puppet-server-2.7.19-1.el5

I'm using MySQL as a DB, versions:

mysql-5.0.95-1.el5_7.1
mysql-server-5.0.95-1.el5_7.1

The database configuration is:

```
production:
adapter: mysql
```

database: foreman
username: foreman
password: XXXXXXXXXX
host: localhost
pool: 5

[similar for development and test environments]

Puppet agents are running with the --noop option.
The issue i'm seeing is that although the reports do not have errors, changes not applied, the hosts are in error state. Looking at the DB:

(Not

mysql> describe reports;
~~--------~~------------+------+-----+---------+----------------+ | Field | Type | Null | Key | Default | Extra |
~~--------~~------------+------+-----+---------+----------------+ | id | int(11) | NO | PRI | NULL | auto_increment | | host_id | int(11) | NO | MUL | NULL | | | reported_at | datetime | YES | MUL | NULL | | | created_at | datetime | YES | | NULL | | | updated_at | datetime | YES | | NULL | | | status | smallint(6) | YES | MUL | NULL | | | metrics | longtext | YES | | NULL | |
~~--------~~------------+------+-----+---------+----------------+
7 rows in set (0.00 sec)

mysql> select distinct(status) from reports;
~~-----~~ | status |
~~-----~~ | -32768 | | 0 | | 1 | | 74 | | 198 | | 278 | | 4096 | | 8472 | | 32767 |
~~-----~~
9 rows in set (0.00 sec)

Here's an entry in reports which is shown in error, but when opened (in https://FQDN_FOREMAN/reports/1200) i see just notices:

status column: 32767
metrics column:

```
changes:
    total: 0
  resources:
    out_of_sync: 1
    total: 19
  events:
    total: 1
    noop: 1
  time:
    service: 0.394067
    exec: 0.000916
    file: 0.212078
    package: 0.001021
    filebucket: 0.000249
    total: 1.59548393463135
    schedule: 0.002159
    config_retrieval: 0.984993934631348 |
```

I'm attaching the report.yaml of this entry just in case.

Any ideas?

Thanks in advance,
Frederik

History

#1 - 11/16/2012 12:24 PM - Frederik Nosi

Forgot formatting table info

```
mysql> show columns from reports;
+-------------+-------------+------+-----+---------+----------------+
| Field       | Type        | Null | Key | Default | Extra          |
+-------------+-------------+------+-----+---------+----------------+
| id          | int(11)     | NO   | PRI | NULL    | auto_increment |
| host_id     | int(11)     | NO   | MUL | NULL    |                |
| reported_at | datetime    | YES  | MUL | NULL    |                |
| created_at  | datetime    | YES  |     | NULL    |                |
| updated_at  | datetime    | YES  |     | NULL    |                |
| status      | smallint(6) | YES  | MUL | 0       |                |
| metrics     | longtext    | YES  |     | NULL    |                |
+-------------+-------------+------+-----+---------+----------------+
7 rows in set (0.00 sec)

mysql> select distinct(status) from reports;
+--------+
| status |
+--------+
| -32768 |
|      0 |
|      1 |
|     74 |
|    198 |
|    278 |
|   4096 |
|   8472 |
|  32767 |
+--------+
9 rows in set (0.00 sec)
```

#2 - 12/06/2012 11:36 AM - Frederik Nosi

Ok, today had some time and tried debugging this issue (i know very little Ruby).
Added some logging to app/models/report.rb, specifically to this functions:

Report.metrics_to_hash
Report.calc_status
Report.status

and here's the output of a report which applies resources correctly and makes a single modification (This correctly sets this hosts status in the dashboard as "hosts that had performed modifications without error"):

```
[Report.metrics_to_hash] - {"applied"=>1, "failed_restarts"=>0, "skipped"=>0, "pending"=>0, "failed"=>0, "rest
arted"=>0}
[Report.calc_status] - st: 1 BIT_NUM: 6, METRIC: ["applied", "restarted", "failed", "failed_restarts", "skippe
d", "pending"]
[Report.status] - st is a: Fixnum
[Report.status] - s: 1
```

Here's the output of the report of the same host which has pending modifications as puppet was launched with the --noop option. This report set's incorrectly the host in foreman dashboard as "Host in error state":

```
[Report.metrics_to_hash] - {"pending"=>1, "failed_restarts"=>0, "applied"=>0, "failed"=>0, "skipped"=>0, "rest
arted"=>0}
[Report.calc_status] - st: 1073741824 BIT_NUM: 6, METRIC: ["applied", "restarted", "failed", "failed_restarts"
, "skipped", "pending"]
[Report.status] - st is a: Fixnum
```

I would expect the second case to put the host state as "Hosts that had pending changes" ... I have yet to understand the status calculation though.

Ah, another data point, when i open the second report in the "report view" it shows correctly without errors ...

Any ideas?

Thanks,
Frederik

#3 - 12/06/2012 01:53 PM - Frederik Nosi

Ok i think i understand now why this happens.

In app/models/report.rb , method self.calc_status there is a snippet of code which should insure that the state field fits in a 16 bit integer (in the DB, table hosts, field puppet_status). To do so it checks each value of puppet_status with MAX:

Here's the calculation, with some lines of debugging added:

```
    hash.each do |type, value|
      value = MAX if value > MAX # we store up to 2^BIT_NUM -1 values as we want to use only BIT_NUM bits.
      st |= value << (BIT_NUM*METRIC.index(type))
      File.open('/tmp/foreman_rep.log', File::WRONLY|File::APPEND|File::CREAT) { |f| f.write("[Report.calc_status] - type: #{type}, index(type): #{METRIC.index(type)}, value: #{value}, st: #{st}\n") }
    end
    File.open('/tmp/foreman_rep.log', File::WRONLY|File::APPEND|File::CREAT) { |f| f.write("[Report.calc_status] - st: #{st} BIT_NUM: #{BIT_NUM}, MAX: #{MAX}, METRIC: #{METRIC.inspect}\n") }
    return st
```

But from the debugging output i see that MAX is assigned a value of 63 which is way to high:

```
[...]
[Report.calc_status] - st: 3221225472 BIT_NUM: 6, MAX: 63, METRIC: ["applied", "restarted", "failed", "failed_restarts", "skipped", "pending"]
[Report.status] - st is a: Fixnum
[Report.status] - s: 3221225472
```

The place where MAX is calculated is in models/report_common.rb, class ReportCommon:

```
module ReportCommon
  METRIC = %w[applied restarted failed failed_restarts skipped pending]
  BIT_NUM = 6
  MAX = (1 << BIT_NUM) -1 # maximum value per metric
```

Having a 16 bit for the field, we can use at max 2 bits for the 6 types of statuses so using dynamic calculation like the existing code, that should be:

```
module ReportCommon
  METRIC = %w[applied restarted failed failed_restarts skipped pending]
  FIELD_BITS = 16
  BIT_NUM = FIELD_BITS / METRIC.length
  MAX = 1 << BIT_NUM -1 # maximum value per metric
```

With this fix reports are correctly displayed in the dashboard and hosts views, but it tops the maximum number of changes per status type to two which is a bit too low. Would it be more convenient to make the field a bit larger?

Frederik

#4 - 05/18/2017 10:02 AM - Anonymous

- Description updated

- Status changed from New to Resolved

should be fixed by now

Files

report.yaml	12.1 KB	11/16/2012	Frederik Nosi