Mysql2::Error: Duplicate column name 'type': ALTER TABLE `tokens` ADD `type` varchar(255) DEFAULT 'Token::Build' NOT NULL
/home/foreman/gems/gems/mysql2-0.5.2/lib/mysql2/client.rb:131:in `\_query'
/home/foreman/gems/gems/mysql2-0.5.2/lib/mysql2/client.rb:131:in `block in query'
/home/foreman/gems/gems/mysql2-0.5.2/lib/mysql2/client.rb:130:in `\_handle_interrupt'
/home/foreman/gems/gems/mysql2-0.5.2/lib/mysql2/client.rb:130:in `\_query'
/home/foreman/gems/gems/activerecord-5.2.1/lib/active_record/connection_adapters/abstract_mysql_adpter.rb:187:in `block (2 levels) in execute'
/home/foreman/gems/gems/activerecord-5.2.1/lib/active_record/connection_adapters/connection_pool.rb:48:in `block (2 levels) in execute'
/home/foreman/gems/gems/activerecord-5.2.1/lib/active_record/connection_adapters/connection_pool.rb:47:in `permit_concurrent_loads'
/home/foreman/gems/gems/activerecord-5.2.1/lib/active_record/connection_adapters/connection_pool.rb:46:in `block in execute'
/home/foreman/gems/gems/activerecord-5.2.1/lib/active_record/connection_adapters/connection_pool.rb:45:in `\_execute'
/home/foreman/gems/gems/activerecord-5.2.1/lib/active_record/connection_adapters/connection_pool.rb:186:in `block in execute'
/home/foreman/gems/gems/activerecord-5.2.1/lib/active_record/connection_adapters/abstract_mysql_adpter.rb:186:in `block in execute'
/home/foreman/gems/gems/activerecord-5.2.1/lib/active_record/connection_adapters/abstract_mysql_adpter.rb:187:in `block (2 levels) in log'
/home/foreman/gems/gems/activerecord-5.2.1/lib/active_record/connection_adapters/abstract_mysql_adpter.rb:188:in `block in log'
/home/foreman/gems/gems/activerecord-5.2.1/lib/active_record/connection_adapters/abstract_adapter.rb:59:in `\_log'
/home/foreman/gems/gems/activerecord-5.2.1/lib/active_record/connection_adapters/abstract_adapter.rb:58:in `log'
/home/foreman/gems/gems/activerecord-5.2.1/lib/active_record/connection_adapters/abstract_adapter.rb:57:in `block in method_missing'
/home/foreman/gems/gems/activerecord-5.2.1/lib/active_record/migration.rb:871:in `block in method_missing'
/home/foreman/gems/gems/activerecord-5.2.1/lib/active_record/migration.rb:840:in `\_say_with_time'
/home/foreman/gems/gems/activerecord-5.2.1/lib/active_record/migration.rb:840:in `say_with_time'
/home/foreman/gems/gems/activerecord-5.2.1/lib/active_record/migration.rb:860:in `method_missing'
/home/foreman/git/foreman/db/migrate/20180613100703_add_type_to_token.rb:7:in `\_up'
/home/foreman/gems/gems/activerecord-5.2.1/lib/active_record/migration.rb:817:in `exec_migration'
/home/foreman/gems/gems/activerecord-5.2.1/lib/active_record/migration.rb:798:in `block (2 levels) in migrate'
/home/foreman/gems/gems/activerecord-5.2.1/lib/active_record/migration.rb:797:in `block in migrate'
/home/foreman/gems/gems/activerecord-5.2.1/lib/active_record/connection_adapters/abstract/connection_pool.rb:414:in `with_connection'
/home/foreman/gems/gems/activerecord-5.2.1/lib/active_record/migration.rb:796:in `migrate'
ActiveRecord::StatementInvalid: Mysql2::Error: Duplicate column name 'type': ALTER TABLE `tokens` ADD `type` varchar(255) DEFAULT 'Token::Build' NOT NULL

Caused by:
ActiveRecord::StatementInvalid: Mysql2::Error: Duplicate column name 'type': ALTER TABLE `tokens` ADD `type` varchar(255) DEFAULT 'Token::Build' NOT NULL

03/16/2022
Caused by: Mysql2::Error: Duplicate column name 'type'
/home/foreman/gems/mysql2-0.5.2/lib/mysql2/client.rb:131:in `_query'
/home/foreman/gems/mysql2-0.5.2/lib/mysql2/client.rb:131:in `block in method_missing'
/home/foreman/gems/mysql2-0.5.2/lib/mysql2/client.rb:131:in `block in query'
/home/foreman/gems/mysql2-0.5.2/lib/mysql2/client.rb:131:in `execute'
Caused by: Mysql2::Error: Duplicate column name 'type'
/home/foreman/gems/mysql2-0.5.2/lib/mysql2/client.rb:131:in `_query'
/home/foreman/gems/mysql2-0.5.2/lib/mysql2/client.rb:131:in `block in method_missing'
/home/foreman/gems/mysql2-0.5.2/lib/mysql2/client.rb:131:in `block in query'
/home/foreman/gems/mysql2-0.5.2/lib/mysql2/client.rb:131:in `execute'

MySQL can't index fields longer than 767 bytes so we need to limit the index length. This is causing upgrade failures on MySQL, and users attempting to rerun migrations will fail on trying to recreate the existing type index, as there is no transaction support in MySQL for index creation so it isn't rolled back when the first migration fails.

I don't think the name 'type' is the problem as there are already various tables using it as a name (eg. trends, host_status, taxonomies).
I currently don't have a mysql setup around and as I'm currently on vacation anyway, it would be nice if someone else could take a look, thank you.

#4 - 10/02/2018 07:02 AM - Ohad Levy
also, I skipped the earlier error
unless column_exists? :tokens, :type
  change_column :tokens, :value, :string, limit: 900
end

but then the following error observed

ActiveRecord::StatementInvalid: Mysql2::Error: Specified key was too long; max key length is 767 bytes: ALTER TABLE `tokens` CHANGE `value` `value` varchar(900) DEFAULT NULL

#5 - 10/22/2018 07:55 AM - Julian Todt
Okay, but this error is from the next line where we change the string limit for the token (as the new tokens are significantly longer), and the error makes kind of sense as mysql has a maximum vor `varchar(255)` and we want a `varchar(900)`. The length of the generated token depends on the certname (=> hostname or uuid), as hostnames can be up to 255 chars long, tokens can be longer than that, meaning we would have to use a TEXT field instead of a VARCHAR for the value of the token on mysql. Could you try this and see if that works? (Still not sure why the `unless column_exists?` fixes the former problem as the column should not exist...)

#6 - 11/21/2018 02:21 PM - Julian Todt
Length of the varchar-field also doesn't seem to be the issue as noticed in a bug report in IRC today.

  schlitzer:

12:21
hey, i just treid to upgrade to foreman 1.20: and got this error while running foreman-rake db:migrate
12:21
Mysql2::Error: Duplicate column name 'type': ALTER TABLE `tokens` ADD `type` varchar(255) DEFAULT 'Token::Build' NOT NULL
13:00
i think i solved the issue by running the following sql on my database: "ALTER TABLE tokens DROP COLUMN type;"
13:01
after this the db::migrate was successful, but then "foreman-rake db:seed" failed, because there where duplicate entries
13:02
is guess the problem is that i have a redundant foreman setup, with 3 foreman hosts, using the same database, i guess while running yum update, all of them where running db::migrate and db::seed at the same time, and something got messed up
14:54
Juliantodt, you are right, i also had to manually issue this sql: ALTER TABLE `tokens` CHANGE `value` `value` varchar(900) DEFAULT NULL, followed by issuing the drop statement a second time

  juliantodt (@juliantodt:matrix.org)

15:04
 schlitzer: You're running mysql, right? Because as far as I understood 255 is the biggest possible length for varchar in mysql and we would have had to use text there to fix it. I definitely need to take another look at this.

  schlitzer
Yes, MySQL
or MariaDB, not sure... I am not the admin of the MySQL stuff
just inspected the table structure, and it is VARCHAR(900) utf8_unicode_ci
so not a MySQL
but I guess no one is really using a real MySQL anymore, AFAIK all distros switched to MariaDB

The real cause seems to be a thing which I had no idea about: prefix limit: 767 bytes is the stated prefix limitation for InnoDB tables in MySQL version 5.6 (and prior versions). It's 1,000 bytes long for MyISAM tables. In MySQL version 5.7 and upwards this limit has been increased to 3072 bytes. It turns out that MySQL creates indexes for string columns only from the leading part of column values - that's the prefix limit.

So the proper fix is to make the value shorter so it fits - do we really need it 900 characters long? Why this was added? Looks like 30face9 introduced it, I can't tell why Puppet CA has such a long tokens.