MySQL Relational Database

AdminRoles

Description:
Stores all roles with administrative permissions including roles to denote if a person does not have administrative permissions. Includes information like role id, name of the role, and permissions associated.

Columns:
id, name, permissions

Indexes:
id - PRIMARY

Test Results:

#	Time	Action	Message	Duration / Fetch
1	00:05:10	SELECT * FROM dc.AdminRoles LIMIT 0, 1000	9 row(s) returned	0.094 sec / 0.000 sec

Improvements

- Add a description column (set to NULL by default) that provides a brief description of the role, its functionality, and who it should be given to.
- Relate AdminRoles to users table so only users that are admins can pick certain roles
- Combine AdminRoles with the user_roles table (potentially deleting user_roles and creating a unified ‘roles’ table as there are no existing user_roles) for optimization.

Notes:

- None of the items in the list can be null.
- id is set to auto-increment, is a balanced tree, and must only contain unique values

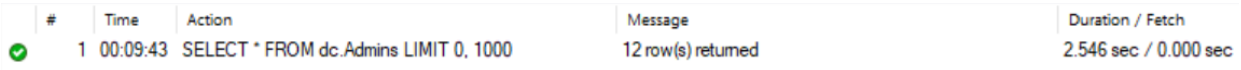
Admins

Description:
Stores a list of all admins including information like email, password, first and last name, role, last login, and status.

Columns:
email, password, firstName, lastName, role, last_login, status

Indexes:
email - PRIMARY
role - role_idx

Test Results:



#	Time	Action	Message	Duration / Fetch
1	00:09:43	SELECT * FROM dc.Admins LIMIT 0, 1000	12 row(s) returned	2.546 sec / 0.000 sec

Improvements:

- Move password to users for privacy purposes. Login should only be done through the users table anyhow.
- role should not be NULL as all admins should have a role
- role should be the name of the role, not the id number, for more description

Notes:

- Only last_login and roles may have null values.
- email is a balanced tree and must only contain unique values
- roles is a balanced tree
- status is an enum (binary, in this case) of values ‘active’ or ‘inactive’

Email_Request

Description:
Stores a list of all email requests, storing the users demographic information.

Columns:
city, comments, country, email, firstName, lastName, id, keywords, lastName, mediaReports, organization, phone, professionallyEditedCheckbox, reportEnd, reportsCheckbox, reportStart, resolutionCheckbox, state, street, televisionFormatCheckbox, transcripts, tvStation, zip

Indexes:
id - PRIMARY

Test Results:

#	Time	Action	Message	Duration / Fetch
1	19:12:18	SELECT * FROM dc.Email_Request LIMIT 0, 1000	20 row(s) returned	0.094 sec / 0.000 sec

Improvements:

- firstName, lastName, and email are nullable but they should be non-nullable because of the importance of that information.

Notes:

- What is this table accomplishing? What are email requests for?

Errors

Description:
Stores a list of all errors, recording host name, station, an error string, an error line, and severity.

Columns:
Date_Time, Host_Name, Station, Error_Str, LineNum, Severity

Indexes:
Date_Time - PRIMARY
Host_Name - PRIMARY
Station - PRIMARY
Severity - fk_Severity_idx

Test Results:

#	Time	Action	Message	Duration / Fetch
1	19:05:58	SELECT * FROM dc.Errors LIMIT 0, 1000	1000 row(s) returned	0.141 sec / 0.078 sec

Improvements:

- It is unclear what LineNum corresponds to.

Notes:

- Severity is linked to the Severity schema which contains three entries: High, Medium, and Low.

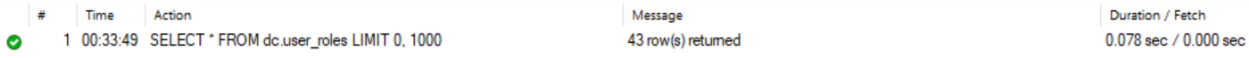
User_Roles

Description:
Contains a list of all user roles.

Columns:
email, role

Indexes:
email - PRIMARY

Test Results:



#	Time	Action	Message	Duration / Fetch
1	00:33:49	SELECT * FROM dc.user_roles LIMIT 0, 1000	43 row(s) returned	0.078 sec / 0.000 sec

Improvements:

- There are no recorded roles for any of the users. Are there any roles that users can possess in the first place? If not, this column should be deleted.
    - Alternatively, merge adminRoles into this table as admins will have permissions unlike the users.

Notes:

- email is the key used to relate the user_roles to the users

Users

Description:
Contains a list of all users with access to the database. Records email, name, password, and verification status.

Columns:
blocked, email, firstName, isVerified, lastName, password, previouslyBlocked, previouslyVerified, salt

Indexes:
email - PRIMARY, email_UNIQUE

Test Results:

#	Time	Action	Message	Duration / Fetch
1	11:58:05	SELECT * FROM dc.users LIMIT 0, 1000	46 row(s) returned	0.235 sec / 0.000 sec

Improvements:

- Why is it useful to record if someone has been previously verified? Should this be folded into isVerified? The same goes for the blocked column.

Notes:

- salt is nullable
- Documentation can be found in the search engine
    - Front-end repository search engine