

Proposal: Namespace Renames

Motivation

The Iceberg REST spec currently provides the ability to rename tables & views, but not namespaces.

Several Apache Polaris users have described wanting to rename a namespace without changing any of its properties or having to migrate its child namespaces/tables/views to the new namespace. This proposal describes a new addition to the REST spec to support this functionality.

Implementation Proposal

REST API

A new operation called `renameNamespace` is proposed. The responses are analogous to those for `renameTable`.

None

```
/v1/{prefix}/namespaces/rename:
  parameters:
    - $ref: '#/components/parameters/prefix'

  post:
    tags:
      - Catalog API
    summary: Rename a namespace from its current name to a new name
    description:
      Rename a namespace from one identifier to another. It's valid to move a
      namespace
      across namespaces, but the server implementation is not required to
      support it.
    operationId: renameNamespace
    requestBody:
      description: Current namespace identifier to rename and new namespace
      identifier to rename to
      content:
        application/json:
          schema:
```

```

        $ref: '#/components/schemas/RenameNamespaceRequest
    required: true
  responses:
    204:
      description: Success, no content
    400:
      $ref: '#/components/responses/BadRequestErrorResponse'
    401:
      $ref: '#/components/responses/UnauthorizedResponse'
    403:
      $ref: '#/components/responses/ForbiddenResponse'
    404:
      description:
        Not Found
        - NoSuchNamespaceException, The namespace does not exist, or the
parent namespace of the target location does not exist
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/IcebergErrorResponse'
    406:
      $ref: '#/components/responses/UnsupportedOperationResponse'
    409:
      description: Conflict - The target identifier to rename to already
exists as a namespace, table, or view
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/IcebergErrorResponse'
    419:
      $ref: '#/components/responses/AuthenticationTimeoutResponse'
    503:
      $ref: '#/components/responses/ServiceUnavailableResponse'
    5XX:
      $ref: '#/components/responses/ServerErrorResponse'

```

The request model, also heavily derivative of RenameTableRequest:

None

```

RenameNamespaceRequest:
  type: object
  required:
    - source

```

```
- destination
properties:
  source:
    $ref: '#/components/schemas/Namespace'
  destination:
    $ref: '#/components/schemas/Namespace'
```

Breaking Changes

This proposal does not necessitate any breaking changes.

For the sake of consistency, we should consider defining how `renameTable` and `renameView` behave when the destination identifier conflicts with a namespace, which could potentially manifest in a breaking change for users relying on this currently-undefined behavior.

Alternatives Considered

The main alternative available to users seems to be that they can "clone" a namespace with a new name and move all child entities from the source to the destination. However, this is nontrivial and cannot be done atomically with the current REST spec. Improvements in this area are possible, but the ability to directly rename a namespace seems preferable.