Protecting Projects from Accidental Deletion with Liens

This document is for Project owners (https://cloud.google.com/resource-manager/docs/access-control-proj#permissions_and_roles) and Organization administrators (https://cloud.google.com/resource-manager/docs/access-control-org#permissions_and_roles) looking to add protections against project deletion.

You can place a lien upon a project to block the project's deletion until you remove the lien. This can be useful to protect projects of particular importance.

The **`gcloud`** command line tool is the easiest way to interact with project liens. If you don't have it installed, you can use Google Cloud Shell (https://cloud.google.com/shell/docs/).

Placing a lien on a project

To place a lien on a project, a user must have the **`resourcemanager.projects.updateLiens`** permission which is granted by the **`roles/owner`** and **`roles/resourcemanager.lienModifier`** roles.

```
gcloud alpha resource-manager liens create \
  --restrictions=resourcemanager.projects.delete \
  --reason="Super important production system"
```

The available parameters to **`liens create`** are:

- **`--project`** - The project the lien applies to.
- **`--restrictions`** - A comma-separated list of IAM permissions to block.
- **`--reason`** - A human-readable description of why this lien exists.
- **`--origin`** - A short string denoting the user/system which originated the lien. Required, but the gcloud tool will automatically populate it with the user's email address if left out.

At present, the only valid restriction for a project is `resourcemanager.projects.delete`.

Listing liens on a project

To list liens applied to a project, a user must have the `resourcemanager.projects.get` permission. Use the `liens list` gcloud command.

```
gcloud alpha resource-manager liens list
```

Here is some example output for this command:

```
gcloud alpha resource-manager liens list
NAME                                                 ORIGIN            REASON
p1061081023732-l3d8032b3-ea2c-4683-ad48-5ca23ddd00e7  user@example.com  testing
```

Removing liens from a project

To remove a lien from a project, a user must have the `resourcemanager.projects.updateLiens` permission which is granted by `roles/owner` and `roles/resourcemanager.lienModifier`.

```
gcloud alpha resource-manager liens delete [LIEN_NAME]
```

where:

- ***[LIEN_NAME]*** is the name of the lien to be deleted.

References

API Reference: REST Resource: liens
(https://cloud.google.com/resource-manager/reference/rest/v1/liens)

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