1.数据库导出的过程和权限

基本过程是:

- 创建bucket
- 把服务关联的sa账号关联到bucket上
- 实现export操作

MemoryStore和Cloud Sql的导出的操作,是通过服务本身关联的一个service account来向指定的bucket中写入rdb文件或者sql文件, 所以从权限角度来看需要给sa账号授权.

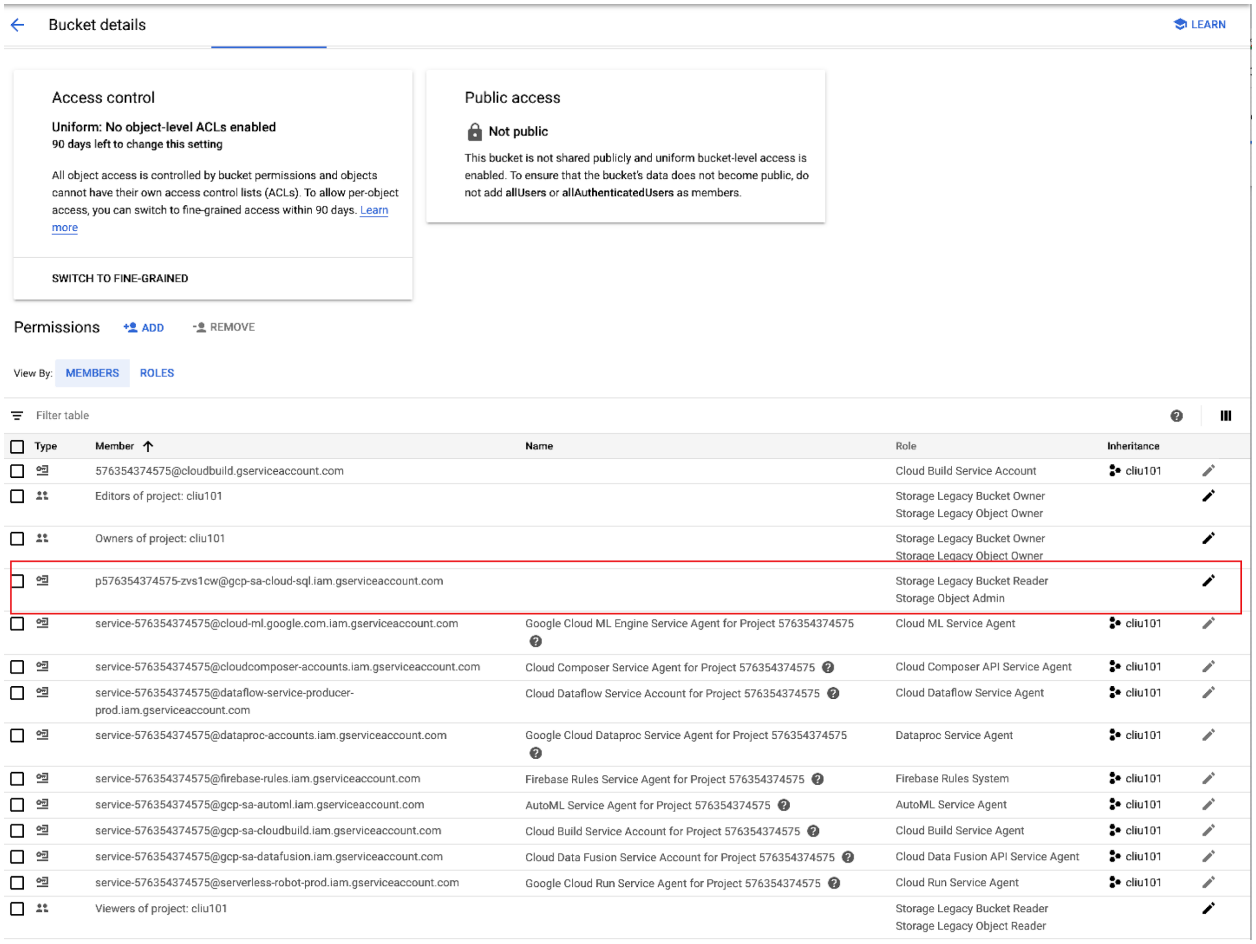
如果在console界面操作,并且登录的user account是一个owner权限的话, 会自动给gcs的bucket添加一个对应sa账号的写入权限,类似以下日志记录的信息

- Cloud sql backup 操作


```
{
  "protoPayload": {
    "@type": "type.googleapis.com/google.cloud.audit.AuditLog",
    "status": {},
    "authenticationInfo": {
      "principalEmail": "liuchenggang@google.com"
    },
    "requestMetadata": {
      "callerIp": "2401:fa00:44:11:8034:1ffe:433b:d4b0",
      "callerSuppliedUserAgent": "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_6)
AppleWebKit/537.36 (KHTML, like Gecko) Chrome/84.0.4147.105 Safari/537.36",
      "requestAttributes": {
        "time": "2020-08-13T07:52:26.743596142Z",
        "auth": {}
      },
      "destinationAttributes": {}
    },
    "serviceName": "storage.googleapis.com",
    "methodName": "storage.setIamPermissions",
    "authorizationInfo": [
      {
        "resource": "projects/_/buckets/cliu101_cloudsql_backup",
        "permission": "storage.buckets.setIamPolicy",
        "granted": true,
        "resourceAttributes": {}
      }
    ],
    "resourceName": "projects/_/buckets/cliu101_cloudsql_backup",
    "serviceData": {
```

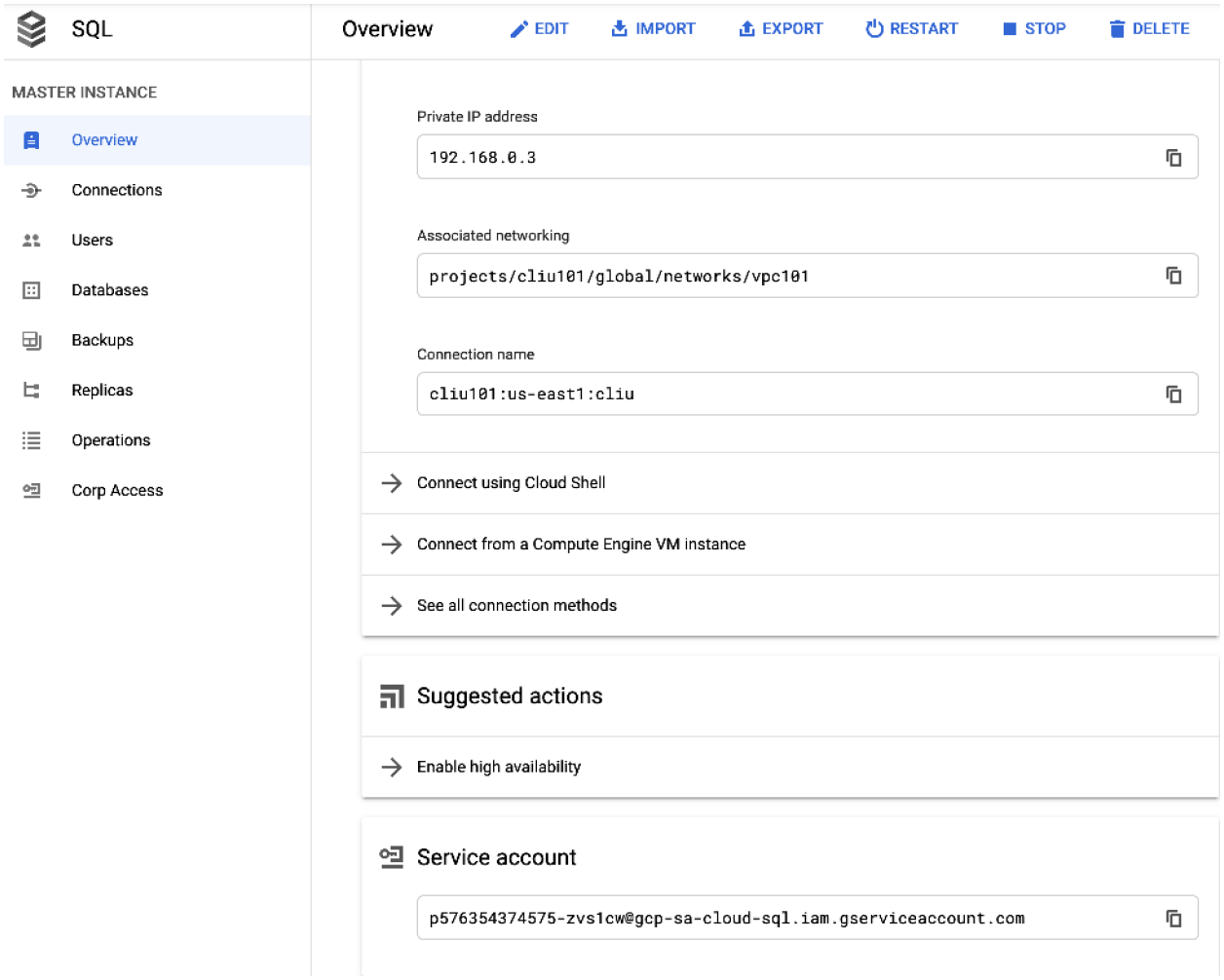
```
      "@type": "type.googleapis.com/google.iam.v1.logging.AuditData",
      "policyDelta": {
        "bindingDeltas": [
          {
            "action": "ADD",
            "role": "roles/storage.legacyBucketReader",
            "member":
"serviceAccount:p576354374575-zvs1cw@gcp-sa-cloud-sql.iam.gserviceaccount.com"
          },
          {
            "action": "ADD",
            "role": "roles/storage.objectAdmin",
            "member":
"serviceAccount:p576354374575-zvs1cw@gcp-sa-cloud-sql.iam.gserviceaccount.com"
          }
        ]
      }
    },
    "resourceLocation": {
      "currentLocations": [
        "us"
      ]
    }
  },
  "insertId": "tov4oae4urp8",
  "resource": {
    "type": "gcs_bucket",
    "labels": {
      "location": "us",
      "project_id": "cliu101",
      "bucket_name": "cliu101_cloudsql_backup"
    }
  },
  "timestamp": "2020-08-13T07:52:26.736945754Z",
  "severity": "NOTICE",
  "logName": "projects/cliu101/logs/cloudaudit.googleapis.com%2Factivity",
  "receiveTimestamp": "2020-08-13T07:52:28.026464719Z"
}
```


可以在bucket的权限里面看到



2.cloud sql和memory store关联的sa账号

cloud sql关联的sa账号,在cloud sql的instance上可以直接获取



Memeory store的instance关联的sa账号必须通过gcloud命令获取,界面上无法获取

```
gcloud redis instances describe [INSTANCE_ID] --region=[REGION]
```

```
[root@mhhtw-test01-tw ~]# gcloud redis instances export gs://mhhtw-redis-backup/test01.rdb --region=asia-east1 mhhtw-game01-gcp-taipei
Request issued for: [mhhtw-game01-gcp-taipei]
Waiting for operation [projects/mhhtw-273808/locations/asia-east1/operations/operation-1597304719344-5acbd7c65038d-27be0278-9f0b6244] to complete...done.
alternativeLocationId: asia-east1-a
authorizedNetwork: projects/mhhtw-273808/global/networks/mhhtw
connectMode: DIRECT_PEERING
createTime: '2020-08-11T06:34:29.898819738Z'
currentLocationId: asia-east1-b
host: 10.106.53.204
locationId: asia-east1-b
memorySizeGb: 8
name: projects/mhhtw-273808/locations/asia-east1/instances/mhhtw-game01-gcp-taipei
persistenceIamIdentity: serviceAccount:555884415706-compute@developer.gserviceaccount.com
port: 6379
redisVersion: REDIS_4_0
reservedIpRange: 10.106.53.200/29
state: READY
tier: STANDARD_HA
[root@mhhtw-test01-tw ~]#
```

参考文档

Granting restricted permissions for import and export

3.常见问题

客户如果第一次创建export任务是在一个gce的vm上, 往往会关联一个默认的sa账号,这个账号往往是一个editor 权限,没有IAM的能力,就会报错

常见的解决方法有两个

- 通过owner先创建一个export任务,建议直接使用console来操作,这样就会自动为关联的sa账对bucket授权
- 后面的自动化备份或者导出的时候使用gcloud命令+最低权限的sa来实现