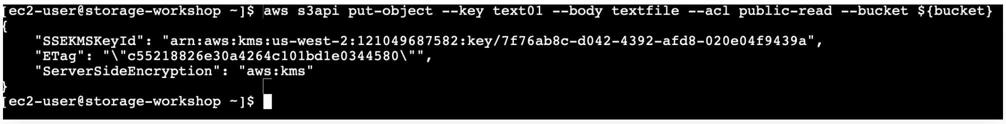
Disable S3 ACLs

In this exercise we will show you how to configure your buckets to disable ACLs and ensure objects are no longer granted access via any ACLs whether they be existing or new ACLs.

First, let us create an object with public read permissions via ACLs.

From you SSH session run the following command.

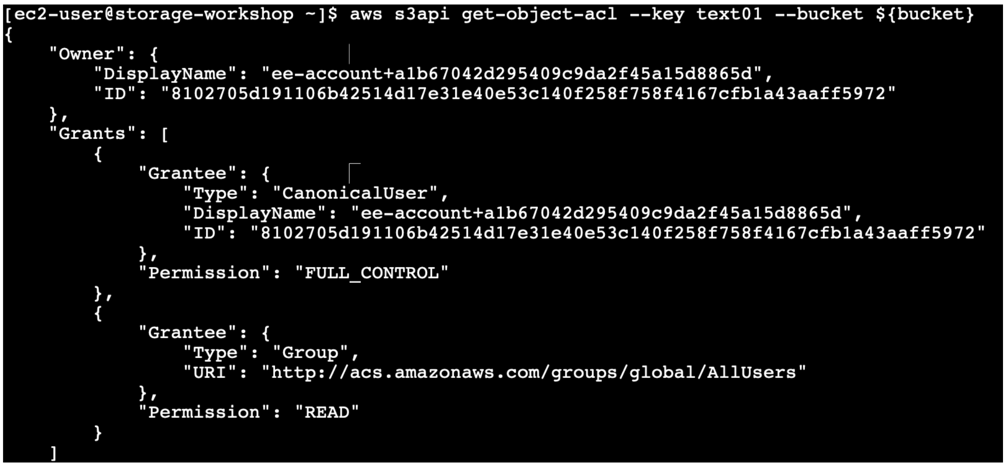
```
aws s3api put-object --key text01 --body textfile --acl public-read --bucket ${bucket}
```



```
[ec2-user@storage-workshop ~]$ aws s3api put-object --key text01 --body textfile --acl public-read --bucket ${bucket}
{
    "SSEKMSKeyId": "arn:aws:kms:us-west-2:121049687582:key/7f76ab8c-d042-4392-afd8-020e04f9439a",
    "ETag": "\"c55218826e30a4264c101bd1e0344580\"",
    "ServerSideEncryption": "aws:kms"
}
[ec2-user@storage-workshop ~]$ 
```

This creates a text01 public object. Let's verify it is public with the following command.

```
aws s3api get-object-acl --key text01 --bucket ${bucket}
```



```
[ec2-user@storage-workshop ~]$ aws s3api get-object-acl --key text01 --bucket ${bucket}
{
    "Owner": {
        "DisplayName": "ee-account+a1b67042d295409c9da2f45a15d8865d",
        "ID": "8102705d191106b42514d17e31e40e53c140f258f758f4167cfb1a43aaff5972"
    },
    "Grants": [
        {
            "Grantee": {
                "Type": "CanonicalUser",
                "DisplayName": "ee-account+a1b67042d295409c9da2f45a15d8865d",
                "ID": "8102705d191106b42514d17e31e40e53c140f258f758f4167cfb1a43aaff5972"
            },
            "Permission": "FULL_CONTROL"
        },
        {
            "Grantee": {
                "Type": "Group",
                "URI": "http://acs.amazonaws.com/groups/global/AllUsers"
            },
            "Permission": "READ"
        }
    ]
```

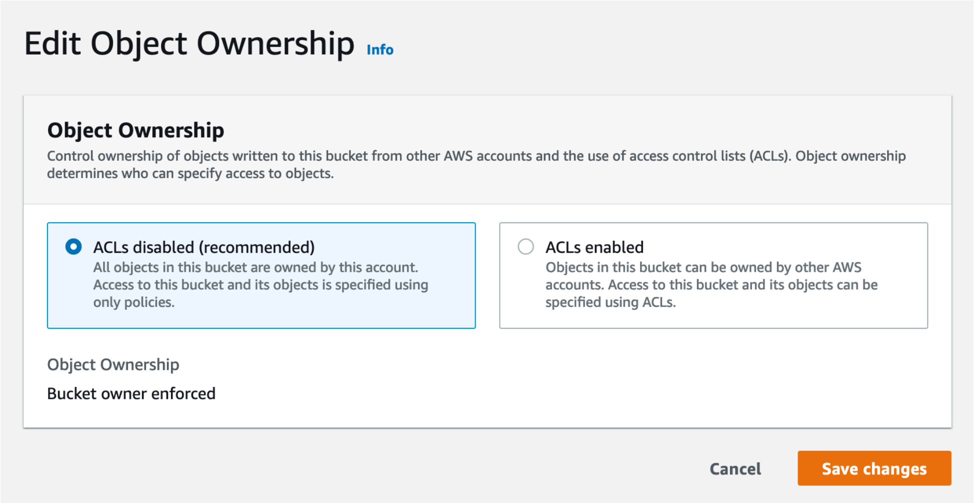
Notice that there is a Grantee Type Group with URI `http://acs.amazonaws.com/groups/global/AllUsers` with Permission `READ`. This means public access is allowed to read this object.

We will update S3 Object Ownership to disable ACLs for all objects.

From the AWS console in the top search bar, search and select `S3`.

- Click the bucket name starting with `sid-security-xxxxxxxx`.
- Click on the `Permissions` tab.
- Under `Object Ownership` click `Edit`.
- Select `ACLs disabled (recommended)`.

- Click `Save changes`



Edit Object Ownership

Object Ownership

Control ownership of objects written to this bucket from other AWS accounts and the use of access control lists (ACLs). Object ownership determines who can specify access to objects.

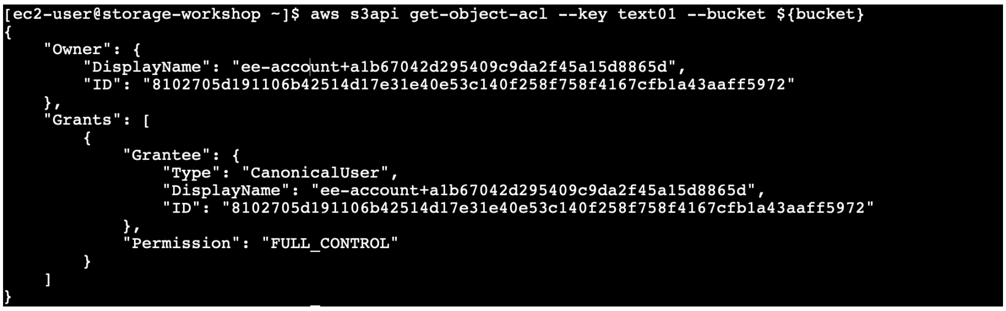
● ACLs disabled (recommended)
All objects in this bucket are owned by this account. Access to this bucket and its objects is specified using only policies.

○ ACLs enabled
Objects in this bucket can be owned by other AWS accounts. Access to this bucket and its objects can be specified using ACLs.

Object Ownership
Bucket owner enforced

Return to your SSH session, and run the following command to verify that the object no longer shows that `http://acs.amazonaws.com/groups/global/AllUsers` has permission `READ`

```
aws s3api get-object-acl --key text01 --bucket ${bucket}
```



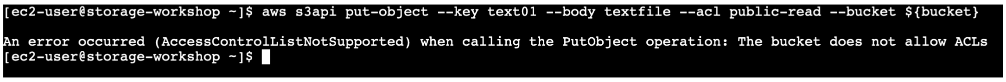
```
[ec2-user@storage-workshop ~]$ aws s3api get-object-acl --key text01 --bucket ${bucket}
{
    "Owner": {
        "DisplayName": "ee-account+a1b67042d295409c9da2f45a15d8865d",
        "ID": "8102705d191106b42514d17e31e40e53c140f258f758f4167cfb1a43aaff5972"
    },
    "Grants": [
        {
            "Grantee": {
                "Type": "CanonicalUser",
                "DisplayName": "ee-account+a1b67042d295409c9da2f45a15d8865d",
                "ID": "8102705d191106b42514d17e31e40e53c140f258f758f4167cfb1a43aaff5972"
            },
            "Permission": "FULL_CONTROL"
        }
    ]
}
```

Without changing the ACL on the object, we have successfully blocked all public access to all objects within our bucket.

Let's see what happens if we try to create a new object with a public read ACL.

```
aws s3api put-object --key text01 --body textfile --acl public-read --bucket ${bucket}
```

The request should fail, notice how the error states that `The bucket does not allow ACLs`



```
[ec2-user@storage-workshop ~]$ aws s3api put-object --key text01 --body textfile --acl public-read --bucket ${bucket}

An error occurred (AccessControlListNotSupported) when calling the PutObject operation: The bucket does not allow ACLs
[ec2-user@storage-workshop ~]$ █
```

You have successfully disabled ACLs from this bucket and prevented new and existing objects from being granted permissions via ACLs.

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