

AWS S3 CLI and SDK Interactions

This document provides detailed instructions for creating and managing an S3 bucket using AWS CLI. The operations include creating a bucket, configuring permissions, enabling versioning and logging, and uploading/downloading files.

1. Create an S3 Bucket

To create the bucket `my-s3-bucket-involve`, run:

bash

Copy code

```
aws s3api create-bucket --bucket my-s3-bucket-involve --region  
us-east-1
```

```
C:\Users\admin>aws s3api create-bucket --bucket my-s3-bucket-involve --region us-east-1  
{  
  "Location": "/my-s3-bucket-involve"  
}
```

2. Attach Bucket Policy

Save the following policy into a file named `policy.json`:

json

Copy code

```
{  
  "Version": "2012-10-17",  
  "Statement": [  
    {  
      "Effect": "Allow",  
      "Principal": {  
        "AWS": "arn:aws:iam::160337832336:user/ahmed"  
      },  
    },  
  ],  
}
```

```

    "Action": "s3:PutObject",

    "Resource": "arn:aws:s3:::my-s3-bucket-involve/*",
    "Condition": {
        "StringEquals": {
            "s3:x-amz-acl": "bucket-owner-full-control"
        }
    },
    {
        "Effect": "Allow",
        "Principal": {
            "AWS": "arn:aws:iam::160337832336:user/ahmed"
        },
        "Action": "s3:GetObject",
        "Resource": "arn:aws:s3:::my-s3-bucket-involve/*"
    }
]
}

```

```
C:\Users\admin\Desktop>start policy.json
```

```
C:\Users\admin\Desktop>
```

```

2  "Version": "2012-10-17",
3  "Statement": [
4      {
5          "Effect": "Allow",
6          "Principal": {
7              "AWS": "arn:aws:iam::160337832336:user/ahmed"
8          },
9          "Action": "s3:PutObject",
10         "Resource": "arn:aws:s3:::my-s3-bucket-involve/*",
11         "Condition": {
12             "StringEquals": {
13                 "s3:x-amz-acl": "bucket-owner-full-control"
14             }
15         }
16     },
17     {
18         "Effect": "Allow",
19         "Principal": {
20             "AWS": "arn:aws:iam::160337832336:user/ahmed"
21         },
22         "Action": "s3:GetObject",
23         "Resource": "arn:aws:s3:::my-s3-bucket-involve/*"
24     }
25 ]
26 }
27

```

To attach this policy to the bucket, use:

bash

Copy code

```
aws s3api put-bucket-policy --bucket my-s3-bucket-involve --policy
file://policy.json
```

```
C:\Users\admin\Desktop>aws s3api put-bucket-policy --bucket my-s3-bucket-involve --policy file://policy.json
```

3. Enable Versioning

To enable versioning for the bucket:

bash

Copy code

```
aws s3api put-bucket-versioning --bucket my-s3-bucket-involve
--versioning-configuration Status=Enabled
```

```
C:\Users\admin\Desktop>aws s3api put-bucket-versioning --bucket my-s3-bucket-involve --versioning-configuration Status=En
abled
```

4. Enable Logging

Step : Configure Logging

Run this command to enable logging for the bucket:

bash

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```
aws s3api put-bucket-logging --bucket my-s3-bucket-involve
--bucket-logging-status '{
  "LoggingEnabled": {
    "TargetBucket": "my-s3-bucket-involve",
    "TargetPrefix": "logs/"
```

```
}  
}'
```

5. Upload Files to the Bucket

To upload a file (e.g., `policy.json`) to the bucket:

bash

Copy code

```
aws s3 cp policy.json s3://my-s3-bucket-involve/
```

```
C:\Users\admin\Desktop>  
aws s3 cp policy.json s3://my-s3-bucket-involve/  
upload: .\policy.json to s3://my-s3-bucket-involve/policy.json
```

6. Download Files from the Bucket

To download the file `policy.json` from the bucket to your local system:

bash

Copy code

```
aws s3 cp s3://my-s3-bucket-involve/policy.json ./policy.json
```

```
C:\Users\admin\Desktop>aws s3 cp s3://my-s3-bucket-involve/policy.json .  
download: s3://my-s3-bucket-involve/policy.json to .\policy.json
```

7. Verify Configuration

Check Bucket Versioning:

bash

Copy code

```
aws s3api get-bucket-versioning --bucket my-s3-bucket-involve
```

```
C:\Users\admin\Desktop>  
C:\Users\admin\Desktop>aws s3api get-bucket-versioning --bucket my-s3-bucket-involve  
{  
  "Status": "Enabled"  
}
```

Check Bucket Logging:

bash

Copy code

```
aws s3api get-bucket-logging --bucket my-s3-bucket-involve
```

```
C:\Users\admin\Desktop>aws s3api get-bucket-logging --bucket my-s3-bucket-involve
{
  "LoggingEnabled": {
    "TargetBucket": "my-s3-bucket-involve",
    "TargetPrefix": "logs/"
  }
}
```

List Bucket Contents:

bash

Copy code

```
aws s3 ls s3://my-s3-bucket-involve/
```

```
C:\Users\admin\Desktop>aws s3 ls s3://my-s3-bucket-involve/
2024-12-06 16:47:55          615 policy.json
```