

Cloud Computing Lab

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BSE-V B

2023-BSE-056

LAB 13

Task 0 Lab Setup (Codespace & GH CLI)

- task0_codespace_create_and_list.png

```
C:\Users\Laptop>gh codespace create --repo SafaJahangir09/CC_Safa_056
  Codespaces usage for this repository is paid for by SafaJahangir09
? Choose Machine Type: 2 cores, 8 GB RAM, 32 GB storage
super-space-enigma-jrrpj9qpwxhxxj

C:\Users\Laptop>gh codespace list
NAME          DISPLAY NAME      REPOSITORY
  BRANCH   STATE      CREATED AT
curly-goldfish-jjppj5j6w7vgjcp5x  curly goldfish    SafaJahangir09/Lab12
  main*   Shutdown  about 13 days ago
super-space-enigma-jrrpj9qpwx...  super space enigma SafaJahangir09/CC_Sa
.. main    Available less than a minute ago
```

- task0_codespace_ssh_connected.png

```
Welcome to Ubuntu 24.04.3 LTS (GNU/Linux 6.8.0-1030-azure x86_64)

* Documentation:  https://help.ubuntu.com
* Management:    https://landscape.canonical.com
* Support:       https://ubuntu.com/pro

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

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individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

@SafaJahangir09 /workspaces/CC_Safa_056 (main) $ cd Lab13
@SafaJahangir09 /workspaces/CC_Safa_056/Lab13 (main) $
```

Task 1 — Create IAM Group and Output Details

- task1_project_directory.png

```
@SafaJahangir09 [?] /workspaces/CC_Safa_056 (main) $ cd Lab13
@SafaJahangir09 [?] /workspaces/CC_Safa_056/Lab13 (main) $ _
```

- task1_file_created.png

```
SafaJahangir09 [?] /workspaces/CC_Safa_056/Lab13 (main) $ touch main.tf
SafaJahangir09 [?] /workspaces/CC_Safa_056/Lab13 (main) $ ls
EADME.md  main.tf
```

- task1_main_tf.png

```
SafaJahangir09 [?] /workspaces/CC_Safa_056/Lab13 (main) $ cat main.tf
provider "aws" {
  shared_config_files      = ["~/.aws/config"]
  shared_credentials_files = ["~/.aws/credentials"]

}

resource "aws_iam_group" "developers" {
  name = "developers"
  path = "/groups/"
}

output "group_details" {
  value = {
    group_name = aws_iam_group.developers.name
    group_arn  = aws_iam_group.developers.arn
    unique_id  = aws_iam_group.developers.unique_id
  }
}

SafaJahangir09 [?] /workspaces/CC_Safa_056/Lab13 (main) $
```

- task1_terraform_init.png

```
@SafaJahangir09 [?] /workspaces/CC_Safa_056/Lab13 (main) $ terraform init
Initializing the backend...
Initializing provider plugins...
- Finding latest version of hashicorp/aws...
- Installing hashicorp/aws v6.28.0...
- Installed hashicorp/aws v6.28.0 (signed by HashiCorp)
Terraform has created a lock file .terraform.lock.hcl to record the provider
selections it made above. Include this file in your version control repository
so that Terraform can guarantee to make the same selections by default when
you run "terraform init" in the future.

Terraform has been successfully initialized!

You may now begin working with Terraform. Try running "terraform plan" to see
any changes that are required for your infrastructure. All Terraform commands
should now work.

If you ever set or change modules or backend configuration for Terraform, rerun this command to reinitialize your working
directory. If you forget, other
commands will detect it and remind you to do so if necessary.
```

- task1_terraform_apply.png

```

Plan: 1 to add, 0 to change, 0 to destroy.

Changes to Outputs:
  + group_details = {
    + group_arn = (known after apply)
    + group_name = "developers"
    + unique_id = (known after apply)
  }
aws_iam_group.developers: Creating...
aws_iam_group.developers: Creation complete after 2s [id=developers]

Apply complete! Resources: 1 added, 0 changed, 0 destroyed.

Outputs:
group_details = {
  "group_arn" = "arn:aws:iam::624150768830:group/groups/developers"
  "group_name" = "developers"
  "unique_id" = "AGPAZCUSI5S7AOCKZMX3"
}

```

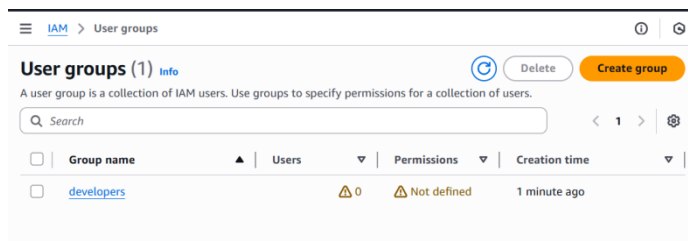
- task1_terraform_output.png

```

@SafaJahangir09 /workspaces/CC_Safa_056/Lab13 (main) $ terraform output
group_details = {
  "group_arn" = "arn:aws:iam::624150768830:group/groups/developers"
  "group_name" = "developers"
  "unique_id" = "AGPAZCUSI5S7AOCKZMX3"
}

```

- task1_aws_console_group.png



Task 2 — Create IAM User with Group Membership

- task2_main_tf_user.png

```

output "group_details" {
  value = {
    group_name = aws_iam_group.developers.name
    group_arn  = aws_iam_group.developers.arn
    unique_id  = aws_iam_group.developers.unique_id
  }
}

resource "aws_iam_user" "lb" {
  name = "loadbalancer"
  path = "/users/"
  force_destroy = true
  tags = {
    DisplayName = "Load Balancer"
  }
}

resource "aws_iam_user_group_membership" "lb_membership" {
  user = aws_iam_user.lb.name
  groups = [
    aws_iam_group.developers.name
  ]
}

output "user_details" {
  value = {
    user_name = aws_iam_user.lb.name
    user_arn  = aws_iam_user.lb.arn
    unique_id = aws_iam_user.lb.unique_id
  }
}

-- INSERT --

```

- task2_terraform_apply.png

```

}
aws_iam_user.lb: Creating...
aws_iam_user.lb: Creation complete after 1s [id=loadbalancer]
aws_iam_user_group_membership.lb_membership: Creating...
aws_iam_user_group_membership.lb_membership: Creation complete after 1s [i
d=terraform-20260112140940444400000001]

Apply complete! Resources: 2 added, 0 changed, 0 destroyed.

```

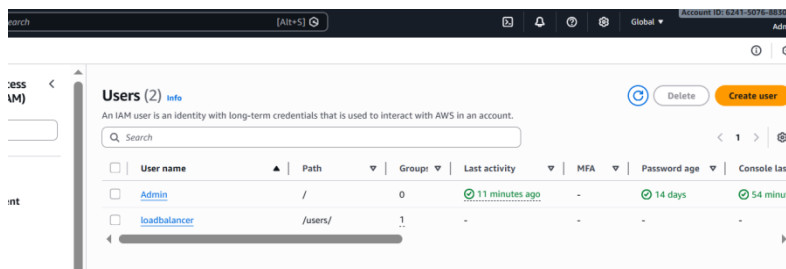
- task2_terraform_output.png

```

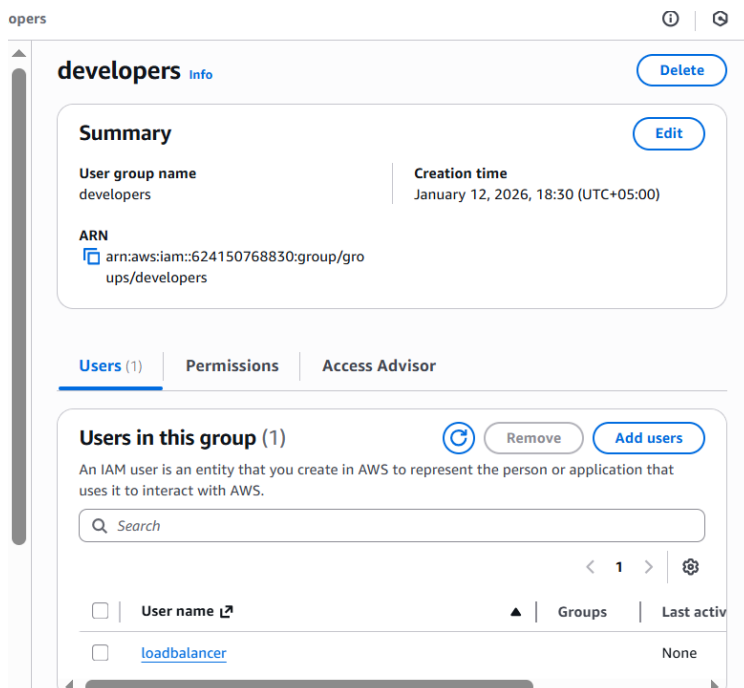
@SafaJahangir09 /workspaces/CC_Safa_056/Lab13 (main) $ terraform output
group_details = {
  "group_arn" = "arn:aws:iam::624150768830:group/groups/developers"
  "group_name" = "developers"
  "unique_id" = "AGPAZCUSI5S7AOCKZMXY3"
}
user_details = {
  "unique_id" = "AIDAZCUSI5S7FQSZOE3YF"
  "user_arn" = "arn:aws:iam::624150768830:user/users/loadbalancer"
  "user_name" = "loadbalancer"
}

```

- task2_aws_console_user.png



- task2_aws_console_user_groups.png



Task 3 — Attach Policies to IAM Group

- task3_main_tf_policies.png

```
unique_id = aws_iam_user.id.unique_id
}
}
resource "aws_iam_group_policy_attachment" "developer_ec2_fullaccess" {
  group = aws_iam_group.developers.name
  policy_arn = "arn:aws:iam::aws:policy/AmazonEC2FullAccess"
}

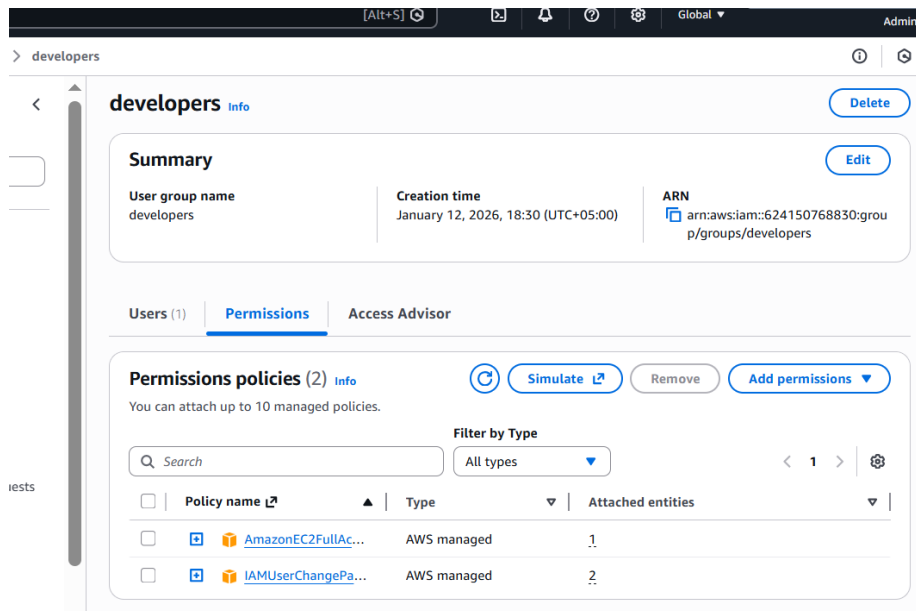
resource "aws_iam_group_policy_attachment" "change_password" {
  group = aws_iam_group.developers.name
  policy_arn = "arn:aws:iam::aws:policy/IAMUserChangePassword"
}
```

- task3_terraform_apply.png

```
Plan: 2 to add, 0 to change, 0 to destroy.
aws_iam_group_policy_attachment.change_password: Creating...
aws_iam_group_policy_attachment.developer_ec2_fullaccess: Creating...
aws_iam_group_policy_attachment.developer_ec2_fullaccess: Creation complete after 1s [id=developers-20260112142454533200000001]
aws_iam_group_policy_attachment.change_password: Creation complete after 1s [id=developers-202601121424546500000002]

Apply complete! Resources: 2 added, 0 changed, 0 destroyed.
```

- task3_aws_console_policies.png



Task 4 — Create Login Profile for IAM User

- task4_variables_tf.png

```
@SafaJahangir09 /workspaces/CC_Safa_056/Lab13 (main) $ cat variables.tf
variable "iam_password" {
  description = "Temporary password for the IAM user"
  type        = string
  sensitive    = true
  default      = "1dontKnow"
```

- task4_create_login_script.png

```
GNU nano 7.2 create-login-profile.sh
#!/usr/bin/env bash
set -euo pipefail

USERNAME="$1"
PASSWORD="$2"

# Check if login profile already exists
if aws iam get-login-profile --user-name "$USERNAME" >/dev/null 2>&1; then
  echo "Login profile already exists for $USERNAME. Skipping."
else
  echo "Creating login profile for $USERNAME"
  aws iam create-login-profile \
    --user-name "$USERNAME" \
    --password "$PASSWORD" \
    --password-reset-required
fi
```

- task4_chmod_script.png

```
_056/Lab13 (main) $
@SafaJahangir09 /workspaces/CC_Safa_056/Lab13 (main) $ chmod +x create-login-profile.sh
@SafaJahangir09 /workspaces/CC_Safa_056/Lab13 (main) $
```

- task4_main_tf_login_profile.png

```
resource "null_resource" "create_login_profile" {
  triggers = {
    password_hash = sha256(var.iam_password)
    user          = aws_iam_user.lb.name
  }

  depends_on = [aws_iam_user.lb]

  provisioner "local-exec" {
    command = "${path.module}/create-login-profile.sh ${aws_iam_user.lb.name} '${var.iam_password}'"
  }
}
```

- task4_terraform_apply.png

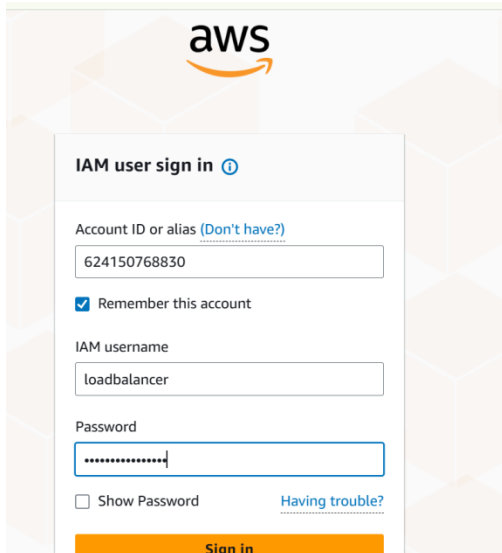
```
Plan: 1 to add, 0 to change, 0 to destroy.
null_resource.create_login_profile: Creating...
null_resource.create_login_profile: Provisioning with 'local-exec'...
null_resource.create_login_profile (local-exec): (output suppressed due to sensitive value in co
null_resource.create_login_profile (local-exec): (output suppressed due to sensitive value in co
null_resource.create_login_profile (local-exec): (output suppressed due to sensitive value in co
null_resource.create_login_profile (local-exec): (output suppressed due to sensitive value in co
null_resource.create_login_profile (local-exec): (output suppressed due to sensitive value in co
null_resource.create_login_profile (local-exec): (output suppressed due to sensitive value in co
null_resource.create_login_profile (local-exec): (output suppressed due to sensitive value in co
null_resource.create_login_profile (local-exec): (output suppressed due to sensitive value in co
null_resource.create_login_profile (local-exec): (output suppressed due to sensitive value in co
null_resource.create_login_profile (local-exec): (output suppressed due to sensitive value in co
null_resource.create_login_profile: Creation complete after 7s [id=1355112466946589324]

Apply complete! Resources: 1 added, 0 changed, 0 destroyed.
```

- task4_aws_cli_verify.png

```
@SafaJahangir09 /workspaces/CC_Safa_056/Lab13 (main) $ aws iam get-login-profile --user-name loadbalancer
{
  "LoginProfile": {
    "UserName": "loadbalancer",
    "CreateDate": "2026-01-13T04:20:43+00:00",
    "PasswordResetRequired": true
  }
}
```

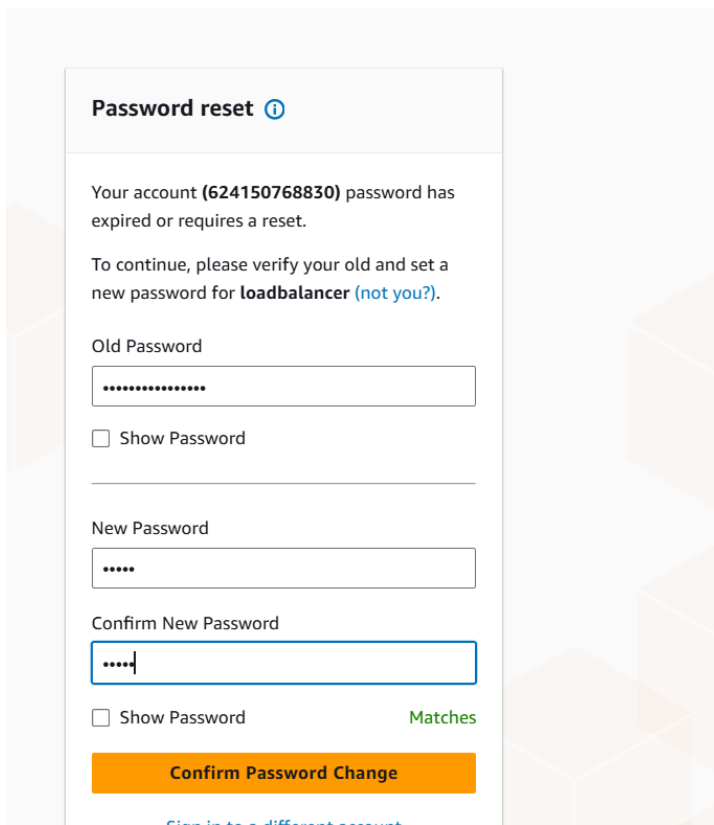
- task4_aws_console_login.png



The screenshot shows the AWS IAM user sign-in page. At the top is the AWS logo. Below it is the heading "IAM user sign in" with a help icon. The form contains the following fields and options:

- Account ID or alias (Don't have?): 624150768830
- ☒ Remember this account
- IAM username: loadbalancer
- Password: [masked with dots]
- ☐ Show Password
- [Having trouble?](#)
- Sign in** button

- task4_aws_console_password_reset.png



The screenshot shows the AWS IAM password reset page. At the top is the heading "Password reset" with a help icon. The page contains the following text and form fields:

Your account (624150768830) password has expired or requires a reset.

To continue, please verify your old and set a new password for **loadbalancer** (not you?).

Old Password: [masked with dots]

☐ Show Password

New Password: [masked with dots]

Confirm New Password: [masked with dots]

☐ Show Password Matches

Confirm Password Change button

[Sign in to a different account](#)

Task 5 — Generate Access Keys for IAM User

- task5_main_tf_access_keys.png

```

command = "${path.module}/create-login-profile.sh ${aws_iam
}
}

resource "aws_iam_access_key" "lb_access_key" {
  user = aws_iam_user.lb.name
}

output "access_key_id" {
  value = aws_iam_access_key.lb_access_key.id
}

output "access_key_secret" {
  value = aws_iam_access_key.lb_access_key.secret
  sensitive = true
}
:WQ_

```

- task5_terraform_apply.png

```

Plan: 1 to add, 0 to change, 0 to destroy.

Changes to Outputs:
  + access_key_id      = (known after apply)
  + access_key_secret = (sensitive value)
aws_iam_access_key.lb_access_key: Creating...
aws_iam_access_key.lb_access_key: Creation complete after 1s [id=AKIAZCUSI5S7HDDJJD6J]

Apply complete! Resources: 1 added, 0 changed, 0 destroyed.

```

- task5_terraform_output.png

```

@SafaJahangir09 /workspaces/CC_Safa_056/Lab13 (main) $ terraform output
access_key_id = "AKIAZCUSI5S7HDDJJD6J"
access_key_secret = <sensitive>
group_details = {
  "group_arn" = "arn:aws:iam::624150768830:group/groups/developers"
  "group_name" = "developers"
  "unique_id" = "AGPAZCUSI5S7AOCKZMX3"
}

```

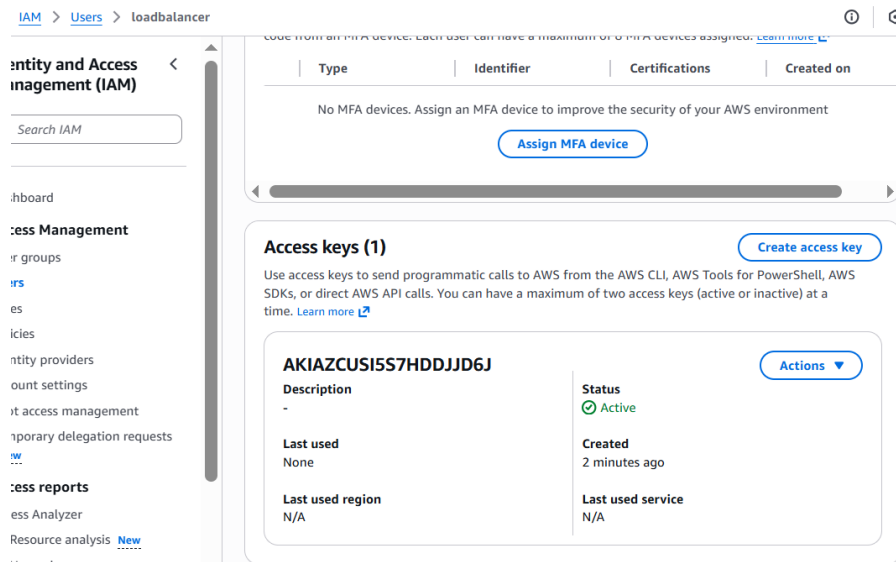
- task5_tfstate_secret. Png

```

@SafaJahangir09 /workspaces/CC_Safa_056/Lab13 (main) $ cat terraform.tfstate
{
  "access_key_secret": {
    "value": "6jTDuQi0350TPaRCwhzWQwGUHBkenlIRjZeNJy9Q",
    "type": "string",
    "sensitive": true
  },
  "group_details": {
    "value": {
      "group_arn": "arn:aws:iam::624150768830:group/groups/developers",
      "group_name": "developers",
      "unique_id": "AGPAZCUSI5S7AOCKZMX3"
    }
  }
}

```

- task5_aws_console_access_keys. Png



Task 6 — Implement Terraform Remote State with S3

- task6_s3_bucket_create.png

Create bucket

Info

Buckets are containers for data stored in S3.

General configuration

AWS Region

Middle East (UAE) me-central-1

Bucket name

Info

myapp-s3-bucket-054

Bucket names must be 3 to 63 characters and unique within the global namespace. Bucket names must also begin and end with a letter or number. Valid characters are a-z, 0-9, periods (.), and hyphens (-). [Learn more](#)

Copy settings from existing bucket - optional

Only the bucket settings in the following configuration are copied.

Choose bucket

Format: s3://bucket/prefix

Object Ownership

Info

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.

Object Ownership

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

Block Public Access settings for this bucket

Public access is granted to buckets and objects through access control lists (ACLs), bucket policies, access point policies, or all. In order to ensure that public access to this bucket and its objects is blocked, turn on Block all public access. These settings apply only to this bucket and its access points. AWS recommends that you turn on Block all public access, but before applying any of these settings, ensure that your applications will work correctly without public access. If you require some level of public access to this bucket or objects within, you can customize the individual settings below to suit your specific storage use cases. [Learn more](#)

Block all public access

Turning this setting on is the same as turning on all four settings below. Each of the following settings are independent of one another.

Block public access to buckets and objects granted through new access control lists (ACLs)

S3 will block public access permissions applied to newly added buckets or objects, and prevent the creation of new public access ACLs for existing buckets and objects. This setting doesn't change any existing permissions that allow public access to S3 resources using ACLs.

Block public access to buckets and objects granted through any access control lists (ACLs)

S3 will ignore all ACLs that grant public access to buckets and objects.

Block public access to buckets and objects granted through new public bucket or access point policies

S3 will block new bucket and access point policies that grant public access to buckets and objects. This setting doesn't change any existing policies that allow public access to S3 resources.

Block public and cross-account access to buckets and objects through any public bucket or access point policies

S3 will ignore public and cross-account access for buckets or access points with policies that grant public access to buckets and objects.

Bucket Versioning

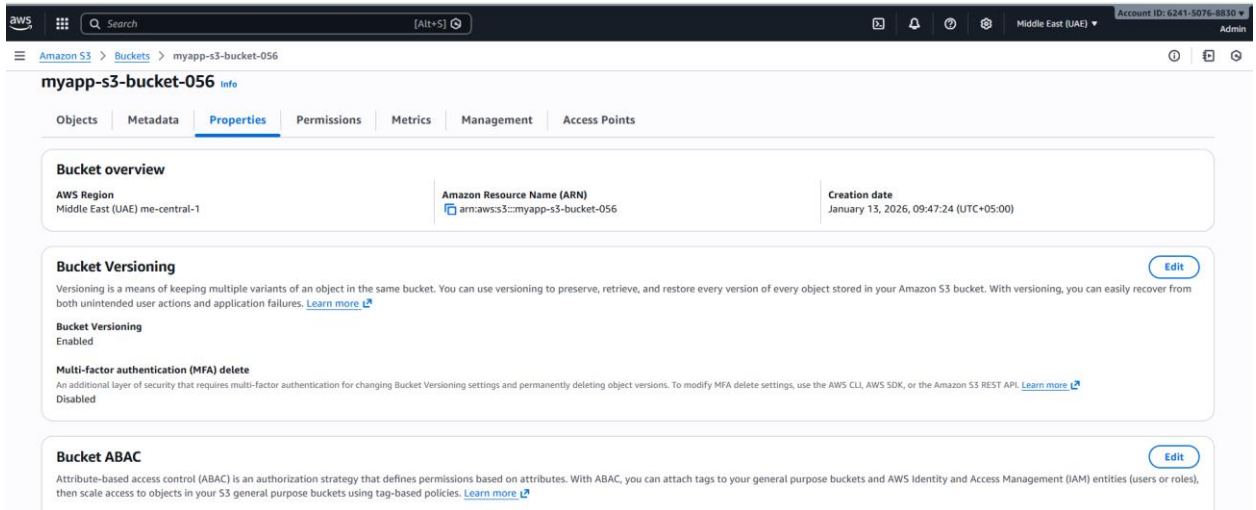
Versioning is a means of keeping multiple variants of an object in the same bucket. You can use versioning to preserve, retrieve, and restore every version of every object stored in your Amazon S3 bucket. With versioning, you can easily recover from both unintended user actions and application failures. [Learn more](#)

Bucket Versioning

Disable

Enable

- task6_s3_bucket_versioning.png



- task6_main_tf_backend.png

```
terraform {  
  backend "s3" {  
    bucket = "myapp-s3-bucket-056"  
    key    = "myapp/terraform.tfstate"  
    region = "me-central-1"  
    encrypt = true  
    use_lockfile = true  
  }  
}  
  
provider "aws" {
```

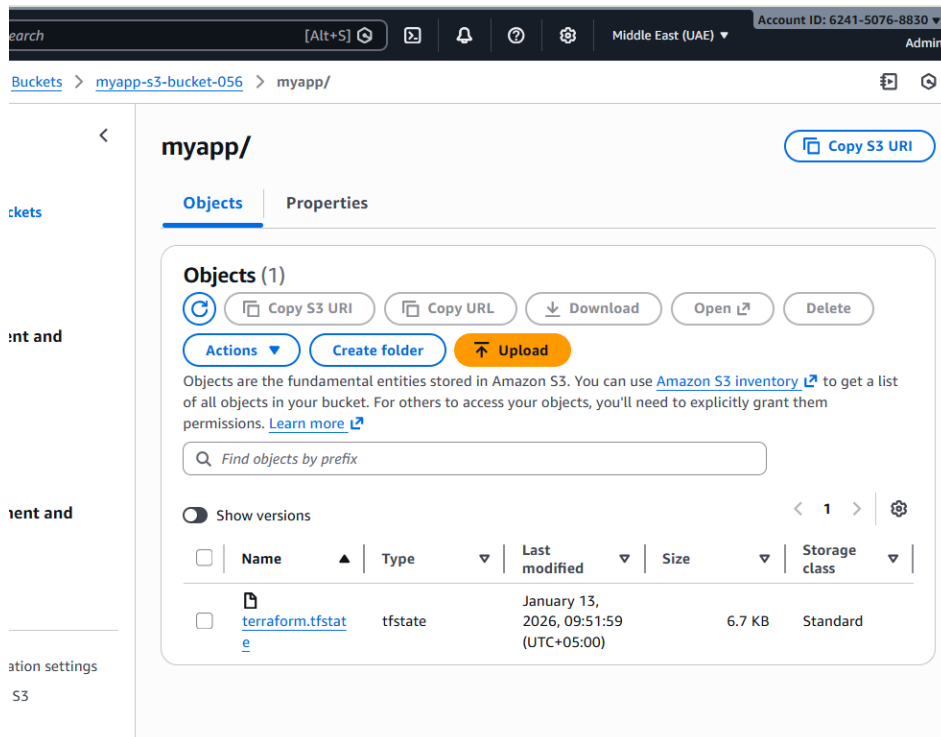
- task6_terraform_init_migrate.png

```
@SafaJahangir09 /workspaces/CC_Safa_056/Lab13 (main) $ terraform init -migrate-state  
Initializing the backend...  
Do you want to copy existing state to the new backend?  
Pre-existing state was found while migrating the previous "local" backend to the  
newly configured "s3" backend. No existing state was found in the newly  
configured "s3" backend. Do you want to copy this state to the new "s3"  
backend? Enter "yes" to copy and "no" to start with an empty state.  
  
Enter a value: yes  
  
Successfully configured the backend "s3"! Terraform will automatically  
use this backend unless the backend configuration changes.  
Initializing provider plugins...  
- Reusing previous version of hashicorp/aws from the dependency lock file  
- Reusing previous version of hashicorp/null from the dependency lock file  
- Using previously-installed hashicorp/aws v6.28.0  
- Using previously-installed hashicorp/null v3.2.4  
  
Terraform has been successfully initialized!
```

- task6_terraform_apply.png

```
aws_iam_user_group_membership.lb_membership: Refreshing state... [id=terraform-2026011214094044400000001]  
aws_iam_access_key.lb_access_key: Refreshing state... [id=AKIAZCUSI5S7HDDJJD6J]  
  
No changes. Your infrastructure matches the configuration.  
  
Terraform has compared your real infrastructure against your configuration and found no differences, so no  
changes are needed.  
  
Apply complete! Resources: 0 added, 0 changed, 0 destroyed.
```

- task6_s3_tfstate_file.png



- task6_local_state_backup.png

```
@SafaJahangir09 /workspaces/CC_Safa_056/Lab13 (main) $ ls -la terraform.tfstate*
-rw-rw-rw- 1 codespace codespace 0 Jan 13 04:51 terraform.tfstate
-rw-rw-rw- 1 codespace codespace 6882 Jan 13 04:51 terraform.tfstate.backup
```

- task6_terraform_destroy.png

```
aws_iam_group_policy_attachment.change_password: Destruction complete after 0s
aws_iam_group_policy_attachment.developer_ec2_fullaccess: Destruction complete after 0s
aws_iam_user_group_membership.lb_membership: Destruction complete after 1s
aws_iam_user.lb: Destroying... [id=loadbalancer]
aws_iam_group.developers: Destroying... [id=developers]
aws_iam_group.developers: Destruction complete after 0s
aws_iam_user.lb: Destruction complete after 3s

Destroy complete! Resources: 7 destroyed.
```

- task6_s3_tfstate_destroyed. Png

```
myapp-s3-bucket-056.s3.me-central-1.amazonaws.com/m...
pretty-print [ ]

{
  "version": 4,
  "terraform_version": "1.14.3",
  "serial": 2,
  "lineage": "46f2a50a-befd-1786-5486-911df1a43971",
  "outputs": {},
  "resources": [],
  "check_results": null
}
```

Task 7 — Create Multiple Users from CSV File

- task7_locals_tf.png

```
@SafaJahangir09 [?] /workspaces/CC_Safa_056/Lab13 (main) $ vim locals.tf
@SafaJahangir09 [?] /workspaces/CC_Safa_056/Lab13 (main) $ cat locals.tf
locals {
  users = csvdecode(file("users.csv"))
}
```

- task7_users_csv.png

```
GNU nano 7.2 users
Michael
Dwight
Jim
Pam
Ryan
Andy
Robert
Stanley
Kevin
Angela
Oscar
Phyllis
Toby
Kelly
Darryl
Creed
Meredith
Erin
Gabe
Jan
David
Holly
Charles
Jo
Clark
Peter_
```

- task7_main_tf_multiple_users.png

```
@SafaJahangir09 [ ] /workspaces/CC_Safa_056/Lab13 (main) $ cat main.tf
terraform {
  backend "s3" {
    bucket = "myapp-s3-bucket-056"
    key     = "myapp/terraform.tfstate"
    region  = "me-central-1"
    encrypt = true
    use_lockfile = true
  }
}

provider "aws" {
  shared_config_files      = ["~/.aws/config"]
  shared_credentials_files = ["~/.aws/credentials"]
}

resource "aws_iam_group" "developers" {
  name = "developers"
  path = "/groups/"
}

output "group_details" {
  value = {
    group_name = aws_iam_group.developers.name
    group_arn  = aws_iam_group.developers.arn
    unique_id  = aws_iam_group.developers.unique_id
  }
}

# Create multiple IAM users from CSV
resource "aws_iam_user" "users" {
  for_each = { for user in local.users : user.user_name => user }

  name       = each.value.user_name
  path       = "/users/"
  force_destroy = true
}
```

- task7_terraform_init.png

```
@SafaJahangir09 [ ] /workspaces/CC_Safa_056/Lab13 (main) $ terraform init
Initializing the backend...
Initializing provider plugins...
- Reusing previous version of hashicorp/null from the dependency lock file
- Reusing previous version of hashicorp/aws from the dependency lock file
- Using previously-installed hashicorp/null v3.2.4
- Using previously-installed hashicorp/aws v6.28.0

Terraform has been successfully initialized!

You may now begin working with Terraform. Try running "terraform plan" to see
any changes that are required for your infrastructure. All Terraform commands
should now work.

If you ever set or change modules or backend configuration for Terraform,
rerun this command to reinitialize your working directory. If you forget, ot
commands will detect it and remind you to do so if necessary.
```

- task7_terraform_apply.png

<input type="checkbox"/>	User name	Path	Group	Last activity	MFA	Password age	Console last sign-in	Access key ID	Actions
<input type="checkbox"/>	Admin	/	0	5 minutes ago	-	15 days	33 minutes ago	Active - AKIAZCUSIS57...	7
<input type="checkbox"/>	Andy	/users/	1	-	-	4 minutes	-	Active - AKIAZCUSIS57...	7
<input type="checkbox"/>	Angela	/users/	1	-	-	4 minutes	-	Active - AKIAZCUSIS57...	7
<input type="checkbox"/>	Charles	/users/	1	-	-	4 minutes	-	Active - AKIAZCUSIS57...	7
<input type="checkbox"/>	Clark	/users/	1	-	-	4 minutes	-	Active - AKIAZCUSIS57...	6
<input type="checkbox"/>	Creed	/users/	1	-	-	4 minutes	-	Active - AKIAZCUSIS57...	6
<input type="checkbox"/>	Darryl	/users/	1	-	-	4 minutes	-	Active - AKIAZCUSIS57...	7
<input type="checkbox"/>	David	/users/	1	-	-	4 minutes	-	Active - AKIAZCUSIS57...	6
<input type="checkbox"/>	Dwight	/users/	1	-	-	4 minutes	-	Active - AKIAZCUSIS57...	6
<input type="checkbox"/>	Erin	/users/	1	-	-	4 minutes	-	Active - AKIAZCUSIS57...	7
<input type="checkbox"/>	Gabe	/users/	1	-	-	4 minutes	-	Active - AKIAZCUSIS57...	6
<input type="checkbox"/>	Holly	/users/	1	-	-	4 minutes	-	Active - AKIAZCUSIS57...	6

- task7_aws_console_group_members. Png

<input type="checkbox"/>	User name	Groups	Last activity	Creation time
<input type="checkbox"/>	Andy		None	7 minutes ago
<input type="checkbox"/>	Angela		None	7 minutes ago
<input type="checkbox"/>	Charles		None	7 minutes ago
<input type="checkbox"/>	Clark		None	7 minutes ago
<input type="checkbox"/>	Creed		None	7 minutes ago
<input type="checkbox"/>	Darryl		None	7 minutes ago

- task7_aws_console_user_access_key.png

Access key ID	Description	Status	Created	Last used region	Last used service
AKIAZCUSIS57K3BWG7FZ		Active	10 minutes ago	N/A	N/A

- task7_s3_tfstate_multiple_users.png

```
{
  "version": 4,
  "terraform_version": "1.14.3",
  "serial": 5,
  "lineage": "46f2a50a-befd-1786-5486-911df1a43971",
  "outputs": {
    "all_access_key_secrets": {
      "value": {
        "Andy": "xSH56b/f9r128TKyZkVHLqBx80+HCCJSA+bDB/1A",
        "Angela": "EQVFQJetu7FkIEdaVdNbt21wZ8xdm73f1aXug7dP",
        "Charles": "vNbQvIth16w3qsLVSq1SXWL8nLvJQIbEiNCise",
        "Clark": "bY8ye5Ya762nEcnuEK2Z8UmCrgGa2q6NuOExsTTz",
        "Creed": "LhNNTt1gCCIHwToBUP/w8Y7WDRubMGzvDf3JOLiQ",
        "Darryl": "+TIBY0x1o4VJaA54JESfsqsMG+168fun2EODLzR+",
        "David": "/NjUr5QyVoxBRuYc0yvJf+HCXYx+u1I1AU04DmTb",
        "Dwight": "1Ca+g3uuSA+Pb7T3ubaEnDeEEKjTJ1G90eNgsJge",
        "Erin": "DPK9wN03vios1Un/Gu+MSOE7tXmhcpwsq1sSFqy",
        "Gabe": "omPpczXRMWqN0rTPifxYRsZ8u1/RyUXk4nkH/f5L",
        "Holly": "tsRO0ybcSvx4nD/5MXotSwNnhvIM/Uw3bwNZUNVq",
        "Jan": "K6SN+yFTygBK9qtvrbM9Iav2MhUObY2WTcv1bQQ2",
        "Jim": "Xe9oyCqW+ebleUEqD3cDZC4NXEm3aMQMcyDt/Hbx",
        "Jo": "YVe4Ljr2hkFx6dmjxtzkxj2pshkF4jwgmK0vdAOA",
        "Kelly": "iaQ3HM1RZkyIFRkByNucoGiL2dqeBmFNo0vJGcT",
        "Kevin": "Aedm3PKPd1EBQGe1C5kzgRrUyRF1oTvyl0B1z4vp",
        "Meredith": "a61ZiBMxF20gMeI2Z1C50ThLur6UMXUt8AxRI7lh",
        "Michael": "PV5sO2R+oP8B19Oenn0uShc3HyNgkQupmpUDq0gn",
        "Oscar": "z3VtCwkSvTo3k23XZA5hmtOgZbsgWiuwoY5XmK55",
        "Pam": "Miw9nmV1XmMUfxQxwmmQc6FwH+XcwIFINCGs4PO5",
        "Peter": "YKNKnpcolu4kk04UR2iv25ZGIQ6S1gysWQHGWNLw",
        "Phyllis": "f86kJun03jR0hpYu+0Femj0V/4Q8/DT9+FBF2sG5",
        "Robert": "vxyOK0beJ7hP9mGHTdXpZXOUs/9JazR+K2ROCR5a",
        "Rvan": "10pFHRRparpOvgveJUG4fxtvWGgIPRvL54pdLmio".
      }
    }
  }
}
```

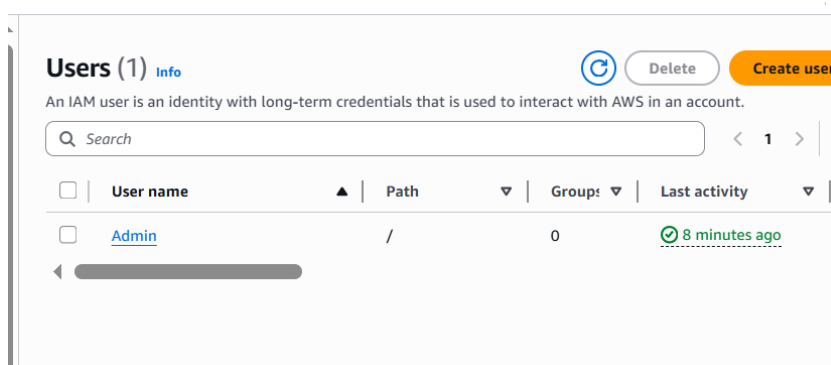
Cleanup

- cleanup_destroy_complete.png

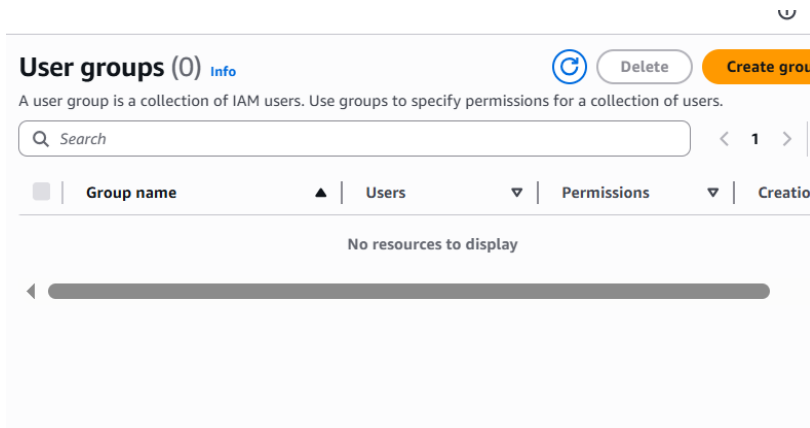
```
aws_iam_user.users["Clark"]: Destruction complete after 5s
aws_iam_user.users["Jan"]: Destruction complete after 8s
aws_iam_user.users["Andy"]: Destroying... [id=Andy]
aws_iam_user.users["Jo"]: Destruction complete after 2s
aws_iam_user.users["Gabe"]: Destruction complete after 8s
aws_iam_user.users["David"]: Destruction complete after 3s
aws_iam_user.users["Creed"]: Destruction complete after 4s
aws_iam_user.users["Michael"]: Destruction complete after 5s
aws_iam_user.users["Holly"]: Destruction complete after 4s
aws_iam_user.users["Andy"]: Destruction complete after 2s
aws_iam_user.users["Oscar"]: Destruction complete after 5s
aws_iam_user.users["Pam"]: Destruction complete after 4s
aws_iam_user.users["Clark"]: Destruction complete after 5s

Destroy complete! Resources: 107 destroyed.
```

- cleanup_aws_console_users_deleted.png



- cleanup_aws_console_group_deleted.png



- cleanup_s3_empty_state.png

This XML file does not appear to have any style information associated with it. The document tree is shown below.

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<Error>
  <Code>AccessDenied</Code>
  <Message>Access Denied</Message>
  <RequestId>FJJH1VJEQ1ZCP910</RequestId>
  <HostId>XpGVya1jGgR52SDdhZi6HTAbco2VmeVZ6u5pTQbk08OMB525CPjZM9E3iuJbj7/9ACP7c2fN+A3oas4z66vSgI+N9+FTIaES</HostId>
</Error>
```

- cleanup_final_files.png

```
@SafaJahangir09 /workspaces/CC_Safa_056/Lab13 (main) $ ls -la
total 65324
drwxrwxrwx+ 4 codespace root          4096 Jan 13 05:10 .
drwxrwxrwx+ 17 codespace root          4096 Jan 12 14:05 ..
drwxr-xr-x+ 3 codespace codespace      4096 Jan 13 04:51 .terraform
-rw-r--r-- 1 codespace codespace      2422 Jan 13 04:20 .terraform.lock.hcl
-rw-rw-rw- 1 codespace root              0 Jan 12 13:05 README.md
drwxr-xr-x+ 3 codespace codespace      4096 Jan  9 19:14 aws
-rw-rw-rw- 1 codespace codespace 66842323 Jan 12 13:21 awscli2.zip
-rwxrwxrwx 1 codespace codespace        423 Jan 13 04:17 create-login-profile.sh
-rw-rw-rw- 1 codespace codespace         50 Jan 13 05:00 locals.tf
-rw-rw-rw- 1 codespace codespace      2509 Jan 13 05:10 main.tf
-rw-rw-rw- 1 codespace codespace          0 Jan 13 04:51 terraform.tfstate
-rw-rw-rw- 1 codespace codespace      6882 Jan 13 04:51 terraform.tfstate.backup
-rw-rw-rw- 1 codespace codespace        167 Jan 13 05:02 users.csv
-rw-rw-rw- 1 codespace codespace        150 Jan 13 04:15 variables.tf
```