

# Platform Engineer Assignment

## 1. Running Terraform Commands and Verifying Deployment

Navigate to terraform directory in the terminal and run

*terraform init*

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

● hareenhelanjith@Helanjiths-MacBook-Air terraform % terraform init
  Initializing the backend...
  Initializing modules...
  Initializing provider plugins...
  - Reusing previous version of hashicorp/aws from the dependency lock file
  - Using previously-installed hashicorp/aws v5.94.1

  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.
❖ hareenhelanjith@Helanjiths-MacBook-Air terraform %
```

Terraform Apply

*terraform apply -auto-approve (If you want to manually approve, omit -auto-approve)*

```
○ hareenhelanjith@Helanjiths-MacBook-Air terraform % terraform apply -auto-approve
data.aws_caller_identity.current: Reading...
data.aws_caller_identity.current: Read complete after 0s [id=381492065416]

Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the following symbols:
+ create

Terraform will perform the following actions:

# module.cloudwatch.aws_cloudwatch_log_group.ecs_logs will be created
+ resource "aws_cloudwatch_log_group" "ecs_logs" {
  + arn                = (known after apply)
  + id                 = (known after apply)
  + log_group_class    = (known after apply)
  + name               = "/ecs/terraform-aws-assignment-dev"
  + name_prefix        = (known after apply)
  + retention_in_days  = 30
  + skip_destroy       = false
  + tags               = {
    + "Environment" = "dev"
    + "Project"     = "terraform-aws-assignment"
    + "Terraform"   = "true"
  }
  + tags_all           = {
    + "Environment" = "dev"
    + "Project"     = "terraform-aws-assignment"
    + "Terraform"   = "true"
  }
}

# module.ecr.aws_ecr_lifecycle_policy.lifecycle_policy[0] will be created
+ resource "aws_ecr_lifecycle_policy" "lifecycle_policy" {
  + id          = (known after apply)
  + policy      = jsonencode(
    {
      + rules = [
        + {
          + action      = {
            + type = "expire"
          }
          + description = "Keep last 10 images"
          + rulePriority = 1
          + selection    = {
            + countNumber = 10
            + countType   = "imageCountMoreThan"
            + tagStatus    = "any"
          }
        }
      ]
    }
  )
}

)
```

## Verifying Service Creation

```
module.vpc.aws_subnet.public: Still creating... [10s elapsed]
module.vpc.aws_subnet.public: Creation complete after 13s [id=subnet-03638a4defe84f871]
module.vpc.aws_route_table_association.public: Creating...
module.vpc.aws_nat_gateway.nat: Creating...
module.vpc.aws_route_table_association.public: Creation complete after 1s [id=rtbassoc-06f154e7859fb12f2]
module.vpc.aws_nat_gateway.nat: Still creating... [10s elapsed]
module.vpc.aws_nat_gateway.nat: Still creating... [20s elapsed]
module.vpc.aws_nat_gateway.nat: Still creating... [30s elapsed]
module.vpc.aws_nat_gateway.nat: Still creating... [40s elapsed]
module.vpc.aws_nat_gateway.nat: Still creating... [50s elapsed]
module.vpc.aws_nat_gateway.nat: Still creating... [1m0s elapsed]
module.vpc.aws_nat_gateway.nat: Still creating... [1m10s elapsed]
module.vpc.aws_nat_gateway.nat: Still creating... [1m20s elapsed]
module.vpc.aws_nat_gateway.nat: Still creating... [1m30s elapsed]
module.vpc.aws_nat_gateway.nat: Still creating... [1m40s elapsed]
module.vpc.aws_nat_gateway.nat: Still creating... [1m50s elapsed]
module.vpc.aws_nat_gateway.nat: Creation complete after 1m58s [id=nat-0d26e804e506f0527]
module.vpc.aws_route_table.private: Creating...
module.vpc.aws_route_table.private: Creation complete after 3s [id=rtb-00ff629c0d7717f29]
module.vpc.aws_route_table_association.private: Creating...
module.vpc.aws_route_table_association.private: Creation complete after 1s [id=rtbassoc-0c1d8b09262340d54]
```

Apply complete! Resources: 24 added, 0 changed, 0 destroyed.

### Outputs:




```
cloudwatch_log_group_arn = "arn:aws:logs:us-east-1:381492065416:log-group:/ecs/terraform-aws-assignment-dev"
cloudwatch_log_group_name = "/ecs/terraform-aws-assignment-dev"
ecr_repository_arn = "arn:aws:ecr:us-east-1:381492065416:repository/terraform-aws-assignment-dev-repo"
ecr_repository_name = "terraform-aws-assignment-dev-repo"
ecr_repository_registry_id = "381492065416"
ecr_repository_url = "381492065416.dkr.ecr.us-east-1.amazonaws.com/terraform-aws-assignment-dev-repo"
ecs_cluster_name = "terraform-aws-assignment-dev-cluster"
ecs_execution_role_arn = "arn:aws:iam::381492065416:role/terraform-aws-assignment-ecs-task-execution-role-dev"
ecs_execution_role_name = "terraform-aws-assignment-ecs-task-execution-role-dev"
ecs_service_name = "terraform-aws-assignment-dev-service"
ecs_task_definition_family = "terraform-aws-assignment-dev-task"
ecs_task_role_arn = "arn:aws:iam::381492065416:role/terraform-aws-assignment-ecs-task-role-dev"
ecs_task_role_name = "terraform-aws-assignment-ecs-task-role-dev"
private_subnet_id = "subnet-035557aeb85ea67c2"
public_subnet_id = "subnet-03638a4defe84f871"
vpc_id = "vpc-07a9a1ed59acef381"
```

## 2. Pipeline Stage Execution

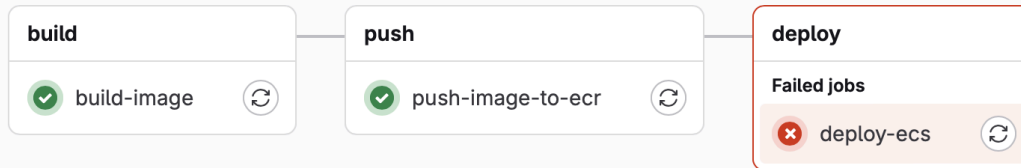
### update yml file

 **Failed** Hareen Helanjith created pipeline for commit `4c398410`  2 minutes ago, finished 26 seconds ago

1 related merge request: [!1 update the modules](#)



**latest** **branch**  3 jobs  2.15  2 minutes 9 seconds, queued for 1 seconds







Pipeline Jobs **3** Failed Jobs **1** Tests **0**



### build Stage Execution

#### build-image

 **Passed** Started 3 minutes ago by  Hareen Helanjith

Search visible log output      

```
1 Running with gitlab-runner 17.10.0~pre.41.g5c23fd8e (5c23fd8e)
2 on blue-2.saas-linux-small-amd64.runners-manager.gitlab.com/default XxUrkriX, system ID: s_
  f46a988edce4
3 Preparing the "docker+machine" executor 00:32
4 Using Docker executor with image docker:latest ...
5 Starting service docker:dind...
6 Pulling docker image docker:dind ...
7 Using docker image sha256:b26e595cb1df199dc05758e494ee8e1aa36bbd2c66b1e203108308187632b9fd fo
  r docker:dind with digest docker@sha256:4de6a5668da5d138bf9c18b29d2702e43c8773daee085087ba4fa
  c61a6d34b7f ...
8 Waiting for services to be up and running (timeout 30 seconds)...
9 Pulling docker image docker:latest ...
10 Using docker image sha256:b26e595cb1df199dc05758e494ee8e1aa36bbd2c66b1e203108308187632b9fd fo
  r docker:latest with digest docker@sha256:4de6a5668da5d138bf9c18b29d2702e43c8773daee085087ba4
  fac61a6d34b7f ...
11 Preparing environment 00:00
12 Running on runner-xxurkriX-project-68978438-concurrent-0 via runner-xxurkriX-s-l-s-amd64-1744
  779016-7bacc884...
13 Getting source from Git repository 00:02
14 Fetching changes with git depth set to 20...
15 Initialized empty Git repository in /builds/hareendev/iac-explore/.git/
16 Created fresh repository.
17 Checking out 4c398410 as detached HEAD (ref is test)...
18 Skipping Git submodules setup
```


```

108 #10 naming to docker.io/library/my-sample-app-v1:latest done
109 #10 DONE 0.2s
110 $ docker images
111 REPOSITORY          TAG          IMAGE ID      CREATED      SIZE
112 my-sample-app-v1    latest      a9eb491c8444  1 second ago 136MB
113 $ mkdir -p image
114 $ docker save "$IMAGE_NAME:$IMAGE_TAG" > image/docker-image.tar
115 Uploading artifacts for successful job 00:07
116 Uploading artifacts...
117 image/docker-image.tar: found 1 matching artifact files and directories
118 Uploading artifacts as "archive" to coordinator... 201 Created id=9735117189 responseStatus=
201 Created token=eyJraWQiO
119 Cleaning up project directory and file based variables 00:01
120 Job succeeded

```

## push Stage Execution

### push-image-to-ecr

✓ Passed Started 3 minutes ago by  Hareen Helanjith

Search visible log output

```

1 Running with gitlab-runner 17.10.0~pre.41.g5c23fd8e (5c23fd8e)
2 on blue-4.saas-linux-small-amd64.runners-manager.gitlab.com/default J2nyww-s, system ID: s_
cf1798852952
3 Preparing the "docker+machine" executor 00:32
4 Using Docker executor with image docker:latest ...
5 Starting service docker:dind...
6 Pulling docker image docker:dind ...
7 Using docker image sha256:b26e595cb1df199dc05758e494ee8e1aa36bbd2c66b1e203108308187632b9fd fo
r docker:dind with digest docker@sha256:4de6a5668da5d138bf9c18b29d2702e43c8773daee085087ba4fa
c61a6d34b7f ...
8 Waiting for services to be up and running (timeout 30 seconds)...
9 Pulling docker image docker:latest ...
10 Using docker image sha256:b26e595cb1df199dc05758e494ee8e1aa36bbd2c66b1e203108308187632b9fd fo
r docker:latest with digest docker@sha256:4de6a5668da5d138bf9c18b29d2702e43c8773daee085087ba4
fac61a6d34b7f ...
11 Preparing environment 00:01
12 Running on runner-j2nyww-s-project-68978438-concurrent-0 via runner-j2nyww-s-s-l-s-amd64-1744
779056-3b6735eb...
13 Getting source from Git repository 00:01
14 Fetching changes with git depth set to 20...
15 Initialized empty Git repository in /builds/hareendev/iac-explore/.git/
16 Created fresh repository.

```

```

98 $ docker tag "$IMAGE_NAME:$IMAGE_TAG" "$ECR_REPOSITORY_URL:$IMAGE_TAG"
99 $ docker push "$ECR_REPOSITORY_URL:$IMAGE_TAG"
100 The push refers to repository [381492065416.dkr.ecr.us-east-1.amazonaws.com/terraform-aws-ass
    ignment-dev-repo]
101 a4f0cc43bafd: Preparing
102 86a781257000: Preparing
103 08c444ad2c6a: Preparing
104 072b6ffd2703: Preparing
105 7ad524989e4f: Preparing
106 e0cc49235ebd: Preparing
107 185439f46b41: Preparing
108 ea680fbff095: Preparing
109 185439f46b41: Waiting
110 e0cc49235ebd: Waiting
111 ea680fbff095: Waiting
112 08c444ad2c6a: Pushed
113 072b6ffd2703: Pushed
114 7ad524989e4f: Pushed
115 86a781257000: Pushed
116 a4f0cc43bafd: Pushed
117 185439f46b41: Pushed
118 e0cc49235ebd: Pushed
119 ea680fbff095: Pushed
120 latest: digest: sha256:84d3621367259cf3bdef5a560f4a3b96dc8e8adde7fd60b79238326d877ef066 size:
    1990
✓ 121 Cleaning up project directory and file based variables 00:01
122 Job succeeded

```

## deploy Stage Execution

### deploy-ecs

Failed
Started 3 minutes ago by Hareen Helanjith

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```

1 Running with gitlab-runner 17.10.0~pre.41.g5c23fd8e (5c23fd8e)
2   on blue-2.saas-linux-small-amd64.runners-manager.gitlab.com/default XxUrkriX, system ID: s_
   f46a988edce4
✓ 3 Preparing the "docker+machine" executor 00:07
4 Using Docker executor with image hashicorp/terraform:1.6.6 ...
5 Pulling docker image hashicorp/terraform:1.6.6 ...
6 Using docker image sha256:b6292d46186976b6f8b9892caf966af22291844596053433789b1933533270c6 fo
   r hashicorp/terraform:1.6.6 with digest hashicorp/terraform@sha256:9a42ea97ea25b363f4c65be25b
   9ca52b1e511ea5bf7d56050a506ad2daa7af9d ...
✓ 7 Preparing environment 00:01
8 Running on runner-xxurkrix-project-68978438-concurrent-0 via runner-xxurkrix-s-l-s-amd64-1744
   779131-c17d6829...
✓ 9 Getting source from Git repository 00:01
10 Fetching changes with git depth set to 20...
11 Initialized empty Git repository in /builds/hareendev/iac-explore/.git/
12 Created fresh repository.
13 Checking out 4c398410 as detached HEAD (ref is test)...
14 Skipping Git submodules setup
15 $ git remote set-url origin "${CI_REPOSITORY_URL}" || echo 'Not a git repository; skipping'
✓ 16 Downloading artifacts 00:04
17 Downloading artifacts for build-image (9735117189)...
18 Downloading artifacts from coordinator... ok      host=storage.googleapis.com id=9735117189
   responseStatus=200 OK token=eyJraWQiOi
✓ 19 Executing "step_script" stage of the job script 00:00
20 Using docker image sha256:b6292d46186976b6f8b9892caf966af22291844596053433789b1933533270c6 fo
   r hashicorp/terraform:1.6.6 with digest hashicorp/terraform@sha256:9a42ea97ea25b363f4c65be25b
   9ca52b1e511ea5bf7d56050a506ad2daa7af9d ...

```

```
2   on blue-2.saas-linux-small-amd64.runners-manager.gitlab.com/default XxUrkriX, system ID: s_
   f46a988edce4
3   Preparing the "docker+machine" executor 00:07
4   Using Docker executor with image hashicorp/terraform:1.6.6 ...
5   Pulling docker image hashicorp/terraform:1.6.6 ...
6   Using docker image sha256:b6292d46186976b6f8b9892caf966af22291844596053433789b1933533270c6 fo
   r hashicorp/terraform:1.6.6 with digest hashicorp/terraform@sha256:9a42ea97ea25b363f4c65be25b
   9ca52b1e511ea5bf7d56050a506ad2daa7af9d ...
7   Preparing environment 00:01
8   Running on runner-xxurkrix-project-68978438-concurrent-0 via runner-xxurkrix-s-l-s-amd64-1744
   779131-c17d6829...
9   Getting source from Git repository 00:01
10  Fetching changes with git depth set to 20...
11  Initialized empty Git repository in /builds/hareendev/iac-explore/.git/
12  Created fresh repository.
13  Checking out 4c398410 as detached HEAD (ref is test)...
14  Skipping Git submodules setup
15  $ git remote set-url origin "${CI_REPOSITORY_URL}" || echo 'Not a git repository; skipping'
16  Downloading artifacts 00:04
17  Downloading artifacts for build-image (9735117189)...
18  Downloading artifacts from coordinator... ok      host=storage.googleapis.com id=9735117189
   responseStatus=200 OK token=eyJraWQiO
19  Executing "step_script" stage of the job script 00:00
20  Using docker image sha256:b6292d46186976b6f8b9892caf966af22291844596053433789b1933533270c6 fo
   r hashicorp/terraform:1.6.6 with digest hashicorp/terraform@sha256:9a42ea97ea25b363f4c65be25b
   9ca52b1e511ea5bf7d56050a506ad2daa7af9d ...
21  Terraform has no command named "sh". Did you mean "push"?
22  To see all of Terraform's top-level commands, run:
23      terraform -help
24  Cleaning up project directory and file based variables 00:01
25  ERROR: Job failed: exit code 1
```