

Pulumi Modules

VPC Module

1. Create *vpc* folder.
 2. Inside *vpc* folder, create ***init.py*** file.
 3. Import the following in the file:
 - from .main import vpc
 4. Now, inside *vpc* folder create *main.py* file.
 5. Import the following:
 - pulumi_aws as aws
 6. Define a class named *vpc*.
 7. Inside *vpc* class, define the ***init*** constructor & inside it call the following functions:
 - aws.ec2.Vpc()
 - aws.get_availability_zones()
 - for public
 - aws.ec2.InternetGateway()
 - aws.ec2.RouteTable()
 - aws.ec2.Subnet()
 - aws.ec2.RouteTableAssociation()
 - for private
 - aws.ec2.RouteTable()
 - aws.ec2.Subnet()
 - aws.ec2.RouteTableAssociation()
 8. Click [code](#) for reference.
 9. Now we have completed defining the **VPC Module**.
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S3 Module

1. Create *s3* folder.
 2. Inside *s3* folder, create ***init.py*** file.
 3. Import the following in the file:
 - from .main import s3
 4. Now, inside *s3* folder create *main.py* file.
 5. Import the following:
 - pulumi_aws as aws
 6. Define a class named *s3*.
 7. Inside *s3* class, define the ***init*** constructor & inside it call the following functions:
 - aws.s3.BucketV2()
 - aws.s3.BucketVersioningV2()
 8. Click [code](#) for reference.
 9. Now we have completed defining the **S3 Module**.
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RDS Module

1. Create *rds* folder.
 2. Inside *rds* folder, create ***init.py*** file.
 3. Import the following in the file:
 - from .main import rds
 4. Now, inside *rds* folder, create *data.py* file and import the following:
 - import pulumi_aws as aws
 5. Call the following function:
 - aws.ec2.get_ami()
 6. Click [code](#) for reference.
 7. Now, inside *rds* folder create *main.py* file.
 8. Import the following:
 - pulumi
 - pulumi_aws as aws
 - from . import data
 9. Define a class named *rds*.
 10. Inside *rds* class, define the ***init*** constructor & inside it call the following functions:
 - for database
 - aws.rds.SubnetGroup()
 - aws.ec2.SecurityGroup()
 - aws.ec2.SecurityGroupIngressArgs()
 - aws.ec2.SecurityGroupEgressArgs()
 - aws.rds.Instance()
 - for bastion-host
 - aws.ec2.SecurityGroup()
 - aws.ec2.SecurityGroupIngressArgs()
 - aws.ec2.SecurityGroupEgressArgs()
 - aws.ec2.KeyPair()
 - aws.ec2.Instance()
 11. Export the following outputs:
 - DB_HOST
 - bastion-host-ip
 12. Click [code](#) for reference.
 13. Now we have completed defining the **RDS Module**.
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Load Balancer Module

1. Create *load_balancer* folder.
2. Inside *load_balancer* folder, create ***init.py*** file.
3. Import the following in the file:
 - from .main import load_balancer
4. Now, inside *load_balancer* folder create *main.py* file.
5. Import the following:
 - pulumi
 - pulumi_aws as aws
6. Define a class named *load_balancer*.
7. Inside *load_balancer* class, define the ***init*** constructor & inside it call the following functions:

- `aws.ec2.SecurityGroup()`
- `aws.lb.LoadBalancer()`
- `aws.lb.TargetGroup()`
- `aws.lb.Listener()`

8. Export the following output:

- `url`

9. Click [code](#) for reference.

10. Now we have completed defining the **Load Balancer Module**.

ECS Module

1. Create `ecs` folder.

2. Inside `ecs` folder, create ***init.py*** file.

3. Import the following in the file:

- `from .main import ecs`

4. Now, inside `ecs` folder, create `data.py` file and import the following:

- `import pulumi_aws as aws`

5. Define the following:

- `ecs_task_role_policy_document`

6. Click [code](#) for reference.

7. Now, inside `ecs` folder create `main.py` file.

8. Import the following:

- `pulumi`
- `pulumi_aws as aws`
- `from . import data`
- `import json`

9. Define a class named `ecs`.

10. Inside `ecs` class, define the ***init*** constructor & inside it call the following functions:

- `aws.ecs.Cluster()`
- `aws.iam.Role()`
- `aws.iam.RolePolicyAttachment()`
- `aws.ecs.TaskDefinition()`
- `aws.ecs.Service()`

11. Click [code](#) for reference.

12. Now we have completed defining the **ECS Module**.

EKS Module

1. Create `eks` folder.

2. Inside `eks` folder, create ***init.py*** file.

3. Import the following in the file:

- `from .main import eks`

4. Now, inside `eks` folder, create `data.py` file and import the following:

- `import pulumi_aws as aws`

5. Define the following:

- eks_cluster_role_policy_document
 - eks_node_group_role_policy_document
6. Click [code](#) for reference.
7. Now, inside *eks* folder create *main.py* file.
8. Import the following:
- pulumi_aws as aws
 - from . import data
 - import json
9. Define a class named *eks*.
10. Inside *eks* class, define the ***init*** constructor & inside it call the following functions:
- for eks-cluster
 - aws.iam.Role
 - aws.iam.RolePolicyAttachment()
 - aws.ec2.SecurityGroup()
 - aws.ec2.SecurityGroupIngressArgs()
 - aws.eks.Cluster()
 - aws.eks.ClusterVpcConfigArgs()
 - for eks-node-groups
 - aws.iam.Role()
 - aws.iam.RolePolicyAttachment()
 - aws.iam.RolePolicyAttachment()
 - aws.iam.RolePolicyAttachment()
 - aws.eks.NodeGroup()
 - aws.eks.NodeGroupScalingConfigArgs()
11. Click [code](#) for reference.
12. Now we have completed defining the **EKS Module**.
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