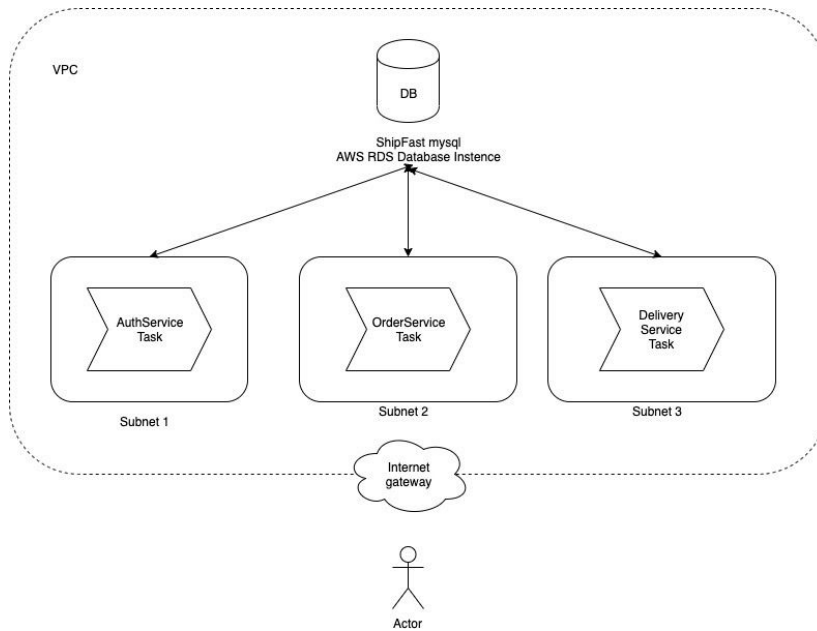


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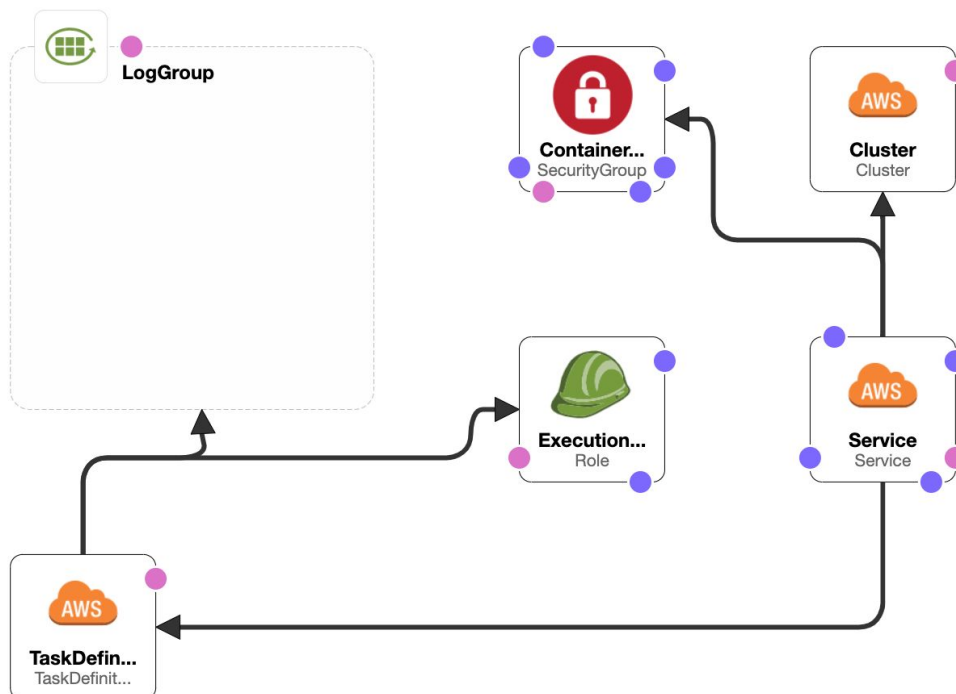
2020 – Semester 03
SE6020 – Cloud Computing
Assignment

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Architecture diagram



Cloudformation diagram



Following is the Cloudformation stack that I have created. It will create and run each task but for some reason, it is getting stopped. I haven't found the issue yet. However, when I creating each task by own, I used task definitions to deploy each task. Following is the cloud formation stack.

Cloudformation Stack (not working)

```
AWSTemplateFormatVersion: "2010-09-09"

Parameters:
  SubnetID:
    Type: String

Resources:
  Cluster:
    Type: AWS::ECS::Cluster
    Properties:
      ClusterName: shipfast
  LogGroup:
    Type: AWS::Logs::LogGroup
    Properties:
      LogGroupName: shipfast-log-group
  ExecutionRole:
    Type: AWS::IAM::Role
    Properties:
      RoleName: shipfast-role
      AssumeRolePolicyDocument:
        Statement:
          - Effect: Allow
            Principal:
              Service: ecs-tasks.amazonaws.com
            Action: sts:AssumeRole
      ManagedPolicyArns:
        - arn:aws:iam::aws:policy/service-role/AmazonECSTaskExecutionRolePolicy
  ContainerSecurityGroup:
    Type: AWS::EC2::SecurityGroup
    Properties:
      GroupName: ShipFastContainerSecurityGroup
      GroupDescription: Security group for NGINX container
      SecurityGroupIngress:
        - IpProtocol: tcp
          FromPort: 3000
          ToPort: 3000
```

```
CidrIp: 0.0.0.0/0
TaskDefinition:
  Type: AWS::ECS::TaskDefinition
  Properties:
    Family: nodejs-fargate-task
    Cpu: 256
    Memory: 512
    NetworkMode: awsvpc
    ExecutionRoleArn: !Ref ExecutionRole
    ContainerDefinitions:
      - Name: nodejs-app
        Image: 946034122256.dkr.ecr.us-east-1.amazonaws.com/shipfast/auth:latest
        PortMappings:
          - ContainerPort: 3000
        LogConfiguration:
          LogDriver: awslogs
          Options:
            awslogs-region: !Ref AWS::Region
            awslogs-group: !Ref LogGroup
            awslogs-stream-prefix: ecs
      - Name: nodejs-app-order
        Image: 946034122256.dkr.ecr.us-east-1.amazonaws.com/shipfast/auth:order
        PortMappings:
          - ContainerPort: 3000
        LogConfiguration:
          LogDriver: awslogs
          Options:
            awslogs-region: !Ref AWS::Region
            awslogs-group: !Ref LogGroup
            awslogs-stream-prefix: ecs
      - Name: nodejs-app-delivery
        Image: 946034122256.dkr.ecr.us-east-1.amazonaws.com/shipfast/auth:delivery
        PortMappings:
          - ContainerPort: 3000
        LogConfiguration:
          LogDriver: awslogs
          Options:
            awslogs-region: !Ref AWS::Region
            awslogs-group: !Ref LogGroup
```

```

        awslogs-stream-prefix: ecs
    RequiresCompatibilities:
        - FARGATE
Service:
    Type: AWS::ECS::Service
    Properties:
        ServiceName: shipfast-service
        Cluster: !Ref Cluster
        TaskDefinition: !Ref TaskDefinition
        DesiredCount: 1
        LaunchType: FARGATE
        NetworkConfiguration:
            AwsvpcConfiguration:
                AssignPublicIp: ENABLED
            Subnets:
                - !Ref SubnetID
            SecurityGroups:
                - !GetAtt ContainerSecurityGroup.GroupId

```

Task definitions used to deploy (auth)

```

{
    "family": "nodejs-fargate-task",
    "networkMode": "awsvpc",
    "executionRoleArn": "arn:aws:iam::946034122256:role/ecsTaskExecutionRole",
    "containerDefinitions": [
        {
            "name": "nodejs-app",
            "image":
"946034122256.dkr.ecr.us-east-1.amazonaws.com/shipfast/auth:latest",
            "portMappings": [
                {
                    "containerPort": 3000,
                    "hostPort": 3000,
                    "protocol": "tcp"
                }
            ],
            "essential": true
        }
    ]
}

```

```

    }

    ],
    "requiresCompatibilities": [
        "FARGATE"
    ],
    "cpu": "256",
    "memory": "512"
}

```

Task definitions used to deploy (order)

```

{
    "family": "nodejs-fargate-task-order",
    "networkMode": "awsvpc",
    "executionRoleArn": "arn:aws:iam::946034122256:role/ecsTaskExecutionRole",
    "containerDefinitions": [
        {
            "name": "nodejs-app-order",
            "image":
"946034122256.dkr.ecr.us-east-1.amazonaws.com/shipfast/auth:order",
            "portMappings": [
                {
                    "containerPort": 3000,
                    "hostPort": 3000,
                    "protocol": "tcp"
                }
            ],
            "essential": true
        }
    ],
    "requiresCompatibilities": [
        "FARGATE"
    ],
    "cpu": "256",
    "memory": "512"
}

```

Task definitions used to deploy (delivery)

```

{
    "family": "nodejs-fargate-task-delivery",

```

```
"networkMode": "awsvpc",
"executionRoleArn": "arn:aws:iam::946034122256:role/ecsTaskExecutionRole",
"containerDefinitions": [
  {
    "name": "nodejs-app-delivery",
    "image":
"946034122256.dkr.ecr.us-east-1.amazonaws.com/shipfast/auth:delivery",
    "portMappings": [
      {
        "containerPort": 3000,
        "hostPort": 3000,
        "protocol": "tcp"
      }
    ],
    "essential": true
  }
],
"requiresCompatibilities": [
  "FARGATE"
],
"cpu": "256",
"memory": "512"
}
```