

By this stage, you have completed several configuration steps. Even a small misconfiguration in any of the earlier stages can prevent the application from working correctly. Before debugging deeper, verify the following common problem areas:

1. Application Check

- Ensure the application runs correctly on your local machine.
- In ECS Fargate, we use the *prod* profile. Ensure that
 - You have `application-prod.properties`
 - Check the secrets name in the `application-prod.properties`
 - Your Task definitions have `SPRING_PROFILES_ACTIVE` env variable.

2. Docker Image

Did you build the Docker image with the correct platform option?

```
docker build -t movie-service . --platform=linux/amd64
docker build -t customer-service . --platform=linux/amd64
```

- Verify that the CPU architecture is `linux/amd64`.
- The Fargate cluster must also use the same architecture.

3. Networking

- Is the NAT Gateway up and running?
- Is it correctly associated with the private subnet route table?

4. Security Groups

- Review the inbound and outbound rules for all related security groups.
 - Does the ALB use ***netflux_alb_sg***?
 - Does the app use ***netflux_app_sg***?
 - Does the DB use ***netflux_db_sg***?

5. Database (RDS)

```
org.springframework.beans.factory.BeanCreationException:
Error creating bean with name 'entityManagerFactory' defined in class path resource
[org.springframework.boot.autoconfigure.orm.jpa.HibernateJpaConfiguration.class]:
Unable to create requested service [org.hibernate.engine.jdbc.env.spi.JdbcEnvironment]
due to: Unable to determine Dialect without JDBC metadata
(please set 'jakarta.persistence.jdbc.url' for common cases or
'hibernate.dialect' when a custom Dialect implementation must be provided)
```

- If you see something like this “*org.postgresql.util.PSQLException: FATAL: password authentication failed*”
 - Confirm that the RDS instance is running.
 - Verify that you have executed the init.sql script.
 - You can debug using cloud shell. You should be able to connect to the movie db using movie_user credentials.

```
psql -h [host-name] -U movie_user -d movie
```

6. Secrets Manager

- Ensure that the application secrets are correctly configured and accessible.

7. IAM Roles

- Verify the two IAM roles created for this setup.
 - netflix-task-role
 - ecs-task-execution-role
- Check that each has the required permissions

8. Log Group

- Ensure that you have created the CloudWatch Log Groups
 - /ecs/movie-service
 - /ecs/customer-service

9. Health Check

- Check the health check endpoints.
 - /actuator/health
- We should provide at least 90 seconds for health check grace period