Migration Plan for  
(Add the application name)

**ECS to kubernetes 1.2.1**

1. Overview

We need to migrate complete infrastructure for (your application) from ECS to kubernetes ,which would enable us to have highly scalable and serverless infrastructure .

1. Goals
   1. **Migrating to kubernetes v 1.2.1 :** Migrating from ECS stack to kubernetes cluster.
   2. **Maintain minimum/no downtime at migration:** The app should not be down during the migration process.
2. Points to consider

3.1. VPC is new and different from the existing one for both environments staging & prod and taken care by terraform eks module.

3.2. Subnets will be new and different from the existing one for both environments staging & prod

3.3. Security groups should be new

3.4. Use the docker containers as a pods in kubernetes cluster with (your required size) nodes

1. Migration Phase 1
   1. Create core -infra including vpc, subnets, routing-tables, security-groups
   2. Bring up the Kubernetes cluster
   3. Setup docker registry on ECR
   4. Build app image and push to ECR
   5. Test build and push pipeline
   6. Migrate the RDS to new VPC, Make sure RDS is accessible from the application pod on the cluster
   7. Setup ElasticSearch with access policy and add NAT gateway IP for kubernetes cluster
   8. **Snapshot the RDS database**
   9. Setup basic services for Kubernetes cluster
      1. Namespace
      2. Ingress
      3. Secrets
      4. Deployment
      5. Service
   10. Create deployment configuration as per ECR url for your specific application and deploy.We might use docker hub instead
   11. Make the host entry to test application
   12. Test the application from browser for reachability and login
   13. Verify SSL for the domain as per environment (SSL would not be valid at this point)
   14. Test deployment pipeline
   15. **Snapshot the RDS database**
2. Migration Phase 2
   1. Testing team **makes the host entry** in their system to test the application on the new cluster.
   2. Testing team access the application on the browser (Not valid SSL yet).
   3. Reduce the TTL to DNS record.
   4. Testing team confirm the application and related components are working fine
3. Migration Phase 3
   1. **Snapshot the RDS database**
   2. Change the DNS to cluster
   3. Ensure the **valid SSL certificate** is issued by the certificate service
   4. Ask the test team to test the application again

You can also add the same using a terraform template including ECS and EKS cluster.

5. Need to check

6. Milestones