



SampleApp

Challenge Solution - General Guideline

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This is a general guideline for the Ballast Lane DevOps Challenge solution

Please download the architecture and plan from

<https://github.com/jfechava/ChallengeDocumentation>

And follow the next steps.

1. Architecture and plan

- **Networking:** Refers to *01_sampleapp-networking.pdf* document, where you can see the architecture and plan for the creation of a Virtual Network, Subnetworks, CIDR (Ips range for subnets), Network Security Groups, and AKS.
- **Infrastructure:** Kubernetes Cluster with AKS, refers to *02_sampleapp-infra-kubernetes.pdf* document, where you can see the architecture of the Kubernetes cluster with all its components.
- **Continuous Integration and Continuous Delivery:** Refers to *03_sampleapp-ci-cd.pdf* document, where you can see the model and the end to end process for CI and CD, including, tools and operations.
- **Acceptance Criteria:** Refers to *04_acceptance-criteria.pdf* document, where you can see every point requested in the acceptance criteria.



2. Implementation

For this solution, Microsoft Azure was chosen as the Cloud provider, and Terraform for managing the Infrastructure as Code, also is important to mention the use of Docker and Azure DevOps (Azure Repos, Azure Pipeline, Azure Container Registry, etc).

Microsoft Azure Public Project: <https://dev.azure.com/jfechav0881/BallastLane-Challenge>

- **Epic and User Stories:** Board → https://dev.azure.com/jfechav0881/BallastLane-Challenge/_workitems/recentlyupdated/
- **Infrastructure-AKS:** Repo → https://dev.azure.com/jfechav0881/BallastLane-Challenge/_git/sampleapp-iac-terraform
- Pipeline → https://dev.azure.com/jfechav0881/BallastLane-Challenge/_build (choose sampleapp-terraform-iac-pipeline)
- **CI-CD-API:** Repo → https://dev.azure.com/jfechav0881/BallastLane-Challenge/_git/sampleapp-api
- Pipeline → https://dev.azure.com/jfechav0881/BallastLane-Challenge/_build (choose sampleapp-api-pipeline)
- **CI-CD-Web:** Repo → https://dev.azure.com/jfechav0881/BallastLane-Challenge/_git/sampleapp-web
- Pipeline → https://dev.azure.com/jfechav0881/BallastLane-Challenge/_build (choose sampleapp-web-pipeline)

3. Application up and running

<http://52.184.212.173>

