SpaceX Starlink

Runbook name	**Satellite Microservice Solution**
Runbook description	Runbook - Satellite initialization, management and monitoring microservices
Owner	@ Kanishka Wijendra
Version	V.0.0.1
Version date	14 Jan 2021
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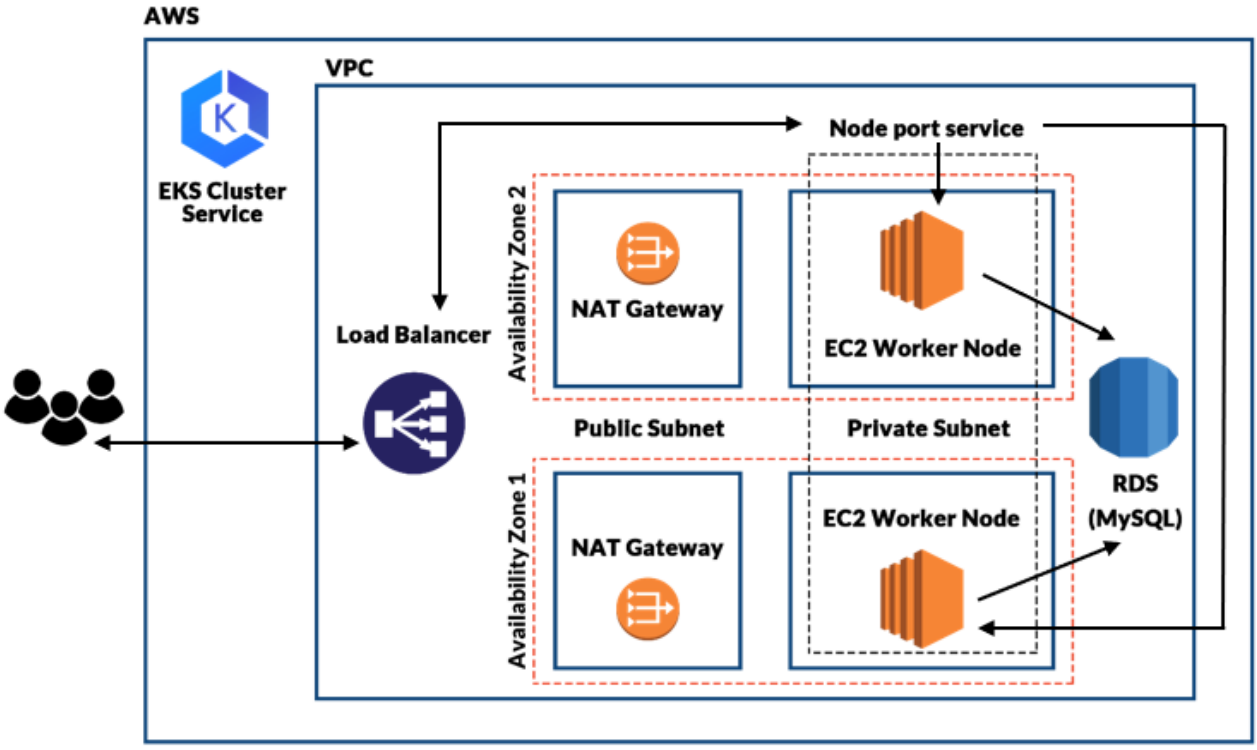
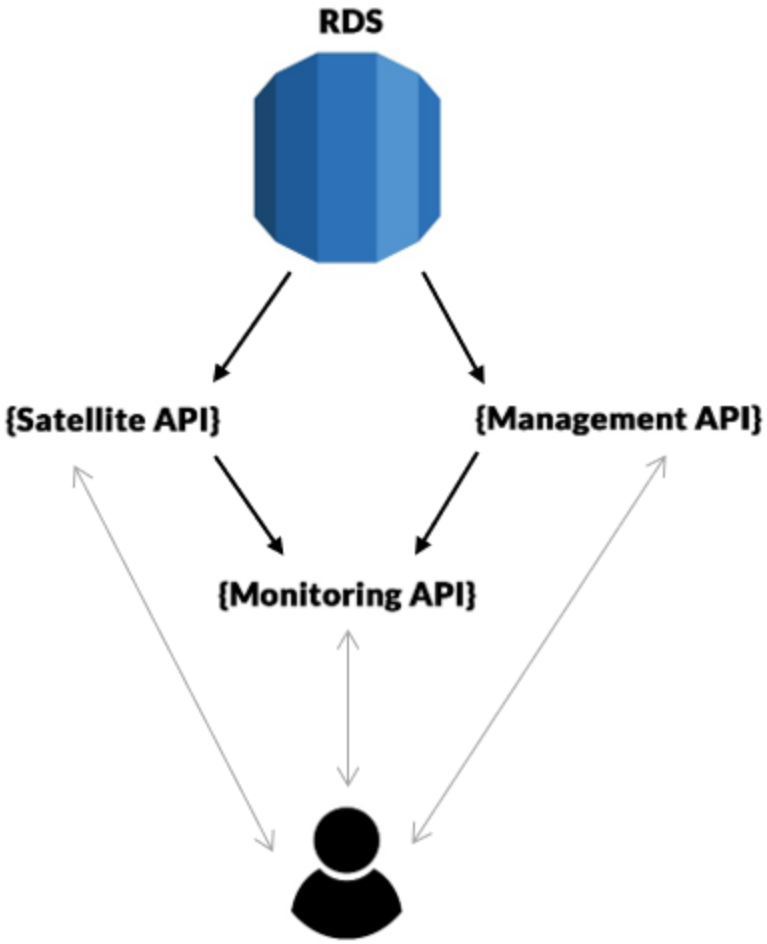
Architecture

Solution architecture

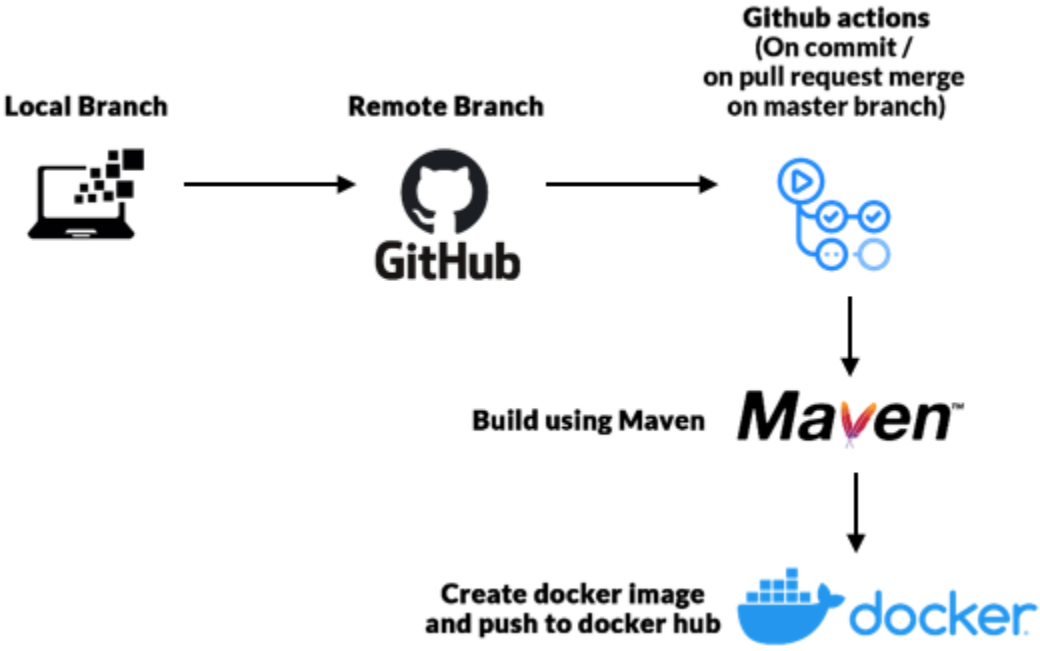


Service communication architecture

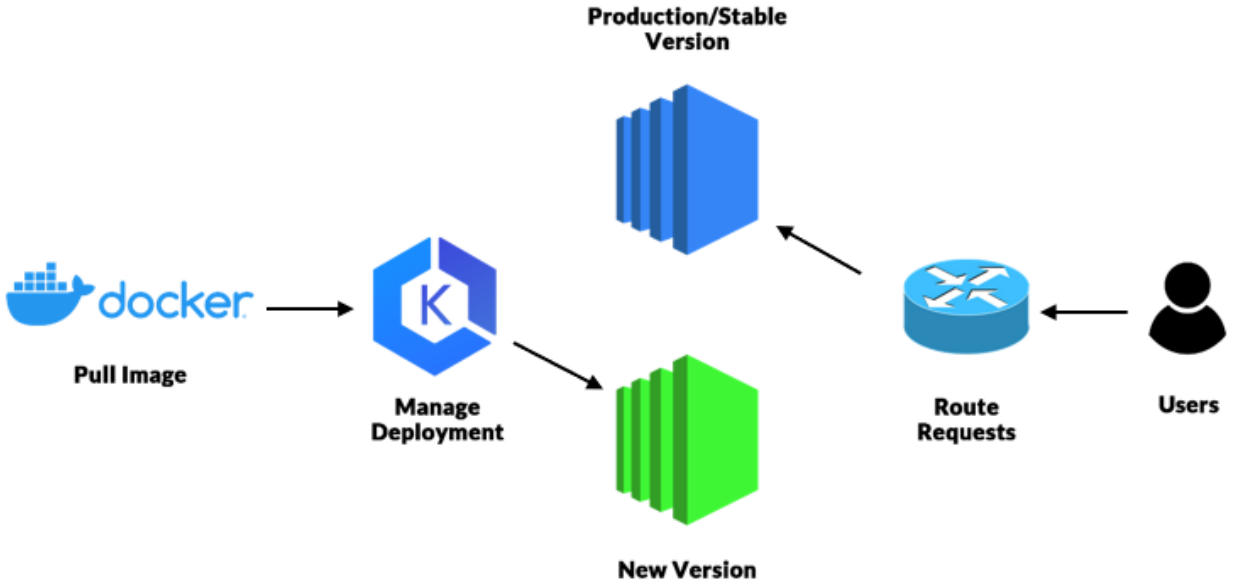


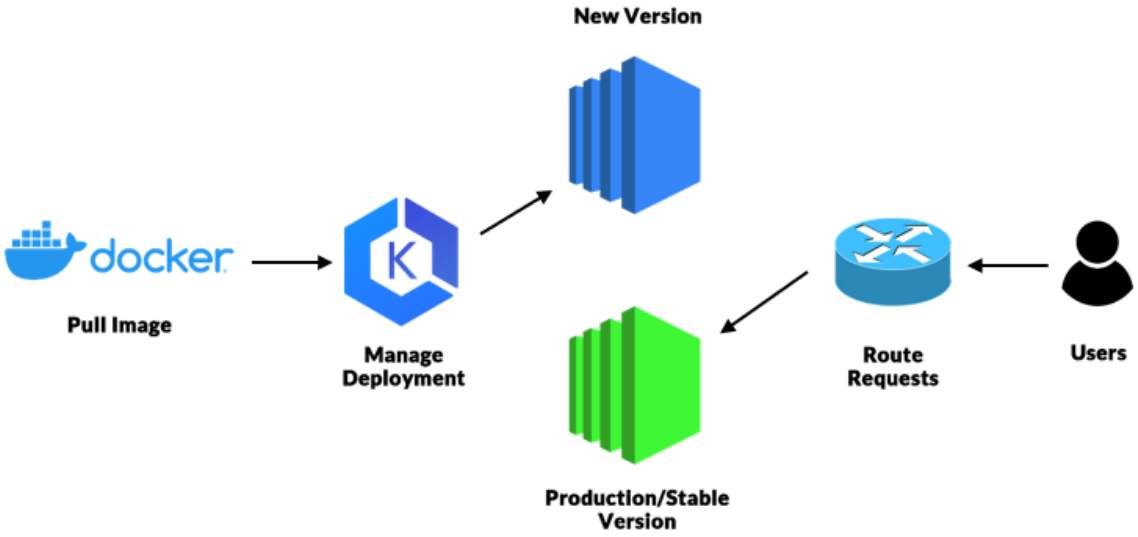
Deployment architecture

Continuous integration



Continuous deployment





Support contacts

Expertise level	Team	Team lead	Contact info
Developer	@ Kanishka Wijendra		kanishkaw@live.com
Product Owner	@ Kanishka Wijendra		kanishkaw@live.com

Runs

Name	State	Start time	Completed time	Duration
Database backup	SUCCESS / ERROR			
Code review				
Service health monitoring				

Process

	Step instructions	Execution location	Run environments	Run conditions	Run instruction	Documentation
1	Configure AWS CLI	Local Machine	Local Machine CLI			https://docs.aws.amazon.com/cli/latest/userguide/cli-chap-configure.html
2	Setup eksctl	Local Machine	Local Machine CLI	Run as administrator	**choco** `install -y eksctl`	
3	Install Kubernetes CLI	Local Machine	Local Machine CLI	Run as administrator	**choco** `install -y kubernetes-cli`	
4	Create EKS cluster	AWS	AWS Configured CLI in local machine		eksctl create cluster --region us-east-2 --node-type t3.medium --nodes 2 --nodes-min 1 --nodes-max 4 --name starlink-satellite-cluster --kubeconfig=C:/KubernatesCluster/iit-kube-config.yaml	
5	Create RDS for SatelliteAPI	AWS EKS Cluster VPC	AWS	MySQL RDS on same VPC as the EKS Cluster	After creating RDS, need to create satellite_db inside RDS	
6	Create RDS for ManagementAPI	AWS EKS Cluster VPC	AWS	MySQL RDS on same VPC as the EKS Cluster	After creating RDS, need to create management_db inside RDS	
7	Update MySQL connection URL of SatelliteAPI	GitHub	Local Machine		Clone the repository, change the connection string, commit and merge to main branch using a pull request	https://github.com/kanishka2019758/SatelliteAPI/blob/main/src/main/resources/application.yml
8	Update MySQL connection URL of ManagementAPI	GitHub	Local Machine		Clone the repository, change the connection string, commit and merge to main branch using a pull request	https://github.com/kanishka2019758/ManagementAPI/blob/main/src/main/resources/application.yml
9	Set Environment variable for KUBECONFIG	AWS	AWS Configured CLI in local machine		set KUBECONFIG=C:/KubernatesCluster/iit-kube-config.yaml	
10	Deploy services	AWS	AWS Configured CLI in local machine		kubectl apply -f deployment.yaml	https://github.com/kanishka2019758/runbook/blob/main/deployment.yaml