

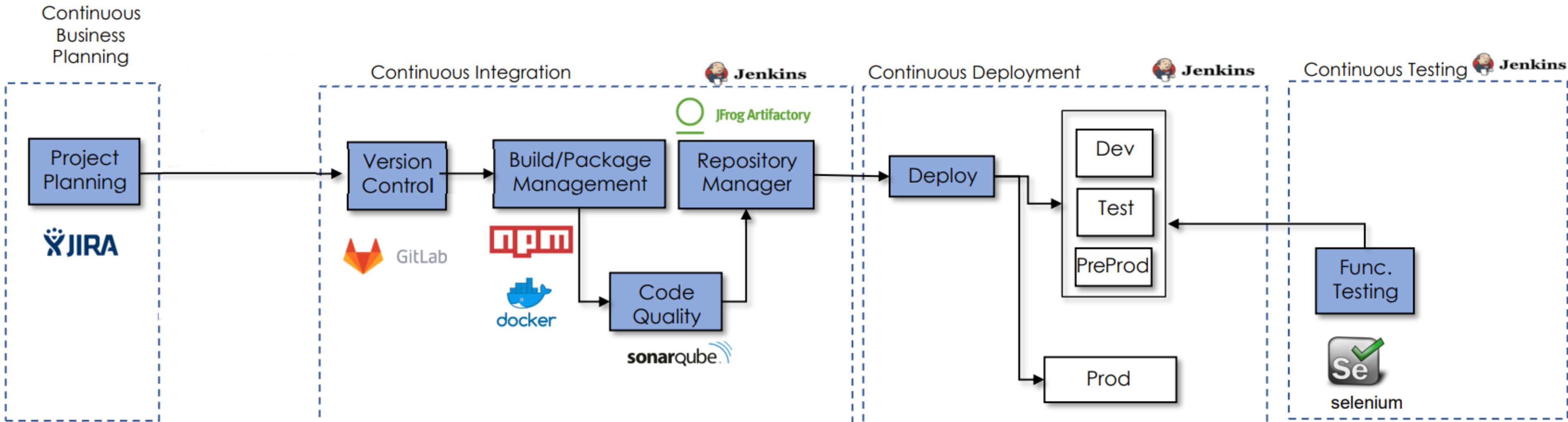
# DevOps Implementation for HondaUK

# Overview

- Honda is currently the fourth-largest vehicle manufacturer in the world.
- CI/CD Implementation done by incorporating the best principles and practices of DevOps.
- This document contains the detailed DevOps implementation for the HondaUK applications.



# DevOps Pipeline



# DevOps Tools

DevOps Capabilities	IBM Project Liberty
Project management tool	JIRA
Source code management	GitLab
Build orchestration tool	Jenkins
Static code analysis	SonarQube
Binary storage	Artifactory
Deployment Tool	Jenkins

# Tool Links

Tools	Links
JIRA	<a href="https://gbsjira.in.edst.ibm.com/">https://gbsjira.in.edst.ibm.com/</a>
Gitlab	<a href="https://gbsgit.edst.ibm.com/">https://gbsgit.edst.ibm.com/</a>
Jenkins	<a href="https://gbsjenkins.edst.ibm.com/">https://gbsjenkins.edst.ibm.com/</a>
Artifactory	<a href="https://gbsartifactory.edst.ibm.com/">https://gbsartifactory.edst.ibm.com/</a>
Sonar	<a href="https://gbssonar.edst.ibm.com/sonar/">https://gbssonar.edst.ibm.com/sonar/</a>



# Technology Stack

Build Packages : Nodejs server, node:14.17.5,  
docker(19.03.13-beta2 version),  
npm(6.13.7 version).

Databases : Redis, Maximo, Cloudant.

# Information

Pipelines : 9 Pipelines

Bluegroups : Admin-HondaUK & Dev-HondaUK

Jenkins slave : DockerIO-agent

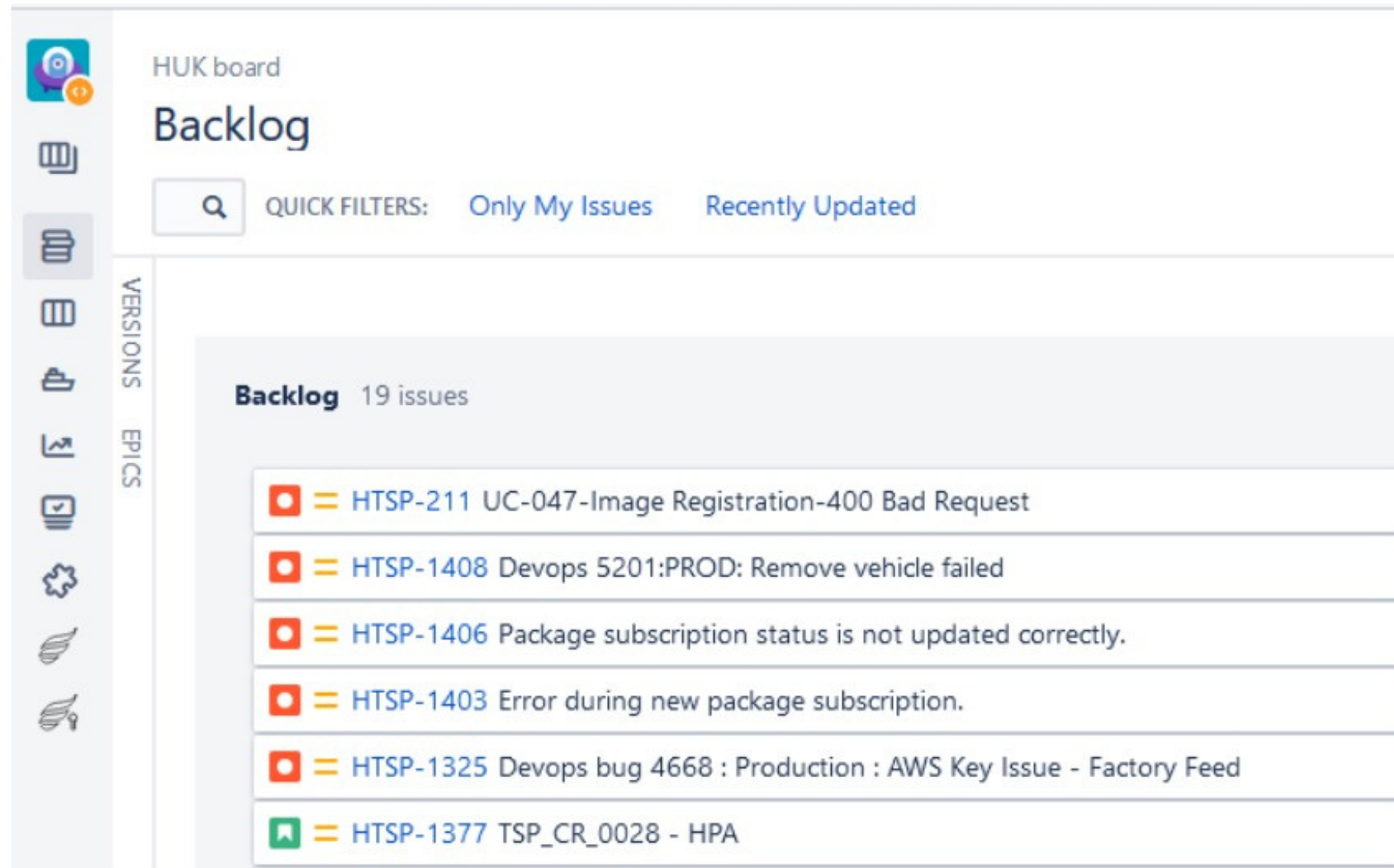
Executors : 2

Environments : Dev, Test, Prod and PreProd.

Target Environment : IBM Cloud IKS

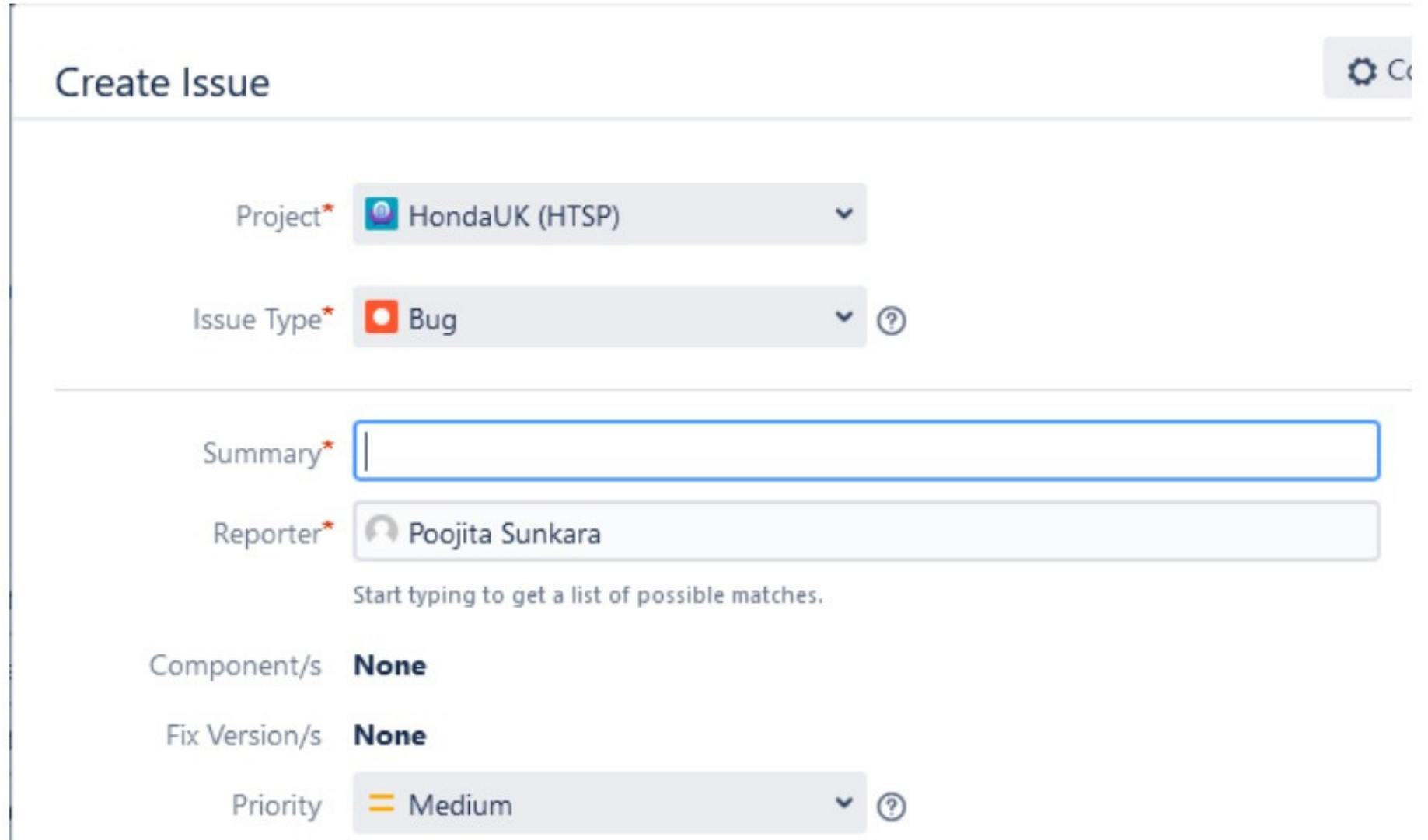


# JIRA- <https://gbsjira.in.edst.ibm.com>



The screenshot shows the JIRA Backlog page for the 'HUK board'. The page title is 'Backlog' with a search icon and 'QUICK FILTERS: Only My Issues Recently Updated'. Below the filters, there is a section titled 'Backlog 19 issues'. The issues are listed in a table with columns for status, ID, and description. The issues are:

Status	ID	Description
Red square icon	HTSP-211	UC-047-Image Registration-400 Bad Request
Red square icon	HTSP-1408	Devops 5201:PROD: Remove vehicle failed
Red square icon	HTSP-1406	Package subscription status is not updated correctly.
Red square icon	HTSP-1403	Error during new package subscription.
Red square icon	HTSP-1325	Devops bug 4668 : Production : AWS Key Issue - Factory Feed
Green square icon	HTSP-1377	TSP_CR_0028 - HPA



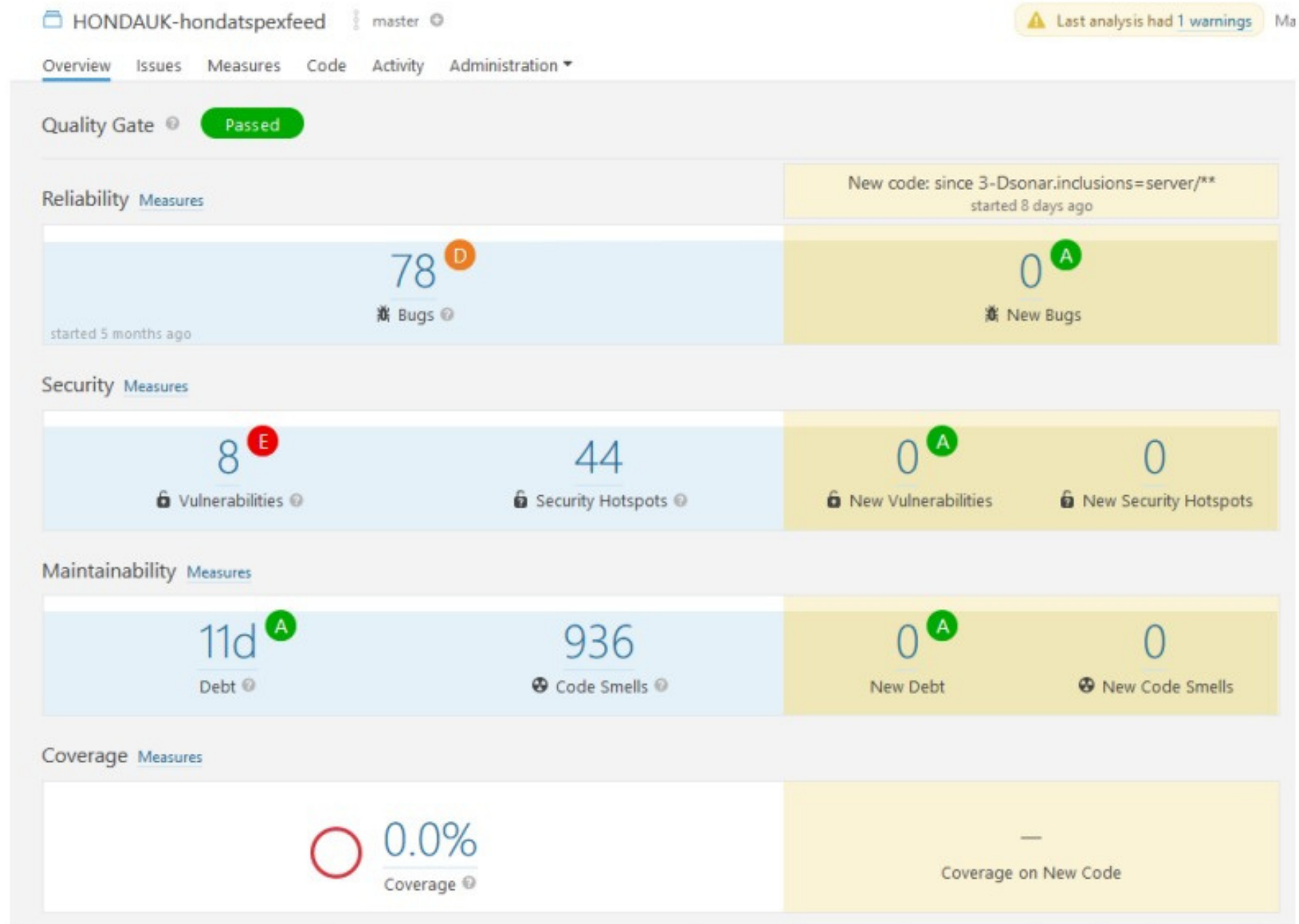
The screenshot shows the 'Create Issue' form in JIRA. The form has the following fields:

- Project\***: HondaUK (HTSP) (dropdown)
- Issue Type\***: Bug (dropdown with a help icon)
- Summary\***: (text input field)
- Reporter\***: Poojita Sunkara (dropdown with a help icon)
- Component/s**: None
- Fix Version/s**: None
- Priority**: Medium (dropdown with a help icon)

Jira will be used as the Issue tracking tool, which have complete control on the development and the bug tracking by the project team

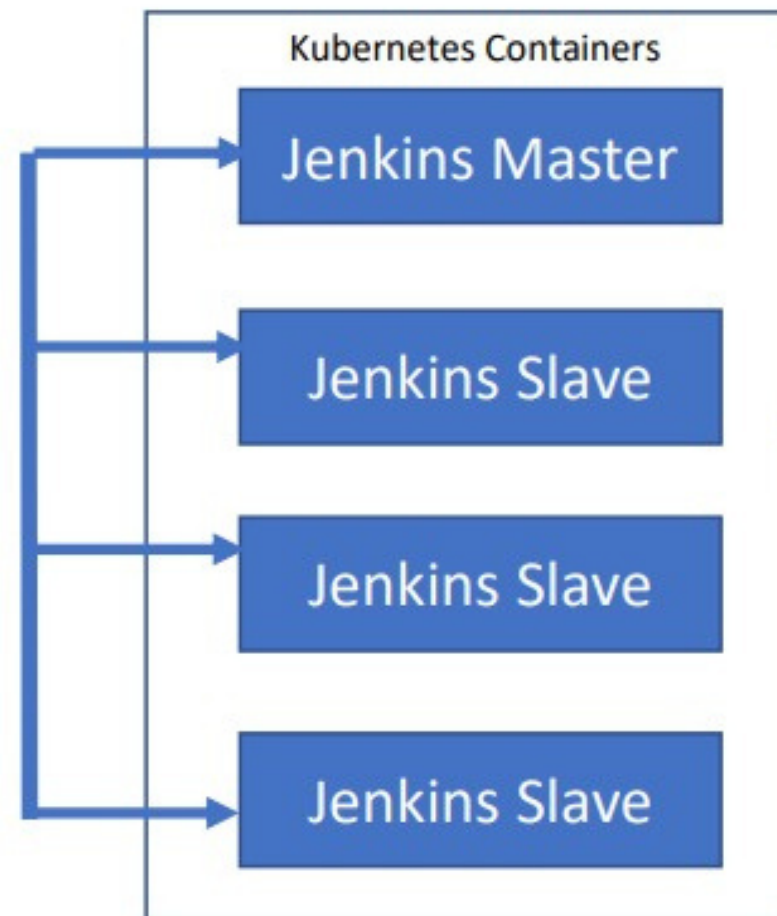


# SONAR QUBE



- SonarQube Give the Static Code Analysis details which will help the team to identify the code quality.
- It will have the quality gate to proceed further as per the threshold value set by the project team.

# Jenkins Structure and its implementation - HondaUK




The screenshot shows the Jenkins web interface for the 'HondaUK' project. The top navigation bar includes the Jenkins logo and the project name 'HondaUK'. The left sidebar contains a list of navigation links: Up, Status (selected), Configure, New Item, Delete Folder, People, Build History, Project Relationship, Check File Fingerprint, Move, Job Config History, Open Blue Ocean, Rename, and Config Files. The main content area displays a table of build jobs for the 'HondaUK' project.

S	W	Name ↓	Last Success
●	☀	ATT	4 days 22 hr - #15
●	☁	Digital	4 days 22 hr - #98
●	☀	EPOI	8 days 4 hr - #5
●	☀	Exfeed	8 days 3 hr - #4
●	☀	External-MS	4 days 22 hr - #11
●	☀	Notification	19 hr - #35
●	☁	test	6 days 18 hr - #132
●	☀	Thirdparty	19 hr - #39
●	☀	VDH_GTC	5 mo 8 days - #5
●	☁	VDH_TSP	18 hr - #30



# Jenkins For DEPLOY

**Jenkins**

Dashboard > HondaUK > ATT >

↑ Up

🔍 Status

📅 Changes

▶ Build with Parameters

⚙️ Configure

🗑️ Delete Pipeline

📁 Move

🔍 Full Stage View

📊 View Last Changes

➤ Splunk

🔧 Job Config History

📶 SonarQube

🌊 Open Blue Ocean

✎ Rename

❓ Pipeline Syntax

## Pipeline ATT

This build requires parameters:

Environment

Dev ▼

PIPELINE\_KUBERNETES\_CLUSTER\_NAME

Environment Specific Clusters

dev-tsp-cluster ▼

REGISTRY\_NAMESPACE

Namespace to which Docker images are to be pushed

dev-tsp-cr-ns ▼

CLUSTER\_NAMESPACE

default ▼

BRANCH

PCR-032-LoginResponseTime ▲  
task\_csp\_phase1  
development  
DevOps#6132-LogDNA  
prod ▼

Build

🔍 Build History

trend ▼

# Artifactory

The screenshot displays the Artifactory web interface. On the left, a sidebar shows a tree view of repositories under the 'HondaUK' namespace. The main panel shows the configuration for the 'HondaUK' repository, with tabs for 'General', 'Effective Permissions', and 'Properties'. The 'General' tab is active, showing the following information:

Info	
Name:	HondaUK
Repository Path:	HondaUK/
URL to file:	<a href="https://gbsartifactory.edst.ibm.com:443/artifactory/HondaUK/">https://gbsartifactory.edst.ibm.com:443/artifactory/HondaUK/</a>
Package Type:	Generic
Repository Layout:	simple-default
Artifact Count / Size:	<a href="#">Show</a>
Created:	02-11-20 06:27:17 -06:00

A database icon is visible on the right side of the 'Info' section.

Artifactory is the repository manager supporting all major packaging formats, build tools and CI servers.

It has different type of repositories like generic, npm, maven, gradle etc.

The repository will store the outcome of your build process, often denoted as artifacts.





*Thank  
you!*