

Short Name

Short Description

Offering Type

Introduction

GitHub repository URL

journey background image

Overview

Run GitLab on IBM Bluemix

Deploy a distributed GitLab leveraging Kubernetes and Docker

Containers are a major trend in deploying applications in both public and private clouds. The recent widespread adoption of containers is largely due to the development of Docker, which has enabled making them easier to use, and has the Docker engine for cloud and hybrid cloud model. One of the key use cases for containers is moving legacy applications to container orchestration platforms like Kubernetes, which allows for better distribution, scaling, and maintenance.

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get the code

Demo

Video

demo link (optional)

demo video (optional)

Overview

This application showcases the full power of containers and how we can move existing applications to the cloud seamlessly. We provide a full roadmap for developers, helping them to migrate their apps to the cloud and leverage cloud-native packaging by using containers. We show you how a common multi-component application can be deployed on the IBM Bluemix Container Service leveraging Kubernetes.

GitLab represents a typical multi-tier app and each component will have its own container(s). The microservice containers will be for the web tier and the enterprise database will be with Redis and PostgreSQL as the database.

Flow

Architecture Diagram

Flow Steps

- The user interacts with GitLab via the web interface or by pushing code to a GitHub repository. The GitLab container runs the main Ruby on Rails application behind NGINX and gitlab-workhorse, which is a reverse proxy for large HTTP requests like file downloads and Git push/pull. While serving repositories over HTTP(S), GitLab utilizes the GitLab API to receive authorization and access and serve Git objects.
- After authentication and authorization, the GitLab Rails application puts the incoming jobs.
- Jobs/containers are created in a local file system.
- The user creates users, roles, merge requests, groups, and more—all are then stored in PostgreSQL.
- The user accesses the repository by going through the Git shell.

Included BM components

IBM Bluemix Container Service

Kubernetes cluster

GitLab

Redis

PostgreSQL

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Run GitLab on Kubernetes

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