

IBM **Digital Business Group**

Cloud Infrastructure - NAME

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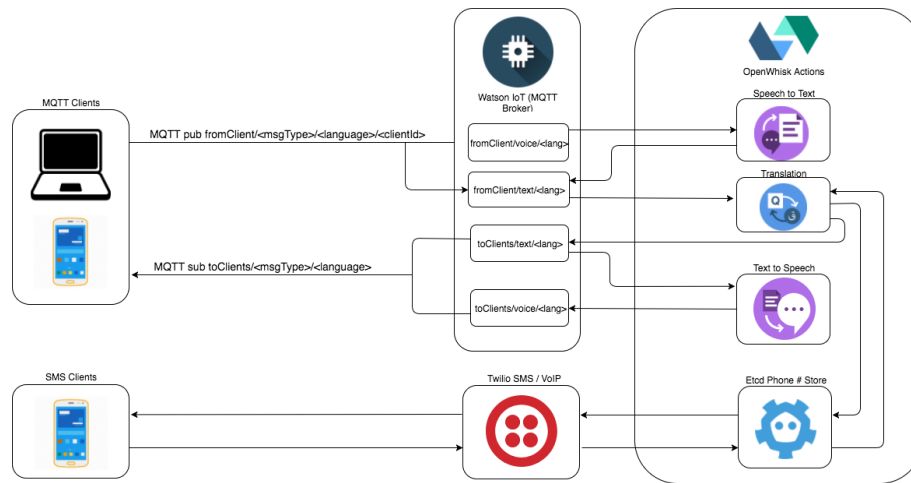


Overview

In the journey, I explain how to dockerize an application and get it deployed with Kubernetes. The journey explores creating an IBM Cloud account to configuring

a user's CLI then building and deploying an existing React application to the IBM Cloud Kubernetes.

Architecture Diagram



IBM Products

- IBM Container Service

Related Technologies

- Node.js
- Docker
- Kubernetes

Key Features

In this Code Pattern, we will deploy a React application using Kubernetes.

Rationale

This repository uses the React Javascript library alongside Redux to build out the front end of the application. The OMDb API is used to get movie information based on user input. Redux handles the data between the application and the API, as well as the state between components. Docker is used to package the application and Kubernetes is used to deploy the container.

Concept

What is the Code Pattern?

Do you have a front end application that contains large amounts of duplication, handles complex states, and manages large amounts of data?

React and Redux is the perfect Javascript library if your application is similar to the one described above. React provides a component based structure for everything included in an application and allows abstraction if needed to limit duplication. With Redux, it handles all of the state and can easily manage data in an application.

Once an application has been developed, it needs to be deployed for the rest of the world to see. There are many choices when looking for the right solution to manage and deploy your application. It can often be overwhelming when you're trying to pick the right solution.

If you're looking for a deployment tool that can provide automation, scalability and management of a deployed application, Kubernetes is the tool for you!

An application must be packaged into a container to deploy on Kubernetes. Docker is an open source tool that is used to package the application into a container. The container is then deployed on Kubernetes for public access. Once the application is deployed, Kubernetes handles the management, scalability and automation of the deployed application.

When the reader has completed this journey, they will understand how to:

Containerize a React application using Docker
Deploy and manage an application using Kubernetes

Who is it for?

Anyone who wants to learn Kubernetes, or take an application from start to deploying.

What are the key metrics for this Code Pattern?

1. # Github repo forks
2. # Deploys to Bluemix
3. # Readme page views
4. % reduction in churn from monthly active users (MAU) versus non-Code Pattern MAU