

One-Click Deployment

Degree programme : BSc in Computer Science
Thesis advisor : Prof. Dr. Erik Graf
Expert : Reto Tinkler

This thesis explores how the One-Click Deployment system leverages Kubernetes to enhance the deployment of open-source software. By simplifying the complexities of Kubernetes, the system aims to democratize access to its powerful features, making it easier for users of all technical levels to benefit from advanced container orchestration.

Overview

Kubernetes is a powerful tool for managing containerized applications, but its complexity often limits its accessibility. The One-Click Deployment system addresses this by encapsulating Kubernetes' strengths within a user-friendly interface. This system simplifies the deployment, scaling, and management processes, making the advanced capabilities of Kubernetes available to a broader audience. Through iterative development and user feedback, the system has been refined to balance ease of use with powerful functionality.

Objectives

The primary objective is to make Kubernetes' powerful features more accessible by simplifying its deployment and management processes. The system aims to enable users, regardless of their technical background, to leverage Kubernetes for efficient and scalable application management.

Results

The One-Click Deployment system successfully made Kubernetes' strengths more accessible, reducing the need for specialized knowledge. The system developed during this thesis is fully functional and in production use. Users reported significant improvements in deployment efficiency and ease of management,

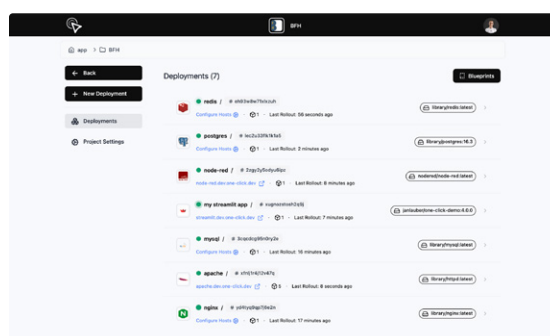
highlighting the system's effectiveness in democratizing advanced container orchestration.

Future Decisions

Future enhancements will focus on further simplifying the user experience, integrating additional Kubernetes features, and ensuring robust security measures. Ongoing user feedback will drive the continuous improvement of the system, ensuring it meets the evolving needs of the open-source community.



Jan Lauber
Data Engineering
jan.lauber@natron.io



Deployments Screenshot



One-Click Illustration