User Guide

Disclaimer: Due to the unfinished nature of the project the user documentation assumes design choices that have yet to be implemented and might change in coming versions.

Our Goal

Simplifying Kubernetes Management and Monitoring for DevOps Teams

At KIT (Kubernetes Inventory Taker), our mission is to simplify Kubernetes management and monitoring for DevOps teams. We want to provide a user-friendly tool that gives you a clear, real-time view of your Kubernetes resources, from deployments and pods to containers, so you can easily manage and optimize your infrastructure.

Here's what we're all about:

- Inventory Visibility: We'll provide you with a comprehensive view of your Kubernetes inventory, showing you the state, health, and configuration of your deployments, pods, and containers in a single, easy-to-navigate interface. No more complex logs or guesswork - we'll make it simple and intuitive for you to understand your resources.
- Insights and Analysis: We'll help you gain deep insights into your Kubernetes resources with powerful analytics and analysis. Get real-time information on resource utilization, health status, and configuration changes, so you can quickly identify and resolve issues, track changes over time, and optimize your resources for better performance.
- User-friendly Web Frontend: We believe in making KIT easy to use and visually appealing. Our web frontend is designed to be user-friendly and responsive, with clear representations of your inventory, including status indicators and configuration details. Find what you need, when you need it, with a clean and intuitive interface that fits seamlessly into your workflow.
- Integration with Kubernetes Ecosystem: We'll seamlessly integrate with the Kubernetes ecosystem, working smoothly with tools like kubectl, Kubernetes Dashboard, and Kubernetes-native logging solutions. You can continue using your existing authentication and authorization mechanisms, without any disruption to your workflow. We're here to enhance your existing Kubernetes setup, not complicate it.

With these goals in mind, our product mission is to simplify Kubernetes management and monitoring for DevOps teams, helping you optimize your resources and streamline your operations. We're committed to providing you with a user-friendly tool that empowers you to effectively manage your Kubernetes cluster and ensure the smooth operation of your containerized applications.

How to use KIT

This chapter explains the key features of KIT and how a user can successfully navigate the application and use use these features.

Navigation

After visiting the dedicated website running the Explorer application, the user will be greeted by our Dashboard with a sidebar on the left window side and a small location bar on the top. The sidebar offers the following main pages to navigate to:

- Dashboard
- Cluster
- Deployments
- Nodes
- Pods
- Containers
- Volumes
- Services
- Options

They can be accessed by a simple click on the corresponding list item. The current page is marked using a darker colored background. The top location bar always tells the user in detail what page he is on. For the container details page with ID 5103 the top location bar would show the following:

`Container/ID/5103`

We will now describe the contents of the main pages.

Dashboard

The Dashboard provides key information on different health aspects of the cluster. This includes numbers of running, terminated, paused and failed components and how much heavy the hardware is currently being used by it.

Cluster

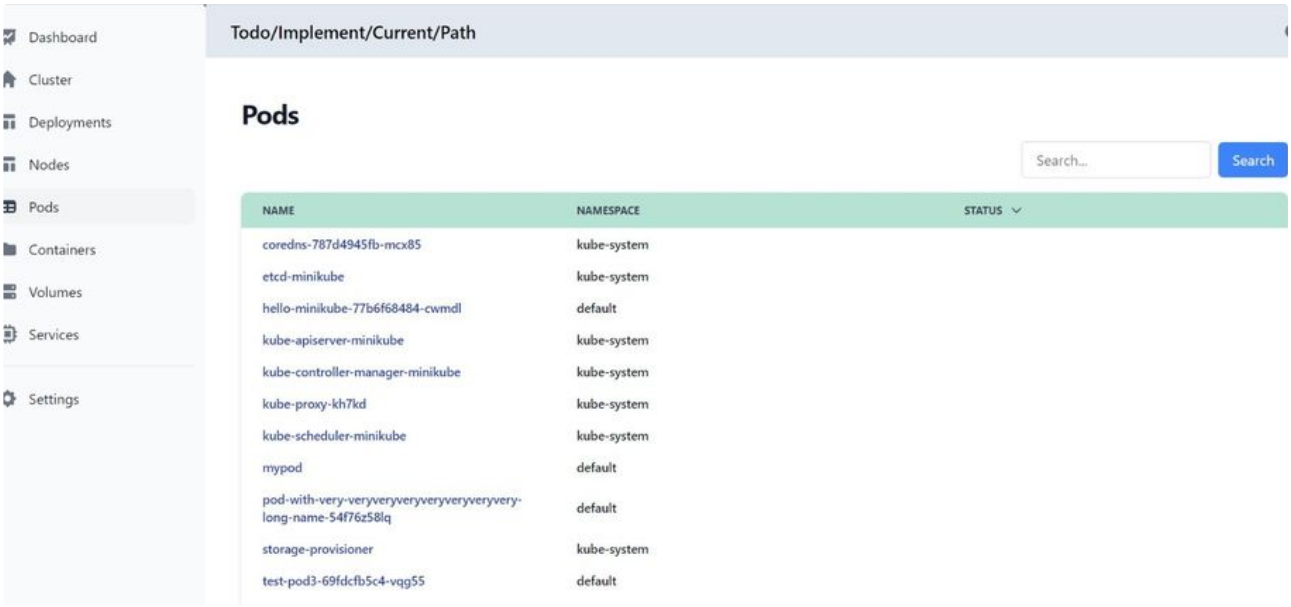
A list view of all components of the cluster with key information like name and type. Clicking on the singular table entries leads to the specific sites for the different component types.

Nodes

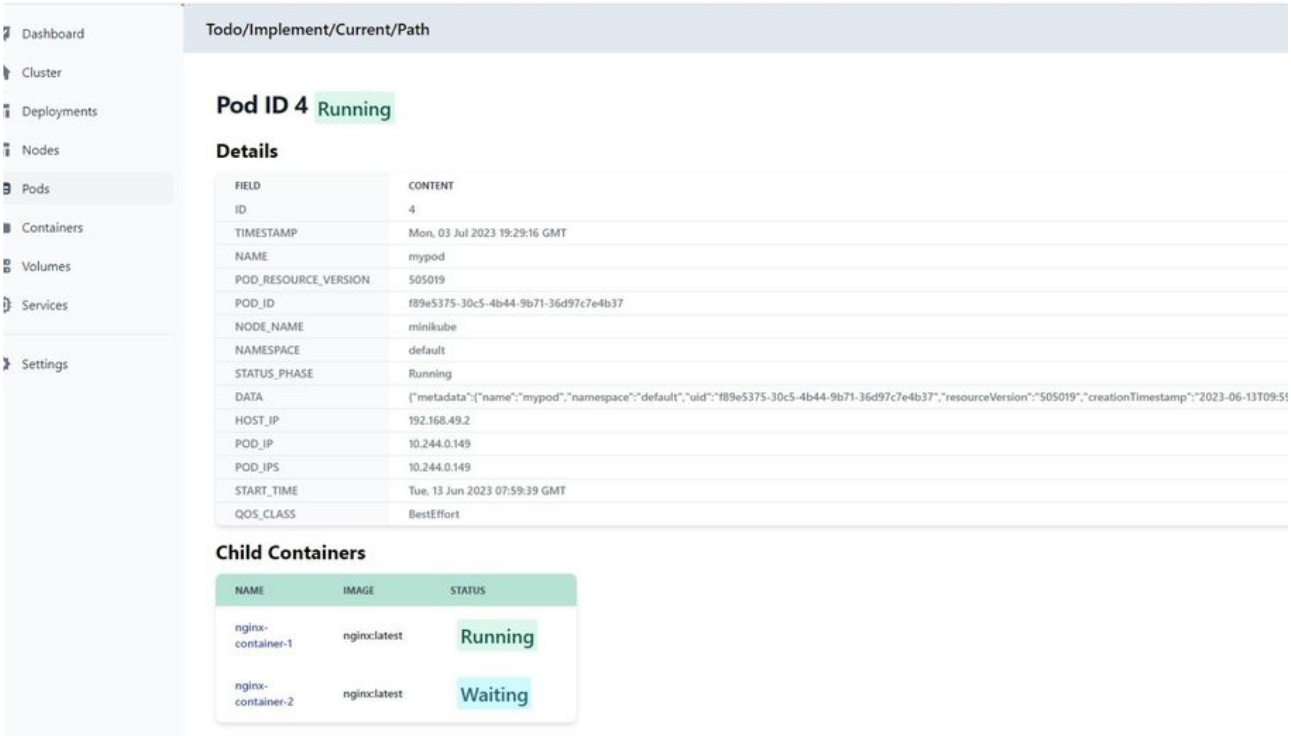
A list view of all nodes of the cluster with key information like name and id. Clicking on the singular table entries leads to the detail page of the selected node.

Pods

A list view of all pods of the cluster with key information like name, id and status with search and sorting features and clicking on the singular table entries leads to the detail page of the selected pod.

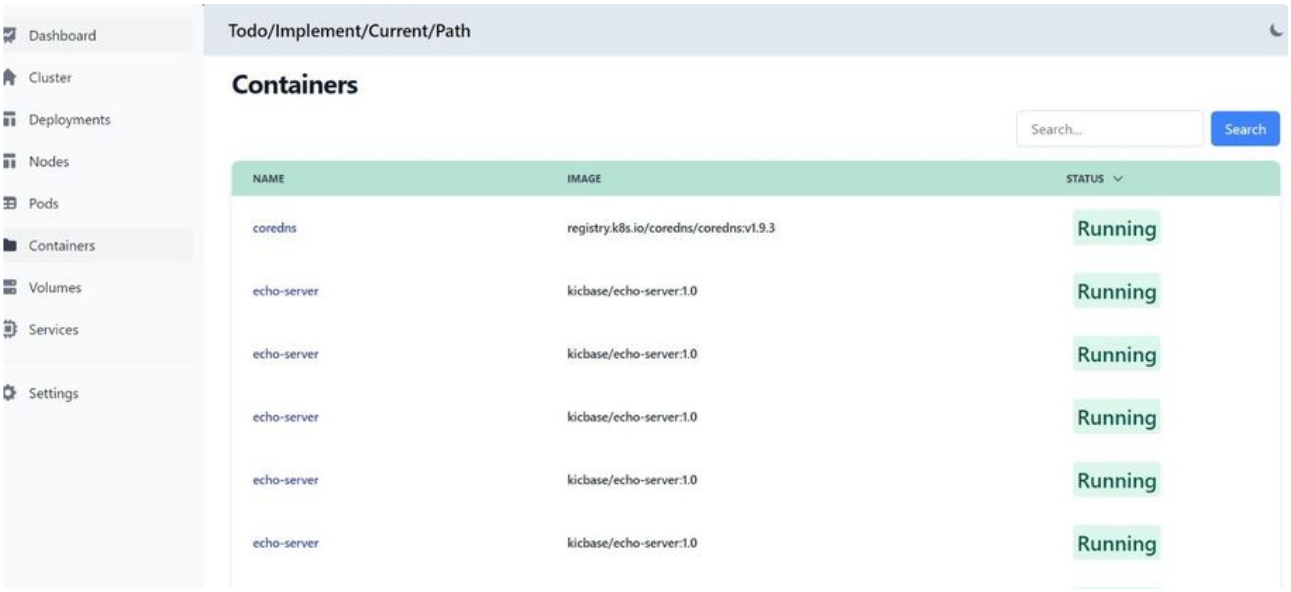


The detail page provides comprehensive information about the container, including its child container list, POD id, POD resource version, namespace, and other relevant details. This page allows users to gain a deeper understanding of individual containers and perform specific actions or troubleshooting tasks if needed.

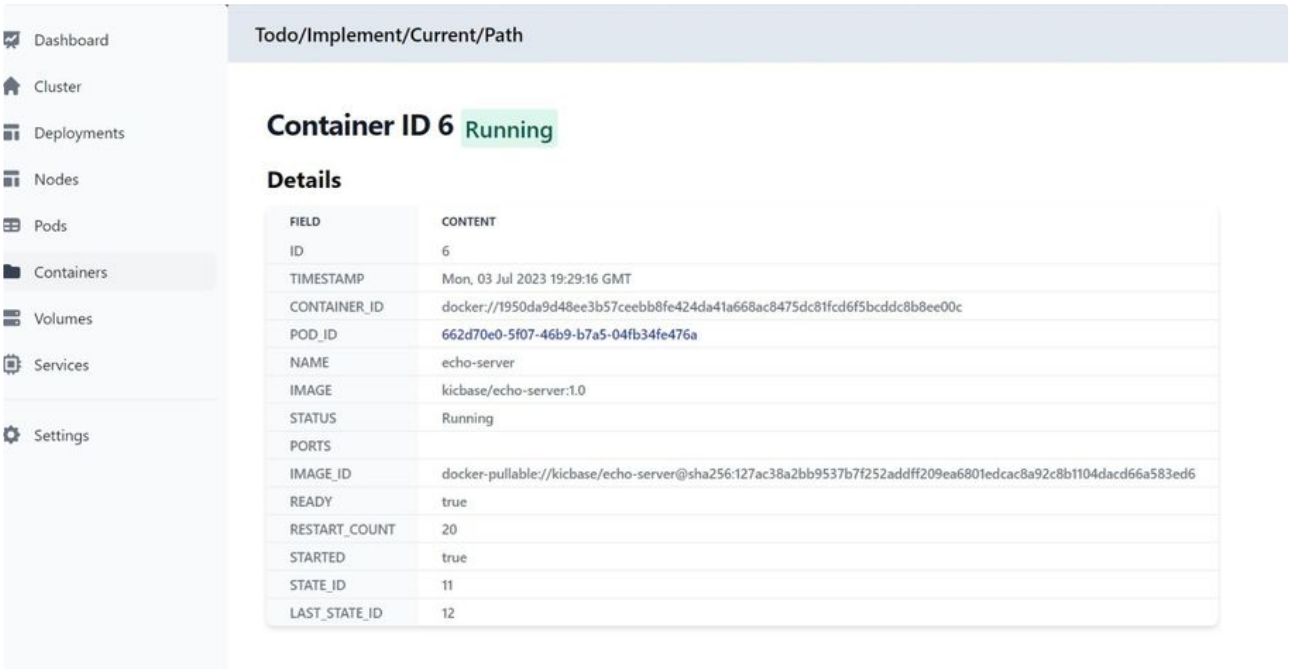


Containers

A list view of all containers of the cluster with key information like name, image and status with search and sorting features and clicking on the singular table entries leads to the detail page of the selected container.



The detail page provides comprehensive information about the container, including its container id, POD id, status, ports, and other relevant details. This page allows users to gain a deeper understanding of individual containers and perform specific actions or troubleshooting tasks if needed.



Volumes

A list view of all volumes of the cluster with key information like name, container, pod, node and size.

Services

A list view of all services of the cluster with key information like name and service.

Settings

A page to change cluster, enter access data and perform changes to the application.

Archived Version

An out-of-date version of the Wire Draft can be found below. Some features have been added or changed and different design choices have been made, but the core functionality of the applications is still the same. The arrows provide a quick overview on how to navigate through the application.