Introduction to the Tools

Getting Started

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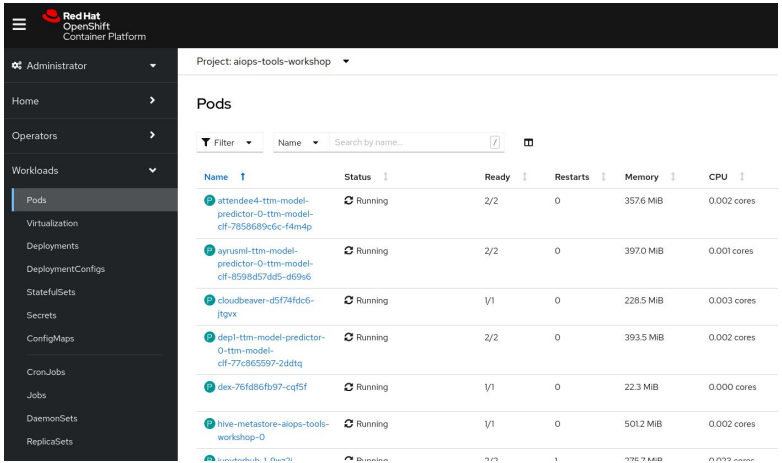
Everything is Open Source!

- All applications and services use open source software
- You too can deploy this workshop
- You will need a running instance of OpenShift
- Operate First Community Cloud also as long running OpenShift clusters that run all these applications for the general public to experiment with.

Everything is deployed on Openshift

OpenShift

- An enterprise-ready Kubernetes container platform built for an open hybrid cloud strategy
- Sits on top of Kubernetes
- Interactions with OCP is limited in this WorkShop



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Open Data Hub

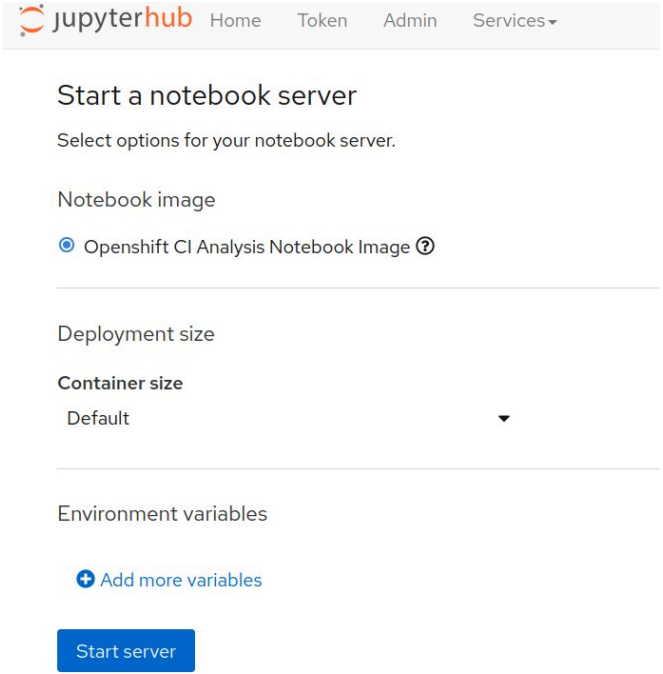
open source AI tools for running large and distributed AI workloads on OpenShift Container Platform

ODH Components

- JupyterHub
- Superset
- Trino
- Seldon
- Kubeflow Pipelines

JupyterHub

- A central hub to manage Jupyter Notebooks on the Cloud
- ODH Integrates JupyterHub with OCP
- Notebooks as Kubernetes Pods
- Admin / User interface
  - Access Control
- Easily supports adding new Notebook images and environments



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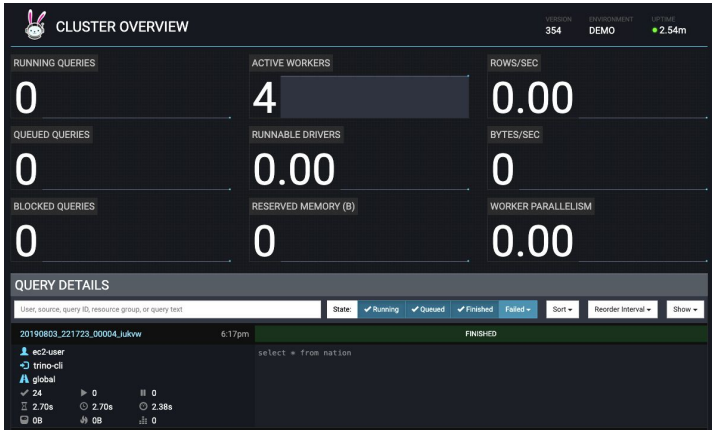
Trino

- A distributed SQL query engine designed to query large data sets distributed over one or more heterogeneous data sources.
- It is **not** a general-purpose relational database
- It **is** a tool designed to efficiently query vast amounts of data using distributed queries.



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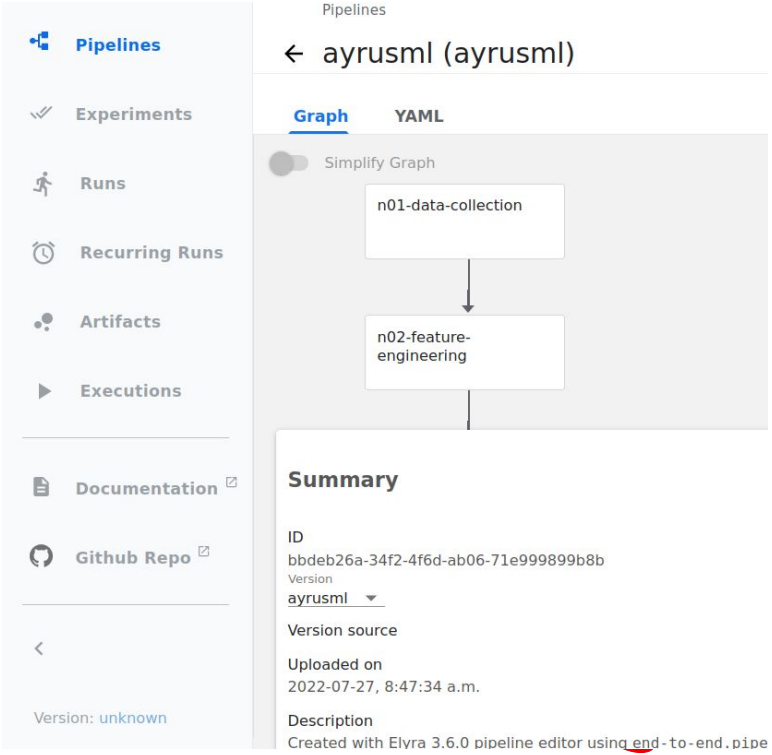
Seldon

- Seldon provides a set of tools for deploying machine learning models at scale.
- This is the one time you will be interacting with Open Shift Directly

Kubeflow pipelines via Tekton

- A platform for building and deploying portable, scalable machine learning (ML) workflows based on Docker containers.
  - In our case containers within K8s Pods
- Provisioned via Kubeflow directly, but there is incoming support for it via ODH
- We will use kfp to run the training pipeline of the ML model



Superset

- Superset is a modern data exploration and data visualization platform
- A powerful, web-based **SQL Editor** for advanced querying
- ODH integrates Superset with OCP
  - Access control, governed by OCP/K8s rbac
- Out of the box support for nearly any SQL database or data engine
  - Including Trino

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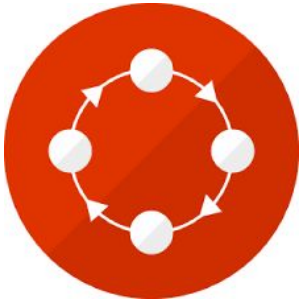
Other Applications



Openshift Pipelines

Re-create the environment

Instructions can be found here:

github.com/operate-first/apps/tree/master/workshops/aiops-tools