

AMLGO LABS

Ensuring Scalability, Governance & Innovation

Technical MLOps Architecture

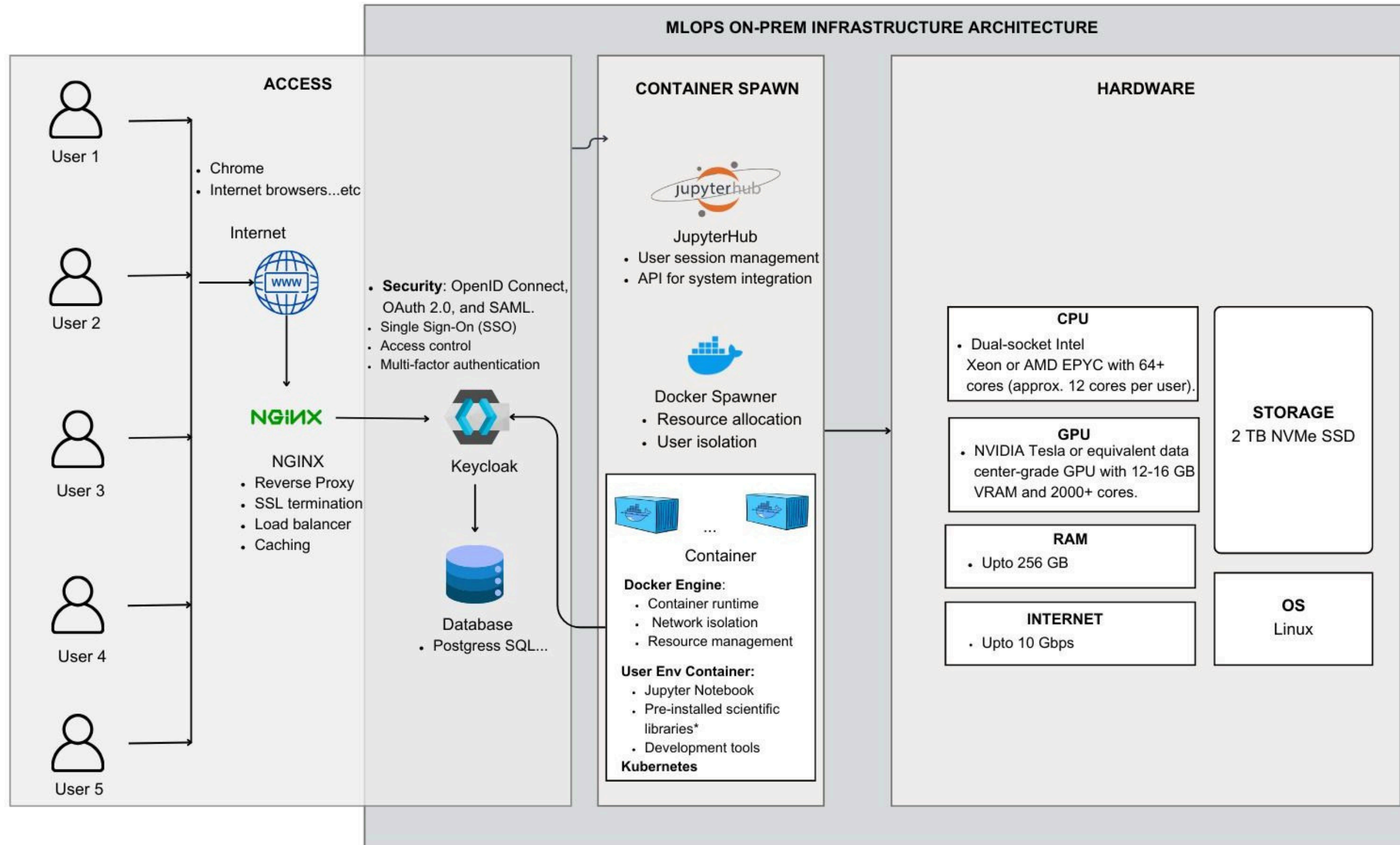
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for the Development and Implementation of MLOps Architecture

PROJECT OBJECTIVE

The goal of this project is to design and implement a secure, self-hosted multi-user environment that enables up to five users(POC Phase) to collaboratively utilize pre-installed software, such as Jupyter Notebook, without dependence on cloud services. The system will be deployed on a dedicated server under administrative management, ensuring a highly secure environment where file uploads and downloads are restricted. The solution will incorporate containerized environments to provide isolated workspaces and authentication mechanisms

HIGH LEVEL ARCHITECTURE



Note: Libraries are on the next page.

TOOLS

MACHINE LEARNING TOOLS

Core ML Libraries

- TensorFlow
- PyTorch
- Keras

Specialized ML Libraries

- MLflow
- StarDist

Data Processing and Analysis

- Pandas
- NumPy
- Scikit-learn
- Infrastructure and Deployment

DEVOPS TOOLS

Infrastructure and Deployment

- Docker
- Kubernetes
- Jupiter Lab

Core DevOps Tools

- Airflow/KubeFlow
- Jenkins/Github Actions
- Terraform

MLOPS ARCHITECTURE

By Amlgo Labs

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