k-bench [Container: K-Bench]

A framework to benchmark the control and data plane aspects of a Kubernetes infrastructure

Netdata

[Container: Netdata v1.42.0-189-nightly]

An open-source, distributed, real-time, performance, and monitoring solution that gathers metrics from the host and sends them to the MongoDB database.

kube-bench

[Container: kube-bench v0.6.17]

A tool that checks whether Kubernetes is deployed securely by running the checks documented in the CIS Kubernetes

Benchmark.

K8s Controller

[Container: k0s, k3s, k8s, OpenYurt, KubeEdge]

Controller is responsible for maintaining the desired state of the cluster.

imaster

[NUC: Ubuntu Server 22.04.2 AMD64/i7-10710U@1.10GHz/64GbDDR4/1TbNVMe]

K8s Worker

[Container: k0s, k3s, k8s, OpenYurt, KubeEdge]

Worker node is responsible for running containerized applications (workloads) and ensuring they are operational.

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node_3

|[Raspberry Pi 4 Model B: Ubuntu Preinstalled Server 22.04.2 ARM64 raspi/BCM2711,Quad-core ||Cortex-A72(ARM v8)64-bit SoC@1.8GHz/4Gb/64Gb sd-card]

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node 1

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node 2

[Raspberry Pi 4 Model B: Ubuntu Preinstalled Server 22.04.2 ARM64 raspi/BCM2711,Quad-core Cortex-A72(ARM v8)64-bit SoC@1.8GHz/4Gb/64Gb sd-card]

streams metrics to

k8s cluster

[k0s, k3s, k8s, OpenYurt, KubeEdge]

Netdata storage [Container: MongoDb 7.0]

Stores streamed events from netdata instances in metrics collection.

Sidecar

| |INUC: Ubuntu Server 22.04.2 AMD64/i7-\10710U@1.10GHz/64GbDDR4/1TbNVMe|