

cc-metric-store

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Motivation

- Generic time series DB issues
 - Configuration complexity
 - Deployment for production difficult
 - Overhead and feature bloat
 - Often OpenCore
- Requirements for ClusterCockpit
 - Only need to hold limited time frame
 - Static layout
 - Fixed timestep
 - Getting full series fast is important
 - Special queries: Last node state

Current state

Is in BETA state but can already be used and is used for all systems in the NHR@FAU ClusterCockpit instance.

- Defined schema for metrics
- Index access using timestamp to fixed slots
- Fixed memory consumption with circular memory buffers
- InfluxData line protocol for inserting metrics
- Simple REST API for queries
- Checkpoints for persistence across restart or crashes
- Long term archiving storage option for raw data
- Is aware of metric relations and can aggregate metrics

Outlook

- Sort out stability issues
- Mature feature set
- Relocate features from cc-metric-collector to cc-metric-store
- Compression for file store

- Benchmark with fair conditions against TS Databases

We will focus on keeping cc-metric-store simple, lightning fast, and almost zero config as a primary design and development goal!