Calibration/Constants database plans
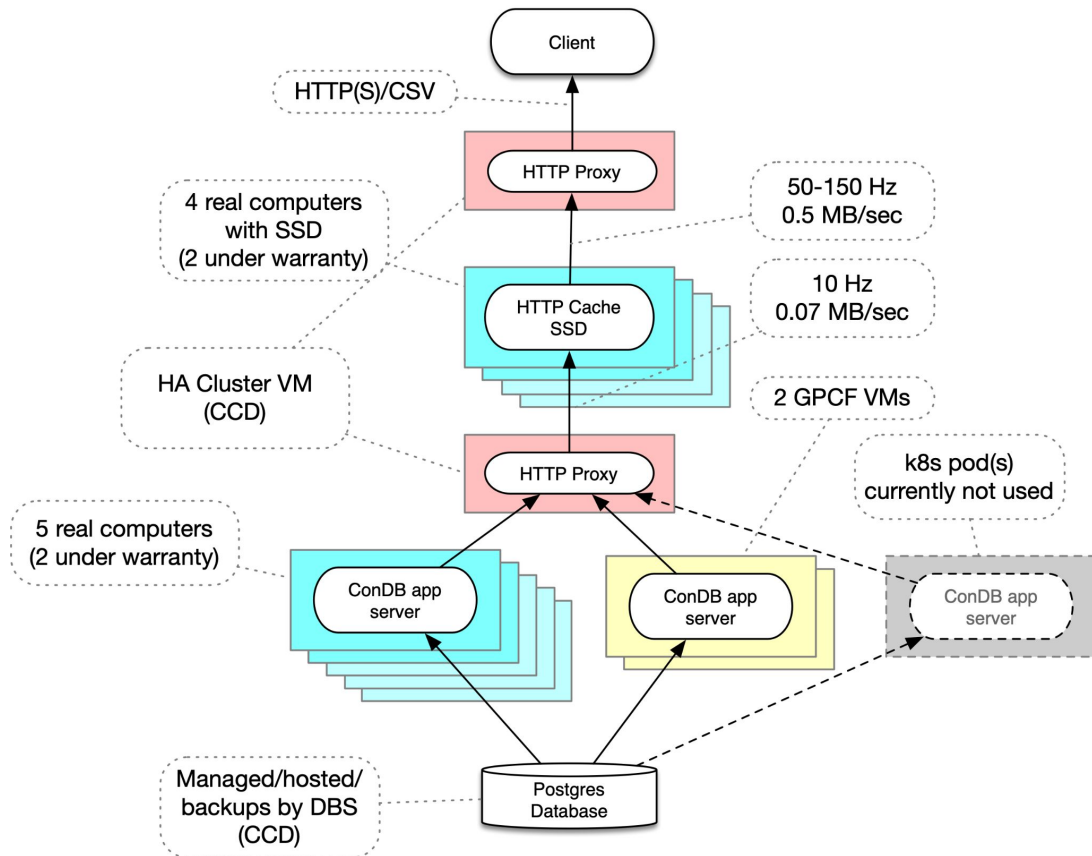
Igor Mandrichenko, FNAL

Muon g-2/SCD Computing Workshop

Muon g-2 Constants DB in RWSI

RWSI: Redundant Web Services Infrastructure

- High(er) availability
- Resource management
- Horizontal scalability

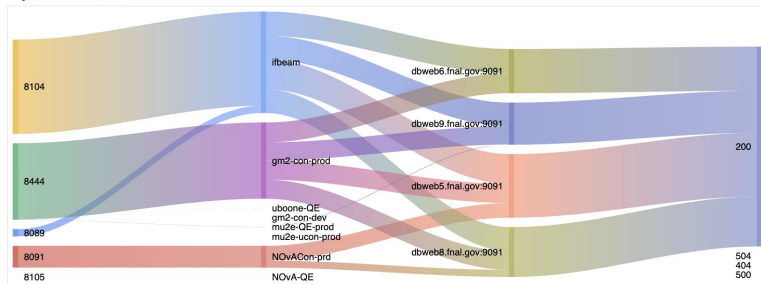Resources are shared with other experiments

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Data Flow: Cache

Cache proxy

https://dbdata0vm.fnal.gov:8044/dashboard

Data Flow Services Virtual servers
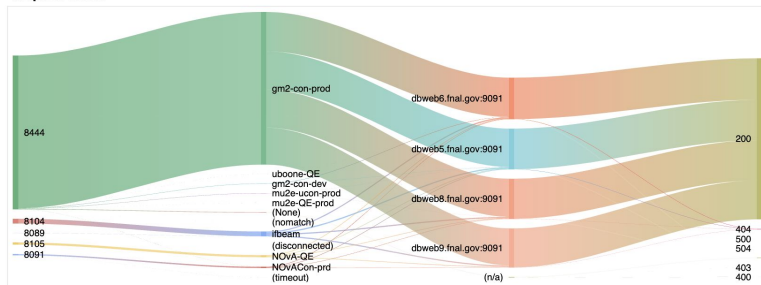
Data Flow

Time window: day

Filter by: port: (all) service: (all)
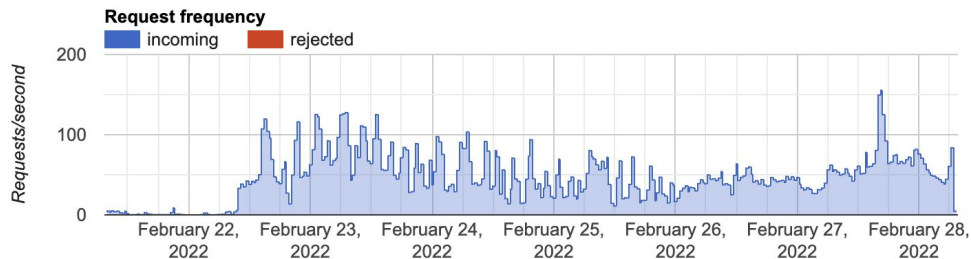
Bytes transferred

Request count

Time window: week

Request frequency: 50-150(peak) Hz

No rejections
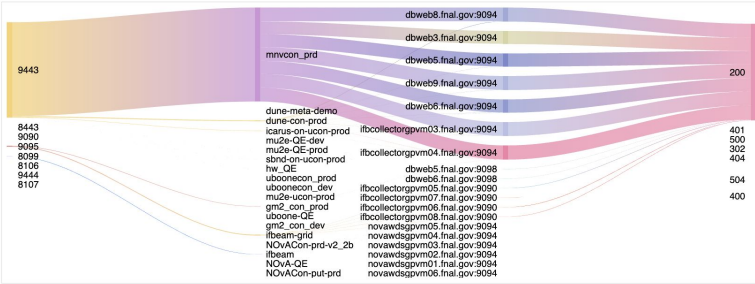
Data rate: 0.5 MB/sec

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Data Flow: Backend
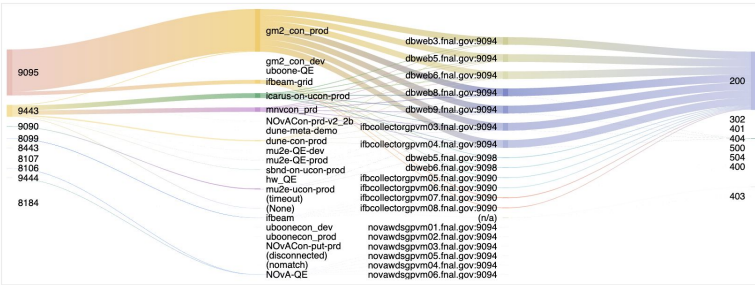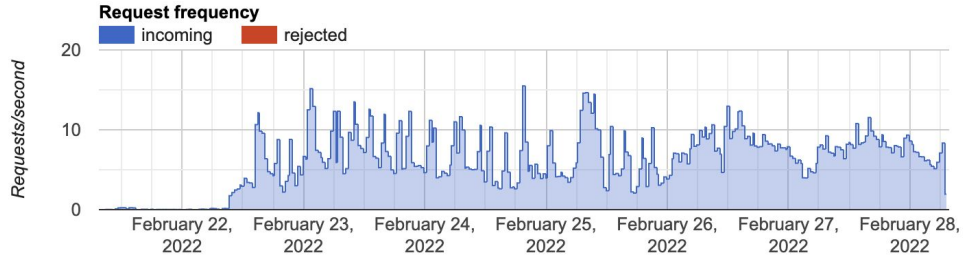
Request frequency: 5-10 Hz

- Cache hit ratio ~90%

Data rate: 70 KB/sec

Plans/Expectations: software

- Software (Minerva style conditions DB) has been stable for a long while
- Requests for new features/bug fixes for ConDB: ~1/year

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Plans/Expectations: resources

- We have sufficient resources to support Muon g-2 production using Calibration/Conditions Database
- The database shares resources with other services/experiments

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Plans/Expectations: resources

- If the demand/competition increases, our options are:
  - RWSI: allocate more shared or dedicated resources
    - GPCF VMs
    - Kubernetes cluster pods
  - Database: allocate more resources (DBS group, CCD)
  - Client: Make sure data is re-used by the worker instead of re-downloading (cache hit ratio 90% suggests this may not be the case)

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