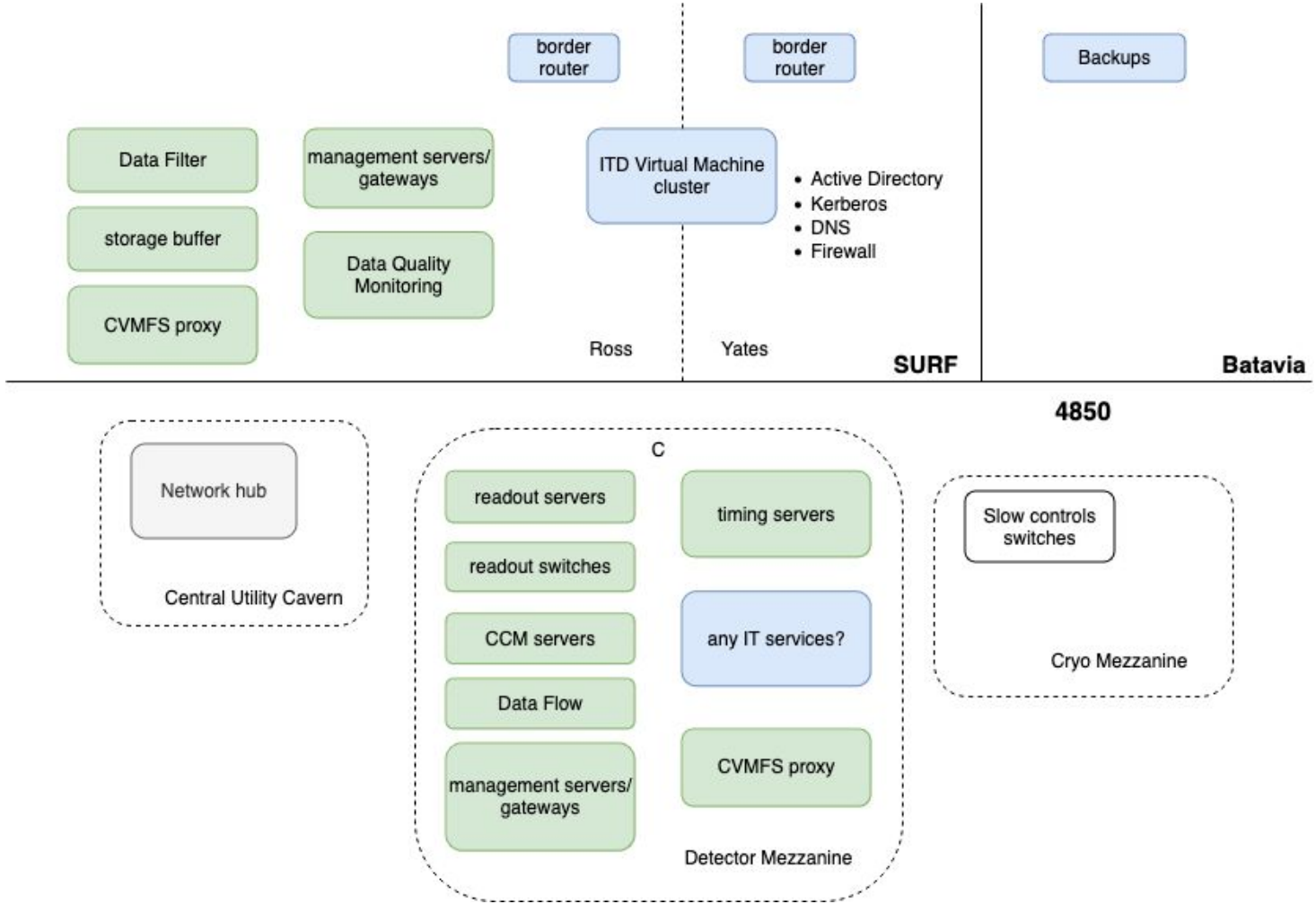
Server provisioning for PRRs

DUNE-DAQ F&I meeting Aug 30 2024


border router
border router
Backups
Data Filter
storage buffer
CVMFS proxy
management servers/ gateways
Data Quality Monitoring
ITD Virtual Machine cluster
• Active Directory
• Kerberos
• DNS
• Firewall
Ross
Yates
SURF
Batavia
4850
Network hub
Central Utility Cavern
C
readout servers
readout switches
CCM servers
Data Flow
management servers/ gateways
timing servers
any IT services?
CVMFS proxy
Detector Mezzanine
Slow controls switches
Cryo Mezzanine

Items for discussion

- Code distribution and home areas
- Shared infrastructure
- CCM/k8s
- Central databases
- IT Services

Code distribution and home areas

- CVMFS
  -
- NFS
- Local
  - Packaging etc
- Consider bandwidth used for software distribution (experiment network)

What about building software

- Capability to build & deploy quickly at SURF without WAN

What are the network failure/disaster scenarios considered

- Have a larger discussion with DUNE and SURF
- Enumerate failure scenarios

Shared infrastructure

Provision for VD installation, expand in final procurement for VD and/or HD procurement

Failures should not propagate from one to the other

- Timing
- Kubernetes Services cluster
  - Doesn’t affect server specification much
- Facilities servers
  - Could be shared
- Home areas and central ‘interactive’ storage
  - What is the role of home areas in operations?
    - If they don’t introduce a single point of failure they could be shared
  - We would need more capacity if not shared
- Code distribution

How much separation between detectors is needed?

CCM/k8s

- How much of CCM is within k8s
- Monitoring is the highest consuming component of CCM
- How to determine how services like influx and kafka scale
  - And whether they are part of CCM or central infrastructure
  - Current influx is not final
    -
  - Monitoring is available in grafana and could be enhanced

Central Databases

- ITD provides centrally hosted Mongo and Postgres databases at FNAL, use these for DAQ?
  - What about influx

IT Services

- DNS
- Kerberos
- Active Directory
- Logbook
- How will backups work
  - What do we need to backup
    - Again, failure scenarios
      - Hardware failure, user error
  - Would we have an additional backup strategy
    - snapshots?

Separate 50KVA allocation for IT hardware