Fermilab U.S. DEPARTMENT OF ENERGY Office of Science

The State of FIFE Monitoring & Accounting

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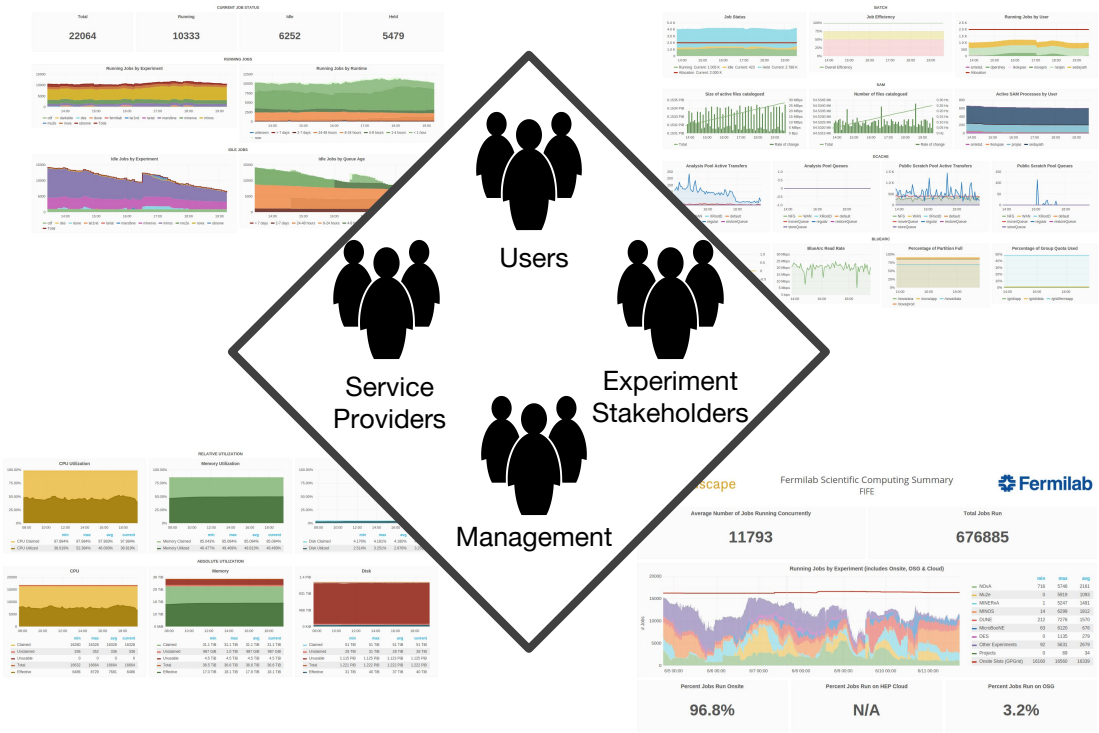
FIFE Workshop

20th-21st June 2016

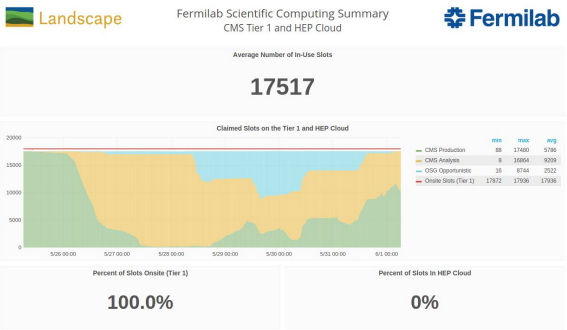
FABRIC FOR FRONTIER EXPERIMENTS Landscape

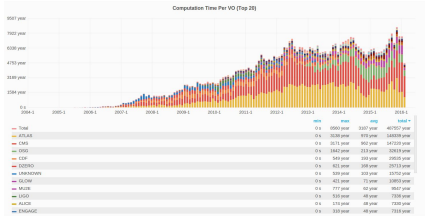
Fifemon is a comprehensive monitoring platform for all FIFE experiments, services, and stakeholders

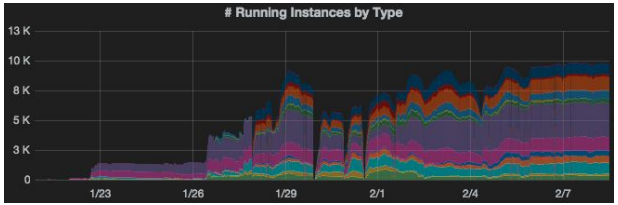


https://fifemon.fnal.gov/monitor

The **Landscape** program supports the development of unified comprehensive monitoring for Scientific Computing.



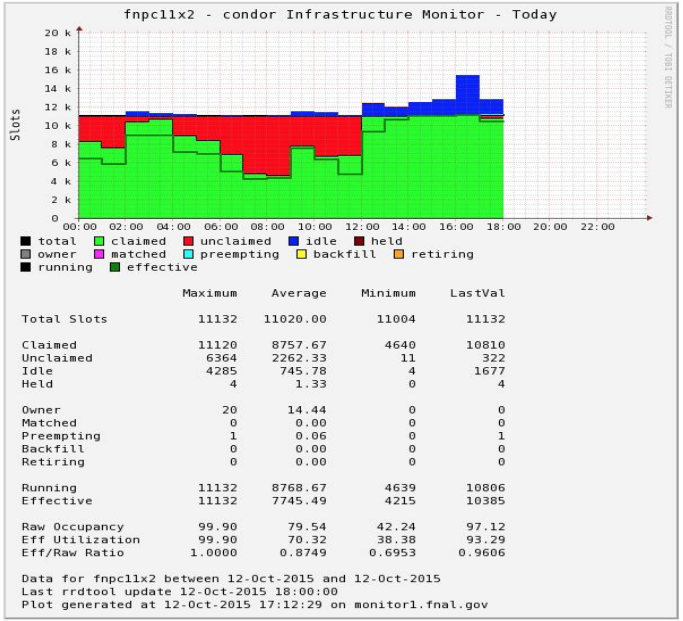




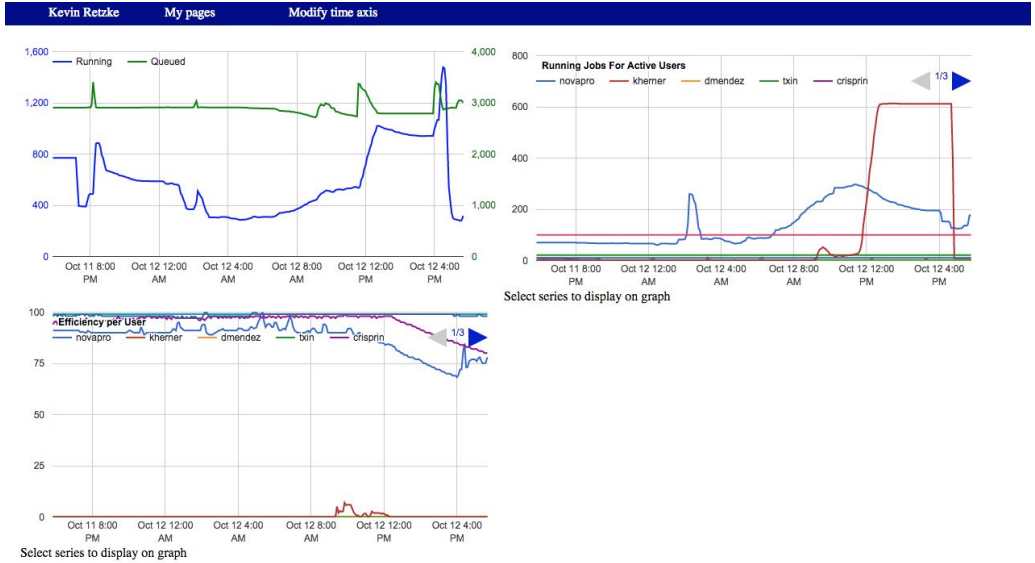
https://landscape.fnal.gov

State of FIFE Monitoring 2015

Fermigrid



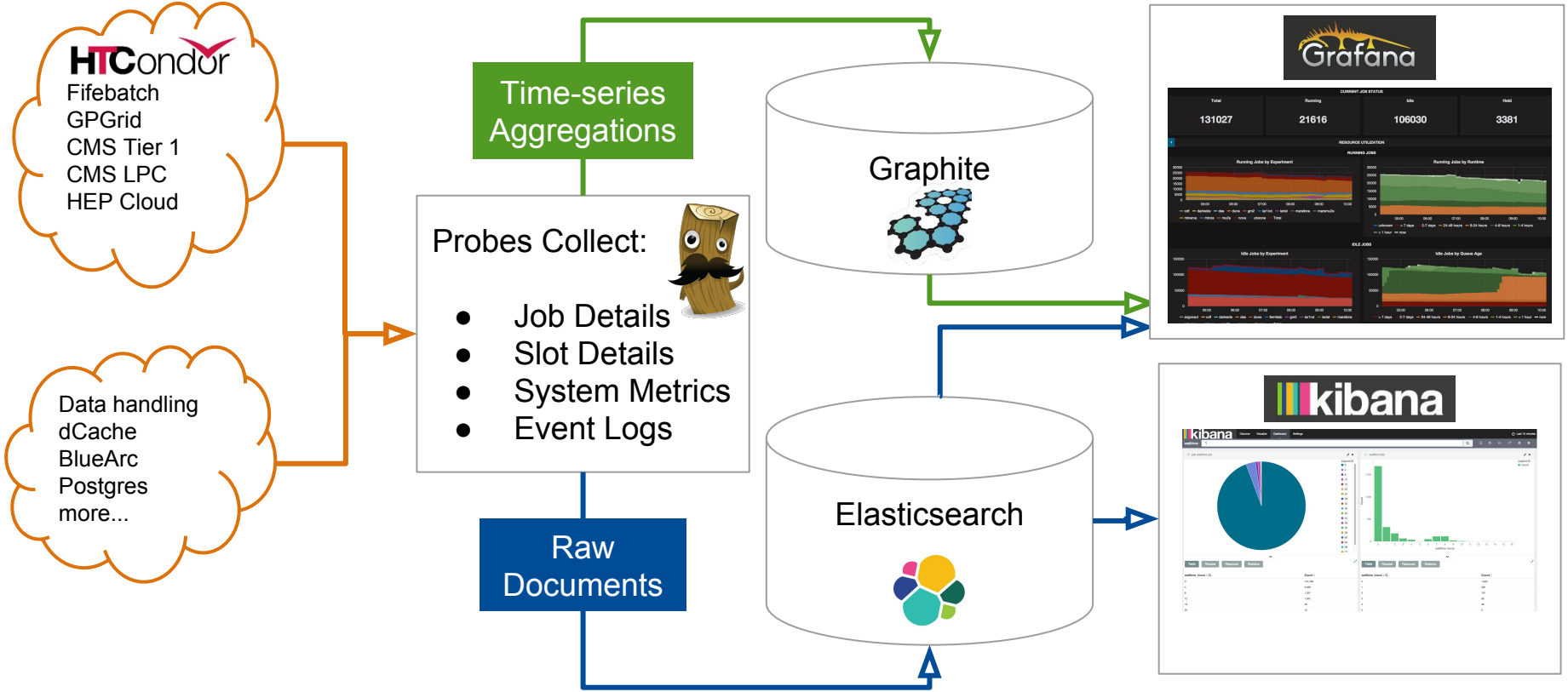
Fifemon



A New Monitoring Paradigm

- Leverage open-source monitoring technology
- Focus on incorporating new data sources and new dashboards
- Rapid development and iteration of tailored views for each target audience

Fifemon Architecture



Statistics

250 users

15 data sources

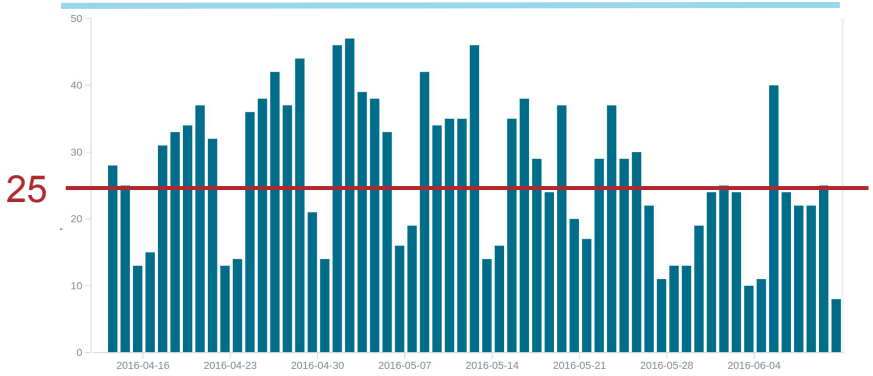
50 dashboards

280K total metrics

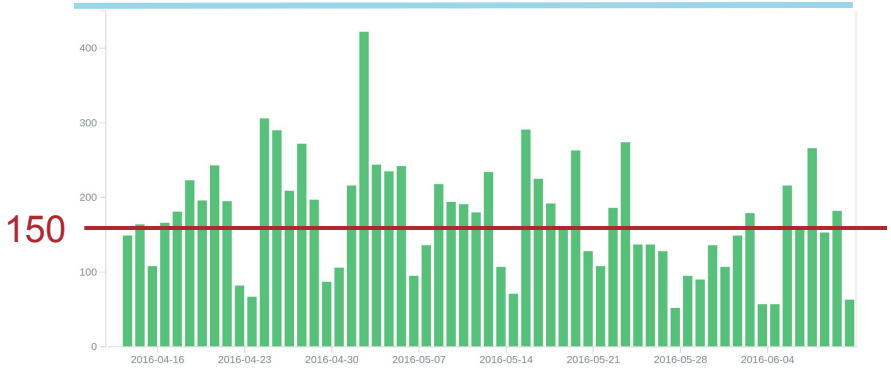
500K datapoints per hour

70K log events per hour

Unique Users per Day

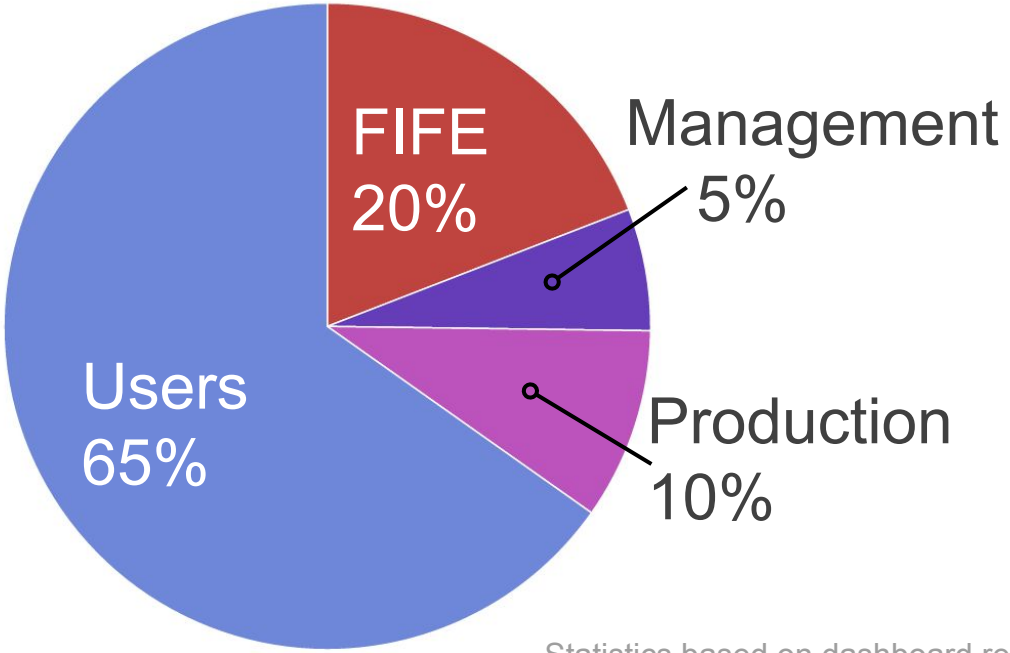


Dashboard Loads per Day

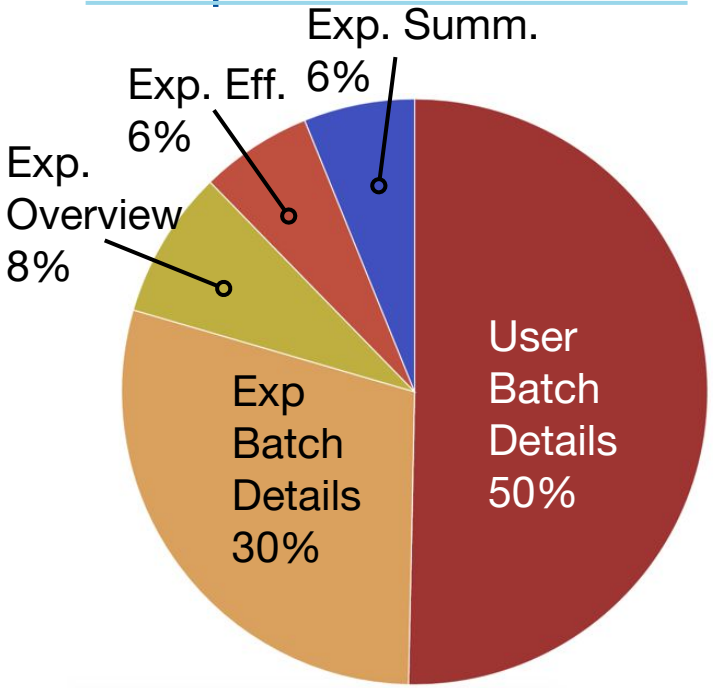


Usage

Requests by Group



Top Dashboards



Statistics based on dashboard requests in last 60 days.

Upcoming Features

Near-Term

- Federated SSO Auth
- Grafana v3
- Completed job details & resource usage
- dCache
- Running job logs
- Outage notices and logs
- Dashboard improvements

Long-Term

- Realtime job updates
- Email reports
- User and experiment areas
- Alerting

Preview and test:

https://fifemon-pp.fnal.gov

What do you want to see?

https://fermi.service-now.com

Beyond FIFE

- CMS LPC cluster monitoring
- Collaborating with OSG and wider scientific computing community
  - Increase Fermilab visibility
  - Feedback improvements
  - Better site monitoring - what resources are available offsite for FIFE jobs?

http://www.lumaxart.com/

Collaborative Project

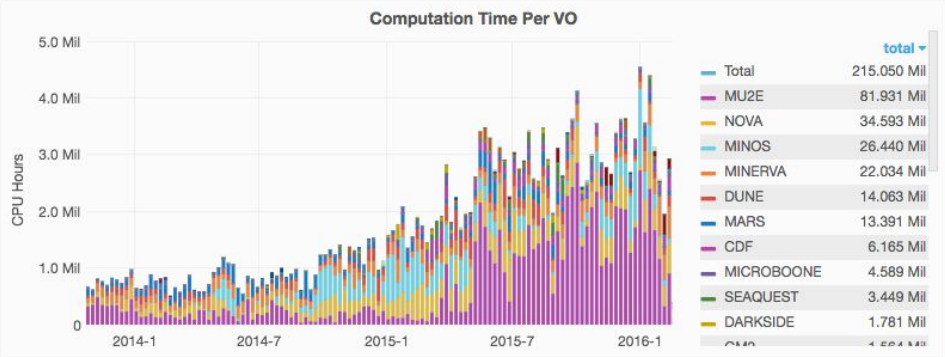
https://fifemon.github.io

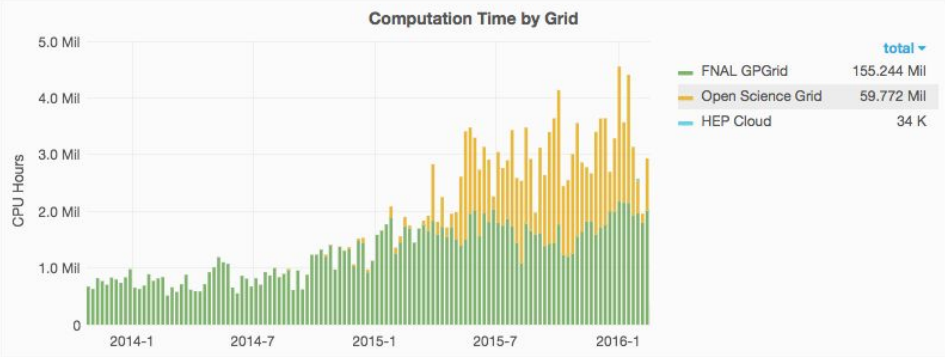
Accounting

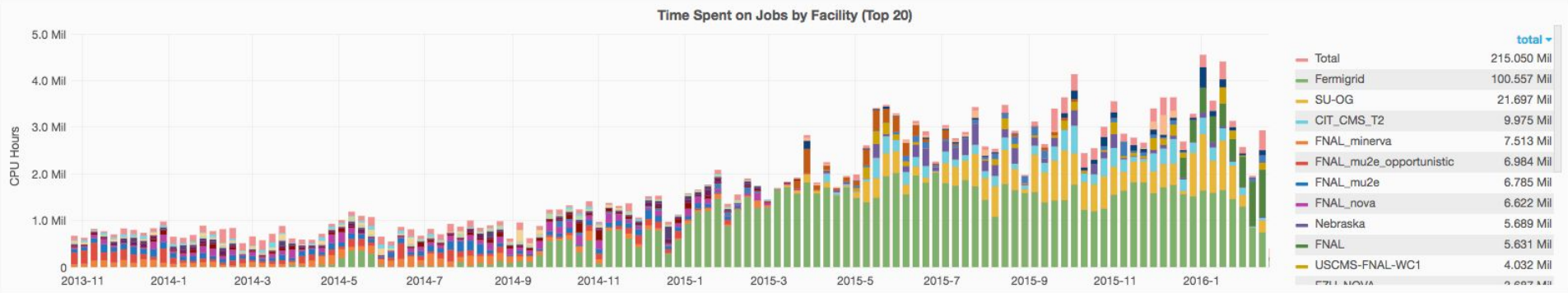
- OSG retiring Gratia, ruled it unmaintainable and inflexible
- "GRÅCC" being developed by OSG and FNAL
  - Modular, microservice-based architecture
  - Primary data store: Elasticsearch
  - Primary frontend: Grafana
  - Compatible with existing probes
  - Alpha stage this summer, Production by end of year
- Accounting data will be more readily accessible
  - Integrate FIFE accounting data into Fifemon...

https://gracc.opensciencegrid.org

Over Two Years of FIFE History







https://fifemon-pp.fnal.gov/dashboard/db/fife-history

Fifemon Tutorial Tomorrow

- Grafana basic usage, tips & tricks
- Common workflows:
  - Checking your job status and resource usage
  - Checking your experiment's status and usage
  - Checking batch system usage and resource availability
- Q&A