DIRAC at LHCb

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For the LHCb distributed computing team

DIRAC & Rusio Workshop 2023

October 2023

KEK

DIRAC vs LHCbDIRAC

DIRAC

- WMS (pilots, jobs)
- DMS (replica catalog, storage management)
- Transformation System for Jobs and DataManagement
- Accounting, Monitoring

LHCbDIRAC

- LHCb bookkeeping
  - metadata and provenance catalog
- LHCb Production Request System
  - Production requests
  - MC submission system New
  - Analysis production submission New

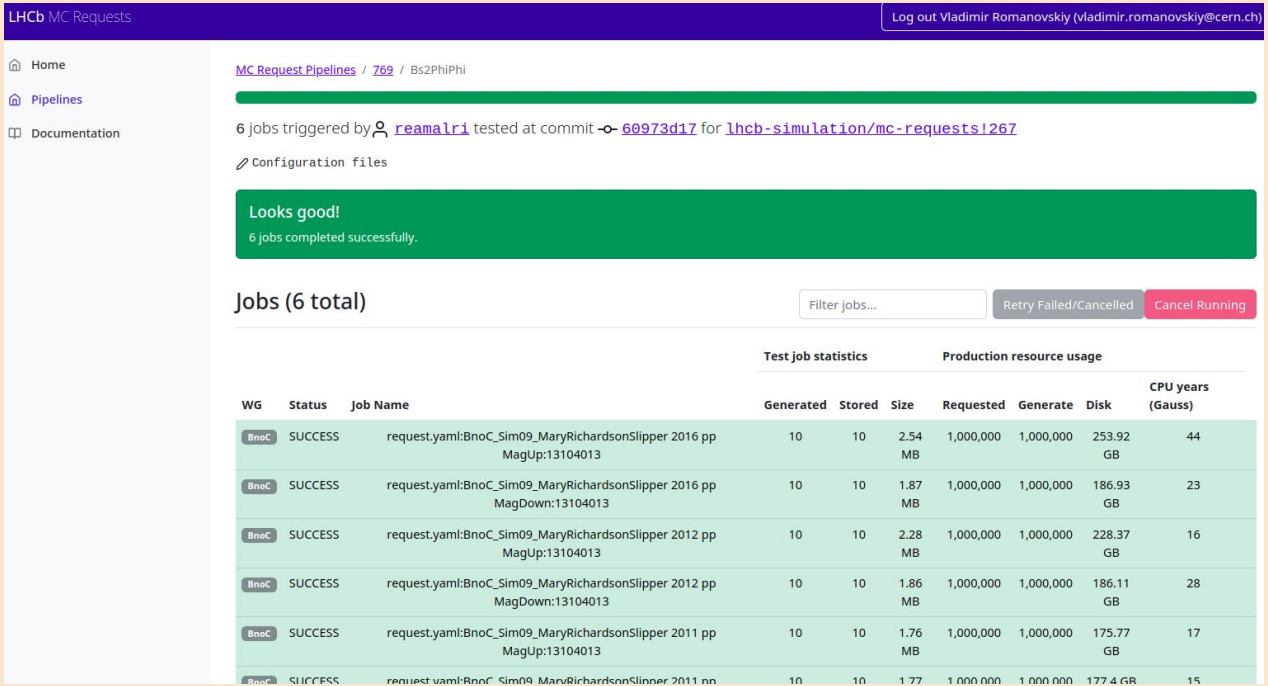
MC submission system

Extension of LHCb Production Request system

- Description of set of productions in one YAML file
- Commited to GitLab and tested in CI
- On merge, submit as Production requests (LHCbDirac)
- Submitting and running productions with Production Request system through WebApplication

MC submission system

Testing result

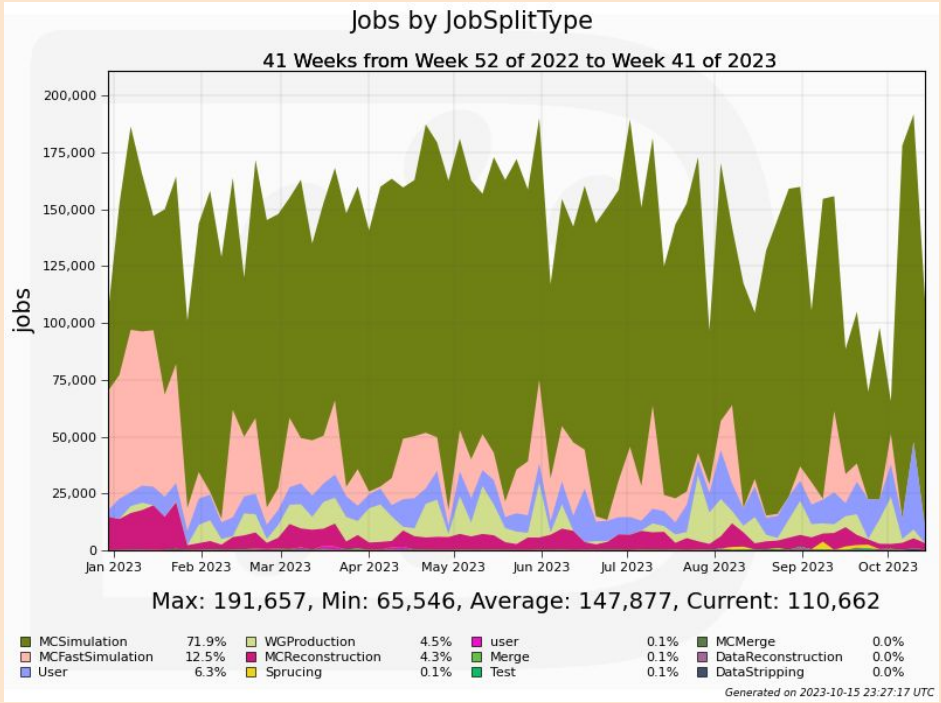


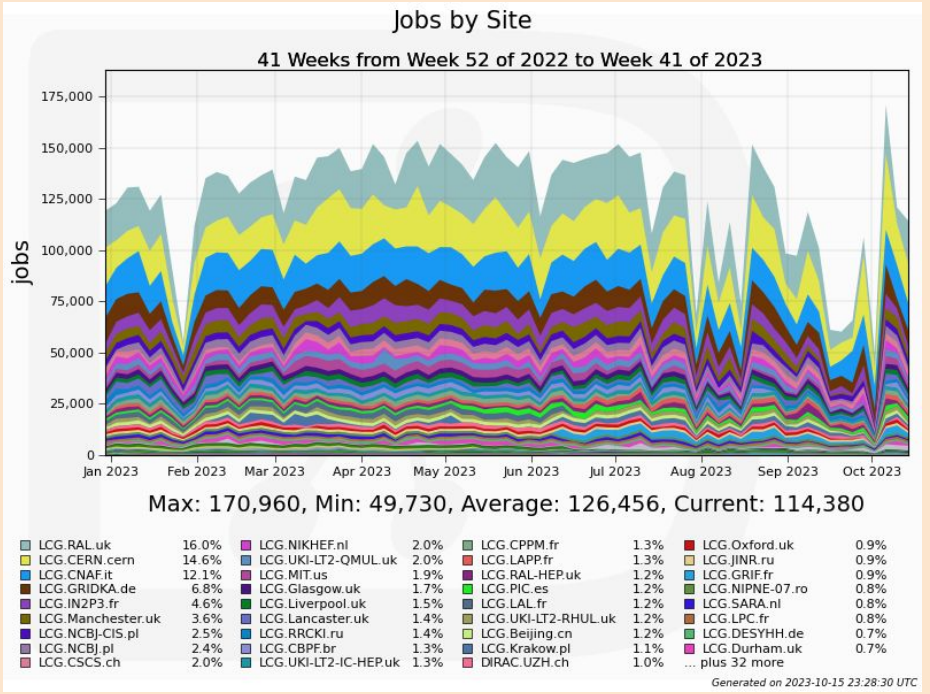
User Analysis production system

Access for users to Transformation system

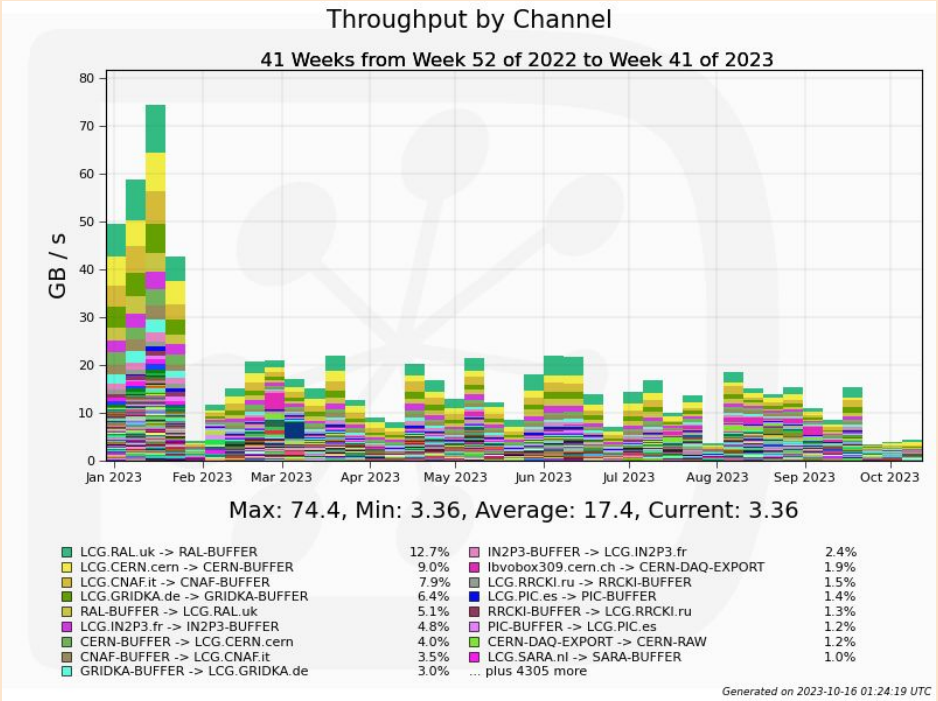
- Same workflow as MC requests (YAML + GitLab CI + MR)
- Testing user application by submitting jobs to Dirac via GitLab CI
- Submitting, running and finalisation of productions automatically using Production Request system by scripts

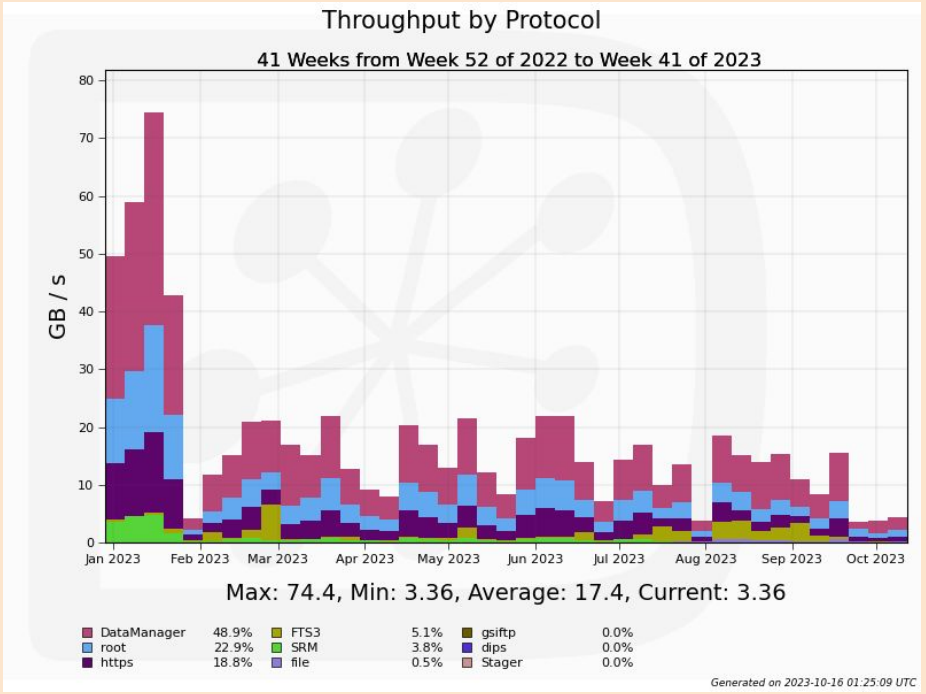
Job Activity





Data transfers activity





Answers to the questions

What is your biggest frustration with DIRAC?

My opinion only

Jobs stalled forever at any state (Matched, Waiting, Rescheduled)

It's a bug in the WMS which has been there since 7.3(?)

It blocks all automatic action of Production system

Answers to the questions

Any notable operations incident in the last year?

Few times installation of new (certified) version of (LHCb)DIRAC brakes everything.

Answers to the questions

What can be improved for communication in the project?

Most (All) LHCbDIRAC developers are simultaneously DIRAC developers. No problems!

Answers to the questions

What are your expectations with DiracX?

Fixing old problems without introducing new.