

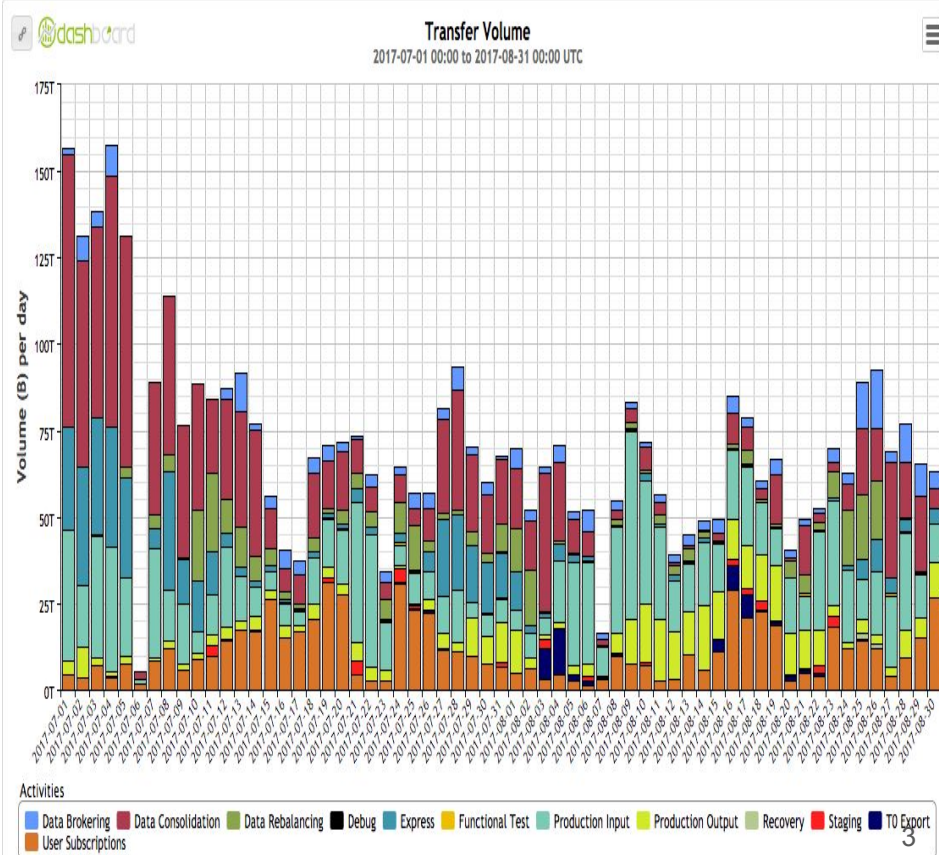
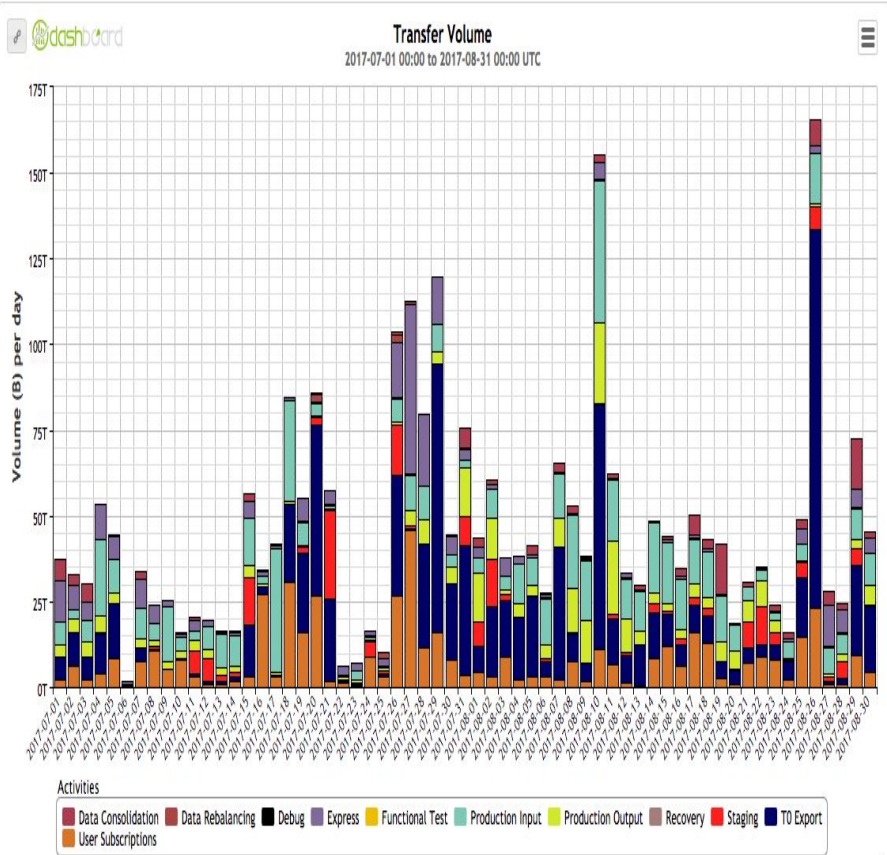
# WAN/LAN Monitoring and Statistics

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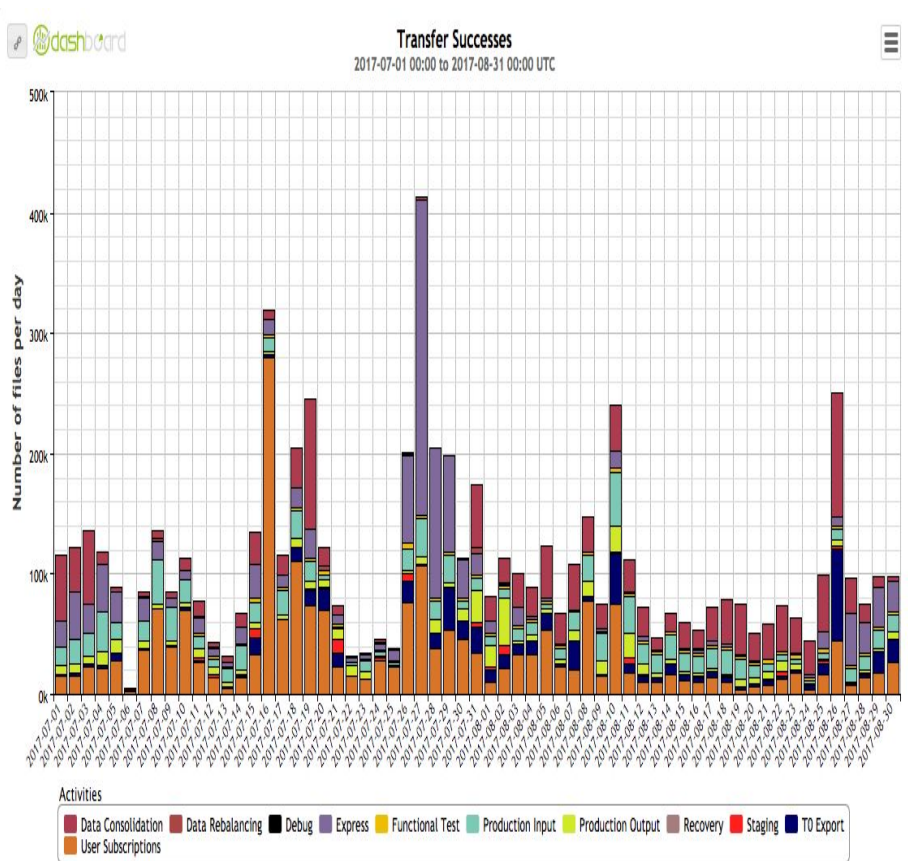
# Introduction

- Overview talk presenting currently available ways to monitor WAN/LAN activity
- Mainly two different activities that can be monitored: FTS transfers between sites and site mover transfers to/from worker node
- Focussing on three site: BNL, TRIUMF, DESY-HH
- Looking at two full month (July/August 2017)
- Transfer plots have been taken from the DDM dashboard
- Concurrent number of transfers have been calculated using the Rucio events by computing the parallel transfers per second and the calculating the average and the max over a 24 hours period.
- Site mover plots have been created using data from the Rucio traces

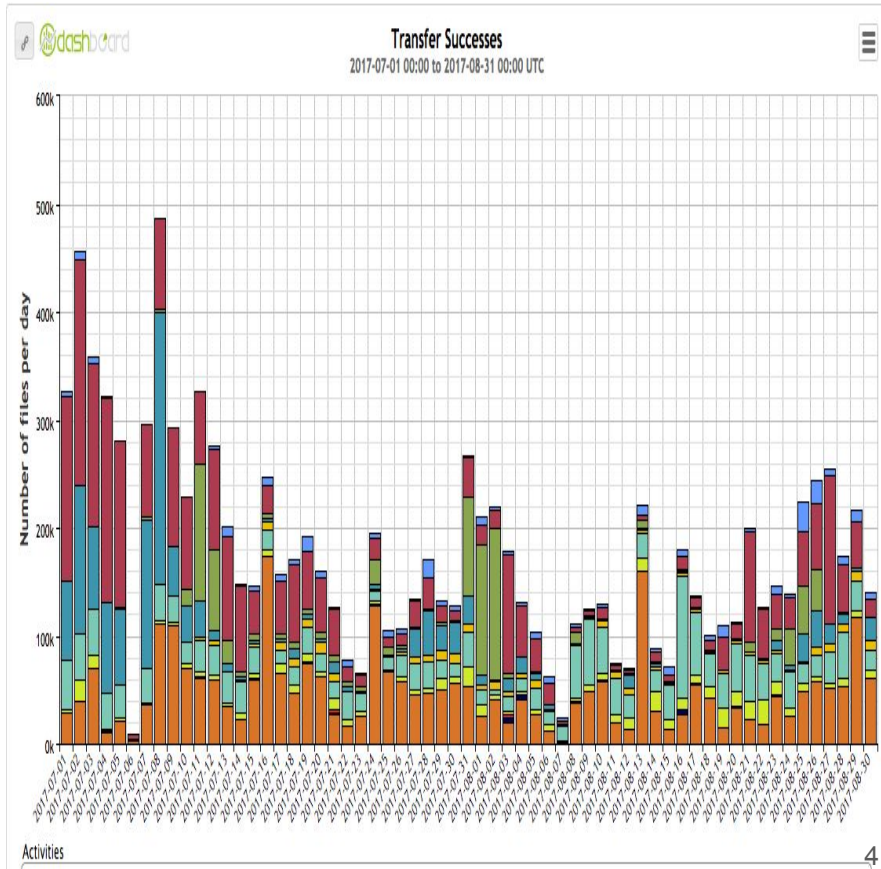
# BNL FTS transfer volumes per day (ingress/egress)



# BNL FTS transfers files per day (ingress/egress)



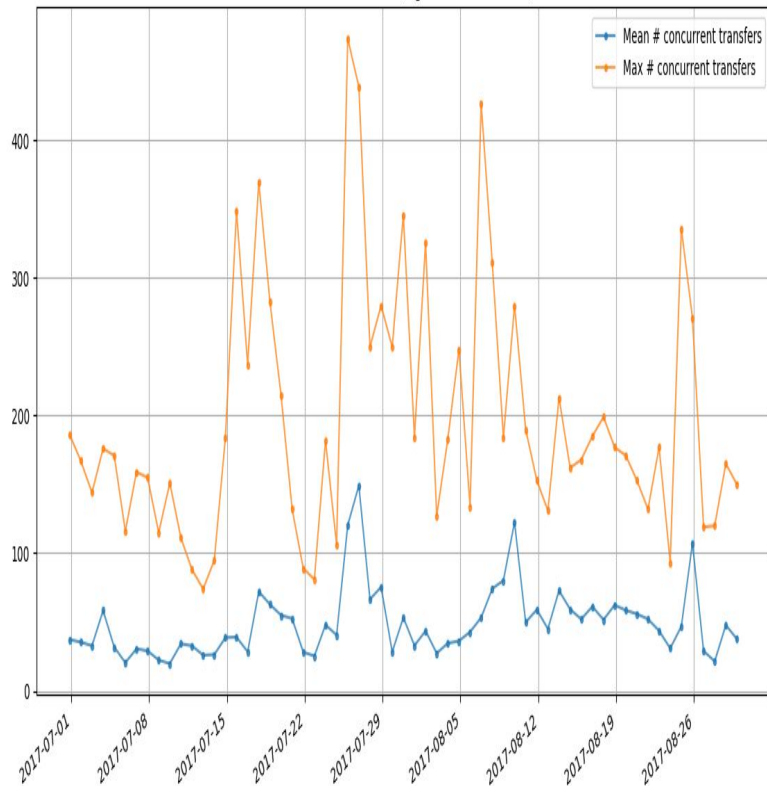
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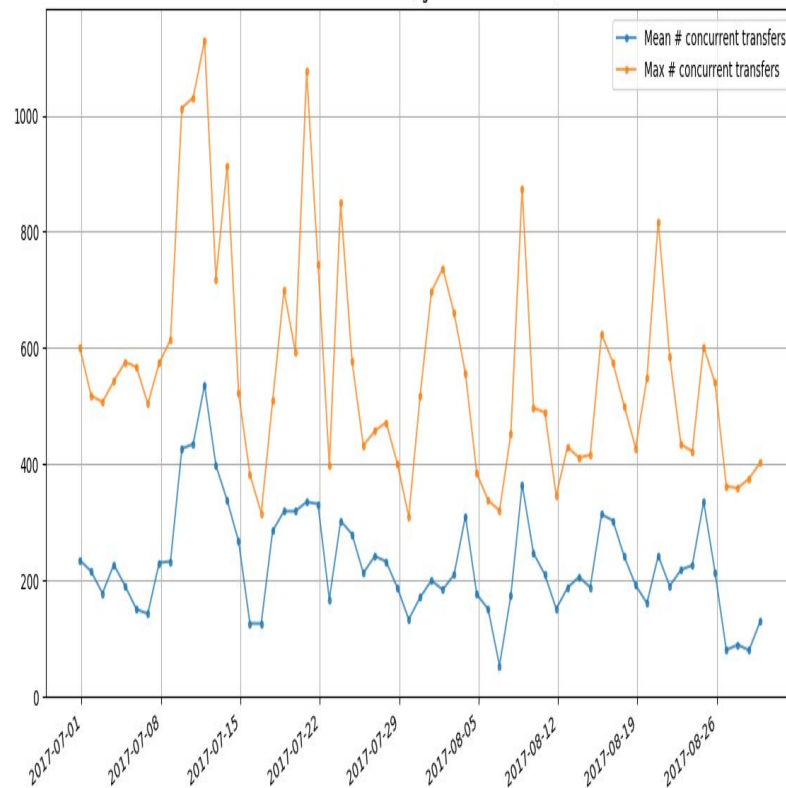
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# BNL concurrent transfers (ingress/egress)

Concurrent Transfers (Ingress to BNL-ATLAS)

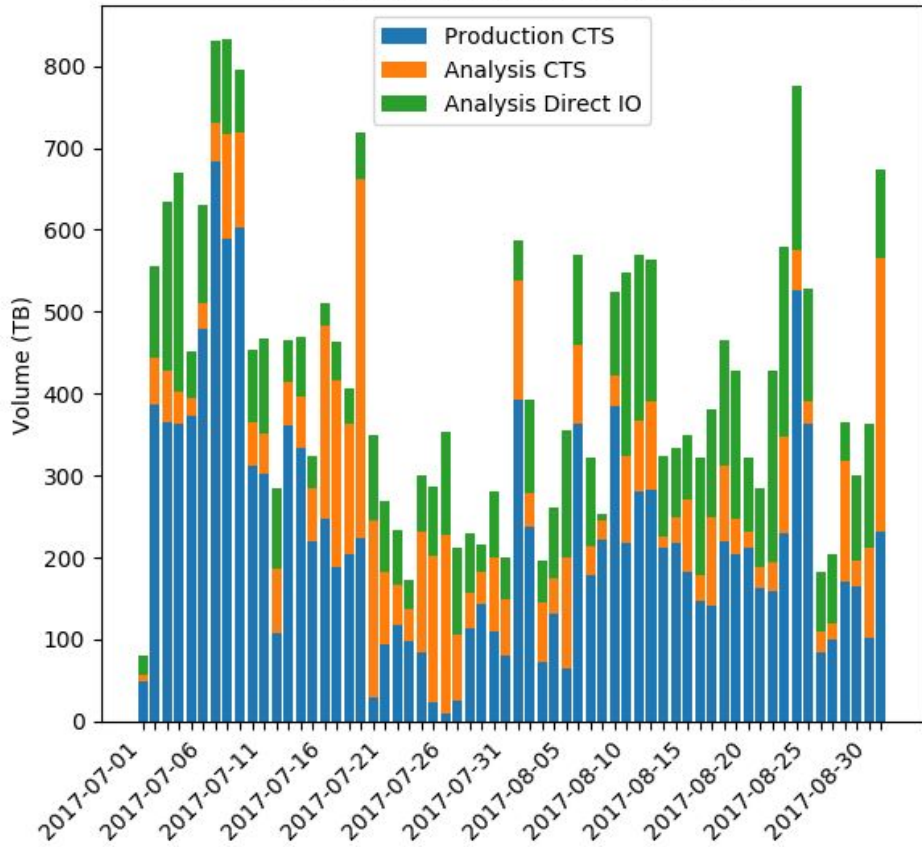


Concurrent Transfers (Egress from BNL-ATLAS)

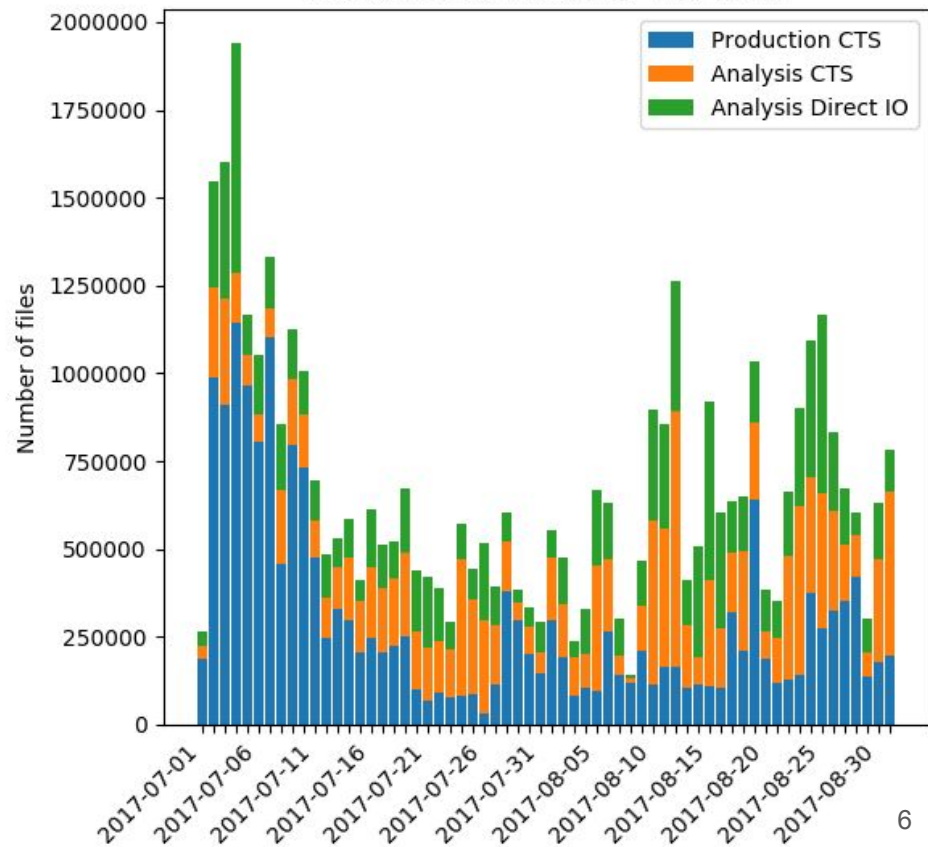


# BNL site movers volume & files per day

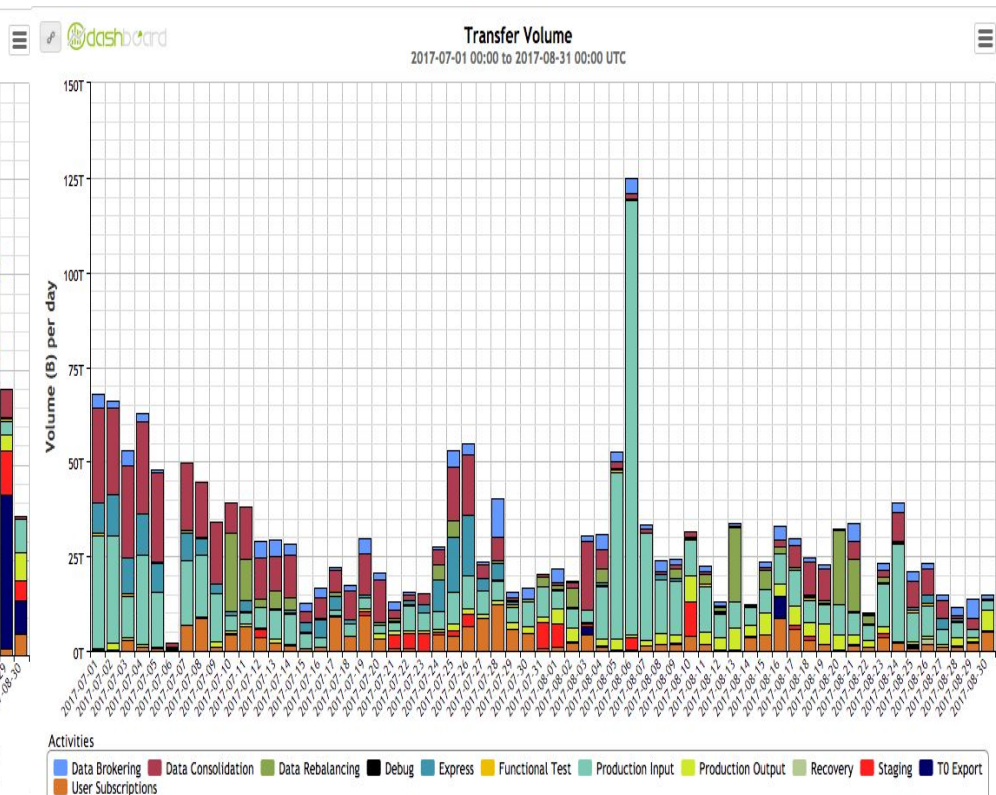
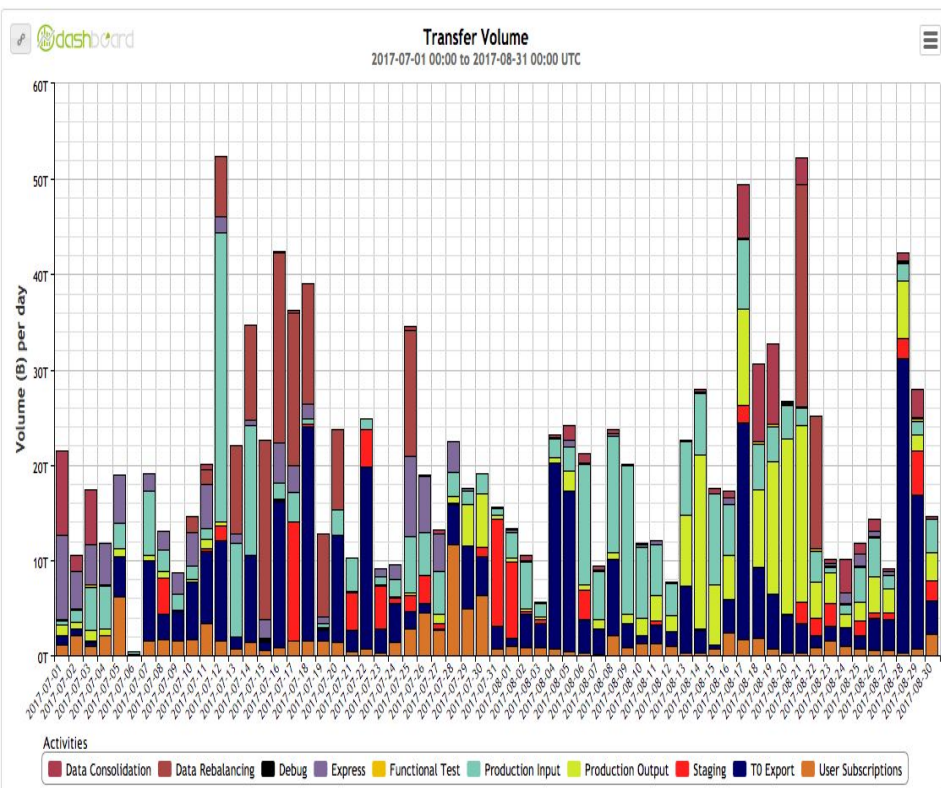
Site movers download volume (BNL)



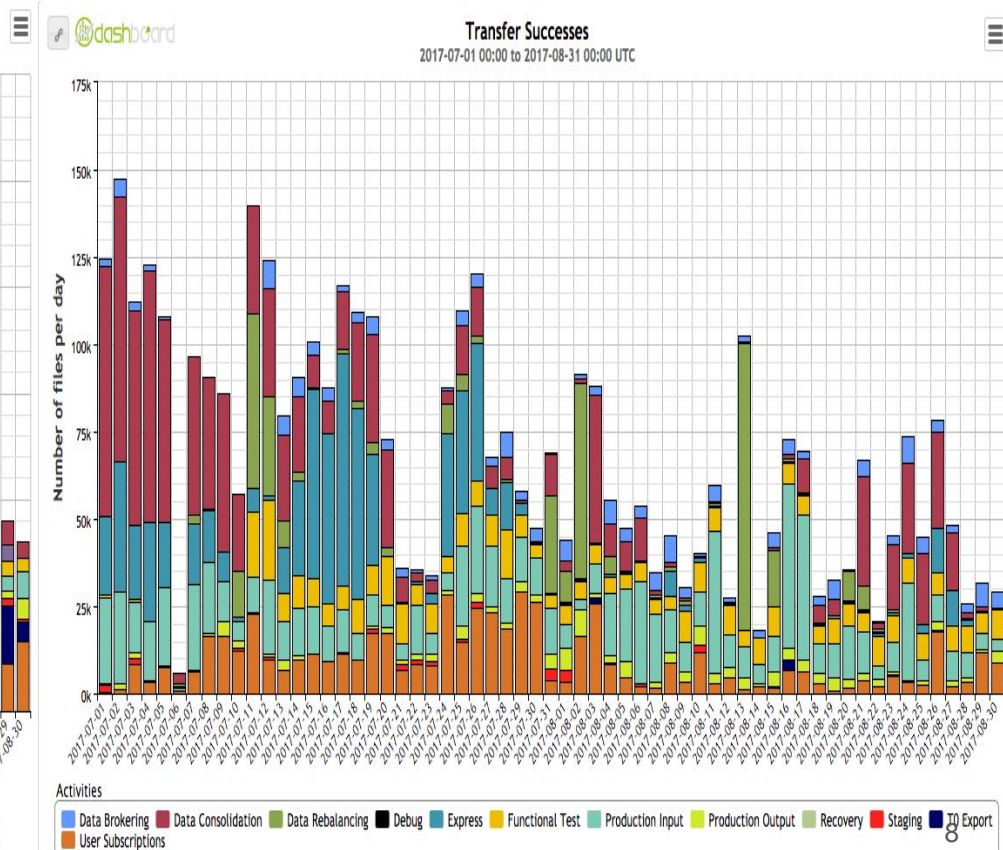
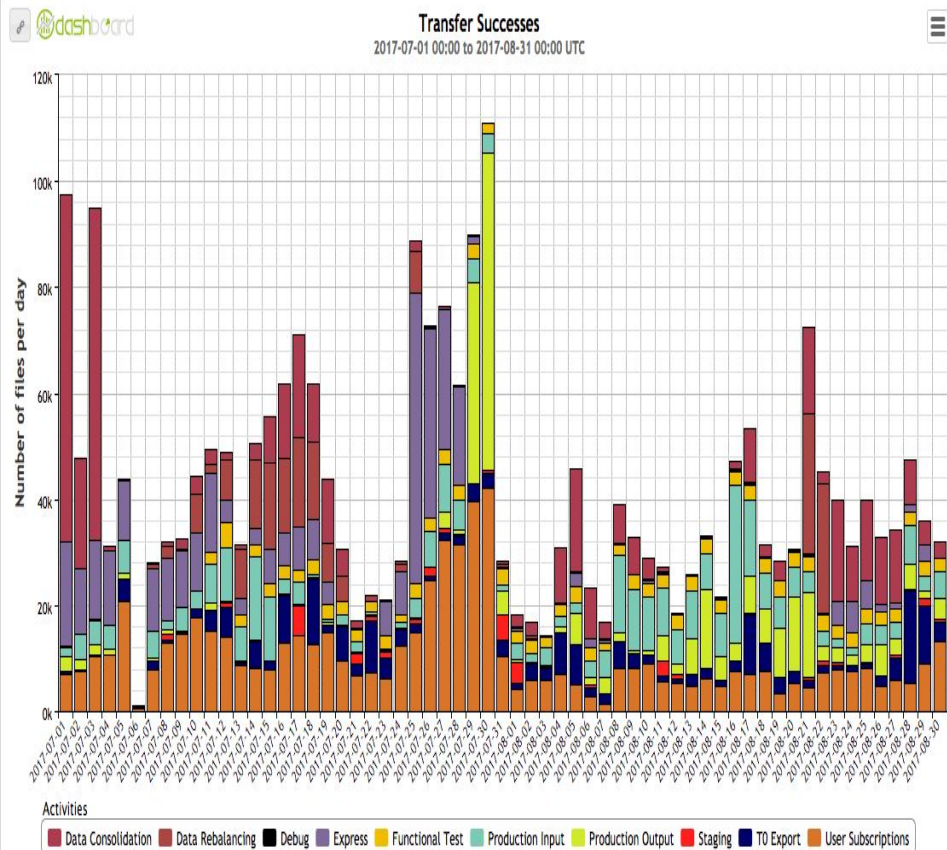
Site movers downloaded files (BNL)



# TRIUMF FTS transfer volumes per day (ingress/egress)



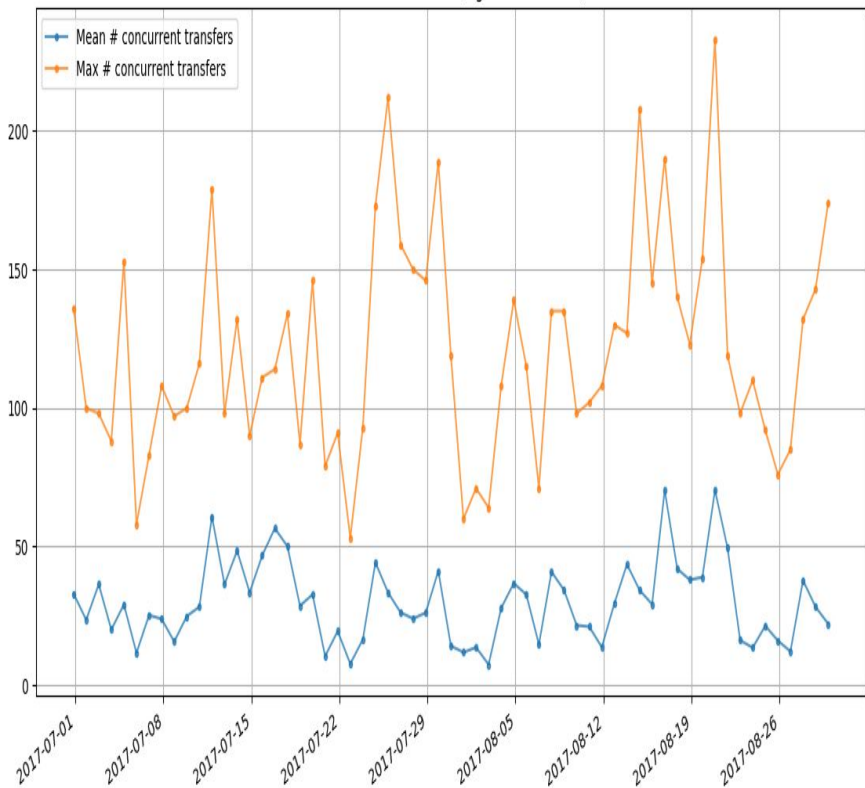
# TRIUMF FTS transfers files per day (ingress/egress)



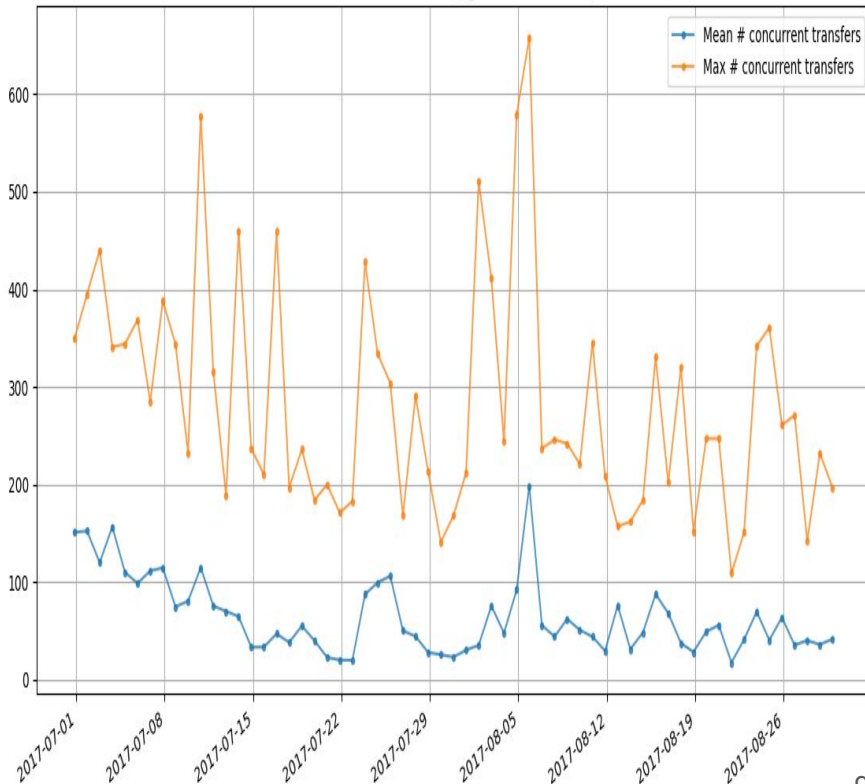


# TRIUMF concurrent transfers (ingress/egress)

Concurrent Transfers (Ingress to TRIUMF)

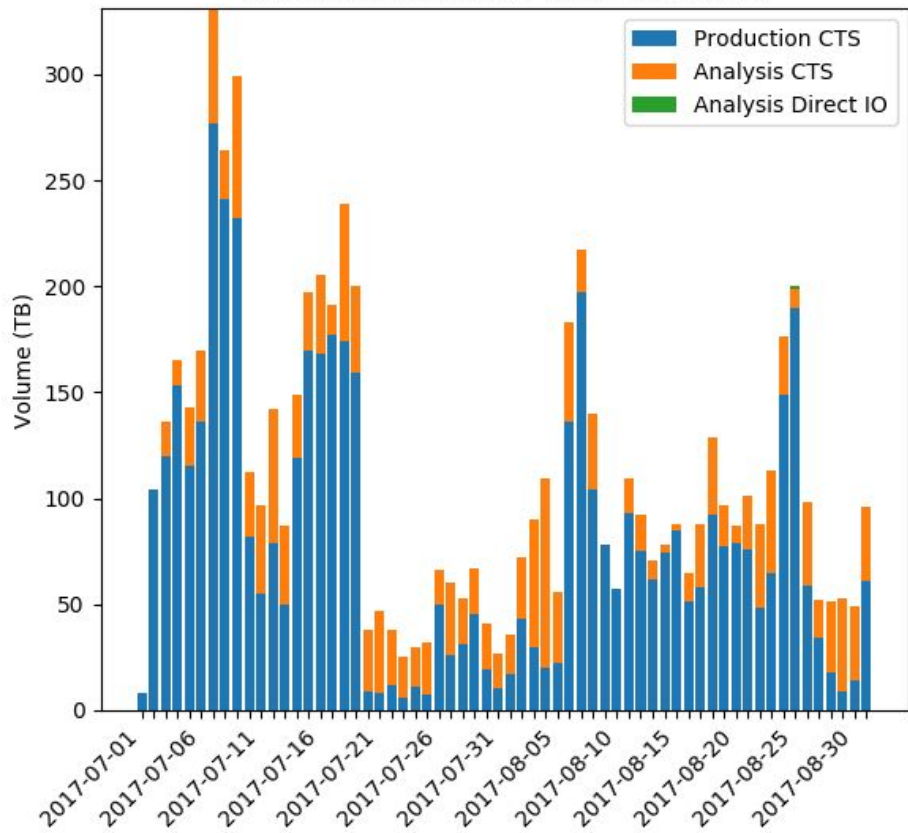


Concurrent Transfers (Egress from TRIUMF)

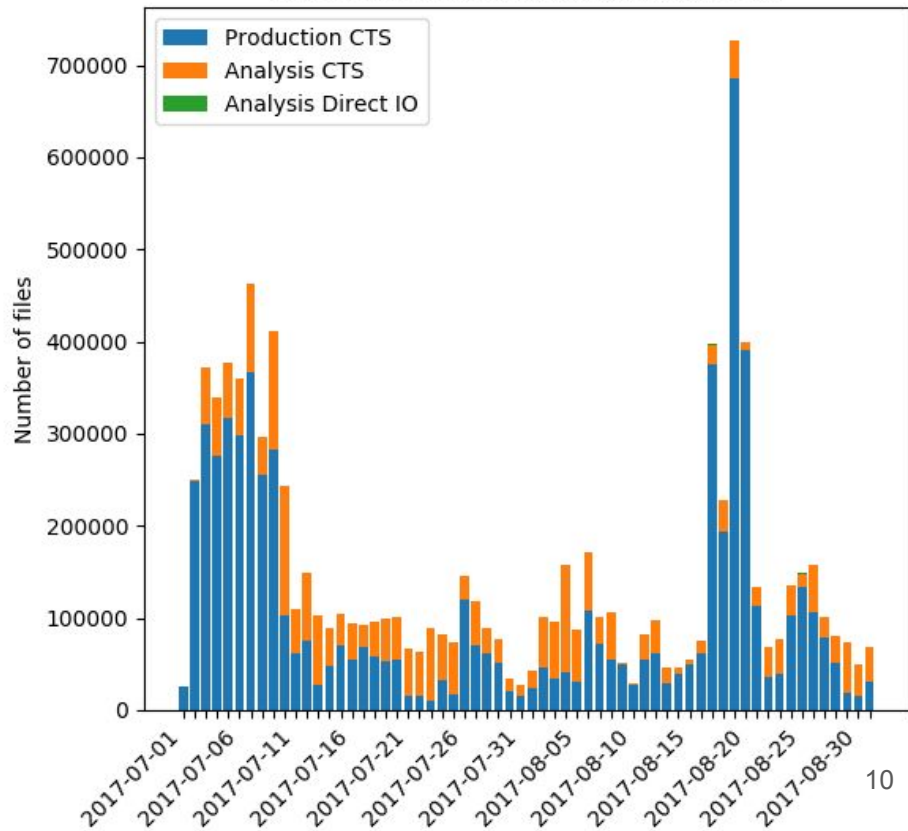


# TRIUMF site movers volume & files per day

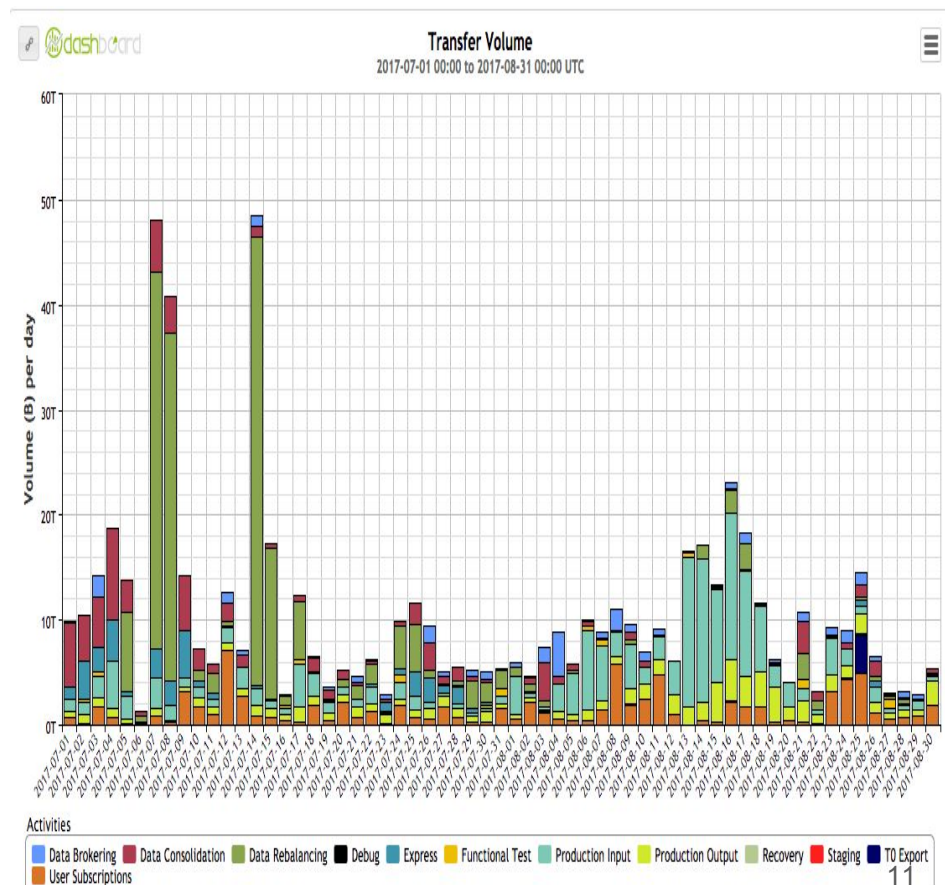
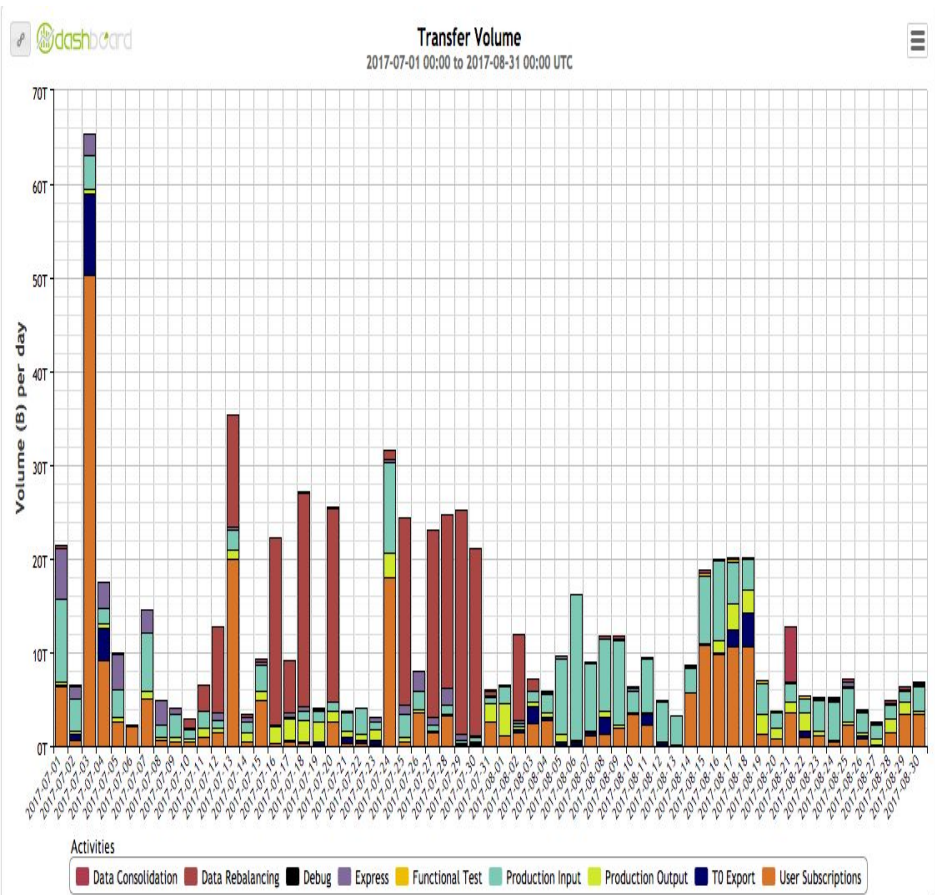
Site movers download volume (TRIUMF)



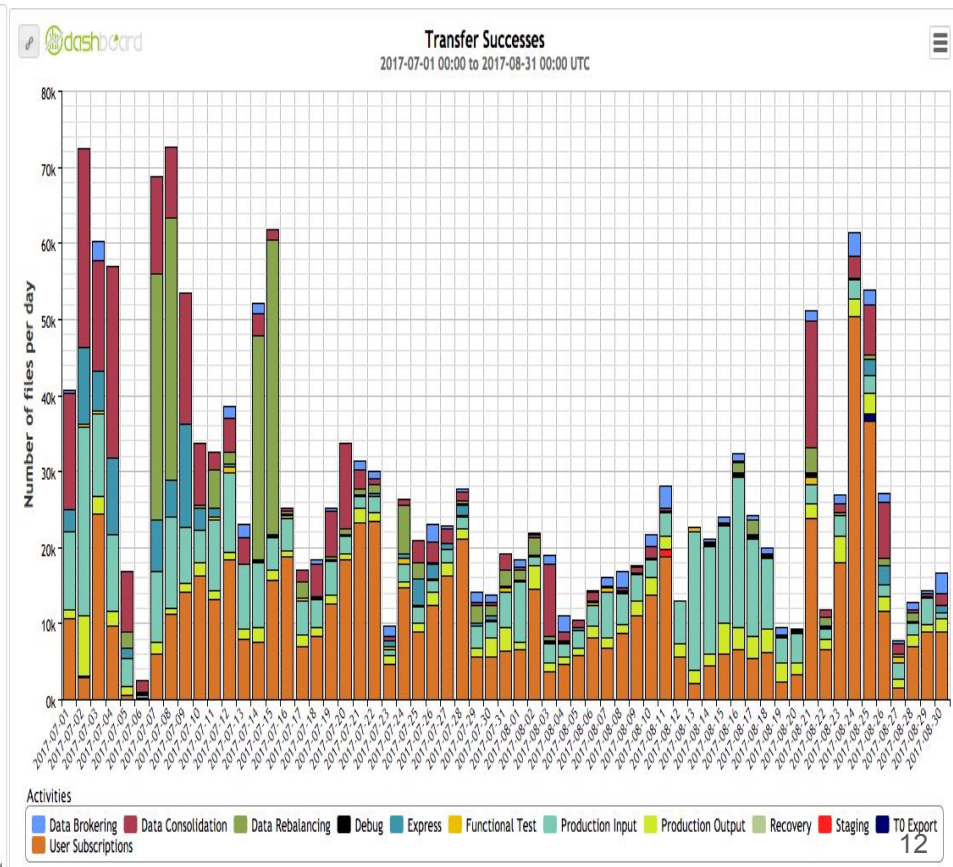
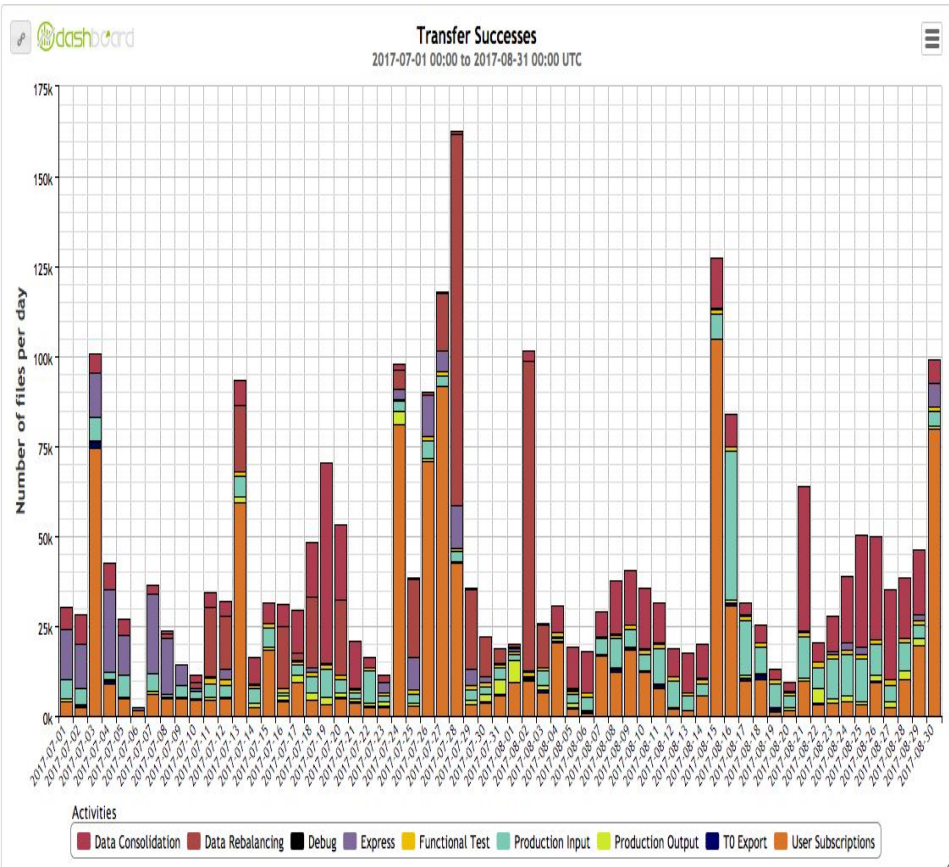
Site movers downloaded files (TRIUMF)



# DESY-HH FTS transfer volumes per day (ingress/egress)

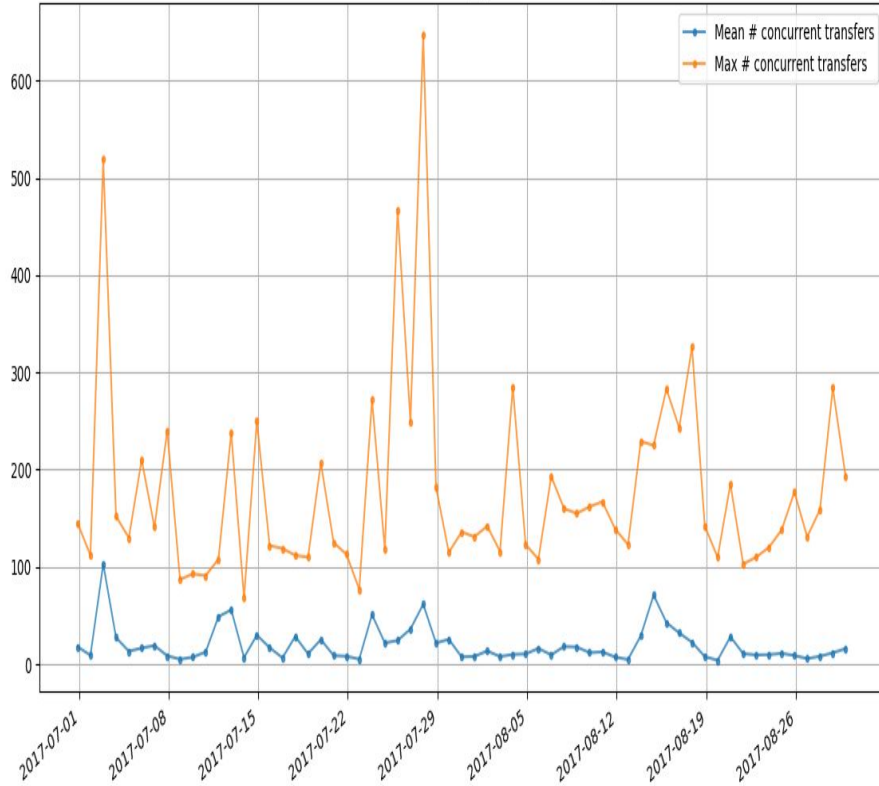


# DESY-HH FTS transfers files per day (ingress/egress)

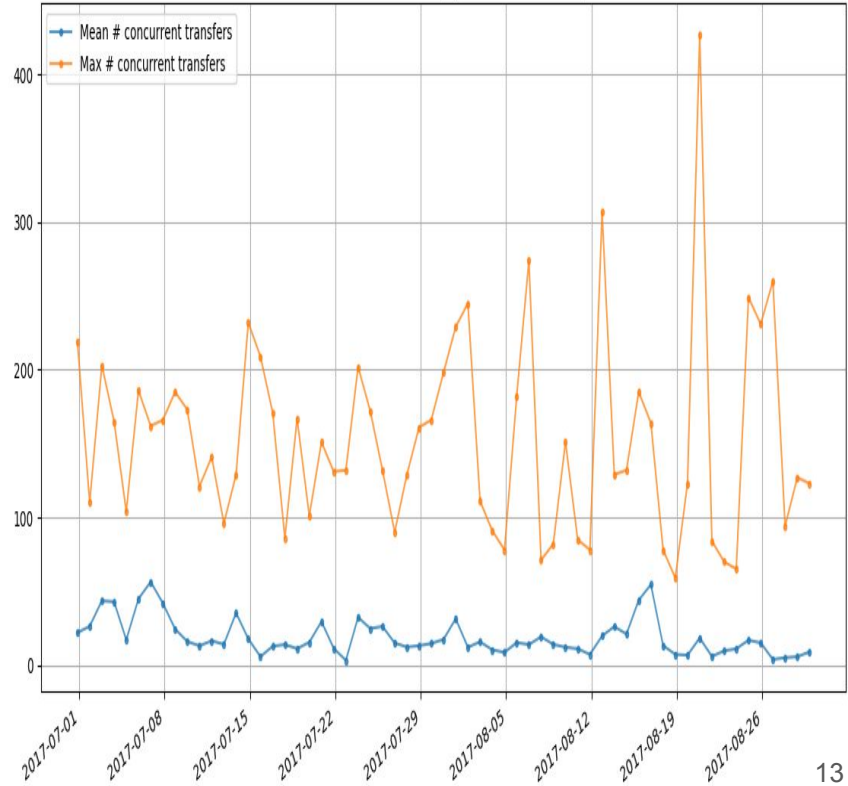


# DESY-HH concurrent transfers (ingress/egress)

Concurrent Transfers (Ingress to DESY-HH)

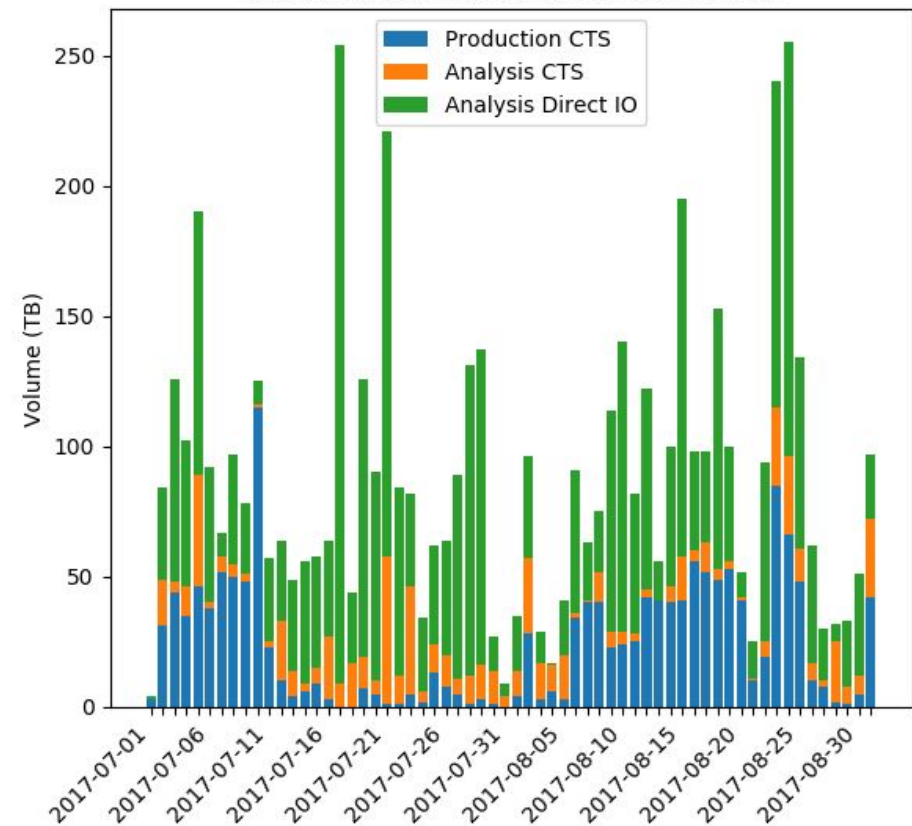


Concurrent Transfers (Egress from DESY-HH)

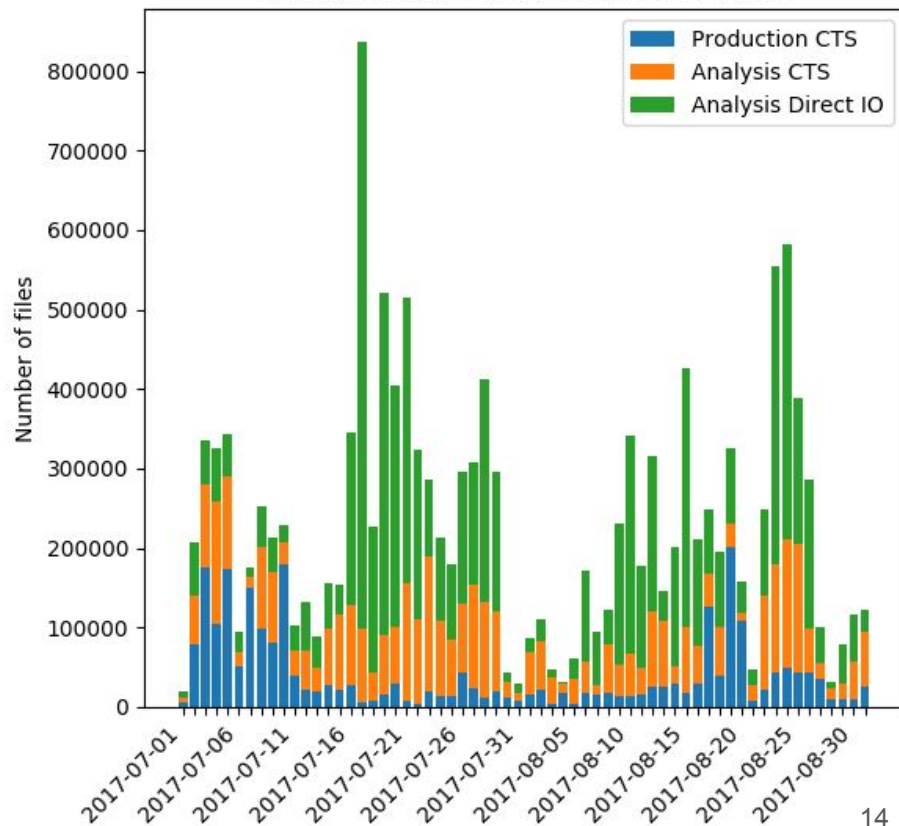


# DESY-HH site movers volume & files per day

Site movers download volume (DESY-HH)



Site movers downloaded files (DESY-HH)



# How to get this data?

- FTS Transfer volume and files is easily accessible through the DDM dashboard:
  - Old dashboard: <http://dashb-atlas-ddm.cern.ch/ddm2/>
  - New dashboard using the new monitoring infrastructure (currently under active development): <https://monit-grafana.cern.ch/dashboard/db/atlas-ddm-dashboard?orgId=17>
- Site mover activity also in those dashboard (activity: Production/Analysis Upload/Download). Direct IO missing there but could be added.
- Concurrent transfers more difficult as there are no dashboard for this. Had to go to the Rucio events archive on HDFS and then use custom scripts to calculate the parallel transfers.