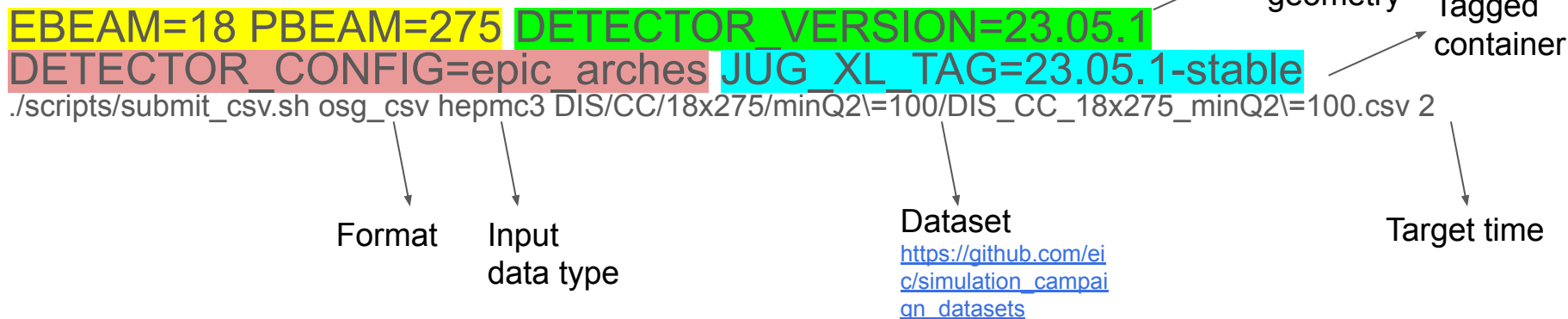


General Updates for May 2023 Train

Sakib Rahman
11 May 2023

Conductor's Log Book

- Created account on Open Science Grid and subscribed to EIC project
- Connected to osg login node login05.osgconnect.net
- Cloned https://github.com/eic/job_submission_condor
- Within the job submission folder the following script is executed for each dataset provided in the form of csv files



- Jobs when submitted goes into idle queue before running. Failed jobs go into hold queue. Use `hold_review_and_release.sh` to monitor reasons for common job failures and resubmit. To release all jobs on hold at once use `condor_release <username>`
- Running both `epic_arches` and `epic_brycecanon` in May train. Should be the case until we converge to a single config.

Common job failure modes

Type 1:

```
[JEventProcessorPODIO] [error] Omitting PODIO collection 'EcalBarrelSciGlassClusters' due to exception: Could not find JFactoryT<edm4hep::SimCalorimeterHit> with tag=EcalBarrelSciGlassHits.  
[JEventProcessorPODIO] [error] Omitting PODIO collection 'EcalBarrelSciGlassRawHits' due to exception: Could not find JFactoryT<edm4hep::SimCalorimeterHit> with tag=EcalBarrelSciGlassHits.  
[JEventProcessorPODIO] [error] Omitting PODIO collection 'EcalBarrelSciGlassRecHits' due to exception: getRefChild: Failed to find child with name: EcalBarrelSciGlassHits  
Map contains 28 elements: {B0EcalHits  
[JEventProcessorPODIO] [error] Omitting PODIO collection 'EcalBarrelSciGlassTruthClusters' due to exception: Could not find JFactoryT<edm4hep::SimCalorimeterHit> with tag=EcalBarrelSciGlassHits.  
[JEventProcessorPODIO] [error] Omitting PODIO collection 'HcalEndcapPClusters' due to exception: Could not find JFactoryT<edm4hep::SimCalorimeterHit> with tag=HcalEndcapPHits.  
[JEventProcessorPODIO] [error] Omitting PODIO collection 'HcalEndcapPMergedHits' due to exception: Could not find JFactoryT<edm4hep::SimCalorimeterHit> with tag=HcalEndcapPHits
```

Accompanied by a crash message

Cause: Jana2 'feature' that we have to use to support multiple different geometry configurations. EICrecon doesn't have a way to specify the dependency graph, that's all compiled in. So, we have to use the absence of certain hit collections, and failures reading them, to disable branches in the reconstruction chain.

Type 2:

```
Transfer output files failure at the execution point while sending files to access point login05. Details: Error from slot1_1@glidein_1573250_225910104@elf07.beocat.ksu.edu: STARTER at 10.5.36.7 failed to send file(s) to <192.170.231.218:9618>: : FILETRANSFER:1:Multi-file plugin at /tmp/glide_CVE0iD/main/condor/libexec/curl_plugin did not produce valid response; missing TransferError for failed transfer|FILETRANSFER:1:Multi-file plugin at /tmp/glide_CVE0iD/main/condor/libexec/curl_plugin did not produce valid response; missing TransferError for failed transfer|FILETRANSFER:1:Multi-file plugin at /tmp/glide_CVE0iD/main/condor/libexec/curl_plugin did not produce valid response; missing TransferError for failed transfer|FILETRANSFER:1:non-zero exit (1) from /tmp/glide_CVE0iD/main/condor/libexec/curl_plugin. |Error: File transfer plugin /tmp/glide_CVE0iD/main/condor/libexec/curl_plugin exited unexpectedly without producing an error message ( URL file = https://eics3.sdcc.bnl.gov:9000/eicetest/EPIC/LOG/23.05.1/epic_brycecanon/DIS/CC/5x41/minQ2%3D100/pythia8CCDIS_5x41_minQ2%3D100_beamEffects_xAngle%3D-0.025_hiDiv_1.0045.eicrecon.prmon.txt?... )||FILETRANSFER:1:non-zero exit (1) from /tmp/glide_CVE0iD/main/condor/libexec/curl_plugin. |Error: File transfer plugin /tmp/glide_CVE0iD/main/condor/libexec/curl_plugin exited unexpectedly without producing an error message ( URL file = https://eics3.sdcc.bnl.gov:9000/eicetest/EPIC/LOG/23.05.1/epic_brycecanon/DIS/CC/5x41/minQ2%3D100/pythia8CCDIS_5x41_minQ2%3D100_beamEffects_xAngle%3D-0.025_hiDiv_1.0045.eicrecon.log?... )||FILETRANSFER:1:non-zero exit (1) from /tmp/glide_CVE0iD/main/condor/libexec/curl_plugin. |Error: File transfer plugin /tmp/glide_CVE0iD/main/condor/libexec/curl_plugin exited unexpectedly without producing an error message ( URL file = https://eics3.sdcc.bnl.gov:9000/eicetest/EPIC/RECO/23.05.1/epic_brycecanon/DIS/CC/5x41/minQ2%3D100/pythia8CCDIS_5x41_minQ2%3D100_beamEffects_xAngle%3D-0.025_hiDiv_1.0045.eicrecon.tree.edm4eic.root?... ); SHADOW failed to receive file(s) from <129.130.32.11:34187>  
Code 12 Subcode 1
```

Cause: File transfer to S3 failed

Common job failure modes

Type 3:

mc: <ERROR> Unable to validate source `S3/eictest/EPIC/LOG/CONDOR/osg\_30536420/osg\_30536420\_11202.err`: Object does not exist
mc: <ERROR> Unable to validate source `S3/eictest/EPIC/LOG/CONDOR/osg\_30536420/osg\_30536420\_11202.out`: Object does not exist

Thread model: pthreads

47831027218112:

```
`- JSigHandler::handle_sigsegv(int, siginfo_t*, void*) (0x2b8072eec296)
`- /lib/x86_64-linux-gnu/libc.so.6 (0x2b807366bf90)
`- edm4eic::ReconstructedParticle::~ReconstructedParticle() (0x2b80760a8238)
`- eicrecon::JFactoryPodioT<edm4eic::ReconstructedParticle>::ClearData() (0x2b8076c84790)
`- JFactorySet::Release() (0x2b8072e38eb2)
`- JEventSourceArrow::execute(JArrowMetrics&, unsigned long) (0x2b8072e5fdb8)
`- JWorker::loop() (0x2b8072e654d7)
`- /usr/lib/x86_64-linux-gnu/libstdc++.so.6 (0x2b80734c84a3)
`- /lib/x86_64-linux-gnu/libc.so.6 (0x2b80736b8fd4)
`- __clone (0x2b8073738820)
```

[2023-05-11 08:57:05.684] [prmon] [warning] Child process 114 had non-zero return value: 139

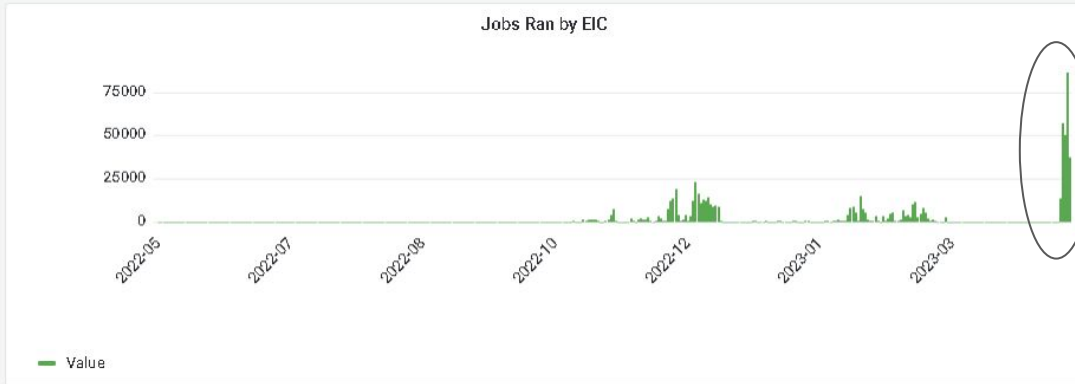
Cause: Segfault during reconstruction. Exact source is not clear. When this happens, the error and log files are not transferred to S3. Log can still be found in local job_submission_condor folder .

Type 4:

Eicweb migration caused temporary interruption in job submission.

Comparison with Past Campaign ([GRACC Dashboard](#))

✓ How many jobs has EIC ran on the OSPool?

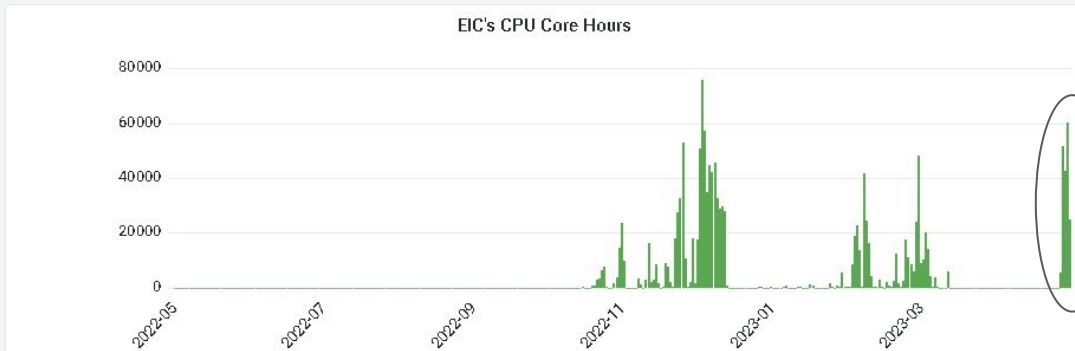


May 2023
Campaign

Time per event is longer than last campaign

Without changing job duration, a lot more jobs need to be run to get similar statistics. Calculations are automatically done by CI.

✓ How many compute resources has EIC been using?

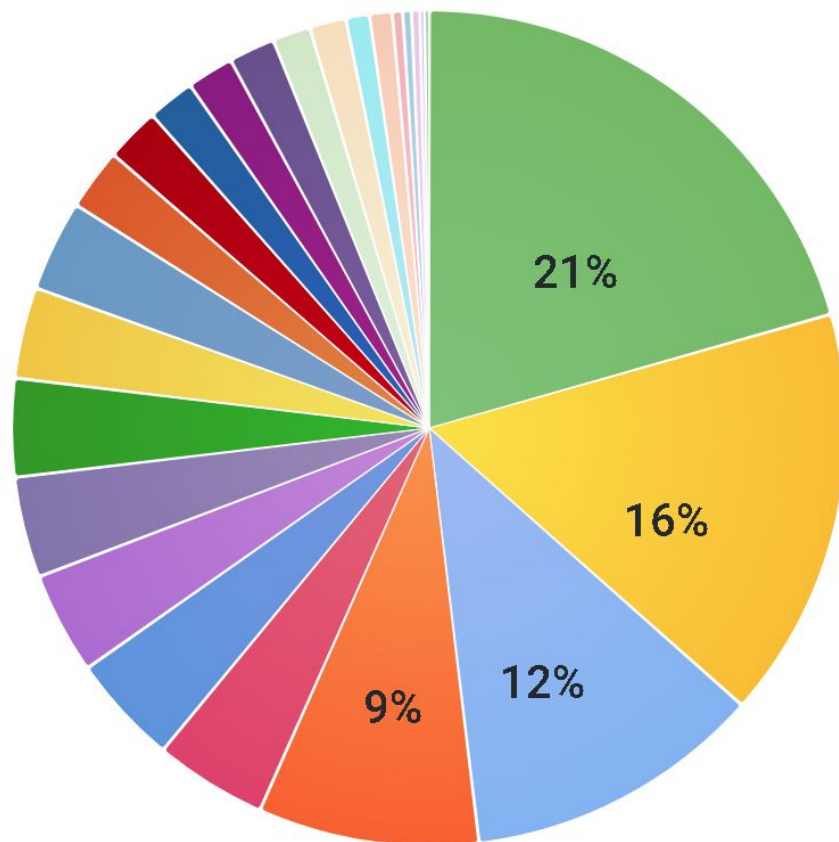


May 2023
Campaign

CPU usage per day is similar to last campaign. Could be better.

Resource Locations

Where has EIC been running their jobs?



- University of Chicago
- University of California San Diego
- University of Connecticut
- University of Wisconsin
- University of Alabama
- University of Colorado
- University of Notre Dame
- Brookhaven National Laboratory
- Great Plains Network
- Lancium
- Clemson University
- Florida State University
- Fermi National Accelerator Laboratory
- New Mexico State University
- Purdue University
- Indiana University
- Syracuse University
- Southern Illinois University Edwardsville
- Georgia Institute of Technology
- University of Arkansas at Little Rock
- University of Southern California
- West Texas A&M University
- University of Washington
- Wayne State University
- University of Michigan

Datasets run so far

```
./mc config host add S3 https://eics3.sdcc.bnl.gov:9000 eicS3read eicS3read [Only needs to be done once]
```

The folders evgen, full, log and reco contain the root files produced during the train.

```
[rahmans1@login05 bin]$ ./mc ls S3/eicetest/EPIC/  
[2023-05-11 11:18:39 CDT] 0B Campaigns/  
[2023-05-11 11:18:39 CDT] 0B EVGEN/  
[2023-05-11 11:18:39 CDT] 0B FULL/  
[2023-05-11 11:18:39 CDT] 0B LOG/  
[2023-05-11 11:18:39 CDT] 0B RECO/
```

So far the datasets that have been submitted are DIS: NC and CC for both arches and brycecanyon.

```
[rahmans1@login05 bin]$ ./mc ls S3/eicetest/EPIC/RECO/23.05.1/epic_brycecanyon/DIS/  
[2023-05-11 11:25:20 CDT] 0B CC/  
[2023-05-11 11:25:20 CDT] 0B NC/  
[rahmans1@login05 bin]$ ./mc ls S3/eicetest/EPIC/RECO/23.05.1/epic_brycecanyon/  
[2023-05-11 11:25:27 CDT] 0B DIS/  
[2023-05-11 11:25:27 CDT] 0B EXCLUSIVE/
```

Current view of condor queue (condor_q)

```
-- Schedd: login05.osgconnect.net : <192.170.231.218:9618?... @ 05/11/23 11:28:04
OWNER  BATCH_NAME                                SUBMITTED   DONE    RUN    IDLE   HOLD   TOTAL   JOB_IDS
rahmans1 23.05.1/epic_brycecanyon/DIS_CC_5x41_minQ2=100-2 5/7 11:35 15683 22      -    116  41100 30536420.873-15812
rahmans1 23.05.1/epic_brycecanyon/DIS_NC_5x41_minQ2=100-2 5/7 11:41 22222 21      -    107  46512 30536429.1613-22346
rahmans1 23.05.1/epic_brycecanyon/DIS_NC_5x41_minQ2=10-20 5/7 12:48 18657 34      -    109  31583 30536512.5555-18790
rahmans1 23.05.1/epic_brycecanyon/DIS_NC_5x41_minQ2=1-202 5/7 16:13 16819 406     8     86  20880 30536817.694-17318
rahmans1 23.05.1/epic_brycecanyon/DIS_NC_18x275_minQ2=1-2 5/7 16:18 7655 467     3    30  15498 30536834.5876-8154
rahmans1 23.05.1/epic_brycecanyon/DIS_NC_18x275_minQ2=10- 5/7 16:21 9763 454     3    43  25212 30536844.7707-10262
rahmans1 23.05.1/epic_brycecanyon/DIS_NC_18x275_minQ2=100 5/7 16:23 9840 472     5    23  27912 30536849.7450-10339
rahmans1 23.05.1/epic_brycecanyon/DIS_NC_18x275_minQ2=100 5/7 20:50 10449 450    12   38  43800 30537272.7354-10948
rahmans1 23.05.1/epic_brycecanyon/DIS_NC_10x100_minQ2=1-2 5/7 21:30 9661 438    34   28  10962 30537332.2000-10160
rahmans1 23.05.1/epic_brycecanyon/DIS_NC_10x100_minQ2=10- 5/7 21:32 15303 408    59   33  24392 30537336.9172-15802
rahmans1 23.05.1/epic_brycecanyon/DIS_NC_10x100_minQ2=100 5/7 21:32 13869 213    97   12  22728 30537337.8878-14190
rahmans1 23.05.1/epic_brycecanyon/DIS_NC_10x100_minQ2=100 5/7 21:33 15714 38     95    7  35088 30537341.1213-15853
rahmans1 23.05.1/epic_brycecanyon/DIS_NC_10x275_minQ2=100 5/7 22:02 9355 353     8    13  36810 30537404.6286-9808
rahmans1 23.05.1/epic_brycecanyon/DIS_NC_10x275_minQ2=100 5/7 22:06 8444 338    100   5  26790 30537410.6003-8886
rahmans1 23.05.1/epic_brycecanyon/DIS_NC_10x275_minQ2=10- 5/7 22:07 8042 147     90   12  24102 30537412.5912-8290
rahmans1 23.05.1/epic_brycecanyon/DIS_NC_10x275_minQ2=1-2 5/7 22:08 5158 77     93    9  13038 30537415.2136-5336
rahmans1 23.05.1/epic_brycecanyon/DIS_NC_5x100_minQ2=1-20 5/8 08:33 3402 8      107   21  12286 30538460.1406-3537
rahmans1 23.05.1/epic_brycecanyon/DIS_NC_5x100_minQ2=10-2 5/8 08:35 3835 8      103   15  15588 30538464.61-3960
rahmans1 23.05.1/epic_brycecanyon/DIS_NC_5x100_minQ2=100- 5/8 08:36 4719 2      110   35  25866 30538468.1688-4865
rahmans1 23.05.1/epic_brycecanyon/DIS_NC_5x100_minQ2=1000 5/8 08:49 4116 3      107   12  25866 30538491.2823-4237
rahmans1 23.05.1/epic_brycecanyon/Son100-2023-05-08T09:15 5/8 09:15 3240 2      107   12  11088 30538526.1472-3360
rahmans1 23.05.1/epic_brycecanyon/Son41-2023-05-08T09:16- 5/8 09:16 3471 1      111    1  6873 30538529.1550-3582
rahmans1 23.05.1/epic_brycecanyon/DIS_CC_5x100_minQ2=100- 5/8 13:44 3270 1      112    8  23256 30538918.1089-3389
rahmans1 23.05.1/epic_brycecanyon/DIS_CC_5x100_minQ2=1000 5/8 13:45 2409 1      126    6  24594 30538919.860-2540
rahmans1 23.05.1/epic_brycecanyon/DIS_CC_18x275_minQ2=100 5/8 13:55 2386 1      101    34686 30538939.415-2486
rahmans1 23.05.1/epic_brycecanyon/DIS_CC_18x275_minQ2=100 5/8 13:56 2948 1      139    40002 30538941.112-3086
rahmans1 23.05.1/epic_brycecanyon/DIS_CC_10x275_minQ2=100 5/8 16:38 2477 1      118    66672 30539116.116-2594
rahmans1 23.05.1/epic_brycecanyon/DIS_CC_10x275_minQ2=100 5/8 16:55 3524 1      121    67416 30539135.294-3612
rahmans1 23.05.1/epic_brycecanyon/DIS_CC_10x100_minQ2=100 5/8 17:13 3778 1      119    53574 30539163.127-3894
rahmans1 23.05.1/epic_arches/DIS_CC_5x41_minQ2=100-2023-0 5/8 19:53 4172 1      121    41100 30539366.370-4284
rahmans1 23.05.1/epic_arches/DIS_NC_5x41_minQ2=100-2023-0 5/8 19:56 4361 1      126    46512 30539370.648-4475
rahmans1 23.05.1/epic_arches/DIS_NC_5x41_minQ2=10-2023-05 5/8 20:01 5682 1      123    31583 30539375.474-5803
rahmans1 23.05.1/epic_arches/DIS_NC_5x41_minQ2=1-2023-05 5/8 20:03 4826 1      124    20880 30539378.2472-4949
rahmans1 23.05.1/epic_brycecanyon/DIS_NC_5x100_minQ2=1-20 5/8 21:29 1925 1      122    24667 30539466.245-2046
rahmans1 23.05.1/epic_brycecanyon/DIS_NC_5x100_minQ2=10-2 5/8 21:32 1387 1      107    31254 30539468.108-1493
rahmans1 23.05.1/epic_arches/DIS_NC_5x100_minQ2=10-2023-0 5/8 21:45 896 1      112    31254 30539486.279-1007
rahmans1 23.05.1/epic_arches/DIS_NC_5x100_minQ2=1-2023-05 5/8 21:46 158 1      102    24667 30539487.57-259
rahmans1 23.05.1/epic_arches/DIS_NC_5x100_minQ2=100-2023- 5/8 21:48 57 1      108    52176 30539489.0-163
rahmans1 23.05.1/epic_arches/DIS_NC_5x100_minQ2=1000-2023 5/8 21:50 72 1      103    52176 30539495.0-174
rahmans1 23.05.1/epic_arches/DIS_NC_18x275_minQ2=1-2023-0 5/9 07:18 897 1      122    15498 30539560.16-1018
rahmans1 23.05.1/epic_arches/DIS_NC_18x275_minQ2=10-2023- 5/9 07:19 665 1      123    25212 30539561.21-787
rahmans1 23.05.1/epic_arches/DIS_NC_18x275_minQ2=100-2023 5/9 07:20 603 1      118    27912 30539562.9-720
rahmans1 23.05.1/epic_arches/DIS_NC_18x275_minQ2=1000-202 5/9 07:21 542 1      118    43800 30539563.12-659
rahmans1 23.05.1/epic_arches/DIS_NC_10x275_minQ2=1000-202 5/9 07:23 463 1      109    36810 30539564.3-571
rahmans1 23.05.1/epic_arches/DIS_NC_10x275_minQ2=100-2023 5/9 07:24 169 1      106    26790 30539565.1-274
rahmans1 23.05.1/epic_arches/DIS_NC_10x275_minQ2=10-2023- 5/9 07:24 100 1      100    24102 30539566.0-99
rahmans1 23.05.1/epic_arches/DIS_NC_10x275_minQ2=1-2023-0 5/9 07:25 100 1      100    13038 30539567.0-99
rahmans1 23.05.1/epic_arches/DIS_NC_10x100_minQ2=1-2023-0 5/9 07:26 100 1      100    10962 30539568.0-99
rahmans1 23.05.1/epic_arches/DIS_NC_10x100_minQ2=10-2023- 5/9 07:27 100 1      100    24392 30539569.0-99
```

To Do

1) Update documentation for new train conductors on job_submission_condor

 feature-update... ▾

job_submission_condor / docs /

Go to file

This branch is 4 commits ahead of main.

 rahmans1

Update campaign_setup_instructions.md

ab7d088 yesterday  History

..



campaign_setup_instructions.md

Update campaign_setup_instructions.md

yesterday



faq.md

Create faq.md

yesterday

2) Need to add a requirement to the job submission that the node is an x86_64_v2 chip

3) How do we get charter/taxi requests?