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Computing Team

ECCE Simulation Workshop
May 21 2021

EIC/ECCE Computing Resources

For more information:
J. Lauret Computing Report at EICUG, 5/20/2021

Storage

- Pledged resources

BNL	1 PB
JLab	1 PB

Availability:

BNL (physical disk in place. Details on cvmfs/singularity)

JLab (>= 1 month)

Compute

- Pledged resources

BNL	2k cores - 4 months
JLab	2k cores - 4 months
OSG	4k cores

Availability:

now-ish

- ***All pledged resources are for "EIC" and not for specific proto-collaborations***
  - How to fairly allocate between EIC, ATHENA(IP6), CORE, … ?
    - UG formation of Computing Coordination Group (CCG)
  - How to implement quotas?
    - start with directory structure and "first-come-first-served" access

Access

- Compute
  - Access to the bulk of BNL and JLab resources will likely be limited to a few people so they can be rationed and we can ensure minimal duplication
    - Requests should be sent through the *Simulation WG*
    - https://wiki.bnl.gov/eicug/index.php/ECCE_Simulations_Working_Group
  - Access to the OSG opportunistic cycles will likely be open, but limited by access to the large storage resource
  - “Long term” plan is to try and make system where all campaigns can be submitted via OSG in order to get fastest turnaround time
    - How to handle writing to distributed storage is an issue

- Storage
  - Write access will likely be limited to a few people (exact model has not been discussed)
  - Read access to entire 1PB+1PB storage will be available to those with accounts at BNL*, JLab
  - Global read access will be made available to only certain files (~100TB/site)
    - S3 for BNL
    - xrootd for JLab

best guess at the moment

Accounts

- Some work has been going on to federate BNL and JLab access
  - Federated access to account at one lab can get you access to the other (Jerome, Graham)
  - Many details worked out, but many more needed to make this a reality
  - First items will be communications/social media systems
  - Compute and storage resources will come later (too late for us to plan on)

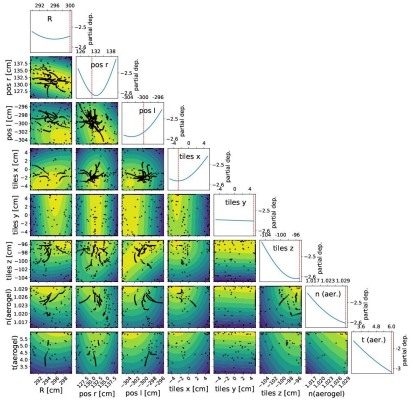
- Users may apply for offsite (computer access only) accounts at each of BNL and JLab
  - I don’t recommend doing this now if you are not already a user at both BNL and JLab
    - May not be necessary due to global access plan for the most relevant files
    - You’ll have limited access to the large EIC resources even with an account
  - ***Please do not execute large campaigns*** (i.e. reading through >=100TB of data) ***without coordinating with the Simulation WG***

Computing Resources

- First bi-weekly Software & Computing meeting was on May 12th (2nd one is this week)
  - Joe Osborn chair
  - Two talks:
    - PanDA for EIC (system for job submission, Kolja Kauder)
    - Data Cataloging (Maxim Potekhin)
      - follow-up interaction with Simulations WG

- OSG + S3 storage
  - Identified contacts at BNL (Tejas Rao) and OSG (Pascal Paschor)
  - Met on Friday last week
    - Clarified what OSG provides and what we must provide in container/cvmfs
  - Will continue to pursue in order to prototype multi-institutional distributed architecture
    - Not necessarily critical for ECCE proposal simulations
- Access to simulated data sets
  - BNL - S3 (object store), JLab - xrootd (seekable)
  - Smaller (~10TB) data sets can be made widely available
- Skeleton Computing Plan document created in Overleaf
  - Anyone wishing to contribute to the computing plan should contact the Computing Team conveners: Cristiano Fanelli <cfanelli@mit.edu>, David Lawrence <davidl@jlab.org>

AI Working Group



- Kick-off meeting May 14th with core people (Brunel, CNU, MIT, Regina)
  - Will Phelps(CNU) chair
  - Introduction, skills and expertise of each group
    - Discussion on optimization techniques with AI and identified strategies
  - Cristiano reported on meetings in the past weeks with PID, tracking, far forward
    - Identified potential tasks for the AI WG
    - Discussion on dimensionality of design and objectives spaces for each task
    - Validation and benchmarking
    - Resources needed and documentation in the computing plan
    - Reminded first AI workshop for EIC (AI4EIC) on September 2021 - potentially well aligned with these activities
  - Will start regular meetings (next Thursday)
    - Interaction with Detector WGs