



HEP-CCE

Adam Lyon

CSAID Roadmap Meeting

High Energy Physics - Center for Computational Excellence

HEP-CCE

- Collaboration between Fermilab, Argonne, Brookhaven and Berkeley lab
- PIs are Salman Habib (ANL) and Paolo Calafiura (LBNL)
- My recollection of how this started...
 - ~ 6 years ago... DOE Program Manager Lali Chatterjee set up an “advisory panel” between Rob Roser (FNAL), Salman Habib (ANL), and Peter Nugent (LBNL). Focus on HPC for HEP.
 - Grew into a three year program... HEP-CCE ... R&D on moving HEP to HPC systems
 - Now embarking on new HEP-CCE2 program (5 years or base program)

HEP-CCE ... 2

- Three year program now mostly completed
- Four thrusts
 - **Portable Parallelization Strategies (PPS)**
 - **Fine Grained I/O and Storage (IOS)**
 - Event Generators on HPC
 - Complex Workflows
- For HEP-CCE2, the above are evolving into...
 - Portable Applications and Workflows
 - Storage Optimization
 - Accelerating HEP Simulations
 - Scalable AI/ML on HPC systems

HEP-CCE2

- Do more outreach activities as well
 - Internships
 - Seminars
 - Hackathons
- Fermilab receives ~3 FTE of funding from this program
- Synergistic with CMS, DUNE and other experiments
- Today, you will hear results from the first three years of HEP-CCE and plans for HEP-CCE2

Conclusions

- CCE continues to evolve
- <https://www.anl.gov/hep-cce>