My Introduction

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1

Background and Past Experience:

- *PhD in Computing Applications, at IHEP (2009)*
- *CMS Central Computing (Grid Computing), at CERN (2007-2008)*
- *University of Wisconsin-Madison (2009-2022)*
  - *ATLAS Advance Distributed Computing (2014-2017, 2019-2022)*
- *June 6, 2022, joined BNL NPPS group.*

2

Current Assignments:

- *iDDS developments*
- *PanDA integration system for Rubin*

Background and Past Experience (PhD period)

- **Cluster Computing:**
  - PBS (Torque) source codes analysis and developments.
- **Storage System:**
  - Management, operations and developments on parallel file system Lustre (Lustre source codes analysis).
- **Grid system:**
  - WLCG Grid gatekeep and gridftp source codes analysis.
  - IHEP Grid Tier2 and Certificate Authority (CA) system setup and management.
- **CMS Grid integration:**
  - Grid function tests and integration.
  - CMS production system ProdAgent management and development.
  - CMS production system integration with PhEDEx, ProdRequest, DBS and Tier0.

Background and Past Experience (University of Wisconsin-Madison)

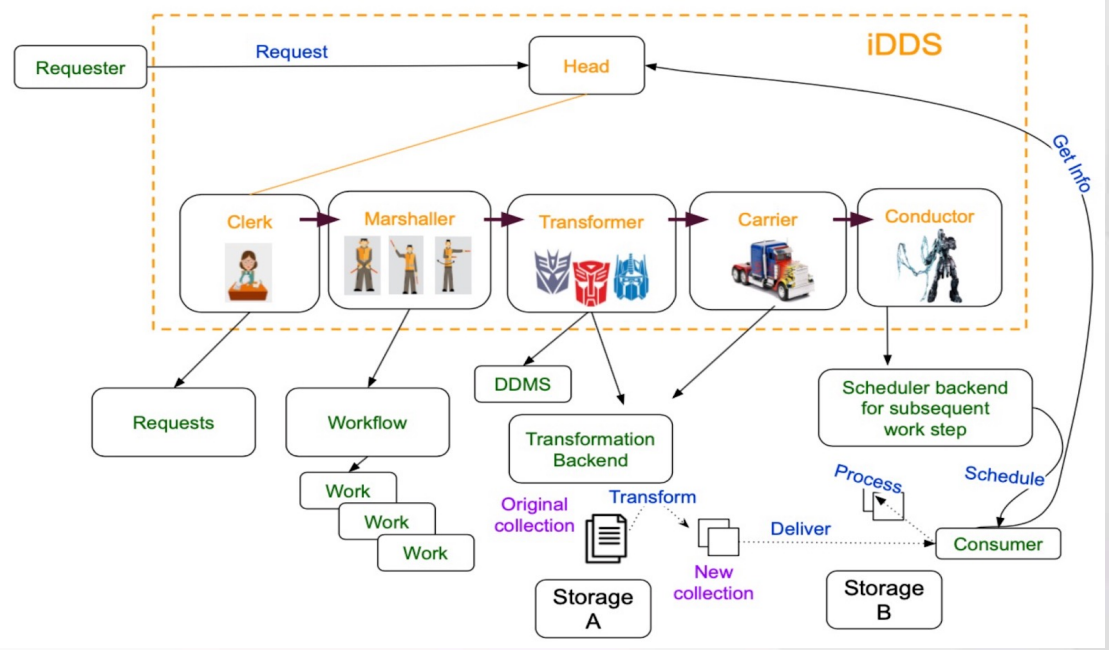
- **UW ATLAS Computing system :**
  - System design, setup and management (cluster, storage, database, Grid, Cloud)
  - Software design and development
    - Automatic data discovery and transformation system (Automatically find some data from DQ2 when LHC data appeared, download data and transform data to D3PD).
    - Distributed job system to schedule jobs to Wisc, Wisc-CERN, SLAC, PanDA and BNL Tier3.
- **Machine learning for HEP analysis:**
  - Machine learning methods hunting and development.
    - BDT, DNN, CNN, RNN, Residual-NN, anomaly detection d and so on.
  - ML application optimization, for example neural networks, to improve the performance for HEP analysis.
- **Quantum machine learning for HEP analysis:**
  - Quantum simulation on HPC (ALCF, MPI based).
  - Quantum hardware exploitations (IBMQ quantum hardware).
  - Quantum machine learning for HEP analysis (QSVM, VQC, QNN, QVAE).

Background and Past Experience (ATLAS ADC)

- **Rucio development**
  - Rucio data transfer subsystem Conveyor development.
  - Rucio protocol for objectstore s3 development.
- **PanDA Pilot and EventService development**
  - Pilot development.
  - EventService on Grid and HPC.
- **iDDS development (ATLAS & IRIS-HEP)**
  - iDDS design and development
  - iDDS use cases: ATLAS & Rubin.

Current Assignments (iDDS)

- **iDDS use cases:**
  - **ATLAS data carousel**
  - **ATLAS HyperParameterOptimization (HPO)**
  - **ATLAS ActiveLearning**
  - **Rubin DAG management**



A RESTful interface processes requests to run fine grained workflows orchestrating the marshalling/transformation/delivery of data and managing multi-step processing, with complex workflow support: DAGs, subdivided workflows, loops, dynamic conditions, and so on.

Current Assignments (PanDA for Rubin)

- **PanDA system for Rubin:**
  - **BPS (Batch Production Service) and PanDA integration (development)**
  - **PanDA system deployment on Kubernetes**
    - **PanDA, iDDS, Harvester, BigMon(Eddie), ActiveMQ, Indigo-IAM**
  - **Integration of Rubin sites to PanDA.**