OpInt framework
Why make an Oplnt framework

- We saw that most of the Oplnt use cases share a lot of common requirements and workflows.
- We decided to collect all common parts of our implementations under the same roof so that anyone can reuse them.
- Sharing common parts minifies development process drastically.
- Everyone still has freedom inside their own app.
Use Cases for current Apps

Jobs Buster Use Case Diagram

Rucio OI Use Case Diagram
FW Requirements

Started gathering requirements in the doc
Current architecture
Django Based microservices approach

Architecture / components diagrams
Shared Implementation examples: DataLoaders

- Everybody needs to access data from various data sources.
- We build an abstract data loader that offers a structure for all data loaders to follow and caching out of the box.
- Inheriting from that we have implemented a base HDFS loader.
  - Given the needed configuration the HDFS loader can pull data from any Hadoop cluster
  - This is used as base i.e. for FTSDataLoader in Rucio OpInt app app.
Shared Implementation examples: Scheduler

- Everybody needs to be able to schedule various tasks.
- We build a scheduler and an abstract task that every app can use.
- Data fetching, model training etc run periodically as scheduled tasks.
- Every task is configured separately and can be switched on or off and run on demand if needed.
Current schema example (Core + RucioOpint parts)
Benefits of using OpInt framework

- Data collection becomes easier using our DataLoader
- Scheduled tasks are supported out of the box
- Rest APIs are also easy to be created and come with automatic documentation testing interfaces and filtering/sorting etc.
- Soon we will incorporate the ML core app which will host all the ML algorithm implemented by various people in our community. Each app can use the algorithm of its choice for the app specific workflows.
Links

- Github page: [https://github.com/operationalintelligence/opint-framework](https://github.com/operationalintelligence/opint-framework)
- Documentation will be created soon