IPHC contribution to Belle II/Dirac

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cnrs

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IPHC facility in short

- **IPHC is a CNRS/University of Strasbourg multidisciplinary laboratory (ethology, high energy and nuclear physics, biology and radiology applications)**
- **It hosts a computing facility that is:**
  - **T2 for LHC experiments (CMS and Alice**
  - **Belle II site since 2015, processed 10M HS06 in 2018 and 5M HS06 in 2019 (0.6%) (and there is room for more)**
  - **Other non LHC-VOs**

Ressources

- Local network 80Gb/s, ipv6
- ~3000 Xeon cores, GPUs
- 3PB disk storage
- Tape archive (no staging for now) max capacity of 23Po

Goals for Dirac in general

- **We entered the Dirac collaboration as most of our non-LHC users are relying on Dirac for job submission.**
- **So we wanted:**
  - **Ensure bugs would be fixed if we needed it**
  - **Add features our users need:**
    - **Multicore jobs**
    - **MPI jobs**
    - **GPU**

Goals for Belle II

- **As partner of the Belle II community, we were also invited to participate in Dirac for Belle II development**
- **For now, we’re taking Task 27, which is about the ability to instantiate a custom (usually newer) instance of Dirac in a Singularity container from the host Dirac job, so that Belle II can use its OS and Dirac version regardless of the site current update status**

Current status

- **Started to work on SL6 with Dirac 6.x**
- **I don’t want my work to be obsolete even before actually started**
- **Moving to CentOS7 / Dirac 7.x**
- **Some troubles to get a working testbed, trying to modify the containerized version of Dirac sitting in the current Git repository.**
- **In particular, it seems that the meaning of the “setup” parameter in install.cfg has changed a way I can’t understand yet.**
- **Tasks list (as Ueda wrote)**
  - **Task 1 and 2 is what I’m currently struggling with**
  - **Task 3 and 4 are rather easy assuming installation of gBasf2 on CC7 is.**