

8. Central Analysis

F-d. DØRACE

DØRACE setup consists of Regional Analysis Centers (RAC) that holds 10-20% of raw and DST data set, along with 100% of Thumbnail data set for the users within its network sensible geographic location and institutional analysis stations (IAS) that provide analysis cpu and processing services within the given institutional network. The DØRACs are required to provide the following services:

- Code Distribution Services
- Batch Processing Services
- Data Delivery Services
- Data Reprocessing Services
- Database access services
- MC Production and Processing
- MC Data Storage Services

Among the above listed services, data reprocessing and batch processing services would require significant cpu power. In order to produce estimates, I assume that the reprocessing of all RAW data set held at a DØRAC must be completed within 1 month of the beginning of processing, and it takes 10 seconds per each event. Since a given DØRAC holds 10-20% of the RAW data set, they will have $1 \sim 2 \times 10^8$ and $1 \sim 2 \times 10^9$ events at the end of Run IIa and IIb respectively. Given these assumptions, it would require 390-770 and 3900-7700 cpus, equivalent to the current cpu that gave the 10 second/event estimate.

The IAS will need to provide sufficient cpu power for local analysis and cache access service. Therefore, the requirements for these cpus are not as stringent as that of a DØRAC.