ALICE requirements for CCRC'07, February phase

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Introduction

The ALICE T1 requirements for the February (04-29/02) phase of CCRC'08 are presented in this document. These are based on the distributed computing model [1] and experiences with the December 2007 detector commissioning exercise. The complete list of reconstruction and analysis tasks and metrics of the upcoming February exercise are given here. For ALICE, the CCRC'08 challenge will run in parallel with the second Detector Commissioning challenge. As such, the data recording, replication, reconstruction at the T0/T1s and analysis at T2s and CAF will be performed predominantly on live data coming from the experimental setup.

Overview of the required resources

During CCRC'08 ALICE will use all available CPU resources at T0/T1/T2 sites. The portions of resources at the T1 sites, which are necessary for the reconstruction of the RAW data registered by the experiment, are given in table 1. The resources are calculated from the relative contribution of the respective T1s to the RAW data rate out of CERN T0 (60 TB). The tape space shown in the table is for data with indefinite retention.
The remaining CPU resources will be used for the ongoing MC production and analysis. The job priorities scheduling will be handled by ALICE through the common Task Queue.

Table 1 – Summary of required storage resources only for RAW data and processing to ESDs per Tier 1 site. The bracketed numbers in the first column are the relative T1 contributions to the total data volume

Tier1 site	Disk space (TB)	Tape space (TB)
CCIN2P3 (15%)	2	9
CNAF (15%)	2	9
GridKA (45%)	5.5	27
NDGF (15%)	2	9
RAL (5%)	0.6	3
T1-NL (5%)	0.6	3
Total	**13**	**60**

The total data transferred out of CERN T0 is 130 TB for the 25 days of the CCRC'08 exercise. The 70 TB in addition to the 60 TB RAW data are supplemental to keep the T0->T1 transfer rate at the nominal level of ***60MB/sec***. This data will be written into a recyclable tape pools.

Schedule

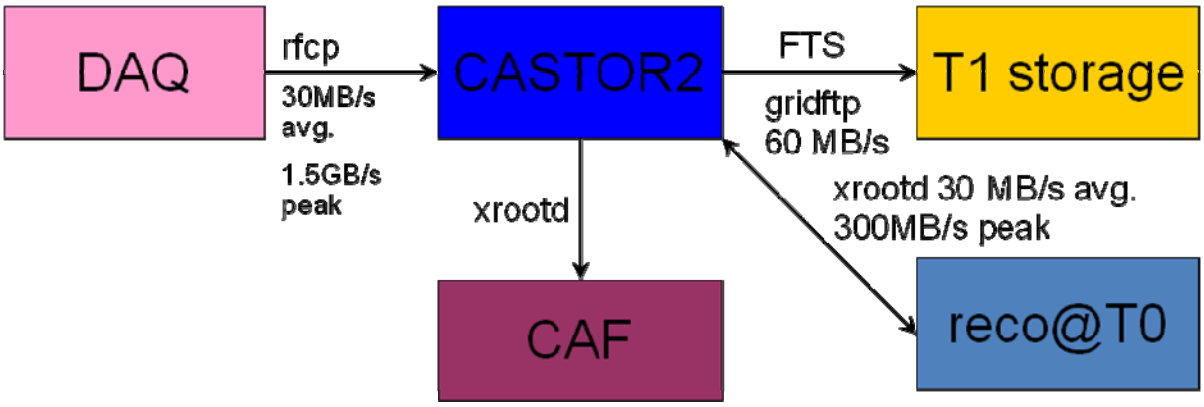
The planned CCRC'08 activities are shown in table 2. The data replication and all processing steps are quasi-online. The MC production is asynchronous with respect to the other activities.

Table 2 – Schedule of the planned activities during CCRC08

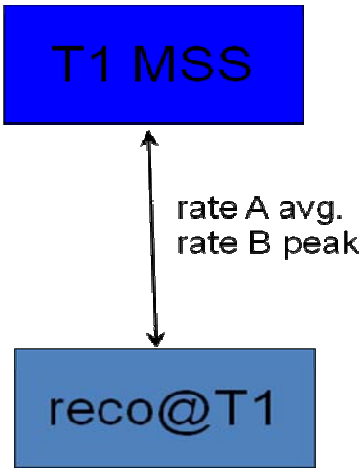
Activity	Week1	Week2	Week3	Week4
Data Taking	✓	✓	✓	✓
Data replication to T1s	✓	✓	✓	✓
Raw data processing to ESDs, Pass 1 at T0, Pass 2 at T1s	✓	✓	✓	✓
MC production	✓	✓	✓	✓

Detailed activity description

1. Data taking, replication to T1s, reconstruction and CAF at T0



2. Reconstruction at T1s



T1	Rate A (MB/s)	Rate B (MB/s)
CCIN2P3	5	300
CNAF	5	300
GridKA	12.5	300
NDGF	5	300
RAL	1.4	300
T1-NL	1.4	300