

accelerator operation					
Networking service to Tier-1 Centres during accelerator operation	6 hours	6 hours	12 hours	99%	n/a
All other Tier-0 services	12 hours	24 hours	48 hours	98%	98%
All other services ⁷ – prime service hours ⁸	1 hour	1 hour	4 hours	98%	98%
All other services ⁷ – outwith prime service hours ⁸	12 hours	24 hours	48 hours	97%	97%

Annex 3.2. Tier-1 Services

Each Tier1 Centre⁹ forms an integral part of the central data handling service of the LHC Experiments. It is thus essential that each such centre undertakes to provide its services on a long-term basis (initially at least 5 years) and to make its best efforts to upgrade its installations steadily in order to keep pace with the expected growth of LHC data volumes and analysis activities.

Tier1 services must be provided with excellent reliability, a high level of availability and rapid responsiveness to problems, since the LHC Experiments depend on them in these respects.

The following services shall be provided by each of the Tier1 Centres in respect of the LHC Experiments that they serve, according to policies agreed with these Experiments. With the exception of items i, ii, iv and x, these services also apply to the CERN analysis facility:

- i. acceptance of an agreed share of raw data from the Tier0 Centre, keeping up with data acquisition;
- ii. acceptance of an agreed share of first-pass reconstructed data from the Tier0 Centre;
- iii. acceptance of processed and simulated data from other centres of the WLCG;
- iv. recording and archival storage of the accepted share of raw data (distributed back-up);
- v. recording and maintenance of processed and simulated data on permanent mass storage;
- vi. provision of managed disk storage providing permanent and temporary data storage for files and databases;

⁷ Services essential to the running of the Centre and to those who are using it.

⁸ Prime service hours for the Host Laboratory: 08:00-18:00 in the time zone of the Host Laboratory, Monday-Friday, except public holidays and scheduled laboratory closures.

⁹ The term “Tier1 Centre” includes a distributed Tier1 Centre according to the provisions of this MoU. In terms of services and levels of service a distributed Tier1 Centre shall be indistinguishable from a single-location Tier1 Centre.