

- vii. provision of access to the stored data by other centres of the WLCG and by named AF's as defined in paragraph 1.41.4 of this MoU;
- viii. operation of a data-intensive analysis facility;
- ix. provision of other services according to agreed Experiment requirements;
- x. ensure high-capacity network bandwidth and services for data exchange with the Tier0 Centre, as part of an overall plan agreed amongst the Experiments, Tier1 and Tier0 Centres;
- xi. ensure network bandwidth and services for data exchange with Tier1 and Tier2 Centres, as part of an overall plan agreed amongst the Experiments, Tier1 and Tier2 Centres;
- xii. administration of databases required by Experiments at Tier1 Centres.

All storage and computational services shall be "grid enabled" according to standards agreed between the LHC Experiments and the regional centres.

The following parameters define the minimum levels of service. They will be reviewed by the operational boards of the WLCG Collaboration.

<i>Service</i>	<i>Maximum delay in responding to operational problems</i>			<i>Average availability⁶ measured on an annual basis</i>	
	Service interruption	Degradation of the capacity of the service by more than 50%	Degradation of the capacity of the service by more than 20%	During accelerator operation	At all other times
Acceptance of data from the Tier-0 Centre during accelerator operation	12 hours	12 hours	24 hours	99%	n/a
Networking service to the Tier-0 Centre during accelerator operation	12 hours	24 hours	48 hours	98%	n/a
Data-intensive analysis services, including networking to Tier-0, Tier-1 Centres outwith accelerator operation	24 hours	48 hours	48 hours	n/a	98%
All other services ⁷ – prime service hours ¹⁰	2 hour	2 hour	4 hours	98%	98%
All other services ⁷ – outwith prime service hours ¹⁰	24 hours	48 hours	48 hours	97%	97%

The response times in the above table refer only to the maximum delay before action is taken to repair the problem. The mean time to repair is also a very important factor that is only covered in this table indirectly through the availability targets. All of these parameters will require an adequate level of staffing of the services, including on-call coverage outside of prime shift.

¹⁰ Prime service hours for Tier1 Centres: 08:00-18:00 in the time zone of the Tier1 Centre, during the working week of the centre, except public holidays and other scheduled centre closures.