

## Definition of Availability and Reliability terms used are in the WLCG MoU and Site Availability Metrics

This note has been written to explain the different usage of the term *availability* in the WLCG MoU and the Site Availability Metrics.

The WLCG [Memorandum of Understanding](#) defines availability targets for CERN (Annex 3.1), Tier-1s (Annex 3.2) and Tier-2s (Annex 3.3) as follows:

$$\text{availability} = \text{time\_running} / \text{scheduled\_up\_time}$$

The site availability metrics are calculated by the [Site Availability Monitor](#), which runs a range of different tests at regular intervals throughout the day. A site is considered to be *available* if a defined set of critical tests complete successfully. The daily averages are calculated for each site and [reported monthly](#) to the WLCG management. These metrics distinguish between *availability* and *reliability*, with the following definitions:

$$\text{availability} = \text{time\_site\_is\_available} / \text{total\_time}$$

$$\text{reliability} = \text{time\_site\_is\_available} / \{\text{total\_time} - \text{time\_site\_is\_scheduled\_down}\}$$

The Management Board considers that reporting both of these measures is necessary, and has selected a terminology that follows the normal meanings of the two terms. This has the unfortunate consequence that the term *availability* used in the MoU refers to the *reliability* metric.