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Ceph Deployment at CNAF

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The INFN CNAF data centre hosts resources for several scientific communities.
The disk resources are deployed mainly with IBM Spectrum Scale (formerly GPFS).
In order to widen the portfolio of the storage services we tested the Ceph distributed file system which provides a POSIX compliant file system (Ceph File System - CephFS), along with object storage and block device service.
We have chosen Ceph to be deployed along with GPFS because it is open source and supported by a very wide community.
We deployed an erasure coding Ceph cluster of 3.1PB of net space. This space is used to provide block devices to INFN Tier1 Openstack Cloud and
1.5PB of pledged disk space to the ALICE LHC experiment which accesses their storage area via XrootD.
POSIX compliance as well as support for extended attributes and ACLs were of key importance for this last use case.
In this contribution we report on the choices we made to optimize purchasing costs, physical space and net storage space as well as the setup, performances of the first period of production activity.

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