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Status Report on Ceph Based Storage Systems at the RACF

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We review various functionality, performance, and stability tests performed at the RHIC and ATLAS Computing Facility (RACF) at Brookhaven National Laboratory (BNL) in 2014-2015. Tests were run on all three (object storage, block storage and file system) levels of Ceph, using a range of hardware platforms and networking solutions, including 10/40 Gbps Ethernet and IPoIB/4X FDR Infiniband. We also report the current status of a 1 PB scale Ceph-based object storage system, provided with Amazon S3 compliant RADOS Gateway interfaces, that was built for the RACF in 2014 and went through a major hardware upgrade in the beginning of 2015. We present performance measurements of this system and discuss the experience gained while operating it as ATLAS event service storage for the past 8 months.

Authors: Mr ZAYTSEV, Alexandr (Brookhaven National Laboratory (US)); ITO, Hironori (Brookhaven National Laboratory (US)); Dr RIND, Ofer (BROOKHAVEN NATIONAL LABORATORY)

Co-authors: WONG, Antonio (Brookhaven National Laboratory (US)); HOLLOWELL, Christopher (Brookhaven National Laboratory); Mr RAO, Tejas (Brookhaven National Laboratory (US))

Presenter: Dr RIND, Ofer (BROOKHAVEN NATIONAL LABORATORY)

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