**Presentation and Poster:**

**Due Dates:**

* We need our abstracts submitted by Friday, July 24, 2015
* Technical presentations are due by Noon Wednesday, July 29, 2015
* The Mini Showcase will be held Thursday, July 30, 2014
* You will also find on this site the abstract template and the link for the Review & Approval System for Scientific and Technical Information (RASSTI)  which is an electronic submission system that assigns LA-UR numbers to unclassified, unrestricted documents intended for public release\*\*

**Abstract:**

**The Viability of Ceph**

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High Performance Computing systems generate and analyze up to Petabytes of data during a computation. Because of this, HPC systems require a file system that is high performing, reliable, and scalable. There are several distributed file systems available including Ceph, Lustre, OrangeFS, and FusionFS. Here at LANL, there are many file systems being used for different purposes. With new distributed network file systems such as Ceph becoming available, LANL may possibly have the need to change to such a software. Ceph is appealing for several reasons. It is scalable from 1 to many thousands of nodes and provides high availability and reliability. Also, it offers fast recovery from node failures and uses automatic rebalancing of data on node addition/removal. Ceph accomplishes this by using their CRUSH algorithm, and concepts such as Pools and Placement Groups (pgs). The proper configuration of these pools and pgs are crucial to the performance of the Ceph file system. Erasure coding can be used with the Ceph file system, which provides increased reliability and decreased overall storage footprint. The Ceph testing we conducted provided us with the knowledge ………