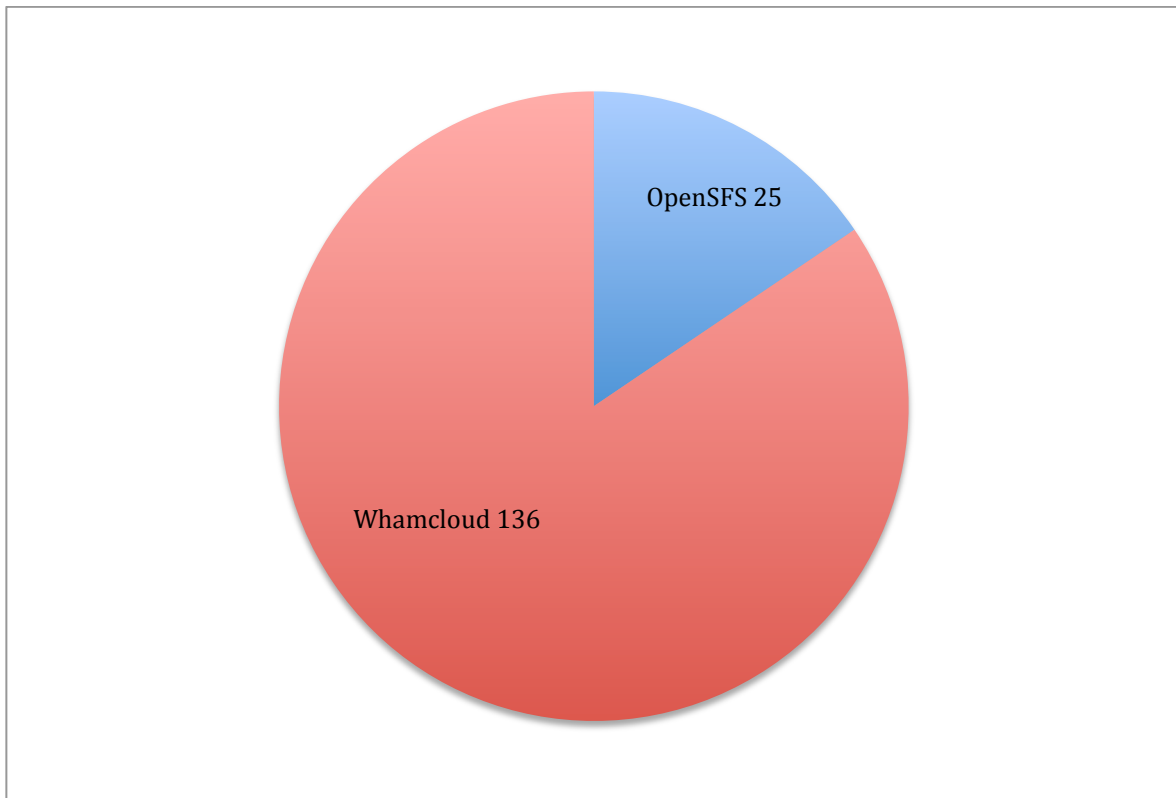




## **OpenSFS-Whamcloud Lustre Tree Report - Q1 2012**

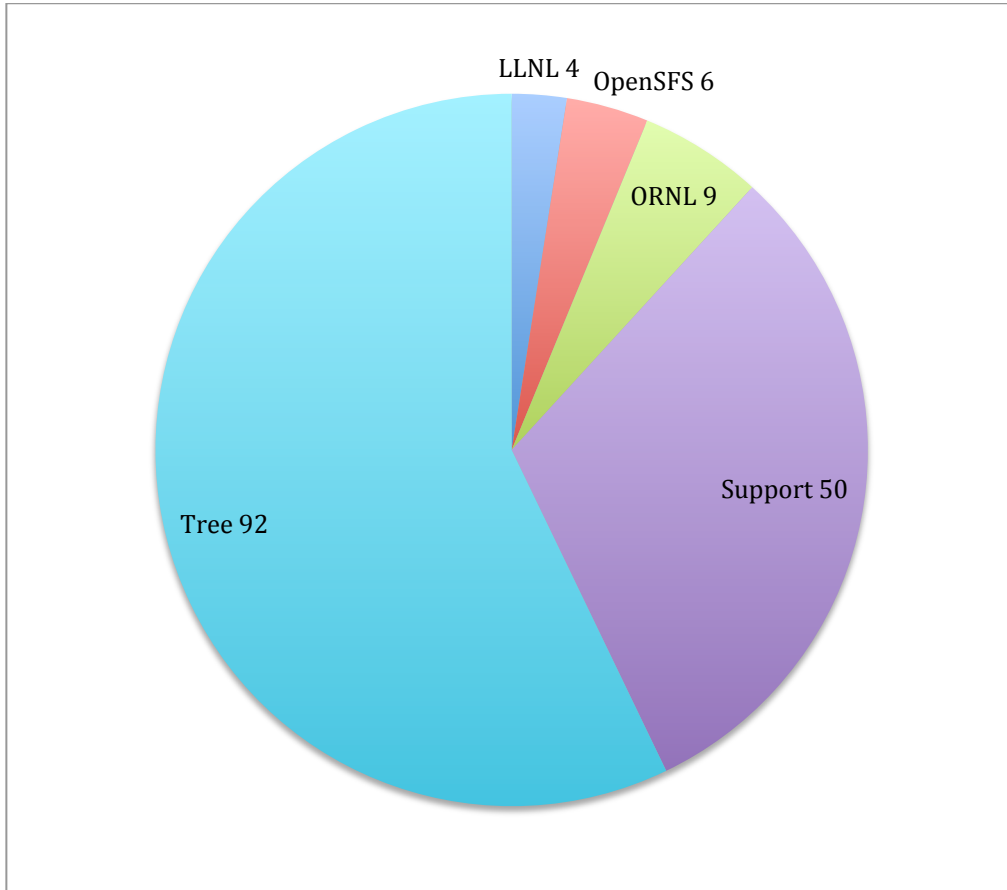
This report provides a brief summary of the highlights of activity on the Lustre master branch for Q1 2012. The full details of landings can be seen at <http://tinyurl.com/wcgit>.

### **Landings By Organization**



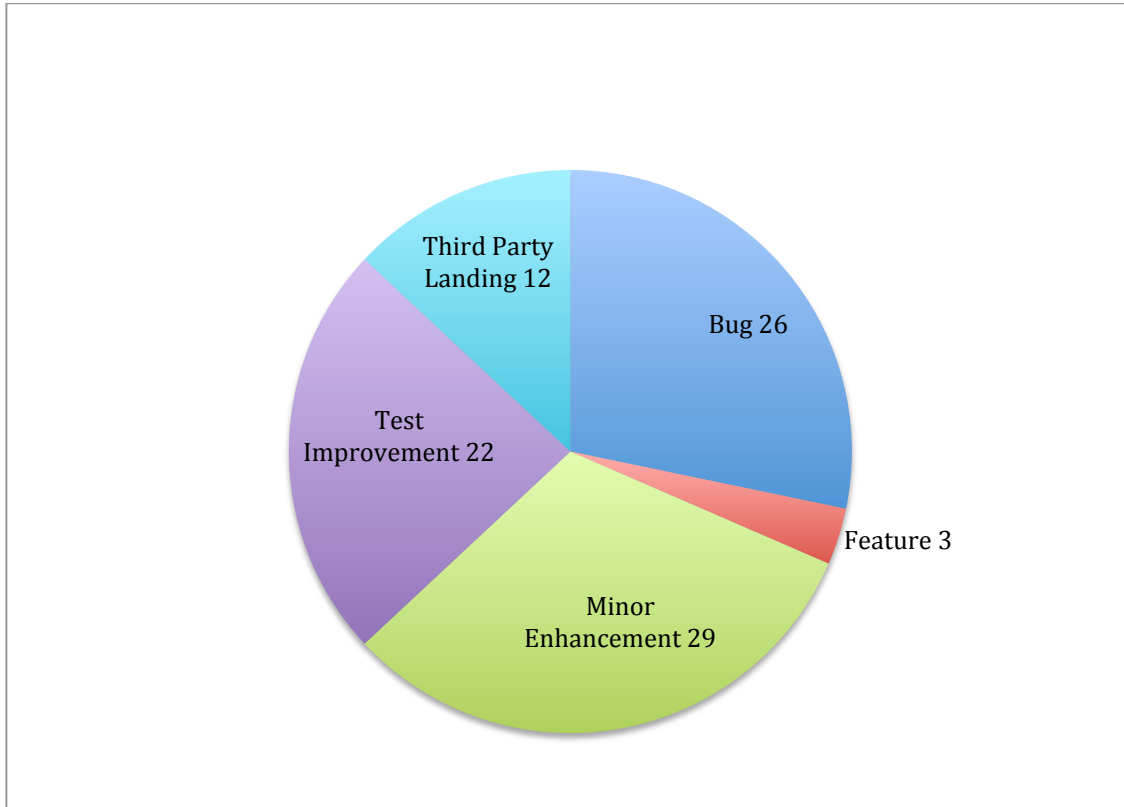
These are just straight totals of the number of landings made to master during the quarter broken down by the organization. Contributions from outside Whamcloud are broken down by the contributing engineer's community affiliation. Some organizations are a member of both EOFS and OpenSFS and these have been classified as OpenSFS for this purpose as this document relates to an OpenSFS contract.

### Landings By Contract



**LLNL:** Landing of work related to the LLNL-Whamcloud NRE contract  
**OpenSFS NRE:** Landing of work funded by the OpenSFS-Whamcloud NRE contract  
**ORNL:** Landing of work related to the ORNL-Whamcloud NRE contract  
**Support:** Landing of work funded by Whamcloud support contracts  
**Whamcloud Funded/Open SFS Tree:** Landing of work not covered by other contracts. This work is partially funded by the OpenSFS-Whamcloud Lustre Tree contract and otherwise covered by Whamcloud.

### Whamcloud Funded/OpenSFS Tree Contract Landings by Type



**Bug:** Correcting Lustre code in response to a defect discovered by Whamcloud or an unsupported organization

**Minor Enhancement:** Enhancing Lustre to provide minor new capabilities e.g. supporting new kernels, etc

**Test Improvement:** Improvements made to Lustre tests (fixed flaws in the tests that can result in false failures, adding new tests, etc)

**Third Party Landing:** Performing inspections and testing on contribution from organization without support arrangements in place.



## **Quality Metrics**

The below report shows a summary of testing results from maloo.

Note that many test failures are due to issues with the tests themselves rather than bugs in Lustre.

This report can be generated dynamically at <https://maloo.whamcloud.com/reports> and the individual details can be drilled into and mapped to issues in JIRA.

Tests highlighted in red have either declined compared to the previous revision or else are new tests with at least one failure.

Tests highlighted in orange have one or more failures but an improved pass rate compared to the prior revision.

Tests highlighted in green passed all test runs.



### Pass rate report for lustre-release - b2\_2

	2.2.0-RC2 f91f2a6 2012-03-23	2.2.0-RC1 100c10e 2012-03-14	2.1.56 e41a9f0 2012-02-18	2.1.55 1255aa5 2012-01-25	2.1.54 107a010 2012-01-11	2.1.52 31569d7 2011-11-12	2.1.0 9d71fe8 2011-09-16	2.1.0-RC1 1f1c672 2011-08-23	2.1.0-RC0 65156ed 2011-08-20	2.0.66.0 78bd429 2011-07-26	2.0.65.0 a2cccb1 2011-07-08	2.0.64.0 5c53b76 2011-07-07
conf-sanity	7/9	15/15	6/6	6/13	2/3	7/7	1/20	1/2		0/1	0/1	1/1
insanity	9/9	15/15	5/5	8/8	3/3	7/7	20/20	3/3		2/2	1/1	1/1
large-scale	9/9	14/14	5/5	7/7	3/3	7/7						
ifsck	4/9	8/15	7/8	1/10	1/3	5/7	23/25	2/2		1/1		
liblustre			3/5	10/16	2/3	1/7	7/25	2/2		1/1		
lnet-selftest	9/9	14/14	5/5	7/7	3/3	7/7	16/16	3/4		3/3	1/1	1/1
lustre-sync-test	9/9	10/10	5/5	9/9	2/2	7/7	13/13					
mdu-survey	2/7	1/9										
metadata-updates	9/9	15/15	5/5	10/10	3/3	7/7	20/20	3/3		2/2	1/1	1/1
mmp	10/10	15/15	5/5	8/8	2/3	7/7	18/19	4/4		1/2	1/1	1/1
obdfilter-survey	8/9	12/14	5/5	6/8	3/3	0/7	16/16	4/4		2/3	0/1	0/1
ost-pools	9/9	10/15	5/5	4/10	2/3	3/7	11/20	2/3		1/2	1/1	1/1
parallel-scale	2/9	2/14	4/5	2/7	0/3	2/7	10/19	0/4		0/2		
parallel-scale-nfsv3	2/7	3/9	1/5									
parallel-scale-nfsv4	2/7	3/9	1/6									
performance-sanity	7/9	11/14	4/5	5/7	3/3	3/7	15/19	0/4		0/2		
racer	9/9	14/15	6/6	1/10	3/3	7/7	17/21					
recovery-double-scale	0/1	0/1	2/3	0/1								
recovery-mdu-scale	1/1	1/1	2/5	1/1								
recovery-random-scale	0/1	0/1	2/5	0/1								
recovery-small	9/10	15/16	5/7	10/10	3/3	7/7	19/20	2/2		1/1	1/1	1/1
replay-dual	10/10	14/16	5/5	10/10	3/3	7/7	18/20	2/2		1/1	1/1	1/1
replay-ost-single	10/10	16/16	5/5	10/10	3/3	7/7	20/20	2/2		1/1	1/1	1/1
replay-single	10/10	11/16	5/6	9/11	2/3	6/7	19/20	2/2		0/1	1/1	1/1
replay-vbr	9/10	15/16	5/5	1/10	2/3	7/7	18/20	2/2		2/2		
runracer								1/1			1/1	1/1
runtests	9/9	15/15	9/9	13/13	3/3	7/7	26/29	1/1	1/1	3/3		
sanity	4/9	8/15	0/9	0/13	0/3	5/7	9/30	0/1	0/1	1/3	1/1	0/1
sanity-benchmark	7/9	15/15	8/10	10/10	3/3	5/7	2/28	0/1		0/2	1/1	1/1
sanity-quota	9/9	15/15	5/5	7/8	3/3	7/7	18/20	3/3		2/2	1/1	0/1
sanity-sec	9/9	10/10	5/5	9/9	2/2	7/7	13/13	2/2		1/1	1/1	1/1
sanityn	8/9	14/15	8/8	10/10	3/3	7/7	24/26	2/2		1/1	1/1	1/1
sgpdd-survey				0/1		0/7	0/16	0/4		0/3		



## **Work Completed**

The focus for Q1 2012 was testing and stabilization for the upcoming Lustre 2.2 release (targeted for March 2012). The first week of the quarter permitted some residual feature landings for this release.

The following features were landed during the quarter

**Client parallel checksums:** funded by the ORNL-Whamcloud NRE contract.

**Large Xattrs:** (aka "wide striping"). This work was initiated by an ORNL-Sun NRE contract but never landed to the Lustre mainline. Whamcloud has been leading efforts to complete and land this work with assistance from ORNL and Xyratex.

**Mds-survey:** funded by the OpenSFS-Whamcloud NRE contract.

**OSD API:** funded by the LLNL-Whamcloud NRE contract.

**Quota protocol improvements:** funded by the LLNL-Whamcloud NRE contract.

Release testing was completed according to the 2.2 test plan on the following tags – 2.1.54, 2.1.55, 2.1.56, and 2.2.0-RC1. A number of bugs were found and fixed as a result.

RHEL 6.2 server and client support landed.

Released a version of e2fsprogs that supports 2.2 features.

Added a report capability to maloo to make it easier to see quality trends over time - <https://maloo.whamcloud.com/reports>.

NFS and MMP tests are now included in automated test runs rather than being executed manually.

Setup a test cluster at both Juelich and IU to run autotest and upload results into maloo.

Exclusive Hyperion access was provided for three days and RC2 was tested at scale with 1115 clients (a mix of RHEL5 and RHEL6).

The master branch was open for landings for Lustre 2.3 towards the end of Q1 but the small amount of activity relating to this will be included in the Q2 report (for clarity).

## **Work In Progress**



The majority of the work to support clients running the 2.6.38 client has been completed and landed.

Development work has continued to automate failover testing. These tests are currently done manually during release testing. POSIX and Large LUN tests are also being automated.

Preparations have been made to relocate the Whamcloud build-test infrastructure to a more reliable facility.

Peter Jones  
Whamcloud  
April 2<sup>nd</sup> 2012



## **Appendix A: Timeline for Lustre 2.2**

Release criterion is zero blockers remaining on the Lustre 2.2 Blockers filter in JIRA

-  
<http://jira.whamcloud.com/secure/IssueNavigator.jspa?mode=hide&requestId=10184>.

<b>Milestone</b>	<b>Planned Date</b>	<b>Actual Date</b>
Call for Features	August 31 <sup>st</sup> 2011	August 23 <sup>rd</sup> 2011
Open for Landings	September 30 <sup>th</sup> 2011	September 15 <sup>th</sup> 2011
Feature Freeze	January 7 <sup>th</sup> 2012	January 7 <sup>th</sup> 2012
Code Freeze	February 29 <sup>th</sup> 2012	March 6 <sup>th</sup> 2012
GA	March 31 <sup>st</sup> 2012	March 30 <sup>th</sup> 2012

## **Appendix B: Landings for Lustre 2.2 By Organization**

This combines the data from Q4 2011 and Q1 2012.

