



# Lustre 2.0 Alpha-5 Summary

## Summary

The focus of the fifth Alpha release (Alpha-5) of 2.0 was to continue improve stability of Lustre while landing fixes to HEAD and completing additional bug fixes. 155 total fixes were landed during this cycle.

This release was tested on RHEL5/x86\_64 with both IB and TCP connectivity. Known failures are documented in the HEAD Daily Testing Document available from [lustre.org](http://lustre.org).

## Timeline

The Alpha-5 bug fix period was from August 14, 2009 – October 8, 2009. The build on October 8 marks the Lustre 2.0 Alpha-5 release which was announced and available for download October 14, 2009.

## Fixes Landed

Below is a summary listing of all unique landings to HEAD during the Lustre 2.0 Alpha-5 Milestone period. This is inclusive of all landings -- code fixes as well as test framework fixes.

1. Bug 13520: replay-single test\_65: \*\*\*\* FAIL: No early reply  
Attachment: 25647
2. Bug 14951: OST addition not being handled by client  
Attachment: 25503
3. Bug 15284: write a simple utility to rename files in lost+found to object ID  
Attachment: 25049 Attachment: 25050
4. Bug 15390: permission issue  
Attachment: 25514
5. Bug 15504: acc-sm needs the possibility to start from the defined test  
Attachment: 25775
6. Bug 15534: make HEAD safety run on BIG\_ENDIAN machines.  
Attachment: 25553 Attachment: 25577 Attachment: 25582
7. Bug 15902: make test for the 1.8->HEAD upgrade process  
Attachment: 25653
8. Bug 16186: One down Lustre FS hangs ALL mounted Lustre filesystems  
Attachment: 25045
9. Bug 16208: Land LLNL Patches for known and resolved bugzilla bugs
10. Bug 16403: test framework should use lustre\_rmmod  
Attachment: 25703
11. Bug 16890: small fixtures for quota  
Attachment: 25405
12. Bug 17197: ll\_read\_ahead\_pages()) ASSERTION(page\_idx > ria->ria\_stoff) failed  
Attachment: 25951
13. Bug 17517: LBUG in ldlm\_lock\_cancel() from ldlm\_lock.c

- Attachment: 25845
14. Bug 17591: refactor acc-sm
  15. Bug 17873: not skipping tests due to env misconfiguration in YALA  
Attachment: 25656 Attachment: 25657
  16. Bug 17951: conf-sanity test\_46a: @@@@ @@@@ FAIL: test\_46a failed with 7  
Attachment: 25772
  17. Bug 18054: build using in-kernel ldiskfs  
Attachment: 25027
  18. Bug 18102: lnet\_proc.c should be rewritten  
Attachment: 25875
  19. Bug 18534: Unnecessary lookup RPC when doing non-open related creates  
Attachment: 21800
  20. Bug 18548: Running of conf\_param on 1.8 disk without --writeconf should return error  
Attachment: 25284
  21. Bug 18623: Improve acc-sm to support ENABLE\_QUOTA  
Attachment: 25743
  22. Bug 18674: clients not allowed to reconnect because a glimpse callback cannot be sent  
Attachment: 25038
  23. Bug 18775: cleanup lctl get\_param interface  
Attachment: 25698
  24. Bug 18866: sanity test\_64b: FAIL: no OSTs are close to full  
Attachment: 25851
  25. Bug 18881: recovery-double-scale test\_2 failed, can not stop client  
Attachment: 25197 Attachment: 25832
  26. Bug 18948: Snappy recovery  
Attachment: 25372 Attachment: 25518 Attachment: xx
  27. Bug 18956: add write\_disjoint to lustre tests  
Attachment: 25271
  28. Bug 19027: lustre uuid specification should be more forgiving  
Attachment: 25907
  29. Bug 19053: llapi\_path2fid() for all object types  
Attachment: 25370
  30. Bug 19124: t-f need to load modules from work dir on remote nodes.  
Attachment: 25945
  31. Bug 19154: replay-single test\_20b: @@@@ @@@@ FAIL: after 2707848 > before 2701704  
Attachment: 25741
  32. Bug 19205: lfs df for pools  
Attachment: 25201
  33. Bug 19211: PIOS, LBUG, (mdc\_locks.c:126:mdc\_set\_lock\_data()) ASSERTION(lock != NULL) failed  
Attachment: 25258
  34. Bug 19215: "MDT\*" need be changed to "MDT0000" under CMD configuration  
Attachment: 25519
  35. Bug 19312: add parallel\_grouplock test to acc-sm  
Attachment: 25655
  36. Bug 19380: LBUG hit while running racer  
Attachment: 24688
  37. Bug 19418: port cmd3-38 test to acc-sm  
Attachment: 25629
  38. Bug 19442: kernel panic when setting parameter mdt.quota\_type  
Attachment: 25394
  39. Bug 19525: MGS doesn't export RPC stats in /proc  
Attachment: 23586
  40. Bug 19537: fsx failed

- Attachment: 25757 Attachment: 25970
41. Bug 19551: continuing LustreError "mds adjust qunit failed!"  
Attachment: 25934
  42. Bug 19557: BUG: soft lockup - CPU#1 stuck for 10s! [ll\_mdt\_07:4523]
  43. Bug 19566: successful umounts although umount failed  
Attachment: 25467
  44. Bug 19580: BUG: soft lockup - CPU#7 stuck for 10s! [ll\_imp\_inval:18451]  
Attachment: 25829
  45. Bug 19657: pios: Segmentation fault  
Attachment: 26011
  46. Bug 19674: problems seen building 1.8.1 prerelease on sles 11  
Attachment: 25733
  47. Bug 19686: SLES11-ext4: replay-single test 5: kernel BUG at fs/jbd2/transaction:1017!  
Attachment: 23854
  48. Bug 19690: provide "make cscope" target, like "make tags"  
Attachment: 23733
  49. Bug 19720: various -Werror illicited errors  
Attachment: 25382
  50. Bug 19721: debian/ubuntu .deb build bits  
Attachment: 25383
  51. Bug 19743: 1.8.1 VBR Testing  
Attachment: 25310
  52. Bug 19778: MDS refuses reconnection due to still active RPCs  
Attachment: 25699
  53. Bug 19780: Tests for the OST Pools feature  
Attachment: 25584 Attachment: 25937
  54. Bug 19781: Tests for the OSS Read Only Cache feature  
Attachment: 25841
  55. Bug 19791: ASSERTION(atomic\_read(&de->d\_count) > 0) failed  
Attachment: 25126
  56. Bug 19808: 2.6.29-fc11 patchless support  
Attachment: 25636
  57. Bug 19835: sanity-quota test\_11 : l\_getgroups: no such user ....  
Attachment: 25411
  58. Bug 19844: Timer expired but recovery doesn't end ever  
Attachment: 25210 Attachment: 25222
  59. Bug 19934: some files created in lustre 1.8 are not valid under lustre 1.6  
Attachment: 25312
  60. Bug 19955: add a reverse comm path from MDT to MDC for copytool reqs  
Attachment: 25104
  61. Bug 19994: replay-single test\_0c failed with 2  
Attachment: 25433
  62. Bug 20008: quota related jbd/ldiskfs/quota BUG  
Attachment: 25168
  63. Bug 20044: Assertion failure in journal\_start() at fs/jbd/transaction.c:270: "handle->h\_transaction->t\_journal == journal"  
Attachment: 25093
  64. Bug 20082: sanity quota : test 15 failed  
Attachment: 25777
  65. Bug 20126: replay-single FAIL: test\_53b failed with 2  
Attachment: 25091
  66. Bug 20131: obdfilter-survey: LBUG (echo\_client.c:939:cl\_echo\_object\_put())  
ASSERTION(&eco->eo\_hdr == luh2coh(loh)) failed  
Attachment: 25606
  67. Bug 20183: kernel oops during parallel\_scale: (lov\_pack.c:240:lov\_packmd())  
ASSERTION(loi->loi\_id) failed

- Attachment: 25226
68. Bug 20200: Allow lfs quota command to use numeric user/group id.  
Attachment: 25678 Attachment: 25744
69. Bug 20219: system degrades after a while during 1.8.1 test  
Attachment: 24902
70. Bug 20231: How to map objid to file name.
71. Bug 20237: acc-sm: recovery-\* scale tests gather logs fn  
Attachment: 25785
72. Bug 20298: Merge head ldiskfs and b1\_8 ldiskfs  
Attachment: 25567
73. Bug 20305: racer:LBUG:osc\_io.c:637:osc\_req\_attr\_set()) ASSERTION(lock != NULL) failed  
Attachment: 25825
74. Bug 20339: HEAD does not compile for ppc  
Attachment: 25482 Attachment: 25176 Attachment: 25178
75. Bug 20346: performance-sanity test\_8: @@@@ @@@@ FAIL: test\_8 failed with 1  
Attachment: 25290
76. Bug 20347: replay-vbr: rm: cannot remove `/mnt/lustre/f0n': Operation not permitted  
Attachment: 25410
77. Bug 20368: fsck fixes for fid in dirent
78. Bug 20392: Oops: RIP: ptlrpc:ptlrpc\_at\_check\_timed+0x290/0x1480  
Attachment: 25272
79. Bug 20400: Kernel update for RHEL5.3 2.6.18-128.7.1.el5.  
Attachment: 25245
80. Bug 20411: Modify changelog to use LustreNetLink instead of seq\_file  
Attachment: 26023
81. Bug 20433: mdsrate fails to write after 1.3+M files opened Cray XT3  
Attachment: 25483
82. Bug 20456: ASSERTION(atomic\_read(&imp->imp\_inflight) == 0) failed  
Attachment: 25622
83. Bug 20459: make LST test and client RPC timeouts tunable  
Attachment: 25371
84. Bug 20463: getstripe doesn't report stripe count = -1 sanely  
Attachment: 25520
85. Bug 20464: resolve possible race between update and write lov objid file  
Attachment: 25307
86. Bug 20478: version\_tag.pl needs to support no-kernel builds  
Attachment: 25314
87. Bug 20482: All compute nodes panic after boot.  
Attachment: 25682 Attachment: 25684
88. Bug 20500: Doxygen on HEAD  
Attachment: 25817
89. Bug 20521: ost-pools test\_3d: @@@@ @@@@ FAIL: pool\_add failed: pool1; lustre-OST[0-2/1]  
Attachment: 25473
90. Bug 20533: Lustre not doing large IOs  
Attachment: 25754 Attachment: 25755
91. Bug 20550: missing tree\_status on 1.8.1 RPM build  
Attachment: 25840
92. Bug 20560: File access errors and checksum failures with OST read cache on  
Attachment: 25833 Attachment: 25896 Attachment: 25912
93. Bug 20595: Support OFED 1.4.2  
Attachment: 25605
94. Bug 20605: e2label Segfault  
Attachment: 25665
95. Bug 20620: ASSERTION(obd->obd\_stopping) failed

- Attachment: 25761
96. Bug 20626: Move "struct obd\_stats" definition to "lustre\_user.h".  
Attachment: 25671
  97. Bug 20653: ost-pools test\_1 failed due to no mds\_HOST defined  
Attachment: 25842
  98. Bug 20695: configure: error: You have got no 64-bit kernel quota support  
Attachment: 25831
  99. Bug 20698: integrate PIOS into acc-sm  
Attachment: 25931
  100. Bug 20703: trivial code cleanups on HEAD  
Attachment: 25794 Attachment: 25925
  101. Bug 20705: typo in \_debug\_req()  
Attachment: 25795
  102. Bug 20719: replay-single test\_80a: @@@@ @@@@ FAIL: needs >= 2 MDTs  
Attachment: 25857
  103. Bug 20734: ior test should enable striping  
Attachment: 25858
  104. Bug 20748: sanity test\_55 failed  
Attachment: 25892
  105. Bug 20771: vulnerable sprintf usage in ptlrpcd\_start()  
Attachment: 25928
  106. Bug 20784: sanity test\_215: @@@@ @@@@ FAIL: /proc/sys/lnet/peers  
misformatted  
Attachment: 25974
  107. Bug 20814: enable frame pointers in our kernels  
Attachment: 26013
  108. Bug 3633: some open/close RPCs should not be replayed or resent  
Attachment #25758
  109. Bug 17153: remove 2.4 compatibility from b1\_8  
Attachment #26208
  110. Bug 17670: find -type f performance degradation with 2.0 servers  
Attachment #24900; Attachment #25374
  111. Bug 17873: not skipping tests due to env misconfiguration in YALA  
Attachment #25776
  112. Bug 18505: OOM on MDS when lru resize is enabled (i686)  
Attachment #26113
  113. Bug 18629: sanityN test\_32a: @@@@ @@@@ FAIL: wrong file size  
Attachment #26316
  114. Bug 18674: clients not allowed to reconnect because a glimpse callback cannot  
be sent  
Attachment #26039
  115. Bug 18698: incorrect debug message in request\_in\_callback()  
Attachment #25793
  116. Bug 18857: namei.c:732:ll\_create\_node()) ASSERTION(list\_empty(&inode->i\_dentry)) failed  
Attachment #24626; reverted 2 days later.
  117. Bug 19113: umounting MGS hangs  
Attachment #26066
  118. Bug 19235: LBUG: (recov\_thread.c:436:llog\_recov\_thread\_stop()) Busy llcfs  
found (0) on lcm ffff8100c4ae16e0  
Attachment #25830
  119. Bug 19242: replay-single, test\_44a : lctl failed with: Try interactive use without  
arguments or use one of  
Attachment #26032; second landing "minor fix" 40 minutes later, no patch attached.
  120. Bug 19317: allow multiple instances of echo OBD  
Attachment #23152

121. Bug 19526: conf-sanity test\_46a: stat: cannot stat `/mnt/lustre/widestripe':  
Cannot send after transport endpoint shutdown  
Attachment #26072
122. Bug 19657: pios: Segmentation fault  
Attachment #26011; Attachment #26275
123. Bug 19662: Remove set\_info(KEY\_UNLINKED) from MDS/OSC  
Attachment #26009
124. Bug 19688: move duplicate FID-to-inode functions to lclient  
Attachment #26186
125. Bug 19763: quotacheck performance/scaling issues  
Attachment #24175
126. Bug 19917: repeated atomic allocation failures in kptllnd\_rx\_alloc() causing OST  
to be unreachable  
Attachment # 26214
127. Bug 19990: additional software raid patch needed to avoid counter overflow  
Attachment #26225
128. Bug 20098: mod use after free  
Attachment #25823; reverted 5 days later
129. Bug 20205: Performance degradation with O\_DIRECT between 1.6 & 1.8.1  
b190  
Attachment #26012; Attachment #25458
130. Bug 20317: sanity.sh test\_13: lockless truncate does not work  
Attachment #25969
131. Bug 20349: don't access to invalid data.  
Attachment #26248
132. Bug 20482: All compute nodes panic after boot - accessing deactivated OST  
Attachment #26156
133. Bug 20501: performance\_sanity : test 8: getattr large files : timed out  
Attachment #26293
134. Bug 20505: sanity test\_163: @@@@ @@@@ FAIL: Inl send failed - Cray XT3  
Attachment #26114
135. Bug 20529: Patch to fix the problem in vvp\_mmap\_locks  
Attachment #25681
136. Bug 20539: Lustre support for OEL  
Attachment #25734; Attachment #26209
137. Bug 20575: pios: Watchdog; ll\_ost\_io\_119 S  
Attachment #26321
138. Bug 20603: recovery-small test\_60: @@@@ @@@@ FAIL: Recorded 0 unlinks out  
of 15000  
Attachment #26297
139. Bug 20650: memory leak issue in Lustre 2.0  
Attachment #26416
140. Bug 20672: sanity-benchmark with ext4, ldiskfs\_mb\_free\_blocks: IO failure  
Attachment #26135; Attachment #26136
141. Bug 20689: Server downgrade testing for the OST Pools feature  
Attachment #25939; Attachment # ; Attachment #
142. Bug 20698: integrate PIOS into acc-sm  
Attachment #26139
143. Bug 20703: trivial code cleanups on HEAD  
Attachment #26134
144. Bug 20719: replay-single test\_80a: @@@@ @@@@ FAIL: needs >= 2 MDTs  
Reported as landed but no attachment in this bug was actually landed.  
Possibly it was landed with bug 20784.
145. Bug 20736: ptlrpc: Unknown symbol cpu\_online\_map  
Attachment #25861
146. Bug 20756: filter\_cancel\_cookies\_cb: no valid context for group 0

- Attachment #26237
147. Bug 20762: sanity.sh: test\_156 IN CACHE: before: 2072, after: 2075  
Attachment #25998
148. Bug 20771: vulnerable sprintf usage in ptrpcd\_start()  
Attachment #25928
149. Bug 20784: sanity test\_215: @@@@ @@@@ FAIL: /proc/sys/lnet/peers  
misformatted  
Attachment #25974; Attachment #26361
150. Bug 20877: sanity-quota.sh test\_12 doesn't scale well  
Attachment #26167
151. Bug 20878: yala test start timed out  
Attachment #26335
152. Bug 20902: conf-sanity test\_50g hang  
Attachment #26314
153. Bug 20903: sanity-quota hang while stopping mds  
Attachment #26355
154. Bug 20913: e2fsck waits long time for MMP despite clean unmount  
Attachment #26218
155. Bug 20929: target\_request\_copy\_put()) ASSERTION(list\_empty(&req-  
>rq\_replay\_list))  
Attachment #26249

## Results

Please review the Lustre 2.0 Alpha Test Plan document and Head Daily Testing Results spreadsheet (both available on [lustre.org](http://lustre.org)) for detailed plans and daily testing results.

The Lustre 2.0 Alpha-5 has the following characteristics:

- Testing completed for RHEL5/x86\_64 using IB and TCP
- Passing consistently: ior, simul, runtests, sanity, dbench, bonnie, iozone, fsx, sanityn, liblustre, recovery\_small, replay\_dual, insanity, sanity\_sec, replay\_vbr, replay\_ost\_single, conf\_sanity, performance\_sanity

Lustre 2.0 Alpha-5 was delivered on October 14, 2009 and is available from:

<http://downloads.lustre.org/public/lustre/v2.0/latest/>

or

[http://downloads.lustre.org/public/lustre/v2.0/alpha/Lustre\\_2.0\\_Alpha5/](http://downloads.lustre.org/public/lustre/v2.0/alpha/Lustre_2.0_Alpha5/)