

new/usr/src/pkg/manifests/system-test-libctest.mf

1

```
*****
3168 Thu Oct 30 00:34:28 2014
new/usr/src/pkg/manifests/system-test-libctest.mf
5276 Add Richard PALO's fpround test.
Reviewed by: John Kennedy <john.kennedy@delphix.com>
Reviewed by: Yuri Pankov <yuri.pankov@nexenta.com>
Approved by: Daniel Whitehall <dw@hydra.org>
*****
```

```
1 #
2 # This file and its contents are supplied under the terms of the
3 # Common Development and Distribution License ("CDDL"), version 1.0.
4 # You may only use this file in accordance with the terms of version
5 # 1.0 of the CDDL.
6 #
7 # A full copy of the text of the CDDL should have accompanied this
8 # source. A copy of the CDDL is also available via the Internet at
9 # http://www.illumos.org/license/CDDL.
10 #
11 #
12 #
13 # Copyright (c) 2012 by Delphix. All rights reserved.
14 # Copyright 2014, OmniTI Computer Consulting, Inc. All rights reserved.
15 # Copyright 2014 Garrett D'Amore <garrett@damore.org>
16 #
17 #
18 set name=pkg.fmri value=pkg:/system/test/libctest@$(PKGVERS)
19 set name=pkg.description value="C library Unit Tests"
20 set name=pkg.summary value="C Library Unit Test Suite"
21 set name=info.classification \
22     value=org.opensolaris.category.2008:Development/System
23 set name=variant.arch value=$(ARCH)
24 dir path=opt/libc-tests
25 dir path=opt/libc-tests/bin
26 dir path=opt/libc-tests/runfiles
27 dir path=opt/libc-tests/tests
28 file path=opt/libc-tests/README mode=0444
29 file path=opt/libc-tests/bin/libctest mode=0555
30 file path=opt/libc-tests/runfiles/default.run mode=0444
31 file path=opt/libc-tests/tests/fpround_test mode=0555
32 $(i386_ONLY)file path=opt/libc-tests/tests/fpround_test.amd64 mode=0555
33 $(i386_ONLY)file path=opt/libc-tests/tests/fpround_test.i386 mode=0555
34 $(sparc_ONLY)file path=opt/libc-tests/tests/fpround_test.sparc mode=0555
35 $(sparc_ONLY)file path=opt/libc-tests/tests/fpround_test.sparcv9 mode=0555
36 file path=opt/libc-tests/tests/newlocale_test mode=0555
37 $(i386_ONLY)file path=opt/libc-tests/tests/newlocale_test.amd64 mode=0555
38 $(i386_ONLY)file path=opt/libc-tests/tests/newlocale_test.i386 mode=0555
39 $(sparc_ONLY)file path=opt/libc-tests/tests/newlocale_test.sparc mode=0555
40 $(sparc_ONLY)file path=opt/libc-tests/tests/newlocale_test.sparcv9 mode=0555
41 file path=opt/libc-tests/tests/nl_langinfo_test mode=0555
42 $(i386_ONLY)file path=opt/libc-tests/tests/nl_langinfo_test.amd64 mode=0555
43 $(i386_ONLY)file path=opt/libc-tests/tests/nl_langinfo_test.i386 mode=0555
44 $(sparc_ONLY)file path=opt/libc-tests/tests/nl_langinfo_test.sparc mode=0555
45 $(sparc_ONLY)file path=opt/libc-tests/tests/nl_langinfo_test.sparcv9 mode=0555
46 file path=opt/libc-tests/tests/wcsrtombs_test mode=0555
47 $(i386_ONLY)file path=opt/libc-tests/tests/wcsrtombs_test.amd64 mode=0555
48 $(i386_ONLY)file path=opt/libc-tests/tests/wcsrtombs_test.i386 mode=0555
49 $(sparc_ONLY)file path=opt/libc-tests/tests/wcsrtombs_test.sparc mode=0555
50 $(sparc_ONLY)file path=opt/libc-tests/tests/wcsrtombs_test.sparcv9 mode=0555
51 file path=opt/libc-tests/tests/wctype_test mode=0555
52 $(i386_ONLY)file path=opt/libc-tests/tests/wctype_test.amd64 mode=0555
53 $(i386_ONLY)file path=opt/libc-tests/tests/wctype_test.i386 mode=0555
54 $(sparc_ONLY)file path=opt/libc-tests/tests/wctype_test.sparc mode=0555
55 $(sparc_ONLY)file path=opt/libc-tests/tests/wctype_test.sparcv9 mode=0555
56 license lic_CDDL license=lic_CDDL
57 depend fmri=locale/de type=require
58 depend fmri=locale/en type=require
```

new/usr/src/pkg/manifests/system-test-libctest.mf

2

```
59 depend fmri=locale/en-extra type=require
60 depend fmri=locale/ja type=require
61 depend fmri=locale/ru type=require
62 depend fmri=system/test/testrunner type=require
```

new/usr/src/test/libc-tests/runfiles/default.run

1

813 Thu Oct 30 00:34:29 2014

new/usr/src/test/libc-tests/runfiles/default.run

5276 Add Richard PALO's fpround test.

Reviewed by: John Kennedy <john.kennedy@delphix.com>

Reviewed by: Yuri Pankov <yuri.pankov@nexenta.com>

Approved by: Daniel Whitehall <dw@hydra.org>

```
1 #
2 # This file and its contents are supplied under the terms of the
3 # Common Development and Distribution License ("CDDL"), version 1.0.
4 # You may only use this file in accordance with the terms of version
5 # 1.0 of the CDDL.
6 #
7 # A full copy of the text of the CDDL should have accompanied this
8 # source. A copy of the CDDL is also available via the Internet at
9 # http://www.illumos.org/license/CDDL.
10 #
```

```
12 #
13 # Copyright (c) 2012 by Delphix. All rights reserved.
14 # Copyright 2014 Garrett D'Amore <garrett@damore.org>
15 #
```

```
17 [DEFAULT]
18 pre =
19 verbose = False
20 quiet = False
21 timeout = 60
22 post =
23 outputdir = /var/tmp/test_results
```

```
25 [/opt/libc-tests/tests/fpround_test]
```

```
27 [/opt/libc-tests/tests/newlocale_test]
```

```
29 [/opt/libc-tests/tests/nl_langinfo_test]
```

```
31 [/opt/libc-tests/tests/wcsrtombs_test]
```

```
33 [/opt/libc-tests/tests/wctype_test]
```

new/usr/src/test/libc-tests/tests/Makefile

1

638 Thu Oct 30 00:34:29 2014

new/usr/src/test/libc-tests/tests/Makefile

5276 Add Richard PALO's fpround test.

Reviewed by: John Kennedy <john.kennedy@delphix.com>

Reviewed by: Yuri Pankov <yuri.pankov@nexenta.com>

Approved by: Daniel Whitehall <dw@hydra.org>

```
1 #
2 # This file and its contents are supplied under the terms of the
3 # Common Development and Distribution License ("CDDL"), version 1.0.
4 # You may only use this file in accordance with the terms of version
5 # 1.0 of the CDDL.
6 #
7 # A full copy of the text of the CDDL should have accompanied this
8 # source. A copy of the CDDL is also available via the Internet at
9 # http://www.illumos.org/license/CDDL.
10 #
```

```
12 #
13 # Copyright (c) 2012 by Delphix. All rights reserved.
14 # Copyright 2014 Garrett D'Amore <garrett@damore.org>
15 #
```

```
17 SUBDIRS = fpround newlocale nl_langinfo wcsrtombs wctype
17 SUBDIRS = newlocale nl_langinfo wcsrtombs wctype
```

```
19 include $(SRC)/Makefile.master
20 include $(SRC)/test/Makefile.com
```

new/usr/src/test/libc-tests/tests/fpround/Makefile

1

```
*****  
594 Thu Oct 30 00:34:29 2014  
new/usr/src/test/libc-tests/tests/fpround/Makefile  
5276 Add Richard PALO's fpround test.  
Reviewed by: John Kennedy <john.kennedy@delphix.com>  
Reviewed by: Yuri Pankov <yuri.pankov@nexenta.com>  
Approved by: Daniel Whitehall <dw@hydra.org>  
*****
```

```
1 #  
2 # This file and its contents are supplied under the terms of the  
3 # Common Development and Distribution License ("CDDL"), version 1.0.  
4 # You may only use this file in accordance with the terms of version  
5 # 1.0 of the CDDL.  
6 #  
7 # A full copy of the text of the CDDL should have accompanied this  
8 # source. A copy of the CDDL is also available via the Internet at  
9 # http://www.illumos.org/license/CDDL.  
10 #  
12 #  
13 # Copyright 2014 Garrett D'Amore <garrett@damore.org>  
14 #  
16 include $(SRC)/Makefile.master  
18 PROG = fpround_test  
19 ARCHPROG = fpround_test  
21 include ../Makefile.com  
23 LDLIBS += -lm  
24 LDLIBS64 += -lm
```

```

*****
2958 Thu Oct 30 00:34:29 2014
new/usr/src/test/libc-tests/tests/fpround/fpround_test.c
5276 Add Richard PALO's fpround test.
Reviewed by: John Kennedy <john.kennedy@delphix.com>
Reviewed by: Yuri Pankov <yuri.pankov@nexenta.com>
Approved by: Daniel Whitehall <dw@hydra.org>
*****
1 /*
2  * This file and its contents are supplied under the terms of the
3  * Common Development and Distribution License ("CDDL"), version 1.0.
4  * You may only use this file in accordance with the terms of version
5  * 1.0 of the CDDL.
6  *
7  * A full copy of the text of the CDDL should have accompanied this
8  * source. A copy of the CDDL is also available via the Internet at
9  * http://www.illumos.org/license/CDDL.
10 */
12 /*
13  * Copyright 2014 PALO, Richard. All rights reserved.
14  * Copyright 2014 OmniTI Computer Consulting, Inc. All rights reserved.
15 */
17 /*
18  * Test rounding of floating point numbers in libc's *printf() routines.
19  *
20  * C99 must be enabled to get DECIMAL_DIG defined, but it looks like all
21  * of usr/src/test/libc is compiled that way.
22  */
24 #include <float.h>
25 #include <fenv.h>
26 #include <stdio.h>
27 #include <strings.h>
28 #include "test_common.h"
30 /*
31  * Returns negative if snprintf() fails. Returns 0 upon
32  * successful execution of the test, return 1 upon a failure.
33  * Spews output if verbose is TRUE.
34  */
35 int
36 run_one(test_t t, int i, int j, int precision, boolean_t verbose)
37 {
38     const int size = 100;
39     char buffer[size], check[size];
40     double val;
41     int status;
43     val = (double)(0.0 + j) / i;
44     /* first get max precision for control check */
45     status = snprintf(check, size, "%+-.*f", DECIMAL_DIG, val);
46     if (status < 0) {
47         test_failed(t, "Max precision snprintf() "
48             "(i = %d, j = %d) returned %d\n", i, j, status);
49         return (status);
50     }
51     /* then get specific precision */
52     status = snprintf(buffer, size, "%+-.#.*f", precision, val);
53     if (status < 0) {
54         test_failed(t, "Specific precision snprintf() "
55             "(i = %d, j = %d, precision = %d) returned %d\n", i, j,
56             precision, status);
57         return (status);
58     }

```

```

60     if (strlen(check) > strlen(buffer) &&
61         strcmp(buffer, check, strlen(buffer))) {
62         /* last check if correctly rounded up */
63         if (check[strlen(buffer)] < '5' &&
64             buffer[strlen(buffer) - 1] > check[strlen(buffer) - 1]) {
65             if (verbose)
66                 (void) printf("failure:f precision %d "
67                     "for %02d/%02d => %s (%s)\n",
68                     precision, j, i, buffer, check);
69             return (1);
70         }
71     }
73     return (0);
74 }
76 int
77 main(int argc, char *argv[])
78 {
79     int status, i, j, precision;
80     int failures = 0;
81     int runs = 0;
82     test_t t;
83     /* NOTE: Any argument after the command enables "VERBOSE" mode. */
84     boolean_t verbose = (argc > 1);
86     t = test_start("**printf() floating-point rounding tests.");
88     (void) fesetround(FE_TONEAREST);
90     for (j = 1; j < 100; j++) {
91         for (i = 2; i < 100; i++) {
92             for (precision = DBL_DIG - 1; precision <= DECIMAL_DIG;
93                 precision++) {
94                 runs++;
95                 status = run_one(t, i, j, precision, verbose);
96                 if (status < 0)
97                     return (status);
98                 failures += status;
99             }
100         }
101     }
103     if (failures > 0) {
104         test_failed(t, "Tests failed %d times out of %d attempts.\n"
105             "Run '%s full' to see the %d failures individually.\n",
106             failures, runs, argv[0], failures);
107     } else
108         test_passed(t);
110     return (0);
111 }

```