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Subject: [PATCH 2/4]: Test3: continous read/write to pipe  
Posted by [Sukadev Bhattiprolu](#) on Tue, 24 Jun 2008 03:33:25 GMT  
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>From ade1b719f7d9968e0f934daf736ca1746cb6747d Mon Sep 17 00:00:00 2001

From: Sukadev Bhattiprolu <sukadev@linux.vnet.ibm.com>

Date: Sun, 22 Jun 2008 22:26:18 -0700

Subject: [PATCH] Testcase 3: continous read/write to pipe

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tests/pipe.c | 82 ++++++-----  
1 files changed, 81 insertions(+), 1 deletions(-)

diff --git a/tests/pipe.c b/tests/pipe.c

index 76be6cc..c81ac2a 100644

--- a/tests/pipe.c

+++ b/tests/pipe.c

@@ -6,6 +6,8 @@

#include <string.h>

#include <errno.h>

+#define min(a, b) ((a) < (b) ? (a) : (b))

+static char \*temp\_file;

char \*test\_descriptions[] = {

NULL,

"Test with an empty pipe",

@@ -18,7 +20,7 @@ char \*test\_descriptions[] = {

"Test with all-fds in use for pipes",

};

-static int last\_num = 2;

+static int last\_num = 3;

usage(char \*argv[])

{

int i;

@@ -82,12 +84,89 @@ int test2()

}

}

+int read\_write\_pipe()

+

+ int i = 0;

+ int rc;

+ int fds[2];

+ int fd1, fd2;

+ int c;

+ char \*wbufp;

+ char wbuf[256];

```

+ char rbuf[256];
+ char *rbufp;
+
+ rbufp = &rbuf[0];
+ wbufp = &wbuf[0];
+
+ strcpy(wbufp, "abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLMNOPQRSTUVWXYZ");
+ memset(rbufp, '\0', sizeof(rbuf));
+
+ if (pipe(fds) < 0) {
+ perror("pipe()");
+ exit(1);
+ }
+ printf("fds[0] %d, fds[1] %d\n", fds[0], fds[1]);
+
+ if (fcntl(fds[0], F_SETFL, O_NONBLOCK) < 0) {
+ perror("fcntl()");
+ exit(1);
+ }
+
+ printf("Running as %d\n", getpid());
+ for (i = 0; i < 50; i++) {
+ sleep(1);
+ if (i%2 == 0) {
+ c = errno = 0;
+ rc = read(fds[0], rbufp, 3);
+
+ if (rc < 0)
+ perror("read() failed");
+ else {
+ printf("i is %d (pid %d), rbufp %p read %s\n",
+ i, getpid(), rbufp, rbufp);
+ rbufp += rc;
+ }
+
+ if (*wbufp == '\0')
+ continue;
+
+ errno = 0;
+ rc = write(fds[1], wbufp, min(3, strlen(wbufp)));
+ if (rc < 0) {
+ perror("write() to pipe");
+ } else {
+ if (rc != 3) {
+ printf("Wrote %d of 3 bytes, "
+ "error %d\n", rc, errno);
+ }
+ wbufp += rc;
}

```

```

+ }
+ }
+ }
+
+ if (strncmp(wbuf, rbuf, strlen(wbufp))) {
+ printf("Wrote: %s\n", wbuf);
+ printf("Read : %s\n", rbuf);
+ printf("Test FAILED\n");
+ } else {
+ printf("Test passed\n");
+ }
+}
+
+static void test3()
+{
+ read_write_pipe();
+}
+
int
main(int argc, char *argv[])
{
    int c;
    int tc_num;

+ temp_file = argv[0];
+
    while((c = getopt(argc, argv, "t:")) != EOF) {
        switch(c) {
            case 't':
@@ -102,6 +181,7 @@ main(int argc, char *argv[])
        switch(tc_num) {
            case 1: test1(); break;
            case 2: test2(); break;
+ case 3: test3(); break;
        default:
            printf("Unsupported test case %d\n", tc_num);
            usage(argv);
--
```

## 1.5.2.5

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 Containers@lists.linux-foundation.org  
<https://lists.linux-foundation.org/mailman/listinfo/containers>