

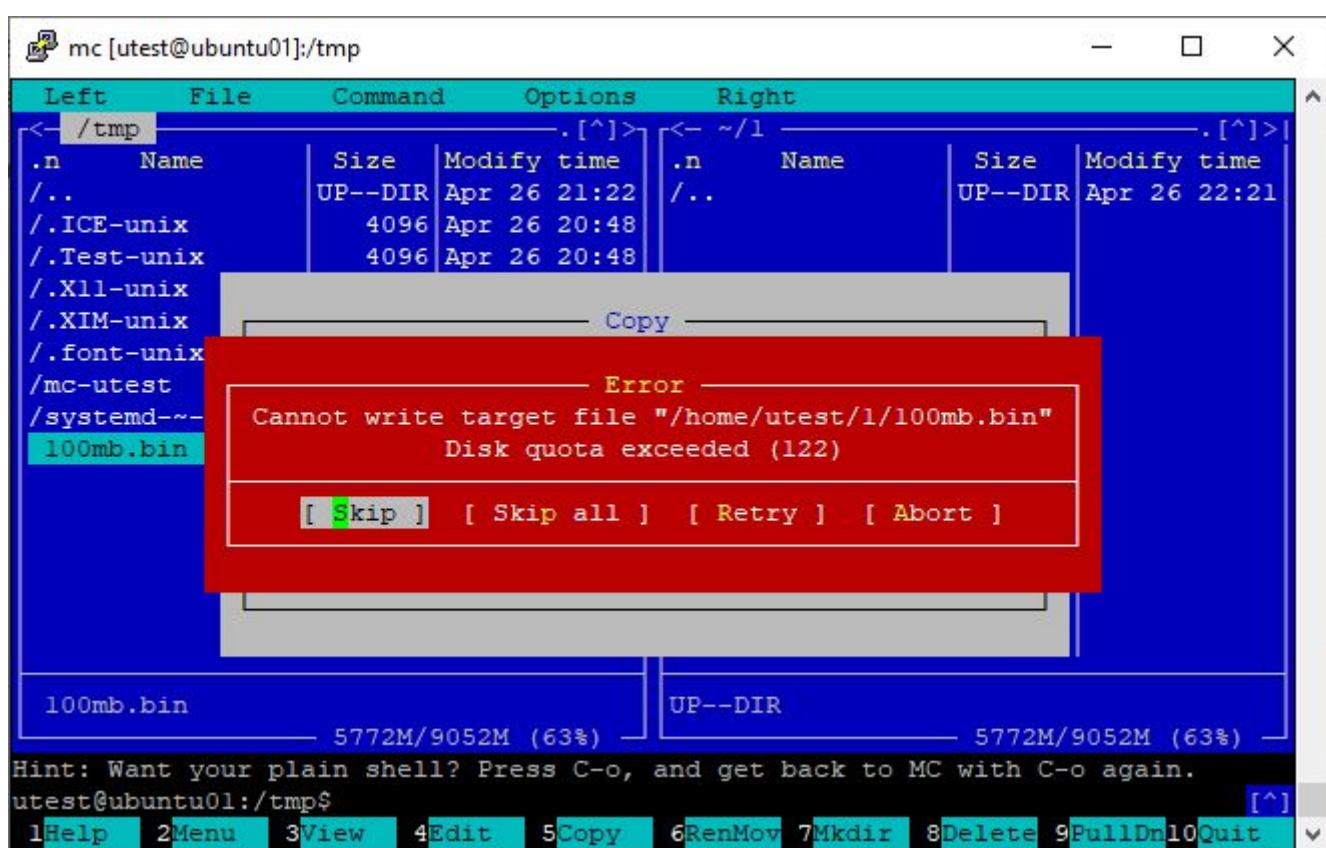
Homework 4.7
by Alexander Krupskiy

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ak@ubuntu01:~$ sudo useradd -s /bin/bash -d /home/utest -m utest
ak@ubuntu01:~$ sudo passwd utest
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
ak@ubuntu01:~$ sudo apt -qy install quota
Reading package lists...
Building dependency tree...
Reading state information...
The following additional packages will be installed:
  libtirpc1
Suggested packages:
  libnet-ldap-perl rpcbind default-mta | mail-transport-agent
The following NEW packages will be installed:
  libtirpc1 quota
0 upgraded, 2 newly installed, 0 to remove and 0 not upgraded.
Need to get 336 kB of archives.
After this operation, 1,744 kB of additional disk space will be used.
Get:1 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libtirpc1 amd64
0.2.5-1.2ubuntu0.1 [75.7 kB]
Get:2 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 quota amd64
4.04-2ubuntu0.1 [260 kB]
Fetched 336 kB in 1s (296 kB/s)
Preconfiguring packages ...
Selecting previously unselected package libtirpc1:amd64.
(Reading database ... 102573 files and directories currently installed.)
Preparing to unpack .../libtirpc1_0.2.5-1.2ubuntu0.1_amd64.deb ...
Unpacking libtirpc1:amd64 (0.2.5-1.2ubuntu0.1) ...
Selecting previously unselected package quota.
Preparing to unpack .../quota_4.04-2ubuntu0.1_amd64.deb ...
Unpacking quota (4.04-2ubuntu0.1) ...
Setting up libtirpc1:amd64 (0.2.5-1.2ubuntu0.1) ...
Setting up quota (4.04-2ubuntu0.1) ...
Processing triggers for systemd (237-3ubuntu10.39) ...
Processing triggers for man-db (2.8.3-2ubuntu0.1) ...
Processing triggers for ureadahead (0.100.0-21) ...
Processing triggers for libc-bin (2.27-3ubuntu1) ...
ak@ubuntu01:~$ quota --version
Quota utilities version 4.04.
Compiled with: USE_LDAP_MAIL_LOOKUP EXT2_DIRECT HOSTS_ACCESS RPC RPC_SETQUOTA BSD_BEHAVIOUR
Bugs to jack@suse.cz
ak@ubuntu01:~$ sudo nano /etc/fstab
ak@ubuntu01:~$ cat /etc/fstab
# /etc/fstab: static file system information.
#
# Use 'blkid' to print the universally unique identifier for a
# device; this may be used with UUID= as a more robust way to name devices
# that works even if disks are added and removed. See fstab(5).
#
# <file system> <mount point> <type> <options> <dump> <pass>
# / was on /dev/sda2 during installation
UUID=5d691983-9cfb-4c67-b36b-6583dcd76ce3 /          ext4    errors=remount-ro,usrquota 0
1
# /boot was on /dev/sda1 during installation
UUID=b69cb2c0-8a9b-4be3-aab6-992d5ed28ca4 /boot      ext4    defaults        0        2
/swappfile           none      swap      sw        0        0
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ak@ubuntu01:~$ sudo mount -o remount /
ak@ubuntu01:~$ cat /proc/mounts | grep ' '
/dev/sda2 / ext4 rw,relatime,quota,usrquota,errors=remount-ro,data=ordered 0 0
ak@ubuntu01:~$ sudo quotacheck -ugm /
ak@ubuntu01:~$ ls -l /aquota.user
-rw----- 1 root root 8192 Apr 26 21:20 /aquota.user
ak@ubuntu01:~$ sudo quota -vsu utest
Disk quotas for user utest (uid 1001):
      Filesystem    space    quota    limit   grace   files   quota    limit   grace
      /dev/sda2     16K     100M    150M          4       0       0
ak@ubuntu01:~$ sudo quotaon -v /
/dev/sda2 [/]: user quotas turned on
ak@ubuntu01:~$ sudo repquota -s /
*** Report for user quotas on device /dev/sda2
Block grace time: 7days; Inode grace time: 7days
      Space limits           File limits
User        used    soft    hard   grace   used    soft    hard   grace
-----
root      --  2555M     0K     0K          110k    0       0
daemon    --   64K     0K     0K          4       0       0
man       --  1012K     0K     0K          78      0       0
syslog    -- 1704K     0K     0K          4       0       0
_apt      --   24K     0K     0K          4       0       0
lxd       --   4K     0K     0K          1       0       0
landscape --   8K     0K     0K          4       0       0
pollinate --   4K     0K     0K          2       0       0
ak        --  28K     0K     0K          9       0       0
utest     --  16K    100M    150M          4       0       0
#62583   --   4K     0K     0K          2       0       0
utest@ubuntu01:~$ ls -l
total 102400
-rw-rw-r-- 1 utest utest 104857600 Jun 10 2015 100mb.bin
ak@ubuntu01:~$ sudo repquota -s /
*** Report for user quotas on device /dev/sda2
Block grace time: 7days; Inode grace time: 7days
      Space limits           File limits
User        used    soft    hard   grace   used    soft    hard   grace
-----
root      --  2563M     0K     0K          111k    0       0
daemon    --   64K     0K     0K          4       0       0
man       --  1024K     0K     0K          78      0       0
syslog    -- 1708K     0K     0K          4       0       0
_apt      --   24K     0K     0K          4       0       0
lxd       --   4K     0K     0K          1       0       0
landscape --   8K     0K     0K          4       0       0
pollinate --   4K     0K     0K          2       0       0
ak        --  101M     0K     0K          10      0       0
utest     +-  101M    100M    150M  6days         17      0       0
#62583   --   4K     0K     0K          2       0       0

```



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ak@ubuntu01:~$ sudo nano /etc/fstab
ak@ubuntu01:~$ cat /etc/fstab
# /etc/fstab: static file system information.
#
# Use 'blkid' to print the universally unique identifier for a
# device; this may be used with UUID= as a more robust way to name devices
# that works even if disks are added and removed. See fstab(5).
#
# <file system> <mount point> <type> <options> <dump> <pass>
# / was on /dev/sda2 during installation
UUID=5d691983-9cfb-4c67-b36b-6583dcd76ce3 / ext4
errors=remount-ro,usrquota,acl 0 1
# /boot was on /dev/sda1 during installation
UUID=b69cb2c0-8a9b-4be3-aab6-992d5ed28ca4 /boot ext4 defaults 0 2
/swapfile none swap sw 0 0
ak@ubuntu01:~$ blkid 2>&1 | logger -t acl_test
ak@ubuntu01:~$ sudo blkid 2>&1 | logger -t acl_test
ak@ubuntu01:~$ sudo tune2fs -l /dev/sda2 2>&1 | logger -t acl_test
ak@ubuntu01:~$ mkdir /tmp/acl_test 2>&1 | logger -t acl_test
ak@ubuntu01:~$ chmod o+w /tmp/acl_test 2>&1 | logger -t acl_test
ak@ubuntu01:~$ ls -ld /tmp/acl_test 2>&1 | logger -t acl_test
ak@ubuntu01:~$ sudo -u utest touch /tmp/acl_test/utest.txt 2>&1 | logger -t acl_test
ak@ubuntu01:~$ ls -l /tmp/acl_test 2>&1 | logger -t acl_test
ak@ubuntu01:~$ getfacl /tmp/acl_test 2>&1 | logger -t acl_test
ak@ubuntu01:~$ getfacl /tmp/acl_test/utest.txt 2>&1 | logger -t acl_test
ak@ubuntu01:~$ setfacl -m u:utest:r /tmp/acl_test 2>&1 | logger -t acl_test
ak@ubuntu01:~$ getfacl /tmp/acl_test 2>&1 | logger -t acl_test
ak@ubuntu01:~$ sudo -u utest touch /tmp/acl_test/prohibited.txt 2>&1 | logger -t acl_test
ak@ubuntu01:~$ sudo -u utest echo "new content" 2>&1 > /tmp/acl_test/utest.txt | logger -t acl_test
ak@ubuntu01:~$ chmod 770 /tmp/acl_test 2>&1 | logger -t acl_test
ak@ubuntu01:~$ ls -ld /tmp/acl_test 2>&1 | logger -t acl_test
ak@ubuntu01:~$ setfacl -m u:utest:rwx /tmp/acl_test 2>&1 | logger -t acl_test
ak@ubuntu01:~$ getfacl /tmp/acl_test 2>&1 | logger -t acl_test
ak@ubuntu01:~$ sudo -u utest touch /tmp/acl_test/prohibited.txt 2>&1 | logger -t acl_test

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ak@ubuntu01:~$ sudo -u utest echo "new content" 2>&1 > /tmp/acl_test/utest.txt | logger -t acl_test
#Above command gives error, but below command after 'su - utest' works!!!
utest@ubuntu01:~$ echo "new content" 2>&1 > /tmp/acl_test/utest.txt | logger -t acl_test
ak@ubuntu01:~$ ls -la /tmp/acl_test 2>&1 | logger -t acl_test
ak@ubuntu01:~$ setfacl -dm u:utest:r /tmp/acl_test 2>&1 | logger -t acl_test
ak@ubuntu01:~$ getfacl /tmp/acl_test 2>&1 | logger -t acl_test
utest@ubuntu01:~$ touch /tmp/acl_test/utest2.txt 2>&1 | logger -t acl_test
utest@ubuntu01:~$ getfacl /tmp/acl_test/utest2.txt 2>&1 | logger -t acl_test
utest@ubuntu01:~$ setfacl -m m::r /tmp/acl_test/utest.txt | logger -t acl_test
utest@ubuntu01:~$ getfacl /tmp/acl_test/utest.txt 2>&1 | logger -t acl_test
ak@ubuntu01:~$ setfacl -bR /tmp/acl_test/
ak@ubuntu01:~$ grep "acl_test" /var/log/syslog
Apr 28 22:52:44 ubuntu01 acl_test: /dev/sda1: UUID="b69cb2c0-8a9b-4be3-aab6-992d5ed28ca4"
TYPE="ext4" PARTUUID="4e084d54-01"
Apr 28 22:52:44 ubuntu01 acl_test: /dev/sda2: UUID="5d691983-9cfb-4c67-b36b-6583dcd76ce3"
TYPE="ext4" PARTUUID="4e084d54-02"
Apr 28 22:54:02 ubuntu01 acl_test: /dev/sda1: UUID="b69cb2c0-8a9b-4be3-aab6-992d5ed28ca4"
TYPE="ext4" PARTUUID="4e084d54-01"
Apr 28 22:54:02 ubuntu01 acl_test: /dev/sda2: UUID="5d691983-9cfb-4c67-b36b-6583dcd76ce3"
TYPE="ext4" PARTUUID="4e084d54-02"
Apr 28 22:54:19 ubuntu01 acl_test: tune2fs 1.44.1 (24-Mar-2018)
Apr 28 22:54:19 ubuntu01 acl_test: Filesystem volume name: <none>
Apr 28 22:54:19 ubuntu01 acl_test: Last mounted on: /
Apr 28 22:54:19 ubuntu01 acl_test: Filesystem UUID:
5d691983-9cfb-4c67-b36b-6583dcd76ce3
Apr 28 22:54:19 ubuntu01 acl_test: Filesystem magic number: 0xEF53
Apr 28 22:54:19 ubuntu01 acl_test: Filesystem revision #: 1 (dynamic)
Apr 28 22:54:19 ubuntu01 acl_test: Filesystem features: has_journal ext_attr resize_inode
dir_index filetype needs_recovery extent 64bit flex_bg sparse_super large_file huge_file
dir_nlink extra_isize metadata_csum
Apr 28 22:54:19 ubuntu01 acl_test: Filesystem flags: signed_directory_hash
Apr 28 22:54:19 ubuntu01 acl_test: Default mount options: user_xattr acl
Apr 28 22:54:19 ubuntu01 acl_test: Filesystem state: clean
Apr 28 22:54:19 ubuntu01 acl_test: Errors behavior: Continue
Apr 28 22:54:19 ubuntu01 acl_test: Filesystem OS type: Linux
Apr 28 22:54:19 ubuntu01 acl_test: Inode count: 593344
Apr 28 22:54:19 ubuntu01 acl_test: Block count: 2371072
Apr 28 22:54:19 ubuntu01 acl_test: Reserved block count: 118553
Apr 28 22:54:19 ubuntu01 acl_test: Free blocks: 1645201
Apr 28 22:54:19 ubuntu01 acl_test: Free inodes: 482977
Apr 28 22:54:19 ubuntu01 acl_test: First block: 0
Apr 28 22:54:19 ubuntu01 acl_test: Block size: 4096
Apr 28 22:54:19 ubuntu01 acl_test: Fragment size: 4096
Apr 28 22:54:19 ubuntu01 acl_test: Group descriptor size: 64
Apr 28 22:54:19 ubuntu01 acl_test: Reserved GDT blocks: 1024
Apr 28 22:54:19 ubuntu01 acl_test: Blocks per group: 32768
Apr 28 22:54:19 ubuntu01 acl_test: Fragments per group: 32768
Apr 28 22:54:19 ubuntu01 acl_test: Inodes per group: 8128
Apr 28 22:54:19 ubuntu01 acl_test: Inode blocks per group: 508
Apr 28 22:54:19 ubuntu01 acl_test: Flex block group size: 16
Apr 28 22:54:19 ubuntu01 acl_test: Filesystem created: Fri Mar 27 18:23:49 2020
Apr 28 22:54:19 ubuntu01 acl_test: Last mount time: Tue Apr 28 22:37:57 2020
Apr 28 22:54:19 ubuntu01 acl_test: Last write time: Tue Apr 28 22:37:56 2020
Apr 28 22:54:19 ubuntu01 acl_test: Mount count: 17
Apr 28 22:54:19 ubuntu01 acl_test: Maximum mount count: -1
Apr 28 22:54:19 ubuntu01 acl_test: Last checked: Fri Mar 27 18:23:49 2020
Apr 28 22:54:19 ubuntu01 acl_test: Check interval: 0 (<none>)
Apr 28 22:54:19 ubuntu01 acl_test: Lifetime writes: 5244 MB

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Apr 28 22:54:19 ubuntu01 acl_test: Reserved blocks uid:          0 (user root)
Apr 28 22:54:19 ubuntu01 acl_test: Reserved blocks gid:          0 (group root)
Apr 28 22:54:19 ubuntu01 acl_test: First inode:                  11
Apr 28 22:54:19 ubuntu01 acl_test: Inode size:#011           256
Apr 28 22:54:19 ubuntu01 acl_test: Required extra isize:      32
Apr 28 22:54:19 ubuntu01 acl_test: Desired extra isize:      32
Apr 28 22:54:19 ubuntu01 acl_test: Journal inode:             8
Apr 28 22:54:19 ubuntu01 acl_test: Default directory hash: half_md4
Apr 28 22:54:19 ubuntu01 acl_test: Directory Hash Seed:
bb2a3121-4f8d-4705-9635-5e805d0f106a
Apr 28 22:54:19 ubuntu01 acl_test: Journal backup:            inode blocks
Apr 28 22:54:19 ubuntu01 acl_test: Checksum type:            crc32c
Apr 28 22:54:19 ubuntu01 acl_test: Checksum:                 0x532ccae1
Apr 28 23:01:34 ubuntu01 acl_test: drwxrwxrwx 2 ak ak 4096 Apr 28 22:55 /tmp/acl_test
Apr 28 23:03:43 ubuntu01 acl_test: total 0
Apr 28 23:03:43 ubuntu01 acl_test: -rw-r--r-- 1 utest utest 0 Apr 28 23:02 utest.txt
Apr 28 23:05:42 ubuntu01 acl_test: getfacl: Removing leading '/' from absolute path names
Apr 28 23:05:42 ubuntu01 acl_test: # file: tmp/acl_test
Apr 28 23:05:42 ubuntu01 acl_test: # owner: ak
Apr 28 23:05:42 ubuntu01 acl_test: # group: ak
Apr 28 23:05:42 ubuntu01 acl_test: user::rwx
Apr 28 23:05:42 ubuntu01 acl_test: group::rwx
Apr 28 23:05:42 ubuntu01 acl_test: other::rwx
Apr 28 23:05:42 ubuntu01 acl_test:
Apr 28 23:06:02 ubuntu01 acl_test: getfacl: Removing leading '/' from absolute path names
Apr 28 23:06:02 ubuntu01 acl_test: # file: tmp/acl_test/utest.txt
Apr 28 23:06:02 ubuntu01 acl_test: # owner: utest
Apr 28 23:06:02 ubuntu01 acl_test: # group: utest
Apr 28 23:06:02 ubuntu01 acl_test: user::rw-
Apr 28 23:06:02 ubuntu01 acl_test: group::r--
Apr 28 23:06:02 ubuntu01 acl_test: other::r--
Apr 28 23:06:02 ubuntu01 acl_test:
Apr 28 23:21:32 ubuntu01 acl_test: getfacl: Removing leading '/' from absolute path names
Apr 28 23:21:32 ubuntu01 acl_test: # file: tmp/acl_test
Apr 28 23:21:32 ubuntu01 acl_test: # owner: ak
Apr 28 23:21:32 ubuntu01 acl_test: # group: ak
Apr 28 23:21:32 ubuntu01 acl_test: user::rwx
Apr 28 23:21:32 ubuntu01 acl_test: user:utest:r--
Apr 28 23:21:32 ubuntu01 acl_test: group::rwx
Apr 28 23:21:32 ubuntu01 acl_test: mask::rwx
Apr 28 23:21:32 ubuntu01 acl_test: other::rwx
Apr 28 23:21:32 ubuntu01 acl_test:
Apr 28 23:22:09 ubuntu01 acl_test: touch: cannot touch '/tmp/acl_test/prohibited.txt':
Permission denied
Apr 28 23:23:46 ubuntu01 acl_test: -bash: /tmp/acl_test/utest.txt: Permission denied
Apr 28 23:29:27 ubuntu01 acl_test: drwxrwx---+ 2 ak ak 4096 Apr 28 23:02 /tmp/acl_test
Apr 28 23:30:51 ubuntu01 acl_test: getfacl: Removing leading '/' from absolute path names
Apr 28 23:30:51 ubuntu01 acl_test: # file: tmp/acl_test
Apr 28 23:30:51 ubuntu01 acl_test: # owner: ak
Apr 28 23:30:51 ubuntu01 acl_test: # group: ak
Apr 28 23:30:51 ubuntu01 acl_test: user::rwx
Apr 28 23:30:51 ubuntu01 acl_test: user:utest:rwx
Apr 28 23:30:51 ubuntu01 acl_test: group::rwx
Apr 28 23:30:51 ubuntu01 acl_test: mask::rwx
Apr 28 23:30:51 ubuntu01 acl_test: other::---
Apr 28 23:30:51 ubuntu01 acl_test:
Apr 28 23:48:54 ubuntu01 acl_test: -bash: /tmp/acl_test/utest.txt: Permission denied
Apr 28 23:53:09 ubuntu01 acl_test: total 12
Apr 28 23:53:09 ubuntu01 acl_test: drwxrwx---+ 2 ak     ak    4096 Apr 28 23:47 .
Apr 28 23:53:09 ubuntu01 acl_test: drwxrwxrwt  9 root   root  4096 Apr 28 23:47 ..
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Apr 28 23:53:09 ubuntu01 acl_test: -rw-r--r-- 1 utest utest      0 Apr 28 23:47 prohibited.txt
Apr 28 23:53:09 ubuntu01 acl_test: -rw-r--r-- 1 utest utest     12 Apr 28 23:50 utest.txt
Apr 28 23:59:18 ubuntu01 acl_test: getfacl: Removing leading '/' from absolute path names
Apr 28 23:59:18 ubuntu01 acl_test: # file: tmp/acl_test
Apr 28 23:59:18 ubuntu01 acl_test: # owner: ak
Apr 28 23:59:18 ubuntu01 acl_test: # group: ak
Apr 28 23:59:18 ubuntu01 acl_test: user::rwx
Apr 28 23:59:18 ubuntu01 acl_test: user:utest:rwx
Apr 28 23:59:18 ubuntu01 acl_test: group::rwx
Apr 28 23:59:18 ubuntu01 acl_test: mask::rwx
Apr 28 23:59:18 ubuntu01 acl_test: other::---
Apr 28 23:59:18 ubuntu01 acl_test: default:user::rwx
Apr 28 23:59:18 ubuntu01 acl_test: default:user:utest:r--
Apr 28 23:59:18 ubuntu01 acl_test: default:group::rwx
Apr 28 23:59:18 ubuntu01 acl_test: default:mask::rwx
Apr 28 23:59:18 ubuntu01 acl_test: default:other::---
Apr 28 23:59:18 ubuntu01 acl_test:
Apr 29 00:01:26 ubuntu01 acl_test: getfacl: Removing leading '/' from absolute path names
Apr 29 00:01:26 ubuntu01 acl_test: # file: tmp/acl_test/utest2.txt
Apr 29 00:01:26 ubuntu01 acl_test: # owner: utest
Apr 29 00:01:26 ubuntu01 acl_test: # group: utest
Apr 29 00:01:26 ubuntu01 acl_test: user::rw-
Apr 29 00:01:26 ubuntu01 acl_test: user:utest:r--
Apr 29 00:01:26 ubuntu01 acl_test: group::rwx#011#effective:rw-
Apr 29 00:01:26 ubuntu01 acl_test: mask::rw-
Apr 29 00:01:26 ubuntu01 acl_test: other::---
Apr 29 00:01:26 ubuntu01 acl_test:
Apr 29 00:05:40 ubuntu01 acl_test: getfacl: Removing leading '/' from absolute path names
Apr 29 00:05:40 ubuntu01 acl_test: # file: tmp/acl_test/utest.txt
Apr 29 00:05:40 ubuntu01 acl_test: # owner: utest
Apr 29 00:05:40 ubuntu01 acl_test: # group: utest
Apr 29 00:05:40 ubuntu01 acl_test: user::rw-
Apr 29 00:05:40 ubuntu01 acl_test: group::r--
Apr 29 00:05:40 ubuntu01 acl_test: mask::r--
Apr 29 00:05:40 ubuntu01 acl_test: other::r--
Apr 29 00:05:40 ubuntu01 acl_test:
Apr 29 00:08:36 ubuntu01 acl_test: getfacl: Removing leading '/' from absolute path names
Apr 29 00:08:36 ubuntu01 acl_test: # file: tmp/acl_test/prohibited.txt
Apr 29 00:08:36 ubuntu01 acl_test: # owner: utest
Apr 29 00:08:36 ubuntu01 acl_test: # group: utest
Apr 29 00:08:36 ubuntu01 acl_test: user::rw-
Apr 29 00:08:36 ubuntu01 acl_test: group::r--
Apr 29 00:08:36 ubuntu01 acl_test: other::r--
Apr 29 00:08:36 ubuntu01 acl_test:
Apr 29 00:08:36 ubuntu01 acl_test: # file: tmp/acl_test/utest2.txt
Apr 29 00:08:36 ubuntu01 acl_test: # owner: utest
Apr 29 00:08:36 ubuntu01 acl_test: # group: utest
Apr 29 00:08:36 ubuntu01 acl_test: user::rw-
Apr 29 00:08:36 ubuntu01 acl_test: group::rw-
Apr 29 00:08:36 ubuntu01 acl_test: other::---
Apr 29 00:08:36 ubuntu01 acl_test:
Apr 29 00:08:36 ubuntu01 acl_test: # file: tmp/acl_test/utest.txt
Apr 29 00:08:36 ubuntu01 acl_test: # owner: utest
Apr 29 00:08:36 ubuntu01 acl_test: # group: utest
Apr 29 00:08:36 ubuntu01 acl_test: user::rw-
Apr 29 00:08:36 ubuntu01 acl_test: group::r--
Apr 29 00:08:36 ubuntu01 acl_test: other::r--
Apr 29 00:08:36 ubuntu01 acl_test:
ak@ubuntu01:~$
```