kmod-11 测试

THU-12-1 下载编译源码包

下载源码包

```
$ wget https://www.kernel.org/pub/linux/utils/kernel/kmod/
kmod-11.tar.gz
--2013-06-18 01:08:47--   https://www.kernel.org/pub/linux/
utils/kernel/kmod/kmod-11.tar.gz
Resolving www.kernel.org (www.kernel.org)... 149.20.4.69, 198.145.20.140
Connecting to www.kernel.org (www.kernel.org)|149.20.4.69|:
443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 3458574 (3.3M) [application/x-gzip]
Saving to: `kmod-11.tar.gz'

100%[====================================>] 3,458,574   795K/
s    in 5.3s

2013-06-18 01:08:54 (641 KB/s) - `kmod-11.tar.gz' saved [3458574/3458574]
```

查看下载文件大小 3458574字节

```
$ ls -l
total 3380
-rw-rw-r-- 1 akaedu akaedu 3458574 Nov  8  2012 kmod-11.tar.gz
$
```

解压源码包

```
$ tar zxf kmod-11.tar.gz
$ ls
kmod-11  kmod-11.tar.gz
```

查看解压后文件数量 421个

```
$ cd kmod-11
$ find * | wc  -l
421
$
```

编译项目源码

```
$ ./configure CFLAGS="-g -O2" --prefix=/usr --sysconfdir=/etc --
libdir=/usr/lib
```

查看当前目录下文件数量 确认已经生成 Makefile

```
$ find * | wc  -l
467
$ ls -l Makefile
-rw-rw-r-- 1 akaedu akaedu 91795 Jun 18 01:15 Makefile
$ make
```

查看tools目录下生成的可执行文件 $ ls ./tools/ -l | grep ``x''
lrwxrwxrwx 1 akaedu akaedu 10 Jun 18 01:17 depmod -> kmod-nolib
lrwxrwxrwx 1 akaedu akaedu 10 Jun 18 01:17 insmod -> kmod-nolib -
rwxrwxr-x 1 akaedu akaedu 8352 Jun 18 01:17 kmod -rwxrwxr-x 1 akaedu
akaedu 468079 Jun 18 01:17 kmod-nolib lrwxrwxrwx 1 akaedu akaedu 10
Jun 18 01:17 lsmod -> kmod-nolib lrwxrwxrwx 1 akaedu akaedu 10 Jun
18 01:17 modinfo -> kmod-nolib lrwxrwxrwx 1 akaedu akaedu 10 Jun 18
01:17 modprobe -> kmod-nolib lrwxrwxrwx 1 akaedu akaedu 10 Jun 18
01:17 rmmod -> kmod-nolib

安装可执行文件 $ make install 权限不够，需要 sudo

```
$ sudo make install
[sudo] password for akaedu:
Making install in .
 /bin/mkdir -p '/usr/lib'
  /bin/bash ./libtool    --mode=install /usr/bin/install -
c  libkmod/libkmod.la '/usr/lib'
libtool: install: /usr/bin/install -c libkmod/.libs/libkmod.so.
2.2.1 /usr/lib/libkmod.so.2.2.1
libtool: install: (cd /usr/lib && { ln -s -f libkmod.so.
2.2.1 libkmod.so.2 || { rm -f libkmod.so.2 && ln -s libkmod.so.
2.2.1 libkmod.so.2; }; })
libtool: install: (cd /usr/lib && { ln -s -f libkmod.so.
2.2.1 libkmod.so || { rm -f libkmod.so && ln -s libkmod.so.
2.2.1 libkmod.so; }; })
libtool: install: / usr/ bin/ install  - c  libkmod/.libs/
libkmod.lai /usr/lib/libkmod.la
libtool: finish: PATH="/usr/local/sbin:/usr/local/bin:/usr/
sbin:/usr/bin:/sbin:/bin:/sbin" ldconfig -n /usr/lib
----------------------------------------------------------------
Libraries have been installed in:
   /usr/lib


If you ever happen to want to link against installed libraries
in a given directory, LIBDIR, you must either use libtool, and
specify the full pathname of the library, or use the `-LLIBDIR'
flag during linking and do at least one of the following:
   - add LIBDIR to the `LD_LIBRARY_PATH' environment variable
     during execution
   - add LIBDIR to the `LD_RUN_PATH' environment variable
     during linking
   - use the `-Wl,-rpath -Wl,LIBDIR' linker flag
    - have your system administrator add LIBDIR to `/etc/
ld.so.conf'

See any operating system documentation about shared libraries for
more information, such as the ld(1) and ld.so(8) manual pages.
----------------------------------------------------------------
 /bin/mkdir -p '/usr/bin'
  /bin/bash ./libtool  --mode=install /usr/bin/install -c tools/
kmod '/usr/bin'
libtool: install: /usr/bin/install -c tools/.libs/kmod /usr/
```

```
bin/kmod
make --no-print-directory install-exec-hook
if test "/usr/lib" != "/usr/lib"; then \
        /bin/mkdir -p /usr/lib && \
        so_img_name=$(readlink /usr/lib/libkmod.so) && \
        so_img_rel_target_prefix=$(echo /usr/lib | sed 's,\(^/
\|\)[^/][^/]*,..,g') && \
        ln -sf $so_img_rel_target_prefix/usr/lib/$so_img_name /
usr/lib/libkmod.so && \
        mv /usr/lib/libkmod.so.* /usr/lib; \
    fi
 /bin/mkdir -p '/usr/include'
 /usr/bin/install -c -m 644 libkmod/libkmod.h '/usr/include'
 /bin/mkdir -p '/usr/lib/pkgconfig'
 /usr/bin/install -c -m 644 libkmod/libkmod.pc '/usr/lib/
pkgconfig'
Making install in libkmod/docs
make[2]: Nothing to be done for `install-exec-am'.
make[2]: Nothing to be done for `install-data-am'.
Making install in man
make[2]: Nothing to be done for `install-exec-am'.
 /bin/mkdir -p '/usr/share/man/man5'
 /usr/bin/install -c -m 644 depmod.d.5 modprobe.d.5 modules.dep.
5 modules.dep.bin.5 '/usr/share/man/man5'
 /bin/mkdir -p '/usr/share/man/man8'
 /usr/bin/install -c -m 644 depmod.8 insmod.8 lsmod.8 rmmod.
8 modprobe.8 modinfo.8 '/usr/share/man/man8'
```

THU-12-2 测试 insmod 命令

编写测试用内核模块源码 hello.c

```
$ cat hello.c

#include <linux/module.h>
#include <linux/kernel.h>

MODULE_AUTHOR("AKAEDU");
```

```c
MODULE_DESCRIPTION("module example ");
MODULE_LICENSE("GPL");

int global = 100;

int __init
akae_init (void)
{
    int local = 200;
    printk ("Hello, akaedu\n");

    printk(".text = %p\n", akae_init);
    printk(".data = %p\n", &global);
    printk(".stack = %p\n", &local);
    return 0;
}

void __exit
akae_exit (void)
{
    int local = 300;
    printk ("module exit\n");

    printk(".text = %p\n", akae_exit);
    printk(".data = %p\n", &global);
    printk(".stack = %p\n", &local);
    return ;
}

module_init(akae_init);
module_exit(akae_exit);
$
```

编写测试用内核模块的 Makefile 文件

```
$ cat Makefile

obj-m := hello.o
```

```
KDIR := /usr/src/linux-headers-3.2.0-29-generic-pae/

all:
    make -C $(KDIR) SUBDIRS=$(PWD)  modules

clean:
    rm -rf *.o *.ko *.mod.* *.cmd
    rm -rf .*

$
```

编译内核模块 hello.ko

```
$ cd hello-module/
$ make
make    - C    / usr/ src/ linux- headers-3.2.0-29- generic-
pae/         SUBDIRS=/ home/ akaedu/ Github/ comment- subs/ hello-
module   modules
make[1]: Entering directory `/usr/src/linux-headers-3.2.0-29-
generic-pae'
  CC [M]  /home/akaedu/Github/comment-subs/hello-module/hello.o
  Building modules, stage 2.
  MODPOST 1 modules
   CC          /home/akaedu/Github/comment-subs/hello-module/
hello.mod.o
  LD [M]  /home/akaedu/Github/comment-subs/hello-module/hello.ko
make[1]: Leaving directory `/usr/src/linux-headers-3.2.0-29-
generic-pae'
$
```

使用测试用工具 insmod 插入内核模块

```
$ sudo ./kmod-11/tools/insmod hello-module/hello.ko
```

查看插入内核模块后的打印结果

```
$ lsmod | grep hello
hello                  12415  0
$ dmesg | tail
[350775.859640] usb 2-2.1: USB disconnect, device number 14
[350777.611134] Bluetooth: hci0 urb c7304180 submission failed
[350778.217886]        usb        2-2.1:        new        full-
speed USB device number 15 using uhci_hcd
[352048.604051] usb 2-2.1: USB disconnect, device number 15
[352048.630829] Bluetooth: hci0 urb dd3d3000 submission failed
[352049.254135]        usb        2-2.1:        new        full-
speed USB device number 16 using uhci_hcd
[352111.505217] Hello, akaedu
[352111.505223] .text = e0844000
[352111.505225] .data = e0c03000
[352111.505227] .stack = df6e3f54
$
```

重复插入同样的内核模块系统会报错

```
$ sudo ./kmod-11/tools/insmod hello-module/hello.ko
insmod:  ERROR:  could  not  insert  module  hello- module/
hello.ko: File exists
$ lsmod | grep hello
hello                  12415  0
```

THU-12-3 测试 rmmod 命令

使用测试用工具 rmmod 卸载内核模块

```
$ sudo ./kmod-11/tools/rmmod hello-module/hello.ko
$ rmmod        hello      .ko
```

查看卸载内核模块后的打印结果

```
$ lsmod | grep hello
$
$ dmesg | tail
[352048.630829] Bluetooth: hci0 urb dd3d3000 submission failed
[352049.254135]        usb        2-2.1:        new        full-
speed USB device number 16 using uhci_hcd
[352111.505217] Hello, akaedu
[352111.505223] .text = e0844000
[352111.505225] .data = e0c03000
[352111.505227] .stack = df6e3f54
[352365.795618] module exit
[352365.795624] .text = e0c01000
[352365.795626] .data = e0c03000
[352365.795628] .stack = dd197f40
$
```

THU-12-4 测试 1smod 命令

1smod 命令运行

不加参数，直接运行 1smod ，可以显示出当前在内核中的模块情况。

```
$ ./kmod-11/tools/lsmod
Module                Size  Used by
nls_iso8859_1        12617  0
nls_cp437            12751  0
usb_storage          39646  0
btrfs               638208  0
zlib_deflate         26622  1 btrfs
libcrc32c            12543  1 btrfs
ufs                  78131  0
qnx4                 13309  0
hfsplus              83507  0
hfs                  49479  0
minix                31418  0
ntfs                100171  0
```

```
vfat                    17308  0
msdos                   17132  0
fat                     55605  2 msdos,vfat
jfs                    175085  0
xfs                    747494  0
reiserfs               230896  0
ext2                    67987  0
usblp                   17885  0
vmwgfx                 102138  2
ttm                     65344  1 vmwgfx
drm                    197692  3 ttm,vmwgfx
acpiphp                 23535  0
vmw_balloon             12700  0
psmouse                 72919  0
serio_raw               13027  0
btusb                   17912  2
joydev                  17393  0
rfcomm                  38139  0
bnep                    17830  2
bluetooth              158438  13 bnep,rfcomm,btusb
ppdev                   12849  0
nfsd                   229850  13
nfs                    307376  0
lockd                   78804  2 nfs,nfsd
fscache                 50642  1 nfs
i2c_piix4               13093  0
auth_rpcgss             39597  2 nfs,nfsd
nfs_acl                 12771  2 nfs,nfsd
sunrpc                 205647  19 nfs_acl,auth_rpcgss,lockd,nfs,nfsd
parport_pc              32114  1
shpchp                  32325  0
mac_hid                 13077  0
snd_ens1371             24819  4
gameport                15060  1 snd_ens1371
snd_rawmidi             25424  1 snd_ens1371
snd_seq_device          14172  1 snd_rawmidi
snd_ac97_codec         106082  1 snd_ens1371
ac97_bus                12642  1 snd_ac97_codec
snd_pcm                 80845  3 snd_ac97_codec,snd_ens1371
snd_timer               28931  2 snd_pcm
snd                     62064  12 snd_timer,snd_pcm,snd_ac97_codec,snd_seq_device,snd_rawmidi,s
soundcore               14635  1 snd
```

```
snd_page_alloc          14108   1 snd_pcm
lp                      17455   0
parport                 40930   3 lp,parport_pc,ppdev
pcnet32                 41110   0
usbhid                  41906   0
hid                     77367   1 usbhid
mptspi                  22474   2
mptscsih                39530   1 mptspi
mptbase                 96852   2 mptscsih,mptspi
floppy                  60310   0
vmw_pvscsi              18334   0
vmxnet3                 44924   0
$
```

lsmod 命令运行参数

该命令不支持带参数，因此后面如果跟某个模块名称，只会显示 usage ，
不会显示模块的信息。

```
$ ./kmod-11/tools/lsmod ufs
Usage: ./kmod-11/tools/lsmod
$
```

THU-12-5 测试 modinfo 命令

modinfo 命令运行参数

对于没有依赖关系的单个 .ko 内核模块，使用 modinfo 可以直接显示出模
块的信息。

```
$ ./kmod-11/tools/modinfo ./hello-module/hello.ko
filename:       ./hello-module/hello.ko
license:        GPL
description:    module example
```

```
author:             AKAEDU
srcversion:         C928237C5C93794C5E0EF9C
depends:
vermagic:                                        3.2.0-29- generic-
pae SMP mod_unload modversions 686
$
```

modinfo 命令检查依赖关系

对于有依赖关系的单个 .ko 内核模块，使用 modinfo 可以显示出模块的依
赖关系信息depends，同时也可以显示出模块加载时的参数信息parm。这个
参数信息是在编译内核模块的时候，源码中通过用 MODULE_PARM_DESC() 宏
来指定的。

```
$  modinfo  /lib/modules/3.2.0-29-generic-pae/kernel/fs/nfs/
nfs.ko
filename:        /lib/modules/3.2.0-29-generic-pae/kernel/fs/nfs/
nfs.ko
license:         GPL
author:          Olaf Kirch <okir@monad.swb.de>
srcversion:      BB0605CB0AF0BA47415CBEC
depends:         fscache,sunrpc,lockd,auth_rpcgss,nfs_acl
intree:          Y
vermagic:                                        3.2.0-29- generic-
pae SMP mod_unload modversions 686
parm:            callback_tcpport:portnr
parm:        cache_getent:Path to the client cache upcall program (string)
parm:        cache_getent_timeout:Timeout (in seconds) after which the cache upcall is ass
parm:            enable_ino64:bool
parm:        nfs4_disable_idmapping:Turn off NFSv4 idmapping when using 'sec=sys' (bool)
$
```

查看别名信息 alias

对于可以使用别名的内核模块，也可以用它的别名 alias 来查看模块信
息。别名是在 /lib/modules/3.2.0-29-generic-pae/modules.alias 描述
的模块名称的简单形式。

```
$ head /lib/modules/3.2.0-29-generic-pae/modules.alias
# Aliases extracted from modules themselves.
alias pci:v00008086d00003422sv*sd*bc*sc*i* mce_xeon75xx
alias char-major-10-134 apm
alias devname:cpu/microcode microcode
alias char-major-10-184 microcode
alias aes-asm aes_i586
alias aes aes_i586
alias twofish-asm twofish_i586
alias twofish twofish_i586
alias salsa20-asm salsa20_i586
```

但是在这个文件中，别名为 aes 的模块，还有很多个，通过 grep ``alias
aes'' 可以看出一共有3个别名都是 aes 的模块，分别是 aes_i586,
aesni_intel, padlock_aes。

```
$     cat    / lib/ modules/ 3.2.0-29- generic- pae/
modules.alias | grep "alias aes"
alias aes-asm aes_i586
alias aes aes_i586
alias aes aesni_intel
alias aes padlock_aes
```

使用 modinfo 查看各个依赖模块信息

通过 modinfo 来查看 aes 这个别名所对应的模块信息，可以看到这3个
模块所对应的模块文件 crypto/aes-i586.ko，aesni-intel.ko，padlock-
aes.ko 的详细信息。

```
$ ./kmod-11/tools/modinfo aes
filename:       /lib/modules/3.2.0-29-generic-pae/kernel/arch/
x86/crypto/aes-i586.ko
alias:          aes-asm
```

```
alias:          aes
license:        GPL
description:    Rijndael (AES) Cipher Algorithm, asm optimized
srcversion:     24373C7FF739526E8AAF1B0
depends:
intree:         Y
vermagic:                                       3.2.0-29- generic-
pae SMP mod_unload modversions 686

filename:       /lib/modules/3.2.0-29-generic-pae/kernel/arch/
x86/crypto/aesni-intel.ko
alias:          aes
license:        GPL
description:     Rijndael (AES) Cipher Algorithm, Intel AES-
NI instructions optimized
srcversion:     E0B859CB1FF480D0B70F6F2
depends:        cryptd,aes-i586
intree:         Y
vermagic:                                       3.2.0-29- generic-
pae SMP mod_unload modversions 686

filename:       /lib/modules/3.2.0-29-generic-pae/kernel/drivers/
crypto/padlock-aes.ko
alias:          aes
author:         Michal Ludvig
license:        GPL
description:    VIA PadLock AES algorithm support
srcversion:     6842B20FF8E68314ED45103
depends:
intree:         Y
vermagic:                                       3.2.0-29- generic-
pae SMP mod_unload modversions 686
$
```

THU-12-6 测试 depmod 命令

depmod 命令运行时调试图

```
$ ./kmod-11/tools/depmod | wc -l
```

```
3529

$ vi ./kmod-11/tools/depmod.c
     output_deps              stdout

1790 static int output_deps(struct depmod *depmod, FILE *out)
1791 {
1792         size_t i;
1793
1794       fprintf(stdout, "total count %d", depmod->modules.count);
1795 ...
1798               const char *p = mod_get_compressed_path(mod);
1799                 size_t j, n_deps;
1800
1801                 if (mod->dep_loop) {
1802                       DBG("Ignored %s due dependency loops
\n", p);
1803                         continue;
1804                 }
1805
1806                 fprintf(out, "%s:", p);
1807                 fprintf(stdout, "%s:", p);

$ make -C kmod-11
make[1]: Entering directory `/home/akaedu/Github/comment-subs/
kmod-11'
make --no-print-directory all-recursive
Making all in .
  CC       tools/depmod.o
  CCLD     tools/kmod
  CCLD     tools/kmod-nolib
Making all in libkmod/docs
make[3]: Nothing to be done for `all'.
Making all in man
make[3]: Nothing to be done for `all'.
make[1]: Leaving directory `/home/akaedu/Github/comment-subs/
kmod-11'

$ sudo ./kmod-11/tools/depmod | head
total count 3529
kernel/arch/x86/kernel/cpu/mcheck/mce-xeon75xx.ko:
kernel/arch/x86/kernel/cpu/mcheck/mce-inject.ko:
```

```
kernel/arch/x86/kernel/msr.ko:
kernel/arch/x86/kernel/cpuid.ko:
kernel/arch/x86/kernel/apm.ko:
kernel/arch/x86/kernel/microcode.ko:
kernel/arch/x86/crypto/aes-i586.ko:
kernel/ arch/ x86/ crypto/ twofish- i586.ko:    kernel/ crypto/
twofish_common.ko
kernel/arch/x86/crypto/salsa20-i586.ko:
kernel/arch/x86/crypto/aesni-intel.ko: kernel/arch/x86/crypto/
aes-i586.ko kernel/crypto/cryptd.ko
$
```

THU-12-7 测试 depmod 命令

modprobe 命令运行时调试图

```
$ sudo ./kmod-11/tools/modprobe -r nfs
name = nfs

line   =   kernel/ fs/ nfs/ nfs.ko:   kernel/ fs/ nfs_common/
nfs_acl.ko kernel/net/sunrpc/auth_gss/auth_rpcgss.ko kernel/fs/
fscache/fscache.ko kernel/fs/lockd/lockd.ko kernel/net/sunrpc/
sunrpc.ko
--------------------

p = kernel/fs/nfs_common/nfs_acl.ko
--------------------

p = kernel/net/sunrpc/auth_gss/auth_rpcgss.ko
--------------------

p = kernel/fs/fscache/fscache.ko
--------------------

p = kernel/fs/lockd/lockd.ko
--------------------

p = kernel/net/sunrpc/sunrpc.ko
--------------------
```

```
$

$ sudo ./kmod-11/tools/modprobe nfs
name = nfs

line   =   kernel/ fs/ nfs/ nfs.ko:   kernel/ fs/ nfs_common/
nfs_acl.ko kernel/net/sunrpc/auth_gss/auth_rpcgss.ko kernel/fs/
fscache/fscache.ko kernel/fs/lockd/lockd.ko kernel/net/sunrpc/
sunrpc.ko
--------------------

p = kernel/fs/nfs_common/nfs_acl.ko
--------------------

p = kernel/net/sunrpc/auth_gss/auth_rpcgss.ko
--------------------

p = kernel/fs/fscache/fscache.ko
--------------------

p = kernel/fs/lockd/lockd.ko
--------------------

p = kernel/net/sunrpc/sunrpc.ko
--------------------
$
```

THU-12-8 编译生成 testsuite 命令集

```
$ make check
Making check in .
  GEN      rootfs
make  -- no- print- directory  testsuite/ uname.la   testsuite/
path.la         testsuite/  init_module.la        testsuite/
delete_module.la    testsuite/ libtestsuite.la      testsuite/
test- init    testsuite/ test- testsuite    testsuite/ test-
loaded testsuite/test-modinfo testsuite/test-alias testsuite/
```

```
test- new- module   testsuite/ test- modprobe   testsuite/ test-
blacklist testsuite/test-dependencies testsuite/test-depmod
  CC       testsuite/uname.lo
  CCLD     testsuite/uname.la
  CC       testsuite/path.lo
  CCLD     testsuite/path.la
  CC       testsuite/init_module.lo
  CC       testsuite/mkdir.lo
  CCLD     testsuite/init_module.la
  CC       testsuite/delete_module.lo
  CCLD     testsuite/delete_module.la
  CC       testsuite/testsuite_libtestsuite_la-testsuite.lo
  CCLD     testsuite/libtestsuite.la
  CC       testsuite/testsuite_test_init-test-init.o
  CCLD     testsuite/test-init
  CC       testsuite/testsuite_test_testsuite-test-testsuite.o
  CCLD     testsuite/test-testsuite
  CC       testsuite/testsuite_test_loaded-test-loaded.o
  CCLD     testsuite/test-loaded
  CC       testsuite/testsuite_test_modinfo-test-modinfo.o
  CCLD     testsuite/test-modinfo
  CC       testsuite/testsuite_test_alias-test-alias.o
  CCLD     testsuite/test-alias
  CC       testsuite/testsuite_test_new_module-test-new-module.o
  CCLD     testsuite/test-new-module
  CC       testsuite/testsuite_test_modprobe-test-modprobe.o
  CCLD     testsuite/test-modprobe
  CC       testsuite/testsuite_test_blacklist-test-blacklist.o
  CCLD     testsuite/test-blacklist
    CC               testsuite/ testsuite_test_dependencies-test-
dependencies.o
  CCLD     testsuite/test-dependencies
  CC       testsuite/testsuite_test_depmod-test-depmod.o
  CCLD     testsuite/test-depmod
make --no-print-directory check-TESTS
TESTSUITE: running test_initlib, in forked context
TESTSUITE: 'test_initlib' [20196] exited with return code 0
TESTSUITE: PASSED: test_initlib
TESTSUITE: running test_insert, in forked context
TESTSUITE: 'test_insert' [20197] exited with return code 0
TESTSUITE: PASSED: test_insert
TESTSUITE: running test_remove, in forked context
```

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TESTSUITE: 'test_remove' [20198] exited with return code 0
TESTSUITE: PASSED: test_remove
PASS: testsuite/test-init
TESTSUITE: running testsuite_uname, in forked context
TRAP uname(): missing export TESTSUITE_UNAME_R?
TESTSUITE: 'testsuite_uname' [20202] exited with return code 0
TESTSUITE: PASSED: testsuite_uname
TESTSUITE: running testsuite_rootfs_fopen, in forked context
TESTSUITE: 'testsuite_rootfs_fopen' [20203] exited with return code 0
TESTSUITE: PASSED: testsuite_rootfs_fopen
TESTSUITE: running testsuite_rootfs_open, in forked context
TESTSUITE: 'testsuite_rootfs_open' [20204] exited with return code 0
TESTSUITE: PASSED: testsuite_rootfs_open
TESTSUITE: running testsuite_rootfs_stat_access, in forked context
TESTSUITE: 'testsuite_rootfs_stat_access' [20205] exited with return code 0
TESTSUITE: PASSED: testsuite_rootfs_stat_access
TESTSUITE: running testsuite_rootfs_opendir, in forked context
TESTSUITE: 'testsuite_rootfs_opendir' [20206] exited with return code 0
TESTSUITE: PASSED: testsuite_rootfs_opendir
PASS: testsuite/test-testsuite
TESTSUITE: running loaded_1, in forked context
TESTSUITE: 'loaded_1' [20210] exited with return code 0
TESTSUITE: PASSED: loaded_1
PASS: testsuite/test-loaded
TESTSUITE: running modinfo_jonsmodules, in forked context
TESTSUITE: 'modinfo_jonsmodules' [20214] exited with return code 0
TESTSUITE: PASSED: modinfo_jonsmodules
PASS: testsuite/test-modinfo
TESTSUITE: running alias_1, in forked context
TESTSUITE: 'alias_1' [20218] exited with return code 0
TESTSUITE: PASSED: alias_1
PASS: testsuite/test-alias
TESTSUITE: running from_name, in forked context
TESTSUITE: 'from_name' [20222] exited with return code 0
TESTSUITE: PASSED: from_name
TESTSUITE: running from_alias, in forked context
TESTSUITE: 'from_alias' [20223] exited with return code 0
TESTSUITE: PASSED: from_alias
PASS: testsuite/test-new-module
TESTSUITE: running modprobe_show_depends, in forked context
TESTSUITE: 'modprobe_show_depends' [20227] exited with return code 0
TESTSUITE: PASSED: modprobe_show_depends
```

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TESTSUITE: running modprobe_show_depends2, in forked context
TESTSUITE: 'modprobe_show_depends2' [20228] exited with return code 0
TESTSUITE: PASSED: modprobe_show_depends2
TESTSUITE: running modprobe_builtin, in forked context
TESTSUITE: 'modprobe_builtin' [20229] exited with return code 0
TESTSUITE: PASSED: modprobe_builtin
TESTSUITE: running modprobe_softdep_loop, in forked context
TESTSUITE: 'modprobe_softdep_loop' [20230] exited with return code 0
TESTSUITE: PASSED: modprobe_softdep_loop
TESTSUITE: running modprobe_install_cmd_loop, in forked context
TESTSUITE: ERR: Test 'modprobe_install_cmd_loop' timed out, killing 20231
TESTSUITE: ERR: 'modprobe_install_cmd_loop' [20231] terminated by signal 9 (Killed)
FAIL: testsuite/test-modprobe
TESTSUITE: running blacklist_1, in forked context
TESTSUITE: 'blacklist_1' [20283] exited with return code 0
TESTSUITE: PASSED: blacklist_1
PASS: testsuite/test-blacklist
TESTSUITE: running test_dependencies, in forked context
TRAP uname(): missing export TESTSUITE_UNAME_R?
TESTSUITE: 'test_dependencies' [20287] exited with return code 0
TESTSUITE: PASSED: test_dependencies
PASS: testsuite/test-dependencies
TESTSUITE: running depmod_modules_order_for_compressed, in forked context
TESTSUITE: 'depmod_modules_order_for_compressed' [20291] exited with return code 0
TESTSUITE: ERR: sizes do not match /home/akaedu/Github/test-
kmod-11/ kmod-11/ testsuite/ rootfs/ test- depmod/ modules- order-
compressed/lib/ modules/3.5.4-1- ARCH/ correct- modules.alias  /
home/ akaedu/ Github/ test- kmod-11/ kmod-11/ testsuite/ rootfs/
test-depmod/modules-order-compressed/lib/modules/3.5.4-1-ARCH/
modules.alias
TESTSUITE: ERR: FAILED: exit ok but outputs do not match: depmod_modules_order_for_compres
FAIL: testsuite/test-depmod
=============================================
2 of 10 tests failed
Please report to linux-modules@vger.kernel.org
=============================================
make[2]: *** [check-TESTS] Error 1
make[1]: *** [check-am] Error 2
make: *** [check-recursive] Error 1
$ Killed


$
```