

## Modifications in Minix 3.2.1 exec.c

File path: /usr/src/servers/pm/exec.c

Inside function exec\_restart

```
if (rmp->mp_tracer != NO_TRACER && !(rmp->mp_trace_flags & TO_NOEXEC))
{
    sn = (rmp->mp_trace_flags & TO_ALTEXEC) ? SIGSTOP : SIGTRAP;
    check_sig(rmp->mp_pid, sn, FALSE /* ksig */);
}

/** The below line is the ADDED LINE, its the portion which calls kernel with
pointers set by VFS ***/

/* Call kernel to exec with SP and PC set by VFS. */
printf("executing %s\n", rmp->mp_name);
r = sys_exec(rmp->mp_endpoint, sp, (vir_bytes)rmp->mp_name, pc, ps_str);
if (r != OK) panic("sys_exec failed: %d", r);
```

## Modifications in cd.c in Minix 3.2.1

Filepath: /usr/src/commands/ash/cd.c

Inside docd function

```
TRACE(("docd(\"%s\", %d, %d) called\n", dest, print, phys));
```

```
printf("executing cd\n");                                /** added line **/
```

```
if((phys || cdlogical(dest) < 0) && cdphysical(dest) < 0)
```

```
    return -1;
```

Inside pwdcmd function

```
char buf[PATH_MAX];
```

```
int ch, phys;
```

```
printf("executing pwd\n");                                /** added line **/
```

```
optreset=1; optind = 1; opterr = 0;
```

```
phys = Pflag;
```



## Changes in Ubuntu 14.04 exec.c

File path: /usr/src/linux-lts-vivid-3.19.0/fs/exec.c

Inside do\_execveat\_common function

```
retval = exec_binprm(bprm);
```

```
    if (retval < 0)
```

```
        goto out;
```

```
printk("executing %s\n", filename->name);          /** added line **/
```

```
/* execve succeeded */
```

```
current->fs->in_exec = 0;
```

```
current->in_execve = 0;
```

```
acct_update_integrals(current);
```