

Thread 1

FILE: sound/hda/hdac_regmap.c

```
393. void snd_hdac_regmap_exit(...) {
394.     if (codec->regmap) {
396.         codec->regmap = NULL;
398.     }
399. }
```

Thread 2

FILE: sound/hda/hdac_regmap.c

```
599. void snd_hdac_regmap_sync(...) {
600.     if (codec->regmap) {
601.         // codec->regmap is set to NULL
// by Thread 1
602.         mutex_lock(&codec->regmap_lock);
603.         regcache_sync(codec->regmap);
604.         mutex_unlock(&codec->regmap_lock);
605.     }
```

FILE: drivers/base/regmap/regcache.c

```
345. int regcache_sync(struct regmap *map) {
354.     // Unsafe dereference
map->lock(map->lock_arg);
399. }
```

(a) Null-pointer dereference in the hda driver

Thread 1

FILE: fs/gfs2/super.c

```
982. int gfs2_show_options(...) {
1043.     val = sdp->sd_tune.gt_statfs_quantum;
1044.     if (val != 30)
1045.         seq_printf(s, "statfs_quantum=%d", val);
1046.     else if (sdp->sd_tune.gt_statfs_slow)
1047.         seq_puts(s, "statfs_quantum=0");
1048.     // sdp->sd_tune.gt_quota_quantum is
// changed by Thread 2
1049.     val = sdp->sd_tune.gt_quota_quantum;
1050.     if (val != 60)
1051.         seq_printf(s, "quota_quantum=%d", val);
1078. }
```

Thread 2

FILE: fs/gfs2/ops_fstype.c

```
1541. static int gfs2_reconfigure(...) {
1546.     gt = &sdp->sd_tune; // Alias
1613.     spin_lock(&gt->gt_spin);
1614.     gt->gt_logd_secs = ...;
1615.     gt->gt_quota_quantum = ...;
1624.     spin_unlock(&gt->gt_spin);
1628. }
```

(b) Data inconsistency in the gfs2 file system

Thread 1

FILE: drivers/scsi/lpfc/lpfc_hbadisc.c

```
1859. lpfc_register_fcf(...) {
1864.     spin_lock_irq(&phba->hbalock);
1873.     if (!(phba->fcf.fcf_flag &
1874.         FCF_REGISTERED)) {
1875.         // phba->fcf.fcf_flag is
// changed by Thread 2
phba->fcf.fcf_flag |= ...;
1883.         spin_unlock_irq(
1884.             &phba->hbalock);
1885.     }
1886.     spin_unlock_irq(
1887.         &phba->hbalock);
1908. }
```

Thread 2

FILE: drivers/scsi/lpfc/lpfc_hbadisc.c

```
6962. lpfc_unregister_fcf_rescan(...) {
6979.     phba->fcf.fcf_flag = 0;
7009. }
```

(c) Unprotected write in the lpfc driver