

[U-Boot] [PATCH 1/5] CVE-2019-13103: disk: stop infinite recursion in DOS Partitions

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Mon Jul 8 23:37:03 UTC 2019

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part_get_info_extended and print_partition_extended can recurse infinitely while parsing a self-referential filesystem or one with a silly number of extended partitions. This patch adds a limit to the number of recursive partitions.

Signed-off-by: Paul Emge <[paulemge at forallsecure.com](mailto:paulemge@forallsecure.com)>

```
---
disk/part_dos.c | 18 ++++++
1 file changed, 18 insertions(+)

diff --git a/disk/part_dos.c b/disk/part_dos.c
index 936cee0d36..aae9d95906 100644
--- a/disk/part_dos.c
+++ b/disk/part_dos.c
@@ -23,6 +23,10 @@
#define DOS_PART_DEFAULT_SECTOR 512

+/* should this be configurable? It looks like it's not very common at all
+ * to use large numbers of partitions */
+#define MAX_EXT_PARTS 256
+
+/* Convert char[4] in little endian format to the host format integer
+ */
static inline unsigned int le32_to_int(unsigned char *le32)
@@ -126,6 +130,13 @@ static void print_partition_extended(struct blk_desc *dev_desc,
    dos_partition_t *pt;
    int i;

+    /* set a maximum recursion level */
+    if (part_num > MAX_EXT_PARTS)
+    {
+        printf("*** Nested DOS partitions detected, stopping **\n");
+        return;
+    }

    if (blk_dread(dev_desc, ext_part_sector, 1, (ulong *)buffer) != 1) {
        printf ("*** Can't read partition table on %d:" LBAFU " **\n",
            dev_desc->devnum, ext_part_sector);
@@ -191,6 +202,13 @@ static int part_get_info_extended(struct blk_desc *dev_desc,
    int i;
    int dos_type;

+    /* set a maximum recursion level */
+    if (part_num > MAX_EXT_PARTS)
+    {
+        printf("*** Nested DOS partitions detected, stopping **\n");
+        return -1;
+    }

```

```
+
    if (blk_dread(dev_desc, ext_part_sector, 1, (ulong *)buffer) != 1) {
        printf ("** Can't read partition table on %d:" LBAFU " **\n",
                dev_desc->devnum, ext_part_sector);
    }
--
2.20.1
```

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