

Advantech AE Technical Share Document

Date	2019/9/25	SR#	
Category	■FAQ □SOP	Related OS	N/A
Abstract	How to find the root cause for node-red server crashed		
Keyword	ADAM-6700, Node-red server, Crashed, putty		
Related Product	ADAM-6717, ADAM-6750		

■ **Problem Description:**

When using Node-red to develop IoT application on ADAM-6700, sometimes we may crash the node-red server due to programming error. When node-red server crashed, we cannot enter the Web GUI page also the node-red editor page. User will see below screenshot and cannot to any further operation on the module. This document explains the step for you to find out the possible root cause on your node-red flow

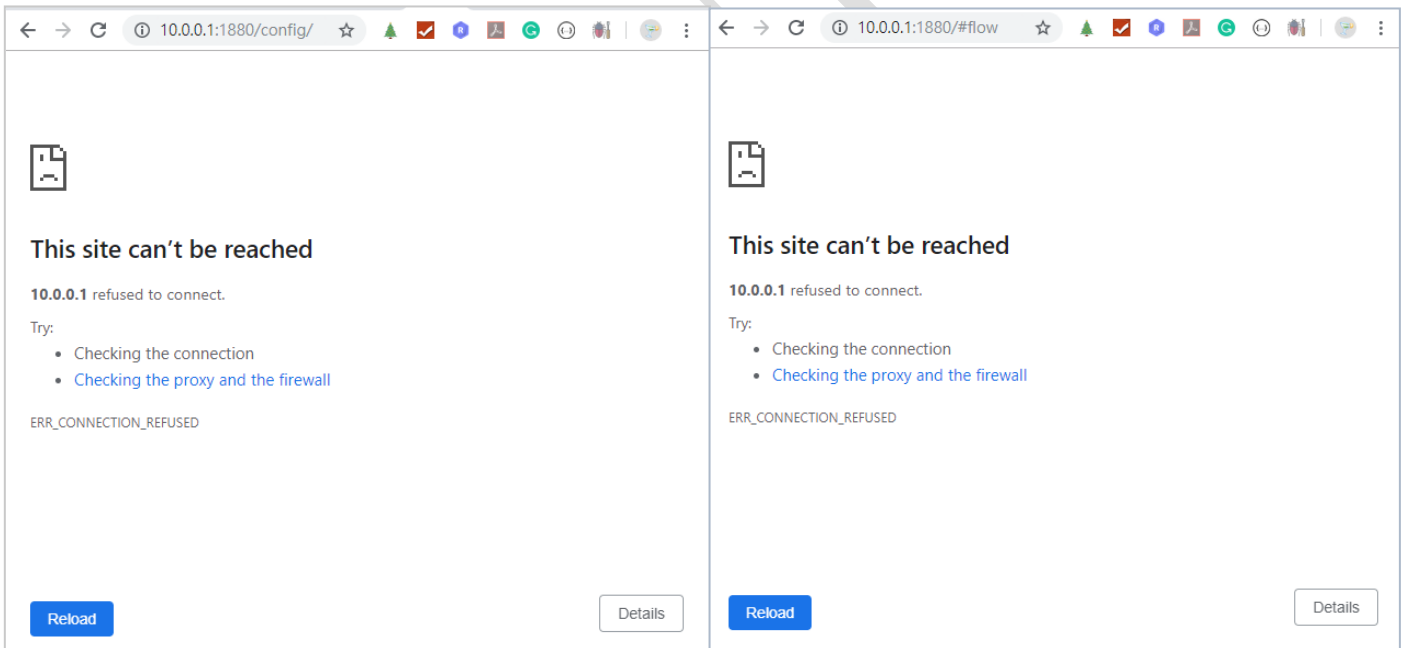


Fig.1 Cannot Enter WebGUI page due to node-red server crash

When node-red server crashed, if you wish to find the possible root cause, please follow below instruction.

■ **Solution:**

Step1:

Find the node-red process in SSH

Use putty to enter ADAM-6700 module, enter “ps” command to list out all the process

```

10.0.0.1 - PuTTY
login as: root
root@10.0.0.1's password:
root@adam67c1:~# ps
PID  USER    TIME  COMMAND
  1  root     0:07  init [5]
  2  root     0:00  [kthreadd]
  3  root     0:02  [ksoftirqd/0]
  4  root     0:00  [kworker/0:0]
  5  root     0:00  [kworker/0:0H]
  6  root     0:00  [kworker/u2:0]
  7  root     0:00  [posixcpumr/0]
  8  root     0:00  [kclksetdelayd]
  9  root     0:00  [kcmosdelayd]
 10  root     0:00  [rcu_preempt]
 11  root     0:00  [rcu_bh]
 12  root     0:00  [rcu_sched]
 13  root     0:00  [rcu0/0]
 14  root     0:00  [khelper]
 15  root     0:00  [kdevtmpfs]
 16  root     0:00  [kworker/u2:1]
 51  root     0:01  [kworker/0:1]
 79  root     0:00  [irq/116-gpmc]
 89  root     0:00  [irq/28-edma]
 90  root     0:00  [irq/30-edma_err]
    
```

Fig.1 Enter ps command to list out all the process

Step2:

Kill the **chk.sh** process. Find the process ID via as shown in Figure 2. User can use one of below command to kill the process.

>> Kill 2006

This is the process to make sure node-red application will keep running even the node-red process is being closed manually. The process will monitor whether node-red process is running or not, if not, it will execute the node-red process.

```

10.0.0.1 - PuTTY
1465 root     0:01 [irq/88-OMAP UAR]
1472 messageb 0:00 /usr/bin/dbus-daemon --system
1479 root     0:00 /usr/sbin/dropbear -r /etc/dropbear/dropbear_rsa_host_key
1482 root     0:00 /usr/sbin/telnetd
1490 root     0:00 /sbin/syslogd -n -O /var/log/messages
1493 root     0:00 /sbin/klogd -n
1497 root     0:00 /usr/sbin/lighttpd -f /etc/lighttpd.conf
2037 root     0:00 busybox ifplugd -d 2 -I -i eth0 -r /etc/network/if.sh
2039 root     0:00 busybox ifplugd -d 2 -I -i eth1 -r /etc/network/if.sh
2153 root     0:00 vsftpd /etc/vsftpd.conf
2170 root     0:00 udhcpc -R -n -p /var/run/udhcpc.eth1.pid -i eth1
2173 root     0:00 [wdt_feed thrd]
2177 root     0:02 /home/root/bin/AdvAgentMain -d
2183 root     0:00 udpsvd -WE 0 69 tftpd -c /home/root/
2189 root     0:00 /home/root/udpsearch/udpsearch.o 1 2 3 4
2206 root     0:06 {chk.sh} /bin/sh /home/root/chk.sh
2213 root     0:00 /sbin/getty 115200 tty0
2214 root     0:00 /sbin/getty 38400 tty1
15818 root    0:00 /usr/sbin/dropbear -r /etc/dropbear/dropbear_rsa_host_key
15826 root     0:00 -sh
15862 root     0:00 sleep 5
15863 root     0:00 ps
root@adam67c1:~# kill 2206
root@adam67c1:~#
    
```

Fig.2 Kill chk.sh process

Step3:

Kill node-red process, you can achieve this action by below command.

```
>> sh k.sh
```

Step4:

Run node-red program manually by below command to see the error message show on SSH screen

```
>> node-red &
```

```

10.0.0.1 - PuTTY
=====httpNode=====
24 Sep 14:05:55 - [info] Dashboard version 2.14.0 started at /ui
24 Sep 14:05:58 - [warn] -----
24 Sep 14:05:58 - [warn] [rpi-gpio] Info : Ignoring Raspberry Pi specific node
24 Sep 14:05:58 - [warn] -----
24 Sep 14:05:58 - [info] Settings file : /home/root/.node-red/settings.js
24 Sep 14:05:59 - [info] User directory : /home/root/.node-red
24 Sep 14:05:59 - [info] Flows file : /home/root/.node-red/flows_adam67c1.js
on
adam67c1

adam67c1 fd=13
ADAM-6717
close serial fd=13
[AdamComPort_OpenComPort] device=/dev/ttyO2 fd=12
Device type is ADAM-6717
{ moduleType: 'ADAM-6717',
  nDI: 5,
  nDO: 4,
  nAI: 8,
  nAO: 0,
  nCTR: 0,
  nLen: 2,
  nRFID: 0,
  isPureDI: 1,
  isPureDO: 1,
  isSupBurnOut: 0 }
24 Sep 14:05:59 - [info] Server now running at https://127.0.0.1:1880/
24 Sep 14:05:59 - [info] Starting flows
INFO : ModbusTCPServer log level: info
INFO : ModbusTCPServer log level: info
24 Sep 14:05:59 - [info] Started flows
24 Sep 14:05:59 - [red] Uncaught Exception:
24 Sep 14:05:59 - Error: listen EADDRINUSE 0.0.0.0:502
    at Object.exports._errnoException (util.js:1012:11)
    at exports._exceptionWithHostPort (util.js:1035:20)
    at Server._listen2 (net.js:1252:14)
    at listen (net.js:1288:10)
    at net.js:1398:9
    at _combinedTickCallback (internal/process/next_tick.js:77:11)
    at process._tickCallback (internal/process/next_tick.js:98:9)
root@adam67c1:~# n

```

Fig.3 Error message in SSH console

In this example, the node-red flow use two modbus server node and are both running at port 502, which cause the node-red web server crashed.

Step 5:

Enter the ftp server of ADAM-6700, rename the [flows_adam67c1.json](#) and [flows_adam67c1_cred.json](#) for fixing the problem in node-red flow later.

The default account/password of ftp server is root and no password.

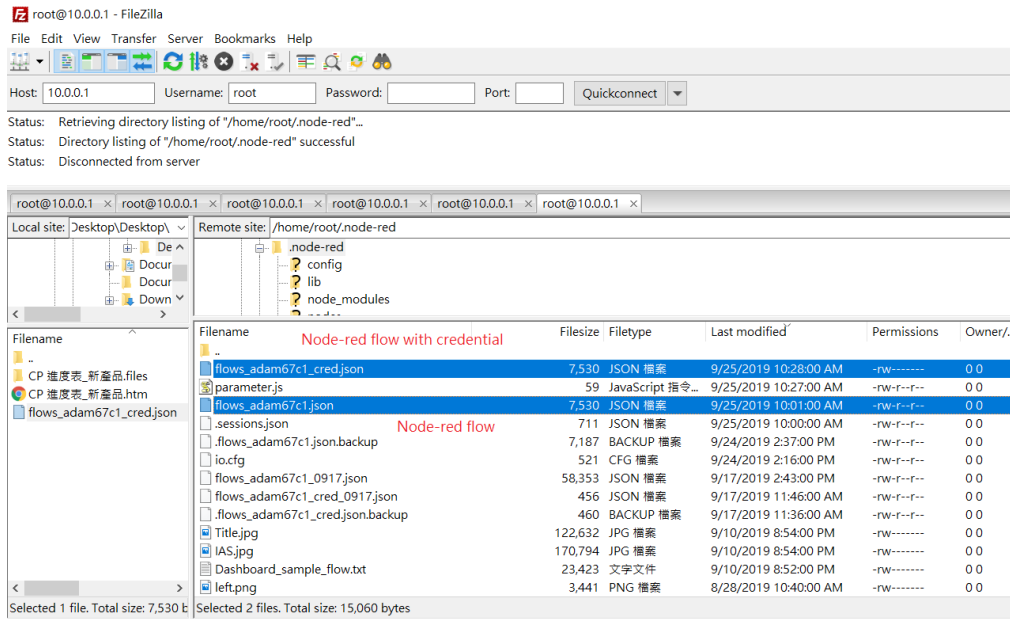


Fig.4 Rename the node-red flow in ADAM-6700

Step6:

Restart the module by a power cycle, after the system is ready, you can enter both Web GUI page and node-red editor page again as below screenshot.

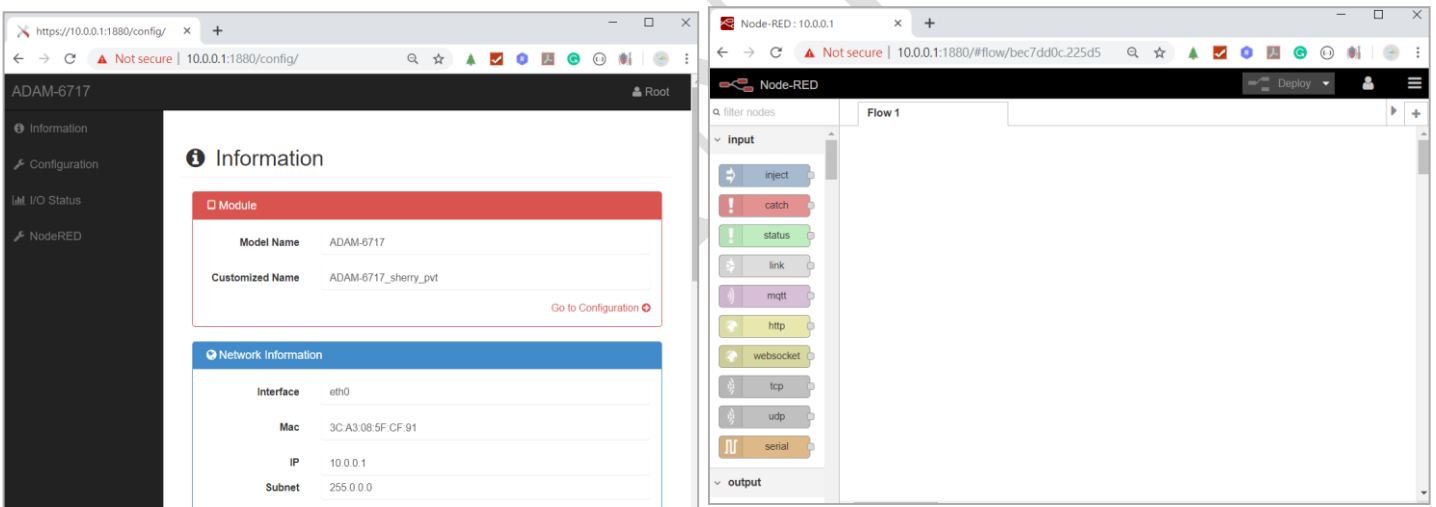


Fig.4 Both Web GUI and Node-red editor page already recovered

Step7:

Import the [flows_adam67c1.json](#) you just rename into node-red editor page, find the Modbus server node and change to different port number then click deploy to solve the programming error in node-red flow. Since the error already fixed, you can see the message show on debug column as below picture in Figure 5.

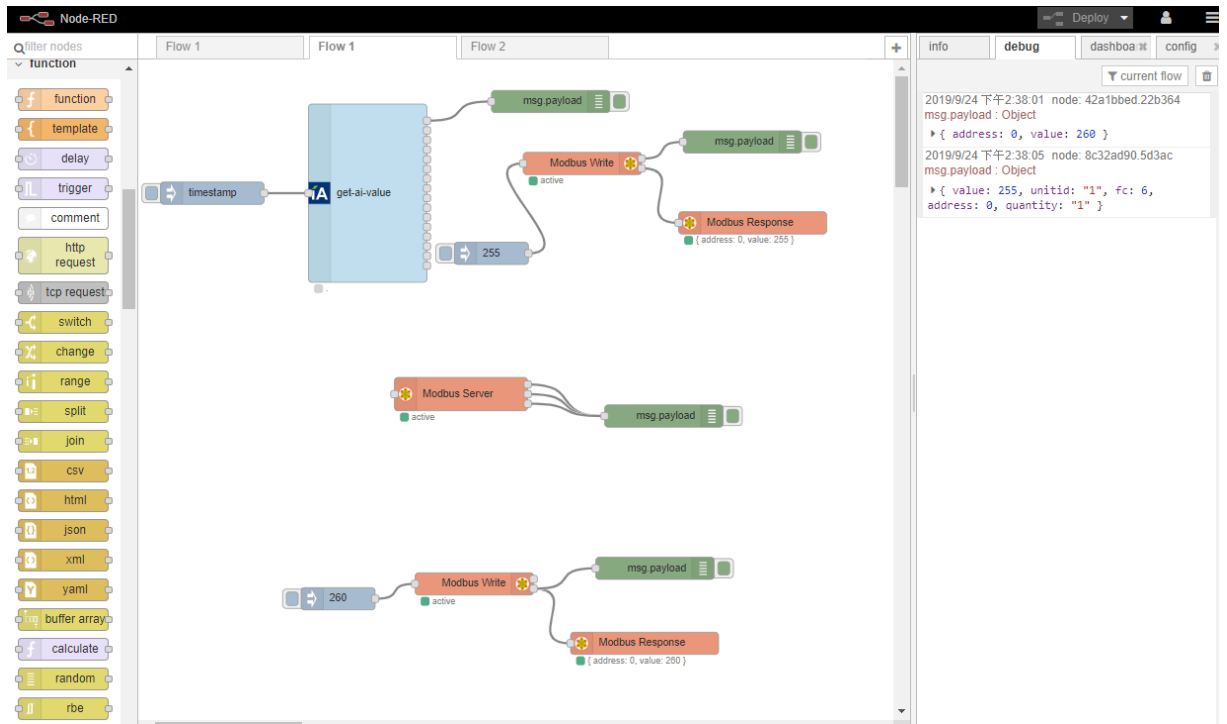


Fig.5 Fixed the duplicated Modbus server port number issue.
The flow can successfully running in node-red again.