Wi-SUN Network Topology Checking Guide

Reported
FAE Dept.

Date
Aug. 4th 2023

- Preparation

- XAMPP Installation Process

- XAMPP Relative Setting

- Generate .json File

- Execute .json File

- Wi-SUN Topology Description

Software

Web Server[1]

Ping Test Tool[2]

Configuration File[1]
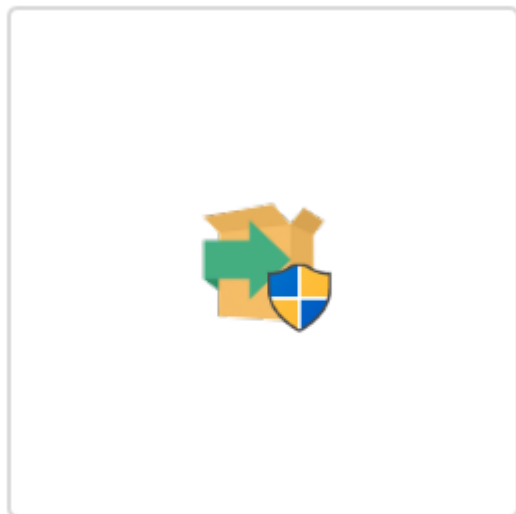

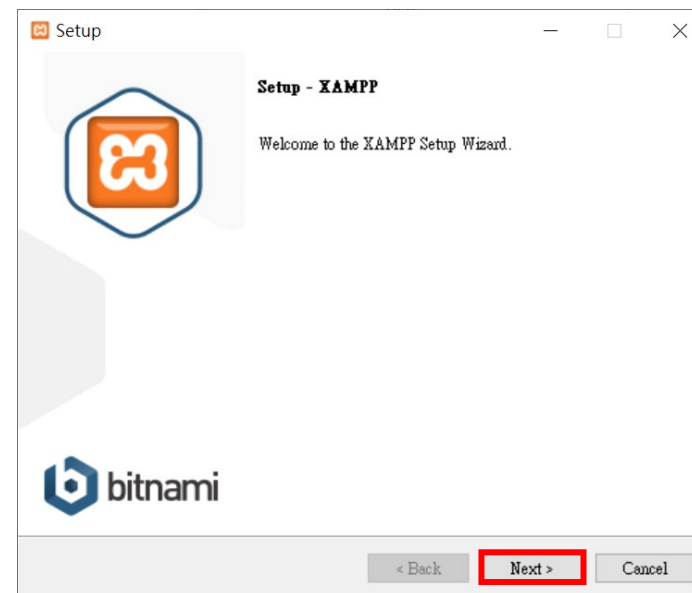Terminal Emulator[1]

Hardware

Several Wi-SUN Devices

[1] XAMPP and Tera Term can be downloaded from official website, VC_Engineering_PingTest.exe can be applied from VertexCom, www.zip can be applied from AENEAS FAE.
[2] Ping Test Tool is used to generate and execute .json file.

XAMPP Installation Process

1. Execute xampp-windows-x64-8.0.8-0-VS16-installer.exe to install XAMPP[3].
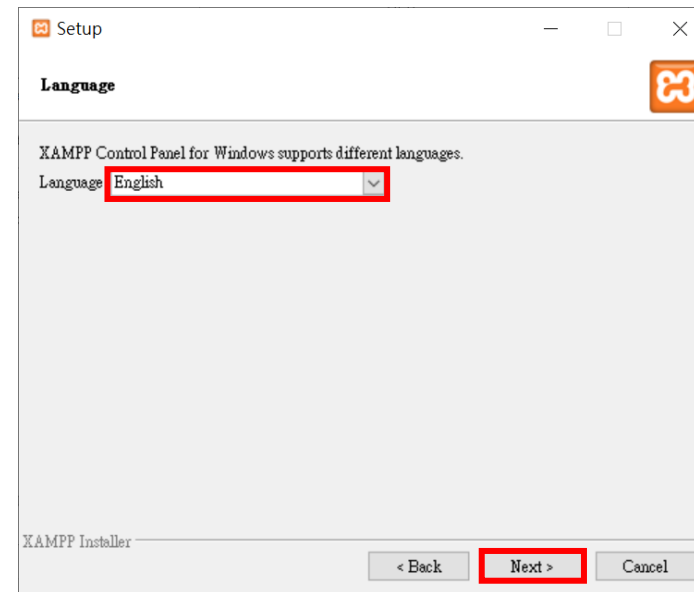
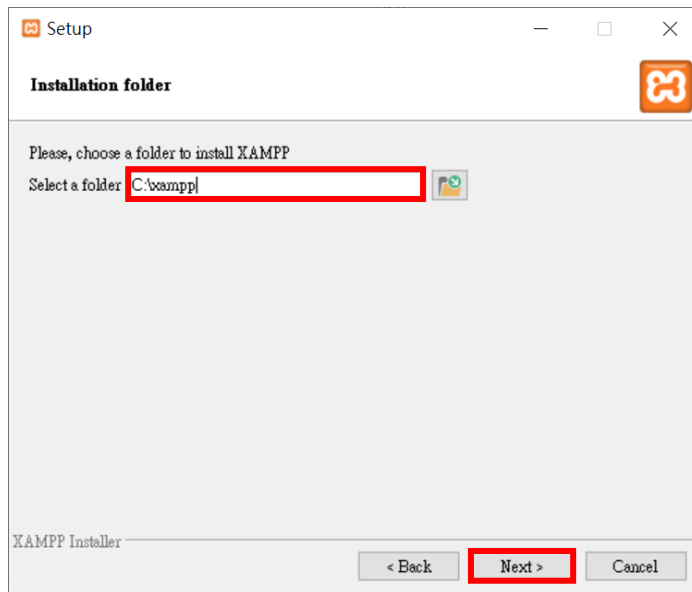2. Click「Next」to start the installation setting of XAMPP.
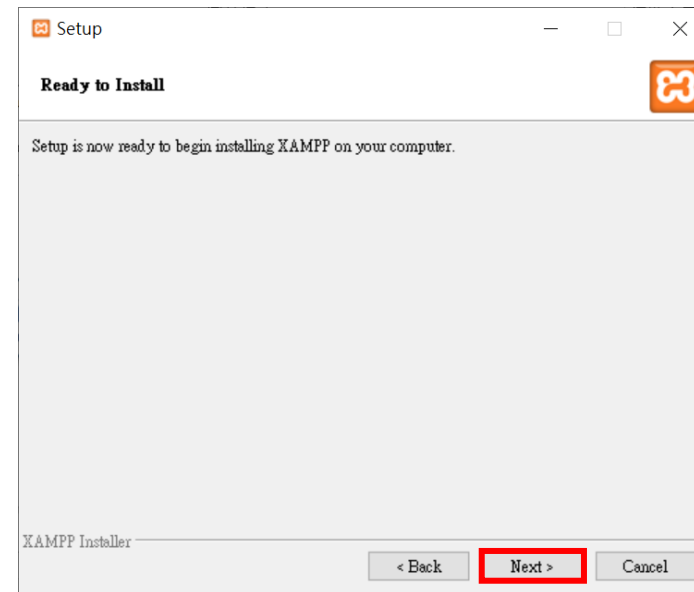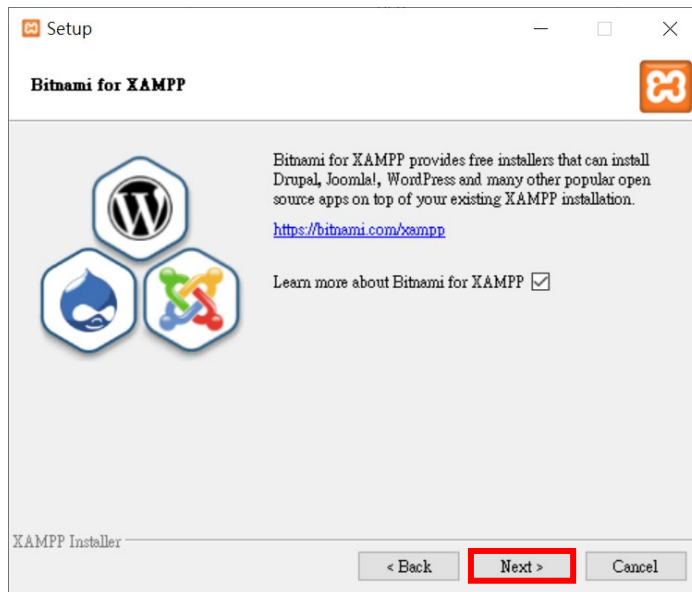

xampp-windows-x64-8.0.8-0-
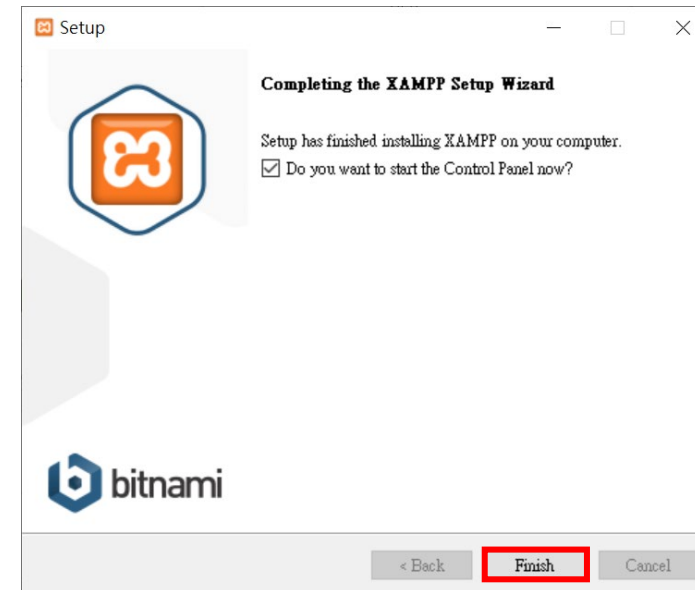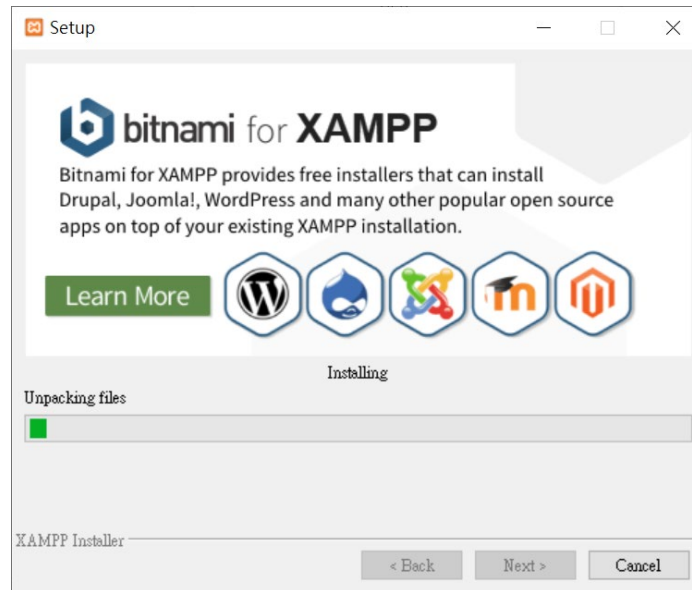VS16-installer.exe

[3]In this example, use XAMPP8.0.8(PHP 8.0.8)

3. Click「Next」to select the program installed location.

4. Click「Next」to select the Language.

5. Click「Next」.

6. Click「Next」to start the installation.

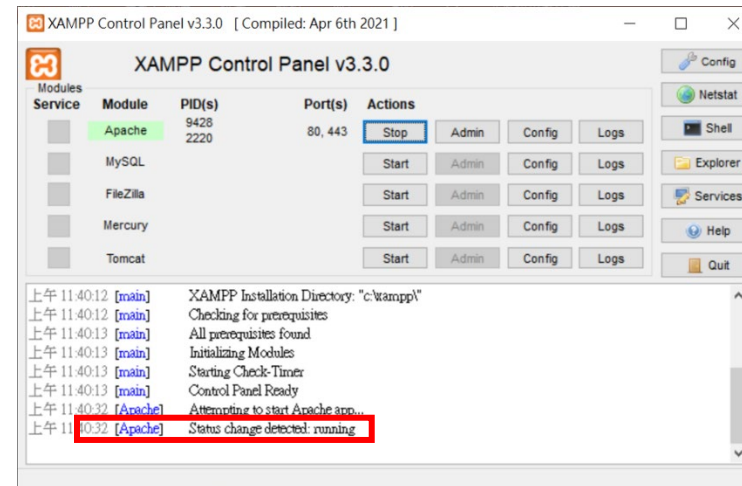7. Wait for installation process.
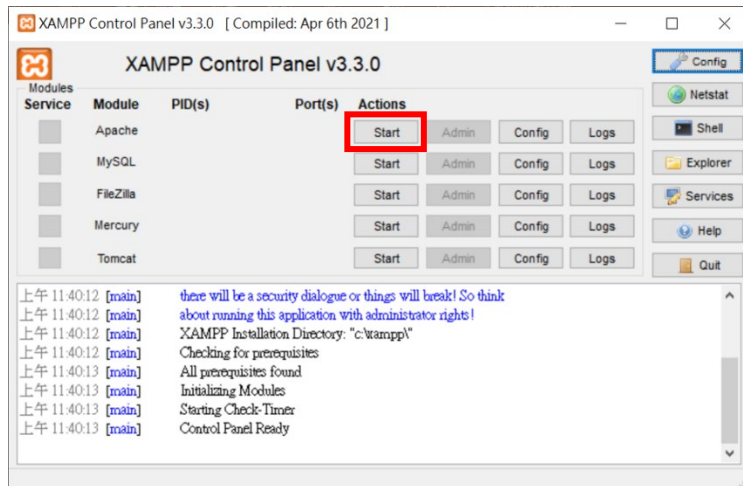
8. Click「Finish」to complete the installation.

XAMPP Relative Setting

1. Execute XAMPP, and click 「Start」 of Apache module.
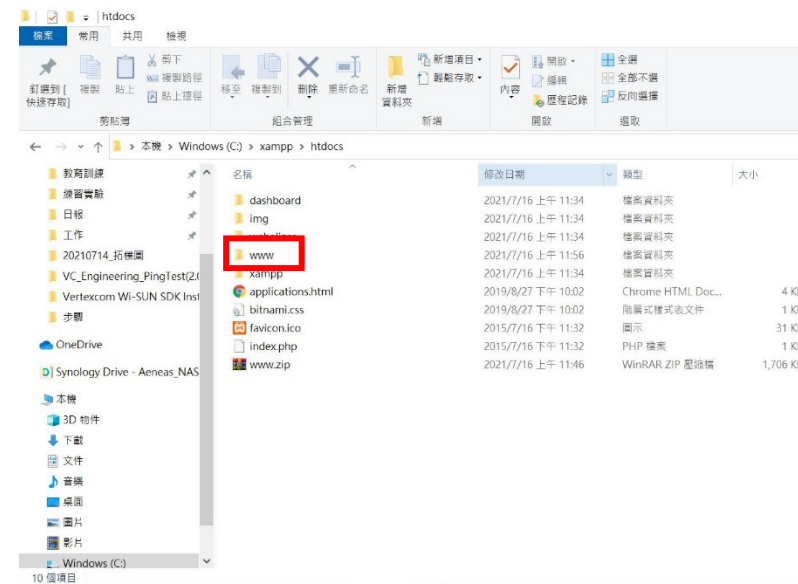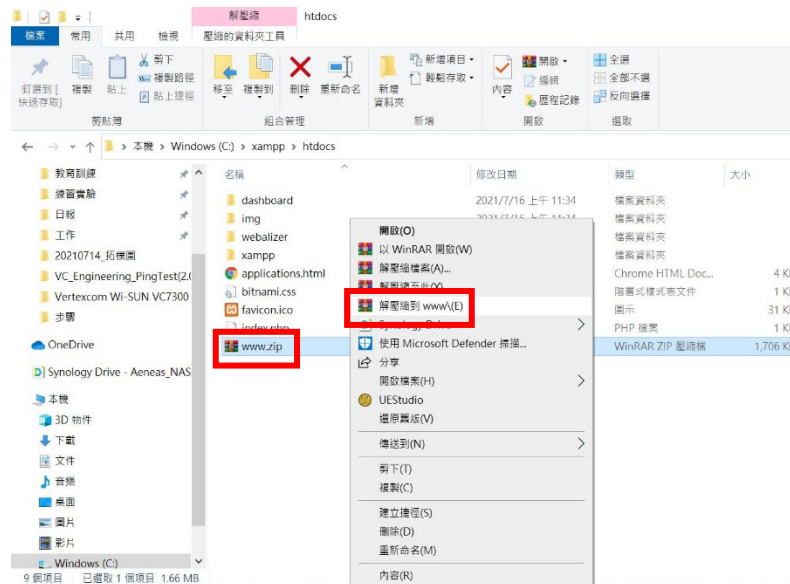
2. Wait for the following message, then minimize the window.

[Apache] Status change detected: running

3. Unzip www.zip from C:\xampp\htdocs to www\.

4. Wait for unzip process until www folder is generated under C:\xampp\htdocs.

Generate .json File

1. Setup the Wi-SUN root and node devices in your test environment.

2. Make sure the Wi-SUN networking is completed on Tera Term, then disconnect the port between Root and Tera Term[4].

```
rpl_root_init
dhcp6s: Listening on port 547 my_addr = 1
vc# Watchdog enabled
WiSUN: get rpl ready
[183039][RPL JOIN] 2: lladdr=00:15:61:00:00:21:18:3B device=2001:db8::3 parent=2001:db8::1 (parent changed)
[207798][RPL JOIN] 3: lladdr=00:15:61:FF:FE:99:56:A2 device=2001:db8::4 parent=2001:db8::3 (parent changed)
[213546][RPL JOIN] 3: lladdr=00:15:61:FF:FE:99:56:A2 device=2001:db8::4 parent=2001:db8::1 (parent changed)
[277153][RPL JOIN] 4: lladdr=00:15:61:FF:FE:99:56:A5 device=2001:db8::5 parent=2001:db8::1 (parent changed)
[283618][RPL JOIN] 5: lladdr=00:15:61:FF:FE:99:56:D4 device=2001:db8::6 parent=2001:db8::1 (parent changed)
[288539][RPL JOIN] 6: lladdr=00:15:61:FF:FE:99:56:16 device=2001:db8::7 parent=2001:db8::1 (parent changed)
[332852][RPL JOIN] 7: lladdr=00:15:61:FF:FE:99:56:15 device=2001:db8::8 parent=2001:db8::1 (parent changed)
[334062][RPL JOIN] 8: lladdr=FF:FF:FF:FF:F4:5A:0D:CF device=2001:db8::9 parent=2001:db8::1 (parent changed)
```
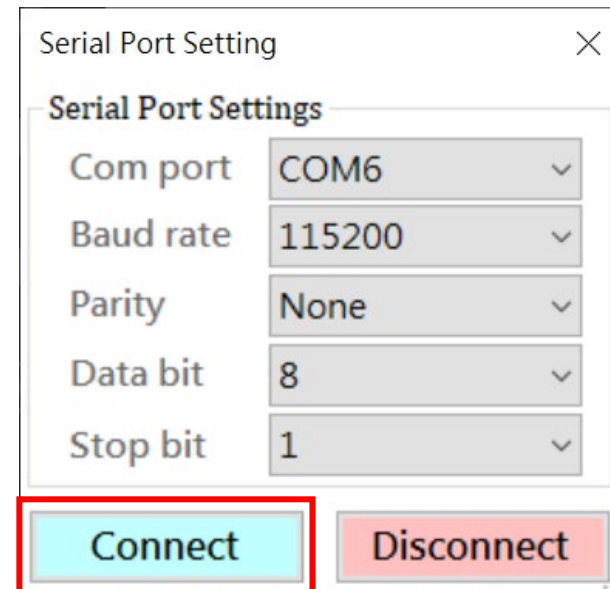
[4] If port is occupied by Tera Term, the Ping Test Tool cannot be executed.

Generate .json File

3. Execute VC_Engineering_PingTest.exe.

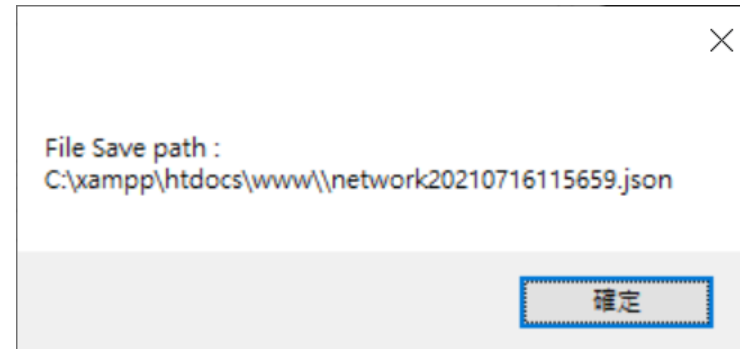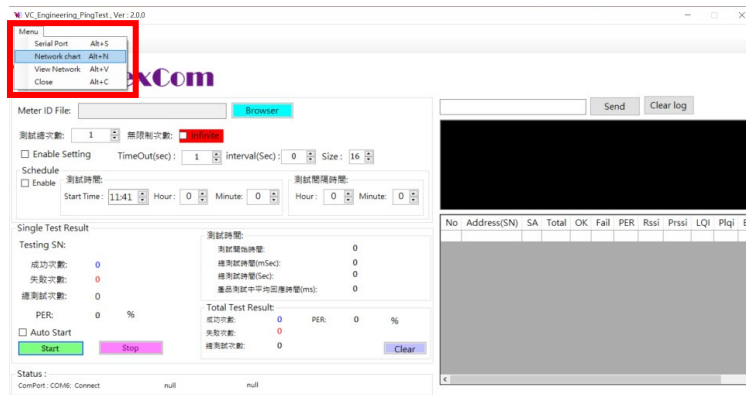4. Setup Com Port Setting of Root device, then click「Connect」.
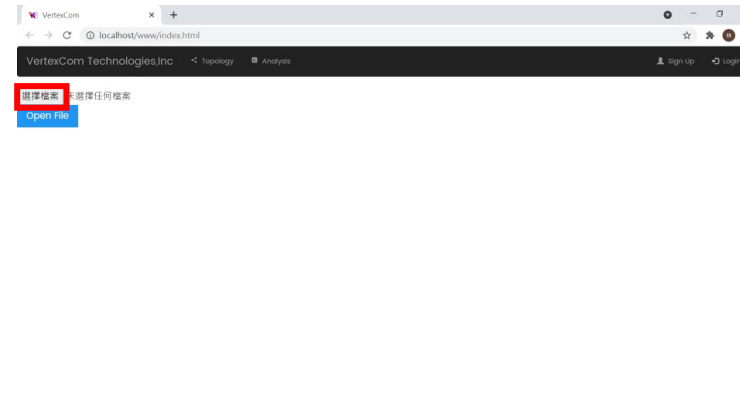
VC_Engineering
_PingTest.exe

Serial Port Setting

Serial Port Settings

Com port	COM6
Baud rate	115200
Parity	None
Data bit	8
Stop bit	1

Connect   Disconnect

5. Click「 Menu 」 →「 Network chart 」.

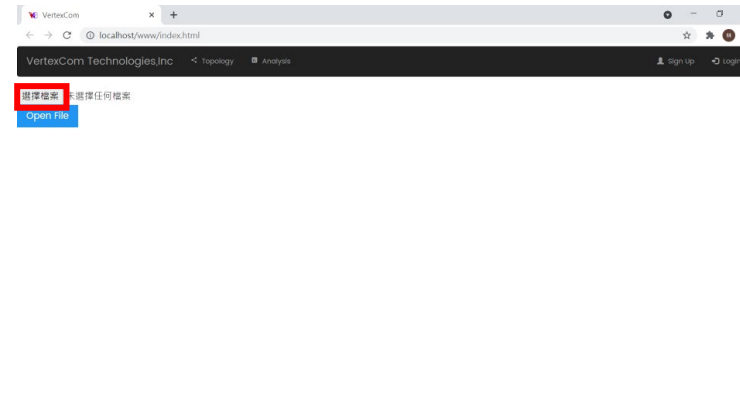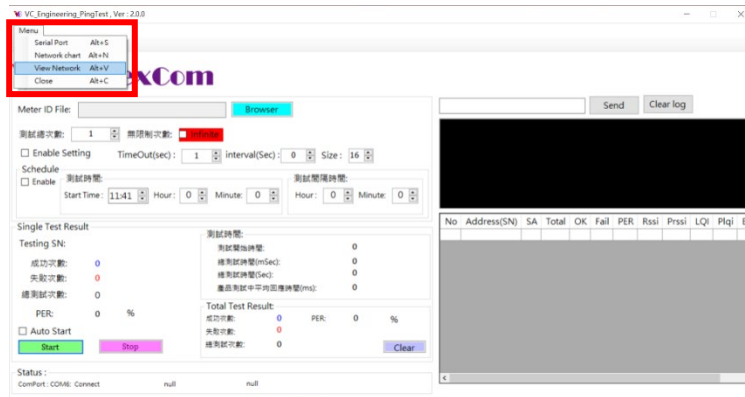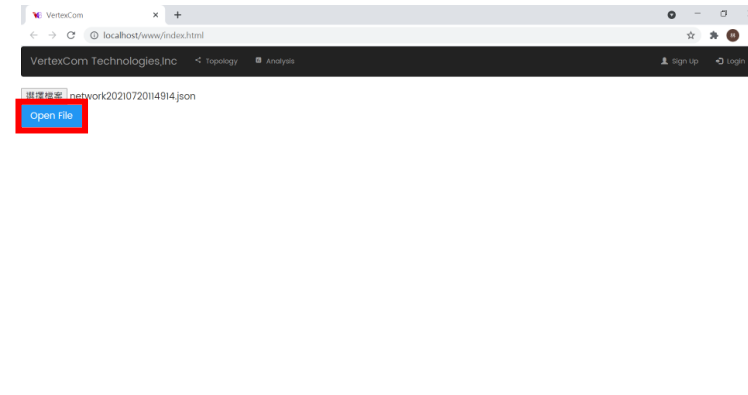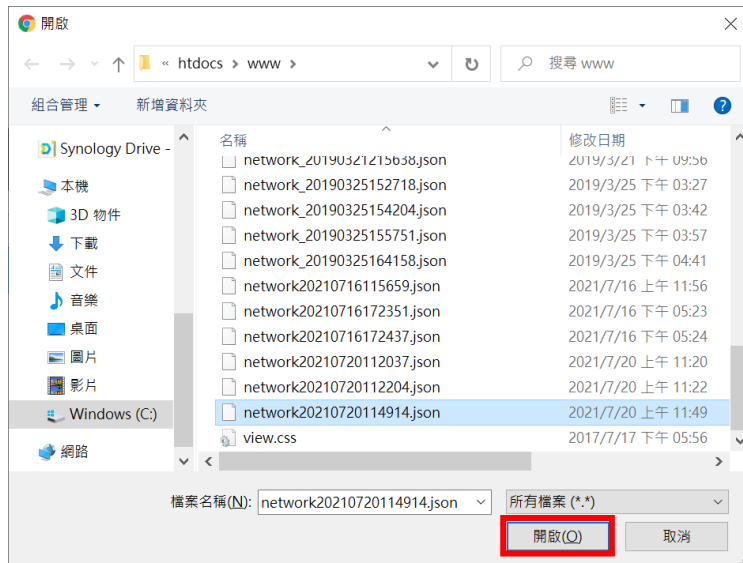6. Wait for the notification window of .json file save path.

Execute .json File

1. Click「 Menu 」 → 「 View Network」.

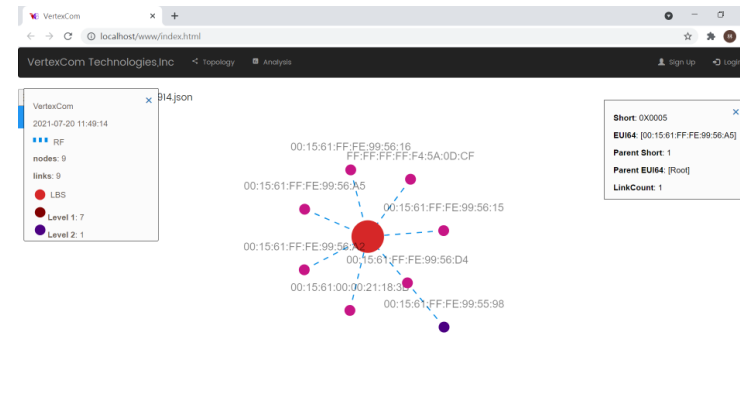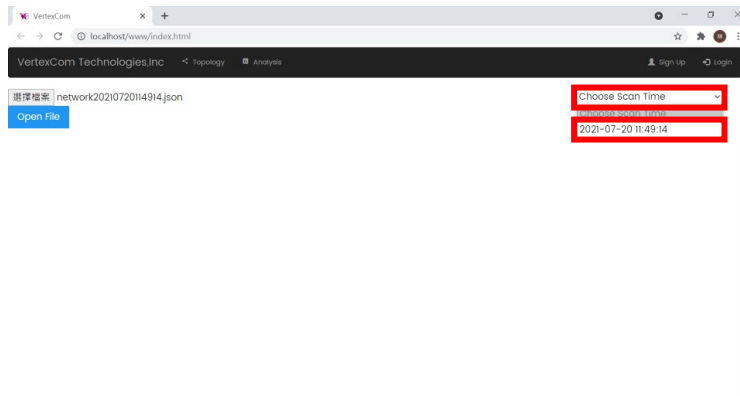2. Wait for the program move to「http://localhost/www/index.html」, then click

   「 選擇檔案 」.

1. Click「 Menu 」→「 View Network」.

2. Wait for the program move to「http://localhost/www/index.html」, then click 「 選擇檔案 」.

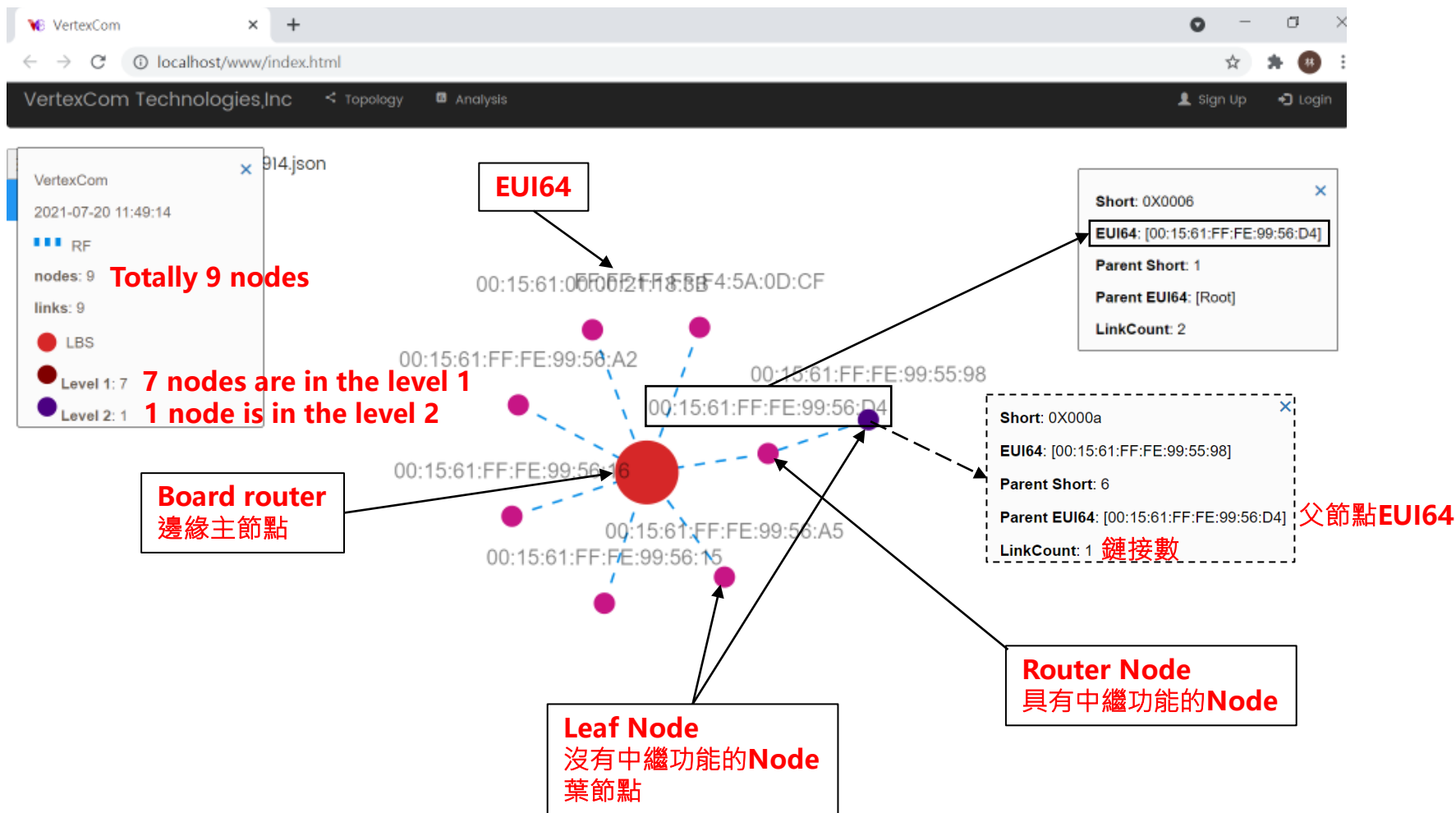3. Select the .json file which was built just now.

4. Click「 Open File」.

5. Click「 Choose Scan Time」to select the time when the .json file is generated.

6. Wait for the .json file to be loaded and generate a topology map.

Wi-SUN Topology Description

Thank You!