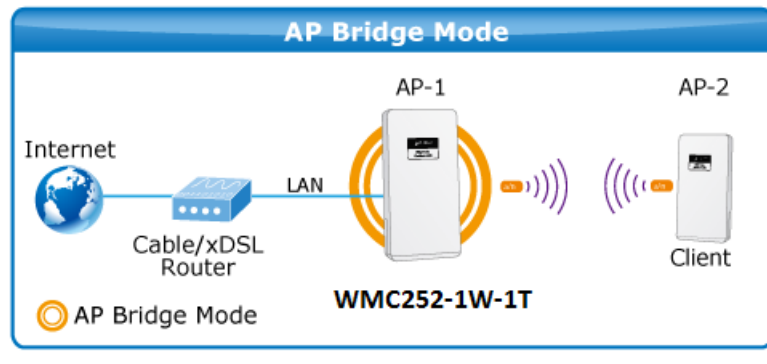


Q: How to set up the AP-Client and WDS Connection

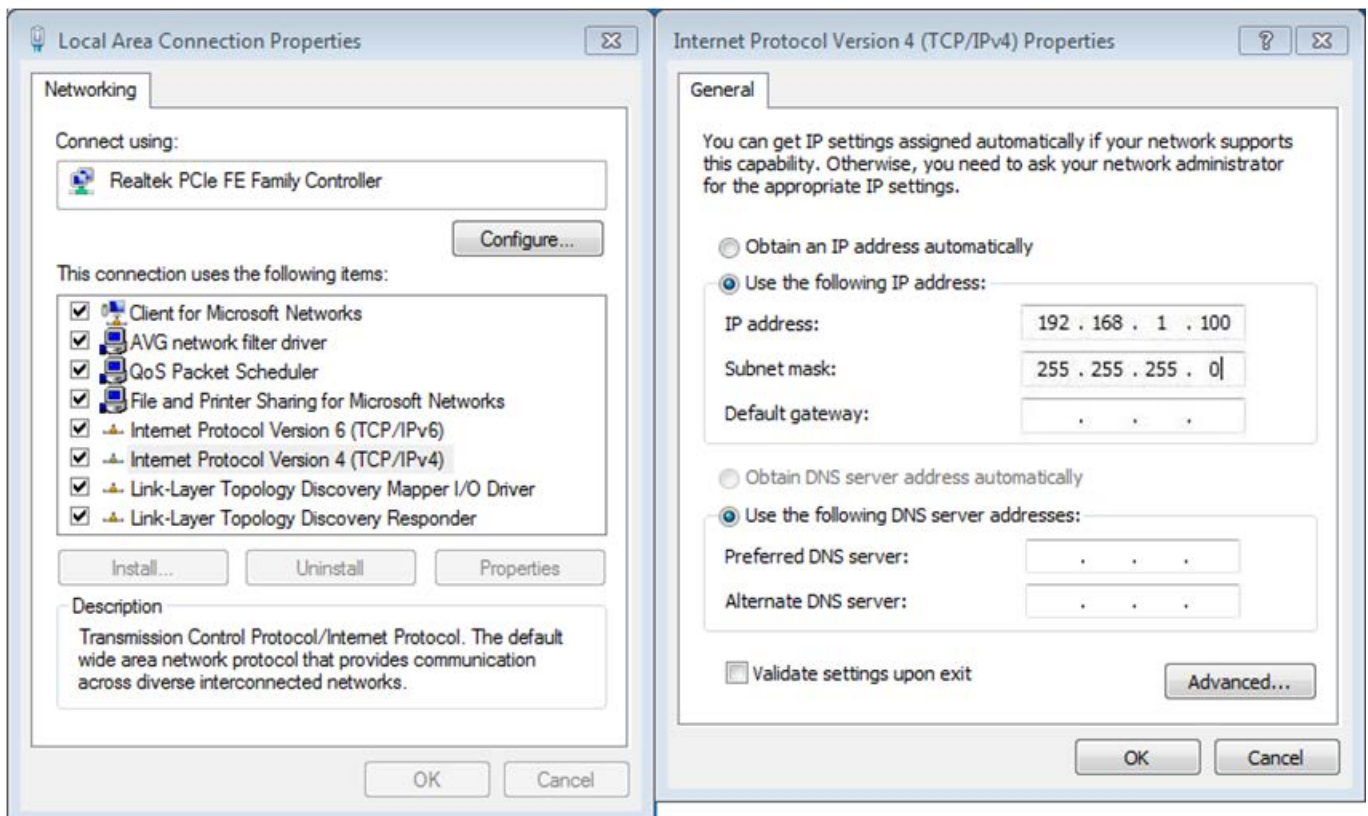
- (1) [AP-Client Connection](#)
- (2) [WDS Connection](#)

(1) AP-Client Connection

Topology:



Step 1. Use the static IP in the PCs that are connected with AP-1(Site 1) and AP-2 (Site 2). In this case, Site-1 is "192.168.1.100", and Site-2 is "192.168.1.200".



Step 2. In AP-1, go to “**Operation Mode**” to configure it to **Access Point** mode.

※ You can also configure it to “**AP Router**” mode if the **WAN** port of the **AP** is connected to the **internet** directly.

▶ **Operation Mode**

Select the "Operation Mode" by clicking on "Setup" button and then configure the Wireless Settings.

Mode		Radio	Ethernet Port
<input checked="" type="radio"/> Access Point	<input type="button" value="Setup"/>	Access Point	LAN+LAN
<input type="radio"/> Client	<input type="button" value="Setup"/>	Client	LAN+LAN
<input type="radio"/> WDS AP	<input type="button" value="Setup"/>	WDS Access Point	LAN+LAN
<input type="radio"/> WDS Client	<input type="button" value="Setup"/>	WDS Client	LAN+LAN
<input type="radio"/> AP Router	<input type="button" value="Setup"/>	Access Point	WAN+LAN
<input type="radio"/> Wireless ISP	<input type="button" value="Setup"/>	Wireless ISP	LAN+LAN

Step 3. Click “**Setup**” to configure the following parameters, and then click **Save & Restart** to save the settings.

- 1) **Network ID (SSID):** set to a unique value
- 2) **Channel:** set to a fixed one
- 3) **Security Setting:** strongly suggested to configure it.

In this case, we configure it to WPA2-PSK, AES.

► Operation Mode Settings

Regulatory Domain:

Network ID (SSID):

Enable Wireless
 Disable SSID Broadcasting
 Enable Isolated

Radio Mode:

Channel:

Data Rate:

Security Setting:

Transmit Power:

Transmit Distance:

TDMA:

DFS Control:

DFS Domain:

Advanced Settings:

Access Control:

NOTE: To access the wireless network, user must have correct SSID and encryption key, if enabled.

Security Settings

Select Encryption:

Pre-Authentication: Personal (Pre-Shared Key) Enterprise (RADIUS)

Encryption Type: TKIP AES Auto

Pre-Shared Key:

Step 4. In AP-2, modify the default IP to the same IP range but different with AP-1.

In this case, the IP is changed to **192.168.0.252**.

► **Device IP Settings**

Configure the IP settings of the device.

IP Address:	0	<input type="text" value="192"/>	<input type="text" value="168"/>	<input type="text" value="0"/>	<input type="text" value="252"/>
IP Subnet Mask:		<input type="text" value="255"/>	<input type="text" value="255"/>	<input type="text" value="255"/>	<input type="text" value="0"/>
Gateway IP Address:		<input type="text" value="192"/>	<input type="text" value="168"/>	<input type="text" value="0"/>	<input type="text" value="253"/>
Primary DNS Server:		<input type="text" value="8"/>	<input type="text" value="8"/>	<input type="text" value="4"/>	<input type="text" value="4"/>
Secondary DNS Server:		<input type="text" value="8"/>	<input type="text" value="8"/>	<input type="text" value="8"/>	<input type="text" value="8"/>

NOTE: Changes to this page will not take effect until you click Save & Restart on the save config page.

Step 5. In AP-2, configure it to **“Client”** mode, and click **“Setup”**.

► **Operation Mode**

Select the "Operation Mode" by clicking on "Setup" button and then configure the Wireless Settings.

Mode		Radio	Ethernet Port
<input type="radio"/> Access Point	<input type="button" value="Setup"/>	Access Point	LAN+LAN
<input checked="" type="radio"/> Client	<input type="button" value="Setup"/>	Client	LAN+LAN
<input type="radio"/> WDS AP	<input type="button" value="Setup"/>	WDS Access Point	LAN+LAN
<input type="radio"/> WDS Client	<input type="button" value="Setup"/>	WDS Client	LAN+LAN
<input type="radio"/> AP Router	<input type="button" value="Setup"/>	Access Point	WAN+LAN
<input type="radio"/> Wireless ISP	<input type="button" value="Setup"/>	Wireless ISP	LAN+LAN

Step 6. Click “**Setup**”, and then click **Site Survey** to find the AP-1.

▶ Operation Mode Settings

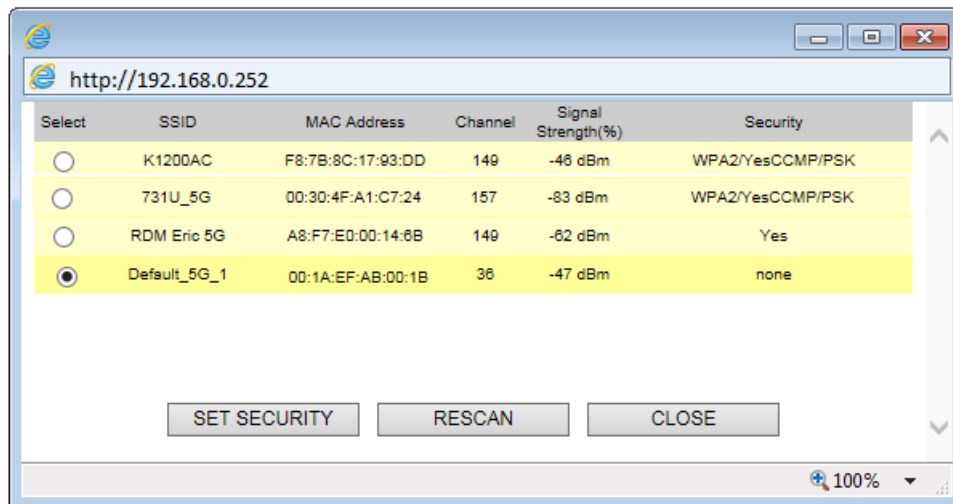
Regulatory Domain:	United States ▼	
Remote AP SSID:	WMC252	Site Survey
<input checked="" type="checkbox"/> Enable Wireless		
<input type="checkbox"/> Disable SSID Broadcasting		
<input type="checkbox"/> Enable Isolated		
Lock to AP MAC:	00:00:00:00:00:00	
Radio Mode:	5G 11NA HT40 ▼	
Channel:	Auto Channel ▼	
Data Rate:	Auto ▼	
Security Setting:	Setup	
Transmit Power:	12 dbm ▼	
Transmit Distance:	1 Km ▼	
TDMA:	Disable ▼	
DFS Control:	Enable ▼	
DFS Domain:	FCC ▼	
Advanced Settings:	Setup	
Access Control:	Setup	

[Save & Restart](#)

NOTE: Changes to this page will not take effect until you click Save & Restart on the save config page.

Step 7. Select the AP-1 from the list.

► Operation Mode Settings



Transmit Distance:

TDMA:

DFS Control:

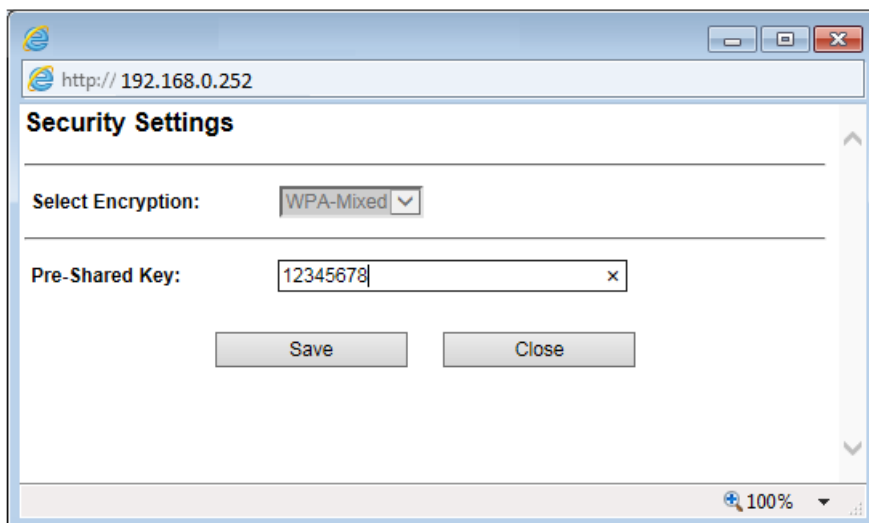
DFS Domain:

Advanced Settings:

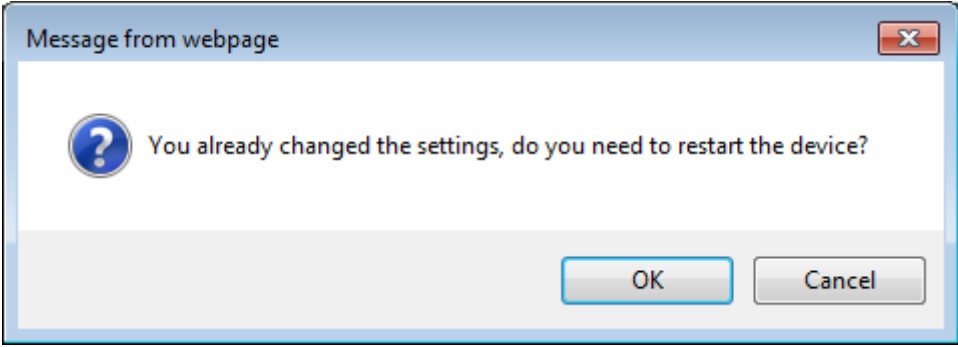
Access Control:

NOTE: Changes to this page will not take effect until you click Save & Restart on the save config page.

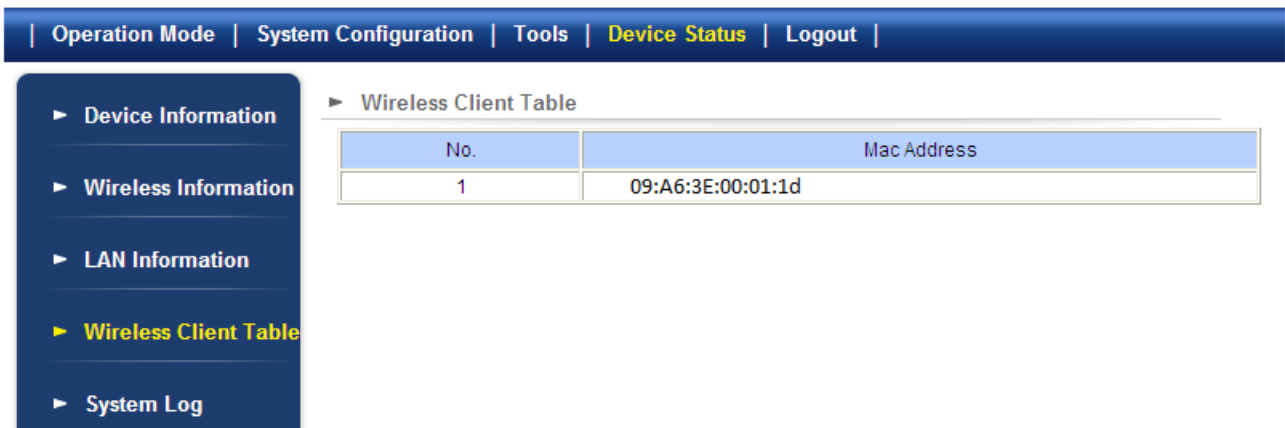
Step 8. Click “SET SECURITY” to configure the Pre-Shared Key, and then click “Save” and close the window.



Step 9. Click “OK” and click “Save & Restart” to apply the setting.



Step 10. In AP-1, go to “**Device Status-> Wireless Client Table**” to check whether the AP-2 is in the list.



Operation Mode | System Configuration | Tools | **Device Status** | Logout

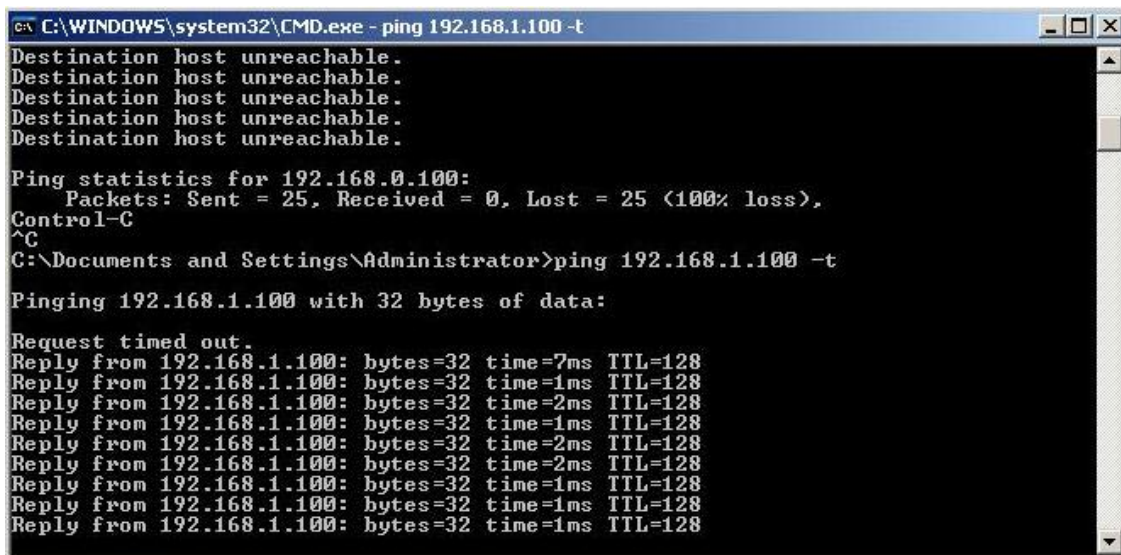
- ▶ Device Information
- ▶ **Wireless Client Table**
- ▶ LAN Information
- ▶ System Log

▶ Wireless Client Table

No.	Mac Address
1	09:A6:3E:00:01:1d

Step 11. Use command line tool to ping each other to ensure the link is successfully established.

From Site 1, ping 192.168.1.200, and in Site 2, ping 192.168.1.100.



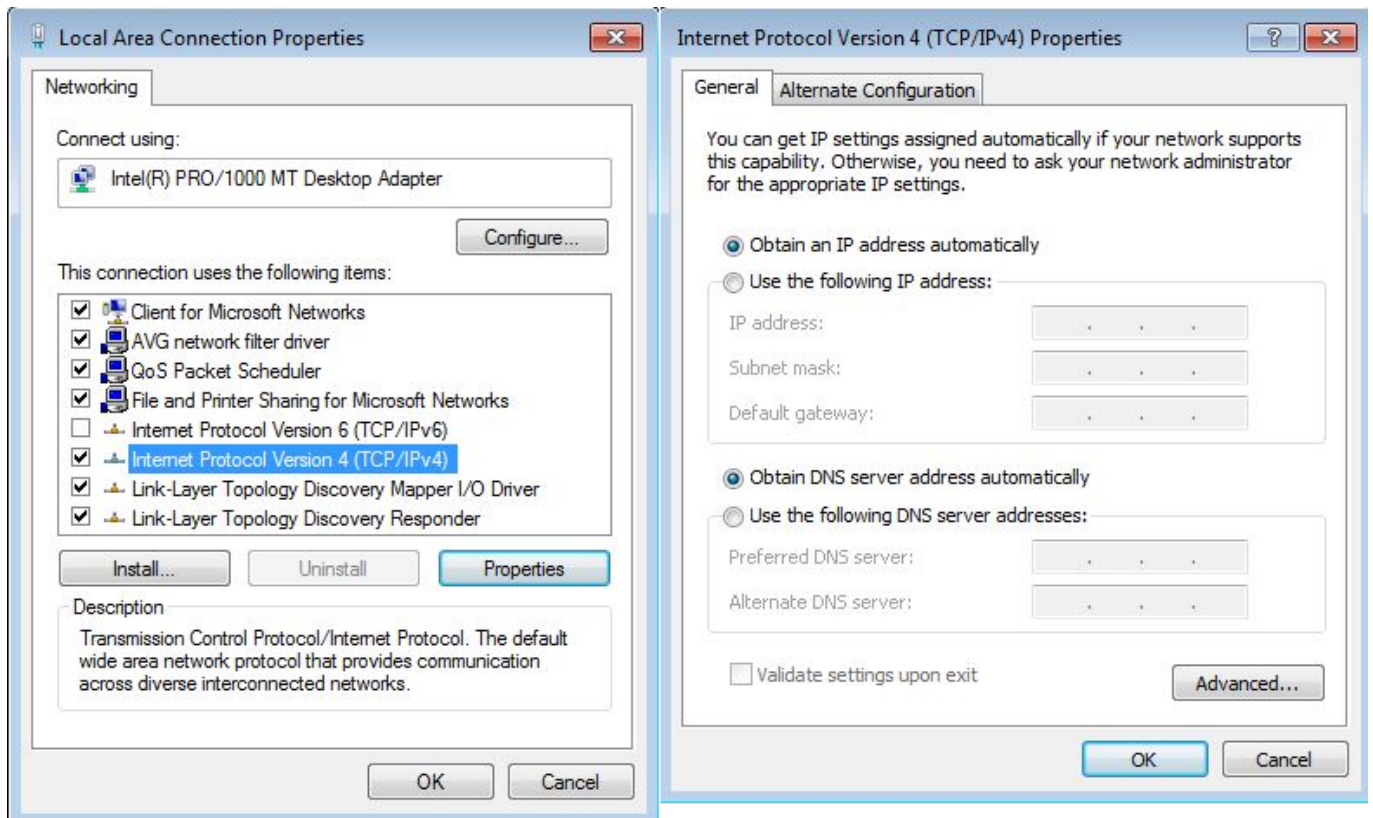
```
C:\WINDOWS\system32\CMD.exe - ping 192.168.1.100 -t
Destination host unreachable.
Destination host unreachable.
Destination host unreachable.
Destination host unreachable.
Destination host unreachable.

Ping statistics for 192.168.0.100:
    Packets: Sent = 25, Received = 0, Lost = 25 (100% loss),
Control-C
^C
C:\Documents and Settings\Administrator>ping 192.168.1.100 -t

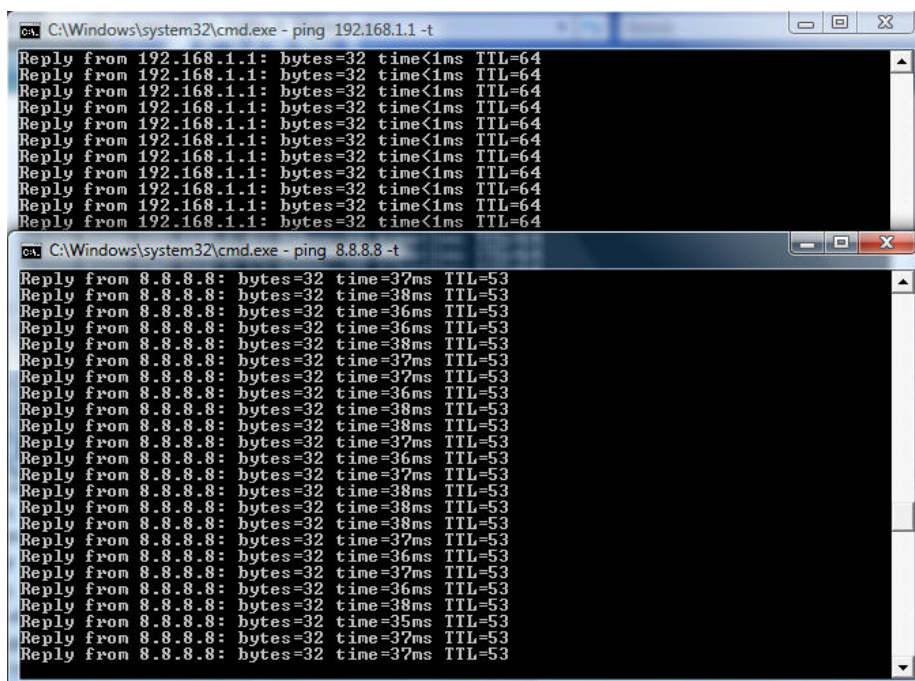
Pinging 192.168.1.100 with 32 bytes of data:

Request timed out.
Reply from 192.168.1.100: bytes=32 time=7ms TTL=128
Reply from 192.168.1.100: bytes=32 time=1ms TTL=128
Reply from 192.168.1.100: bytes=32 time=2ms TTL=128
Reply from 192.168.1.100: bytes=32 time=1ms TTL=128
Reply from 192.168.1.100: bytes=32 time=2ms TTL=128
Reply from 192.168.1.100: bytes=32 time=2ms TTL=128
Reply from 192.168.1.100: bytes=32 time=1ms TTL=128
Reply from 192.168.1.100: bytes=32 time=1ms TTL=128
Reply from 192.168.1.100: bytes=32 time=1ms TTL=128
```

Step 12. Configure the TCP/IP settings of Site 2 to “**Obtain an IP address automatically**”.



Step 13. Use command line tool to ping the DNS (e.g. Google) to ensure Site 2 can access internet through the wireless connection.

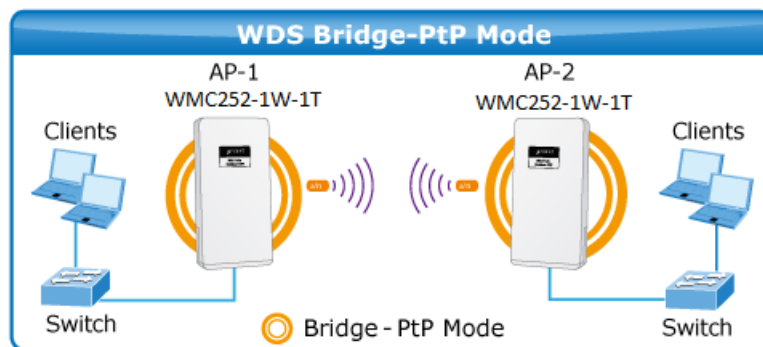


The following hints should be noted:

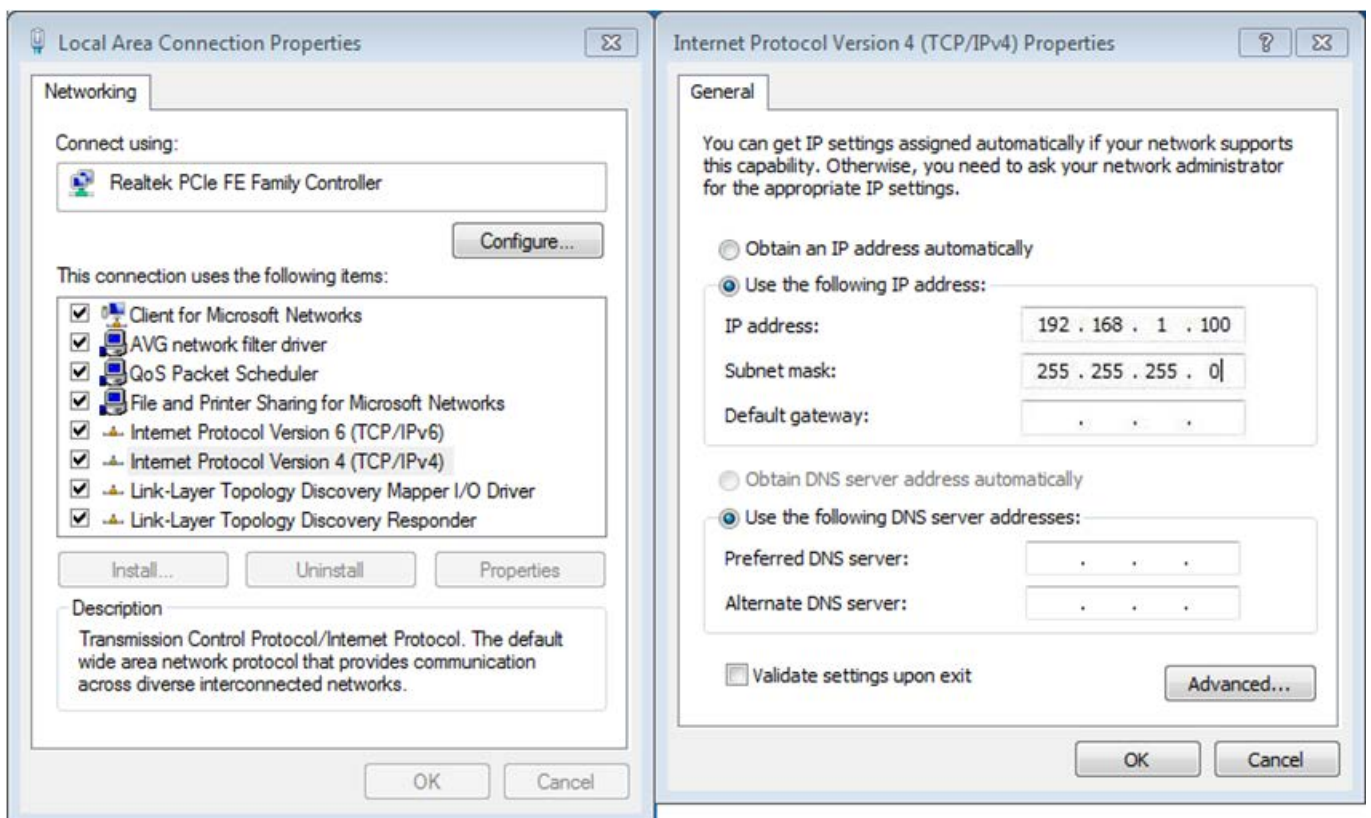
- 1) The encryption method must be the same in both sites if configured.
- 2) Both sites should be Line-Of-Sight.
- 3) For the short distance connection less than 1km, please reduce the "Transmit Power" of both sites.
- 4) For the long distance connection over 1km, please adjust the "Transmit Distance" to the actual distance or double the actual distance.

(2) WDS Connection

Topology:



Step1. Use the static IP in the PCs that are connected with WMC252-1W-1T(Site1) and WMC252-1W-1T (Site2). In this case, Site 1 is "192.168.1.100", and Site 2 is "192.168.1.200".



Step 2. In AP-1, go to “**Operation Mode**” to configure it to **Access Point** mode.

► **Operation Mode**

Select the "Operation Mode" by clicking on "Setup" button and then configure the Wireless Settings.

Mode		Radio	Ethernet Port
<input type="radio"/> Access Point	<input type="button" value="Setup"/>	Access Point	LAN+LAN
<input type="radio"/> Client	<input type="button" value="Setup"/>	Client	LAN+LAN
<input checked="" type="radio"/> WDS AP	<input type="button" value="Setup"/>	WDS Access Point	LAN+LAN
<input type="radio"/> WDS Client	<input type="button" value="Setup"/>	WDS Client	LAN+LAN
<input type="radio"/> AP Router	<input type="button" value="Setup"/>	Access Point	WAN+LAN
<input type="radio"/> Wireless ISP	<input type="button" value="Setup"/>	Wireless ISP	LAN+LAN

Step 3. Click “**Setup**” to configure the following parameters, and then click **Save & Restart** to save the settings.

- 4) **Network ID (SSID):** set to a unique value
- 5) **Channel:** set to a fixed one
- 6) **Security Setting:** strongly suggested to configure it.

In this case, we configure it to WPA2-PSK, AES.

► Operation Mode Settings

Regulatory Domain:

Network ID (SSID):

Enable Wireless
 Disable SSID Broadcasting
 Enable Isolated

Radio Mode:

Channel:

Data Rate:

Security Setting:

Transmit Power:

Transmit Distance:

TDMA:

DFS Control:

DFS Domain:

Advanced Settings:

Access Control:

NOTE: To access the wireless network, user must have correct SSID and encryption key, if enabled.

Security Settings

Select Encryption:

Pre-Authentication: Personal (Pre-Shared Key) Enterprise (RADIUS)

Encryption Type: TKIP AES Auto

Pre-Shared Key:

Step 4. In AP-2, modify the default IP to the same IP range but different with AP-1.

In this case, the IP is changed to **192.168.1.252**.

► **Device IP Settings**

Configure the IP settings of the device.

IP Address:	<input type="text" value="192"/>	<input type="text" value="168"/>	<input type="text" value="1"/>	<input type="text" value="252"/>
IP Subnet Mask:	<input type="text" value="255"/>	<input type="text" value="255"/>	<input type="text" value="255"/>	<input type="text" value="0"/>
Gateway IP Address:	<input type="text" value="192"/>	<input type="text" value="168"/>	<input type="text" value="1"/>	<input type="text" value="253"/>
Primary DNS Server :	<input type="text" value="8"/>	<input type="text" value="8"/>	<input type="text" value="4"/>	<input type="text" value="4"/>
Secondary DNS Server :	<input type="text" value="8"/>	<input type="text" value="8"/>	<input type="text" value="8"/>	<input type="text" value="8"/>

NOTE: Changes to this page will not take effect until you click Save & Restart on the save config page.

Step 5. In AP-2, configure it to “**Client**” mode, and click “**Setup**”.

► **Operation Mode**

Select the "Operation Mode" by clicking on "Setup" button and then configure the Wireless Settings.

Mode		Radio	Ethernet Port
<input type="radio"/> Access Point	<input type="button" value="Setup"/>	Access Point	LAN+LAN
<input type="radio"/> Client	<input type="button" value="Setup"/>	Client	LAN+LAN
<input type="radio"/> WDS AP	<input type="button" value="Setup"/>	WDS Access Point	LAN+LAN
<input checked="" type="radio"/> WDS Client	<input type="button" value="Setup"/>	WDS Client	LAN+LAN
<input type="radio"/> AP Router	<input type="button" value="Setup"/>	Access Point	WAN+LAN
<input type="radio"/> Wireless ISP	<input type="button" value="Setup"/>	Wireless ISP	LAN+LAN

Step 6. Click “Setup”, and then click **Site Survey** to find the AP-1.

► Operation Mode Settings

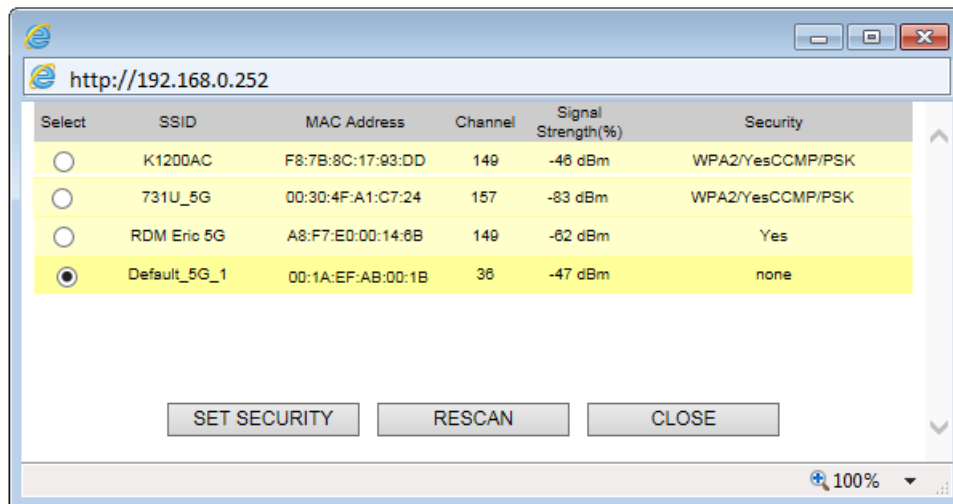
Regulatory Domain:	United States ▼	
Remote AP SSID:	WMC252	Site Survey
	<input checked="" type="checkbox"/> Enable Wireless	
	<input type="checkbox"/> Disable SSID Broadcasting	
	<input type="checkbox"/> Enable Isolated	
Lock to AP MAC:	00:00:00:00:00:00	
Radio Mode:	5G 11NA HT40 ▼	
Channel:	Auto Channel ▼	
Data Rate:	Auto ▼	
Security Setting:	Setup	
Transmit Power:	12 dbm ▼	
Transmit Distance:	1 Km ▼	
TDMA:	Disable ▼	
DFS Control:	Enable ▼	
DFS Domain:	FCC ▼	
Advanced Settings:	Setup	
Access Control:	Setup	

Save & Restart

NOTE: Changes to this page will not take effect until you click Save & Restart on the save config page.

Step 7. Select the AP-1 from the list.

► Operation Mode Settings



Transmit Distance:

TDMA:

DFS Control:

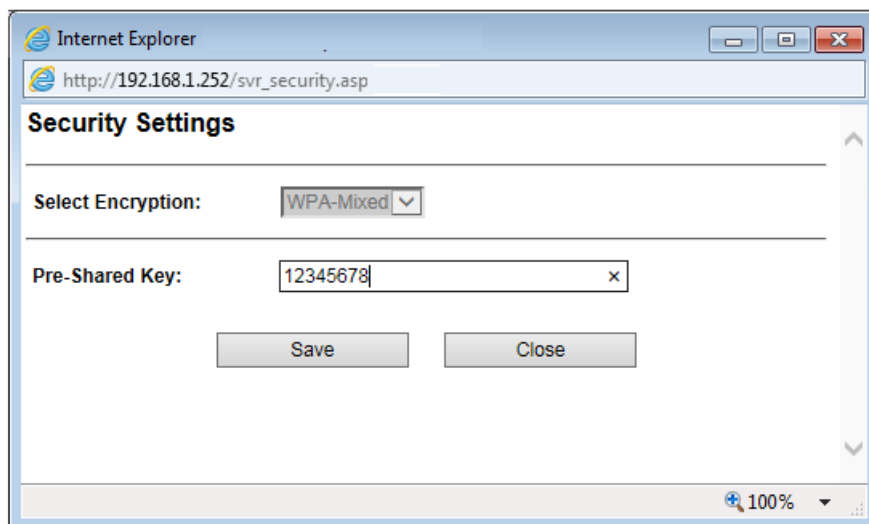
DFS Domain:

Advanced Settings:

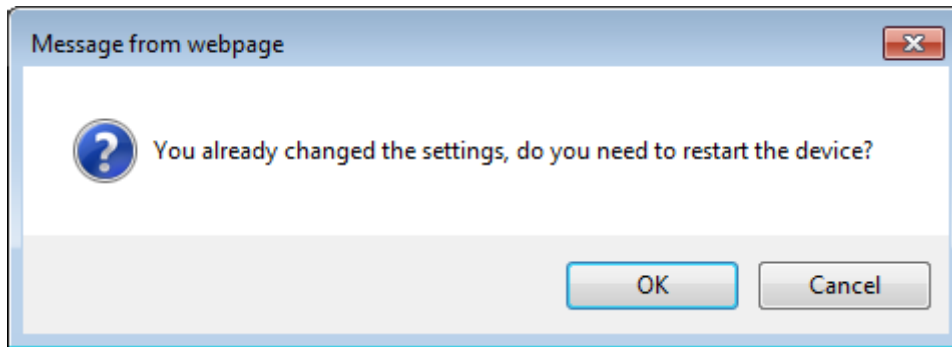
Access Control:

NOTE: Changes to this page will not take effect until you click Save & Restart on the save config page.

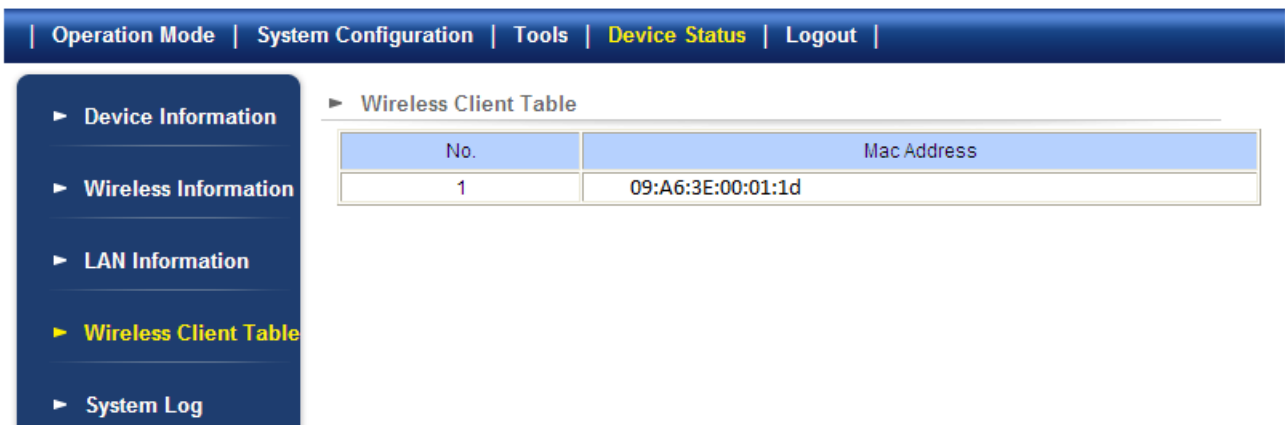
Step 8. Click “SET SECURITY” to configure the Pre-Shared Key, and then click “Save” and close the window.



Step 9. Click “OK” and click “Save & Restart” to apply the setting.

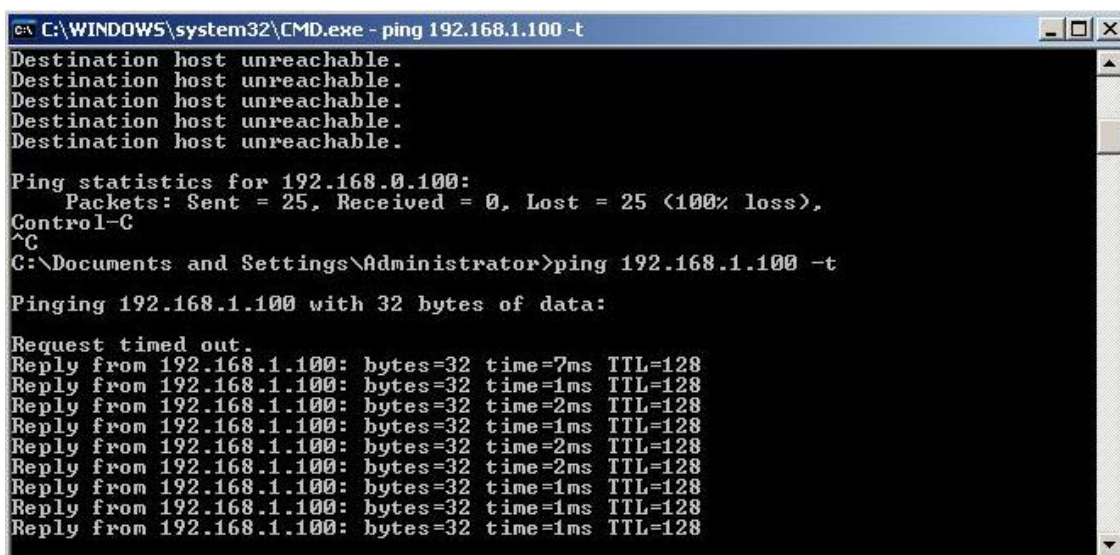


Step 10. In AP-1, go to “**Device Status-> Wireless Client Table**” to check whether the AP-2 is in the list.



Step 11. Use command line tool to ping each other to ensure the link is successfully established.

From Site 1, ping 192.168.1.200, and in Site 2, ping 192.168.1.100.



The following hints should be noted:

- 1) The encryption method must be the same in both sites if configured.
- 2) Both sites should be Line-Of-Sight.
- 3) For the short distance connection less than 1km, please reduce the "Transmit Power" of both sites.
- 4) For the long distance connection over 1km, please adjust the "Transmit Distance" to the actual distance or double the actual distance.

