ACKSYS COMMUNICATIONS & SYSTEMS

APPLICATION NOTE

APNUS016 Connect before break

Client setup procedure

March 2020 - Rev. A1

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Introduction

The purpose of this document is to help you configure your ACKSYS product in client mode, with the CONNECT BEFORE BREAK functionality. Please note that this functionality is described in the *WaveOS User's guide DTUS070*, section V.2.6.7

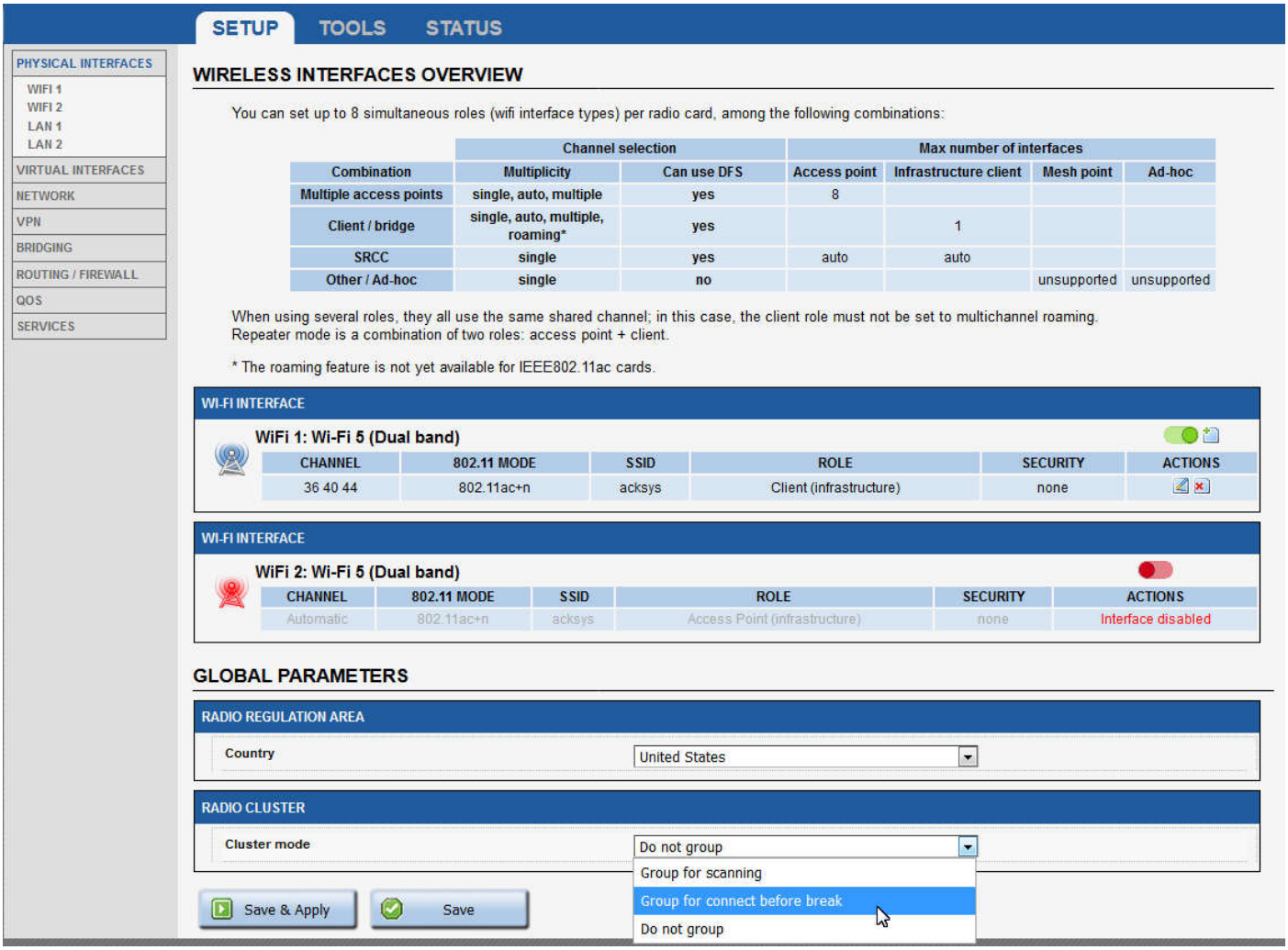
Wi-Fi Client configuration

For this example, we will use the following parameters:

- Bridge client mode (no routing)
- 802.11ac using channels 36, 40 & 44
- SSID AcksysRBB
- No security
- Roaming delay between scans = 2 seconds
- Roaming leave threshold = -75 dB
- Interface Wi-Fi 1 used for data

Please note that when the Wi-Fi client is in bridge mode, the Connect Before Break can be used only with Acksys WaveOS products as Access points. To use Access Points from other brands, your client must be configured as a NAT router.

In SETUP/PHYSICAL INTERFACES, set the RADIO CLUSTER to *Group for connect before break* and



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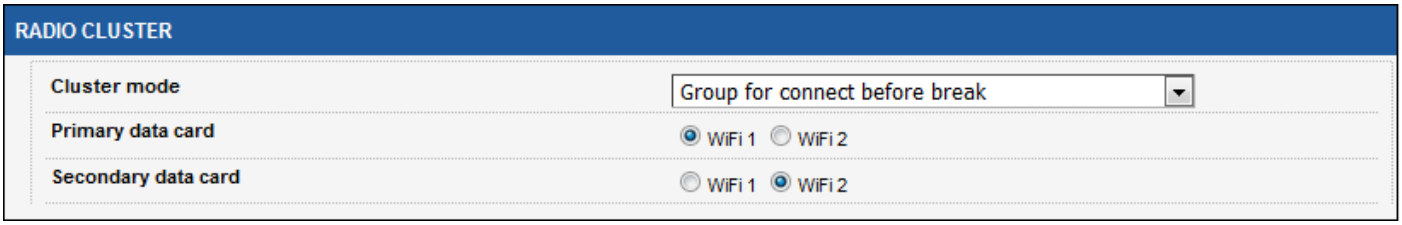
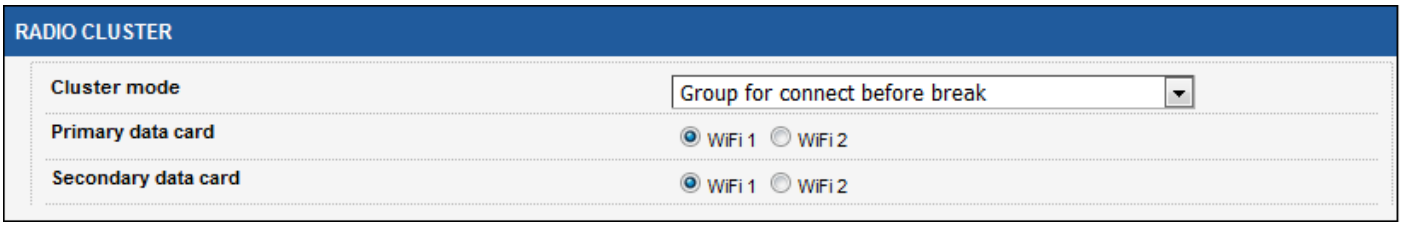
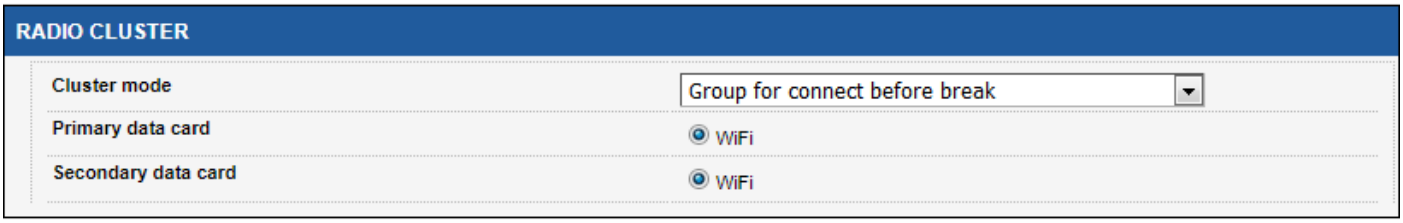
The choice of the initial primary interface has, in most cases, no effect on the operation since it's a temporary state. The WiFi 1 interface is selected by default as the primary card. This is the configuration we will use for this example.



For your information, please note that you can also choose to use only one radio card for both functions. In the following example, the Connect before break client is defined only on WiFi1, and WiFi2 can be used for another purpose. Beware: this implies that you can use only one radio channel!



If your product only has one radio card, of course you have no choice: both functions, scanning and data exchange, are handled by the same radio interface, and you can scan only one channel



After saving this page, edit the Wi-Fi interface

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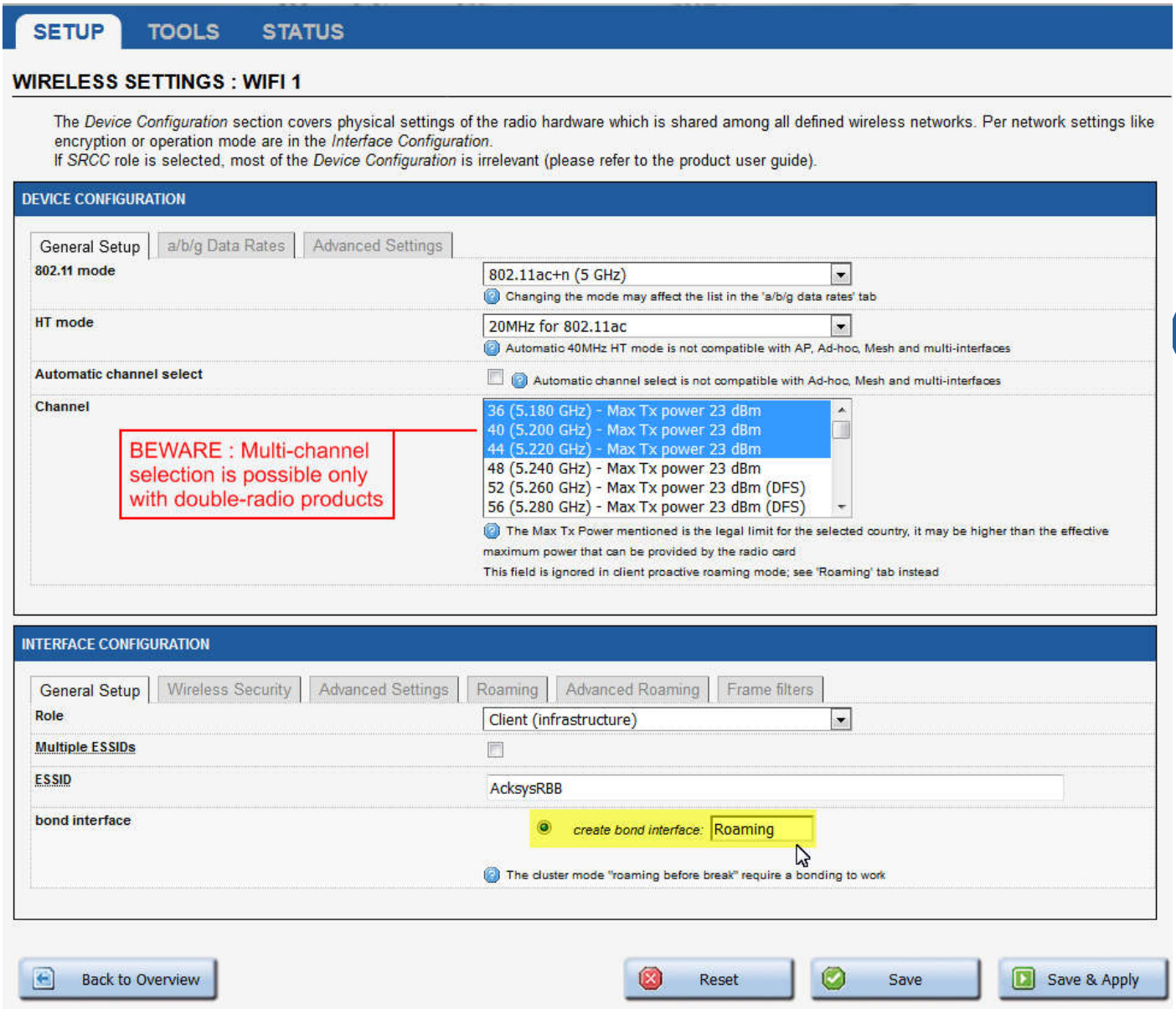
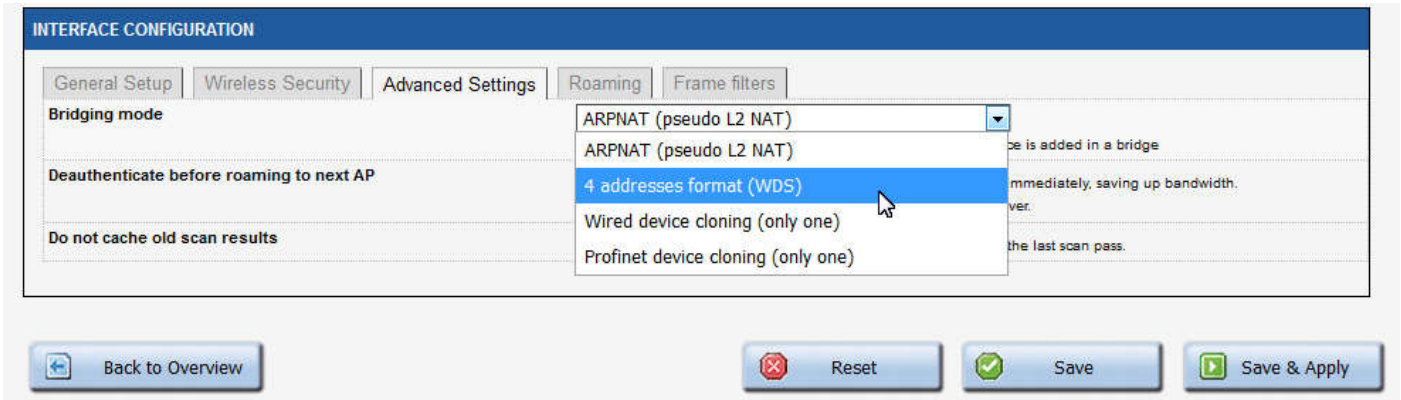
Give a name to the *bond interface* (here we choose *Roaming*), and change the Wi-Fi settings according to your needs.



In the advanced settings, select *4 addresses format (WDS)*. Caution: this implies the exclusive use of WaveOS Acksys access points.



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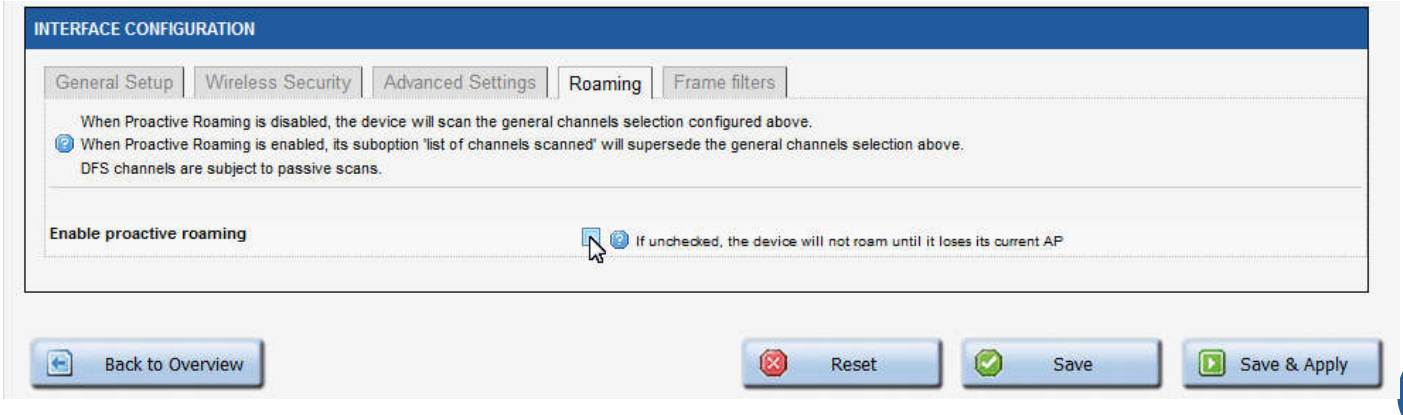
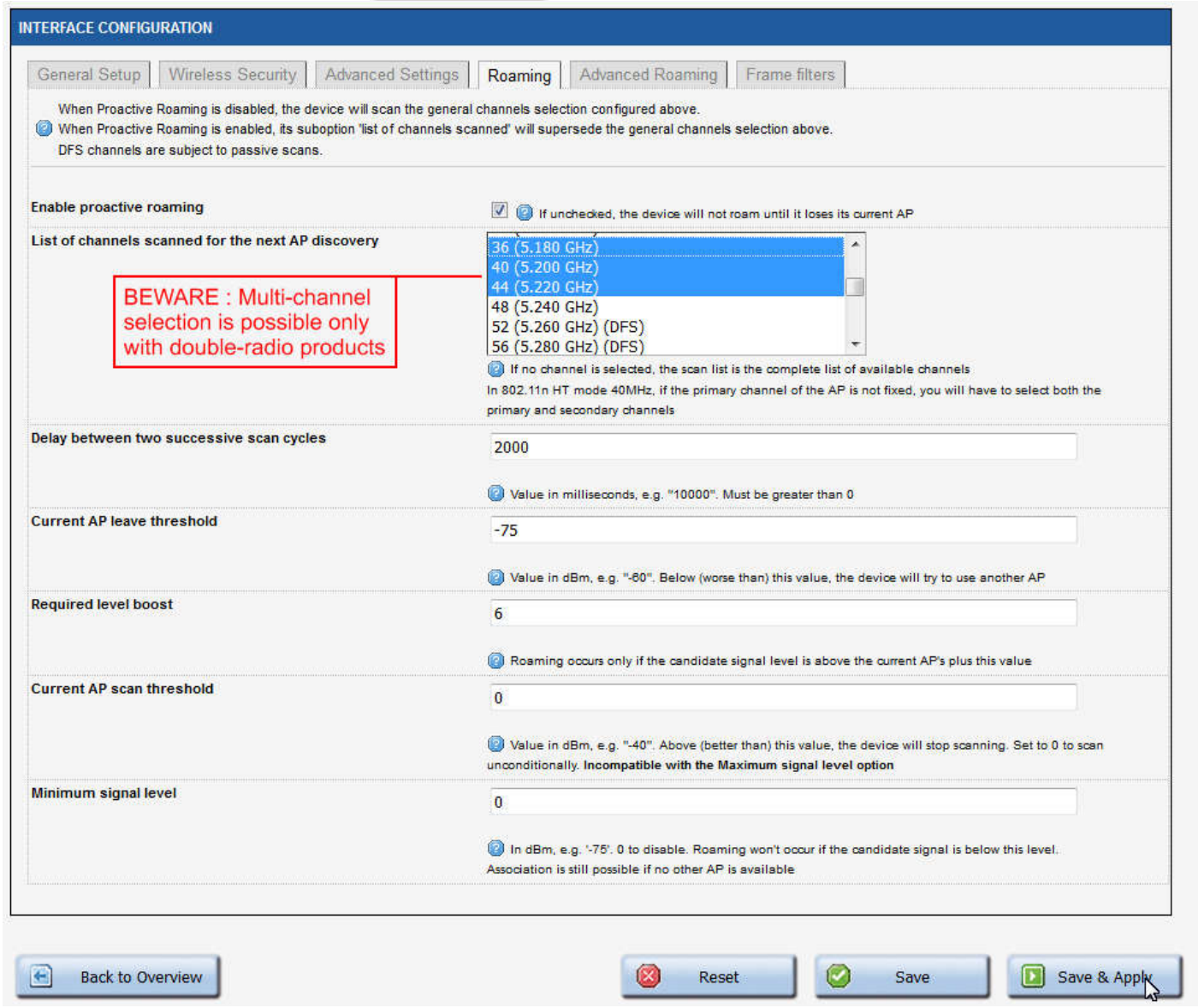
In the Roaming tab, select *Enable proactive roaming*



Set your roaming parameters, then Save & Apply



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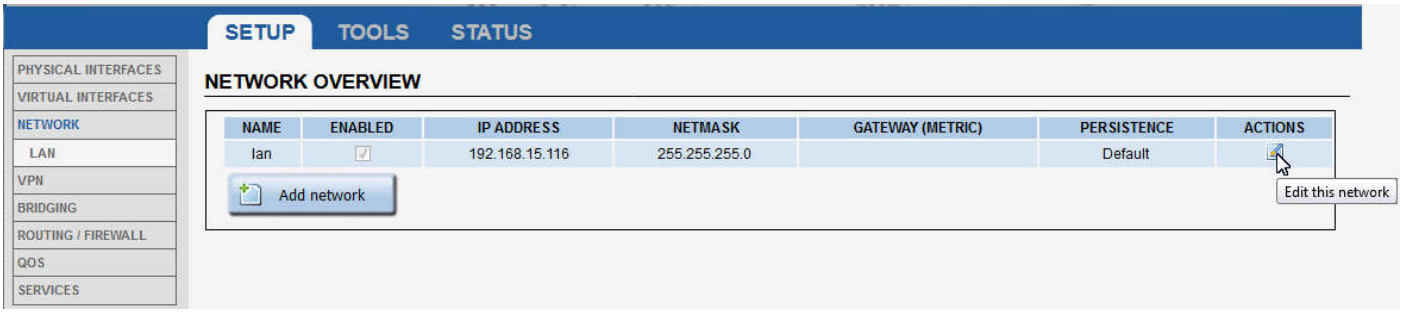
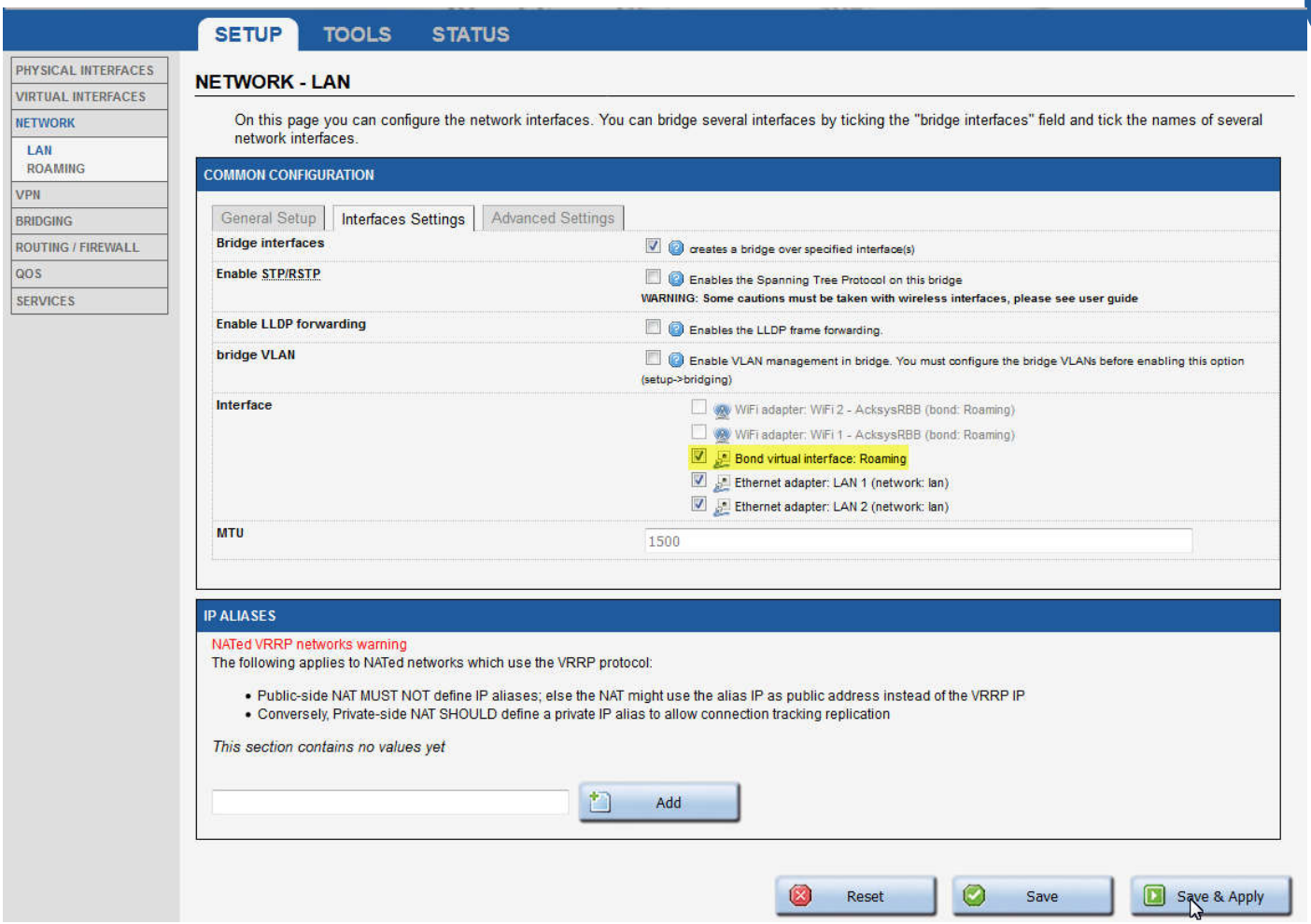
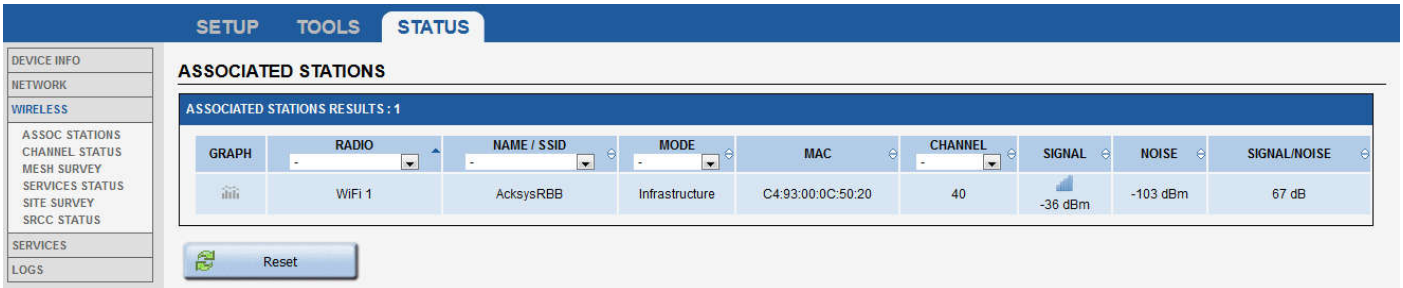
Edit your main Network (default name is *LAN*)



Include the *Roaming* bond interface into the bridge, then Save & Apply



Your product is now ready for a fast and efficient roaming, without loss of packets during the handover



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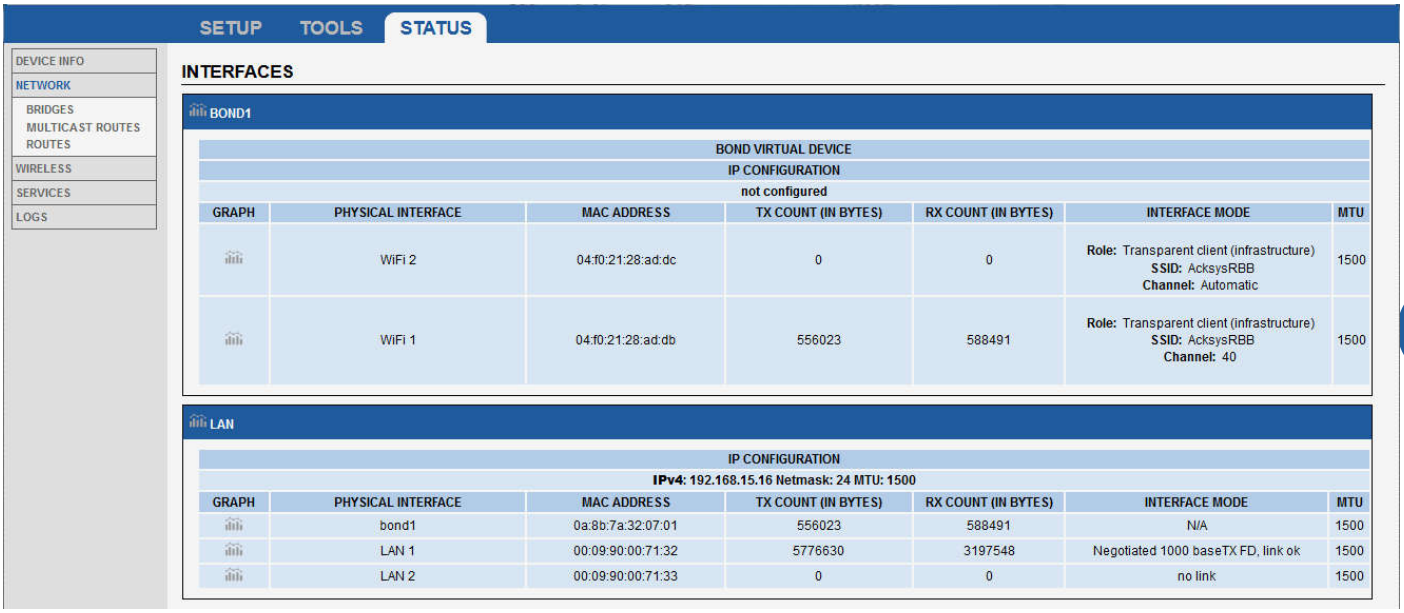
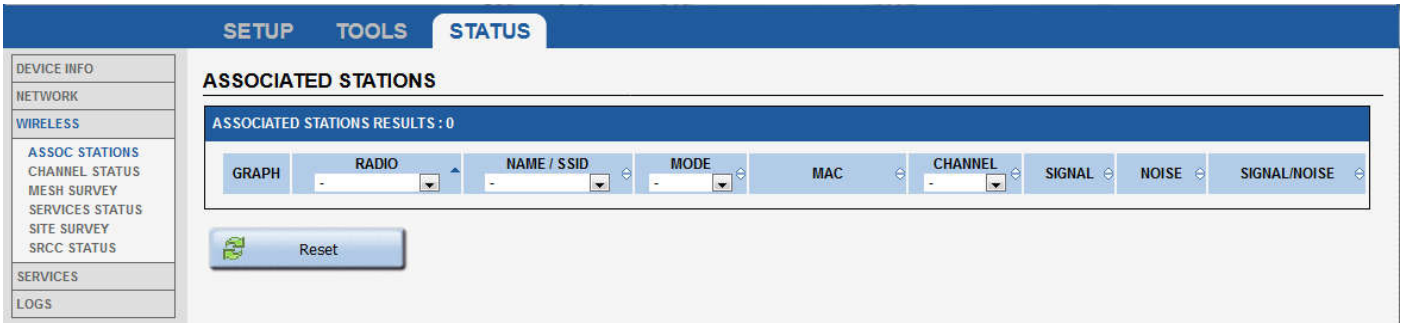
Troubleshooting

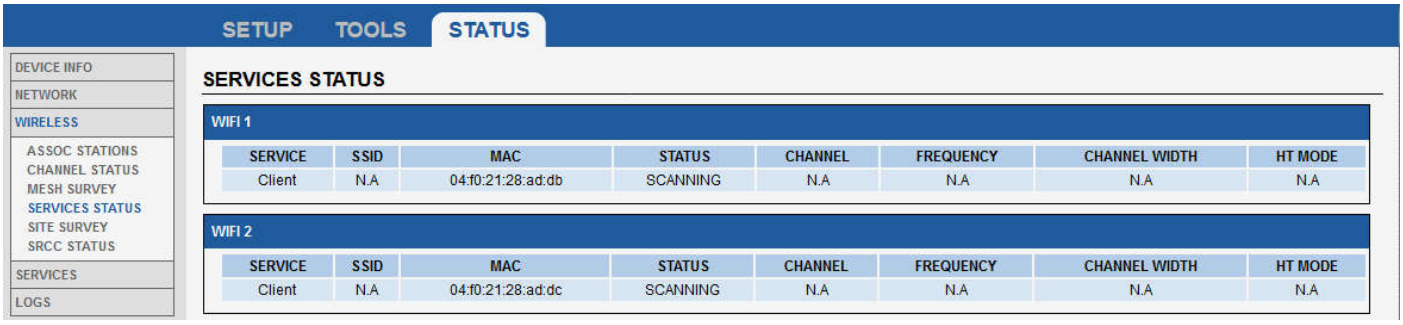
In the event of malfunction, first check on the *STATUS/Network* page that the interfaces are correctly mounted



The STATUS/WIRELESS/ASSOCIATED STATIONS and the STATUS/WIRELESS/SERVICES STATUS page will also give you invaluable information, in particular an instantaneous view of the state of the cards, to know which is active and which is passive.

Here we can see that the client hasn't found any access point: no station associated, and the two radio interfaces are in the scanning state. You can run a site survey to check for the presence of Access Points with our settings (SSID, Radio channel, Security mode…)





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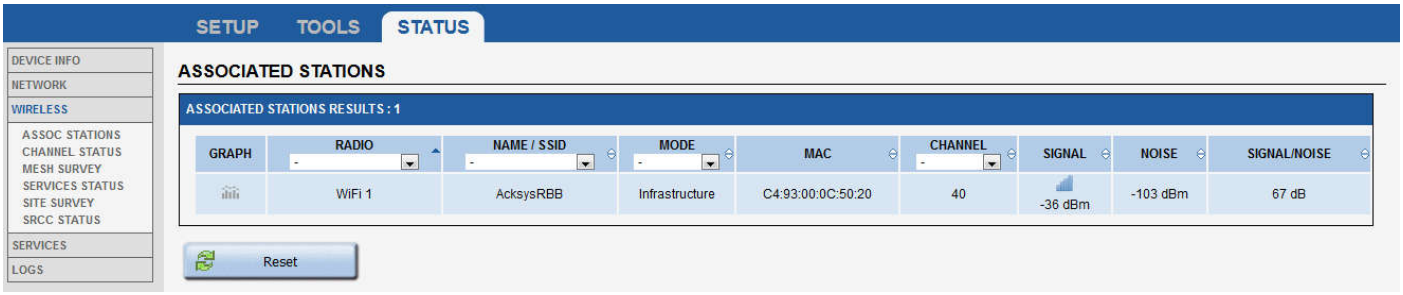
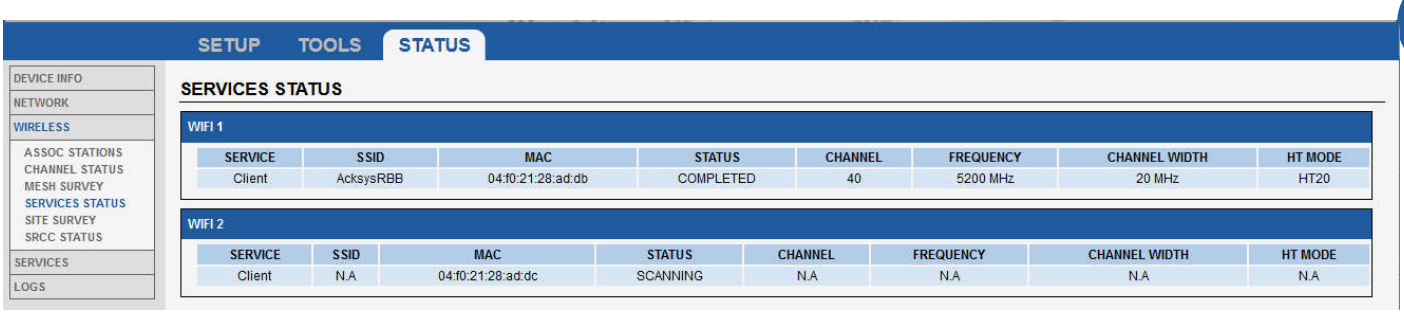
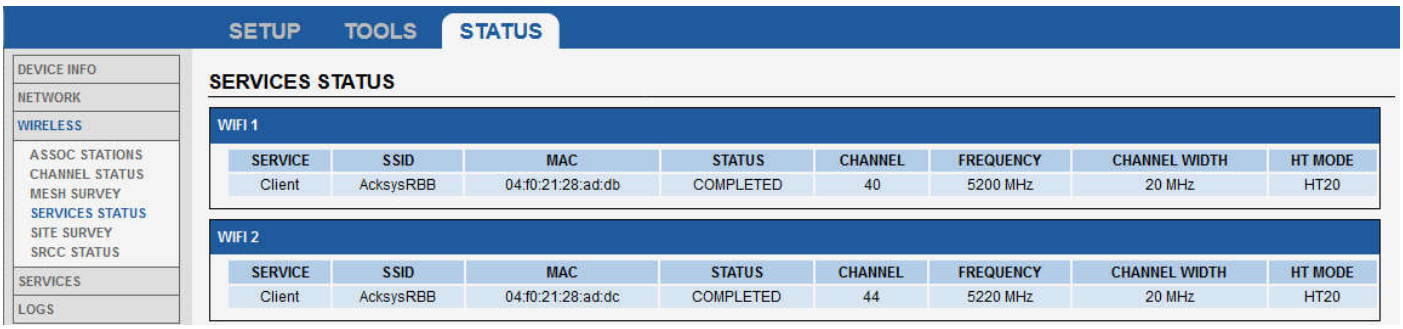
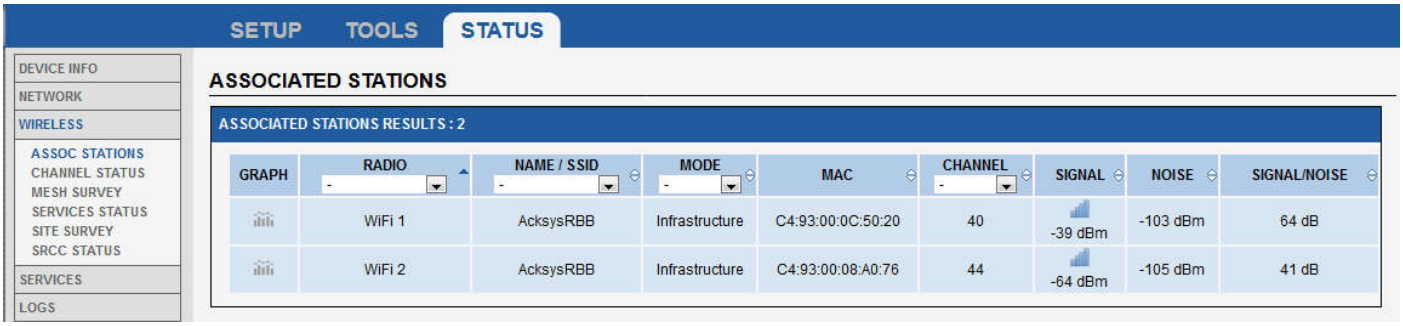
Here we can see that WiFi1 is connected to an Access Point, but WiFi2 is still scanning, looking for a second Access Point.





Here, WiFi2 has found a candidate AP and is connected.





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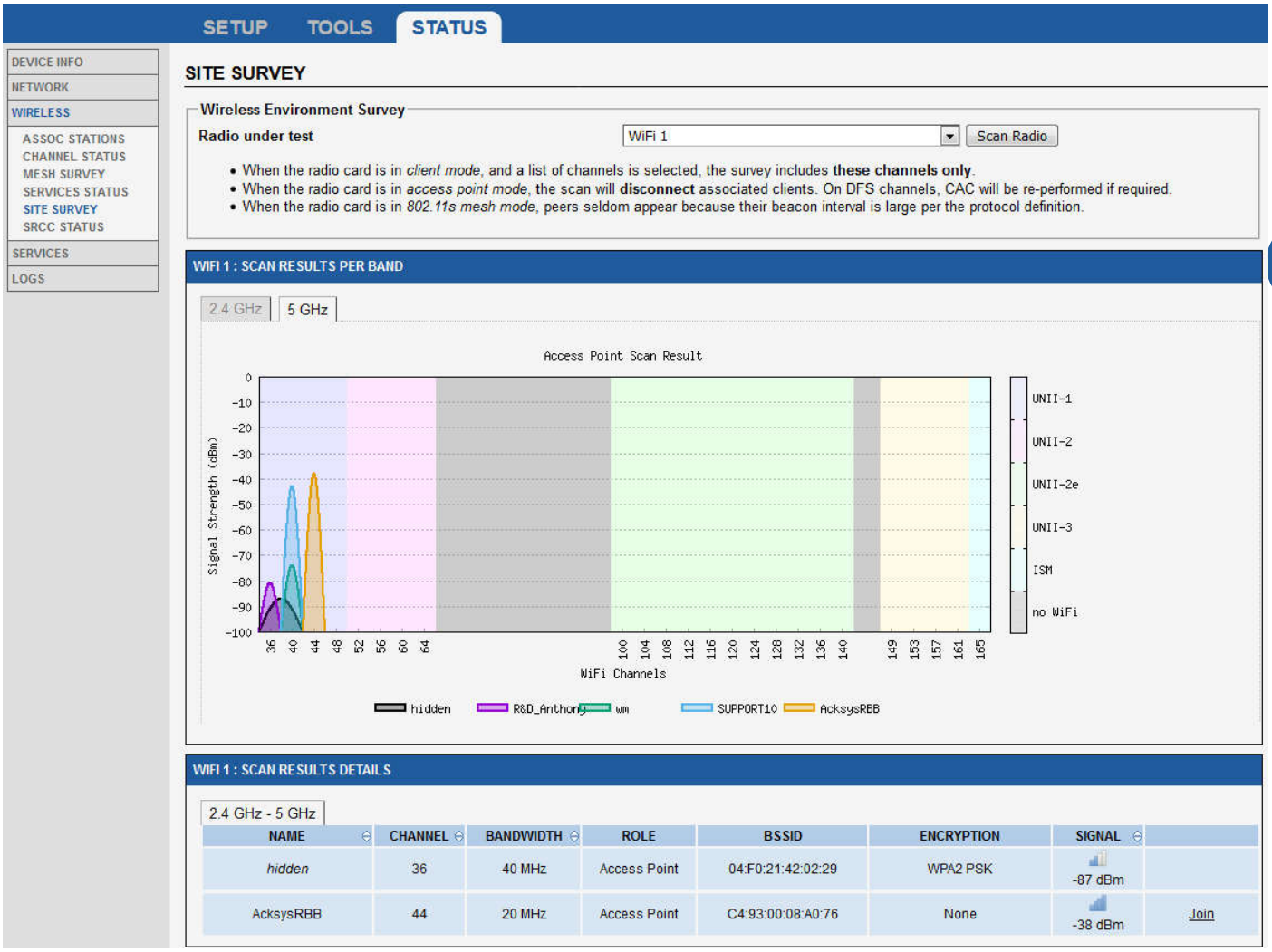
In the event that the product does not find an access point, you can launch a site survey in order to visualize which APs are detected by the product. If no AP is detected, there may be a problem with the antennas or with the radio card. If APs are detected, check that the SSID, the frequency and the security mode match the configuration of your Client



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