

Setting up RG1xx's Wi-Fi Profile through AVsystem

Sentrius RG1xx Series

Version 2.0

Revision History

Version	Date	Notes	Contributors	Approver
1.0	11 August 2023	Initial Release	Seokwoo Yoon	Senthooan Ragavan
2.0	8 May 2025	Ezurio rebranding	Dave Drogowski	Dave Drogowski

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1 Overview

The RG1xx gateways can be managed remotely from Auto Configuration Server (ACS) using TR-069 protocol. One can arrange many tasks in ACS, such as updating gateway configuration, updating firmware and downloading logs. This document will provide an example of creating Wi-Fi profile for the RG1xx from AVSystem.

This document assumes that you already know how to access the RG1xx web interface through Wi-Fi or Ethernet. If you are not familiar with it, please refer to the [RG1xx User Guide](#) located in the [RG1xx product page](#).

This document also assumes that you already have your own setup for ACS server. We will use AVsystem in this document, but the same concept can be applied to any other ACS servers that support TR-069.

Note: The remote management feature was introduced in software version v93.8.4.29 (GA4).

2 Configuring AVSystem in RG1xx UI

1. Log into RG1xx web UI and make sure that RG1xx has internet connection by confirming that Wi-Fi or Ethernet is set up. If not, configure Wi-Fi connection by scanning or plug in Ethernet cable into RJ45 connector on RG1xx.

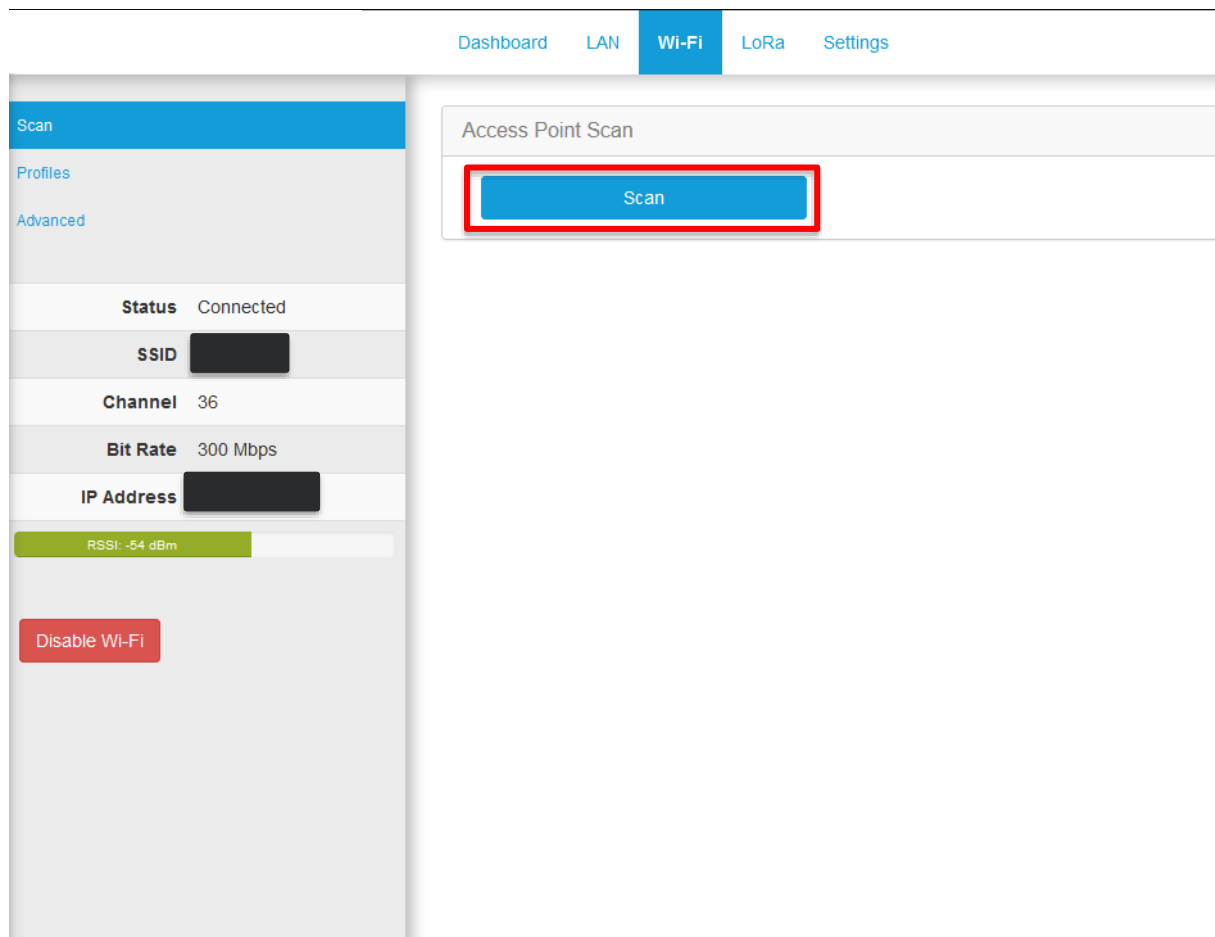
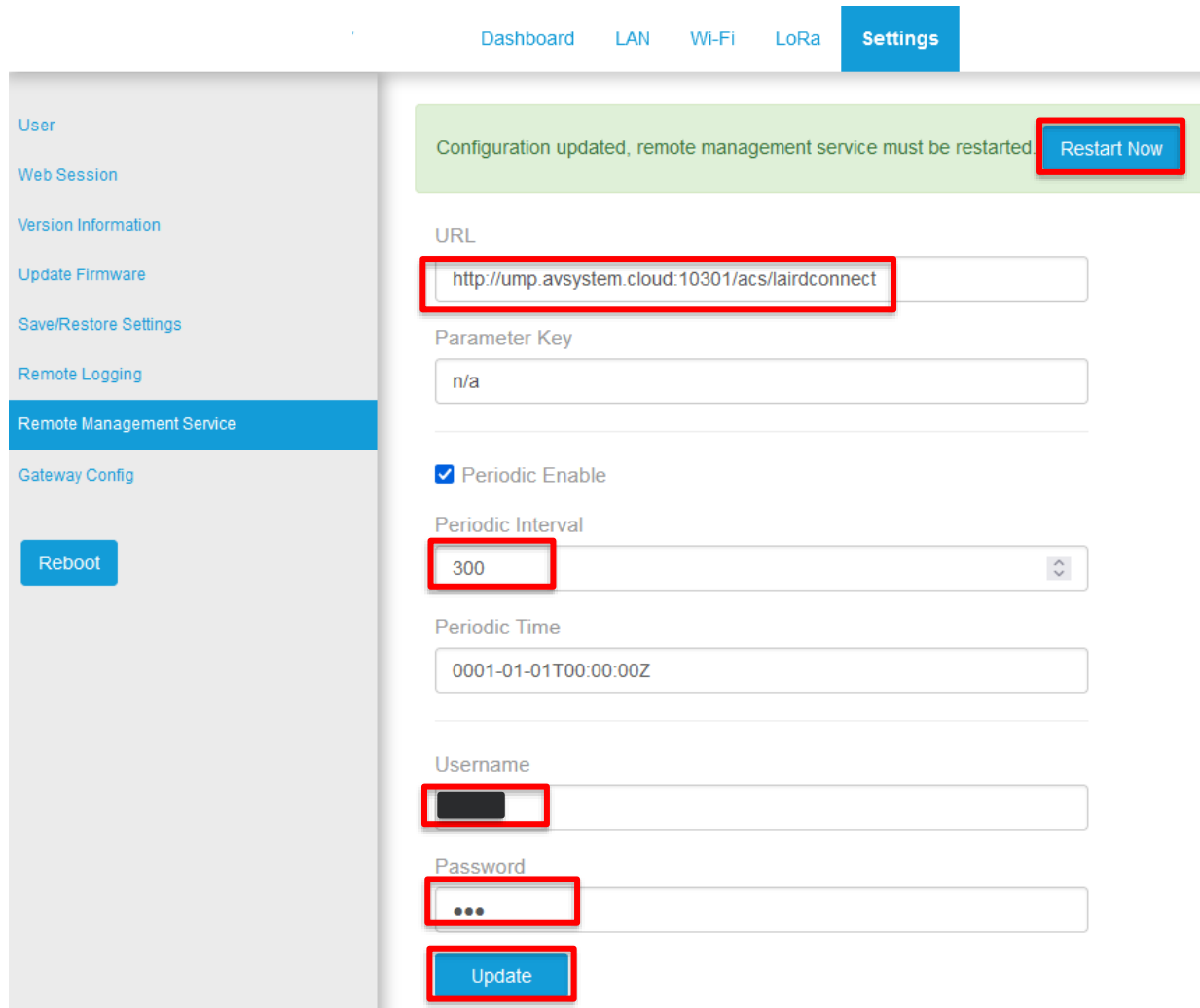


Figure 1: Wi-Fi page on RG1xx UI

2. Under *Settings > Remote Management Service*, fill in **URL**, **Username** and **password** of yours, and then hit **Update**. After that, you will be asked to **Restart Now**.

Note: **Periodic Interval** is how often gateway checks in ACS server checks to see if there are any tasks to be completed. We will set Periodic Interval to 300 seconds but you can adjust this value as you like. Increasing its value means that ACS will wait more time for next check-in in order to accomplish scheduled tasks on RG1xx.



Dashboard LAN Wi-Fi LoRa **Settings**

User
Web Session
Version Information
Update Firmware
Save/Restore Settings
Remote Logging
Remote Management Service
Gateway Config

Reboot

Configuration updated, remote management service must be restarted. **Restart Now**

URL
http://ump.avsystem.cloud:10301/acs/lairdconnect

Parameter Key
n/a

☒ Periodic Enable

Periodic Interval
300

Periodic Time
0001-01-01T00:00:00Z

Username
[Redacted]

Password
[Redacted]

Update

Figure 2: Settings > Remote Management Service

- Make a note of gateway EUI from LoRa tab. We will use this value when registering gateway on AVSystem.

Figure 3: Gateway EUI on LoRa tab

3 Registering RG1xx on AVSystem

- We will create an excel file that contain device information and import it to AVSystem. Open a new excel file and enter **Identity** in cell A1 and **C0EE40-RG1XX<last 6 digit of gateway EUI>** and save it as **device.csv**.

	A
1	Identity
2	C0EE40-RG1XX293904

Figure 4: Excel file that has gateway information.

- Go to <https://ump.avsystem.cloud/auth/login?url=%2F> and log in with your username and password.

Figure 5: AVSystem login page

3. On the top menu, go to *Device groups* and click **Add**.



Figure 6: Device group

4. Give it a **Name** and click **Add** to create a group. Leave the rest of the fields as they are.

Add group + x

Full name

Name *

Priority Priority value: undefined

Description

☐ Enable session monitoring

Figure 7: Add group

5. Under *Device actions*, **Import device from CSV**.

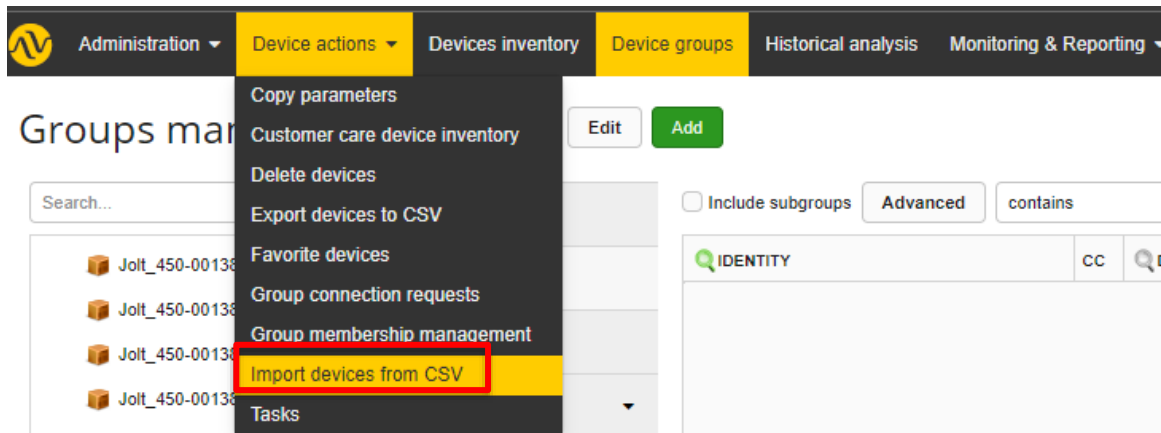


Figure 8: Menu for "Import devices from CSV"

6. Deselect **Only Verify** box. Change *Select Import Mode* to **New and Existing Devices**. Select **Identity** from *Simple list*. Click *Add Devices to Groups* and choose the group you created in pop-up window.

Import devices from CSV

Select import configuration

<Custom import configuration> ▼

☒ Skip CSV header (first line)

☐ Only verify

Select import mode

New and existing devices ▼

[Hide configuration editor](#)

[Simple](#) Expressions Plain text

AVAILABLE OPERATIONS	OPERATION
ACS password	<div> <div>\$(device.id)</div> </div>
Add to a group	
Blacklisted	
Description	
Domain	
Hardware version	
Identity	
Licensing pool	
Log level	
Manufacturer	
Model name	
OUI	
Product class	
Property	

[Add devices to groups \(1\)](#) [Remove devices from groups \(0\)](#) Note: Devices will be added to at least one top level group

☐ Override domains

Uploaded file: [device.csv](#)

Figure 9: Configuration for importing devices

Select groups to add (1)

<input type="checkbox"/>	<input type="text" value=""/>
<input type="checkbox"/>	<input type="text" value=""/>
<input type="checkbox"/>	<input type="text" value=""/>
<input type="checkbox"/>	<input type="text" value=""/>
<input checked="" type="checkbox"/>	test

Figure 10: pop-up from "Add Devices to Group"

- Click **Upload** in Figure 9 and choose the .csv file you created in step 1. Then, click **Perform import**. The Import log window at the bottom will show the status of the import process.

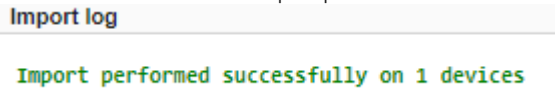


Figure 11: import success message

- Go to *Device groups* > the group you created ('test' in our example) > *Devices*. Click the device on the right column. Check the gateway status as **Online** on the next page.

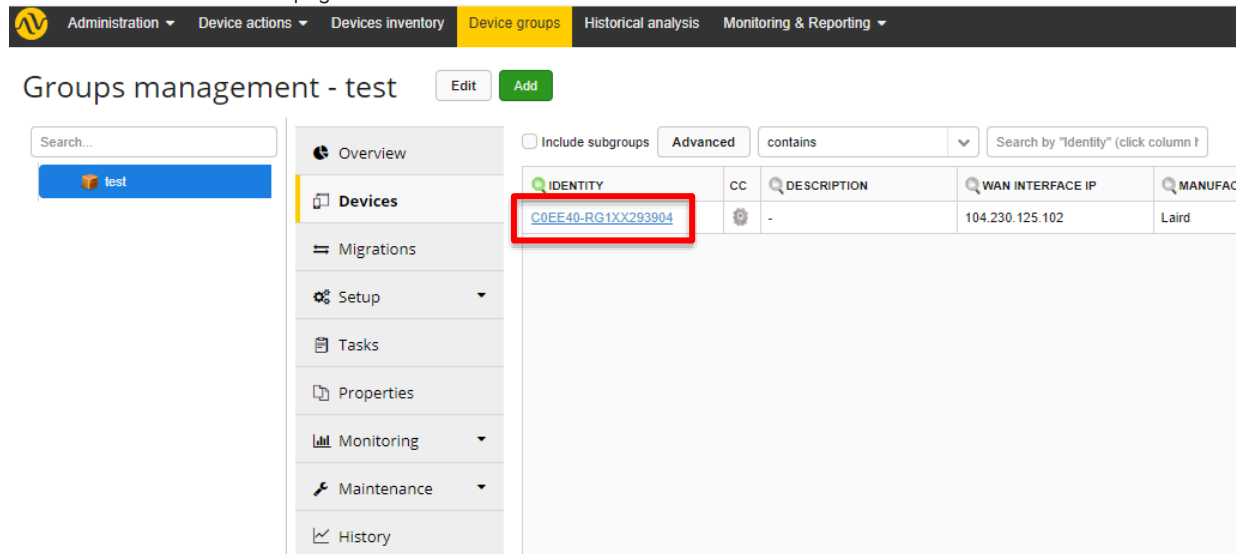


Figure 12: Device under device group



Figure 13: Device page

Note: If the gateway status is offline, give it some time as you set for the period interval in RG1xx UI. Also, the next check-in time can be found in **Info** (Figure 13).

4 Provision RG1xx's Wi-Fi profile remotely through AVSystem

We will create multiple tasks in three different times. We do this because the order is important, and it's needed that one task is completed before starting another. In this example, we will create a Wi-Fi profile that has WPA2_PSK security. If you use different security type, adjust parameters accordingly as shown in the RG1xx User Guide.

1. [Task #1] In the Data Model, find InternetGatewayDevice.Laird.SavedProfileSettings.AddProfile and click (empty) to write a value for write value on it.

The screenshot shows the device management interface for a Sentrius RG1xx device (C0EE40-RG1XX293904). The device is online. The left sidebar shows the 'Data model' menu item highlighted. The main content area displays the 'InternetGatewayDevice' data model tree. Under 'Laird', 'SavedProfileSettings' is expanded, and the 'AddProfile' entry is selected. The 'VALUE' column for 'AddProfile' is highlighted with a red box, showing '(empty)'. The 'TYPE' column for 'AddProfile' is 'xsd:string'.

NAME	DESCRIPTION	TYPE	VALUE
InternetGatewayDevice			
Cellular			
DeviceInfo			
IP			
IPingDiagnostics			
Laird			
ActiveProfileSettings			
GatewayManagement			
LAN Settings			
LORA Settings			
SavedProfileSettings			
AddProfile		xsd:string	(empty)

Figure 14: InternetGatewayDevice.Laird.SavedProfileSettings.

The screenshot shows the 'Value' input field for the 'AddProfile' entry. The field is highlighted with a red box and contains the text 'WKW2'. Below the field is a 'Validate value' checkbox. The 'Type' dropdown menu is set to '(automatic type)'. There are 'Revert' and 'Save' buttons at the bottom.

Figure 15: write value for Wi-Fi profile

2. In RG1xx UI, go to Wi-Fi > Profiles and the newly entered profile is created.

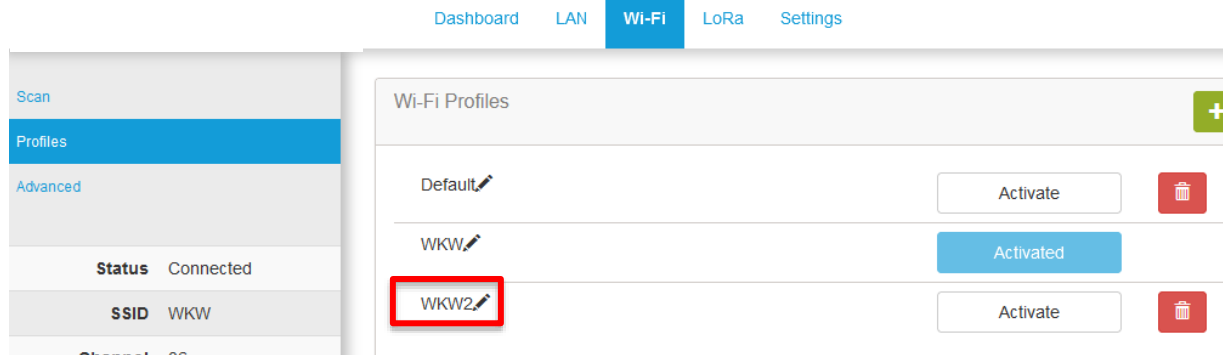


Figure 16: Wi-Fi profile created remotely

3. [Task #2] Update the following parameters for the newly added profile, and wait until the next check-in.
- InternetGatewayDevice.Laird.SavedProfileSettings.ProfileName = < the profile created in task #1 >
 - InternetGatewayDevice.Laird.SavedProfileSettings.SSID = < SSID of your network >
 - InternetGatewayDevice.Laird.SavedProfileSettings.WEPTType = < your security type > (wpa2-psk in this example)

▼ SavedProfileSettings		Show	
AddProfile	Show	xsd:string	WKW2 ✓
AuthType	Show	xsd:string	Open
ClientName	Show	xsd:string	(empty)
DeleteProfile	Show	xsd:string	(empty)
EAPType	Show	xsd:string	None
ListProfiles	Show	xsd:string	Default WKW ACTIVE
Mode	Show	xsd:string	ABGN
PSK	Show	xsd:string	(empty)
PSPDelay	Show	xsd:string	200
Password	Show	xsd:string	*****
Powersave	Show	xsd:string	Fast
ProfileName	Show	xsd:string	WKW2 Ⓞ
SSID	Show	xsd:string	WKW Ⓞ
TxPower	Show	xsd:string	Auto
Username	Show	xsd:string	(empty)
WEPTType	Show	xsd:string	wpa2-psk Ⓞ

Figure 17: Wi-Fi parameters under SavedProfileSettings

4. In RG1xx UI, confirm that the configuration of the newly created Wi-Fi profile is set as expected.

Wi-Fi Profile: WKW2

SSID
WKW

Security
WPA2_PSK

PSK
.....

Update Cancel

Figure 18: configuration of the newly added Wi-Fi profile

Note: It looks that PSK key was set and hidden in the above picture, but the pre-shared key is actually not set yet at this stage.

5. [Task #3] Activate the profile with PSK set.
- InternetGatewayDevice.Laird.ActiveProfileSettings.PSK
 - InternetGatewayDevice.Laird.ActiveProfileSettings.ProfileName

NAME	DESCRIPTION	TYPE	VALUE
InternetGatewayDevice	Show		
Cellular	Show		
DeviceInfo	Show		
IP	Show		
IPPingDiagnostics	Show		
Laird	Show		
ActiveProfileSettings	Show		
AuthType	Show	xsd:string	Open
ClientName	Show	xsd:string	(empty)
EAPType	Show	xsd:string	None
Mode	Show	xsd:string	ABGN
PSK	Show	xsd:string	
PSPDelay	Show	xsd:string	200
Password	Show	xsd:string	*****
Powersave	Show	xsd:string	Fast
ProfileName	Show	xsd:string	WKW2

Figure 19: Parameters under ActiveProfileSettings

6. In RG1xx UI, confirm that your profile is activated and connected to your network.

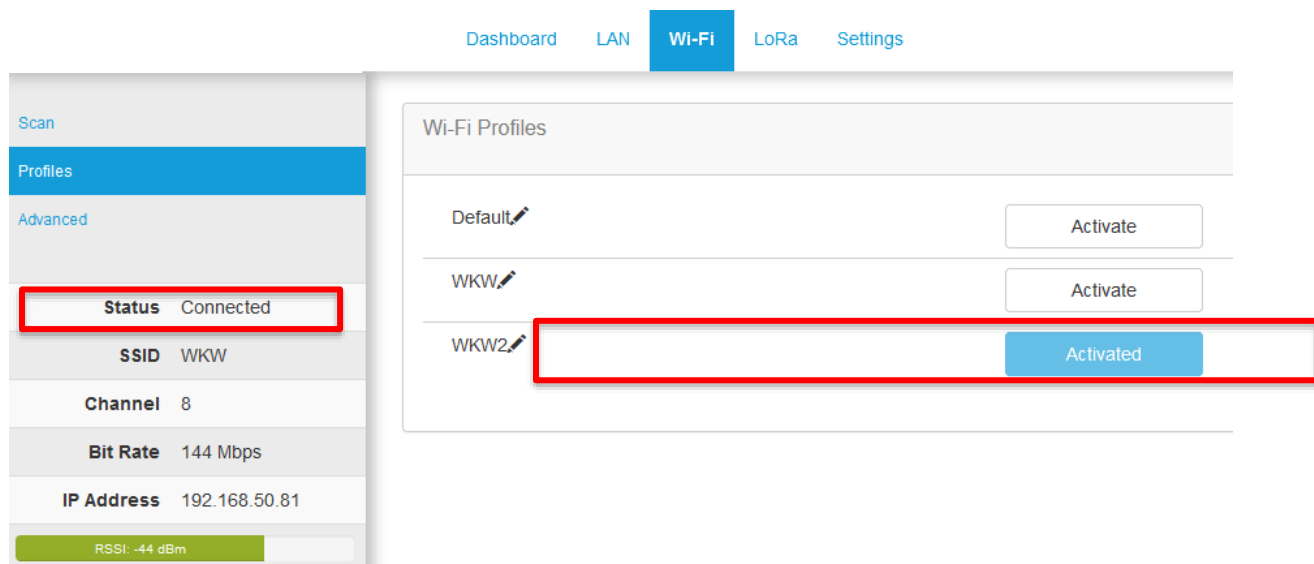


Figure 20: The newly added profile is activated

5 Additional Information

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