



Captive Portal Externo - Wifeed

Captive Portal Externo AP

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25 de Julho de 2024

P&D Redes Empresarias

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1. Sobre o teste

Realizada a homologação do captive portal externo com Wifeed utilizando AP da linha Intelbras FUTURE.

O teste teve como objetivo mapear todos os passos necessários para o funcionamento do captive portal externo junto com o roaming no AP stand-alone.

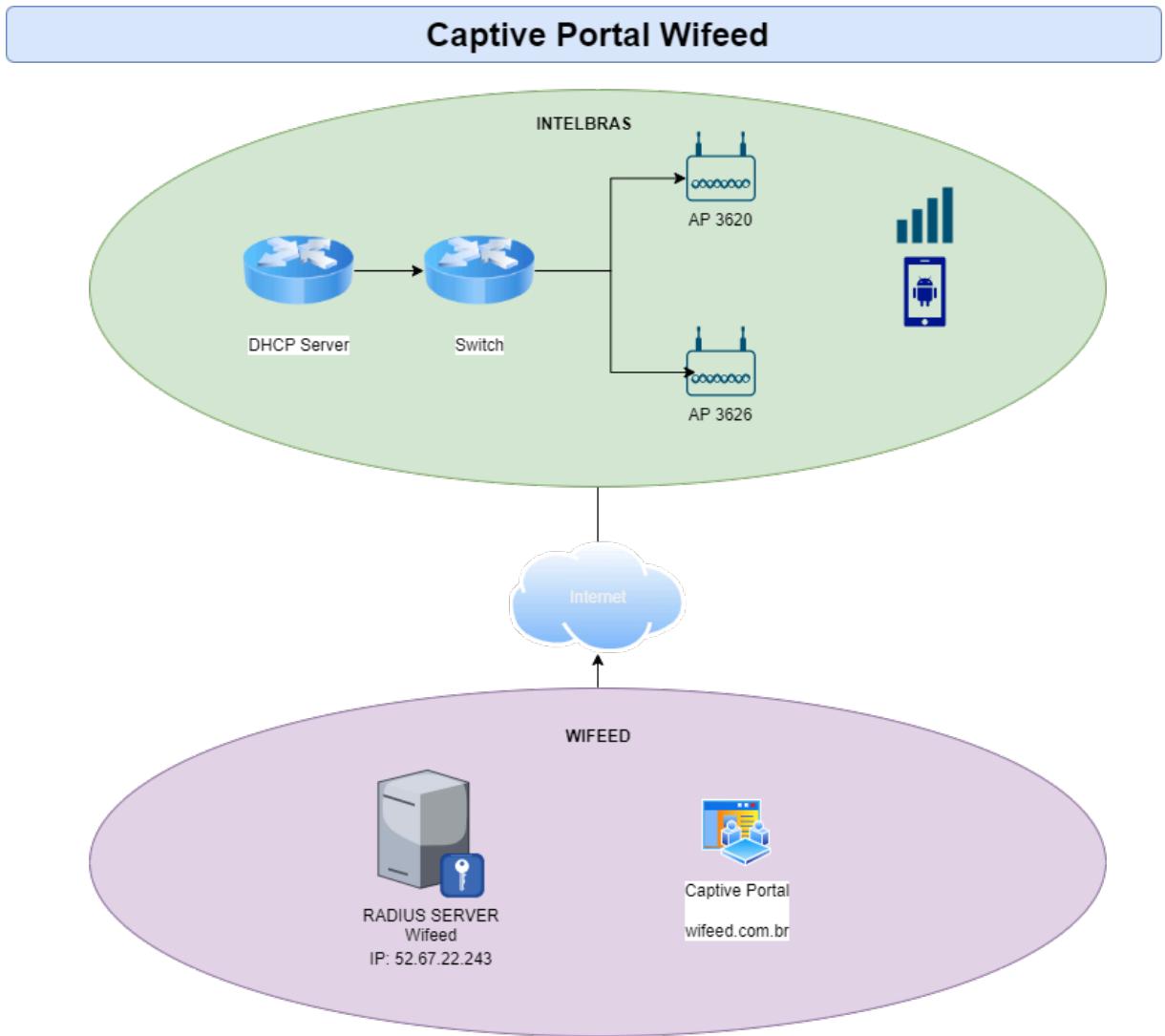
2. Versão Firmware utilizada

Versão de firmware e de AP utilizado nos testes:

```
1 <INTELBRAS>display version
2 INTELBRAS OS Software, Version 7.1.064, Release 2603P01
3 Copyright (c) 2023 Intelbras S.A. All rights reserved.
4 INTELBRAS AP5620 uptime is 0 weeks, 0 days, 8 hours, 18 minutes
5 Last reboot reason : User soft reboot
6
7 Boot image: flash:/ap6002-boot.bin
8 Boot image version: 7.1.064, Release 2603P01
9   Compiled Feb 06 2024 16:00:00
10 System image: flash:/ap6002-system.bin
11 System image version: 7.1.064, Release 2603P01
12   Compiled Feb 06 2024 16:00:00
13 Feature image(s) list:
14   flash:/ap6002-freeradius.bin, version: 7.1.064
15     Compiled Feb 06 2024 16:00:00
16
17 with 1 ARM 1.0GHz Processor
18 1024M bytes DDR3
19 256M bytes NandFlash Memory
20
21 Current running mode: Cloud AP
22 Next startup mode: Cloud AP
23 Hardware Version is Ver.A
24 Basic Bootrom Version is 7.13
25 Extend Bootrom Version is 7.20
26 [Subslot 0]INTELBRAS AP5620 Hardware Version is Ver.A
27 [SLOT 1]GE1/0/1      (Hardware)Ver.A, (Driver)1.0
28 [SLOT 1]SGE1/0/1    (Hardware)Ver.A, (Driver)1.0
29 [SLOT 1]RADIO1/0/1  (Hardware)Ver.A, (Driver)1.0
30 [SLOT 1]RADIO1/0/2  (Hardware)Ver.A, (Driver)1.0
31
32 <INTELBRAS>
```

3. Topologia utilizada

Figura 1: Image Created by The Author



4. Configuração Passo a Passo

Segue o passo a passo para realizar a configuração do captive portal no AP da linha FUTURE.

4.1. Passo a Passo - CLI

4.1.1. Configuração do service template com ssid e habilitando captive portal

```
1 wlan service-template 5
2   ssid ._Intelbras_Wifeed
3   portal enable method direct
4   portal domain d_wifeed
5   portal apply web-server w_wifeed
6   portal fail-permit web-server
7   portal temp-pass enable
8   service-template enable
```

4.1.2. Configuração do RADIUS apontando para o server da Wifeed

```

1 radius scheme r_wifeed
2   primary authentication 52.67.22.243 7564
3   primary accounting 52.67.22.243 4657
4     key      authentication      cipher      $c$3$MS+NzZ3PhmKzUCVXfqv7phrHQc/Mz/
4     I2CkeyMBWxIh5rcwkTzmbh6g==
5       key                  accounting          cipher
5   $c$3$4vdeCQTpfNuVI7PxzMeI33NK2k65hhzN2NaGk2aSiXXSHK+ZFNcvjg==
6   user-name-format without-domain

```

4.1.3. Configuração do domínio para autenticação via radius

```

1 domain d_wifeed
2   authentication portal radius-scheme r_wifeed
3   authorization portal radius-scheme r_wifeed
4   accounting portal radius-scheme r_wifeed

```

4.1.4. Configuração do web portal apontando para a URL da Wifeed

```

1 portal web-server w_wifeed
2   url https://bigbox.wifeed.com.br/api/redirect/hs-intbrafuture
3   server-detect log
4   server-type http-auth
5   url-parameter ap_ip bas-ip
6   url-parameter ap_mac ap-mac format section 6 lowercase
7   url-parameter ip source-address
8   url-parameter mac source-mac format section 6 lowercase
9   url-parameter original-url original-url
10  url-parameter ssid ssid

```

4.1.5. Configurando urls dentro do web portal em http e https

```

1 portal local-web-server http
2   login success-url https://bigbox.wifeed.com.br/api/redirect/hs-
3   intbrafuture
4   login failed-url https://bigbox.wifeed.com.br/api/redirect/hs-intbrafuture
4 #
5 portal local-web-server https
6   login success-url https://bigbox.wifeed.com.br/api/redirect/hs-
7   intbrafuture
7   login failed-url https://bigbox.wifeed.com.br/api/redirect/hs-intbrafuture

```

4.1.6. Liberação de bloqueio no portal free-rule e na acl

```

1 portal free-rule 20091 destination ip [IP DO AP] 255.255.255.255
2
3 undo acl advanced name default

```

4.1.7. Adicionar o service template criado nas interfaces WLAN

```

1 interface WLAN-Radio1/0/1
2   service-template 5
3
4 interface WLAN-Radio1/0/2
5   service-template 5

```

4.2. Passo a Passo - WEB

4.2.1. Configuração do RADIUS

Figura 2: Image Created by The Author

The screenshot shows the Intelbras AP5620 web interface. The left sidebar has sections like Dashboard, Monitoring, Quick Start, Wireless Configuration, Network Configuration, System, and Tools. Under Network Configuration, there's a 'Network Security' dropdown. The main content area is titled 'RADIUS' and describes it as a scheme for RADIUS servers. It includes tabs for Traffic Policy, Packet Filter, Priority Mapping, Access Control (IPv4 ACL, IPv6 ACL, Layer 2 ACL), Authentication (MAC Authentication, 802.1X, Portal, Port Security), AAA (ISP Domains, RADeUS), User Management, and Local Users. A red arrow points from the 'Network Security' dropdown to the 'RADeUS' tab.

Figura 3: Image Created by The Author

This screenshot is similar to Figura 2 but shows a list of RADIUS servers. It includes a header row with columns for Primary Auth Server, Primary Acct Server, and Actions. Below is a table with one entry: 'r_wifeed' with IP '52.67.22.243:7564' and Acct IP '52.67.22.243:4657'. A red arrow points to the 'r_wifeed' entry.

Primary Auth Server	Primary Acct Server	Actions
52.67.22.243:7564	52.67.22.243:4657	

Figura 4: Image Created by The Author

Figura 5: Image Created by The Author

4.2.2. Configuração do domain

Figura 6: Image Created by The Author

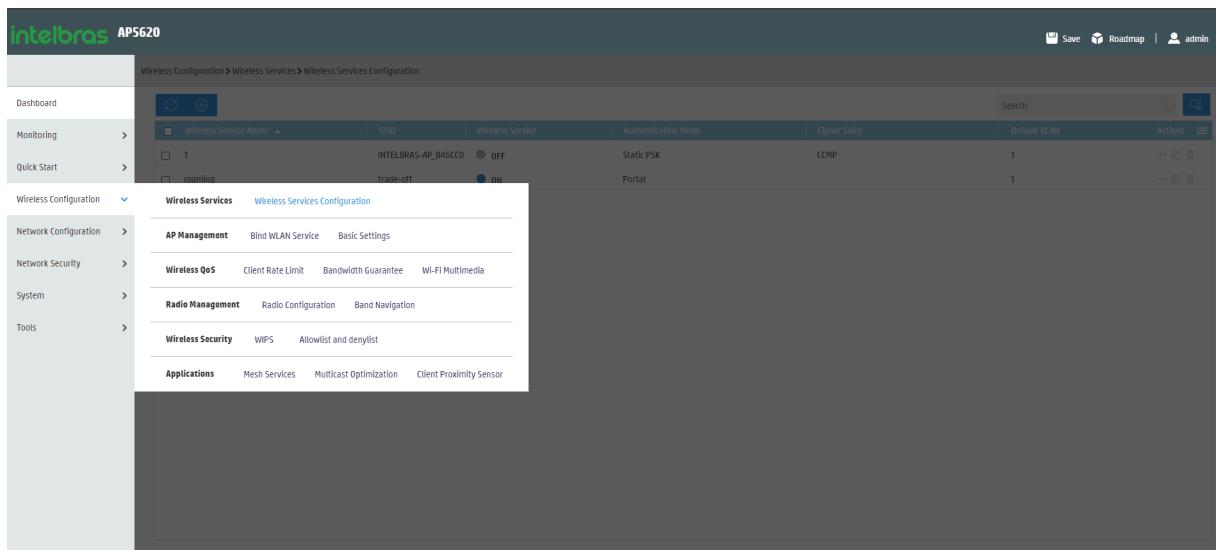


Figura 7: Image Created by The Author

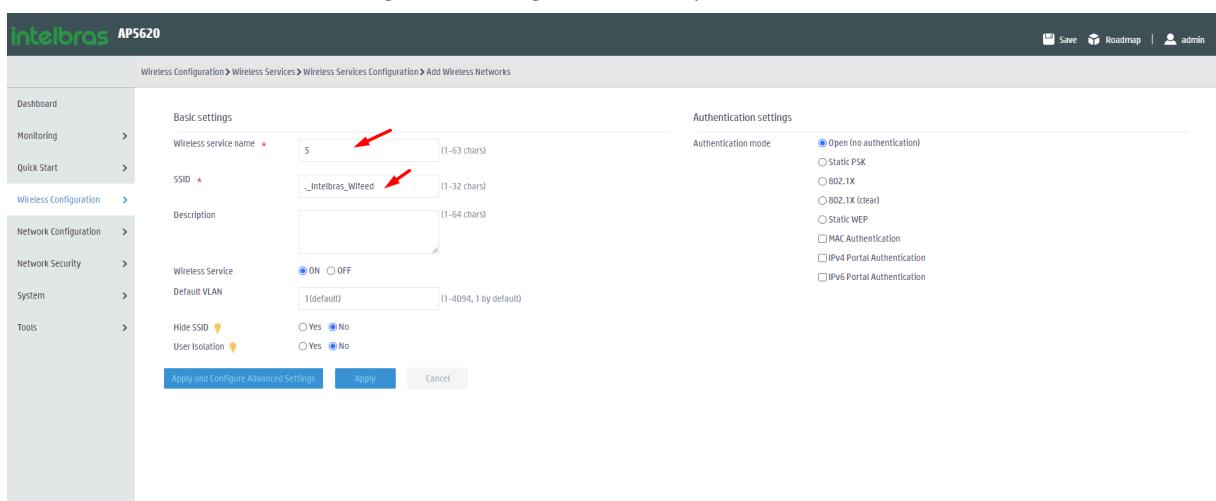
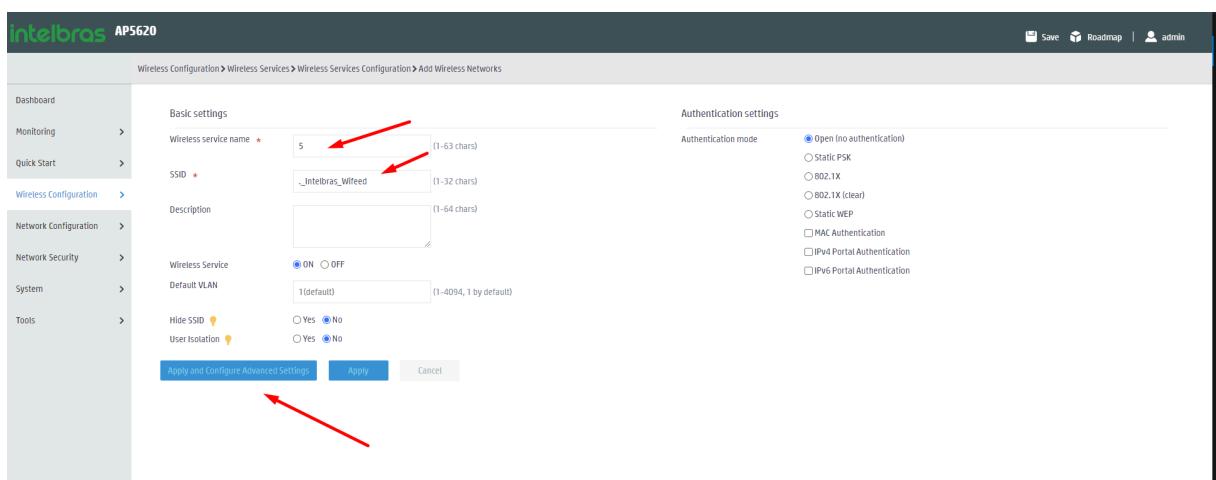


Figura 8: Image Created by The Author



4.2.3. Portal Web Server

Figura 9: Image Created by The Author

The screenshot shows the Intelbras AP5620 configuration interface. The main menu on the left includes Dashboard, Monitoring, Quick Start, Wireless Configuration, Network Configuration, Network Security, System, and Tools. Under Network Security, there are sub-options for Traffic Policy, Packet Filter, Priority Mapping, Access Control (IPv4 ACL, IPv6 ACL, Layer 2 ACL), Authentication (MAC Authentication, 802.1X, Portal, Port Security), AAA (ISP Domains, RADIUS), User Management, and Local Users. The current view is under the Authentication > Portal section. The sub-menu on the right shows settings for IPv4 Portal, including Domain name (e_wififeed), Fail-permit (ON), Portal web server (Select...), Maximum clients (4294967295), and BAS-IP (192.168.1.1). There are also tabs for IPv6 Portal and Port Security.

Figura 10: Image Created by The Author

This screenshot shows the same configuration interface as Figure 9, but with a different focus. It highlights the 'Portal' tab in the sub-menu under Network Security > Authentication > Portal. The sub-menu includes options for Portal authentication server, Portal Web server, Local portal Web server, Portal-free rule, Interface policy, and Online users.

Figura 11: Image Created by The Author

This screenshot shows the 'Portal' configuration page with a table listing various portal entries. The table has columns for Server Name, URL, Status(Pv4), Status(Pv6), and Actions. The table lists 16 entries, numbered 1 through 15 and one entry for 'w_wififeed'. Most entries have URLs starting with 'http://inccloud-auth.intelbras.com.br/portal/protocol'. The last entry, 'w_wififeed', has a URL starting with 'https://bigbox.wififeed.com.br/api/redirections/intelbras'. All entries show 'Reachable' in the status columns. The top left of the table has a search bar and a refresh icon.

Server Name	URL	Status(Pv4)	Status(Pv6)	Actions
1	http://inccloud-auth.intelbras.com.br/portal/protocol	Reachable	Reachable	<input type="checkbox"/> <input type="checkbox"/>
10	http://inccloud-auth.intelbras.com.br/portal/protocol	Reachable	Reachable	<input type="checkbox"/> <input type="checkbox"/>
11	http://inccloud-auth.intelbras.com.br/portal/protocol	Reachable	Reachable	<input type="checkbox"/> <input type="checkbox"/>
12	http://inccloud-auth.intelbras.com.br/portal/protocol	Reachable	Reachable	<input type="checkbox"/> <input type="checkbox"/>
13	http://inccloud-auth.intelbras.com.br/portal/protocol	Reachable	Reachable	<input type="checkbox"/> <input type="checkbox"/>
14	http://inccloud-auth.intelbras.com.br/portal/protocol	Reachable	Reachable	<input type="checkbox"/> <input type="checkbox"/>
15	http://inccloud-auth.intelbras.com.br/portal/protocol	Reachable	Reachable	<input type="checkbox"/> <input type="checkbox"/>
2	http://inccloud-auth.intelbras.com.br/portal/protocol	Reachable	Reachable	<input type="checkbox"/> <input type="checkbox"/>
3	http://inccloud-auth.intelbras.com.br/portal/protocol	Reachable	Reachable	<input type="checkbox"/> <input type="checkbox"/>
4	http://inccloud-auth.intelbras.com.br/portal/protocol	Reachable	Reachable	<input type="checkbox"/> <input type="checkbox"/>
5	http://inccloud-auth.intelbras.com.br/portal/protocol	Reachable	Reachable	<input type="checkbox"/> <input type="checkbox"/>
6	http://inccloud-auth.intelbras.com.br/portal/protocol	Reachable	Reachable	<input type="checkbox"/> <input type="checkbox"/>
7	http://inccloud-auth.intelbras.com.br/portal/protocol	Reachable	Reachable	<input type="checkbox"/> <input type="checkbox"/>
8	http://inccloud-auth.intelbras.com.br/portal/protocol	Reachable	Reachable	<input type="checkbox"/> <input type="checkbox"/>
9	http://inccloud-auth.intelbras.com.br/portal/protocol	Reachable	Reachable	<input type="checkbox"/> <input type="checkbox"/>
w_wififeed	https://bigbox.wififeed.com.br/api/redirections/intelbras	Reachable	Reachable	<input type="checkbox"/> <input type="checkbox"/>

Figura 12: Image Created by The Author

```

1 portal web-server w_wifeed
2 url https://bigbox.wifeed.com.br/api/redirect/hs-intbrafuture
3 server-detect log
4 server-type http-auth
5 url-parameter ap_ip bas-ip
6 url-parameter ap_mac ap-mac format section 6 lowercase
7 url-parameter ip source-address
8 url-parameter mac source-mac format section 6 lowercase
9 url-parameter original-url original-url
10 url-parameter ssid ssid

```

4.2.4. Service template

Figura 13: Image Created by The Author

Figura 14: Image Created by The Author

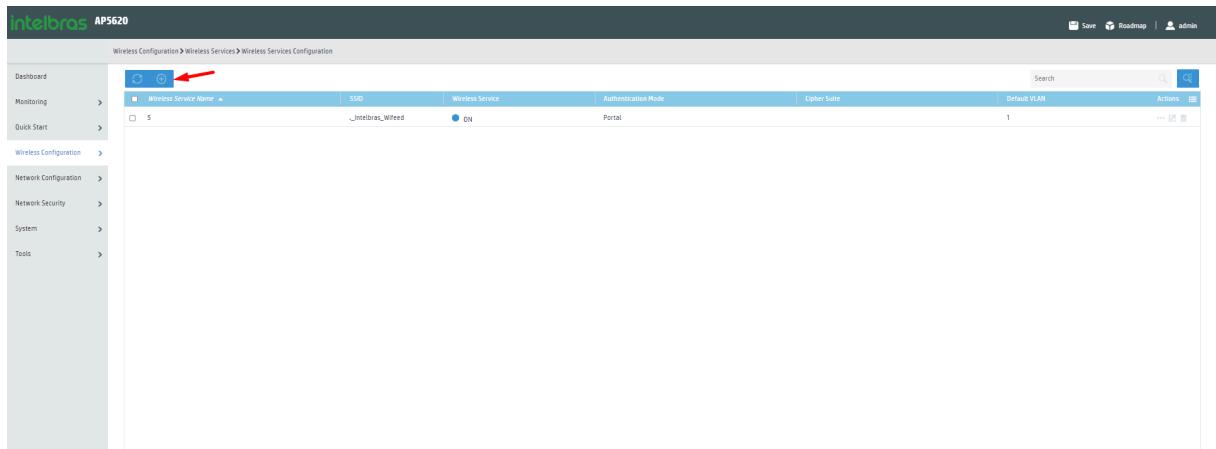


Figura 15: Image Created by The Author

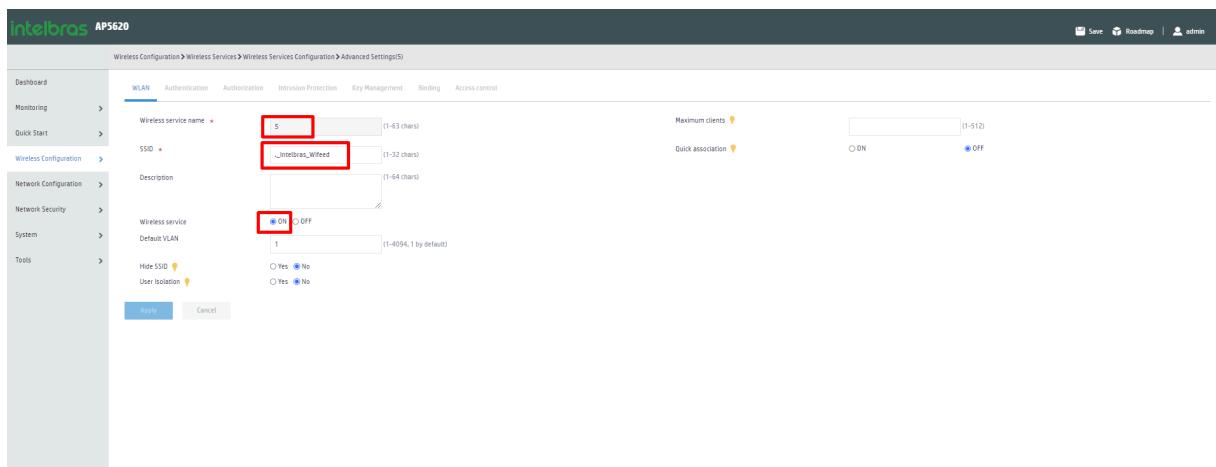
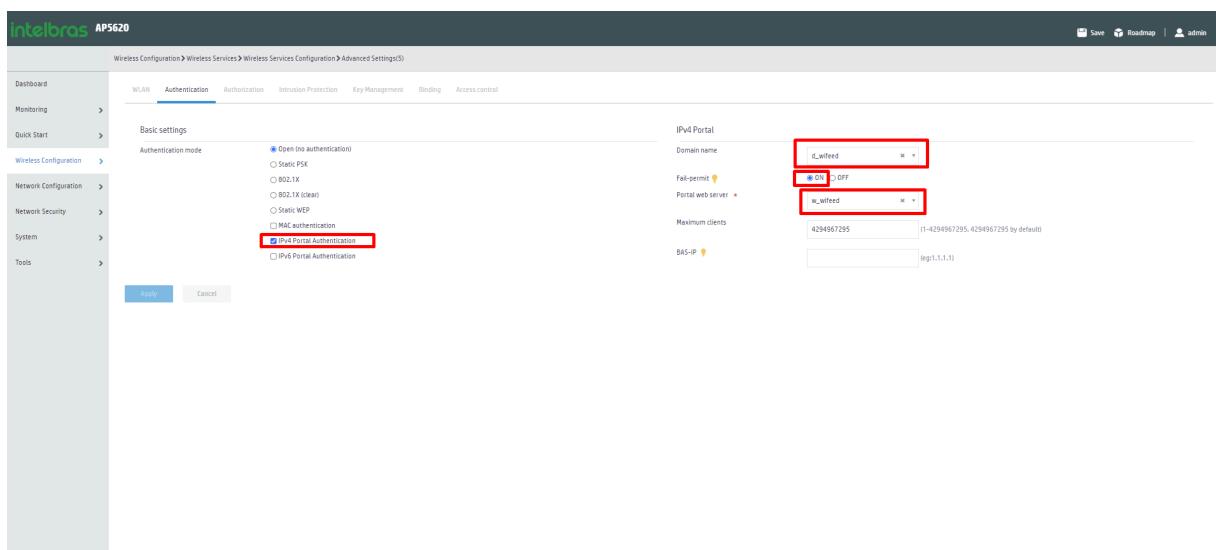


Figura 16: Image Created by The Author



4.2.5. Portal Local Web Server HTTP e https

Estes comandos precisam ser via CLI

```

1 portal local-web-server http
    login success-url https://bigbox.wifeed.com.br/api/redirect/hs-
intbrafuture
2 login failed-url https://bigbox.wifeed.com.br/api/redirect/hs-intbrafuture
3 #
4 portal local-web-server https
    login success-url https://bigbox.wifeed.com.br/api/redirect/hs-
intbrafuture
5 login failed-url https://bigbox.wifeed.com.br/api/redirect/hs-intbrafuture

```

4.2.6. Portal Free rule

Figura 17: Image Created by The Author

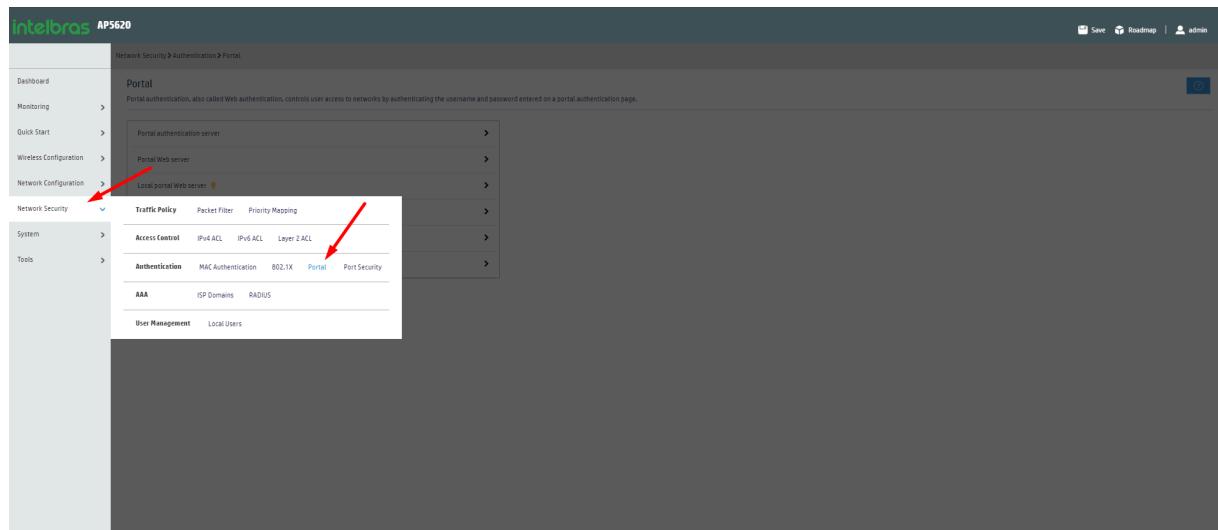


Figura 18: Image Created by The Author

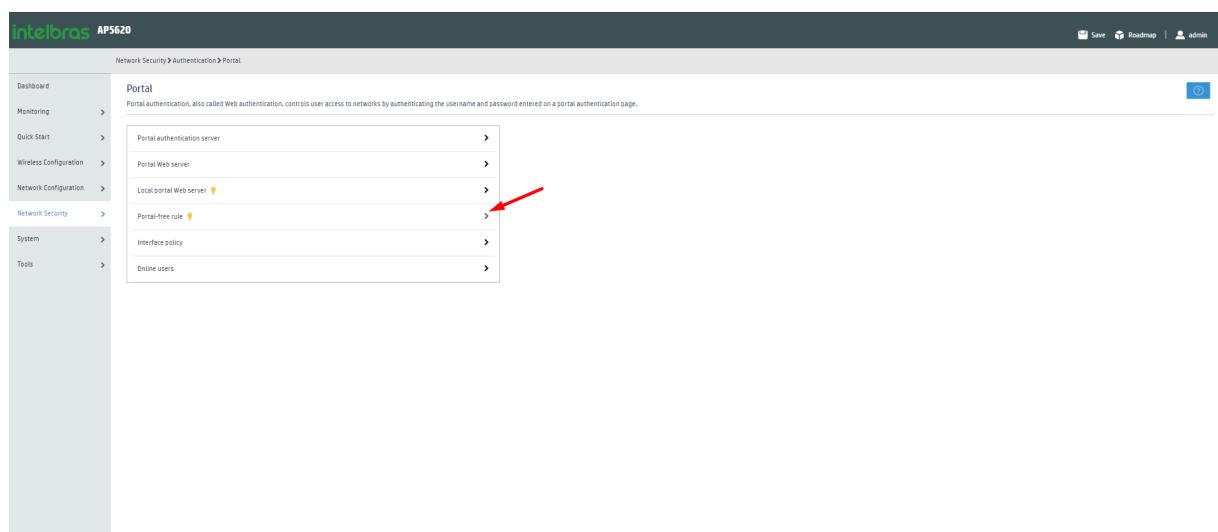
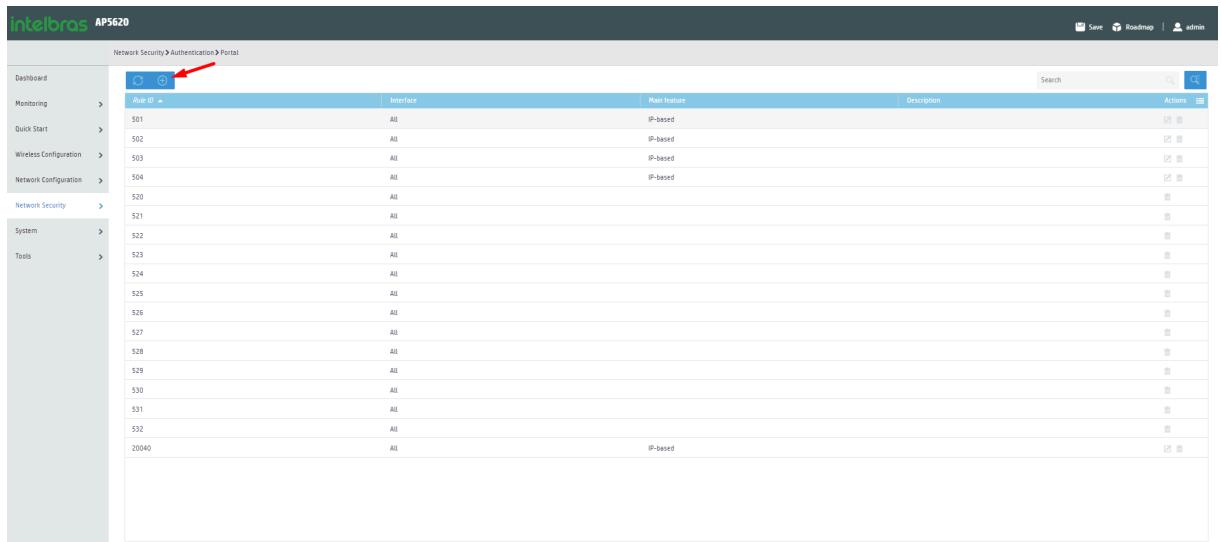
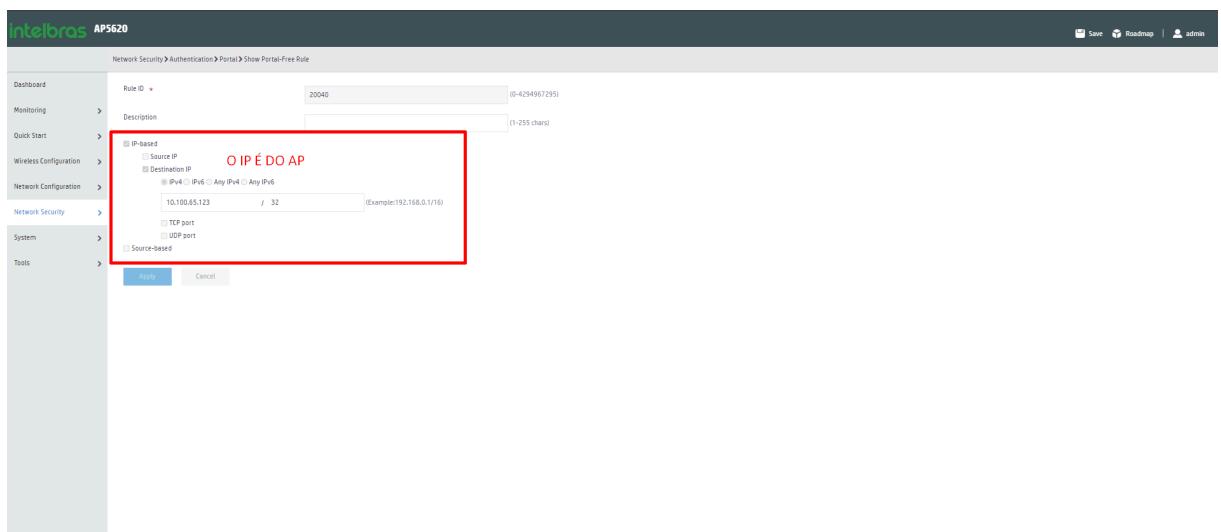


Figura 19: Image Created by The Author



Rule ID	Interface	Main feature	Description	Actions
501	All	IP-based		
502	All	IP-based		
503	All	IP-based		
504	All	IP-based		
520	All			
521	All			
522	All			
523	All			
524	All			
525	All			
526	All			
527	All			
528	All			
529	All			
530	All			
531	All			
532	All			
20040	All	IP-based		

Figura 20: Image Created by The Author



The screenshot shows the configuration of a specific rule (ID 20040). The rule is titled "O IP É DO AP". The configuration includes:

- Source IP:** 10.100.65.123
- Port:** 32
- Protocol:** TCP port
- Feature:** Source-based

Buttons at the bottom include "Apply" and "Cancel".

4.2.7. Retirar ACL

Figura 21: Image Created by The Author

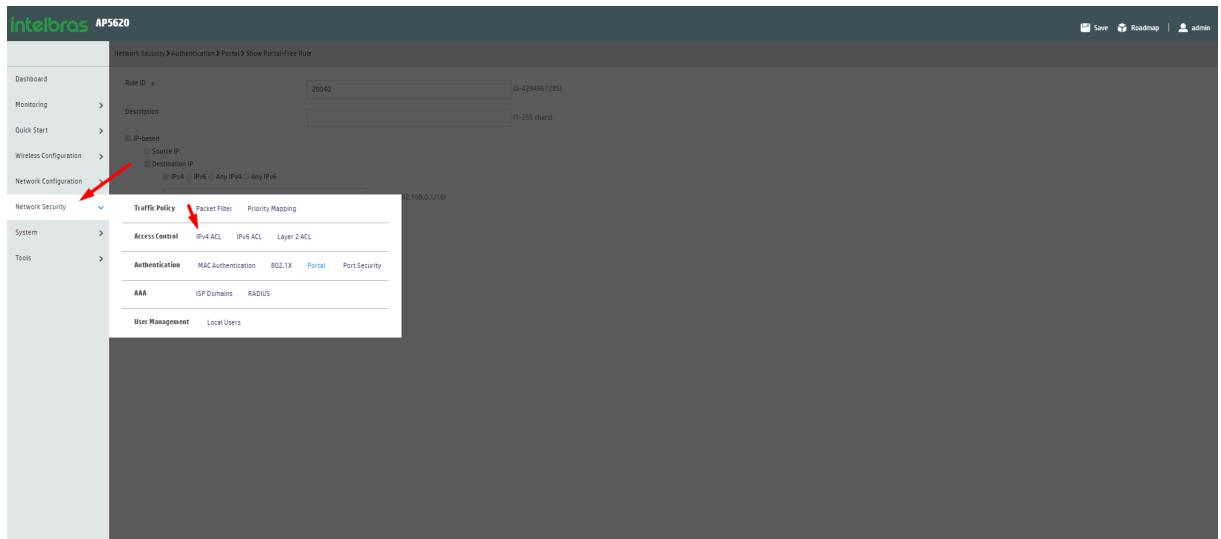
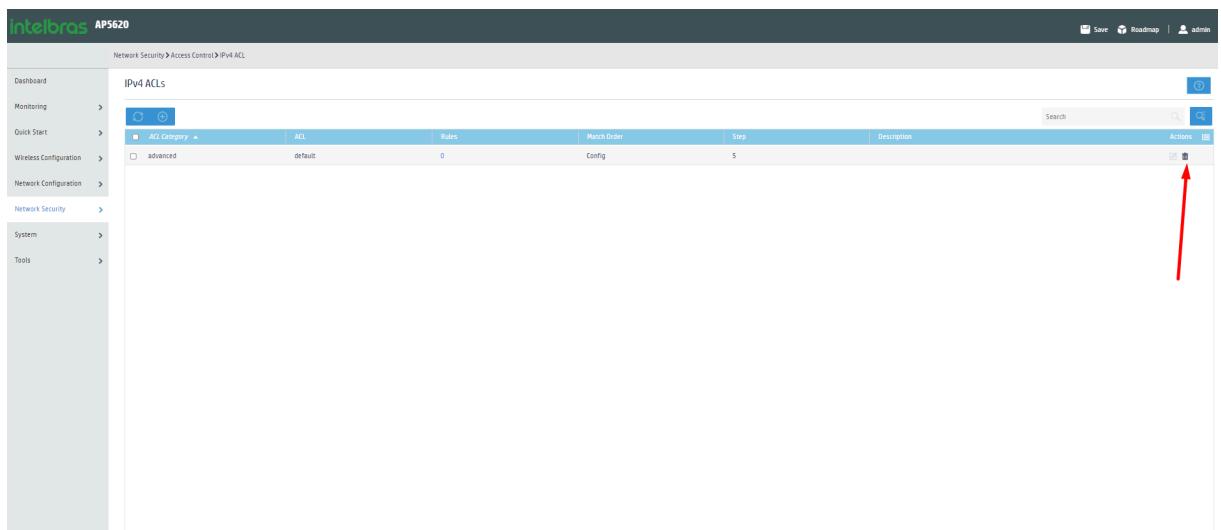


Figura 22: Image Created by The Author



4.2.8. Adicionar Service Template as interfaces WLAN

Figura 23: Image Created by The Author

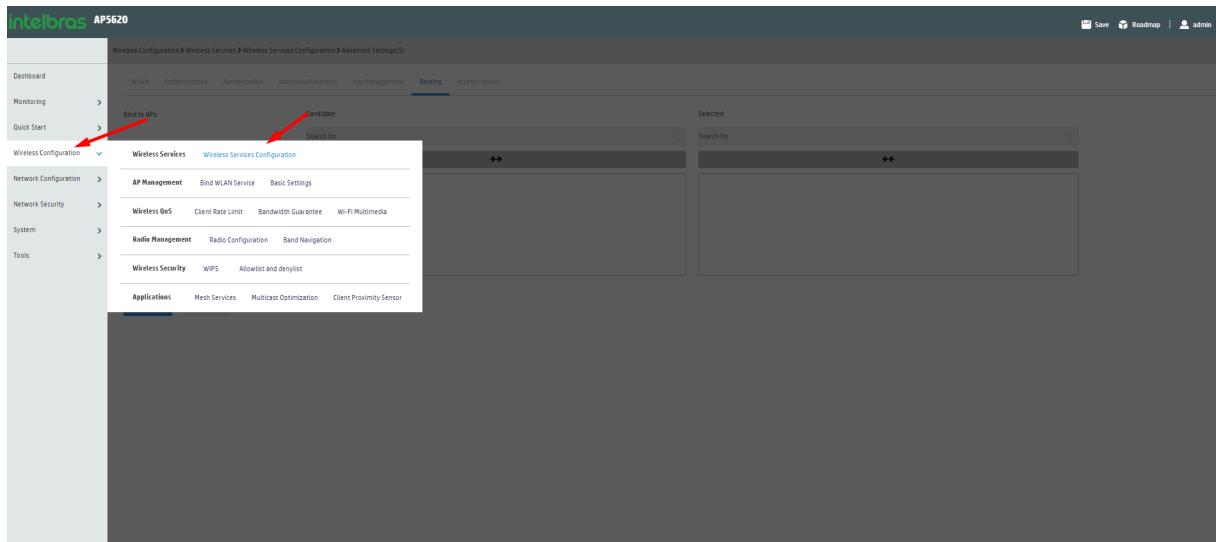


Figura 24: Image Created by The Author

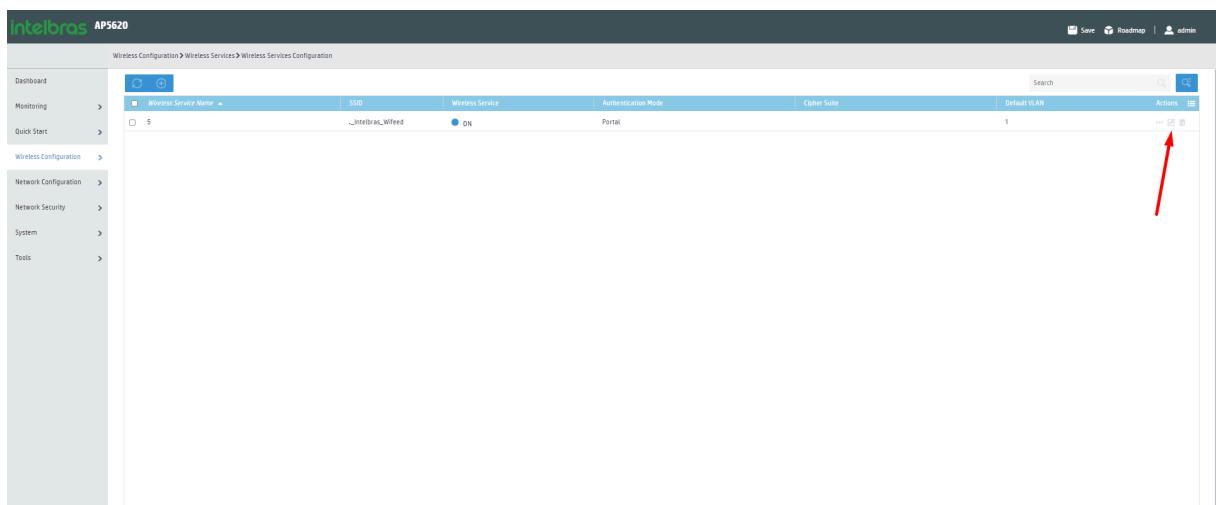


Figura 25: Image Created by The Author

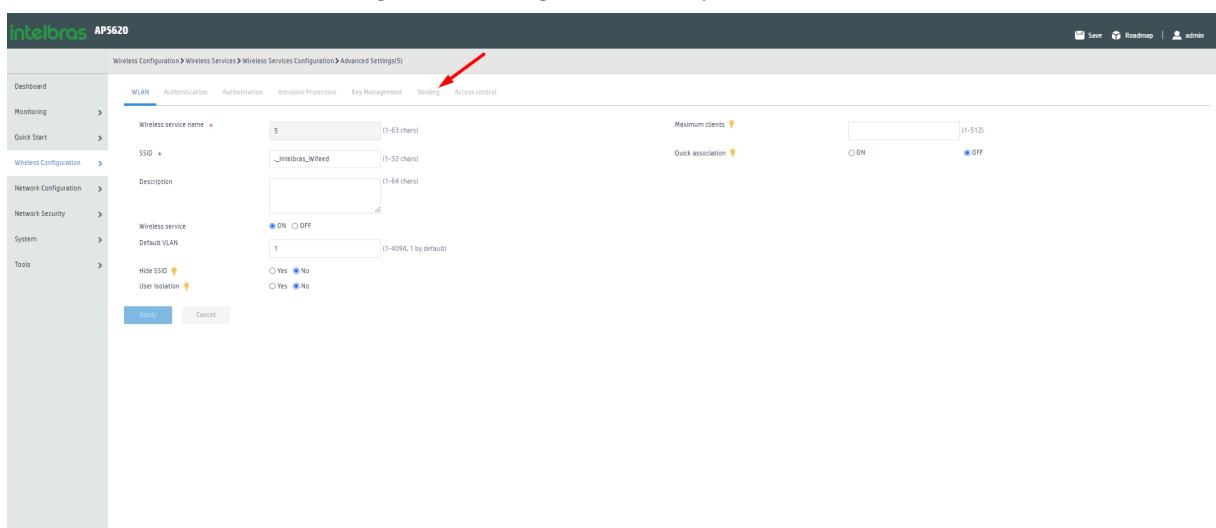
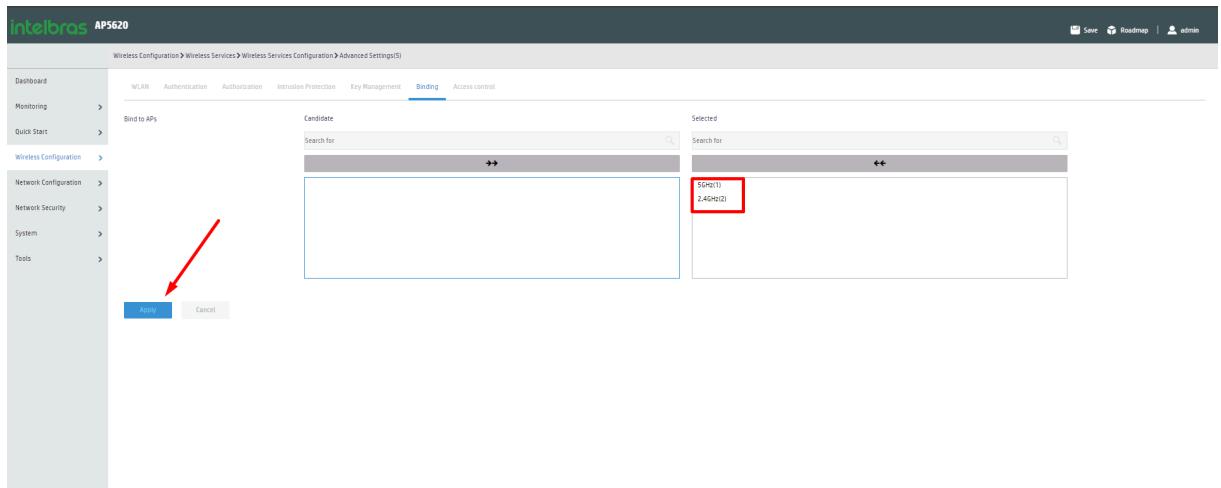


Figura 26: Image Created by The Author



4.3. Passo a Passo - INCCloud

4.3.1. Configuração do RADIUS e Domain

Figura 27: Image Created by The Author

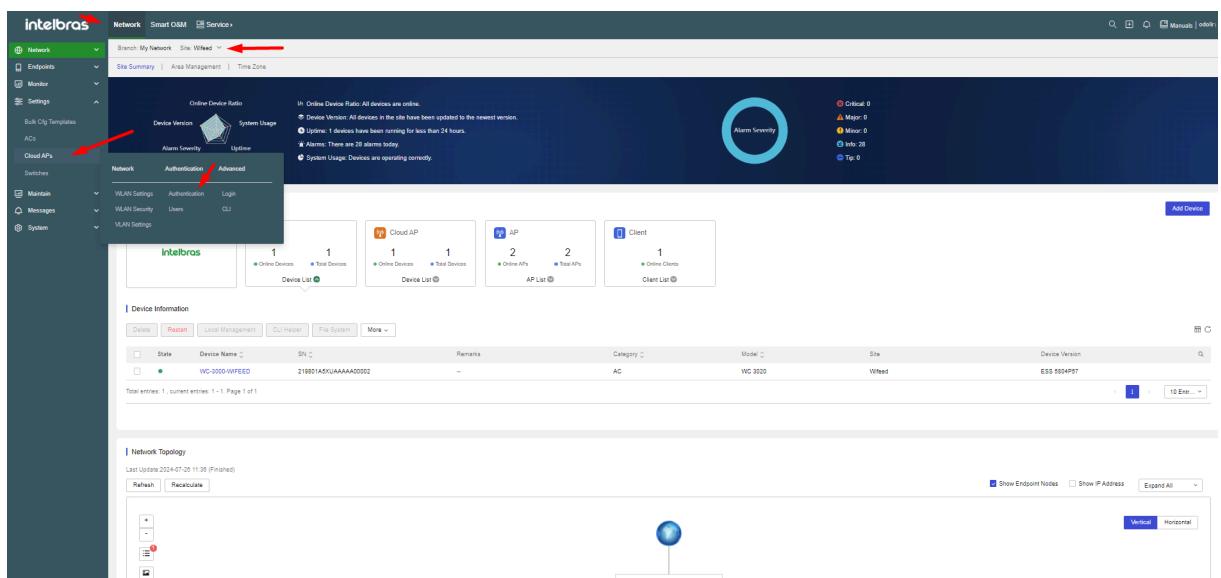


Figura 28: Image Created by The Author

The screenshot shows the intelbras Cloud APs interface under the 'Network' tab. In the left sidebar, 'Cloud APs' is selected. The main content area is titled 'RADIUS Scheme' and shows a table with one entry: 'd_wifeed'. Below the table is a section titled 'NAS-IP Configuration' with a note about the NAS-IP-Address attribute. At the bottom of the page, there is a table for 'Status' showing 'AP-WIFEE' as 'Online'.

Figura 29: Image Created by The Author

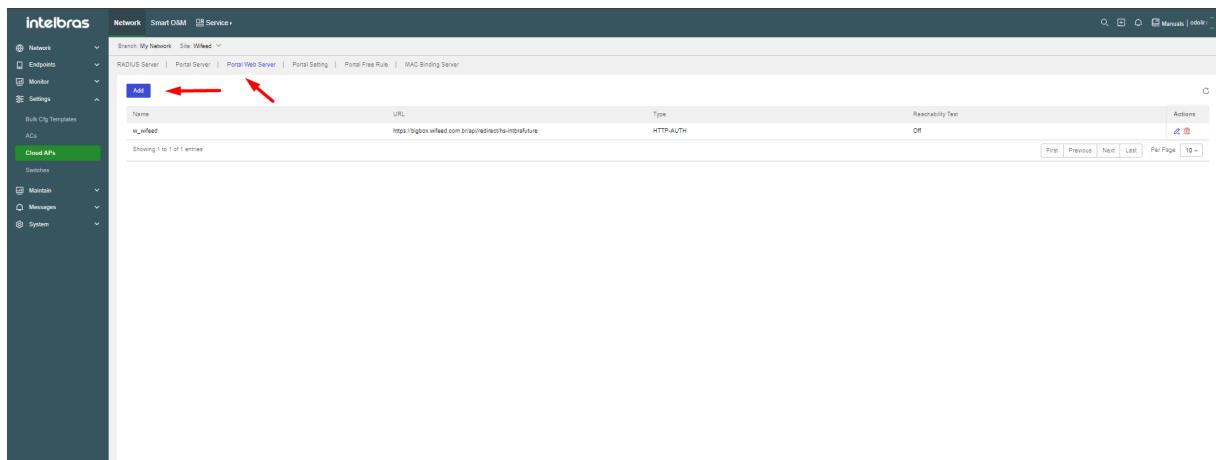
This screenshot shows the 'Edit' view of a RADIUS Scheme named 'd_wifeed'. The 'Auth Server' section is highlighted with a red box. It contains two entries: 'Primary Server IP' (92.87.22.243) with port 7554 and 'Backup Server IP' (Specify server IP) with port 145555. The 'Accounting Server' section also has two entries: 'Primary Server IP' (92.87.22.243) with port 4557 and 'Backup Server IP' (Specify server IP) with port 145555. Below these sections, there is a 'Domain Name' field set to 'd_wifeed' and a 'Domain Name Assignment' dropdown with options 'With Domain', 'Without Domain', and 'Remain Unchanged', with 'Without Domain' selected. At the bottom of the form, there are fields for 'Response Timeout', 'Max Attempts', 'Idle Time', 'Actual Accounting Interval', and 'Actual Max Accounting Attempts'. The 'Save' button is located at the bottom right of the form.

4.3.2. Portal Web Server

Figura 30: Image Created by The Author

The screenshot shows the intelbras Cloud APs interface under the 'Network' tab. In the left sidebar, 'Cloud APs' is selected. The main content area is titled 'Portal Web Server' and shows a table with one entry: 'w_wifeed'. The table includes columns for 'Name', 'URL', 'Type', and 'Reachability Test'. The 'Actions' column shows a 'Edit' icon. At the bottom of the page, there are navigation links for 'First', 'Previous', 'Next', 'Last', 'Per Page', and '10'.

Figura 31: Image Created by The Author



4.3.3. Portal Free rule

Figura 32: Image Created by The Author

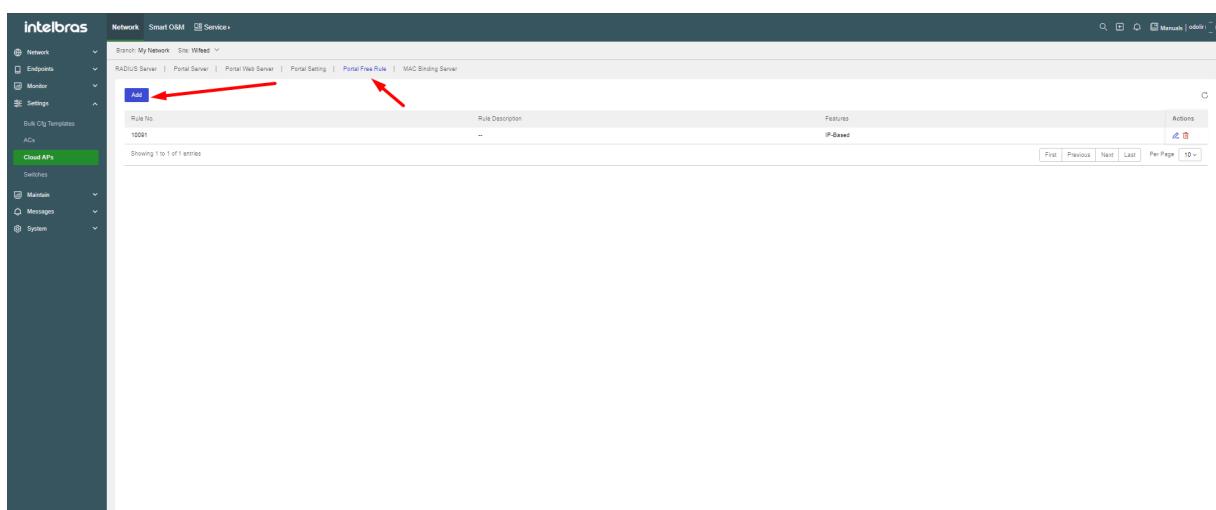
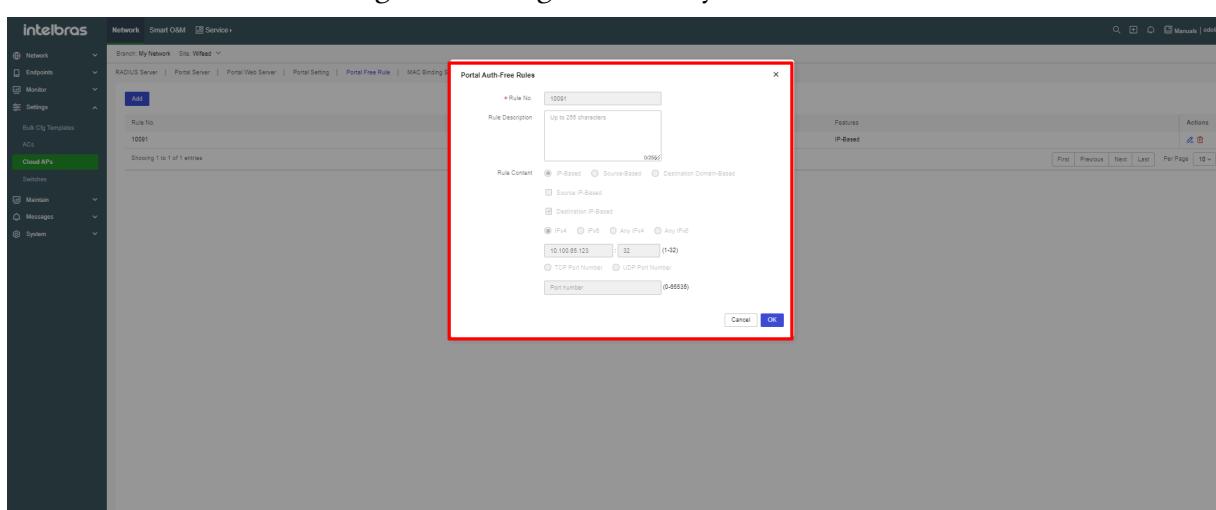


Figura 33: Image Created by The Author



4.3.4. Service template

Figura 34: Image Created by The Author

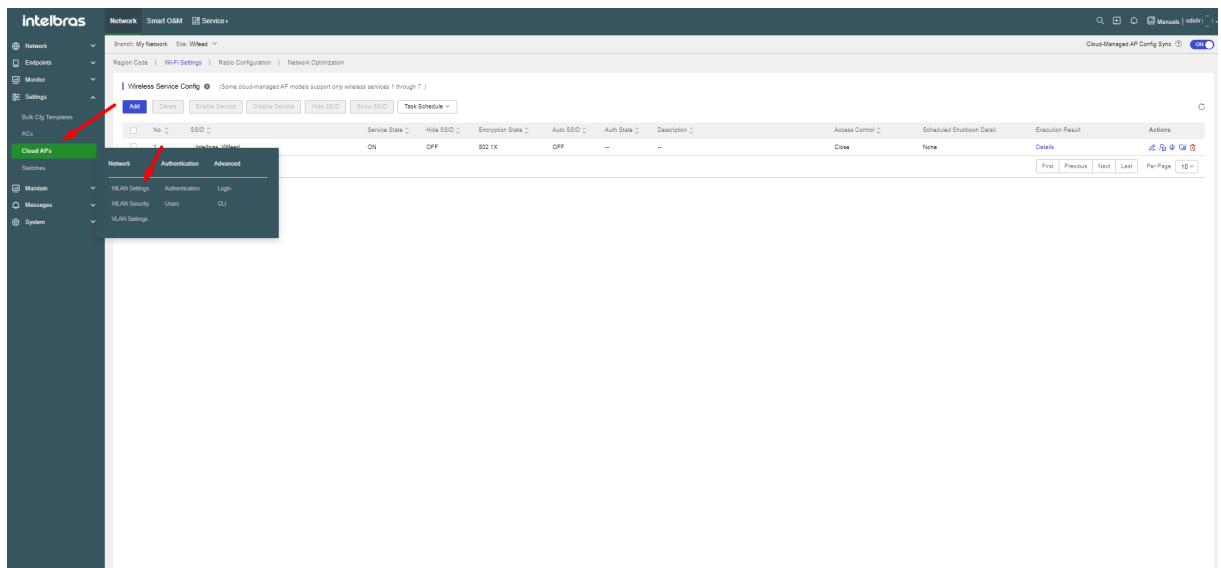


Figura 35: Image Created by The Author

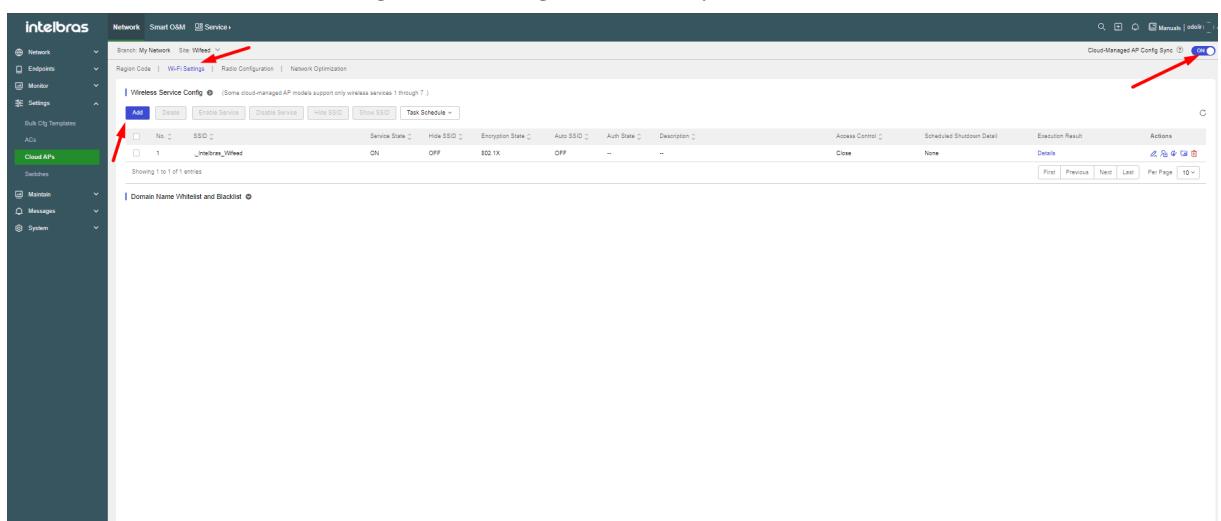


Figura 36: Image Created by The Author

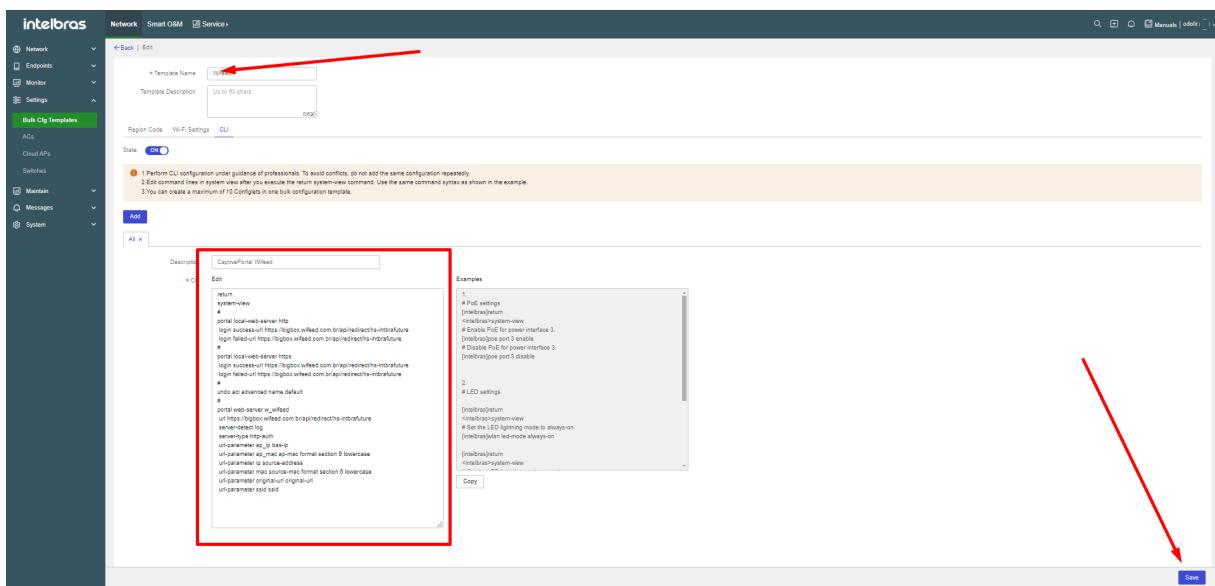


4.3.5. AP Template

Figura 37: Image Created by The Author

Template Name	Template Description	Creator	Created At	Updated At	Last Applied At	Actions
Wifid	—	eddir	2024-07-28 13:28:27	2024-07-28 13:28:27	—	Edit Delete Import Export
web_unified_objects	web_unified_objects	intelbras	2024-05-23 09:40:24	2024-05-23 09:40:24	2024-05-23 09:40:24	Edit Delete Import Export
AC Templates	—	eddir	2024-04-30 13:28:17	2024-04-30 13:28:17	2024-04-30 17:38:31	Edit Delete Import Export
Switch Templates	—	eddir	2024-04-18 10:53:40	2024-04-18 10:53:40	2024-05-10 14:49:29	Edit Delete Import Export
802.1X Templates	—	eddir	2024-04-17 14:22:55	2024-04-17 14:22:55	2024-04-18 15:47:21	Edit Delete Import Export

Figura 38: Image Created by The Author



```

1 return
2 system-view
#
4 portal local-web-server http
    login success-url https://bigbox.wifeed.com.br/api/redirect/hs-
intbrafuture
    login failed-url https://bigbox.wifeed.com.br/api/redirect/hs-
intbrafuture
#
8 portal local-web-server https
    login success-url https://bigbox.wifeed.com.br/api/redirect/hs-
intbrafuture
    login failed-url https://bigbox.wifeed.com.br/api/redirect/hs-
intbrafuture
#
12 undo acl advanced name default
#
14 portal web-server w_wifeed
    url https://bigbox.wifeed.com.br/api/redirect/hs-intbrafuture
    server-detect log
    server-type http-auth
    url-parameter ap_ip bas-ip
    url-parameter ap_mac ap-mac format section 6 lowercase
    url-parameter ip source-address
    url-parameter mac source-mac format section 6 lowercase
    url-parameter original-url original-url
    url-parameter ssid ssid

```

Figura 39: Image Created by The Author

