

Managed WiFi



Marek Vyklický
B2B Channel Manager

KKDS Olomouc
25. 4. 2024



„At' si zákazník koupí, co chce, nás to nezajímá“

Pepa, Horní Dolní Net

„Potřebuji co nejlevnější router“

Karel, Super Net

Aginet



Aginet Config

- Defaultní konfigurace
- Lokální upgrade FW*

Aginet ACS

- Auto konfigurace
- TR-69
- Vzdálený upgrade FW
- Správa CPE

TAUC

- Auto konfigurace
- TR-369
- Vzdálený upgrade FW
- Správa CPE a Easy Mesh (Multi-AP, Data Elements)
- Managed WiFi s historií

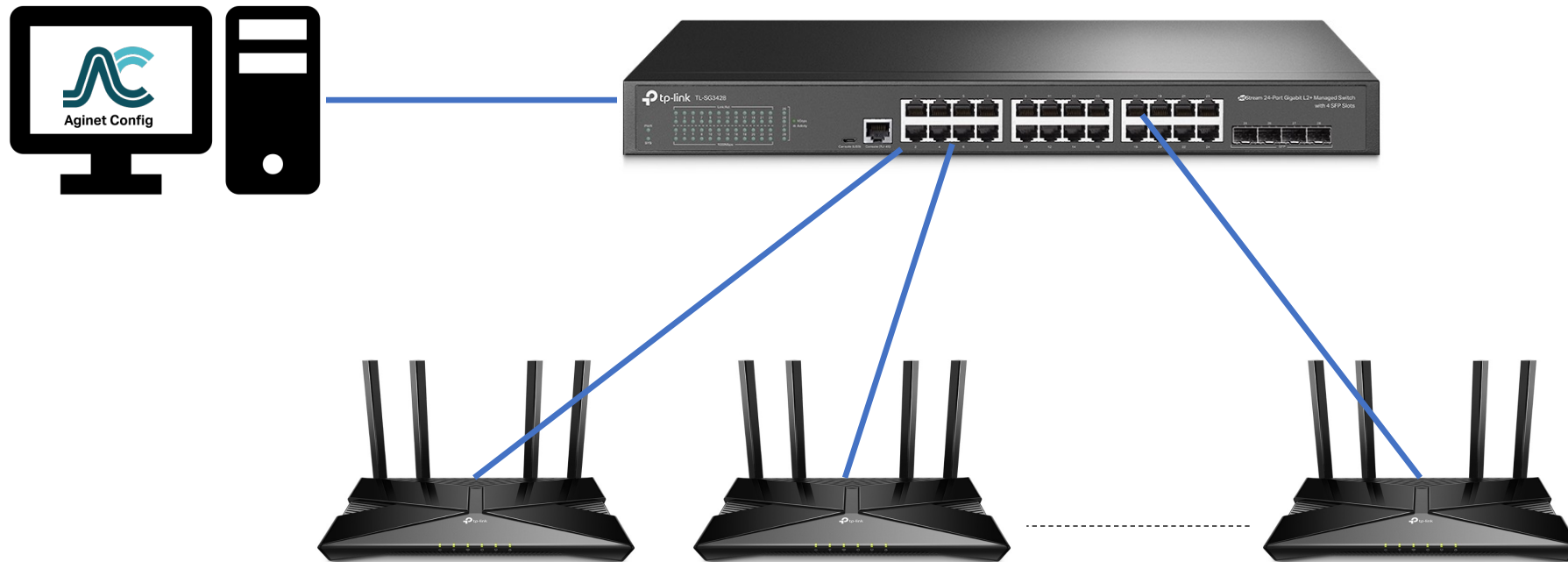
Aginet Config



Aginet
Config



Aginet Config



Dávková konfigurace s individuálním nastavením



Wi-Fi SSID



Wi-Fi Password



Router Username
and Password



PPPoE Username
and Password



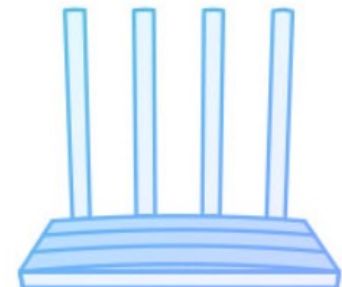
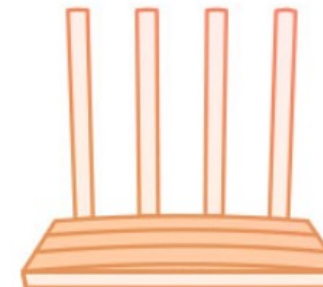
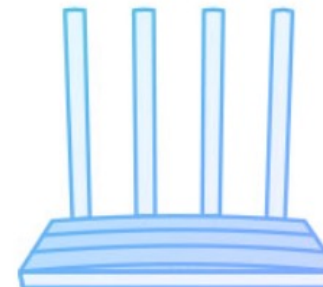
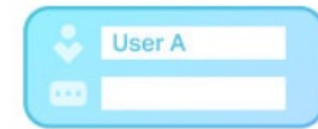
IP Address



Subnet Mask



Gateway Address



Aginet Config 3.0



tp-link | Aginet

Device Management

Choose below buttons to manage devices

Configure Upgrade Clear Configure

Current Status
Idle
Tool is not running any operation by now.

Operation Log [Export Reports](#)

DEVICE MODEL	MAC ADDRESS	VERSION	STATUS	RUN TIME	OPERATION TIME
HC220(EU)1.0 V2	FF:FF:FF:FF:FF:FF	1.5.0	Configuring... (59%)	00:20	Last Hour
HC220(EU)1.0 V2	FF:FF:FF:FF:FF:FF			01:00	24 Hours
HC220(SEA)1.0 V2	FF:FF:FF:FF:FF:FF			00:20	7 Days
OSW-16	FF:FF:FF:FF:FF:FF			00:10	30 Days
OSW-24	FF:FF:FF:FF:FF:FF			03:00	2022-09-05 00:00:00
EAP 110	FF:FF:FF:FF:FF:FF	1.5.0	Upgrade Failed	00:30	2022-09-05 00:00:00
EAP 115	FF:FF:FF:FF:FF:FF	1.5.0	Clearing... (31%)	00:00	2022-09-05 00:00:00
EAP 225	FF:FF:FF:FF:FF:FF	1.3.0	Clear Succeeded	10:00	2022-09-05 00:00:00
EAP245 v1.0	FF:FF:FF:FF:FF:FF	1.3.0	Clear Failed	00:20	2022-09-05 00:00:00
Unknown	FF:FF:FF:FF:FF:FF	1.3.0	Upgrade Failed	00:39	2022-09-05 00:00:00

Showing 1-10 of 85 records

1 2 3 4 5 ... 9 > 10 Items/page Go to Go

Select a Profile for Upgrade

Profile:
Please Select...

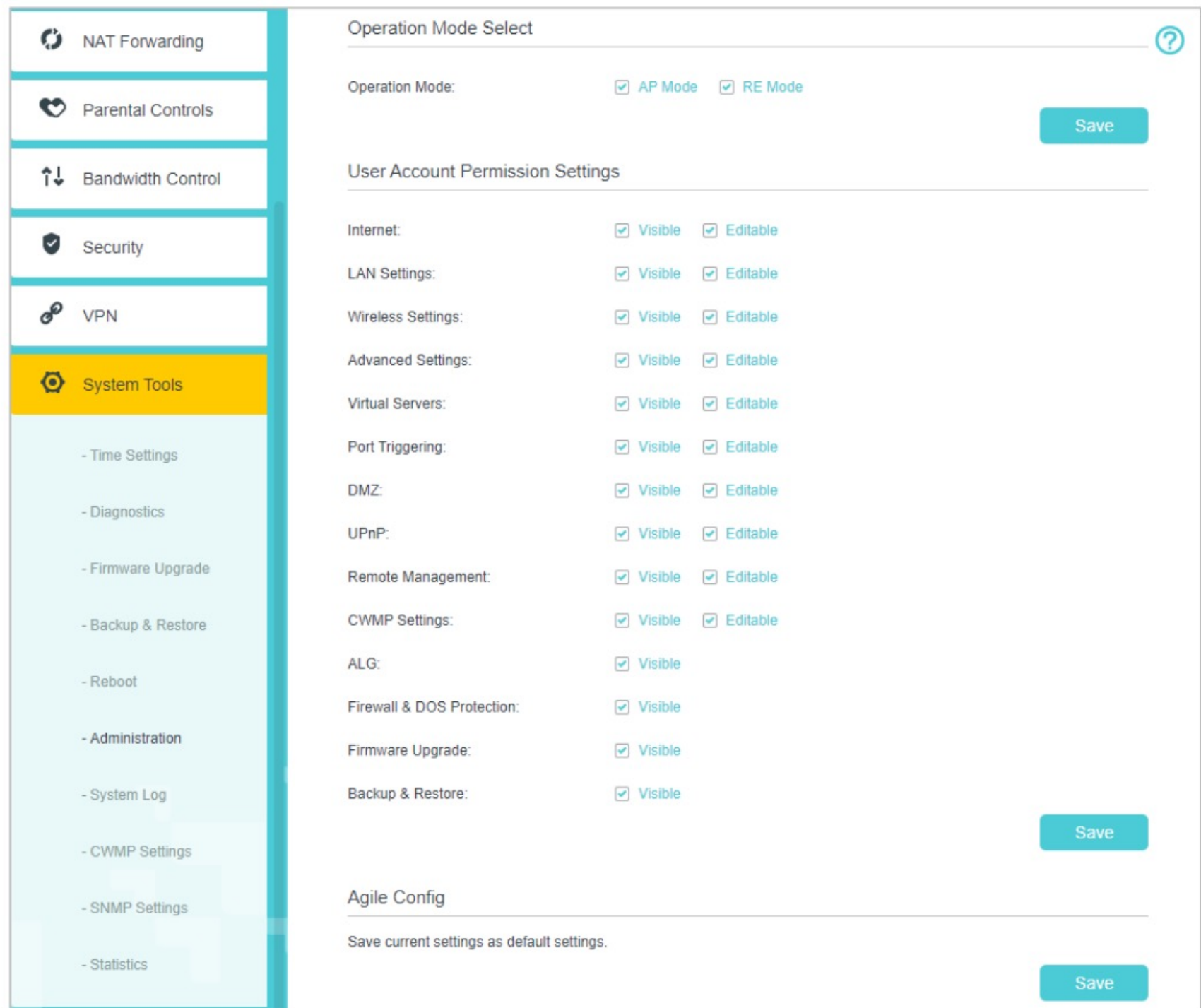
Confirm Cancel

Error: 404 not found
Retry

- Dashboard
- Upgrade FW
- Konfigurační profily

Superadmin

192.168.1.1/superadmin



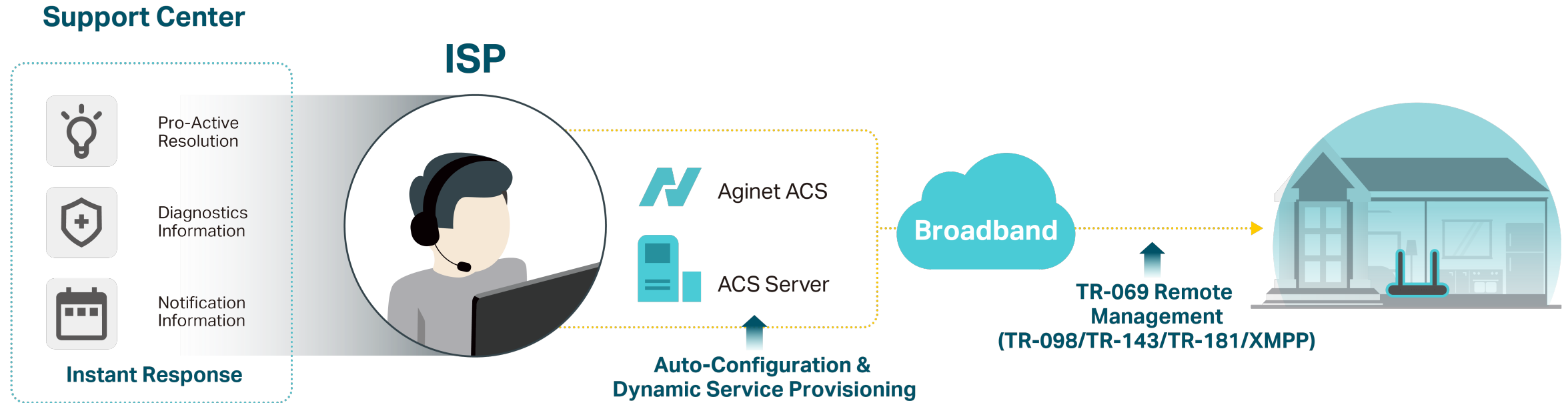
The screenshot displays the Superadmin web interface. On the left is a vertical navigation menu with the following items: NAT Forwarding, Parental Controls, Bandwidth Control, Security, VPN, System Tools (highlighted in yellow), Time Settings, Diagnostics, Firmware Upgrade, Backup & Restore, Reboot, Administration, System Log, CWMP Settings, SNMP Settings, and Statistics. The main content area shows the 'Operation Mode Select' page. At the top right of this page is a help icon. The 'Operation Mode' section has two checked checkboxes: 'AP Mode' and 'RE Mode'. A 'Save' button is located at the bottom right of this section. Below this is the 'User Account Permission Settings' section, which lists various system settings with 'Visible' and 'Editable' checkboxes. All these checkboxes are checked. A 'Save' button is at the bottom right of this section. At the very bottom of the page is the 'Agile Config' section with the text 'Save current settings as default settings.' and a 'Save' button.

Setting	Visible	Editable
Internet:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
LAN Settings:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Wireless Settings:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Advanced Settings:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Virtual Servers:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Port Triggering:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
DMZ:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
UPnP:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Remote Management:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
CWMP Settings:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
ALG:	<input checked="" type="checkbox"/>	
Firewall & DOS Protection:	<input checked="" type="checkbox"/>	
Firmware Upgrade:	<input checked="" type="checkbox"/>	
Backup & Restore:	<input checked="" type="checkbox"/>	

Aginet ACS



Aginet ACS



Aginet ACS: CPE onboarding

System – CWMP Settings

System

System Settings CPE Settings System Upgrade System Info

CWMP Settings

ACS Username
admin

ACS Password

CPE Username
admin

CPE Password

Save

ACS ← CPE
Trigger by CPE

ACS → CPE
Trigger by ACS

Quick Setup Basic Advanced CPE CWMP Web Page

CWMP Settings

CWMP:

Inform:

Inform Interval: 300 (seconds)

ACS URL: http://192.168.40.1:7548/

ACS Username: admin

ACS Password: *****

Interface used by TR-069 client: Any WAN

Display SOAP messages on serial console:

Connection Request Authentication

Username: admin

Password: *****

Path: /tr069

Port: 7548

URL: http://192.168.40.1:7548/tr069

Simple Traversal of UDP over NATs

Get RPC Methods

- Konfigurace CWMP parametrů do CPE přes **Aginet Config**
- Konfigurace CWMP parametrů do CPE přes **DHCP Option 43** (ISP modely)

Aginet ACS: funkce



Správa až
100K CPE



Podpora
TR-181



Konfigurace
Wi-Fi



Management
zařízení za NAT



Zobrazení
sousedních AP



Vzdálený
dávkový
upgrade FW



Účty s více
rolemi



Měření
výkonu

Vyhledání / filtrování CPE

[Version: aginet_1.0-sp1 | Feature Set: norm



Home Devices Profiles Files Log Backup & Restore System License Remote Assistance Notifications Helps & Tips Users Roles

Devices List

Filters

Serial number = Case Insensitive

- Serial number
- Model
- Home ID
- Zone ID
- Cell phone
- CPF
- MAC
- IP
- PPPoE UserName
- Software version
- Hardware version
- Last inform

[Support List](#)

	Product class	Model	Home ID	Zone ID	Cell phone	CPF	MAC	IP	PPPoE UserName	Software version	Hardware version	XMPP Cap.	Last inform ▲	
<input type="checkbox"/>	5	EC225-G5	EC225-G5	blank	220621	blank	blank	34:60:F9:B9:8A:58	192.168.86.173	blank	1.12.0 Build 220621 Rel.75276n(4555)	EC225-G5 1.0	yes	● 4 minutes ago
<input type="checkbox"/>	Device	EC230-G1	blank	blank	blank	blank	3C:84:6A:70:EB:DB	192.168.86.171	blank	2.0.0 0.9 v6034.0 Build 221206 Rel.8036n	EC230-G1 v1 ...	yes	● 5 minutes ago	
<input type="checkbox"/>	4	EC225-G5	EC225-G5	blank	blank	blank	blank	34:60:F9:B9:8D:07	192.168.86.164	blank	1.13.0 Build 220926 Rel.76907n(4555)	EC225-G5 1.0	yes	● about 1 hour ago
<input type="checkbox"/>		Archer C6	Archer C6	blank	blank	blank	blank	34:60:F9:AC:94:68	192.168.86.168	blank	1.11.0 Build 220425 Rel.61837n(4555)	Archer C6 4.0	no	● about 6 hours ago
<input type="checkbox"/>		Device	EC230-G1	blank	210924	blank	blank	3C:84:6A:70:D5:A6	192.168.86.170	blank	2.0.0 0.9 v6034.0 Build 210924 Rel.31505n	EC230-G1 v1 ...	yes	● 21 days ago
<input type="checkbox"/>		Device2	HX220	blank	blank	blank	blank	34:60:F9:4E:9D:BC	192.168.0.2	blank	0.12.0 2.0.0 v605f.0 Build 220710 Rel.13422n	HX220 v1.0 0...	yes	● about 1 month ago
<input type="checkbox"/>		H30G	H30G	blank	blank	blank	blank	C0:25:2F:C6:AC:80	192.168.86.151	blank	1.0.13 Build 20221008 Rel. 64520	1.0	yes	● 3 months ago
<input type="checkbox"/>		Archer C80	Archer C80	blank	blank	blank	blank	1C:3B:F3:BA:44:EF	192.168.89.121	blank	1.11.0 Build 220425 Rel.43193n(4555)	Archer C80 1.0	no	● 4 months ago
<input type="checkbox"/>		IGD	Archer C20	blank	blank	blank	blank	D8:0D:17:CA:E3:80	192.168.89.120	blank	0.9.1 4.17 v0001.0 Build 201214 Rel.42010n(4555)	Archer C20 v5...	no	● 4 months ago

Konfigurace CPE

Device: 3460F9-EC225%2DG5-22260H5004625

Last inform: 2 minutes ago — Refresh, Ping

Task queue

Task	Time	Fault code	Fault message	Fault detail	Retries
getParameterValues	2023-03-03T18:04:43.324Z				

- INFO
- LAN
- WAN
- WIRELESS**
- TR TREE
- DIAGNOSTICS
- ACTIONS

[Edit list](#) [Refresh](#)

Save

Primary SSID Multi-SSID

Band :

Wireless Radio : Enable Disable

Network Name (SSID) :

Security :

Version : Auto WPA2-PSK WPA3-SAE

Encryption : Auto TKIP AES

Password :

Mode :

Channel : (Current Channel:2)

Channel Width : (Current Width:Auto)

Transmit Power : Low Middle High

(Signal detection may cause Wi-Fi disconnection)

Scanning status : <Empty>

Total amount of neighboring Wi-Fi networks :

TR strom

Device: 3460F9-EC225%2DG5-22260H5004625

Last inform: 3 minutes ago — Refresh, Ping

Task queue

Task	Time	Fault code	Fault message	Fault detail	Retries
getParameterValues	2023-03-03T18:04:43.324Z	8805	Session timeout		0

INFO LAN WAN WIRELESS **TR TREE** DIAGNOSTICS ACTIONS

ssid

Device.X_TP_MESH_WIFI.PrimarySSID TP-Link_8A58

Edit Refresh

Device.WiFi.Radio.1.MaxSupportedSSIDs 2
Device.WiFi.Radio.2.MaxSupportedSSIDs 2
Device.WiFi.SSID
Device.WiFi.SSID.1
Device.WiFi.SSID.1.Upstream false
Device.WiFi.SSID.1.SSID TP-Link_8A58abcs
Device.WiFi.SSID.1.BSSID 34:60:F9:B9:8A:58
Device.WiFi.SSID.1.LowerLayers Device.WiFi.Radio.1.
Device.WiFi.SSID.1.Status Up
Device.WiFi.SSID.1.Enable true
Device.WiFi.SSID.2
Device.WiFi.SSID.2.Upstream false
Device.WiFi.SSID.2.SSID TP-Link_Guest_8A58
Device.WiFi.SSID.2.BSSID 34:60:F9:B9:8A:58
Device.WiFi.SSID.2.LowerLayers Device.WiFi.Radio.1.
Device.WiFi.SSID.2.Status Down
Device.WiFi.SSID.2.Enable false
Device.WiFi.SSID.3
Device.WiFi.SSID.3.BSSID 34:60:F9:B9:8A:5A
Device.WiFi.SSID.3.Upstream false

Měření rychlosti

Device: CC32E5-Device-CC32E5974F9A

Last inform: ● less than 5 seconds ago — Refresh, Ping

Task queue

Task	Time	Fault code	Fault message	Fault detail	Retries
------	------	------------	---------------	--------------	---------

Empty

INFO

LAN

WAN

WIRELESS

TR TREE

DIAGNOSTICS

ACTIONS

Diagnostics

Download Test ▾

Download Test

WAN Interface: Default Route ▾

Download URL: From Agile ACS URL

HTTP ▾

100MB ▾

▼ Advanced

Test

Download Test Results (Completed)

Speed: 20.65 Mbps

Request Time: 2023-03-03T17:21:14.211Z

Begin of Transmission Time: 2023-03-03T17:21:14.212Z

End of Transmission Time: 2023-03-03T17:21:55.107Z

Received Test Bytes: 104857842

Received Total Bytes: 110711193

Request Time: 2023-03-03T17:21:14.210Z

Response Time: 2023-03-03T17:21:14.211Z

Konfigurace profilů a upgrade FW

New profile

Name

Application

Firmware Upgrade ▾
Configure File Download
Firmware Upgrade
PPPoE
Periodic Inform Interval

Serial number ▾ = ▾ 

Firmware File

▾

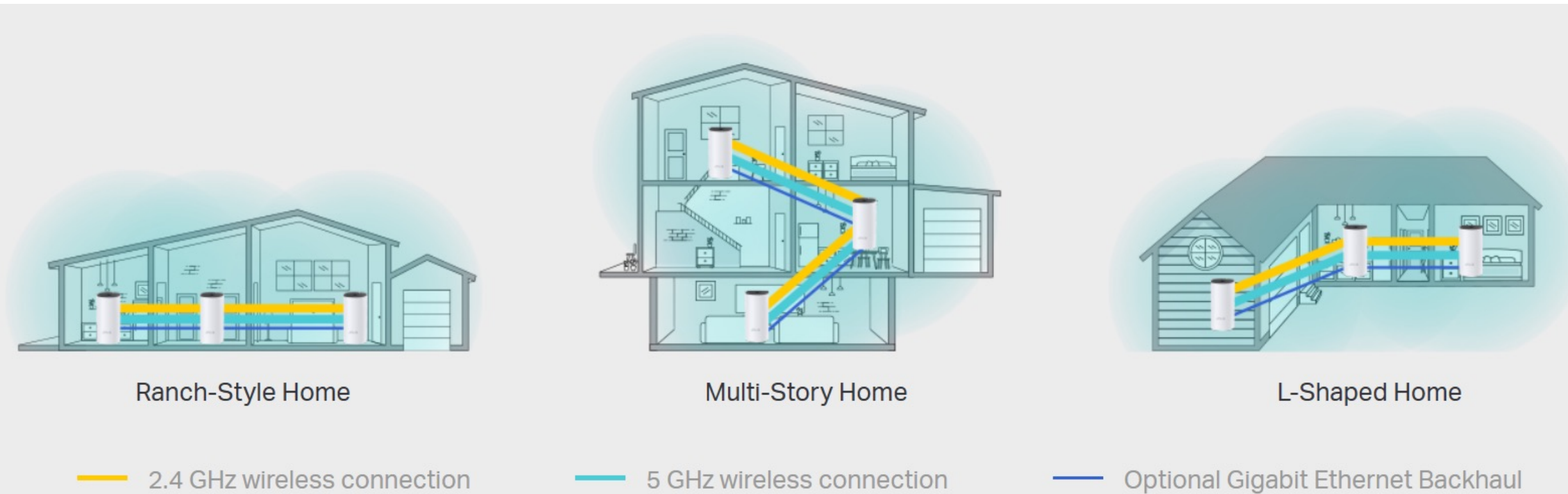
Trigger Interval

43600

Save

[Back](#)

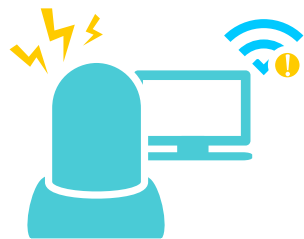
Chytrá domácnost s Wi-Fi Mesh



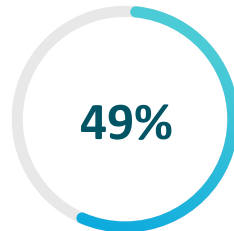
Bolestivá místa ISP

Uživatelé mění ISP kvůli špatné zkušenosti s Wi-Fi

Pomalá/nestabilní Wi-Fi



- Pomalá / Nestabilní Wi-Fi
- Problémy s připojením k Wi-Fi

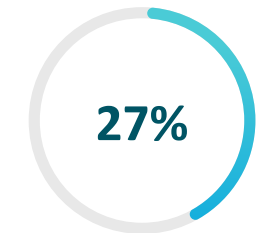


ISP platí vyšší OPEX provozní náklady bez správných diagnostických nástrojů

Potřeba techniků pro výjezdy / podporu v místě zákazníka



- Diagnostické nástroje

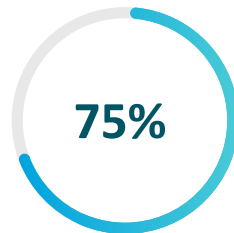


Uživatelé očekávají, že ISP vyřeší všechny potíže s Wi-Fi

Chybějící platforma pro správu Wi-Fi s pokročilými diagnostickými nástroji



- Potíže s Wi-Fi pokrytím
- Potíže s Wi-Fi klientem

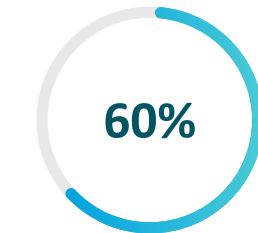


ISP platí vyšší OPEX provozní náklady bez patřičných poznatků

Potřeba zákaznického teamu pro vzdálenou podporu



- Čas jsou peníze



TR-369 User Services Platform

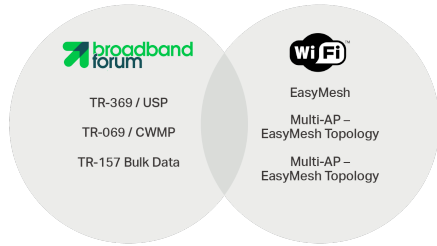
TR-369 VS TR-069	TR-369 USP	TR-069 CWMP
First Released	2019	2004
Management Scope	Managing a Connected Home	Single Device Management
Target Applications	Mesh Management, Managed Wi-Fi, etc.	Remote Device Management
Message Protocol	MQTT, WebSockets, Stomp	HTTP
Data Encoding	Google Protocol Buffers (binary wire format) Significant Performance Improvement	XMPP
Communications	Anytime Bi-Directional Communications	Short-lived Sessions Triggered by External Events
Efficient Management	Direct CPE Fast Management	Via Connection Request and Complicated Procedures under NAT Traversal Support
Bulk Statistics Collection	Gather the Telemetry Necessary for Mass Data Processing Services	Not Available



Klíčové funkce TAUC



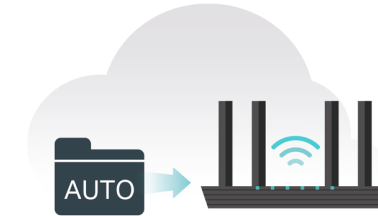
Use of Industry Standards



Unified Cloud Management



Zero-Touch Deployment



Near Real-Time Troubleshooting



Agile Task



Cloud to CPE



CAF Performance Measures Testing



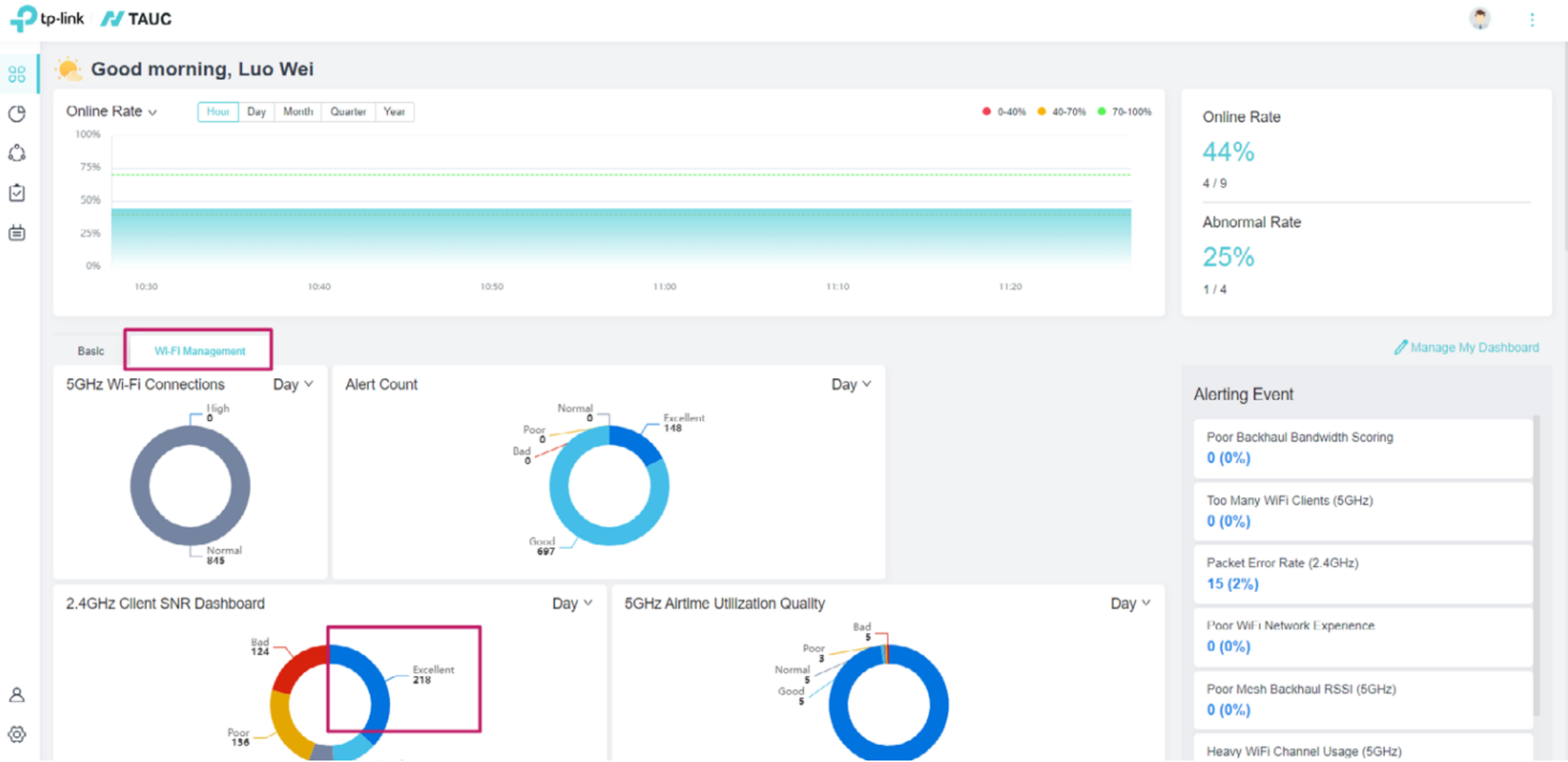
Schedule Execution



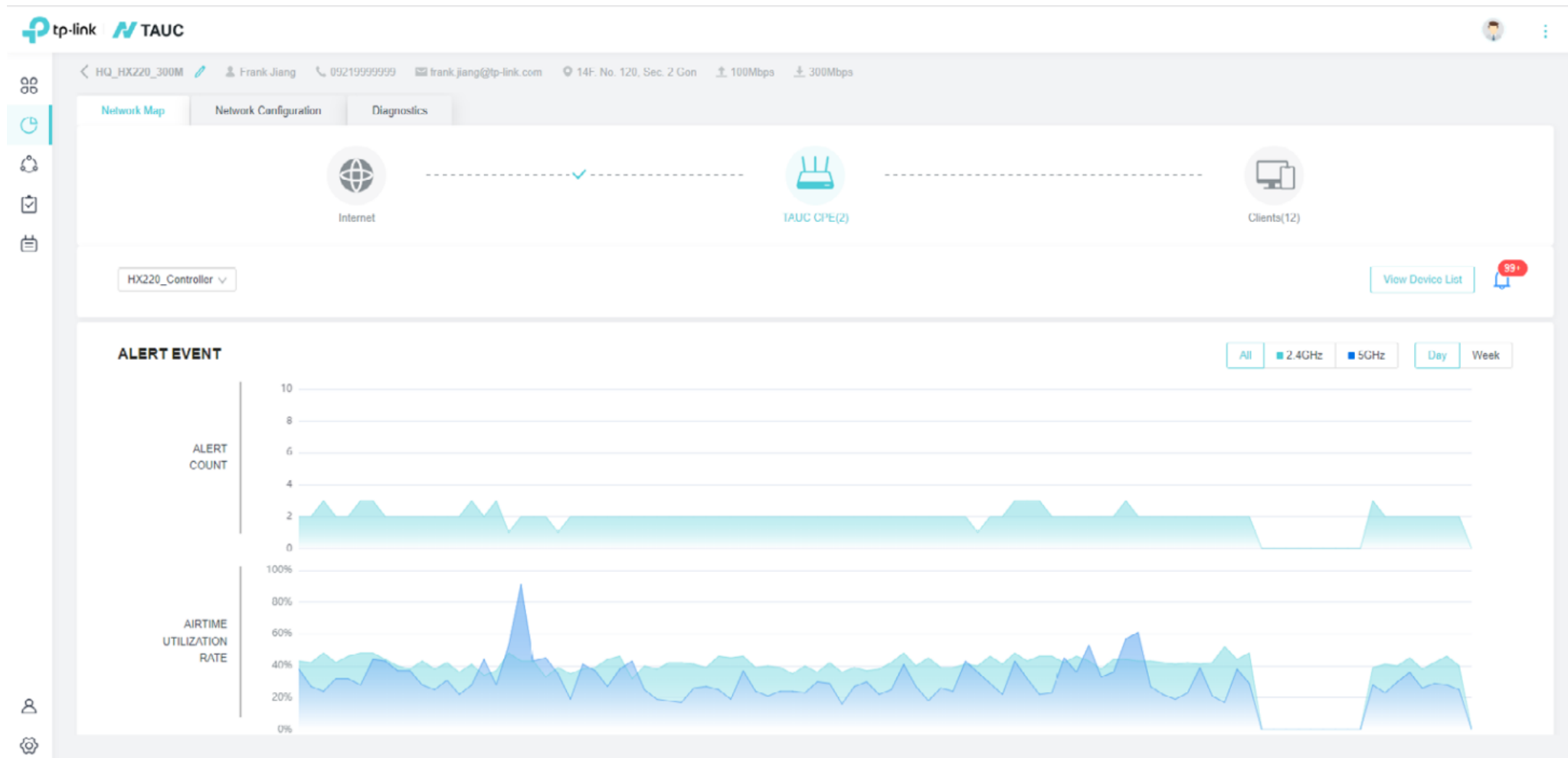
Open API Integration



WiFi Management – celkový monitoring



Managed WiFi – mapa sítě, alerty a historie



Managed WiFi – stav klientů

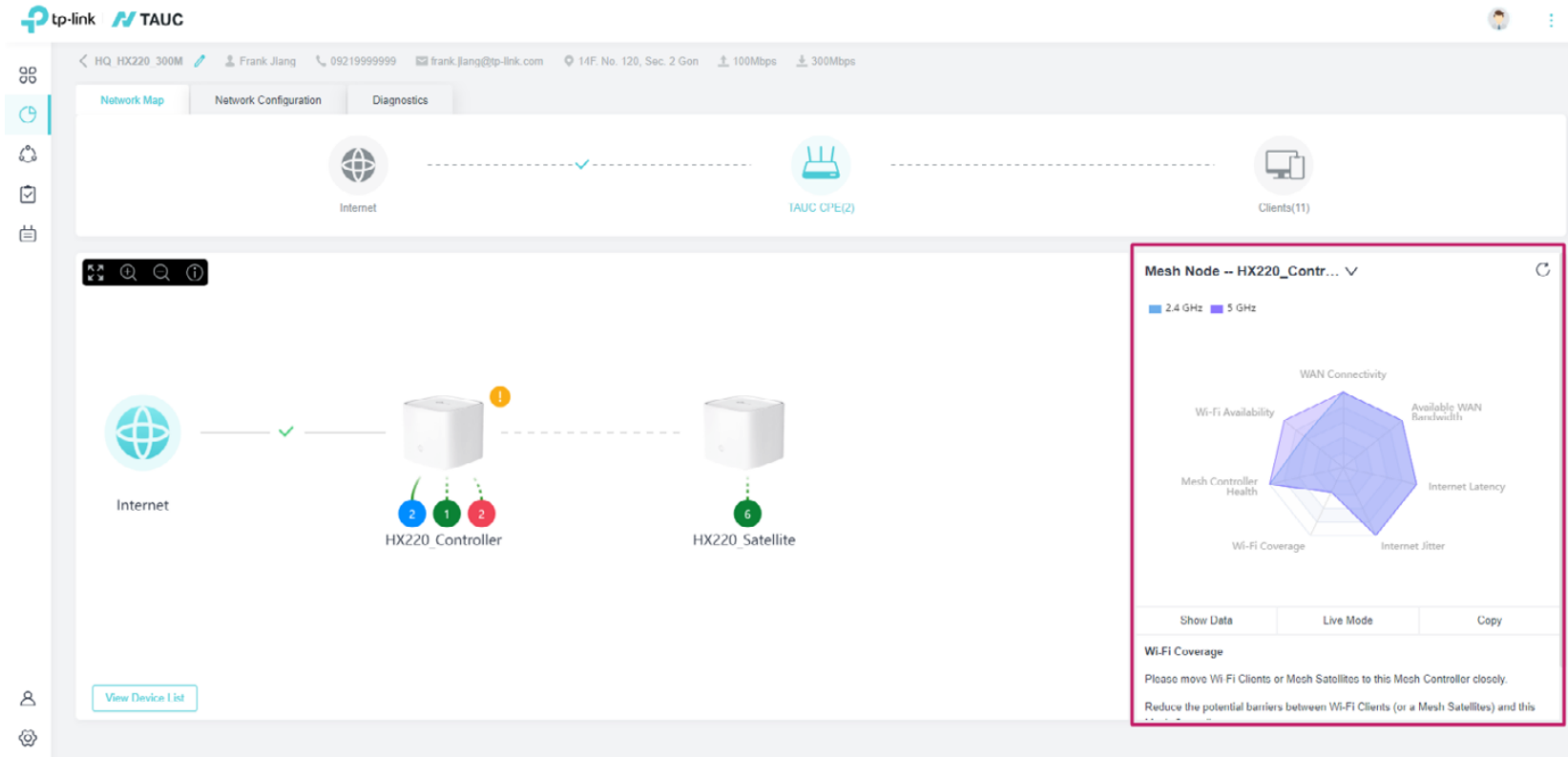
Name, IP, Status, MAC... All(15) Wireless(12) Wired(2) [Export](#)

15 Clients on Network, 10 Online, 5 Offline, 11 Alert, 0 Alarm Total Network Data Consumption Rate: ↑ 8.0 Kbps ↓ 0 Kbps Top 1: ASUS NB Co... 100% Top 2: Samsung TV... 0% Top 3: Unknown 0%

<input type="checkbox"/>	Client Name	IP	Status	Alert	Alarm	Link Rate	SNR	RSSI	Upload Rate	Download Rate	Linked Mesh Node	Action
<input type="checkbox"/>	--	192.168.0.5	OFFLINE 3d 15h 49m 25s	--	--	1.00 Gbps	--	--	0 Kbps	0 Kbps	HX220_Controller	
<input type="checkbox"/>	AGUS ND Core i9	192.168.0.2	ONLINE 1h 17m 9s	1	--	1.20 Gbps	--	-57 dBm ★ ★ ★ ★ ☆	8.0 Kbps	0 Kbps	HX220_LivingRoom	
<input type="checkbox"/>	Frank-Apple-TV	192.168.0.11	ONLINE 6d 14h 58m 59s	2	--	650.0 Mbps	--	-63 dBm ★ ★ ☆ ☆ ☆	0 Kbps	0 Kbps	HX220_LivingRoom	
<input type="checkbox"/>	Frank-WiFi6-LG	192.168.0.8	OFFLINE 12d 13h 36m 25s	--	--	960.0 Mbps	--	--	176.0 Kbps	16.0 Kbps	HX220_LivingRoom	
<input type="checkbox"/>	Frank_Oppo A9	192.168.0.13	ONLINE 1h 18m 22s	1	--	433.0 Mbps	--	-54 dBm ★ ★ ★ ★ ☆	0 Kbps	0 Kbps	HX220_LivingRoom	
<input type="checkbox"/>	Galaxy-A50	192.168.0.6	ONLINE 17h 14m 57s	2	--	57.0 Mbps	--	-64 dBm ★ ★ ☆ ☆ ☆	0 Kbps	0 Kbps	HX220_Controller	
<input type="checkbox"/>	IPC_IOT	192.168.0.10	ONLINE 10d 10h 22m 47s	2	--	130.0 Mbps	--	-50 dBm ★ ★ ★ ★ ☆	0 Kbps	0 Kbps	HX220_Controller	
<input type="checkbox"/>	iPhone5	192.168.0.9	OFFLINE 10d 20h 4m 50s	--	--	1.0 Mbps	--	--	0 Kbps	0 Kbps	HX220_Controller	
<input type="checkbox"/>	L92U-I01	192.168.0.7	ONLINE 3d 14h 52m 25s	1	--	65.0 Mbps	--	46 dBm ★ ★ ★ ★ ☆	0 Kbps	0 Kbps	HX220_LivingRoom	
<input type="checkbox"/>	OPPO-R15-MENGJING	192.168.0.3	ONLINE 3h 22m 4s	2	--	325.0 Mbps	--	-70 dBm ★ ☆ ☆ ☆ ☆	0 Kbps	0 Kbps	HX220_Controller	

Last updated: 2023-10-16 10:00 Refresh Showing 1-10 of 15 record(s) < 1 2 > 10 / page Go to

Managed WiFi – health check (radar chart)

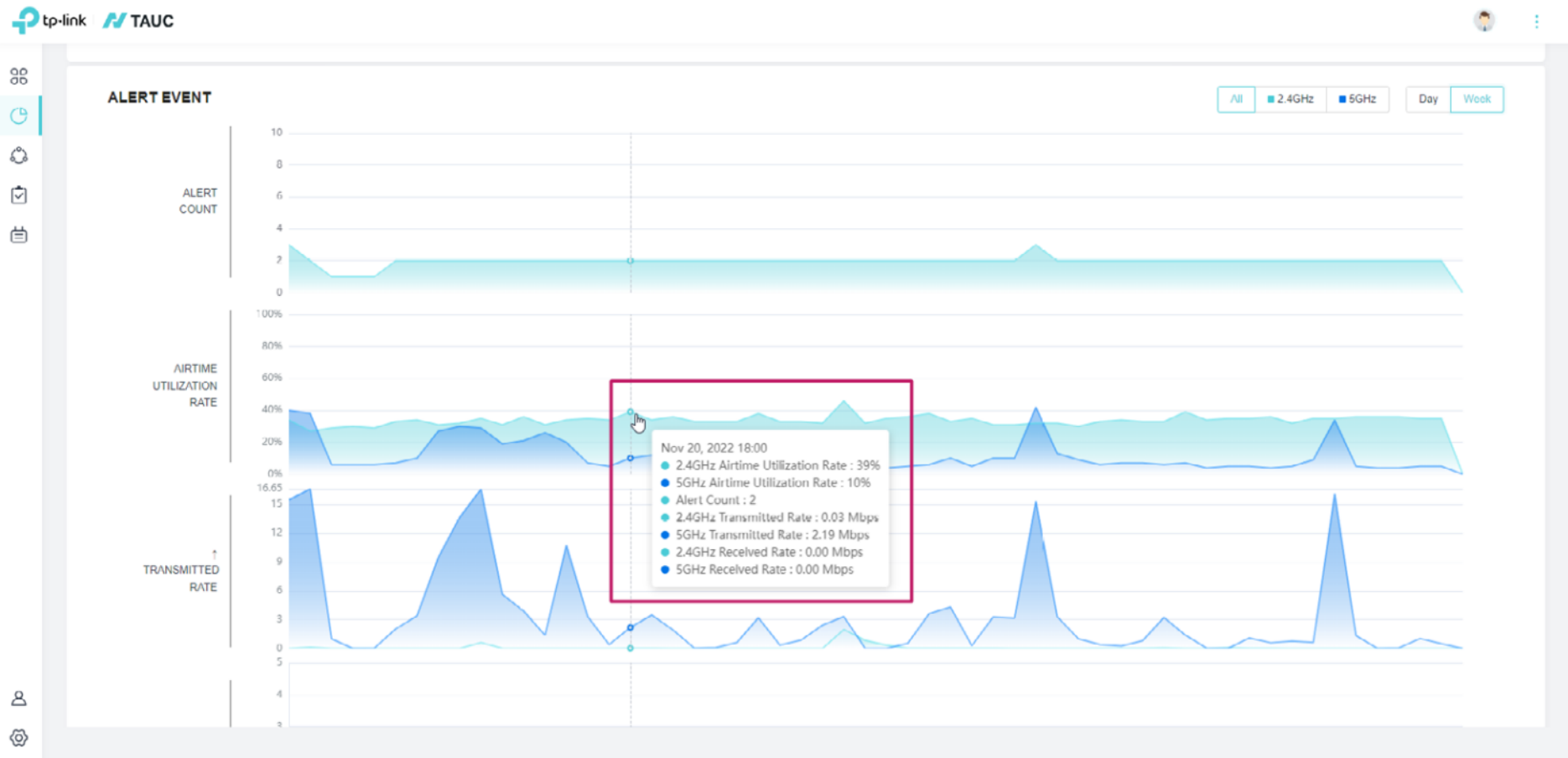


- WAN Connectivity
- Available WAN Bandwidth
- Internet Latency
- Internet Jitter
- Wi-Fi Coverage
- Mesh Controller Health
- Wi-Fi Availability

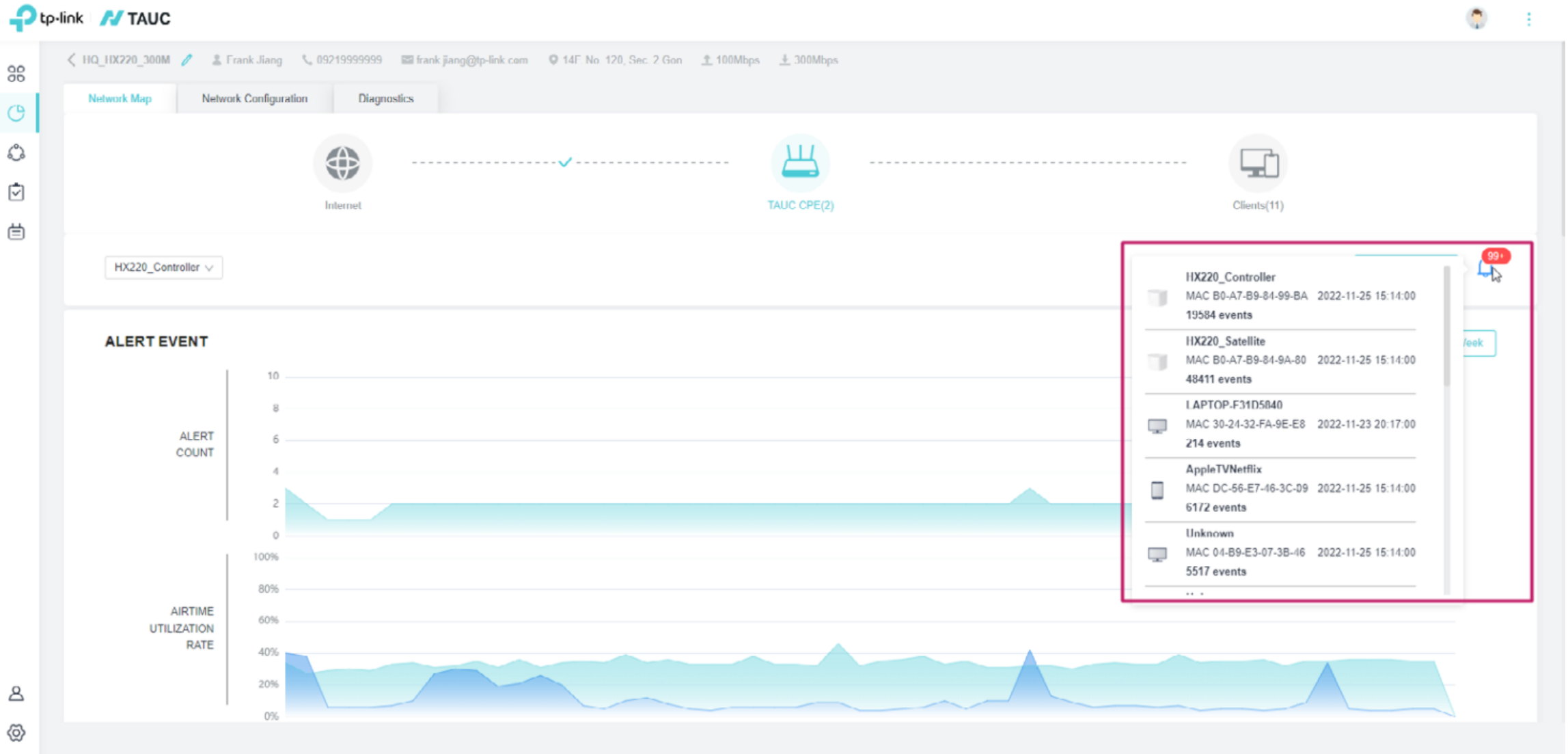
Managed WiFi – live mode

The screenshot shows the TP-Link TAUC interface with a 'Live Mode' window open for a mesh node. The window title is 'Mesh Node -- HX220_Contr...' and it features a 'Live Mode' toggle that is currently turned on, with a timer indicating '(Ends in 30min 33s)'. Below the title, a status message reads 'Getting the mesh node data per minute between [14:44-15:15]'. The main content of the window is a large radar chart for the selected node, with seven axes: WAN Connectivity, Available WAN Bandwidth, Internet Latency, Internet Jitter, Wi-Fi Coverage, Mesh Controller Health, and Wi-Fi Availability. The chart is filled with a blue gradient, representing data for both 2.4 GHz and 5 GHz bands. To the right of the main chart are two smaller radar charts showing the node's performance in 'Loading' (at 14:45) and 'Standby' (at 14:46) states. At the bottom of the window, there are navigation arrows for the time range, currently set to 14:44, and buttons for 'Show Data' and 'Download Data'. The background interface shows a network map with nodes 'HX220_Controller' and 'HX220_Satellite', and a 'View Device List' button.

Managed WiFi – historie WiFi

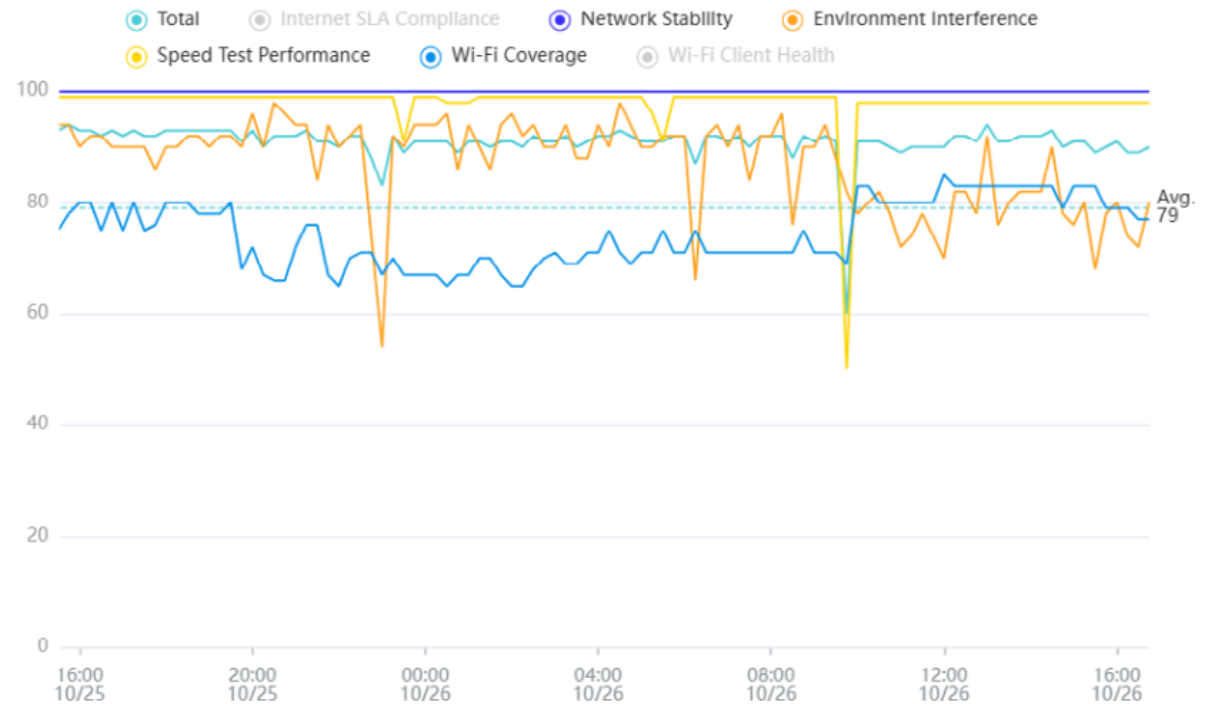
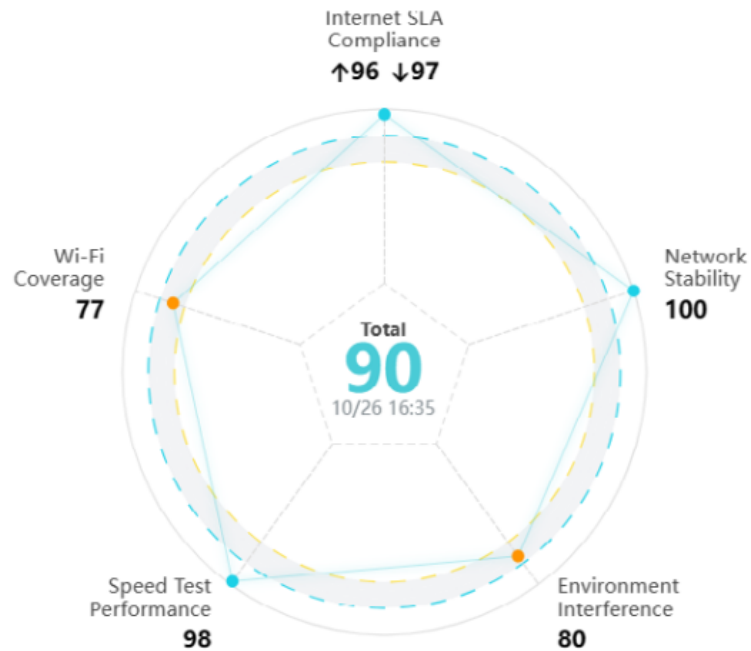


Managed WiFi – historie alertů



Managed WiFi – celkový health check

✓ **Total Health Score 90** Update at Oct.26 16:35



Bud'te „Managed WiFi ready“

ISP produkty: „Entry modely“ s podporou ACS (bez podpory TAUC)



EC225-G5
AC1300



EX141
AX1500

ISP produkty: Easy Mesh sady s podporou ACS a TAUC



HC220-G5
AC1200



HX220
AX1800

ISP produkty: Routery s podporou Easy Mesh, ACS a TAUC



EX222
AX1800



EX220 / XX230v
AX1800



EX511
AX3000



EX510 Pro
AX3000
2,5G WAN



EX820v
AX6000
2,5G WAN
2,5G LAN

Jste v A-ISP programu?

Marek Vyklický
marek.vyklicky@tp-link.com

 marekvyklicky

+420 735 758 508