联发科技 EasyMesh WebGUI





版本	日期	描述	笔记
1.0	2019.01.03	Initial version by Rits/Kaihua/Liuzhong	
1.1	2019.03.07	1.修改MT7621+7615D自动构建镜像2.优化措辞 3.重新排列演示序 列	图片版本: TB_MT7621_MT7615_MAPD_WP A3_AP_3.10.14_2019021812024 7_uImage (P150)





- WebGUI 介绍
- Easymesh 的特点是在WebGUI 上操作。



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网页界面介绍

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EasyMesh GUI 登录页面



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EasyMesh 图形用户界面

选择 EasyMesh

Mediatek Overview MTK -	
WiFi configuration M.A.N Web Console	
MT7615.1.2 EasyMesh Work mode: AP Driver version: 5.0.3.2	Seload Config Add
Interface: rax0 Type: AP SSID: 0Multi-AP-24G-1 Channel: 9 BSSID: 02:0c:43:48:0c:96 Mode: B/G/GN mode	Ø Disable Config Remove
Interface: rax1 Type: AP SSID: 0Multi-AP-24G-2 Channel: 9 BSSID: 02:0c:43:58:0c:96 Mode: B/G/GN mode	Ø Disable Config Remove
Interface: rax2 Type: AP SSID: 0Multi-AP-24G-3 Channel: 9 BSSID: 02:0c:43:68:0c:96 Mode: B/G/GN mode	Ø Disable Config Remove
Interface: rax3 Type: AP SSID: 0Multi-AP-24G-4 Channel: 9 BSSID: 02:0c:43:78:0c:96 Mode: B/G/GN mode	🙆 Disable 🗾 Config 💌 Remove
Interface: apclix0 Type: STA Status: Disconnected Wireless is disabled or not associated	Enable & Connect Config
Work mode: AP Driver version: 5.0.3.2	Reload Config Add

EasyMesh 配置 3 个主要页面 – 基本 UI

Basic	Advanced Status					
EasyMesh		Enable Disable				
Set Device Role as		Controller •				
Current Device Role		Controller				
Reset EasyMesh Settings to default		Load Default Settings				
EasyMesh On-board		Trigger Wi-Fi On-boarding (Wi-Fi will select the back-haul band automatically)				
Runtime Topology		Display Runtime Topology				
Steering		Enable Disable				
		Save and Apply Save Reset				

EasyMesh 配置

3 个主要页面 - 高级用户界面 (1/2)

Basic Advanced Status							
AL_MAC	00:0c:43:28:0c:3C						
Up-link AP Selection	Trigger Up-link AP Selection						
BSS Configurations Renew	Configure BSS						
	2G	70	Range: 0 to 100 Unit:				
		Percentage					
	5GL	80	Range: 0 to 100 Unit:				
Channel Utilization Threshold		Percentage					
	5GH	80	Range: 0 to 100 Unit:				
		Percentage					
	Apply Channel Utilization Threshold						
	-54 Range: -90 to 0 Unit:						
AP Steering RSSI Threshold	dbm						
	Apply RSSI Threshold						

EasyMesh 配置 3 个主要页面 – 高级 UI (2/2)

	STA MAC
Mandate Steering on Agent	Target BSSID
	Trigger Mandate Steering on Agent
	Back-haul MAC
Back-haul Steering	Target BSSID
	Trigger Back-haul Steering
Trigger WPS at front-haul BSS of an	Agent AL-MAC
Agent	Trigger WPS at Front-haul BSS of an Agent
Front-haul status per BSS	Display Front-haul Status per BSS
Back-haul Link Metrics at Controller	Display Back-haul Link Metrics at Controller
Powered by LuCL(SVN) SDK	
renord by Edor (ovin) obit	

EasyMesh 配置

3 个主要页面 – 状态

Basic Advanced Status	
STA Steering Progress	
AP Back-haul Interface List	ra0rax0
AP Front-haul Interface List	 ra3 ra0 ra1 ra2 rax1 rax2 rax3 rax0
AP Capabilities	Display AP Capabilities
Client Capabilities	Display Client Capabilities



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GUI 上的 EASYMESH 功能演示



入职 Auto Eth 入 职 Wifi 入职

拓扑显示链路修复 手动 回程转向漫游/AP 转向 波段转向 Pre-Assoc 转向 Post-Assoc 转向配置更新

证书更新 频道更新 回程交换机 自动 Eth<->WiFi BH 开关

改变 BH 优先级

入职 Auto Eth 入 职 Wifi 入职

拓扑显示链路修复 手动 回程转向漫游/AP 转向 波段转向 Pre-Assoc 转向 Post-Assoc 转向配置更新

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第1步:启用 EasyMeshand 配置设备角色



内部使用

第2步:自动 Eth 入职

在 Controller 和 Agent1 之间插入以太网电缆,Eth onboarding 自动完成。

前 Basic Advanced Status		-		
EasyMesh	Enable Disable			
Set Device Role as	Agent •		Agent AL_MAC - 00:0c:43:26:67:10	
Current Device Role	Agent			
Back-haul Connection Status	Disconnected			
Reset EasyMesh Settings to default	Load Default Settings			
后				
Basic Advanced Status				
EasyMesh	Enable ○ Disable		Agent AL_MAC - 00:0c:43:26:67:10	
Set Device Role as	Agent 🔻			
Current Device Role	Agent			
Back-haul Connection Status	Ethernet [If you want to use Wi-Fi connection, please	plug out the ethernet cable)	Controller AL_MAC - 00:0c:43:26:60:aa	
Reset EasyMesh Settings to default 開始使用	Load Default Settings			

第3步:WiFiOnboarding

在 Controller 和 Agent2 上触发 Wi-Fi 接入

前				
	Basic Advanced Status			
	EasyMesh	Enable Disable		
	Set Device Role as	Agent •		
	Current Device Role	Agent		
	Back-haul Connection Status	Disconnected	Agent AL_MAC - 00:0c:43:26:60:1d	
	Reset EasyMesh Settings to default	Load Default Settings	-	
	EasyMesh On-board	Trigger Wi-Fi On-boarding Wi-Fi will select the back-haul band automatically)		
后				
			Agent	
	Current Device Role	Agent	AL_MAC - 00:0c:43:26:60:1d	
	Back-haul Connection Status	5G		
			Controller AL_MAC - 00:0c:43:26:60:aa	
N	ГЕ DIATEK райен		Agent L_MAC - 00:0c:43:26:67:10	

第4步:入职结果检查

当WiFi和Eth都完成后,代理的 SSID 和安全性将与控制器保持一

		后		
2	MT7615.1.2 Work mode: AP Driver version: 5.0.3.2		@	MT7615.1.2 Work mode: AP Driver version: 5.0.3.2
	Interface: rax0 Type: AP SSID: MAP-Def-2G-AP1 Channel: 8 BSSID: 02:00:00:40:00:00 Mode: B/G/GN mode			Interface: rax0 Type: AP SSID: Multi-AP-24G-1 Channel: 2 BSSID: 02:00:00:40:00:00 Mode: B/G/GN mode
	Interface: rax1 Type: AP SSID: MAP-Def-2G-AP2 Channel: 8 BSSID: 02:00:00:50:00:00 Mode: B/G/GN mode			Interface: rax1 Type: AP SSID: Multi-AP-24G-2 Channel: 2 BSSID: 02:00:00:50:00:00 Mode: B/G/GN mode
	MT7615.1.1 Work mode: APCli Driver version: 5.0.3.2		2	MT7615.1.1 Work mode: APCli Driver version: 5.0.3.2
	Interface: ra0 Type: AP SSID: MAP-Def-5G-AP1 Channel: 136 BSSID: 00:00:00:00:00:00 Mode: A/AC/AN mixed			Interface: ra0 Type: AP SSID: Multi-AP-5LG-1 Channel: 112 BSSID: 00:00:00:00:00:00 Mode: A/AC/AN mixed
	Interference and L Turner AD L COID: MAD Def EC ADD L Chemicals 400			Interface: ra1 Type: AP SSID: Multi-AP-5LG-2 Channel: 112

入职 Auto Eth 入 职 Wifi 入职

拓扑显示链路修复 手动 回程转向漫游/AP 转向

波段转向 Pre-Assoc 转向 Post-Assoc 转向配置更新

证书更新
 频道更新
 回程交换机
 自动 Eth<->WiFi BH 开关
 改变 BH 优先级



Step 1:On Boarding后显示Runtime Topology

单击"基本"选项卡	中的"显示运行时拓扑"按钮	
EasyMesh Configurations		
Basic Advanced Status		
EasyMesh	Enable O Disable	
Set Device Role as	Controller •	
Current Device Role	Controller	Agent
Reset EasyMesh Settings to default	Load Default Settings	AL_MAC - DC:5C:4C:dT:e6:T8
EasyMesh On-board	Trigger Wi-Fi On-boarding (Wi-Fi will select the back-haul ba	
Runtime Topology	Display Runtime Topology	Controller AL_MAC - 00:11:22:33:44:3a
Steering	Enable Disable	
		Agent
		AL_MAC - 02:00:00:10:00:55
	\searrow	

Step 2:在Status页面显示AP能力

单击"状态"选项卡中的"显示 AP 功能"按钮

Basic Advanced Status						
STA Steering Progress		Radio Info of 1	905 Device - 1			
AP Back-haul Interface List	• ra0 • rax0		ohannel identifier	84 00:00:00:00:02:01		
	• ra3 • ra0		wireless mode Tx Spartial streams	17 1		
	• ra1 • ra2		Rx Spartial streams	1		
AP Front-haul Interface List	• rax1 • rax2	Radio Info - 1	BSSINFO - 1	BSSID	00:0c:43:28:02:87 Multi-AP-5G	
	• rax0			Security	0000	
				connected sta info - 1	STA MAC address	06:0c:43:28:07:1c
AP Capabilities	Display AP Capabilities			connected sta info - 2	last assoc time	827
					STA MAC address	00:00:43:28:07:08
Client Capabilities	Display Client Capabilities		channel	6		
			identifier	00:00:00:00:01:00		
			BW	NA		
	,		wireless mode	14		
		Radio Info - 2	Tx Spartial streams	1		
			Rx Spartial streams	1		
				BSSID	00:0c:43:28:07:30	
		$\langle $	BSSINFO - 1	SSID	Multi-AP-24G	
		N		Security	0000	

Step 3:状态页中的客户端能力

将 STA 连接到代理

单击"显示客户端功能"按钮

Basic Advanced Status											
STA Steering Progress											
AP Back-haul Interface List	 ra0 rax0										
		Eas	syMesh Clie	nt Capabilit	ties						
	 ra3 ra0 	No.	MAC	BSSID	Capability	Phy Mode	Max. BW 0	Max. BW 1	Spatial Streams	Supported Bands	Supported Channels
AP Front-haul Interface List	 ra1 ra2 rax1 	1	94:87:E0:2D:EB:98	02:11:22:13:44:90	DOT11K_SUPPORTED, DOT11V_SUPPORTED	HTMIX	20	8080	2	2GHz, 5GHz	2, 140
	 rax2 rax3 rax0 	$\left\langle \right\rangle$									
AP Capabilities	Display AP Capabilit	ies	\								
Client Capabilities	Display Client Capab Display Client Capab	oilities									



入职 Auto Eth 入 职 Wifi 入职

拓扑显示链路修复 手动 回程转向漫游/AP 转向 波段转向 Pre-Assoc 转向 Post-Assoc 转向配置更新

证书更新
 频道更新
 回程交换机
 自动 Eth<->WiFi BH 开关
 改变 BH 优先级





Step 2:链接修复

Agent1断电,Agent2直接连接Controller



入职 Auto Eth 入 职 Wifi 入职

拓扑显示链路修复 手动

回程转向漫游/AP 转向

波段转向 Pre-Assoc 转向 Post-Assoc 转向配置更新

证书更新
 频道更新
 回程交换机
 自动 Eth<->WiFi BH 开关
 改变 BH 优先级



Step 1:漫游测试(1/2)

将 STA 连接到代理







将 STA 从 Agent 移动到 Controller,STA 将被引导到 Controller



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第三步:结果核对

在代理处检查 BTM 状态

Basic Advanced Status	
STA Steering Progress	BTM Success
Station Back-haul Interface	 apcli0
AP Back-haul Interface List	ra0rax0

在STA查询漫游结果





第三步:结果核对

苹果手机6



内部使用

夏威夷死 10



OPPO R17



入职 Auto Eth 入 职 Wifi 入职

拓扑显示链路修复 手动 回程转向漫游/AP 转向 波段转向 Pre-Assoc转向 Post-Assoc转向配置更新

证书更新
频道更新
回程交换机
自动 Eth<->WiFi BH 开关
改变 BH 优先级



Step 1:Pre-AssocBand Steering

1. 生成5G测试吞吐量 300M, 2.4G & 5G FH have same SSID 2. Trigger STA connect to controller 3. Controller s 5G reject STA s Auth 4. STA connect to 2G

STA:A0:C9:A0:A3:55:31 控制器 5G FH:

00:0C:43:26:60:00(雷凌科技:26:60:00)



Step 2: Post-AssocBand Steering

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入职 Auto Eth 入 职 Wifi 入职

拓扑显示链路修复 手动 回程转向漫游/AP 转向 波段转向 Pre-Assoc 转向 Post-Assoc 转向**配置更新**

证书更新 频道更新

回程交换机

自动 Eth<->WiFi BH 开关 改变 BH 优先级

第一步:配置BSS信息

单击控制器上的"高级"选项卡,然后单击"配置 BSS"

EasyMesh Configurations			
Basic Advanced Status			
AL_MAC	00:11:22:33:44:3A		
Up-link AP Selection	Trigger Up-link AP Selection		
BSS Configurations Renew	Configure BSS		

选择下面的按钮添加/编辑/删除 BSS

EasyMesh BSS Con	figuration			
Configured BSS Info	rmation			
	A	AL-MAC: FF:FF:FF:FF:FF:FF:	FF	
	SSID	Multi-AP-24G-1_asd		
	Authentication Mode	WPA2 - Personal		
	Encryption Type	AES		
2G : B\$\$-1	Pass-phrase	maprocks1	Z Edit BSS	Remove BSS
	Hidden	Disabled		
	_{内部使} 用HBSS Support	Enabled		
	FH BSS Support	Enabled		

第二步:配置BSS信息

修改 SSID、AuthMode/EncryptionType、Passphrase、Hiddenness、 BH支持和FH支持

EasyMesh BSS Configuration

Add BSS Configurations	
AL-MAC	FF:FF:FF:FF:FF
Radio Band	5GH V
SSID	Multi-AP-5HG-4-edited
Authentication Mode	WPA2 - Personal 🔻
Encryption Type	AES V
Pass-phrase	maprocks4
Hidden	
Back-haul BSS Support	
Front-haul BSS Support	



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第四步:频道更新



mapd_cli /tmp/mapd_ctrl set user_preferred_channel 1
count =5 1=mapd_cli 2=/tmp/mapd_ctrl
Succesfully opened connection to mapd
OK

mapd_cli /tmp/mapd_ctrl set user_preferred_channel 149
count =5 1=mapd_cli 2=/tmp/mapd_ctrl
Succesfully opened connection to mapd



Step 5:频道更新结果查询



入职 Auto Eth 入 职 Wifi 入职

拓扑显示链路修复 手动 回程转向漫游/AP 转向 波段转向 Pre-Assoc 转向 Post-Assoc 转向配置更新

> 证书更新 频道更新

回程交换机

自动 Eth<->WiFi BH 开关 改变 BH 优先级

Step 1:WiFi Eth BH自动切换

在Agent和Controller之间插上以太网线,连接状态会自动改变。



第二步:Eth WiFi BH自动切换

拔掉Agent和Controller之间的网线,连接状态会自动改变。





内部使用

2 E	10.10.10.253	的凹复:	子卫=32	ចេរ[ម]=3 គ ន	1117-2-64
릴거륏	10.10.10.253	的回复:	字节-32	时间-3ms	TTL=64
来自	10.10.10.253	的回复:	字节-32	时间-3ms	TTL=64
请求	超时。				
来自	10.10.10.253	的回复:	字节-32	时间= 4 ms	TTL=64
来自	10.10.10.253	的回复:	字节=32	时间=4ms	TTL=64
spilling spilling	a set of the state of the set	And the second second	and the second s	Photo Carl and	

第三步:5G 2G BH手动切换

Agent2 BH 由 5G 改为 2G by preference

前			后		
Current Device Role	Agent		Current Device Role	Agent	
Back-haul Connection Status	5G		Back-haul Connection Status	2.4G	
Reset EasyMesh Settings to default	School Default Settings		Reset EasyMesh Settings to default	Load Default Settings	
EasyMesh On-board	Trigger Wi-Fi On-boarding (Wi-Fi will select the back-haul band automati	ically)	EasyMesh On-board	Trigger Wi-Fi On-boarding (Wi-Fi will select the b	ack-haul band automatically
Runtime Topology	Display Runtime Topology		Runtime Topology	Display Runtime Topology	
Steering	● Enable ○ Disable		Steering	● Enable ○ Disable	
	2G Low •		Wireless Back-haul Preference	2G	High
Wireless Back-haul Preference	5G High 🔻			5G	Disable *
	Apply Wireless Back-haul Priority			Apply Wireless Back-haul Priority	
	控制器 ジェル た て て 理人			控制器 2G 代理人	
在切换时间内:1 ріг	ng 丢失 来音 10 来自 10 来自 10 来自 10 来自 10 来自 10 来自 10	.10.10.252 的回复: .10.10.252 的回复: .10.10.252 的回复: .10.10.252 的回复: .10.10.252 的回复:	字节=32 时间=2ms TTL=64 字节=32 时间=2ms TTL=64 字节=32 时间=2ms TTL=64 字节=32 时间=3ms TTL=64		
	来首 10 来月 10	.10.10.252 的回复: .10.10.252 的回复:	字节=32 时间=6ms TTL=64 字节=32 时间=4ms TTL=64		

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