

عضو عم نسحم لاحتفم ل SSID نيوكت OWE - لاقتنال

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عمدقم ل

ةدام يلع بولس للاقتنال عم حتف نسحم ااطخ ا فاشكتسا او لكشي نا فيك ةقيثو اذه فصي (9800 WLC) مكحت زاخ لان يكلسال 9800 ةزافح

قيساس الابلطتم ل

تابلطتم ل

ةيلال ا عيضاوم ل ا ب ةفرعم كيدل نوكت نا ب Cisco ي صوت:

- Cisco نم 9800 (WLC) ةيكلسال ال LAN ةكبش في مكحت ل ا ادحو
- Wi-Fi 6E م عدت ي ل Cisco نم (APs) لوصول ا طاقن
- IEEE 802. 11ax راي عم
- Wireshark.

عمدختسم ل تانوكم ل

ةيلال ا ةيدام ل تانوكم ل او جمارب ل ا ارادصا ل ا دنن تسم ل ا اذه في ةدراول ا تامولعم ل دنن تست:

- WLC 9800-CL عم IOS® XE 17.9.3.
- APs C9130 و C9136 و CW9162 و CW9164 و CW9166.

- Wi-Fi 6:
 - iPhone SE3rd gen على IOS 16
 - Mac OS 12. في كوب كام
- Wi-Fi 6e:
 - Lenovo X1 Carbon Gen11 مع AX211 Wi-Fi 6 و 6E لوجم عم (1) 22.200.2 رادصا
 - NetGear A8000 Wi-Fi 6 و 6E ليغشت جم انرب عم v1(0.0.108)؛
 - Mobile Pixel 6a مع Android 13 ليغشت ل ماظن عم
 - Samsung S23 لوجم ل فتاهل مع Android 13 ليغشت ل ماظن عم

ةصاخ ةي لم عم ةئي ب ي ف ةدوجوم ل ةزهجال نم دنتس م ل اذ ه ي ف ةدراول تامول عم ل ةاشن ا مت تناك اذا. (يضا رتفا) حوس مم نيوك تب دنتس م ل اذ ه ي ف ةمدختس م ل ةزهجال عي مج ت ادب رم ا ي ل لم تحم ل ري ثا تل ل كم ه ف نم دك ات ف ، ليغشت ل دي ق كتك ب ش

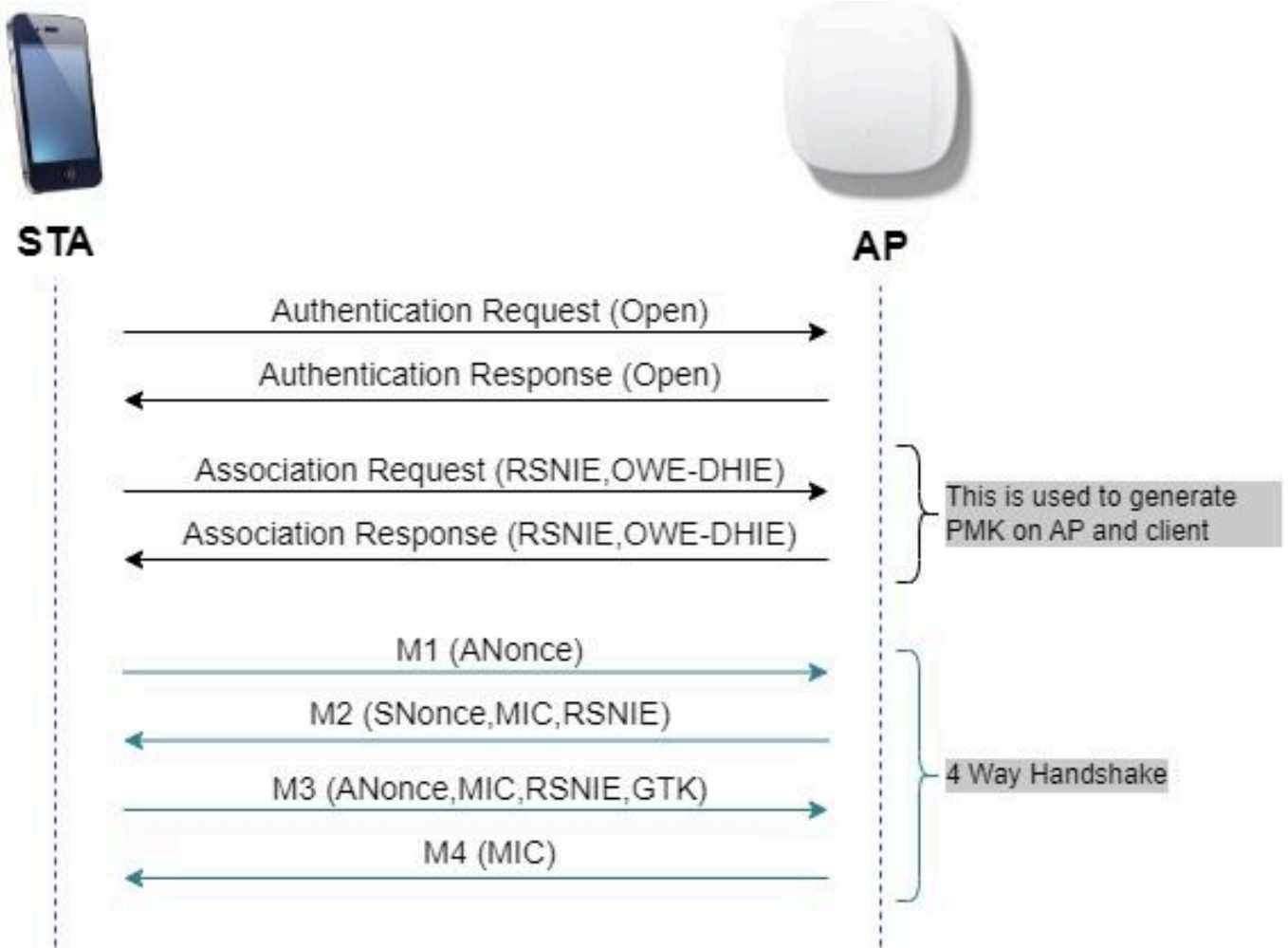
ةي ساس ا تامول عم

نام ا ل را ي عم نم عزجك WiFi ف ل ا ح ت نم ةمدقم ةداهش وه (ن س ح م ل ا ح ت ف ل ا) Enhanced Open تاك ب ش ل ا ي ل ع (OWE) ي زاه ت ن ا ل ا ي ك ل س ا ل ل ا ري ف ش ت ل ا م د خ ت س ي وه و WPA3 ي ك ل س ا ل ل ا ة ن ر ا ق م ة ط ي س ب ل ا تام ح ه ل ا ع ن م و ي ب ل س ل ا ل ف ط ت ل ا ع ن م ل (اه ي ل ع ق د ص م ل ا ري غ) ة ح و ت ف م ل ا ة م ا ل ا ة ي ك ل س ا ل ل ا PSK ة ك ب ش ب

ة ط ق ن و ا (ة ي ز ك ر م ل ا ة ق د ا ص م ل ا ة ل ا ح ي ف) WLC و ة ا ل م ع ل ا م و ق ي ، Enhanced Open م ا د خ ت س ا ب Diffie-Hellman ح ي ت ا ف م ل د ا ب ت ا ر ج ا ب (FlexConnect ل ل ا ح م ل ا ة ق د ا ص م ل ا ة ل ا ح ي ف) ل و ص و ل ا ة ح ف ا ص م ل ا عم ة ك ر ح ل ا ب ص ا خ ل ا (PMK) ي س ي ئ ر ل ا ح ا ت ف م ل ا رس م ا د خ ت س ا و ا ن ا ر ت ق ا ل ا ة ي ل م ع ا ن ا ث ا ه ا ج ت ا ل ا ة ي ع ا ب ر

ن ن ا د ت س ت

ري ف ش ت ر ف و ي ي ذ ل ا 11 IEEE 802. را ي عم ل د ا د ت م ا وه (OWE) ي زاه ت ن ا ل ا ي ك ل س ا ل ل ا ري ف ش ت ل ا ب ن ح ت وه OWE ي ل ا ة د ن ت س م ل ا ة ق د ا ص م ل ا نم ضرغ ل ن ا. ([IETF RFC 8110](#)) ي ك ل س ا ل ل ا ط ي س و ل ا م ئ ا ق ري ف ش ت OWE م د خ ت س ي . ة ا ل م ع ل ا و ل و ص و ل ا ط ا ق ن ن ي ب نم ا ري غ ي ك ل س ا ل ل ا ص ت ا ح ت ف ل ي م ع ل ا م و ق ي ، OWE ل ا ل خ نم . ي ك ل س ا ل ل ا ري ف ش ت ل ا د ا د ع ا ل Diffie-Hellman ت ا ي م ز ر ا و خ ي ل ع ح ا ت ف م ل ا م ا د خ ت س ا و ل و ص و ل ا ا ر ج ا ا ن ا ث ا Diffie-Hellman ح ي ت ا ف م ل د ا ب ت ب ل و ص و ل ا ة ط ق ن و OWE م ا د خ ت س ا ي د و ي . ه ا ج ت ا ل ا ة ي ع ا ب ر ل ا ة ح ف ا ص م ل ا عم ك ل ذ ن ع ج ت ا ن ل ا (PMK) ة م ك ح ل ل ي س ي ئ ر ل ا ت ا ك ب ش ل ا ر ش ن ا ه ي ف م ت ي ي ت ل ا ر ش ن ل ا ت ا ي ل م ع ل ا ة ي ك ل س ا ل ل ا ة ك ب ش ل ا نام ا ن ي س ح ت ي ل ا PSK ي ل ا ة د ن ت س م ل ا ة ك ر ت ش م ل ا و ا ة ح و ت ف م ل ا



نويديلا تاراطا لدابت

يللاق تنا لعضولا

نوكي نأ لضفت يه ورفشم ريغ دحاو فيض SSID فرعم تاسسؤم ل تاكبش ل نوكي ام ةداعو نسحم لي مع عم ددجالا ونيحوت فم ل نيددحم ل عالم عدي ال نيدلا مدقألا عالم عالك اهل ويراني سالا اذهب افولل صاخ لكش ب "لاق تنا لعضو" لخدإ مت . دوجولا يلا حوت فم

متي وحتو فم SSID رخآلا و OWE معدل في فخم SSID امه دحأ - SSID نم نينثا نينوكت بلطتي اذهو هثب .

تاكرحم لي صوت ةينك م (OWE) يزاهتنا لال يكل سالا لال ريفش ل للاق تنا لعضو حيتي ةمظنا عي مج يرت ام دنع . تقولا س فن في SSID س فن ب ةني دمل ريغو ةني دمل STA صارقأ OWE عم لصتت اهنا ف ، نويديلا للاق تنا لعضو في SSID ةني دمل STA

نمضتت . لاسرالا تاراشا لاسراب ةصاخلا WLAN ةكبشو ةحتو فم ل WLAN ةكبش نم الك Wi-Fi لوحم OWE ب ةصاخلا WLAN ةكبش نم راب سمل او قرانم ل مادختساب ةباجت سالا تاراطا WLAN ةكبش نمضتت ، لثم ل اباو ، ةحتو فم ل WLAN ةكبش ل SSID و BSSID نيمضتت ل ةني دمل ل WLAN ةكبش لاضيا ةحتو فم ل

لوصول ةطقنب ةصاخلا Open BSS لوصول ةطقنب صاخلا SSID ضرع OWE STA يلع بجي امك ، طقف ةحاتم ل تاكبش لال ةمئاق في مدختسمل ل Owe للاق تنا لعضو في ةلماع ل Owe AP OWE AP لوصول ةطقنب ةصاخلا BSS SSID BSS ضرع عنم اه يلع بجي

دويقلو تاداش رال:

- Cisco IOS 1 (Cisco IOS ©-based) APs في WPA3 دناسي ال . طقف WPA3 جهن نسحمل حتفل بلطتي
- يضارتفا لكش ب اذه طبض متي . "بولطم" لى لى (PMF) ةيحمل ةرادال راطا نيي عت بجي
- 2. ةقبطال طقف WPA3 ني مات عم
- ليغش تب نوموقي نيذلا نييئا هنال عالم ال ع طقف Enhanced Open لمعي
- Enhanced Open معدت يتل ثدال تارادصال

نيوكتال

حمسي كلذ عم نكلو Enhanced Open نيوكت لوؤسمل دي ري ثي حيج ذومن مادختسا ةلح فيضال SSID ب ليصوتلاب مدقأال عالم لل

ةكبش لى لى طيختال مسرلا



ةكبش لى لى طيختال مسرلا

ةيوسرلا مدختسمل ةهجال نيوكتال تاوخط

WLAN 3 فرعم ، لاثملا اذه في . "OWE_TRANSITION" انه هي لع ق لطي و ، لوالا SSID عاشناب مق "SSID" ثب" راخي لي طعت عم هئا فح | نم دكأتو

تاكبش ةحفص حتفل WLAN تاكبش > تافيصوت وزيي مت تامال ع > نيوكت رتخأ 1 ةوطخال

Cisco Catalyst 9800-CL Wireless Controller

Welcome admin

Configuration > Tags & Profiles > WLANs

+ Add - Delete Clone Enable WLAN Disable WLAN WLAN Wizard

Selected WLANs: 0

Status	Name	ID	SSID	Security
<input type="checkbox"/>	MacFilter	1	MacFilter	[open]MAC Filtering [Web Auth]
<input type="checkbox"/>	dot1x	2	dot1x	[WPA2][802.1x][AES]
<input type="checkbox"/>	OWE_Transition	3	OWE_Transition	[WPA3][OWE][AES]
<input type="checkbox"/>	open	4	open	[open]
<input type="checkbox"/>	wifi6_test	5	wifi6_test	[WPA3][OWE][AES]

OWE لاقتناء وضوب ةصاخلا WLAN تاكبش

ةبولطملا جهنلا فيرعت تافلما لىل اءاؤاشنم مت يتي ال WLAN تاكبش نييعتب مق 6 ةوطخلا لوصول طاقن لىل عاقيبطت وجهنلا ةمالة في

Edit Policy Tag

⚠ Changes may result in loss of connectivity for some clients that are associated to APs with this Policy Tag.

Name*

Description

▼ WLAN-POLICY Maps: 2

+ Add - Delete

WLAN Profile	Policy Profile
<input type="checkbox"/> OWE_Transition	CentralSwPolicyProfile
<input type="checkbox"/> open	CentralSwPolicyProfile

1 - 2 of 2 items

جهنلا ةمالة

CLI ل نيوكتل:

نسحمل اءوتفملا SSID:

```
Device# conf t
Device(config)# wlan OWE_Transition 3 OWE_Transition
Device(config)# no broadcast-ssid
Device(config)# no security ft adaptive
Device(config)# no security wpa wpa2
Device(config)# no security wpa akm dot1x
Device(config)# security wpa akm owe
Device(config)# security wpa transition-mode-wlan-id 4
Device(config)# security wpa wpa3
```

```
Device(config)# security pmf mandatory
Device(config)# no shutdown
```

SSID: ح ت ف

```
Device# conf t
Device(config)# wlan open 4 open
Device(config)# no security ft adaptive
Device(config)# no security wpa
Device(config)# no security wpa wpa2
Device(config)# no security wpa wpa2 ciphers aes
Device(config)# no security wpa akm dot1x
Device(config)# security wpa transition-mode-wlan-id 3
Device(config)# no shutdown
```

ج: ه ن ل ا في ر ع ت ف ل م

```
Device(config)# wireless tag policy Wifi6E_TestPolicy
Device(config-policy-tag)# wlan open policy CentralSwPolicyProfile
Device(config-policy-tag)# wlan OWE_Transition policy CentralSwPolicyProfile
```

ة ح ص ل ا ن م ق ق ح ت ل ا

ق ق ح ت ل ا م س ق و ه ا ذ ه

WLAN ع ل ج CLI: ت ا ك ب ش ن ي و ك ت ن م ق ق ح ت

<#root>

```
Device#show wlan id 3
WLAN Profile Name : OWE_Transition
```

```
=====
Identifier : 3
```

Description :

```
Network Name (SSID) : OWE_Transition
```

Status : Enabled

Broadcast SSID : Disabled

[...]

Security

802.11 Authentication : Open System

Static WEP Keys : Disabled

Wi-Fi Protected Access (WPA/WPA2/WPA3) : Enabled

WPA (SSN IE) : Disabled

WPA2 (RSN IE) : Disabled

WPA3 (WPA3 IE) : Enabled

AES Cipher : Enabled

CCMP256 Cipher : Disabled

GCMP128 Cipher : Disabled

GCMP256 Cipher : Disabled

Auth Key Management

802.1x : Disabled

PSK : Disabled

CCKM : Disabled

FT dot1x : Disabled

FT PSK : Disabled

FT SAE : Disabled

Dot1x-SHA256 : Disabled

PSK-SHA256 : Disabled

SAE : Disabled

OWE : Enabled

SUITEB-1X : Disabled

SUITEB192-1X : Disabled

SAE PWE Method : Hash to Element, Hunting and Pecking(H2E-HNP)

Transition Disable : Disabled

CCKM TSF Tolerance (msecs) : 1000

OWE Transition Mode : Enabled

OWE Transition Mode WLAN ID : 4

OSEN : Disabled

FT Support : Disabled

FT Reassociation Timeout (secs) : 20

FT Over-The-DS mode : Disabled

PMF Support : Required

PMF Association Comeback Timeout (secs): 1

PMF SA Query Time (msecs) : 200

[...]

#show wlan id 4

WLAN Profile Name : open

=====

Identifier : 4

Description :

Network Name (SSID) : open

Status : Enabled

Broadcast SSID : Enabled

[...]

Security

802.11 Authentication : Open System

Static WEP Keys : Disabled

Wi-Fi Protected Access (WPA/WPA2/WPA3) : Disabled

OWE Transition Mode : Enabled

OWE Transition Mode WLAN ID : 3

OSEN : Disabled

FT Support : Disabled

FT Reassociation Timeout (secs) : 20

FT Over-The-DS mode : Disabled

PMF Support : Disabled

PMF Association Comeback Timeout (secs): 1

PMF SA Query Time (msecs) : 200

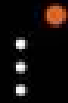
[...]

نيوكتىلى لاقتنالال كنىمى (WLC) ةىكلسالال ةىلحملا ةكبشلا فى مكحتال رصنع فى
لوصول ةطقن لىل ةطشن WLAN ىتكبش الك نأ نم ققحتال لوصول ةطقن

09:03

30%

Wi-Fi



Ligado



Rede atual



Ligado



Redes disponíveis



MEO-WiFi

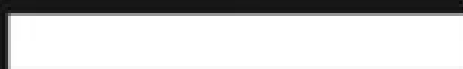
É necessário iniciar sessão.



open



snowstorm



Client MAC Address : 286b.3598.580f
[...]
AP Name: AP9136_5C.F524
AP slot : 1
Client State : Associated
Policy Profile : CentralSwPolicyProfile
Flex Profile : N/A
Wireless LAN Id: 3

WLAN Profile Name: OWE_Transition

Wireless LAN Network Name (SSID): OWE_Transition

BSSID : 00df.1ddd.7d3e
Connected For : 682 seconds
Protocol : 802.11ax - 5 GHz
Channel : 64
Client IIF-ID : 0xa0000003
Association Id : 2

Authentication Algorithm : Open System

Idle state timeout : N/A
[...]

Policy Type : WPA3

Encryption Cipher : CCMP (AES)

Authentication Key Management : OWE

Transition Disable Bitmap : None
User Defined (Private) Network : Disabled
User Defined (Private) Network Drop Unicast : Disabled
Encrypted Traffic Analytics : No

Protected Management Frame - 802.11w : Yes

EAP Type : Not Applicable

ةنجلب ةصاخلا (GUI) ةيموسرلا مدختسمل ةهجاو يف ةيشلا سفن ةظحالم اننكم يو
ة (WLC): ةيكللساللا لاصتالا

Cisco Catalyst 9800-CL Wireless Controller 17.9.3

Welcome admin Last login 06/23/2023 12:49:00

Monitoring > Wireless > Clients

Client Properties AP Properties Security Information Client Statistics QOS

Client MAC Address	IPv4 Address	IPv6 Address
0429.2ec9.e371	192.168.1.160	fe80::6a20:34e8:ab1b:6332
286b.3598.580f	192.168.1.159	2001:8a0:fb91:1c00:d0cb:dd1b:71e4:f29d

Client Properties

MAC Address	286b.3598.580f
Client MAC Type	Universally Administered Address
Client DUID	NA
IPv4 Address	192.168.1.159
IPv6 Address	2001:8a0:fb91:1c00:d0cb:dd1b:71e4:f29d fe80::ac5b:e1e1:67ba:c353 2001:8a0:fb91:1c00:edb2:8d62:d379:c53b
User Name	N/A
Policy Profile	CentralSwPolicyProfile
Flex Profile	N/A
Wireless LAN Id	3
WLAN Profile Name	OWE_Transition
Wireless LAN Network Name (SSID)	OWE_Transition
RSSID	00f1 1d1d 7d2e

Cisco Catalyst 9800-CL Wireless Controller 17.9.3

Welcome admin Last login 06/23/2023 15:56:39

Monitoring > Wireless > Clients

Client Properties AP Properties Security Information Client Statistics QOS

Client MAC Address	IPv4 Address	IPv6 Address	AP Name
0429.2ec9.e371	192.168.1.160	fe80::6a20:34e8:ab1b:6332	AP9136_5
286b.3598.580f	192.168.1.159	fe80::ac5b:e1e1:67ba:c353	AP9136_...

Security Information

Client State Servers	None
Client ACLs	None
Client Entry Create Time	424 seconds
Policy Type	WPA3
Encryption Cipher	CCMP (AES)
Authentication Key Management	OWE
EAP Type	Not Applicable
Session Timeout	1800

فرعم یوس نوري ال من إف، (ن س حمل ا حت فل) Enhanced Open ةي نقت نودي وي ال ن يذلا ءالم علل ءب س ن لابو ريفش ت نود هب نول ص تي و حوت فل م ال SSID.

IOS جم ان رب ىل ع iPhone ي لاوتل ا ىل ع) Enhanced Open نوم ع دي ال ن يذلا ءالم عل ا يه هذ، انه حضوم وه امك نوم دخت سي ال و Open Guest SSID ال نوري الو (Mac OS 12 ل ي غ شت ل ما ظن ىل ع MacBook و 15 ريفش ت ل ا).

Wi-Fi



open

Unsecured Network



MY NETWORKS



OTHER NETWORKS

apr0v0



Other...

Ask to Join Networks

Notify >

No.	Time	Delta	Source	Destination	Protocol	Length	Channel	Signal	Info
1	0.000000	0.000000	Cisco_06:70:3e	Broadcast	802.11	454	64-45	dbm	Beacon Frame, Ssn=0, Fw=, Flg=.....C, B=100, SSI=0open
2	0.000018	0.000018	Cisco_06:70:3e	Broadcast	802.11	475	64-45	dbm	Beacon Frame, Ssn=129, Fw=, Flg=.....C, B=100, SSI=0wildcard
3	0.182434	0.182434	Cisco_06:70:3e	Broadcast	802.11	454	64-45	dbm	Beacon Frame, Ssn=0, Fw=, Flg=.....C, B=100, SSI=0open
4	0.182471	0.000037	Cisco_06:70:3e	Broadcast	802.11	475	64-45	dbm	Beacon Frame, Ssn=129, Fw=, Flg=.....C, B=100, SSI=0wildcard
5	0.204408	0.181789	Cisco_06:70:3e	Broadcast	802.11	454	64-45	dbm	Beacon Frame, Ssn=0, Fw=, Flg=.....C, B=100, SSI=0open
6	0.204422	0.000014	Cisco_06:70:3e	Broadcast	802.11	475	64-45	dbm	Beacon Frame, Ssn=129, Fw=, Flg=.....C, B=100, SSI=0wildcard
7	0.387414	0.182992	Cisco_06:70:3e	Broadcast	802.11	454	64-45	dbm	Beacon Frame, Ssn=0, Fw=, Flg=.....C, B=100, SSI=0open
8	0.387432	0.000018	Cisco_06:70:3e	Broadcast	802.11	475	64-45	dbm	Beacon Frame, Ssn=129, Fw=, Flg=.....C, B=100, SSI=0wildcard
9	0.409355	0.221941	Cisco_06:70:3e	Broadcast	802.11	454	64-44	dbm	Beacon Frame, Ssn=0, Fw=, Flg=.....C, B=100, SSI=0open
10	0.410011	0.000056	Cisco_06:70:3e	Broadcast	802.11	475	64-45	dbm	Beacon Frame, Ssn=129, Fw=, Flg=.....C, B=100, SSI=0wildcard
11	0.470886	0.060899	92:194:40:70:3e	Cisco_06:70:3e	802.11	247	64-36	dbm	Probe Request, Ssn=228, Fw=, Flg=.....C, SSI=0OH_Transition
12	0.474214	0.003328	92:194:40:70:3e	Cisco_06:70:3e	802.11	96	64-38	dbm	Authentication, Ssn=229, Fw=, Flg=.....C
13	0.479338	0.005122	92:194:40:70:3e	92:194:40:70:3e	802.11	96	64-44	dbm	Authentication, Ssn=, Fw=, Flg=.....C
14	0.481176	0.001838	92:194:40:70:3e	Cisco_06:70:3e	802.11	449	64-38	dbm	Association Request, Ssn=230, Fw=, Flg=.....C, SSI=0OH_Transition
15	0.491676	0.010500	92:194:40:70:3e	Broadcast	LIC	114	64-45	dbm	I, N(1)>N(1), N(1)>M(1) DSAP Rcmd Group, SSAP Rcmd Mfg/Manufacturing Message Serv
16	0.493132	0.001456	92:194:40:70:3e	92:194:40:70:3e	802.11	140	64-45	dbm	Association Response, Ssn=, Fw=, Flg=.....C
17	0.512468	0.020336	Cisco_06:70:3e	Broadcast	802.11	454	64-45	dbm	Beacon Frame, Ssn=0, Fw=, Flg=.....C, B=100, SSI=0open
18	0.512487	0.000019	Cisco_06:70:3e	Broadcast	802.11	475	64-47	dbm	Beacon Frame, Ssn=129, Fw=, Flg=.....C, B=100, SSI=0wildcard
19	0.524291	0.011804	Cisco_06:70:3e	92:194:40:70:3e	802.11	211	64-45	dbm	Key (Message 1 of 4)
20	0.524289	0.000002	92:194:40:70:3e	Cisco_06:70:3e	802.11	243	64-36	dbm	Key (Message 2 of 4)
21	0.525271	0.000982	92:194:40:70:3e	92:194:40:70:3e	802.11	295	64-44	dbm	Key (Message 3 of 4)
22	0.525259	0.000012	92:194:40:70:3e	Cisco_06:70:3e	802.11	299	64-36	dbm	Key (Message 4 of 4)
23	0.578289	0.053810	Cisco_06:70:3e	92:194:40:70:3e	LIC	183	64-45	dbm	I, N(1)>N(1), N(1)>M(1) DSAP Rcmd Group, SSAP Rcmd Mfg/Manufacturing Message Serv
24	0.579227	0.000938	Cisco_06:70:3e	92:194:40:70:3e	LIC	183	64-45	dbm	I, N(1)>N(1), N(1)>M(1) DSAP Rcmd Group, SSAP Rcmd Mfg/Manufacturing Message Serv
25	0.579262	0.000035	Cisco_06:70:3e	92:194:40:70:3e	802.11	118	64-45	dbm	Action, Ssn=, Fw=, Flg=.....C
26	0.592858	0.013586	92:194:40:70:3e	Cisco_06:70:3e	802.11	118	64-36	dbm	Action, Ssn=231, Fw=, Flg=.....C(NotFormed Packet)
27	0.600837	0.011179	92:194:40:70:3e	Cisco_06:70:3e	802.11	174	64-38	dbm	Action, Ssn=232, Fw=, Flg=.....C(NotFormed Packet)
28	0.614431	0.013594	Cisco_06:70:3e	Broadcast	802.11	454	64-45	dbm	Beacon Frame, Ssn=0, Fw=, Flg=.....C, B=100, SSI=0open
29	0.614495	0.000064	Cisco_06:70:3e	Broadcast	802.11	475	64-45	dbm	Beacon Frame, Ssn=129, Fw=, Flg=.....C, B=100, SSI=0wildcard

• OWE Beacon AKM

تالچس دهاشت و لېمعلل MAC ناووع ېل ادا نسا RadioActive عبتت تاي لمع عمجت 4. ېلې امك ډلثامم

2023/06/23 15:08:58.567933 {wncd_x_R0-0}{1}: [client-keymgmt] [14854]: (note): MAC: xxxx.xxxx.xxxx EAP Key management successful. AKM:OWE Cipher:CCMP WPA Version: WPA3

2023/06/23 15:10:06.971651 {wncd_x_R0-0}{1}: [client-orch-state] [14854]: (note): MAC: xxxx.xxxx.xxxx Client state transition: S_CO_IP_LEARN_IN_PROGRESS -> S_CO_RUN

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[17.9.x رادص ال ا Cisco Catalyst 9800 Series Wireless Controller Software چمان رب نېوكت لېلد](#)

[WPA3 رشن لېلد](#)

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} Frame 18: 475 bytes on wire (1800 bits), 475 bytes captured (1800 bits) on interface Vlan100/0/0/0 (08:00:0c:28:90:00)
} Ethernet II, Src: Cisco_06:70:3e (08:00:0c:28:90:3e), Dst: Multicast_01:00:5e:00:00:01 (01:00:5e:00:00:01)
} Internet Protocol Version 4, Src: 192.168.1.15, Dst: 192.168.1.121
} User Datagram Protocol, Src Port: 5555, Dst Port: 5000
} Aligned/offsets encapsulated IEEE 802.11
} 802.11 radio information
} IEEE 802.11 Beacon Frame, Flags: .....C
} Fixed parameters (12 bytes)
} Tagged parameters (23 bytes)
} Tag: SSID parameter set: wildcard SSID
} Tag: Supported rates (R0, R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R12, R13, R14, R15, R16, R17, R18, R19, R20, R21, R22, R23, R24, R25, R26, R27, R28, R29, R30, R31, R32, R33, R34, R35, R36, R37, R38, R39, R40, R41, R42, R43, R44, R45, R46, R47, R48, R49, R50, R51, R52, R53, R54, R55, R56, R57, R58, R59, R60, R61, R62, R63, R64, R65, R66, R67, R68, R69, R70, R71, R72, R73, R74, R75, R76, R77, R78, R79, R80, R81, R82, R83, R84, R85, R86, R87, R88, R89, R90, R91, R92, R93, R94, R95, R96, R97, R98, R99, R100, R101, R102, R103, R104, R105, R106, R107, R108, R109, R110, R111, R112, R113, R114, R115, R116, R117, R118, R119, R120, R121, R122, R123, R124, R125, R126, R127, R128, R129, R130, R131, R132, R133, R134, R135, R136, R137, R138, R139, R140, R141, R142, R143, R144, R145, R146, R147, R148, R149, R150, R151, R152, R153, R154, R155, R156, R157, R158, R159, R160, R161, R162, R163, R164, R165, R166, R167, R168, R169, R170, R171, R172, R173, R174, R175, R176, R177, R178, R179, R180, 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