Resolución de problemas de velocidades 802.11n

Contenido

Introducción Prerequisites Requirements Componentes Utilizados Convenciones Antecedentes Solución de problemas del controlador para velocidades de 11n Cómo calcular el rendimiento a través de iPerf Capacidades anunciadas en balizas Información Relacionada

Introducción

Este documento aborda problemas frecuentes a tener en cuenta en el troubleshooting de la producción inalámbrica. Este documento incluye el uso de herramientas para medir el rendimiento y el rendimiento de la red inalámbrica, que incluye diferentes puntos de acceso 802.11n (AP) de proveedores en comparación con el Cisco 1252 AP en condiciones de prueba similares.

Prerequisites

Requirements

Cisco recomienda que tenga estos requisitos:

- Herramientas como iPerf y analizadores de red como OmniPeek y Cisco Spectrum Analysis
- 802.11n admite AP de las series 1140, 1250, 3500 y 1260

Componentes Utilizados

La información que contiene este documento se basa en las siguientes versiones de software y hardware.

- Controlador WS-SVC-WiSM que ejecuta la versión de software 6.0.182
- AP AIR-LAP1142-A-K9

Convenciones

Consulte <u>Convenciones de Consejos TécnicosCisco para obtener más información sobre las</u> <u>convenciones del documento.</u>

Antecedentes

802.11n nace debido a una serie de cambios realizados en la agregación de tramas de los AP: A-MPDU y A-MSDU.

- Block Ack Size (Bloquear tamaño de ack)
- MCS y vinculación de canal
- MIMO
- Uso de 5 GHz a través de 2,4 GHz: mencione también que Wi-Fi certifica la vinculación de canales en 5 GHz

Solución de problemas del controlador para velocidades de 11n

Complete estos pasos:

1. Verifique que el soporte 802.11n esté habilitado en el controlador.

(WISM-Slot3-2) >show 802.lla
802.11a Network Enabled
11nSupport Enabled
802.11a Low Band Enabled
802.11a Mid Band Enabled
802.11a High Band Enabled
802.11a Operational Rates
802.11a 6M Rate Mandatory
802.11a 9M Rate Supported
802.11a 12M Rate Disabled
802.11a 18M Rate Supported
802.11a 24M Rate Mandatory
802.11a 36M Rate Supported
802.11a 48M Rate Supported
802.11a 54M Rate Supported
802.11n MCS Settings:
MCS 0 Supported
MCS 1 Supported
MCS 2 Supported
MCS 3 Supported
MCS 4 Supported
MCS 5 Supported

2. Las tasas N se obtienen de dos maneras. Se puede alcanzar el esquema de codificación de modulación (MCS) 7 sin utilizar la vinculación de canal. Para las velocidades de MCS superiores a 7 y hasta 15, se debe habilitar la vinculación de canales. Puede verificar si la vinculación del canal está habilitada usando este comando show en el controlador: (WiSM-slot3-2) >show advanced 802.11a channel

DCA 802.11n Channel Width	40 MHz
DCA Sensitivity Level	STARTUP (5 dB)
Last Run	371 seconds ago
Channel Assignment Leader	00:1d:45:f0:d2:c0
Channel Update Contribution	SNI.
Anchor time (Hour of the day)	0
Channel Update Interval	600 seconds [startup]
Channel Assignment Mode	AUTO
Automatic Channel Assignment	

 Channel Energy Levels

 Minimum......unknown

 Average....unknown

 Maximum....unknown

 Channel Dwell Times

 Minimum....unknown

 Average...unknown

 Average...unknown

 Maximum...unknown

 802.11a 5 GHz Auto-RF Channel List

 Allowed Channel List......

 36,40,44,48,52,56,60,64,149,

 153,157,161

 Unused Channel List.......

 100,104,108,112,116,132,136,

- 3. También puede configurar el ancho del canal por AP usando estos comandos: (WiSM-slot2-2) >config 802.11a disable AP0022.9090.8e97 (WiSM-slot2-2) >config 802.11a chan_width AP0022.9090.8e97 40 Set 802.11a channel width to 40 on AP AP0022.9090.8e97
- 4. El intervalo de protección y las tasas de MCS correspondientes ayudan a determinar las velocidades de datos que se ven en los clientes 802.11n. Estos son los comandos para verificar esta configuración:

(WiSM-slot3-2) >show 802.11a	
802.11a Network Enable	≥đ
11nSupport Enable	۶đ
802.11a Low Band Enabled	
802.11a Mid Band Enabled	
802.11a High Band Enabled	
802.11a Operational Rates	
802.11a 6M Rate Mandatory	
802.11a 9M Rate Supported	
802.11a 12M Rate Disabled	
802.11a 18M Rate Supported	
802.11a 24M Rate Mandatory	
802.11a 36M Rate Supported	
802.11a 48M Rate Supported	
802.11a 54M Rate Supported	
802.11n MCS Settings:	
MCS 0 Supported	
MCS 1 Supported	
MCS 2 Supported	
MCS 3 Supported	
MCS 4 Supported	
MCS 5 Supported	
MCS 6 Supported	
MCS 7 Supported	
MCS 8 Supported	
MCS 9 Supported	
MCS 10 Supported	
MCS 11 Supported	
MCS 12 Supported	
MCS 13 Supported	
MCS 14 Supported	
MCS 15 Supported	
802.11n Status:	
A-MPDU Tx:	
Priority 0 Enabled	
Priority 1 Disabled	
Priority 2 Disabled	
Priority 3 Disabled	
Priority 4 Disabled	
Priority 5 Disabled	
Priority 6 Disabled	

Priority 7 Disal	bled
Beacon Interval	100
CF Pollable mandatory	Disabled
CF Poll Request mandatory	Disabled
More or (q)uit	
CFP Period	4
CFP Maximum Duration	60
Default Channel	36
Default Tx Power Level	1
DTPC Status	Enabled
Fragmentation Threshold	2346
Pico-Cell Status	Disabled
Pico-Cell-V2 Status	Disabled
TI Threshold	50
Traffic Stream Metrics Status	Disabled
Expedited BW Request Status	Disabled
World Mode	Enabled
EDCA profile type	default-wmm
Voice MAC optimization status	Disabled
Call Admission Control (CAC) configuration	
Voice AC - Admission control (ACM)	Enabled
Voice max RF bandwidth	75
Voice reserved roaming bandwidth	6
Voice load-based CAC mode	Enabled
Voice tspec inactivity timeout	Disabled
Video AC - Admission control (ACM)	Disabled
Voice Stream-Size	84000
Voice Max-Streams	2
Video max RF bandwidth	Infinite
Video reserved roaming bandwidth	0

Asegúrese de la agregación de paquetes A-MPDU. Para el mejor esfuerzo, los niveles de QoS se habilitan a través de estos comandos:**config 802.11a 11nSupport a-mpdu tx priority 0** enableconfig 802.11b 11nSupport a-mpdu tx priority 0 enable

- 5. Se deben utilizar las tres antenas de la radio A. Asegúrese de que las antenas son el mismo modelo.
- 6. En la WLAN configurada para la conectividad del cliente, se debe permitir o requerir WMM, y sólo se debe utilizar AES o cifrado abierto. Esto se puede verificar usando este resultado de comando:

(WiSM-slot2-2) >show wlan 1	
WLAN Identifier	1
Profile Name	wlab5WISMip22
Network Name (SSID)	wlab5WISMip22
Status	Enabled
MAC Filtering	Disabled
Broadcast SSID	Enabled
AAA Policy Override	Disabled
Network Admission Control	
NAC-State D:	isabled
Quarantine VLAN 0	
Number of Active Clients	0
Exclusionlist Timeout	60 seconds
Session Timeout	1800 seconds
CHD per WLAN	Enabled
Webauth DHCP exclusion	Disabled
Interface	management
WLAN ACL	unconfigured
DHCP Server	Default
DHCP Address Assignment Required	Disabled
Quality of Service	Silver (best effort)
WMM	Allowed
CCX - AironetIe Support	Enabled

CCX - Gratuitous ProbeResponse (GPR) Disabled CCX - Diagnostics Channel Capability..... Disabled Dot11-Phone Mode (7920)..... Disabled Wired Protocol..... None IPv6 Support..... Disabled Peer-to-Peer Blocking Action..... Disabled Radio Policy..... All DTIM period for 802.11a radio..... 1 DTIM period for 802.11b radio..... 1 Radius Servers Authentication..... Global Servers Accounting..... Disabled Local EAP Authentication..... Disabled Security 802.11 Authentication:..... Open System Static WEP Keys..... Disabled 802.1X..... Disabled Wi-Fi Protected Access (WPA/WPA2)..... Enabled WPA (SSN IE)..... Disabled WPA2 (RSN IE)..... Enabled TKIP Cipher..... Disabled AES Cipher..... Enabled Auth Key Management 802.1x.... Enabled PSK..... Disabled CCKM..... Disabled FT(802.11r)..... Disabled FT-PSK(802.11r)..... Disabled FT Reassociation Timeout..... 20 FT Over-The-Air mode..... Enabled FT Over-The-Ds mode..... Enabled CKIP Disabled IP Security..... Disabled IP Security Passthru..... Disabled Web Based Authentication..... Disabled Web-Passthrough..... Disabled Conditional Web Redirect..... Disabled Splash-Page Web Redirect..... Disabled Auto Anchor..... Disabled H-REAP Local Switching..... Enabled H-REAP Learn IP Address..... Enabled Infrastructure MFP protection..... Enabled (Global Infrastructure MFP Disabled) Client MFP..... Optional Tkip MIC Countermeasure Hold-down Timer..... 60 Call Snooping..... Disabled Band Select..... Enabled Load Balancing..... Enabled

7. Diversidad de antenas: si utiliza sólo dos antenas por cualquier motivo, debe utilizar la antena A y B para los puertos transmisor/receptor.

En el lado del cliente:

- 1. Suplicante utilizado para controlar la tarjeta inalámbrica, preferido para hacer coincidir el proveedor del suplicante con la tarjeta inalámbrica.
- 2. Controladores de cliente: debe asegurarse de que los controladores de cliente más recientes se ejecutan en las tarjetas inalámbricas.
- 3. Póngase en contacto con el proveedor del adaptador inalámbrico.
- 4. Asegúrese de que utiliza el adaptador con certificación 11n para conseguir velocidades de transferencia de datos de 11n.

http://www.wi-fi.org/certified_products.php

Cómo mejorar el rendimiento:

- Utilización del canal: los analizadores de red informan de la utilización del canal en el porcentaje de tiempo empleado en transmitir y recibir tramas. Esto ayuda a medir la variación potencial de velocidad debido a la distancia desde un punto de acceso. Esto ayudará a monitorear y ver, por ejemplo, si un canal está completamente ocupado transmitiendo a 1 Mbps en condiciones ideales funcionaría a 0.94 Mbps bajo una utilización del 100%.
- El medio físico utilizado en la red inalámbrica también determina el rendimiento. El uso de 802.11g o 802.11a en 802.11b ofrece un rendimiento mucho mayor, a menudo de hasta 30 mbps en 802.11b, donde una capacidad de radio de 6 mpbs se divide entre todas las estaciones asociadas.
- 3. Tamaños de celda: se recomienda reducir los tamaños de celda para que los clientes estén lo más cerca posible de los AP. Esto beneficiará las velocidades de datos a las que el cliente puede conectarse al AP. Esto se puede hacer reduciendo los niveles de energía en el AP al nivel más bajo.
- 4. La reducción del tamaño de la celda también disminuye la interferencia del canal conjunto. Si se utiliza RRM, los AP deben seleccionar los canales dinámicamente según la implementación. Sin embargo, si implementa la asignación de canal dinámica, asegúrese de que no tenga dos AP en niveles de energía altos en el mismo canal justo al lado.
- 5. La protección también provoca un resultado positivo en el rendimiento.

Cómo calcular el rendimiento a través de iPerf

Consejos De Configuración De Iperf

Para aquellos clientes o probadores que no poseen Chariot, Iperf se puede utilizar en su lugar. Este documento está disponible en <u>http://www.macalester.edu/crash/software/pc/iperf/kperf_setup.exe</u>.

Medición del Rendimiento de TCP

Ejecute este comando en el lado del servidor:

Iperf -s -w 256k Ejecute este comando en el lado del cliente:

Iperf -c -P 6 -w 256k -r -t 60

Server listening on TCP port 5001 TCP window size: 256 KByte							
Client connecting to 10.10.10.10, TCP port 5001 TCP window size: 256 KByte							
[1788] local 10.10.10.20 port 1155 connected with 10.10.10.1 [1820] local 10.10.10.20 port 1153 connected with 10.10.10.1 [1868] local 10.10.10.20 port 1150 connected with 10.10.10.1 [1836] local 10.10.10.20 port 1152 connected with 10.10.10.1 [1804] local 10.10.10.20 port 1154 connected with 10.10.10.1 [1804] local 10.10.10.20 port 1154 connected with 10.10.10.1	d port d port d port d port d port d port	5001 5001 5001 5001 5001					
[ID] Interval Transfer Bandwidth [1788] 0.0-60.1 sec 124 MBytes 17.3 Mbits/sec [1868] 0.0-60.1 sec 123 MBytes 17.1 Mbits/sec [1820] 0.0-60.2 sec 110 MBytes 15.4 Mbits/sec [1804] 0.0-60.1 sec 84.6 MBytes 11.8 Mbits/sec [1852] 0.0-60.1 sec 89.2 MBytes 12.4 Mbits/sec [1836] 0.0-60.2 sec 86.3 MBytes 12.4 Mbits/sec	o porc	2001					
[SUM] 0.0-60.2 sec 617 MBytes 86.0 Mbits/sec [1952] local 10.10.10.20 port 5001 connected with 10.10.10.10 [1832] local 10.10.10.20 port 5001 connected with 10.10.10.10 [1748] local 10.10.10.20 port 5001 connected with 10.10.10.10 [1732] local 10.10.10.20 port 5001 connected with 10.10.10.10 [1800] local 10.10.10.20 port 5001 connected with 10.10.10.10 [1812] local 10.10.10.20 port 5001 connected with 10.10.10.10	d port d port d port d port d port d port	2663 2664 2665 2666 2667 2668					
[10] Interval Iransfer Bandwidth [1800] 0.0-60.0 sec 114 MBytes 15.9 Mbits/sec [1812] 0.0-60.0 sec 117 MBytes 16.3 Mbits/sec [1952] 0.0-60.1 sec 89.6 MBytes 12.5 Mbits/sec [1748] 0.0-60.1 sec 129 MBytes 18.1 Mbits/sec [1732] 0.0-60.1 sec 111 MBytes 15.5 Mbits/sec [1832] 0.0-60.1 sec 112 MBytes 15.6 Mbits/sec [SUM] 0.0-60.1 sec 672 MBytes 93.8 Mbits/sec							

El primer número en círculo de esta imagen representa el rendimiento ascendente, el segundo número en círculo representa el rendimiento descendente (de AP al cliente).

Medición del Rendimiento UDP

Cierre las aplicaciones Iperf anteriores tanto en el lado del servidor como del cliente. Ambos deben configurarse de nuevo, pero esta vez para las pruebas de rendimiento UDP.

Ejecute este comando en el lado del servidor:

Iperf -s -u -l 56k Ejecute este comando en el lado del cliente:

Iperf -c -u -b 50M -l 56k -P

Este es un ejemplo de capturas de Omnipeek para analizar la **unidad de datos de servicio MAC agregado**:

El seguimiento A-MSDU muestra un paquete

🙀 OaniPeek - [AMSDUP	cket.	100]										
🏯 Ele Est 🕥	n Bir Bir Mew Germen Song Merika Inde Merika Hen												
🔟 - 😂 - 🖬	1.60.40.4 回転回転回載のおけたの可能で、												
7													
Capture	÷ 👳	\$ E	🖹 🖹 📓 🔛 👒 🛛 🖓 -	16 3 16 1× A 🗵									
100.000	- A	w set	Source	Destination	0.530	Flage	Charcel	E goal	Deta Rate	3276	Relative Titre	Protocol	Success
E Farret		_1	19 10: 14: 5E: 57: 7E: AL	01:12:28:36:19:37	100:16:01:6F:03:5Z	A	1 4	1008	144.5	4350	0.000000	502.11 A-2500	FD F
Here-cha	-	2	💵 (Or 28: E): 8::15:77	100191590196P9US95E		1	1	1008	24.0	14	0.000005	S02.11 Ack	PU=
												Packet/ 2	Division DODD11
Done													ag hors

- Sólo se muestra la primera subtrama.
- Necesita inspeccionar el volcado hexadecimal para ver subtramas adicionales.

Se muestra el siguiente submarco A-MSDU adjunto

(A DaniPeck - (AMSDUPacket apo - Packet #1)	
🖻 Ele Est View Contae Send Yorka Italy Wildow Hap	비즈
■ • S • F ≥ E E E E E E B Ø Ø U T 2 • F = T 7 < E Ø B	
· → ▲ ▲ · · · · · · · · · · · · · · · ·	
Packet (A) de - 7	
Le Xo XIZ Options	-
1 2 and a second s	
-@ Data Zorea: (1.00 hytes)	
Zatra žytes (Zetfang)/(2100 bytes) Heat Subfrage Header	
B-T PCS - Frame Check Sequence	
L@ PS: 0x:03071	Ξ
1 MARE 100 00 00 W AD 101 AD 107 70 AD 100 TO TO TO TO TO AD 40, 470 AD 10 AD 37 AD 777 AD 20 TO 77 AD 100 FO TO TO TO TO TO TO AD 40 AD 30 AD 3	-
14351 FR 39 75 39 15 1F 35 05 05 85 MR 50 20 FD 60 24 FR 40 37 24 72 41 P1 61 75 55 37 66 04 MR 10 [D F6 45 10 59 24 03 35 45 78 31 65 D6 67 83 4904	
15001 SA 18: 43 43 53 84 12 BK 45 04 48 19 48 10 48 10 10 20 47 19 33 87 88 01 55 55 85 37 27 20 17 58 50 18 14 46 38 97 31 54 87 01 86 01 90 18 2.0.1.1.1.8.8.1.1.1.8.1.8.1.1.1.8.1.1.1.1	
1545: 52 40 6F 68 AA 01 15 25 35 10 17 10 14 55 57 76 AL 04 24 AA 03 01 01 00 06 00 45 10 14 20 AC 30 40 00 80 05 73 AS C1 AS AA 62 C0 AS6.4	
	100
1991: 44 TO 11 64 04 0F 3F 64 02 51 F4 30 10 14 10 16 F7 46 TO 96 00 01 E4 15 91 22 04 TE 15 10 16 24 27 63 55 CL 30 CB 37 72 DF 45 97 39 10 10 17, 344F.	Ξ

- Una A-MPDU es una estructura que contiene múltiples MPDU, transportadas como una sola PSDU por el PHY.
- Indicación de que el paquete es A-MPDU de datos en el procedimiento de convergencia de capa física (PLCP).



Este es un ejemplo de capturas de Omnipeek para analizar la **unidad de datos del protocolo MAC agregado**:

Configuración A-MPDU

50 OaniPeek -	🖟 OwniPark - (AMPDUSebip.ap.t)												
🔮 Ele - Ecc - S	토 Bit Sith Service Song Monitor Table Ministry Hate												
🔄 - 😂 - 🖬	8	2 2 1	🛾 🛋 🗶 🎗 男子	20000000	1 🛛 🔓								
- T													
L Laptore	-	$\Rightarrow \Rightarrow $	🗄 🏝 🔤 🖳 🔦 😵 🗎	16 3 16 1× 10 12 1									
* <u>nacionis</u>		Rendet	Course	Destination	0000	Elage	Channel	E gnal	Deta Rate	200	Relative Time	Protocol	Success
E Paret	— .	1	10:17:17:A6:40:90	F000:12:28:10:MD:55	FP 00: 17: DF: A5: 40: 91	7A	1	1005	130.0	37	0.001001	502.11 Action	PD
denote		2	#0+28+29+35+25+65	DUCTORNAL SUPERAL SUPERAL			5	100%	36.0	19	0.000004	500.11 A08	PD=concerned
14		3	📑 10: 10: FO: 10: FO: 55	1001:13:0F:A6:40:30	📑 00: 17: DF: A6: 40: 91		¢ .	1004	26.0	.17	0.000003	302.11 Acrim	FD,28026
4epipate	- - 1	4	📑 05:17:DF:26:40:99	B00:12:20:10:F0:55		1	s .	1008	36.0	14	0.000013	502.11 Ack	FC
1		4				12	120.12			1			
												Packetz 4	Duration [Billbill
Done													My Kora

- ADDBA—Agregar confirmación de bloque
- Solicitud ADDBA: contiene el identificador, la política de ack de bloqueo, el tamaño del búfer,

etc.

• Respuesta ADDBA: puede cambiar el tamaño de la política y del búfer.

Configuración A-MPDU

- Solicitud ADDBA
- AP1250 utiliza un tiempo de espera de cero para indicar que no hay tiempo de espera.



- Respuesta ADDBA
- El receptor debe indicar que el acuerdo de acuse de recibo de bloqueo se ha establecido correctamente.

🞾 OmniPeek - (AMPDUSeti	up.apc - Packet #3]							
Eile Edit View Capture Send Monitor Tools Window Help								
🔯 - 💋 - 🖯 🗞 📓 🛚) 🔄 🔺 🖄 💩 🖏 T 🔍 😂 🖬 🖬 💱 🗢 😫 🕗 🔂							
Packet: 3	<u>ال</u> ۲							
802.11 MAC Header	<u>r</u>							
	0							
	\$00 Management							
🕤 Subtype:	%1101 Management Action							
E Frame Control	Flags: %0000000							
🞯	0 Non-strict order							
	.0 Non-Protected Frame							
🞯	No More Data							
	0 Power Management - active mode							
	0 This is not a Re-Transmission							
	0. Not an Exit from the Distribution System							
	Not to the Distribution System							
Duration:	40 Microseconds							
Destination:	00:17:DF:A6:40:90							
Source:	00:13:18:10:70:55							
BSSID:	00:17:DF:A6:40:90							
Seq Number:	876							
g ray number:	U t - Action							
Category Code:	3 Block Jok							
Action Code:	J JUDRA Regnonse							
Bialog Token:	1 ADDDA Response							
Status Code:	1 Successful							
BlockAck Para	Set: \$00010000000000							
	Buffer Size:64							
BlockAck Timeo	ut Value: 5000 TUs							
FCS - Frame Check	k Sequence							
G FCS:	0x3DD891AF							
0000: D0 00 28 00 00 1								
0021: 90 C0 36 03 01 0	01 00 00 02 10 88 13 3D D8 91 AF6							
For Help, press F1	None 📃							

Transferencia de datos A-MPDU

- Block Ack contiene mapa de bits comprimido para indicar las MPDU recibidas.
- Consulte IEEE 802.11n sección 9.10.7 "Extensiones de Ack de Bloqueo Inmediato HT" para obtener información sobre el envío de Ack de Bloqueo.

🕅 EnniPeek - (AMPDUDeteActBlinckAck epc)												
😩 Eile Edit Vier	2) Ele Edit Yew Capture Send Monitor Took Window Uso											
🔄 - 😂 - 🖬 🗄	□ - U - H > B Y Y B B B A > 7 7 2 C B H 3 < 1 0 6											
÷ 💎 -	PT											
Capture	-	II 🖬 🖬 🔍 🤻 🌱	***									
 Pobles 	Packat	t Source	Dash nation	82210	Hegs	Channel	Signal	Data Rata	Size i	Relative Time	Protocol	
C Exect	1	U D0:13:E8:36:19:77	50 00:14:5E:67:7E:A1	00:16:01:67:03:52	1	1	100%	130.0	78	0.000000	TCP	
Herardha	2	2 🕎 00: 13: K6: 36: 19: 72	📑 00: 14: 5K: 87: 7K: A1	00:16:01:6F:03:5E	*	1	100%	130.0	75	0.000003	TEP	
Ba	3	B 00:13:E8:36:19:77	■D00:14:5E:87:7E:A1	00:16:01:6F:03:5E	à.	1	100%	130.0	78	0.000008	TCP	
Application	4	F 10:13:K0:36:19:72	📑 00:14:5K:67:7K:A1	III 00:16:01:6F:03:5E	Χ	1	100%	130.0	75	0.000011	TEP	
I-I Visuals	- 5	5 💵 00:13:E8:36:19:77	■\$00:14:5E:67:7E:A1	00:16:01:6F:03:5E	λ	1	100%	130.0	78	0.000014	TCP	
Peer Map	6	i 📑 00:13:80:36:19:72	■\$00:14:5E:07:7E:A1	100:16:01:6F:00:55	×	1	100%	130.0	70	0.000017	TOP	
Graphs	- 7	00:13:E8:96:19:77	■\$00:14:5E:87:7E:A1	BD:16:01:6F:D3:5E	A.	1	100%	130.0	78	0.000020	TCP	
Statistics	0) 📳 00; 16; 01; 07; 03; 55	B00:13:E0:36:19:77		1 C	1	1008	20.0	33	0.000023	002.11 88	
Stoker Lat	1											
<u> </u>										2		
										Machelia 8	Duration: 0	100.00
Done											By None	10

Capacidades anunciadas en balizas

HI Capability Info	
😌 Element ID:	45 HT Capability Info
🎯 Length:	26
😑 🏋 HT Capability Info:	\$0001100001101110
··· 🕥	0 L-SIG TXOP Protection Support: Not Supported
🕥	.0 AP allows use of 40MHz Transmissions In Neighboring BSSs
()	0 Device/BSS does Not Support use of PSMP
()	1 BSS does Allow use of DSSS/CCK Rates @40MHz
😏	1 Maximal A-MSDU size: 7935 bytes
···· 🕅	0 Does Not Support HT-Delayed BlockAck Operation
😭	00 No Rx STBC Support
🚱	0 Transmitter does Not Support Tx STBC
📦	
🚱	
🕥	
A-ROPDU Parameters:	\$00011011
	xxx Reserved
	110 Minimum MPDU Start Spacing: 8 usec
	11 Maximum Rx A-MPDU Size: 64K
Supported MCS Set	
0ne Spatial Stream	: %1111111
MCS Index 0 Sup	ported - BPSK. Coding Rate: 1/2
	ported - QPSK. Coding Rate: 1/2
MCS Index 2 Sup	ported - OPSK. Coding Rate: 3/4
MCS Index 3 Sup	ported - 16 0MM. Coding Rate: 1/2
Mis Index 4 Sum	norted = 16 00M. Coding Rate: 3/4
MCS Index 5 Sup	ported = 64 0AM. Coding Rate: 2/3
MCS Index 6 Sup	ported - 64 OAM. Coding Rate: 3/4
Mrs Index 7 Sun	ported - 64 0BM. Coding Rate: 5/6
Two Spatial Stream	s: \$0111111
MCS Index & Sup	ported - BPSK, Coding Rate: 1/2
MCS Index 9 Sup	ported = OPSK, Coding Rate: 1/2
MCS Index 10 Su	pported - OPSK. Coding Rate: 3/4
MCS Index 11 Su	pported = 16 02M. Coding Rate: 1/2
MCS Index 12 Su	pported = 16 02M. Coding Rate: 3/4
MCS Index 13 Su	pported = 64 DBM. Coding Rate: 2/3
Mrs Index 14 Su	prosted - 64 02M Coding Rate: 3/4
MCS Index 14 Su	t Summarted - 64 OBM. Coding Rate: 5/6
Rx Bitnask b16-b23	* \$0000000
Rx Bitmask h24-h31	\$0000000
Rx Bitmack h32-h30	\$0000000
Rx Bitmask h40-h47	\$0000000
Ry Ritnack h42-b55	* *0000000
W DI DI CHESK DIG-DJJ	

Capacidades anunciadas en Beacons:

```
Reserved:
                                    $000
   $000000
   Reserved:
   Tx Supported MCS Set: %0 Not Defined
   😗 Tx and Rx MCS Set: 👘 🚯 Equal
   🎯 Tx Naximun Number Spatial Streams Supported: 500 - 1 Spatial Stream
   Tx Unequal Modulation: 40 Not Supported
                                   Reserved:
... 📦
                                   XXXX .... Reserved
   .
                                    .... 0... .... Reverse Direction Responder: Supported
   .
                                    ..... 00 ..... MCS Feedback: STA Does Not Provide MCS Feedback
   .
   0
                                    .... Reserved
                                    .... .... .00. Transition Time: No Transition
   0
   63
                                    .... .... .... 0 Transmitter Supports PCO: Supported
xxx. .... Reserved
   .
   0
                                    ...0 0... ... ... ... ... ... Channel Estimation Capability: 1 Space Time Stream
   0
                                    ..... 00. .... ... .... .... CSI Max Number of Rows: 1 Row of CSI
   .
                                    ۲
                                    .... .... 0 0... .... .... .... CSI Number of BF Antennas: 1 TX Antenna Sounding
   0
                                    .... Minimal Grouping: STA Supports Groups of 1 (No Grouping)
   0
   0
                                    .... 0 0... ... Compressed BF Feedback Matrix: Not Supported
   ..... 00. .... Uncompressed BF Feedback Matrix: Not Supported
   0
                                    .... TxBF CSI Feedback: Not Supported
                                    .... O. .... Compressed BF Feedback Matrix Capable: Not Supported
   0
                                    .... Uncompressed BF Feedback Matrix: Not Supported
   0
                                    .... D. ... ... ... ... Explicit CSI TxBF Capable: Not Supported
   0
                                    ..... Calibration: Not Supported
   0
                                    .... Implicit TxBF Capable: Not Supported
   0
                                    .... Tx NDP Capable: Not Supported
                                    .... 0... Rx NDP Capable: Not Supported
   .
                                    .... .... Carter and the second state of the s
   .
                                    .... 0. Rx Staggered Sounding Capable: Not Supported
   .
                                    .... 0 Implicit TxBF Receiving Capable: Not Supported
   0
  Antenna Selection Capability (ASEL):$0000000
   . 🕲
                                    z... Reserved
   ۲
                                    .0.. .... Tx Sounding PPDUs Capable: Not Supported
                                    ... 0. .... Rx ASEL Capable: Not Supported
   ۲
   0
                                    ...0 .... Antenna Indices Feedback Capable: Not Supported
                                    .... 0... Explicit CSI Feedback: Tx AS Capable: Not Supported
   ۲
   ۲
                                    .... . 0.. Antenna Indices Feedback Based Tx ASEL Capable: Not Supported
                                    .... .. 0. Re-Explicit CSI Feedback Tx ASEL Capable: Not Supported
   ۲
   ~
```

Capacidades anunciadas en Beacons:

```
61 Additional HT Information
 😥 Element ID:
 🗑 Length:
                     22
 Primary Channel:
                     - 6
- 🌍 Srvc Int Granularity: 4000 - 5ms
 • PSAP STAS Only: *0 Association Requests are Accepted Regardless of PSAP Capability
 🗑 RIFS Mode:
                     41 Use of RIFS Permitted
 🗑 STA Channel Width:
                     %1 Use Any Channel Width Enabled Under Supported Channel Width Set
 2nd Channel Offset: 401 Above the Primary Channel
. 🗑
                       XXXXXXXX XXX.... Reserved
   . 💮
                        .
                        .....0... Transmit Burst Limit: No Limit
  -- 🕲
                        .....1.. Non-Greenfield STAs: One or more HT STAs are Not Greenfield Capable
   . 🐨
                        HT Info Element 3:
                     $00000000000000000
   . 📦
                        xxxx.... Reserved
                        ....0.... PCO Phase: Switch To/Continue Use 20MHz Phase
  --- 🗑
                        .....0.. ....... PCO Active: Not Active in the BSS
   - 🗑
   ... 🗑
                        .....0. ...... L-SIG TXOP Protection: Not Full Support
  --- 😥
                        .....0 ...... Secondary Beacon: Primary Beacon
                        ..... 0..... Duel CTS Protection: Not Required
   . 🕤
                        0
   . 📦
                        - Basic MCS Set
 📩 🐨 One Spatial Stream: 👘 %00000000
     ... 🜒 MCS Index 0 Not Supported - BPSK. Coding Rate: 1/2
     -- 😙 MCS Index 1 Not Supported - QPSK. Coding Rate: 1/2
     ... 📵 MCS Index 2 Not Supported - QPSK. Coding Rate: 3/4
     ... 🕲 MCS Index 3 Not Supported - 16 QAM. Coding Rate: 1/2
      📵 MCS Index 4 Not Supported - 16 QAM. Coding Rate: 3/4
      🌒 MCS Index 5 Not Supported - 64 QAM. Coding Rate: 2/3
      👩 MCS Index 6 Not Supported - 64 QAM. Coding Rate: 3/4
     ... 🗑 MCS Index 7 Not Supported - 64 QAM. Coding Rate: 5/6
 🗄 🍸 Two Spatial Streams: 300000000
     -- 🎯 MCS Index 8 Not Supported - BPSK. Coding Rate: 1/2
     ... 🗑 MCS Index 9 Not Supported - QPSK. Coding Rate: 1/2
     . 🜒 MCS Index 10 Not Supported - QPSK. Coding Rate: 3/4
      😋 MCS Index 11 Not Supported - 16 QAM. Coding Rate: 1/2
      🜒 MCS Index 12 Not Supported - 16 QAM. Coding Rate: 3/4
     -- 😏 MCS Index 13 Not Supported - 64 QAM. Coding Rate: 2/3
     ... 🕲 MCS Index 14 Not Supported - 64 QAM. Coding Rate: 3/4
    📖 🎯 MCS Index 15 Not Supported - 64 GAM. Coding Rate: 5/6
    Rx Bitnask b16-b23: *00000000
   🕲 Rx Bitnask b24-b31: 👘 \00000000
    🝘 Rx Bitnask b32-b39:
                        $00000000
   💼 Rx Bitnask b40-b47:
                        $00000000
```

Asociación similar con la adición de la configuración de Ack de Bloqueo para A-MPDU:

194	IV 00:13:E8:1D:F0:55	B00:17:DF:A6:4C:90	802.11 Ack			100%	6.0	14
195	EE 00:17:DF:A6:4C:90	Elethernet Broadcast	802.11 Beacon	m 00:17:DF:A6:4C:90	*	100%	6.0	204
196	EP 00:13:28:10:F0:55	🕎 Ethernet Broadcast	802.11 Probe Req	Ethernet Broadcast	×	100%	1.0	81
197	FP 00:17:DF:A6:4C:90	13:E8:1D:F0:55	802.11 Probe Rsp	mp 00:17:DF:A6:4C:90	*+	100%	6.0	204
198	00:13:E8:1D:F0:55	00:17:DF:A6:4C:90	802.11 Ack		#	100%	6.0	14
199	ID:13:CE:89:DC:A2	Ethernet Broadcast	802.11 Probe Req	Ethernet Broadcast		100%	1.0	87
200	00:13:E8:36:19:77	Ethernet Broadcast	802.11 Probe Req	Ethernet Broadcast	*	100%	1.0	81
201	B0:17:DF:A6:4C:90	00:13:E8:36:19:77	802.11 Probe Rsp	B) 00:17:DF:A6:4C:90	*+	100%	6.0	204
202	Image: 00:13:E8:36:19:77	B00:17:DF:A6:4C:90	802.11 Ack		9	100%	6.0	14
203	00:13:E8:36:19:77	Ethernet Broadcast	802.11 Probe Req	Ethernet Broadcast	*	100%	1.0	74
204	D0:13:E8:36:19:77	Ethernet Broadcast	802.11 Probe Req	Ethernet Broadcast	*	100%	1.0	81
205	B0:17:DF:A6:4C:90	00:13:E8:36:19:77	802.11 Probe Rsp	ID: 17: DF: A6: 4C: 90	*+	100%	6.0	204
206	00:13:E8:36:19:77	B00:17:DF:A6:4C:90	802.11 Ack		#	100%	6.0	14
207	00:13:CE:89:DC:A2	Ethernet Broadcast	802.11 Probe Req	Ethernet Broadcast		52%	1.0	55
208	BO:13:CE:89:DC:A2	Ethernet Broadcast	802.11 Probe Req	Ethernet Broadcast	*	97\$	1.0	55
209	B) 00:13:CE:89:DC:A2	Ethernet Broadcast	802.11 Probe Req	Ethernet Broadcast	*	100%	1.0	87
210	00:13:CE:89:DC:A2	Ethernet Broadcast	802.11 Probe Req	Ethernet Broadcast		100%	1.0	55
211	00:17:DF:A6:4C:90	Ethernet Broadcast	802.11 Beacon	00:17:DF:A6:4C:90	*	100%	6.0	204
212	00:13:CE:89:DC:A2	Ethernet Broadcast	802.11 Probe Req	Ethernet Broadcast	×	95%	1.0	55
213	00:13:CE:89:DC:A2	Ethernet Broadcast	802.11 Probe Req	Ethernet Broadcast		100%	1.0	87
214	00:13:CE:89:DC:A2	Ethernet Broadcast	802.11 Probe Req	Ethernet Broadcast	*	100%	1.0	55
215	EP 00:13:E8:10:F0:55	R 00:17:DF:A6:4C:90	802.11 Auth	1 00:17:DF:A6:4C:90	*	100%	36.0	34
216	FP 00:17:DF:A6:4C:90	R. 00:13:E8:1D:F0:55	802.11 Ack		ÿ	100%	36.0	14
217	E 00:17:DF:A6:4C:90	E 00:13:E8:1D:F0:55	802.11 Auth	E 00:17:DF:A6:4C:90	×	100%	36.0	34
218	FP 00:13:E8:1D:F0:55	F 00:17:DF:A6:4C:90	802.11 Ack		ÿ	100%	36.0	14
219	FP 00:13:E8:1D:F0:55	100:17:DF:A6:4C:90	802.11 Assoc Reg	E 00:17:DF:A6:4C:90	*	100%	36.0	134
220	E 00:17:DF:A6:4C:90	FR 00:13:E8:1D:F0:55	802.11 Ack		¥	100%	36.0	14
221	FF 00:17:DF:A6:4C:90	F 00:13:E8:1D:F0:55	802.11 Assoc Rsp	00:17:DF:A6:4C:90		100%	130.0	180
222	00:13:E8:1D:F0:55	B00:17:DF:A6:4C:90	802.11 Åck		#	100%	36.0	14
223	3 192.168.170.89	3224.0.0.1	IGMP	B) 00:17:DF:A6:4C:90		100%	130.0	84
224	🕎 00:13:E8:1D:F0:55	B 00:17:DF:A6:4C:90	802.11 Ack		¥	100%	36.0	14
225	3 192.168.170.89	3224.0.0.1	IGMP	B) 00:17:DF:A6:4C:90	+	100%	130.0	84
226	III 00:13:E8:1D:F0:55	00:17:DF:A6:4C:90	802.11 Ack			100%	36.0	14
227	B) 00:17:DF:A6:4C:90	BO:13:E8:1D:F0:55	WLCCP	B) 00:17:DF:A6:4C:90		100%	130.0	92
228	00:13:E8:1D:F0:55	00:17:DF:A6:4C:90	802.11 Ack		¥.	100%	36.0	14
229	FP 00:17:DF:A6:4C:90	F2 00:13:E8:1D:F0:55	802.11 Action	E 00:17:DF:A6:4C:90	*	100%	130.0	37
230	00:13:E8:1D:F0:55	B00:17:DF:A6:4C:90	802.11 Ack		¥	100%	36.0	14
231	FP 00:13:E8:1D:F0:55	FR 00:17:DF:A6:4C:90	802.11 Action	E 00:17:DF:A6:4C:90	*	100%	36.0	37
232	00:17:DF:A6:4C:90	BO:13:E8:1D:F0:55	802.11 Ack		¥	100%	36.0	14

Verifying A-MPDU is enabled on the controller

in the second second second		
a st capaciticy into	A DE ANNO 1997 AND AND AND	
Element ID:	as an capability hare [01]	
- W Length:	26 [04]	
T HT Capability Info:	4000110000110110 (05-06)	
- 9	0 E-SIG TADP Protection Support: Not Supported	
	.0 30 allows use of 4090s Transmissions In Heighboring SDSs	
	Device/855 does Not Support use of 2502	
	8 Does Not Support MT-Delayed BlockAck Operation	
	A Transmitter does Not Support Ty SIDC	
	1. Both 1000s and 4000s Constitut is Constant	
	A 150° ordine cambilities for formertad	
The second burners are	And the second s	A-MPDU enabled and seen in the
a s anno racasters	November (07)	+ baacon
	KER Beserver [07 Hark Octo]	Deacon
T Supported BCS Set.		

Above is a beacon frame from an SSID enabled for n rates

- interface Dot11Radio1
- Radio AIR-RM1252A, Base Address 00119ea6.8520, BBlock version 0.00, Software version 2.10.20
- Serial number: FOC1212405A
- Number of supported simultaneous BSSID on Dot11Radio1: 16
- Carrier Set: Americas (OFDM) (US) (-A)
- Uniform Spreading Required: Yes
- Configured Frequency: 5180 MHz Channel 36 40MHz, extended above
- Compared Prequency: 5159 MHz Channel 36 40MHz, extended above Allowed Frequencies: 5180(36) 5200(40) 5220(44) 5240(48) *5260(52) *5280(56) *5300(60) *5320(64) *5500(100) *5520(104) *5540(108) *5560(112) *5590(116) *5660(132) *5680(136) *5700(140) 5745(148) 5765(153) 5785(157) 5805(161) 5825(165) * = May only be selected by Dynamic Frequency Selection (DFS) Listen Frequencies: 5180(36) 5200(40) 5220(44) 5240(48) 5260(52) 5280(56) 5300(60) 5320(64) 5500(100) 5520(104) 5540(108) 5560 (112) 5580(116) 5660(132) 5680(136) 5700(140) 5745(149) 5765(153) 5785(157) 5805(161) 5825(165) Beacon Flags: 0, Interface Flags 20105; Beacons are enabled; Probes are enabled Compared Brance Methods Methods and the second Brance Methods and Brance Methods Methods

- Configured Power: 14 dBm (level 1)
- Active power levels by rate
- 6.0 to 54.0 , 14 dBm
- 6.0-bf to 54.0-b, 8 dBm, changed due to regulatory maximum m0. to m15.-4, 11 dBm, changed due to regulatory maximum
- OffChnl Power: 14, Rate 6.0
- Allowed Power Levels: -1 2 5 8 11 14 --More--
- --More--Allowed Client Power Levels: 2 5 8 11 14
- Receive Antennas : right-a left-b middle-c
- Transmit Antennas : right-a left-b, ofdm single
- Antenna: external, Gain: Allowed 11, Reported 0, Configured 0, In Use 11
- Active Rates: basic-6.0 9.0 basic-12.0 18.0 basic-24.0 36.0 48.0 54.0
- Current Rates: basic-6.0 9.0 basic-12.0 18.0 basic-24.0 36.0 48.0 54.0
- Allowed Rates: 6.0 9.0 12.0 18.0 24.0 36.0 48.0 54.0
- All Rates: 6.0 9.0 12.0 18.0 24.0 36.0 48.0 54.0 m0. m1. m2. m3. m4. m5. m6. m7. m8. m9. m10. m11. m12. m13. m14. m15.
- Default Rates: basic-6.0 9.0 basic-12.0 18.0 basic-24.0 36.0 48.0 54.0 m0. m1. m2. m3. m4. m5. m6. m7. m8. m9. m10. m11. m12. m13. m14. m15.
- Best Range Rates: basic-6.0 9.0 12.0 18.0 24.0 36.0 48.0 54.0 m0. m1. m2. m3. m4. m5. m6. m7. m8. m9. m10. m11. m12. m13. m14. m15.
- Best Throughput Rates: basic-6.0 basic-9.0 basic-12.0 basic-18.0 basic-24.0 basic-36.0 basic-48.0 basic-54.0 m0. m1. m2. m3. m4. m5. m6. m7. m8. m9. m10. m11. m12. m13. m14. m15.

MCS Rates on 802.11n beacon

Contract and a second to be able				
· · · · · · · · · · · · · · · · · · ·				
in A. a state of a support of the su				
Example and a second se				
The second second second second second second second second				
a T Dependent Mill Set				
in T the Spation Phonese Taxanaa (11)				
- Will Dates 4 Papersted - ANNL Contrar Beter L/D				
- · Wit links I happened - phil. Collar links Art				
- Wit Dates 2 Departed - USE, Colleg Beles Ave				
- · · · · · · · · · · · · · · · · · · ·				
- The second state of the				
- Still Dollar i Dagastited - 66 (200, Colling Rate) 2/7				
. · · · · · · · · · · · · · · · · · · ·				
a T he lasted House Allocation (11)				
- · · · · · · · · · · · · · · · · · · ·				
- · · · · · · · · · · · · · · · · · · ·				
• With Dasher 2.4 Regenerated + QMML Conting Refer Arts				
- The second second and the second se				
- · · · · · · · · · · · · · · · · · · ·				
- · · · · · · · · · · · · · · · · · · ·				
Still Dates 10 Augustind - 68 108. Colling Jahrs 1/4				
- Bo BUILDING BUILDING TO				
- B Re Billeanh 200-612: 40000000 1111				
- P By By handle hit have a subsection (12).				
- Br Billeash 148-141: ADDIMIDD [11]				
Bar Burbauch 168-1771. KODONNOO (1-4)				
- * Ba Britandi 154-141. 10000000 [11]				
Be Billerich 144-1/10 Househouseman (200-17 Baum California)				
- • Branz mate + 1000-(11 Mark doi:10)				
- Bighter Supported Baters How (19-33 Back Collect)				
- • Brant vid. • • • • • • • • • • • • • • • • • • •				
- The Suggestion MIS Set : No. (not defined (107) New 1999)				
- The and the MCD Bells - No. Report 1100 (Back -0x-81)				
. In Process Party Institute Concess Connected Add. J. Section (1998) Role (1997)				

Supported MCS rates

_		
	OmniPeek _ =	ж
6 B	Idt Verw Capture Send Monitor Tools Window Help Wild Packada Capture Send Monitor Tools Window Help	ek.
-	Rat Page 002.11a.pkt 000.130,4094.pkt 000.11a.pkt - Packet #57 000.11m_40994.pkt - Packet #100 ×	х.
-		
8.7	SSD Bird Afen State SSD-Vi	-
* 7	andrean 19-1: Satasa Lemand Rate-5.0 Maps Rate-5.0 Maps Rate-52.0 Maps Rate-54.0 Maps Rate-54.0 Maps Rate-54.0 Maps Rate-56.0 Maps	г
* T	The DeS Tit: Least FTH Counted FTH Fertude; Sting Control+1000000 Part Virt Bog-000	
13	Constry Dev Country Level & Country Country Country Country (Developed and Real Provided and Real Provided and Country	٩.
14	With Brill (Diff Level Muttin Grant & Changel Millington (0) 1 Prola Manager (9) 3007	h
11	Clowest Die 40 27 Canability 2nds 1821	
	• Length: 26 (04)	
1.4		
	- 1 * 1. 8000 Parameters-10011001	
	T Supported MS Set	
	G The Spatial Stream + 1111111 (***)	
	We same a support of the second secon	
	Ref Dates 2 Supporter - 0027, Colling Barty 3/4	
	Will Index 3 Supported - 16 GMM, Coding Rate: 1/1	
	- Will Index 4 Supported - 14 GMK, Coding Reter 1/4	
	- 🗣 MCF Index 6 Supported - 66 QBM. Coding Ante: 2/9	
	- • MCF Index 6 Supported - 46 QMK, Coding Actor 3/4	
	La ACE Jonda 7 Supported - 42 QMA, Coding Arter 5/4	
	We special intervent transmission (17)	
	REL Dates 9 Supported - OVE. Collar lates 1/2	
	WET Index 10 Supported - OFER, Colling Rate: 3/4	
	- 🖉 MCF Index 12 Supported - 14 GAM. Collar Aste: 1/2	
	With Index 12 Supported - 14 GAM. Coding Bates 3/4	
	- REF Index 13 Deported - 64 UAR. Colling Jates 2/7	
	 We assure as appointed = or gave concept parts of a	
	Bit Bitmark bit should be separate to be a second bit	۳
	- R Bitmack b19-0101 V00000000 [11]	
	- Bx Eltrank b17-b19 40000000 2103	
	- 9 Rx 811yuark 548 5431 90000000 (103	
	- Sx Eltman b48 0151 V000000 (14)	
	- The Billmank bill bill 19 00000000 (2013)	
	- • • • • • • • • • • • • • • • • • • •	
	• Nuclear Transition Robert Rose (201701)	
	9 Reserved) 940000 (17 Ball 0217)	
	The Supported MCS Set: VB. Dot Decision 2100 Basis (2001)	*

802.11a with N rates Enabled

p OmniPeek	. * ×					
F His Edit. View Cupture Send Monitor Tools Hindow Help	WildPachels OmniPeek					
1 Stat Page 802 Lington 802 Lington 802 Lington Page 1 (2010) 802 Lington Page 107 (20						
** N N N N N N N N N N N N N N N N N N						
Fachet Inde Fachet Raderräll Fingerörkönnnen (1997)	6 -7 Align Chairelds \$210 Mile					
(0-21) HET, 13 KRC Reader Version-O Type-VOL Assessment Subtype-VLOD Descen Designation-O Redesenant Destination-PEPPEPEPEPEPEPEPEPEPEPEPEPE						
1 887 11 Encarpror M Reserva						
- Brauss Internal (MA (N-10)						
* T Capability Tain-1000000000000000000000000000000000000						
* T SID Det 1120 Land SID-N						
T Sales Del Inter Level Raised, 0 Kpc Ralest, 0 Kpc Rales21, 0 Kpc Rales24, 0 Kpc Rales24, 0 Kpc Rales34, 0 Kpc Rales34, 0 Kpc Rales34, 0 Kpc						
a T the B-3 DM Loss-4 BTH Forst-0 BTH Forst-0 Bitter Control - Control For York Rep-Child South Control - Control	and these lines in the second s					
2 Control with the second s	The first the proper considering a proper-					
T II Canadity Infe	earon frame including					
Compatible 43 AT Capability Date (80)	MODUL and MCS rates					
- • Length: 86 (14)	WP DU and MGa rales					
a T M (apphiling Tabe-600110000131100	pported					
a T & STOR Terrent Converting - VOCUMENT The The State of the State	A DATE AND ADDRESS OF A DATE OF					
THE Except Control of the Information Control of the Information						
The Beam Forming Capability (TallF)						
* T Astemas Selection Capability (BEE)-40000000						
- T his of Index Book Add of Index General Primary Channel-40						
T B-10 Let March 000000000						
a T the second set is the set of the second set of the set of t						
a T Finder Sectific Bolt Vestor Recific Las-5 000-00-40-46 Version-5 000 Version-5						
a T Tender Specific ID-221 Vender Specific Least 600-00-00 Balan(2 Syles)						
a Y <u>Pressee Type:11:0</u> 30-011 Vector Dy-0100 taxa-5 400-00-40-80 Bata+(1 bytes)						
T FIS - Frame Check Segment						
- CEI CEIDERE CLIMETER						

802.11A Beacon frame

p	OmniPeek x				
He Edt New Capture Send Monitor Tools Window Heb	WildPackets OmniPeek				
2-0-0-0 RERE 44 9720001* E	03				
Start Page 802.11apkt 802.11n_40M-b.pkt 802.11apkt - Packet #57	x 602.11n_40H8.pit - Packet #110				
##INDIAL918381 93					
# Nachet Info Packet Baber-S7 Fieps-Be0000000 Stenus-Be000000	00 Tucket Length-150 Timestamp-17:29:22.503699000 82/23/2010 Data Rate-12 6 .0 Mpc Chao-26 5100 MBr 5				
# T (0-23) 802.11 KBC Reader Version-0 Type-100 Xataprast: Subtype-1200 3	eacon Demotion-O Microsocoulo Destination-PFoFFoFFoFFoFFoFFoFFoFFoFFoFFoFFoFFoFFoF				
2 T H7.11 Kenaperent - Beaces					
Timestamp: 3754066 Astrosecunds [24-31]					
T Conductive Information					
- T SID D-0 SID Los-2 SID-77					
T Rates- ID-1 Jutes: Len-I Rate-6.0 Kips Rate-9.0 Kips Rate-12.0 Kips Rate-	T Tales Del Antes Level Rateri, S Non Rateri, S Non Rateri, S Non Raterik, S Non				
* TID- D-5 720: Les-4 0101 Great-0 0102 Period-1 001map Control-40000000 Pert Virt Basp-Ox00					
# T Country Dev Country Level Country Code-05 Starting Causel-06 Poster of Causels-4 Ras To Power (dBig-05 Starting Causels-62 Rober of Causels-4 Ras To Power (dBig-05 Starting Causels-62 Rober of Causels-64 Ras To Power (dBig-05 Starting Causels-62 Rober of Causels-64 Ras To Power (dBig-05 Starting Causels-62 Rober of Causels-64 Ras To Power (dBig-05 Starting Cau					
* T 000- 0-11 (000: Les-5 Station Count-0 Channel Willington-Ocid + Annil	* T mose B-41 (MS): Least Station Grantel Utilization-Ocid # Small Medianian Coparity-0307				
T ID-150 Let-4 Table-000409900000					
a T State Design The The Control of the Local Official Action 1 Internal States of Control of Co	Sect Personne				
T Traine Specific D-021 Vender Specific Land 00-00-40-96 Version-0 002 5	Persian-S				
a T Vender Specific ID-221 Vender Specific Lan-5 000-00-40-96 Data-(2 bytes)					
in T Sendor Specific IB-021 Vender Specific Len-5 (00-00-40-96 Buta-(2 bytes)					
= 1 TCS - True Cleck Separate					
• PCS: 0x5142032 Calculated					

Información Relacionada

Soporte Técnico y Documentación - Cisco Systems