
Cisco AP 1
Client E
Broadcast
Client L
Client V
Client W
Cisco AP 11a
Cisco AP 11b
Client U
Client AB
Cisco AP 14a
qos_marking_bittiumsd41_alloy_wlan.pcapng
QoS Data (0x0028)
Dst 18:01:e3:04:fe:4a
Src 00:23:5d:c9:5a:c7
BSS 84:b2:61:24:a2:00
Seq 2452
TID 2
Priority Spare (Background) (2)
Len 36
[Frame 1] 802.11 QoS Data — TID (Traffic Identifier) maps to WMM Access Category: TID 0-2=Best Effort (AC_BE), 3=Background (AC_BK), 4-5=Video (AC_VI), 6-7=Voice (AC_VO)
QoS Data (0x0028)
Dst 00:23:5d:c9:5a:c7
Src 18:01:e3:04:fe:4a
BSS 84:b2:61:24:a2:00
Seq 638
TID 0
Priority Best Effort (Best Effort) (0)
Len 36
[Frame 2] 802.11 QoS Data — TID (Traffic Identifier) maps to WMM Access Category: TID 0-2=Best Effort (AC_BE), 3=Background (AC_BK), 4-5=Video (AC_VI), 6-7=Voice (AC_VO)
Block Ack (0x0019)
Policy Immediate Acknowledgement Required
Type Compressed BlockAck
Bitmap 0700000000000000
Last ACK 638
[Frame 3] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead
ACK (0x001d)
RA 18:01:e3:04:fe:4a
Frame 7 | 2017-01-23T19:45:51.099373Z
Beacon frame (0x0008)
BSS 84:b2:61:24:a2:00
Seq 931
Beacon Interval 0.104448 [Seconds]
DTIM count 0
[Frame 8] Beacon — AP announces its presence at Beacon Interval (usually 100 TU = 102.4ms); carries SSID, supported rates, DTIM count, RSN info; basis for passive scanning

📡 Cisco AP 1	📱 Client E	📢 Broadcast	📱 Client L	📱 Client V	📱 Client W	📡 Cisco AP 11a	📡 Cisco AP 11b	📱 Client U	📱 Client AB	📡 Cisco AP 14a

✅ Block Ack (0x0019)

📋 Policy	Immediate Acknowledgement Required
📋 Type	Compressed BlockAck
📊 Bitmap	0f00000000000000
✅ Last ACK	639

💡 [Frame 12] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead

✅ Block Ack (0x0019)

📋 Policy	Immediate Acknowledgement Required
📋 Type	Compressed BlockAck
📊 Bitmap	1f00000000000000
✅ Last ACK	640

💡 [Frame 16] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead

✅ Block Ack (0x0019)

📋 Policy	Immediate Acknowledgement Required
📋 Type	Compressed BlockAck
📊 Bitmap	3f00000000000000
✅ Last ACK	641

💡 [Frame 19] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead

📡 RTS (0x001b)

⏱️ Duration	376 µs

💡 [Frame 27] RTS (Request to Send) — collision avoidance for large frames; reserves the medium via NAV (Network Allocation Vector); receiver replies with CTS to grant access

✅ Block Ack (0x0019)

📋 Policy	Immediate Acknowledgement Required
📋 Type	Compressed BlockAck
📊 Bitmap	ff00000000000000
✅ Last ACK	643

💡 [Frame 30] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead

✅ Block Ack (0x0019)

📋 Policy	Immediate Acknowledgement Required

💡 [Frame 33] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by


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Type
Compressed BlockAck
Bitmap
ff01000000000000
Last ACK
644
Block Ack (0x0019)
Policy
Immediate Acknowledgement Required
Type
Compressed BlockAck
Bitmap
ff07000000000000
Last ACK
646
Block Ack (0x0019)
Policy
Immediate Acknowledgement Required
Type
Compressed BlockAck
Bitmap
0100000000000000
Last ACK
648
Block Ack (0x0019)
Policy
Immediate Acknowledgement Required
Type
Compressed BlockAck
Bitmap
0300000000000000
Last ACK
649
Block Ack (0x0019)
Policy
Immediate Acknowledgement Required
Type
Compressed BlockAck
Bitmap
0f00000000000000
Last ACK
651
Block Ack (0x0019)
Policy
Immediate Acknowledgement Required
Type
Compressed BlockAck
reducing per-frame ACK overhead
[Frame 42] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead
[Frame 50] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead
[Frame 53] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead
[Frame 67] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead
[Frame 70] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead

Cisco AP 1 | Client E | Broadcast | Client L | Client V | Client W | Cisco AP 11a | Cisco AP 11b | Client U | Client AB | Cisco AP 14a

Bitmap	1f00000000000000
Last ACK	652

Block Ack (0x0019)

Policy	Immediate Acknowledgement Required
Type	Compressed BlockAck
Bitmap	0300000000000000
Last ACK	654

[Frame 78] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead

Block Ack (0x0019)

Policy	Immediate Acknowledgement Required
Type	Compressed BlockAck
Bitmap	0700000000000000
Last ACK	655

[Frame 82] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead

Block Ack (0x0019)

Policy	Immediate Acknowledgement Required
Type	Compressed BlockAck
Bitmap	0f00000000000000
Last ACK	656

[Frame 87] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead

Block Ack (0x0019)

Policy	Immediate Acknowledgement Required
Type	Compressed BlockAck
Bitmap	1f00000000000000
Last ACK	657

[Frame 90] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead

Block Ack (0x0019)

Policy	Immediate Acknowledgement Required
Type	Compressed BlockAck
Bitmap	3f00000000000000

[Frame 94] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead


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Client W
Cisco AP 11a
Cisco AP 11b
Client U
Client AB
Cisco AP 14a
Last ACK 658
Block Ack (0x0019)
Policy Immediate Acknowledgement Required
Type Compressed BlockAck
Bitmap 7f00000000000000
Last ACK 659
[Frame 101] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead
Block Ack (0x0019)
Policy Immediate Acknowledgement Required
Type Compressed BlockAck
Bitmap ff00000000000000
Last ACK 660
[Frame 104] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead
Block Ack (0x0019)
Policy Immediate Acknowledgement Required
Type Compressed BlockAck
Bitmap ff01000000000000
Last ACK 661
[Frame 108] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead
Block Ack (0x0019)
Policy Immediate Acknowledgement Required
Type Compressed BlockAck
Bitmap ff03000000000000
Last ACK 662
[Frame 113] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead
Block Ack (0x0019)
Policy Immediate Acknowledgement Required
Type Compressed BlockAck
Bitmap 0100000000000000
Last ACK 664
[Frame 125] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead

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✅ Block Ack (0x0019)

📋 Policy	Immediate Acknowledgement Required
📋 Type	Compressed BlockAck
📊 Bitmap	0300000000000000
✅ Last ACK	665

💡 [Frame 129] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead

✅ Block Ack (0x0019)

📋 Policy	Immediate Acknowledgement Required
📋 Type	Compressed BlockAck
📊 Bitmap	0700000000000000
✅ Last ACK	666

💡 [Frame 131] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead

✅ Block Ack (0x0019)

📋 Policy	Immediate Acknowledgement Required
📋 Type	Compressed BlockAck
📊 Bitmap	0f00000000000000
✅ Last ACK	667

💡 [Frame 138] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead

✅ Block Ack (0x0019)

📋 Policy	Immediate Acknowledgement Required
📋 Type	Compressed BlockAck
📊 Bitmap	1f00000000000000
✅ Last ACK	668

💡 [Frame 141] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead

✅ Block Ack (0x0019)

📋 Policy	Immediate Acknowledgement Required
📋 Type	Compressed BlockAck
📊 Bitmap	3f00000000000000
✅ Last ACK	669

💡 [Frame 143] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead

✅ Block Ack (0x0019)

💡 [Frame 150] Block Ack — acknowledges multiple MPDUs in a


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📡 Cisco AP 11b
📱 Client U
📱 Client AB
📡 Cisco AP 14a
📋 Policy
Immediate Acknowledgement Required
📋 Type
Compressed BlockAck
📊 Bitmap
7f00000000000000
✅ Last ACK
670
✅ Block Ack (0x0019)
single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead
📋 Policy
Immediate Acknowledgement Required
📋 Type
Compressed BlockAck
📊 Bitmap
ff01000000000000
✅ Last ACK
672
✅ Block Ack (0x0019)
💡 [Frame 154] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead
📋 Policy
Immediate Acknowledgement Required
📋 Type
Compressed BlockAck
📊 Bitmap
ff03000000000000
✅ Last ACK
673
✅ Block Ack (0x0019)
💡 [Frame 160] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead
📋 Policy
Immediate Acknowledgement Required
📋 Type
Compressed BlockAck
📊 Bitmap
ff0f000000000000
✅ Last ACK
675
✅ Block Ack (0x0019)
💡 [Frame 164] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead
📋 Policy
Immediate Acknowledgement Required
📋 Type
Compressed BlockAck
📊 Bitmap
ff1f000000000000
✅ Last ACK
676
✅ Block Ack (0x0019)
💡 [Frame 168] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead
✅ Block Ack (0x0019)
💡 [Frame 172] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates

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Policy	Immediate Acknowledgement Required
Type	Compressed BlockAck
Bitmap	0100000000000000
Last ACK	677

which sequence numbers were received; improves throughput by reducing per-frame ACK overhead

Probe Request (0x0004)

Dst	ff:ff:ff:ff:ff:ff
Src	18:01:e3:04:fe:4a
Seq	221

[Frame 177] Probe Request — active scanning: client solicits responses from APs; directed (specific SSID) or wildcard (broadcast SSID); faster than passive scanning (beacon-only)

Probe Request (0x0004)

Dst	ff:ff:ff:ff:ff:ff
Src	18:01:e3:04:fe:4a
Seq	222

[Frame 178] Probe Request — active scanning: client solicits responses from APs; directed (specific SSID) or wildcard (broadcast SSID); faster than passive scanning (beacon-only)

Probe Request (0x0004)

Dst	ff:ff:ff:ff:ff:ff
Src	18:01:e3:04:fe:4a
Seq	223

[Frame 179] Probe Request — active scanning: client solicits responses from APs; directed (specific SSID) or wildcard (broadcast SSID); faster than passive scanning (beacon-only)

Probe Request (0x0004)

Dst	ff:ff:ff:ff:ff:ff
Src	18:01:e3:04:fe:4a
Seq	224

[Frame 181] Probe Request — active scanning: client solicits responses from APs; directed (specific SSID) or wildcard (broadcast SSID); faster than passive scanning (beacon-only)

Probe Response (0x0005)

Dst	18:01:e3:04:fe:4a
Src	00:7f:28:4b:ab:d5
BSS	00:7f:28:4b:ab:d5
Seq	1048
Capabilities Information	0x0431

[Frame 182] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

Probe Response (0x0005)

Dst	18:01:e3:04:fe:4a
Src	00:7f:28:4b:ab:d5
BSS	00:7f:28:4b:ab:d5
Seq	1048

[Frame 183] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

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Capabilities Information	0x0431

Probe Response (0x0005)

Dst	18:01:e3:04:fe:4a
Src	00:7f:28:4b:ab:d5
BSS	00:7f:28:4b:ab:d5
Seq	1048
Capabilities Information	0x0431

[Frame 184] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

Probe Response (0x0005)

Dst	18:01:e3:04:fe:4a
Src	00:7f:28:4b:ab:d5
BSS	00:7f:28:4b:ab:d5
Seq	1048
Capabilities Information	0x0431

[Frame 185] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

Probe Response (0x0005)

Dst	18:01:e3:04:fe:4a
Src	00:7f:28:4b:ab:d5
BSS	00:7f:28:4b:ab:d5
Seq	1048
Capabilities Information	0x0431

[Frame 186] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

Probe Response (0x0005)

Dst	18:01:e3:04:fe:4a
Src	00:7f:28:4b:ab:d5
BSS	00:7f:28:4b:ab:d5
Seq	1048
Capabilities Information	0x0431

[Frame 187] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

Probe Response (0x0005)

Dst	18:01:e3:04:fe:4a
Src	84:b2:61:24:a2:00
BSS	84:b2:61:24:a2:00
Seq	2407
Capabilities Information	0x1421

[Frame 188] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

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Client E → Client L: Probe Response (0x0005)

Dst	18:01:e3:04:fe:4a
Src	00:7f:28:4b:ab:d5
BSS	00:7f:28:4b:ab:d5
Seq	1048
Capabilities Information	0x0431

[Frame 189] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

Client E → Client L: Probe Response (0x0005)

Dst	18:01:e3:04:fe:4a
Src	00:7f:28:4b:ab:d5
BSS	00:7f:28:4b:ab:d5
Seq	1048
Capabilities Information	0x0431

[Frame 190] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

Client E → Client L: Probe Response (0x0005)

Dst	18:01:e3:04:fe:4a
Src	00:7f:28:4b:ab:d5
BSS	00:7f:28:4b:ab:d5
Seq	1048
Capabilities Information	0x0431

[Frame 191] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

Client E → Broadcast: Probe Request (0x0004)

Dst	ff:ff:ff:ff:ff:ff
Src	18:01:e3:04:fe:4a
Seq	229

[Frame 192] Probe Request — active scanning: client solicits responses from APs; directed (specific SSID) or wildcard (broadcast SSID); faster than passive scanning (beacon-only)

Client L → Client E: Probe Response (0x0005)

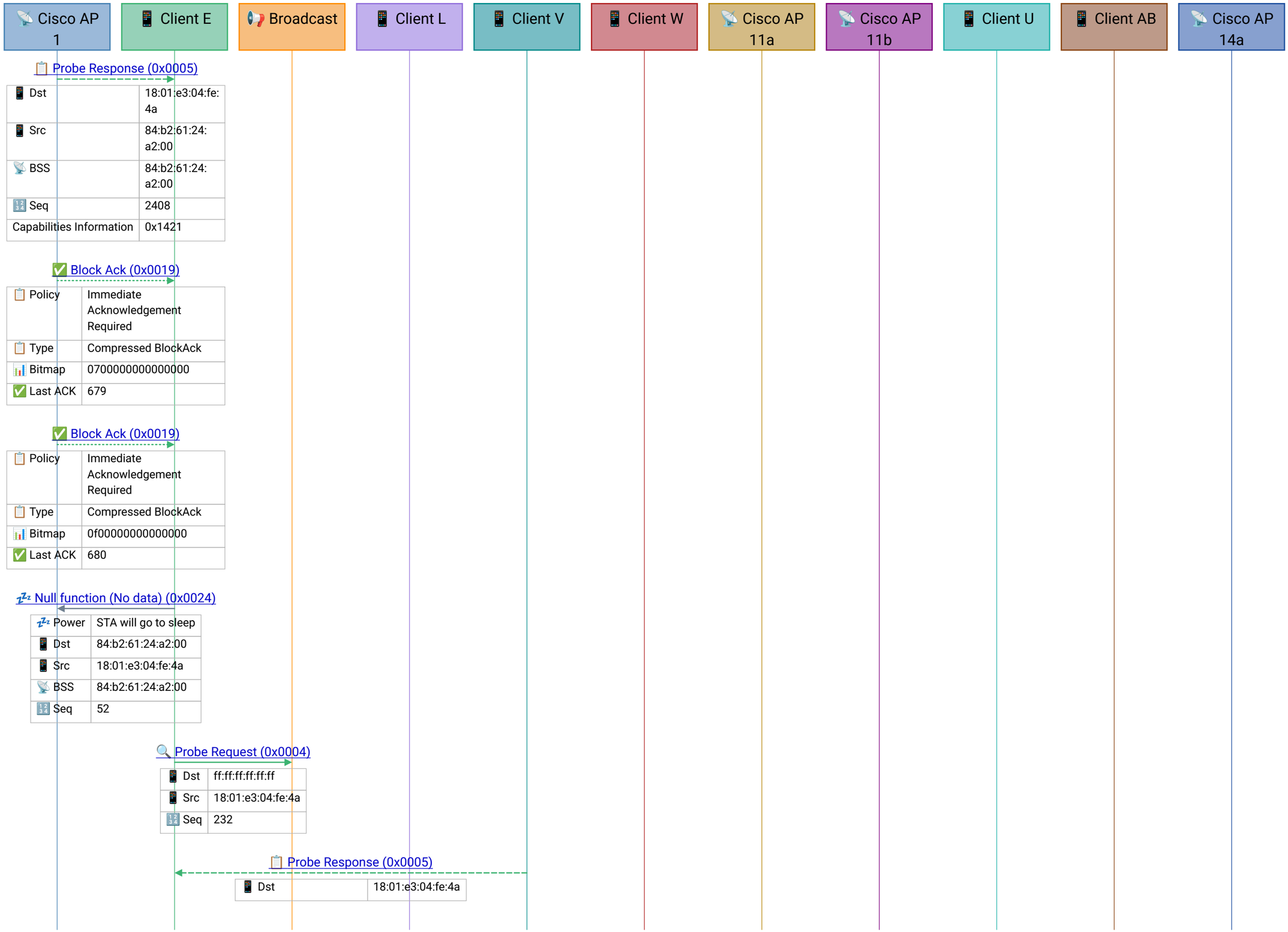
Dst	18:01:e3:04:fe:4a
Src	00:7f:28:4b:ab:d5
BSS	00:7f:28:4b:ab:d5
Seq	1048
Capabilities Information	0x0431

[Frame 193] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

Client E → Broadcast: Probe Request (0x0004)

Dst	ff:ff:ff:ff:ff:ff
Src	18:01:e3:04:fe:4a
Seq	230

[Frame 194] Probe Request — active scanning: client solicits responses from APs; directed (specific SSID) or wildcard (broadcast SSID); faster than passive scanning (beacon-only)



💡 [Frame 195] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

💡 [Frame 202] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead

💡 [Frame 204] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead

💡 [Frame 210] Null Data — no payload; used for power management signaling: PWR MGT=1 tells AP the client is going to sleep (AP buffers frames); PWR MGT=0 means client is awake

💡 [Frame 212] Probe Request — active scanning: client solicits responses from APs; directed (specific SSID) or wildcard (broadcast SSID); faster than passive scanning (beacon-only)

💡 [Frame 213] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to

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Src	d8:97:ba:fd:43:e8
BSS	d8:97:ba:fd:43:e8
Seq	2131
Capabilities Information	0x0431

select best AP for association

Probe Response (0x0005)

Dst	18:01:e3:04:fe:4a
Src	d8:97:ba:fd:43:e8
BSS	d8:97:ba:fd:43:e8
Seq	2131
Capabilities Information	0x0431

[Frame 214] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

Probe Request (0x0004)

Dst	ff:ff:ff:ff:ff:ff
Src	18:01:e3:04:fe:4a
Seq	233

[Frame 215] Probe Request — active scanning: client solicits responses from APs; directed (specific SSID) or wildcard (broadcast SSID); faster than passive scanning (beacon-only)

Probe Response (0x0005)

Dst	18:01:e3:04:fe:4a
Src	d8:97:ba:fd:43:e8
BSS	d8:97:ba:fd:43:e8
Seq	2131
Capabilities Information	0x0431

[Frame 216] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

Probe Response (0x0005)

Dst	18:01:e3:04:fe:4a
Src	d8:97:ba:fd:43:ea
BSS	d8:97:ba:fd:43:ea
Seq	2021
Capabilities Information	0x0421

[Frame 217] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

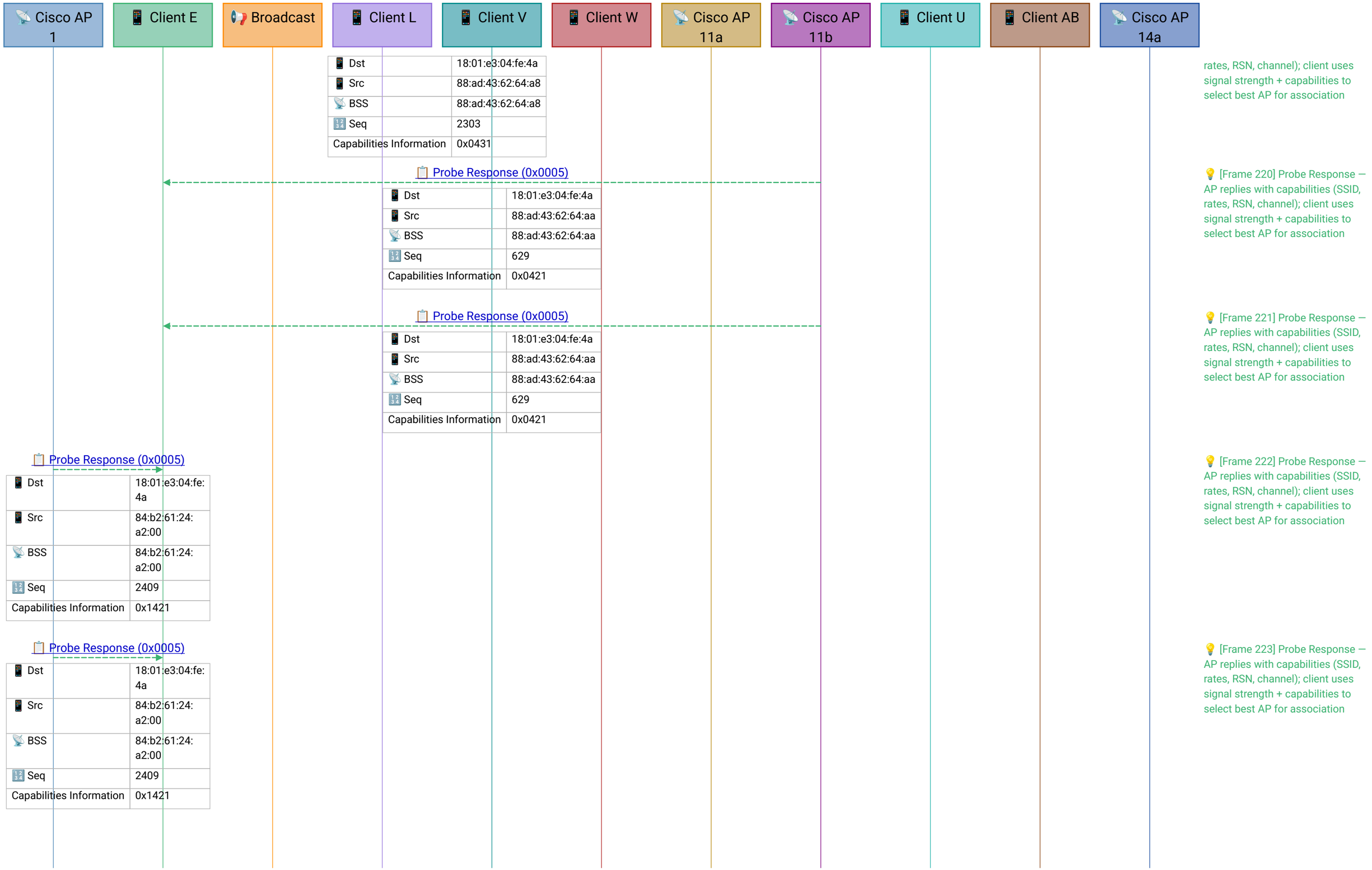
Probe Response (0x0005)

Dst	18:01:e3:04:fe:4a
Src	d8:97:ba:fd:43:ea
BSS	d8:97:ba:fd:43:ea
Seq	2021
Capabilities Information	0x0421

[Frame 218] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

Probe Response (0x0005)

[Frame 219] Probe Response — AP replies with capabilities (SSID,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Cisco AP 14a
Dst 18:01:e3:04:fe:4a
Src 88:ad:43:62:64:a8
BSS 88:ad:43:62:64:a8
Seq 2303
Capabilities Information 0x0431
rates, RSN, channel); client uses signal strength + capabilities to select best AP for association
Probe Response (0x0005)
Dst 18:01:e3:04:fe:4a
Src 88:ad:43:62:64:aa
BSS 88:ad:43:62:64:aa
Seq 629
Capabilities Information 0x0421
[Frame 220] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association
Probe Response (0x0005)
Dst 18:01:e3:04:fe:4a
Src 88:ad:43:62:64:aa
BSS 88:ad:43:62:64:aa
Seq 629
Capabilities Information 0x0421
[Frame 221] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association
Probe Response (0x0005)
Dst 18:01:e3:04:fe:4a
Src 84:b2:61:24:a2:00
BSS 84:b2:61:24:a2:00
Seq 2409
Capabilities Information 0x1421
[Frame 222] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association
Probe Response (0x0005)
Dst 18:01:e3:04:fe:4a
Src 84:b2:61:24:a2:00
BSS 84:b2:61:24:a2:00
Seq 2409
Capabilities Information 0x1421
[Frame 223] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

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Probe Response (0x0005)

Dst	18:01:e3:04:fe:4a
Src	84:b2:61:24:a2:00
BSS	84:b2:61:24:a2:00
Seq	2410
Capabilities Information	0x1421

[Frame 224] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

Probe Response (0x0005)

Dst	18:01:e3:04:fe:4a
Src	84:b2:61:24:a2:00
BSS	84:b2:61:24:a2:00
Seq	2410
Capabilities Information	0x1421

[Frame 225] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

Probe Request (0x0004)

Dst	ff:ff:ff:ff:ff:ff
Src	18:01:e3:04:fe:4a
Seq	238

[Frame 226] Probe Request — active scanning: client solicits responses from APs; directed (specific SSID) or wildcard (broadcast SSID); faster than passive scanning (beacon-only)

Probe Response (0x0005)

Dst	18:01:e3:04:fe:4a
Src	d8:97:ba:fd:43:e8
BSS	d8:97:ba:fd:43:e8
Seq	2133
Capabilities Information	0x0431

[Frame 227] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

Probe Response (0x0005)

Dst	18:01:e3:04:fe:4a
Src	88:ad:43:62:64:a8
BSS	88:ad:43:62:64:a8
Seq	2304
Capabilities Information	0x0431

[Frame 228] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

Probe Response (0x0005)

[Frame 229] Probe Response — AP replies with capabilities (SSID,

Cisco AP 1 | Client E | Broadcast | Client L | Client V | Client W | Cisco AP 11a | Cisco AP 11b | Client U | Client AB | Cisco AP 14a

Dst	18:01:e3:04:fe:4a
Src	88:ad:43:62:64:a8
BSS	88:ad:43:62:64:a8
Seq	2304
Capabilities Information	0x0431

rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

📋 Probe Response (0x0005)

Dst	18:01:e3:04:fe:4a
Src	d8:97:ba:fd:43:e8
BSS	d8:97:ba:fd:43:e8
Seq	2133
Capabilities Information	0x0431

💡 [Frame 230] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

📋 Probe Response (0x0005)

Dst	18:01:e3:04:fe:4a
Src	d8:97:ba:fd:43:e8
BSS	d8:97:ba:fd:43:e8
Seq	2133
Capabilities Information	0x0431

💡 [Frame 231] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

📋 Probe Response (0x0005)

Dst	18:01:e3:04:fe:4a
Src	d8:97:ba:fd:43:ea
BSS	d8:97:ba:fd:43:ea
Seq	2023
Capabilities Information	0x0421

💡 [Frame 232] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

📋 Probe Response (0x0005)

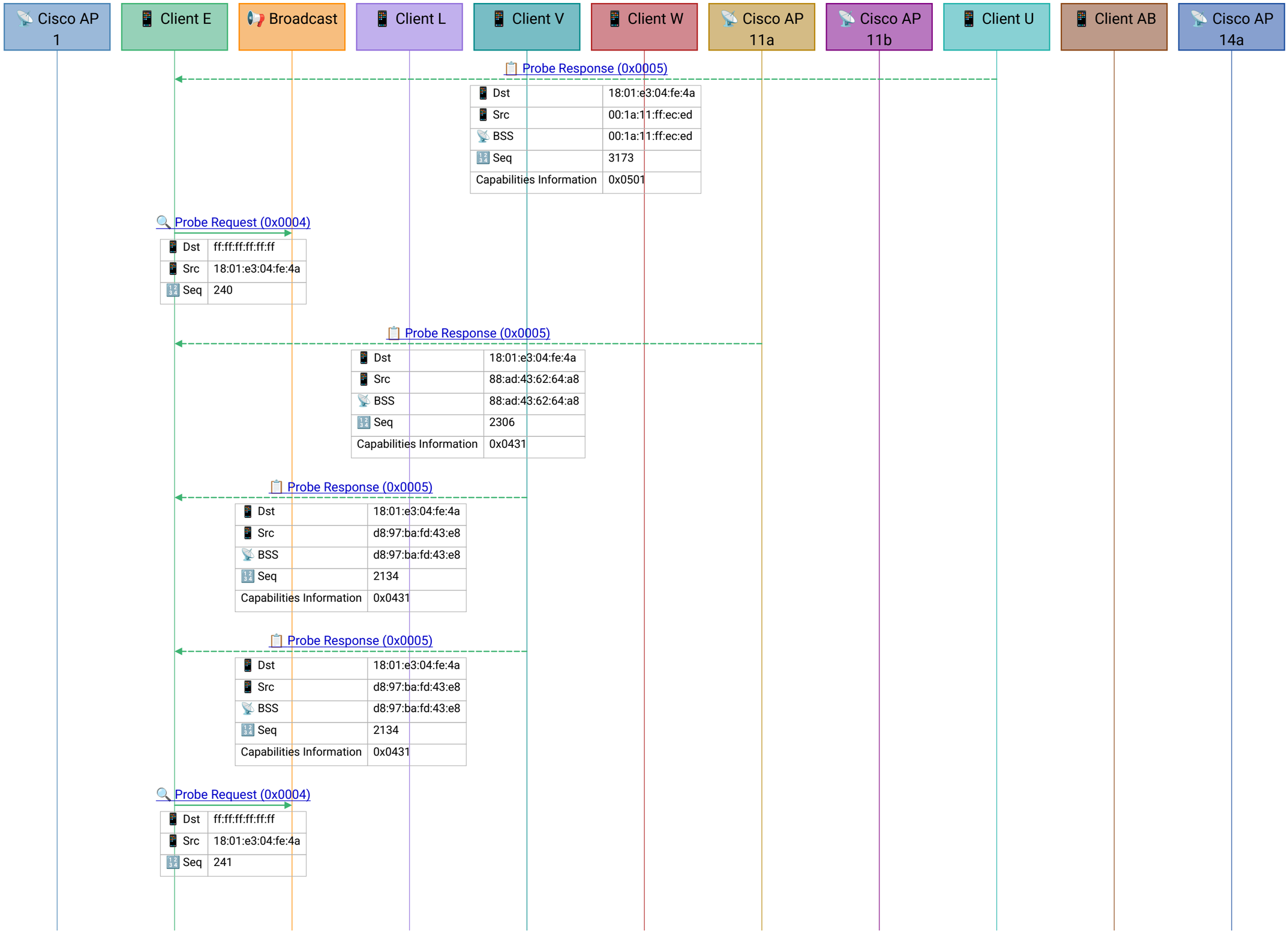
Dst	18:01:e3:04:fe:4a
Src	d8:97:ba:fd:43:ea
BSS	d8:97:ba:fd:43:ea
Seq	2023
Capabilities Information	0x0421

💡 [Frame 233] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

🔍 Probe Request (0x0004)

Dst	ff:ff:ff:ff:ff:ff
Src	18:01:e3:04:fe:4a
Seq	239

💡 [Frame 234] Probe Request — active scanning: client solicits responses from APs; directed (specific SSID) or wildcard (broadcast SSID); faster than passive scanning (beacon-only)



💡 [Frame 235] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

💡 [Frame 236] Probe Request — active scanning: client solicits responses from APs; directed (specific SSID) or wildcard (broadcast SSID); faster than passive scanning (beacon-only)

💡 [Frame 237] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

💡 [Frame 238] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

💡 [Frame 239] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

💡 [Frame 240] Probe Request — active scanning: client solicits responses from APs; directed (specific SSID) or wildcard (broadcast SSID); faster than passive scanning (beacon-only)

📡 Cisco AP 1 | 📱 Client E | 📢 Broadcast | 📱 Client L | 📱 Client V | 📱 Client W | 📡 Cisco AP 11a | 📡 Cisco AP 11b | 📱 Client U | 📱 Client AB | 📡 Cisco AP 14a

📋 Probe Response (0x0005)

📱 Dst	18:01:e3:04:fe:4a
📱 Src	00:7f:28:4b:ab:d5
📡 BSS	00:7f:28:4b:ab:d5
🔢 Seq	1050
Capabilities Information	0x0431

💡 [Frame 241] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

📋 Probe Response (0x0005)

📱 Dst	18:01:e3:04:fe:4a
📱 Src	d8:97:ba:fd:43:ea
📡 BSS	d8:97:ba:fd:43:ea
🔢 Seq	2024
Capabilities Information	0x0421

💡 [Frame 243] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

📋 Probe Response (0x0005)

📱 Dst	18:01:e3:04:fe:4a
📱 Src	f8:e4:fb:be:37:99
📡 BSS	f8:e4:fb:be:37:99
🔢 Seq	328
Capabilities Information	0x0431

💡 [Frame 244] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

📋 Probe Response (0x0005)

📱 Dst	18:01:e3:04:fe:4a
📱 Src	f8:e4:fb:be:37:99
📡 BSS	f8:e4:fb:be:37:99
🔢 Seq	328
Capabilities Information	0x0431

💡 [Frame 245] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

📋 Probe Response (0x0005)

📱 Dst	18:01:e3:04:fe:4a
📱 Src	f8:e4:fb:be:37:99
📡 BSS	f8:e4:fb:be:37:99
🔢 Seq	328
Capabilities Information	0x0431

💡 [Frame 246] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

📋 Probe Response (0x0005)

📱 Dst	18:01:e3:04:fe:4a
📱 Src	f8:e4:fb:be:37:99

💡 [Frame 247] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

📡 Cisco AP 1 | 📱 Client E | 📢 Broadcast | 📱 Client L | 📱 Client V | 📱 Client W | 📡 Cisco AP 11a | 📡 Cisco AP 11b | 📱 Client U | 📱 Client AB | 📡 Cisco AP 14a

📡 BSS	f8:e4:fb:be:37:99
🔢 Seq	328
Capabilities Information	0x0431

📋 Probe Response (0x0005)

📱 Dst	18:01:e3:04:fe:4a
📱 Src	84:b2:61:24:a2:00
📡 BSS	84:b2:61:24:a2:00
🔢 Seq	2410
Capabilities Information	0x1421

💡 [Frame 248] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

📋 Probe Response (0x0005)

📱 Dst	18:01:e3:04:fe:4a
📱 Src	f8:e4:fb:be:37:99
📡 BSS	f8:e4:fb:be:37:99
🔢 Seq	328
Capabilities Information	0x0431

💡 [Frame 249] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

📋 Probe Response (0x0005)

📱 Dst	18:01:e3:04:fe:4a
📱 Src	84:b2:61:24:a2:00
📡 BSS	84:b2:61:24:a2:00
🔢 Seq	2411
Capabilities Information	0x1421

💡 [Frame 250] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

📋 Probe Response (0x0005)

📱 Dst	18:01:e3:04:fe:4a
📱 Src	84:b2:61:24:a2:00
📡 BSS	84:b2:61:24:a2:00
🔢 Seq	2411
Capabilities Information	0x1421

💡 [Frame 251] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

📡 Cisco AP 1	📱 Client E	📢 Broadcast	📱 Client L	📱 Client V	📱 Client W	📡 Cisco AP 11a	📡 Cisco AP 11b	📱 Client U	📱 Client AB	📡 Cisco AP 14a

📋 Probe Response (0x0005)

📱 Dst	18:01:e3:04:fe:4a
📱 Src	84:b2:61:24:a2:00
📡 BSS	84:b2:61:24:a2:00
🔢 Seq	2411
Capabilities Information	0x1421

💡 [Frame 252] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

📋 Probe Response (0x0005)

📱 Dst	18:01:e3:04:fe:4a
📱 Src	84:b2:61:24:a2:00
📡 BSS	84:b2:61:24:a2:00
🔢 Seq	2412
Capabilities Information	0x1421

💡 [Frame 253] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

📋 Probe Response (0x0005)

📱 Dst	18:01:e3:04:fe:4a
📱 Src	84:b2:61:24:a2:00
📡 BSS	84:b2:61:24:a2:00
🔢 Seq	2412
Capabilities Information	0x1421

💡 [Frame 254] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

📋 Probe Response (0x0005)

📱 Dst	18:01:e3:04:fe:4a
📱 Src	84:b2:61:24:a2:00
📡 BSS	84:b2:61:24:a2:00
🔢 Seq	2412
Capabilities Information	0x1421

💡 [Frame 255] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

📋 Probe Response (0x0005)

💡 [Frame 256] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses

Cisco AP 1	Client E	Broadcast	Client L	Client V	Client W	Cisco AP 11a	Cisco AP 11b	Client U	Client AB	Cisco AP 14a

Dst	18:01:e3:04:fe:4a
Src	84:b2:61:24:a2:00
BSS	84:b2:61:24:a2:00
Seq	2413
Capabilities Information	0x1421

Probe Response (0x0005) →

signal strength + capabilities to select best AP for association

Dst	18:01:e3:04:fe:4a
Src	84:b2:61:24:a2:00
BSS	84:b2:61:24:a2:00
Seq	2413
Capabilities Information	0x1421

Probe Response (0x0005) →

[Frame 257] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

Dst	18:01:e3:04:fe:4a
Src	84:b2:61:24:a2:00
BSS	84:b2:61:24:a2:00
Seq	2413
Capabilities Information	0x1421

Probe Response (0x0005) →

[Frame 258] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

Dst	18:01:e3:04:fe:4a
Src	84:b2:61:24:a2:00
BSS	84:b2:61:24:a2:00
Seq	2414
Capabilities Information	0x1421

Probe Response (0x0005) →

[Frame 259] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

Dst	18:01:e3:04:fe:4a

Probe Response (0x0005) →

[Frame 260] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

Cisco AP 1	Client E	Broadcast	Client L	Client V	Client W	Cisco AP 11a	Cisco AP 11b	Client U	Client AB	Cisco AP 14a

Src	84:b2:61:24:a2:00
BSS	84:b2:61:24:a2:00
Seq	2414
Capabilities Information	0x1421

Probe Response (0x0005) →

Dst	18:01:e3:04:fe:4a
Src	84:b2:61:24:a2:00
BSS	84:b2:61:24:a2:00
Seq	2414
Capabilities Information	0x1421

[Frame 262] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

Probe Response (0x0005) →

Dst	18:01:e3:04:fe:4a
Src	84:b2:61:24:a2:00
BSS	84:b2:61:24:a2:00
Seq	2415
Capabilities Information	0x1421

[Frame 263] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

Probe Response (0x0005) →

Dst	18:01:e3:04:fe:4a
Src	84:b2:61:24:a2:00
BSS	84:b2:61:24:a2:00
Seq	2416
Capabilities Information	0x1421

[Frame 266] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

Block Ack (0x0019) →

Policy	Immediate Acknowledgement Required
Type	Compressed BlockAck

[Frame 274] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead

Cisco AP 1 | Client E | Broadcast | Client L | Client V | Client W | Cisco AP 11a | Cisco AP 11b | Client U | Client AB | Cisco AP 14a

Bitmap	0700000000000000
Last ACK	684

Block Ack (0x0019)

Policy	Immediate Acknowledgement Required
Type	Compressed BlockAck
Bitmap	0f00000000000000
Last ACK	685

[Frame 279] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead

Probe Response (0x0005)

Dst	18:01:e3:04:fe:4a
Src	f8:e4:fb:be:37:99
BSS	f8:e4:fb:be:37:99
Seq	329
Capabilities Information	0x0431

[Frame 282] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

Probe Response (0x0005)

Dst	18:01:e3:04:fe:4a
Src	00:7f:28:4b:ab:d5
BSS	00:7f:28:4b:ab:d5
Seq	1051
Capabilities Information	0x0431

[Frame 283] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

Probe Response (0x0005)

Dst	18:01:e3:04:fe:4a
Src	00:7f:28:4b:ab:d5
BSS	00:7f:28:4b:ab:d5
Seq	1052
Capabilities Information	0x0431

[Frame 284] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

Probe Response (0x0005)

Dst	18:01:e3:04:fe:4a
Src	48:5d:36:c5:2b:b6
BSS	48:5d:36:c5:2b:b6
Seq	940
Capabilities Information	0x0431

[Frame 285] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

Cisco AP 1 | Client E | Broadcast | Client L | Client V | Client W | Cisco AP 11a | Cisco AP 11b | Client U | Client AB | Cisco AP 14a

📋 Probe Response (0x0005)

📱 Dst	18:01:e3:04:fe:4a
📱 Src	f8:e4:fb:be:37:99
📡 BSS	f8:e4:fb:be:37:99
🔢 Seq	329
Capabilities Information	0x0431

💡 [Frame 286] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

📋 Probe Response (0x0005)

📱 Dst	18:01:e3:04:fe:4a
📱 Src	f8:e4:fb:be:37:99
📡 BSS	f8:e4:fb:be:37:99
🔢 Seq	329
Capabilities Information	0x0431

💡 [Frame 287] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

📋 Probe Response (0x0005)

📱 Dst	18:01:e3:04:fe:4a
📱 Src	f8:e4:fb:be:37:99
📡 BSS	f8:e4:fb:be:37:99
🔢 Seq	329
Capabilities Information	0x0431

💡 [Frame 288] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

📋 Probe Response (0x0005)

📱 Dst	18:01:e3:04:fe:4a
📱 Src	84:b2:61:24:a2:00
📡 BSS	84:b2:61:24:a2:00
🔢 Seq	2417
Capabilities Information	0x1421

💡 [Frame 289] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

📋 Probe Response (0x0005)

📱 Dst	18:01:e3:04:fe:4a
📱 Src	84:b2:61:24:a2:00
📡 BSS	84:b2:61:24:a2:00
🔢 Seq	2418
Capabilities Information	0x1421

💡 [Frame 290] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

📡 Cisco AP 1	📱 Client E	📢 Broadcast	📱 Client L	📱 Client V	📱 Client W	📡 Cisco AP 11a	📡 Cisco AP 11b	📱 Client U	📱 Client AB	📡 Cisco AP 14a

📋 Probe Response (0x0005)

📱 Dst	18:01:e3:04:fe:4a
📱 Src	84:b2:61:24:a2:00
📡 BSS	84:b2:61:24:a2:00
🔢 Seq	2418
Capabilities Information	0x1421

💡 [Frame 291] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

📋 Probe Response (0x0005)

📱 Dst	18:01:e3:04:fe:4a
📱 Src	84:b2:61:24:a2:00
📡 BSS	84:b2:61:24:a2:00
🔢 Seq	2418
Capabilities Information	0x1421

💡 [Frame 292] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

📋 Probe Response (0x0005)

📱 Dst	18:01:e3:04:fe:4a
📱 Src	84:b2:61:24:a2:00
📡 BSS	84:b2:61:24:a2:00
🔢 Seq	2419
Capabilities Information	0x1421

💡 [Frame 294] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

📋 Probe Response (0x0005)

📱 Dst	18:01:e3:04:fe:4a
📱 Src	84:b2:61:24:a2:00
📡 BSS	84:b2:61:24:a2:00
🔢 Seq	2419
Capabilities Information	0x1421

💡 [Frame 295] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

📋 Probe Response (0x0005)

💡 [Frame 296] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses

Cisco AP 1 | Client E | Broadcast | Client L | Client V | Client W | Cisco AP 11a | Cisco AP 11b | Client U | Client AB | Cisco AP 14a

Dst	18:01:e3:04:fe:4a
Src	84:b2:61:24:a2:00
BSS	84:b2:61:24:a2:00
Seq	2419
Capabilities Information	0x1421

signal strength + capabilities to select best AP for association

Probe Response (0x0005)

Dst	18:01:e3:04:fe:4a
Src	84:b2:61:24:a2:00
BSS	84:b2:61:24:a2:00
Seq	2420
Capabilities Information	0x1421

[Frame 297] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

Probe Response (0x0005)

Dst	18:01:e3:04:fe:4a
Src	00:1a:11:ff:ec:ed
BSS	00:1a:11:ff:ec:ed
Seq	3176
Capabilities Information	0x0501

[Frame 298] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

Probe Response (0x0005)

Dst	18:01:e3:04:fe:4a
Src	00:1a:11:ff:ec:ed
BSS	00:1a:11:ff:ec:ed
Seq	3176
Capabilities Information	0x0501

[Frame 299] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

Probe Response (0x0005)

Dst	18:01:e3:04:fe:4a
Src	00:1a:11:ff:ec:ed
BSS	00:1a:11:ff:ec:ed
Seq	3176
Capabilities Information	0x0501

[Frame 300] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

📡 Cisco AP 1 | 📱 Client E | 📢 Broadcast | 📱 Client L | 📱 Client V | 📱 Client W | 📡 Cisco AP 11a | 📡 Cisco AP 11b | 📱 Client U | 📱 Client AB | 📡 Cisco AP 14a

📋 Probe Response (0x0005)

📱 Dst	18:01:e3:04:fe:4a
📱 Src	00:1a:11:ff:ec:ed
📡 BSS	00:1a:11:ff:ec:ed
🔢 Seq	3176
Capabilities Information	0x0501

💡 [Frame 301] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

📋 Probe Response (0x0005)

📱 Dst	18:01:e3:04:fe:4a
📱 Src	84:b2:61:24:a2:00
📡 BSS	84:b2:61:24:a2:00
🔢 Seq	2420
Capabilities Information	0x1421

💡 [Frame 302] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

📋 Probe Response (0x0005)

📱 Dst	18:01:e3:04:fe:4a
📱 Src	00:1a:11:ff:ec:ed
📡 BSS	00:1a:11:ff:ec:ed
🔢 Seq	3176
Capabilities Information	0x0501

💡 [Frame 303] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

🔍 Probe Request (0x0004)

📱 Dst	ff:ff:ff:ff:ff:ff
📱 Src	18:01:e3:04:fe:4a
🔢 Seq	250

💡 [Frame 304] Probe Request — active scanning: client solicits responses from APs; directed (specific SSID) or wildcard (broadcast SSID); faster than passive scanning (beacon-only)

🔍 Probe Request (0x0004)

📱 Dst	ff:ff:ff:ff:ff:ff
📱 Src	18:01:e3:04:fe:4a
🔢 Seq	251

💡 [Frame 305] Probe Request — active scanning: client solicits responses from APs; directed (specific SSID) or wildcard (broadcast SSID); faster than passive scanning (beacon-only)

✅ Block Ack (0x0019)

📋 Policy	Immediate Acknowledgement Required
📋 Type	Compressed BlockAck

💡 [Frame 314] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead

Cisco AP 1	Client E	Broadcast	Client L	Client V	Client W	Cisco AP 11a	Cisco AP 11b	Client U	Client AB	Cisco AP 14a

Bitmap	1f00000000000000
Last ACK	686

✅ Block Ack (0x0019)

Policy	Immediate Acknowledgement Required
Type	Compressed BlockAck
Bitmap	3f00000000000000
Last ACK	687

✅ Block Ack (0x0019)

Policy	Immediate Acknowledgement Required
Type	Compressed BlockAck
Bitmap	7f00000000000000
Last ACK	688

🔍 Probe Request (0x0004)

Dst	ff:ff:ff:ff:ff:ff
Src	18:01:e3:04:fe:4a
Seq	253

🔍 Probe Request (0x0004)

Dst	ff:ff:ff:ff:ff:ff
Src	18:01:e3:04:fe:4a
Seq	254

🔍 Probe Request (0x0004)

Dst	ff:ff:ff:ff:ff:ff
Src	18:01:e3:04:fe:4a
Seq	255

📋 Probe Response (0x0005)

Dst	18:01:e3:04:fe:4a
Src	00:7f:28:4b:ab:d5
BSS	00:7f:28:4b:ab:d5
Seq	1053
Capabilities Information	0x0431

💡 [Frame 316] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead

💡 [Frame 319] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead

💡 [Frame 322] Probe Request — active scanning: client solicits responses from APs; directed (specific SSID) or wildcard (broadcast SSID); faster than passive scanning (beacon-only)

💡 [Frame 323] Probe Request — active scanning: client solicits responses from APs; directed (specific SSID) or wildcard (broadcast SSID); faster than passive scanning (beacon-only)

💡 [Frame 325] Probe Request — active scanning: client solicits responses from APs; directed (specific SSID) or wildcard (broadcast SSID); faster than passive scanning (beacon-only)

💡 [Frame 326] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

📡 Cisco AP 1 | 📱 Client E | 📢 Broadcast | 📱 Client L | 📱 Client V | 📱 Client W | 📡 Cisco AP 11a | 📡 Cisco AP 11b | 📱 Client U | 📱 Client AB | 📡 Cisco AP 14a

📋 Probe Response (0x0005)

📱 Dst	18:01:e3:04:fe:4a
📱 Src	00:7f:28:4b:ab:d5
📡 BSS	00:7f:28:4b:ab:d5
🔢 Seq	1053
Capabilities Information	0x0431

💡 [Frame 327] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

📋 Probe Response (0x0005)

📱 Dst	18:01:e3:04:fe:4a
📱 Src	00:7f:28:4b:ab:d5
📡 BSS	00:7f:28:4b:ab:d5
🔢 Seq	1053
Capabilities Information	0x0431

💡 [Frame 328] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

📋 Probe Response (0x0005)

📱 Dst	18:01:e3:04:fe:4a
📱 Src	00:7f:28:4b:ab:d5
📡 BSS	00:7f:28:4b:ab:d5
🔢 Seq	1053
Capabilities Information	0x0431

💡 [Frame 329] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

📋 Probe Response (0x0005)

📱 Dst	18:01:e3:04:fe:4a
📱 Src	00:7f:28:4b:ab:d5
📡 BSS	00:7f:28:4b:ab:d5
🔢 Seq	1053
Capabilities Information	0x0431

💡 [Frame 330] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

🔍 Probe Request (0x0004)

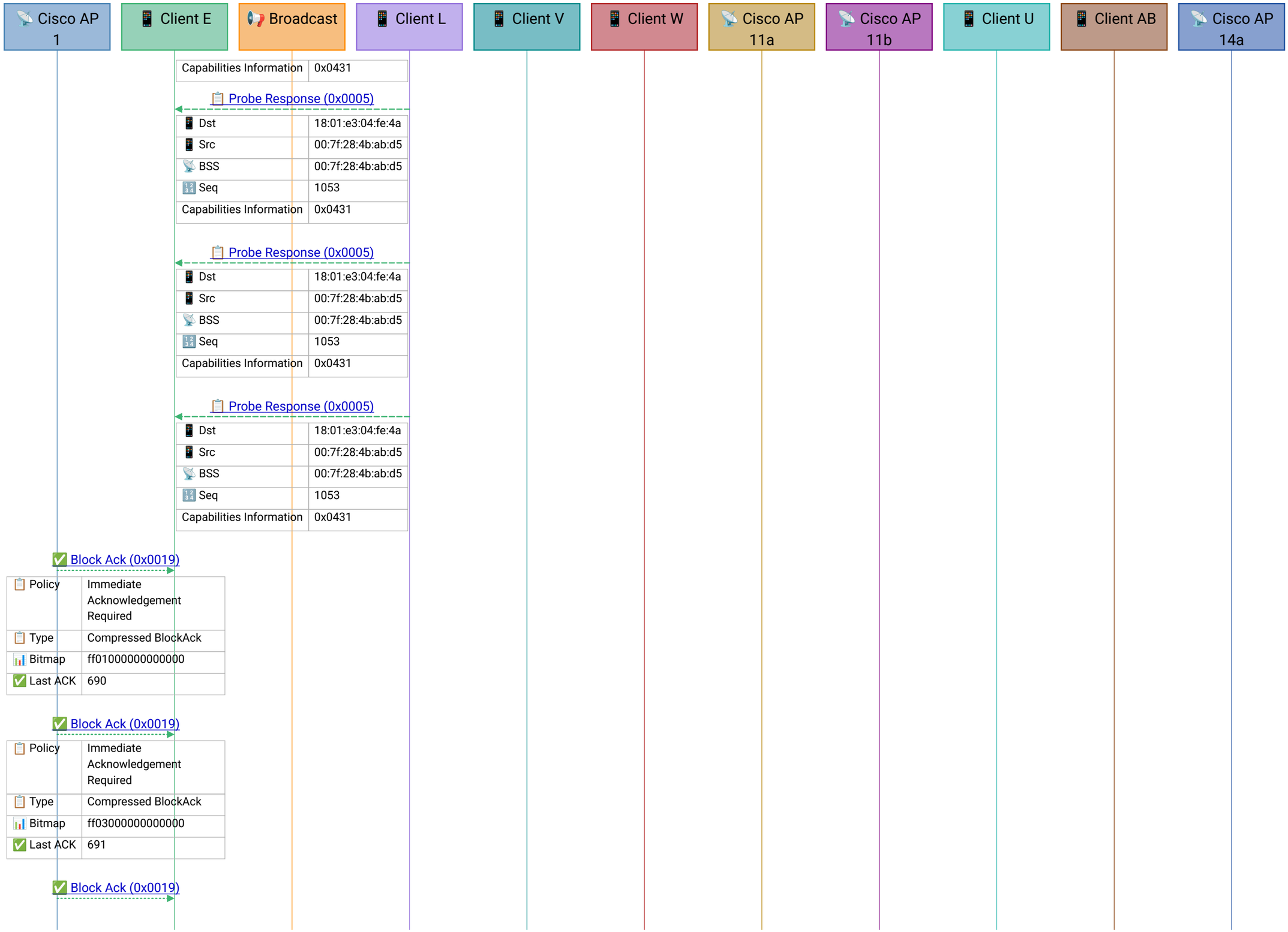
📱 Dst	ff:ff:ff:ff:ff:ff
📱 Src	18:01:e3:04:fe:4a
🔢 Seq	258

💡 [Frame 331] Probe Request — active scanning: client solicits responses from APs; directed (specific SSID) or wildcard (broadcast SSID); faster than passive scanning (beacon-only)

📋 Probe Response (0x0005)

📱 Dst	18:01:e3:04:fe:4a
📱 Src	00:7f:28:4b:ab:d5
📡 BSS	00:7f:28:4b:ab:d5
🔢 Seq	1053

💡 [Frame 332] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association



💡 [Frame 333] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

💡 [Frame 334] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

💡 [Frame 335] Probe Response — AP replies with capabilities (SSID, rates, RSN, channel); client uses signal strength + capabilities to select best AP for association

💡 [Frame 344] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead

💡 [Frame 347] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead

💡 [Frame 350] Block Ack — acknowledges multiple MPDUs in a


Cisco AP 1
Client E
Broadcast
Client L
Client V
Client W
Cisco AP 11a
Cisco AP 11b
Client U
Client AB
Cisco AP 14a
Policy
Immediate Acknowledgement Required
Type
Compressed BlockAck
Bitmap
ff07000000000000
Last ACK
692
Block Ack (0x0019)
Policy
Immediate Acknowledgement Required
Type
Compressed BlockAck
Bitmap
0100000000000000
Last ACK
693
Block Ack (0x0019)
Policy
Immediate Acknowledgement Required
Type
Compressed BlockAck
Bitmap
0300000000000000
Last ACK
694
Block Ack (0x0019)
Policy
Immediate Acknowledgement Required
Type
Compressed BlockAck
Bitmap
0700000000000000
Last ACK
695
Block Ack (0x0019)
Policy
Immediate Acknowledgement Required
Type
Compressed BlockAck
Bitmap
0f00000000000000
Last ACK
696
Block Ack (0x0019)
single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead
[Frame 364] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead
[Frame 370] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead
[Frame 372] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead
[Frame 380] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead
[Frame 390] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates

which sequence numbers were received; improves throughput by reducing per-frame ACK overhead

💡 [Frame 394] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead

💡 [Frame 397] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead

💡 [Frame 414] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead

💡 [Frame 417] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead

💡 [Frame 423] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates

Cisco AP 1	Client E	Broadcast	Client L	Client V	Client W	Cisco AP 11a	Cisco AP 11b	Client U	Client AB	Cisco AP 14a

📋 Policy	Immediate Acknowledgement Required
📋 Type	Compressed BlockAck
📊 Bitmap	1f00000000000000
✅ Last ACK	707

✅ Block Ack (0x0019)

📋 Policy	Immediate Acknowledgement Required
📋 Type	Compressed BlockAck
📊 Bitmap	0100000000000000
✅ Last ACK	708

which sequence numbers were received; improves throughput by reducing per-frame ACK overhead

💡 [Frame 433] Block Ack — acknowledges multiple MPDUs in a single frame (A-MPDU aggregation); bitmap indicates which sequence numbers were received; improves throughput by reducing per-frame ACK overhead