

iPhone Client

Broadcast

Client C

roam_intra_wep.pcapng

Probe Request (0x0004)

Dst	ff:ff:ff:ff:ff:ff
Src	00:56:cd:ee:f1:71
Seq	1995

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	00:56:cd:ee:f1:71
Src	f8:c2:88:07:58:80
BSS	f8:c2:88:07:58:80
Seq	1364
Capabilities Information	0x1431

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

Authentication (0x000b)

Dst	f8:c2:88:07:58:80
Src	00:56:cd:ee:f1:71
BSS	f8:c2:88:07:58:80
Seq	1997
Auth	Shared key (1)
Auth Seq	0x0001
Status	Successful (0x0000)

802.11 Authentication – Open System (2 frames) or SAE/WPA3 (multiple rounds); must succeed before Association

ACK (0x001d)

RA	00:56:cd:ee:f1:71
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Frame 4 | 2017-02-25T14:07:01.116898Z

Authentication (0x000b)

Dst	00:56:cd:ee:f1:71
Src	f8:c2:88:07:58:80
BSS	f8:c2:88:07:58:80
Seq	3808
Auth	Shared key (1)
Auth Seq	0x0002
Status	Successful (0x0000)

802.11 Authentication – Open System (2 frames) or SAE/WPA3 (multiple rounds); must succeed before Association

Authentication (0x000b)

Dst	f8:c2:88:07:58:80
Src	00:56:cd:ee:f1:71
BSS	f8:c2:88:07:58:80
Seq	1998
Len	147

802.11 Authentication – Open System (2 frames) or SAE/WPA3 (multiple rounds); must succeed before Association

Authentication (0x000b)

Dst	00:56:cd:ee:f1:71
Src	f8:c2:88:07:58:80
BSS	f8:c2:88:07:58:80
Seq	3809
Auth	Shared key (1)
Auth Seq	0x0004
Status	Successful (0x0000)

802.11 Authentication – Open System (2 frames) or SAE/WPA3 (multiple rounds); must succeed before Association

Reassociation Request (0x0002)

Dst	f8:c2:88:07:58:80
Src	00:56:cd:ee:f1:71
BSS	f8:c2:88:07:58:80
Seq	1999
Current AP	00:d7:8f:d3:53:d0

Reassociation Request – client roams to new AP within same ESS; carries Current AP MAC so new AP can request PMK from old AP (fast roaming) or via RADIUS

Reassociation Response (0x0003)

Dst	00:56:cd:ee:f1:71
Src	f8:c2:88:07:58:80
BSS	f8:c2:88:07:58:80
Seq	3810
Status	Successful (0x0000)
AID	0x0001

Reassociation Response – new AP accepts roaming client; AID may change; PMK transfer via OKC, 802.11r FT, or CCKM enables fast secure roaming without full re-auth

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Action (0x000d)

Dst	f8:c2:88:07:58:80
Src	00:56:cd:ee:f1:71
BSS	f8:c2:88:07:58:80
Seq	2000
Category	Radio Measurement (5)
Action	Neighbor Report Request (4)

Frame 12 |
2017-02-25T14:07:01.124407Z

Action (0x000d)

Dst	00:56:cd:ee:f1:71
Src	f8:c2:88:07:58:80
BSS	f8:c2:88:07:58:80
Seq	3811
Category	Radio Measurement (5)
Action	Neighbor Report Response (5)

Frame 14 |
2017-02-25T14:07:01.127336Z

Beacon frame (0x0008)

BSS	f8:c2:88:07:58:80
Seq	3812
Beacon Interval	0.104448 [Seconds]
DTIM count	0

💡 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

QoS Data (0x0028)

Dst	00:23:5d:c9:5a:c7
Src	00:56:cd:ee:f1:71
BSS	f8:c2:88:07:58:80
Seq	0
TID	6
Priority	Voice (Voice) (6)
Len	36

💡 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)