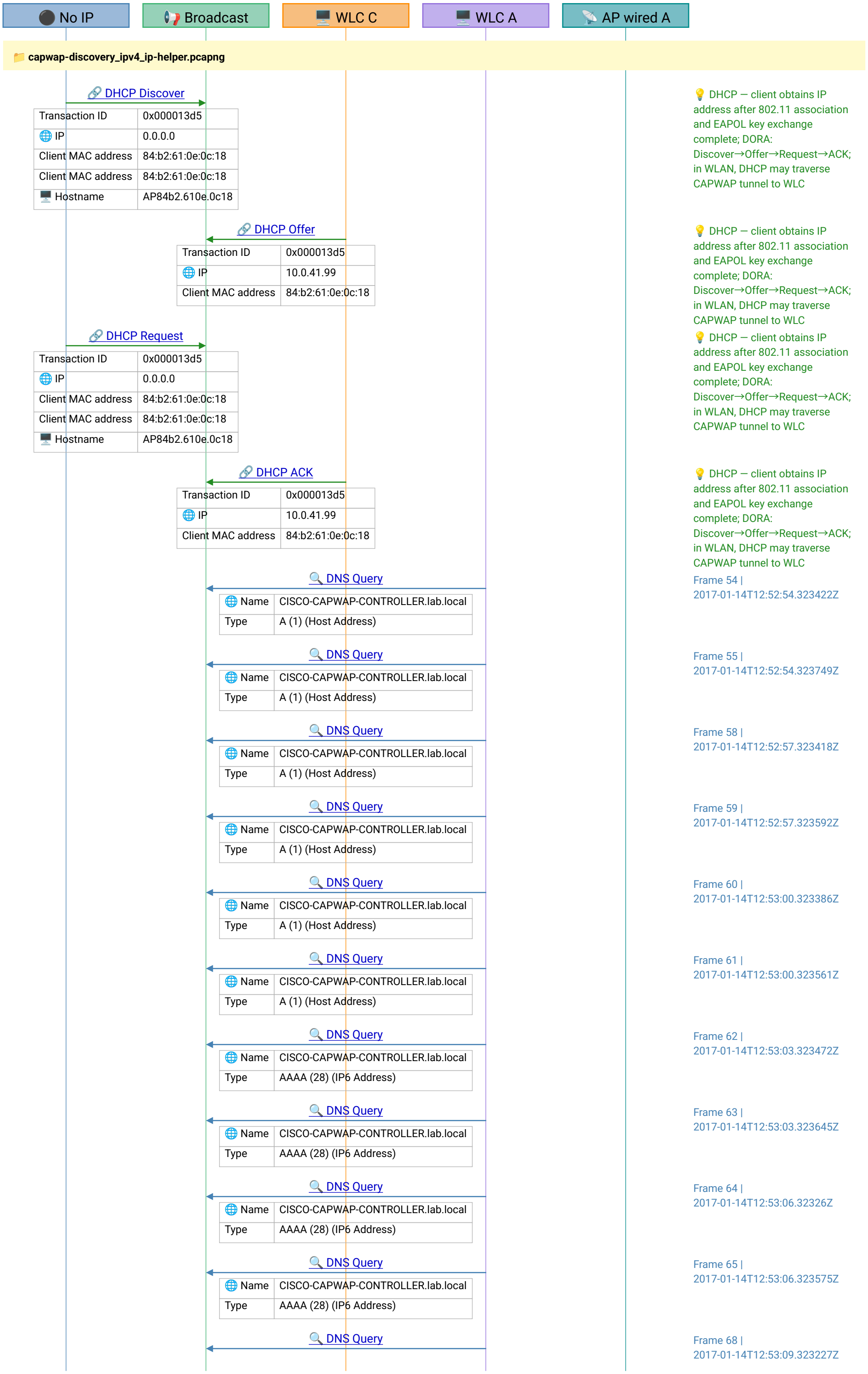

No IP
Broadcast
WLC C
WLC A
AP wired A
capwap-discovery_ipv4_ip-helper.pcapng
DHCP Discover
Transaction ID 0x000013d5
IP 0.0.0.0
Client MAC address 84:b2:61:0e:0c:18
Client MAC address 84:b2:61:0e:0c:18
Hostname AP84b2.610e.0c18
DHCP — client obtains IP address after 802.11 association and EAPOL key exchange complete; DORA: Discover→Offer→Request→ACK; in WLAN, DHCP may traverse CAPWAP tunnel to WLC
DHCP Offer
Transaction ID 0x000013d5
IP 10.0.41.99
Client MAC address 84:b2:61:0e:0c:18
DHCP — client obtains IP address after 802.11 association and EAPOL key exchange complete; DORA: Discover→Offer→Request→ACK; in WLAN, DHCP may traverse CAPWAP tunnel to WLC
DHCP Request
Transaction ID 0x000013d5
IP 0.0.0.0
Client MAC address 84:b2:61:0e:0c:18
Client MAC address 84:b2:61:0e:0c:18
Hostname AP84b2.610e.0c18
DHCP — client obtains IP address after 802.11 association and EAPOL key exchange complete; DORA: Discover→Offer→Request→ACK; in WLAN, DHCP may traverse CAPWAP tunnel to WLC
DHCP ACK
Transaction ID 0x000013d5
IP 10.0.41.99
Client MAC address 84:b2:61:0e:0c:18
DHCP — client obtains IP address after 802.11 association and EAPOL key exchange complete; DORA: Discover→Offer→Request→ACK; in WLAN, DHCP may traverse CAPWAP tunnel to WLC
DNS Query
Name CISCO-CAPWAP-CONTROLLER.lab.local
Type A (1) (Host Address)
Frame 54 | 2017-01-14T12:52:54.323422Z
DNS Query
Name CISCO-CAPWAP-CONTROLLER.lab.local
Type A (1) (Host Address)
Frame 55 | 2017-01-14T12:52:54.323749Z
DNS Query
Name CISCO-CAPWAP-CONTROLLER.lab.local
Type A (1) (Host Address)
Frame 58 | 2017-01-14T12:52:57.323418Z
DNS Query
Name CISCO-CAPWAP-CONTROLLER.lab.local
Type A (1) (Host Address)
Frame 59 | 2017-01-14T12:52:57.323592Z
DNS Query
Name CISCO-CAPWAP-CONTROLLER.lab.local
Type A (1) (Host Address)
Frame 60 | 2017-01-14T12:53:00.323386Z
DNS Query
Name CISCO-CAPWAP-CONTROLLER.lab.local
Type A (1) (Host Address)
Frame 61 | 2017-01-14T12:53:00.323561Z
DNS Query
Name CISCO-CAPWAP-CONTROLLER.lab.local
Type AAAA (28) (IP6 Address)
Frame 62 | 2017-01-14T12:53:03.323472Z
DNS Query
Name CISCO-CAPWAP-CONTROLLER.lab.local
Type AAAA (28) (IP6 Address)
Frame 63 | 2017-01-14T12:53:03.323645Z
DNS Query
Name CISCO-CAPWAP-CONTROLLER.lab.local
Type AAAA (28) (IP6 Address)
Frame 64 | 2017-01-14T12:53:06.32326Z
DNS Query
Name CISCO-CAPWAP-CONTROLLER.lab.local
Type AAAA (28) (IP6 Address)
Frame 65 | 2017-01-14T12:53:06.323575Z
DNS Query
Frame 68 | 2017-01-14T12:53:09.323227Z

⚫ No IP | 📢 Broadcast | 🖥️ WLC C | 🖥️ WLC A | 📡 AP wired A

🌐 Name	CISCO-CAPWAP-CONTROLLER.lab.local
Type	AAAA (28) (IP6 Address)

🔍 DNS Query

Frame 69 | 2017-01-14T12:53:09.323537Z

🌐 Name	CISCO-CAPWAP-CONTROLLER.lab.local
Type	AAAA (28) (IP6 Address)

📡 CAPWAP Discovery Request

💡 CAPWAP — controller manages lightweight APs; Discovery finds WLC, Join establishes DTLS tunnel, Config provisions AP (SSID, channel, power)

Sequence Number	0

📡 CAPWAP Discovery Request

💡 CAPWAP — controller manages lightweight APs; Discovery finds WLC, Join establishes DTLS tunnel, Config provisions AP (SSID, channel, power)

Sequence Number	0

📡 CAPWAP Discovery Response

💡 CAPWAP — controller manages lightweight APs; Discovery finds WLC, Join establishes DTLS tunnel, Config provisions AP (SSID, channel, power)

Sequence Number	0
🖥️ WLC	WLC2504_A

📡 CAPWAP Discovery Response

💡 CAPWAP — controller manages lightweight APs; Discovery finds WLC, Join establishes DTLS tunnel, Config provisions AP (SSID, channel, power)

Sequence Number	0
🖥️ WLC	WLC2504_A

🔐 DTLS Handshake (22)

💡 DTLS Handshake — establishes encrypted tunnel between AP and WLC for CAPWAP control/data; uses UDP (not TCP) so it works with CAPWAP's UDP transport

📋 Version	DTLS 1.0 (0xfeff)

🔐 DTLS Handshake (22)

💡 DTLS Handshake — establishes encrypted tunnel between AP and WLC for CAPWAP control/data; uses UDP (not TCP) so it works with CAPWAP's UDP transport

📋 Version	DTLS 1.0 (0xfeff)

🔐 DTLS Handshake (22)

💡 DTLS Handshake — establishes encrypted tunnel between AP and WLC for CAPWAP control/data; uses UDP (not TCP) so it works with CAPWAP's UDP transport

📋 Version	DTLS 1.0 (0xfeff)

🔐 DTLS Handshake (22)

💡 DTLS Handshake — establishes encrypted tunnel between AP and WLC for CAPWAP control/data; uses UDP (not TCP) so it works with CAPWAP's UDP transport

📋 Version	DTLS 1.0 (0xfeff)

🔐 DTLS Handshake (22)

📋 Version	DTLS 1.0 (0xfeff)

🔐 DTLS Handshake (22)

💡 DTLS Handshake — establishes encrypted tunnel between AP and WLC for CAPWAP control/data; uses UDP (not TCP) so it works with CAPWAP's UDP transport

📋 Version	DTLS 1.0 (0xfeff)

🔐 DTLS Handshake (22)

💡 DTLS Handshake — establishes encrypted tunnel between AP and WLC for CAPWAP control/data; uses UDP (not TCP) so it works with CAPWAP's UDP transport

📋 Version	DTLS 1.0 (0xfeff)

🔐 DTLS Handshake (22)

📋 Version	DTLS 1.0 (0xfeff)

🔐 DTLS Handshake (22)

📋 Version	DTLS 1.0 (0xfeff)

🔐 DTLS Handshake (22)

💡 DTLS Handshake — establishes encrypted tunnel between AP and WLC for CAPWAP control/data; uses UDP (not TCP) so it works with CAPWAP's UDP transport

📋 Version	DTLS 1.0 (0xfeff)

🔐 DTLS Handshake (22)

💡 DTLS Handshake — establishes encrypted tunnel between AP and WLC for CAPWAP control/data; uses UDP (not TCP) so it works with CAPWAP's UDP transport

📋 Version	DTLS 1.0 (0xfeff)

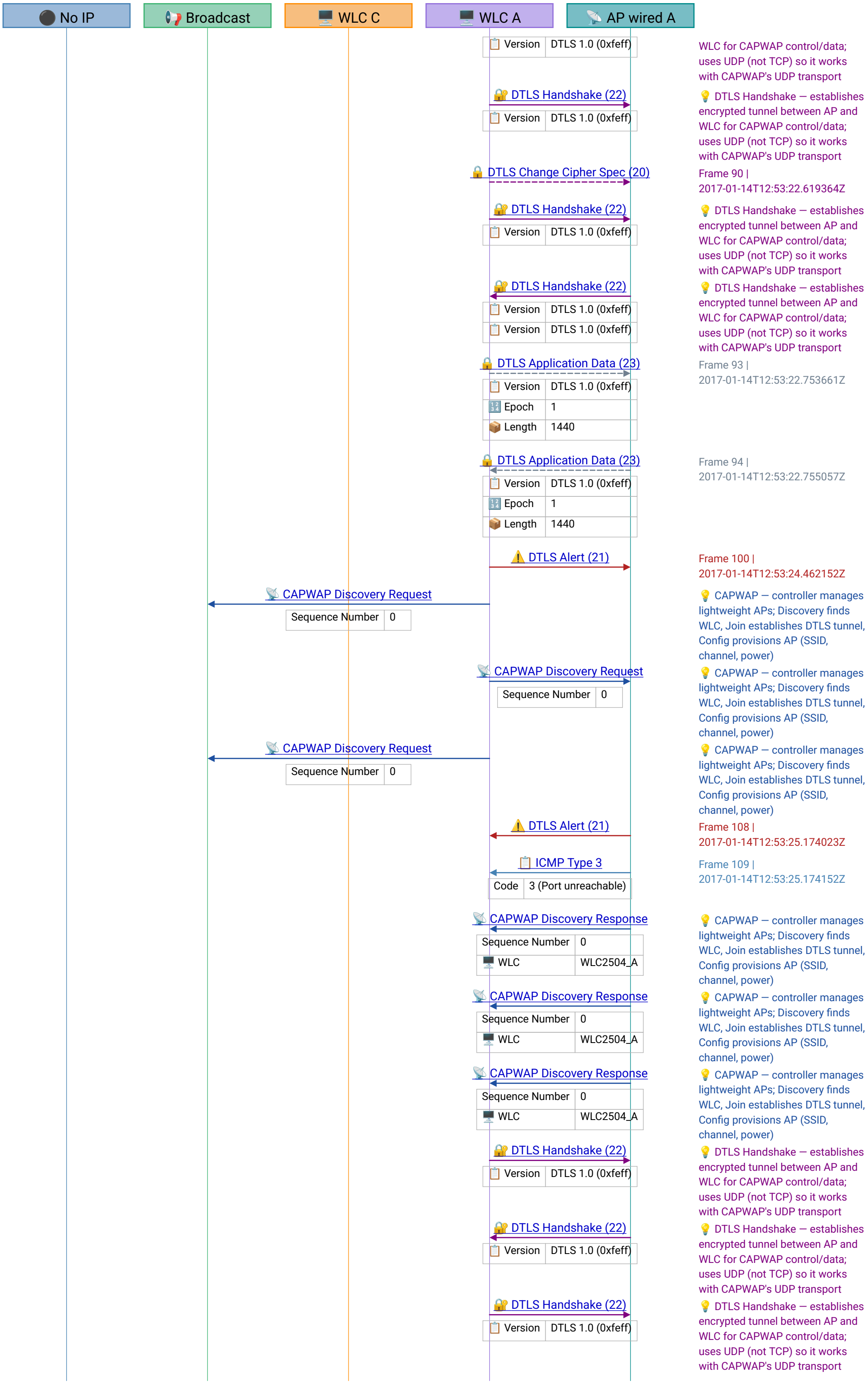
🔐 DTLS Handshake (22)

💡 DTLS Handshake — establishes encrypted tunnel between AP and WLC for CAPWAP control/data; uses UDP (not TCP) so it works with CAPWAP's UDP transport

📋 Version	DTLS 1.0 (0xfeff)

🔐 DTLS Handshake (22)

💡 DTLS Handshake — establishes encrypted tunnel between AP and


No IP
Broadcast
WLC C
WLC A
AP wired A
Version DTLS 1.0 (0xfeff)
DTLS Handshake (22)
Version DTLS 1.0 (0xfeff)
DTLS Change Cipher Spec (20)
DTLS Handshake (22)
Version DTLS 1.0 (0xfeff)
DTLS Handshake (22)
Version DTLS 1.0 (0xfeff)
Version DTLS 1.0 (0xfeff)
DTLS Application Data (23)
Version DTLS 1.0 (0xfeff)
Epoch 1
Length 1440
DTLS Application Data (23)
Version DTLS 1.0 (0xfeff)
Epoch 1
Length 1440
DTLS Alert (21)
CAPWAP Discovery Request
Sequence Number 0
CAPWAP Discovery Request
Sequence Number 0
CAPWAP Discovery Request
Sequence Number 0
DTLS Alert (21)
ICMP Type 3
Code 3 (Port unreachable)
CAPWAP Discovery Response
Sequence Number 0
WLC WLC2504_A
CAPWAP Discovery Response
Sequence Number 0
WLC WLC2504_A
CAPWAP Discovery Response
Sequence Number 0
WLC WLC2504_A
DTLS Handshake (22)
Version DTLS 1.0 (0xfeff)
DTLS Handshake (22)
Version DTLS 1.0 (0xfeff)
DTLS Handshake (22)
Version DTLS 1.0 (0xfeff)
WLC for CAPWAP control/data; uses UDP (not TCP) so it works with CAPWAP's UDP transport
DTLS Handshake — establishes encrypted tunnel between AP and WLC for CAPWAP control/data; uses UDP (not TCP) so it works with CAPWAP's UDP transport
Frame 90 | 2017-01-14T12:53:22.619364Z
DTLS Handshake — establishes encrypted tunnel between AP and WLC for CAPWAP control/data; uses UDP (not TCP) so it works with CAPWAP's UDP transport
DTLS Handshake — establishes encrypted tunnel between AP and WLC for CAPWAP control/data; uses UDP (not TCP) so it works with CAPWAP's UDP transport
Frame 93 | 2017-01-14T12:53:22.753661Z
Frame 94 | 2017-01-14T12:53:22.755057Z
Frame 100 | 2017-01-14T12:53:24.462152Z
CAPWAP — controller manages lightweight APs; Discovery finds WLC, Join establishes DTLS tunnel, Config provisions AP (SSID, channel, power)
CAPWAP — controller manages lightweight APs; Discovery finds WLC, Join establishes DTLS tunnel, Config provisions AP (SSID, channel, power)
CAPWAP — controller manages lightweight APs; Discovery finds WLC, Join establishes DTLS tunnel, Config provisions AP (SSID, channel, power)
Frame 108 | 2017-01-14T12:53:25.174023Z
Frame 109 | 2017-01-14T12:53:25.174152Z
CAPWAP — controller manages lightweight APs; Discovery finds WLC, Join establishes DTLS tunnel, Config provisions AP (SSID, channel, power)
CAPWAP — controller manages lightweight APs; Discovery finds WLC, Join establishes DTLS tunnel, Config provisions AP (SSID, channel, power)
CAPWAP — controller manages lightweight APs; Discovery finds WLC, Join establishes DTLS tunnel, Config provisions AP (SSID, channel, power)
DTLS Handshake — establishes encrypted tunnel between AP and WLC for CAPWAP control/data; uses UDP (not TCP) so it works with CAPWAP's UDP transport
DTLS Handshake — establishes encrypted tunnel between AP and WLC for CAPWAP control/data; uses UDP (not TCP) so it works with CAPWAP's UDP transport
DTLS Handshake — establishes encrypted tunnel between AP and WLC for CAPWAP control/data; uses UDP (not TCP) so it works with CAPWAP's UDP transport


No IP
Broadcast
WLC C
WLC A
AP wired A
DTLS Handshake (22)
Version
DTLS 1.0 (0xfeff)
DTLS Change Cipher Spec (20)
DTLS Application Data (23)
Epoch
1
Length
1440
DTLS Handshake — establishes encrypted tunnel between AP and WLC for CAPWAP control/data; uses UDP (not TCP) so it works with CAPWAP's UDP transport
Frame 126 | 2017-01-14T12:53:35.482615Z
Frame 129 | 2017-01-14T12:53:35.590945Z
Frame 130 | 2017-01-14T12:53:35.592516Z