```
476 24.827751
                128.119.245.12
                               192.168.1.109
                                                          80 → 2538 [SYN, ACK] Seq=0 Ack=1 Win=5840
                                               TCP
                                                     110
Len=0 SACK PERM=1
Frame 476: 110 bytes on wire (880 bits), 110 bytes captured (880 bits)
  Encapsulation type: IEEE 802.11 plus radiotap radio header (23)
  Arrival Time: Jun 29, 2007 10:05:31.900208000 中国标准时间
  [Time shift for this packet: 0.000000000 seconds]
  Epoch Time: 1183082731.900208000 seconds
  [Time delta from previous captured frame: 0.016520000 seconds]
  [Time delta from previous displayed frame: 0.016520000 seconds]
  [Time since reference or first frame: 24.827751000 seconds]
  Frame Number: 476
  Frame Length: 110 bytes (880 bits)
  Capture Length: 110 bytes (880 bits)
  [Frame is marked: False]
  [Frame is ignored: False]
  [Protocols in frame: radiotap:wlan_radio:wlan:llc:ip:tcp]
  [Coloring Rule Name: HTTP]
  [Coloring Rule String: http || tcp.port == 80 || http2]
Radiotap Header v0, Length 24
  Header revision: 0
  Header pad: 0
  Header length: 24
  Present flags
     Present flags word: 0x000058ee
        .... 0 = TSFT: Absent
        .... .1.. = Rate: Present
        .... 1... = Channel: Present
        .... = FHSS: Absent
        .... = dBm Antenna Signal: Present
        .... = TX Attenuation: Absent
        .... = dB TX Attenuation: Absent
        .... = dBm TX Power: Absent
        .... = Antenna: Present
        .... = dB Antenna Signal: Present
        .... = dB Antenna Noise: Absent
        .... = RX flags: Present
        .... = Channel+: Absent
        \dots = MCS information: Absent
        .... = A-MPDU Status: Absent
        .... = VHT information: Absent
        .... = frame timestamp: Absent
        .... 0... = HE information: Absent
        .... = HE-MU information: Absent
        .... .0.. .... = 0 Length PSDU: Absent
        .... 0... = L-SIG: Absent
        \dots0 \dots = Reserved: 0x0
        ..0. .... = Radiotap NS next: False
        .0.. .... = Vendor NS next: False
        0... = Ext: Absent
  Flags: 0x10
     .... ..0. = Preamble: Long
     .... .0.. = WEP: False
     .... 0... = Fragmentation: False
     ...1 .... = FCS at end: True
     ..0. .... = Data Pad: False
     .0.. .... = Bad FCS: False
     0... = Short GI: False
  Data Rate: 54.0 Mb/s
  Channel frequency: 2437 [BG 6]
  Channel flags: 0x00c0, Orthogonal Frequency-Division Multiplexing (OFDM), 2 GHz spectrum
     .... = Turbo: False
     .... ..... ..0. .... = Complementary Code Keying (CCK): False
     .... 11. .... = Orthogonal Frequency-Division Multiplexing (OFDM): True
     .... 1... = 2 GHz spectrum: True
     .... = 5 GHz spectrum: False
     .... ..0. .... = Passive: False
     ..... .0.. .... = Dynamic CCK-OFDM: False
     .... 0... = Gaussian Frequency Shift Keying (GFSK): False
     ...0 .... = GSM (900MHz): False
     ..0. .... = Static Turbo: False
     .0.. .... = Half Rate Channel (10MHz Channel Width): False
     0... .... = Quarter Rate Channel (5MHz Channel Width): False
```

Destination

Protocol Length Info

No.

Time

Source

```
Antenna signal: -38dBm
   Antenna noise: -100dBm
   Signal Quality: 82
   Antenna: 0
   dB antenna signal: 62dB
   RX flags: 0x407d
       802.11 radio information
   PHY type: 802.11g (6)
   Short preamble: False
   Proprietary mode: None (0)
   Data rate: 54.0 Mb/s
   Channel: 6
   Frequency: 2437MHz
   Signal strength (dB): 62dB
   Signal strength (dBm): -38dBm
   Noise level (dBm): -100dBm
   Signal/noise ratio (dB): 62dB
   [Duration: 36µs]
       [Preamble: 20µs]
IEEE 802.11 QoS Data, Flags: ..mP..F.C
   Type/Subtype: QoS Data (0x0028)
   Frame Control Field: 0x8832
       .... ..00 = Version: 0
       .... 10.. = Type: Data frame (2)
       1000 .... = Subtype: 8
       Flags: 0x32
           .... ..10 = DS status: Frame from DS to a STA via AP(To DS: 0 From DS: 1) (0x2)
           .... .0.. = More Fragments: This is the last fragment
           .... 0... = Retry: Frame is not being retransmitted
           ...1 .... = PWR MGT: STA will go to sleep
           ..1. .... = More Data: Data is buffered for STA at AP
           .0.. .... = Protected flag: Data is not protected
           0... = Order flag: Not strictly ordered
   Duration/ID: 11560 (reserved)
   Receiver address: 91:2a:b0:49:b6:4f (91:2a:b0:49:b6:4f)
   Transmitter address: Cisco-Li f7:1d:51 (00:16:b6:f7:1d:51)
   Destination address: 91:2a:b0:49:b6:4f (91:2a:b0:49:b6:4f)
   Source address: Cisco-Li_f4:eb:a8 (00:16:b6:f4:eb:a8)
   BSS Id: Cisco-Li_f7:1d:51 (00:16:b6:f7:1d:51)
   STA address: 91:2a:b0:49:b6:4f (91:2a:b0:49:b6:4f)
   .... 0000 = Fragment number: 0
   1100 0011 0100 .... = Sequence number: 3124
   Frame check sequence: 0xecdc407d [unverified]
   [FCS Status: Unverified]
   Qos Control: 0x0100
       .... 0000 = TID: 0
       [.... .... .000 = Priority: Best Effort (Best Effort) (0)]
       .... = EOSP: Service period
       .... .00. .... = Ack Policy: Normal Ack (0x0)
       .... 0... = Payload Type: MSDU
       0000 0001 .... = QAP PS Buffer State: 0x01
           .... ..0. .... = Buffer State Indicated: No
Logical-Link Control
   DSAP: SNAP (0xaa)
       1010 101. = SAP: SNAP
       .... 0 = IG Bit: Individual
   SSAP: SNAP (0xaa)
       1010 101. = SAP: SNAP
       .... 0 = CR Bit: Command
   Control field: U, func=UI (0x03)
       000. 00.. = Command: Unnumbered Information (0x00)
       .... ..11 = Frame type: Unnumbered frame (0x3)
   Organization Code: 00:00:00 (Officially Xerox, but
   Type: IPv4 (0x0800)
Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.1.109
   0100 .... = Version: 4
   .... 0101 = Header Length: 20 bytes (5)
   Differentiated Services Field: 0x00 (DSCP: CS0, ECN: Not-ECT)
       0000 00.. = Differentiated Services Codepoint: Default (0)
       .... ..00 = Explicit Congestion Notification: Not ECN-Capable Transport (0)
   Total Length: 48
   Identification: 0x0000 (0)
   Flags: 0x4000, Don't fragment
       0... - Reserved bit: Not set
       .1.. .... = Don't fragment: Set
       ..0. .... = More fragments: Not set
```

```
...0 0000 0000 0000 = Fragment offset: 0
   Time to live: 49
   Protocol: TCP (6)
   Header checksum: 0x122f [validation disabled]
   [Header checksum status: Unverified]
   Source: 128.119.245.12
   Destination: 192.168.1.109
Transmission Control Protocol, Src Port: 80, Dst Port: 2538, Seq: 0, Ack: 1, Len: 0
   Source Port: 80
   Destination Port: 2538
   [Stream index: 0]
   [TCP Segment Len: 0]
                         (relative sequence number)
   Sequence number: 0
   [Next sequence number: 0
                             (relative sequence number)]
   Acknowledgment number: 1
                               (relative ack number)
   0111 .... = Header Length: 28 bytes (7)
   Flags: 0x012 (SYN, ACK)
       000. .... = Reserved: Not set
       ...0 .... = Nonce: Not set
       .... 0... = Congestion Window Reduced (CWR): Not set
       .... .0.. .... = ECN-Echo: Not set
       .... ..0. .... = Urgent: Not set
       .... = Acknowledgment: Set
       .... 0... = Push: Not set
       .... .0.. = Reset: Not set
       .... .... ..1. = Syn: Set
           [Expert Info (Chat/Sequence): Connection establish acknowledge (SYN+ACK): server port 80]
               [Connection establish acknowledge (SYN+ACK): server port 80]
               [Severity level: Chat]
               [Group: Sequence]
        .... .... ...0 = Fin: Not set
       [TCP Flags: ······A··S·]
   Window size value: 5840
   [Calculated window size: 5840]
   Checksum: 0x5ea5 [unverified]
   [Checksum Status: Unverified]
   Urgent pointer: 208
       [Expert Info (Note/Protocol): The urgent pointer field is nonzero while the URG flag is not set]
           [The urgent pointer field is nonzero while the URG flag is not set]
           [Severity level: Note]
           [Group: Protocol]
   Options: (8 bytes), CC.ECHO, No-Operation (NOP), No-Operation (NOP), SACK permitted
       TCP Option - CC
           Kind: CC.ECHO (13)
           Length: 4
               [Expert Info (Note/Sequence): option length should be 6]
                    [option length should be 6]
                    [Severity level: Note]
                   [Group: Sequence]
       TCP Option - No-Operation (NOP)
           Kind: No-Operation (1)
       TCP Option - No-Operation (NOP)
           Kind: No-Operation (1)
       TCP Option - SACK permitted
           Kind: SACK Permitted (4)
           Length: 2
   [SEQ/ACK analysis]
       [This is an ACK to the segment in frame: 474]
       [The RTT to ACK the segment was: 0.016658000 seconds]
       [iRTT: 0.016931000 seconds]
   [Timestamps]
       [Time since first frame in this TCP stream: 0.016658000 seconds]
       [Time since previous frame in this TCP stream: 0.016658000 seconds]
```