LAP8

Name: Mohammad Alhomidan ID: 2510431

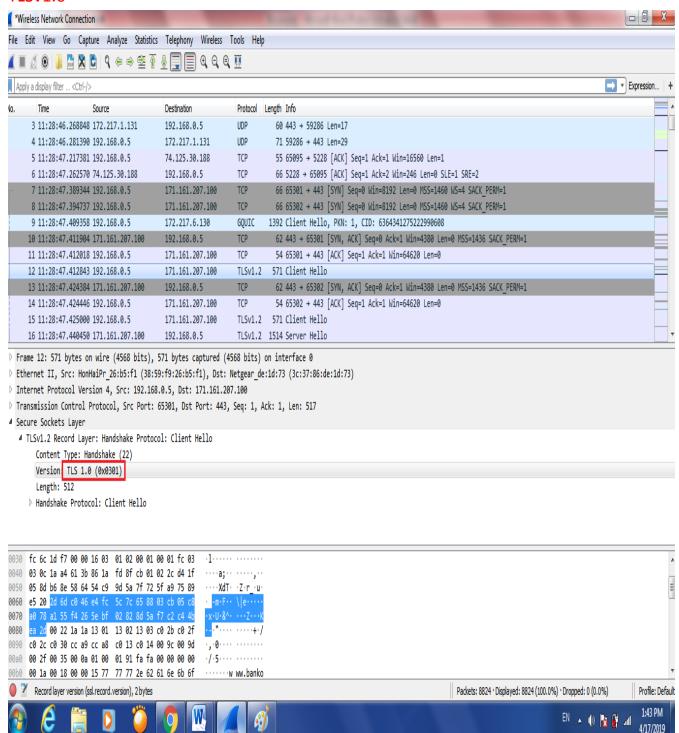
My IP 192.168.0.5

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_ D X
C:\windows\system32\cmd.exe
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation.  All rights reserved.
C:\Users\user>ipconfig
Windows IP Configuration
Wireless LAN adapter Wireless Network Connection 2:
   Media State . . . . . . . . : Media disconnected Connection—specific DNS Suffix . :
Ethernet adapter Bluetooth Network Connection:
   Media State . . . . . . . . : Media disconnected Connection—specific DNS Suffix . :
Wireless LAN adapter Wireless Network Connection:
   Connection-specific DNS Suffix ::
Link-local IPv6 Address . . . : fe80::99f1:4a6c:6bfa:4ada%12
IPv4 Address . . . . : 192.168.0.5
   Ethernet adapter Local Area Connection:
   Media State . . . . . . . . : Media disconnected Connection-specific DNS Suffix . :
Tunnel adapter isatap.{05DA48C7-5141-437A-BCED-1F29AF2DE6D1}:
   Media State . . . . . . . . : Media disconnected Connection—specific DNS Suffix . :
Tunnel adapter Local Area Connection* 12:
   Tunnel adapter isatap.{6384ADFC-9F59-41B6-A461-1FCA8BDØBE49}:
   Media State . . . . . . . . : Media disconnected Connection—specific DNS Suffix . :
Tunnel adapter isatap.{CE98C002-B144-42B7-8B3F-807EE0392342}:
   Media State . . . . . . . . : Media disconnected Connection-specific DNS Suffix . :
                                                                                     11:37 AM
                                                              EN 🔺 🌓 🙀 📶
                                                                                     4/17/2019
```

Client Hello Record:

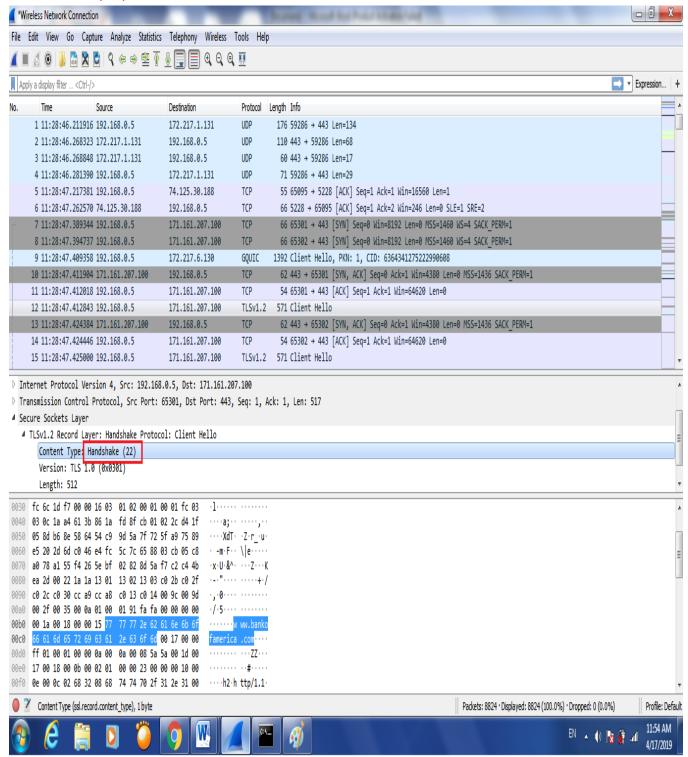
1. What is the SSL/TLS version of the of the Client Hello frame?





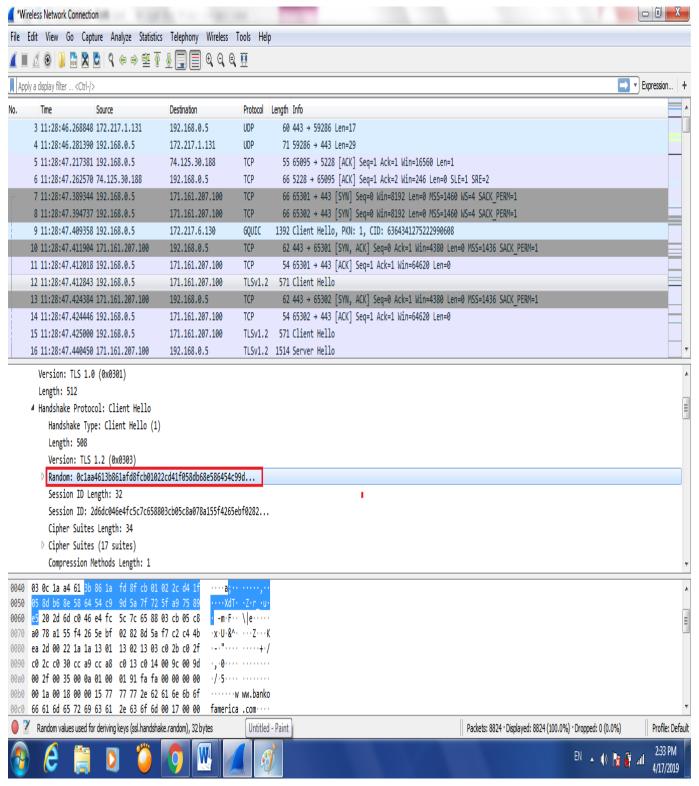
2. Expand the ClientHello record. (If your trace contains multiple ClientHello records, expand the frame that contains the first one.) What is the value of the content type?

Handshake (22)



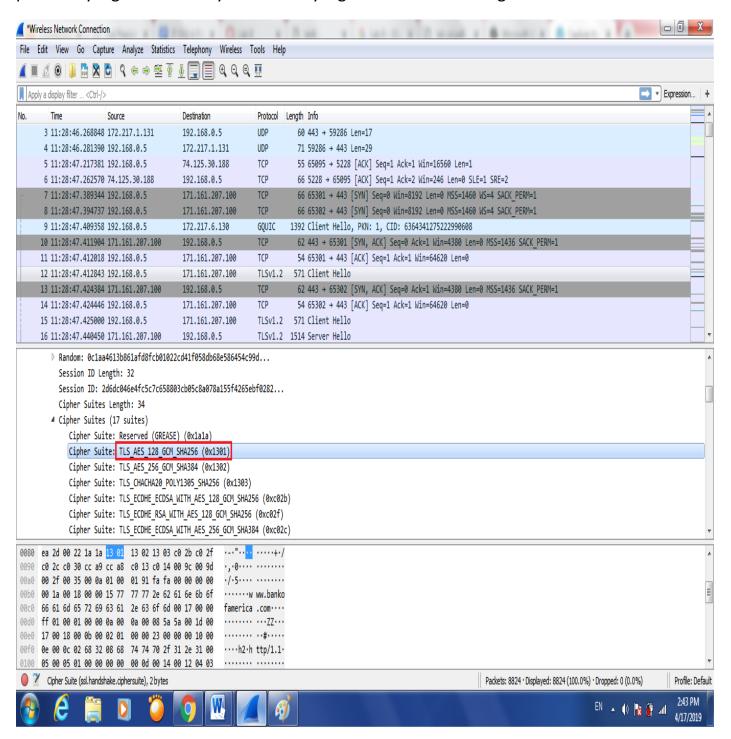
3. Does the ClientHello record contain a nonce (also known as a "challenge")? If so, what is the value of the challenge in hexadecimal notation?

Yes it does 0c1aa4613b861afd8fcb01022cd41f.......



4. Does the ClientHello record advertise the cyber suites it supports? If so, in the first listed suite, what are the public-key algorithm, the symmetric-key algorithm, and the hash algorithm?

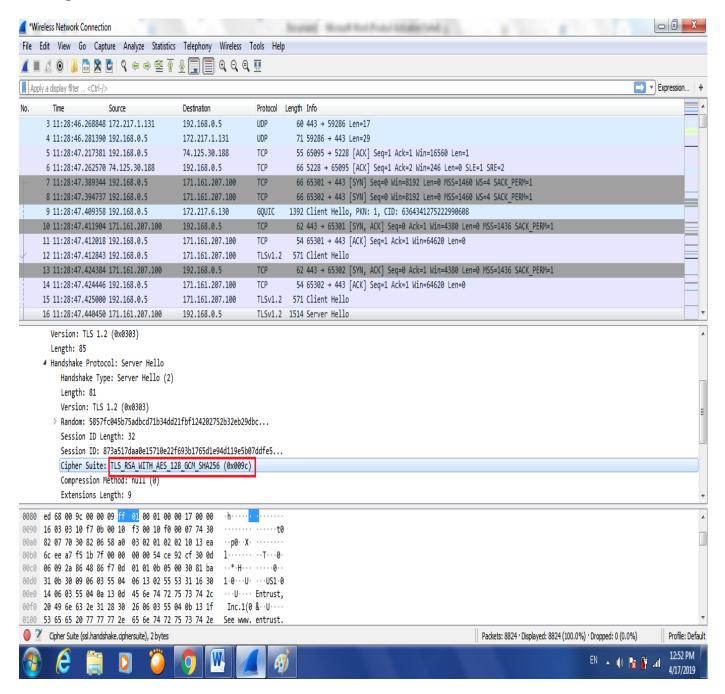
public-key algorithm AES symmetric-key algorithm GCM hash algorithm SHA256



Server Hello Record:

1. Locate the ServerHello SSL record. Does this record specify a chosen cipher suite? What are the algorithms in the chosen cipher suite?

Public-key algorithm RSA with AES symmetric-key algorithm GCM hash algorithm SHA256



 $C:\Users\user\AppData\Local\Temp\wireshark_6D8C6C4E-7F69-4A94-83C7-1D7587D59643_20190417112845_a04704.pcapng~8824~total~packets,~30~shown$

No. Time Source Destination Protocol Length Info 4397 11:29:33.302104 192.168.0.5 192.168.0.1 HTTP 191 HTTP/1.1 200 OK Frame 4397: 191 bytes on wire (1528 bits), 191 bytes captured (1528 bits) on interface 0 Ethernet II, Src: HonHaiPr_26:b5:f1 (38:59:f9:26:b5:f1), Dst: Netgear_de:1d:73 (3c:37:86:de:1d:73) Internet Protocol Version 4, Src: 192.168.0.5, Dst: 192.168.0.1 Transmission Control Protocol, Src Port: 2869, Dst Port: 1082, Seq: 1, Ack: 597, Len: 125 Hypertext Transfer Protocol

C:\Users\user\AppData\Local\Temp\wireshark_6D8C6C4E-7F69-4A94-83C7-1D7587D59643_20190417112845_a04704.pcapng 8824 total packets, 8824 shown

No. Time Source Destination Protocol Length Info 12 11:28:47.412843 192.168.0.5 171.161.207.100 TLSv1.2 571 Client Hello Frame 12: 571 bytes on wire (4568 bits), 571 bytes captured (4568 bits) on interface 0 Ethernet II, Src: HonHaiPr_26:b5:f1 (38:59:f9:26:b5:f1), Dst: Netgear_de:1d:73 (3c:37:86:de:1d:73) Internet Protocol Version 4, Src: 192.168.0.5, Dst: 171.161.207.100 Transmission Control Protocol, Src Port: 65301, Dst Port: 443, Seq: 1, Ack: 1, Len: 517 Secure Sockets Layer TLSv1.2 Record Layer: Handshake Protocol: Client Hello Content Type: Handshake (22) Version: TLS 1.0 (0x0301) Length: 512 Handshake Protocol: Client Hello Handshake Type: Client Hello (1) Length: 508 Version: TLS 1.2 (0x0303) Random: Oc1aa4613b861afd8fcb01022cd41f058db68e586454c99d... Session ID Length: 32 Session ID: 2d6dc046e4fc5c7c658803cb05c8a078a155f4265ebf0282... Cipher Suites Length: 34 Cipher Suites (17 suites) Cipher Suite: Reserved (GREASE) (0x1a1a) Cipher Suite: TLS_AES_128_GCM_SHA256 (0x1301) Cipher Suite: TLS_AES_256_GCM_SHA384 (0x1302) Cipher Suite: TLS_CHACHA20_POLY1305_SHA256 (0x1303) Cipher Suite: TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256 (0xc02b) Cipher Suite: TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 (0xc02f) Cipher Suite: TLS_ECDHE_ECDSA_WITH_AES_256_GCM_SHA384 (0xc02c) Cipher Suite: TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384 (0xc030) Cipher Suite: TLS_ECDHE_ECDSA_WITH_CHACHA20_POLY1305_SHA256 (0xcca9) Cipher Suite: TLS ECDHE RSA WITH CHACHA20 POLY1305 SHA256 (0xcca8) Cipher Suite: TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA (0xc013) Cipher Suite: TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA (0xc014) Cipher Suite: TLS_RSA_WITH_AES_128_GCM_SHA256 (0x009c) Cipher Suite: TLS_RSA_WITH_AES_256_GCM_SHA384 (0x009d) Cipher Suite: TLS_RSA_WITH_AES_128_CBC_SHA (0x002f) Cipher Suite: TLS_RSA_WITH_AES_256_CBC_SHA (0x0035) Cipher Suite: TLS_RSA_WITH_3DES_EDE_CBC_SHA (0x000a) Compression Methods Length: 1 Compression Methods (1 method) Extensions Length: 401 Extension: Reserved (GREASE) (len=0) Extension: server_name (len=26) Extension: extended_master_secret (len=0) Extension: renegotiation_info (len=1) Extension: supported groups (len=10) Extension: ec point formats (len=2) Extension: SessionTicket TLS (len=0) Extension: application_layer_protocol_negotiation (len=14) Extension: status_request (len=5) Extension: signature algorithms (len=20) Extension: signed certificate timestamp (len=0) Extension: key share (len=43) Extension: psk_key_exchange_modes (len=2) Extension: supported_versions (len=11) Extension: Unknown type 27 (len=3) Extension: Reserved (GREASE) (len=1) Extension: padding (len=195)