

# **Task -1**

```
Command Prompt
Microsoft Windows [Version 10.0.26100.7171]
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C:\Users\ARAVIND>ipconfig

Windows IP Configuration

Ethernet adapter Ethernet:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix . :

Ethernet adapter Ethernet 2:

    Connection-specific DNS Suffix . :
    Link-local IPv6 Address . . . . . : fe80::...
    IPv4 Address. . . . . : 10.20.20.1
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . :

Wireless LAN adapter Local Area Connection* 1:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix . :

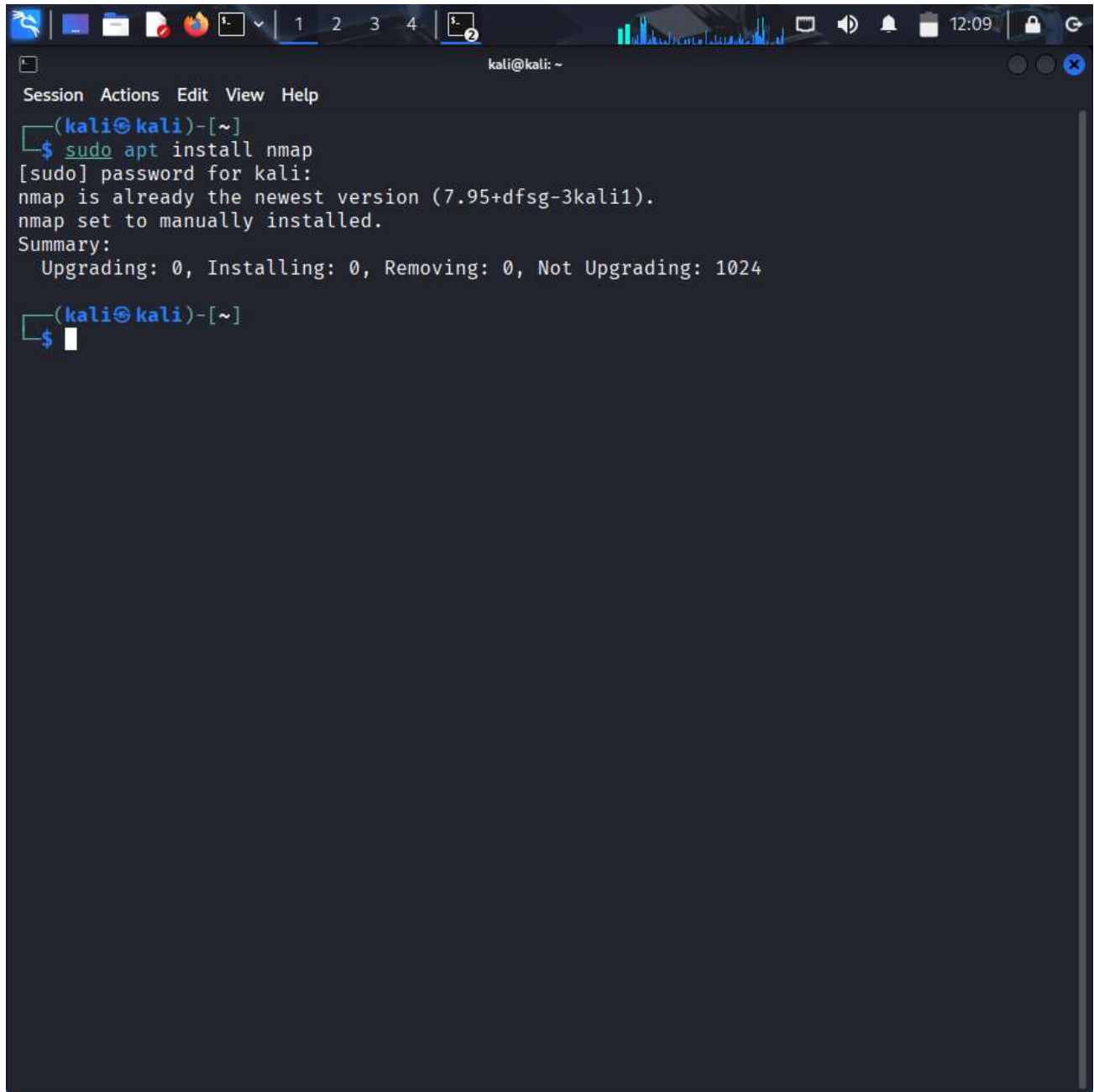
Wireless LAN adapter Local Area Connection* 2:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix . :

Wireless LAN adapter Wi-Fi:

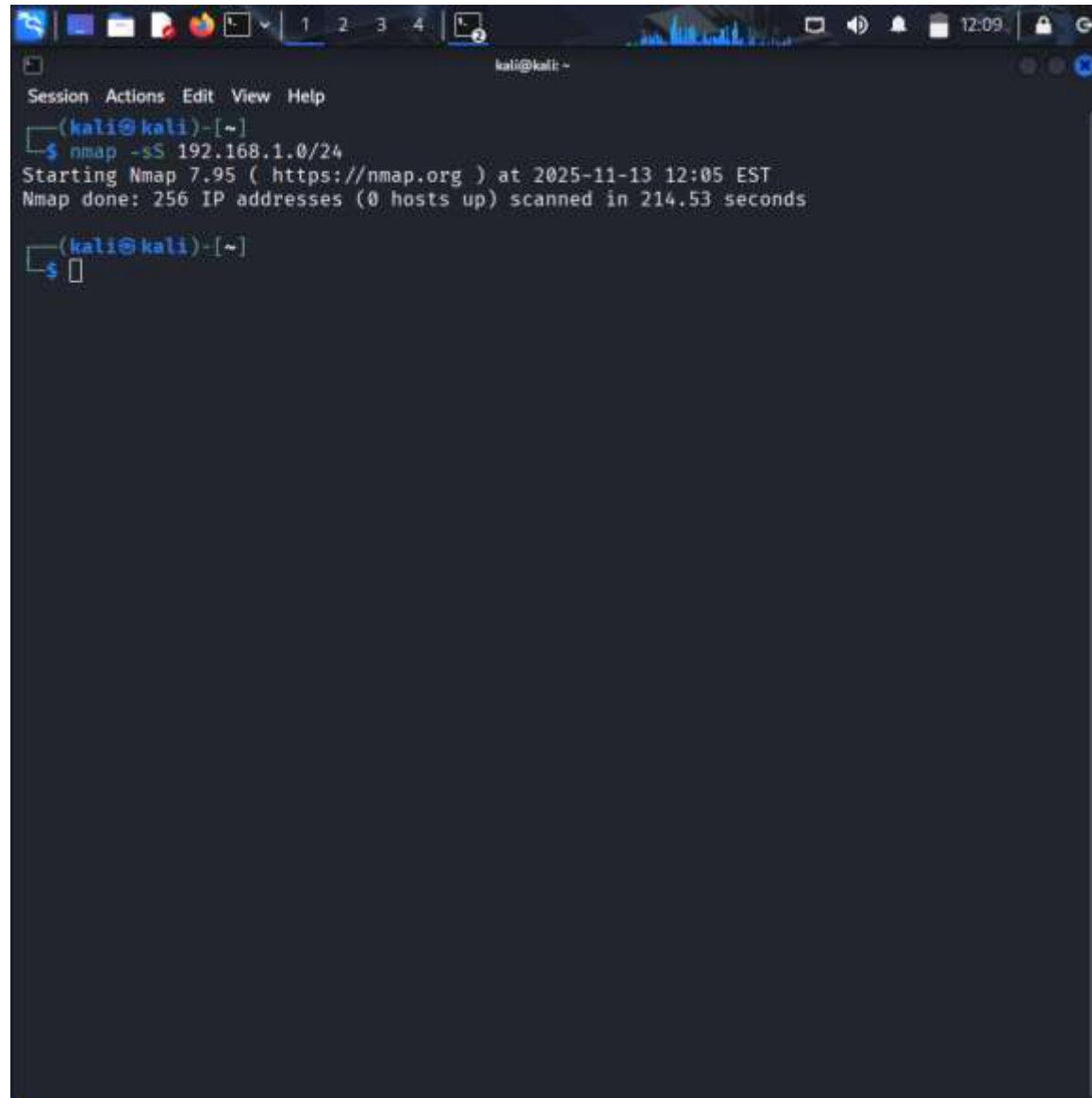
    Connection-specific DNS Suffix . :
    IPv6 Address. . . . . : fe80::...
    Temporary IPv6 Address. . . . . : fe80::...
    Link-local IPv6 Address . . . . . : fe80::...
    IPv4 Address. . . . . : 192.168.1.1
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.1.1

C:\Users\ARAVIND>
```



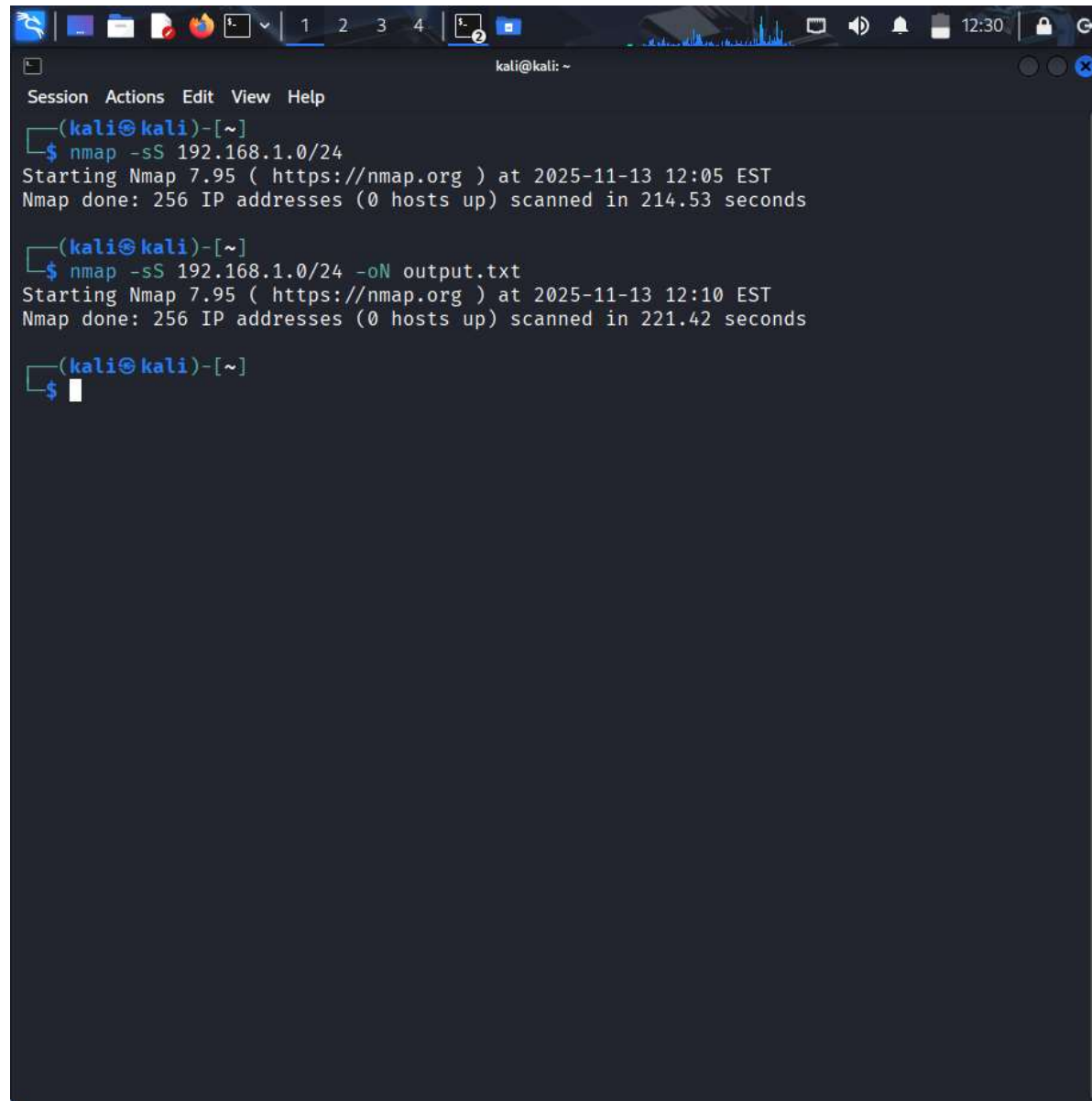
A terminal window on a Kali Linux system. The window has a dark theme and a menu bar with 'Session', 'Actions', 'Edit', 'View', and 'Help'. The title bar shows 'kali@kali: ~'. The terminal output shows the command 'sudo apt install nmap' being executed. The system responds that nmap is already the newest version (7.95+dfsg-3kali1) and has been manually installed. A summary line shows 'Upgrading: 0, Installing: 0, Removing: 0, Not Upgrading: 1024'. The prompt returns to '(kali@kali)-[~]' and the user enters a dollar sign '\$' at the prompt.

```
kali@kali: ~  
Session Actions Edit View Help  
(kali@kali)-[~]  
$ sudo apt install nmap  
[sudo] password for kali:  
nmap is already the newest version (7.95+dfsg-3kali1).  
nmap set to manually installed.  
Summary:  
  Upgrading: 0, Installing: 0, Removing: 0, Not Upgrading: 1024  
(kali@kali)-[~]  
$
```



A terminal window on a Kali Linux system. The window title is "kali@kali: ~". The menu bar includes "Session", "Actions", "Edit", "View", and "Help". The terminal shows a command prompt "(kali@kali)-[~]" followed by the command "\$ nmap -sS 192.168.1.0/24". The output of the command is displayed: "Starting Nmap 7.95 ( https://nmap.org ) at 2025-11-13 12:05 EST" and "Nmap done: 256 IP addresses (0 hosts up) scanned in 214.53 seconds". The prompt returns to "(kali@kali)-[~]" followed by "\$ " and a cursor.

```
kali@kali: ~
Session Actions Edit View Help
(kali@kali)-[~]
$ nmap -sS 192.168.1.0/24
Starting Nmap 7.95 ( https://nmap.org ) at 2025-11-13 12:05 EST
Nmap done: 256 IP addresses (0 hosts up) scanned in 214.53 seconds
(kali@kali)-[~]
$ 
```



A terminal window on a Kali Linux system. The window title is "kali@kali: ~". The menu bar includes "Session", "Actions", "Edit", "View", and "Help". The terminal shows two Nmap scans. The first scan is initiated with the command `nmap -sS 192.168.1.0/24` at 12:05 EST, taking 214.53 seconds. The second scan is initiated with the command `nmap -sS 192.168.1.0/24 -oN output.txt` at 12:10 EST, taking 221.42 seconds. Both scans report "Nmap done: 256 IP addresses (0 hosts up) scanned". The prompt `(kali@kali)-[~]` is shown before each command. The third prompt `(kali@kali)-[~]` is shown with a dollar sign and a cursor, indicating the terminal is ready for input.

```
kali@kali: ~  
Session Actions Edit View Help  
(kali@kali)-[~]  
$ nmap -sS 192.168.1.0/24  
Starting Nmap 7.95 ( https://nmap.org ) at 2025-11-13 12:05 EST  
Nmap done: 256 IP addresses (0 hosts up) scanned in 214.53 seconds  
  
(kali@kali)-[~]  
$ nmap -sS 192.168.1.0/24 -oN output.txt  
Starting Nmap 7.95 ( https://nmap.org ) at 2025-11-13 12:10 EST  
Nmap done: 256 IP addresses (0 hosts up) scanned in 221.42 seconds  
  
(kali@kali)-[~]  
$
```

Wireshark packet capture analysis showing a TLSv1.2 connection. The interface is 'tcp'. The packet list shows several TCP and TLSv1.2 packets. The packet details pane shows the structure of a TLSv1.2 packet, including the Transport Layer Security (TLS) protocol version, source and destination ports, sequence number, and acknowledgment number. The packet bytes pane displays the raw data in hexadecimal and ASCII.

Packet List:

No.	Time	Source	Destination	Protocol	Length	Info
237	31.682982	192.168.43.39	135.233.45.221	TCP	66	58602 → 443 [ACK] Seq=119092 Ack=111 Min=20 Len=0 TSval=2633374 TSecr=1059570778
238	31.820053	192.168.43.39	135.233.45.221	TCP	125	[TCP Spurious Retransmission] 443 → 58602 [PSH, ACK] Seq=56 Ack=119092 Min=16384 Len=55 TSval=1059571673 TSecr=2632330
239	31.820126	192.168.43.39	135.233.45.221	TCP	78	[TCP Dup ACK 237#1] 58602 → 443 [ACK] Seq=119092 Ack=111 Min=20 Len=0 TSval=2633511 TSecr=1059570778 SLE=56 SRE=111
240	31.920698	192.168.43.39	135.233.45.221	TCP	82	[TCP Dup ACK 235#1] 443 → 58602 [ACK] Seq=111 Ack=119092 Min=16384 Len=0 TSval=1059571770 TSecr=2632330 SLE=117814 SRE=119092
241	33.470854	192.168.43.39	135.233.45.221	TCP	1344	58602 → 443 [ACK] Seq=119092 Ack=111 Min=20 Len=1278 TSval=2635162 TSecr=1059571770
242	33.470854	192.168.43.39	135.233.45.221	TCP	1344	58602 → 443 [ACK] Seq=120370 Ack=111 Min=20 Len=1278 TSval=2635162 TSecr=1059571770
243	34.145033	192.168.43.39	135.233.45.221	TCP	70	443 → 58602 [ACK] Seq=111 Ack=121648 Min=16384 Len=0 TSval=1059573611 TSecr=2635162
244	34.145115	192.168.43.39	135.233.45.221	TCP	1344	58602 → 443 [ACK] Seq=121648 Ack=111 Min=20 Len=1278 TSval=2635836 TSecr=1059573611 [TCP PDU reassembled in 245]
245	34.145115	192.168.43.39	135.233.45.221	TLSv1.2	1344	Application Data
246	34.145115	192.168.43.39	135.233.45.221	TCP	1344	58602 → 443 [ACK] Seq=124204 Ack=111 Min=20 Len=1278 TSval=2635836 TSecr=1059573611
247	34.956713	192.168.43.39	135.233.45.221	TCP	70	443 → 58602 [ACK] Seq=111 Ack=124204 Min=16384 Len=0 TSval=1059574317 TSecr=2635836
248	34.956713	192.168.43.39	135.233.45.221	TLSv1.2	117	Application Data
249	34.956713	192.168.43.39	135.233.45.221	TLSv1.2	102	Application Data
250	34.956713	192.168.43.39	135.233.45.221	TCP	70	443 → 58602 [ACK] Seq=111 Ack=125482 Min=16384 Len=0 TSval=1059574362 TSecr=2635836
251	34.956700	192.168.43.39	135.233.45.221	TCP	1344	58602 → 443 [ACK] Seq=125482 Ack=111 Min=20 Len=1278 TSval=2636648 TSecr=1059574362 [TCP PDU reassembled in 252]
252	34.956700	192.168.43.39	135.233.45.221	TLSv1.2	1344	Application Data
253	34.956949	192.168.43.39	135.233.45.221	TCP	74	1380 → 443 [ACK] Seq=2 Ack=65 Win=255 Len=0
254	34.958285	192.168.43.39	135.233.45.221	TCP	74	1380 → 443 [FIN, ACK] Seq=2 Ack=65 Win=255 Len=0
255	34.967394	192.168.43.39	135.233.45.221	TCP	102	[TCP Spurious Retransmission] 443 → 1380 [FIN, PSH, ACK] Seq=40 Ack=2 Min=484 Len=24

Packet Details:

Frame 1: Packet, 1344 bytes on wire (10752 bits), 1344 bytes captured (10752 bits) on interface \Device\NPF...

Ethernet II, Src: Intel E81C:2:82 (90:10:57:cc:e2:82), Dst: 26:d7:8d:31:34:12 (26:d7:8d:31:34:12)

Internet Protocol Version 4, Src: 192.168.43.39, Dst: 135.233.45.221

Transmission Control Protocol, Src Port: 58602, Dst Port: 443, Seq: 1, Ack: 1, Len: 1278

Transport Layer Security

Packet Bytes:

26 d7 8d 31 34 12 90 10 57 cc e2 82 08 00 45 00 R 14 W E  
05 32 43 d3 40 00 00 06 10 5d c0 a0 2b 27 87 a9 2C # } +  
2d dd e4 ea 01 bb d5 b3 f3 ef b4 49 bf 02 00 10 - I  
00 14 6e b3 00 00 01 01 00 0a 00 27 b2 db 3f 27 n  
47 8f b7 f5 7d 3d 8f d3 67 df 1c 2d cc 1b df 8e G }= g  
49 99 7d d5 b9 0a d3 da 8d f2 d6 36 68 63 3c 3d I } Ghat=  
21 9c 7b 3e 0c 54 5f a0 08 3d 0f a4 e2 c0 32 8b l (> T\_ = 2  
44 2b 89 12 b8 ea 65 b7 14 32 65 80 da 7a 3a 7c Dr = 2a -:  
ba 64 22 3f 5d b9 40 2d 05 3d d8 16 85 1c 4a 2d d\*) @ - 6 - ?  
e2 c2 d1 ea 15 82 3b 6c 83 31 61 36 3c 63 65 15 - - - - - l 1a6cc  
15 c0 9d a6 01 0f c2 c9 57 55 9c 18 2b 47 2f 57 0000 WU +G/M  
8d 74 75 7d 84 ea e0 93 90 93 00 05 c6 7c a1 3b tu) | ;  
1a e7 9a f8 31 c1 42 5b ae c4 78 56 a3 99 17 68 0000 1 Bk pV h  
7f a0 39 b6 22 c3 78 76 e0 53 0b 6c a0 64 d0 7c 0000 9 - wv S d |  
fb 6c 8c 32 84 87 75 cb c9 5d 14 31 49 ee 6a f7 0000 1 2 u j - j j  
2b 82 ee be f9 d3 fa 1d 3f eb 7f 03 9d a4 90 3f 0000 + - - - - - ? - ?  
2c 65 41 1d 01 93 03 1a 56 af cf e9 a6 8d d9 70 0100 ,a V p  
6f 16 07 da 35 50 2e df d1 3a 59 6c 57 82 6a 31 0110 o SP. iYIM j1  
9d 06 45 30 9b 2c 0b c0 0f bd 24 fa 81 dd 63 5e 0120 fo \$ c  
f0 6f f4 1d 10 47 29 23 78 ba 2a c4 b1 db a1 c2 0130 o G) x \*  
f5 ac 62 49 92 97 f0 a9 14 ff 43 3e 96 2a 01 a6 0140 b1 C> \*  
05 08 b0 0a c6 5f 99 32 45 48 39 a5 f3 52 0a 59 0150 \_ 2 El0 R Y