Data is the new currency

PCAP Challenge

NOTE: This write up is not very good, I will fix.

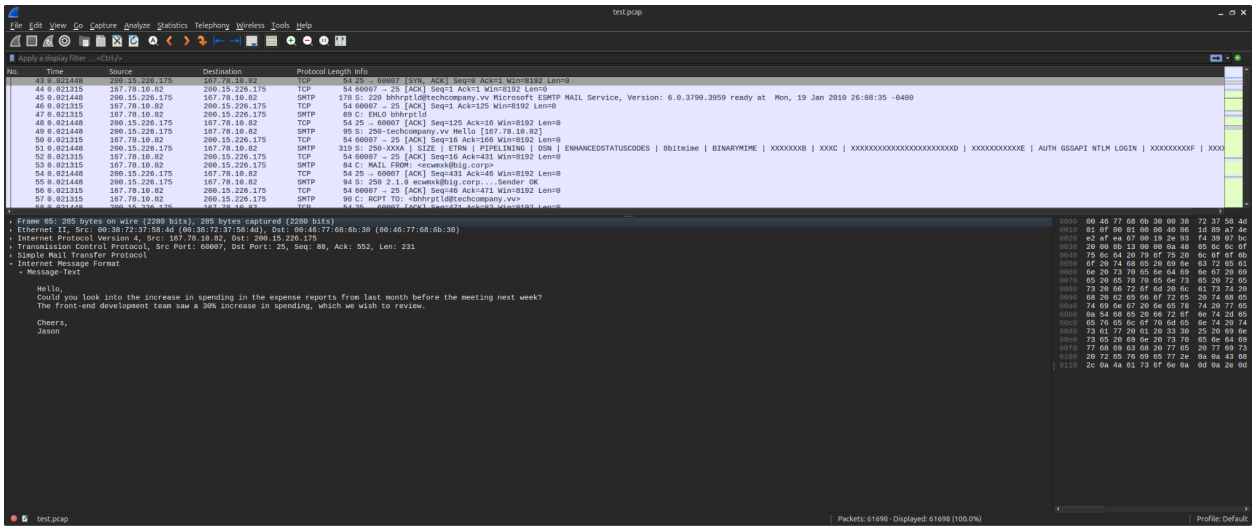
Challenge Description

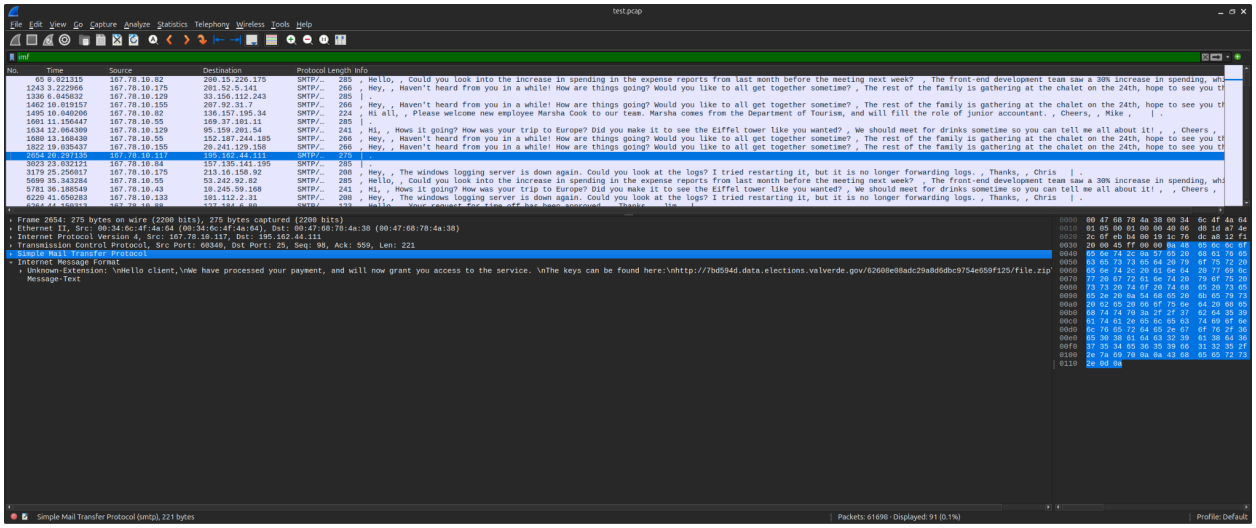
Corrupt government officials are offering the voter information as a service for a profit. You have been tasked with uncovering this hidden service.

2 Flags:

1. What file is sent to the customer, who just purchased access to the voter information service? (Answer Format is the full path)
2. What is the occupation of Tatiana Castro?

Part 1:

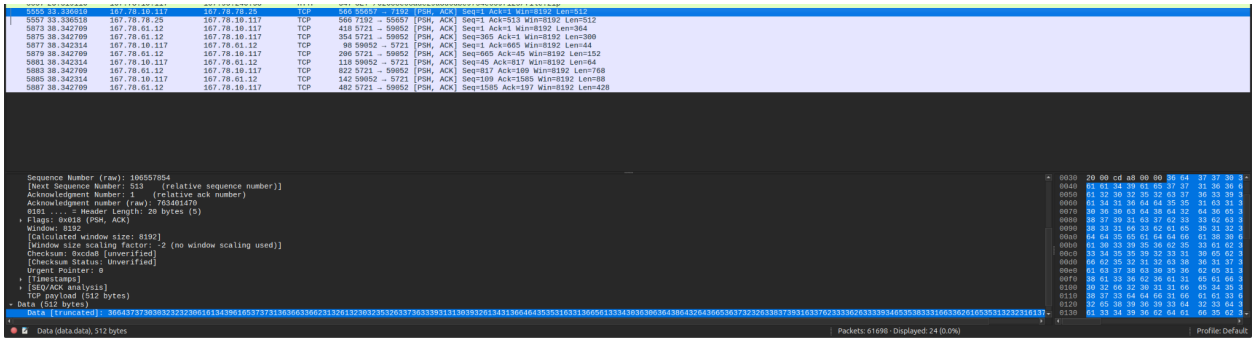




Part 2:

Extract bytes to get zip file.

Check IP of client fetching the zip file, 167.78.10.117



There are 2 services. Try the first.
Decrypt with private key.

```
def decrypt(message_encrypted, private_key):
    try:
        message_decrypted = private_key.decrypt(
            message_encrypted,
            padding.OAEP(
                mgf=padding.MGF1(algorithm=hashes.SHA256()),
                algorithm=hashes.SHA256(),
                label=None
            )
        )
        return f"Decrypted Message: {message_decrypted}"
    except ValueError:
        return "Failed to Decrypt"
```

You get:

```
KEY: 3a5d6f0b799b745d064d311dbf9064f9
```

Try key on other service:

```
def decrypt(key, source, decode=True):
    if decode:
        source = base64.b64decode(source.encode("latin-1"))
    key = SHA256.new(key).digest()  # use SHA-256 over our key to get a
proper-sized AES key
    IV = source[:AES.block_size]  # extract the IV from the beginning
    decryptor = AES.new(key, AES.MODE_CBC, IV)
    data = decryptor.decrypt(source[AES.block_size:])  # decrypt
    padding = data[-1]  # pick the padding value from the end; Python 2.x:
ord(data[-1])
```

```
   if data[-padding:] != bytes([padding]) * padding:  # Python 2.x:
chr(padding) * padding
       raise ValueError("Invalid padding...")
   return data[:-padding]  # remove the padding
```

We get:
Name: Tatiana Castro **Historical Voting Patterns: FP,FP,FP,FP,FP,FP,FP,FP,FP,FP**
Occupation: Nurse at Vega General **Dependents: 0**
Martial Status: Widowed **Country of Origin: Guatemala**
Age: 67 **Income Bracket: T3**
Education: College

FIN.