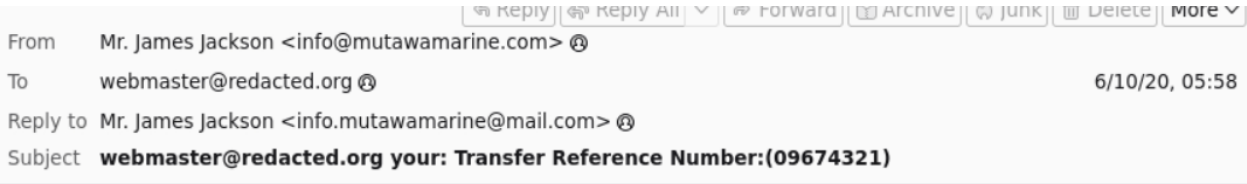
# The Greenholt Phish – Challenge 2026/01/13

A Sales Executive at Greenholt PLC received an email that he didn't expect to receive from a customer. He claims that the customer never uses generic greetings such as "Good day" and didn't expect any amount of money to be transferred to his account. The email also contains an attachment that he never requested. He forwarded the email to the SOC (Security Operations Center) department for further investigation.

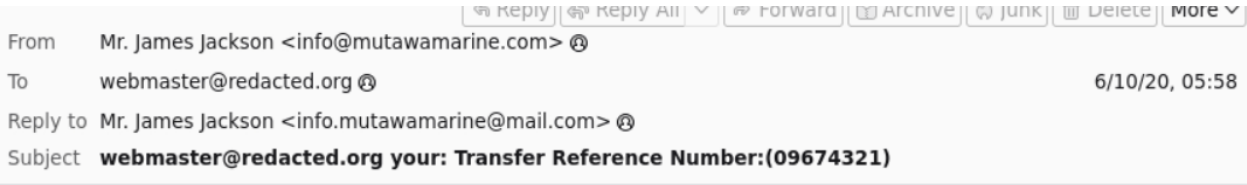
Investigate the email sample to determine if it is legitimate.

Step 1: What is the **Transfer Reference Number** listed in the email's **Subject**?



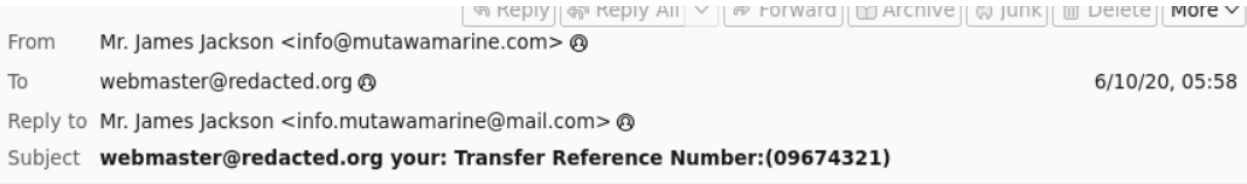

Looking at the Header of the email, I identified the Transfer Reference Number – **09674321**.

Step 2: Who is the email from?



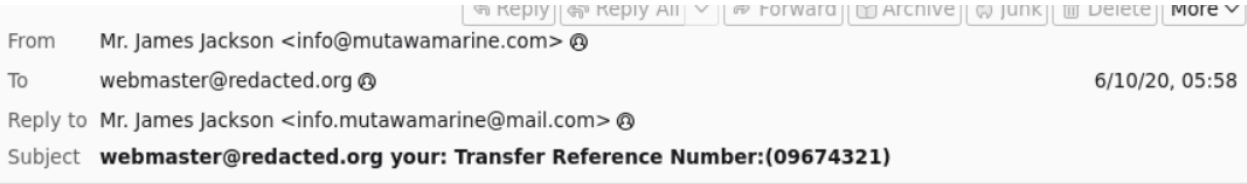

Working in the same header again, I identified the Sender - **Mr. James Jackson**.

Step 3: What is his email address?



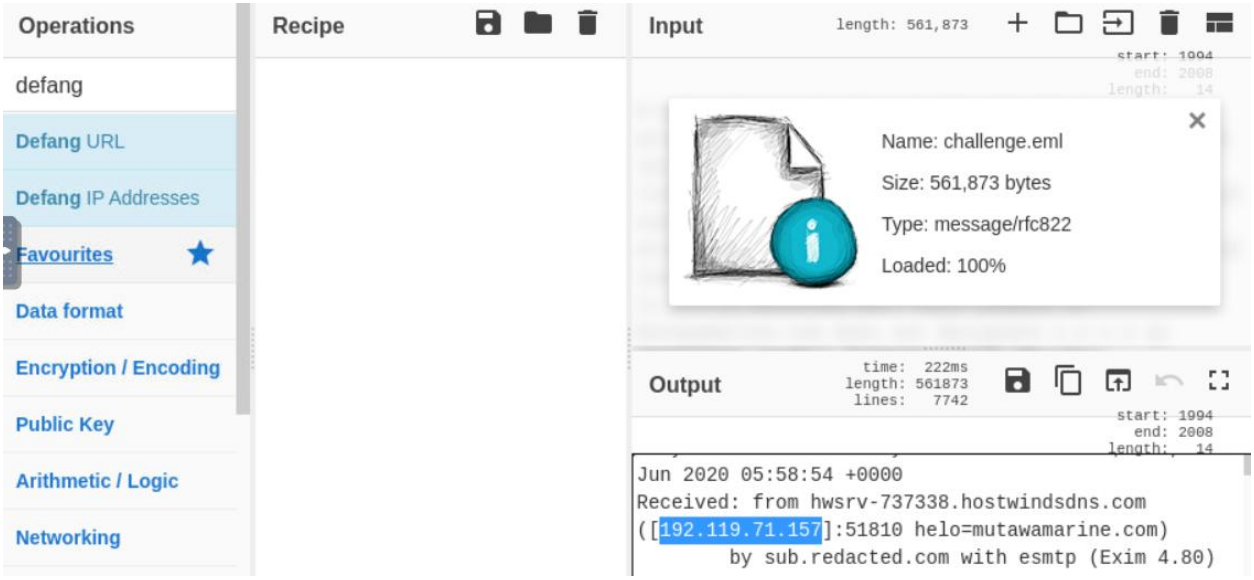

His email - **info@mutawamarine.com**.

Step 4: What email address will receive a reply to this email?



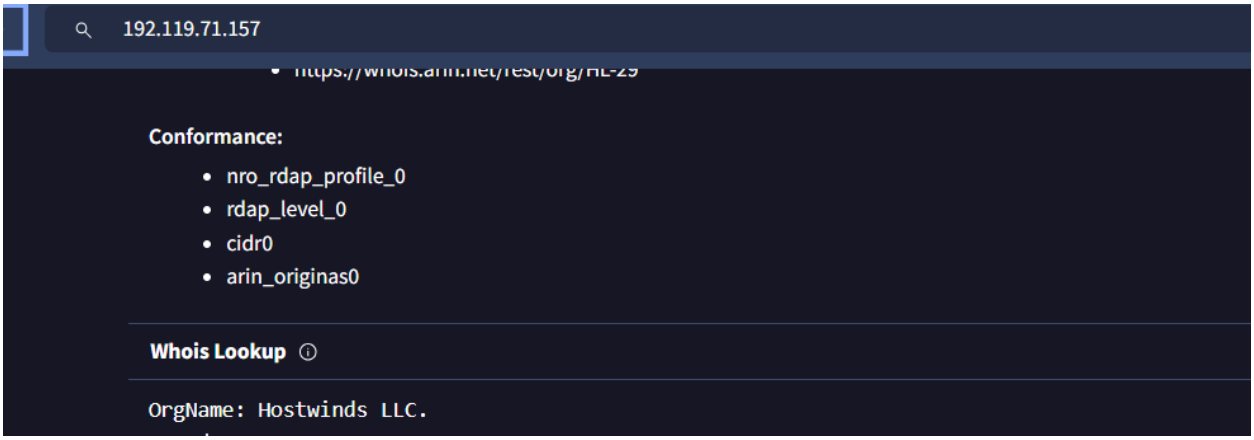

**info.mutawamarine@mail.com**.

Step 4: What is the Originating IP?



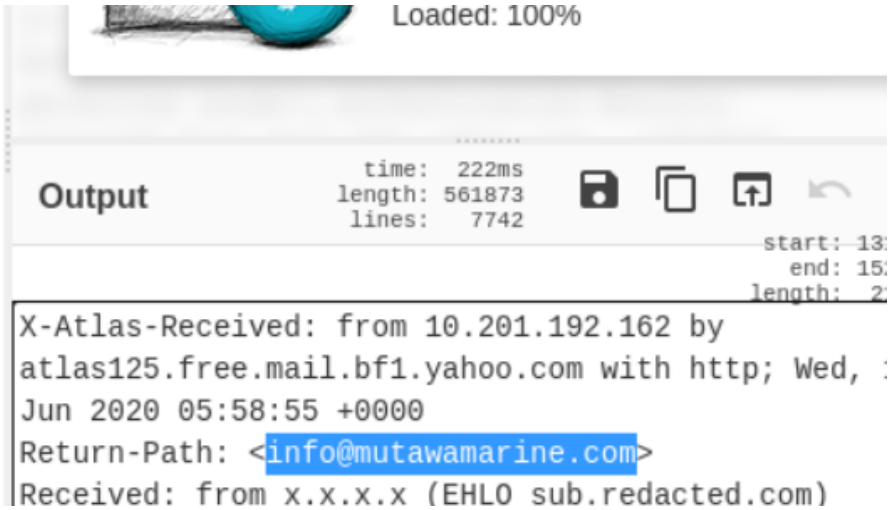

I opened up **Cyberchef** for this one. I brought in the file on Input and In the Output, I managed to identify the Originating IP – **192.119.71.157**.

Step 5: Who is the owner of the Originating IP? (Do not include the "." in your answer.)

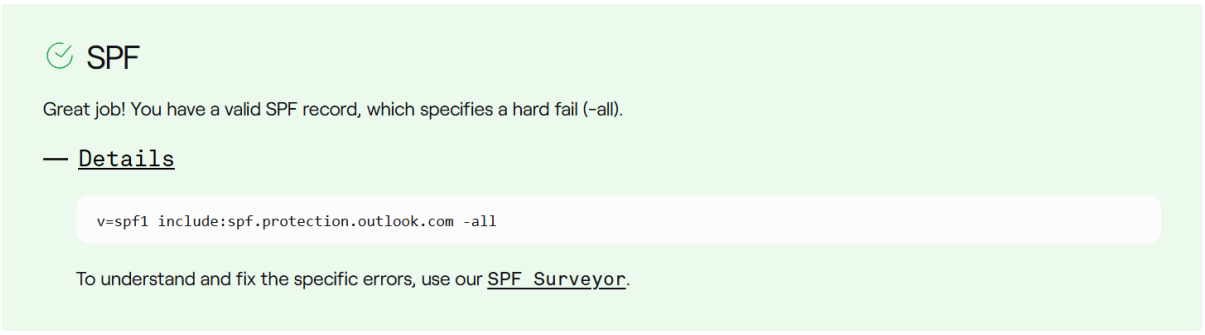



For this I copied the IP - **192.119.71.157**. I opened 'VirusTotal' and pasted it there. I clicked on Details and scrolled down to 'Whois Lookup' and found the originating name - **Hostwinds LLC**.

Step 6: What is the SPF record for the Return-Path domain?

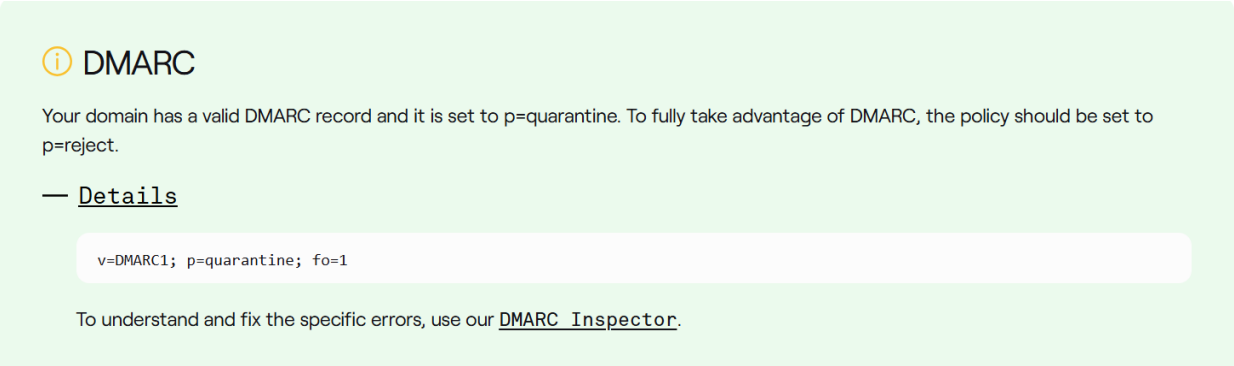



I opened up **Cyberchef** and navigated to the Return-Path and found the domain – **mutawarine.com**.



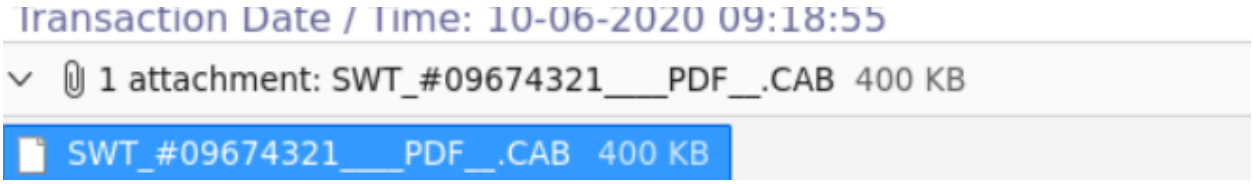

I opened up **Dmarcian** and pasted the domain I copied earlier. I then clicked search and scrolled down to SPF and clicked Details to view the record - `v=spf1 include:spf.protection.outlook.com -all.`

Step 7: What is the DMARC record for the Return-Path domain?




The DMARC record - `v=DMARC1; p=quarantine; fo=1.`

Step 8: What is the name of the attachment?



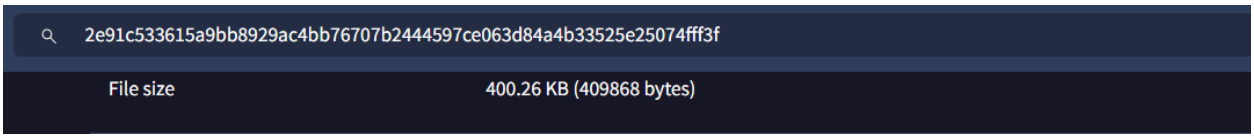

I scrolled down to the end of the email and clicked the arrow pointing down – **SWT_#09674321____PDF__.CAB**.

Step 9: What is the SHA256 hash of the file attachment?

```
ubuntu@ip-10-64-138-170:~$ dir
Desktop  Documents  Downloads  Music  Pictures  Public  Templates  Videos
ubuntu@ip-10-64-138-170:~$ cd Desktop
ubuntu@ip-10-64-138-170:~/Desktop$ ls
SWT_#09674321____PDF__.CAB  Tools  challenge.eml
ubuntu@ip-10-64-138-170:~/Desktop$ SHA256sum SWT_#09674321____PDF__.CAB
SHA256sum: command not found
ubuntu@ip-10-64-138-170:~/Desktop$ sha256sum SWT_#09674321____PDF__.CAB
2e91c533615a9bb8929ac4bb76707b2444597ce063d84a4b33525e25074fff3f  SWT_#09674321_
___PDF__.CAB
```

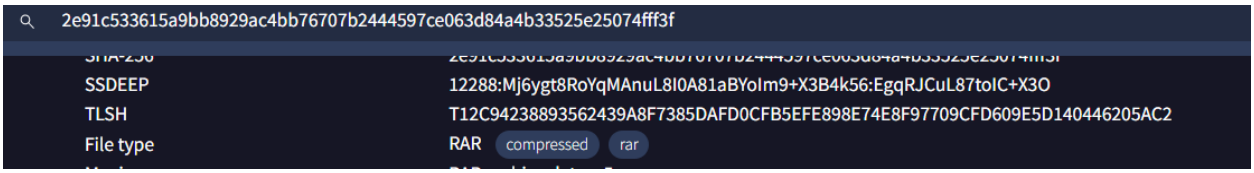
I saved the attachment from the email, navigated through the directories and found the hash - **2e91c533615a9bb8929ac4bb76707b2444597ce063d84a4b33525e25074fff3f**.

Step 10: What is the attachments file size? (Don't forget to add "KB" to your answer, **NUM KB**)




I copied the hash and opened up VirusTotal and pasted it and scrolled down to identify the file size – **400.26 KB**.

Step 11: What is the actual file extension of the attachment?




**RAR**.

**Conclusion Summary**

This challenge simulated a real-world SOC phishing investigation and required a structured analysis of a suspicious business email. By examining the email headers, sender and reply-to details, and originating IP address, I was able to identify inconsistencies that indicated the message was not legitimate. Investigating the IP ownership and validating SPF and DMARC records further reinforced how attackers abuse trusted-looking domains and infrastructure to bypass initial scrutiny.

The attachment analysis provided additional confirmation of malicious intent. By identifying the attachment name, calculating its SHA-256 hash, verifying its size through VirusTotal, and uncovering the true file extension hidden behind a misleading filename, I demonstrated safe handling and validation of potentially harmful files.

Overall, this exercise strengthened my ability to correlate email metadata, authentication records, and attachment indicators to confidently assess phishing attempts and produce clear, evidence-based conclusions aligned with real-world SOC investigation practices.