

STOLEN MOUNT INVESTIGATION - PRE-REPORT - TIER 1 SECURITY ANALYST L1 - MSSP

INFORMATION:

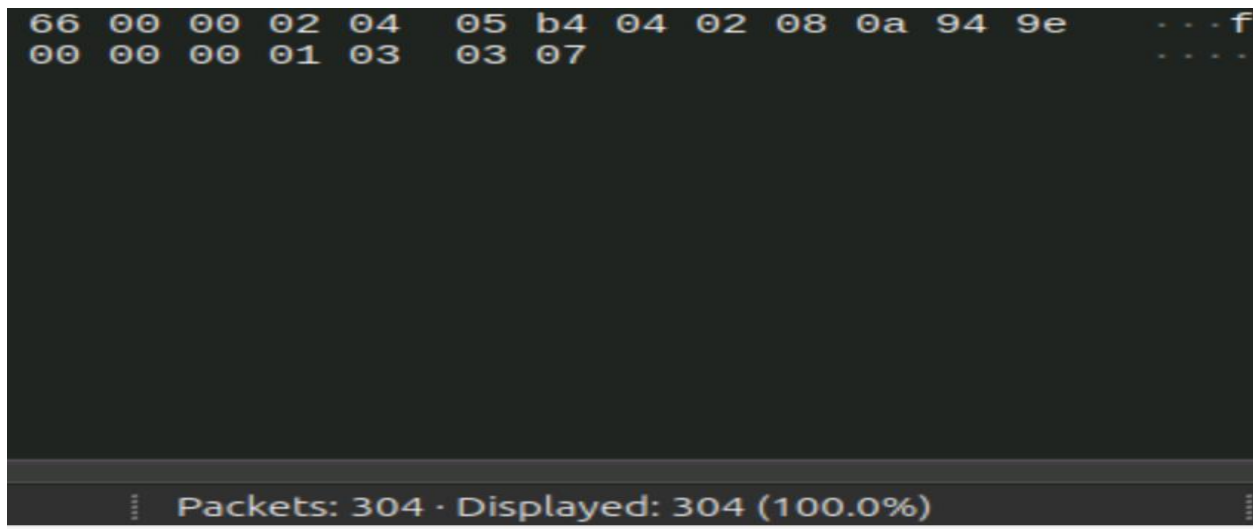
I AM TASKED WITH ANALYSING NETWORK TRAFFIC RELATED TO AN UNAUTHENTICATED FILE SHARE ACCESS ATTEMPT. I AM FOCUSING ON POTENTIAL SIGNS OF DATA EXFILTRATION. THE ADVERSARY'S TARGET IS A NFS SERVER WHERE BACKUP FILES ARE STORED. A CLASSIFIED SECRET WAS ACCESSED & STOLEN. THE ONLY TRACES LEFT BEHIND BY THE ADVERSARY WAS A PCAP FILE DURING THE INCIDENT.

SCOPE:

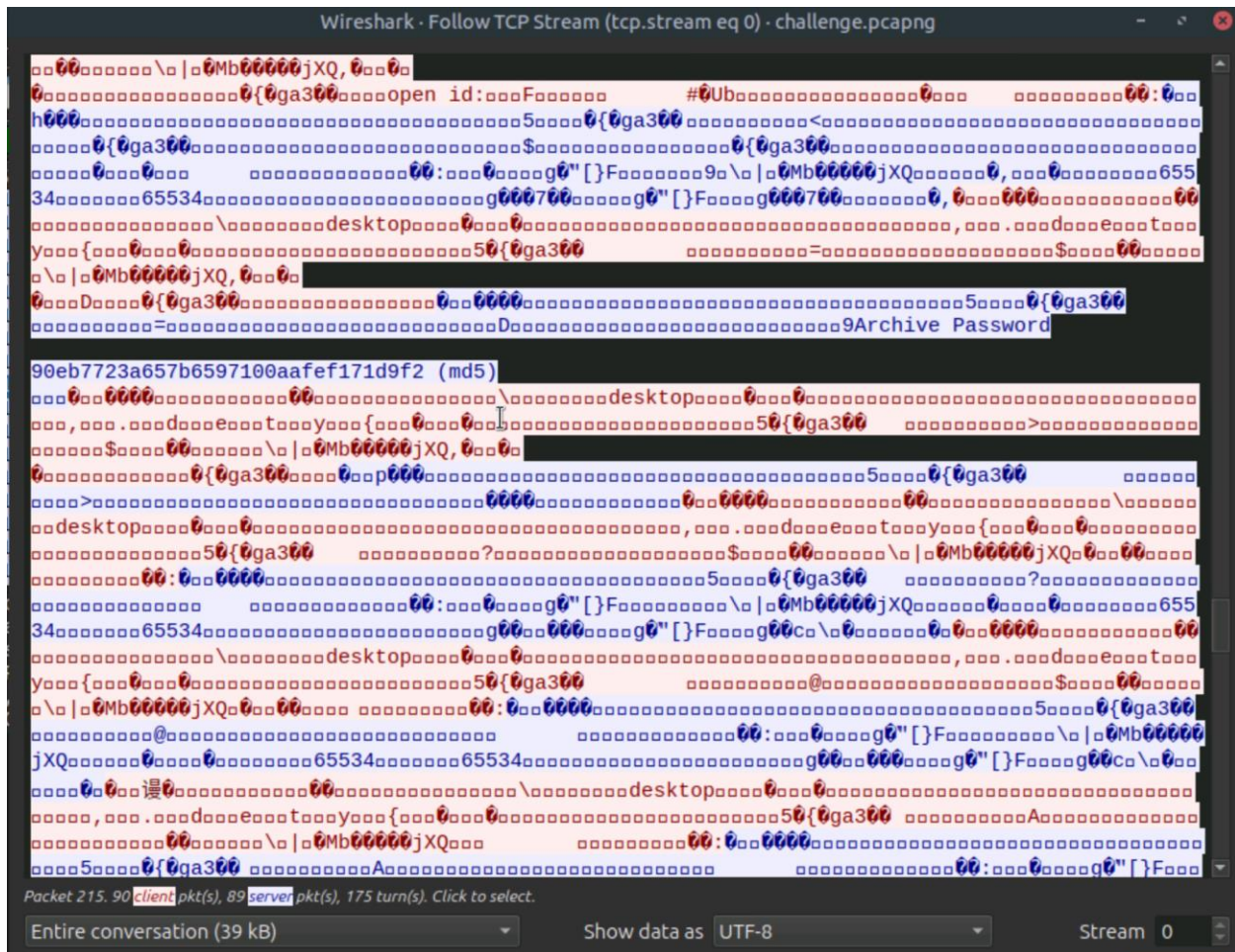
THE INVESTIGATION IS FOCUED ON A PCAP FILE NAMED 'CHALLENGE.PCAP'. NOT MUCH INFORMATION IS KNOW ON HOW THIS INCIDENT WAS DETECTED BUT WE ARE LOOKING INTO THE POTENTIAL EXFILTRATION OF A CLASSIFIED FILE CONTAINING TOP SECRET INFORMATION. I AM GOING TO BE CONDUCTING MY INVESTIGATION USING WIRESHARK. THE SCOPE WAS LIMITED TO TRAFFIC PRESENT IN THE PCAP FILE & DID NOT INCLUDDE HOST-BASED FORENICS OR ENDPOINT TELEMETRY.

INVESTIGATION:

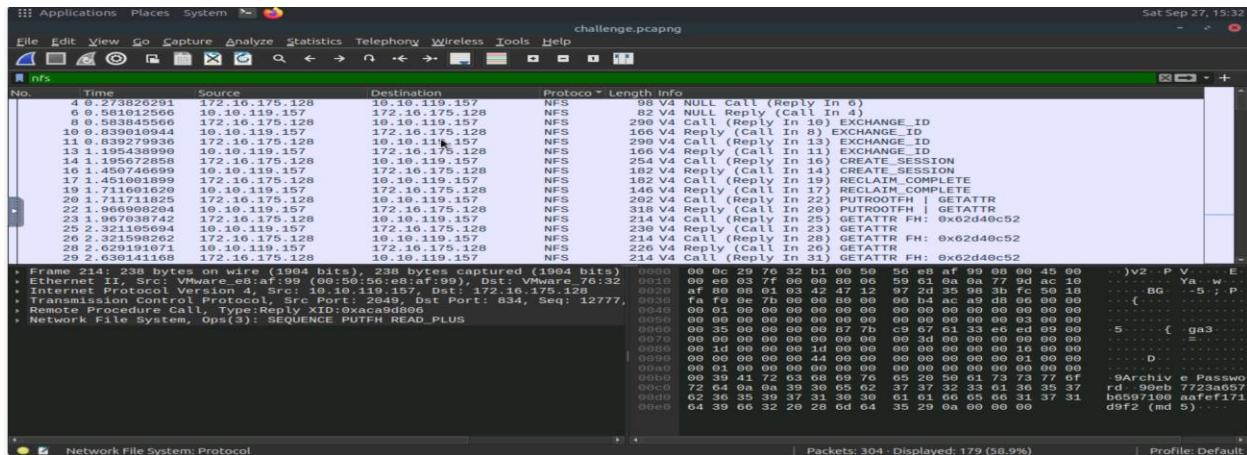
THE TOTAL PACKETS WITHIN THE CHALLENGE.PCAP FILE IS A TOTAL OF 304 PACKETS. WHEN FILTERED FOR NFS SERVER THE TOTAL PACKETS WENT DOWN TO 179 PACKETS.



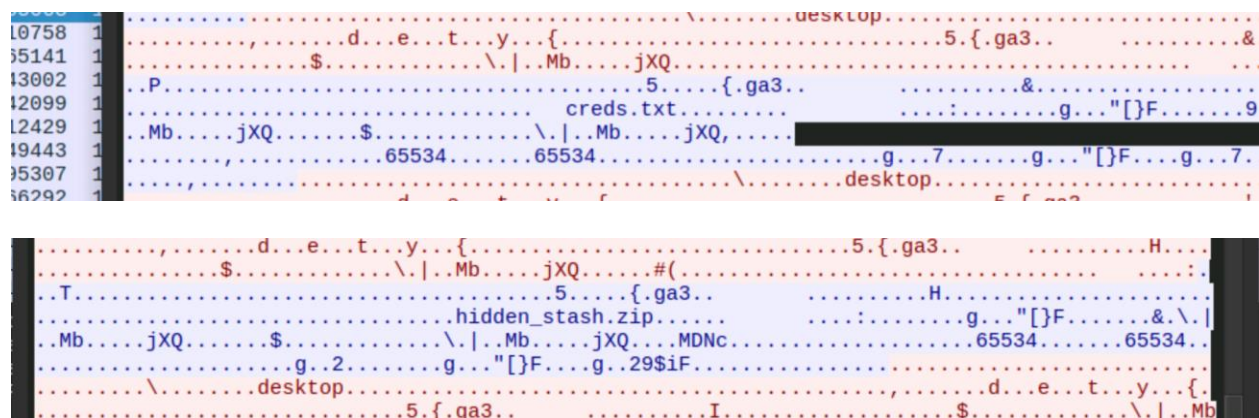
I FOLLOWED THE TCP STREAM OF ONE OF THE NFS PACKETS & AS I SCROLLED, I ENCOUNTERED A PASSWORD HASHED WITH MD5: 90eb7723a657b6597100aafef171d9f2. I TOOK THIS MD5 HASH TO CRACKSTATION & THE RESULT WAS 'avengers' WHICH IS OUR PASSWORD.



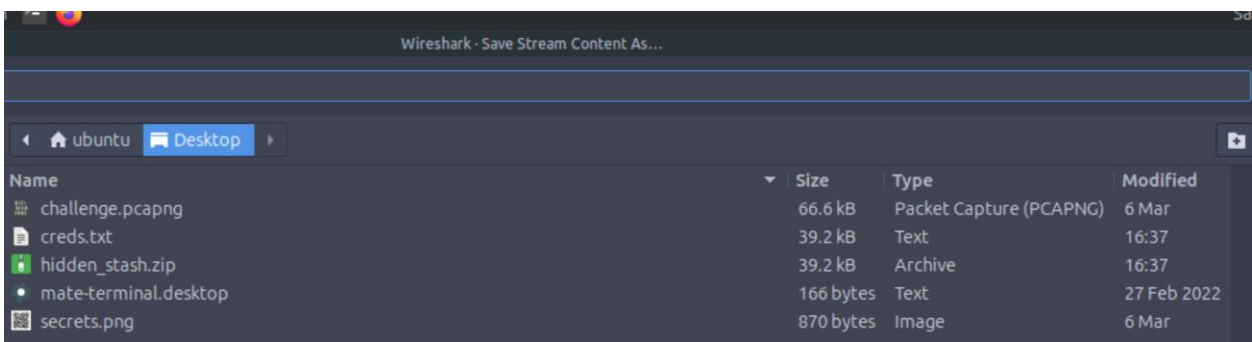
THERE ARE ONLY TWO IP ADDRESSES: 172.16.175.128 & 10.10.119.157. I BELEIVE THE ADVERSARY IS USING THE 172.16.175.128 IP ADDRESS.



SCROLLING THROUGH THE LOGS I NOTICED 2 FILES ONE FILE IS CALLED CRED.S.TXT / CRED.S.TXT & ANOTHER FILE CALLED HIDDEN_STASH.ZIP. AFTER RESEARCHING ONLINE THE NEXT STEP I TOOK WAS TO SAVE THE TCP STREAM IN RAW FORMAT I SAVED ONE UNDER CRED.S.TXT & THE OTHER SAVED AS HIDDEN_STASH.ZIP

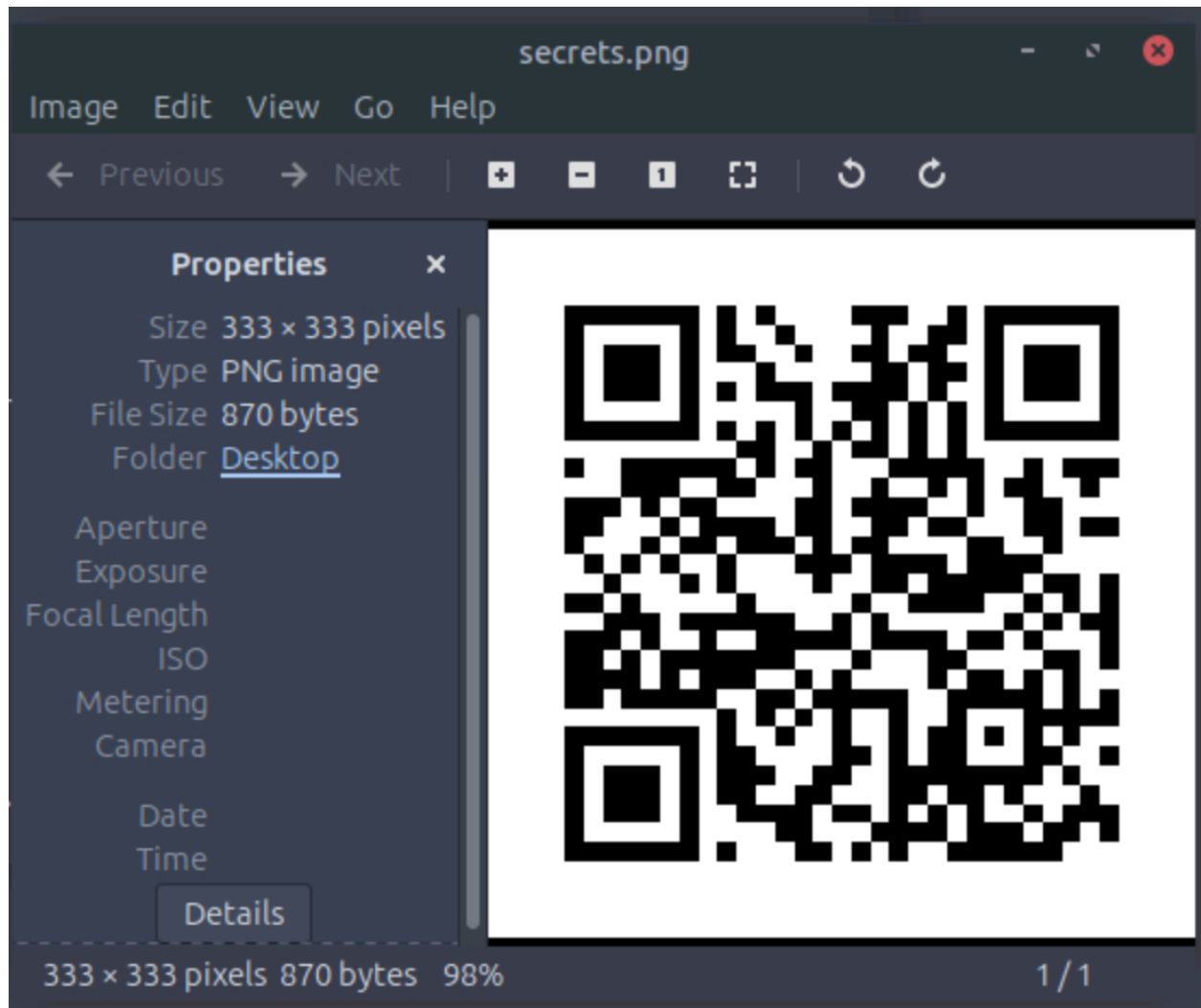


THE CRED.S.TXT FILE I SAVED WAS A DUPLICATE OF THE DATA WE SAW IN THE TCP STREAM

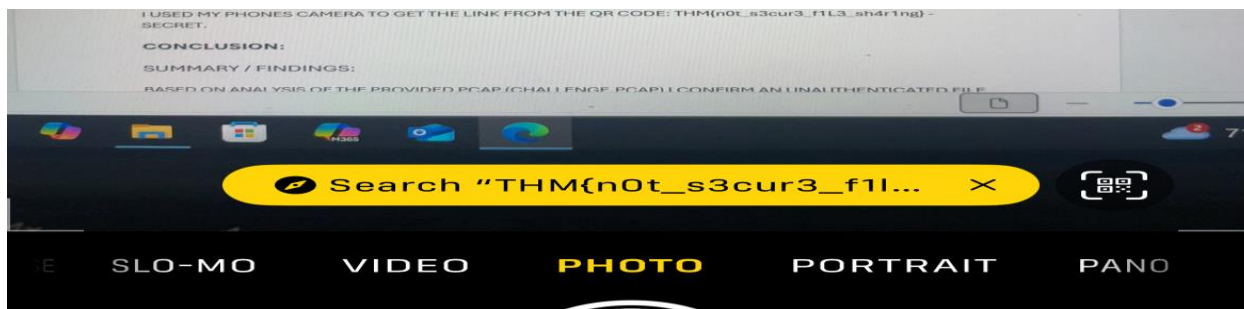


THE FILE I SAVED AS HIDDEN_STASH.ZIP WAS UNZIPPEDD USING THE 'UNZIP HIDDEN_STASH.ZIP'. IT PROMPT ME FOR A PASSWORD SO I ENTERED THE PASSWORD I FOUNDD EARLIER: 'avengers'. THE ZIP FILE CONTAINED ONLY ONE FILE WITHIN IT CALLED: 'SECRETS.PNG'. ITS A FILE OF A QR CODE.

```
ubuntu@tryhackme: ~/Desktop
File Edit View Search Terminal Help
s.kY1
s.kY1
s.kY1
s.kY1
s.kY1
s.kY1
s.kY1
s.kY1
s.kY1
s.kY1
secrets.pngUT
secrets.pngUT
stor
storage
ubuntu@tryhackme:~/Desktop$ unzip hidden_stash.zip
Archive:  hidden_stash.zip
warning [hidden_stash.zip]:  36452 extra bytes at beginning or within zipfile
(attempting to process anyway)
[hidden_stash.zip] secrets.png password:
  inflating: secrets.png
ubuntu@tryhackme:~/Desktop$ ls
challenge.pcapng  hidden_stash.zip  secrets.png
creds.txt         mate-terminal.desktop
ubuntu@tryhackme:~/Desktop$ open secrets.png
```



I USED MY PHONES CAMERA TO GET THE LINK FROM THE QR CODE: THM{n0t_s3cur3_f1L3_sh4r1ng} - SECRET.



CONCLUSION:

SUMMARY / FINDINGS:

BASED ON ANALYSIS OF THE PROVIDED PCAP (CHALLENGE.PCAP) I CONFIRM AN UNAUTHENTICATED FILE SHARE ACCESS RESULTING IN THE THEFT OF A CLASSIFIED FILE. THE PCAP CONTAINS 304 PACKETS (179 NFS RELATED). ONLY TWO IP ADDRESSES APPEAR: 172.16.175.128 AND 10.10.119.157. I ASSESS 172.16.175.128 AS THE ADVERSARY SOURCE. WITHIN A TCP STREAM I EXTRACTED AN MD5 HASH (90EB7723A657B6597100AAFEF171D9F2) THAT CRACKED TO THE PASSWORD: avengers. TWO ARTIFACTS WERE RECOVERED FROM THE STREAM: CRED.S.TXT (DUPLICATE OF STREAM DATA) AND HIDDEN_STASH.ZIP. HIDDEN_STASH.ZIP REQUIRED A PASSWORD; USING 'avengers' I DECRYPTED IT AND FOUND SECRETS.PNG (A QR CODE). SCANNING THE QR PRODUCED: THM{n0t_s3cur3_f1i3_sh4r1ng} CONFIRMED SECRET EXFILTRATED.

IMPACT:

A CLASSIFIED SECRET WAS ACCESSED AND EXFILTRATED FROM THE NFS BACKUP SHARE. CREDENTIALS/SHARE PASSWORDS WERE PRESENT IN CLEARTEXT/RECOVERABLE FORM FROM NETWORK TRAFFIC INDICATES WEAK/EXPOSED AUTHENTICATION PRACTICES. ATTACKER USED NETWORK-LEVEL ACCESS ONLY (NO HOST FORENSICS AVAILABLE), BUT SUCCESSFUL EXTRACTION OF A SENSITIVE FILE IS PROVEN BY THE QR FLAG.

INDICATORS / ARTEFACTS (IOC):

ADVERSARY IP: 172.16.175.128 OTHER OBSERVED IP: 10.10.119.157 MD5 HASH: 90eb7723a657b6597100aafef171d9f2 → PASSWORD: avengers RECOVERED FILES: CRED.S.TXT, HIDDEN_STASH.ZIP, SECRETS.PNG EXFILTRATED SECRET (QR PAYLOAD): THM{n0t_s3cur3_f1L3_sh4r1ng}

LIMITATIONS:

SCOPE WAS LIMITED TO THE PCAP ONLY NO ENDPOINT/HOST LOGS, NO ACTIVE DIRECTORY/FILE-SERVER AUDITS, NO SYSTEM TIMELINES. THIS LIMITS ABILITY TO ATTRIBUTE BEYOND NETWORK OBSERVABLES OR TO DETERMINE LATERAL MOVEMENT/INITIAL ACCESS VECTOR OUTSIDE THE CAPTURE. IF THE PCAP IS PARTIAL (TRUNCATED/INCOMPLETE) THERE MAY BE ADDITIONAL ACTIVITY NOT SEEN HERE.

RECOMMENDATIONS / NEXT STEPS (PRIORITIZED): ISOLATE & PRESERVE: ENSURE THE NFS SERVER/NETWORK SEGMENT IS ISOLATED (IF NOT ALREADY) AND PRESERVE IMAGES / FULL NETWORK

CAPTURES. COLLECT ENDPOINT TELEMETRY FOR 172.16.175.128 AND 10.10.119.157 IF AVAILABLE. ENGAGE DFIR: ESCALATE TO FULL DFIR TEAM COLLECT HOST FORENSICS, SERVER FILE TIMESTAMPS, AUTH LOGS, AND BACKUP INTEGRITY CHECKS. CREDENTIAL ROTATION: IMMEDIATELY ROTATE ANY CREDENTIALS/SHARE PASSWORDS IDENTIFIED (INCLUDING "avengers") AND FORCE PASSWORD CHANGES FOR ACCOUNTS WITH ACCESS TO THE NFS BACKUP. HARDEN NFS ACCESS: REVIEW AND RESTRICT NFS EXPORTS, ENFORCE AUTHENTICATION/ENCRYPTION (USE KERBEROS/STRONGER AUTH), DISABLE UNNECESSARY ANONYMOUS/UNAUTHENTICATED ACCESS. MONITOR & DETECT: IMPLEMENT/ADJUST IDS/NSM RULES TO ALERT ON SIMILAR NFS READS, TCP STREAM EXTRACTIONS, AND ANY TRANSFERS INVOLVING HIDDEN_STASH.ZIP/SECRETS.PNG OR THE IDENTIFIED IPS. COMMS & NOTIFICATION: NOTIFY STAKEHOLDERS / DATA OWNERS / LEGAL / COMPLIANCE PER ORGANIZATIONAL POLICY. CONSIDER LAW ENFORCEMENT IF CLASSIFICATION / REGULATORY OBLIGATIONS REQUIRE. POST-INCIDENT REVIEW: PERFORM A ROOT-CAUSE ANALYSIS FOCUSED ON HOW THE CREDENTIAL/SHARE BECAME EXPOSED ON THE NETWORK AND REMEDIATE (CONFIG, POLICY, USER BEHAVIOR). HUNTING: RUN THREAT HUNTING FOR SIMILAR ARTIFACTS ACROSS THE ENVIRONMENT (OTHER ZIPS, QR FILES, KNOWN PASSWORD USAGE), AND CHECK FOR OTHER POTENTIAL DATA DESTINATIONS OR C2.

CONFIDENCE:

EVIDENCE IS STRONG THAT A SECRET WAS EXFILTRATED VIA NFS ACCESS AND NETWORK TRAFFIC CONTAINS BOTH CREDENTIALS AND THE EXFILTRATED ARTIFACT. CONFIDENCE IS MODERATE TO HIGH FOR NETWORK LEVEL FINDINGS; LOWER FOR FULL SCOPE/ATTRIBUTION DUE TO LACK OF HOST FORENSICS.

CLOSING:

THE PCAP ANALYSIS PROVES A SUCCESSFUL DATA THEFT FROM THE NFS BACKUP SHARE USING RECOVERABLE CREDENTIALS. ACTIONS SHOULD FOCUS FIRST ON CONTAINMENT, EVIDENCE PRESERVATION, AND CREDENTIAL ROTATION, THEN ON A FULL DFIR INVESTIGATION TO DETERMINE EXTENT, TIMELINE, AND ROOT CAUSE.