

Ex. No.: 1

CAPTURE FLAGS-ENCRYPTION CRYPTO 101

Aim:

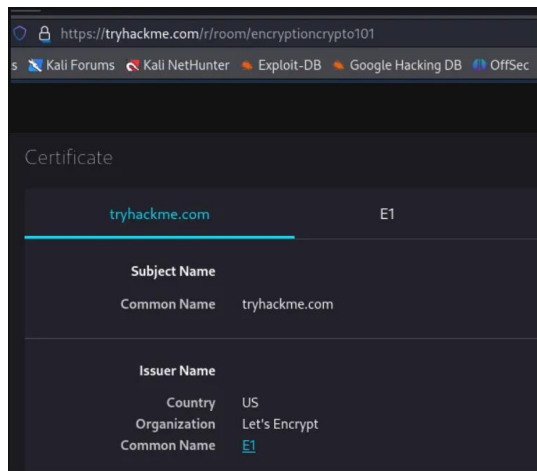
To capture the various flags in Encryption Crypto 101 in TryHackMe platform.

Algorithm:

1. Access the Encryption Crypto 101 lab in TryHackMe platform using the link below-
<https://tryhackme.com/r/room/encryptioncrypto101>
2. Click Start AttackBox to run the instance of Kali Linux distribution.
3. Solve the crypto math used in RSA.
4. Find out who issued the HTTPS Certificate to tryhackme.com
5. Perform SSH Authentication by generating public and private key pair using ssh-keygen
6. Perform decryption of the gpg encrypted file and find out the secret word.

The screenshot displays the TryHackMe interface for the 'Encryption - Crypto 101' room. The room title is 'Encryption - Crypto 101' with a subtitle 'An introduction to encryption, as part of a series on crypto'. It is rated 'Medium' and estimated to take '45 min'. The interface shows a list of 12 tasks, all of which are completed (indicated by green checkmarks). The tasks are: Task 1: What will this room cover?, Task 2: Key terms, Task 3: Why is Encryption important?, Task 4: Crucial Crypto Maths, Task 5: Types of Encryption, Task 6: RSA - Rivest Shamir Adleman, Task 7: Establishing Keys Using Asymmetric Cryptography, Task 8: Digital signatures and Certificates, Task 9: SSH Authentication, Task 10: Explaining Diffie Hellman Key Exchange, Task 11: PGP, GPG and AES, and Task 12: The Future - Quantum Computers and Encryption. Below the task list, a terminal window is open, showing a password hash cracking session using John the Ripper. The terminal output indicates that a password hash (SSH, SSH private key [RSA/DSA/EC/OPENSSH 32/64]) was loaded, and the session was completed successfully, displaying the cracked password 'delicious'.

```
(kali@kali)-[~/Downloads]
$ john ssh.txt --wordlist=/usr/share/wordlists/rockyou.txt
Using default input encoding: UTF-8
Loaded 1 password hash (SSH, SSH private key [RSA/DSA/EC/OPENSSH 32/64])
Cost 1 (KDF/cipher [0=MD5/AES 1=MD5/3DES 2=Bcrypt/AES]) is 0 for all loaded hashes
Cost 2 (iteration count) is 1 for all loaded hashes
Will run 2 OpenMP threads
Press 'q' or Ctrl-C to abort, almost any other key for status
delicious (id_rsa_1593558668558.id_rsa)
1g 0:00:00:00 DONE (2024-06-06 18:57) 25.00g/s 98400p/s 98400c/s 98400C/s savannah1..delicious
Use the "--show" option to display all of the cracked passwords reliably
Session completed.
```



Result: Thus, the various flags have been captured in Encryption Crypto 101 in TryHackMe platform.