

Ex. No.: 1**Date:30-08-2024****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.

Output:

The screenshot displays the TryHackMe interface for the 'Encryption - Crypto 101' room. The browser address bar shows the URL `tryhackme.com/r/room/encryptioncrypto101`. The TryHackMe logo and navigation links (Dashboard, Learn, Compete, Other) are visible in the top header. A user profile with 0 points and a 'Go Premium' button is on the right. The room title 'Encryption - Crypto 101' is prominently displayed, along with the subtitle 'An introduction to encryption, as part of a series on crypto'. The difficulty is 'Medium' and the estimated time is '45 min'. Below the title, there are buttons for 'Share your achievement', 'Start AttackBox', 'Help', 'Save Room', a like count of 3725, and an 'Options' dropdown. A green progress bar indicates 'Room completed (100%)'. The task list on the right includes:

- Task 1 ✓ What will this room cover?
- Task 2 ✓ Key terms
- Task 3 ✓ Why is Encryption important?
- Task 4 ✓ Crucial Crypto Maths

```
root@ip-10-10-18-189: ~
File Edit View Search Terminal Help
root@ip-10-10-18-189:~# ssh-keygen -t rsa
Generating public/private rsa key pair.
Enter file in which to save the key (/root/.ssh/id_rsa): myKey
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in myKey.
Your public key has been saved in myKey.pub.
The key fingerprint is:
SHA256:MYLMN1vmJnLZgFjuatvJ+ma0mK9HcIARie//j0dXt9s root@ip-10-10-18-189
The key's randomart image is:
+---[RSA 2048]---+
|==          |
|o..  + .     |
|... o .      |
|..o.o  +     |
|.o+ = S .    |
|..o O o. .   |
|. + + =. . . |
|. +.O+=. . . |
|++*OX.  ..E  |
+-----[SHA256]-----+
root@ip-10-10-18-189:~# ls
burp.json  Downloads  myKey.pub  Rooms      Tools
CTFBuilder Instructions Pictures   Scripts    welcome.txt
Desktop    myKey      Postman    thinclient_drives welcome.txt.gpg
```

```
root@ip-10-10-18-189:~# gpg --import tryhackme.key
```

```
gpg: /root/.gnupg/trustdb.gpg: trustdb created
```

```
gpg: key FFA4B5252BAEB2E6: public key "TryHackMe (Example Key)" imported
```

```
gpg: key FFA4B5252BAEB2E6: secret key imported
```

```
gpg: Total number processed: 1
```

```
gpg:      imported: 1
```

```
gpg:    secret keys read: 1
```

```
gpg:  secret keys imported: 1
```

```
root@ip-10-10-18-189:~# gpg message.gpg
```

```
gpg: WARNING: no command supplied. Trying to guess what you mean ...
```

```
gpg: encrypted with 1024-bit RSA key, ID 2A0A5FDC5081B1C5, created 2020-06-30
```

```
"TryHackMe (Example Key)"
```

gpg: WARNING: no command supplied. Trying to guess what you mean ...

gpg: encrypted with 1024-bit RSA key, ID 2A0A5FDC5081B1C5, created 2020-06-30

"TryHackMe (Example Key)"

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