ROLL NO:241901047

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Exercise-1

CAPTURE FLAGS-ENCRYPTION CRYPTO 101

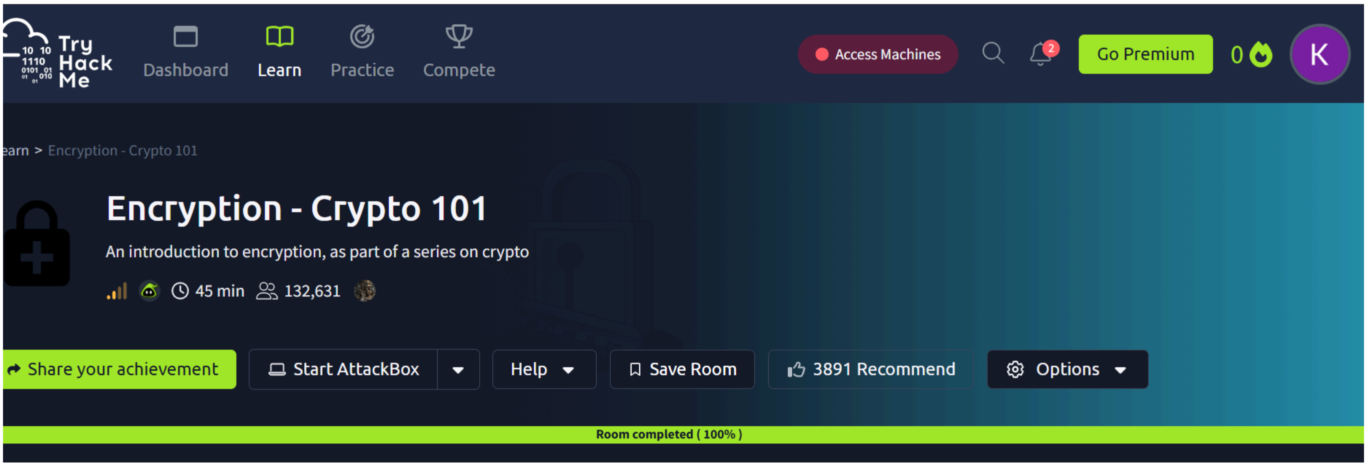
Aim:

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

Algorithm:

1. Access the Passive reconnaissance 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:

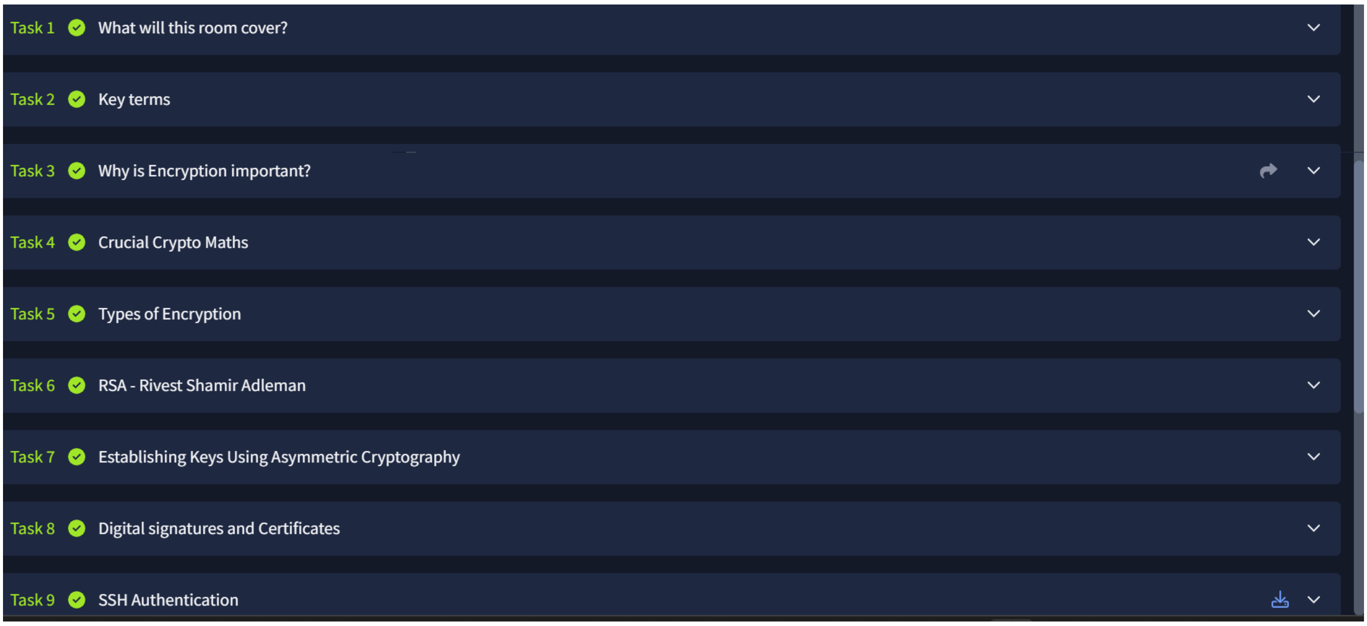


Encryption - Crypto 101

An introduction to encryption, as part of a series on crypto

45 min 132,631

Room completed (100%)



Task 1 ✓ What will this room cover?

Task 2 ✓ Key terms

Task 3 ✓ Why is Encryption important?

Task 4 ✓ Crucial Crypto Maths

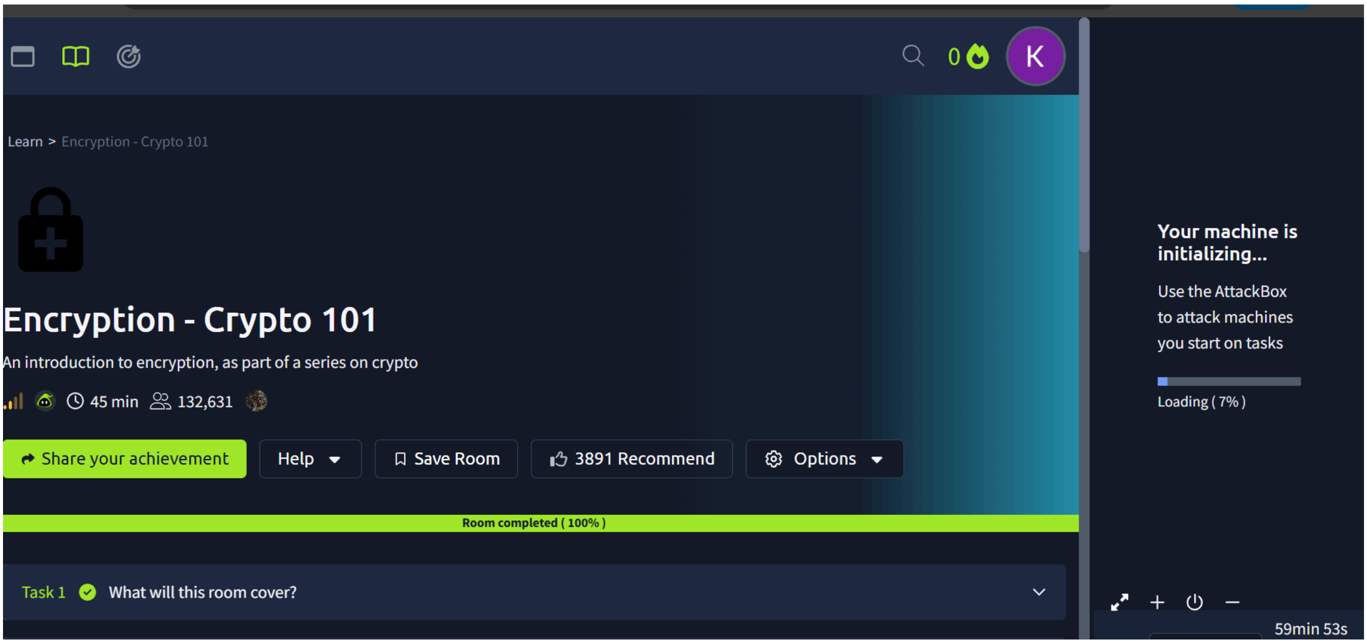
Task 5 ✓ Types of Encryption

Task 6 ✓ RSA - Rivest Shamir Adleman

Task 7 ✓ Establishing Keys Using Asymmetric Cryptography

Task 8 ✓ Digital signatures and Certificates

Task 9 ✓ SSH Authentication



Learn > Encryption - Crypto 101

Encryption - Crypto 101

An introduction to encryption, as part of a series on crypto

45 min 132,631

Room completed (100%)

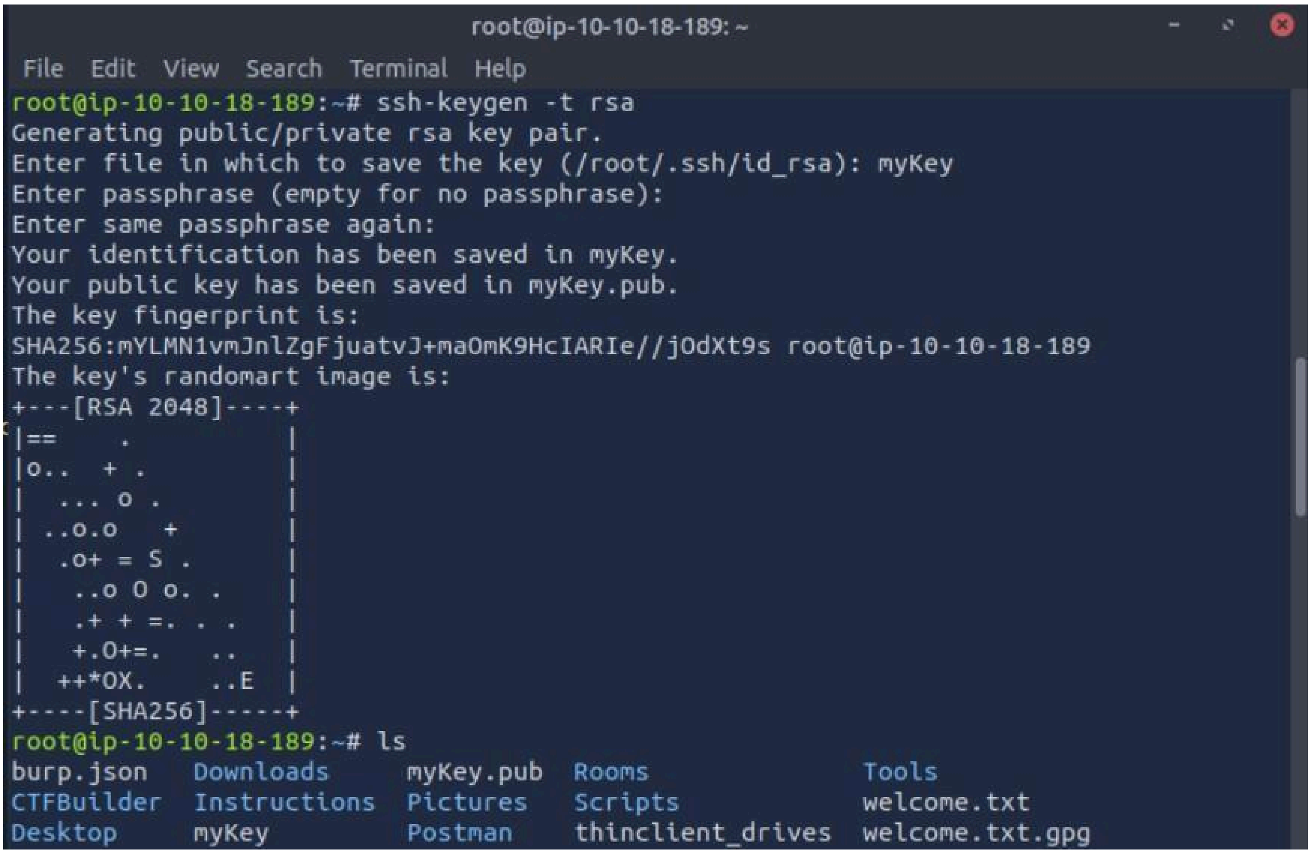
Task 1 What will this room cover?

Your machine is initializing...

Use the AttackBox to attack machines you start on tasks

Loading (7%)

59min 53s



```
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+maOmK9HcIARIe//jOdXt9s 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