

CS6501: A1-2

Access Netlab using an Internet browser – <https://netlab2.weltec.ac.nz>. If you don't have a email address set up, it will be assigned to your Moodle account. The initial password, if you have not used the system before, will be Weltec2023

Please complete labs 14 and 16 from the NDG Security+ V4 series.

The deliverable for A1-2 is a separate document for each lab exercise. Each document should show the occasional screenshot (which includes either your student ID and name or your Netlab username) and a **brief narrative explaining what you were doing and the resultant output**. This indicates to me that you have attempted the lab and I can confirm this by viewing the reservation logs on the system. The narrative explaining the screenshot indicates to me whether or not you understand what it is that is captured in the screenshot.

Please submit the documents via associated drop box on Moodle, when you have completed the required exercises.

The due date is 24 March 2024.

Below we can see few of the commands entered

```
kali@kali: ~/Desktop/steg
File Actions Edit View Help
(kali@kali)-[~/Desktop/steg]
$ echo "The password to the WinOS is NDGLabpass123\" > secret.txt
(kali@kali)-[~/Desktop/steg]
$ cat secret.txt
The password to the WinOS is NDGLabpass123!
(kali@kali)-[~/Desktop/steg]
$ steghide info top_secret.jpg
"top_secret.jpg":
  format: jpeg
  capacity: 119.1 KB
Try to get information about embedded data ? (y/n) n
(kali@kali)-[~/Desktop/steg]
$ du -b secret.txt
44      secret.txt
(kali@kali)-[~/Desktop/steg]
$ sha1sum top_secret.jpg
85527a71b0612b06fd4b9535c96765c97f8a1a59  top_secret.jpg
(kali@kali)-[~/Desktop/steg]
$ steghide embed -cf top_secret.jpg -ef secret.txt
Enter passphrase:
Re-Enter passphrase:
embedding "secret.txt" in "top_secret.jpg" ... done
(kali@kali)-[~/Desktop/steg]
$
```

🕒 Lab History: Lab 14: Cryptography Concepts

Summary	PCs
Community	default
Class	CS501 InfoSec2 OSD 2022
Reservation ID	17470
Pod ID	2263
Pod Name	NDG Security+ v4 13
Exercise	Lab 14: Cryptography Concepts
Attendees	Andrew Graff
Date/Time	2024-03-07 09:31
Duration (Hrs.)	1.13
Grade	100.00

Few commands we learned here were creating new text documents, and redirecting this text to a file. A new command was learned called steghide info which gives us the capacity amount.

```
kali@kali$ steghide info top_secret.jpg
```

We then check the new text document we created to see whether this can fit into the image. Commands du with -b displayed file size

```
kali@kali$ du -b secret.txt
```

We learn an amount command called sha1sum which provided us with the hash value of the image

```
kali@kali$ sha1sum top_secret.jpg
```

Then a command to initialize hiding the secret message in image locked with a passphrase

```
kali@kali$ steghide embed -cf top_secret.jpg -ef secret.txt
```

We discover the using of steghide to hide text within a picture and hiding multiple files within an image files via CLI in Linux.

We learn to observe Avalanche Effect in Hashing Operation – comparing the hash values and seeing the effects of changing one bit that impacts the binary value.

(Apologies – forgot to obtain screenshots along the way sir)