

Old Dominion University

CYSE 450: Ethical Hacking and Penetration Testing

Lab 4: Steganography using Steghide

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```
4. root@TS3: /home/gdsj05 x gdsj05@TS3: ~ x gdsj05@TS3: ~/Gsmi036/stegDir x
(gdsj05@TS3)-[~/Gsmi036/stegDir]
$ nano testfile.txt
(gdsj05@TS3)-[~/Gsmi036/stegDir]
$ nano testfile.txt
```

```
GNU nano 8.3 testfile.txt
this class im in is fun! 4612567
```

```
6. (gdsj05@TS3)-[~/Gsmi036/stegDir]
$ ls
dog.jpeg testfile.txt
(gdsj05@TS3)-[~/Gsmi036/stegDir]
$
```

```
7. (gdsj05@TS3)-[~/Gsmi036/stegDir]
$ md5sum dog.jpeg && md5sum testfile.txt
85e3b42750f99b6a5c4fede978baf61d dog.jpeg
85a4776c31bcd22b8c5f816308c27bfb testfile.txt
(gdsj05@TS3)-[~/Gsmi036/stegDir]
$
```

```
8. (gdsj05@TS3)-[~/Gsmi036/stegDir]
$ steghide embed -cf dog.jpeg -ef testfile.txt
Enter passphrase:
Re-Enter passphrase:
embedding "testfile.txt" in "dog.jpeg" ... done
(gdsj05@TS3)-[~/Gsmi036/stegDir]
$
```

```
(gdsj05@TS3)-[~/Gsmi036/stegDir]
$ md5sum dog.jpeg
20b80943a3a4d07d07fc75ec64e3521f  dog.jpeg
```

9.
The hash value has now changed

```
(gdsj05@TS3)-[~/Gsmi036/stegDir]
$ steghide info dog.jpeg
"dog.jpeg":
  format: jpeg
  capacity: 178.0 Byte
Try to get information about embedded data ? (y/n) y
Enter passphrase:
  embedded file "testfile.txt":
    size: 34.0 Byte
    encrypted: rijndael-128, cbc
    compressed: yes
```

- 10.

```
(gdsj05@TS3)-[~/Gsmi036/stegDir]
$ rm testfile.txt

(gdsj05@TS3)-[~/Gsmi036/stegDir]
$ ls
dog.jpeg

(gdsj05@TS3)-[~/Gsmi036/stegDir]
$
```

- 11.

```
(gdsj05@TS3)-[~/Gsmi036/stegDir]
$ steghide --extract -sf dog.jpeg
Enter passphrase:
wrote extracted data to "testfile.txt".Dog Phot
```

- 12.

```
(gdsj05@TS3)-[~/Gsmi036/stegDir]
$ ls
dog.jpeg  testfile.txt
```

- 13.

```
testfile.txt
~/Gsmi036/stegDir
1 | This class im in is fun! 4612567
```

- 14.

17.

```
(gdsj05@TS3)-[~/Gsmi036/stegDir]
$ exiftool dog.jpeg
ExifTool Version Number      : 13.10
File Name                    : dog.jpeg
Directory                    : .
File Size                     : 6.8 kB
File Modification Date/Time   : 2025:04:04 22:36:24-04:00
File Access Date/Time        : 2025:04:04 22:36:24-04:00
File Inode Change Date/Time   : 2025:04:04 22:36:24-04:00
File Permissions              : -rw-rw-r--
File Type                     : JPEG
File Type Extension          : jpg
MIME Type                     : image/jpeg
JFIF Version                  : 1.01
Resolution Unit               : None
X Resolution                  : 1
Y Resolution                   : 1
XMP Toolkit                   : Image::ExifTool 13.10
Author                        : Trey
Image Width                   : 186
Image Height                  : 148
Encoding Process               : Baseline DCT, Huffman coding
Bits Per Sample                : 8
Color Components               : 3
Y Cb Cr Sub Sampling          : YCbCr4:2:0 (2 2)
Image Size                    : 186x148
Megapixels                    : 0.028
```

18.

```
(gdsj05@TS3)-[~/Gsmi036/stegDir]
$ md5sum dog.jpeg
ede408fd3698f09d8351f19d3ac8cfd3 dog.jpeg
```

Starts with letters now