

Steganography cipher puzzle challenge

This is a multi-tiered puzzle that will most likely take an hour or more to solve.

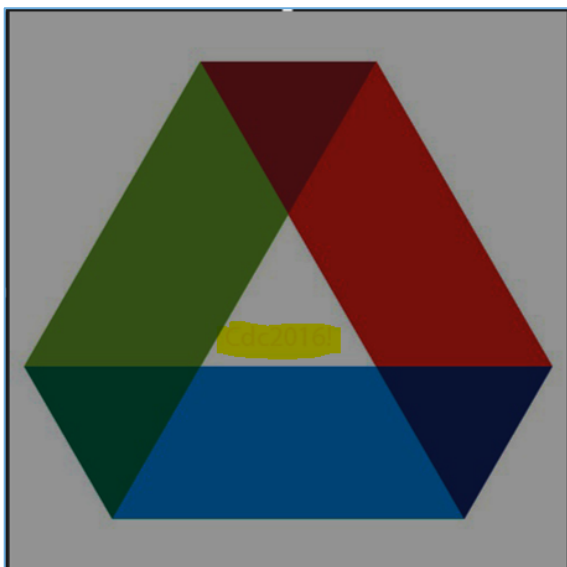
Here is how this puzzle works:

On the cyber defense competition website, we will have this picture in the “puzzles” tab:



At first glance, it looks like a normal Argonne logo.

Upon further investigation, users will find that there are two messages buried in this image file. Playing with the brightness settings in any photo editing software will reveal a password hidden in the picture:



As you can see, the password is Cdc2016!

This image also includes a text file that was hidden using steganography software. The user will have to figure out which software was used to complete the steganography. To get the text file hidden in this picture, the user will have to download a program called steghide.

To install steghide, the user will need to install the dependencies, including libmcrypt, libmhash, and libjpeg62, and compile the program or install it from a package in order to use the software in Linux.

Once the user successfully downloads and configures steghide correctly, they will have to run it from the terminal and figure out what commands to type in, in order to extract the text file.

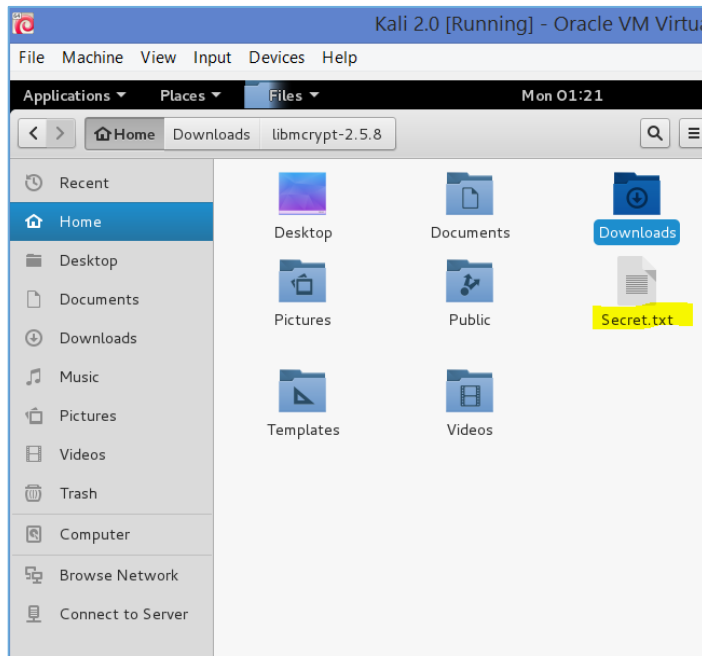
The command to extract the text file is as follows:

```
steghide extract -sf /"picture location goes here"/Delta.jpg
```

```
root@kali:~# steghide extract -sf /root/Desktop/Delta.jpg
Enter passphrase:
wrote extracted data to "secret.txt".
root@kali:~#
```

It will then ask the user to enter the passphrase, which they have already found hidden in the picture “Cdc2016!”.

The extracted data will then be written to their predesignated location, and the user will be able to open the text file.



When the user opens “Secret.txt”, they will find hints to what the cyber defense competition will involve:

