

Stegosuite- Steganography

Steganography is the art and science of hiding information within other non-secret, typically digital, files or messages to avoid detection. Unlike cryptography, which focuses on concealing the content of a message, steganography aims to obscure the fact that a hidden message even exists. This can be achieved by embedding the secret data within various types of media files, such as images, audio files, or videos, by subtly altering their appearance or structure in ways that are usually imperceptible to human senses. Steganography is used for a range of applications, from protecting personal privacy and securing communication in oppressive regimes to facilitating covert operations by intelligence agencies. Despite its potential for benign use, it can also pose security challenges, as it can be exploited for malicious purposes, such as concealing malware or facilitating illicit communications.

Stegosuite is a user-friendly software tool designed for performing steganography, the practice of hiding secret data within non-secret files. Primarily focused on embedding hidden messages or files within images, Stegosuite allows users to seamlessly conceal information in such a way that the altered image appears virtually identical to the original. The tool supports both embedding and extracting hidden

data, with an optional encryption feature for added security. This makes it suitable for various applications, including secure communications and digital watermarking. Its intuitive interface and straightforward functionality make it accessible for users without extensive technical expertise, ensuring that sensitive information can be protected with minimal effort.

Examples: -

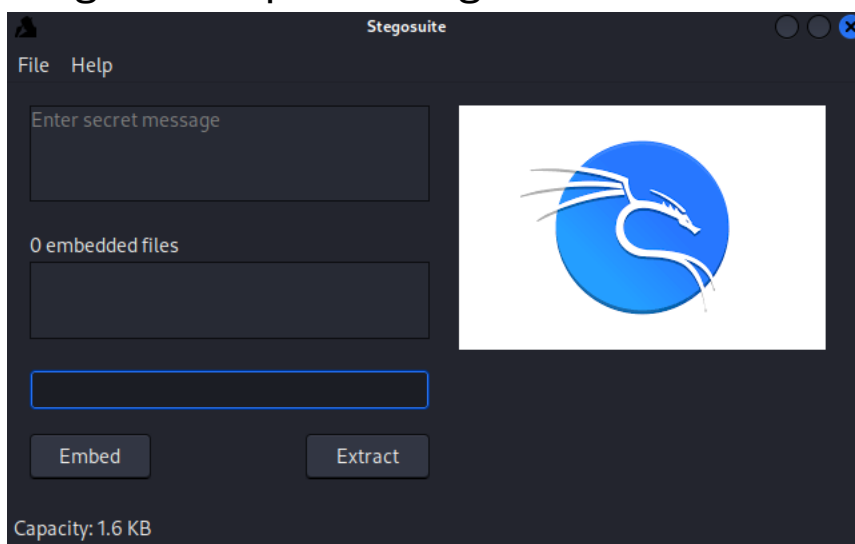
1. To install the Stegosuite use the following command.

```
(root@kali)~[/home/kali]
# apt-get install stegosuite
Reading package lists ... Done
Building dependency tree ... Done
Reading state information ... Done
The following packages were automatically installed and are no longer required:
 fonts-noto-color-emoji libnsl-dev libtirpc-dev
Use 'sudo apt autoremove' to remove them.
The following additional packages will be installed:
 at-spi2-common at-spi2-core bsextrautils bsdutils eject fdisk gir1.2-atk-1.0 gir1.2-atspi-2.0 gir1.2-glib-2.0 gir1.2-gtk-3.0 gnutls-bin
 gtk-update-icon-cache libatk-adaptor libatk-bridge2.0-0t64 libatk1.0-0t64 libatspi2.0-0t64 libblkid1 libc-bin libc-dev-bin libc-devtools libc-l10n libc6
 libc6-dev libc6-i386 libcups2t64 libfdisk1 libgl1.0-0t64 libgl2.0-0t64 libgnutls-dane0t64 libgnutls30t64 libgtk-3-0t64 libgtk-3-bin libgtk-3-common
 libhogweed6t64 liblogback-java libmount1 libnettle8t64 libpicocli-java libreadline8t64 libslf4j-java libsmartcols1 libswt-cairo-gtk-4-jni libswt-gtk-4-jni
 libswt-gtk-4-java libswt-gtk-4-jni libuuid1 locales mount readline-common rfc822-util-linux util-linux util-linux-extra
Suggested packages:
 glibc-doc libnss-nis libnss-nisplus cups-common low-memory-monitor libjanino-java libjansi-java libjetty9-java libmail-java libservlet-api-java
 libtomcat9-java liblog4j1.2-java uuid-runtime readline-doc util-linux-locales
The following packages will be REMOVED:
 kali-defaults-desktop kali-desktop-core kali-desktop-xfce libatk-bridge2.0-0 libatk1.0-0 libatspi2.0-0 libcups2 libgl1.0-0 libgl2.0-0 bin
 libgnutls-dane0 libgnutls30 libgtk-3-0 libhogweed6 libnettle8 libreadline8
The following NEW packages will be installed:
 libatk-bridge2.0-0t64 libatk1.0-0t64 libatspi2.0-0t64 libcups2t64 libgl1.0-0t64 libgnutls-dane0t64 libgnutls30t64 libgtk-3-0t64 libhogweed6t64
 liblogback-java libnettle8t64 libpicocli-java libreadline8t64 libslf4j-java libswt-cairo-gtk-4-jni libswt-gtk-4-jni libswt-gtk-4-java libswt-gtk-4-jni stegosuite
The following packages will be upgraded:
 at-spi2-common at-spi2-core bsextrautils bsdutils eject fdisk gir1.2-atk-1.0 gir1.2-atspi-2.0 gir1.2-glib-2.0 gir1.2-gtk-3.0 gnutls-bin
 gtk-update-icon-cache libatk-adaptor libblkid1 libc-bin libc-dev-bin libc-devtools libc-l10n libc6 libc6-dev libc6-i386 libfdisk1 libgl1.0-0t64
 libgl2.0-0t64 libgnutls-dane0t64 libgnutls30t64 libgtk-3-0t64 libhogweed6t64 liblogback-java libmount1 libsmartcols1 libuuid1 locales mount readline-common rfc822-util-linux util-linux util-linux-extra
34 upgraded, 18 newly installed, 15 to remove and 1596 not upgraded.
Need to get 33.4 MB of archives.
After this operation, 5,479 kB of additional disk space will be used.
Do you want to continue? [Y/n] y
```

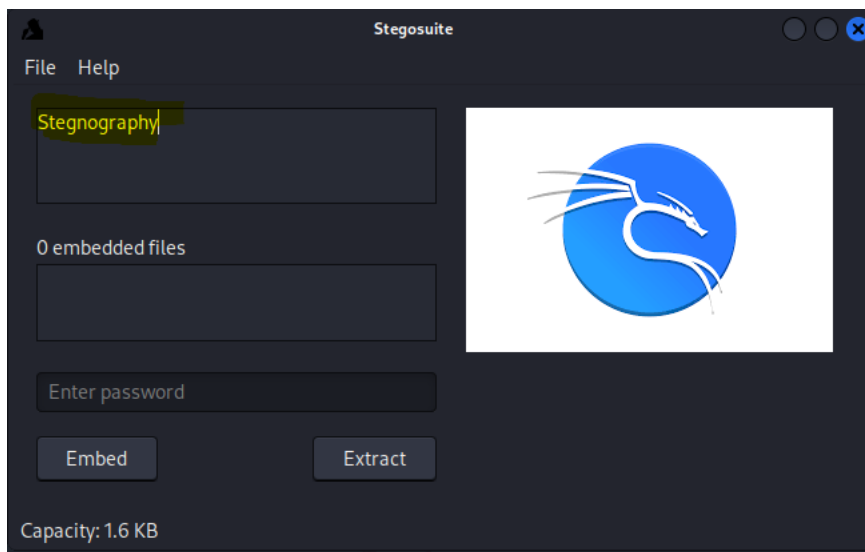
2. Now to run the GUI based tool use this command.

```
(root@kali)~[/home/kali]
# stegosuite gui
```

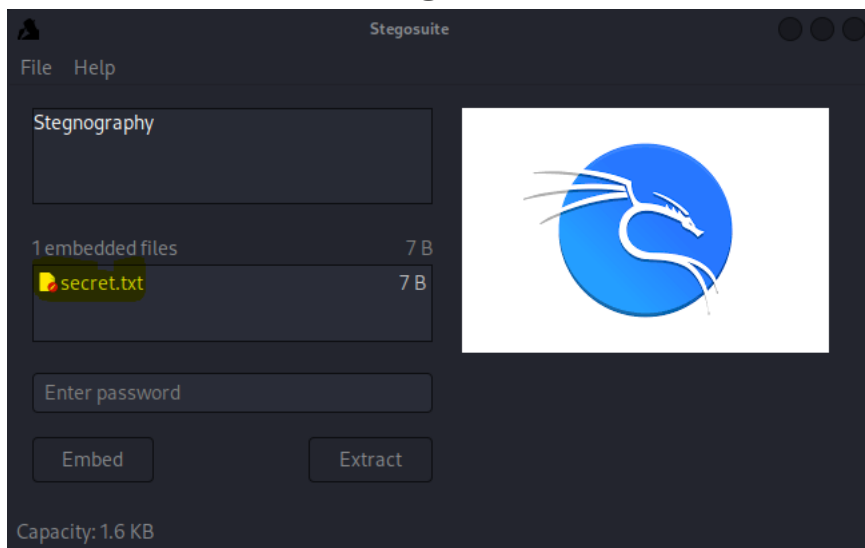
3. Now we have a window pop up. Here we will insert or drag and drop our image file.



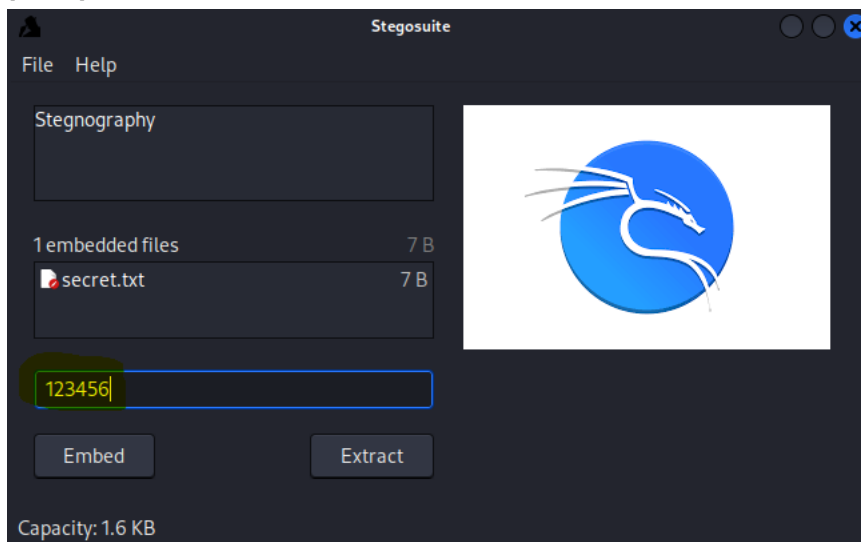
4. Now enter the secret text inside the text box.



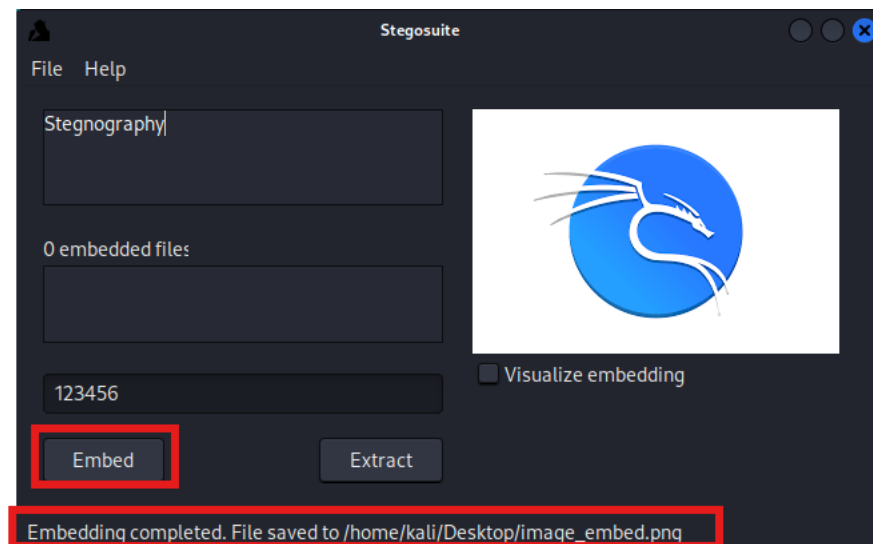
5. Now we can drag and drop that file which we want to hide behind our image file.



6. Now set the password for the image file for encryption purposes.



7. At last click on the embed button to create stegno file.



8. As we can see our stegno file is created on Desktop.

