

```

root@leandrocgst:/home/leandro# docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
ubuntu               latest              cf0f3ca922e0       7 days ago         64.2MB
centos                latest              0f3e07c0138f       3 weeks ago        220MB
fedora                32                 e13031c001a8       4 weeks ago        201MB
fedora                rawhide            e13031c001a8       4 weeks ago        201MB
fedora                31                 98c519118eac       4 weeks ago        195MB
fedora                30                 9eff96f4c827       4 weeks ago        248MB
fedora                latest             9eff96f4c827       4 weeks ago        248MB
fedora                29                 d09302f77cfc       7 months ago       275MB
fedora                26                 f36d549d2474       8 months ago       232MB
fedora                27                 f89698585456       8 months ago       236MB
fedora                28                 4c5b21baa7a0       9 months ago       261MB
fedora                branched           30190780b50e       19 months ago      249MB
fedora                25                 9c9fd21a45e3       24 months ago      232MB
fedora                26-modular         4f8db653aa36       24 months ago      85.3MB
fedora                modular            4f8db653aa36       24 months ago      85.3MB
fedora                24                 971e0f0a8b71       2 years ago        204MB
fedora                20                 ba74bddb630e       3 years ago        291MB
fedora                helsenbug          ba74bddb630e       3 years ago        291MB
fedora                21                 ba6369d667d1       3 years ago        241MB
fedora                22                 01a9fe974dba       3 years ago        189MB
fedora                23                 00ba3309bebb       3 years ago        214MB

```

As imagens baixadas são armazenadas no diretório
/var/lib/docker/overlay2/

```

root@war-machine:/var/lib/docker/overlay2# ls -lia
total 24
132325 drwx--x--- 6 root root 4096 ago 11 07:01 .
132317 drwx--x--- 13 root root 4096 ago 11 06:18 ..
794965 drwx--x--- 4 root root 4096 ago 11 07:11 fa954bbdd7e204180318fc74841156271fab5dfc5a2514abd82962a9f2127531
794959 drwx--x--- 4 root root 4096 ago 11 07:01 fa954bbdd7e204180318fc74841156271fab5dfc5a2514abd82962a9f2127531-init
786454 drwx--x--- 3 root root 4096 ago 11 07:01 ffe0efe97088bc89be62fc779f3d226474e8b59752e94bfa53ca8ed7d6f26ea6f
132361 drwx----- 2 root root 4096 ago 11 07:01 l

```

Figura 1: Lista todas as camadas da imagem

```

root@war-machine:/var/lib/docker/overlay2# ls -lia fa954bbdd7e204180318fc74841156271fab5dfc5a2514abd82962a9f2127531/diff/
total 40
794978 drwxr-xr-x 7 root root 4096 ago 11 07:01 .
794965 drwx--x--- 4 root root 4096 ago 11 07:11 ..
1048632 drwxr-xr-x 3 root root 4096 ago 11 07:07 etc
1050521 dr-xr-x--- 2 root root 4096 ago 11 07:11 root
917508 drwxrwxrwt 2 root root 4096 ago 11 07:08 tmp
794989 drwxr-xr-x 7 root root 4096 mai 6 07:10 usr
795006 drwxr-xr-x 6 root root 4096 mai 6 07:10 var
root@war-machine:/var/lib/docker/overlay2# ls -lia fa954bbdd7e204180318fc74841156271fab5dfc5a2514abd82962a9f2127531/diff/tmp/
total 12
917508 drwxrwxrwt 2 root root 4096 ago 11 07:08
794978 drwxr-xr-x 7 root root 4096 ago 11 07:01 ..
917545 -rw-r--r-- 1 root root 29 ago 11 07:08 treasure
root@war-machine:/var/lib/docker/overlay2# cat fa954bbdd7e204180318fc74841156271fab5dfc5a2514abd82962a9f2127531/diff/tmp/treasure
I will be the Pirate's King.

```

Figura 2: Ao acessar a camada de update, podemos notar que exibido uma lista de diretórios, onde está localizado as alterações feitas no contêiner

```
[root@localhost leandrocsi]# ls -lia /var/lib/docker/overlay2/26fe3155cc2f286d5b7d59f4ced4ac1942322cf2a42b251f3689e835aac96e87/diff/
total 12
25670432 drwxr-xr-x. 21 root root 224 Oct 25 19:18 .
17401349 drwx----- 3 root root 47 Oct 25 19:18 ..
17596417 drwxr-xr-x. 2 root root 4096 Oct 10 17:07 bin
25670434 drwxr-xr-x. 2 root root 6 Apr 24 2018 boot
1624101 drwxr-xr-x. 2 root root 6 Oct 10 17:07 dev
9152992 drwxr-xr-x. 29 root root 4096 Oct 10 17:07 etc
8410032 drwxr-xr-x. 2 root root 6 Apr 24 2018 home
17410875 drwxr-xr-x. 8 root root 96 May 23 2017 lib
9152695 drwxr-xr-x. 2 root root 34 Oct 10 17:06 lib64
17415832 drwxr-xr-x. 2 root root 6 Oct 10 17:06 media
25671991 drwxr-xr-x. 2 root root 6 Oct 10 17:06 mnt
1446613 drwxr-xr-x. 2 root root 6 Oct 10 17:06 opt
9152697 drwxr-xr-x. 2 root root 6 Apr 24 2018 proc
17415833 drwx----- 2 root root 37 Oct 10 17:07 root
25671992 drwxr-xr-x. 4 root root 43 Oct 10 17:06 run
17450114 drwxr-xr-x. 2 root root 4096 Oct 10 17:07 sbin
25671994 drwxr-xr-x. 2 root root 6 Oct 10 17:06 srv
1446616 drwxr-xr-x. 2 root root 6 Apr 24 2018 sys
9152700 drwxrwxrwt. 2 root root 6 Oct 10 17:07 tmp
17596607 drwxr-xr-x. 10 root root 105 Oct 10 17:06 usr
9227268 drwxr-xr-x. 11 root root 139 Oct 10 17:07 var
```

Figura 3: Camada base

```
[root@localhost leandrocsi]# ls -lia /var/lib/docker/overlay2/5e7dbf8e8f89d5a2a409e686f065e2e6c0f2eea78ec0c96a8c9fe06b0866bfc5/diff/
total 0
17600840 drwxr-xr-x. 3 root root 17 Oct 25 19:18 .
9183924 drwx----- 4 root root 55 Oct 25 19:18 ..
17600841 drwxr-xr-x. 3 root root 21 Oct 18 14:48 run
```

Figura 4: Camada intermediária, também conhecida como camada de aplicação

```
[root@localhost leandrocsi]# ls -lia /var/lib/docker/overlay2/6e57cf58aed473508e538d6bbb0e1fb8459833091eb0846cc0a8e3f64d1e214b/diff/
total 0
17600834 drwxr-xr-x. 6 root root 51 Oct 25 19:18 .
9183917 drwx----- 4 root root 72 Oct 25 19:18 ..
17600835 drwxr-xr-x. 4 root root 29 Oct 18 14:48 etc
25670983 drwxr-xr-x. 2 root root 21 Oct 18 14:48 sbin
2288995 drwxr-xr-x. 3 root root 18 Oct 10 17:06 usr
17600838 drwxr-xr-x. 3 root root 17 Oct 10 17:07 var
```

Figura 5: Camada Superior - Os diretórios da camada superior irão sobrescrever diretórios os da camada base

```
[root@localhost leandrocsi]# ls -lia /var/lib/docker/overlay2/9fbf879946b90633e615732e3784719c286e6e6881c5a11330a278cea0350fb7/diff/
total 0
17600575 drwxr-xr-x. 3 root root 17 Oct 25 19:18 .
9183914 drwx----- 4 root root 72 Oct 25 19:18 ..
17600832 drwxr-xr-x. 3 root root 19 Oct 10 17:07 var
```

Figura 6: Camada de leitura e escrita