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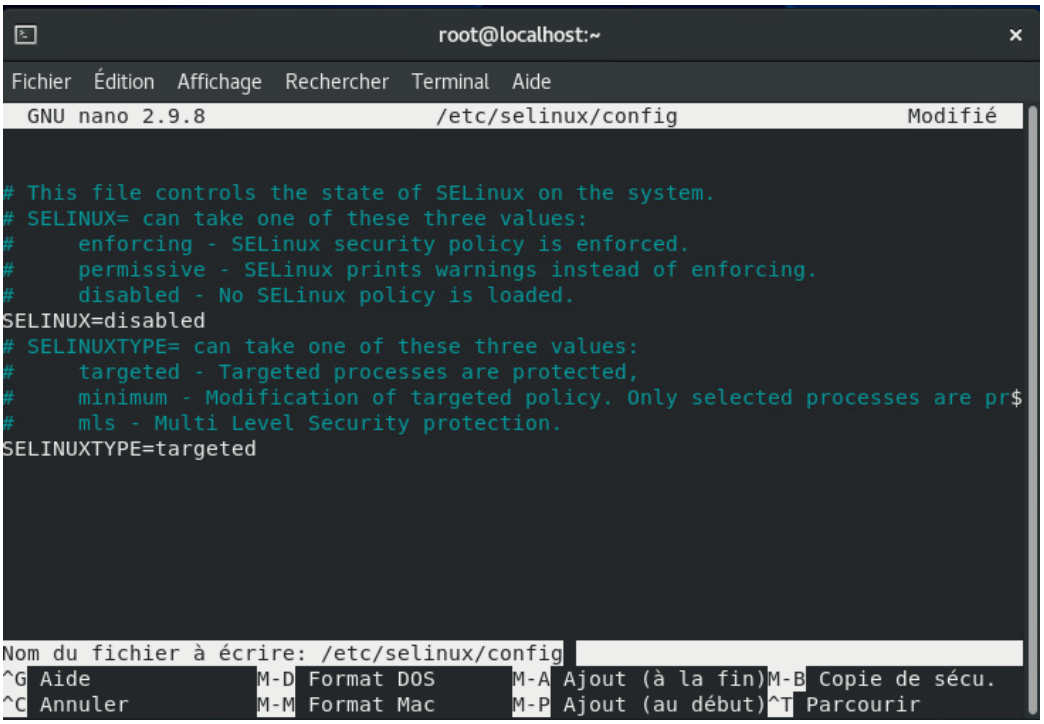
Projet Docker

Etape 1:

étapes :

Installer et vérifier Docker sous Centos 8

désactivation de SELINUX :
il faut aller modifier le fichier config dans /etc/selinux/



apres avoir changer la valeur de SELINUX en disable il faut taper la commande setenforce 0 dans un terminal

L'installation des 1ers packages :

il nous faut les packages suivants pour poursuivre

yum-utils

```
[root@LAPTOP-0UP80P22 ~]# dnf install yum-utils
```

device-mapper-persistent-data

```
[root@LAPTOP-0UP80P22 ~]# dnf install -y device-mapper-persistent-data
```

lvm2

```
[root@LAPTOP-0UP80P22 ~]# dnf install -y lvm2
```

en suite, le dépôt de Centos étant âgé , le package docker-ce n'est pas disponible, il nous faudra créer un lien de dépôt sur le dépôt officiel de docker

pour cela il faut taper la commande suivante,

```
[root@LAPTOP-0UP80P22 ~]# yum-config-manager --add-repo https://download.docker.com/linux/centos/docker-ce.repo
```

yum-config-manager --add-repo
https://download.docker.com/linux/centos/docker-ce.repo

voici le résultat :

```
Ajout du dépôt depuis : https://download.docker.com/linux/centos/docker-ce.repo
```

puis faire cette commande

```
[root@LAPTOP-0UP80P22 ~]# yum-config-manager --enable docker-ce-nightly
```

yum-config-manager --enable docker-ce-nightly

```
[root@LAPTOP-0UP80P22 ~]# yum install docker-ce docker-ce-cli containerd.io
Docker CE Stable - x86_64                       36 kB/s |  11 kB     00:00
Docker CE Test - x86_64                         64 kB/s |  14 kB     00:00
Docker CE Nightly - x86_64                      11 kB/s | 3.1 kB     00:00
Erreur :
 Problème 1: problem with installed package podman-2.2.1-7.module_el8.3.0+699+d61d9c41.x86_64
  - package podman-2.2.1-7.module_el8.3.0+699+d61d9c41.x86_64 requires runc >= 1.0.0-57, but non
e of the providers can be installed
  - package containerd.io-1.4.4-3.1.el8.x86_64 conflicts with runc provided by runc-1.0.0-70.rc9
2.module_el8.3.0+699+d61d9c41.x86_64
  - package containerd.io-1.4.4-3.1.el8.x86_64 obsoletes runc provided by runc-1.0.0-70.rc92.mod
ule_el8.3.0+699+d61d9c41.x86_64
  - cannot install the best candidate for the job
  - package runc-1.0.0-64.rc10.module_el8.3.0+479+69e2ae26.x86_64 is filtered out by modular fil
tering
 Problème 2: problem with installed package buildah-1.9.0-5.module_el8.1.0+237+63e26edc.x86_64
  - package buildah-1.9.0-5.module_el8.1.0+237+63e26edc.x86_64 requires runc >= 1.0.0-26, but no
ne of the providers can be installed
  - package buildah-1.16.7-4.module_el8.3.0+699+d61d9c41.x86_64 requires runc >= 1.0.0-26, but n
one of the providers can be installed
  - package docker-ce-3:20.10.5-3.el8.x86_64 requires containerd.io >= 1.4.1, but none of the pr
oviders can be installed
  - package containerd.io-1.4.3-3.1.el8.x86_64 conflicts with runc provided by runc-1.0.0-70.rc9
2.module_el8.3.0+699+d61d9c41.x86_64
  - package containerd.io-1.4.3-3.1.el8.x86_64 obsoletes runc provided by runc-1.0.0-70.rc92.mod
ule_el8.3.0+699+d61d9c41.x86_64
  - package containerd.io-1.4.3-3.2.el8.x86_64 conflicts with runc provided by runc-1.0.0-70.rc9
2.module_el8.3.0+699+d61d9c41.x86_64
  - package containerd.io-1.4.3-3.2.el8.x86_64 obsoletes runc provided by runc-1.0.0-70.rc92.mod
ule_el8.3.0+699+d61d9c41.x86_64
  - package containerd.io-1.4.4-3.1.el8.x86_64 conflicts with runc provided by runc-1.0.0-70.rc9
2.module_el8.3.0+699+d61d9c41.x86_64
  - package containerd.io-1.4.4-3.1.el8.x86_64 obsoletes runc provided by runc-1.0.0-70.rc92.mod
ule_el8.3.0+699+d61d9c41.x86_64
  - package containerd.io-1.4.1-3.1.el8.x86_64 conflicts with runc provided by runc-1.0.0-70.rc9
2.module_el8.3.0+699+d61d9c41.x86_64
  - package containerd.io-1.4.1-3.1.el8.x86_64 obsoletes runc provided by runc-1.0.0-70.rc92.mod
ule_el8.3.0+699+d61d9c41.x86_64
  - package containerd.io-1.4.3-3.el8.x86_64 conflicts with runc provided by runc-1.0.0-70.rc92.
module_el8.3.0+699+d61d9c41.x86_64
  - package containerd.io-1.4.3-3.el8.x86_64 obsoletes runc provided by runc-1.0.0-70.rc92.modul
e_el8.3.0+699+d61d9c41.x86_64
  - cannot install the best candidate for the job
```

```
(essayez d'ajouter « --allowerasing » à la ligne de commande pour remplacer les paquets en confl
it ou « --skip-broken » pour ignorer les paquets non installables ou « --nobest » pour ne pas ut
iliser seulement les meilleurs paquets candidats)
[root@LAPTOP-0UP80P22 ~]# yum install docker-ce docker-ce-cli containerd.io --allowerasing
Dernière vérification de l'expiration des métadonnées effectuée il y a 0:00:30 le jeu. 08 avril
2021 17:02:57 EDT.
Dépendances résolues.
================================================================================
 Paquet           Architecture
                        Version                        Dépôt            Taille
================================================================================
Installation:
 containerd.io    x86_64 1.4.4-3.1.el8                docker-ce-stable  33 M
     remplacement  runc.x86_64 1.0.0-70.rc92.module_el8.3.0+699+d61d9c41
 docker-ce        x86_64 3:20.10.5-3.el8              docker-ce-stable  27 M
 docker-ce-cli    x86_64 1:20.10.5-3.el8              docker-ce-stable  33 M
Mise à jour:
 fuse-overlayfs   x86_64 1.3.0-2.module_el8.3.0+699+d61d9c41
                                                      AppStream         72 k

Installation des dépendances:
 docker-ce-rootless-extras
                  x86_64 20.10.5-3.el8                docker-ce-stable 9.1 M
 fuse3            x86_64 3.2.1-12.el8                 BaseOS            50 k
 libcgroup        x86_64 0.41-19.el8                  BaseOS            70 k
Supprimer des paquets dépendants:
 buildah          x86_64 1.9.0-5.module_el8.1.0+237+63e26edc
                                                      @AppStream        24 M
 cockpit-podman   noarch 4-1.module_el8.1.0+237+63e26edc @AppStream      5.1 M
 podman           x86_64 2.2.1-7.module_el8.3.0+699+d61d9c41
                                                      @AppStream        52 M
 podman-catatonit x86_64 2.2.1-7.module_el8.3.0+699+d61d9c41
                                                      @AppStream       753 k

Résumé de la transaction
================================================================================
Installer        6 Paquets
Mettre à niveau  1 Paquet
Supprimer        4 Paquets

Taille totale des téléchargements : 102 M
Voulez-vous continuer ? [o/N] : o
Téléchargement des paquets :
(1/7): fuse3-3.2.1-12.el8.x86_64.rpm            495 kB/s |  50 kB     00:00
(2/7): libcgroup-0.41-19.el8.x86_64.rpm         682 kB/s |  70 kB     00:00
(3-5/7): docker-ce-cli-20.10 54% [===============             ] 1.4 MB/s |  55 MB     00:33 ETA
```

```
(1/7): fuse3-3.2.1-12.el8.x86_64.rpm            495 kB/s |  50 kB     00:00
(2/7): libcgroup-0.41-19.el8.x86_64.rpm         682 kB/s |  70 kB     00:00
(3/7): docker-ce-20.10.5-3.el8.x86_64.rpm                473 kB/s |  27 MB     00:57
(4/7): docker-ce-cli-20.10.5-3.el8.x86_64.rpm            472 kB/s |  33 MB     01:11
(5/7): fuse-overlayfs-1.3.0-2.module_el8.3.0+699+d61d9c41.x86_6 765 kB/s |  72 kB     00:00
(6/7): containerd.io-1.4.4-3.1.el8.x86_64.rpm            467 kB/s |  33 MB     01:13
(7/7): docker-ce-rootless-extras-20.10.5-3.el8.x86_64.rpm       458 kB/s | 9.1 MB     00:20
--------------------------------------------------------------------------------------------
Total                                                    1.3 MB/s | 102 MB     01:18
attention : /var/cache/dnf/docker-ce-stable-fa9dc42ab4cec2f4/packages/containerd.io-1.4.4-3.1.el
8.x86_64.rpm: Entête V4 RSA/SHA512 Signature, clé ID 621e9f35: NOKEY
Docker CE Stable - x86_64                                7.7 kB/s | 1.6 kB     00:00
Import de la clef GPG 0x621E9F35 :
Utilisateur : « Docker Release (CE rpm) <docker@docker.com> »
Empreinte : 060A 61C5 1B55 8A7F 742B 77AA C52F EB6B 621E 9F35
Provenance : https://download.docker.com/linux/centos/gpg
Voulez-vous continuer ? [o/N] : o
La clé a bien été importée
Test de la transaction
La vérification de la transaction a réussi.
Lancement de la transaction de test
Transaction de test réussie.
Exécution de la transaction
  Préparation          :                                                             1/1
  Exécution du scriptlet: docker-ce-cli-1:20.10.5-3.el8.x86_64                       1/1
  Installation         : docker-ce-cli-1:20.10.5-3.el8.x86_64                       1/13
  Exécution du scriptlet: docker-ce-cli-1:20.10.5-3.el8.x86_64                      1/13
  Installation         : containerd.io-1.4.4-3.1.el8.x86_64                         2/13
  Exécution du scriptlet: containerd.io-1.4.4-3.1.el8.x86_64                        2/13
  Exécution du scriptlet: libcgroup-0.41-19.el8.x86_64                              3/13
  Installation         : libcgroup-0.41-19.el8.x86_64                               3/13
  Exécution du scriptlet: libcgroup-0.41-19.el8.x86_64                              3/13
  Installation         : fuse3-3.2.1-12.el8.x86_64                                  4/13
  Mise à jour          : fuse-overlayfs-1.3.0-2.module_el8.3.0+699+d61d9c41.x86_64  5/13
  Exécution du scriptlet: fuse-overlayfs-1.3.0-2.module_el8.3.0+699+d61d9c41.x86_64  5/13
  Installation         : docker-ce-3:20.10.5-3.el8.x86_64                           6/13
  Exécution du scriptlet: docker-ce-3:20.10.5-3.el8.x86_64                          6/13
  Installation         : docker-ce-rootless-extras-20.10.5-3.el8.x86_64             7/13
  Exécution du scriptlet: docker-ce-rootless-extras-20.10.5-3.el8.x86_64            7/13
  Suppression de       : cockpit-podman-4-1.module_el8.1.0+237+63e26edc.noarch      8/13
  Suppression de       : podman-2.2.1-7.module_el8.3.0+699+d61d9c41.x86_64          9/13
  Exécution du scriptlet: podman-2.2.1-7.module_el8.3.0+699+d61d9c41.x86_64         9/13
```

```
Mis à niveau:
  fuse-overlayfs-1.3.0-2.module_el8.3.0+699+d61d9c41.x86_64

Installé:
  containerd.io-1.4.4-3.1.el8.x86_64        docker-ce-3:20.10.5-3.el8.x86_64
  docker-ce-cli-1:20.10.5-3.el8.x86_64      docker-ce-rootless-extras-20.10.5-3.el8.x86_64
  fuse3-3.2.1-12.el8.x86_64                 libcgroup-0.41-19.el8.x86_64

Supprimé:
  buildah-1.9.0-5.module_el8.1.0+237+63e26edc.x86_64
  cockpit-podman-4-1.module_el8.1.0+237+63e26edc.noarch
  podman-2.2.1-7.module_el8.3.0+699+d61d9c41.x86_64
  podman-catatonit-2.2.1-7.module_el8.3.0+699+d61d9c41.x86_64

Terminé !
[root@LAPTOP-0UP80P22 ~]#
```

statut de docker après l'installation

```
[root@LAPTOP-0UP80P22 ~]# systemctl status docker
● docker.service - Docker Application Container Engine
   Loaded: loaded (/usr/lib/systemd/system/docker.service; disabled; vendor preset: disabled)
   Active: inactive (dead)
     Docs: https://docs.docker.com
[root@LAPTOP-0UP80P22 ~]#
```

il faut donc le démarrer avec la commande “systemctl start docker-ce”

```
[root@LAPTOP-0UP80P22 ~]# systemctl status docker
● docker.service - Docker Application Container Engine
   Loaded: loaded (/usr/lib/systemd/system/docker.service; disabled; vendor preset: disabled)
   Active: active (running) since Thu 2021-04-08 17:16:17 EDT; 11s ago
     Docs: https://docs.docker.com
 Main PID: 5687 (dockerd)
    Tasks: 8
   Memory: 42.2M
   CGroup: /system.slice/docker.service
           └─5687 /usr/bin/dockerd -H fd:// --containerd=/run/containerd/containerd.sock

avril 08 17:16:16 LAPTOP-0UP80P22.jolsio.net dockerd[5687]: time="2021-04-08T17:16:16.428567330>
avril 08 17:16:16 LAPTOP-0UP80P22.jolsio.net dockerd[5687]: time="2021-04-08T17:16:16.480384737>
avril 08 17:16:16 LAPTOP-0UP80P22.jolsio.net dockerd[5687]: time="2021-04-08T17:16:16.480423709>
avril 08 17:16:16 LAPTOP-0UP80P22.jolsio.net dockerd[5687]: time="2021-04-08T17:16:16.480730097>
avril 08 17:16:16 LAPTOP-0UP80P22.jolsio.net dockerd[5687]: time="2021-04-08T17:16:16.815342593>
avril 08 17:16:17 LAPTOP-0UP80P22.jolsio.net dockerd[5687]: time="2021-04-08T17:16:17.047074779>
avril 08 17:16:17 LAPTOP-0UP80P22.jolsio.net dockerd[5687]: time="2021-04-08T17:16:17.141011704>
avril 08 17:16:17 LAPTOP-0UP80P22.jolsio.net dockerd[5687]: time="2021-04-08T17:16:17.141178294>
avril 08 17:16:17 LAPTOP-0UP80P22.jolsio.net systemd[1]: Started Docker Application Container E>
avril 08 17:16:17 LAPTOP-0UP80P22.jolsio.net dockerd[5687]: time="2021-04-08T17:16:17.270800681>
```

pour qu’il soit allumé à chaque démarrage

```
[root@LAPTOP-0UP80P22 ~]# systemctl enable docker
Created symlink /etc/systemd/system/multi-user.target.wants/docker.service → /usr/lib/systemd/sy
stem/docker.service.
```

<u>désactivation du firewall :</u>

```
[root@LAPTOP-0UP80P22 ~]# systemctl disable firewalld.service
Removed /etc/systemd/system/multi-user.target.wants/firewalld.service.
Removed /etc/systemd/system/dbus-org.fedoraproject.FirewallD1.service.
[root@LAPTOP-0UP80P22 ~]#
```

voici son status apres désactivation

```
[root@LAPTOP-0UP80P22 _data]# systemctl status firewalld
● firewalld.service - firewalld - dynamic firewall daemon
   Loaded: loaded (/usr/lib/systemd/system/firewalld.service; disabled; vendor >
   Active: inactive (dead)
     Docs: man:firewalld(1)
lines 1-4/4 (END)
```

infos sur docker

docker info

```
[root@LAPTOP-0UP80P22 ~]# docker info
Client:
 Context:    default
 Debug Mode: false
 Plugins:
  app: Docker App (Docker Inc., v0.9.1-beta3)
  buildx: Build with BuildKit (Docker Inc., v0.5.1-docker)

Server:
 Containers: 0
  Running: 0
  Paused: 0
  Stopped: 0
 Images: 0
 Server Version: 20.10.5
 Storage Driver: overlay2
  Backing Filesystem: xfs
  Supports d_type: true
  Native Overlay Diff: true
 Logging Driver: json-file
 Cgroup Driver: cgroupfs
 Cgroup Version: 1
 Plugins:
  Volume: local
  Network: bridge host ipvlan macvlan null overlay
  Log: awslogs fluentd gcplogs gelf journald json-file local logentries splunk syslog
 Swarm: inactive
 Runtimes: io.containerd.runc.v2 io.containerd.runtime.v1.linux runc
 Default Runtime: runc
 Init Binary: docker-init
 containerd version: 05f951a3781f4f2c1911b05e61c160e9c30eaa8e
 runc version: 12644e614e25b05da6fd08a38ffa0cfe1903fdec
 init version: de40ad0
 Security Options:
  seccomp
   Profile: default
 Kernel Version: 4.18.0-147.el8.x86_64
 Operating System: CentOS Linux 8 (Core)
 OSType: linux
 Architecture: x86_64
 CPUs: 1
 Total Memory: 1.786GiB
 Name: LAPTOP-0UP80P22.jolsio.net
 ID: Q7BE:4ARI:AHTQ:YZIT:A655:PH6L:UBY3:CVOY:KBI2:YVTE:R4W3:5TVT
 Docker Root Dir: /var/lib/docker
 Debug Mode: false
 Registry: https://index.docker.io/v1/
 Labels:
 Experimental: false
 Insecure Registries:
  127.0.0.0/8
 Live Restore Enabled: false
```

docker --help

```
Commands:
  attach      Attach local standard input, output, and error streams to a running container
  build       Build an image from a Dockerfile
  commit      Create a new image from a container's changes
  cp          Copy files/folders between a container and the local filesystem
  create      Create a new container
  diff        Inspect changes to files or directories on a container's filesystem
  events      Get real time events from the server
  exec        Run a command in a running container
  export      Export a container's filesystem as a tar archive
  history     Show the history of an image
  images      List images
  import      Import the contents from a tarball to create a filesystem image
  info        Display system-wide information
  inspect     Return low-level information on Docker objects
  kill        Kill one or more running containers
  load        Load an image from a tar archive or STDIN
  login       Log in to a Docker registry
  logout      Log out from a Docker registry
  logs        Fetch the logs of a container
  pause       Pause all processes within one or more containers
  port        List port mappings or a specific mapping for the container
  ps          List containers
  pull        Pull an image or a repository from a registry
  push        Push an image or a repository to a registry
  rename      Rename a container
  restart     Restart one or more containers
  rm          Remove one or more containers
  rmi         Remove one or more images
  run         Run a command in a new container
  save        Save one or more images to a tar archive (streamed to STDOUT by default)
  search      Search the Docker Hub for images
  start       Start one or more stopped containers
  stats       Display a live stream of container(s) resource usage statistics
  stop        Stop one or more running containers
  tag         Create a tag TARGET_IMAGE that refers to SOURCE_IMAGE
  top         Display the running processes of a container
  unpause     Unpause all processes within one or more containers
  update      Update configuration of one or more containers
  version     Show the Docker version information
  wait        Block until one or more containers stop, then print their exit codes

Run 'docker COMMAND --help' for more information on a command.

To get more help with docker, check out our guides at https://docs.docker.com/go/guides/
```

Utiliser Docker sous Centos

test avec l'image hello-world

```
[root@LAPTOP-0UP80P22 ~]# docker run hello-world
Unable to find image 'hello-world:latest' locally
latest: Pulling from library/hello-world
b8dfde127a29: Pull complete
Digest: sha256:308866a43596e83578c7dfa15e27a73011bdd402185a84c5cd7f32a88b501a24
Status: Downloaded newer image for hello-world:latest

Hello from Docker!
This message shows that your installation appears to be working correctly.

To generate this message, Docker took the following steps:
 1. The Docker client contacted the Docker daemon.
 2. The Docker daemon pulled the "hello-world" image from the Docker Hub.
    (amd64)
 3. The Docker daemon created a new container from that image which runs the
    executable that produces the output you are currently reading.
 4. The Docker daemon streamed that output to the Docker client, which sent it
    to your terminal.

To try something more ambitious, you can run an Ubuntu container with:
 $ docker run -it ubuntu bash

Share images, automate workflows, and more with a free Docker ID:
 https://hub.docker.com/

For more examples and ideas, visit:
 https://docs.docker.com/get-started/
```

recherche d'image avec docker " docker search (nom image)"
exemple avec alpine :

```
[root@LAPTOP-0UP80P22 ~]# docker search alpine
NAME                                DESCRIPTION                                     STARS
 OFFICIAL   AUTOMATED
alpine                              A minimal Docker image based on Alpine Linux…   7313
 [OK]
mhart/alpine-node                   Minimal Node.js built on Alpine Linux           482

anapsix/alpine-java                 Oracle Java 8 (and 7) with GLIBC 2.28 over A…   468
           [OK]
frolvlad/alpine-glibc               Alpine Docker image with glibc (~12MB)          258
           [OK]
gliderlabs/alpine                   Image based on Alpine Linux will help you wi…   183

alpine/git                          A  simple git container running in alpine li…   173
           [OK]
yobasystems/alpine-mariadb          MariaDB running on Alpine Linux [docker] [am…   86
           [OK]
alpine/socat                        Run socat command in alpine container           68
           [OK]
davidcaste/alpine-tomcat            Apache Tomcat 7/8 using Oracle Java 7/8 with…   44
           [OK]
kiasaki/alpine-postgres             PostgreSQL docker image based on Alpine Linux   44
           [OK]
jfloff/alpine-python                A small, more complete, Python Docker image …   40
           [OK]
byrnedo/alpine-curl                 Alpine linux with curl installed and set as …   34
           [OK]
hermsi/alpine-sshd                  Dockerize your OpenSSH-server with rsync and…   33
           [OK]
zenika/alpine-chrome                Chrome running in headless mode in a tiny Al…   31
           [OK]
hermsi/alpine-fpm-php               FPM-PHP 7.0 to 8.0, shipped along with tons …   25
           [OK]
etopian/alpine-php-wordpress        Alpine WordPress Nginx PHP-FPM WP-CLI           24
           [OK]
bashell/alpine-bash                 Alpine Linux with /bin/bash as a default she…   18
           [OK]
davidcaste/alpine-java-unlimited-jce   Oracle Java 8 (and 7) with GLIBC 2.21 over A…   13
           [OK]
```

lancement alpine avec la commandes pull pour télécharger l'image

```
[root@LAPTOP-0UP80P22 ~]# docker pull alpine
Using default tag: latest
latest: Pulling from library/alpine
ca3cd42a7c95: Pull complete
Digest: sha256:ec14c7992a97fc11425907e908340c6c3d6ff602f5f13d899e6b7027c9b4133a
Status: Downloaded newer image for alpine:latest
docker.io/library/alpine:latest
```

vérification des images chargées sur docker

```
[root@LAPTOP-0UP80P22 ~]# docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
alpine        latest    49f356fa4513   8 days ago     5.61MB
hello-world   latest    d1165f221234   4 weeks ago    13.3kB
[root@LAPTOP-0UP80P22 ~]#
```

test avec une echo sur le conteneur alpine

```
[root@LAPTOP-0UP80P22 ~]# docker run alpine echo "bonjour"
bonjour
[root@LAPTOP-0UP80P22 ~]#
```

lancement de la commande sh sur le conteneur alpine

```
[root@LAPTOP-0UP80P22 ~]# docker run -it alpine sh
/ # ls
bin    etc    lib    mnt    proc   run    srv    tmp    var
dev    home   media  opt    root   sbin   sys    usr
/ # cat /etc/alpine-release
3.13.4
/ #
```

vérification des conteneurs en cours (lancés)

```
[root@LAPTOP-0UP80P22 ~]# docker ps
CONTAINER ID   IMAGE     COMMAND   CREATED          STATUS          PORTS     NAMES
806e0968322e   alpine    "sh"      33 seconds ago   Up 32 seconds             inspiring_nobel
[root@LAPTOP-0UP80P22 ~]#
```

commande pour voir les conteneur s en mémoire ou bien déjà chargés

```
[root@LAPTOP-0UP80P22 _data]# docker ps -a
CONTAINER ID   IMAGE                COMMAND                  CREATED             STATUS                      PORTS                    NAMES
f2fb1c50ad0d   mariadb:latest       "docker-entrypoint.s…"   56 minutes ago      Up 56 minutes               3306/tcp                 mariadb
f7fae021eb40   nginx:kd             "/docker-entrypoint.…"   About an hour ago   Up About an hour            0.0.0.0:8089->80/tcp     mynginxkd
43362ea02c7e   nginx:latest         "/docker-entrypoint.…"   About an hour ago   Up About an hour            0.0.0.0:8088->80/tcp     mynginx
04fd25944a6a   portainer/portainer  "/portainer"             3 hours ago         Up 3 hours                  0.0.0.0:9000->9000/tcp   brave_kepler
6cf0973baf1e   alpine               "/bin/sh"                2 weeks ago         Exited (137) 2 weeks ago                             ecstatic_boyd
78babb15e5a4   alpine               "sh"                     2 weeks ago         Exited (0) 2 weeks ago                               laughing_jemison
e198c49cf4ad   alpine               "sh"                     2 weeks ago         Exited (137) 2 weeks ago                             quizzical_shtern
406fe825fc68   alpine               "sh"                     2 weeks ago         Exited (137) 2 weeks ago                             elated_saha
ef7ce45e33ad   alpine               "sh"                     2 weeks ago         Exited (137) 2 weeks ago                             zealous_lehmann
e5f082e80f9b   alpine               "sh"                     2 weeks ago         Exited (0) 2 weeks ago                               lucid_bhabha
8f32242f6d66   alpine               "sh"                     2 weeks ago         Exited (0) 2 weeks ago                               funny_proskuriakova
7ff9bbfd9a1b   alpine               "/bin/sh"                2 weeks ago         Exited (0) 2 weeks ago                               agitated_lalande
806e0968322e   alpine               "sh"                     2 weeks ago         Exited (137) 2 weeks ago                             inspiring_nobel
c46d04df7b65   alpine               "sh"                     2 weeks ago         Exited (127) 2 weeks ago                             eloquent_cannon
441f02deb391   alpine               "echo bonjour"           2 weeks ago         Exited (0) 2 weeks ago                               vigilant_elgamal
81d4d48bb986   hello-world          "/hello"                 2 weeks ago         Exited (0) 2 weeks ago                               frosty_blackburn
[root@LAPTOP-0UP80P22 _data]#
```

pour arrêter un conteneur il faut utiliser les commandes

docker kill (id conteneur)
docker stop (id conteneur)

```
[root@LAPTOP-0UP80P22 ~]# docker stop 806
806
[root@LAPTOP-0UP80P22 ~]# docker ps
```

il n’y a plus de conteneurs lancés

suppression d’un conteneur :

lancement d’un conteneur en arrière plan en guise de test

```
[root@LAPTOP-0UP80P22 ~]# docker run -itd alpine sh
4a18939523893cf32320c6d345171cccc6e56687542fa6ab83822df706c48f0a
[root@LAPTOP-0UP80P22 ~]# docker ps
CONTAINER ID   IMAGE     COMMAND   CREATED         STATUS         PORTS     NAME
S
4a1893952389   alpine    "sh"      5 seconds ago   Up 3 seconds             eage
r_bell
```

suppression forcée dans ce cas

```
[root@LAPTOP-0UP80P22 ~]# docker rm -f  4a1
4a1
[root@LAPTOP-0UP80P22 ~]# docker ps
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS     NAMES
[root@LAPTOP-0UP80P22 ~]#
```

test de suppression d’une image

```
[root@LAPTOP-0UP80P22 ~]# docker pull spotify/alpine
Using default tag: latest
latest: Pulling from spotify/alpine
4fe2ade4980c: Pull complete
749fba4f3a07: Pull complete
Digest: sha256:1ee421796dfa0d46e3e8dd39c488150817b8471ca4c4b6bb8188247613ea0e5b
Status: Downloaded newer image for spotify/alpine:latest
docker.io/spotify/alpine:latest
```

vérification de l’existance de l’image

```
[root@LAPTOP-0UP80P22 ~]# docker images
REPOSITORY       TAG       IMAGE ID       CREATED       SIZE
alpine           latest    49f356fa4513   8 days ago    5.61MB
hello-world      latest    d1165f221234   4 weeks ago   13.3kB
spotify/alpine   latest    eab0286b7606   2 years ago   9.72MB
[root@LAPTOP-0UP80P22 ~]#
```

suppression

```
[root@LAPTOP-0UP80P22 ~]# docker rmi spotify/alpine
Untagged: spotify/alpine:latest
Untagged: spotify/alpine@sha256:1ee421796dfa0d46e3e8dd39c488150817b8471ca4c4b6bb8
188247613ea0e5b
Deleted: sha256:eab0286b7606aa2abd257cd6b057e115c9723bbb40dc1c4c08fe05e9a083a2f1
Deleted: sha256:750091630f7e32ce88b4fff0c9842bbb289dc5281fe41b51f73b823f5f1a5f94
Deleted: sha256:df64d3292fd6194b7865d7326af5255db6d81e9df29f48adde61a918fbd8c332
[root@LAPTOP-0UP80P22 ~]#
```

vérrification suppression

```
[root@LAPTOP-0UP80P22 ~]# docker images
REPOSITORY    TAG       IMAGE ID       CREATED       SIZE
alpine        latest    49f356fa4513   8 days ago    5.61MB
hello-world   latest    d1165f221234   4 weeks ago   13.3kB
[root@LAPTOP-0UP80P22 ~]#
```

Différences de conteneurs:

lancement en arrière plan d'un conteneur et

```
[root@LAPTOP-0UP80P22 ~]# docker run -itd alpine sh
ef7ce45e33ad6b5e0e4be84e99b2a807ca9b4cf6c7522f63c4e37d0ef265c455
[root@LAPTOP-0UP80P22 ~]# docker diff ef7
[root@LAPTOP-0UP80P22 ~]# docker ps
CONTAINER ID   IMAGE     COMMAND   CREATED          STATUS          PORTS     NAM
ES
ef7ce45e33ad   alpine    "sh"      20 seconds ago   Up 16 seconds             zea
lous_lehmann
[root@LAPTOP-0UP80P22 ~]#
```

```
[root@LAPTOP-0UP80P22 ~]# docker run -it alpine sh
/ # ls
bin    etc    lib    mnt    proc   run    srv    tmp    var
dev    home   media  opt    root   sbin   sys    usr
/ # mkdir g14
/ # ls
bin    etc    home   media  opt    root   sbin   sys    usr
dev    g14    lib    mnt    proc   run    srv    tmp    var
/ #
```

```
[root@LAPTOP-0UP80P22 ~]# docker diff 406
C /root
A /root/.ash_history
A /g14
[root@LAPTOP-0UP80P22 ~]#
```

nous voyons bien la différence entre les modifications

Enregistrement d’un conteneur

utilisation du commit
docker commit (id conteneur) (nom image)

```
[root@LAPTOP-0UP80P22 ~]# docker ps
CONTAINER ID   IMAGE     COMMAND   CREATED             STATUS             PORT
S     NAMES
e198c49cf4ad   alpine    "sh"      About a minute ago   Up About a minute
      quizzical_shtern
```

```
[root@LAPTOP-0UP80P22 ~]# docker commit e198 g14/alpine_modif
sha256:c57951700312e3e0cece8e15a7492f57553be3f9f1dff8aeb9e0d98ea466eb56
```

voici l’image sauvegardée

```
[root@LAPTOP-0UP80P22 ~]# docker images
REPOSITORY         TAG       IMAGE ID       CREATED              SIZE
g14/alpine_modif   latest    c57951700312   About a minute ago   5.61MB
alpine             latest    49f356fa4513   8 days ago           5.61MB
hello-world        latest    d1165f221234   4 weeks ago          13.3kB
[root@LAPTOP-0UP80P22 ~]#
```

c’est “g14/alpine_modif” de 5.61Mb

afficher les parametres d’une image

avec la commande “docker inspect (nom image) ou (id conteneur)

```
[root@LAPTOP-0UP80P22 ~]# docker inspect g14/alpine_modif:latest
[
    {
        "Id": "sha256:c57951700312e3e0cece8e15a7492f57553be3f9f1dff8aeb9e0d98ea466eb56",
        "RepoTags": [
            "g14/alpine_modif:latest"
        ],
        "RepoDigests": [],
        "Parent": "sha256:49f356fa4513676c5e22e3a8404aad6c7262cc7aaed15341458265320786c58c",
        "Comment": "",
        "Created": "2021-04-09T11:51:24.817530597Z",
        "Container": "e198c49cf4ad84d439fbdaae3ebd79b6cbdc6335da2cbfd729c6d4dc0e2e5295",
        "ContainerConfig": {
            "Hostname": "e198c49cf4ad",
            "Domainname": "",
            "User": "",
            "AttachStdin": false,
            "AttachStdout": false,
            "AttachStderr": false,
            "Tty": true,
            "OpenStdin": true,
            "StdinOnce": false,
            "Env": [
                "PATH=/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin"
            ],
            "Cmd": [
                "sh"
            ],
            "Image": "alpine",
            "Volumes": null,
            "WorkingDir": "",
            "Entrypoint": null,
            "OnBuild": null,
            "Labels": {}
        },
        "DockerVersion": "20.10.5",
        "Author": "",
        "Config": {
            "Hostname": "e198c49cf4ad",
            "Domainname": "",
            "User": ""
```

utiliser " | grep (chose à rechercher) pour avoir un résultat plus précis

exécution de commandes directes sur les conteneur , dans un conteneur existant

exemple avec la commande "ls" sur le conteneur avec comme is e198

```
[root@LAPTOP-0UP80P22 ~]# docker exec -it e198 ls
bin   etc   lib   mnt   proc  run   srv   tmp   var
dev   home  media opt   root  sbin  sys   usr
[root@LAPTOP-0UP80P22 ~]#
```

pareil mais avec sh sur un autre conteneur

```
[root@LAPTOP-0UP80P22 ~]# docker exec -it 6cf sh
/ #
```

monter un volume pour eviter toutes pertes de fichiers

avec la commandes
docker run -v (répertoire hôte):(point montage) (Identificateur conteneur)

exemple:
docker run -v /home/btssio/html:/data centos:latest