

Projet 1 :

- Connexion sur compte docker hub

```
liti@DESKTOP-TIDTQWU: //mnt/c/Users/hp/Desktop/projetDocker$ docker login
Authenticating with existing credentials...
WARNING! Your password will be stored unencrypted in /home/liti/.docker/config.json.
Configure a credential helper to remove this warning. See
https://docs.docker.com/engine/reference/commandline/login/#credentials-store

Login Succeeded
```

- Push image wordPress

```

root@DESKTOP-TDCTQO:~/mt/c/Users/hp/Desktop/proje/Docker$ docker push litiica659/wordpressdockfile:1.0
The push refers to repository [docker.io/litiica659/wordpressdockfile]
7c6bc37f9d6b: Mounted from library/wordpress
9390f6acda157: Mounted from library/wordpress
f8db865ecd9a: Mounted from library/wordpress
7015c6bc1a61: Mounted from library/wordpress
d8f6a2a069ed: Mounted from library/wordpress
f2b1327ac115: Mounted from library/wordpress
ae5f626a04ff: Mounted from library/wordpress
f251b476f76c: Mounted from library/wordpress
39b04e35566d: Mounted from library/wordpress
51addb9a67b2: Mounted from library/wordpress
90fafd360931: Mounted from library/wordpress
d7ff65317e4e: Mounted from library/wordpress
c748a7d1b3bf: Mounted from library/wordpress
3cb98ef87e89: Mounted from library/wordpress
b897cf086a42: Mounted from library/wordpress
b69431a68981: Mounted from library/wordpress
3f80ba795da1: Mounted from library/wordpress
dad97eb7c8a8: Mounted from library/wordpress
9656c5045c54: Mounted from library/wordpress
4055fd147512f: Mounted from library/wordpress
932770f546e06: Mounted from library/wordpress
1.0: digest: sha256:1e790bee9adb9d22512acd49fb5988aa65a4c180dba7d9744dbe9eff80e0ae size: 4711

```

- Build image wordpress

[illegible]

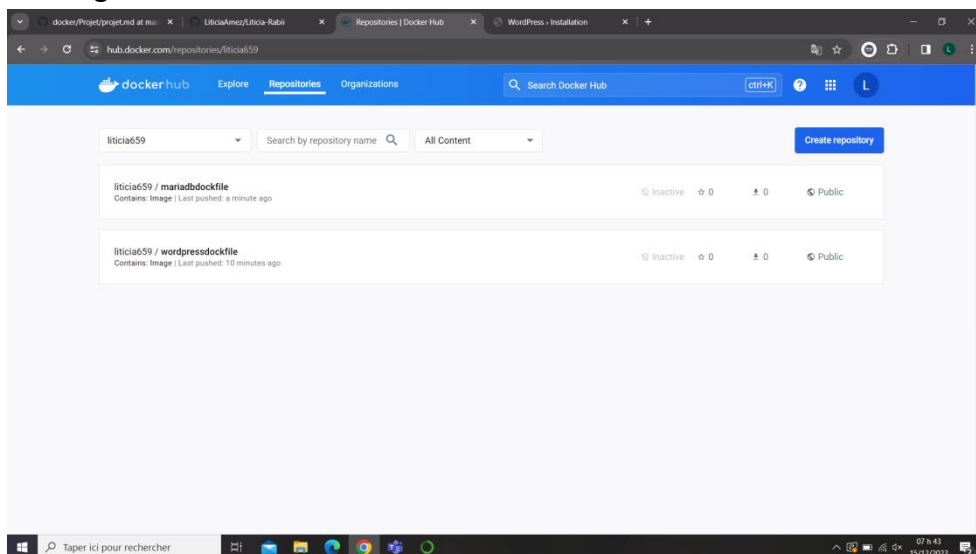
- build mariadb

```
liticia@DESKTOP-T1DC1QU:/mnt/c/Users/hp/Desktop/projetDocker$ docker build -t liticia659/mariadb:latest -f mariadb-dockerfile .
[+] Building 26.1s (6/6) FINISHED
=> [internal] load .dockerignore
=> transferring context: 2kB
=> [internal] load build definition from mariadb-dockerfile
=> transferring dockerfile: 306B
=> [internal] load metadata for docker.io/library/mariadb:latest
[auth] library/mariadb:pull token for registry-1.docker.io
[1/1] FROM docker.io/library/mariadb:latest@sha256:c806c05608804ef21c9f9b33af3ba7d6ccb3df5bc042c3fe294e0bed34089b55
=> resolve docker.io/library/mariadb:latest@sha256:c806c05608804ef21c9f9b33af3ba7d6ccb3df5bc042c3fe294e0bed34089b55
=> sha256:006c05608804ef21c9f9b33af3ba7d6ccb3df5bc042c3fe294e0bed34089b55 979B / 979B
=> sha256:cbe3537751e03e42788c2fbc2d5d336180dc2e20472c8c0ba0b3224191d101 30.45MB / 30.45MB
=> sha256:5bfc4d11f87510f9327f74383b00a0ab670566878722210a9b06962ad00519f73 1.75kB / 1.75kB
=> sha256:15b05a1891a297e2b1ad33c5fd40846033e064a15204c4f06841bb19bf8a4dc 1.99kB / 1.99kB
=> sha256:f8c340abd40f80a61a18057ef4d196c0dd3d0f59b5e8829ee7eb5165a10757 10.13kB / 10.13kB
=> sha256:e018e89b0bd0f4ac4f90c7d2ed58dc4f73aeeb1658c677c727b0a9de02e71bb1 5.65MB / 5.65MB
=> sha256:3e4cf40a46f900d0a061e6cd0ab048efba143849f06e850515113c35837947a 149B / 149B
=> sha256:938b1b815dc06dc58c3bc0d4a9a7973122f1c1d09a000f93c505746184339 313B / 313B
=> sha256:07e00e75320a22c895c243bb3e5631f0180ce474cf0e0d04973a20902130 07.42MB / 07.42MB
=> sha256:82012f0ef36f47d0f315091698b18ac2b04c8de0530100725c0690a8e407d 3.61kB / 3.61kB
=> sha256:6430910462f435d87bfc4d08f7392150b9f400e9262a7cd27d8fed2ae5acac 7.86kB / 7.86kB
=> extracting sha256:cbe3537751e03e42788c2fbc2d5d336180dc2e20472c8c0ba0b3224191d101
=> extracting sha256:5bfc4d11f87510f9327f74383b00a0ab670566878722210a9b06962ad00519f73
=> extracting sha256:e018e89b0bd0f4ac4f90c7d2ed58dc4f73aeeb1658c677c727b0a9de02e71bb1
=> extracting sha256:3e4cf40a46f900d0a061e6cd0ab048efba143849f06e850515113c35837947a
=> extracting sha256:938b1b815dc06dc58c3bc0d4a9a7973122f1c1d09a000f93c505746184339
=> extracting sha256:07e00e75320a22c895c243bb3e5631f0180ce474cf0e0d04973a20902130
=> extracting sha256:82012f0ef36f47d0f315091698b18ac2b04c8de0530100725c0690a8e407d
=> extracting sha256:6430910462f435d87bfc4d08f7392150b9f400e9262a7cd27d8fed2ae5acac
=> exporting to image
=> exporting layers
=> writing image sha256:1e5f4d92731d2995b56c01496048f874ba2096d1658d77d97cd497a05b49acf
=> naming to docker.io/liticia659/mariadb:latest
=> naming to docker.io/liticia659/mariadb:latest
```

- push mariadb

```
liticia@DESKTOP-T1DC1QU:/mnt/c/Users/hp/Desktop/projetDocker$ docker push liticia659/mariadb:latest
The push refers to repository [docker.io/liticia659/mariadb:latest]
6212fc662829: Mounted from library/mariadb
ee89ba752825: Mounted from library/mariadb
e46052fbd454: Mounted from library/mariadb
363fb3cb0991: Mounted from library/mariadb
cfac55f8d05a: Mounted from library/mariadb
871405073739: Mounted from library/mariadb
4e26bc6368ac: Mounted from library/mariadb
8ceb9643fb36: Mounted from library/mariadb
1.0: digest: sha256:ae4d942fedf3955a31d26bd65e365062f5df958f937372bb643762d63342ae17 size: 1990
```

- les images sur DockerHub



- exécuter la cmd docker-compose up

```

#B0CKTOP-TDCTQ: /mnt/c/Users/tp/Desktop/projetdocker $ docker-compose up
Starting projetdocker_mariadb_1 ... done
Starting projetdocker_wordpress_1 ... done
Attaching to projetdocker_mariadb_1, projetdocker_wordpress_1
mariadb_1 | 2023-12-14 15:32:27+00:00 [Note] [Entrypoint]: Entrypoint script for MariaDB Server 1:11.2.2-mariadb-ubu2204 started.
wordpress_1 | No wp-config.php found in /var/www/html, but 'WPDEPRESS...' variables supplied, copying '/usr/src/wordpress/wp-config-docker.php' (WPDEPRESS_DB_HOST WPDEPRESS_DB_NAME WPDEPRESS_DB_PASSWORD WPDEPRESS_DB_CHARSET)
wordpress_1 | A000508: apache2: Could not reliably determine the server's fully qualified domain name, using 172.17.0.2. Set the 'ServerName' directive globally to suppress this message
wordpress_1 | [Thu Dec 14 15:32:29.454029 2023] [core:error] [pid 1] #000015: Apache/2.4.52 (Ubuntu) PHP/8.2.13 configured -- resuming normal operations
mariadb_1 | 2023-12-14 15:32:29+00:00 [Note] [Entrypoint]: Entrypoint script for MariaDB Server 1:11.2.2-mariadb-ubu2204 started.
mariadb_1 | 2023-12-14 15:32:30+00:00 [Note] [Entrypoint]: MariaDB upgrade not required
mariadb_1 | Warning: World-writable config file '/etc/mysql/my.cnf' is ignored
mariadb_1 | 2023-12-14 15:32:30 0 [Warning] Setting lower_case_table_names=2 because file system for '/var/lib/mysql/' is case insensitive
mariadb_1 | 2023-12-14 15:32:30 0 [Note] Starting MariaDB 11.2.2-MariaDB-1:11.2.2-mariadb-ubu2204 source revision 92953268426d89111c24c3d69c23cc54382259 as process 1
mariadb_1 | 2023-12-14 15:32:30 0 [Note] InnoDB: Compressed tables use zlib 1.2.11
mariadb_1 | 2023-12-14 15:32:30 0 [Note] InnoDB: Using Transactional Memory
mariadb_1 | 2023-12-14 15:32:30 0 [Note] InnoDB: Number of transaction pools: 1
mariadb_1 | 2023-12-14 15:32:30 0 [Note] InnoDB: Using crc32 + pclmulqdq instructions
mariadb_1 | 2023-12-14 15:32:30 0 [Note] mariadb: O_TMPFILE is not supported on /tmp (disabling future attempts)
mariadb_1 | 2023-12-14 15:32:30 0 [Note] InnoDB: File locking
mariadb_1 | 2023-12-14 15:32:30 0 [Note] InnoDB: Initializing buffer pool, total size = 128.000MiB, chunk size = 2.000MiB
mariadb_1 | 2023-12-14 15:32:30 0 [Note] InnoDB: Completed initialization of buffer pool
mariadb_1 | 2023-12-14 15:32:30 0 [Note] InnoDB: Buffered log writes (block size=512 bytes)
mariadb_1 | 2023-12-14 15:32:30 0 [Note] InnoDB: End of log at LSN=67029
mariadb_1 | 2023-12-14 15:32:30 0 [Note] InnoDB: Opened 3 undo tablespaces
mariadb_1 | 2023-12-14 15:32:30 0 [Note] InnoDB: 128 rollback segments in 3 undo tablespaces are active
mariadb_1 | 2023-12-14 15:32:31 0 [Note] InnoDB: Setting file './ibtmp1' size to 12.000MiB. Physically writing the file full; Please wait ...
mariadb_1 | 2023-12-14 15:32:32 0 [Note] InnoDB: File './ibtmp1' size is now 12.000MiB.
mariadb_1 | 2023-12-14 15:32:32 0 [Note] InnoDB: Log sequence number 479291, Transaction Id 14
mariadb_1 | 2023-12-14 15:32:32 0 [Note] Plugin 'FEDERAX' is disabled.
mariadb_1 | 2023-12-14 15:32:32 0 [Note] Plugin 'xtrabackup' is disabled.
mariadb_1 | 2023-12-14 15:32:32 0 [Note] InnoDB: Loading buffer pool(s) from /var/lib/mysql/ib_buffer_pool
mariadb_1 | 2023-12-14 15:32:32 0 [Note] InnoDB: Buffer pool(s) load completed at 231214 15:32:32
mariadb_1 | 2023-12-14 15:32:32 0 [Note] Server socket created on IP: '0.0.0.0'
mariadb_1 | 2023-12-14 15:32:32 0 [Note] mariadb: Event Scheduler: loaded 0 events
mariadb_1 | 2023-12-14 15:32:32 0 [Note] mariadb: ready for connections.
mariadb_1 | Version: '11.2.2-MariaDB-1:11.2.2-mariadb-ubu2204' socket: '/run/mysql.sock' port: 3306 mariadb.org binary distribution

```

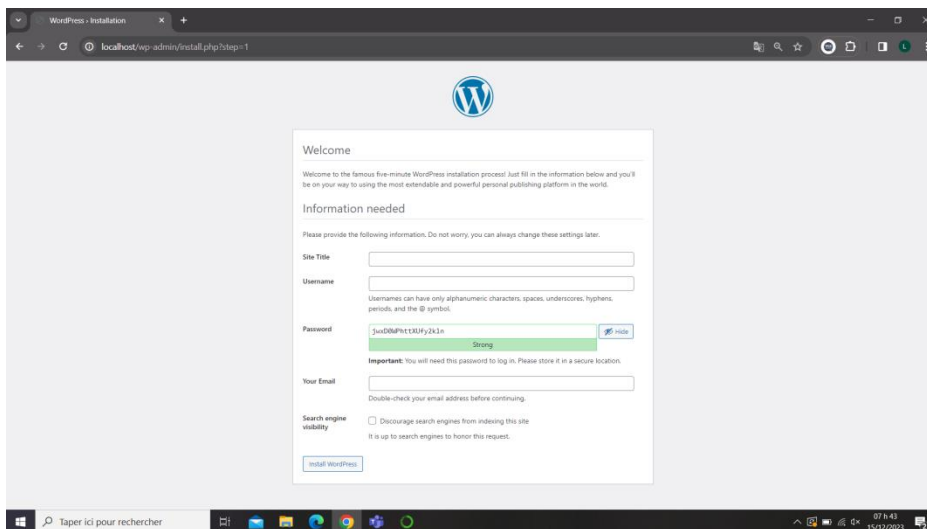
- exécution de la commande <<docker ps>>

```

#B0CKTOP-TDCTQ: ~ $ docker ps
CONTAINER ID   IMAGE                                COMMAND                  CREATED        STATUS        PORTS                               NAMES
fa262f96a211   111c1a859/wordpressdockerfile:1.0  "docker-entrypoint.s..." About a minute ago Up about a minute 0.0.0.0:80->80/tcp, :::80->80/tcp projetdocker_wordpress_1
c38f6d9308ba   111c1a859/mariadbdockerfile:1.0     "docker-entrypoint.s..." 8 minutes ago Up 8 minutes    3306/tcp                                projetdocker_mariadb_1

```

- Lancement wordpress sur le localhost



- Justification des Décisions :
 - Images choisies :
 - Les images officielles sont généralement bien entretenues, mises à jour et sécurisées.
 - Elles sont largement utilisées, ce qui facilite le support communautaire.
 - Variables d'environnement :
 - Ces variables sont standard pour WordPress et garantissent une configuration correcte pour la connexion à la base de données.
 - Réseaux Virtuels Distincts :
 - Séparer les réseaux pour le frontend et le backend limite l'accès non autorisé et suit le principe de moindre privilège.
 - Persistance des Données :
 - L'utilisation d'un volume pour la base de données garantit que les données persistent même après la suppression du conteneur.

Projet 2 :

- Création de la structure de projet

```
lihi@DESKTOP-TIDCTQ: /mnt/c/Users/hp/Desktop/projetDocker/Projet_Docker2/Liticia&Rabii
lihi@DESKTOP-TIDCTQ: /mnt/c/Users/hp/Desktop/projetDocker$ ls
Projet_Docker2  README.md
lihi@DESKTOP-TIDCTQ: /mnt/c/Users/hp/Desktop/projetDocker$ cd Projet_Docker2
lihi@DESKTOP-TIDCTQ: /mnt/c/Users/hp/Desktop/projetDocker/Projet_Docker2$ ls
Prjt.txt
lihi@DESKTOP-TIDCTQ: /mnt/c/Users/hp/Desktop/projetDocker/Projet_Docker2$ rm Prjt.txt
lihi@DESKTOP-TIDCTQ: /mnt/c/Users/hp/Desktop/projetDocker/Projet_Docker2$ git status

On branch master
nothing to commit, working tree clean
lihi@DESKTOP-TIDCTQ: /mnt/c/Users/hp/Desktop/projetDocker/Projet_Docker2$ mkdir "Liticia&Rabii"
lihi@DESKTOP-TIDCTQ: /mnt/c/Users/hp/Desktop/projetDocker/Projet_Docker2$ nano docker-compose.yml
lihi@DESKTOP-TIDCTQ: /mnt/c/Users/hp/Desktop/projetDocker/Projet_Docker2$ nano
lihi@DESKTOP-TIDCTQ: /mnt/c/Users/hp/Desktop/projetDocker/Projet_Docker2$ ls
docker-compose.yml
lihi@DESKTOP-TIDCTQ: /mnt/c/Users/hp/Desktop/projetDocker/Projet_Docker2$ nano docker-compose.yml
lihi@DESKTOP-TIDCTQ: /mnt/c/Users/hp/Desktop/projetDocker/Projet_Docker2$ ls
docker-compose.yml
lihi@DESKTOP-TIDCTQ: /mnt/c/Users/hp/Desktop/projetDocker/Projet_Docker2$ cat docker-compose.yml
version: '3.8'
services:
  elasticsearch-node1:
    image: docker.elastic.co/elasticsearch/elasticsearch:7.15.0
    container_name: es-node1
    environment:
      - node.name=es-node1
      - discovery.seed_hosts=elasticsearch-node2,elasticsearch-node3
      - cluster.initial_master_nodes=es-node1,es-node2,es-node3
      - cluster.name=docker-cluster
    volumes:
      - ./es-cluster:/usr/share/elasticsearch/data
    ports:
      - 9200:9200
    networks:
      - es-net
  elasticsearch-node2:
    image: docker.elastic.co/elasticsearch/elasticsearch:7.15.0
    container_name: es-node2
    environment:
      - node.name=es-node2
      - discovery.seed_hosts=elasticsearch-node1,elasticsearch-node3
      - cluster.initial_master_nodes=es-node1,es-node2,es-node3
      - cluster.name=docker-cluster
    volumes:
      - ./es-cluster:/usr/share/elasticsearch/data
    networks:
      - es-net
  elasticsearch-node3:
    image: docker.elastic.co/elasticsearch/elasticsearch:7.15.0
```

```
lihi@DESKTOP-TIDCTQ: /mnt/c/Users/hp/Desktop/projetDocker/Projet_Docker2/Liticia&Rabii
lihi@DESKTOP-TIDCTQ: /mnt/c/Users/hp/Desktop/projetDocker/Projet_Docker2$ mkdir es-cluster
lihi@DESKTOP-TIDCTQ: /mnt/c/Users/hp/Desktop/projetDocker/Projet_Docker2$ ls
docker-compose.yml  es-cluster
lihi@DESKTOP-TIDCTQ: /mnt/c/Users/hp/Desktop/projetDocker/Projet_Docker2$ cd es-cluster/
lihi@DESKTOP-TIDCTQ: /mnt/c/Users/hp/Desktop/projetDocker/Projet_Docker2/es-cluster$ nano elasticsearch.yml
lihi@DESKTOP-TIDCTQ: /mnt/c/Users/hp/Desktop/projetDocker/Projet_Docker2/es-cluster$ nano kibana.yml
lihi@DESKTOP-TIDCTQ: /mnt/c/Users/hp/Desktop/projetDocker/Projet_Docker2/es-cluster$ ls
elasticsearch.yml  kibana.yml
lihi@DESKTOP-TIDCTQ: /mnt/c/Users/hp/Desktop/projetDocker/Projet_Docker2/es-cluster$ cat kibana.yml
server.name: kibana
elasticsearch.hosts: ["http://elasticsearch-node1:9200"]
lihi@DESKTOP-TIDCTQ: /mnt/c/Users/hp/Desktop/projetDocker/Projet_Docker2/es-cluster$ nano .env
lihi@DESKTOP-TIDCTQ: /mnt/c/Users/hp/Desktop/projetDocker/Projet_Docker2/es-cluster$ cat .env
ES_VERSION=8.11.3
lihi@DESKTOP-TIDCTQ: /mnt/c/Users/hp/Desktop/projetDocker/Projet_Docker2/es-cluster$ ls
elasticsearch.yml  kibana.yml
lihi@DESKTOP-TIDCTQ: /mnt/c/Users/hp/Desktop/projetDocker/Projet_Docker2/es-cluster$ cd ..
lihi@DESKTOP-TIDCTQ: /mnt/c/Users/hp/Desktop/projetDocker/Projet_Docker2$ ls
docker-compose.yml  es-cluster
lihi@DESKTOP-TIDCTQ: /mnt/c/Users/hp/Desktop/projetDocker/Projet_Docker2$ rm .env
rm: cannot remove '.env': No such file or directory
lihi@DESKTOP-TIDCTQ: /mnt/c/Users/hp/Desktop/projetDocker/Projet_Docker2$ cd es-cluster/
lihi@DESKTOP-TIDCTQ: /mnt/c/Users/hp/Desktop/projetDocker/Projet_Docker2/es-cluster$ ls
elasticsearch.yml  kibana.yml
lihi@DESKTOP-TIDCTQ: /mnt/c/Users/hp/Desktop/projetDocker/Projet_Docker2/es-cluster$ rm .env
lihi@DESKTOP-TIDCTQ: /mnt/c/Users/hp/Desktop/projetDocker/Projet_Docker2/es-cluster$ cd ..
lihi@DESKTOP-TIDCTQ: /mnt/c/Users/hp/Desktop/projetDocker/Projet_Docker2$ nano .env
lihi@DESKTOP-TIDCTQ: /mnt/c/Users/hp/Desktop/projetDocker/Projet_Docker2$ ls
docker-compose.yml
lihi@DESKTOP-TIDCTQ: /mnt/c/Users/hp/Desktop/projetDocker/Projet_Docker2$ cat .env
ES_VERSION=8.11.3
lihi@DESKTOP-TIDCTQ: /mnt/c/Users/hp/Desktop/projetDocker/Projet_Docker2$ ls
docker-compose.yml
lihi@DESKTOP-TIDCTQ: /mnt/c/Users/hp/Desktop/projetDocker/Projet_Docker2$ cd Liticia&Rabii/
lihi@DESKTOP-TIDCTQ: /mnt/c/Users/hp/Desktop/projetDocker/Projet_Docker2/Liticia&Rabii$ ls
docker-compose.yml
lihi@DESKTOP-TIDCTQ: /mnt/c/Users/hp/Desktop/projetDocker/Projet_Docker2/Liticia&Rabii$ code
Command 'code' not found, but can be installed with:
sudo snap install code
lihi@DESKTOP-TIDCTQ: /mnt/c/Users/hp/Desktop/projetDocker/Projet_Docker2/Liticia&Rabii$ sudo snap install code
[sudo] password for lihi:
error: This revision of snap "code" was published using classic confinement and thus may perform
arbitrary system changes outside of the security sandbox that snaps are usually confined to,
which may put your system at risk.
```

- exécution de la commande <<docker-compose up>>


```
ih@DESKTOP-TIDTQQU: /mnt/c/Users/hp/Desktop/projectDocker/Project_Docker2/Liticia&Rabi$ docker-compose up
If you understand and want to proceed repeat the command including --classic.
ih@DESKTOP-TIDTQQU: /mnt/c/Users/hp/Desktop/projectDocker/Project_Docker2/Liticia&Rabi$ ls
docker-compose.yml
ih@DESKTOP-TIDTQQU: /mnt/c/Users/hp/Desktop/projectDocker/Project_Docker2/Liticia&Rabi$ docker-compose up
ERROR: Version in "/docker-compose.yml" is unsupported. You might be seeing this error because you're using the wrong Compose file version. Either specify a supported version (e.g. "2.2" or "3.3") and place your
service definitions under the 'services' key, or omit the 'version' key and place your service definitions at the root of the file to use version 1.
For more on the Compose file format versions, see https://docs.docker.com/compose/compose-file/
ih@DESKTOP-TIDTQQU: /mnt/c/Users/hp/Desktop/projectDocker/Project_Docker2/Liticia&Rabi$ docker-compose up
ERROR: The Compose file "/docker-compose.yml" is invalid because:
services.kibana.environment contains {"ELASTICSEARCH_HOSTS=http://elasticsearch-node1: null}, which is an invalid type, it should be a string
ih@DESKTOP-TIDTQQU: /mnt/c/Users/hp/Desktop/projectDocker/Project_Docker2/Liticia&Rabi$ docker-compose up
Creating network 'liticiarabi_es-net' with driver 'bridge'
Pulling elasticsearch-node1 (docker.elastic.co/elasticsearch/elasticsearch:8.11.3)...
8.11.3: Pulling from elasticsearch/elasticsearch
0e61d8b90935: Pull complete
b72403a59eb9: Pull complete
9fe4457bccc6: Pull complete
89732bc75041: Pull complete
7d188a7d0c46: Pull complete
5f0c732baa5d: Pull complete
d9f9fc79894f: Pull complete
4c7e26a355c8: Pull complete
4db3c9e90277: Pull complete
bc9c1e3bbcf8: Pull complete
Digest: sha256:2892d2363c3c2c5ed54c64faf89a19d63d8dd0d190d0bffe03035ff09b93
Status: Downloaded newer image for docker.elastic.co/elasticsearch/elasticsearch:8.11.3
Pulling kibana (docker.elastic.co/kibana/kibana:8.11.3)...
8.11.3: Pulling from kibana/kibana
0e61d8b90935: Already exists
c79649230f0c: Pull complete
c1dd4d65700b: Pull complete
7221c1d508b1: Pull complete
1364c5f4cd3c: Pull complete
89732bc75041: Pull complete
9bc68ebc353: Pull complete
08f54fe1897: Pull complete
4db3c9e90277: Pull complete
b1fd760494b3: Pull complete
9d6755d940c3: Pull complete
47eb033b0e2d: Pull complete
b0e9f9bc2d5: Pull complete
85c36431764: Pull complete
Digest: sha256:f8316cca9f15286eb2686451b7216a51f273be696a541914b58f889e7896e
Status: Downloaded newer image for docker.elastic.co/kibana/kibana:8.11.3
Creating kibana ... done
Creating es03 ... done
Creating es01 ... done
Creating es02 ... done
Attaching to es02, kibana, es01, es03
```

```
ih@DESKTOP-TIDTQQU: /mnt/c/Users/hp/Desktop/projectDocker/Project_Docker2/Liticia&Rabi$ docker-compose logs
es03 | ["@timestamp":"2023-12-23T10:55:19.006Z","log.level":"INFO","message":"Java vector incubator API enabled; uses preferredBitsSize=256","ecs.version":"1.2.0","service.name":"ES_ECS","event.dataset":"elasticsearch.server","process.thread.name":"main","log.logger":"org.apache.lucene.internal.vectorization.PanamaVectorizationProvider","elasticsearch.cluster.name":"es03","elasticsearch.cluster.name":"docker-cluster"}
es02 | ["@timestamp":"2023-12-23T10:55:23.169Z","log.level":"INFO","message":"version[8.11.3], pid[69], build[docker/64cf052f3b56b1fd4449f5454cb88aca7e739d9a/2023-12-08T11:33:53.634979452Z], OS[Linux/5.15.133.1-microsoft-standard-WSL2/amd64], JVM[Oracle Corporation/OpenJDK 64-Bit Server VM/21.0.1/21.0.1+12-29],"ecs.version":"1.2.0","service.name":"ES_ECS","event.dataset":"elasticsearch.server","process.thread.name":"main","log.logger":"org.elasticsearch.node.Node","elasticsearch.cluster.name":"es02","elasticsearch.cluster.name":"docker-cluster"}
es02 | ["@timestamp":"2023-12-23T10:55:23.171Z","log.level":"INFO","message":"JVM home [/usr/share/elasticsearch/jdk], using bundled JDK [true]","ecs.version":"1.2.0","service.name":"ES_ECS","event.dataset":"elasticsearch.server","process.thread.name":"main","log.logger":"org.elasticsearch.node.Node","elasticsearch.cluster.name":"es02","elasticsearch.cluster.name":"docker-cluster"}
es02 | ["@timestamp":"2023-12-23T10:55:23.175Z","log.level":"INFO","message":"JVM arguments [-Des.networkaddress.cache.ttl=60, -Des.networkaddress.cache.negative.ttl=10, -Djava.security.manager=allow, -XX:+AlwaysPreTouch, -Xssm, -Djava.awt.headless=true, -Dfile.encoding=UTF-8, -Djna.nosys=true, -XX:-OmitStackTraceInFastThrow, -Dio.netty.noUnsafe=true, -Dio.netty.noKeySetOptimization=true, -Dio.netty.recycler.maxCapacityPerThread=0, -Dlog4j2.shutdownHookEnabled=false, -Dlog4j2.disable.jmx=true, -Dlog4j2.formatMsgNoLookups=true, -Djava.locale.providers=SPI,COMPAT, --add-opens=java.base/java.io.org.elasticsearch.preallocator, -Des.groups.hierarchy.override=/, -XX:+UseG1GC, -Djava.io.tmpdir=/tmp/elasticsearch-1583807298303707267, --add-modules=jdk.incubator.vector, -XX:HeapDumpOnOutOfMemoryError, -XX:ExitOnOutOfMemoryError, -XX:HeapDumpPath=data, -XX:ErrorFile=logs/hs_err_pid0.log, -Xlog:gc*:gc-age=trace,safepoint:file=logs/gc.log:utctime,level,pid,tags:filecount=32,filesize=64m, -Xms750m, -Xmx750m, -XX:MaxDirectMemorySize=393216000, -XX:G1HeapRegionSize=4m, -XX:InitiatingHeapOccupancyPercent=30, -XX:G1ReservePercent=15, -Des.distribution.type=docker, --module-path=/usr/share/elasticsearch/lib, --add-modules=jdk.net, --add-modules=ALL-Module-PATH, -Djdk.module.main=org.elasticsearch.server],"ecs.version":"1.2.0","service.name":"ES_ECS","event.dataset":"elasticsearch.server","process.thread.name":"main","log.logger":"org.elasticsearch.node.Node","elasticsearch.cluster.name":"es02","elasticsearch.cluster.name":"docker-cluster"}
es01 | ["@timestamp":"2023-12-23T10:55:23.195Z","log.level":"INFO","message":"version[8.11.3], pid[66], build[docker/64cf052f3b56b1fd4449f5454cb88aca7e739d9a/2023-12-08T11:33:53.634979452Z], OS[Linux/5.15.133.1-microsoft-standard-WSL2/amd64], JVM[Oracle Corporation/OpenJDK 64-Bit Server VM/21.0.1/21.0.1+12-29],"ecs.version":"1.2.0","service.name":"ES_ECS","event.dataset":"elasticsearch.server","process.thread.name":"main","log.logger":"org.elasticsearch.node.Node","elasticsearch.cluster.name":"es01","elasticsearch.cluster.name":"docker-cluster"}
es01 | ["@timestamp":"2023-12-23T10:55:23.199Z","log.level":"INFO","message":"JVM home [/usr/share/elasticsearch/jdk], using bundled JDK [true]","ecs.version":"1.2.0","service.name":"ES_ECS","event.dataset":"elasticsearch.server","process.thread.name":"main","log.logger":"org.elasticsearch.node.Node","elasticsearch.cluster.name":"es01","elasticsearch.cluster.name":"docker-cluster"}
es01 | ["@timestamp":"2023-12-23T10:55:23.200Z","log.level":"INFO","message":"JVM arguments [-Des.networkaddress.cache.ttl=60, -Des.networkaddress.cache.negative.ttl=10, -Djava.security.manager=allow, -XX:+AlwaysPreTouch, -Xssm, -Djava.awt.headless=true, -Dfile.encoding=UTF-8, -Djna.nosys=true, -XX:-OmitStackTraceInFastThrow, -Dio.netty.noUnsafe=true, -Dio.netty.noKeySetOptimization=true, -Dio.netty.recycler.maxCapacityPerThread=0, -Dlog4j2.shutdownHookEnabled=false, -Dlog4j2.disable.jmx=true, -Dlog4j2.formatMsgNoLookups=true, -Djava.locale.providers=SPI,COMPAT, --add-opens=java.base/java.io.org.elasticsearch.preallocator, -Des.groups.hierarchy.override=/, -XX:+UseG1GC, -Djava.io.tmpdir=/tmp/elasticsearch-1583807298303707267, --add-modules=jdk.incubator.vector, -XX:HeapDumpOnOutOfMemoryError, -XX:ExitOnOutOfMemoryError, -XX:HeapDumpPath=data, -XX:ErrorFile=logs/hs_err_pid0.log, -Xlog:gc*:gc-age=trace,safepoint:file=logs/gc.log:utctime,level,pid,tags:filecount=32,filesize=64m, -Xms750m, -Xmx750m, -XX:MaxDirectMemorySize=393216000, -XX:G1HeapRegionSize=4m, -XX:InitiatingHeapOccupancyPercent=30, -XX:G1ReservePercent=15, -Des.distribution.type=docker, --module-path=/usr/share/elasticsearch/lib, --add-modules=jdk.net, --add-modules=ALL-Module-PATH, -Djdk.module.main=org.elasticsearch.server],"ecs.version":"1.2.0","service.name":"ES_ECS","event.dataset":"elasticsearch.server","process.thread.name":"main","log.logger":"org.elasticsearch.node.Node","elasticsearch.cluster.name":"es01","elasticsearch.cluster.name":"docker-cluster"}
es03 | ["@timestamp":"2023-12-23T10:55:23.785Z","log.level":"INFO","message":"JVM home [/usr/share/elasticsearch/jdk], using bundled JDK [true]","ecs.version":"1.2.0","service.name":"ES_ECS","event.dataset":"elasticsearch.server","process.thread.name":"main","log.logger":"org.elasticsearch.node.Node","elasticsearch.cluster.name":"es03","elasticsearch.cluster.name":"docker-cluster"}
es03 | ["@timestamp":"2023-12-23T10:55:23.786Z","log.level":"INFO","message":"JVM arguments [-Des.networkaddress.cache.ttl=60, -Des.networkaddress.cache.negative.ttl=10, -Djava.security.manager=allow, -XX:+AlwaysPreTouch, -Xssm, -Djava.awt.headless=true, -Dfile.encoding=UTF-8, -Djna.nosys=true, -XX:-OmitStackTraceInFastThrow, -Dio.netty.noUnsafe=true, -Dio.netty.noKeySetOptimization=true, -Dio.netty.recycler.maxCapacityPerThread=0, -Dlog4j2.shutdownHookEnabled=false, -Dlog4j2.disable.jmx=true, -Dlog4j2.formatMsgNoLookups=true, -Djava.locale.providers=SPI,COMPAT, --add-opens=java.base/java.io.org.elasticsearch.preallocator, -Des.groups.hierarchy.override=/, -XX:+UseG1GC, -Djava.io.tmpdir=/tmp/elasticsearch-12071582757131408474, --add-modules=jdk.incubator.vector, -XX:HeapDumpOnOutOfMemoryError, -XX:ExitOnOutOfMemoryError, -XX:HeapDumpPath=data, -XX:ErrorFile=logs/hs_err_pid0.log, -Xlog:gc*:gc-age=trace,safepoint:file=logs/gc.log:utctime,level,pid,tags:filecount=32,filesize=64m, -Xms750m, -Xmx750m, -XX:MaxDirectMemorySize=393216000, -XX:G1HeapRegionSize=4m, -XX:InitiatingHeapOccupancyPercent=30, -XX:G1ReservePercent=15, -Des.distribution.type=docker, --module-path=/usr/share/elasticsearch/lib, --add-modules=jdk.net, --add-modules=ALL-Module-PATH, -Djdk.module.main=org.elasticsearch.server],"ecs.version":"1.2.0","service.name":"ES_ECS","event.dataset":"elasticsearch.server","process.thread.name":"main","log.logger":"org.elasticsearch.node.Node","elasticsearch.cluster.name":"es03","elasticsearch.cluster.name":"docker-cluster"}
kibana | [2023-12-23T10:55:33.391+00:00][INFO][root] Kibana is starting
kibana | [2023-12-23T10:55:34.120+00:00][INFO][node] Kibana process configured with roles: [background_tasks, ui]
```

- Exécution de la commande <<docker ps >>

```
liti@DESKTOP-TIDCTQU: ~  
liti@DESKTOP-TIDCTQU:~$ docker ps -a
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
4f444fbc2c12	docker.elastic.co/kibana/kibana:8.11.3	"/bin/tini -- /usr/l..."	2 minutes ago	Up 2 minutes	0.0.0.0:5601->5601/tcp, :::5601->5601/tcp	kibana
4b7de3da1146	docker.elastic.co/elasticsearch/elasticsearch:8.11.3	"/bin/tini -- /usr/l..."	2 minutes ago	Up 2 minutes	9200/tcp, 9300/tcp	es02
41ef2684f3f6	docker.elastic.co/elasticsearch/elasticsearch:8.11.3	"/bin/tini -- /usr/l..."	2 minutes ago	Up 2 minutes	0.0.0.0:9200->9200/tcp, :::9200->9200/tcp, 9300/tcp	es01
3250c5178870	docker.elastic.co/elasticsearch/elasticsearch:8.11.3	"/bin/tini -- /usr/l..."	2 minutes ago	Up 2 minutes	9200/tcp, 9300/tcp	es03

```
liti@DESKTOP-TIDCTQU:~$
```

- Lancement de kibana sur le port 5601

