

《数据库系统原理》实验报告（）

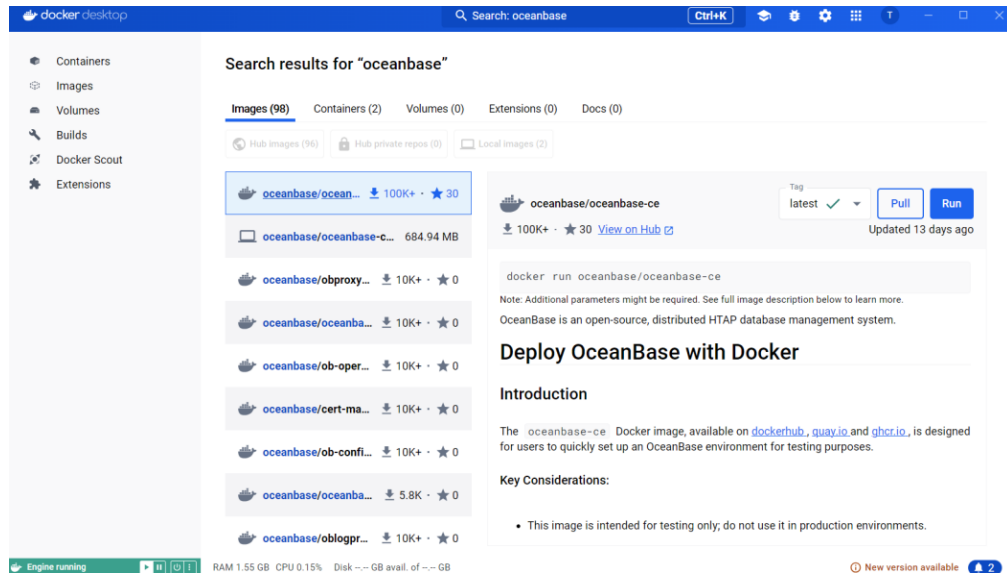
题目：实验 0 实验准备

学号	2351753	姓名	黄保翔	日期	2025/4/3
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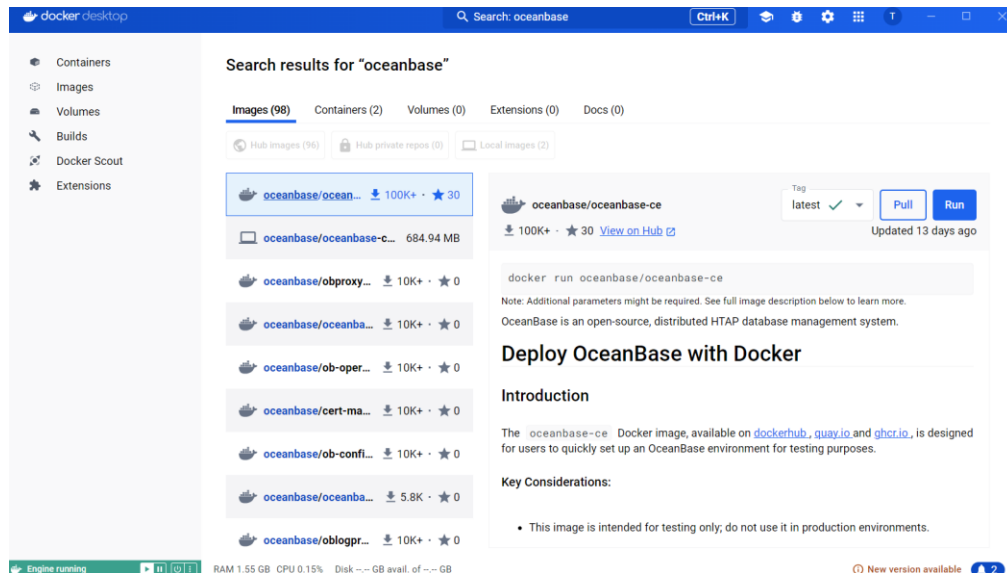
实验环境：wsl2 docker oceanbase/oceanbase-ce

实验步骤及结果截图：

1、 下载 docker,进入 docker desktop



2、 搜索，pull 并 run Oceanbase



Containers / Oceanbase

Oceanbase

1542d8400ee9 [oceanbase/oceanbase-ce:latest](#) STATUS Running (2 minutes ago)

Logs Inspect Bind mounts Exec Files Stats

```

2025-04-03 13:59:18 [WARN] OBD-1017: (172.17.0.2) The value of the "vm.overcommit_memory" must be 0 (Current value: 1, Recommended value: 0)
2025-04-03 13:59:18 [WARN] OBD-1017: (172.17.0.2) The value of the "fs.file-max" must be greater than 6573688 (Current value: 795252, Recommended value: 6573688)
2025-04-03 13:59:18 [WARN] OBD-2000: (172.17.0.2) not enough memory. (Free: 5G, Need: 6G)
2025-04-03 13:59:18 cluster scenario: express_oltp
2025-04-03 13:59:19 Start observer ok
2025-04-03 13:59:22 observer program health check ok
2025-04-03 13:59:40 Connect to observer ok
2025-04-03 13:59:43 obshell start ok
2025-04-03 13:59:43 obshell program health check ok
2025-04-03 13:59:44 Connect to observer ok
2025-04-03 13:59:44 Wait for observer init ok
2025-04-03 13:59:44 +-----+
2025-04-03 13:59:44 |                   oceanbase-ce                   |
2025-04-03 13:59:44 +-----+-----+-----+-----+-----+
2025-04-03 13:59:44 | ip           | version | port | zone | status |
2025-04-03 13:59:44 +-----+-----+-----+-----+-----+
2025-04-03 13:59:44 | 172.17.0.2   | 4.2.1.10 | 2881 | zone1 | ACTIVE |
2025-04-03 13:59:44 +-----+-----+-----+-----+-----+
2025-04-03 13:59:44 obclient -h172.17.0.2 -P2881 -uroot -Doceanbase -A
2025-04-03 13:59:44
2025-04-03 13:59:44 cluster unique id: f33d1cf3-f52c-5277-871b-eb4f0c7b6206-195f090055c-0a010204
2025-04-03 13:59:44
2025-04-03 13:59:44 obcluster running
2025-04-03 13:59:44 Trace ID: c6c5c808-1050-11f0-a46f-0242ac110002
    
```

RAM 5.51 GB CPU 1.75% Disk --- GB avail. of --- GB New version available

- 3、启动成功后进入 exec 输入 `obclient -uroot@sys -h127.1 -P2881` 链接 Oceanbase 数据库（注意此时默认数据库时 none）

Containers / Oceanbase

Oceanbase

1542d8400ee9 [oceanbase/oceanbase-ce:latest](#) STATUS Running (2 minutes ago)

Logs Inspect Bind mounts Exec Files Stats

Debug mode [Open in external terminal](#)

```

sh-4.4# obclient -uroot@sys -h127.1 -P2881
Welcome to the OceanBase. Commands end with ; or \g.
Your OceanBase connection id is 3221487633
Server version: OceanBase_CE 4.2.1.10 (r110000072024112010-28c1343085627e79a4f13c29121646bb889cf901) (Built Nov 20 2024 10:11:18)

Copyright (c) 2000, 2018, OceanBase and/or its affiliates. All rights reserved.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

obclient[root@sys][(none)]>
    
```

RAM 5.55 GB CPU 2.09% Disk --- GB avail. of --- GB New version available

- 4、Show 所有的数据库，进入 Oceanbase 数据库

```
obclient(root@sys)[(none)]> SHOW DATABASES;
+-----+
| Database |
+-----+
| information_schema |
| LBACSYS |
| mysql |
| oceanbase |
| ocs |
| ORAAUDITOR |
| SYS |
| test |
+-----+
8 rows in set (0.007 sec)

obclient(root@sys)[(none)]> use oceanbase
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
obclient(root@sys)[oceanbase]> _
```

5、此时环境配置成功，可以进行实验

```
obclient(root@sys)[oceanbase]> CREATE TABLE Customers (
->     CustomerID INT AUTO_INCREMENT NOT NULL,
->     Name VARCHAR(50) NOT NULL,
->     Email VARCHAR(100) NOT NULL UNIQUE,
->     Phone VARCHAR(20),
->     RegistrationDate DATETIME NOT NULL DEFAULT CURRENT_TIMESTAMP,
->     CONSTRAINT chk_Email CHECK (Email LIKE '%_@_%._%'),
->     PRIMARY KEY (CustomerID)
-> );
Query OK, 0 rows affected (0.302 sec)
```

出现的问题：

- 1、 搜索不到 oceanbase/oceanbase-ce 官方镜像
- 2、 Pull 镜像失败
- 3、 找不到数据库

```
obclient(root@sys)[(none)]> CREATE TABLE Customers (
->     CustomerID INT AUTO_INCREMENT NOT NULL,
->     Name VARCHAR(50) NOT NULL,
->     Email VARCHAR(100) NOT NULL UNIQUE,
->     Phone VARCHAR(20),
->     RegistrationDate DATETIME NOT NULL DEFAULT CURRENT_TIMESTAMP,
->     CONSTRAINT chk_Email CHECK (Email LIKE '%_@_%._%'),
->     PRIMARY KEY (CustomerID)
-> );
ERROR 1046 (3D000): No database selected
[172.17.0.2:2882] [2025-04-03 06:18:42.318139] [YB42AC110002-000631D98109CBC3-0-0]
```

解决方案：

- 1、 需要注册登录 docker 账号
- 2、 需要科学上网
- 3、 需要选择数据库，使用 SHOW DATABASES;查找所有数据库，使用 use OceanBase 选择数据库