Steps to install docker and Impala in Ubuntu

INSTALLING IMAPALA

1. INSTALL DOCKER

Update system packages

sudo apt update

Install prerequisites

sudo apt install apt-transport-https ca-certificates curl software-properties-common -y

Add Docker’s official GPG key

curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo gpg --dearmor -o /usr/share/keyrings/docker-archive-keyring.gpg

Add Docker APT repository

echo \

  "deb [arch=$(dpkg --print-architecture) signed-by=/usr/share/keyrings/docker-archive-keyring.gpg] https://download.docker.com/linux/ubuntu \

  $(lsb_release -cs) stable" | sudo tee /etc/apt/sources.list.d/docker.list > /dev/null

Update package index again

sudo apt update

Install Docker

sudo apt install docker-ce -y

Start Docker and enable it to launch at boot

sudo systemctl start docker

sudo systemctl enable docker

#Add current user to docker group so you don't need sudo

sudo usermod -aG docker $USER

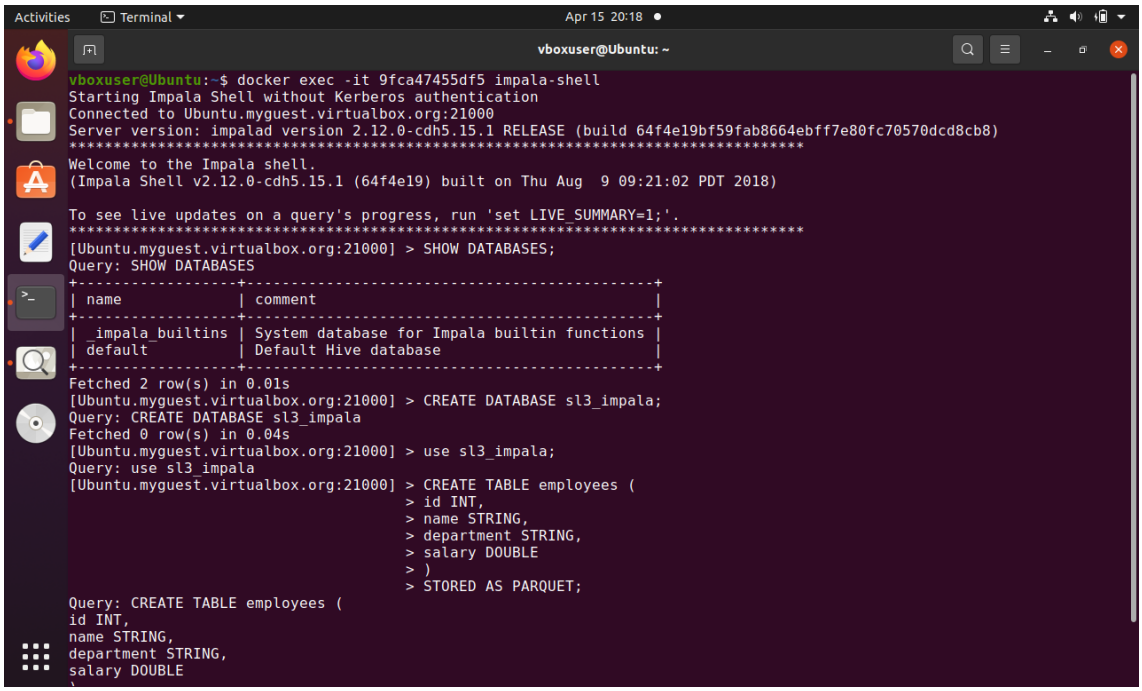
2. docker pull josemyd/all-in-one-impala-kudu

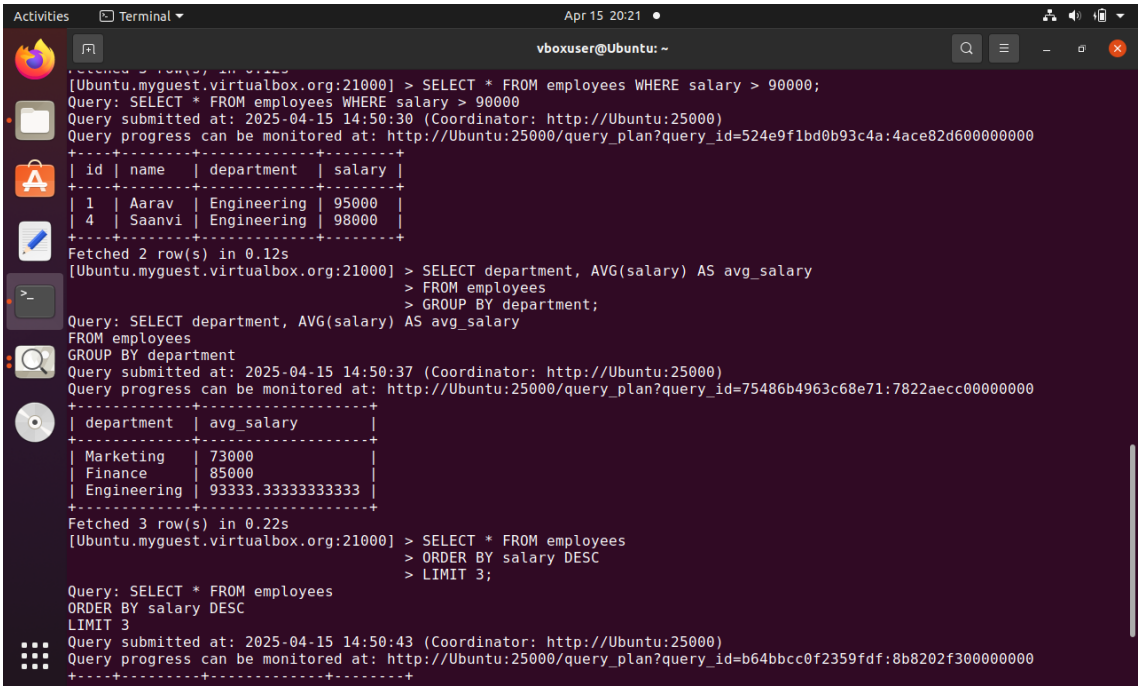
3. docker run -it --name impala-kudu-container josemyd/all-in-one-impala-kudu

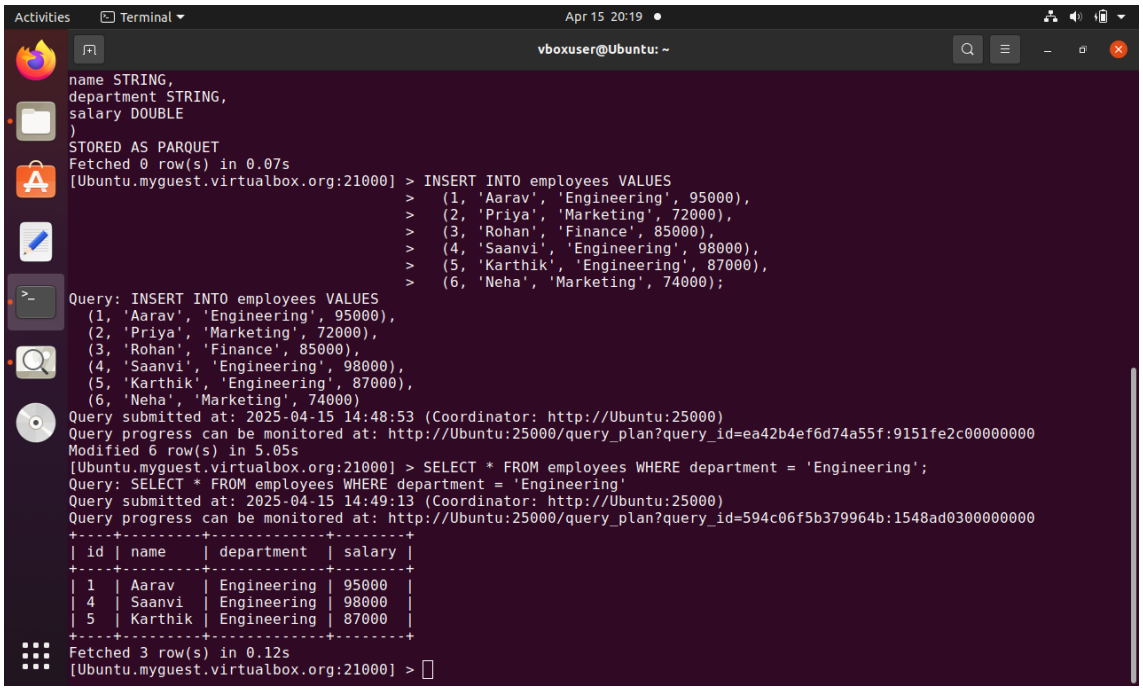
4. docker exec -it impala-kudu-container impala-shell

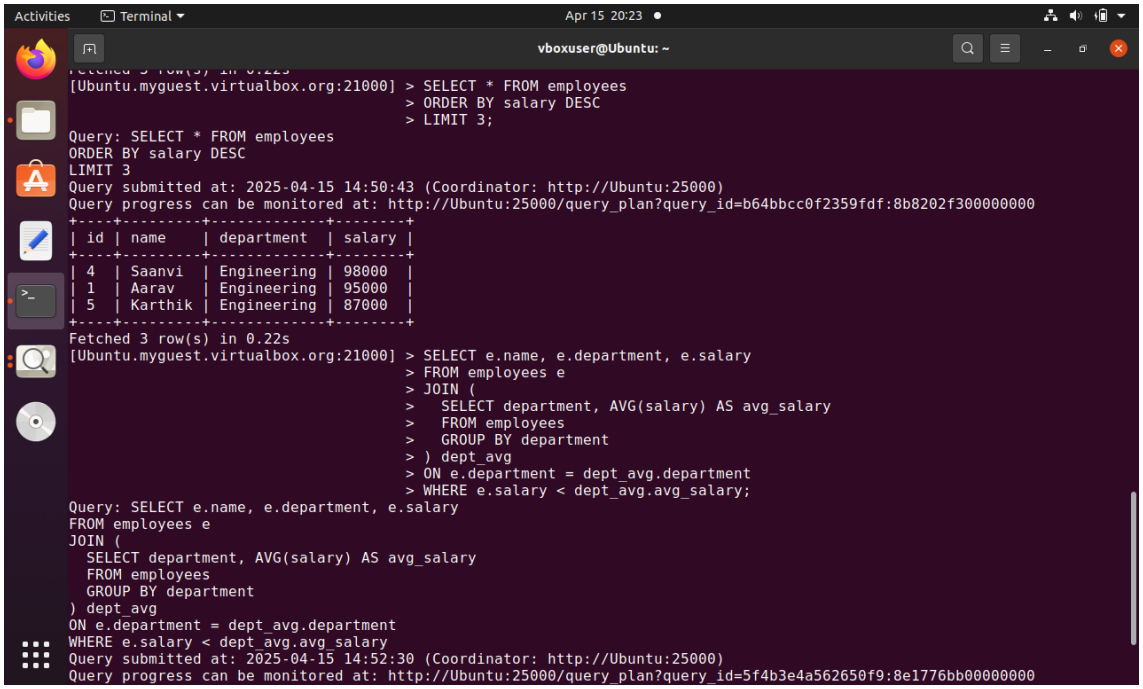
```
SHOW DATABASES;
CREATE DATABASE sl3_impala;
USE sl3_impala;

CREATE TABLE employees (
    id INT,
    name STRING,
    department STRING,
    salary DOUBLE
)
STORED AS PARQUET;

INSERT INTO employees VALUES
(1, 'Aarav', 'Engineering', 95000),
(2, 'Priya', 'Marketing', 72000),
(3, 'Rohan', 'Finance', 85000),
(4, 'Saanvi', 'Engineering', 98000),
(5, 'Karthik', 'Engineering', 87000),
(6, 'Neha', 'Marketing', 74000);

SELECT * FROM employees WHERE department = 'Engineering';

SELECT * FROM employees WHERE salary > 90000;

SELECT department, AVG(salary) AS avg_salary FROM employees GROUP BY
department;

SELECT * FROM employees ORDER BY salary DESC LIMIT 3;
```

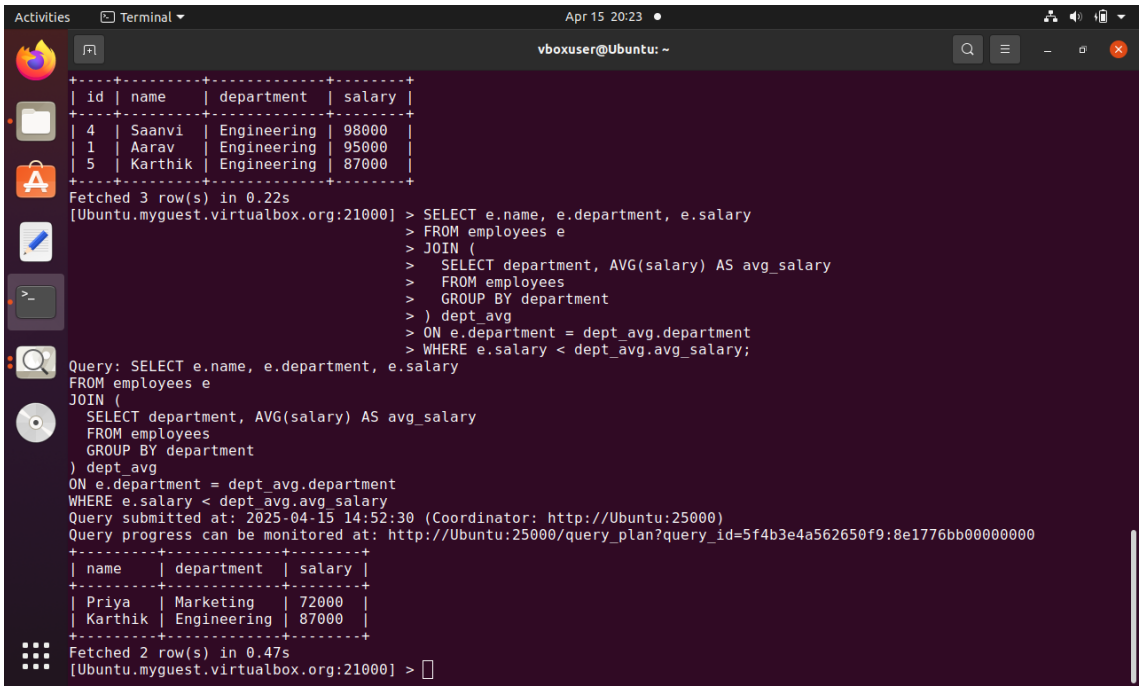
```
SELECT e.name, e.department, e.salary FROM employees e
JOIN ( SELECT department, AVG(salary) AS avg_salary FROM employees
    GROUP BY department
) dept_avg
ON e.department = dept_avg.department
WHERE e.salary < dept_avg.avg_salary;
```






Activities
Terminal
Apr 15 20:19
vboxuser@Ubuntu: ~
name STRING,
department STRING,
salary DOUBLE
)
STORED AS PARQUET
Fetched 0 row(s) in 0.07s
[Ubuntu.myguest.virtualbox.org:21000] > INSERT INTO employees VALUES
> (1, 'Aarav', 'Engineering', 95000),
> (2, 'Priya', 'Marketing', 72000),
> (3, 'Rohan', 'Finance', 85000),
> (4, 'Saanvi', 'Engineering', 98000),
> (5, 'Karthik', 'Engineering', 87000),
> (6, 'Neha', 'Marketing', 74000);
Query: INSERT INTO employees VALUES
(1, 'Aarav', 'Engineering', 95000),
(2, 'Priya', 'Marketing', 72000),
(3, 'Rohan', 'Finance', 85000),
(4, 'Saanvi', 'Engineering', 98000),
(5, 'Karthik', 'Engineering', 87000),
(6, 'Neha', 'Marketing', 74000)
Query submitted at: 2025-04-15 14:48:53 (Coordinator: http://Ubuntu:25000)
Query progress can be monitored at: http://Ubuntu:25000/query_plan?query_id=ea42b4ef6d74a55f:9151fe2c00000000
Modified 6 row(s) in 5.05s
[Ubuntu.myguest.virtualbox.org:21000] > SELECT * FROM employees WHERE department = 'Engineering';
Query: SELECT * FROM employees WHERE department = 'Engineering'
Query submitted at: 2025-04-15 14:49:13 (Coordinator: http://Ubuntu:25000)
Query progress can be monitored at: http://Ubuntu:25000/query_plan?query_id=594c06f5b379964b:1548ad0300000000
+----+---------+-------------+--------+
| id | name | department | salary |
+----+---------+-------------+--------+
1	Aarav	Engineering	95000
4	Saanvi	Engineering	98000
5	Karthik	Engineering	87000
+----+---------+-------------+--------+
Fetched 3 row(s) in 0.12s
[Ubuntu.myguest.virtualbox.org:21000] >


Activities
Terminal
Apr 15 20:23
vboxuser@Ubuntu: ~
[Ubuntu.myguest.virtualbox.org:21000] > SELECT * FROM employees
> ORDER BY salary DESC
> LIMIT 3;
Query: SELECT * FROM employees
ORDER BY salary DESC
LIMIT 3
Query submitted at: 2025-04-15 14:50:43 (Coordinator: http://Ubuntu:25000)
Query progress can be monitored at: http://Ubuntu:25000/query_plan?query_id=b64bbcc0f2359fdf:8b8202f300000000
+----+---------+-------------+--------+
| id | name | department | salary |
+----+---------+-------------+--------+
4	Saanvi	Engineering	98000
1	Aarav	Engineering	95000
5	Karthik	Engineering	87000
+----+---------+-------------+--------+
Fetched 3 row(s) in 0.22s
[Ubuntu.myguest.virtualbox.org:21000] > SELECT e.name, e.department, e.salary
> FROM employees e
> JOIN (
> SELECT department, AVG(salary) AS avg_salary
> FROM employees
> GROUP BY department
>) dept_avg
> ON e.department = dept_avg.department
> WHERE e.salary < dept_avg.avg_salary;
Query: SELECT e.name, e.department, e.salary
FROM employees e
JOIN (
SELECT department, AVG(salary) AS avg_salary
FROM employees
GROUP BY department
) dept_avg
ON e.department = dept_avg.department
WHERE e.salary < dept_avg.avg_salary
Query submitted at: 2025-04-15 14:52:30 (Coordinator: http://Ubuntu:25000)
Query progress can be monitored at: http://Ubuntu:25000/query_plan?query_id=5f4b3e4a562650f9:8e1776bb00000000


Activities
Terminal
Apr 15 20:23
vboxuser@Ubuntu: ~
+----+---------+-------------+--------+
| id | name | department | salary |
+----+---------+-------------+--------+
4	Saanvi	Engineering	98000
1	Aarav	Engineering	95000
5	Karthik	Engineering	87000
+----+---------+-------------+--------+
Fetched 3 row(s) in 0.22s
[Ubuntu.myguest.virtualbox.org:21000] > SELECT e.name, e.department, e.salary
> FROM employees e
> JOIN (
>   SELECT department, AVG(salary) AS avg_salary
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> ON e.department = dept_avg.department
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FROM employees e
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  SELECT department, AVG(salary) AS avg_salary
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Query submitted at: 2025-04-15 14:52:30 (Coordinator: http://Ubuntu:25000)
Query progress can be monitored at: http://Ubuntu:25000/query_plan?query_id=5f4b3e4a562650f9:8e1776bb00000000
+---------+-------------+--------+
| name | department | salary |
+---------+-------------+--------+
| Priya | Marketing | 72000 |
| Karthik | Engineering | 87000 |
+---------+-------------+--------+
Fetched 2 row(s) in 0.47s
[Ubuntu.myguest.virtualbox.org:21000] >