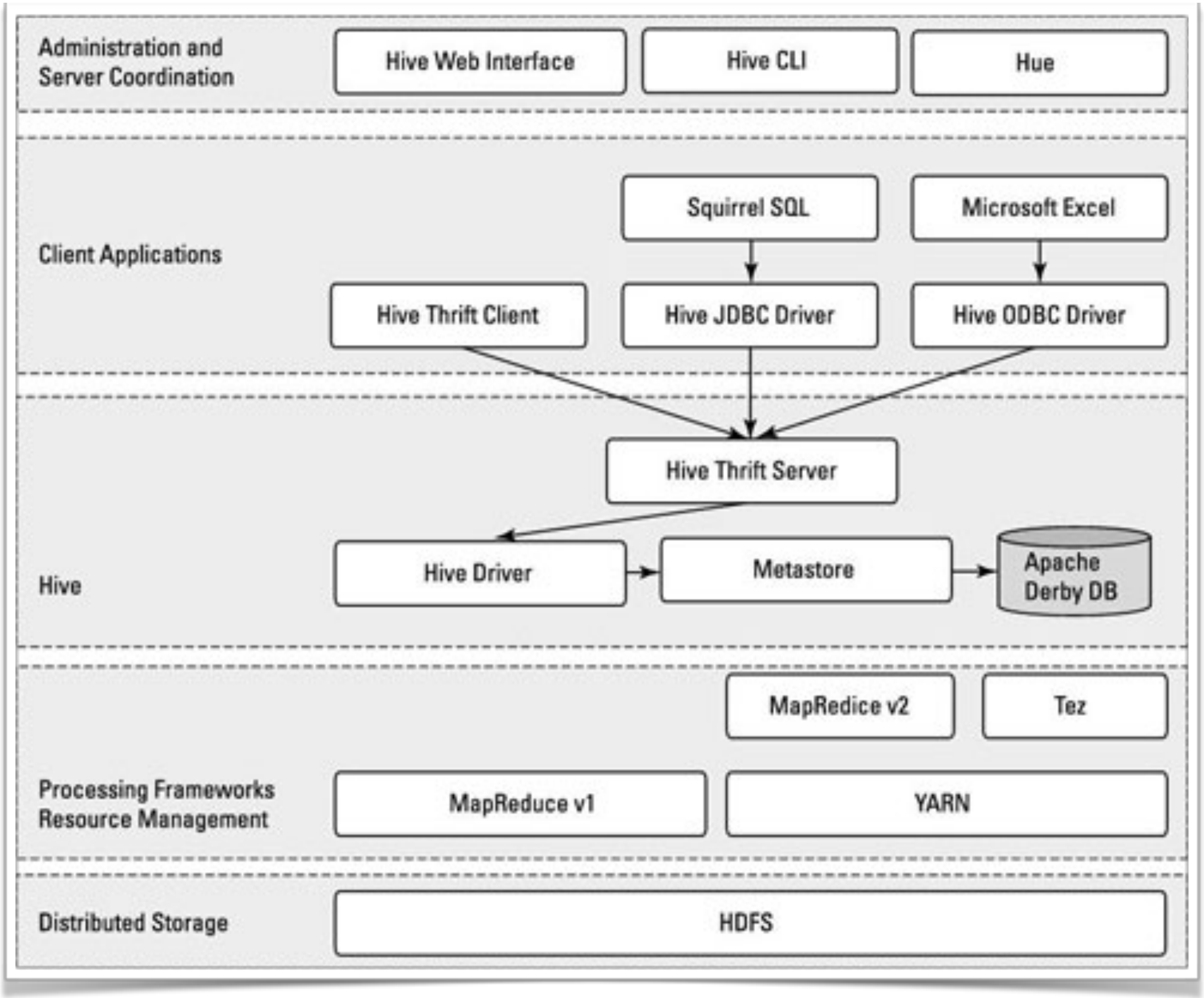
HIVE

Практика

NEWPROLAB.COM

Hive архитектура



Списки объектов

- show databases;
- show tables [in ‘db_name’]
- show partitions <tbl_name>
- show create table <tbl_name>

Таблицы

- Regular

```
CREATE  TABLE users
(
 user_id int,
 age int,
 gender string,
 occupation string,
 zip string
)
ROW FORMAT DELIMITED
FIELDS TERMINATED BY '|';
```

Таблицы

- External

```
create external table genre
(
  name string,
  id int
  )
ROW FORMAT DELIMITED
FIELDS TERMINATED BY '|'
location '/user/anton.pilipenko/npl/';
```

Скрипты

```
CREATE  TABLE users
(
 user_id int,
 age int,
 gender string,
 occupation string,
 zip string
)
ROW FORMAT DELIMITED
FIELDS TERMINATED BY ‘|'
STORED AS TEXTFILE;
```

Скрипты

```
create table movies
(
 movie_id int,  movie_title string,  release_date string,
video_release_date string,  IMDbURL string,  unknown int,
Action int,  Adventure int,  Animation int,  Childrens int,
Comedy int,  Crime int,  Documentary int, Drama int,
Fantasy int,  FilmNoir int,
 Horror int,  Musical int,  Mystery int,  Romance int,  SciFi
int,  Thriller int,  War int,  Western int
)
row format delimited
fields terminated by ‘\|'
STORED AS TEXTFILE;;
```

Скрипты

```
CREATE  TABLE rating
(
user_id int,
item_id int,
rating int
)
ROW FORMAT DELIMITED
FIELDS TERMINATED BY ‘\t’
STORED AS TEXTFILE;
```

Скрипты

```
create external table genre
(
  name string,
  id int
  )
ROW FORMAT DELIMITED
FIELDS TERMINATED BY '|'
location '/user/anton.pilipenko/npl/';
```

Загрузка данных

```
load data <local> inpath
'/user/anton.pilipenko/npl/rating.data'
into table rating;
```

Задания

получить средний возраст пользователей

Задания

получить средний возраст пользователей

```
select avg(age)
from users;
```

Задания

для пользователей старше 21 года получить статистику количества пользователей в разрезе возраста только для тех групп в которых более 10 человек

Задания

```
select count(*) cnt, age from users
where age > 21
group by age
having count(*) > 10
order by age;
```

Задания

получить название, минимальную, максимальную и среднюю оценки комедий, отсортированны по убыванию среднего рейтинга

Задания

```
Select      min(rating) min_rating,
            max(rating) max_rating,
            avg(rating) avg_rating,
            m.movie_title
from rating r
join movies m on (r.item_id = m.movie_id)
where m.comedy = 1
group by m.movie_title
order by avg_rating desc
```

Виртуальные поля

```
select INPUT__FILE__NAME,
BLOCK__OFFSET__INSIDE__FILE,
m.*
from  movies m;
```

Партиционирование

```
CREATE  TABLE rating_parted(
user_id int,
item_id int)
partitioned by (rating int)
ROW FORMAT DELIMITED
FIELDS TERMINATED BY '\t';
```

Партиционирование

```
insert into table rating_parted partition
(rating=1)
select t.user_id, t.item_id from rating t
where t.rating=1;
```

Выгрузки данных

```
insert overwrite local directory '/home/apilipenko/result.csv'
ROW FORMAT DELIMITED FIELDS TERMINATED BY '\;'
select /*+ MAPJOIN(dbl) */ t.ban,
t.subscriber_no,
t.imsi,
lag(t.imsi) over (partition by t.ban, t.subscriber_no order by
eff_date_time) old_imsi,
t.eff_date_time,
t.exp_date_time
from subscriber_sim t
join (select ban, subscriber_no from subscriber_sim where
eff_date_time >= '2015-07-27' and eff_date_time < '2015-08-03'
group by ban, subscriber_no ) dbl on (dbl.ban = t.ban and
dbl.subscriber_no = t.subscriber_no);
```