***1. Explain Hive Architecture in Brief.***

8

EXECUTION

ENGINE

METASTORE

COMPILER

DRIVER

UI

6

1

7

6.1

5

4

3

2

***Step1 :***

* The work of UI is to the execution part of the driver part.

***Step2:***

* Session handle will be created by the driver for the purpose of query in order to compile and to execute the plan.

***Step3&4:***

* Metadata will be sent as a request to the compiler when needed and the metadata will bee received at the metatsore.

***Step5:***

* From the query in order to check the expressions from query tree meta data will be used.
* Also used for partitions of query predicates.
* DAG stages is the plan generated by DAG stages will be used for map/reducer job.
* Can also be for metadata or for HDFS operation.

***Step6:***

* All the stages of execution engine will be submitted with its components.
* Deserializer will be there for all the tasks which will be associated with any table or with the intermediate output which helps to read HDFS rows.
* And al the data will be at last made to pass through the operator tree.

***Step7&8:***

* Execution engine will directly read the temporary files and its contents for queries which will call from the driver through HDFS.

***2. Explain Hive Components in Brief.***

***UI :***

* UI- User Interface.
* UI will help to submit the queries as well other operations.

***Driver :***

* **All the equerries from UI will be received by driver.**
* The components of driver will be used to implement the notation of the session which is handled.
* It is used for providing executing and fetching the API model of JDBC/ODBC interfaces.

***Compiler :***

* **Semantic analysis is done by the components of the compiler.**
* **And the analysis is done for different blocks of query.**
* **Execution plan is generated for the query expressions with the help of table.**
* **Metadata which is partitioned will be looked after by metastore.**

***MetaStore :***

* **The structure information regarding all the tables as well the partitions will be stored in the warehouse.**
* This will include column type information also.
* It needs serializers and deserializers in order to read and write the HDFS file where the data will be stored.

***Execution Engine :***

* The compiler will create the component where all the execution plan will be created.
* DAG stages will be the plan.
* Dependency of all the different plan stages will be managed by execution engine.
* Which will execute the stages on the appropriate system components.