

Query processing and visualisation using hive

By

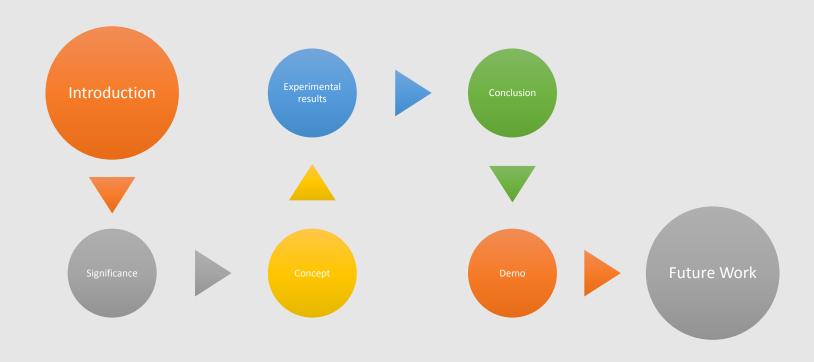
Sukumar Mangapuram Venkata Murali

Shaista Gulnaar

Hemanth Kumar Paluru

Shravan Kumar Radha

Outline



Introduction

- Dream of a student/professional
- several jobs posted through various websites
- Naukri is a platform that brings the recruiters or the employers and the job Seekers together
- data set from www.kaggle.com



Significance



- Not restricted to only naukri
- Third party
- regions with less jobs posted.
- increse their profit by providing some discounts do their clients and ask for reference in the areas where less number of jobs are posted
- High paid jobs
- Regions for which job frequency is high

Concepts

Hadoop, HDFS

Hive, HQL

Zeppelin, Visualisation on HQL Hadoop - Hadoop Distributed File
System and MapReduce
processing. It stores intermediary
data on Hadoop Distributed File
System, which is a disk-based
distributed file system

HDFS Hadoop technologies are disk-based, thus having physical limitations in processing speeds

Parallel processing(Map reduce)

Hadoop

Hadoop

main technologies of Hadoop are HDFS and MapReduce processing

Hadoop - Hadoop Distributed File System and MapReduce processing. It stores intermediary data on Hadoop Distributed File System, which is a disk-based distributed file system

HDFS Hadoop technologies are disk-based, thus having physical limitations in processing speeds

Parallel processing(Map reduce)

Hadoop is suitable for batch processing of bigdata

Initially developed by Facebook,

data warehouse on Apache Hadoop

Using hive is that data to be analyzed is stored in HDFS which provides all features like scalability, redundancy etc..,

HQL like SQL, automatically translates SQL-like queries into MapReduce jobs

Hive v0.7.0 added integration with Hadoop security

Hive abstracts the complexity of Hadoop

Hive

Apache Zeppelin

Open source Visualization tool provided by apache organization

Web front end

At the backend it connects to SQL system(eg.hive)

Hive integrated with zeppelin

```
Unrecognized option: --version
Error: Could not create the Java Virtual Machine.
Error: A fatal exception has occurred. Program will exit.
orienit@hadoop:~$ clear
orienit@hadoop:~$ java -version
java version "1.7.0_95"
OpenJDK Runtime Environment (IcedTea 2.6.4) (7u95-2.6.4-0ubuntu0.14.04.2)
OpenJDK 64-Bit Server VM (build 24.95-b01, mixed mode)
orienit@hadoop:~$ start-all.sh
This script is Deprecated. Instead use start-dfs.sh and start-yarn.sh
Starting namenodes on [localhost]
localhost: namenode running as process 18378. Stop it first.
localhost: datanode running as process 18529. Stop it first.
Starting secondary namenodes [0.0.0.0]
0.0.0.0: secondarynamenode running as process 18717. Stop it first.
starting yarn daemons
resourcemanager running as process 18866. Stop it first.
localhost: nodemanager running as process 18993. Stop it first.
orienit@hadoop:~$ jps
18993 NodeManager
18529 DataNode
18717 SecondaryNameNode
18378 NameNode
18866 ResourceManager
24101 Jps
orienit@hadoop:~$
```

orienit@hadoop:~\$ java --version

Experimental Results

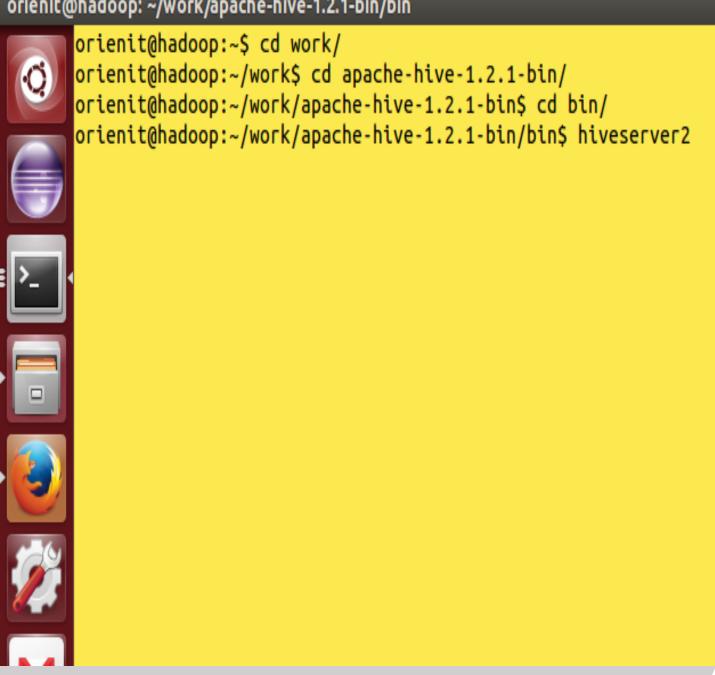


orienit@hadoop:~\$ hive Q Logging initialized using configuration in jar:file:/home/orienit/work/apache-hive-1.2.1-bin/lib/hive-common-1.2.1.jar!/hive-log4j.properties hive> show databases > ; default Time taken: 1.257 seconds, Fetched: 2 row(s) hive> use team5; Time taken: 0.14 seconds hive> show tables; naukri Time taken: 0.049 seconds, Fetched: 1 row(s) hive>

Hadoop	NameNode localhost:	8020 - Mozilla Firefox						\Diamond \blacktriangleleft	b)) 2:0	07 AM 🔾		
0	Hadoop NameNode	eloc ×										
(3)	♦ localhost:5007	'0/dfshealth.jsp			▼ C Q Search	†	igstar	1		9 ≡		
	Most Visited ▼ ②	Most Visited Getting Started Namenode information Hadoop NameNode I All Applications										
>_	NameNode 'localhost:8020' (active)											
	Started:	Thu Apr 12 00:35:4	2 IS1	2018								
	Version:	2.6.0, e3496499ect	58d2	20fba99dc5ed4c99c8f9e33	Bbb1							
	Compiled:	2014-11-13T21:102	Z by	jenkins from (detached fror	m e349649)							
	Cluster ID:			51-b2b9-da0f921fbaf8								
A-164	Block Pool ID:	Block Pool ID: BP-1146332765-127.0.0.1-1506304561964										
	Browse the filesystem											
M	NameNode Logs	NameNode Logs										
M	Cluster Summ	Cluster Summary										
	Security is OFF											
	183 files and dir	L83 files and directories, 109 blocks = 292 total.										
	Heap Memory used 31.64 MB is 18% of Commited Heap Memory 168 MB. Max Heap Memory is 889 MB. Non Heap Memory used 34.97 MB is 97% of Commited Non Heap Memory 35.94 MB. Max Non Heap Memory is 214 MB.											
	Configured Capa		:	76.65 GB	up Memory 33.34 MB. Max Non Neap Memory is 214 MB.							
	DFS Used		-	182.50 MB								
	Non DFS Used		:	23.62 GB								
	DFS Remaining		:	52.85 GB								
	DFS Used%		:	0.23%								
	DFS Remaining%	6	:	68.95%								
	Block Pool Used		:	182.50 MB								
	Block Pool Used	%	:	0.23%								
	DataNodes usag	es	:	Min %	Median % Max % stdev %							
				0.23%	0.23% 0.23% 0.00%							
	<u>Live Nodes</u>		:	1 (Decommissioned: 0)								
	<u>Dead Nodes</u>		:	0 (Decommissioned: 0)								
	Decommissionin		:	0								
	Number of Unde	er-Replicated Blocks	:	2								
	NameNode Jo	urnal Status:										
	Current transaction ID: 5873											
	Journal Manager				State							
**	FileJournalManag	er(root=/home/orien	it/wo	ork/hadoop2data/dfs/name)	EditLogFileOutputStream(/home/orienit/work/hadoop2data/dfs/name/current/edits_inprogress_00000000000005873)							

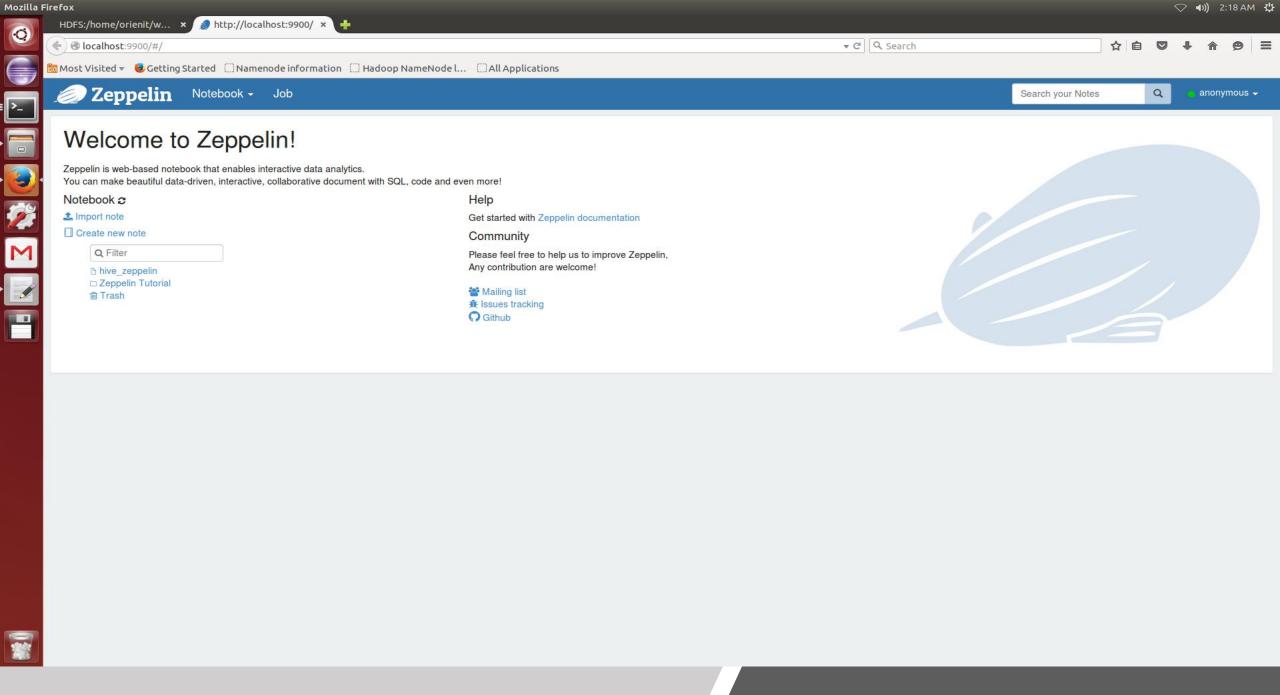
F5:/F	ome/orienit/work/warenouse/naukri1/naukri.txt - Mozilla Firerox
3	HDFS:/home/orienit/w × +
-	🛊 📵 localhost:50075/browseBlock.jsp?blockId=1073741889&blockSize=20971520&genstamp=1065&filename=%2Fhome%2Forienit%2Fwork%2Fwarehouse%2Fnaukri1%2Fna 🔻 🖰 🔍 Search
	Most Visited ▼
	File: /home/orienit/work/warehouse/naukri1/naukri.txt
	Goto : [/home/orienit/work/warehouse/n] go
	Go back to dir listing Advanced view/download options
<u></u>	View Next chunk
1	company education experience industry jobdescription jobid joblocation_address jobtitle numberofpositions payrate postdate site_name skills uniq_id MM Media Pvt Ltd "UG: B.Tech/B.E Any Specialization PG:Any Postgraduate - Any Specialization, Post Graduation Not Required" 0 - 1 yrs Media / Entertainment / Internet "Job Description Send me Jobs like this Qualifications: - == > 10th To Graduation & Any Skill: - == > Basic Computer Knowledge Job Requirement : - == > System or Laptop Type of job: - == > Full Time or Part time Languages: - == > Tamil & English. Experience : - => Fass Selection Process: - == > Easy Selection Process: - == > Fass Selection Process: - => Fass Selection Process Selection Pr
	Deepika Team Leader 9087728815 / 9087726713 Salary:INR 1,50,000 - 2,50,000 P.A. 20000 Industry: Advertising / PR / MR / Event Management Functional Area: Marketing / Advertising , MR , PR , Media Planning Role Category:Online/Digital Marketing Role:Search Engine Marketing/SEM Specialist Keyskills Data Entry data processing Desired Candidate Profile Education - UG: B.Tech/B.E Any Specialization PG:MBA/PGDM - Any Specialization Description above Company Profile: find live infotech Find Live Infotech is no en of our main projects, it is a developing search to the Job description above Company Profile: find live infotech Find Live In
	Download this file Tail this file Chunk size to view (in bytes, up to file's DFS block size): 32768 Refresh
	Total number of blocks: 3 1073741889: 127.0.0.1:50010 View Block Info 1073741890: 127.0.0.1:50010 View Block Info 1073741891: 127.0.0.1:50010 View Block Info
	Go back to DFS home
	Local logs
	<u>Log</u> directory

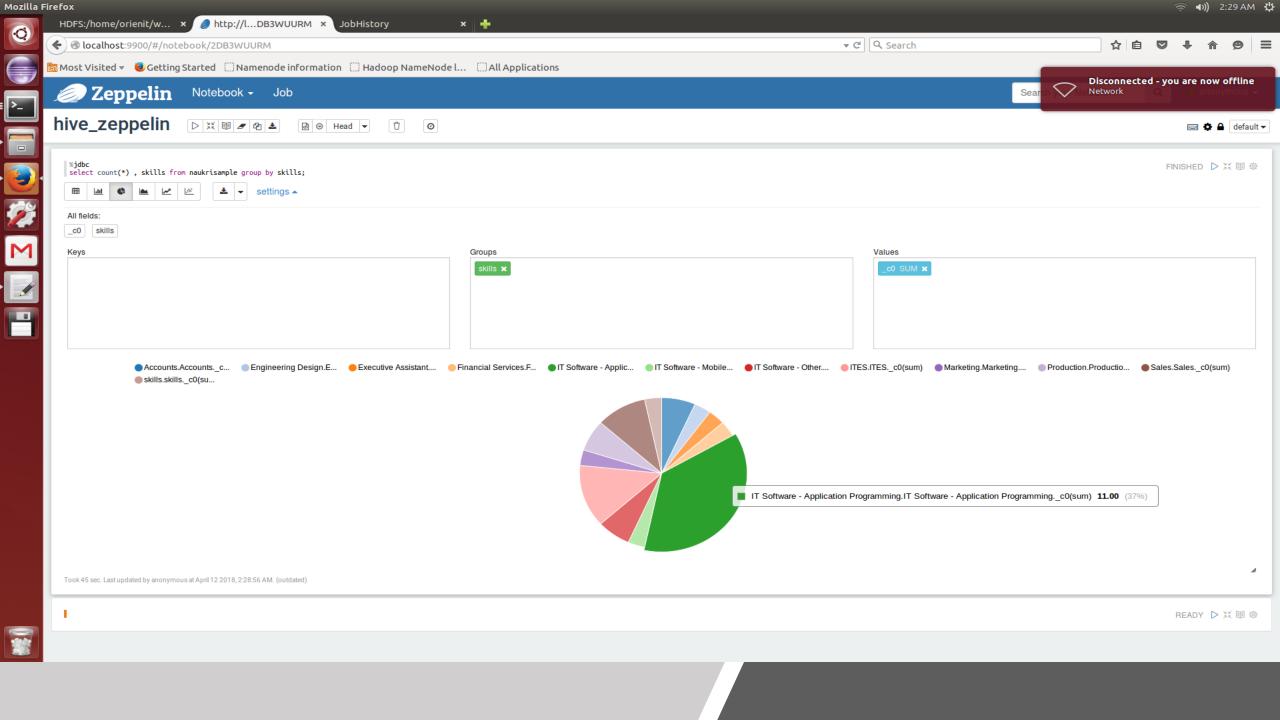
orienit@hadoop: ~/work/apache-hive-1.2.1-bin/bin

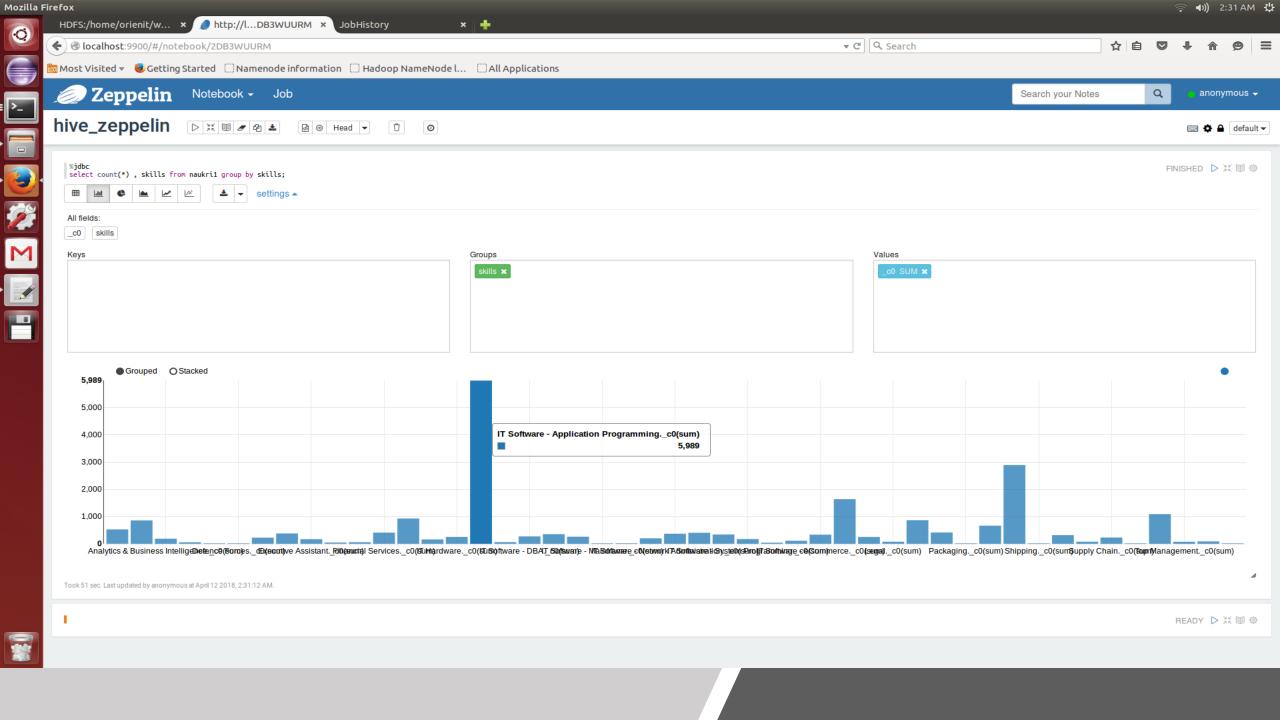


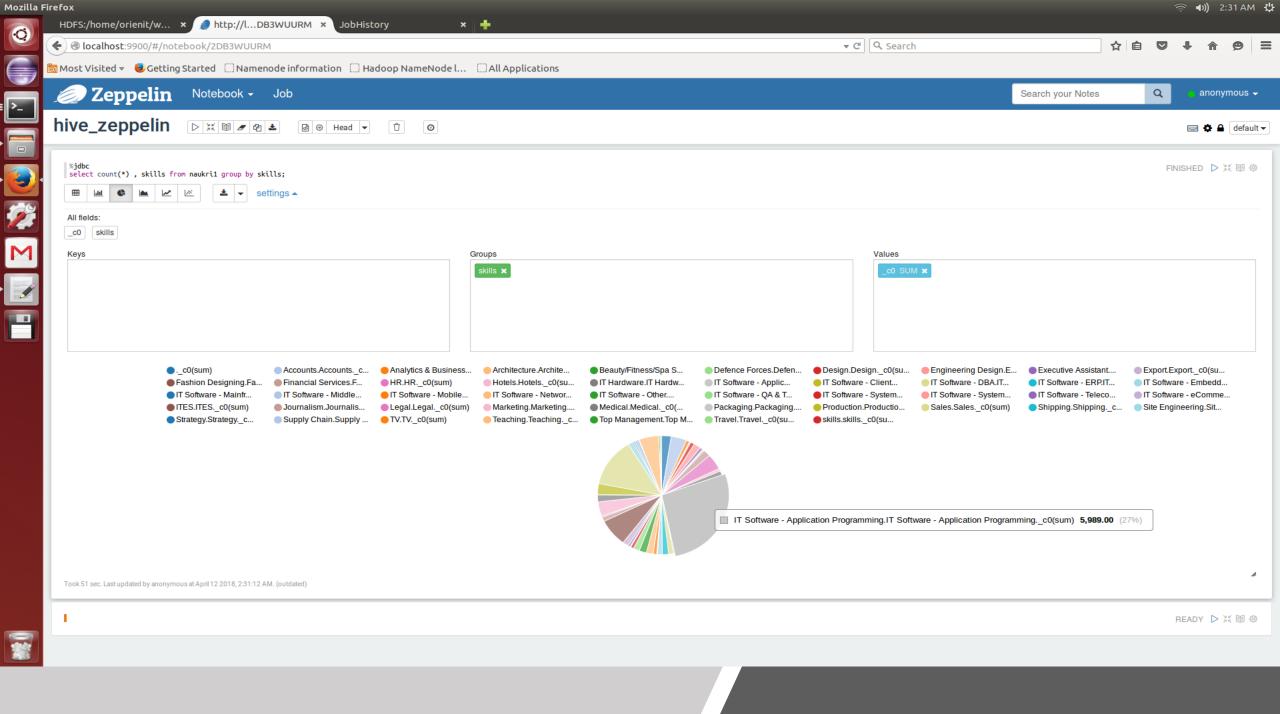


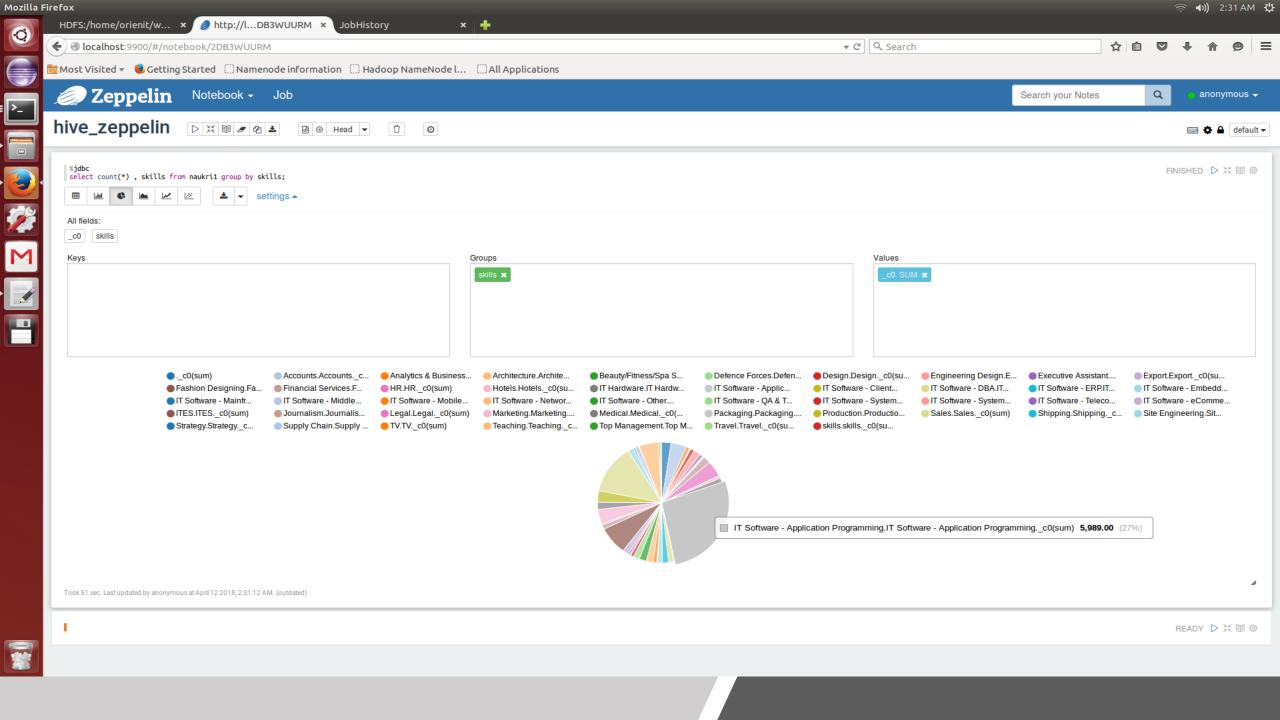


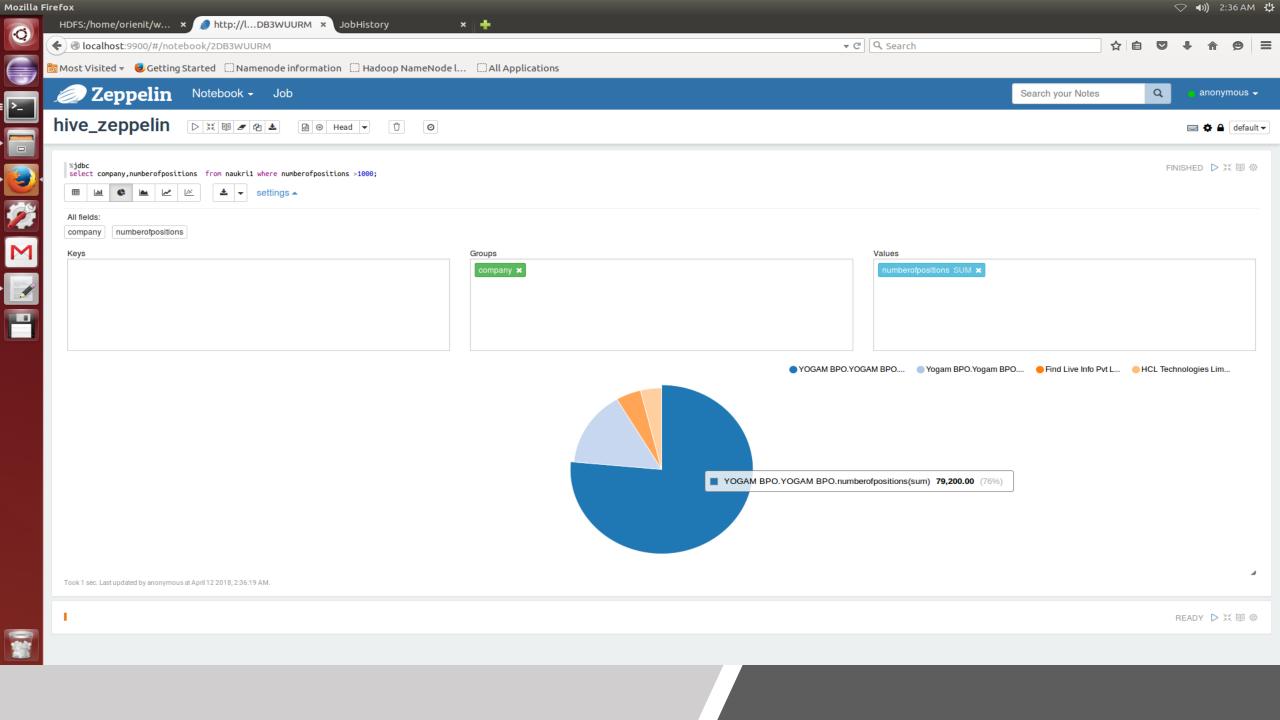


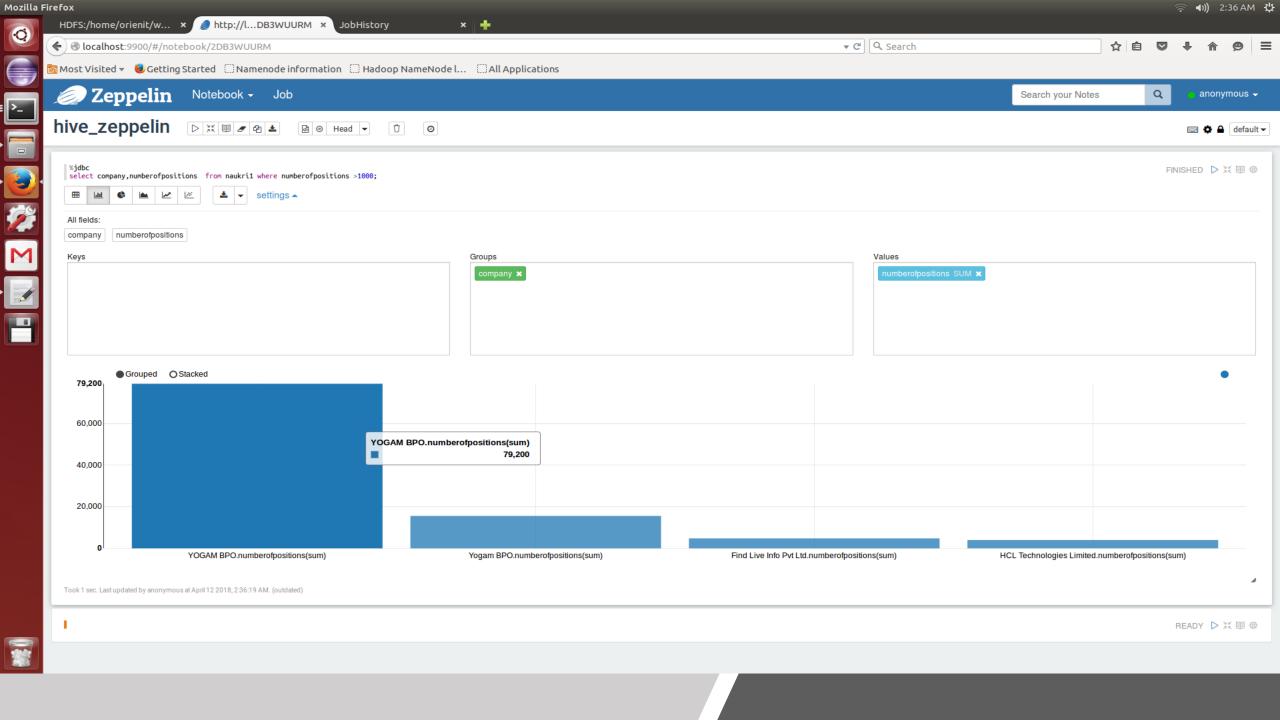


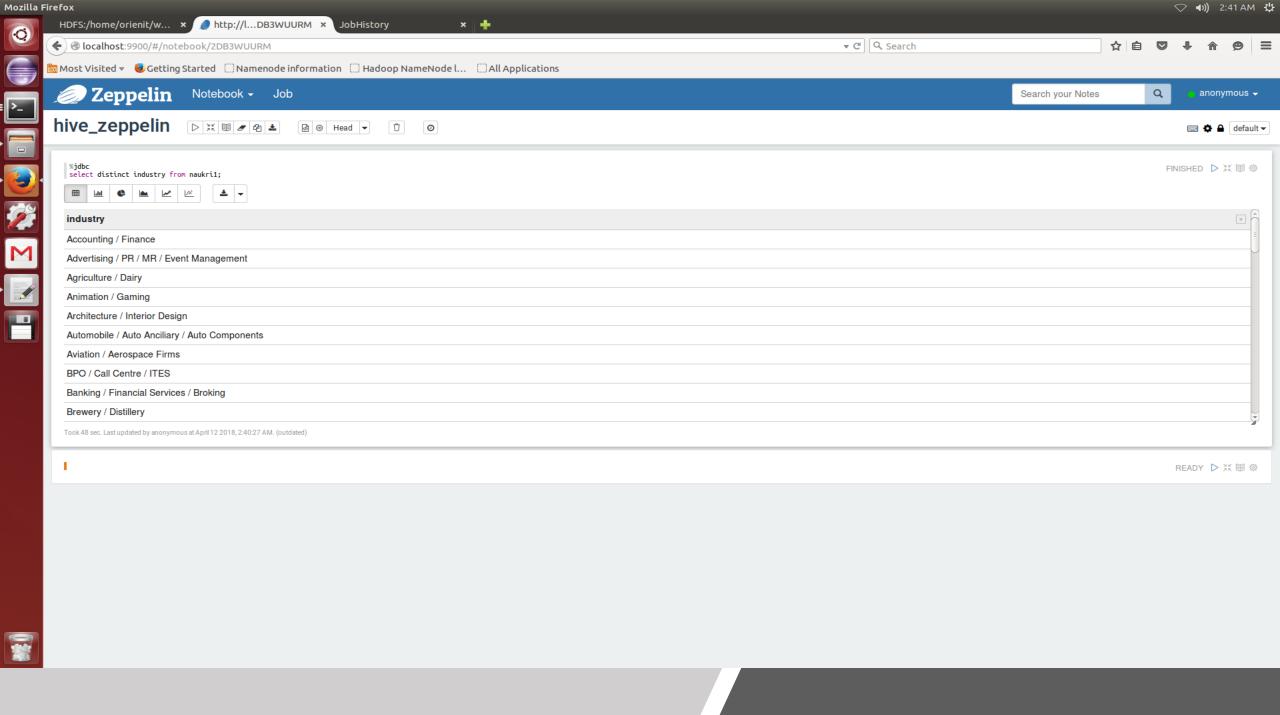


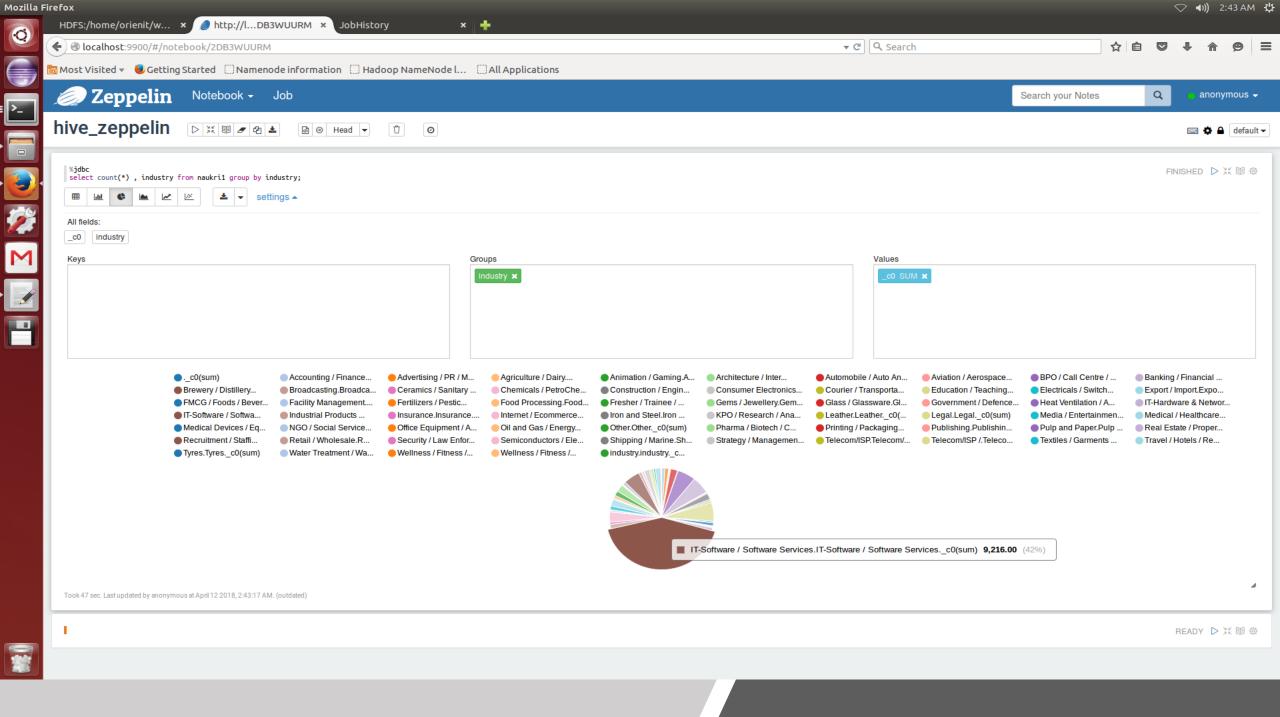


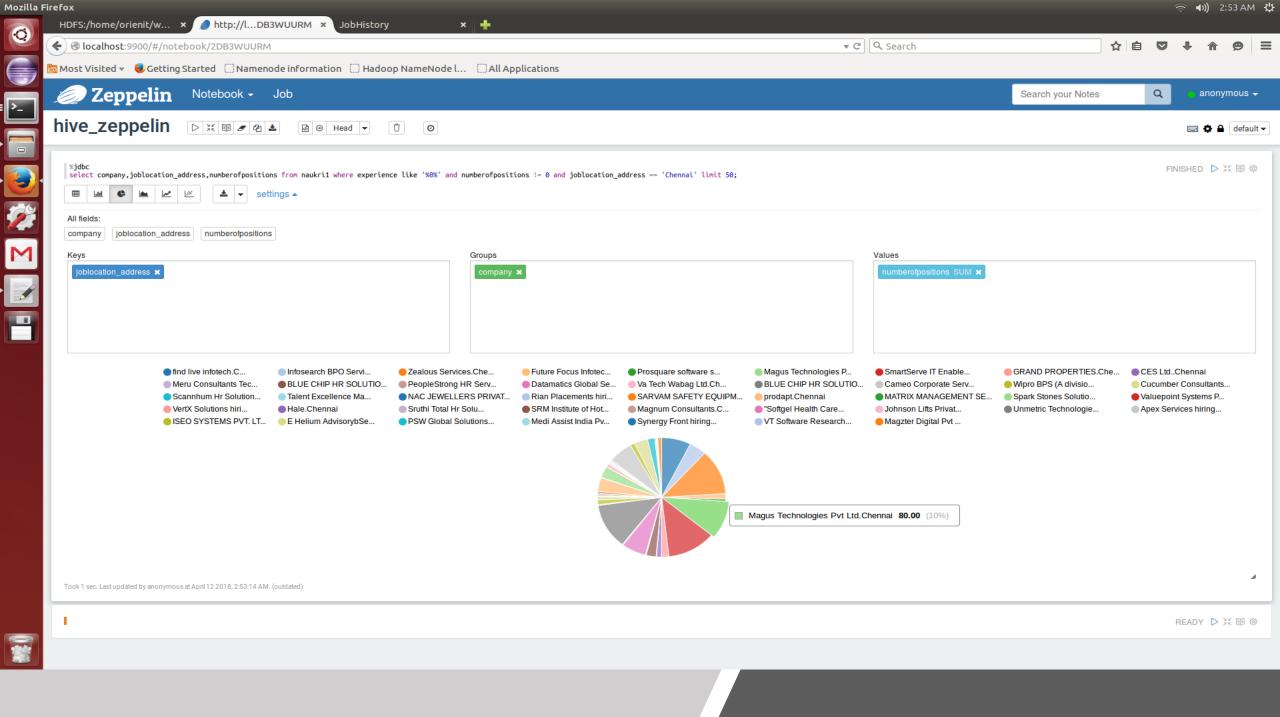


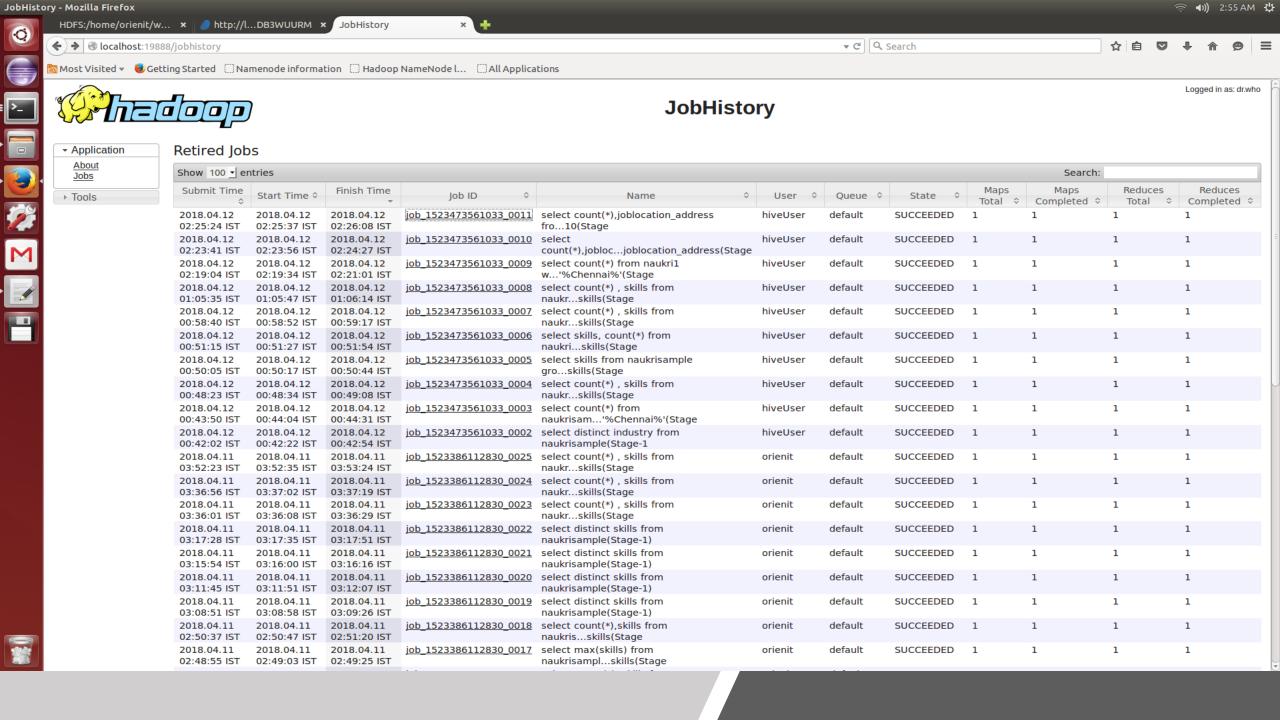












Conclusion

- Visualisation
- Most efficient
- Fast results, Hive is faster than hadoop



Demo time

