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An Information Technology on Big Data Analytics

Dhananjaya Kumar K
Assistant Professor of Computer Science
Yuvaraja's College, University of Mysore,
Karnataka, India.

Abstract:- The data is Every where and each collection of related data called as an information some how coming to the data presently processing parallel and distributed manner, each distributed data should access, maintain, storage in database system. The technology comes under how they works in big data and it's challenges, applications, and how big data can improve their analytics of information technology and how technology involved in information science technology, medical science technology, education technology, transportation technology, data science technology, corporate technology, government sectors, telecommunication technology and many other resources technologies. Mainly the problem is storage and manipulating information so avoid the problem of the storage, we use a big data and big data analytics. This paper provides understandings on data, information technology, big data analytics are, how its work and how big data analytics improve distributed storage, discussion and conclusion included.

Keywords:- *Information Technology, Big Data, Big Data Analytics, Tools.*

I. INTRODUCTION

In information world, the information driven by each and every person, information are generated from various technologies and the fast transaction from digital world has led to growth of big data. Now a days the information has been wast because all the fields we are generating a lot of information but the problem is storing that much of information to disk, cloud or any other devices. So In 2010 the term 'Big Data' was virtually unknown, but by mid-2011 it was being widely touted as the latest trend and technology, with all the usual hype. Like 'cloud computing' before it, the term has today been adopted by everyone, from product vendors to large-scale outsourcing and cloud service providers keen to promote their offerings. But what really is Big Data and Information technology? Is big data is a technique which is massively large data which is information and technology is provide the data.

II. WHAT IS INFORMATION TECHNOLOGY?

Let's discussing about the information technology, the technologies are used to development, maintenance, and evaluation of a computer systems, system software and communication for the processing and distributing the information. The meaning of the information technology is wide, it all the form of technology involves any form of data like hardware or software or electronic data. It refers to any kind of related data to computer technology, such as network, software, hardware, finally the Internet or the people will communicate these technologies.

III. IMPORTANCE AND THE ROLE OF INFORMATION TECHNOLOGY

The consider information technology is expand more importance now a days because everywhere we have globally an information, First a) Education: In education system we have lot of information discuss with the student, learning the subject, technologies and practicals, experiment and discuss more technologies now days. In education department each and every people who are working in the universities, colleges, departments gather the information[1]. b) Organization: in organization looking for the lot of information regarding projects, survey the technologies, implement the projects by using information example Infosys, NASA, hp and many more software companies[1][2]. c) News Paper and News Channels: Now days media was developed, any source of news paper or media having information telecasting, In 2018 we are looking the political system broadly canvasing either win or loss. But the system can involving only the information will telecasting by using television or Internet and many more social medias like, Facebook, Twitter, instagram and many more application[2][3]. d) Medical field: now a days in India we have lot of hospitals, Medical stores which sell or buy the drugs and chemical avoid the problems. The information technology to concern the doctor to take the treatment and medicine going to cure in normal stage in biomedical information center[9]. e) Government: In government sector we have lot of information to develop cities, villages and communication between people and employees[1][10].

IV. WHAT IS BIG DATA?

Big data is the term 'a data' which can be large data sets, which can be analyzed computation to relevant pattern, association, trends, relating human characters, behavior and interactions. now this world much company collect the information and investigate is process towards managing, distributing and maintaining our big data. The big data is a set of voluminous and traditional data set which is data processing technique called application software are deal with them. The big data are challenging capturing the information or data, storing, analyzing, searching, transferring, sharing, querying, visualizing, updating, information privacy and source. The

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main characteristics or functionality of big data is 5V's[6][8], 1) Volume: the volume of big data is more which can be collect terabyte of data 2) Variety: the variety of data is big data which is structured and unstructured data means any data like audio, video, text, pdf data, multimedia data, traditional data, geographical data and many more. 3)Velocity: the speed of processing of data going to be stored or analyzed in real time. 4) Variability: the inconsistency of data set can be processing, handling and managing it. 5) Veracity: the quality of data which is captured data and affecting accurate analysis.

V. APPLICATIONS OF BIG DATA

The digital world has increased the amount of information and management specialist has much more so that all the software companies work with big data and developed economy has increasingly their use data technologies. Now a days in worldwide more than billion people use the Internet. Between 2015 and 2020 more than trillion people access the Internet that becomes led the information growth. So that I) Government: In government sector use and adopting the big data which is processes efficiently which is cost, productivity, innovations. The data analysis often requires central and local work in collaboration and new innovation process to desired output. II) Information and Communication Technologies: researcher are effective use of ICT for developing big data technologies to present international development. Advantages of big data is offer improve cost effective, decision making, economy productivity, natural disasters, resource management and security. III) Health Care: the big data as lot of helped health cares to improve provide the medicine, prescriptive, intervention of clinical risk, and predictive analysis, automated internal and external patient data. The big data is added adopting mHealth, ehealth , wearable technologies volume of data will increase the data. IV) Education: we are discussed in importance of role the general institutions study 200 millions student trained professional data including universities, Indian science institutions and many more. V) Media: talk about media now a days gather the information and understand how media use big data, the ultimate goal is to convey the message to people. Various activities, advertising, data capture, data journalism and consumer target. VI) IOT(Internet of Things): now a days big data and IOT are work together. The data will be extracted from the devices provide interconnection mapping devices. IOT gather sensor data[7]. VII) Information Technology: the big data come to business operation tool work which is collection of distributed information technology.

VI. BIG DATA TOOLS

A. Apache Hadoop

The Hadoop is a apache server and it is a software framework which is process and maintain big data, hadoop framework if purely Java based free software that can effectively process and store large data in a distributed and parallel cluster. The hadoop framework execute and runs in parallel cluster and process data in all nodes. The HDFS (Hadoop Distributed File System) is the storage system of hadoop which is break or splits big data and distributed across other nodes and this cluster is high availability.

B. Apache Map Reduce

The Map Reduce is a Programming language which is Map the data and Reduce the Data, Map Reduce is a Tool which is execute big data, a programming language which is based on Java that allows for massive data, unstructured data, data across thousands of commodity clusters server in Apache hadoop. The Map Reduce refers key and value pairs, map contains takes the input and convert into anther set of data which is individual elements, The reduce takes the map data and produces as on output.

C. Apache Hive

The Apache Hive is a distributed management data for Hadoop. Its support SQL query HSQl(HiveSQL) to access big data. Hive can be primary use for data mining and its run on Hadoop.

D. Microsoft HDInsight

The big data solution one of the main goal from Microsoft powered Apache Hadoop can be available as a service in the cloud. The Hadoop Distributed Insight uses windows Azure blob storage as the file system. This is also maintain information technology provide high availability and with low cost.

E. MangoDB

The MangoDB is a tool which is store and analyze big data, the mangoDB to support Humongous database and it is noSQL Database MangoDB support high level availability and low cost.

F. R Analytics

The R is a Analytics Software and also a programming language. The software Project R has been designed Data Mining tool. The R language is one of the high level analytics and open source language tool it provide graphical and statistical techniques, linear and non-linear technique, clustering time series analysis, classification and many more analysis can be done in R language.

VII. CONCLUSION

In today's world only the information, so, the information need modern, moderate and very simple technologies. The information technology in order to meet it's needs and correct arrival use. The most important are. 1) Education, Expanding human sources of Information Technology through educational programs and promoting skills for increasing work force efficiency in education. 2) Using Information Technology for increasing projects in a company or organization to develop well creativity projects. 3)Supporting Information Technology, for example supporting costs related to research and expansion in Government

Projects. 4) Developing proper atmosphere and participation morale in Medical science by the use of Information Technology.5) Developing proper skill sets of media and news channels improve their use of information technology. In evaluating the kind of information technologies In education, Medical Science, Government Sector, Transportation and many more consider their needs, properties, and importance of existing cases.

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