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Growth Level of Big Data

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Abstract: ***Big-data' is similar to 'Small-data', but big data analysis. Big data is, without doubt, hot topic nowadays, moreover because the development of new technology makes it possible to analyze all available ever-growing data which easily amasses terabytes of Information. The big data used in 5 billion mobile phones on 2010. There are 30 billion pieces of content shared on Facebook each month is a 40% projected growth in global data generated per year vs. 5% growth in global IT spending. There are 235 terabytes of data collected by the US Library of Congress in April 2011.It is 15 out of 17 major business sectors in the United States have more data stored per company that the US Library of Congress. Than 50 billion devices will be connected by 2020.Every day it seems that a new technique or application is introduced that pushes the edges of the speed-size envelope even further. It boasts scan speeds of 33 million rows/second/core and ingest speeds of 10 thousand records/second/node. The events leading to the discovery and resolution of the scandal point to the promises and challenges of data management for multiparty, multidimensional, international systems. Billions of individual pieces of data are amassed each day, from sources including supplier data, delivery slips, restaurant locations, employment records, DNA 22records, data from Interpol's database of international criminals, and also customer complaints and user-generated content such as location check-ins, messages, photos and videos on social media sites. It have used for three different characterize (volume, variety, velocity). Most are keenly aware that Big Data is at the heart of nearly every digital transformation taking place today.***

Keywords: Data Storage, Data Management, Big Data Yield, Characterize (Volume, Variety, Velocity).

I. INTRODUCTION

Society is becoming increasingly more instrumented and as a result, organizations are producing and storing vast amounts of data. Bill Loconzolo, vice president of data engineering at Intuit, jumped into a data lake with both feet. Dean Abbott, chief data scientist at smarter Remarketer, made a beeline for the cloud. When discussing important matters, informed discussions can be had with data rather than conjecture. There will still be many who throw themselves at things with blind faith & gut instinct, but 2016 will see a growing segment of the population who can through data in a way that they never could before, both through increased access & understanding of it. According to win shuttle it took a little over 10 year for that statistic to come full circle, which meant that 99%of enterprise data had switched to digital storage. The heterogeneity, noise, and the massive size of structured big data calls for developing computationally efficient algorithms that may avoid big data pitfalls, such as spurious correlation. It have used for three different characterize (volume, variety, velocity)-are Increasingly placing pressure on organizations that need to manage this data as well as extract value from this data deluge for predictive analytics & decision-making. The following that the figure, as shown in here. Most are keenly aware that Big Data is at the heart of nearly every digital transformation taking place today. It boasts scan speeds of 33 million rows/second/core and ingest speeds of 10 thousand records/second/node. Than 50 billion devices will be connected by 2020.

II. BIG DATA GROWTH IN SMART CITIES

Big data will enable implementing a number of systems and features that will support the 'smart' aspects of these cities. Big data resources can be utilizing to analyze trend in consumption of power by public in entertainment such as TV and music systems. Big data can play a critical role for efficient management of resources such as electric power. The intriguing outcomes of technological development, especially IT, is the massive and ever growing bulk of information. Amount of digital data will grow from 3.2 zettabytes to 40 zettabytes within only six years (one zettabyte is roughly a billion terabytes).Then 28.1 billion more devices will be introduced. Lot of smart cities must be handled efficiently in order to offer an improved quality of life. Monitoring public services & amenities will be one of the crucial aspects of big data. As big data requires large storage and improved technology for efficient processing, bringing these massive data sets under the ambit of single authority could jeopardize the process. This would cause unexpected glitches in public service. Technologically, this is challenging, as big data analytics and applications are not developed enough for real-time processing of large data sets. The challenge is to utilize real-time data from such sources to address these issues quickly. This calls for a concrete infrastructure aided by big data technology, big data platforms can assist public security massively. Real-time processing of data from monitoring devices such as security cameras in public places, ATMs, etc., can be effectively used to resist crimes. Thus, leveraging and managing big data is crucial to transition of cities to smart cities.

III. DATA STORAGE

Several solutions were proposed to store and retrieve large amounts of data demanded by Big Data, some of which are currently used in Clouds. One key aspect in providing performance for Big Data analytics applications is the data locality. This is because the volume of data involved in the analytics makes it prohibitive to transfer the data to process it. This was the preferred option in typical high performance computing systems: in such systems, that typically concern performing CPU-intensive calculations over a moderate to medium volume of data, it is feasible to transfer data to the computing units, because the ratio of data transfer to processing time is small. Nevertheless, in the context of Big Data, this approach of moving data to computation nodes would generate large ratio of data transfer time to processing time. This fig1 is explain in data storage. The bottom of box explain in Data storage and top of the box explain in Distribute Files.

Fig1: Data Storage

Big Data analytics, Map Reduce presents an interesting model where data locality is explored to improve the performance of applications the drawbacks of Cloud storage techniques and Map Reduce implementations; there is the fact that they require the customer to learn a new set of APIs to build analytics solution for the cloud.

IV. DATA MANAGEMENT

One of the most time-consuming and labor-intensive tasks of analytics is preparation of data for analysis; a problem often exacerbated by Big Data as it stretches existing infrastructure to its limits. The $15 billion on software firms only specializing in data management and analytics. This industry on its own is worth more than $100 billion and growing at almost 10% a year which is roughly twice as fact as the software business as a whole. The private network, managed by the organization itself or by a third party. A private Cloud is suitable for businesses that require the highest level of control of security and data privacy. Deployed off-site over the Internet and available to the general public. Public Cloud offers high efficiency and shared resources with low cost. The analytics services and data management are handled by the provider and the quality of service (e.g. privacy, security, and availability) is specified in a contract. Customers can develop and deploy analytics applications using a private environment, thus reaping benefits from elasticity and higher degree of security than using only a public Cloud. Considering the Cloud

deployments, the following scenarios are generally envisioned regarding the availability of data and analytics models: (i) data and models are private; (ii) data is public, models are private; (iii) data and models are public; and (iv) data is private, models are public.

BIG DATA YIELD

S.NO	SOCIAL MEDIA AND OTHERS	RANGE OF GROWTH
1.	Twitter Followers	80.01+Billion
2.	Facebook Users	30+Billion
3.	YouTube Videos	10,000 Videos App
4.	New Website Created	571/minute
5.	E-Mails Sent	204 Million/minute
6.	Domains Registered	70/minute
7.	Tweets	278,000/minute

VOLUME

The amount of data. While volume indicates *more* data, it is the granular nature of the data that is unique. Big Data requires processing high volumes of low-density data, that is, data of unknown value, such as twitter data feeds, clicks on a web page, network traffic, sensor-enabled equipment capturing data at the speed of light, and many more. It is the task of Big Data to convert low-density data into high-density data, that is, data that has value.

Attributes

There are three type of Attributes used are

a. Exabyte
b. Zettabyte
c. Yottabyte, etc.

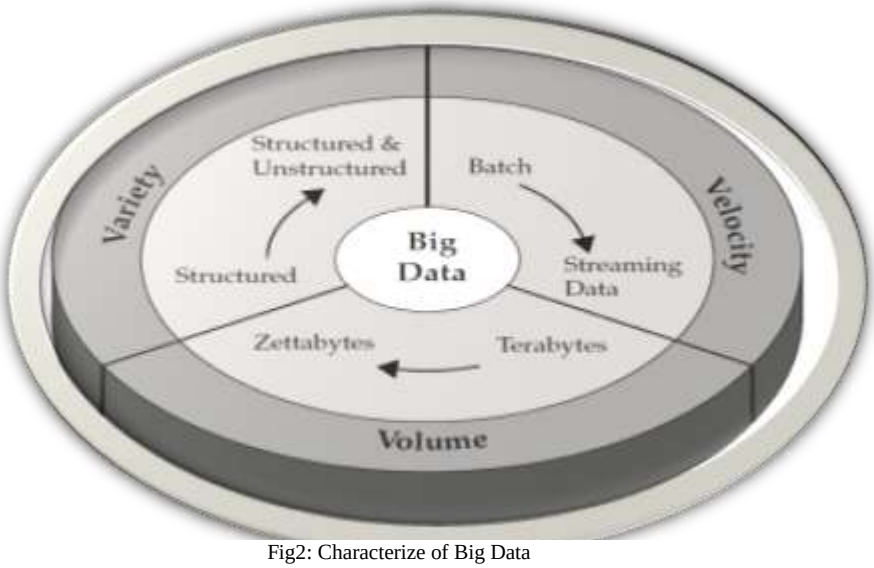

Fig2: Characterize of Big Data

VARIETY

The degree of diversity of data from sources both inside and outside an organization. New Unstructured data types. Unstructured and semi-structured data types, such as text, audio, and video require additional processing to both derive meaning and the supporting metadata. Once understood, unstructured data has many of the same requirements as structured data, such as summarization, lineage, auditability, and privacy.

Attributes

a. Degree of structure
b. Complexity

VELOCITY

How fast data is being produced and changed and the speed at which data is transformed into insight.

Attributes

a. Batch
b. Near real-time
c. Real-time
d. Streams
e. Rapid feedback loop

CONCLUSION

The objective of this paper is to explained growth level of big data. The Big Data development of new technology makes it possible to analyze all available ever-growing data which easily amasses terabytes of Information Big data will enable implementing a number of systems and features. Several solutions were proposed to store and retrieve large amounts of data demanded by Big Data. The analytics services and data management are handled by the provider and the quality of service is specified in a contract. The volume indicates *more* data. Then velocity and variety are equally important. The Big data is warming every day. The growth in the volume and variety of data is accelerating quickly. Big data is beginning to be an important part of the economy such as labor and capital.

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