JIT Acquisition in Unified Information Management and Separate Navigation in Intelligent Process Integration in Big Data and Analytics

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Abstract: *In Big Data and Analytics, Unified Information Management and Intelligent Process work together as powerful way of source in big data which easily available across several multiple sources to fulfill needs of information by only getting access. Unified Information Management included High Volume Data Acquisition, JIT Acquisition, Multi-Structure Data, Low Latency Data Processing and Analysis Consistency. The High Volume Data must gather all data from different channels but it cannot persist and maintain all data that have received. High Volume data Acquisition may ignore and discard data. The JIT Acquisition will persist and maintain ignored and discarded data. Intelligent Process included Embedded Analysis Applications, Rules Engine, User Navigation, Automated Navigation and Performance and Strategy Management. The Proposed User Navigation and Automated Navigation are two separate way to find analytic contents for business using embedded application. The suggested or found analytic contents or information by navigation to embedded application helps business for decision.*

Keywords: JIT, BD, OLAP, BDA, EBS.

1. INTRODUCTION

Among the many BD (Big Data) Challenges, It also found that, the BD is huge complex term and require rapid amount of data. Due to this challenge outdated applications and relational database management not up to the mark to avail facility in rapid way to user [1][3]. In big data arrangement, it includes data procurement, data pre-processing and data transmission. Data collection is nothing but a techniques which collect data from sources where raw data is originate further specific processed perform on it fulfill task. When the task of data collection complete, it will be transferred to storage media for processing and analysis. Because of the several different types of data sources, the collection of different type of data may be stored in form of redundancy, and consistency, etc., and that's why it's become meaningless data to store. Therefore, to make the valuable data integration, Data pre-process is a valuable term under lots of circumstances to collect the data from sources, which reduce storage and also store overall data without discarding [2]. Data integration is the foundation of Big Data and Analytics, which collect data from different sources without discarding and provides platform to available data view [3].

In high volume data acquisition of unified information management, the collection of raw data from multiple channels shall utilize an efficient transmission mechanism without ignoring and discarding, later it will sent to database of big data to serve different OLAP Tools and applications. In order to approach BDA (Big Data and analytics) holistically, it is important to consider what that means, we want to view data in terms of its requirement, qualities and improvement for business decisions [1]. This includes its degree of structure, volume, method of acquisition, historical significance, quality, value, and relationship to other forms of data. These data require as per need and its qualities will determine how it is managed, processed, used, integrated and later serve to needy.

Intelligent process is transforming data into information, information into knowledge, and knowledge which makes decision. It is possible because intelligent process interact with Embedded Analysis Applications, Rules Engine, User Navigation and Automated Navigation and Performance and Strategy Management. Intelligent process provides semantically meaningful ways, where data is used to learn and to obtain knowledge to make valuable decision for business. There are many types of analysis that can be consequence performed, by different types of users, system or analyst, using many different methods and tools, and through several varieties of channels. Some types of analysis require current information and others work mostly with historical information. The architecture design must be accept universally and more extensible to hold full range of analytics. Intelligence must be integrated with the applications that knowledge workers use to perform their jobs. Likewise, EBS (Embedded Business Application) must integrate with information and analysis components in a manner that produces consistent results.

Embedded analytics has capability that while data analysis occur user will get natural workflow, without the need to approach to another application. Embedded analytics tends narrowly deployed around specific processes. Embedding analytics into normal user decision-making ensures users are more likely to see and act upon analytic insights. The advantages of embedded analytic application are Cultivate Data-Driven Decision Making,

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Increase ROI on Data Transformation Investment, Increase Productivity, Enhance Competitiveness, Improve Customer Satisfaction, Increase Revenue etc.

2. UNIFIED INFORMATION MANAGEMENT AND INTELLIGENT PROCESS

The Unified Information Management enables to store integrated data from different sources and channels to leverage information and analysis. It includes High Volume Data Acquisition, JIT Acquisition, Multi-Structure Data, Low Latency Data Processing and Analysis Consistency. The Intelligent Process includes Proposed Embedded Analysis Applications, Rules Engine, User navigation, Automated Navigation and Performance and Strategy Management.
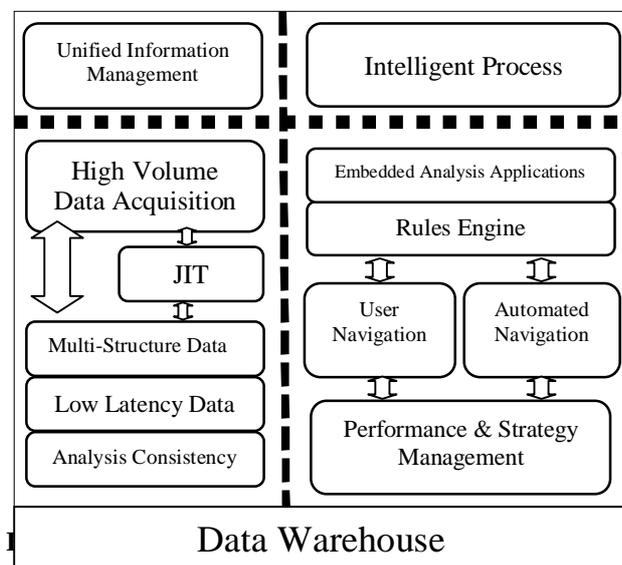

Figure 1 Intelligent Process and Unified Information Management

2.1 High Volume Data

High volume data played important role in data acquisition and due to this all related tools work properly to complete the task of analysis. There are so many data acquisition tools and protocols available. These tools and protocols are also open source solutions and stands for the process of data acquisition. All tools have been developed and currently working in production environments. The system must need to acquire all data whether that data belongs to high volumes or variety or velocity. It must persist and maintain all data received but it discarded or ignored data and while sum amount of data are save for some moment of time [4].

2.2 JIT-In-Time Acquisition

No matter how much volume, velocity, and variety of data is to be processed. High Volume Data procurement is not able to persist and maintain all data received. So it discarded or ignored data and while sum amount of data are save for some moment of time. As obvious this seems as

drawback. To overcome this drawback JIT Acquisition is introduced. The Architecture uses the JIT method to streamline the delivery process of data. The Benefits of Just-in-Time Acquisition is a stratagem that acquires data from high volume data acquisition, which may be ignored or discarded from it while sum amount of data are save for some moment of time. Just-in-Time Acquisition is a methodology aimed primarily at reducing time within data acquisition of system as well as response time of end user. Just-in-time data delivery is focused on efficiency, while lean High Volume Data acquisition is centered on using efficiency to add value for the end user. The JIT Acquisition process adds value by increasing efficiency.

2.3 Multi-Structure Data

Multi-structure data deals with different forms and types of data. It can be come as a result between machines and peoples after interactions. It may be happened by using web applications or social networks. It is related to organization and discovery of multi structure data. In unified information management, it has ability to search data across different forms by navigating it. It can also be improved by the ability to organize data of different forms. That can be happened using into a common schema. Using this structure of data organization, the schema can relate structured data and semi structured data. For example model number and specification is structured data and installation videos are unstructured data. The sophisticated business chances can be searched from different forms data in new way.

2.4 Low Latency Data

It enhanced to process a very high volume of data with minimal delay (latency). These are planned to help operations that need in real-time access to make fast change in data. Data processing can occur at many stages of the architecture. In way to deal with processing arrangement of Big Data, the low latency data processed fast and efficient way.

2.5 Analysis Consistency

When different type of people performs the similar form of analysis they must get the similar outcome and obviously they should get similar screen of output. As notice as this seems, it should not be small difference, especially if the different type of people belong to different departments or location. The analysis consistency requires architecture reliability and governance.

2.6 Embedded Analysis Application

It included several types of applications which can be used to perform business analysis. It is divided into two parts namely operational applications and business applications. The operational application support data processing capability and analytics against database. The statistical analysis, historical analysis and data mining can be possible for drill down search, business analysis, search routines etc. The business application supports business operation. The automated business processes, services and business

execution applications that are used to execute the business with proper objectives and for making decisions. Embedded analysis application helps user to make often informed decisions.

2.7 Rules Engine

It is a real-time rules engine. It provides decisions, advices and also decision logic based on real time information and analysis. Based on current condition decision will be taken or suggested. The rule engine provides a facility to change decision based on current condition, even if it executed automatically. The real time rule provider can be used to influence rules for real-time decision management. The real time rule provider provides complete decision management problem's solution. It also delivers real time decision and advices and automatically renders decisions within business activity.

2.8 User Navigation

In embedded business application some process required to take self-directed action with respect investigation an issue and determine a context of action while analysis information from analytic contents. The proposed system should available and leverage such information to user along with correct path of investigation. But the rules are defined by rule engine with real time information and strategy. The user will get option in real time analysis to choose the user navigation for further process the task.

2.9 Automated Navigation

It also deals with embedded business application. The process required to take automated action with respect investigation an issue and determine a context of action while analysis information from analytic contents. The proposed system should available and leverage such information automated system along correct path of investigation. But the rules are defined by rule engine with real time information and strategy. The user will get option in real time analysis to choose the automated navigation for further process the task.

2.10 Performance and Strategy Management

The performance and strategy management processes of any business can be guided and supported by analytics system. The analytics contents will available to take suitable decisions regarding business. Due to decision taken by analytics contents, the strategy will be made. The business will get performance depends on decision by analytics. So it means business is based on sound analytics. The performance and objectives of any business in order to gain is depended on decided strategy achievement.

2.11 Data Warehouse

A data warehouse is a repository of subjectively selected and adapted operational data, which can successfully answer any ad hoc, complex, statistical or analytical queries. It contains integrated historical data; both summarized and detailed information [1]. It also includes Authoritative Data, System-Generated Data, External Data and Analytical Data.

3. Result of Just-In-Time Acquisition and Separate Navigation

The Unified Information Management with JIT Acquisition in Big Data and Analytics is providing solution to overcome the problem of data gathering when amount of several high volumes, velocity, and variety of data comes under one roof of big data. Previously, High Volume Data procurement is not able to persist and maintain all data received. So it discarded or ignored data and while sum amount of data are save for some moment of time. This is main lacuna of data processing in big data and analytics.

Just-in-Time Acquisition is stratagem that acquires data from high volume data acquisition, which may be ignored or discarded from it while sum amount of data are save for some moment of time. Just-in-Time Acquisition is a methodology aimed primarily at reducing time within data acquisition of system as well as response time end user. Just-in-time data delivery is focused on efficiency, while lean High Volume Data acquisition is centered on using efficiency to add value for the end user. The JIT Acquisition process adds value by increasing efficiency. It also helps end user for collect information, make analysis and take suitable decision. It keeps information dynamically through real time.

The multi-structure works with high volume data acquisition and JIT acquisition to provide fast data to web application and social networks users because of this architecture it will avoid the delay time of data processing. Analysis consistency included in this architecture to make it reliable and governance. This architecture has ability to find out and search across different type and nature of data to serve user in fast manner with proposed JIT acquisition. The JIT Acquisition process adds value by increasing efficiency and kept various types of data in data warehouse for long time. The proposed JIT acquisition fulfills data gathering process and serving high efficient quality data to user with minimal delay.

The Big Data and Analytics get credit to add intelligence in business process with mentioned result. The Big Data and Analytics with embedded analysis provide latest information to decision makers mainly when needed. On a fly or real time decision method provides intelligence by user or automated process. The decision makers get data from operational systems, historical data stores and real-time data and make the results known to knowledge workers. Sense and response capabilities that perform analysis on information are stored inside big data. Any event happened while analysis, it must alter the process of business if decision taken from analytics.

User Navigation: In embedded business application some process will take self-directed action with respect investigation an issue and determine a context of action

while analysis information from analytic contents. The proposed system will make available and leverage such information to user along with correct path of investigation.

Automated Navigation: The process will take automated action with respect investigation an issue and determine a context of action while analysis information from analytic contents. The proposed system should available and leverage such information automated system along correct path of investigation.

4. Conclusion

High Volume Data procurement is not able to persist and maintain all data received. So it discarded or ignored data and while sum amount of data are save for some moment of time. As obvious this seems as drawback. The Architecture uses the JIT method to streamline the delivery process of data where it must not ignored or discarded data as happened with High volume Data Acquisition. The Just-in-Time Acquisition is a technique that acquires data from high volume data acquisition, which may be ignored or discarded from High Volume Data Acquisition. Just-in-Time Acquisition is a methodology aimed primarily at reducing time within data acquisition of system as well as response time of end user. High Volume Data acquisition is centered on using efficiency to add value for the end user with JIT.

The proposed model of big data and analytics included Embedded Analysis Applications, Rules Engine, User Navigation, Automated Navigation and Performance and Strategy Management. The Proposed User Navigation and Automated Navigation are two separate ways to find analytic contents for business process to make decision using embedded application. The business process will be benefited from suggested or found analytic contents or information by navigation using embedded business application. The Big Data and Analytics with embedded analysis provide latest information to decision makers mainly when needed. The advantages of this embedded business analytic application are Cultivate Data-Driven Decision Making, Increase ROI on Data Transformation Investment, Increase Productivity, Enhance Competitiveness, Improve Customer Satisfaction, Increase Revenue etc.

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