Design of Real Time Analytics with Intelligent Query Adviser in Big Data and Analytics

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Abstract: *In view of Big data analytics, The Real-Time Analytics enables the business to leverage information and analysis as events are unfolding [1]. It included proposed Intelligent Query Adviser, interactive dash board, Event processing and advanced Analytics. Intelligent Query Adviser can find contents of required analysis. Intelligent Query Adviser can determine the expected result. The Intelligent Query Adviser will be used to suggest the query depend on analyst thought. It will be included in interaction layer of Big data Architecture. The suggested queries from Intelligent Query Adviser will be based on thought of analyst with availability of big data. So it will help analyst to know the availability of data in big data.*
Keywords: *Intelligent Query, Analytics, Big Data*

I.   Introduction

Among the many BD challenges the large datasets (in terms of size and complexity) and the ability to process vast amount of data remains a critical challenge for outdated data processing applications and, relational database management systems [3]. Real time analytics is the analysis of data as soon as that data becomes available. In other words, users get insights or can draw conclusions immediately (or very rapidly after) the data enters their system [2]. In order to approach 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 [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. 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. Some are performed proactively and others are reactive. 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, applications must integrate with information and analysis components in a manner that produces consistent results. There must be consistency from one application to another, as well as consistency between applications, reports, and analysis tools [1].

II.   Real Time Analytics with Intelligent Query Adviser in Big data and Analytics

In view of Big data and analytics, The Real-Time Analytics enables the business to leverage information and analysis as events are unfolding. It includes Proposed Intelligent Query Adviser, interactive dash board, Event processing and advanced Analytics [1].

a. **Intelligent Query Adviser**: Analysis is often a journey of finding and discovery, where the results of one query suggest the number of queries. The Proposed Intelligent Query Adviser will provide advice to user depend on query which fired against big data. The Intelligent Query Adviser is work in an expeditious manner and keep pace with users thought process and provides any advice or suggestion to analyst or user. Whenever user analysis data and try to find out expected data from big data, the analyst need to fire the query against the big data using real time analytics. The Intelligent Query Adviser has the details of query executed by analyst. The Intelligent Query Adviser will make the queries depends on the analyst need and base on available data in Big data. Then the Intelligent Query adviser will advise or suggest the queries regarding user requirement for analysis. The user or analyst will get bunch of suggested or advised queries from available big data to make suitable decisions. The system must support this journey in an expeditious manner. System performance must keep pace with the users' thought process [1]
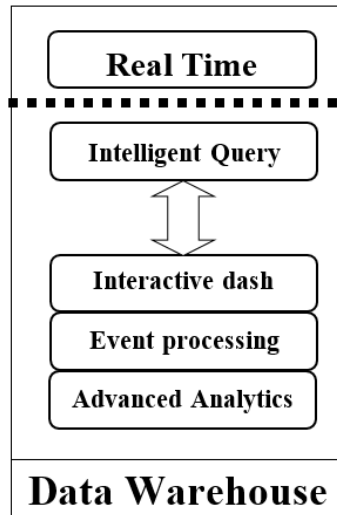
Fig 1: *Real Time Analytics with Intelligent Query Adviser in Big data and Analytics*

b. **Interactive Dashboards:** Dashboards provide a heads-up display of information and analysis that is most pertinent to the user. Interactive dashboards allow the user to immediately react to information being displayed, providing the ability to drill down and perform root cause analysis of situations at hand [1]. A well-built interactive dashboard provides a variety of ways to dissect data. You should be able to easily explore your data to discover a wide range of insights.

c. **Event Processing:** Real-time processing of events enables immediate responses to existing problems and opportunities. It filters through large quantities of streaming data, triggering predefined responses to known data patterns [1]. Event Processing delivers the core capabilities for building a real-time, event-based Decision Management System—correlating events, managing decision logic, embedding predictive analytics, optimizing results, and monitoring and improving decision-making [5].

d. **Advanced Analytics:** Advanced forms of analytics, including data mining, machine learning, and statistical analysis enable businesses to better understand past activities and spot trends that can carry forward into the future. Applied in real-time, advanced analytics can enhance customer interactions and buying decisions, detect fraud and waste, and enable the business to make adjustments according to current conditions [1]. Advanced analytics refers to a broad range of analytics that are intended to give businesses greater insight into their data than they could ordinarily [4].

e. **Data warehouse:** It includes with Operational data, Contents, Authoritative Data, System-Generated Data, External Data, Historical Data and Analytical Data.

III.   Advantages of Intelligent Query Adviser

1. The Intelligent Query Adviser will provide suggestions or advices to Analyst or User from fired query depends on the availability of data.
2. The Analyst or User will get easily the details of Big data by observing suggestions provided from Intelligent Query Adviser.
3. The suggestions provided from Intelligent Query Adviser to Analyst will get help to make decision about drill drown analysis in Big data.
4. By taking the suggestion from Intelligent Query Adviser, Analyst may get fast result, so it will not time consuming for analyst or user and System performance must keep pace with the users' thought process [1].
5. If analyst will not satisfy with the suggestion, it means that there is no data available regarding the analyst or user need.
6. When Analyst will get status that there is no data regarding the requirement, the analyst would leave the big data and search in other data warehouse. So Eventually, Intelligent Query Adviser will reduce the big data load and available resources to other users for analysis.

IV.   Conclusion

The advantages of Intelligent Query Adviser will provide often facility to user or analyst. The proposed Intelligent Query Adviser will be used to suggest the queries depend on analyst thought. It will determine the expected results from user thought. The expected results will depend on the availability of data in Big data. Intelligent Query Adviser will help to make decision regarding analysis. So Eventually, Intelligent Query

Adviser will reduce the big data load and available resources to other users for analysis, if analyst not satisfied from suggested queries.

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