Abstract

Incremental join aggregate queries based on sliding window are a sort of queries that are widely used. All the join aggregate query algorithms in existing research works are designed for immediate continuous queries. A join aggregate query method based on Compound sliding window for periodically executed continuous queries is presented. This method organizes the basic windows in a compound sliding window according to their join properties, the aggregate values are computed while the join processing, the join results of compound sliding window are not saved, so the memory used by query processing is greatly reduced. Some of which we discussed in CJMAX where the input data stream is serial. CJMAX algorithm possesses superior performance. There will be good time and space complexity of this incremental algorithm. Many applications in several domains require online processing of continuous data flows. They produce very high loads that require aggregating the processing Capacity of many
nodes. Current Stream Processing Engines do not scale with the input load due to single-node bottlenecks. Here new concept Cloud Stream, a scalable and elastic stream processing engine for processing large data stream volumes. Cloud Stream uses a novel parallelization technique that splits queries into sub queries that are allocated to independent sets of nodes in a way that minimizes the distribution overhead. Its elastic protocols exhibit low intrusiveness, enabling effective adjustment of resources to the incoming load. Elasticity is combined with dynamic load balancing to minimize the computational Resources used.

References

- “Query Processing, Resource Management, and Approximation in a Data Stream Management System” Rajeev Motwani, Jennifer Widom, Arvind Arasu, Brian Babcock, Shivnath Babu, Mayur Datar, Gurmeet Manku, Chris Olston, Justin Rosenstein, Rohit Varma Stanford University 2003

Index Terms

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Keywords

Basic Windows  Compound Sliding Window  Data Stream  Join Aggregate Algorithms