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## Signature Proxy: An Efficient View Management Under Distributed Architecture

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### Abstract

Multiple query redirects are the major issue encountered frequently in view management following distributed architectures. Redirecting the query is the approach followed when queried view or sub-view is not precomputed at a distributed node. Real-time massively generated data, forced the enterprises follow distributed

query architecture to render efficient storage combined with efficient query evaluations. Taking advantage of the efficient indexing methods, the current OLAP technology is maintained a distributed architecture where parts of total views are distributed over various sites. Observing the storage major limitation, specific views are only pre-calculated. Views that are materialized and distributed at various sites are not similar. Because of this if the view is not present precomputed at a particular node the query has to be redirected to other sites. While redirecting many OLAP technologies follow a query translation mechanism to reduce the communication cost of the query. The queried node, though the sub-view is not pre-calculated with it, needs to execute the translated query to identify it cannot answer the query, which may incur additional execution time, and this will add one redirect. If this distributed architecture implements an indexing approach to find the view present at a distributed site is materialized or not, at the initial query request before processing the query, then the approach would have reduced this additional cost of unnecessary query execution. This article proposes a new approach of view management under distributed scheme which is the proxy architecture. Our proposed architecture can locate where the requested views are present pre-computed. The proposed architecture is designed to minimize

the redirects of the posed query, also minimize the query communication cost.

## Keywords

OLAP

Cube lattice

Pre-computed views

Query rewriting

View fragmentation

Query translations

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