

A Hierarchical Intrusion Detection System for Clouds: Design and Evaluation

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Abstract

Distributed query processing is usually done assuming a cost function associated with each communication link in the network connecting different databases. There are many factors that can be used beside the traditional cost function to select the best optimal plan. In this paper we propose adding the Quality of Service (QoS) aspects to the distributed query optimization process. We suggest an optimization model that incorporates the network delay, error rate, loss probability and bandwidth as QoS factors to the distributed query optimization. The model is built as a Goal Programming (GP) model that solves multi-objective problems. Our results demonstrate that incorporating the QoS factors in the optimization process may result in selecting query execution plans different from those plans selected by a traditional optimizer.

Keywords: Distributed query processing, QoS factors, cost function

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