Performance Evaluation of CEP Engines for Stream Data Processing

Abstract:
The easy deployment of wireless sensors allows the development of context-aware applications that could react to the environment changes and users' preferences. For example, information extracted from data gathered using mobile phones and embedded computers in buses and taxis could be used to understand city dynamics in real-time and therefore take mitigation actions. However, gathering and real-time processing of relevant information is still a challenging task. Complex-event processing (CEP) techniques and predictive analytics have been recently proposed for analyzing streaming data in real-time in order to generate fast insights and then take suitable actions according to the environment changes. The work presented in this paper focuses mainly on the performance evaluation of three CEP engines widely used by researchers for semantic and physical streaming data processing. Experiments have been conducted using existing benchmark tools and results are reported to shed more light on the performance these engines for stream data processing.
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