

عنوان مقاله:

EDBPM: An Event-Driven Business Process Monitoring Mechanism

محل انتشار:

مجله بین المللی ارتباطات و فناوری اطلاعات، دوره 10، شماره 2 (سال: 1397)

تعداد صفحات اصل مقاله: 12

نویسندگان:

Mohammad Ali Fardbastani - School of Computer Engineering Iran University of Science and Technology (IUST)
Tehran, Iran

Farshad Allahdadi - School of Computer Engineering Iran University of Science and Technology (IUST) Tehran, Iran

Mohsen Sharifi - School of Computer Engineering, Iran University of Science and Technology (IUST), Tehran, Iran

خلاصه مقاله:

Many process-aware organizations need to monitor the execution of their Business Processes (BP). Changes in BP execution can be reported as events while real-time detection of event patterns from such events can help the monitoring of model-execution conformance or business activities. Complex Event Processing (CEP) techniques can detect event patterns that are specified as CEP rules. Given the high rate of events and numerous number of complex rules, existing CEP-based solutions are not scalable. We present a novel scalable Event Driven Process Monitoring Mechanism (EDBPM) using distributed CEP. Events are partitioned by process instance identifier and the events of each partition is dispatched to a compute node. As such, the processing load of BP monitoring is distributed adaptively to compute nodes in a load balanced manner. Using a prototyped implementation of EDBPM we show that EDBPM scales well horizontally, i.e. increases in throughput are nearly linear when the number of compute nodes increases. Compared to CPU and memory balancing in a general purpose distributed CEP-based solution, EDBPM .keeps the CPU load doubly balanced and does balance the memory too, which is lacking in similar solutions

کلمات کلیدی:

Business Process Management, Business Process Monitoring, Complex Event Processing, Scalability, Load Balancing

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1152215>

