A Microservices Architecture for Distributed Complex Event Processing in Smart Cities

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Workshop on the Distributed Smart City (WDSC’2018)

This research is part of the INCT of the Future Internet for Smart Cities funded by CNPq, proc. 465446/2014-0, CAPES proc. 88887.136422/2017-00, and FAPESP, proc. 2014/50937-1.

This study was financed in part by the Coordenação de Aperfeiçoamento de Pessoal de Nível Superior - Brasil (CAPES) - Finance Code 001 and CNPq
Introduction and motivation

Smart Cities [Kitchin, 2014]

- Information and Communication Technology usage
- Sensors e Actuators
- Quality of life
Smart City applications involve:

- Real time processing
- Situations: Fires and Car Accidents.

Complex Event Processing – CEP

- Detection of specific situations based on occurrence patterns
- Open source tools do not provide large scale solutions
Objectives

Create a microservice architecture for distributed CEP:

- Based on Microservices
- Dynamic distribution of event processing
- Load balancing techniques
InterSCity platform integration

Requirements:
- Scalability
- Availability
Preliminary results

Implementation:
- Register of event types and web hooks
- Event type duplication verification

Next steps:
- Load balancing algorithms implementation
- Database scalability techniques
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