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AWS Cost Optimization Tool

Bachelor's thesis
in COMPUTER SCIENCE

Supervisor:
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May 2018

Supervisor's statement

Hereby I confirm that the presented thesis was prepared under my supervision and that it fulfils the requirements for the degree of Bachelor of Computer Science.

Date

Supervisor's signature

Authors' statements

Hereby I declare that the presented thesis was prepared by me and none of its contents was obtained by means that are against the law.

The thesis has never before been a subject of any procedure of obtaining an academic degree.

Moreover, I declare that the present version of the thesis is identical to the attached electronic version.

Date

Authors' signatures

Abstract

The thesis describes the design and implementation process, in-depth system and code architecture as well as used communication protocols, storing methods and other internals of the AWS Cost Optimization System.

Keywords

system, aws, cost, optimization, heuristic, cost management, koszt, aws, optymalizacja, heurystyka kosztowa

Thesis domain (Socrates-Erasmus subject area codes)

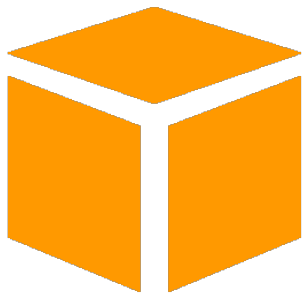11.3 Informatyka

Subject classification

D. Software
D.127. Blabalgorithms
D.127.6. Numerical blabalysis

Tytuł pracy w języku polskim

Narzędzie Optymalizacji Kosztów AWS

Contents

Wprowadzenie

Statement of the problem

Nowadays the industry increasingly relies on cloud technologies. More and more companies start or move their products to cloud environment. It has been observed that gradually institutions introduce dedicated teams for managing the costs of cloud operations or use third-parties for that purpose. Such solutions cause great savings for everyone. Unfortunately existing toolkit is either very primitive or targets billion dollar companies. Currently neither Amazon nor any third-party offer a tool that would allow flexible, cheap and quick insight into the operation costs for small or middle-sized organizations.

The solution

The AWS Cost Optimization Tool is a system that offers reliable solution adressing that issue. We focus on one of the biggest cloud platforms - Amazon Web Services, which is maintained by Amazon. Whole system intends not only to provide easy cost insight, but also help with basic cost optimization. Despite collecting and storing AWS data the system will offer users following core features:

- Interfaces for adjusting dynamic cost limits per user, group or tag

- Dynamic alert system for limits exceeding

- Customizable alert propagation along management hierarchy tree

- Shutdown of redundant running AWS products

- Charts useful for cost management

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Bibliography