MICADO SERVICE BENEFITS

The results of project COLA enable generic application developers to implement applications that automatically optimise cloud resource utilisation based on application developer/operator defined quality of service parameters (QoS).

Application developers will be able to extend their application code with MiCADO service calls (the generic set of services developed by project) in order to utilise the scalability and optimisation services at both deployment and also at run-time.

Application operators will be able to define desired quality of service parameters, e.g. maximum response/ completion time, maximum cost, security policy requirements etc. MiCADO services will assure that the application is deployed in an optimal way based on the defined parameters.

Moreover, MiCADO services will monitor the application at run-time and will automatically scale it up or down in order to optimise application execution based on the user-defined multidimensional set of QoS parameters. Users/application operators can also modify the parameters during run-time to trigger rescaling of resources, if necessary.

PROJECT PARTNERS

COLA
Cloud Orchestration at the Level of Application

Project Director: Dr. Tamas Kiss (UoW)
t.kiss@westminster.ac.uk
Project Manager: Dr. Gábor Terstyánszky (UoW)

UNIVERSITY OF WESTMINSTER
MTA SZTAKI
RISE
Brunel University London – Modelling & Simulation Group
ScaleTools
CloudBroker
BALABIT
CloudSigma
saker solutions
Outlandish
sarga
Inycom innovation technologies

Published by:

cloudSME UG
Bismarckstr. 142
47057 Duisburg
Germany

cloudSME *Simulation for manufacturing & engineering*

Email: cola@cloudsme.eu
Tel. +49 (0) 203 3639 9955

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SECURE & SCALABLE MULTI-CLOUD

COLA

Cloud Orchestration at the Level of Application

New version available:
MiCADO V3 released

- www.project-COLA.eu
- twitter.com/projectCOLA
- facebook.com/projectCOLA

COLA – Cloud Orchestration at the Level of Application receives funding from the European Union's Horizon 2020 research and innovation programme (Grant No. 731574).

ABOUT PROJECT COLA

Project COLA is an Innovation Action funded by the European Commission as part of the Horizon2020 Programme. The project started in January 2017 and will last 30 months. The consortium includes 10 companies and 4 research organisations out of 6 different countries from Europe, including the United Kingdom, Hungary, Sweden, Switzerland, Spain and Germany.
The coordinator of the COLA project is Dr. Tamas Kiss, University of Westminster (UK).

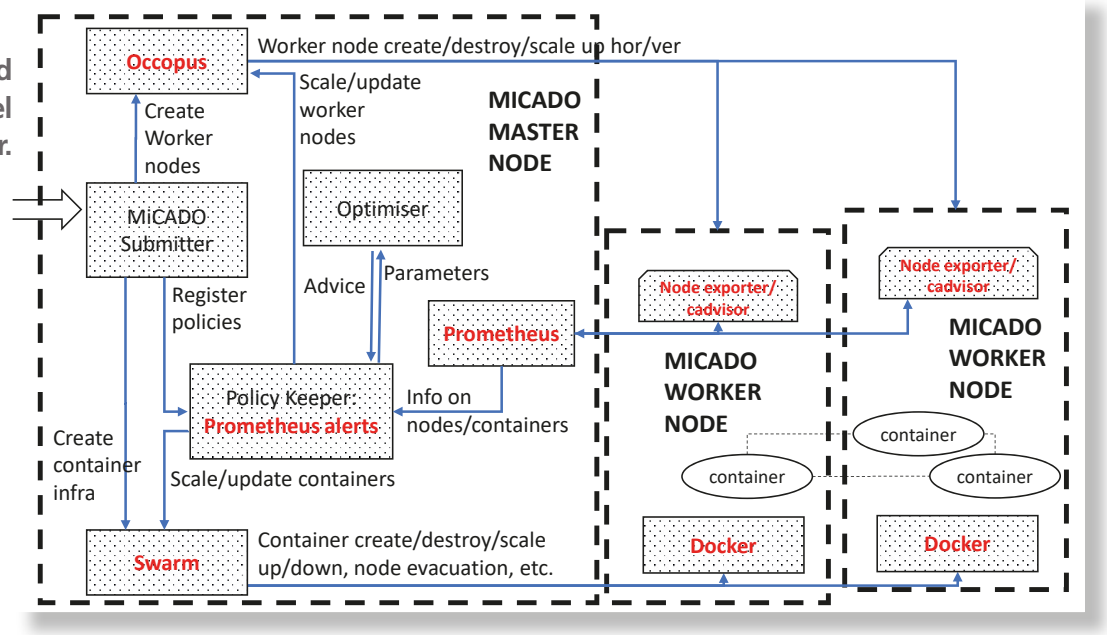
SMEs and public sector organizations increasingly investigate the possibilities to use cloud computing services in their everyday business conduct. Accessing services and resources in the cloud on-demand and in a flexible and elastic way could result in significant cost savings due to more efficient and convenient resource utilization that also replaces large investment costs with long term operational costs. On the other hand, the take up of cloud computing by SMEs and the public sector is still relatively low due to limited application-level flexibility and also security concerns.

Project COLA (Cloud Orchestration at the Level of Application) aims to increase the adoption of cloud computing services by SMEs and the public sector as strategic target communities.

ABOUT MICADO

The overall objective of the COLA project is to define and provide a reference implementation of a generic and pluggable framework that supports the optimal and secure deployment and run-time orchestration of cloud applications:

MiCADO - Micro-services-based Cloud Application-level Dynamic Orchestrator.



MiCADO services can be expressed with a set of well-defined (standardised) interfaces to be easily embedded into application control code without changing the original application logic.

Data consistency, data protection, trustworthiness and access control are handled in a secure way when sharing and migrating applications within a single cloud or between multi-cloud platforms.

MICADO ELASTICITY

MiCADO (Microservices-based Cloud Application-level Dynamic Orchestrator) services provide dynamic and automated resource scalability on clouds for all (or at least a very wide range of) applications.

MiCADO provides elasticity service for the customer application or infrastructure in different scenarios, including:

- to optimise the load of services
- to optimise the cost of using cloud resources
- to optimise the execution time (i.e. keep the deadline) of executing parameter sweep jobs

http://www.project-cola.eu

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