

Realisation Engine

BigDataStack Software Component developed by University of Glasgow

Description

The component enables the production, deployment, and management of cloud deployment configurations. It enables cloud services providers and cloud computing administrators to manage end-to-end the process of producing and monitoring optimal deployment configurations for their applications.

It is used in conjunction with other components of the BigDataStack platform.

Features

- Produces sets of recommended deployment configurations from among a set of candidate deployment patterns, factoring in user preferences and cost.
- Registration of user applications via BigDataStack Playbook (or via components).
- Triggerable Operations for configuring/deploying/altering user applications.
- Operation Sequences that enable serialized lists of operations, allowing users to define higher-level tasks.
- Graphical User Interface, providing user access to application configuration, deployment and management.
- Realisation API, allowing for programmatic access to operations.
- Openshift Monitoring sub-system, enabling state-syncing between the cluster and realisation engine.
- Cost Estimator, that produces monetary costs for running applications.
- Resource Monitor provides live resource usage of running applications for use in private clouds.
- Integrated State and Metric databases."

 bigdatastack.eu

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Areas of Application

- Retail (H2020 BigDataStack).
- Maritime Transport (H2020 BigDataStack).
- Finance and Insurance (H2020 BigDataStack).

Market trends & opportunities

- Dynamic resource management in cloud computing and edge computing.
- Optimisation of cloud computing infrastructures for BigData and AI applications.

Customer benefits

- **Optimisation and Efficiency:** The Realisation Engine facilitates the identification and deployment of optimized cloud configurations for data-centric applications.
- **Cost-Effectiveness – User Friendliness:** The Realisation Engine facilitates cloud service providers and cloud infrastructure providers to manage deployment configurations in a user-friendly way.

Technological novelty

Cloud resources optimisation taking into account different criteria such as the required resources and cloud costs.

TRL level: 5

Find the Open Source code here:

- <https://github.com/terrierteam/realizationengine>