



OPTIMIS: Cloud but better

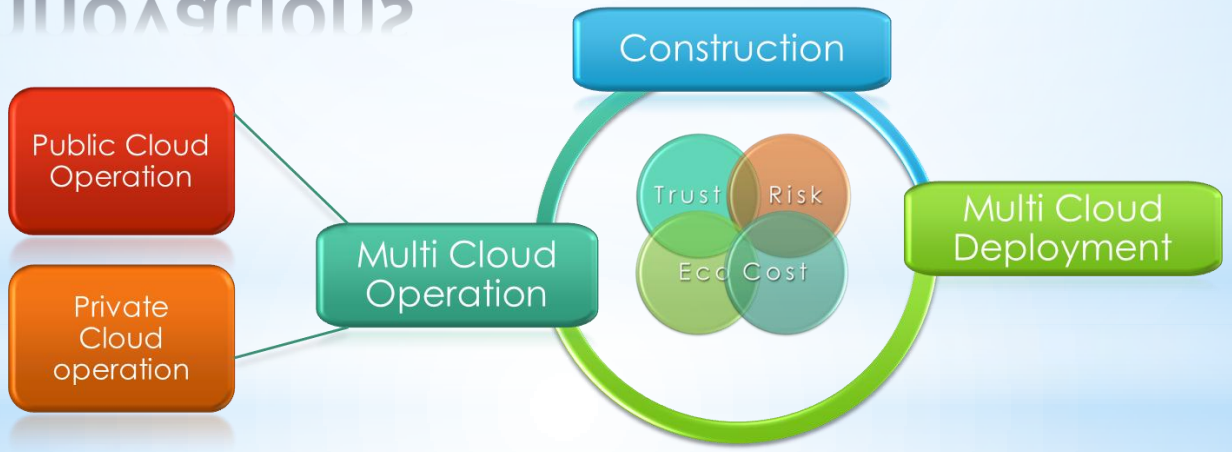


A **toolkit** enabling **secure, risk-aware** and **compliant** cloud application **construction & life-cycle management.**

A platform architecture enabling **multi-cloud optimisation** based on **trust, risk, eco-efficiency** and **cost**



Innovations



OPTIMIS is an innovative **tool suite** supporting users at all stages of the cloud **service lifecycle**:

- application **construction**
- **deployment**
- **operation** across the most **appropriate mix of public, private, and hybrid cloud venues** and **value added services**

Deployment and **operation** is optimised based on:

- **Trust:** provider's trustworthiness based on performance and social networking data;
- **Risk:** probability and impact of adverse events;
- **Energy:** metrics to enable energy-efficient computing;
- **Cost:** management of operation costs.

Construction

Programming Model

- Simplifies cloud enablement of new or legacy applications
- It is independent of the underlying cloud infrastructure interfaces
- It based on sequential specifications of data and application execution flows
- That can combined with declarative constraints which ensure affinity and performance compliance.
- It is available as Eclipse-based IDE

Run-Time

- it provides optimal parallelism and multi-cloud distribution
- It performs run-time scheduling and optimization during application execution.

Multi Cloud Deployment

OPTIMIS Cloud Broker

- Enables multi-tier cloud infrastructure reseller model
- It is integrated with PM to obtain application component's template images automatically
- it analyses possible application decompositions and distributions to one or multiple cloud infrastructure providers
- It may integrate value-added services (VAS) in order to meet performance, data security and protection requirements.
- it establishes a virtual private network overlay among the VMs of each multi-cloud application deployment, and a shared virtual data space that aggregates data elements across multiple clouds

Multi Cloud Operation

OPTIMIS Multi Cloud Operation include tools

- to improve elasticity
- to determine the optimal placement of virtual machines and their live migration
- to support conformance to application requirements by bursting application components to another cloud without interrupting the continuity of monitoring or operational management of multi-cloud application.

It offers unified operations management (dashboard):

- instruments cloud infrastructure provider's monitoring interfaces
- correlates application specific information for multiple sources, including integrated VAS.

OPTIMIS multi cloud deployment and operation tools are compatible with:

- Private Cloud management tools



OpenNebula.org
The Open Source Toolkit for Cloud Computing



- Public Clouds



* Testimonials

Mike Smith, Chief Technology Officer, Atos IT Services, UK "OPTIMIS technologies are a perfect fit for our DAaaS offerings, based on the flexibility provided at the infrastructure management level and the innovative combination of capabilities for analytical application development"

David Cairns, Principle Design Development and Consultancy Services, BT Compute, BT Global Services "I cite the injection of multiple security offerings from Encrypted Storage through to patching via IPS as these are wholly applicable market additions that you have offered"

Josep Luís Gelpi, Head of the Spanish Institute of Bioinformatics : "Biology is facing the need of analyzing large amounts of genomics or simulation data with continuously changing methods. Traditional bioinformatics based on web-based applications is now moving to the cloud what would allow having applications and data in a single virtual environment and would ease the customization of analysis workflows. The OPTIMIS Programming Model offers to our group an excellent opportunity to port our existing applications and services to the cloud and to develop new ones in an easy manner. This helps biologists to focus in their expertise, instead of having to learn the intricacies of cloud infrastructures to be able to exploit them."

Tabassum Sharif, Director of Operations of Flexiant "FCO has now integrated the OPTIMIS Data Manager / Service Provider concept with a multi-cluster deployment functionality allowing our end users to deploy across multiple hypervisors and geographical locations from a single pane of glass".

Csilla Zsigri, Director of consulting services EMEA, at 451 Research: "End-user organizations are now seeking new ways to automate the delivery of workloads and applications to the most appropriate cloud environments, be it internal or external, and whether it is determined by performance, risk, location and compliance or other SLA parameters. We trust OPTIMIS will encourage more European SMEs to create and use new cloud applications and services."

* Additional resources

www.optimistoolkit.com

Optimis Whitepaper:

<http://www.optimistoolkit.com/assets/docs/OPTIMISWhitePaperMAY2013.pdf>

Innovations

<http://www.sciencedirect.com/science/article/pii/S0167739X1100104X>

Features:

<http://www.youtube.com/watch?v=lHQaNpuoey0>

See Optimis in action:

<http://www.optimistoolkit.com/howitworks.html>

Research Project:

<http://www.optimis-project.eu>