SeaClouds Newsletter

seaclouds

AGILITY AFTER DEPLOYMENT

Modelling   Planning   Controlling

Editorial

The SeaClouds project has now been running for 20 months, and the first remarkable outcomes are being obtained thanks to the good and hard work of a well-balanced consortium of European partners from both academic and industrial environments.
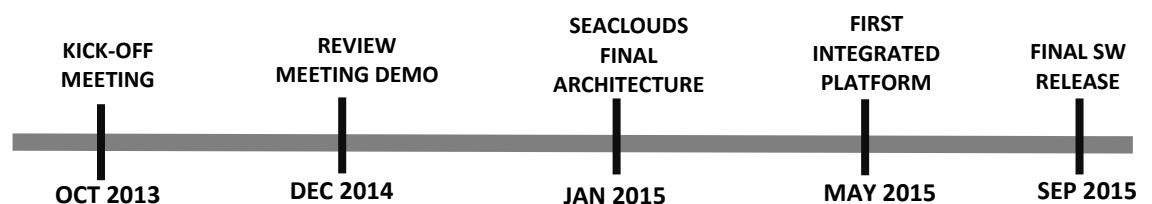
The excellent cooperation between the different partners during this period has resulted in significant achievements. Therefore, and since the development of the project is now in a quite advanced stage, the second SeaClouds´ newsletter focuses on describing these main outcomes, among which we can highlight the release of the **first integrated platform** of the SeaClouds solution, available at the project´s repository on Github (https://github.com/SeaCloudsEU).

Its **open source** nature, reflected on the Apache 2.0 license adopted, together with the use and contribution to ongoing cloud standards like **OASIS CAMP** and **OASIS TOSCA**, are two important factors that contribute to the potential success of the project.

Additionally to this, the interactions with other important and existing initiatives like **Apache Brooklyn** (responsible of the deployment) and **MODAClouds** (used for monitoring purposes) are also important features of this innovative platform that provides Seamless Adaptive Multi-cloud Management of service-based applications.

Project timeline

KICK-OFF MEETING	REVIEW MEETING DEMO	SEACLOUDS FINAL ARCHITECTURE	FIRST INTEGRATED PLATFORM	FINAL SW RELEASE
OCT 2013	DEC 2014	JAN 2015	MAY 2015	SEP 2015

Why SeaClouds?

Main benefits

The **SeaClouds** project aims to develop a new open source framework which performs Seamless Adaptive Multi-Cloud management of service-based applications. The framework consists of an Application Management System over Clouds (AMSoC) at different levels, IaaS and PaaS, which implements a **DevOps** approach for continuous software delivery. This approach enables application providers to mitigate business risks and reduce time to market and customer feedback.

Some of the main benefits provided by SeaClouds are:

Support for application deployment and migration to different providers. SeaClouds will provide support for deploying and migrating applications composed of several services taking care of their synchronization and their reconfiguration, without requiring the user to manually intervene.

Management and monitoring of underlying providers. Properties over application and services deployed on multiple clouds can be ensured and managed in a standardized way by using unified metrics and automated auditing.

Increased availability and higher security. The usage of formal models to support the management of service-based applications over multi-clouds environments gives more flexibility to reconfigure the distribution when a SLA violation occurs.

Performance and cost optimization. The framework gives users freedom to distribute application requirements over different cloud offerings by using needed options in a flexible manner. Organizations can take advantage of useful and powerful services provided by each platform and avoiding its weaknesses. Optimization requirements can also be modelled to consider cost as the main decision parameter

Low impact on the code and user-friendly interface. SeaClouds will tackle different problems for developers and administrators of cloud applications. First, the development process is simplified by using the SeaClouds tools and framework which requires minor code changes. Second the management of already deployed complex cloud applications is simplified thanks to the SeaClouds dashboard.

The operation mode of SeaClouds is quite simple:

First, the **application developer** provides the application with the corresponding modules to be deployed and specifying the **desired QoS** requirements and the properties to generate the SLA agreements of the whole application, as well as the technological requirements needed for individual application modules.

Then, **SeaClouds** will provide a feasible distribution of the application modules over available Clouds by means of the specification of an orchestration plan of the multi-cloud deployment. These clouds will be chosen using the so called **SeaClouds searching engine** which will return the **best-fit cloud** offering for each user requirement and will ease the deployment process of the whole application, considering the main dependencies among the application modules.
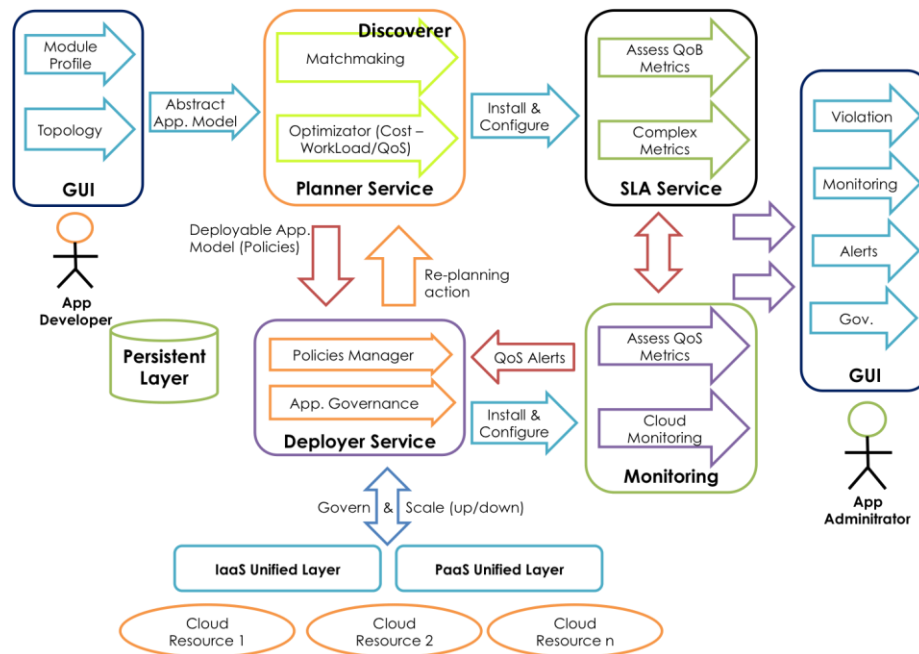
After the application is deployed, in case of violations of the defined requirements, a **reconfiguration** process will be initiated to (possibly) evolve the modules distribution, e.g. by migrating services to other providers. This reconfiguration process is applied over the system in execution providing mechanisms for rescheduling and re-execution of the modules, with the purpose of foreseeing the compliance of the properties and the soundness of the orchestration.

Finally, the application modules will be **effectively re-deployed** on the Clouds indicated in the distribution plan previously generated, and a run-time monitoring process will be initiated to guarantee that modules satisfy the SLAs and QoS properties specified.

1st SeaClouds Industrial Workshop

The **1st SeaClouds industrial workshop** will take place during the **7th Cloud World Forum**, to be held on the Olympia Grand in London, next June 24th and 25th, 2015.

This reputed event, which counts with more than 8.000 attendees, more than 3.000 enterprise end-users and more than 200 exhibitors and sponsors, represents the perfect place to showcase the SeaClouds´ results, get audience´s feedback and also to test the acceptance of the first integrated prototype.

For more info about this event, visit http://cloudwf.com/.

2nd SeaClouds Industrial Workshop

CLOUD

expo europe frankfurt
Incorporating **Powering the Cloud**

10. – 11. November 2015 Messe Frankfurt

The dissemination and exploitation strategy followed by SeaClouds has another industrial major event in the spotlight. Cloud Expo Europe, to be held next November in Frankfurt, is the perfect setting to present the final version of the SeaClouds solution.

The relevance of such event in the cloud environment, together with the perfect timing of the venue (aligned with the end of the project) turn this venue into the ideal scenario for the final release of SeaClouds

For more information about the event, please visit the web: http://www.poweringthecloud.com/

2nd SeaClouds Scientific Workshop

After the success of the First Scientific Workshop organized at the **European Conference on Service-Oriented and Cloud Computing (ESOCC 2014),** the SeaClouds consortium has decided to repeat at the experience and has chosen ESOCC 2015 to hold its Second Scientific Workshop.

The fourth edition of this event will take place in Taormina (Messina), Italy from 15th to 17th of September 2015.

Visit https://www.scenic.uma.es/workshops/seawave/ for more info about the SeaClouds workshop.

ESOCC 2015
TAORMINA

Download it now!

The code of the **SeaClouds first integrated prototype**, together with the instructions for downloading and installing it, are already available at SeaClouds´ Github repository located at https://github.com/SeaCloudsEU/seaclouds-distribution.

In order to perform a deployment of the SeaClouds solution, the use of Apache Brooklyn, Vagrant and Virtual Box will be required.

Additionally, in case of needing only some components of the overall solution, all the binaries produced by each software components of SeaClouds can be downloaded by accessing https://oss.sonatype.org/content/groups/public/eu/seaclouds-project/

This first version of the SeaClouds integrated platform includes the following components:

- Deployer
- Monitor
- Planner
- SLA service
- Cloud service optimizer
- Dashboard

The definitive version of the integrated platform will include the discoverer component, which is not available on this first version.

Additionally, although the final version of the designer component will be fully automated, the current distribution requires certain level of human interaction.

In order to showcase SeaClouds and to demonstrate its benefits on a multi-cloud environment, an application example implementing a simple web chat room will be provided.

Contact info

For more information on the project please visit http://www.seaclouds-project.eu or contact:

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