SeaClouds Project

D1.5.2 – Dissemination Report

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Dissemination Level

	Project co-funded by the European Commission within the Seventh Framework Programme	
PU	Public	X
PP	Restricted to other programme participants (including the Commission)	
RE	Restricted to a group specified by the consortium (including the Commission)	
CO	Confidential, only for members of the consortium (including the Commission)	

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Executive Summary

This deliverable describes the activities carried out during the second year of the SeaClouds project with the aim of promoting the project itself and of disseminating the project outcomes.

This deliverable recalls the objectives of SeaClouds project and the dissemination strategy followed to spread the results obtained during the project development, then it describes in detail these results, taking into account the KPIs established at the beginning of this period.

This report highlights the significant results obtained thanks to the dissemination effort made during Year 2. The majority of key achievements have been addressed, raising awareness of the project and encouraging the dialog on its key concepts.

The members of the SeaClouds consortium have attended to several events to present the project as well as to spread the results obtained so far, including current prototype implementation. The project website statistics have surpassed second year KPIs and the project is present on three social media channels, namely Twitter, LinkedIn and Facebook. 5 journal papers, 25 conference papers and 3 technical reports have been published so far; furthermore, the second scientific SeaClouds workshop has been organized in conjunction with ESOCC 2015. Moreover, additional dissemination resources have been produced, including a factsheet, a poster and a second press release.

All these dissemination efforts are aligned with expectations and have impacted positively on the project.

1. Introduction

This deliverable describes in depth the results obtained by the SeaClouds project during its second year as a result of the dissemination strategies planned at the beginning of the project, featured in D1.4 Dissemination Strategy & Plan [1]. The dissemination activities have focused on expanding the visibility of the project at an international level through a prototype implemented following the open source strategy as planned in D7.2. [2] – representing Year 2 goals outlined in D1.4.

The document is structured as follows: Section 2 describes the dissemination activities carried out during the second year of the project. Section 3 presents an overview of the KPIs, by comparing the obtained results with those expected. Finally, the report is concluded with key achievements and the next steps for the next year.

1.1 Glossary of Acronyms

Acronym	Definition
API	Application Programming Interface
CAMP	Cloud Application Management for Platforms
IaaS	Infrastructure as a Service
KPI	Key Performance Indicator
OASIS	Organization for the Advancement of Structured Information Standard
PaaS	Platform as a Service
QoS	Quality of Service
SaaS	Software as a Service
SDO	Standard Development Organization
TOSCA	Topology and Orchestration Specification for Cloud Based Application

Table 1 Acronyms

2.   Report on Dissemination Activities

In this section, we provide a detailed description of the results obtained by the dissemination activities performed during the second year and how they are related with the target entities and previously identified objectives.

2.1   Web Strategies

The SeaClouds consortium focused the second year web strategies on updating the SeaClouds website and its social network profiles. The goal was to exploit the power of these online tools to enable more active dissemination towards the creation of SeaClouds online community. At the moment, this community includes the project website, a Twitter feed, a LinkedIn group and a Facebook page.

Project Website

One of the core elements of the dissemination strategy is the project´s official website. Available at www.seaclouds-project.eu, the website provides all the information about the project, its latest news, the released publications (papers, deliverables, etc.), the attended events, the generated dissemination assets, etc.

During the 2nd year, the main focus has been to post relevant content and keep them updated with the latest news of the project. Furthermore, Google Analytics has been used to measure website statistics.

An estimation of 3000 visitors had been established as a success factor for the second year. These expectations were well surpassed, reaching 8423 visits from 126 countries since the creation of the web.

Other relevant statistics about the website usage during these two years are:

- Unique visitors: 6054
- Page views: 16618
- Avg. Session Duration: 1:43
- Bounce rate: 68.1%

Figure 1 represents that info, together with the weekly evolution of the visits and their provenance.
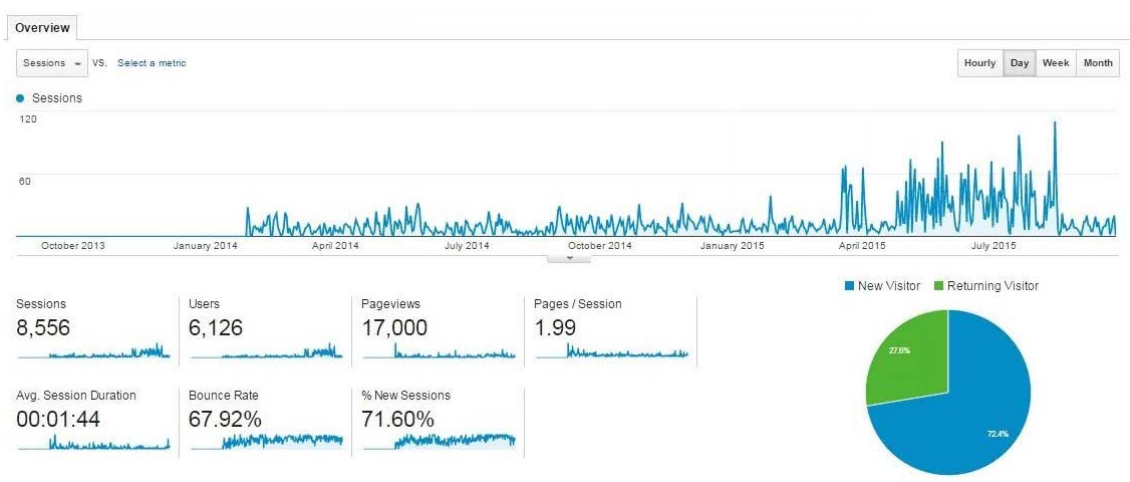

Figure 1 Website statistics

The figures also draw attention to the top ten countries visiting the site. Consortium countries, such as Spain, Germany and Italy, are naturally the highest audiences, given partners' individual dissemination channels. Also the high number of visits from countries outside the boundaries of the European Union (mainly USA and Brazil), shows the extended reach for project dissemination.

Deepening a bit more into the analysis of the visitors, Figure 2 shows the distribution of different sources used to reach the project´s website. The main source is the referrals (almost 40% of the visits), followed by direct access (with 30%) and organic search (almost 24%). The last of the list is the social media, with less than a 8% of the total.
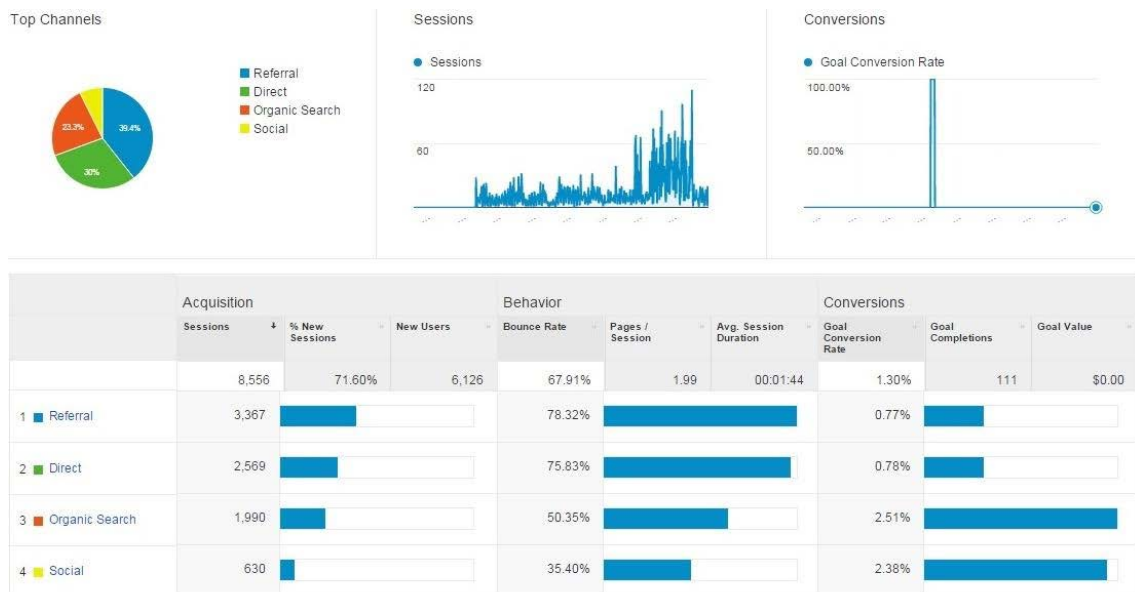

Figure 2 Analysis of the visitors

SeaClouds website is updated on regular basis, including all the info of the new publications, attended conferences, organized events, etc. The goal is to engage the maximum number of users by updating its content as the project evolves, reshaping the initial messages and creating new sections as necessary.

GitHub & Apache Brooklyn

In order to gain interest, participation and embrace the benefits of adopting open source solutions, including transparent development, stakeholder feedback and broad uptake potential, the SeaClouds platform is hosted in a well-established open source community named GitHub.

GitHub, the largest code host in the world with over 3.4 million developers, is the connection hub between the project and the market, allowing us to reach a large

number of developers that could help to improve the quality of SeaClouds, as well as to disseminate the project. Cloud developers, open source incubators, service providers, standards development organizations and researchers, are some of the communities targeted with this approach.

Following an agile methodology, the github repository of the SeaClouds platform has reached since its creation more than **270 commits** and **12 active contributors** within the SeaClouds consortium.

Apache Brooklyn, the application management that enables the SeaClouds Deployer, is an open source project in the Apache Foundation that is also used for this community building strategy.

Social Media
Another important part of SeaClouds dissemination is the presence in social media. The use of these powerful tools provides SeaClouds a channel not only to increase the exposure of the project but also to reach out and communicate on a personal level with a wider audience. At the moment, three different channels have been used: Twitter, LinkedIn and Facebook.
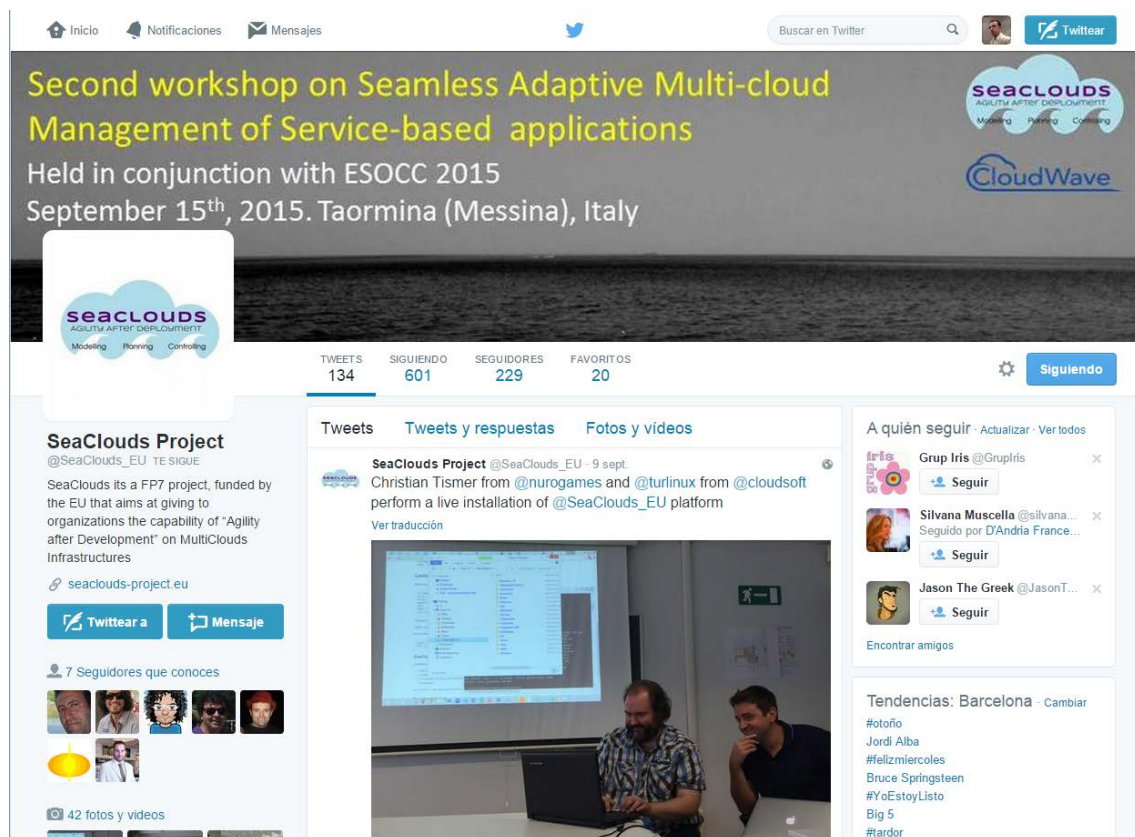

Figure 3 Twitter screenshot for the workshop event

The most active of the three channels is **Twitter**, which can be followed in https://twitter.com/SeaClouds_EU. This social network has more than 500 million total users worldwide and over 288 million monthly active users. These numbers turn Twitter

into the perfect showcase for posting news about SeaClouds, promoting events, etc. In just two years, SeaClouds has achieved **229 followers**, published more than **130 tweets**, and uploaded **42 pictures or videos**.

This tool has been also useful for establishing connections with other European projects that afterwards have contributed to the success experienced in both the first and second scientific workshop organized at ESOCC (Figure 4).

The second social media tool used for dissemination is **LinkedIn**. This professional business-oriented social network has over 238 million users, of which 3 millions are company pages. The advantage offered by LinkedIn over other social networks is that it is specially oriented towards professional profiles, allowing SeaClouds to reach niche communities of interest. The goal of this group is both to bring together professionals involved in the project and outsiders interested on it.

The SeaClouds group in LinkedIn can be found in the following link www.linkedin.com/groups/SEACLOUDS-PROJECT-7449431, having **81 active users** and several opened discussions.

The third element of this triad is Facebook (Figure 5). Although the previous channels are more professional-oriented, the magnitude of this tool is such (more than 1 billion users worldwide) that cannot be disregarded. With **62 likes** from **8 different countries** and more than **110 posts reached** and **250 post clicks**, Facebook becomes the perfect tool to complement the other dissemination channels used.

Figure 4 Screenshot of the facebook page of the project

Social media constitute a free and very fast way to communicate with others on just a mouse click. The importance they are achieving in the last years, turn them into a reliable way to connect and stay updated about the most recent developments on a specific industry. Therefore, SeaClouds will reinforce its social media strategy, trying to foster relationships and collaborations with other professionals and companies of the cloud environment.

2.2   Events

The SeaClouds consortium recognizes that face-to-face dissemination has the largest impact. Several scientific conferences have been attended by partners of the consortium, in order to present the concepts and development of the project and publish papers in the scientific community, reported in Section 3.3. In its second year, the **SeaClouds project has been presented in 6 international events.**

Project Presentations in Community Events

SeaClouds has been presented in a number of events addressed to an academic and industry audience, mainly revolving around cloud computing technologies and innovations.

- *7th IEEE/ACM International Conference on Utility and Cloud Computing, Dec 08 – 11, 2014, London, United Kingdom.* The SeaClouds project was presented at the Demonstration interoperability days of the conference.
- *Cloud World Forum, June 24-25, 2015, London, United Kingdom.* This event is one of the leading content led exhibition for the European Cloud and DevOps community, specially addressing the CIO community. SeaClouds had an stand where details and demonstrations were presented to the visitors
- *Software Technologies: Applications and Foundations (STAF), July 20 – 24, 2015, L'Aquila Italy.* This event is a federation of a number of leading conferences on software technologies. SeaClouds has been presented in this event, in particular, Marc Oriol (UPI) attended this event and presented the paper "Agile management of complex applications across multiple heterogeneous clouds" in the Projects Showcase track.
- *11th Spanish Conference on Services Engineering and Science (JCIS), SISTEDES, Sept 15 – 17, 2015, Santander, Spain*. UMA attended this conference and presented the paper "SeaClouds: An Application Management System over the Clouds"
- *4th European Conference on Service-Oriented and Cloud Computing (ESOCC), Sept 15 – 17, 2015, Taormina, Italy.* A. Brogi (UPI) attended this conference and presented the paper "Adaptive application management over multiple clouds" in the track EU presentations.

SeaClouds-hosted Activities

The first webinar of the SeaClouds project was done on June 22, at 3 pm. Presented by Javi Cubo (UMA) and Andrea Turli (CloudSoft), the webinar got 21 registrants from both academy and industry. The video can be accessed at the youtube channel of SeaClouds at: https://www.youtube.com/channel/UC2RkcaDlREF2AaoIxtbDhjA

Furthermore, the 2nd SeaClouds Workshop took place in Taormina, Italy on September 15 and was held in conjunction with ESOCC 2015. The program included one invited talk on the self-aware adaptive clouds, four contributed research papers, a round table and a session devoted to presentations of the development and results of ongoing 12 EU research projects. The detailed program can be found in the associated webpage at http://seaclouds.lcc.uma.es/ and a detailed description of the workshop outcomes have been reported in deliverable D1.7.3 [3].

Interest shown by companies in SeaClouds

One of the dissemination objectives of SeaClouds is to catalyze early adoption potential in line with SeaClouds' developing sustainability plan: dissemination efforts are focusing on the integrated prototype, in order to stimulate potential stakeholders to provide their evaluation and feedback upon its release.

So far, several companies have shown interest to integrate or use SeaClouds in their platforms. In particular, the companies that are currently in contact with SeaClouds are:

- Ormuco: Company that offers hybrid, private and public cloud hosting solutions built for enterprises and developers across the globe.
- UBS: Company that provides investment banking, asset management, and wealth management services for private, corporate, and institutional clients worldwide
- Cloudyn: Company that provides solutions for cloud monitoring, analytics, and optimization solution for multi-cloud deployment.

2.3   Publications: Scientific Papers

During the second year of the project, **2 Journal papers, 12 conferences papers and 3 technical reports** have been published. If we take into account the papers published during the first year (3 journals papers and 13 conference papers), the scientific production in the project so far is 5 journals, 25 conferences and 2 technical reports. Below we detail the list of papers published in this second year.

Papers of Seaclouds published in journals

[j1] A. Brogi, M. Fazzolari, A. Ibrahim, J. Soldani, P. Wang, J. Carrasco, J. Cubo, F. Duran, E. Pimentel, E. Di Nitto, F. D'Andria. "Adaptive management of applications across multiple clouds: The SeaClouds Approach". CLEI Electronic Journal, volume 18, number 1, pages 1-14, April 2015.

Papers of interest for Seaclouds published in journals

[j2] Durán, G. Salaün. "Robust and Reliable Reconfiguration of Cloud Applications". In Journal of Systems and Software. To appear.

Papers of Seaclouds published in conferences

[c1] D. Athanasopoulos, M. Barrientos, L. Bartoloni, A. Broi, M. Buccarella, J. Carrasco, J. Cubo, F. D'Andria, E. Di Nitto, A. Nieto, Oriol, E. Pimentel, S. Zenzaro. "SeaClouds: Agile management of complex applications across multiple heterogeneous clouds". Projects Showcase STAF 2015. July 20-24 2015, L'Aquila (Italy).

[c2] M. Barrientos, J. Carrasco, J. Cubo, E. Pimentel. "Propuesta para un acceso homogéneo a servicios PaaS en la Nube". 20th Spanish on Software Engineering and Databases (JISBD), SISTEDES. To appear. September 15-17 2015, Santander (Spain).

[c3] M. Barrientos, L. Bartoloni, A. Brogi, M. Buccarella, J. Carrasco, J. Cubo, F. D'Andria, E. Di Nitto, A. Nieto, M. Oriol, E. Pimentel, S. Zenzaro. "SeaClouds: An Application Management System over the Clouds". 11th Spanish Conference on Services Engineering and Science (JCIS), SISTEDES. To apper. September 15-17 2015, Santander (Spain).

[c4] M. Barrientos, A. Brogi, M. Buccarella, J. Carrasco, J. Cubo, F. D'Andria, E. Di Nitto, A. Nieto, M. Oriol, D. Pérez, E. Pimentel, S. Zenzaro. "Adaptive application management over multiple clouds". In the 4th European Conference on Servce-Oriented and Cloud Computing (ESOCC). September 15 – 17, 2015, Taormina (Italy).

Papers of interest for Seaclouds published in conferences

[c5] Leonardo Bartoloni, Antonio Brogi, and Ahmad Ibrahim, "Probabilistic prediction of the QoS of service orchestrations: A truly compositional approach", Published in Proceedings of 12th International Conference on Service-Oriented Computing (ICSOC 2014), LNCS 8831, pp. 378–385, Paris, France, November 3-6, 2014.

[c6] C. Canal, G. Salaün. "Adaptation of Asynchronously Communicating Software". 12th International Conference on Service-Oriented Computing (ICSOC 2014). Service Oriented-Computing (ICSOC 2014). Lecture Notes in Computer Science, 8831, pp. 437-444, Springer, November 2014.

[c7] A. Brogi, A. Canciani, J. Soldani. "Modelling and analysing cloud application management". Service-Oriented and Cloud Computing (ICSOC), Lecture Notes in Computer Science, volume 9306, pages 19-33, Springer, 2015.

[c8] C. Canal, G. Salaün. "Model-Based Adaptation of Software Communicating via FIFO Buffers". 18th International Conference on Fundamental Approaches to Software Engineering (FASE 2015). Fundamental Approaches to Software Engineering (FASE 2015). Lecture Notes in Computer Science, 9033, pp. 252-266, Springer, April 2015.

[c9] J. Cubo, N. Gámez, E. Pimentel, L. Fuentes. "Reconfiguration of Service Failures in DAMASCo using Dynamic Software Product Lines". In IEEE International Conference on Services Computing (IEEE SCC). IEEE CS, 114-121. June 27-July 2 2015, New York (USA).

[c10] J. Boubeta-Puig, J. Cubo, A. Nieto, G. Ortiz, E. Pimentel. "Propuesta de una Arquitectura de Dispositivos como Servicios con Procesamiento de Eventos". 11th Spanish Conference on Services Engineering and Science (JCIS), To apper. September 15-17 2015, Santander (Spain).

[c11] Leonardo Bartoloni, Antonio Brogi and Ahmad Ibrahim, "Automated prediction of the QoS of service orchestrations: PASO at work", WAS4FI 2015, Taormina, Italy, September 15, 2015.

Technical reports of interest for Seaclouds

[tr1] J. Soldani, T. Binz, U. Breitenbücher, F. Leymann, A. Brogi. "TOSCA-MART: A Method for Adapting and Reusing Cloud Applications". University of Pisa, Italy, 2015.

[tr2] (Right) A. Brogi, A. Canciani, J. Soldani. "Modelling the behaviour of management operations in TOSCA". University of Pisa, Italy, 2015.

[tr3] Leonardo Bartoloni, Antonio Brogi and Ahmad Ibrahim, "Predicting the QoS of service orchestrations", Technical Report, University of Pisa, March 10, 2015 http://eprints.adm.unipi.it/2329/1/Unipi_TR.pdf

2.4   Supporting Material

In order to strengthen and support the previous dissemination activities, the following support dissemination materials have been published:

Project Poster

A second poster has been created in June 2015 to provide an overview of the architecture and the main functionalities of the project (Figure 7). This poster has been used in the different events and meetings where SeaClouds project was presented.

Figure 5 Project poster: archiecture overview

Project Flyer

Another flyer/leaflet was also created in June 2015 (Figure 8). This small but dynamic format was used to promote SeaClouds during the events and conferences attended.

Figure 6 Project flyer (front and back)

Press Release

In addition to the previous assets, and as part of the project's dissemination strategy, the consortium also published a second press release in May 2015. This general-purpose delivery presented an overview of the project, pointing out the existing problem on the cloud environment that SeaClouds aims to solve, and how development will achieve that goal.

Whitepaper

Two whitepapers have been already published.

The first whitepaper, titled "SeaClouds Open Reference Architecture", was published in October 2014, and describes the SeaClouds framework, the architecture, its main features and its technical aspects.

The second whitepaper, titled "SeaClouds Business paper", was published in June 2015, and describes SeaClouds from a Business oriented point of view, including the solution it provides, its business impact, and a detailed description of a use case.

The SeaClouds whitepapers are available at:

http://www.seaclouds-project.eu/media.html#Whitepapers

3.   KPIs Overview Results

Table 2 summarizes the main KPIs achieved by the SeaClouds dissemination activities during the first and second year of the project.

Table 2 Main KPIs achieved by the dissemination activities during the first and second year

Dissemination activities	KPI expected (during three years)	KPI achieved (during the 1st and 2nd year)	Success indicator
Publications	4 journal 4 conferences	5 journals 25 conferences 3 technical reports	For more detailed information on publications, please refer to section 3.3 of this document.
Industry workshops and webinars	2 workshops 1 webinar	1 1	The first industry workshop was held at Cloud World Forum, 24-25, June 2015, London. The webinar took place in June 22 presented by Javi Cubo (UMA) and Andrea Turli (CloudSoft). For the 3rd Year, SeaClouds will be presented in the following events: • 8/10/2015 – 9/10/2015: Cloud forward: clusters and meeting. In • 20/10/2015: ICT Lisbon Oct 20: cluster SE meeting • 10/11/2015 – 11/11/2015: Cloud Expo Europe in Frankfurt. With a Stand for both days and a presentation on day11.
Scientific workshops	2	2	The second SeaClouds scientific workshop has been held in Taormina, Italy on Sep 15, 2015, in conjunction with ESOCC 2015 (see section 3.2 and deliverable D1.7.3 for more details).
Whitepapers	4	2	Two whitepapers have been already published. One technical white paper and one business white paper. Two more whitepapers are expected for year 3.

Project presentations in events or conferences	3	17	The SeaClouds project has been presented in several national and international events, considering the events in the 2nd year, they are: • Cloud World Forum, June 24-25, 2015, London, United Kingdom. • 7th IEEE/ACM International Conference on Utility and Cloud Computing, Dec 08 – 11, 2014, London, United Kingdom. • Software Technologies: Applications and Foundations (STAF), July 20 – 24, 2015, L'Aquila Italy. • 11th Spanish Conference on Services Engineering and Science (JCIS), SISTEDES, Sept 15 – 17, 2015, Santander, Spain. • 4th European Conference on Service-Oriented and Cloud Computing (ESOCC), Sept 15 – 17, 2015, Taormina, Italy.
Brochures/flyers	3	2	The first flyer has been published in month M6 to promote the SeaClouds project. The second flyer has been published in the second year with a market-oriented focus to support the prototype. A third flyer will be published in year 3.
Posters	3	2	A second poster has been produced contextually to the first prototype release. A third poster will be released in year 3.
Press releases	3	2	The first press release was published in month M6. The second press release has been published in month M19. The final press release will be published in the third year.
Demonstration videos	2	2	Two demonstration videos have been produced so far and hosted in our youtube channel (SeaClouds Project). A demonstration of the SeaClouds interoperability and a demo showing the main features of the platform (https://www.youtube.com/channel/UC2RkcaDlREF2AaolxtbDhjA)

Presence in social media	3	3	The SeaClouds project is on LinkedIn, Twitter and Facebook (please see data reported in Sect. 3.1).
Newsletters	6	2	The newsletters summarizes the project progresses and the preliminary results obtained during the first two years of the project. So far, 2 newsletters have been produced, and more efforts will be done in the 3rd year to meet this KPI.
Website visitors	1500 visitors per year 2 minutes/visit	2079 visitors in the second year 3 minutes/visit	The number of actual visitors has overtaken the expected minimum threshold.

4.   Conclusions and Next Steps

This document has described the activities performed during the 2nd year to disseminate the project. As shown, a considerable dissemination effort has been made by the SeaClouds project. Analyzing the proposed KPIs for the second year, we can conclude that our dissemination efforts are on track and aligned with expectations.

- The web campaign through the project website and social media channels (Twitter, LinkedIn and Facebook) with statistics surpassing the KPIs, and the first webinar of SeaClouds.

- SeaClouds was presented at 17 international events, as well as hosted its second scientific workshop at the ESOCC 2015 conference.

- 3 journals entries and 17 conference papers were published, positioning SeaClouds as a leader in the multi-cloud research domain.

- Various dissemination materials have been published, including posters, fact sheets, flyers and press releases, ensuring that project information was available from very early on in the project.

A follow-up deliverable will be available in M30 to reflect the forthcoming Year 3 dissemination campaign.

5.   References

[1] SeaClouds Project Team, Public Project Deliverable. "D1.4. – Detailed Dissemination strategy & plan", available at http://www.seaclouds-project.eu/deliverables/SeaClouds-D1.4-Detailed_Dissemination_Strategy_Plan.pdf, December 2013.

[2] SeaClouds Project Team, Confidential Project Deliverable. "D7.2. – Initial Exploitation Plan". September 2014.

[3] SeaClouds Project Team, Public Project Deliverable. "D1.7.3. – 2nd SeaClouds Scientific Workshop", available soon. September 2015.

[4] SeaClouds Project Team, Public Project Deliverable. "D1.5.1 – Dissemination Report", available at http://www.seaclouds-project.eu/deliverables/SEACLOUDS-D1.5.1_DisseminationReport.pdf, September 2014.