

Cluster on Data Protection, Security and Privacy in Cloud

Meeting of the 7th of Oct 2015

CloudForward 2015, Pisa.

Erkuden Rios (TECNALIA)

Context

- Increase impact of EU-funded projects on Cloud working in the areas of:
 - Data protection
 - Security
 - Privacy
- i.e.: IDM, AAA, cryptography, trust, security in SLAs, anonymization, privacy policies, PLAs, etc.

DPSP Cluster objectives

- 1. Maximize the impact** of the Cluster projects' results:
 - Seek synergies of proposed solutions
 - Maximise the innovation over state-of-the-art.
 - Organise joint dissemination events
 - Encourage standardisation.
2. Ensure the **market orientation and adoption** of project results.
 - Work in the deep analysis of market trends and needs.
 - Look for alignment of exploitation strategies and models as much as possible.
- 3. Help define the research and innovation needs** in H2020 in the areas of Data Protection, Security and Privacy in the Cloud.

Deliverables

- White Paper
- Joint workshops (2 per year).
- Map of synergies in research.
- Catalogue of AB candidates.
- Catalogue of End-users candidates.

Agenda (I)

Wednesday 07 October 2015	
Parallel session	
12:00-13:15	Distributed and CLOUD Computing
12:00-12:05	Data Protection, Security and Privacy in the Cloud Cluster Introduction by Erkuden Rios Velasco (DPSP Cluster coordinator)
12:05-12:20	<i>[P] Security Enforcement for Multi-Cloud Platforms - The Case of PaaSage</i> by Kyriakos Kritikos, Tom Kirkham, Bartosz Kryza and Philippe Massonet
12:20-12:35	<i>[P] A Cloud Service Broker with Legal-Rule Compliance checking and Quality Assurance capabilities</i> by Emiliano Casalicchio and Monica Palmirani
12:35-13:15	<i>Data Protection, Security and Privacy in the Cloud Cluster</i> Cluster discussion (30 min). Round table of participants presenting themselves. Discussion on cluster procedures.
13:15-14:00	Lunch Break

Wednesday 07 October 2015

Parallel session

14:30-15:15	Distributed and CLOUD Computing
14:30-14:45	[P] <i>Secure Data Sharing and Processing in Heterogeneous Clouds</i> by Bojan Suzic, Andreas Reiter, Florian Reimair, Daniele Venturi and Baldur Kubo
14:45-15:00	[P] <i>Applying short-term memory to social search agents</i> by Albert Trias Mansilla, Sam Sethserey and Josep Lluís De La Rosa
15:00-16:45	<i>Data Protection, Security and Privacy in the Cloud Cluster</i>
15:00-16:45	<p>Cluster discussion (1:45 min)</p> <p>40 min. Discussion on possible joint results and events (follow of telco). - follow up</p> <p>35 min. Discussion on intended progress on Privacy, Certification and CSLAs in the projects and possible collaboration in research. Networking sessions in ICT 2015.</p> <p>30 min. Discussion on TOC and section responsible persons for the Cluster Position Paper.</p>
16:45-17:00	Tea Break
17:00-18:30	Distributed and CLOUD Computing
17:00-17:45	<i>Data Protection, Security and Privacy in the Cloud Cluster</i>
17:00-17:45	<p>Cluster discussion / Conclusions (45 min)</p> <p>30 min. Start planning next joint event.</p> <p>15 min. Conclusions and wrap up.</p>

Objectives for Cloud Forward 2015

1. Get to know each other.
2. TOC of the Position paper and initial assignment of sections to projects & persons.
3. Initial organization of the 1st joint Workshop in Q1 2016.
4. Initial identification of synergies in: Privacy, Certification and CSLAs.

12:35-13:15

Cluster discussion (30 min).

Round table of participants presenting themselves.

Discussion on cluster procedures.

Participants

- Luigi Romano - SERECA
- Max Rak - SPECS
- Antonio Lioy - CLIPS
- Nick Ferguson – CloudWatch, CloudWatch2 and SLA-READY
- Roberto Cascella - CLARUS
- Erkuden Rios – MUSA and DPSP Cluster
- [Stefano Paraboschi – EscudoCloud]
- [Simone Braun – PAASWORD] -not attending

Roundtable of Cluster participants attending Cloud Forward 2015

- Name
- Affiliation
- Project
- Interests

Status of the Cluster

- Cluster is merged with Trusted Cloud Initiative

Project	Project Name
MUSA	MUlti-cloud Secure Applications
CLARUS	A FRAMEWORK FOR USER CENTRED PRIVACY AND SECURITY IN THE CLOUD
ESCUDO-CLOUD	Enforceable Security in the Cloud to Uphold Data Ownership
SERECA	Secure Enclaves for REactive Cloud Applications
SLALOM	Service Level Agreement - Legal and Open Model
SLA-READY	SLA-Ready: Making Cloud SLAs readily usable in the EU private sector
SWITCH	Software Workbench for Interactive, Time Critical and Highly self-adaptive cloud applications
PAASWORD	A Holistic Data Privacy and Security by Design Platform-as-a-Service Framework Introducing Distributed Encrypted Persistence in Cloud-based Applications
SPECS	Secure Provisioning of Cloud Services based on SLA management
A4CLOUD	Accountability For Cloud and Other Future Internet Services

Project	Project Name
TRESCCA	TRustworthy Embedded systems for Secure Cloud Computing Applications
CLIPS	Cloud approach for Innovation in Public Services
COCO CLOUD	Confidential and Compliant Clouds
WITDOM	WITDOM - empoWering prIvacy and securiTy in non-trusted enviroNments
TREDISEC	TREDISEC - Trust-aware, RELiable and Distributed Information SEcurity in the Cloud.
STRATEGIC	Service diSTRibution network And Tools for intEroperable proGrammable, and Unified public Cloud services
PRISMACLOUD	PRIVacy and Security MAIntaining services in the CLOUD
SECCORD	SECurity and trust COoRDination and enhanced collaboration
CLOUDWATCH	A European cloud observatory supporting cloud policies, standard profiles and services
CLOUDWATCH2	Think Cloud Services for Government, Business Research
APPHUB	AppHub, the European Open Source Marketplace

More information

- Cluster website:

<https://eucloudclusters.wordpress.com/data-protection-security-and-privacy-in-the-cloud/>

- Coordinator:

erkuden.rios@tecnalia.com

Join us by sending an email to the coordinator!!

Discussion: Cluster procedures

- Telcos: monthly – needed bi-weekly?
- Intranet ready: all working docs (password protected).
- How to ensure contributions and participation?
 - Create subgroups?

15:00-16:45 Cluster discussion (1:45 min)

40 min. Discussion on possible joint results and events (follow of telco). - follow up

35 min. Discussion on intended progress on Privacy, Certification and CSLAs in the projects and possible collaboration in research. Networking sessions in ICT 2015.

30 min. Discussion on TOC and section responsible persons for the Cluster Position Paper.

Discussion: Joint results

1) Position paper on “anonymization and linkage to innovation and free flow of data (in the context of DSM)” – extended to other aspects researched by the projects.

Initial Title and TOC proposal by Erkuden (docx.)

Discussion: Joint results

2) **Joint feedback to ETSI CSC Phase 2 – “Interoperability and Security”** document.

Final Review Workshop was on October 1-2 in Brussels.

A final version will be published by **mid-October 2015**.

Pending action: *Erkuden send link and collect the feedback of individual projects. Discussions by email.*

Discussion: Joint results

3) Catalogue of candidates (individuals) to participate in Advisory Boards (AB) of other Cloud projects.

- Template ready in intranet.

4) Catalogue of candidates of end-users (organisations) to validate other Cluster projects' results.

- Template ready in intranet.
- Volunteered end-users would evaluate (give feedback other projects' results by watching some video presentations and test the result/tools if possible.
- A mechanism to balance number of results evaluated per end-users will be in place.
- Cluster members should encourage the end-users of their projects to participate.

Discussion: Joint results

5) **The synergies map:** identified common interests, gaps, overlaps, and potential standardisation interests.

- Erkuden creates 1st version and distributes it to all project coordinators, in order they can complete it.
- **Project fiches are needed !!! Project coordinators need to send them to Erkuden. Deadline: 19th Oct 2015.**
- See other examples:
<https://eucloudclusters.files.wordpress.com/2015/05/map-of-challenges2.pdf>

6) **Contribution to define H2020 WP2018-2019 topics.** -> discussions to be started asap in f2f meeting if possible.

7) **Interviews of Cluster members** on particular topics -> not a joint result, lowest priority.

Disussion: Joint events

The Cluster shall organise 4 Joint Workshops: Q1 and Q3 2016 + Q1 and Q3 in 2017

- Joint Workshop (Q1 2016) – several projects do support this proposal.
 - Where? Naples Feb 2016 with SPECS + COCO CLOUD
 - Schema, agenda, etc.
- We could organise an event similar to “CSP Innovation Forum 2016”? Usually in April, in Brussels.
 - The event was organised and funded by SECCORD (ended) + supported by EU projects.
 - Action: Erkuden has contacted Frances Cleary to clarify the status of this event organisation: they are still deciding it internally.

*DISCUSSION IN
NEXT SLOT*

Discussion: Joint Workshops schema

- Joint with a Conference vs. Organise our own CFP.
- Hands on tools: hackathon.
- Participants: Involve Market experts and end-users (Industry): with the support of CloudWatch2.
 - Invite experts ?
- Duration

Next f2f meetings

- **20-22 October 2015: Joint discussion at the following 2 Networking sessions at the *ICT2015*, Lisbon, Portugal:**
 1. “
[Key challenges in end-to-end privacy/security in untrusted environments](#)” on Thursday, October 22nd, Room 8, (14:50-15:35)
 2. “
[Privacy, Certification and SLA for dependable clouds](#)” on Tuesday, October 20th, Room 11, (16:00-16:45)

Open Discussion

- **Synergies and challenges in Privacy, Certification and CSLAs**

Open Discussion

- **Topics for H2020 WP 2018-2019**

What is already in WP 2016-17?

- ICT-06-2016: Cloud Computing:
 - Trust, security and privacy in decentralised cloud infrastructures and across multiple cloud providers, including aspects of data integrity, data localisation and data confidentiality.
- DS-01-2016: Assurance and Certification for Trustworthy and Secure ICT systems, services and components
 - Assurance:
 - reliability and safety assurance at individual phases of the SDLC
 - reliability and quality development and validation of highly dynamic systems
 - Security Certification:
 - Emerging threats, compositional certification and reuse of components in the context of certified systems and certification throughout the operational deployment of a product or a service.
 - Reduce the cost and duration of the certification process.
- DS-02-2016: Cyber Security for SMEs, local public administration and Individuals

What is already in WP 2016-17?

- DS-03-2016: Increasing digital security of health related data on a systemic level
 - Secure storage of information including personal data, safe exchange of data over a number of architectures of differing security levels preventing unauthorised access, loss of data and cyber-attacks.
- DS-04-2016: Economics of Cybersecurity
 - Cybersecurity cost-benefit framework
 - Incentives and business models:
- DS-05-2016: EU Cooperation and International Dialogues in Cybersecurity and Privacy Research and Innovation

What is already in WP 2016-17?

- DS-06-2017: Cryptography
 - Flexible encryption beyond partial homomorphic encryption
 - Anonymization, obfuscation, etc.
 - Ultra-lightweight cryptology & anonymity in communications
 - Authenticated encrypted token research for mobile payment solutions and related applications.
 - Innovative cryptographic primitives and complementary non-cryptographic privacy-preserving mechanisms to enforce privacy at various levels (e.g. pairing based cryptography).
 - New techniques, e.g. quantum safe cryptography
 - Quantum key distribution
 - Automated proof techniques for cryptographic protocols.

What is already in WP 2016-17?

- DS-07-2017: Addressing Advanced Cyber Security Threats and Threat Actors
 - Detection and response against sophisticated, target, multi-faceted attacks over (critical) cyber infrastructures.
 - Anomaly detection, visualisation tools, big data analysis, threat analysis, deep-packet inspection, protocol analysis, forensics, etc. + interdisciplinary research.
- DS-08-2017: Privacy, Data Protection, Digital Identities
 - Privacy-enhancing Technologies (PET) :
 - Privacy Risks Management Framework
 - General Data Protection Regulation in practice:
 - Assist organisations to implement the GDPR
 - Secure digital identities:
 - Evidence based Ids (correlation of soft proofs of Id)
 - Pseudonyms
 - Verification of mobile Id docs
 - leverage existing European electronic identification and authentication platforms

17:00-17:45

Cluster discussion / Conclusions (45 min)
30 min. Start planning next joint event.
15 min. Conclusions and wrap up.

- See wrap-up minutes