

Trusted and compliant clouds community

“Trusted and compliant cloud” is slowly becoming the leitmotiv of several parallel and sometimes interrelated researches, strategic or innovation initiatives.

Strategy and industry level

In accordance with the European Commission’s communication on "Unleashing the Potential of Cloud Computing in Europe", strategic Trusted Cloud Europe White paper is issued in 2014 and can be accessed at : <https://ec.europa.eu/digital-agenda/en/news/trusted-cloud-europe>
Inputs in this document represent the positions of European Cloud Partnership (ECP) as well as individual contributing members of the underlying working groups, regarding the issues and use cases such as storing personal data in public clouds is problematic when data is legally considered as sensitive. This strategic initiative had an echo in individual ECP member’s offerings such as in the case of Atos Helix Nebula (<http://blog.atos.net/blog/2015/02/13/building-trusted-cloud-service-european-businesses/>) or HP Cloud 28+ initiative (<http://cloud28plus.eu/>)

Innovation level

The European Institute of Innovation and Technology (EIT) is a body of the European Union which was established on 11 March 2008, while EIT ICT Labs was established in 2010 as one of the first Knowledge and Innovation Communities of the EIT. The Strategic Innovation Agenda 2014-2016 "Blended Life in a Connected World" (<http://www.eitictlabs.eu/>) includes action lines both in future cloud as well as in privacy and security. The European Trusted Cloud Platform is Future Cloud action line's high impact initiative (HII). The initiative started in Q4-2014 with a goal of creating a solid basis for a trusted European cloud business and more info can be found at: <http://www.eitictlabs.eu/innovation-entrepreneurship/future-cloud/>

Privacy Security & Trust action line, on the other hand, lacks HII , but contains projects such as HC@Works that deal with new privacy-preserving technologies for the cloud.

The **ICT Policy Support Programme** (or ICT PSP) also aims at stimulating innovation and competitiveness and contains a relevant number of innovative “trusted cloud” projects. These project focus on cloud in public sector, but security and privacy are very important elements in Strategic (<http://www.strategic-project.eu/>) , CLIPS (<http://www.clips-project.eu/>) or Cloud4Europe (<http://www.cloudforeurope.eu/>)

Research level

The clusters of EU research projects exist both in FP7, as well as in H2020 research frameworks: one if the assembling the cloud researchers interested in security and privacy issues, while the other is cluster around cloud & security topics co-founded by security research unit.

Concentration and cluster meetings have an old tradition, since early Framework Programmes (e.g. first RACE Programme, FP2, 1987-1992). The latest concentration or cluster meeting in cloud research was organized by CloudWatch project in March 2015, for all active projects under the remit of the Unit CNECT.E2 Software & Services and Cloud Computing, although other EU-funded projects were also welcome to participate. In this occasion, privacy and security cluster has been identified.

So called “Project Cluster on Data protection, Security and Privacy in the Cloud” is coordinated by Erkuden Rios from Tecnalía, project coordinator of MUSA project (1st of Jan launched H2020 project) that will facilitate the launching and operation of the Cluster together with Francisco Medeiros from E2 unit. The strategic objectives of the Cluster are to maximize the impact of EU R&D project results in the areas of Data Protection, Security and Privacy and to ensure the market orientation and adoption of EU R&D project results in the areas of Data Protection, Security and Privacy.

Identified candidate participant projects include (some are cloud research some are security research projects):

- MUSA (secure multicloud)
- CLARUS (user centric privacy and security – crypto and non-crypto)
- ESCUDO-CLOUD (enforcement)
- ENTICE (data ownership)
- SERECA (overcome trust in CSP)
- SUPERCLOUD (user centric security and dependability)
- PAASWORD (access control)
- ALIGNED (data integrity)
- SWITCH (time critical apps)
- SLALOM (to embed security & privacy in cloud SLAs)
- SPECS (secure cloud SLAs)
- A4CLOUD (accountability)
- TRESCCA (embedded systems)

In security research, cloud security projects have been managed by H4 unit of DG INFSO that has changed name in 2012 to DG CONNECT. In H2020 this research has been further separated from cloud research since the topic is now part of Digital Security theme within the Secure Societies Challenge. During the 2013 and 2014, a dedicated support action CIRRUS was acting as a hub for the information exchange around cloud security and privacy projects. However, this project finished in December 2014. The main concentration and clustering in 2015 happened around CSP forum, run by SECCORD project, and the most recent event was on April 28-29th 2015 in Brussels. Although no formal commitments have been made, some collaboration was discussed between projects such as Coco Cloud (initiator of this cluster), A4Cloud, Specs, Witdom, PrismaCloud, Cumulus and Tredisec. This collaboration is structured around three basic levels:

- Awareness (e.g. link exchange on the web site)
- Joint event planning
- Joint test beds and reuse of components developed by the other projects

Joint event in Q2 2015

On May 11th, conference call found place with the participation of representatives from Coco Cloud, Witdom, A4Cloud, Specs, Tredisec, PrismaCloud, Cumulus and Strategic. The objective was to discuss options for organization of a joint event, as well as possible structure of such an event.

The conclusions are:

- The event would be one day event with the first part reserved for mature projects with some project results (A4Cloud, Coco Cloud, Specs), while the second part would be for the new projects (Witdom, Tredisec, PrismaCloud). In this way, the FP7 project results could be reused in the new H2020 projects.
- The focus in the first part of the workshop would be in interaction, overlap and complementarity between privacy level agreements (PLA) in A4Cloud, data sharing agreements (DSA) in Coco Cloud, security level agreements (SecLA) in Specs and their overall integration in the SLA (service level agreement).
- The focus in the second part would be on the presentation of new projects in order to detect possible synergies.

- These are main options for a low cost event in Q1 2015
 - Co-location with a major event such as Annual Privacy forum. Pro: likely to attract more audience. Against: registration cost might prevent some projects to participate. Action. Wait for ENISA feedback
 - Standalone event hosted by some university. Action: Specs will explore these options.
 - Event co-located with some project meeting. Action: Tredisecc will explore option to co-locate event with the meeting planned in Sophia Antipolis at Eurescom premises.
 - Event organized as a SECCORD cluster meeting. Action: Atos and HP will explore this option.