

Main Project Information

The mission of PRACTICE is to design cloud computing technologies that allow computations in the cloud, thus enabling new business processes while keeping the used data secret. Nowadays, organizations no longer completely control their own data, but instead hand it to external untrusted parties for processing and storage. Currently, there are no satisfactory approaches to protect such data and therefore, PRACTICE has assembled key experts who will work towards providing privacy and confidentiality for computations in the cloud. PRACTICE will create a secure cloud framework that allows for the realization of advanced and practical cryptographic technologies providing sophisticated security and privacy guarantees for all parties in the cloud-computing scenarios. The main aims of the PRACTICE project are:

- **Data confidentiality and integrity**, eliminating need for users to trust cloud providers
- **Computation on encrypted data**, preventing insiders from disclosing secrets or disrupting the service
- **Flexible architecture and tools** allowing seamless migration from execution on unchanged clouds to-day towards new platforms while gradually adding levels of protection.

This opens new markets where reach has been limited due to confidentiality and privacy concerns.

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Message from the Coordinator

With this newsletter, we intend to open a new communication channel in order to provide news on the project progress and discuss ongoing topics relevant to PRACTICE for both internal and external project partners, stakeholders and all other interested bodies. For more detailed information we warmly invite you to have a look on our project website, which we constantly keep up to date with the latest project related news: www.practice-project.eu. The project has successfully started with the Kick-Off meeting in November 2013 in Darmstadt and since then the project has been in its initial stages of formation. Use cases and their requirements are being defined and partners are exchanging knowledge about software artefacts and theoretical tools they are bringing to the project. The PRACTICE project has a well-balanced and focused Consortium - comprising 18 partners from 11 countries - and brings together 2 leading European industrial companies as well as application field focused partners, 1 Turkish end-user producer for consumers and industry, 3 European research & development oriented SMEs, 3 non-profit research companies, 8 leading European universities and one of the largest and most established universities of Israel.



Upcoming Events:

DIMACS Workshop on Secure Cloud Computing

27th March, Rutgers University, New Jersey/USA

Technical Meeting

31st March - 2nd April, Berlin

Workshop: Theory and Practice of Secure Multiparty Computation

5th - 9th May, Aarhus

Key Data:

Start Date: 1 November 2013
End Date: 31 October 2016
Duration: 36 months
Project Reference: 609611
Project Costs: € 10.465.059
Project Funding: € 7.550.000

The PRACTICE project has received funding from the European Union's Seventh Framework Programme (FP7/2007-2013) under grant agreement number ICT-609611.

Consortium:
Project Coordinator:

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Scientific Leader:

Project Website:

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Project Progress

The work plan for the PRACTICE project is structured into three Activity lines and tightly integrated work packages:

Activity 1 - "Specification, Design and Implementation of Protocols" - is concerned with the definition and the implementation of the necessary protocols and algorithms. Current activities are focused on the definition of a broad range of use cases not all of which are likely to be executed in practice, but aiming to show the possible scope of the PRACTICE work.

Activity 2 - "Tools, Applications and Prototypes" - is aimed to the development of several tools useful for cloud applications using secure computations, including language/compiler-based application frameworks, database and application servers, and other deployment tools. Current activities are concerned with the collection of the state-of-the-art in software tools (WP22) and the definition of precise requirements for the supply chain use case (WP24)

Activity 3 - "Information Sharing and Project Organisation" - is mainly responsible for wide and effective dissemination as well as the proper programme management that ensures timely and high-quality delivery of all results. Furthermore, this activity is concerned with risk assessment techniques for data sharing and the analysis of the legal aspects of data protection. Current activities are focused on the analysis of the European laws on data protection and on the actions devoted to the project set-up, including the setup and maintenance of IT services (website, communication infrastructure, etc.) and the organization of the kick-off meeting.

Ongoing Activities

After the successful project kick-off each partner has looked into their tasks within the particular WPs and started progress towards the objectives. The first deliverable "[D33.1-Project website and internal and external IT communication infrastructure](#)" has been submitted, and "[MS1-Preliminary project infrastructure](#)" has been successfully reached.

Quite some work has been performed in WP2.3 - Secure Statics Prototype. During a Face-2-Face meeting, Cybernetica, Partisia, and Alexandra have been developing a survey prototype. Furthermore, CYBER has conducted an in-company employee satisfaction survey using the Sharemind secure computation technology. The outcome of the survey provides a solid base for analysing work in WP1.2 and WP2.1. Also WP2.4 can report notable progress. DTA has proposed some aeronautic scenarios where data confidentiality limits collaboration and business performances. UWUERZ has defined the objectives and basic requirements for scenario selection and, by applying such methodology, the aeroengine fleet management scenario was selected for further analysis. Currently, DTA is describing the process, modelling the data flow and analysing risks related to data leakage, while UWUERZ is developing the mathematical models for the collaborative supply chain features and computation algorithms.

Upcoming Deliverables & Milestones:

- **D12.1** "Application scenarios and their requirements"
- **D22.1** "State-of-the-art analysis"
- **D24.1** "Business and Security Requirements"
- **R31.1** "Intermediate report on risk assessment and current legal status on data"
- **MS2 A)** "Specification of application scenarios and requirements"
- **B)** "Security and process requirements"

PRACTICE present at past events:

- **18th International Conference on Financial Cryptography and Data Security 2014**
3rd-7th March 2014, Barbados
- **4th Bar-Ilan Winter School on Cryptography - Symmetric Encryption in Theory and in Practice**
27th-30th January 2014, Ramat Gan/Israel
- **Real World Crypto Workshop**
13th-15th January 2014, New York/USA

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