

Workshop on

“Standardisation and certification of QKD systems and QKD networks”

The need for standardisation and certification in the field of Quantum Key Distribution is an ever-pressing need for a successful roll-out and deployment of large-scale QKD networks. For European entities to play a larger role, an orchestrated approach to standardisation and certification is needed.

To kick-off such an initiative, AIT – Austrian Institute of Technology is launching a series of workshops on those topics.

You are cordially invited to attend the first workshop on “Standardisation and certification of QKD systems and QKD networks”.

Date/time: 28th of September, 10:00 – 12:30 CEST

Target audience: European industry, SMEs, academics and EU commission representatives

Workshop format: This workshop will not be recorded. We will give participants the chance for an open dialogue.

Dial-in link: Microsoft Teams-Besprechung

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Oder anrufen (nur Audio)

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Agenda (draft):

10:00 – 10:05 Welcome (Hannes Hübel, AIT Austrian Institute of Technology)

10:05 – 10:20 Overview presentation of the current standardisation landscape

- a. **Duration:** 15 minutes
- b. **Moderator:** Andreas Poppe (AIT)
- c. **Presenters:** Vicente Martin (Polytechnic University of Madrid)
- d. **Objective:** providing the baseline; i.e. general common understanding of the available information and document basis
- e. **Scope:** Overview presentation of the existing QKD relevant technical documents covering:
 - i. Terminology and general issues
 - ii. Overview of active SDOs (ETSI, ITU-T, CEN/CENELEC, ISO)
 - iii. Quantum safe cryptography for modern ICT systems
 - Security standards for QKD technology
 - QKD network standards
 - Key Management System – Application Interface (KMS)
 - Software Defined Networks (SDN)
 - Trusted Node (TN)
 - Quantum Random Number Generator (QRNG)

10:20 – 11:00 Discussion of processes and existing plans of relevant standardisation bodies

- a. Duration: **30 minutes + 10 minutes Q&A**
- b. Moderator: Hannes Hübel (AIT)
- c. Presenters:
 - i. ETSI (10 minutes): Martin Ward (Toshiba Europe)
 - ii. ITU-T (10 minutes): Helmut Grießer (ADVA)
 - iii. CEN/CENELEC (10 minutes): Marius Löffler (DIN - German Institute for Standardization)
- d. Objective: review on the activities in the individual SDOs on quantum communications
- e. Scope: presentation of the existing plans of the various relevant standardisation bodies and working groups

Break (10 min)

11:10 – 11:40 Presentation on activities concerning security standards and certification

- a. Duration: **20 minutes + 10 minutes Q&A**
- b. Moderator: Andreas Poppe (AIT)
- c. Presenters:
 - i. Integration (10 minutes): Matthieu Legré (IDQuantique)
 - ii. Certification (10 minutes): Manfred Lochter (BSI)
- d. Objective: review on the security activities in the individual SDOs on quantum communications:
 - Security standards
 - Certification (protection profiles)
 - Integration of QKD in the current security ecosystem
- e. Scope: presentation of the existing security standards for QKD systems and plans for certification.

11:40 – 12:05 Presentation and discussion of the relevant standards needed for building large QKD networks

- a. Duration: **20 minutes + 5 minutes Q&A**
- b. Moderator: Andreas Poppe (AIT)
- c. Presenters:
 - i. Gap analysis for trusted nodes and network devices (10 minutes): Walter Jontofsohn (Deutsche Telecom)
 - ii. Gap analysis at the Network plane (10 minutes): Vicente Martin (Telefonica)
- d. Objective: List for a minimum set of standards for EuroQCI
- e. Scope: Identify the main areas where standards should be in place to facilitate roll-out and further expansion of QKD networks.

12:05 – 12:25 Presentation and discussion of standardisation needs for European start-ups

- a. Duration: **15 minutes + 5 minutes Q&A**
- b. Moderator: Hannes Hübel (AIT)
- c. Presenters:
 - i. Sebastian Etcheverry (LuxQuanta Technologies S. L.)
 - ii. Imran Khan (KEEQuant GmbH)
- d. Objective: List the needs in standardisation of start-ups in QKD
- e. Scope: Identify the needs and support options for European QKD start-ups

12:25 – 12:30 Closing