Quantum Key Distribution – Physical implementation and testbed

https://events.geant.org/event/1006/

Piotr Rydlichowski, *QKD technical leader*
Xavier Jeannin, *GN4-3 WP6 T1 task leader*
Susanne Naegele-Jackson, *GN4-3 WP6 T0*

GÉANT Infoshare, 15th October 2021

www.GÉANT.org

GÉANT Infoshares are intended to create a space to engage, improve knowledge sharing and discussion about services and strategic topics, and to build a human network across the Research and Education community.

Co-organised by Network Technologies and Services Development Work package (WP6), together with GÉANT Partner Relations Team, within the Community Programme

Public Infoshares are on Wednesdays and are recorded

Other Infoshares will be 'invitation only' events on other weekdays

Go to the main Infoshares Wiki page to suggest future topics

Recordings are available in the e-Academy, GLAD website and on Wiki pages after the event

Questions: partner-relations@GÉANT.org

Network Technologies and Services Development approach

- **Make European NRENs "quantum aware"**
  - dissemination activities: Infoshares, workshops
  - White paper**: Quantum Technologies Status Overview for the GÉANT NREN community** (https://www.geant.org/Resources)
  - Quantum WIKI: https://wiki.geant.org/display/NETDEV/QKD
  - Training, if NRENs are interested

- **Technology testing:**
  - Collaboration with NRENs, Research projects and industry

- **Exploring QT solutions for GÉANT**

- **Standardisation**

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WP6 - Quantum Key Distribution Team

- Contact us at
  qkd-discuss@lists.GÉANT.org or **quantum-discuss@lists.geant.org**

- **Piotr Rydlichowski**, PSNC - **QKD technical leader**

- Rudolf Vohnout , Josef Vojtech, Pavel Skoda, CESNET

- Peter Kaufmann, Susanne Naegele-Jackson, DFN

- Guy Roberts, Domenico Vicinanza, GÉANT

- Andor Jeszenszky, KIFU

- Prof. Andre Xuereb, University of Malta

- Chrysostomos Tziouvaras, GRNET

- Xavier Jeannin , task leader

- Ivana Golub, Work Package Leader

- Tim Chown, Work Package Leader

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Your feedback is crucial

- An interactive infoshare
  - Please **use the Zoom chat** to submit your questions
  - Q/A at the end of each session

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Two infoshares

Quantum Key Distribution - Simulation

- https://events.geant.org/event/991/
- Simulator tools for team training and design

Quantum Key Distribution, Physical implementation and testbed

- https://events.geant.org/event/1006/
- Physical testbed and implementation

Dissemination material

- **Infoshare**: "Quantum Principles" - GEANTtv YouTube channel: https://youtu.be/eZN41xyfUr4 - https://events.geant.org/event/353/
- **Infoshare**: "QKD - Practical Implementations, Challenges, R&E Use Cases …" - GEANTtv YouTube channel https://www.youtube.com/watch?v=Bg1vZQ_arOY | https://events.geant.org/event/453/
- **White Paper**: "Quantum Technologies Status Overview" - https://www.geant.org/Resources/Documents/GN4-3_White-Paper_Quantum-Technologies-Status-Overview.pdf

Quantum Key Distribution Simulation

[14:00 - 14:05] Introduction and Welcome – Piotr Rydlichowski (PSNC)

[14:05 - 14:20] QKD line implementation between Ostrava - Cieszyn- Josef Vojtech (CESNET)
Piotr Rydlichowski (PSNC)
[14:20 - 14:45] CESNET testbed – Rudolf Vohnout (CESNET)
[14:45 - 14:55] Q/A session

[14:55 - 15:00] Coffee Break

[15:00 - 15:15] QKD PoC between two GEANT PoPs - GEANT & Toshiba
Piotr Rydlichowski (PSNC) on behalf of Domenico Vicinanza (GEANT)
[15:15 - 15:35] European Quantum Communication Infrastructure call (QCI)
Prof. André Xuereb
[15:35 - 15:50] PSNC testbed - Piotr Rydlichowski (PSNC)
[15:50 - 16:00] Q/A session

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Thank you

Any questions?

Share with us your feedback at
qkd-discuss@lists.GEANT.org

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