Partisia

QUANTUM

How do we protect data today

so that it remains secure for the future?

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Imagine being able to compute on all the world's data

Imagine the breadth of research, breakthroughs, and Quantum and AI-driven solutions you could build if you had access to the rich cache of sensitive data that we all keep confidential.

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A platform for privacy preserving data solutions

Pioneer in privacy enhancing technology solutions

+80 experts, software and commercial. World renown cryptography experts. World renown management and R&D team in commercial use of MPC and Blockchain.

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It took decades to combine the two

Unique combination of core technologies

Computing nodes
Global collaboration

Privacy
Enabling Privacy Enhancing Technologies (PETs) to securely process and share sensitive data without revealing it

MultiParty Computation (MPC), Fully Homomorphic Encryption (FHE) and Zero-Knowledge Proof (ZKP)

Privacy

Partisia Platform
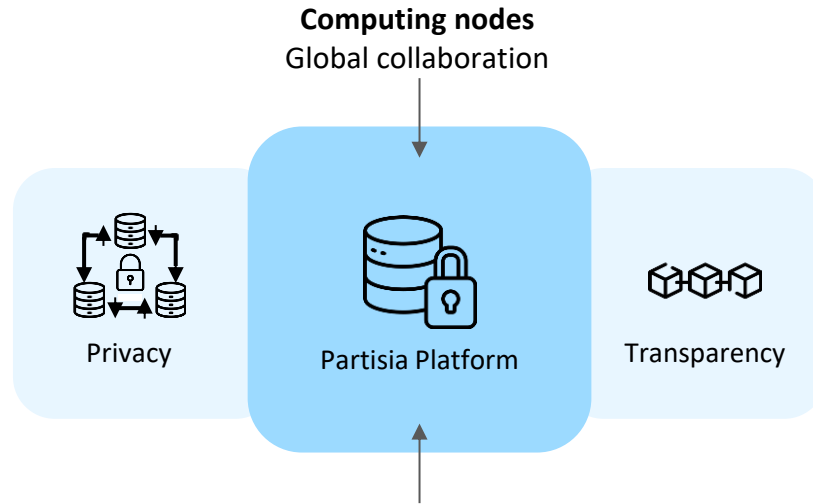
Transparency

Transparency
Ensuring transparent orchestration of PET and automated computation

Unique blockchain with unlimited sharding (scalable like cloud computing) and unique bridging for interoperability
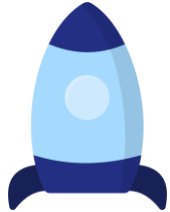
Future proof infrastructure
Runs on all infrastructures

Classical computers, Trusted Execution Environments (TEE) and Quantum Technologies

Step by step

Quantum Rocket
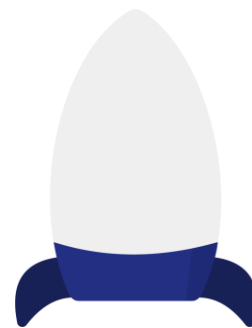
Harnessing the full value of Quantum technologies

Step 3. Securing quantum computation

Step 2. Securing quantum communication

Step 1. Deliver post-quantum security

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Step 1:
Deliver post quantum security
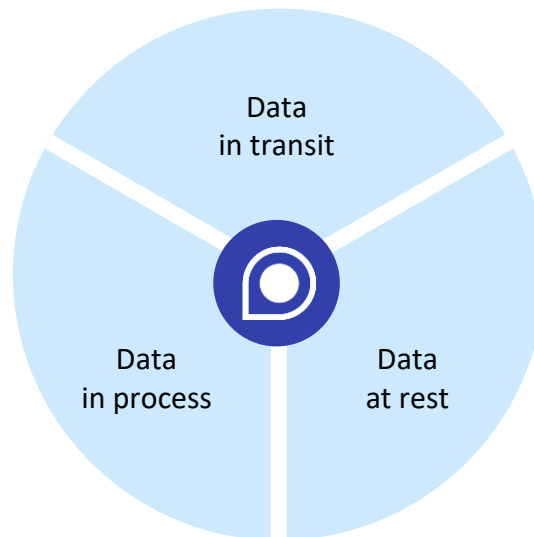
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Traditional Cryptography will fail!

"Harvest Now, Decrypt Later"

NIST finalized FIPS 203, 204 and 205 - now is it all about implementation work

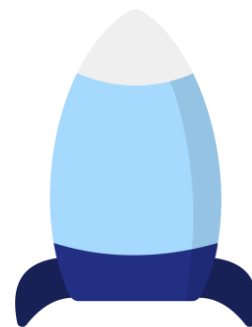Multiparty Computation is Quantum Safe by Design

step 1

Protecting data in all stages
"With no single point of trust"

Data
in transit

Data
in process

Data
at rest

Pioneered and used commercially since 2008
by Partisia

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Step 2:
Unconditional secure communication

Post-Quantum Authentication is needed for Absolute Confidentiality through a quantum channel

Post-quantum Authentication requires Key Management for key generation and protection

Significant challenges with trusted nodes and many different points of attacks
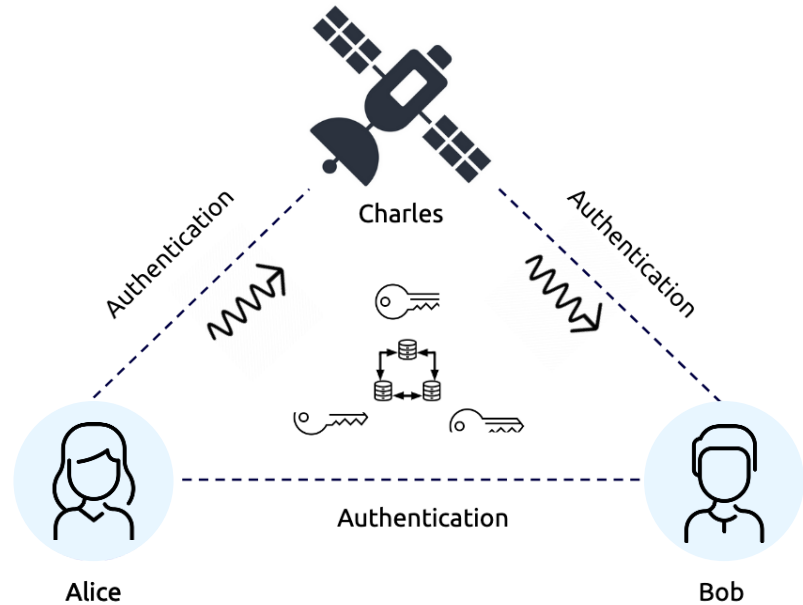
step 2

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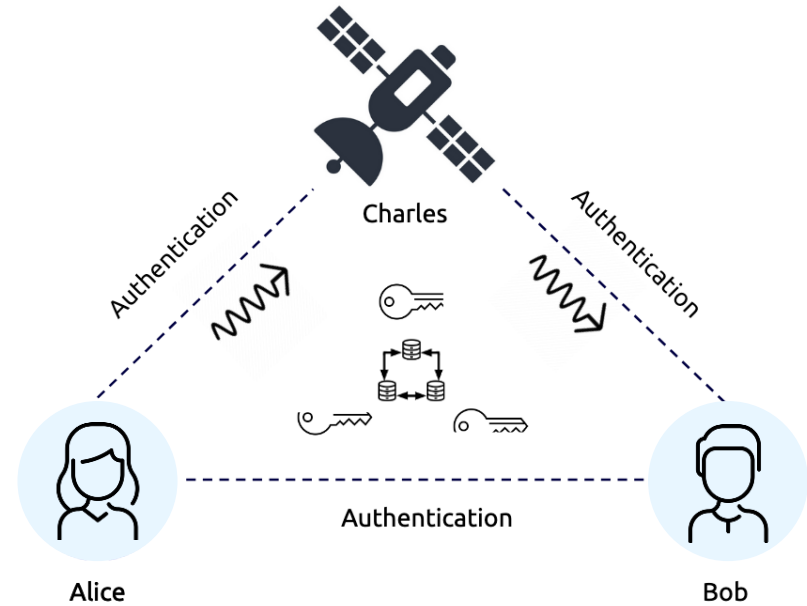
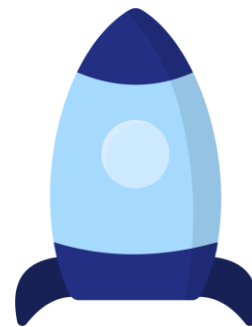Hybrid implementation of QKD and PQC key agreement mitigates trusted node risk

Post-quantum Threshold Multiparty Computation Key Management

Disjoint network paths for redundancy and node corruption mitigation

(Teaser) This could potentially be used for even more……

step 2

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Step 3:
Secure Multi-Party Quantum Computations
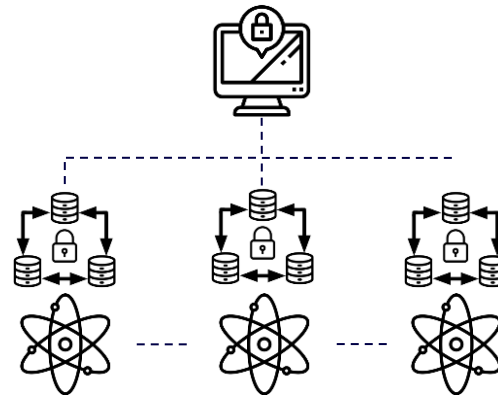
![Partisia]

Privacy by Design!

Solve connecting any Quantum computer to data without breaching privacy or encryption

Enable Cloud Quantum computer to calculate on confidential information

Secure Multiparty Quantum Computing makes quantum computations secure, transparent, private, and running with only very light clients... (Teaser)
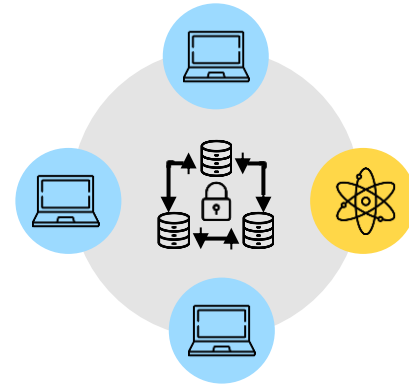
Classical use of MPC

Advanced MPC based QC

What is this useful for?!

… How about prediction of financial fraud!

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Orchestrating and improving fraud detection

Financial Fraud Detection

Developed Proof-of-Concept with UK financial regulators and ongoing work with banks and regulators

The solution
- Include more private information in detecting suspicious transactions using two-party MPC (across sender and receiver)
- Detecting crime rings with general MPC and statistics (facilitating collaboration between banks and law enforcement)

Highlights
- PoC developed in 2019
- Ongoing work with regulators and banks

FCA FINANCIAL CONDUCT AUTHORITY

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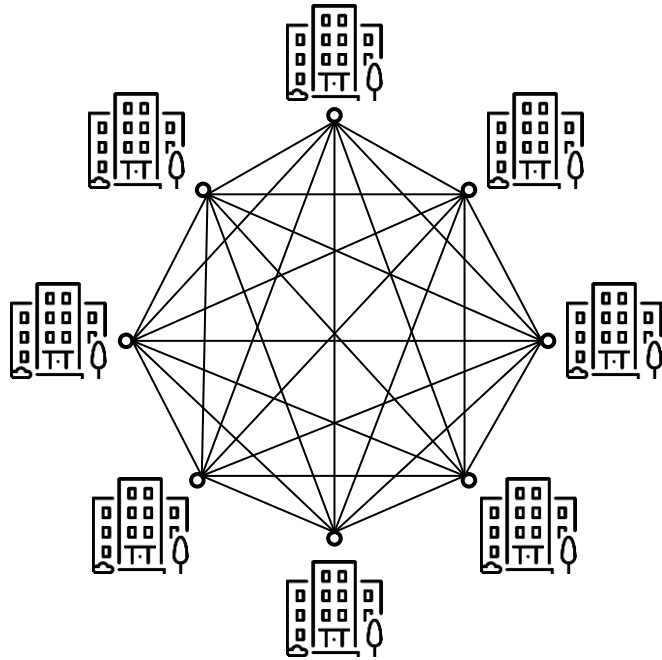
Connecting banks like never before

New possibilities

Post-Quantum protection for every bank
- Banks uses PQC protocols for protecting our data at rest and in transit

Unconditionally Secure Communication
- Secret sharing for unconditional security at rest
- QKD - PQC for unconditional security in transit

Secure Multi-Party Quantum Computation
- The power of quantum computing available for the network

Let's connect!

Stay informed about the Partisia Platform and our technology. Sign up for our newsletter and be the first to receive the latest updates and insightful articles straight to your inbox. Subscribe now and stay connected.

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