ARQIT

Product Sheet

Encryption Intelligence

# Encryption Intelligence

## Encryption Risk Discovery and Advisory Service

### Gain visibility of encryption weaknesses and prepare for quantum security

Arqit helps organisations gain a deep understanding of their encryption landscape. Encryption Intelligence discovers, classifies and analyses encryption usage and vulnerabilities within enterprise traffic flows. The insights provided by the Encryption Risk Advisory Service enable businesses to create effective remediation plans that address data security risks within their business processes and mitigate man-in-the-middle attacks as well as Store Now, Decrypt Later[1] (SNDL) quantum attacks.

*[1]SNDL attacks – Encrypted data is harvested today and stored by adversaries with the intent to decrypt it in the future when quantum computers reach sufficient maturity.*

## Challenges

1. Visibility of application traffic usage, where it is flowing and how it is protected
2. Identifying encryption weaknesses exposed by enterprise devices and apps
3. Continuous monitoring and remediation of encryption risks
4. Planning and migrating to quantum-safe encryption
5. Adoption of easily deployed, rigorously managed, costeffective quantum-safe solutions

## Solution

Encryption is a foundational security control for data protection, however as technologies evolve and data proliferates across hybrid cloud, SaaS and BYOD, the attack surface is ever-growing and presents significant business risks. Understanding data usage across the enterprise, identifying weak encryption technologies and remediating them will help prevent data and reputational loss and preserve trust with customers. Developing crypto-agility is an essential capability that will help organisations migrate to new, more secure cryptographic algorithms and primitives efficiently and rapidly. Government agencies worldwide, including the White House, have advised organizations to start preparing for the migration to post-quantum cryptography by conducting a prioritised inventory of cryptographic systems. Encryption Intelligence delivers detailed insights into the use of encryption across an organisation. The Encryption Intelligence SaaS product and network probes discover and analyse encryption weaknesses in network traffic and Arqit consultants provide actionable intelligence to help businesses prepare remediation plans to mitigate encryption risks, including PKI asymmetric key agreement algorithms which are vulnerable to the quantum threat.

## Benefits

- Uncover encryption technologies in use across the enterprise by applications, cloud services and devices
- Gain visibility into obsolete or weak encryption schemes at gigabit scale – find, classify and analyse risks in real-time
- Build an Encryption Inventory - AI automation adds rich, granular context to the use of encryption for each application flow to enable better risk mitigation decisions
- Identify and prioritise current and future risks to help prepare an effective mitigation plan to address existing encryption weaknesses and protect against the quantum threat
- Enables conontinuous monitoring* of the encryption landscape for new ciphers, protocols and vulnerabilities

**Requires separate Encryption Intelligence SaaS subscription.*

## Simple Cloud Deployment

Encryption Intelligence technology can be installed and analysing encryption within minutes. Data is collected from across the organisaton infrastructure, analysed in-situ, and forwarded to the SaaS platform for deeper, automated analysis.

## Data Collection

A range of data collectors can be deployed to suit the needs and infrastructure of the organisation.

- Physical network appliance
- Virtualised appliance (VM or container)
- Endpoint agent for desktop
- Web browser plugin

## Reporting and visualisation

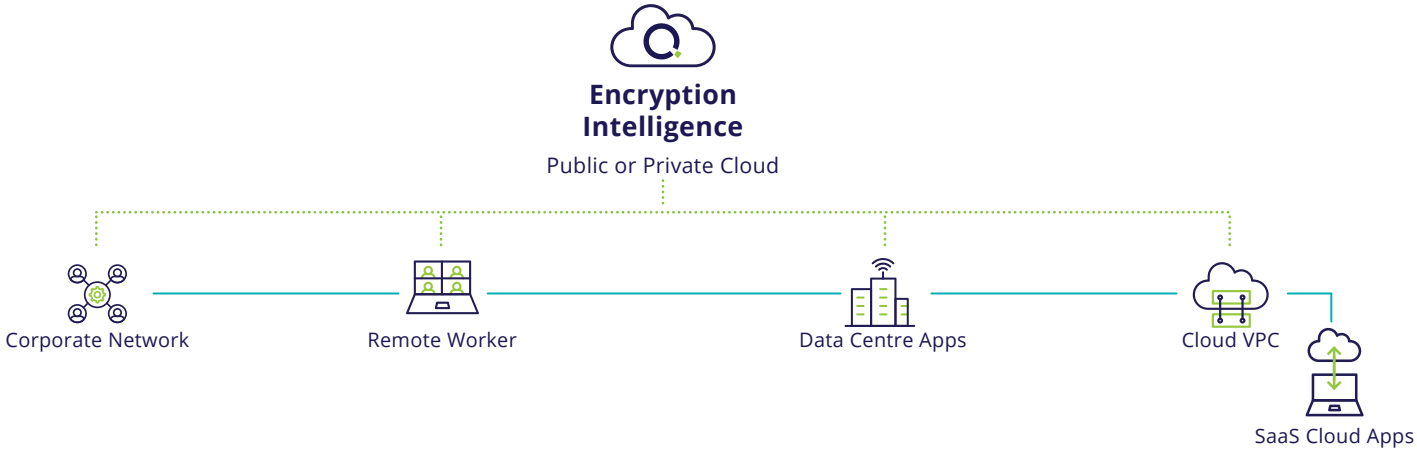
Dashboards and reports within the Encryption Intelligence web application provide a detailed view into the encryption landscape, help build a business case for risk mitigation and monitor and track progress to full encryption security.

## Integration with security tooling

Encryption Intelligence provides APIs and flexible integration points to integrate it with any existing security monitoring infrastructure via the organisational SIEM and SOC.

## Encryption Intelligence

Discover, classify, analyse encryption vulnerabilities in application traffic flows across an organisation.




The Encryption Risk Advisory delivery process consists of the following phases:

- **Kick-off Workshop**
  Our consultants will organise and run a kick-off workshop to define the engagement scope, high level objectives, resource and technical requirements. A Planning Guide will be produced outlining the project goals, tasks and timelines, deliverables and outcomes to align expectations.
- **Data Collection Design**
  Arqit work with technical teams to scope and plan data collection from the organisational network.
- **Technology deployment and data collection**
  Data collector probes will be installed, configured and tested. An Encryption Intelligence SaaS tenant will be set up to aggregate, analyse and report on the data collected over a period of several weeks. If required, traffic generation tools for classic and postquantum cryptography (PQC) encryption can also be deployed.
- **Education and Analysis**
  During this phase, our consultants will perform an analysis of the data collected to develop a view of the organisation's encryption landscape. This includes interactive workshops to educate stakeholders about encryption risk. Analysis results are made available in the Encryption Intelligence web portal.
- **Reporting and Recommendations**
  Our consultants will present key findings and identify areas of improvement, and potential mitigation solutions. A report is produced detailing the results and recommendations for short and long-term actions.

**Contact us**
To learn more about how Encryption Intelligence can help your organisation assess encryption weaknesses and prepare for migration to quantum-safe encryption technologies, please contact enquiries@arqit.uk