**IoT Cloud**

**eSIM**

- eSIM already deployed and managed by OTA can offer new secure remote provisioning (Over-The-Air) and “speak” the same cellular IoT by 2027.

**Operators (MNOs)**

- Billions of SIM and capitalize on their Mobile Network experience with IoT services and all the players.

**Hardware cryptographic toolbox**

- Inside a hardware standardized:
  - **Scalability**
  - **Simplicity**
  - **Security**
  - **Dependability**
  - **Cost effectiveness**

**IoT SAFE**

- **What is IoT SAFE?**
  - Multiple form factors: removable, embedded in the device, embedded in the chipset.
  - A cryptographic toolbox based on tamper resistant element stores private keys, digital certificates and security services.
  - Billions of devices already in the field field proven.
  - IoT SAFE leverages SIMs and eSIMs, which are standardized and already present in cellular devices.

**Sources:**

1. Ericsson mobility report, November 2021
2. IoT Attacks Skyrocket, Doubling in 6 Months, Threatpost, September 2021
3. IoT devices will count for billions and security becomes as important as connectivity. Thales IoT SAFE delivers scalable cyber security for IoT

**IoT SAFE has key benefits compared to other solutions:**

- Scalability
- Bill or fraction of CAPEX
- Security
- Data confidentiality
- Data integrity
- Mutual authentication
- Security by design
- Touchless provisioning

**Our Thales IoT SAFE service**

- Key Stakeholders for the IoT
  - Infrastructure Providers
  - Public Cloud
  - Service Providers
  - Fleet Managers
  - OEMs
  - Mobile Network Operators

**Smart Home**

- Health monitoring (Blood pressure)
- Smart energy
- Smart healthcare

**The IoT combines a wealth of commercial opportunities with profound security challenges.**

**5.5 billion IoT attacks**

**4 IoT use cases will drive growth in cellular connectivity**

- Touchless
- Fleet Management
- Smart Energy
- Consumer monitoring (Energy efficiency)

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- Fleet Management
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**IoT SAFE delivers scalable “security by design” for the IoT**

- IoT SAFE leverages SBDCs and eSIMs, which are standardized and field proven.
  - IoT SAFE is a client/server service and provides an interoperable and scalable security framework.
  - IoT SAFE is an Industry Specification standardized by the GSMA with the contribution of all industry players: IoT Service Providers, Cloud Providers and Fleet Managers, OEMs, Service Providers and fleet managers, and Mobile Network Operators.

**What are the benefits for stakeholders of IoT SAFE?**

- IoT SAFE enables mutual trust between the cloud and IoT devices, which is built on the ‘security by design’ for the IoT.
  - Device and the IoT Service Providers: increased revenues from minimized security risks.
  - Cloud Providers & Fleet Managers: Touchless provisioning, secure access to their cloud and IoT devices, which is built on the ‘security by design’ for the IoT.
  - Public Cloud: Touchless provisioning, secure access to their cloud and IoT devices, which is built on the ‘security by design’ for the IoT.
  - Public and private IoT Service Providers: Touchless provisioning, secure access to their cloud and IoT devices, which is built on the ‘security by design’ for the IoT.

**Contact us:**

https://www.thalesgroup.com/en/dis-contact-us

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**Hardware cryptographic toolbox**

- Field proven
- IoT SAFE is field proven.

**Bill of materials**

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