The Things Industries partners with CYSEC to offer a new dimension to LoRaWAN® security

Lausanne, Switzerland and Amsterdam, The Netherlands – April 30th, 2020 - The Things Industries, a global LoRaWAN® Network provider, creators of The Things Network and contributor member of the LoRa Alliance, is partnering with CYSEC SA, a cybersecurity company from Switzerland, to offer a **highly secure on-premises LoRaWAN network** deployment for enterprise customers.

Enabling Secure Execution of On-premises LoRaWAN operations

The Things Industries is a full-service Internet of Things (IoT) service provider, specialising in LoRaWAN communication and offering an enterprise-grade LoRaWAN Network Server for a wide range of applications including smart agriculture, smart city and smart building.

The Things Industries founded The Things Network, a global LoRaWAN data network with a set of open tools to build IoT connectivity that currently spans across 100+ countries around the globe and operating thousands of gateways providing coverage to millions of people.

As the number of connected devices using the LoRaWAN network continues to grow in various sectors, security has been and will be a fundamental concern. The LoRaWAN architecture has been taking security into consideration from the very beginning by integrating end-to-end encryption and using well-vetted algorithms. A thorough implementation remains paramount to ensure the cyber resilience of private and mass-scale deployments.

This includes implementing a physical root of trust for the cryptographic secrets that are used to authenticate the devices connected to the network and to encrypt the data in transit.

CYSEC provides a solution to this problem by integrating The Things Industries' LoRaWAN Join Server and Network Server into its Trusted Execution Environment called "ARCA". ARCA is a physical appliance which enables the secure deployment of private LoRaWAN networks on-premises by generating, storing and managing the cryptographic keys required by the Application Server and Network Server in a Hardware Security Module (HSM).

Using ARCA in the backend to run The Things Industries' LoRaWAN stack perfectly complements the partnership of The Things Industries with Microchip Technology, who jointly introduced an embedded Secure Element allowing the secure provisioning, storage and usage of LoRaWAN keys in combination with the internal cryptographic algorithms.

The resulting implementation will offer end-to-end cybersecurity using physical root of trust on both the devices and the back end, enabling Enterprise customers to build mass-scale, long-range and low power data networks combining reliability and security.

> *Cybersecurity is becoming more and more important as LoRaWAN private networks are scaling up. We want our Enterprise customers to benefit from the best solutions available without putting the burden on them to set up their own backend infrastructure. Thanks to CYSEC we are able to offer them an integrated solution with state-of-the-art performance and an easy, quick and cost-efficient implementation that complements our partnership with Microchip.*
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> — Wienke Giezeman, CEO at The Things Industries

LoRaWAN is a great example of innovation reaching mass adoption and requiring serious cyber protection. Our secured environment ARCA offers the best compromise between the security of well-proven physical hardware with quick and easy implementation using the latest virtualization tools. We're delighted to work with a leader in the LoRaWAN ecosystem and to contribute to the growth of the technology

— Mathieu Bailly, VP IoT at CYSEC

About The Things Industries

The Things Industries (TTI) is a well-established LoRaWAN connectivity and services provider. With a global installed base of over 20'000 gateways, >100'000 users and 200+ enterprise customers, we assume a leading role in the global ecosystem. TTI's mission is to break down the complexities of LoRaWAN development, allow for integration and interoperability across the supply chain, and lower the TCO of LoRaWAN implementations. TTI envisions an open and neutral global network, just like how the internet was built. TTI continuously brings disruptive innovations to the market, in collaboration with credible partners. Its core product is the LoRaWAN Network Server. Secure by design, purpose-built to meet the needs of our customers' global deployments: flexible, scalable, and robust.

For more information, please visit www.thethingsindustries.com

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About CYSEC

CYSEC SA is a cybersecurity company based at the EPFL Innovation Park in Lausanne, Switzerland, whose mission is to shorten the time-to-market of innovative services by facilitating their integration into a secured IT environment. In order to achieve its mission, CYSEC developed a general-purpose security platform called ARCA able to store data and execute applications in a Trusted Environment. By lowering down the barriers to protect data and software, CYSEC enables its customers to benefit from a whole new level of flexibility and agility which is a game-changer today considering the fast- pace at which security and business requirements evolve. CYSEC focuses on the provision of its cybersecurity solutions in four vertical sectors, namely financial services, IoT, space and telecoms.

For more information, please visit www.cysec.systems

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The Things Industries