

ARUBA ENTERPRISE FOR CANARYBIT
**CONFIDENTIAL COMPUTING:
TRUST STARTS WITH
TECHNOLOGICAL FOUNDATIONS**



SOLUTIONS ADOPTED
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- ✓ Dedicated Servers

Headquartered in Stockholm with a distinctly European footprint, CanaryBit is a company founded in 2020 that develops and provides cutting-edge cybersecurity solutions focused on data protection and regulatory compliance, helping address the challenge faced by organisations reluctant to share their digital assets due to regulatory concerns, compliance requirements, policy constraints, and reputational risks. Its services, brought together in the Confidential Cloud suite, make it possible to create environments secured by Confidential Computing principles across various types of infrastructure, in a completely vendor-agnostic way. Especially active in research, the company is pursuing a trajectory toward next-generation technologies, such as Homomorphic Encryption and Post-Quantum Cryptography, needed to ensure state-of-the-art security in data environments for customers operating primarily in aerospace and defence, energy, automotive, and cybersecurity.

The requirements

Confidential Computing is a foundational technology aimed at creating a secure platform where multiple stakeholders can collaborate by sharing information, data, and applications under reliable and verifiable governance constraints. The core idea is to protect data not only “at rest” (encrypted in storage) or “in transit” (encrypted during transmission), but especially when it is “in use,” meaning while it is being processed. Traditionally, data is processed in clear text, leaving it exposed to potential unauthorised access or breaches. CanaryBit relies on Confidential Computing as the pivot to secure infrastructure and ensure end-to-end data security: a crucial solution for sharing digital assets among partners without giving up confidentiality and exclusive ownership.

CanaryBit began developing such solutions with large cloud providers, at the time the only ones able to provide the hardware platforms

that support Confidential Computing security mechanisms. However, wanting to build zero-trust solutions completely independent of the underlying infrastructure, the company soon needed to complement the cloud with access to physical machines in on-premises environments.

“At first we started with the first machines available from a foreign provider, buying a server to access the technology we needed,” recalls Stefano Cucchiella, co-founder and CTO of CanaryBit. “Even though customer service wasn’t satisfactory, at the time that was the only viable option. Then, as we grew, the need to frequently configure the physical machines, coupled with the increase in our staff, led to operational difficulties with mutual interference among team members. This situation pushed us to equip ourselves with a larger number of physical machines.”

The solution

The search for an alternative provider brought CanaryBit into contact with Aruba, whose range of options for provisioning bare metal servers immediately stood out as broader than that of the previous provider, with the important advantage of newer and more advanced models.

The level of customer support also met expectations: “Aruba has been very

satisfactory because they proved to be competent and extremely responsive. The combination of access to the machines and related support is exactly what we were looking for, so we can focus on our work with the peace of mind that we have the technological foundation we need without surprises or worries,” says Cucchiella.

Benefits

Choosing Aruba simplified machine procurement, enabling CanaryBit to work with a single provider to address all needs related to the different physical configurations the company must be able to experiment with. This made it possible to create a complete “setup pool” on which to test its tool suites and products, effectively replicating customers’ typical on-premises environments through in-house-configured virtualisations.

Aruba’s infrastructure certifications have been useful to attest to the seriousness and robustness of the environment, aligning with CanaryBit’s commitment to European sovereignty and transparency of the technology supply chain. The company

identifies its activities as “Made for Europe,” being strongly guided and influenced by European Union laws and regulations to position itself as an “EU Compliant” solution.

“We have committed to building an entirely European company, from investors to employees, promoting the concept of European sovereignty at the technological and business level,” explains Cucchiella. “With this in mind, we work extensively on European projects, which are a valuable resource to fund product development as an alternative to traditional venture capital investors. Participating in European projects allows us to develop cutting-edge solutions and connect with potential customers.”

Future developments

The current focus of Confidential Computing on processors and execution environments is about to be extended to the network side through Trusted IO, a new technology dedicated to protecting network interfaces that CanaryBit intends to explore, involving Aruba as a potential partner.

The company’s strategic development also

includes the gradual, ongoing evolution of its server fleet: increased capacity and resources will be needed both to create an offering dedicated to Confidential AI, building secure environments for various artificial intelligence activities, and to implement Confidential Computing solutions with next-generation GPU servers.

