



YOUR SECURITY IS OUR CONCERN

# **Stay Safe with Blyott's Security Promises**

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## Let us worry about security so you don't have to

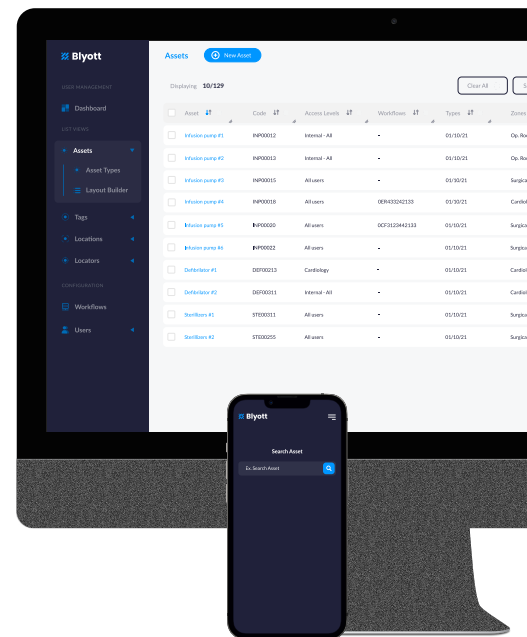
Security is vital for any organization, including hospitals and other businesses operating in the healthcare sector. Flawed healthcare security can put patients at risk, and lives could even be at stake.

As digital transformations evolve, the amount of data increases, ultimately challenging all companies, also hospitals. Think of all the patient data generated, managed, and stored.

Consequently, data protection should be a key concern for the healthcare sector. Patient records and health insurance data are a gold mine for cybercriminals and can sometimes be much more valuable than credit card information.

## What we do to safeguard your privacy and security

- ✓ We follow all industry standards and government regulations to the letter.
- ✓ We're committed to the best practices and security guidelines.
- ✓ Our solutions use the open security standards the OWASP develops and promotes.
- ✓ We protect your data in transit and at rest.
- ✓ Our customers can define data access levels.



## **Secure location-based asset management solutions**

We know that security is a significant concern for our customers, especially those active in the healthcare industry. That's why we've taken every care and precaution to ensure that our location-based asset management solutions are fully secured and protected.

When designing our solutions, we consider security and follow all the industry standards and government regulations to the letter, such as the GDPR for data privacy protection.

In addition, we're committed to the best practices and security guidelines set out by the Open Web Application Security Project (OWASP), a nonprofit dedicated to improving software security. We also integrate the open security standards that the OWASP develops and promotes into our solutions.

The same security promise applies to the data we collect, handle, and store for our customers. Securing that data means protecting it both in transit and at rest.

From transmitting data between devices to storing it on our servers in the Amazon Cloud, encryption improves integrity and guarantees confidentiality at every stage of the journey.

Lastly, we also put mechanisms and policies in place for our customers to define and limit who has access to what data. We often refer to the Principle of Least Privilege (POLP) here.

Essentially, POLP entails restricting users' access to only the data and resources they need to perform routine, legitimate tasks.

Privilege in this context means having the authorization to bypass certain security constraints to gain access to (more) sensitive data.

[READ ABOUT SECURITY ON THE FOLLOWING PAGES.](#) →

## **Encryption is at the heart of our data security**

Encryption ensures that even if unauthorized people gain access to restricted information, their actions will be logged and audited. Because of that audit trail, we can promise our customers full traceability and accountability.

Crucially, all the data our customers entrust us is encrypted at every step. That means the data is useless if a data breach occurs without the public key to decrypt it.

Therefore, this critical piece of our security puzzle is safely stored on our highly-secure Blyott platform and nowhere else. It's also from here the actual decryption processes takes place.

## **The power of BLE asset tracking**

BLE periodically transmits smaller data packages. It means that BLE remains in sleep mode at all times except when participating in data exchange, which, as a result, helps overall energy consumption.

This alteration to the original Bluetooth specification has allowed us to create many small, wearable devices that can run several years on a small battery.

## **Secured BLE transmission for asset tracking**

Every element of our location-based asset management solution is fully secured from data capture (Blyott Sensors) through transmission (Locators) to our Remote Insights Platform.

Head to the next page to view how the four components securely interact.

## Blyott Sensors

Blyott data is advertised using the standard BLE advertising format described by the Bluetooth specification.

Part of the advertising frame of the payload is proprietary Blyott data consisting of the cryptogram, using the AES-128 (Advanced Encryption Standard), where all the sensitive information (sensory data) is stored.

The cryptogram is guarded against spoofing and replay attacks using random bytes, paddings, and counters to ensure that any captured data is useless to the attacker.

Lastly, and importantly, the data decryption is never done on-site. Instead, it is always relayed to the Blyott platform or the platform of our partners or clients.

### 1 Blyott Sensors

Fix on asset. Location, movement and temperature sensors, long battery life.

### 2 Wi-Fi AP's with Bluetooth<sup>(1)</sup>

Receive Blyott sensor info. Wi-Fi AP's, fixed & mobile (4G) locators.

### 3 Remote Insights Platform

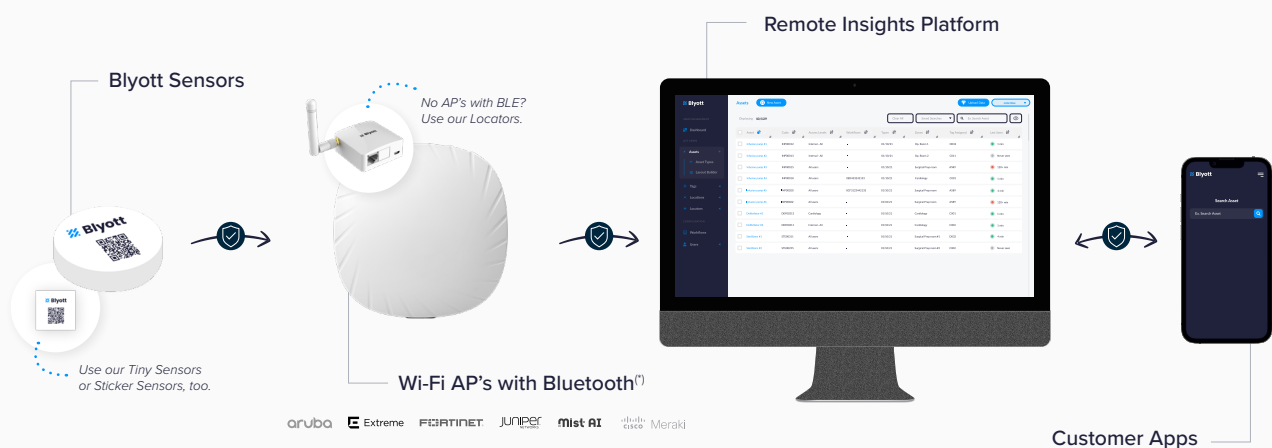
Serverless & scalable architecture. Big "Location" Data analytics.

### 4 Customer Apps

Blyott Web & Mobile App. Support for 3rd party apps using Rest API's.

## Blyott Locators

All Blyott locators scan for BLE advertising packages and relay them as they are to the Blyott Platform. The firmware on the locators is protected via code-signing and secure boot, so only Blyott-issued firmware can be flashed.



<sup>(1)</sup>The Blyott solution is compatible with Wi-Fi APs enabled with Bluetooth® technology from various vendors. Bluetooth® is a registered trademark of Bluetooth SIG, Inc.

## **Blyott Locators (continued)**

Our Blyott Locators communicate with the platform using the TLS 1.2 encrypted MQTT messages. Next, the X.509 certificate encrypts all communication between the Locator and the platform.

At the same time, each of the devices is identified by a unique X.509 certificate, so in the unlikely event of a certificate breach and extraction from the device, it will be safely isolated.

## **Blyott Platform**

Blyott's data entry point to the platform is implemented through the AWS IoT service based on an MQTT protocol using TLS-encrypted communication.

Each locator device is provisioned on the platform under a unique Client Identifier and has a dedicated X.509 certificate for signing all the communication on the device side.

X.509 certificates are issued by the AWS IoT service itself, so the CA is guarded and maintained Amazon itself. All stored data is encrypted in Amazon's RDS and Dynamo DB services, and there is only limited and audited access to these environments.

## **Blyott APIs**

UI, mobile apps, or third-party integrators communicate using the REST API exclusively under TLS communication transport, e.g., HTTPS.

Individual clients are authenticated and authorized onto the platform through the request and issued unique JWT tokens, which are time-framed to one hour to make sure the user can only access the data they are authorized to access.

# Enjoy big savings and happy staff without ever worrying about your security

Secure, affordable, and quick alternative. Those are some key takeaways from AZ Maria Middelares, a Belgian acute-care hospital that implemented Blyott's location-based tracking solution.

Peter Dierickx, IT and Facilities Director at the hospital, is clear on what makes Blyott the best choice:

With our existing infrastructure, room inventory, and locations, Blyott helped implement a tracking solution quickly. As a result, our nursing team no longer spends time looking for assets but on what really matters: patient care.

Are you looking for a location-tracking solution? Contact us for an introduction call. No strings attached.

## About Blyott

Blyott is at the forefront of transforming industries with innovative localization and monitoring solutions. Our platform integrates advanced data analytics and AI, supporting various sectors to navigate operational challenges, enhance efficiency, foster staff well-being, and achieve sustainability goals.



### EASY TO SET UP

Works in a matter of minutes.



### SCALABLE

Scale to millions of assets.



### PAY-AS-YOU-GROW

Custom plans are available.



### OPEN STANDARD

Integrate using REST APIs and webhooks.



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