Kio Staff Safe

Introduction and Setup Guide

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Intro to Kio Staff Safe

In today's dynamic healthcare environments, ensuring the safety and security of staff and patients is paramount. Kontakt.io's Kio Staff Safe solution, one of many applications within the Kio Cloud Platform, leverages its AI-enabled Real-time Location System (RTLS) to enhance people safety. It provides a discreet alerting system and rapid incident response to support an organization's duress protocols.

Why Kontakt.io?

A fast-to-deploy, easy-to-use, and scalable cloud platform

- **Fast time to deployment:** Implement safety measures quickly with minimal disruptions using Kontakt.io's cloud-based infrastructure. Our team of experts ensures swift installation and integration into your existing environment.

- **Easy to use:** Intuitive and seamless operation for both staff and responders, requiring minimal training and support.

- **Scalable:** Easily expand coverage and functionality as your needs grow. The modular infrastructure ensures scalability by leveraging existing BLE-enabled Wi-Fi infrastructure.

The platform advantage

One badge, many use cases

The same Smart Badge used for staff safety duress alerts can also serve multiple other needs across your operations, such as:

- **Asset tracking:** Find and locate equipment closest to you, ensuring quick access to necessary tools and improving operational efficiency.

- **Nurse call cancellation:** Automate nurse call alert cancellation when entering the patient room, saving time and reducing alert fatigue among staff.

- **Hand hygiene compliance:** Automate staff hand hygiene activities to improve infection control.

- **Patient credential display:** When entering a room, automatically show staff credentials on a patient display or TV screen, enhancing transparency and patient trust.

- **Other use cases:** Expand the badge's functionality to cover additional applications, such as patient flow and resource orchestration.

Infrastructure modularity: 100% room-level certainty with Beam Minis

The **Kio Staff Safe solution** leverages **Beam Minis** for **100% room-level certainty** at low latency (< 3 seconds). Unlike Bluetooth-only location systems that provide only pod or zone-level accuracy, Kontakt.io's modular infrastructure allows you to deploy Beam Minis only where needed, providing precise location data when it matters most, ensuring quick and accurate responses in duress situations.

Integrate with existing IT infrastructure and systems

The Kio Staff Safe solution seamlessly integrates with various existing systems to enhance its functionality and fit into your organization's technology landscape. These existing integrations include:

- **Wi-Fi Access Points:** Leverage providers, like Cisco Spaces, to extend BLE connectivity using your current network infrastructure.

- **Emergency Notification Systems:** Integrate with leading platforms, such as Singlewire and Spok, to streamline and automate emergency notifications.

- **Nurse Call Cancellation Systems:** Integrate with systems, such as Rauland Borg and Hillrom, to allow staff to cancel alerts quickly and efficiently.

- **EHRs:** Connect with your existing EHR systems to ensure a comprehensive, integrated approach to staff and patient safety.

The benefits and features

- **Staff feel valued and safe:** When staff encounter an emergency, they can discreetly press a button on their Smart Badge to call for help. This activates an alert and notifies responders of their real-time location.

- **Empowered responders:** Responders receive detailed alert notifications, including the staff's real-tIme location, enabling swift and effective interventions.

- **Room-level certainty:** Thanks to the modular Beam Minis, responders can be dispatched precisely to the room where help is needed, providing location accuracy in critical moments.

- **Alert state awareness:** Alerts go through various statuses from activation to resolution, ensuring complete visibility into the current state of all incidents.

- **Alert metrics and insights:** Gain actionable insights from comprehensive alert metrics to optimize safety protocols.

- **Alert Webhooks:** Instantly send alerts to designated third-party systems for seamless integration.

- **Role-based permissions:** Control access based on user roles, ensuring secure and tailored use of the system.

The components: a connected framework of IoT devices and apps

The Kio Staff Safe framework consists of IoT tag and Infrastructure devices and the Kio Cloud platform, providing a robust, reliable solution for staff safety.

The following illustration highlights the framework and architecture.
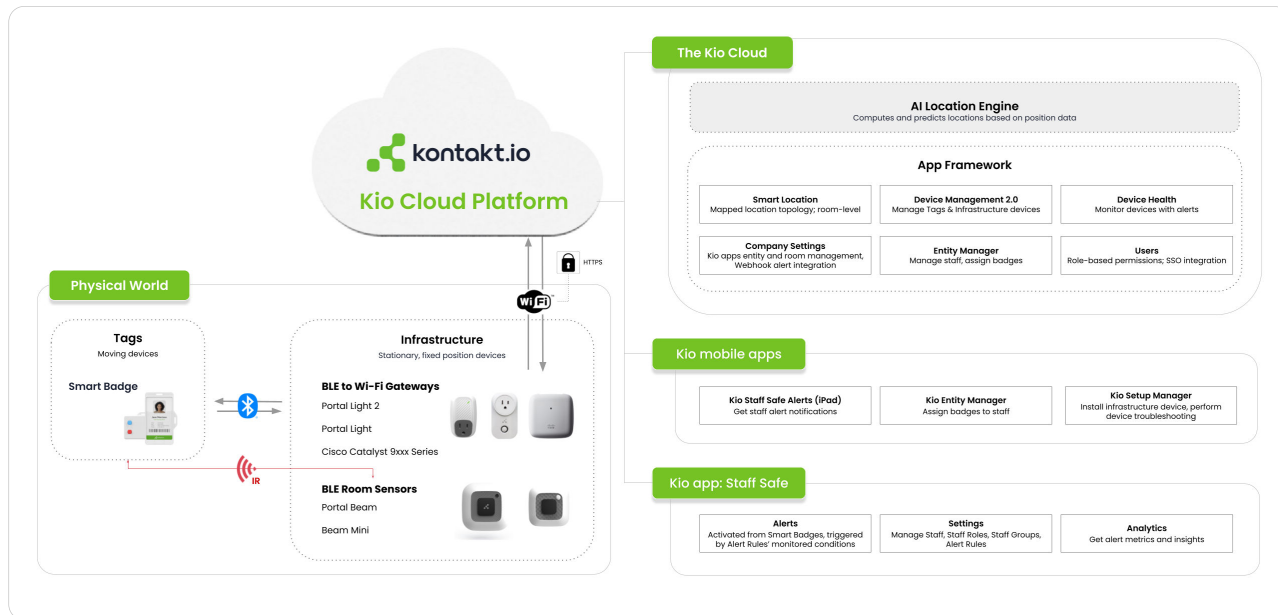
The physical world

This consists of IoT devices deployed to support the Kio Staff Safe solution.

- **Tags: moving devices**

  - **Smart Badges:** These are wearable devices worn by people for staff duress alerts and location awareness. Badges continuously broadcast data via Bluetooth Low Energy (BLE) and empower staff with instantaneous alert activation from two easy-access buttons.

- **Infrastructure devices: stationary devices**

  BLE-enabled Access Points: These devices leverage the Wi-Fi network you already have in place, such as Cisco Catalyst 9100s Access Points and Cisco Spaces, to enhance BLE connectivity and optimize deployment without the need for additional infrastructure.

  Portal Lights (BLE to Wi-Fi Gateway): These devices aggregate data from Kontakt.io BLE devices and send the data to Kio Cloud over the Wi-Fi network. They also provide the over-the-air (OTA) device firmware and configuration updates for BLE-only Infrastructure and Tag devices.

  Beam Mini: Adds room-level certainty with its built-in IR transmitter, ensuring precise location accuracy.

The Kio Cloud

The Kio Cloud is a suite of apps designed to manage Kontakt.io's IoT devices, the location topology, user management, and the Kio solution-based apps shared components,

- **AI Location Engine:** Computes accurate, room-level data for Kontakt.io's RTLS, occupancy, and indoor navigation solutions.

- **Smart Location:** Manage the mapping of the physcial locations where Kontakt.io solutions and IoT devices are deployed. Smart Location consists of the following:

  Mapped location topology: A hierarchical mapping consisting of campuses, buildings, floors along digital floorplans, and rooms. This topology is used by the Kio Cloud Location and Occupancy Engine that computes accurate, room-level data for Kontakt.io's RTLS, occupancy, and indoor navigation solutions.

  Departments: Group rooms for use within the Kio solution-based apps. A Department can be shared between buildings, but it can not be shared between campuses.

  Spaces: Group rooms or seats for use with the Kio Workspace Insights app.

  Footfall: Locations that identify the floors where people footfall occupancy is measured by a Kontakt.io Portal Beam. For use with the Kio Workspace Insights app and the Kontakt.io Location and Occupancy API.

- **Company Settings:** Manage the shared components for the Kio solution-based apps.

  Entity Management (people safety and workflow app): Manage Entity Types (staff roles) and entities (staff).

  Room Management (shared with all Kio solution-based apps): Define room types, set room type rules by entity types, and match Smart Location rooms to their room type.

- **Users:** Manage who has access to the Kio Cloud suite of apps.

  User permissions are role-based, with each role having a specific permissions. If a user is not assigned a role within an app, the app is not available to them from their Kontakt.io Launchpad.

- **Device Management 2.0:** Manage Kontakt.io IoT devices.

  This includes claiming Kontakt.io orders, managing device settings, getting insights into device inventory, and keeping devices up-to-date with the latest firmware.

- **Device Health:** Monitor the health of Kontakt.io IoT devices.

  Get alerts when devices may need attention. The alerting features include three available alert types, optional alert delivery mediums, and elective monitoring of devices by specific devices, device types, or by locations.

The Kio mobile apps

- **Kio Setup Manager:** A mobile app used to install Kontakt.io infrastructure devices, including the Portal Light, Portal Beam, and Beam Mini. It also offers device troubleshooting capabilities.

- **Kio Staff Safe Alerts for the iPad:** A mobile version of the Kio Staff Safe web app "Simple View". This app provides responders with access to active alerts at their selected location, as well as the ability to acknowledge and resolve alerts.

- **Kio Entity Manager:** A mobile companion to the Kio Cloud Entity Manager web app, providing users a method to assign Smart Badges to staff.

- **Kio Proximity:** A mobile app that locates nearby Kontakt.io BLE Tag devices commonly attached to tracked assets or worn by people. Using Bluetooth signal strength (RSSI), it determines the proximity of Tags to your real-time location. The app is especially useful for locating Tags that may be out of range of a Portal Light or other BLE-to-WiFi gateway device.

Kio Staff Safe app concepts and terminology

The Kio Staff Safe app is designed for scalability and ease of use while providing a comprehensive tool for administrators, stakeholders, and personnel responsible for responding to staff duress incidents.

The following provides an overview of the concepts and terminology unique in the Kio Staff Safe app.

- **Staff**

  The people wearing Kontakt.io Smart Badges. Each staff member has a unique profile, which includes their assigned Staff Role and Smart Badge (tag). Staff are Entities within Company Settings.

- **Staff Roles**

  A Staff Role is a method to categorize staff by their roles within your organization. Staff Safe provides metrics by roles, and roles can also be assigned to Alert Rules. Staff Roles are Entity Types within Company Settings.

- **Staff Groups**

  Staff Groups provide an additional method to segment staff. Unique to groups, staff can be assigned to one or multiple groups,

  Staff Groups are required for the "response time" metric. When configuring an Alert Rule, a specific Staff Group is assigned to the Incident Responder setting. The response time is measured by the system tracking which responder - a staff member wearing a smart badge and assigned to the group - first enters the room location where an alert was activated.

- **Alert Rules**

  Alert Rules define the monitored conditions that trigger staff duress alerts and the notifications sent when staff activate an alert from their Kontakt.io Smart Badge. Each Alert Rule's configuration includes the monitored locations, the button event that triggers an alert (blue, red, or any button), the staff the rule applies to, and who receives alert notifications and the notification methods. The notification methods include email, SMS text, or through a Webhook that delivers alerts to a third-party system. Webhooks are configured in Company Settings and assigned to Alert Rules.

  Alert Rules can also be configured to track first-response time metrics by assigning a Staff Group to the Include Responder setting. When a member of this group first enters the location where the alert was activated, the system acknowledges the alert and logs the response time. This data contributes to the calculation of the Average Time to Respond, viewable in the Safety Summary Dashboard and at the individual alert level.

- **Alerts**

  Alerts are the duress alerts activated by staff from their Kontakt.io Smart Badge. Responders receive alert notifications with the staff's real-time location, enabling them to respond and de-escalate the alerting incidents.

  Your organization has the ability to customize the button event that activates an alert, including the buttons and the number of presses.

  Alert Rule configuration: . Specifies which button - blue, red, or any - triggers an alert.

  Smart Badge configuration: By **factory default,** alerts are activated by pressing a badge button **three times in quick succession** . Optionally, a badge can be configured for single-press activation, though this is not recommended due to the increased likelihood of false alerts.

- **Users**

  A User is someone with access to the Kio Cloud platform suite of apps. User access is managed from the Kio Cloud Users app, which employs role-based permissions to ensure appropriate access is granted to users based on their responsibilities.

  Kio Staff Safe users typically include those managing the app's settings, alert responders, and stakeholders requiring insights into analytics and metrics.

About staff duress alerts

Staff duress alerts, activated from a Kontakt.io Smart Badge, are the heart of the Kio Staff Safe solution. When an alert is activated, designated responders are notified of the alerting incident.
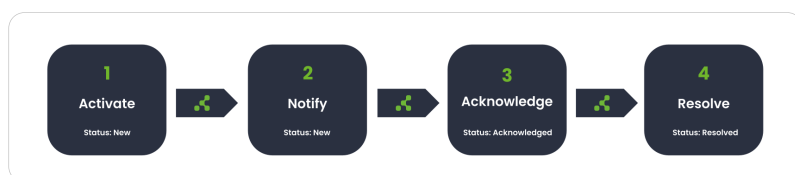
Things to know

At anytime, staff can discretely call for help by pressing a button on their Smart Badge that activates an alert and sends notifications to responders with the staff's real-time location and alert details. Be sure to educate staff on your organization's Alert Rule and Smart badge configuration, which is explained below.

- **Alert Rule configuration:** . Specifies which button - blue, red, or any - triggers an alert.

- **Smart Badge configuration:** By **factory default,** alerts are activated by pressing a badge button **three times in quick succession** . Optionally, a badge can be configured for single-press activation, though this is not recommended due to the increased likelihood of false alerts.

About the alert lifecyle

The alert lifecycle represents the various stages, workflow, and statuses that an alert goes through from activation to resolution.

Within Kio Staff Safe, the state of an alert is identified by its status — New, Acknowledged, and Resolved — providing users with an instant overview of each alert's current state and enabling data-driven metrics. This structured approach ensures a standard, predictable alert progression workflow, starting from the moment an alert is activated to its resolution.


Alert Stage	Alert Workflow	Alert Status
Activate	1. **Staff:** When faced with a duress or emergency situation needing help, they press a button on their Smart Badge three consecutive times (factory default). 2. **Kio Staff Safe Alert Rule:** Condition set in an alert rule is reached.	New

Alert Stage	Alert Workflow	Alert Status
Notify	1. **Kio Staff Safe:** • Triggers a new alert and sends alert notifications to responders. The alert notification method(s) are set in the rule; email, SMS text message, or to a third-party system via a Webhook. An alert notification includes: (1) identity of the staff that activated the alert (2) time of activation (3) name and type of alert (4) location of the alert (campus, building, floor, and room). • Alerts with a critical severity level: additional Kio Staff Safe in-app visual and audio alert is activated. 2. **Responders:** Receive alert notifications.	New
Acknowledge	1. **Responder:** Sets the alert to "Acknowledge" to indicate they are taking action. 2. **Kio Staff Safe:** When a responder, assigned to a Staff Group in the "Include Responder" setting of the Alert Rule that triggered the alert, enters the room where the alert was activated, the system automatically acknowledges the alert and logs the response time. This information is reflected in the "Average Time to Respond" metric, which can be viewed in both the Safety Summary Dashboard and at the individual alert level.	Acknowledged
Resolve	1. **Responder:** Sets the alert to "Resolve" to indicate the alerting incident is resolved, assigns a Resolution Code, and enters notes related to the incident. 2. **Kio Staff Safe:** Permanently stores all alert details along with an activity timeline for historical reporting and metrics..	Resolved

Example: alert activation to resolution
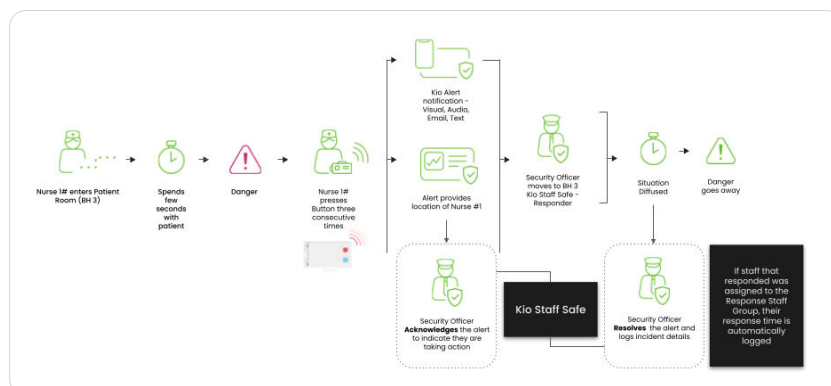
Alert notifications

How responders receive alert notifications, either through email, SMS text, or a third-party system, is configured within Kio Staff Safe Alert Rules. Additionally, Kio Staff Safe provides in-app visual and audio notifications for alerts with a severity level of critical.

When a staff duress alert is activated, its notification provides the following details:

- **Who:** staff that activated the alert.

- **Where:** the real-time location where the alert was activated; campus, building, floor, and room.

- **What:** the type of alert; Critical, High, Medium, Low, or Info.

- **When:** date/time the alert was activated.

Setup guide

This guide is intended for those responsible for the setup of the Kio Staff Safe app - a key phase in the Kio Apps deployment journey.

Prerequisites

To complete this setup, the following requirements are must be met.

- **Assigned User roles:** You are assigned to the **Administrator** role for **Staff Safe** and **Company Settings** .

- **Infrastructure devices installed:** This will vary by your deployment, but commonly includes the BLE to Wi-Fi gateways being either Kontakt.io Portal Lights or third-party BLE Access Points, and Beam Minis or Portal Beams for 100% room-level certainty.

- **Kontakt.io order claimed:** The order with the Smart Badges is claimed in Kio Cloud Device Management 2.0.

Required setup tasks

We recommend completing the tasks in the following order.

Task	Related article
Create Staff Roles and Staff Groups and Add Staff • **Staff Roles:** A categorization of staff that commonly mirrors the types of roles or positions within your organization. Staff Roles apply to metrics, can be assigned to Alert Rules, and staff are required to be assigned to a Staff Role. Staff Roles are the Entity Types within Company Settings. • **Staff Groups (optional):** An additional method to categorize staff. If your deployment requires the "average time to respond metric" that is computed by an alert's first responder, you will need to create Staff Groups. This metric requires responders to be added as Staff and assigned to a Staff Group and badge, and wear their assigned badge onsite at all times. A Staff Group is assigned to the Include Responder setting within Alert Rules. • **Staff:** Each person within your organization that will wear a Kontakt.io Smart Badge must be added to Kio Staff Safe. Staff are assigned to their Kontakt.io Smart Badge (tag), a Staff Role, and optionally a Staff Group. Staff will always be those that require the ability to activate a staff duress alert from their assigned Smart Badge. Staff will not have permissions to sign in to the Kio Cloud platform, which requires a User account. If your deployment includes the "average time to respond metric", that requires responders to also wear a Smart Badge they are required to be added as a Staff, and will also be added as a User that allows them to sign in to the Kio Cloud platform. Staff Roles and Staff can also be created and managed from the Kio Cloud Company Settings app. Within Company Settings, Staff Roles are Entity Types and Staff are Entities. For first-time setup, Kontakt.io recommends use of the Company Settings app. Staff Groups are only managed from the Kio Staff Safe app.	Staff management

Task	Related article
Create Alert Rules An Alert Rule defines when an alert is activated by a Smart Badge button press event including the blue, red, or any button, who the alert applies that identifies the staff wearing badges, the location including one to multiple Campuses and Buildings, and the alert notification recipients that identifies the responders. Based on the scope of your deployment, you may have one to multiple Alert Rules. If your deployment includes sending alerts to a third-party system, you will also need to complete the Webhooks advanced setup [15].	Alert Rule management
Add Users A user is someone that requires access to Kio Staff Safe and the Kio Cloud platform. This includes those responsible for the Staff Safe setup and administration, who will be responding to staff alerts, and users that require access to metrics and analytics.	User access management
Assign staff to their Kontakt.io Smart Badges Each badge has a unique MAC address and Unique ID that is linked to the staff assigned to the badge.	Staff badge management
Onboard responders and users Responders are those responsible for responding to staff duress alerts. It's important for them to know how to respond to and manage staff duress alerts. Users are commonly stakeholders interested in alert analytics and metrics.	Quick start guide Staff Safe web: Respond to and manage alerts Staff Safe Alerts mobile: Respond to and resolve active alerts
Onboard staff wearing badges for staff duress alerts It's important for staff to know how to activate an alert, how to properly wear a badge, and how it all works. The Smart Badge button that activates an alert is dependent on your Alert Rules - that being either the blue, red, or any button.	Guide to activate a staff duress alert

Advanced setup

This setup is dependent on the scope of your deployment and is completed from the Kio Cloud Company Settings app.

Company Settings: Room Management

If your deployment includes the tracking the status of staff by their real-time room locations, you will also need to set up Room Management within Company Settings.

Complete the tasks in the following order.

Task	Related article
Create Room Types	Room Types management
Create Room Type rules by Entity Types (Staff Roles)	Room type rule management
Match Smart Location rooms to their Room Type	Room Matching

Company Settings: Webhooks

If your deployment includes sending new alerts to a third-party system, this requires the set up of Webhooks. This is commonly performed by your IT staff or integration team.

Complete the tasks in the following order.

Task	Related article
Create and configure Webhooks This task is commonly performed by your IT department or integration team.	Webhooks setup and management
Assign Webhooks to Kio Staff Safe Alert Rules This results in alerts being sent to the third-party system configured within the Webhook.	Alert Rules and Webhooks