# Responder® 5 Integration to Real-Time Staff Location Systems - Versus

Staff Location Integration is an optional interface that helps automate otherwise manual processes in a nurse call system. By caregivers wearing badges, it can make day to day activities easier and contribute to a quieter nursing unit. The Responder 5 allows hospitals to choose the Location System that best suits their individual needs, by introducing the first ever Open Architectural Interface (OAI) between a variety of Location Systems and a nurse call system.

There are a wide variety of location technologies available from a number of vendors: infrared (IR), radio frequency identification (RFID), ultrasonic, Wi-Fi. Different technologies offer a greater choice for hospitals to implement the best system given their unique environment. Rauland has continued our 15 year partnership with Versus by integrating to our newest platform, Responder 5.

This document is meant to educate our authorized Rauland Distributors and customers to make informed architecture decisions, to expedite installation, and to avoid unexpected operational limitations in the Responder 5 System. Please refer to your local Versus vendor for specific product details.

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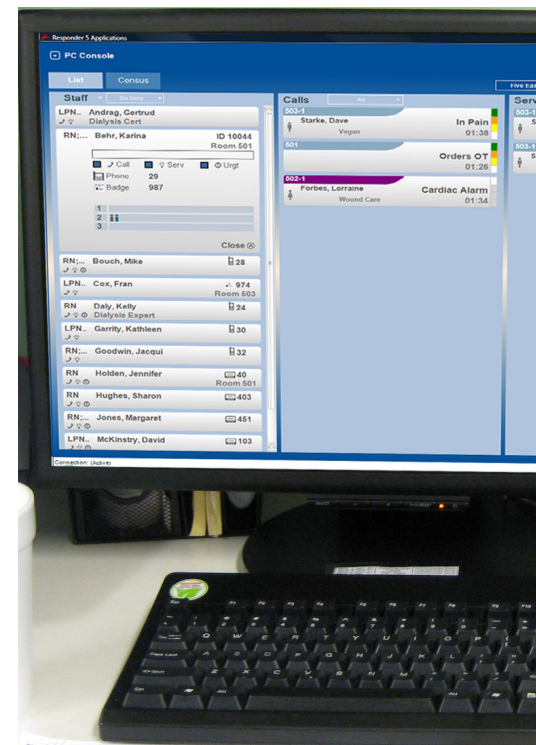
Basic Architecture

There are two separate infrastructures that must be in place for this interface to function - the Versus system and the Responder 5 system. These two systems communicate, via xml protocol, from the VIS Server to Responder Application Server (RAS) exchanging staff location changes real time.

It is imperative that the staff badge movements are detected both inside and outside the patient room. These movements must be relayed from Versus to Responder 5 real-time with minimal delay. This will optimize the user's experience as well as the patient's.

Ease of Setup

Once the Versus system is in place, the setup time is minimal to get the two systems communicating. Rauland's Technical Support Services dials into the RAS via VPN and does the appropriate mapping and setup in less than a day. Once this is complete, the local Rauland partner will do a walk through of the facility to ensure that the response time is optimized and the nurse call behavior is appropriate for the unit's needs.

Responder 5 Features
Basic Nurse Call Features

Integration to the Responder 5 nurse call system offers many features including:

- Illuminating of the corridor light outside the patient room when a staff member is in the room
- Silencing of the nurse call tones when a staff member walks in the patient room
- Sending of Urgent calls for assistance when a staff member is in the room and requires help.

Advanced Software Features

The Responder 5 software applications also display and store more information when the Location Interface is installed. These features include:
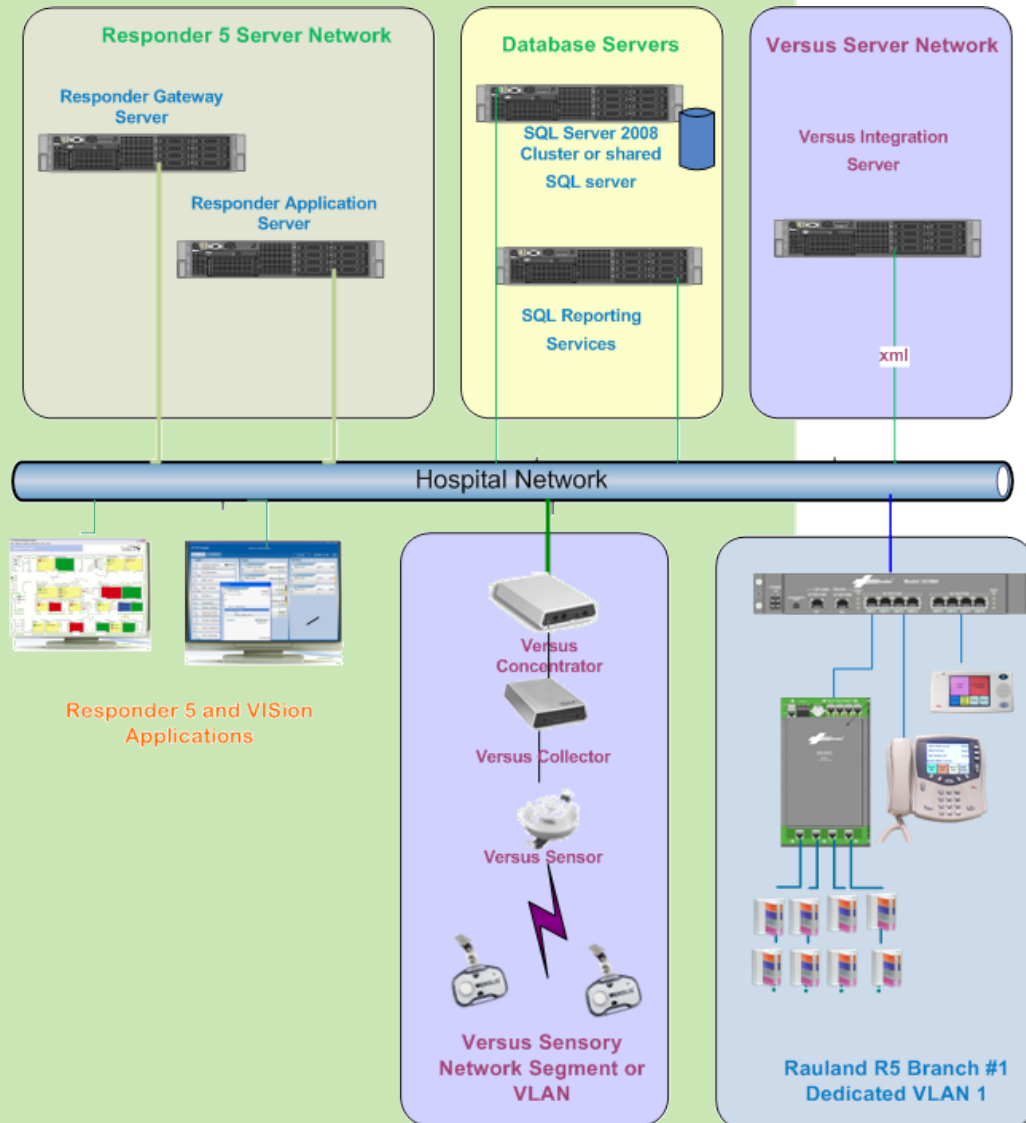
- Simply take a badge and sign on duty while picking their patients for the day
- Quickly find fellow caregivers and see where they are when someone wants to speak with them
- Easily see where the patient's care team is located when the patient requires attention
- Effectively deploy staff to attend to a patient based on who is closer to that patient
- Historically report on staff response times to patient needs
- Physicians can quickly see where the nurse is on the unit for their patient(s)

![Rauland Responder logo]

Versus to Responder® 5 System Architecture

Refer to Figure 1:

- *The staff moves from one location to another*
- *The Versus Sensor picks up the badge movement and communicates this to the Versus Collector*
- *Versus Collector sends this information to the Versus Concentrators*
- *Concentrators send this information to the Versus Integration Server from the Versus network segment or VLAN*
- *The change of locations are sent to the Responder Application Server (RAS)via xml*

Figure 1

Responder 5 Server Network
- Responder Gateway Server
- Responder Application Server

Database Servers
- SQL Server 2008 Cluster or shared SQL server
- SQL Reporting Services

Versus Server Network
- Versus Integration Server
- xml

Hospital Network

Responder 5 and VISion Applications

Versus Concentrator
Versus Collector
Versus Sensor
Versus Sensory Network Segment or VLAN

Rauland R5 Branch #1 Dedicated VLAN 1

![VERSUS logo]

Versus Integration Solution Performance Characteristics

The capability of the Responder® 5 nurse call system to integrate to a particular staff location system is not just a true or false answer. Every Responder® 5 to Real-Time Locating System combination has a unique set of performance characteristics dependent upon many factors including:

- *capabilities of the staff badges*
- *battery life of the staff badges*
- *facility network configuration*
- *intended use of the integrated solution*

The results shown in Table 1 below are a result of Rauland testing the Versus solution in a limited lab environment. While the performance of an integration in an actual healthcare facility environment will differ, the results listed here can be used as a guideline for further customer research, so that a facility can make an educated decision about the best integrated solution based on pricing, capacity, technology platform, reliability, product maturity, the comfort level the facility has with the vendor, and the importance of each of the listed performance characteristics.

Table 1

Base Features	Results	Notes
Individual Badge Response Time	3-5 seconds	
Multiple Badge Response Time	4-8 seconds	
Bay Level Accuracy	Yes	
Compatible with RTLS Software Clients	Yes	
Auto-Start / Auto-Recovery	Yes	
UL Listed Stickers on Equipment	Yes	
Integration Is Fully Functional with Badge in Pocket	No	
Advanced Configuration Features		
Supports Exporting of Staff to R5	Yes	
Supports Exporting of Rooms to R5	Yes	
Supports Importing of Staff From R5	Yes	
Supports Importing of Rooms From R5	Yes	
Capacity Features		
Badge Type Filtering	No	*not tested
Room Type Filtering	No	*not tested
Location Change Error Recovery	Yes	