

# MULTIPROTOCOL SUPPORTED HEALTH MONITORING SOLUTION INTEGRATED

with CENTAURI 200 Gateway



**Services:** Cloud, Embedded Engineering, Internet of Things

## OVERVIEW

For US-based medical healthcare companies, providing high-quality clinical and hospital patient care. They have a close collaboration between clinicians and scientists and help them to bring innovative medical discoveries from the laboratory to patients' bedsides

## CHALLENGES



The client developed a home monitoring solution for the elderly to stay at home for longer periods of time during the pandemic. They were looking for an OEM customizable gateway that can be integrated with their cloud and migrate the current application and functionality quickly

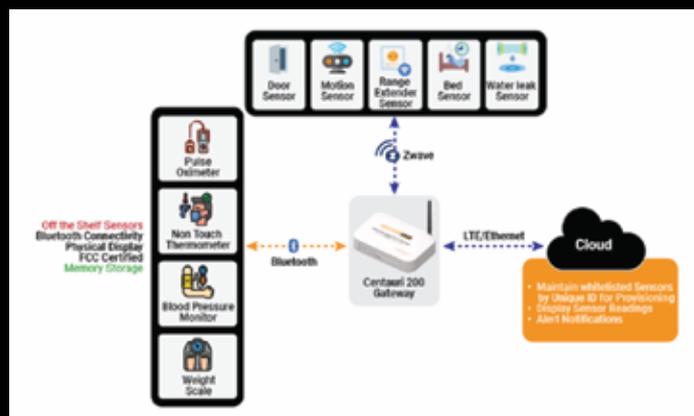


Needed support of Z-Wave, and BLE based sensors to increase the overall functionality of the solution

## SOLUTION

We helped the client in optimizing their complete solution with ready to use CENTAURI 200 IoT Gateway and integrated BLE sensor & Z-Wave. The application is developed for elderly monitoring solutions that are serviced through various hospitals.

- 1 Understanding of high level of requirement, helped the customer to define its implicit requirements
- 2 Finalized the requirement, software architecture
- 3 Developed firmware to communicate with the cloud
  - › DMZ's APIs for cloud communication
  - › Sync sensor events with cloud
  - › OTA manager host OTA, APP OTA, and RF OTA (Z-Wave/BLE RF module)
- 4 Customized Z-Wave and BLE manager
  - › Z-Wave/BLE sensors whitelisted by the cloud
  - › Sensor provisioning process by the Centauri 200 push button event
  - › Added Z-Wave sensors functionality such as door, motion, water leak, bed sensor and extender
  - › Added BLE sensors functionality such as pulse oximeter, thermometer, blood pressure monitor, weight scale
- 5 Developed event manager module
  - › Z-Wave/BLE manager send events to the event manager to manage events in the SQLite database
  - › The event manager sync live events or chunk from the database with the cloud periodically as per the active network interface
  - › Reduce the data usage while Gateway is using an LTE network
- 6 Customize Gateway manager
  - › Send Gateway health report to the cloud with important debugging information if no events synced with the cloud
  - › Monitor network data usage and send it to the cloud on a daily basis



## BENEFITS

- Accelerating overall solution launch timeline by 50% by leveraging our proven and ready-to-use CENTAURI 200 IoT Gateway, and hands-on expertise in Z-Wave and BLE
- Expanded market reach of the client by enabling them to upsell their solution with LTE functionality, which is an easier process than connecting solutions through Wi-Fi for elderly peoples



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