



# MEDICAL DEVICES TRACKING AND ANALYSIS

## CLIENT OVERVIEW

Our client is one of the leading medical technology companies that contribute towards digitally enabled healthcare revolution. Their health scanner device is an embedded health monitoring tool used by patients which is accurate, secure, and easy to use. . This technology is a multi-function health scanner that captures a broad range of health data based on more than ten health parameters.

## KEY REQUIREMENTS

- Track all the patient devices and view the captured data in an easy to read and understandable form
- Analyse the data to determine a trend of the usage of devices in the form of various graphical representation
- View a comprehensive list of patients using the devices with the ability to Add/Remove/Update new patients/users to the system
- Create a dashboard view with role specific access and data display

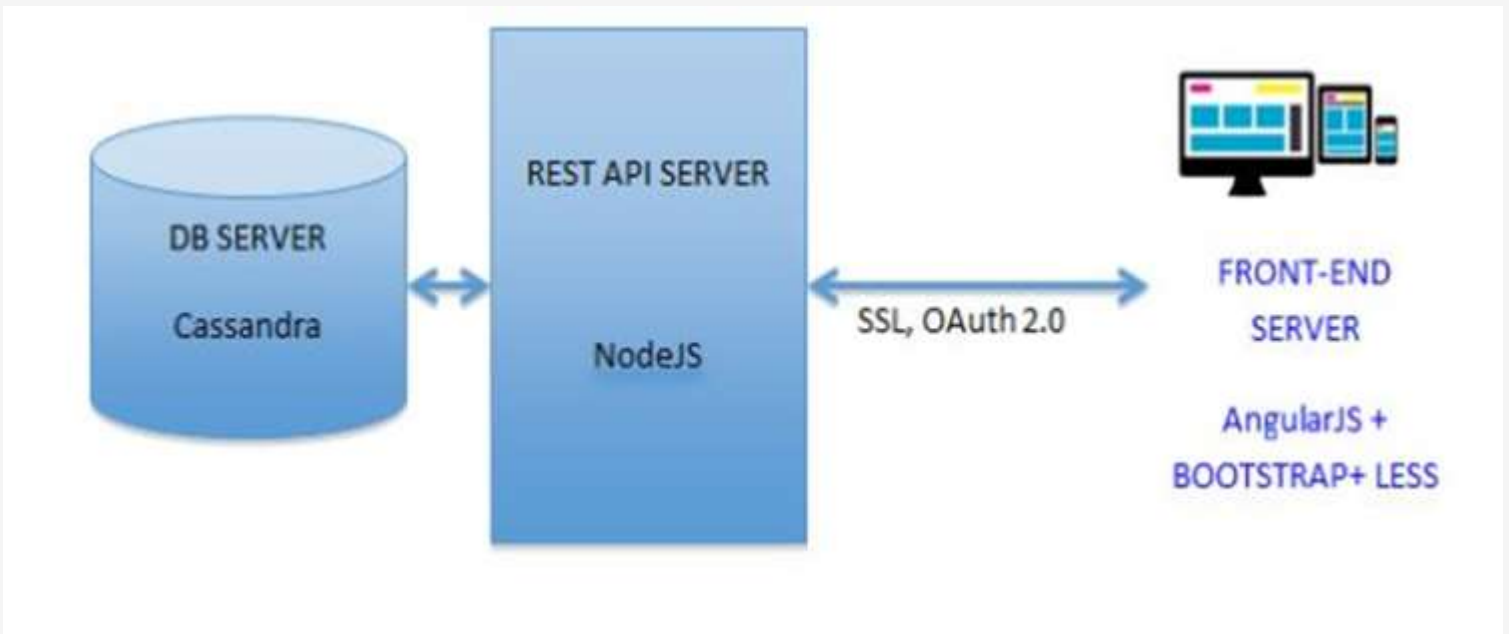
## KEY CONTRIBUTIONS

- Developed a backend REST API Server in NodeJS to handle the Linux of network track smoothly.
- Used Nodes' single thread and Event Loop Model for more scalability.
- Configured SSL for client-server communication, to ensure maximum security of data.
- Generated Server API documentation automatically by reading comments written in the code with the help of JSDoc.
- Used Grunt to ensure systematic deployment without any issues and at the same time eliminating redundancy of manually running development tasks. Adopted Full-stack developer concept and executed automation test scripts using Grunt, Jasmine and Protractor to ensure error free deployment.
- Role authentication and access control of di-errant administrators and supervisors was done using OAuth 2.0
- Used Cassandra and in-memory data manipulation techniques to enable the dashboard to handle big volume of data.
- Converted the analysed data into readable, meaningful graphical format using Javascript libraries like D3 and HighChart.
- Developed responsive dashboards using latest technologies like AngularJS, Bootstrap 3.0, LESS to ensure all kinds of screen/resolutions/devices can access and display it without any distortion.
- Performed end-to-end testing using Protractor with all automation tests on browsers.

## KEY BENEFITS

- Device performance and patient data availability at a glance on a dashboard facilitated 30% increase in productivity which led to faster decision making.
- Provided ease of data access to various administrators who could manage dashboard remotely which ultimately reduced the turnaround time by 20%.
- Easily traceable patient's data that enabled better medical care to the patients drastically increased the user base.

## HIGH LEVEL ARCHITECTURE



## TECHNOLOGY STACK

- NodeJS
- Cassandra
- NodeJS-Cassandra Driver
- AngularJS
- Bootstrap
- LESS
- Grunt
- Protractor
- JSDoc



### About Xoriant:

Xoriant Corporation is a Product Development, Engineering and Consulting Services Company, serving technology startups as well as mid-size to large corporations. We offer a flexible blend of onsite, offsite and offshore services from our eight global delivery centers with over 2000 software professionals. Xoriant has deep client relationships spanning over 25 years with various clients ranging from startups to Fortune 100 companies.