

.Net based New Age Intelligent Locking System

Background

The company, headquartered in Grand Rapids, Michigan, is a market leader in storage and inventory solutions designed for the healthcare industry and is specialized in providing supply/procedure carts, cabinets and casework, small carts, open storage, heavy-duty storage, and inventory management systems to medical facilities around the world. Supply management at the departmental level within the hospital has been the focus of the company since inception.

Business Situation and Challenges

The company developed ILS (Intelligent Locking System) which combines the convenience of prox card security access with a web-based interface that allows the editing of users and programming of carts at any time from any computer. However, this solution is currently only available on company's Harmony carts. The goal of the project was to upgrade security access solutions and integrate a wireless two way data communication system (ILS) across, Scan Module and Infologix cart and cabinet lines.

WinWire Solution

WinWire created a comprehensive IT architecture using ASP.NET MVC 3.0 and WCF RESTful service. This simplified the complexity of syncing up the data between ILS Controller (device) and ILS Server that involves different credential memory and firmware resource downloads to device, control access to contents within carts and cabinets, Device group –User group association, notifications, audit logging and reporting. Some salient features included:

- MVC Web application allows Application User/Support Staff User to login to an organization and view/manager users, devices, user-group associations based on the user role.
- Globalization and Localization of the UI strings have been implemented to support different cultures
- Audit logging functionality keeps track of the all the actions performed by the logged in user so that history trail is maintained.

- Reports module provides the statistics of various aspects in the application in a presentable GUI format.
- Extended support for multiple card readers by implementing different encoders.
- The web-based solution will also provide a reoccurring revenue stream through an annual subscription fee.
- Provide a full suite of ILS enabled storage products that will enable solution selling by giving SHS the ability to create a facility wide credential management system for storage products.

Results

- **Lower cost and ease of use:**
 - Decreased the need for manual intervention for controlling the access to contents within carts and cabinets.
 - With MVC, modular and loosely coupled layered structure that supports easy maintainability and thus the maintenance cost is lowered.
 - Reports give quick Business Intelligent statistics to help the business grow.
- **Faster Access with Enhanced Security**
 - Custom membership provider using forms based authentication.
 - Restricted user access by MVC routing based on associated organization
 - SSL Certificate authentication for communication between device and ILS service.
- **Increased Customer Satisfaction:** Enhanced security, tailored protocol communication between Device and ILS Service and automatic two way setting updates enables the higher satisfaction of customers.