

RFID SmartClient Solution

Client Background

The client is a medical devices company focused on patient safety solutions.

The Client is engaged in the research, development and manufacturing of Pharmaceutical products. They are the fourth largest (by prescription sales) pharmaceutical company in the world.

Prescription drug is manufactured by the Client, for the management of advanced prostate cancer.

Client's Challenge

For many of the hospitals and high valued medicines, the entire process of maintaining inventory of drugs dispensed was manual. Due to this, tracking of dosage was very difficult and slow. We was contracted by Client to build a solution to track the drug from the post manufacturing to the patient allocation and up till the dispensing stage.

The Our Approach

The Client identified Caen RFID as the source for the RF reader and tag. We built the solution to work specifically with this reader and the supplied tags. This solution can be integrated with other readers and tags with minimal effort.

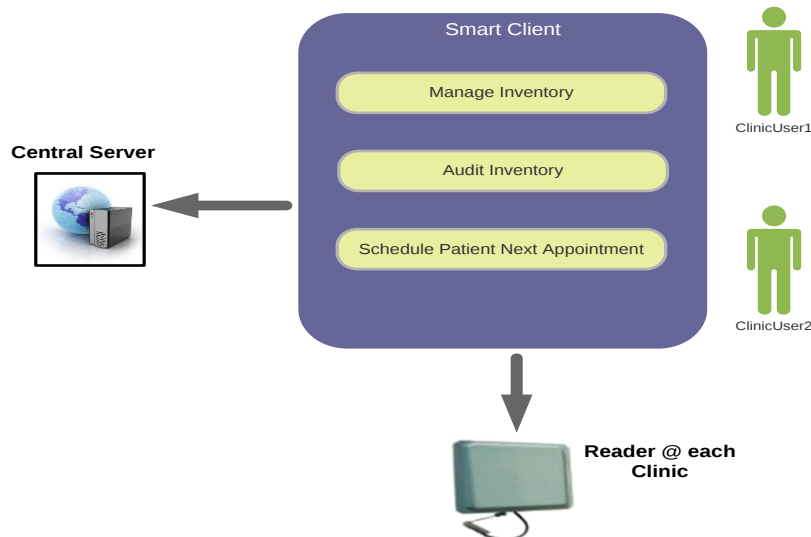
Since the solution was to be deployed at multiple locations, a web solution would have been the first choice. However, since connection and interaction with the RF readers was needed, that would not work with complete web solution, a Smart Client approach was instead chosen.

The Smart Client approach would enable easy deployment and upgrades in a distributed environment while maintaining the ability to interact with local hardware resources (specifically the RF reader) connected to the PC's at each location (Clinic and Distribution center). Reporting and central management functions are web based.

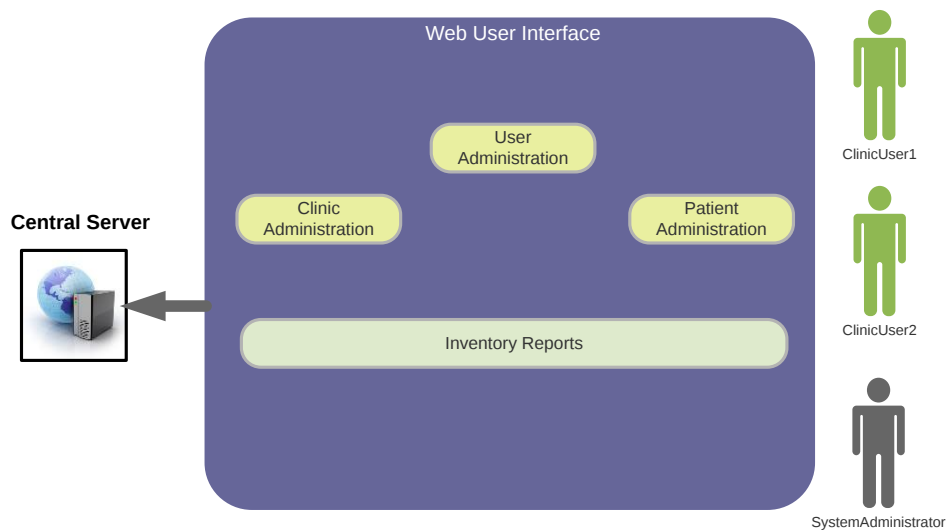
Smart Client is a term describing an application environment which:

- Delivers applications over a web http connection
- Does not require installation (or provide automated installation and updates)
- Automatically updates without user action
- Has the look and feel of desktop applications

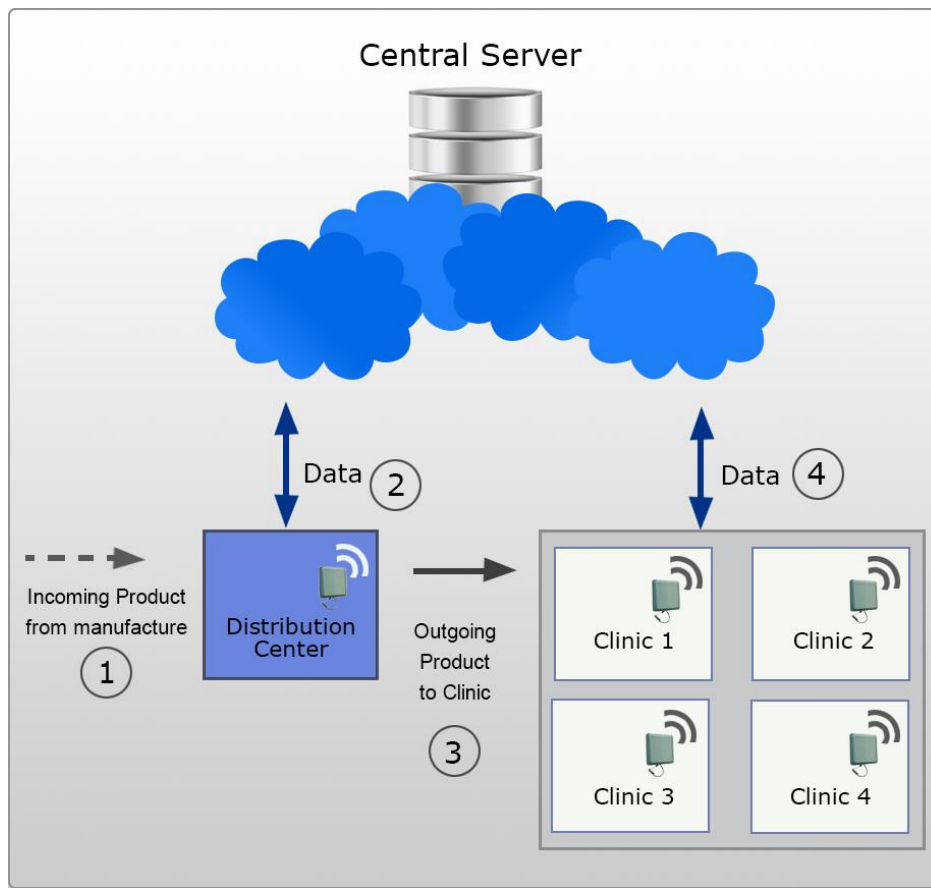
The Smart Client



The Web Interface



System Flow



- Products are dispatched by the manufacturer to the distribution center
- Every product is scanned into the SmartClient System
- The product is then dispatched to clinics where users will manage the incoming and outgoing product inventory using the SmartClient System.
- The SmartClient System allows users to
 - Manage and Audit Inventory
 - Dispense to patient
 - Patient Appointment Management (Automatic and manual)
- The web interface allows the management of
 - Users in the system
 - Clinics, Personnel and RF Readers

- Patients and Appointments
- Auto Ordering alerts based on configured thresholds
- The web reporting interface includes data showing
 - Inventory Dashboard
 - Historical data for Patients and Medicines
 - Transaction history for each RFID reader

Successful outcomes and results

- Track medication and dispensing efficiently and accurately through the use of RF tagged packaging
- Track and trace product from Manufacturing to final use
- Reduce manual effort and operational expenses at warehouses in managing inventory

Technology used

- ASP.Net 3.5 with C#
- MSSQL 2008 R2