Executive Summary

The client for this project got us to build a system which allows individuals to store their medical records in a safe and secure manner. The system offers flexibility to its users to access their records anytime and from anywhere – provided they have access to internet. Besides having the provision to update records, the users have the prerogative to allow permission to people of their choice (i.e. physicians, providers, family members etc.) to access either full or parts of their records on a need basis. There are 3 subscription plans available and users are charged based on the features that they choose to use. The system stands out for its ease of access and the high level of security. The importance of this system grows even more in times of emergency. It can potentially act as a life saver as there is scope for medical staff to be given access to a member's medical records in such situations; thereby increasing the chances of providing accurate medical care.
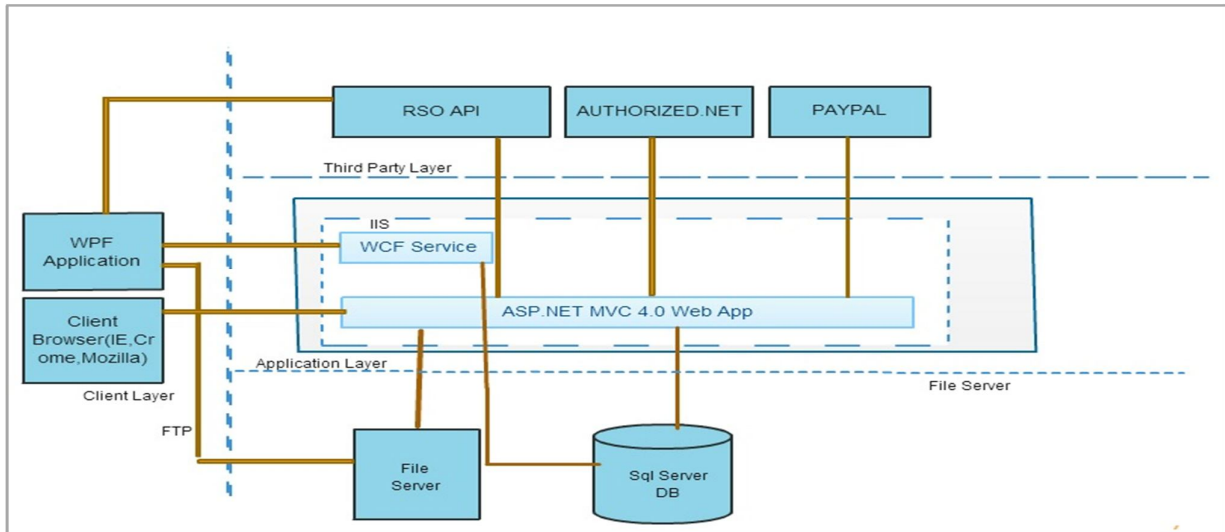
About our Client

Client Name: Confidential | **Location**: USA | **Industry**: Healthcare IT

Technologies

Asp.net MVC 4.0, C#, Entity Framework, Razor, HTML5, JQuery, Bootstrap, CSS3, Repository pattern, StructureMap, WinSCP, SqlServer2008R2, WPF, WCF, Window Service.
Third-Party API: PayPal, Authorize.Net, RSOAPI

Architecture

Project Summary

This application provides medical record management services to its users. There are various subscription levels available to choose from. Various roles are assigned to people to manage this application like Administrator, Document Manager, Owner, Member, Customer Care & Emergency Physician.

- Administrators and Document managers can do admin activities like Add/View/Update/Delete Users, Members, Medical Documents, Document Type and Document Sub-Types.

- Owner is the one who signs up in the application by purchasing a plan. Depending upon the type of plan, an owner may or may not have the ability to add members in its account. The owner can thus manage its own account and medical documents, along with the ability to manage the accounts and medical documents of the members attached to the account.

- Members have their own account, and can only manage their own accounts and medical documents.

- The Customer Care has permission to generate emergency login for Physicians to access the records of patients in cases of emergency. Apart for that, the application also provides a dynamic view for all DICOM files to help physicians better in analyzing them online. Also, the system has a separate module for reporting purpose.

Majorly, the whole system can be divided in 3 different applications:

Web Application: The main application is built in ASP.NET MVC 4.O and provides a method to manage/view/delete all the details. It interacts with PayPal, Authorize.net & RSO API.
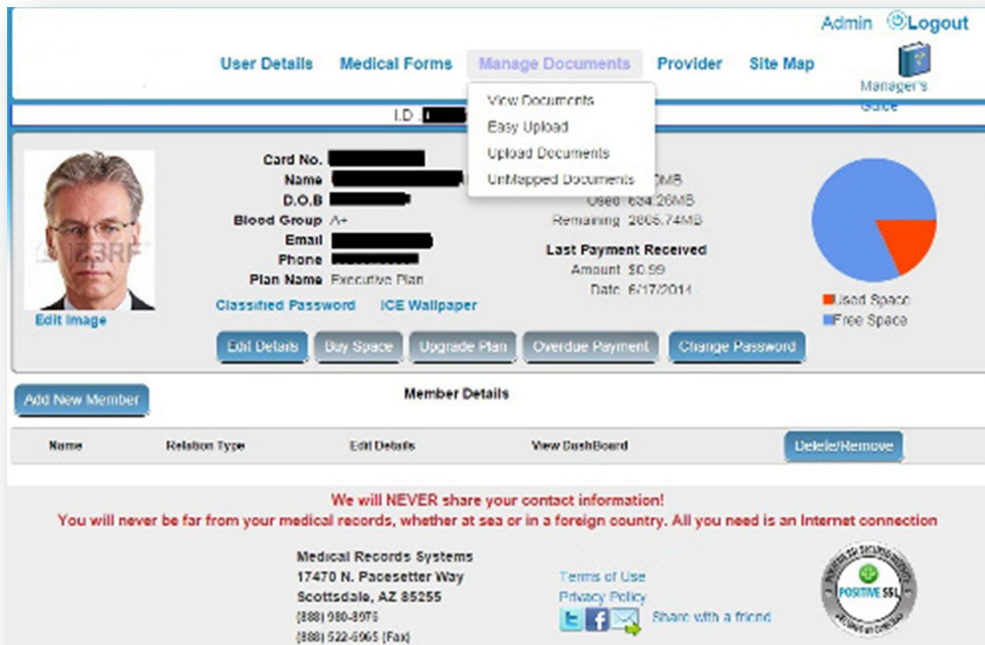
Doc Uploader: This application is built in WPF and helps the admin/manager to manage/integrate different files like large size DOCOM files using RSO API and WinSCP (for SFTP) with servers. It interacts with a WCF Service to update the records in db.
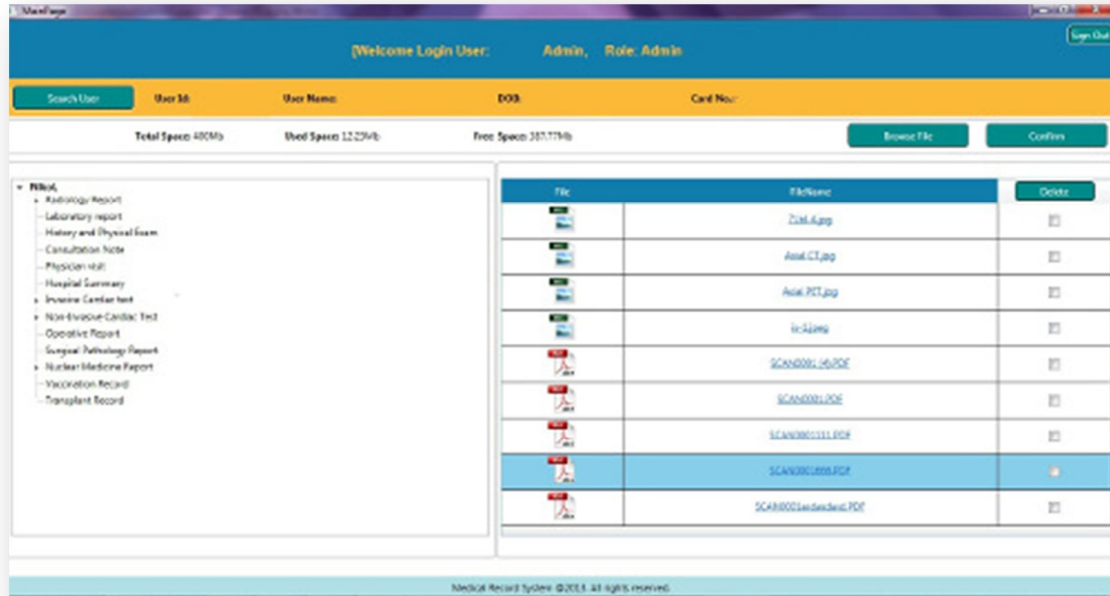
Window Service: Used to update database to manage user plans/payments by interacting with third Party APIs (PayPal, Authorize.Net) regularly.