

How **Direction Software LLP** designed a portal for users to setup the BNP Client Accounts

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#### Client

This Company is a global independent dealer-broker specializing in a broad range of financial products including Cash Equity, ETFs, Equity Derivatives, Foreign Exchange, Futures & Options, Fixed Income, Structured Products and Commodities.

### Summary

- This Portal is designed to help the Market securities users to setup the BNP client accounts
- Create respective .csv files as per predefined rules
- Schedule the Upload of these .csv file to 3rd party SFTP server

## Challenges

- User used to manually create and upload .csv files on FTP server to setup client information with BNP
- Maintain history of upload of .csv and rollback to the last successful entry in case the account details are rejected

#### Solution

- Web Application is created using ASP .Net MVC 5 (for UI) and SQL server (for database)
- User can make entries of client account details and .csv files are created and uploaded on SFTP server. After successful upload, files are moved to secondary folder for maintaining history
- Workflow for updating status is present
- To make application robust various layers are created
- SQL deployment project- Responsible for creating database schema
- UI layer- Using ASP.Net MVC 5 and Typescript
- Database layer Using Microsoft entity framework
- Unit testing layer each for UI and database. Moq (fake class) and Effort (fake data objects) are used
- For Integration server Team city is used to check if the release is successful
- For clean code Resharper has been used



# Technologies used

- UI Asp.Net MVC 5 With C# [Full control and easy to write tests. Best for SPA (single page application)]
- CSS and JavaScript Bootstrap, Typescript, JQuery Bootstrap 3 - sleek, intuitive and powerful front-end framework Typescript – JavaScript library compiles to clean, simple JavaScript code which runs on any browser
- SQL Server Handled through Entity framework.
- LINQ is used for database queries and DML operation

# Third Party Controls and Tools used

- Grid Made from Bootstrap, Html tags & Typescript
- Common controls bootstrap/ Html tags
- WinSCP allows to connect remote machine such as SFTP
- Jetbrains Resharper developer productivity extension for Microsoft Visual Studio (code review)
- Jetbrains Resharper dotcover .NET unit testing and code coverage tool
- TortoiseSVN Version Control
- Git free and open source distributed version control system
- BitBucket Git solution for professional teams
- GitClient Git for Windows free lightweight GIT client
- Visual Studio built in Git version control support in Team Explorer
- Effort 1.0 ADO.NET provider that executes all the data operations on a lightweight in-process main memory database instead of a traditional external database.
- TeamCity continuous integration server from JetBrains. Maintained by client

#### About Direction Software LLP

We are a software services firm, specializing in developing & implementing Internet strategies for businesses & providing high-end software development services including Custom Programming & Offshore Development.

With 17,000 sq. ft. of space in a modern building in central Mumbai the hub of all business activities in Mumbai, Direction Software LLP is fully equipped with state-of-the-art infrastructure and networked with redundant high speed, dedicated internet access from different providers.

Our vision is to be a trusted IT partner, leveraging our knowledge of tools and technologies to provide simple, integrated and innovative solutions that result in maximum customer satisfaction.



