Cambrian processes executed by Data Wrangler

Copy to Spotfire backend

trade.csv  
inquiry.csv  
vintages.c  
vintages\_o.csv  
roll\_rates.csv  
roll\_rates\_q.csv

Cambrian Edge Node SFTP Folder

Cambrian

CSV Files

Export to CSV

ETL2

ETL1

Trade\_rolling\_q

Trade\_rolling\_n

Trade\_vintage\_n

Trade\_vintage\_o

Production data HDFS Encrypted Project Folder HDFS  
 efx\_ca\_prod pi2\_development\_db

Pi2\_inquiry\_n

Pi2\_trade\_n

Pi2\_customer\_n

efx\_customer

Acro

Pi2\_consumer\_n

# ­­­­Portfolio Insights Data Flow

trade  
inquiry  
vintages  
vintages\_o  
roll\_rates  
roll\_rates\_q

Depending on architecture backend may be DB Grid, encrypted file system, or Relational Database

Encrypted Communication Channel

Spofire Webplayer

Spotfire Server with PI2App

Spotfire process executed by BI Developer/IT

Encrypted Spotfire Backend

Ignite Market Place Web Server with app tiles WWW



Client

Client

Client

Client

Firewall

Spotfire Visuals

Optional Data Export   
via Spotfire Tables

## Dat Wrangler Process

Primary task for data wrangler is to prepare date for portfolio insights applicateion.

Data is prepared in multiple steps using Cambrian data,

All data wrangler processes are executed in Cambrian and they will be automated to run for one month of the date at time using linux shell scripts and Hive/Impala scripts.

All reqired data is stored within encrpted project folder.

* Populate Master Data tables using Equifax acro date and equifax customer data by applying busines rulles in order to transform date via ETL1 scripts
* Populate additional tables required for PI application that are derived from master table using ETL2 scritps
* Export aggregated date into csv files. Csv files are stored into dedicated project sftp folder and wil be picked up by BI process in order to be loaded into Spotfire backend storage

## BI/IT process

BI or IT process should transfer csv files out of cambrian sftp folder via secured sftp connection and loade them into spotfire backend server.

Current plan is to use Oracle DB greed with date encrypted at rest and with encrypted data connection between spotfire server and Oracle server.

Alternate solution is to embed csv files into spotfire app and deploy encrypted app to the spofire server encrypted storage.

Upon successful load of data into back end server BI/IT process is responsible for deleting files from cambrian sftp location. There is not need to backup files as data can be recreated as long as cambrian tabls are in place.

## Customer Delivery

This is only high level overview of the system and IT team should provide comprehensive architecture diagram that should include layout of spotfire server, spitfire data connections, web server , and spotfire web player configuration.

In a nutshell spotfire server is operating behind firewall and running PI2 application.

Webserver is client facing Ignite Marketplace and exposes tile to the customer using secured web connection with two way authentication.

Tile acts as a link to the spotfire webplayer that displays PI2 app via WWW.

Customers are only able to se visuals and they don’t have access to data nor they can alter existing visualizations or create new visualizations.

Optionally if customer expresses need to be able to download data vie spotfire to their local computes and all proper agreements are in place additional tile and spitfire app will be created that may allow customers to create visualization using spotfire summary table and eventually export content of the table into csv file on the local computer. This option is being explored by technical team right now and it is not finalized as of yet.