



# ADVANCED DATA ANALYTICS SOLUTION

## CLIENT OVERVIEW

Our client is one of the leading providers of business intelligence systems for customers especially in BFSI space that needs intensive data analysis of huge amounts of data for their decision making. Our client's products aims at overcoming the limitations of regular business intelligence solutions like integrating data from different data sources, reducing data redundancy, etc. Our client's products utilize the benefits of modern technologies and implements graph traversal techniques that extract valuable information in instead of weeks.

## KEY REQUIREMENTS

- Data Extraction: retrieval of data from different data sources viz. DBMS, CSV, and text files in a specific pattern.
- Cleaning and fetching data with relatively few computational operations, and produce actionable output data.
- Develop reporting and provide real-time analytics and visualization on the processed data.

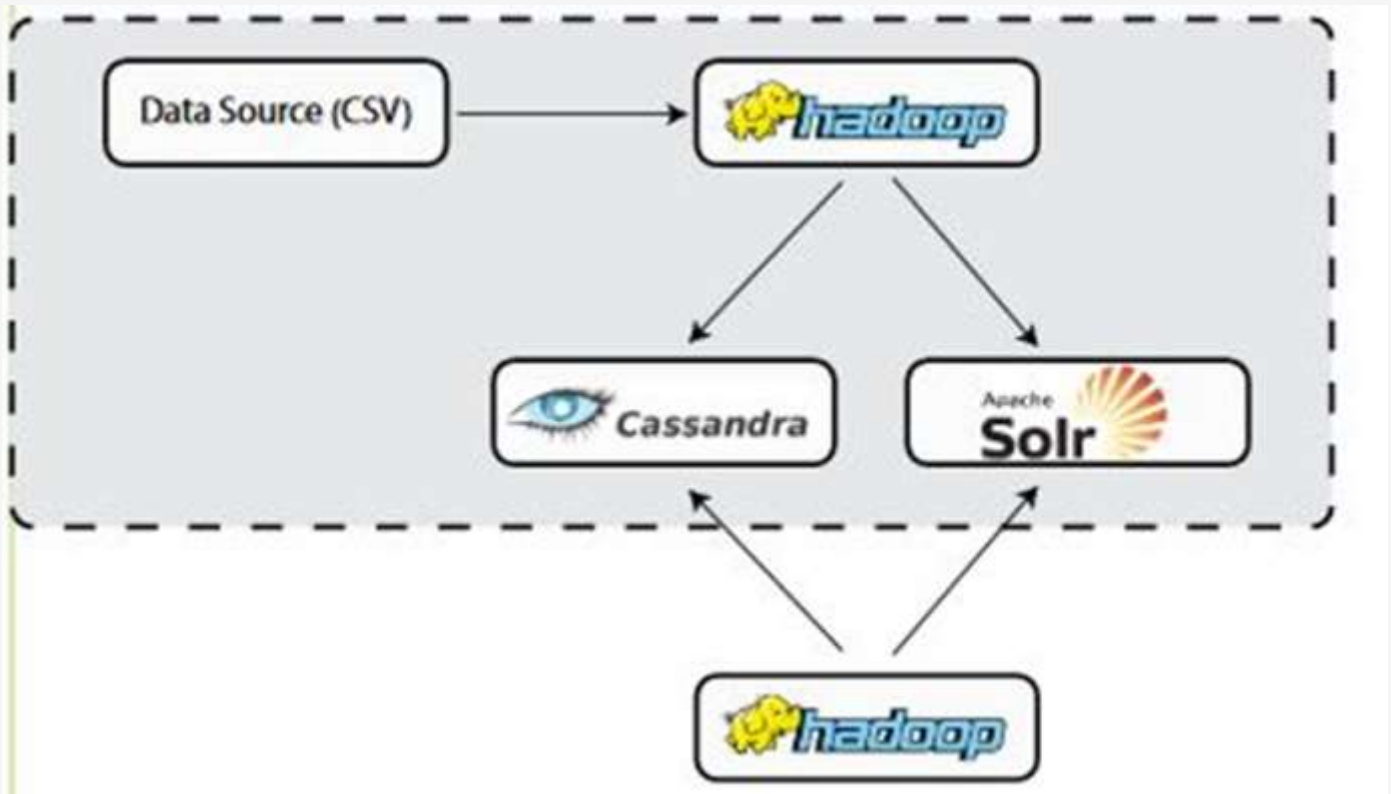
## KEY CONTRIBUTIONS

- Xoriant implemented a scalable solution which provided the required functionalities of eliminating large amount of code at each layer of present system by using Cassandra DB.
- Integrated client's platform with Hadoop framework while using Cassandra, a NoSQL database and Solr text search platform for processing data effectively.
- Incorporated NoSQL database, graph logical structures and graph traversal technique to enable validation, cleanup, and manipulation of data before it can be used by client's system.
- Integrated `CassandraBulkOutputFormat` and `SolrBulkOutputFormat` packages to write data in Cassandra and Solr.
- Integrated D3JS and Node JS library for visualization in the form of charts like line graphs, bar charts, pie charts, etc. with real time data.
- Used centralized graph algorithm to develop customer data connector and a loading framework to load data into the Graph storage.

## KEY BENEFITS

- Provided high scalability as any new data node can be added and related to current node in the system.
- Reduced the implementation and ongoing maintenance cost by 20% because of the centralized graph logic algorithm.
- Introduced new reports and reduced report generation time by 70% resulting in quick informed decisions.
- Resulted in highly optimized and efficient system in terms of time and storage space with customized graph searching functionality.
- Enabled the system to build configure and solve complex analytical problems for e.g. Market Basket Analysis, Cluster Analysis etc.

## HIGH LEVEL ARCHITECTURE



## TECHNOLOGY STACK

- Java
- Cassandra
- Solr
- Hadoop
- HTML
- CSS
- Javascript
- NodeJS



### About Xoriant:

Xoriant Corporation is a Product Development, Engineering and Consulting Services Company, serving technology startups as well as mid-size to large corporations. We offer a flexible blend of onsite, offsite and offshore services from our eight global delivery centers with over 2000 software professionals. Xoriant has deep client relationships spanning over 25 years with various clients ranging from startups to Fortune 100 companies.