# Introduction

The data platform architecture of an ecommerce company named SoftCart.

SoftCart uses a hybrid architecture, with some of its databases on premises and some on cloud.

## Tools and Technologies:

* OLTP database - MySQL
* NoSql database - MongoDB
* Production Data warehouse – DB2 on Cloud
* Staging Data warehouse – PostgreSQL
* Big data platform - Hadoop
* Big data analytics platform – Spark
* Business Intelligence Dashboard - IBM Cognos Analytics
* Data Pipelines - Apache Airflow

## Process:

SoftCart's online presence is primarily through its website, which customers access using a variety of devices like laptops, mobiles and tablets.

* All the catalog data of the products is stored in the MongoDB NoSQL server.
* All the transactional data like inventory and sales are stored in the MySQL database server.

SoftCart's webserver is driven entirely by these two databases.

* Data is periodically extracted from these two databases and put into the staging data warehouse running on PostgreSQL.
* The production data warehouse is on the cloud instance of IBM DB2 server.
* BI teams connect to the IBM DB2 for operational dashboard creation.
* IBM Cognos Analytics is used to create dashboards.
* SoftCart uses Hadoop cluster as its big data platform where all the data is collected for analytics purposes.
* Apache Spark is used to analyse the data on the Hadoop cluster.