# Professional Profile

JEYAKUMAR GOPALAN is Enterprise Data Warehouse Architect working in SAP BW service line for more than eleven years of combined IT experience serving Manufacturing, Chemical, Finance, Utilities, and Engineering industries. His tenure in the industry delivering SAP BW/BI service has afforded him involvement in several full life cycle SAP implementations. He has conducted GAP analysis workshops, finalize requirements, planning, implementation & hyper-care support. He also mentored, trained junior colleagues of the team, He worked in BusinessObjects Web Intelligence reports and Dashboards. He has experience in HANA SPS09, BPC 10.0, IP (Integrated Planning), SEM-BPS.

JEYAKUMAR GOPALAN’s SAP BW/BI expertise includes extraction, logistic cockpit, modeling, reporting and data integration. He is having good functional knowledge in FI, SD, MM, PP. Blueprinting, Handling workshops, Record to report initiatives, ad-hoc reporting, complex modeling, activating and enhancing business content, implementing end to end BW/BOBJ solutions are included in his practical experience. Used query monitor, aggregates, BW statistics for performance needs. Used queries, workbooks, roles and proactively monitored BW system with above capabilities. He is capable of handling complex ABAP, BADI in ETL, Modeling & Reporting layers.

# Technical Skills

## SAP BW: BW 7.4, BW 7.0, BW 3.5, ECC 6.0, BWA

FI, CO, MM, SD, PP, CRM 5.0, TM 9.0, SRM, xEM, EWM, GTS

HANA SP09, SAP Data Services, SLT, Lumira

BPC 7.5, SEM-BPS

## BW Reports, LSA++, HybridProvider, RDA, SPO, InfoCube, InfoSource, InfoObject, DSO, InfoSet, DataMart, OHS, Transformations, Update & Transfer rules, Aggregation Level.

## AO 2.2, BEx-Analyzer, BEx-Browser, Jump query (RRI), RKF, CKF, Workbook, BI Portal, Web Application Designer, Snapshot reporting

LO Cockpit, COPA Datasource, Generic, Business Content

## DataSource Enhancement, User-Exit

Application Process Designer (APD), APO

## Process Chain, Data load management, Event processing, Reporting agent, BW Statistics

## DDIC, Functional Module, Reports

BADI, ABAP, CMOD

**BW BPC 10.1**: ScriptLogic, BADI, Input Forms, Security, Data Access, Task Profiles, Data Manager.

**BusinessObjects XI 3.1/4.1**: Web Intelligence, Relational Universe, Dashboards, QAAWS, Crystal Reports. Tableau Desktop.

# Educational Background

Jeyakumar Gopalan has done Bachelor of Engineering (BE) in Computer Science (2000) from Tamil Nadu College of Engineering, Bharathiar University, Coimbatore, India

# Award

Received, **IBM Thanks Award** for the contribution excellence to Schneider-Electric SAP BW bridge Implementation.

Received, **Thanks Note** for BW - FAM (Financial Asset Management) Implementation in MassMutual.

# Professional Experience

## February 2016 – Present Managing Consultant - BW BPC World Bank

**Washington, DC (Yashco Sytems, Inc.)**

Jeyakumar is the BW BPC Managing Consultant for BPC Implementation in World Bank Group, Washington, DC. Release 1 comprises of Budget Construction, CapEx, Revenue & Expense, Staff Affordability for which he is responsible for the Detailed Design. Design includes Workflow Steps, Inbound/Outbound Interfaces, Versions, Data Locking, Data Migration, Input Forms, Reporting, Mockups, etc.

Budget Construction supports Budget Formulation Process to keep track of budget allocation decisions and other changes. Corporate Budget Dept and Key VPU Planners are the audience this solution caters to Post Go Live. From the BW BPC technical scope perspective, these requirements translate into several Input Forms, Master and Transactional Data load, Initiating Planning Cycle and Business Process Flow. Also, Arriving at Final Approval Plan, Retracting the Plan data back to Operational Systems, Close the Plan Cycle, It includes BPC Models, Dimensions, Data Access & Task Profiles, Input Forms, Data Manager Package, ABAP BADI, Hierarchy Master Data Loads, etc are part of the processes. Plan Vs Actual reports were drawn out of AO 2.2 that acts as control reports. Responsible for entire BW objects supporting BPC data models.

Worked on designing SAP BW Capital Investment Planning data Flows (DSOs, Transformation, and DTPs) on the BW on HANA database Scenarios and imported them to the HANA studio tool. Developed various HANA Models/Views, using non SAP Source system for real time data reporting requirement in Plan Vs Actual reporting. Design, build and deploy the provisioning of SAP data into SAP HANA platform to support real time report replacing BW extractors to support real time Plan data acquisition. Design, build and maintain virtual data model (SAP HANA views) using SAP HANA Studio. Developed Virtual Provider with BW objects upon HANA Models to use Navigational attributes and Master data related to BW Objects. Responsible for building different Data Models (Attributes, Analytical and Calculation Views) in SAP HANA extracting data from multiple sources. Assessed and created HANA models (exposing BW DSO's to Native HANA) in HANA studio and applied the HANA security (Analytic Privileges) to these views to expose out to Tableau for creating dashboards. Involved in tracing HANA SQL statements, Expensive SQL statements, and Performance tracing to improve modelling and execution of SQL statements. Utilizing Smart Data Integration (SDI), Smart Data Quality (SDQ) for Realtime Data Provisioning and Cleansing to HANA.

Developed Composite Provider to combine both data from BW & HANA and designed BEx queries upon these Composite Provider. Transported various HANA views to higher landscapes. Worked on Performance Optimizations by using Input Parameters to avoid the performance breakdowns.

World Bank Group consists of three main entities, IBRD, MIGA, IFC that takes part in this BPC Implementation scope.

Implementation Landscape comprises of BPC 10.1, Classic, EPM Add-in, BW 7.4, HANA, AO 2.2.

## June 2012 – January 2016 Enterprise Data Warehouse Architect Titanium Metals Corporation

## Titanium Metals Corporation (timet.com | precast.com)

Jeyakumar was the Enterprise Data Warehouse Architect in the SAP BW/BI competency designs the SAP BW architecture, plan, implement and maintain. He analyzes the company’s reporting needs and translates it to actionable agenda.

Accounts Receivable – Overdue Analysis (Realtime) – HANA Based Implementation:

(BI\_CONT – 757 SP7)

Implemented Overdue Analysis in SAP BW on HANA (BoH) successfully. Switched on the Business Function (SFW5) after completing all prerequisites in BW HANA system. Activated SAP HANA Optimized Business Content by turning on the Switch, /IMO/BW\_CONTENT. Defined Schema Mapping, Replicated BKPF, BSAD, BSID tables into HANA for delta replication. Activated BW & HANA Information Models. Composite InfoProvider, /IMO/V\_FIAR01 was activated that pulls data from Staged BW on HANA as well as Real-Time SAP HANA data by executing HANA Information Models. Used RKF, CKF in BEx to avoid double counting Customer line items. Used Advanced DSO, /IMO/D\_FIAR30 (Customer Line Items) to bring data for Composite Provider and /IMO/CMFIAR30 to stage into Corporate Memory.

Business Finance executes this Overdue Report to adjust Customer credits based on their Overdue and Outstanding payments. Open and Cleared Customer Line items based on Key date can split into freely selectable Aging Buckets. As this driver report delivers Account KPIs in Realtime (Business Data as it happens), business can pivot their business strategy in Realtime.

Activity, Yield and Hours by Resource:

Gap Analysis, functional and technical feasibility analysis, Business content study and existing design analysis for ‘Activity, Yield and Hours by Resource’ project was taken care of. This project entails resource wide reporting such as Process Order, Operation/Phase, Scheduled and Actual dates with quantities as per the date range, BOM In & Out weights, Batch, MRP Controller, Material, Product Hierarchy, et al. It provides business to gauge performance of Resource/Work center to assess its optimal performance. Costs associated with manufacturing Titanium Billets in these resources are listed out based on the reports mentioned above.

This data basis forms the layout for OEE (Overall Equipment Effectiveness) Reporting and TOC (Theory of Constraints) Lines.

As part of this effort, the portal frontend was replaced with BusinessObjects Web Intelligence Report.

Fiscal Year Conversion:

Precision Castparts Corp acquired TIMET in 2013 that made the fiscal year to be aligned in TIMET as that of PCC. TIMET followed Jan – Dec as the fiscal year period that was converted to PCC fiscal year, Apr – Mar. On the way of converting the fiscal year, TIMET shortened the 2013 fiscal year to start the 2014 fiscal year from Apr 2013. PCC calendar is year specific that added to the existing challenge. Past due, On time delivery, COTD, Asset Accounting reports were affected apart from the hard coded ABAP logic in BW that specifies the fiscal year. ABAP logic used in the data loading, report variables were affected due to this fiscal year change. Studied the entire system thoroughly and created a detailed project plan to address each issue. All the BW & BOBJ reports are stable now.

Overall Order Status:

Production planning required to gauge the Order outflux in which Overall Blocked Status plays a vital role. Order could be blocked due to various reasons such as Credit Worthiness, Billing or Delivery blocks. Backlog and Shipments Analysis reporting was enhanced with the said information that enabled the Planning person to envisage the Sales Orders that were about to be cashed out but blocked for various reasons.

Backlog BusinessObjects Webi report was updated accordingly with the flags.

North American Service Center Consolidation:

Financial Consolidation of Toronto Mill Operations and North American Service Centers to enable visibility over the individual financial and operating performance was planned and executed in ECC. New Sales Order type was needed to transfer replenishment orders from Mill to Service Centers at cost. This large-scale project had counterpart Enterprise BW Reporting such as Backlog, Inventory, Yield, ‘Sales Orders’, ‘On Time Delivery’, ‘On Time Shipments’ were impacted. Impact analysis was conducted throughout the BW System and changes were carried out from BW dataflow perspective in terms of ECC datasource, ABAP, BW Reports.

GRC – Restricted Access Reporting:

PCC required Restricted Access Resources and its access lists in TIMET’s sites for audit efforts associated with Segregation of Duties (SoD) and excessive access. Access control reporting solution was implemented that enables PCC to conduct mandatory SoD checks. It lists the Controls, transactions/devices along with roles and their associated users. BW as an Enterprise Analytics Solution staged the information from various source systems such as ERP, HR and reported out using BusinessObjects Business Intelligence. One another Use case of this project is the proof of concept for analyzing HR information through BW landscape, as it was not a quite successful venture when tried before in TIMET.

Entire solution that deals with ECC, HR, ABAP, BW and SAP Security was architected and executed from idea to consumption. This BusinessObjects Webi solution replaced spreadsheet based dead data reporting that might be not accurate at the time of using when compared to at the time of generating. It is prone to error as it is manual generation. This solution saved thousands of dollars for TIMET in terms of valuable person hours of Business Relationship Manager who generates this spreadsheet containing 10s of tabs. It was delivered on time and under budget.

BW 7.31 upgrade:

BW environment is upgraded from 7.0 to 7.31 successfully. Spearheaded in devising the upgrade plan, path and resources. Handed out and explained the detailed project plan steps to the project members. Created checklist of pre and post steps that needs to be done while upgrading BW environment. Created a list of SAP notes needed to be implemented in post upgrade scenario to get rid of various issues that will appear. Analyzed the security aspects of TIMET BW landscape to study the prerequisite fitness for 7.31 upgrade. Assisted the security team in understanding the Analysis Authorization concept being used in 7.0 environments.

On time shipments, BW extract job failed in R/3 continuously quite lot many times resulted in OTD data loss in BW. Investigated the issue and found that the ABAP program, ZPVR0027 contains a logical syntax error that dumped the job altogether. Logic used the function module that does not support handling the 12 AM (00:00:00) time. Since the job started at 12 AM at times, it is failed. After this fix, this job is not failing anymore.

The technical environment is SAP BW 7.31, 7.0, BW 3.5, ECC 6.0, Tableau, BusinessObjects 3.1.

## January 2011 – June 2012 Systems Specialist MassMutual Financial Group

## MassMutual Financial Group, Springfield, MA

Jeyakumar was the Systems Analyst in SAP BW team designed the SAP BW architecture to support SAP ECC, Insurance module. Worked with business owners to capture business requirements and drive functional and technical designs for FAM, HR & IIF. FAM is the Business Analytics from SAP for Insurance domain that manages the financial assets. IIF is the holder application that processes the insurance information such as policies, agencies, business partners, et al.

BPS, Integrated Planning Expense planning template was modified to get rid of redundant calculations. Business process flows have been readjusted and remodified.

HR Compensation Analysis business content has been analysed after the Gap analysis study with the HR team. Content has been enhanced as per the existing practice and implemented. Course of actions in the HR was modified according to best practices suggested by SAP to accommodate the newly implemented Compensation Analysis. Datasource, 0HR\_PA\_CM\_2 was implemented and enhanced to get to the to-be stage from as-is. RSU5 BADI was used to enhance the datasource with course type.

Enhanced Accounts Payable datasource 0FI\_AP\_4 for document status and value date. Datasource and extraction structure changes have been carried out. Infocube, DSOs are modeled according to the datasource changes. Data reload in Prod have been with delta init and proper cutover strategy.

Modeled the BW objects to access the query statistics from standard BW infocubes and RS tables. A database view was created in BW that acted as a base for Generic datasource that pulled necessary information to the enhanced DSOs, InfoCubes.

Financial Asset Management Module was implemented in R/3 and the respective data flow to BW was implemented. Function module based Generic datasource and its corresponding staging and consolidated layer DSOs, InfoCubes, MultiProviders, Process chains have been modeled.

Used RSDD TREX INDEX DELETE to drop BIA indexes, RSDDV and process type in process chains to intial fill and build BWA indexes.

Production issues for the applications running in the daily schedule is being provided. Issues pertaining to the data load and availability of the business critical systems are ensured.

The technical environment comprised of SAP BW 7.0, BPS, BW 3.5, DB Connect.

## December 2007 – January 2011 Senior Application Consultant IBM India Pvt. Ltd.

## Project 1: SAP BW for Air Products and Chemicals Inc., USA

## Air Produtcs and Chemicals Inc. Allentown, PA

Jeyakumar was the Lead Consultant for SAP BW team, which is into maintenance activities for Air Products SAP BW applications. Task is to develop and implement BW solutions for RFC (Request For Change). Long pending trouble tickets/problem records do get combined to form a RFC. Changes pertaining to FIAR region are getting carried out. Air Products BW reports are based on BEx as well as BusinessObjects that creates the challenge to deliver. Project is in post warranty support period. APO data was being pulled from BW and vice versa. Demand Planning and Supply Network Planning are getting carried out in APO system.

Logistics cockpit datasources involving in stock initialization and material movements have been enhanced. Historical data was effected with the datasource enhancement changes by not through the traditional setup table init. Production database box was queried by T-SQL and then the resultset was fed to the Inventory cube through flat file datasource. Written 100 lines of T-SQL that query Shipment Tables, VTTK, VTTP.

Plant Maintenance BW reports were installed from business content and customized reports were created to cater the business requirements. Damage analysis notifications bring about the damage codes and the frequency they were occurred. Analysis of causes can be viewed in the above query too. QM Infocube, 0QM\_C09 that fed the data from three Datasources, 2LIS\_05\_ITEM, 2LIS\_17\_ITEM, 2LIS\_18\_ITEM was used to refresh data in the above BW reports.

The above reports were fed to Web Intellingence, Xcelsius reports through Unvierses for interactive and dashboard reports. Query as a web service (QAAWS) was used to feed the Xcelsius through Universes from SAP BW queries. BW variables were used in QAAWS/Universe to minimise the XcelSius resultset to boost the runtime performance.

Created BPS variables as a regular routine year start task. These variables have been transported and deployed in Prod for the regular use. Infocube load behavior has been modified to accommodate the planners with more time to do plan and avoid locking the cubes while actuals loaded from R/3.

Dropped and rebuild BWA indexes during prodution move.

The technical environment comprised of SAP BW 7.0, CRM 5.0, SEM-BPS, BusinessObjects XI 3.1 with ECC 6.0.

## Project 2: Marketing Dashboard for Holly Corporation, USA

## Holly Corporation, Dallas, TX

Jeyakumar was part of the team, which was into implementing the Marketing Dashboard for Holly Corporation. Holly is into oil refinery business that produces and sells Oil products to rack and pipeline customers. Marketing dashboard was in use in the form of spreadsheet that consumes time to get the data refreshed that is more prone to errors. Holly wanted to impement this dashboard in SAP BW 7.0 with BusinessObjects.

Netback-MTD calculated in Webi based on the weighted average of Netback for pipeline customer’s weighted average and Netback for Gilf coast customer’s weighted average. Since, weighted average of weighted average calculation in Webi is not technically feasible, the technical design in the BW 7.0 Modelling was included with APD (Application Process Designer). In APD, query that calculates the weighted average was used as an input to a direct-update APD DSO that acts as target. Deltas were pulled from this DSO into the a standard DSO. Process Chains constructed for APDs delta capability.

Formula Pricing is one complex procedure that Holly is being used to in the current scenario in ECC. This pricing procedure Function Module is utilized in such a way that it has been called from the Function Module created by myself. Datasource created based on this new FM that simulates all the pricing scenarios for the current system date or InfoPack selection date.

COPA Profitability Analysis has been pulled into BW through the standard datasource available in the content. Data intialization in the Production in the cutover strategy procedures have been carried out. Account based datasource been generated and utilized.

Many complicated formulas were in place to get the pricing for various customers. These were to get leveraged in the existing form.

The technical environment comprised of SAP BW 7.0, BusinessObjects XI 3.1 with ECC 6.0.

## Project 3: Finance Reconciliation for Ericsson, Sweden

**Ericsson, Sweden**

Jeyakumar was part of the team, which is into reengineering the certain Accounts Receivable EDW layer objects and its BW reports in Ericsson Business Intelligence.

He was involved in resolving Master data, Accounts Receivable related issues. Statement of work in this project is a bunch of tasks bundled into a contract piece that design, execute and deliver reengineered flawless solutions of Ericsson that are being a hurdle in the stableness of the system.

Enhanced the 0FI\_AR\_4 extractor with Profit Center field to avoid doing look-up in the BW. Look-up for this field in BW has given problems in reconciling BW data with ECC. Created reversal update rules so that the selective deletion of small amount of data can be eased.

The technical environment comprised of SAP BW 7.0 with ECC 6.0.

## Project 4: Bridge NAUSP1 for Schneider-Electric, USA

## Schneider-Electric, Nashville, TN

Worked in the client site in Nashville, TN, USA. Jeyakumar is part of the team, which is rolling-out the SAP BW 3.5 for Square D (Schneider Electric)

Responsibility is to coordinate with the business-users to finalize the report expectations and do gap analysis. Core team has already delivered SAP solution in France. This is a BW 3.5 rollout of the solution already delivered by Core team in North America by mapping the local requirements. Finance and Controlling along with the Plant Operations are going live in this rollout phase. Initial knowledge transfer sessions from the Core team regarding FICO, SD, MM modules has been done with series of discussions. I have been doing the North American Business Reporting Lead and the responsibilities includes Work estimation, creating BRS, UDD, et al.

Used Web Application Designer (WAD) to develop web reports using web items, interactive charts, graphics, and tables. Published the BW reports in BI Portal and maintained the templates according to business user needs. Created hierarchy and defined data flow in reports using visual composer.

The technical environment comprised of SAP BW 3.5 with ECC 5.0.

## Project 5: Fusion II for Unilever – S&OP BW Implementation

**Unilever, Bangalore**

Jeyakumar was part of the team, which implemented the SAP BW 7.0 for Unilever.

Responsibility is to coordinate with the end-users to gather requirements analysis and then prepare development track as per the HUL standards. This is a BI7.0 implementation started from scratch. Plant Maintenance (PM) report, OEE deals about the Overall Equipment Efficiency of the EQUNR dealing Packing activity in the line. It sums up the losses gathered because of the entities such as shutdown, no production orders and several others. Calculation is based on Barebone OEE. This report is getting done by employing various complex design ideas like, virtual key figures, BADI, generic datasource based on function module, Ytable extraction, weighted average calculation in the report design, et al.

SRM Tea track’s requirement has been fulfilled by availability analysis, preauction reports, auction efficiency reports development.

The technical environment comprised of SAP BW 7.0 with ECC 5.0.

## April 2006 – November 2007 Senior Associate Consultant Momentum Consulting Group

## Project: Inventory Actuals for Procter & Gamble

Jeyakumar was part of the SAP BW team provided 24\*7 support under follow-the-sun model for P & G. Data from various source systems are extracted and refreshed in SAP BW that enable reporting on them.

He has been involved in Problem tracking and providing solutions as needed in data loading, reports. He has been using the Process Chain during extraction from R/3 to BW, Downloading data from InfoCube and ODS to /BIC/OH tables using Open Hub and InfoSpoke, Enhanced the datasource 2LIS\_03\_BF according to client requirement, Monitor periodic data loads from R/3 to BW that scheduled daily, weekly & monthly. Provided clean up process like PSA data deletion, PSA partitioning, InfoCube compression, deletion of unwanted aggregates and unused queries, Worked extensively on BEx Analyzer using Variables, Navigational attributes, Currency Conversion and Filters.

RRI Jump queries and InfoSet queries for drill down to another query along with RKF, CKF, Structures, Exceptions and Conditions are used along with BW Statistics and query monitor for performance reasons

The technical environment comprised of SAP BW 3.5 with ECC 5.0.

## August 2005 – April 2006 Senior Consultant Capgemini Consulting India Pvt. Ltd.

## Project: Schneider Electric, France

Build, and tested the information warehouse solution, INSIGHT for Schneider Electric, France, a leading industrial electrical products manufacturer. Responsibilities include build, testing, peer reviews, Project Quality Lead (PQL), status updating, knowledge base maintenance, report to offshore coordinator via WSRs and MSRs.

Capgemini has been engaged by the front office, Capgemini, France to support INSIGHT as the Offshore Delivery Center.

Creates custom objects to support FI and CO modules. Developed the DataSource (enhanced) for the CO-PA on basis of operating concern (Cost based) and developed objects for the DataSource. The ODS object facilitated the display of line items and the analysis of the charges made by a particular individual by Cost Center. Designed application that combine special G/L Ledger with standard Ledgers (G/L) from two separate InfoSource to combine fields so queries do not need to combine the average data.

Developed a FI-SL DataSource to facilitate analysis of the margin of profit for returned goods and reproduced goods. Worked with custom DataSource for FI-SL account and User Exit to concatenate fields together to form a compound value for an InfoObject.

The technical environment comprised of BW 3.5 and ECC 5.0

**Feb 2005 – Jul 2005 Senior Consultant Accenture Services Pvt. Ltd.**

## Project: Restructure Un1ty for Dumex

Restructure Un1ty is an SD application running in Dumex for their APAC and EMEA regions. Performed ABAP routine to allow space as allowed character in Scheduler. Involved in data scheduling and monitoring activities for logistics applications. Monitoring of InfoPackages and analyzing the frequent failures of InfoPackages. Maintaining work history of all tickets until it is closed down.

Involved in creation of aggregates and performing InfoCube compression to enhance the query and data load performance. Informed the peoples about the deadlocks and resolved the same.

**June 2004 – January 2005 Senior Software Engineer Satyam Computer Services Ltd.**

## Project: MasperS1 for Manufacturing major

Supported end-users in the France region for manufacturing major accessing information from MM application, MasperSl. Enhanced 2LIS\_03\_BX DataSource and provided function enhancement using ABAP.

Customized Basic InfoCubes, ODS objects, InfoSources, Update rules, DataSources, replicated DataSources, loaded master and transaction data from flat files and OLTP respectively.

Involved in compression of InfoCube, rolling-up the data into aggregates. Changed existed data model of InfoCube by adding new characteristics and key figures. Created aggregates and performed roll-up as part of performance improvement.

Used BW Statistics to analyze and improve the query performance.

Created BEx reports with Formula, Selections, Structures, Exceptions and Conditions, Variables with user entry/default value.

**March 2003 – June 2004 Software Engineer Hewlett-Packard GDIC**

## Project: HP, UK

Provided application management service for MM applications, SAM and FMN in Hewlett-Packard’s EMEA, NAA, APAC regions.

Modified SAPScript layout for Dunning (F150\_DUNN\_01) and created print program for the same.

Developed Material Master detailed interactive reports. Input of material and plant as a selection and the material type as parameters.

Uploaded customer master data from flat file using LSMW.

Generated report based on custom generated FI-SL DataSource (remanufactured goods).

Responsibilities included on-call support for production errors by adhered to SLA, batch jobs monitoring, job scheduling and error documentation. Applications are running with ASP, SQL Server, IIS, VBScript.

**June 2000 – March 2003 Software Engineer EZWAY Solutions Inc.**

**Project:** Sports Tracker, USA, EmpireMLS, Bluemoo ISP, USA, TL Metzger

Involved in various web based applications construction that has the technical environment ASP, VBScript, SQL Server.