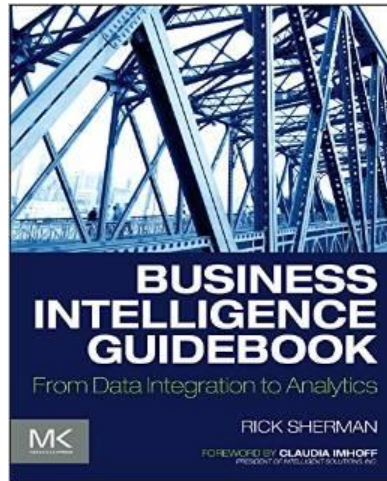


---

# Business Intelligence Guidebook



## BI Dimension Model - Detailed Design Template



# Northeastern University

Northeastern University, Boston

## BI Dimension Logical Model – Detailed Design Template Contoso Retail Project

Date: April 2018

Author(s): Dharit Shah

Luvesh Tekchandani

Ojas Phansekar

Raj Ravindra Phadke

Sponsor(s): Prof. Richard Sherman

Arjun Upadhyay

Labdhi Shah

Palak Agrawal

# TABLE OF CONTENTS

**BI DIMENSIONAL LOGICAL MODEL DESIGN..... 3**

DATA STORE: [RETAIL\_DW] ..... 3

- Source to Target Mapping..... *Error! Bookmark not defined.*
- CONSTRAINTS..... *Error! Bookmark not defined.*
- INDEXES..... *Error! Bookmark not defined.*
- DATA STORE LOGICAL MODEL.....12

**APPROVALS .....ERROR! BOOKMARK NOT DEFINED.**

**APPENDIX: BACKGROUND MATERIALS ..... 18**

AUTHORS AND CONTRIBUTORS ..... 18

## **BI DIMENSIONAL LOGICAL MODEL DESIGN**

---

### **DATA STORE: [NAME]**

Data Store: Contoso Retail Database

Schema Type: Relational Database Schema

Description: Retail\_DW Final Project

Status: Final Submission

Last Updated: 04/28/2018

Team Responsible for Design: Team 5

## Source To Target Mappings:

| Source |                     |                                  |               |               |               |        | Target              |                     |               |
|--------|---------------------|----------------------------------|---------------|---------------|---------------|--------|---------------------|---------------------|---------------|
|        | SourceTable         | Columns                          | DataTypes     |               |               |        | TargetTable         | Columns             | Data Type     |
|        |                     |                                  | MySQL         | SQLServer     | PostgreSQL    | Oracle |                     |                     |               |
| Source | dimaccount          | AccountKey                       | int(11)       | int identity  | int identity  |        | dimaccount          | AccountSK           | int(11)       |
|        |                     |                                  |               |               |               |        | dimaccount          | AccountKey          | int(11)       |
| Source | dimaccount          | ParentAccountKey                 | int(11)       | int           | int           |        | dimaccount          | ParentAccountSK     | int(11)       |
|        |                     |                                  |               |               |               |        | dimaccount          | ParentAccountKey    | int(11)       |
|        |                     | AccountLabel                     | varchar(100)  | nvarchar(100) | nvarchar(100) |        | dimaccount          | AccountLabel        | varchar(100)  |
|        |                     | AccountName                      | varchar(50)   | nvarchar(50)  | nvarchar(50)  |        | dimaccount          | AccountName         | varchar(50)   |
|        |                     | AccountDescription               | varchar(50)   | nvarchar(50)  | nvarchar(50)  |        | dimaccount          | AccountDescription  | varchar(50)   |
|        |                     | AccountType                      | varchar(50)   | nvarchar(50)  | nvarchar(50)  |        | dimaccount          | AccountType         | varchar(50)   |
|        |                     | Operator                         | varchar(50)   | nvarchar(50)  | nvarchar(50)  |        | dimaccount          | Operator            | varchar(50)   |
|        |                     | ETLLoadID                        | int(11)       | int           | int           |        | dimaccount          | SOR_ID              | int(11)       |
|        |                     | LoadDate                         | datetime(3)   | datetime      | datetime      |        | dimaccount          | SOR_LoadDate        | datetime      |
|        |                     | UpdateDate                       | datetime(3)   | datetime      | datetime      |        | dimaccount          | SOR_UpdateDate      | datetime      |
|        |                     | context.getProperty("vChildPID") |               |               |               |        | dimaccount          | DI_JobID            | varchar(20)   |
|        |                     | TalendDate.getCurrentDate()      |               |               |               |        | dimaccount          | DI_CreateDate       | datetime      |
|        |                     | TalendDate.getCurrentDate()      |               |               |               |        | dimaccount          | DI_ModifiedDate     | datetime      |
|        | dimchannel csv      |                                  |               |               |               |        | dimchannel          | ChannelSK           | int(11)       |
|        |                     |                                  |               |               |               |        | dimchannel          | ChannelKey          | int(11)       |
|        |                     |                                  |               |               |               |        | dimchannel          | ChannelLabel        | varchar(100)  |
|        |                     |                                  |               |               |               |        | dimchannel          | ChannelName         | varchar(20)   |
|        |                     |                                  |               |               |               |        | dimchannel          | ChannelDescription  | varchar(50)   |
|        |                     |                                  |               |               |               |        | dimchannel          | SOR_ID              | int(11)       |
|        |                     |                                  |               |               |               |        | dimchannel          | SOR_LoadDate        | datetime      |
|        |                     |                                  |               |               |               |        | dimchannel          | SOR_UpdateDate      | datetime      |
|        |                     | context.getProperty("vChildPID") |               |               |               |        | dimchannel          | DI_JobID            | varchar(20)   |
|        |                     | TalendDate.getCurrentDate()      |               |               |               |        | dimchannel          | DI_CreateDate       | datetime      |
|        |                     | TalendDate.getCurrentDate()      |               |               |               |        | dimchannel          | DI_ModifiedDate     | datetime      |
|        |                     |                                  |               |               |               |        |                     |                     |               |
|        | dimcurrency csv     |                                  |               |               |               |        | dimcurrency         | CurrencySK          | int(11)       |
|        |                     |                                  |               |               |               |        | dimcurrency         | CurrencyKey         | int(11)       |
|        |                     |                                  |               |               |               |        | dimcurrency         | CurrencyLabel       | varchar(10)   |
|        |                     |                                  |               |               |               |        | dimcurrency         | CurrencyName        | varchar(20)   |
|        |                     |                                  |               |               |               |        | dimcurrency         | CurrencyDescription | varchar(50)   |
|        |                     |                                  |               |               |               |        | dimcurrency         | SOR_ID              | int(11)       |
|        |                     |                                  |               |               |               |        | dimcurrency         | SOR_LoadDate        | datetime      |
|        |                     |                                  |               |               |               |        | dimcurrency         | SOR_UpdateDate      | datetime      |
|        |                     | context.getProperty("vChildPID") |               |               |               |        | dimcurrency         | DI_JobID            | varchar(20)   |
|        |                     | TalendDate.getCurrentDate()      |               |               |               |        | dimcurrency         | DI_CreateDate       | datetime      |
|        |                     | TalendDate.getCurrentDate()      |               |               |               |        | dimcurrency         | DI_ModifiedDate     | datetime      |
|        |                     |                                  |               |               |               |        |                     |                     |               |
| Source | dimcustomer_company | CustomerID                       | int(11)       | int           |               |        | dimcustomer_company | CustomerSK          | int(11)       |
|        |                     | CustomerKey                      | int(11)       | int           |               |        | dimcustomer_company | CustomerID          | int(11)       |
|        |                     | CustomerLabel                    | char(5)       | NA            |               |        | dimcustomer_company | CustomerKey         | int(11)       |
| Target | dimgeography        | GeographySK                      | int(11)       |               |               |        | dimcustomer_company | CustomerLabel       | char(5)       |
|        |                     | YearlyIncome                     | decimal(15,4) | numeric(15,2) |               |        | dimcustomer_company | GeographySK         | int(11)       |
|        |                     | CustomerType                     | varchar(15)   | nvarchar(15)  |               |        | dimcustomer_company | YearlyIncome        | decimal(15,2) |
|        | dimcustomer_company | CompanyName                      | varchar(100)  | nvarchar(100) |               |        | dimcustomer_company | CustomerType        | varchar(15)   |
|        |                     | GeographyKey                     | int(11)       | int           |               |        | dimcustomer_company | CompanyName         | varchar(100)  |
|        |                     | ETLLoadID                        | int(11)       | int           |               |        | dimcustomer_company | GeographyKey        | int(11)       |
|        |                     | LoadDate                         | datetime(3)   | datetime      |               |        | dimcustomer_company | SOR_ID              | int(11)       |
|        |                     | UpdateDate                       | datetime(3)   | datetime      |               |        | dimcustomer_company | SOR_LoadDate        | datetime      |
|        |                     | context.getProperty("vChildPID") |               |               |               |        | dimcustomer_company | SOR_UpdateDate      | datetime      |
|        |                     | TalendDate.getCurrentDate()      |               |               |               |        | dimcustomer_company | DI_JobID            | varchar(20)   |
|        |                     | TalendDate.getCurrentDate()      |               |               |               |        | dimcustomer_company | DI_CreateDate       | datetime      |
|        |                     | TalendDate.getCurrentDate()      |               |               |               |        | dimcustomer_company | DI_ModifiedDate     | datetime      |

|        |                    |                                  |               |               |  |                    |                      |               |
|--------|--------------------|----------------------------------|---------------|---------------|--|--------------------|----------------------|---------------|
| Source | dimcustomer_person | CustomerID                       | int(11)       | int identity  |  | dimcustomer_person | CustomerSK           | int(11)       |
|        |                    | CustomerKey                      | int(11)       | int           |  | dimcustomer_person | CustomerID           | int(11)       |
|        |                    | CustomerLabel                    | char(5)       | NA            |  | dimcustomer_person | CustomerKey          | int(11)       |
|        |                    | GeographyKey                     | int(11)       | int           |  | dimcustomer_person | CustomerLabel        | char(5)       |
|        |                    | Title                            | varchar(8)    | nvarchar(8)   |  | dimcustomer_person | GeographySK          | int(11)       |
|        |                    | FirstName                        | varchar(50)   | nvarchar      |  | dimcustomer_person | Title                | varchar(8)    |
|        |                    | MiddleName                       | varchar(50)   | nvarchar      |  | dimcustomer_person | FirstName            | varchar(50)   |
|        |                    | LastName                         | varchar(50)   | nvarchar      |  | dimcustomer_person | MiddleName           | varchar(50)   |
|        |                    | NameStyle                        | tinyint(4)    | NA            |  | dimcustomer_person | LastName             | varchar(50)   |
|        |                    | BirthDate                        | date          | date          |  | dimcustomer_person | NameStyle            | tinyint(4)    |
|        |                    | MaritalStatus                    | char(1)       | nchar         |  | dimcustomer_person | BirthDate            | date          |
|        |                    | Suffix                           | varchar(10)   | nvarchar      |  | dimcustomer_person | MaritalStatus        | char(1)       |
|        |                    | Gender                           | varchar(1)    | nvarchar      |  | dimcustomer_person | Suffix               | varchar(10)   |
|        |                    | EmailAddress                     | varchar(50)   | nvarchar      |  | dimcustomer_person | Gender               | varchar(1)    |
|        |                    | YearlyIncome                     | decimal(15,4) | numeric       |  | dimcustomer_person | EmailAddress         | varchar(50)   |
|        |                    | TotalChildren                    | int(11)       | int           |  | dimcustomer_person | YearlyIncome         | decimal(15,2) |
|        |                    | NumberChildrenAtHome             | int(11)       | int           |  | dimcustomer_person | TotalChildren        | int(11)       |
|        |                    | Education                        | varchar(40)   | nvarchar(40)  |  | dimcustomer_person | NumberChildrenAtHome | int(11)       |
|        |                    | Occupation                       | varchar(100)  | nvarchar(100) |  | dimcustomer_person | Education            | varchar(40)   |
|        |                    | HouseOwnerFlag                   | char(1)       | nchar         |  | dimcustomer_person | Occupation           | varchar(100)  |
|        |                    | NumberCarsOwned                  | int(11)       | int           |  | dimcustomer_person | HouseOwnerFlag       | char(1)       |
|        |                    | AddressLine1                     | varchar(120)  | nvarchar      |  | dimcustomer_person | NumberCarsOwned      | int(11)       |
|        |                    | AddressLine2                     | varchar(120)  | nvarchar      |  | dimcustomer_person | AddressLine1         | varchar(120)  |
|        |                    | Phone                            | varchar(20)   | nvarchar      |  | dimcustomer_person | AddressLine2         | varchar(120)  |
|        |                    | DateFirstPurchase                | date          | date          |  | dimcustomer_person | Phone                | varchar(20)   |
|        |                    | ETLLoadID                        | int(11)       | int           |  | dimcustomer_person | DateFirstPurchase    | date          |
|        |                    | LoadDate                         | datetime(3)   | datetime      |  | dimcustomer_person | SOR_ID               | int(11)       |
|        |                    | UpdateDate                       | datetime(3)   | datetime      |  | dimcustomer_person | SOR_LoadDate         | datetime      |
|        |                    | context.getProperty("vChildPID") |               |               |  | dimcustomer_person | SOR_UpdateDate       | datetime      |
|        |                    | TalendDate.getCurrentDate()      |               |               |  | dimcustomer_person | DI_JobID             | varchar(20)   |
|        |                    | TalendDate.getCurrentDate()      |               |               |  | dimcustomer_person | DI_CreateDate        | datetime      |
|        |                    |                                  |               |               |  | dimcustomer_person | DI_ModifiedDate      | datetime      |

|        |         |                                  |             |             |  |         |                    |             |
|--------|---------|----------------------------------|-------------|-------------|--|---------|--------------------|-------------|
| Source | dimdate | DateSK                           | int(11)     | int         |  | dimdate | DateSK             | int(11)     |
|        |         | FullDateAK                       | date        | date        |  | dimdate | FullDateAK         | date        |
|        |         | FullDateTimeAK                   | datetime(3) | datetime    |  | dimdate | FullDateTimeAK     | datetime    |
|        |         | YearID                           | int(11)     | int         |  | dimdate | YearID             | int(11)     |
|        |         | MonthID                          | int(11)     | int         |  | dimdate | MonthID            | int(11)     |
|        |         | DayID                            | int(11)     | int         |  | dimdate | DayID              | int(11)     |
|        |         | YearQtr                          | int(11)     | int         |  | dimdate | YearQtr            | int(11)     |
|        |         | YearMonth                        | int(11)     | int         |  | dimdate | YearMonth          | int(11)     |
|        |         | DayOfYear                        | int(11)     | int         |  | dimdate | DayOfYear          | int(11)     |
|        |         | WeekOfYear                       | int(11)     | int         |  | dimdate | WeekOfYear         | int(11)     |
|        |         | DayofWeek                        | int(11)     | int         |  | dimdate | DayofWeek          | int(11)     |
|        |         | MonthAbr                         | char(3)     | char        |  | dimdate | MonthAbr           | char(3)     |
|        |         | DayAbr                           | char(3)     | char        |  | dimdate | DayAbr             | char(3)     |
|        |         | MonthFull                        | varchar(12) | varchar     |  | dimdate | MonthFull          | varchar(12) |
|        |         | DayFull                          | varchar(12) | varchar     |  | dimdate | DayFull            | varchar(12) |
|        |         | FullDateUSA                      | char(10)    | char        |  | dimdate | FullDateUSA        | char(10)    |
|        |         | DayOfMonth                       | varchar(2)  | varchar     |  | dimdate | DayOfMonth         | varchar(2)  |
|        |         | DaySuffix                        | varchar(4)  | varchar     |  | dimdate | DaySuffix          | varchar(4)  |
|        |         | DayName                          | varchar(9)  | varchar     |  | dimdate | DayName            | varchar(9)  |
|        |         | DayOfWeekUSA                     | char(1)     | char        |  | dimdate | DayOfWeekUSA       | char(1)     |
|        |         | DayOfWeekInMonth                 | varchar(2)  | varchar     |  | dimdate | DayOfWeekInMonth   | varchar(2)  |
|        |         | DayOfWeekInYear                  | varchar(2)  | varchar     |  | dimdate | DayOfWeekInYear    | varchar(2)  |
|        |         | DayOfQuarter                     | varchar(3)  | varchar     |  | dimdate | DayOfQuarter       | varchar(3)  |
|        |         | DayOfYearChar                    | varchar(3)  | varchar     |  | dimdate | DayOfYearChar      | varchar(3)  |
|        |         | WeekOfQuarter                    | varchar(1)  | varchar     |  | dimdate | WeekOfQuarter      | varchar(1)  |
|        |         | WeekOfQuarter                    | varchar(2)  | varchar     |  | dimdate | WeekOfQuarter      | varchar(2)  |
|        |         | WeekOfYearChar                   | varchar(2)  | varchar     |  | dimdate | WeekOfYearChar     | varchar(2)  |
|        |         | MonthChar                        | varchar(2)  | varchar     |  | dimdate | MonthChar          | varchar(2)  |
|        |         | MonthName                        | varchar(9)  | varchar     |  | dimdate | MonthName          | varchar(9)  |
|        |         | MonthOfQuarter                   | varchar(2)  | varchar     |  | dimdate | MonthOfQuarter     | varchar(2)  |
|        |         | Quarter                          | char(1)     | char        |  | dimdate | Quarter            | char(1)     |
|        |         | QuarterName                      | varchar(9)  | varchar     |  | dimdate | QuarterName        | varchar(9)  |
|        |         | YearChar                         | char(4)     | char        |  | dimdate | YearChar           | char(4)     |
|        |         | YearName                         | char(7)     | char        |  | dimdate | YearName           | char(7)     |
|        |         | MonthYear                        | char(10)    | char        |  | dimdate | MonthYear          | char(10)    |
|        |         | MMYYYY                           | char(6)     | char        |  | dimdate | MMYYYY             | char(6)     |
|        |         | FirstDayOfMonth                  | date        | date        |  | dimdate | FirstDayOfMonth    | date        |
|        |         | LastDayOfMonth                   | date        | date        |  | dimdate | LastDayOfMonth     | date        |
|        |         | FirstDayOfQuarter                | date        | date        |  | dimdate | FirstDayOfQuarter  | date        |
|        |         | LastDayOfQuarter                 | date        | date        |  | dimdate | LastDayOfQuarter   | date        |
|        |         | FirstDayOfYear                   | date        | date        |  | dimdate | FirstDayOfYear     | date        |
|        |         | LastDayOfYear                    | date        | date        |  | dimdate | LastDayOfYear      | date        |
|        |         | IsWeekDay                        | tinyint(4)  | bit         |  | dimdate | IsWeekDay          | int(11)     |
|        |         |                                  |             |             |  | dimdate | IsHolidayUSA       | int(11)     |
|        |         |                                  |             |             |  | dimdate | HolidayUSA         | varchar(50) |
|        |         | EuropeSeason                     | varchar(50) | varchar(50) |  | dimdate | EuropeSeason       | varchar(50) |
|        |         |                                  |             |             |  | dimdate | NorthAmericaSeason | varchar(50) |
|        |         |                                  |             |             |  | dimdate | AsiaSeason         | varchar(50) |
| Source | dimdate | ETLLoadID                        | int(11)     | int         |  | dimdate | SOR_ID             | int(11)     |
|        | dimdate | LoadDate                         | datetime(3) | datetime    |  | dimdate | SOR_LoadDate       | datetime    |
|        | dimdate | UpdateDate                       | datetime(3) | datetime    |  | dimdate | SOR_UpdateDate     | datetime    |
|        |         | context.getProperty("vChildPID") |             |             |  | dimdate | DI_JobID           | varchar(20) |
|        |         | TalendDate.getCurrentDate()      |             |             |  | dimdate | DI_CreateDate      | datetime    |
|        |         | TalendDate.getCurrentDate()      |             |             |  | dimdate | DI_ModifiedDate    | datetime    |

|        |                       |                                  |              |               |               |                   |            |                               |              |
|--------|-----------------------|----------------------------------|--------------|---------------|---------------|-------------------|------------|-------------------------------|--------------|
|        |                       |                                  |              |               |               |                   |            |                               |              |
| Source | dimproduct            | ProductKey                       | int(11)      |               |               |                   | dimproduct | ProductSK                     | int(11)      |
| Source | dimproduct            | ProductID                        | NA           | NA            | character(24) | NA                | dimproduct | ProductKey                    | int(11)      |
| Source | dimproduct            | Brand_ID                         | varchar(24)  | NA            | NA            | NA                | dimproduct | Product_ID                    | varchar(24)  |
| Source | dimproduct            | ProductLabel                     | NA           | nvarchar(24)  | character(24) | nvarchar(24 char) | dimproduct | Brand_ID                      | varchar(24)  |
| Source | dimproduct            | ProductName                      | varchar(500) | nvarchar      |               |                   | dimproduct | ProductLabel                  | varchar(24)  |
| Source | dimproduct            | ProductDescription               | varchar(400) | nvarchar      |               |                   | dimproduct | ProductName                   | varchar(500) |
|        |                       | ProductSubcategoryKey            | NA           | NA            | NA            | NA                | dimproduct | ProductDescription            | varchar(400) |
|        |                       | ProductSubcategoryLabel          | varchar(100) | nvarchar(100) |               |                   | dimproduct | ProductSubcategoryKey         | int(11)      |
| Source | dimproductsubcategory | ProductSubcategoryName           | varchar(50)  | nvarchar(50)  |               |                   | dimproduct | ProductSubcategoryLabel       | varchar(100) |
|        |                       | ProductSubcategoryDescription    | varchar(100) | nvarchar(100) |               |                   | dimproduct | ProductSubcategoryName        | varchar(50)  |
|        |                       |                                  |              |               |               |                   | dimproduct | ProductSubcategoryDescription | varchar(100) |
| Target | dimproductcategory    | ProductCategoryKey               | int(11)      | int           |               |                   | dimproduct | ProductCategoryKey            | int(11)      |
|        |                       | ProductCategoryLabel             | varchar(100) | nvarchar(100) |               |                   | dimproduct | ProductCategoryLabel          | varchar(100) |
|        |                       | ProductCategoryName              | varchar(30)  | nvarchar(30)  |               |                   | dimproduct | ProductCategoryName           | varchar(30)  |
|        |                       | ProductCategoryDescription       | varchar(50)  | nvarchar(50)  |               |                   | dimproduct | ProductCategoryDescription    | varchar(50)  |
|        |                       | Manufacturer                     | varchar(50)  | nvarchar(50)  |               |                   | dimproduct | Manufacturer                  | varchar(50)  |
|        |                       | BrandName                        | varchar(50)  | nvarchar(50)  |               |                   | dimproduct | BrandName                     | varchar(50)  |
|        |                       | ClassID                          | varchar(10)  | nvarchar(10)  |               |                   | dimproduct | ClassID                       | varchar(10)  |
|        |                       | ClassName                        | varchar(20)  | nvarchar(20)  |               |                   | dimproduct | ClassName                     | varchar(20)  |
|        |                       | StyleID                          | varchar(10)  | nvarchar(10)  |               |                   | dimproduct | StyleID                       | varchar(10)  |
|        |                       | StyleName                        | varchar(20)  | nvarchar(20)  |               |                   | dimproduct | StyleName                     | varchar(20)  |
|        |                       | ColorID                          | varchar(10)  | nvarchar(10)  |               |                   | dimproduct | ColorID                       | varchar(10)  |
|        |                       | ColorName                        | varchar(20)  | nvarchar(20)  |               |                   | dimproduct | ColorName                     | varchar(20)  |
|        |                       | Size                             | varchar(50)  | nvarchar(50)  |               |                   | dimproduct | ProductSize                   | varchar(50)  |
|        |                       | SizeRange                        | varchar(50)  | nvarchar(20)  |               |                   | dimproduct | SizeRange                     | varchar(50)  |
| Source | dimproduct            | SizeUnitMeasureID                | varchar(20)  | nvarchar(20)  |               |                   | dimproduct | SizeUnitMeasureID             | varchar(20)  |
|        |                       | Weight                           | double       | float         |               |                   | dimproduct | Weight                        | double       |
|        |                       | WeightUnitMeasureID              | varchar(20)  | nvarchar(20)  |               |                   | dimproduct | WeightUnitMeasureID           | varchar(20)  |
|        |                       | UnitOfMeasureID                  | varchar(10)  | nvarchar(10)  |               |                   | dimproduct | UnitOfMeasureID               | varchar(10)  |
|        |                       | UnitOfMeasureName                | varchar(40)  | nvarchar(40)  |               |                   | dimproduct | UnitOfMeasureName             | varchar(40)  |
|        |                       | StockTypeID                      | varchar(10)  | nvarchar(10)  |               |                   | dimproduct | StockTypeID                   | varchar(10)  |
|        |                       | StockTypeName                    | varchar(40)  | nvarchar(40)  |               |                   | dimproduct | StockTypeName                 | varchar(40)  |
|        |                       | AvailableForSaleDate             | datetime(3)  | date          |               |                   | dimproduct | AvailableForSaleDate          | datetime     |
|        |                       | StopSaleDate                     | datetime(3)  | date          |               |                   | dimproduct | StopSaleDate                  | datetime     |
|        |                       | Status                           | varchar(7)   | nvarchar(7)   |               |                   | dimproduct | Status                        | varchar(7)   |
|        |                       | ETLLoadID                        | int(11)      | int           |               |                   | dimproduct | SOR_ID                        | int(11)      |
|        |                       | LoadDate                         | datetime(3)  | datetime      |               |                   | dimproduct | SOR_LoadDate                  | datetime     |
|        |                       | UpdateDate                       | datetime(3)  | datetime      |               |                   | dimproduct | SOR_UpdateDate                | datetime     |
|        |                       | context.getProperty("vChildPID") |              |               |               |                   | dimproduct | DI_JobID                      | varchar(20)  |
|        |                       | TalendDate.getCurrentDate()      |              |               |               |                   | dimproduct | DI_CreateDate                 | datetime     |
|        |                       | TalendDate.getCurrentDate()      |              |               |               |                   | dimproduct | DI_ModifiedDate               | datetime     |

|                                  |                    |                                  |                   |                             |             |                 |                    |                            |                   |                  |
|----------------------------------|--------------------|----------------------------------|-------------------|-----------------------------|-------------|-----------------|--------------------|----------------------------|-------------------|------------------|
| Source                           | dimproductcategory | ProductCategoryLabel             | varchar(100)      | nvarchar(100)               |             |                 | dimproductcategory | ProductCategoryKey         | int(11)           |                  |
|                                  |                    | ProductCategoryName              | varchar(30)       | nvarchar(30)                |             |                 | dimproductcategory | ProductCategoryLabel       | varchar(100)      |                  |
|                                  |                    | ProductCategoryDescription       | varchar(50)       | nvarchar(50)                |             |                 | dimproductcategory | ProductCategoryName        | varchar(30)       |                  |
|                                  |                    | context.getProperty("vChildPID") |                   |                             |             |                 | dimproductcategory | ProductCategoryDescription | varchar(50)       |                  |
|                                  |                    | TalendDate.getCurrentDate()      |                   |                             |             |                 | dimproductcategory | DI_JobID                   | varchar(20)       |                  |
|                                  |                    | TalendDate.getCurrentDate()      |                   |                             |             |                 | DI_CreateDate      | datetime                   |                   |                  |
|                                  |                    | TalendDate.getCurrentDate()      |                   |                             |             |                 | DI_ModifiedDate    | datetime                   |                   |                  |
| CSV                              |                    |                                  |                   |                             |             |                 | dimproductcost     | SCD_ProductCostSK          | int(11)           |                  |
|                                  |                    |                                  |                   |                             |             |                 | dimproductcost     | ProductSK                  | int(11)           |                  |
|                                  |                    |                                  |                   |                             |             |                 | dimproductcost     | CurrencyKey                | int(11)           |                  |
|                                  |                    |                                  |                   |                             |             |                 | dimproductcost     | UnitCost                   | decimal(15,2)     |                  |
|                                  |                    |                                  |                   |                             |             |                 | dimproductcost     | SCD_EffectiveDate          | date              |                  |
|                                  |                    |                                  |                   |                             |             |                 | dimproductcost     | SCD_IneffectiveDate        | date              |                  |
|                                  |                    |                                  |                   |                             |             |                 | dimproductcost     | SCD_Current_Flag           | int(11)           |                  |
|                                  |                    |                                  |                   |                             |             |                 | dimproductcost     | SOR_ID                     | int(11)           |                  |
|                                  |                    |                                  |                   |                             |             |                 | dimproductcost     | SOR_LoadDate               | datetime          |                  |
|                                  |                    |                                  |                   |                             |             |                 | dimproductcost     | SOR_UpdateDate             | datetime          |                  |
|                                  |                    | context.getProperty("vChildPID") |                   |                             |             | dimproductcost  | DI_JobID           | varchar(20)                |                   |                  |
|                                  |                    | TalendDate.getCurrentDate()      |                   |                             |             | dimproductcost  | DI_CreateDate      | datetime                   |                   |                  |
|                                  |                    | TalendDate.getCurrentDate()      |                   |                             |             | dimproductcost  | DI_ModifiedDate    | datetime                   |                   |                  |
| CSV                              |                    |                                  |                   |                             |             |                 | dimproductprice    | SCD_ProductPriceSK         | int(11)           |                  |
|                                  |                    |                                  |                   |                             |             |                 | dimproductprice    | ProductSK                  | int(11)           |                  |
|                                  |                    |                                  |                   |                             |             |                 | dimproductprice    | CurrencyKey                | int(11)           |                  |
|                                  |                    |                                  |                   |                             |             |                 | dimproductprice    | UnitPrice                  | decimal(15,2)     |                  |
|                                  |                    |                                  |                   |                             |             |                 | dimproductprice    | SCD_EffectiveDate          | date              |                  |
|                                  |                    |                                  |                   |                             |             |                 | dimproductprice    | SCD_IneffectiveDate        | date              |                  |
|                                  |                    |                                  |                   |                             |             |                 | dimproductprice    | SCD_Current_Flag           | int(11)           |                  |
|                                  |                    |                                  |                   |                             |             |                 | dimproductprice    | SOR_ID                     | int(11)           |                  |
|                                  |                    |                                  |                   |                             |             |                 | dimproductprice    | SOR_LoadDate               | datetime          |                  |
|                                  |                    |                                  |                   |                             |             |                 | dimproductprice    | SOR_UpdateDate             | datetime          |                  |
|                                  |                    | context.getProperty("vChildPID") |                   |                             |             | dimproductprice | DI_JobID           | varchar(20)                |                   |                  |
|                                  |                    | TalendDate.getCurrentDate()      |                   |                             |             | dimproductprice | DI_CreateDate      | datetime                   |                   |                  |
|                                  |                    | TalendDate.getCurrentDate()      |                   |                             |             | dimproductprice | DI_ModifiedDate    | datetime                   |                   |                  |
| Source                           | dimpromotion       | PromotionID                      | int(11)           | int                         |             |                 | dimpromotion       | PromotionSK                | int(11)           |                  |
|                                  |                    | PromotionKey                     | int(11)           | NA                          |             |                 | dimpromotion       | PromotionID                | int(11)           |                  |
|                                  |                    | PromotionLabel                   | varchar(12)       | nvarchar(12)                |             |                 | dimpromotion       | PromotionKey               | int(11)           |                  |
|                                  |                    | PromotionName                    | varchar(100)      | nvarchar(100)               |             |                 | dimpromotion       | PromotionLabel             | varchar(12)       |                  |
|                                  |                    | PromotionDescription             | varchar(255)      | nvarchar(255)               |             |                 | dimpromotion       | PromotionName              | varchar(100)      |                  |
|                                  |                    | DiscountPercent                  | double            | float                       |             |                 | dimpromotion       | PromotionDescription       | varchar(255)      |                  |
|                                  |                    | PromotionType                    | varchar(50)       | nvarchar(50)                |             |                 | dimpromotion       | DiscountPercent            | double            |                  |
|                                  |                    | PromotionCategory                | varchar(50)       | nvarchar(50)                |             |                 | dimpromotion       | PromotionType              | varchar(50)       |                  |
|                                  |                    | StartDate                        | date              | date                        |             |                 | dimpromotion       | PromotionCategory          | varchar(50)       |                  |
|                                  |                    | EndDate                          | date              | date                        |             |                 | dimpromotion       | StartDate                  | date              |                  |
|                                  |                    | MinQuantity                      | int(11)           | int                         |             |                 | dimpromotion       | EndDate                    | date              |                  |
|                                  |                    | MaxQuantity                      | int(11)           | int                         |             |                 | dimpromotion       | MinQuantity                | int(11)           |                  |
|                                  |                    | ETLLoadID                        | int(11)           | int                         |             |                 | dimpromotion       | MaxQuantity                | int(11)           |                  |
|                                  |                    | LoadDate                         | datetime(3)       | date                        |             |                 | dimpromotion       | SOR_ID                     | int(11)           |                  |
|                                  |                    | UpdateDate                       | datetime(3)       | date                        |             |                 | dimpromotion       | SOR_LoadDate               | datetime          |                  |
|                                  |                    | context.getProperty("vChildPID") |                   |                             |             |                 | dimpromotion       | SOR_UpdateDate             | datetime          |                  |
|                                  |                    |                                  |                   |                             |             |                 | dimpromotion       | DI_JobID                   | varchar(20)       |                  |
|                                  |                    |                                  |                   | TalendDate.getCurrentDate() |             |                 |                    | dimpromotion               | DI_CreateDate     | datetime         |
|                                  |                    |                                  |                   | TalendDate.getCurrentDate() |             |                 |                    | dimpromotion               | DI_ModifiedDate   | datetime         |
|                                  |                    | Source                           | dimesaleterritory | SalesTerritoryKey           | int(11)     | int             |                    |                            | dimesaleterritory | SalesTerritorySK |
| GeographyKey                     | int(11)            |                                  |                   | int                         |             |                 | dimesaleterritory  | SalesTerritoryKey          | int(11)           |                  |
| SalesTerritoryLabel              | varchar(100)       |                                  |                   | nvarchar(100)               |             |                 | dimesaleterritory  | GeographySK                | int(11)           |                  |
| SalesTerritoryName               | varchar(50)        |                                  |                   | nvarchar(50)                |             |                 | dimesaleterritory  | SalesTerritoryLabel        | varchar(100)      |                  |
| SalesTerritoryRegion             | varchar(50)        |                                  |                   | nvarchar(50)                |             |                 | dimesaleterritory  | SalesTerritoryName         | varchar(50)       |                  |
| SalesTerritoryCountry            | varchar(50)        |                                  |                   | nvarchar(50)                |             |                 | dimesaleterritory  | SalesTerritoryRegion       | varchar(50)       |                  |
| SalesTerritoryGroup              | varchar(50)        |                                  |                   | nvarchar(50)                |             |                 | dimesaleterritory  | SalesTerritoryCountry      | varchar(50)       |                  |
| SalesTerritoryLevel              | varchar(10)        |                                  |                   | nvarchar(10)                |             |                 | dimesaleterritory  | SalesTerritoryGroup        | varchar(50)       |                  |
| SalesTerritoryManager            | int(11)            |                                  |                   | int                         |             |                 | dimesaleterritory  | SalesTerritoryLevel        | varchar(10)       |                  |
| StartDate                        | datetime(3)        |                                  |                   | date                        |             |                 | dimesaleterritory  | SalesTerritoryManager      | int(11)           |                  |
| EndDate                          | datetime(3)        |                                  |                   | date                        |             |                 | dimesaleterritory  | StartDate                  | date              |                  |
| Status                           | varchar(50)        |                                  |                   | nvarchar(50)                |             |                 | dimesaleterritory  | EndDate                    | date              |                  |
| ETLLoadID                        | int(11)            |                                  |                   | int                         |             |                 | dimesaleterritory  | Status                     | varchar(50)       |                  |
| LoadDate                         | datetime(3)        |                                  |                   | date                        |             |                 | dimesaleterritory  | SOR_ID                     | int(11)           |                  |
| UpdateDate                       | datetime(3)        |                                  |                   | date                        |             |                 | dimesaleterritory  | SOR_LoadDate               | datetime          |                  |
| context.getProperty("vChildPID") |                    |                                  |                   |                             |             |                 | dimesaleterritory  | SOR_UpdateDate             | datetime          |                  |
|                                  |                    |                                  |                   |                             |             |                 | dimesaleterritory  | DI_JobID                   | varchar(20)       |                  |
|                                  |                    |                                  |                   | TalendDate.getCurrentDate() |             |                 |                    | dimesaleterritory          | DI_CreateDate     | datetime         |
|                                  |                    |                                  |                   | TalendDate.getCurrentDate() |             |                 |                    | dimesaleterritory          | DI_ModifiedDate   | datetime         |
| CSV                              |                    |                                  |                   |                             |             |                 |                    |                            | dimscenario       | ScenarioSK       |
|                                  |                    |                                  |                   |                             |             |                 | dimscenario        | ScenarioKey                | int(11)           |                  |
|                                  |                    |                                  |                   |                             |             |                 | dimscenario        | ScenarioLabel              | varchar(100)      |                  |
|                                  |                    |                                  |                   |                             |             |                 | dimscenario        | ScenarioName               | varchar(20)       |                  |
|                                  |                    |                                  |                   |                             |             |                 | dimscenario        | ScenarioDescription        | varchar(50)       |                  |
|                                  |                    |                                  |                   |                             |             |                 | dimscenario        | SOR_ID                     | int(11)           |                  |
|                                  |                    |                                  |                   |                             |             |                 | dimscenario        | SOR_LoadDate               | datetime          |                  |
|                                  |                    |                                  |                   |                             |             |                 | dimscenario        | SOR_UpdateDate             | datetime          |                  |
|                                  |                    |                                  |                   |                             |             |                 | dimscenario        | DI_JobID                   | varchar(20)       |                  |
|                                  |                    |                                  |                   |                             |             |                 | dimscenario        | DI_CreateDate              | datetime          |                  |
|                                  |                    |                                  |                   |                             | dimscenario | DI_ModifiedDate | datetime           |                            |                   |                  |



|        |                   |                                  |              |               |  |                  |                  |               |  |
|--------|-------------------|----------------------------------|--------------|---------------|--|------------------|------------------|---------------|--|
|        |                   |                                  |              |               |  |                  |                  |               |  |
| Source | dimstore          | StoreID                          | int(11)      | int(11)       |  | dimstore         | StoreSK          | int(11)       |  |
|        |                   | StoreKey                         | int(11)      | int(11)       |  | dimstore         | StoreID          | int(11)       |  |
| Target | dimsalesterritory | SalesTerritorysk                 | int(11)      | int(11)       |  | dimstore         | StoreKey         | int(11)       |  |
|        |                   | StoreManager                     | int(11)      | int(11)       |  | dimstore         | SalesTerritorySK | int(11)       |  |
|        |                   | StoreType                        | varchar(15)  | nvarchar(15)  |  | dimstore         | StoreManager     | int(11)       |  |
|        |                   | StoreName                        | varchar(100) | nvarchar(100) |  | dimstore         | StoreType        | varchar(15)   |  |
|        |                   | StoreDescription                 | varchar(300) | nvarchar(300) |  | dimstore         | StoreName        | varchar(100)  |  |
|        |                   | Status                           | varchar(20)  | nvarchar(20)  |  | dimstore         | StoreDescription | varchar(300)  |  |
|        |                   | OpenDate                         | datetime(3)  | date          |  | dimstore         | Status           | varchar(20)   |  |
|        |                   | CloseDate                        | datetime(3)  | date          |  | dimstore         | OpenDate         | date          |  |
|        |                   | EntityKey                        | int(11)      | int(11)       |  | dimstore         | CloseDate        | date          |  |
|        |                   | ZipCode                          | varchar(20)  | nvarchar(20)  |  | dimstore         | EntityKey        | int(11)       |  |
|        |                   | ZipCodeExtension                 | varchar(10)  | nvarchar(10)  |  | dimstore         | ZipCode          | varchar(20)   |  |
| Source | dimstore          | StorePhone                       | varchar(15)  | nvarchar(15)  |  | dimstore         | ZipCodeExtension | varchar(10)   |  |
|        |                   | StoreFax                         | varchar(14)  | nvarchar(14)  |  | dimstore         | StorePhone       | varchar(15)   |  |
|        |                   | AddressLine1                     | varchar(100) | nvarchar(100) |  | dimstore         | StoreFax         | varchar(14)   |  |
|        |                   | AddressLine2                     | varchar(100) | nvarchar(100) |  | dimstore         | AddressLine1     | varchar(100)  |  |
|        |                   | GeographyKey                     | int(11)      | int(11)       |  | dimstore         | AddressLine2     | varchar(100)  |  |
|        |                   | CloseReason                      | varchar(20)  | nvarchar(20)  |  | dimstore         | GeographySK      | int(11)       |  |
|        |                   | EmployeeCount                    | int(11)      | int(11)       |  | dimstore         | CloseReason      | varchar(20)   |  |
|        |                   | SellingAreaSize                  | double       | float         |  | dimstore         | EmployeeCount    | int(11)       |  |
|        |                   | LastRemodelDate                  | datetime(3)  | date          |  | dimstore         | SellingAreaSize  | double        |  |
|        |                   | ETLLoadID                        | int(11)      | int(11)       |  | dimstore         | LastRemodelDate  | datetime      |  |
|        |                   | LoadDate                         | datetime(3)  | date          |  | dimstore         | SOR_ID           | int(11)       |  |
|        |                   | UpdateDate                       | datetime(3)  | date          |  | dimstore         | SOR_LoadDate     | datetime      |  |
|        |                   | context.getProperty("vChildPID") |              |               |  | dimstore         | SOR_UpdateDate   | datetime      |  |
|        |                   | TalendDate.getCurrentDate()      |              |               |  | dimstore         | DI_JobID         | varchar(20)   |  |
|        |                   | TalendDate.getCurrentDate()      |              |               |  | dimstore         | DI_CreateDate    | datetime      |  |
|        |                   |                                  |              |               |  | dimstore         | DI_ModifiedDate  | datetime      |  |
| CSV    |                   |                                  |              |               |  | factexchangerate | ExchangeRateSK   | int(11)       |  |
|        |                   |                                  |              |               |  | factexchangerate | CurrencyDateSK   | int(11)       |  |
|        |                   |                                  |              |               |  | factexchangerate | CurrencyDateKey  | date          |  |
|        |                   |                                  |              |               |  | factexchangerate | CurrencySK       | int(11)       |  |
|        |                   |                                  |              |               |  | factexchangerate | EndOfDayRate     | decimal(19,4) |  |
|        |                   |                                  |              |               |  | factexchangerate | SOR_ID           | int(11)       |  |
|        |                   |                                  |              |               |  | factexchangerate | SOR_LoadDate     | datetime      |  |
|        |                   |                                  |              |               |  | factexchangerate | SOR_UpdateDate   | datetime      |  |
|        |                   |                                  |              |               |  | factexchangerate | DI_JobID         | varchar(20)   |  |
|        |                   |                                  |              |               |  | factexchangerate | DI_CreateDate    | datetime      |  |
|        |                   |                                  |              |               |  | factexchangerate | DI_ModifiedDate  | datetime      |  |

[illegible]

|        |                            |                                  |               |               |  |  |                 |                      |               |
|--------|----------------------------|----------------------------------|---------------|---------------|--|--|-----------------|----------------------|---------------|
| Source | dimdate                    | SalesDate                        | date          | datetime      |  |  | factonlinesales | SalesSK              | int(11)       |
| Source | factonlinesalesorderdetail | SalesDate                        | date          | datetime      |  |  | factonlinesales | SalesDateSK          | int(11)       |
| Target | dimcustomer_person         | CustomerSK                       | int(11)       | int           |  |  | factonlinesales | SalesDate            | date          |
| Target | dimchannel                 | ChannelSK                        | int(11)       | int           |  |  | factonlinesales | CustomerSK           | int(11)       |
| Target | dimstore                   | StoreSK                          | int(11)       | int           |  |  | factonlinesales | ChannelSK            | int(11)       |
| Target | dimproduct                 | ProductSK                        | int(11)       | int           |  |  | factonlinesales | StoreSK              | int(11)       |
| Target | dimpromotion               | PromotionSK                      | int(11)       | int           |  |  | factonlinesales | ProductSK            | int(11)       |
| Target | dimgeography               | GeographySK                      | int(11)       | int           |  |  | factonlinesales | PromotionSK          | int(11)       |
|        |                            | SalesOrderNumber                 | int(11)       | nvarchar(20)  |  |  | factonlinesales | GeographySK          | int(11)       |
|        |                            | SalesOrderLineNumber             | int(11)       | int           |  |  | factonlinesales | SalesOrderNumber     | varchar(20)   |
|        |                            | SalesQuantity                    | int(11)       | int           |  |  | factonlinesales | SalesOrderLineNumber | int(11)       |
|        |                            | ReturnQuantity                   | int(11)       | int           |  |  | factonlinesales | SalesQuantity        | int(11)       |
| Source | factonlinesalesorderdetail | SalesAmount                      | decimal(15,4) | numeric(15,2) |  |  | factonlinesales | ReturnQuantity       | int(11)       |
|        |                            | ReturnAmount                     | decimal(15,4) | numeric(15,2) |  |  | factonlinesales | SalesAmount          | decimal(15,2) |
|        |                            | DiscountAmount                   | decimal(15,4) | numeric(15,2) |  |  | factonlinesales | ReturnAmount         | decimal(15,2) |
|        |                            | DiscountPot                      | decimal(10,4) | numeric(15,4) |  |  | factonlinesales | DiscountAmount       | decimal(15,2) |
|        |                            |                                  |               |               |  |  | factonlinesales | TotalCost            | decimal(15,2) |
|        |                            |                                  |               |               |  |  | factonlinesales | Local_CurrencySK     | int(11)       |
|        |                            |                                  |               |               |  |  | factonlinesales | SalesAmount_Local    | decimal(15,2) |
|        |                            |                                  |               |               |  |  | factonlinesales | ReturnAmount_Local   | decimal(15,2) |
|        |                            |                                  |               |               |  |  | factonlinesales | DiscountAmount_Local | decimal(15,2) |
|        |                            |                                  |               |               |  |  | factonlinesales | TotalCost_Local      | decimal(15,2) |
|        |                            |                                  |               |               |  |  | factonlinesales | SOR_ID               | int(11)       |
|        |                            |                                  |               |               |  |  | factonlinesales | SOR_LoadDate         | datetime      |
|        |                            |                                  |               |               |  |  | factonlinesales | SOR_UpdateDate       | datetime      |
|        |                            |                                  |               |               |  |  | factonlinesales | DI_JobID             | varchar(20)   |
|        |                            |                                  |               |               |  |  | factonlinesales | DI_CreateDate        | datetime      |
|        |                            |                                  |               |               |  |  | factonlinesales | DI_ModifiedDate      | datetime      |
|        |                            | context.getProperty("vChildPID") |               |               |  |  |                 |                      |               |
|        |                            | TalendDate.getCurrentDate()      |               |               |  |  |                 |                      |               |
|        |                            | TalendDate.getCurrentDate()      |               |               |  |  |                 |                      |               |

|        |                            |                                  |               |               |              |    |                         |                      |               |
|--------|----------------------------|----------------------------------|---------------|---------------|--------------|----|-------------------------|----------------------|---------------|
| Source | dimdate                    | SalesDate                        | date          | datetime      |              |    | factonlinesales_rejects | SalesSK              | int(11)       |
| Source | factonlinesalesorderdetail | SalesDate                        | date          | datetime      |              |    | factonlinesales_rejects | SalesDateSK          | int(11)       |
| Target | dimcustomer_person         | CustomerSK                       | int(11)       | int           |              |    | factonlinesales_rejects | SalesDate            | date          |
| Target | dimchannel                 | ChannelSK                        | int(11)       | int           |              |    | factonlinesales_rejects | CustomerSK           | int(11)       |
| Target | dimstore                   | StoreSK                          | int(11)       | int           |              |    | factonlinesales_rejects | ChannelSK            | int(11)       |
| Target | dimproduct                 | ProductSK                        | int(11)       | int           |              |    | factonlinesales_rejects | StoreSK              | int(11)       |
| Target | dimpromotion               | PromotionSK                      | int(11)       | int           |              |    | factonlinesales_rejects | ProductSK            | int(11)       |
| Target | dimgeography               | GeographySK                      | int(11)       | int           |              |    | factonlinesales_rejects | PromotionSK          | int(11)       |
|        |                            | SalesOrderNumber                 | int(11)       | nvarchar(20)  |              |    | factonlinesales_rejects | GeographySK          | int(11)       |
|        |                            | SalesOrderLineNumber             | int(11)       | int           |              |    | factonlinesales_rejects | SalesOrderNumber     | varchar(20)   |
|        |                            | SalesQuantity                    | int(11)       | int           |              |    | factonlinesales_rejects | SalesOrderLineNumber | int(11)       |
|        |                            | ReturnQuantity                   | int(11)       | int           |              |    | factonlinesales_rejects | SalesQuantity        | int(11)       |
| Source | factonlinesalesorderdetail | SalesAmount                      | decimal(15,4) | numeric(15,2) |              |    | factonlinesales_rejects | ReturnQuantity       | int(11)       |
|        |                            | ReturnAmount                     | decimal(15,4) | numeric(15,2) |              |    | factonlinesales_rejects | SalesAmount          | decimal(15,2) |
|        |                            | DiscountAmount                   | decimal(15,4) | numeric(15,2) |              |    | factonlinesales_rejects | ReturnAmount         | decimal(15,2) |
|        |                            | DiscountPot                      | decimal(10,4) | numeric(15,4) |              |    | factonlinesales_rejects | DiscountAmount       | decimal(15,2) |
|        |                            |                                  |               |               |              |    | factonlinesales_rejects | TotalCost            | decimal(15,2) |
|        |                            |                                  |               |               |              |    | factonlinesales_rejects | Local_CurrencySK     | int(11)       |
|        |                            |                                  |               |               |              |    | factonlinesales_rejects | SalesAmount_Local    | decimal(15,2) |
|        |                            |                                  |               |               |              |    | factonlinesales_rejects | ReturnAmount_Local   | decimal(15,2) |
|        |                            |                                  |               |               |              |    | factonlinesales_rejects | DiscountAmount_Local | decimal(15,2) |
|        |                            |                                  |               |               |              |    | factonlinesales_rejects | TotalCost_Local      | decimal(15,2) |
|        |                            |                                  |               |               |              |    | factonlinesales_rejects | DI_Reject_Code       | int(11)       |
|        |                            |                                  |               |               |              |    | factonlinesales_rejects | SalesID              | int(11)       |
| Target | dimchannel                 | ChannelKey                       | int(11)       | int           |              |    | factonlinesales_rejects | ChannelKey           | int(11)       |
| Source | factonlinesalesorderheader | StoreID                          | int(11)       | int           |              |    | factonlinesales_rejects | StoreID              | int(11)       |
| Target | dimproduct                 | ProductLabel                     | varchar(24)   | varchar(24)   |              |    | factonlinesales_rejects | ProductLabel         | varchar(24)   |
| Source | factonlinesalesorderdetail | Brand_ID                         | varchar(24)   | NA            |              |    | factonlinesales_rejects | Brand_ID             | varchar(24)   |
| Target | dimproduct                 | Product_ID                       | varchar(24)   | varchar(24)   |              |    | factonlinesales_rejects | Product_ID           | varchar(24)   |
| Target | dimpromotion               | PromotionID                      | int(11)       | int(11)       |              |    | factonlinesales_rejects | PromotionID          | int(11)       |
| Target | dimpromotion               | PromotionLabel                   | varchar(12)   | varchar(24)   |              |    | factonlinesales_rejects | PromotionLabel       | varchar(12)   |
| Source | dimcustomerperson          | CustomerKey                      | int(11)       | int           | NA           |    | factonlinesales_rejects | CustomerKey          | int(11)       |
| Source | dimcustomerperson          | CustomerLabel                    | varchar(5)    | NA            | character(5) | NA | factonlinesales_rejects | CustomerLabel        | varchar(5)    |
|        |                            |                                  |               |               |              |    | factonlinesales_rejects | GeographyID          | int(11)       |
|        |                            |                                  |               |               |              |    | factonlinesales_rejects | SOR_ID               | int(11)       |
|        |                            |                                  |               |               |              |    | factonlinesales_rejects | SOR_LoadDate         | datetime      |
|        |                            |                                  |               |               |              |    | factonlinesales_rejects | SOR_UpdateDate       | datetime      |
|        |                            |                                  |               |               |              |    | factonlinesales_rejects | DI_JobID             | varchar(20)   |
|        |                            |                                  |               |               |              |    | factonlinesales_rejects | DI_CreateDate        | datetime      |
|        |                            |                                  |               |               |              |    | factonlinesales_rejects | DI_ModifiedDate      | datetime      |
|        |                            | context.getProperty("vChildPID") |               |               |              |    |                         |                      |               |
|        |                            | TalendDate.getCurrentDate()      |               |               |              |    |                         |                      |               |
|        |                            | TalendDate.getCurrentDate()      |               |               |              |    |                         |                      |               |

|        |                |                                  |               |               |  |  |           |                      |               |
|--------|----------------|----------------------------------|---------------|---------------|--|--|-----------|----------------------|---------------|
| Source | dimdate        |                                  |               |               |  |  | factsales | SalesSK              | int(11)       |
| Source | factstoresales | SalesDate                        | date          | datetime      |  |  | factsales | SalesDateSK          | int(11)       |
| Target | dimchannel     | ChannelSK                        | int(11)       | int           |  |  | factsales | SalesDate            | date          |
| Source | factinventory  | StoreID                          | int(11)       | int           |  |  | factsales | ChannelSK            | int(11)       |
| Target | dimproduct     | ProductSK                        | int(11)       | int           |  |  | factsales | StoreSK              | int(11)       |
| Target | dimpromotion   | PromotionSK                      | int(11)       | int           |  |  | factsales | ProductSK            | int(11)       |
| Target | dimgeography   | GeographySK                      | int(11)       | int           |  |  | factsales | PromotionSK          | int(11)       |
|        |                | SalesQuantity                    | int(11)       | int           |  |  | factsales | GeographySK          | int(11)       |
|        |                | ReturnQuantity                   | int(11)       | int           |  |  | factsales | SalesQuantity        | int(11)       |
| Source | factstoresales | SalesAmount                      | decimal(15,4) | numeric(15,2) |  |  | factsales | ReturnQuantity       | int(11)       |
|        |                | ReturnAmount                     | decimal(15,4) | numeric(15,2) |  |  | factsales | SalesAmount          | decimal(15,2) |
|        |                | DiscountAmount                   | decimal(15,4) | numeric(15,2) |  |  | factsales | ReturnAmount         | decimal(15,2) |
|        |                | TotalCost                        | decimal(15,4) | numeric(15,2) |  |  | factsales | DiscountAmount       | decimal(15,2) |
|        |                |                                  |               |               |  |  | factsales | TotalCost            | decimal(15,2) |
|        |                |                                  |               |               |  |  | factsales | Local_CurrencySK     | int(11)       |
|        |                |                                  |               |               |  |  | factsales | SalesAmount_Local    | decimal(15,2) |
|        |                |                                  |               |               |  |  | factsales | ReturnAmount_Local   | decimal(15,2) |
|        |                |                                  |               |               |  |  | factsales | DiscountAmount_Local | decimal(15,2) |
|        |                |                                  |               |               |  |  | factsales | TotalCost_Local      | decimal(15,2) |
|        |                |                                  |               |               |  |  | factsales | SOR_ID               | int(11)       |
|        |                |                                  |               |               |  |  | factsales | SOR_LoadDate         | datetime      |
|        |                |                                  |               |               |  |  | factsales | SOR_UpdateDate       | datetime      |
|        |                |                                  |               |               |  |  | factsales | DI_JobID             | varchar(20)   |
|        |                |                                  |               |               |  |  | factsales | DI_CreateDate        | datetime      |
|        |                |                                  |               |               |  |  | factsales | DI_ModifiedDate      | datetime      |
|        |                | context.getProperty("vChildPID") |               |               |  |  |           |                      |               |
|        |                | TalendDate.getCurrentDate()      |               |               |  |  |           |                      |               |
|        |                | TalendDate.getCurrentDate()      |               |               |  |  |           |                      |               |

|        |                |                                  |               |               |               |             |                   |                      |               |
|--------|----------------|----------------------------------|---------------|---------------|---------------|-------------|-------------------|----------------------|---------------|
| Source | dimdate        |                                  |               |               |               |             | factsales_rejects | SalesSK              | int(11)       |
| Source | factstoresales | SalesDate                        | date          | datetime      |               |             | factsales_rejects | SalesDateSK          | int(11)       |
| Target | dimchannel     | ChannelSK                        | int(11)       | int           |               |             | factsales_rejects | SalesDate            | date          |
| Target | dimstore       | StoreSK                          | int(11)       | int           |               |             | factsales_rejects | ChannelSK            | int(11)       |
| Target | dimproduct     | ProductSK                        | int(11)       | int           |               |             | factsales_rejects | StoreSK              | int(11)       |
| Target | dimpromotion   | PromotionSK                      | int(11)       | int           |               |             | factsales_rejects | ProductSK            | int(11)       |
| Target | dimgeography   | GeographySK                      | int(11)       | int           |               |             | factsales_rejects | PromotionSK          | int(11)       |
|        |                | SalesQuantity                    | int(11)       | int           |               |             | factsales_rejects | GeographySK          | int(11)       |
|        |                | ReturnQuantity                   | int(11)       | int           |               |             | factsales_rejects | SalesQuantity        | int(11)       |
| Source | factstoresales | SalesAmount                      | decimal(15,4) | numeric(15,2) |               |             | factsales_rejects | ReturnQuantity       | int(11)       |
|        |                | ReturnAmount                     | decimal(15,4) | numeric(15,2) |               |             | factsales_rejects | SalesAmount          | decimal(15,2) |
|        |                | DiscountAmount                   | decimal(15,4) | numeric(15,2) |               |             | factsales_rejects | ReturnAmount         | decimal(15,2) |
|        |                | TotalCost                        | decimal(15,4) | numeric(15,2) |               |             | factsales_rejects | DiscountAmount       | decimal(15,2) |
|        |                |                                  |               |               |               |             | factsales_rejects | TotalCost            | decimal(15,2) |
|        |                |                                  |               |               |               |             | factsales_rejects | Local_CurrencySK     | int(11)       |
|        |                |                                  |               |               |               |             | factsales_rejects | SalesAmount_Local    | decimal(15,2) |
|        |                |                                  |               |               |               |             | factsales_rejects | ReturnAmount_Local   | decimal(15,2) |
|        |                |                                  |               |               |               |             | factsales_rejects | DiscountAmount_Local | decimal(15,2) |
|        |                |                                  |               |               |               |             | factsales_rejects | TotalCost_Local      | decimal(15,2) |
|        |                |                                  |               |               |               |             | factsales_rejects | DI_Reject_Code       | int(11)       |
| Source | dimrejectcodes | DI_reject_Code                   | int(11)       | int           |               |             | factsales_rejects | SalesID              | int(11)       |
| Source | factstoresales | SalesID                          | int(11)       | int           |               |             | factsales_rejects | ChannelKey           | int(11)       |
| Target | dimchannel     | ChannelKey                       | int(11)       | int           |               |             | factsales_rejects | StoreID              | int(11)       |
| Source | factstoresales | StoreID                          | int(11)       | int           |               |             | factsales_rejects | ProductLabel         | varchar(24)   |
| Target | dimproduct     | ProductLabel                     |               |               |               |             | factsales_rejects | Brand_ID             | varchar(24)   |
| Source | factstoresales | BrandID                          | varchar(24)   | NA            | character(24) | NA          | factsales_rejects | Product_ID           | varchar(24)   |
| Target | dimproduct     | ProductID                        | NA            | NA            | int(11)       | int(11)     | factsales_rejects | PromotionID          | int(11)       |
| Target | dimpromotion   | PromotionID                      | int(11)       | int(11)       | varchar(24)   | varchar(24) | factsales_rejects | PromotionLabel       | varchar(12)   |
| Target | dimpromotion   | PromotionLabel                   | varchar(24)   | varchar(24)   |               |             | factsales_rejects | GeographyID          | int(11)       |
|        |                |                                  |               |               |               |             | factsales_rejects | SOR_ID               | int(11)       |
|        |                |                                  |               |               |               |             | factsales_rejects | SOR_LoadDate         | datetime      |
|        |                |                                  |               |               |               |             | factsales_rejects | SOR_UpdateDate       | datetime      |
|        |                |                                  |               |               |               |             | factsales_rejects | DI_JobID             | varchar(20)   |
|        |                |                                  |               |               |               |             | factsales_rejects | DI_CreateDate        | datetime      |
|        |                |                                  |               |               |               |             | factsales_rejects | DI_ModifiedDate      | datetime      |
|        |                | context.getProperty("vChildPID") |               |               |               |             |                   |                      |               |
|        |                | TalendDate.getCurrentDate()      |               |               |               |             |                   |                      |               |
|        |                | TalendDate.getCurrentDate()      |               |               |               |             |                   |                      |               |

|        |                |                                  |               |               |  |  |                        |                        |               |
|--------|----------------|----------------------------------|---------------|---------------|--|--|------------------------|------------------------|---------------|
| Source | factsalesquota | SalesQuotaSK                     | int(11)       | int           |  |  | factsalesquota         | SalesQuotaSK           | int(11)       |
| Target | dimchannel     | SalesQuotaKey                    | int(11)       | int           |  |  | factsalesquota         | SalesQuotaKey          | int(11)       |
| Target | dimstore       | ChannelSK                        | int(11)       | int           |  |  | factsalesquota         | ChannelSK              | int(11)       |
| Target | dimproduct     | StoreSK                          | int(11)       | int           |  |  | factsalesquota         | StoreSK                | int(11)       |
|        |                | ProductSK                        | int(11)       | int           |  |  | factsalesquota         | ProductSK              | int(11)       |
|        |                | QuotaDate                        | date          | date          |  |  | factsalesquota         | QuotaDateSK            | int(11)       |
|        |                | CurrencyKey                      | int(11)       | int           |  |  | factsalesquota         | QuotaDateKey           | date          |
| Source | factsalesquota | ScenarioKey                      | int(11)       | int           |  |  | factsalesquota         | CurrencySK             | int(11)       |
|        |                | SalesQuantityQuota               | int(11)       | int           |  |  | factsalesquota         | ScenarioSK             | int(11)       |
|        |                | GrossMarginPctQuota              | decimal(10,4) | numeric(10,4) |  |  | factsalesquota         | SalesQuantityQuota     | int(11)       |
|        |                |                                  |               |               |  |  | factsalesquota         | GrossMarginPct         | decimal(15,4) |
|        |                |                                  |               |               |  |  | factsalesquota         | Local_CurrencySK       | int(11)       |
| Source | factsalesquota | SalesAmountQuota                 | decimal(15,2) | numeric(15,2) |  |  | factsalesquota         | SalesAmountQuota_Local | decimal(15,2) |
|        |                | ETLLoadID                        | int(11)       | int           |  |  | factsalesquota         | SOR_ID                 | int(11)       |
|        |                | LoadDate                         | datetime(3)   | date          |  |  | factsalesquota         | SOR_LoadDate           | datetime      |
|        |                | UpdateDate                       | datetime(3)   | date          |  |  | factsalesquota         | SOR_UpdateDate         | datetime      |
|        |                | context.getProperty("vChildPID") |               |               |  |  | factsalesquota         | DI_JobID               | varchar(20)   |
|        |                | TalendDate.getCurrentDate()      |               |               |  |  | factsalesquota         | DI_CreateDate          | datetime      |
|        |                | TalendDate.getCurrentDate()      |               |               |  |  | factsalesquota         | DI_ModifiedDate        | datetime      |
| Source | factsalesquota | SalesQuotaSK                     | int(11)       | int           |  |  | factsalesquota_rejects | SalesQuotaSK           | int(11)       |
| Target | dimchannel     | SalesQuotaKey                    | int(11)       | int           |  |  | factsalesquota_rejects | SalesQuotaKey          | int(11)       |
| Target | dimstore       | ChannelSK                        | int(11)       | int           |  |  | factsalesquota_rejects | ChannelSK              | int(11)       |
| Target | dimproduct     | StoreSK                          | int(11)       | int           |  |  | factsalesquota_rejects | StoreSK                | int(11)       |
|        |                | ProductSK                        | int(11)       | int           |  |  | factsalesquota_rejects | ProductSK              | int(11)       |
|        |                | QuotaDate                        | date          | date          |  |  | factsalesquota_rejects | QuotaDateSK            | int(11)       |
|        |                | CurrencyKey                      | int(11)       | int           |  |  | factsalesquota_rejects | QuotaDateKey           | date          |
| Source | factsalesquota | ScenarioKey                      | int(11)       | int           |  |  | factsalesquota_rejects | CurrencySK             | int(11)       |
|        |                | SalesQuantityQuota               | int(11)       | int           |  |  | factsalesquota_rejects | ScenarioSK             | int(11)       |
|        |                | GrossMarginPctQuota              | decimal(10,4) | numeric(10,4) |  |  | factsalesquota_rejects | SalesQuantityQuota     | int(11)       |
|        |                |                                  |               |               |  |  | factsalesquota_rejects | GrossMarginPct         | decimal(15,4) |
|        |                |                                  |               |               |  |  | factsalesquota_rejects | Local_CurrencySK       | int(11)       |
| Source | factsalesquota | SalesAmountQuota                 | decimal(15,2) | numeric(15,2) |  |  | factsalesquota_rejects | SalesAmountQuota_Local | decimal(15,2) |
| Target | DimRejectCodes | DI_Reject_Code                   | int(11)       | int           |  |  | factsalesquota_rejects | DI_Reject_Code         | int(11)       |
| Source | factsalesquota | ChannelKey                       | int(11)       | int           |  |  | factsalesquota_rejects | ChannelKey             | int(11)       |
| Source | factsalesquota | StoreID                          | int           | int           |  |  | factsalesquota_rejects | StoreID                | int(11)       |
| Target | dimproduct     | ProductLabel                     |               |               |  |  | factsalesquota_rejects | ProductLabel           | varchar(24)   |
| Source | factsalesquota | Brand_ID                         |               | NA            |  |  | factsalesquota_rejects | Brand_ID               | varchar(24)   |
| Target | dimproduct     | Product_ID                       |               |               |  |  | factsalesquota_rejects | Product_ID             | varchar(24)   |
|        |                |                                  |               |               |  |  | factsalesquota_rejects | SOR_ID                 | int(11)       |
|        |                |                                  |               |               |  |  | factsalesquota_rejects | SOR_LoadDate           | datetime      |
|        |                |                                  |               |               |  |  | factsalesquota_rejects | SOR_UpdateDate         | datetime      |
|        |                | context.getProperty("vChildPID") |               |               |  |  | factsalesquota_rejects | DI_JobID               | varchar(20)   |
|        |                | TalendDate.getCurrentDate()      |               |               |  |  | factsalesquota_rejects | DI_CreateDate          | datetime      |
|        |                | TalendDate.getCurrentDate()      |               |               |  |  | factsalesquota_rejects | DI_ModifiedDate        | datetime      |

|        |                   |                                  |               |               |  |  |                          |                    |               |
|--------|-------------------|----------------------------------|---------------|---------------|--|--|--------------------------|--------------------|---------------|
| Source | factstrategyplan  | StrategyPlanSK                   | int(11)       | int           |  |  | factstrategyplan_rejects | StrategyPlanSK     | int(11)       |
|        |                   | StrategyPlanKey                  | int(11)       | int           |  |  | factstrategyplan_rejects | PlanDateSK         | int(11)       |
|        |                   | PlanDate                         | date          | date          |  |  | factstrategyplan_rejects | PlanDateKey        | date          |
| Target | dimscenario       | EntityKey                        | int(11)       | int           |  |  | factstrategyplan_rejects | EntityDK           | int(11)       |
|        |                   | ScenarioSK                       | int(11)       | int           |  |  | factstrategyplan_rejects | ScenarioSK         | int(11)       |
|        |                   | AccountKey                       | int(11)       | int           |  |  | factstrategyplan_rejects | AccountSK          | int(11)       |
| Source | factstrategyplan  | ProductCategoryKey               | int(11)       | int           |  |  | factstrategyplan_rejects | ProductCategoryKey | int(11)       |
|        |                   | PlanAmount                       | decimal(15,2) | numeric(15,2) |  |  | factstrategyplan_rejects | PlanAmount         | decimal(15,2) |
|        |                   | CurrencyKey                      | int(11)       | int           |  |  | factstrategyplan_rejects | Local_CurrencySK   | int(11)       |
|        |                   |                                  |               |               |  |  | factstrategyplan_rejects | PlanAmount_Local   | decimal(15,2) |
| Target | DimRejectCodes    | DI_Reject_Code                   | int(11)       | int           |  |  | factstrategyplan_rejects | DI_Reject_Code     | int(11)       |
| Source | FactStrategicPlan | EntityKey                        | int(11)       | int           |  |  | factstrategyplan_rejects | EntityKey          | int(11)       |
| Source | FactStrategicPlan | ScenarioKey                      | int(11)       | int           |  |  | factstrategyplan_rejects | ScenarioKey        | int(11)       |
| Source | dimaccount        | AccountKey                       | int(11)       | int           |  |  | factstrategyplan_rejects | AccountKey         | int(11)       |
|        |                   |                                  |               |               |  |  | factstrategyplan_rejects | SOR_ID             | int(11)       |
|        |                   |                                  |               |               |  |  | factstrategyplan_rejects | SOR_LoadDate       | datetime      |
|        |                   |                                  |               |               |  |  | factstrategyplan_rejects | SOR_UpdateDate     | datetime      |
|        |                   | context.getProperty("vChildPID") |               |               |  |  | factstrategyplan_rejects | DI_JobID           | varchar(20)   |
|        |                   | TalendDate.getCurrentDate()      |               |               |  |  | factstrategyplan_rejects | DI_CreateDate      | datetime      |
|        |                   | TalendDate.getCurrentDate()      |               |               |  |  | factstrategyplan_rejects | DI_ModifiedDate    | datetime      |

## • DATA STORE LOGICAL MODEL

### Fact Inventory

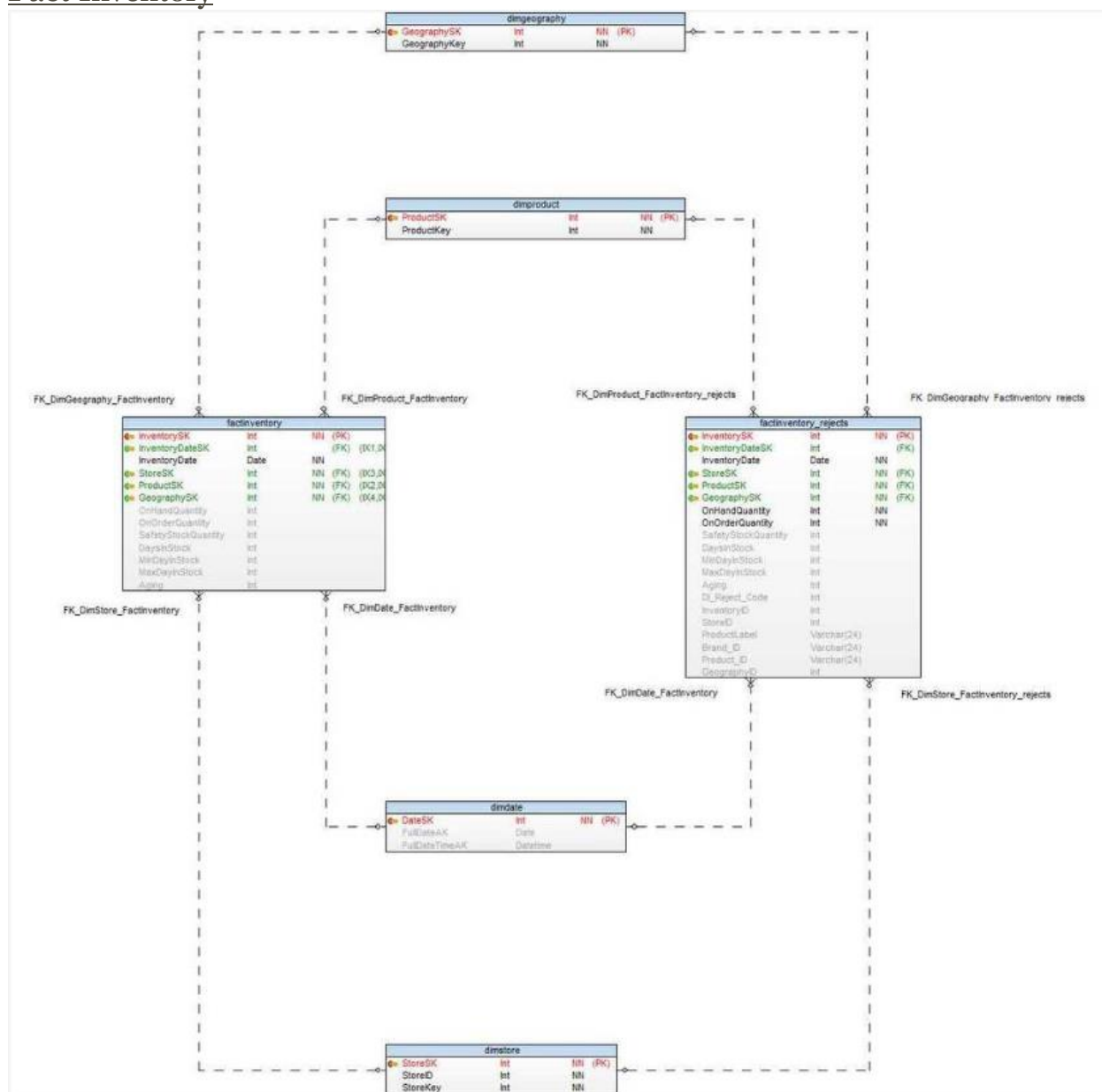
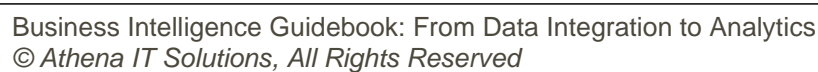
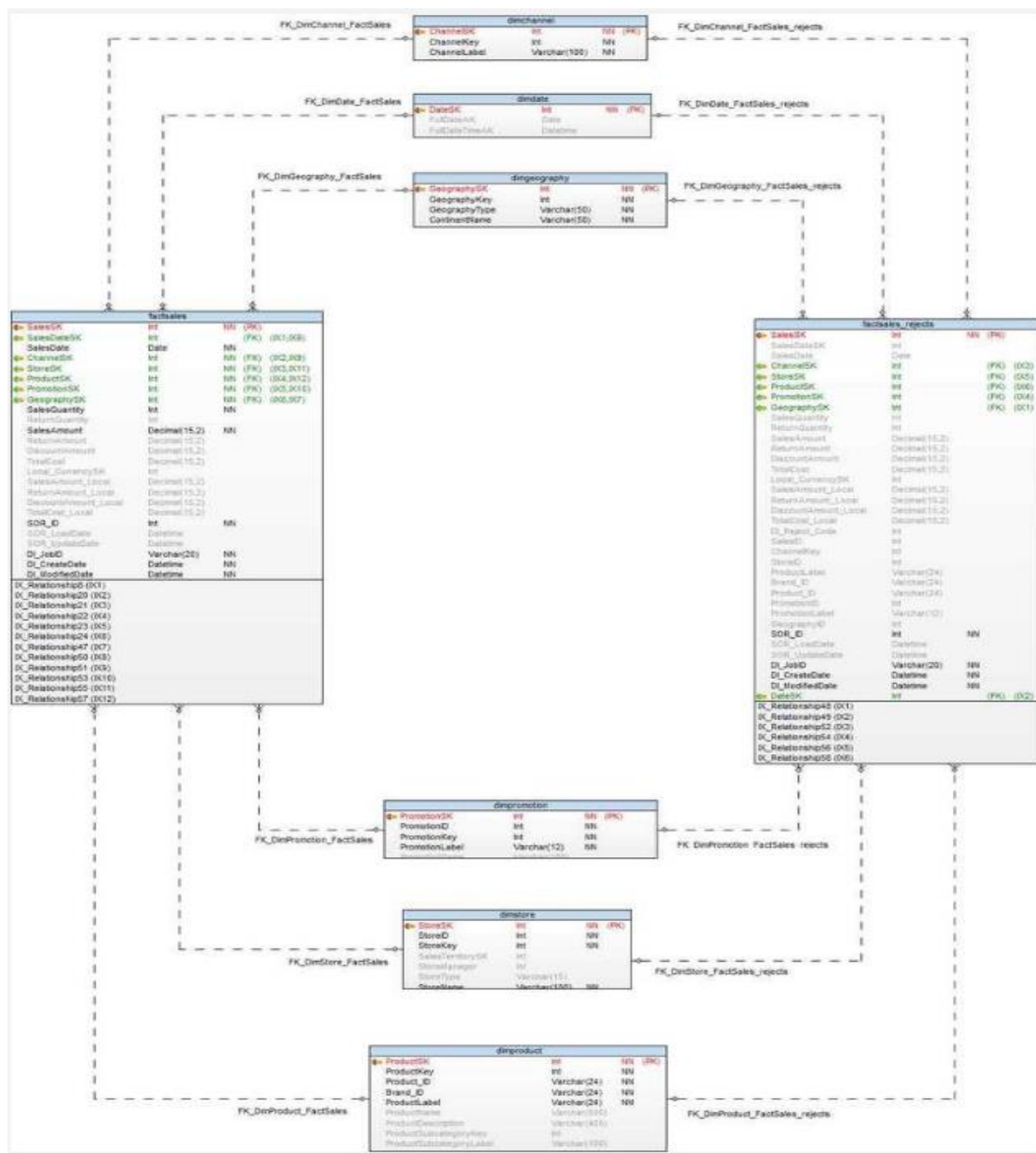


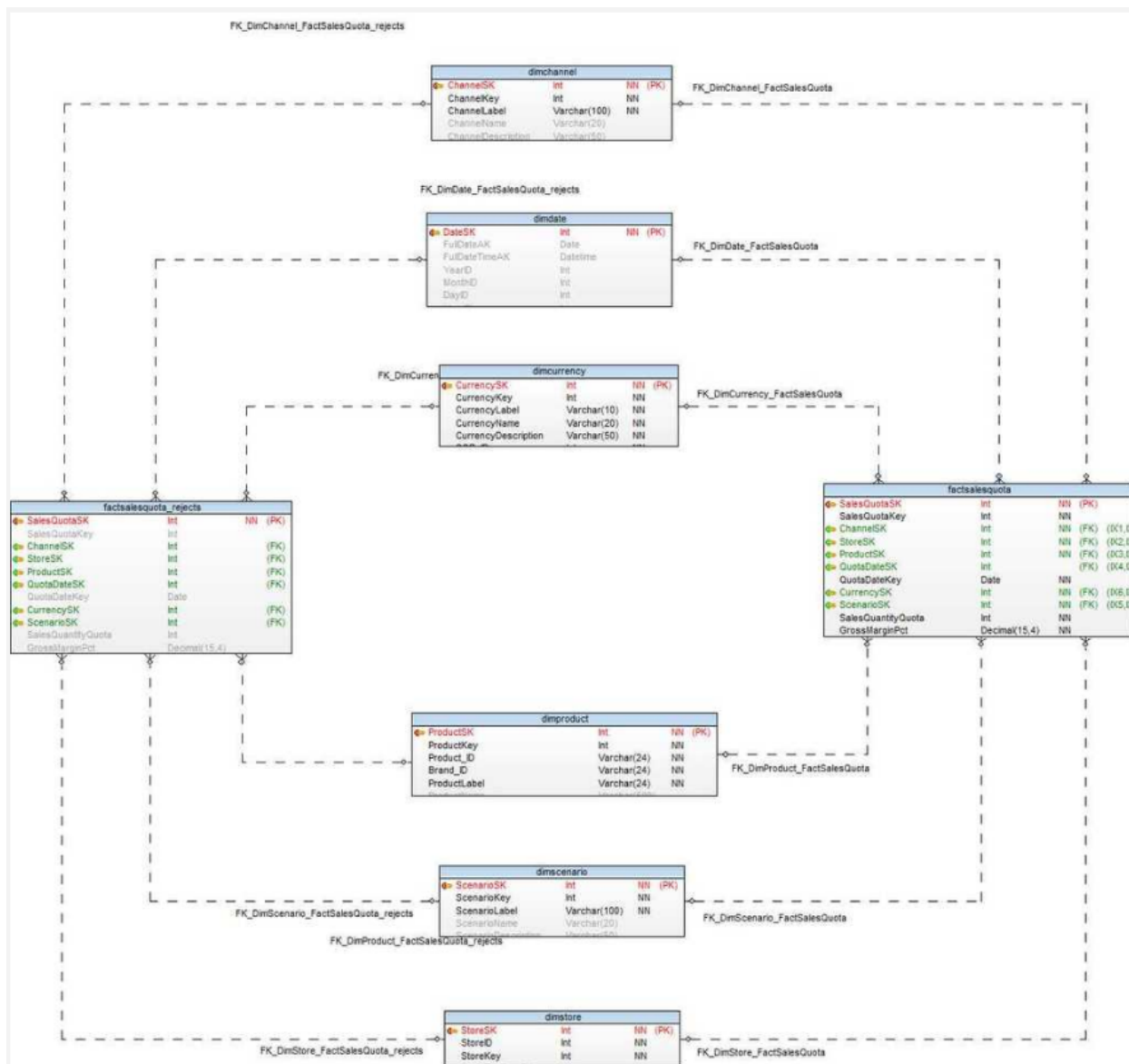
Figure 1: Example of a Data Store's Logical Data Model

### FactOnlineSales:





**FactSales:**

**FactSalesQuota:**



## FactStrategyPlan



**Challenges Faced:**

- To perform error handling, we first performed **Data Profiling** which included Source to Target Mappings. This is a very important and primary step in Data Integration.
- In this Contosa Retail Project we have used **Data Ingestion Services** inorder to handle effective & ineffective dates, new row for updating current records.
- **Data Ingestion Services used in our project include:**
  1. Change Data Capture in the form of Audit columns
  2. Slowly changing dimensions (Type 2 in DimProductCost, DimProductPrice)
  3. Referential Lookups
- In order to perform String to Integer data conversion's we used `String.valueOf()`
- Also to parse from `BigDecimal` to `Int` we used `intValueExact()`
- For implementing conformed date dimension, we used `Integer.parseInt(TalendDate.getCurrentDate())`
- We have used `NumberSequence` inorder to implement the functionality of `AutoIncrement`

## **APPENDIX: BACKGROUND MATERIALS**

---

### **Authors and contributors**

Dharit Shah

Luvesh Tekchandani

Ojas Phansekar

Raj Ravindra Phadke

### **Authors of deliverables:**

Prof. Richard Sherman

### **Special Thanks for guiding us through the project:**

Arjun Upadhyay

Labdhi Shah

Palak Agrawal