Understanding and Implementing Data Models with Sisense

Building Data Model



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Overview on Data Model

What is Data Model

- **How the data is imported from various sources**
- **How the tables are related to one another**
- **How the data is stored**

https://documentation.sisense.com/docs/en/introduction-to-data-models

Sisense Data Model

ElastiCube	**ElastiCubes are Sisense's proprietary, high-performance analytical databases**
Live Model	**Live Model is to analyze live data from data source**
Hybrid Model	**Hybrid Model is combination of ElastiCube and Live**

Facts and Dimensions

Fact Table

Facts are Measures or Metrics about business

Facts are usually a Numeric field

Facts are used in Aggregations like Sum, Avg, Max

Example – Sales, Cost, Revenue ..

Dimension Table

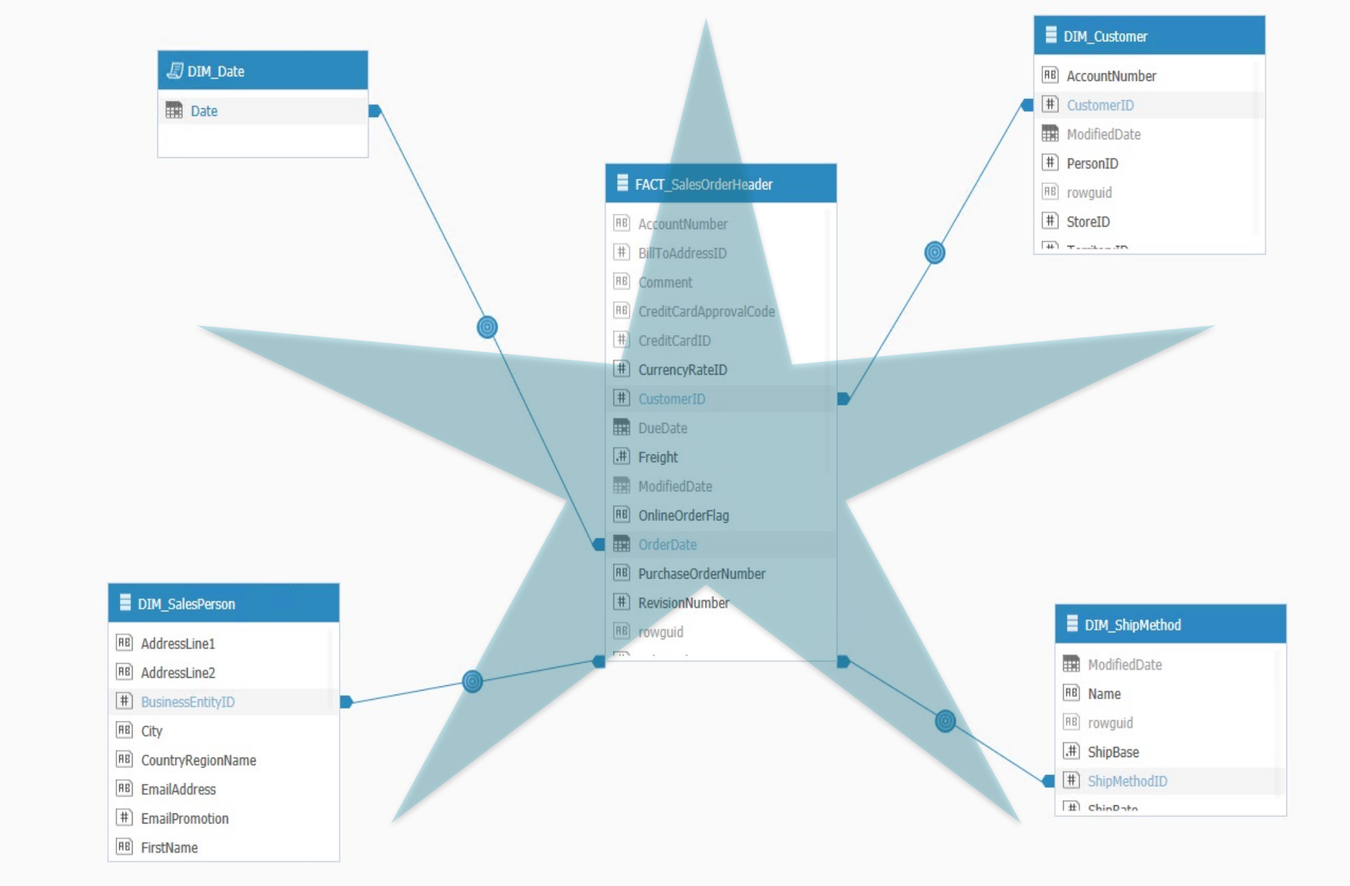
Dimensions are attributes of Facts

Dimension is usually a text field

Dimensions are used to group by measures

Example – Country, Employee, Category ..

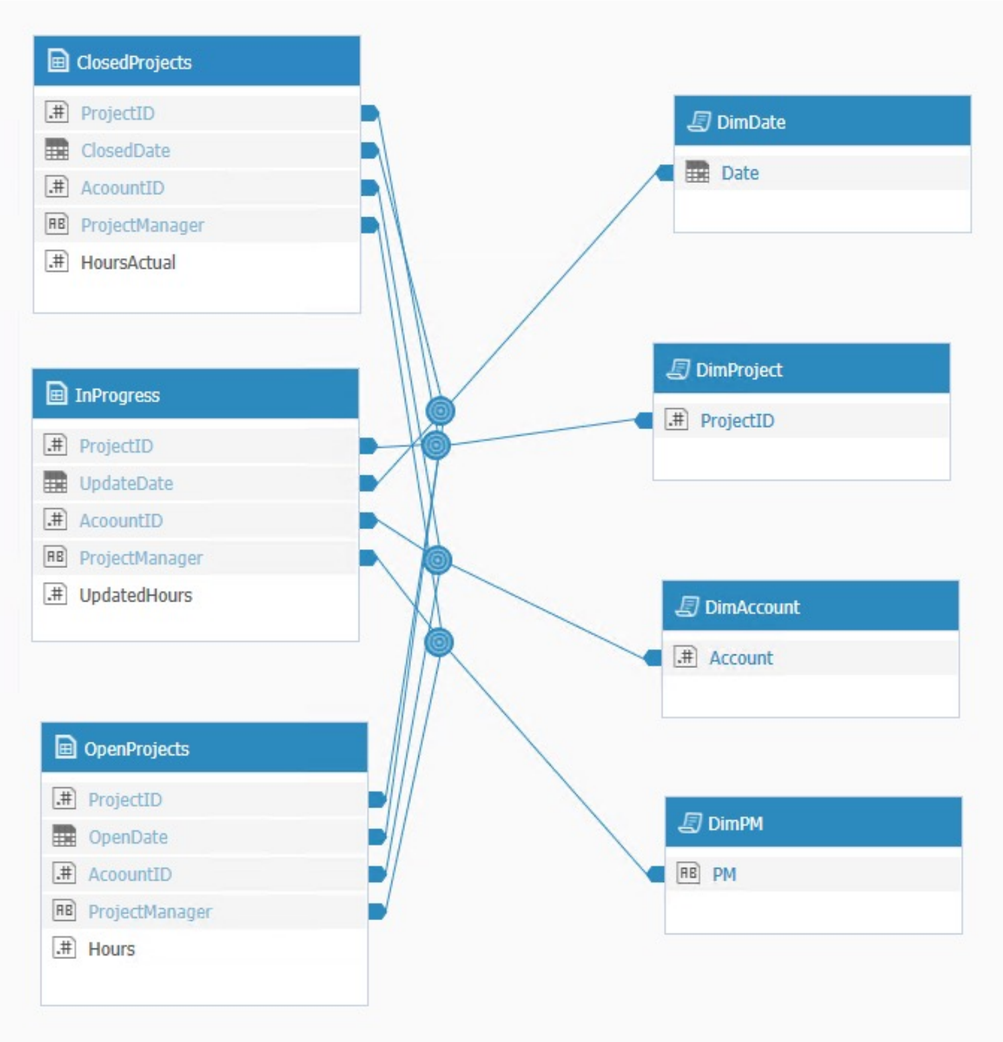
Star Schema



One Fact Table

Multiple Dimension Tables

Source: Sisense Website



Source: Sisense Website

Multiple Fact Tables

Multiple Dimension Tables

Right Data Model Enhances the Data Analysis Experience

Up Next:
Modifying Queries in Data Connection

Modifying Queries in Data Connection

Up Next:
Joining the Tables

Joining the Tables

Basic Rules for Joining Tables

The two fields should be of same data type

Avoid Many to Many relationship

Make single field join between tables

Up Next:
Solving Many to Many Mapping

Solving Many to Many Mapping

1 – 1 Mapping

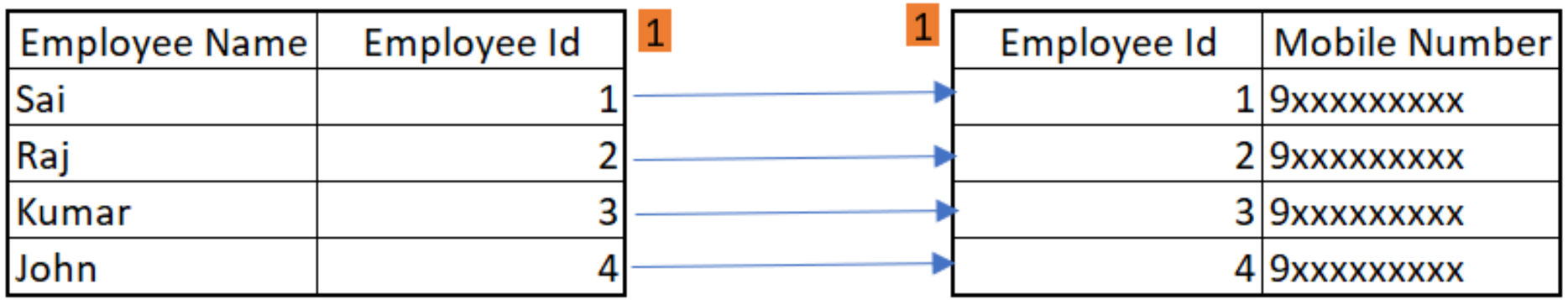
Both sides of the relations have unique values for every row

Employee Name

Employee Name	Employee Id
Sai	1
Raj	2
Kumar	3
John	4

Employee Details

Employee Id	Mobile Number
1	9xxxxxxxxx
2	9xxxxxxxxx
3	9xxxxxxxxx
4	9xxxxxxxxx



1 – n or n - 1 Mapping

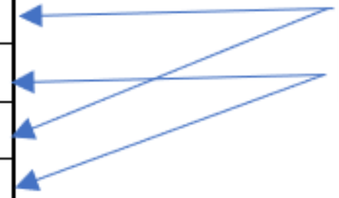
One field will have unique values and Other side of relationship have multiple values, Vice versa

Employee Id	Employee Name	SalaryCode
1	Sai	S001
2	Raj	S002
3	Kumar	S001
4	John	S002

n

1

SalaryCode	Band	Range
S001	Band - A	5 - 10
S002	Band - B	10 -15



n – n Mapping

Both sides of the relationship will hold duplicated values causing excessive calculations run

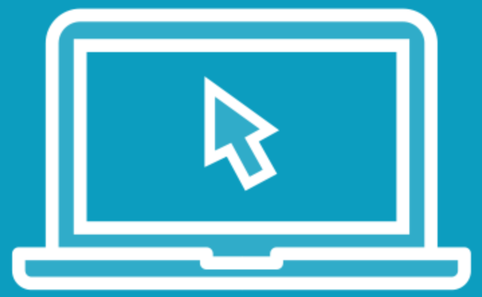
Skill Set	Employee Name
Java	Sai
Sisense	Sai
Python	Raj
Sisense	Raj
Gscript	Kumar
Java	John

n

n

Employee Name	Project Code	Project
Sai	P001	Sisense Development
Raj	P001	Sisense Development
Sai	P002	Pluralsight
Raj	P002	Pluralsight
Kumar	P003	Siriyltics Dashboards
John	P003	Siriyltics Dashboards

Demo



Solving Many to Many Mappings

Up Next:
Cleaning Up Data Model

Cleaning Up Data Model

Demo



Renaming Fields

Hiding Fields

Up Next:
Settings

Settings

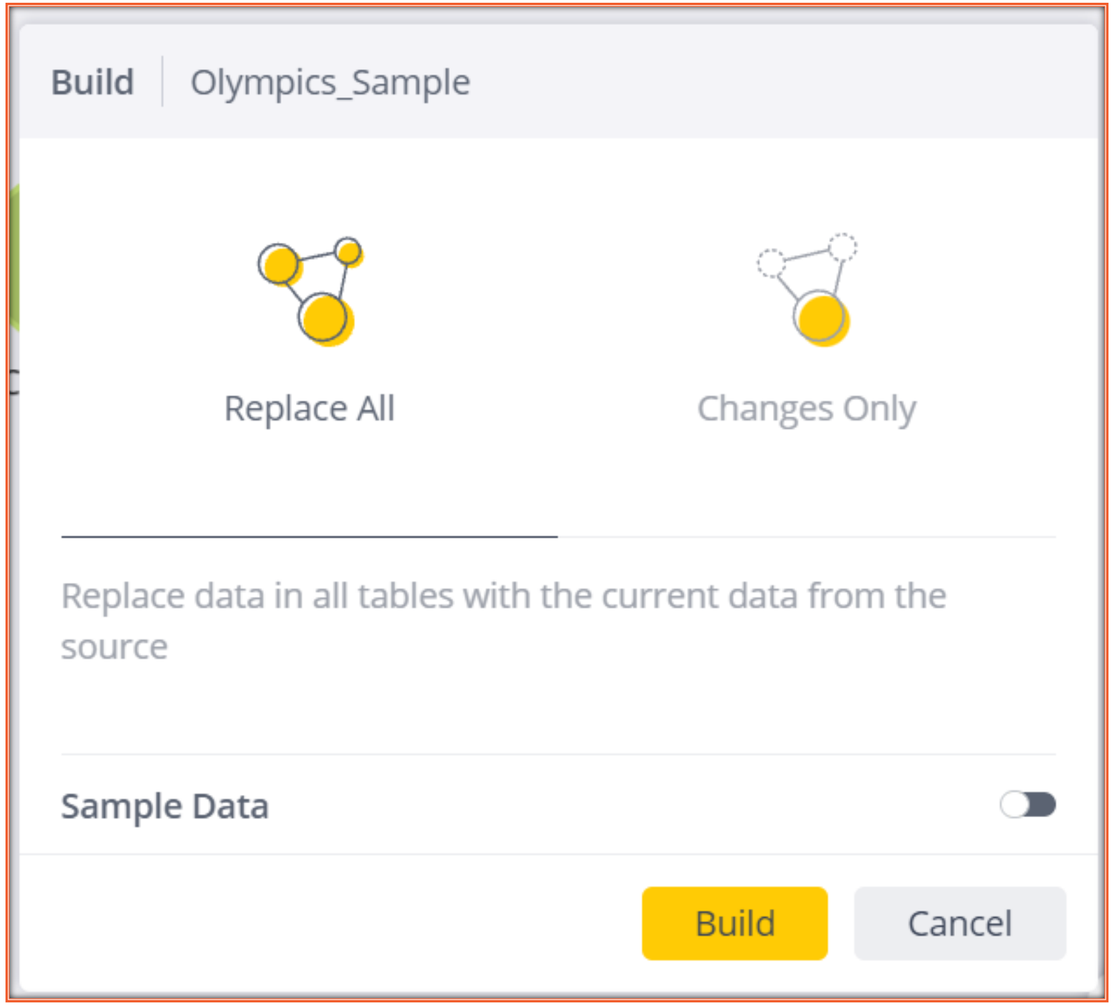
Overview



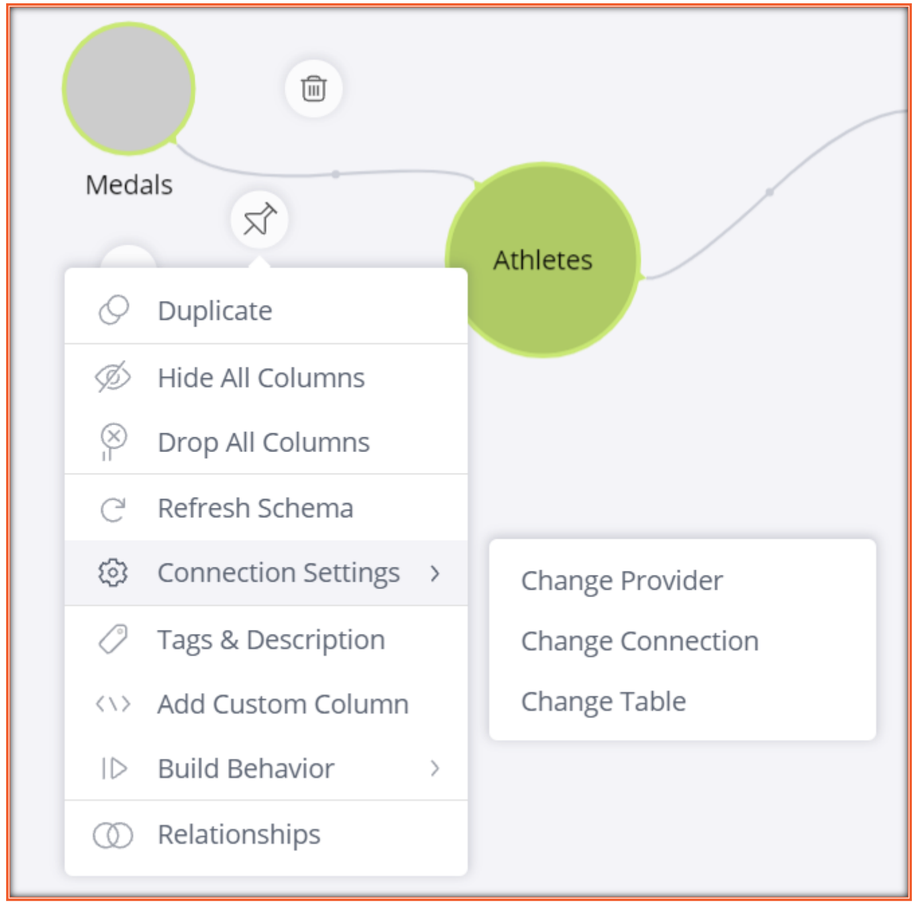
Build Settings

Connectivity Settings

Build Settings



Connection Settings



Summary



- Data Model Overview
- Editing Data Connection
- Joining Tables
- Types of Relationship
- Resolving Many to Many Relationship
- Cleanup
- Build Settings