

BIG DATA ANALYSIS AND VISUALIZATION USING POWER BI AND TABLEAU

Introduction to Tableau

What is Tableau?

- Tableau is a powerful and fastest growing data visualization tool used in the Business Intelligence Industry.
 - ▣ Simplifying raw data into the very easily understandable format.
 - ▣ Data Blending
 - ▣ Real time analysis
 - ▣ Collaboration of data

Tableau Product Suite

- The Tableau Product Suite consists of
 - ▣ Tableau Desktop
 - ▣ Tableau Public
 - ▣ Tableau Online
 - ▣ Tableau Server
 - ▣ Tableau Reader

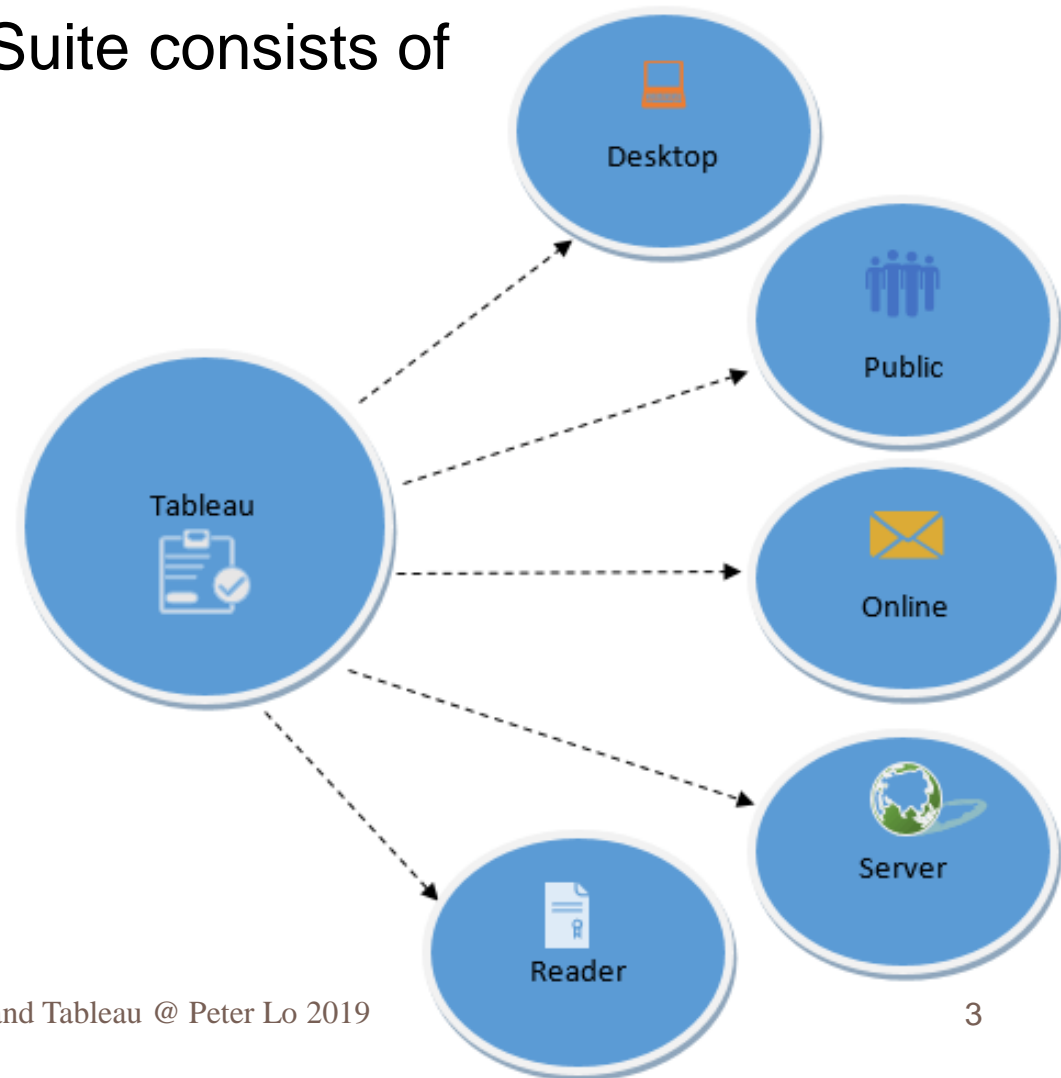
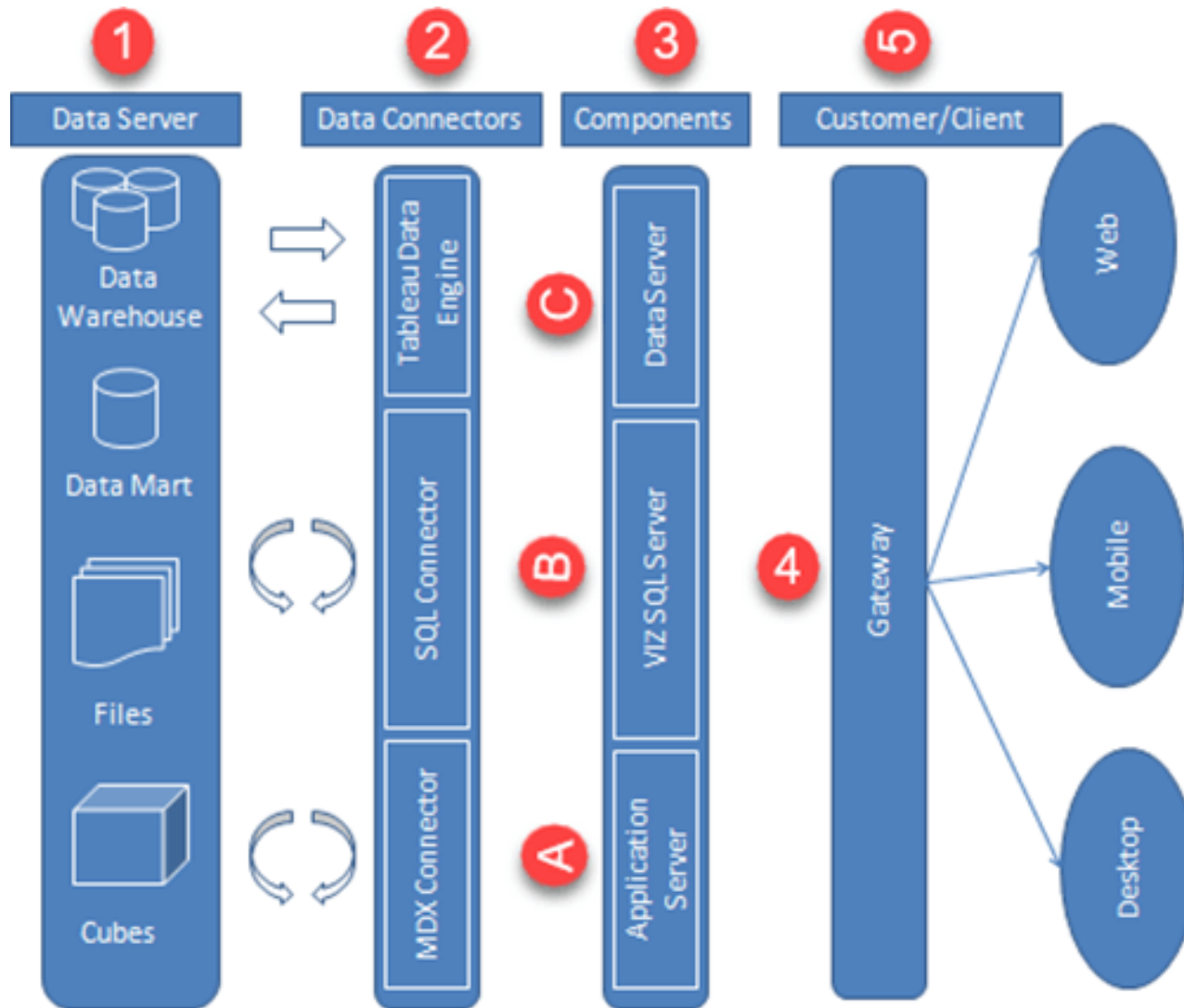
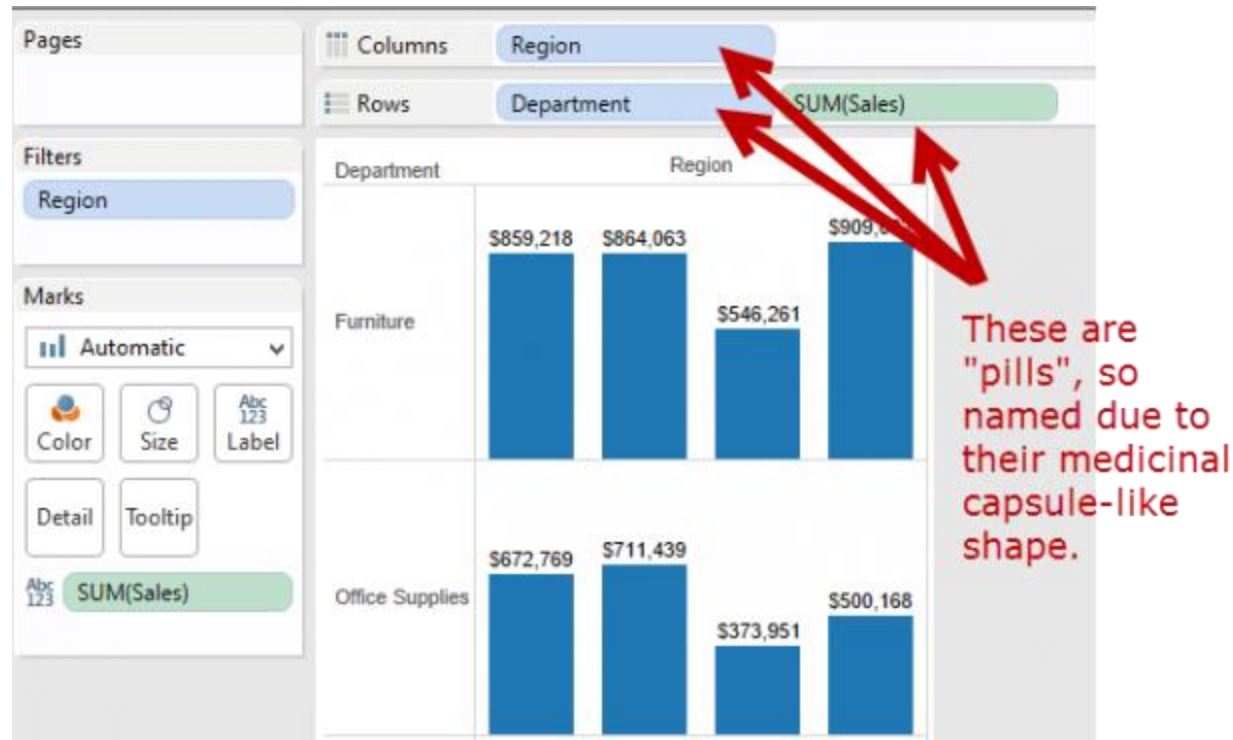


Tableau Server Architecture



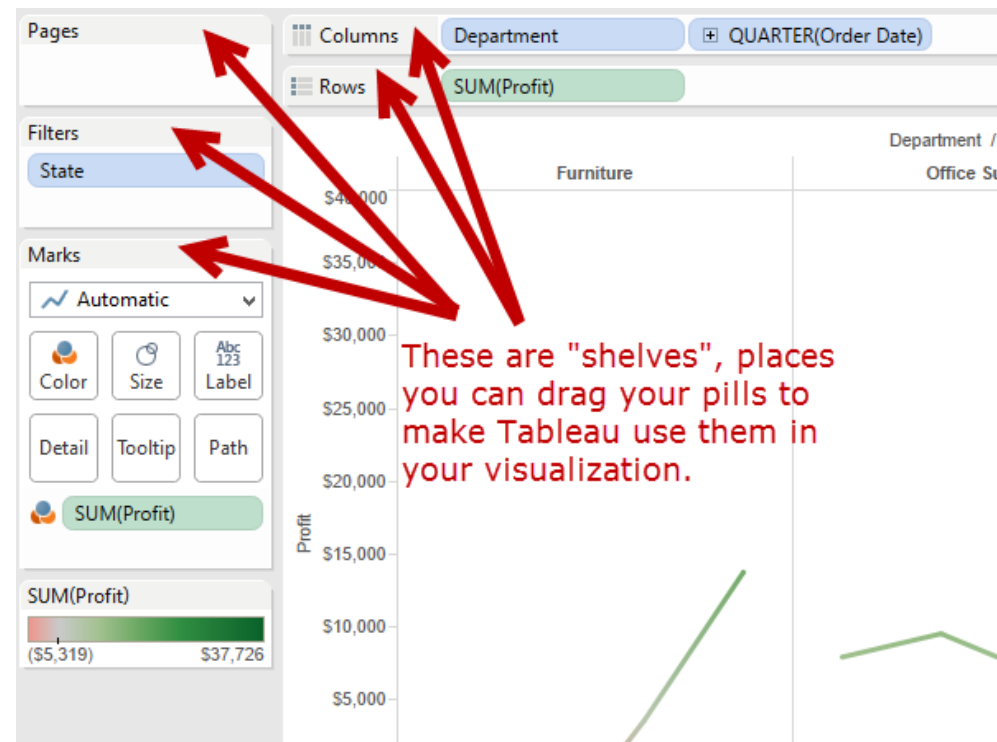
Pill

- Pill is a piece of data that you want to show up on your visualization



Shelves

- Shelf is an area on the visualization screen where you can drop pieces of data so that Tableau can act on them. What Tableau does with a pill depends on which shelf you drag it to.
- Four kinds of shelves:
 - ▣ Columns
 - ▣ Rows
 - ▣ Pages
 - ▣ Filters



Dimensions and Measures

Dimension

Dimensions are the fields that you cannot aggregate.

They are generally string values, or Discrete values, and are mostly used as column or row headings.

E.g. CountryName, ProductName etc

Measure

Measures, as the name suggests are the fields that you can measure or aggregate.

They are generally numerical values, or Continuous and are mostly used as plotting values.

E.g. CountryPopulation, ProductSales etc

Generated Fields

- Tableau generates some fields which can be visible in the data pane.
- These fields are generated in addition to the fields present in the data set.
 - ▣ Measure Names
 - ▣ Measure Values
 - ▣ Number of Records
 - ▣ Longitude
 - ▣ Latitude

Generated Fields (cont.)

□ Measure Names

- Consists of all the names of the measure present in a data set.
- Presents at the end of dimension list.
- Consists of discrete values of all measure names.

□ Measure Values

- Present in a data set are kept together in the field called measure values.
- Presents at the end of measures list.
- Consists of continuous values of all measures

□ Number of Records

- An auto-generated field which assigns '1' for each record.
- Shows the count of records present in the data set.
- Verify the count of records when joining multiple tables.

Dimensions

Abc Customer Name
Abc Manufacturer
Order Date
Abc Order ID
Postal Code
Abc Product Name
Abc Region
Abc Segment
Ship Date
Abc Ship Mode
State
Abc Sub-Category
Abc Measure Names

Measures

Discount
Profit
Profit Ratio
Quantity
Sales
Latitude (generated)
Longitude (generated)
Number of Records
Measure Values