# Task 7 by Dzmitry Shautsou

# Create and populate Dimension of TIME DW – Layer

**Notes:**

To Populate Time dims use External Resources:

|  |  |
| --- | --- |
| File Name | Path |
| Calendars.sql | … \Topic 07 - Dimension and Facts Basics\LabScripts\ |

## Task 01: CREATE DW.T\_DAYS

**The Main Task** is to create Physical diagram and Objects on DW layer:

**Task Results:**

Create document, which contained next chapters:

* + Physical diagram store on GIT
  + Links to Scripts on GIT

## Task 02: CREATE DW.T\_WEEKS

**The Main Task** is to create Physical diagram and Objects on DW layer:

**Task Results:**

Create document, which contained next chapters:

* + Physical diagram store on GIT
  + Links to Scripts on GIT

## Task 03: CREATE DW.T\_MONTHS

**The Main Task** is to create Physical diagram and Objects on DW layer:

**Task Results:**

Create document, which contained next chapters:

* + Physical diagram store on GIT
  + Links to Scripts on GIT

## Task 04: CREATE DW.T\_QUARTERS

**The Main Task** is to create Physical diagram and Objects on DW layer:

**Task Results:**

Create document, which contained next chapters:

* + Physical diagram store on GIT
  + Links to Scripts on GIT

## Task 05: CREATE DW.T\_YEARS

**The Main Task** is to create Physical diagram and Objects on DW layer:

**Task Results:**

Create document, which contained next chapters:

* + Physical diagram store on GIT
  + Links to Scripts on GIT



# OLAP – Business analyses task

## Task 06 – Solution concept – Add: Chapter Dimensions Types

**The Main Task** is to create summary table to describe all future STAR Dimensions:

Next points are mandatory:

* Start scheme must use no less one of SCD type 2 Dimension
* Start scheme must use prepared dimensions: DIM\_TIME, DIM\_GEO\_LOCATIONS
* Start scheme must use one of period dimensions: DIM\_GEN\_PERIODS



**Task Results:**

Create document, which contained next chapters:

* + Chapter: Dimensions Types Description

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Type | Size | DW – Merged Dimensions | Descriptions |
| DIM\_TIMES | TYPE 1 | BIG | DW.T\_DAYS, DW.T\_WEEKS, DW.T\_MONTHS, DW.T\_QUARTERS,  DW.T\_YEARS | It is a specific type of dimension. Appears at the DWH and contains all the time since the introduction of the project until its completion. |
| DIM\_GEO\_LOCATIONS | TYPE 1 | SMALL | DW.T\_COUNTRIES  DW.T\_CNTR\_GROUPS  DW.T\_CNTR\_SUB\_GROUPS  DW.LC\_CNTR\_GROUPS  DW.T\_GEO\_TYPES  DW.T\_GEO\_SYSTEMS  DW.LC\_GEO\_SYSTEMS  DW.T\_GEO\_PARTS  DW.T\_GEO\_REGIONS  DW.T\_GEO\_OBJECTS  DW.T\_CNTR\_GROUP\_SYSTEMS  DW. LC\_CNTR\_GROUP\_SYSTEMS  DW.LC\_CNTR\_SUB\_GROUPS  DW.LC\_ GEO\_PARTS  DW.LC\_COUNTRIES  DW.LC\_ GEO\_REGIONS | This kind of dimension contains information about all countries, subregions, regions of the world. And also enters information on the types of economic development and unions according to the international classification. |
| DIM\_CLIENT\_SCD | SCD TYPE 2 | BIG | DW.T\_CUSTOMERS  DW.T\_TARIFFS | This dimension contains information about clients, their persons data, and tariff plan which they use(used). |
| DIM\_SERVERS | TYPE 1 | BIG | DW.T\_SERVERS  DW.T\_LOCATIONS  DW.T\_CHANNELS | This dimension contains information about our servers, their technical properties. |
| DIM\_TARIFFS | TYPE 1 | SMALL | DW.T\_TARIFFS | Provides information about channels of sales (description and class) |
| DIM\_GEN\_PERIODS | TYPE 1 | SMALL | DW.T\_PERIOD\_DESC | Dimension specific type, which allows grouping of facts on the basis of logic (clients tariff in our case) |

## Task 07 – Solution concept – Add: Chapter Dimensions Hierarchies

**Task Results:**

Create document, which contained next chapters:

* + Chapter: Dimensions Hierarchies

**DIM\_GEN\_TIME:**

**Hierarchy DAY / MONTH / QUARTER / YEAR**

|  |  |  |  |
| --- | --- | --- | --- |
| Name | LEVEL\_CODE | LEVEL\_DESC | LEVEL\_NATURAL\_KEY |
| DAY | DAY | Store all day at the calendar year | DAY\_ID |
| MONTH | MONTH | Store all months at the calendar year | WEEK\_ID |
| QUAR | QUARTER | Store all quarters at the calendar year | QUAR\_ID |
| YEAR | YEAR | Store all years at the calendar year | YEAR\_ID |

**Hierarchy WEEK / MONTH / QUARTER / YEAR**

|  |  |  |  |
| --- | --- | --- | --- |
| Name | LEVEL\_CODE | LEVEL\_DESC | LEVEL\_NATURAL\_KEY |
| WEEK | DAY | Store all weeks at the calendar year | WEEK\_ID |
| MONTH | MONTH | Store all months at the calendar year | MONTH\_ID |
| QUAR | QUARTER | Store all quarters at the calendar year | QUAR\_ID |
| YEAR | YEAR | Store all years at the calendar year | YEAR\_ID |

**DIM\_SERVERS:**

**Hierarchy PRODUCTS / SUBCATEGORY / CATEGORY**

|  |  |  |  |
| --- | --- | --- | --- |
| Name | LEVEL\_CODE | LEVEL\_DESC | LEVEL\_NATURAL\_KEY |
| SERVER | PROD\_NAME | Store all servers of ever y type | SERVER\_ID |
| TYPE | PROD\_SUBCATEGORY | Store all type of internet we provide | TYPE\_ID |

**DIM\_GEO LOCATIONS:**

**Hierarchy COUNTRY / SUBREGION / REGION**

|  |  |  |  |
| --- | --- | --- | --- |
| Name | LEVEL\_CODE | LEVEL\_DESC | LEVEL\_NATURAL\_KEY |
| COUNTRIES | COUNTRY\_NAME | Store all countries for each region. | COUNTRY\_ID |
| SUBREGIONS | COUNTRY\_SUBREGION | Store all subregions for each region . | COUNTRY\_SUBREGION\_ID |
| REGIONS | COUNTRY\_REGION | Store all regions of the world. | COUNTRY\_REGION\_ID |

**Hierarchy COUNTRY / REGION / CONTINENT**

|  |  |  |  |
| --- | --- | --- | --- |
| Name | LEVEL\_CODE | LEVEL\_DESC | LEVEL\_NATURAL\_KEY |
| COUNTRIES | COUNTRY\_NAME | Store all countries for each region. | COUNTRY\_ID |
| SUBREGIONS | COUNTRY\_SUBREGION | Store all regions for each region . | COUNTRY\_REGION\_ID |
| REGIONS | COUNTRY\_CONTINENT | Store all continents of the world. | COUNTRY\_CONTINENT\_ID |

## Task 08 – Solution concept – Add: Chapter Facts Aggregations

**The Main Task** is to create summary table to describe all future STAR Fact Table Aggregations:

Next points are mandatory:

* Create more than one measurement
  + Summarize aggregation
  + Additional task: Not Additive measurement

**Task Results:**

Create document, which contained next chapters:

* + Chapter: Facts Aggregations

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Code | Table Name | Additive | Descriptions |
| TRAFFIC\_IN | TRAFFIC\_IN | FCT\_SPENDINGS\_D | YES | Calculate sum incoming traffic by day. |
| TRAFFIC\_OUT | TRAFFIC\_OUT | FCT\_SPENDINGS\_D | YES | Calculate sum outgoing traffic by day. |
| SPENDING | SPENDING | FCT\_SPENDINGS\_D | YES | Calculate sum of money spent on incoming and outgoing traffic |