

Report

Laboratory Work 8 - 9

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1. Prerequisites Task Information

1.1. Passwords Index

Password Group	Login Name	Password
Operation System	root	"rootadmin"
	oracle	"oracleadmin"
Oracle System	sys	"sysadmin"
	system	"sysadmin"
Oracle Users	All DB users	"%PWD%"

1.2. Folder Paths Index

Path Group	Path Description	Path
Operation System	Oracle RDBMS – BIN	/oracle/app/oracle
	Oracle Inventory	/oracle/app/oraInventory
	Oracle Database Storage	/oracle/oradata
	Oracle Install Directory	/oracle/install
Oracle	ORACLE_BASE	/oracle/app/oracle
	ORACLE_HOME	\$ORACLE_BASE/product/11.2
FTP	ftp Incoming Folder	/ftp/incoming

2. ETL Extraction - BASIC

2.1. Task 01: Extraction Description

The Main Task is to create chapter in the Solution Concept Document that will explain extraction properties and strategy for your Business Task, according Exit Task for Module 6 – Introduction to DWH.

Task Results:

Create required objects:

- Prepare Document with new Chapter.

Note. From my point of view the offline extraction can be assessed as followed: as data is not directly taken from the source, it already has an existing structure, namely it can be tablespaces and logs or in another case the structure may be a result of the extraction method.

Another type of extraction, namely, full extraction may be described as complete pulling of data directly from the source. This may be beneficial in a sense that there is no need to track the source system as the extraction process reflects all the available data in the system.

Note. New Chapter “Extraction Description” will be added to Business task solution concept

3. ETL Transportation – Example of Loading FCT_*

Task 02 is common for LabWork 08, 09.

Task 03: Prepare Table of Facts to DW Layer

The Main Task is to create required objects on DW layers and realize load process for Facts

Required points:

- Create new package for Load FCT_* to DW Layer

Task Results:

Create required objects:

- Put objects script to Git.
- Prepare Document with Screenshot of Data

```

2 alter session set current_schema = DW_DATA;
3 SELECT * FROM FACT_SALES;
4
5 alter session set current_schema = DW_DATA;
6 create table FACT_SALES (
7   SALES_ID          NUMBER(22,0),
8   CUSTOMER_ID       NUMBER(22,0),
9   PRODUCT_ID        NUMBER(22,0),
10  PAYMENT_METHOD_ID NUMBER(10,0),
11  STORE_ID          NUMBER(10,0),
12  EMPLOYEE_ID        NUMBER(10,0),
13  DATE_ID           DATE,
14  UPDATE_DT         DATE

```

Script Output x

Task completed in 0.127 seconds

Session altered.

Table FACT_SALES created.

Note. Fact table created

```

18 constraint PK_FACT_SALES primary key (SALES_ID)
19 )
20 --drop table FACT_SALES;
21 PARTITION BY RANGE (date_id)
22 subpartition by hash(CUSTOMER_ID) subpartitions 4
23 (
24 PARTITION QUARTER_1 VALUES LESS THAN (TO_DATE('01.04.2020', 'DD/MM/YYYY'))
25 (
26 subpartition QUARTER_1_sub_1,
27 subpartition QUARTER_1_sub_2,
28 subpartition QUARTER_1_sub_3,
29 subpartition QUARTER_1_sub_4
30 ),
31 PARTITION QUARTER_2 VALUES LESS THAN (TO_DATE('01.07.2020', 'DD/MM/YYYY'))
32 (
33 subpartition QUARTER_2_sub_1,
34 subpartition QUARTER_2_sub_2,
35 subpartition QUARTER_2_sub_3,

```

```

37      ),
38      PARTITION QUARTER_3 VALUES LESS THAN(TO_DATE('01.10.2020', 'DD/MM/YYYY'))
39      (
40          subpartition QUARTER_3_sub_1,
41          subpartition QUARTER_3_sub_2,
42          subpartition QUARTER_3_sub_3,
43          subpartition QUARTER_3_sub_4
44      ),
45      PARTITION QUARTER_4 VALUES LESS THAN(TO_DATE('01.01.2021', 'DD/MM/YYYY'))
46      (
47          subpartition QUARTER_4_sub_1,
48          subpartition QUARTER_4_sub_2,
49          subpartition QUARTER_4_sub_3,
50          subpartition QUARTER_4_sub_4
51      )
52  );
53

```

Note. It's Primary key and partitions (with sub – partitions)

Table FACT_SALES altered.

Table FACT_SALES altered.

Table FACT_SALES altered.

Table FACT_SALES altered.

Table FACT_SALES altered.

Table FACT_SALES altered.

```

alter table FACT_SALES
  add constraint FK_FACT_SALE_REFERENCE_DIM_TIME foreign key (DATE_ID)
    references DIM_TIME (DATE_ID);

alter table FACT_SALES
  add constraint FK_FACT_SALE_REFERENCE_DIM_CUSTOMERS foreign key (CUSTOMER_ID)
    references DIM_CUSTOMERS (CUSTOMER_ID);

alter table FACT_SALES
  add constraint FK_FACT_SALE_REFERENCE_DIM_PROD foreign key (PRODUCT_ID)
    references DIM_PRODUCTS (PRODUCT_ID);

alter table FACT_SALES
  add constraint FK_FACT_SALE_REFERENCE_DIM_STORES foreign key (STORE_ID)
    references DIM_STORES (STORE_ID);

```

```
alter table FACT_SALES
  add constraint FK_FACT_SALE_REFERENCE_DIM_PAY_METH foreign key (PAYMENT_METHOD_ID)
    references DIM_PAYMENT_METHODS (PAYMENT_METHOD_ID);

alter table FACT_SALES
  add constraint FK_FACT_SALE_REFERENCE_DIM_EMP foreign key (EMPLOYEE_ID)
    references DIM_EMPLOYEES (EMPLOYEE_ID);
```

Note. Foreign key constraints. FACT_SALES TABLE CREATED BEFORE, IN MODULE 1, but now a little bit modified. DDL script added to Laboratory Work 8 – 9 folder and exit task folder.

Laboratory Work Summary

At this Laboratory Work we practiced more how to create fact table