



Data Migration with Oracle DataPump Tool

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ABSTRACT

Data Migration is a procedure where data is sent to and from in between computer storages. It is usable in making a new system or enhancing an existing one. Data Migration is where data gets derived from an old system and infused into a new system. Certain tools and processes are used to attain such a cumbersome task as Data Migration without much interference. Data verification is another step which is very necessary to scrutinize and inspect the originating source and target source of data post-migration. Appropriate outlining along with specific reasoning is key to bring about a triumphant transfer of data.

CASE STUDY:-

Sharing an experience on a real-life migration of 5 TB tables in oracle through data pump tool

Initially it looked quite easy because we thought that it was just an export and import of a table to another database but that was quite not the case. To migrate the large tables, we had to break down the activity into 5 steps.

Step1: The export of table through expdb was taken as shown below

```
expdp \'/ as sysdba\' directory=DATAPUMP_COP
dumpfile= DATAPUMP_COP :
expdp_OBtables%u.dmpfilesize =100g
logfile=cap_cs.log
tables=CAP_CS.CAP_CS_OS_SLS
```

Step2: The EXP dump files were copied in the target location and the table through metadata of EXP dump was created. Post retaining the export data, the dump file was copied to the target database using similar configuration by OS command.

Step3: Create a par file to import the data only on target database by below command

The index creation, statistics and constraint were all removed during import. These would be eventually created, post the data was inserted into the tables. Hence, a separate par file was created which did not have constraint, index etc. The archive importing generation had to be avoided, so the disable archive option was present in the par file. Par file details as below.

```
Imp_dp.par
dumpfile=expdp_OBtables01.dmp,expdp_OBtables02
.dmplogfile=impdp_OB.logdirectory=DATAPUMP1
exclude=index,CONSTRAINT,statistics
METRICS=YES parallel=32
transform=disable_archive_logging:y
```

On OS prompt run the below command.

```
impdp system/system123 PARFILE=impdp.par
```

Note: - Herewe are considering that the user and tablespace of sufficient size was available on the target database.

Step4: By running the import in above fashion, our import completed in just one hour.

This method was successful and the import completed in an hour. The next task at hand was to create index, constraint on the tables etc. So the source database was revisited for information gathering. Once procured, this information was incorporated into the table using the below command

Alter session enable parallel DDL;

```
ALTER TABLE CAP_CS_CS_OB_CS_SLS ADD  
CONSTRAINT XPKCS_OB_CS_SLS PRIMARY KEY  
(BATCH_ID, REC_ID, SEQ_NBR) DISABLE ;  
CREATE UNIQUE INDEX  
CAP_CS.XPKCS_OB_CS_SLS ON  
CAP_CS_CS_OB_CS_SLS (BATCH_ID, REC_ID,  
SEQ_NBR) PARALLEL 20;  
ALTER TABLE CAP_CS_CS_OB_CS_SLS ENABLE  
PRIMARY KEY;  
ALTER INDEX CAP_CS.XPKCS_OB_CS_SLS  
NOPARALLEL;
```

This approach led us to complete the entire import procedure in 4 hours. This is a commendable downtime for a 5TB table to migrate.

CONCLUSION:

Oracle Data Pump is a great tool for the fast movement of data between the databases and much of this performance is derived from the use of its features.

