Customer migration Prove of Concept

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- Customer background

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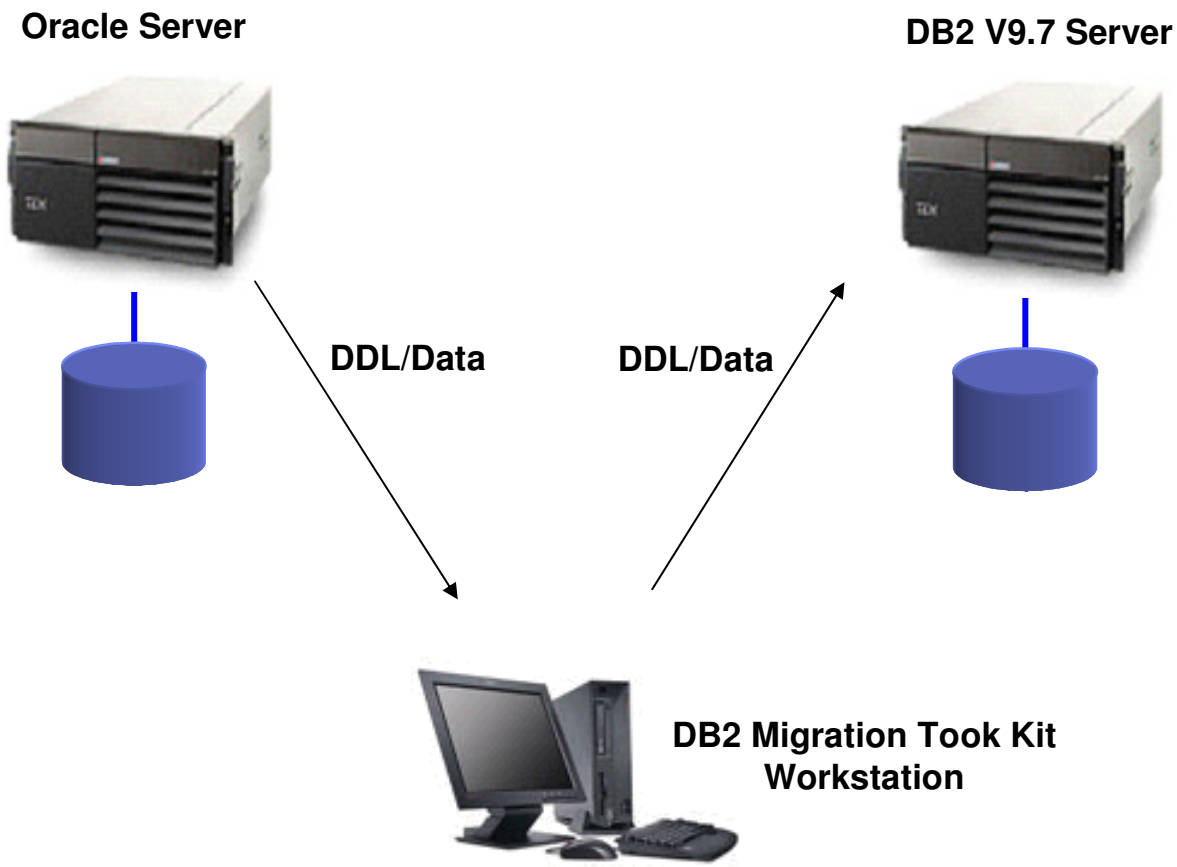
Oracle migration to DB2 – POC Environment



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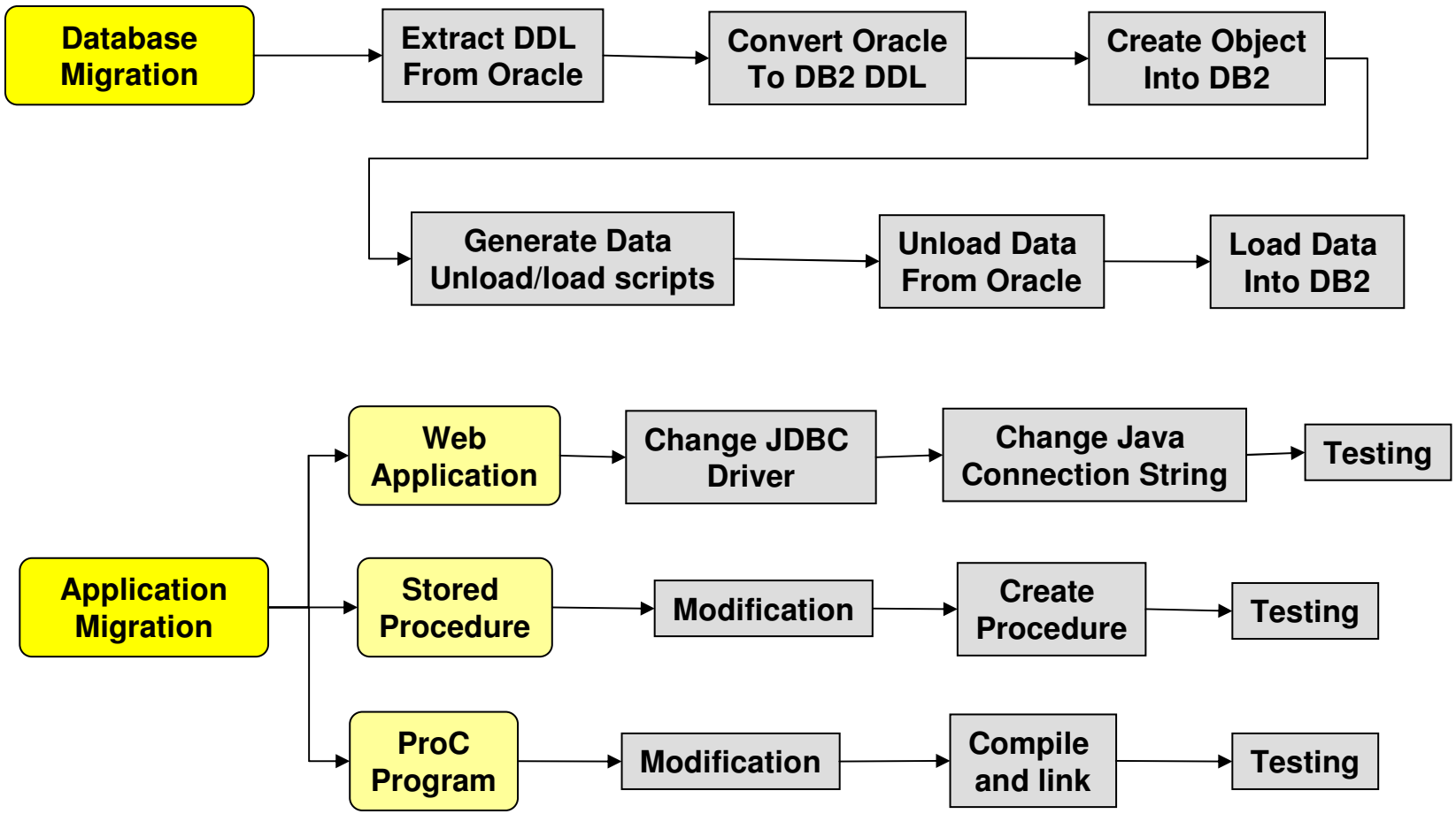
Oracle migration to DB2 - Flow



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Oracle migration to DB2

- **Migration Steps (with flow chart, and changes needed)**
  - Tables other objects (Indexes, Reviews, Triggers, …)
    - Extract Oracle DDLs (with DB2 MTK)
    - Convert to DB2 DDLs (with DB2 MTK)
    - Modify DDLs for ASCII -> UTF-8 issues
    - Deploy to DB2
    - Validation
      - Check deployment messages
      - Number of objects
  - Data
    - Generate data unload/load scripts (with DB2 MTK)
    - Unload data from Oracle
    - Load data into DB2
    - Validation
      - Check load message files
      - Record counts

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Oracle migration to DB2

- **Migration Steps (continue)**
  - Applications
    - Web applications
      - Change JDBC connection string
      - Test data access
      - Test Chinese data
    - Stored Procedure
      - Modification
        - goto logic（will be fixed in GA code）
        - Substrb
        - rtrim
      - Compile
      - Testing
    - ProC programs
      - Modification
        - VARCHAR declaration
        - Connection string
        - Call statement (will be fixed in GA code)
      - Change makefile
      - Compile and link
      - Testing

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AP移轉環境評估

- DB change (For DB2)
  - Modify VARCHAR2 length for UTF8
  - Define Tablespace (Disk Storage) for DB2
  - Define Group and Users
- AP change (For DB2)
  - Web Application
    - Change JDBC driver
    - Change DB connection string
  - Stored Procedure
    - Change GOTO logic (will be fixed in DB2 V97 GA code)
    - Substrb
    - rtrim
  - ProC
    - Change DB Connection command
    - Change VARCHAR definition
    - Change procedure call statement
    - Change compile/link scripts

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AP Migration Lesson Learn

- Lesson Learned – DB2
  - ASC 轉 UTF8
    - Oracle data extracted to text file (big5 code)
    - Load data from big5 client to UTF8 DB
      - DB2 automatically convert big5 code to UTF8 code in DB
    - Query from big5 client
      - DB2 automatically convert UTF8 code to Big5 code
    - Query from Java client
      - Java client access UTF8 from DB
  - UTF8 code is wider than ASC (big5) code
    - Need to double the width of VARCHAR2 columns
  - “Carriage Return” code in “remark” columns
    - Need to extract Oracle data to “FIXED LENGTH” text file then load into DB2
    - If use “DELIMITED” text file, record will be truncated when encounter the “Carriage Return” code
  - Run the extract/load job from DB servers to speed up
  - Need to have systematic and repeatable method to verify program (Stored Procedure or ProC) result or output,

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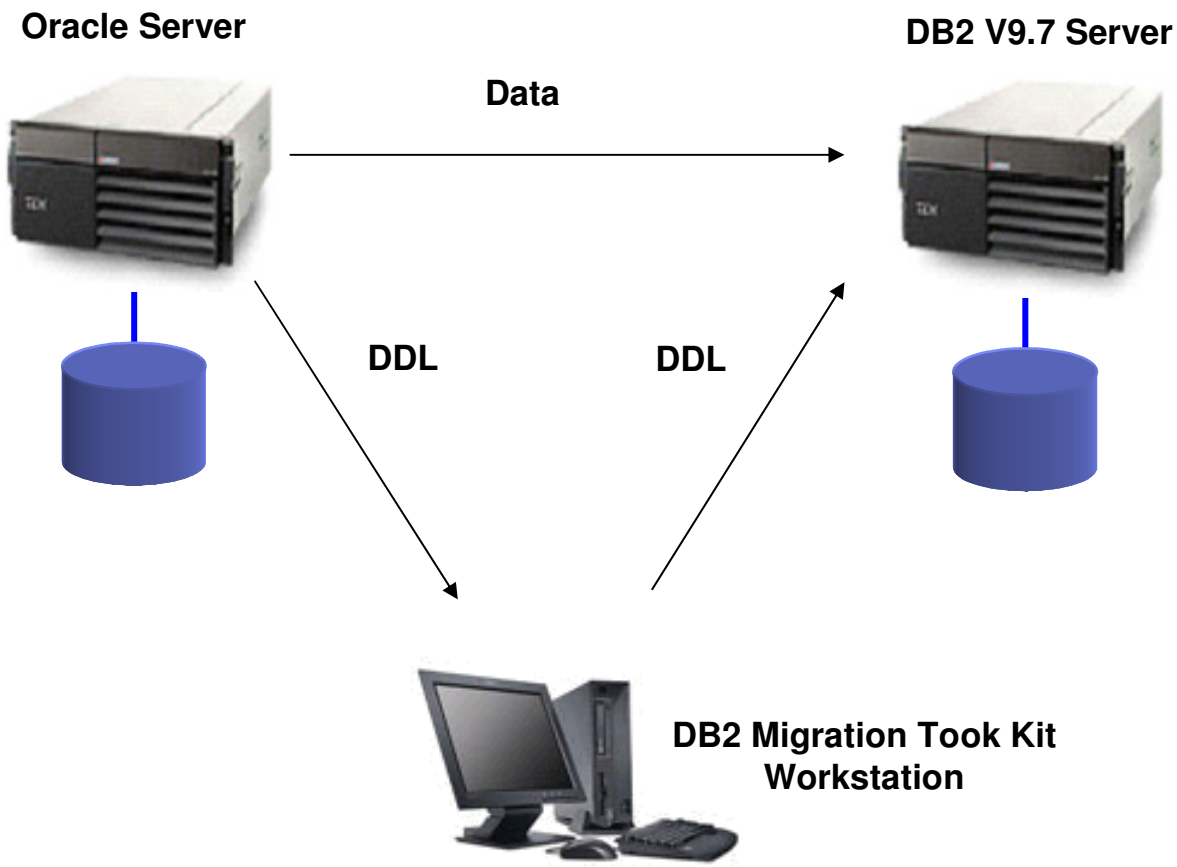
Oracle migration to DB2 – For better performance with large data volume



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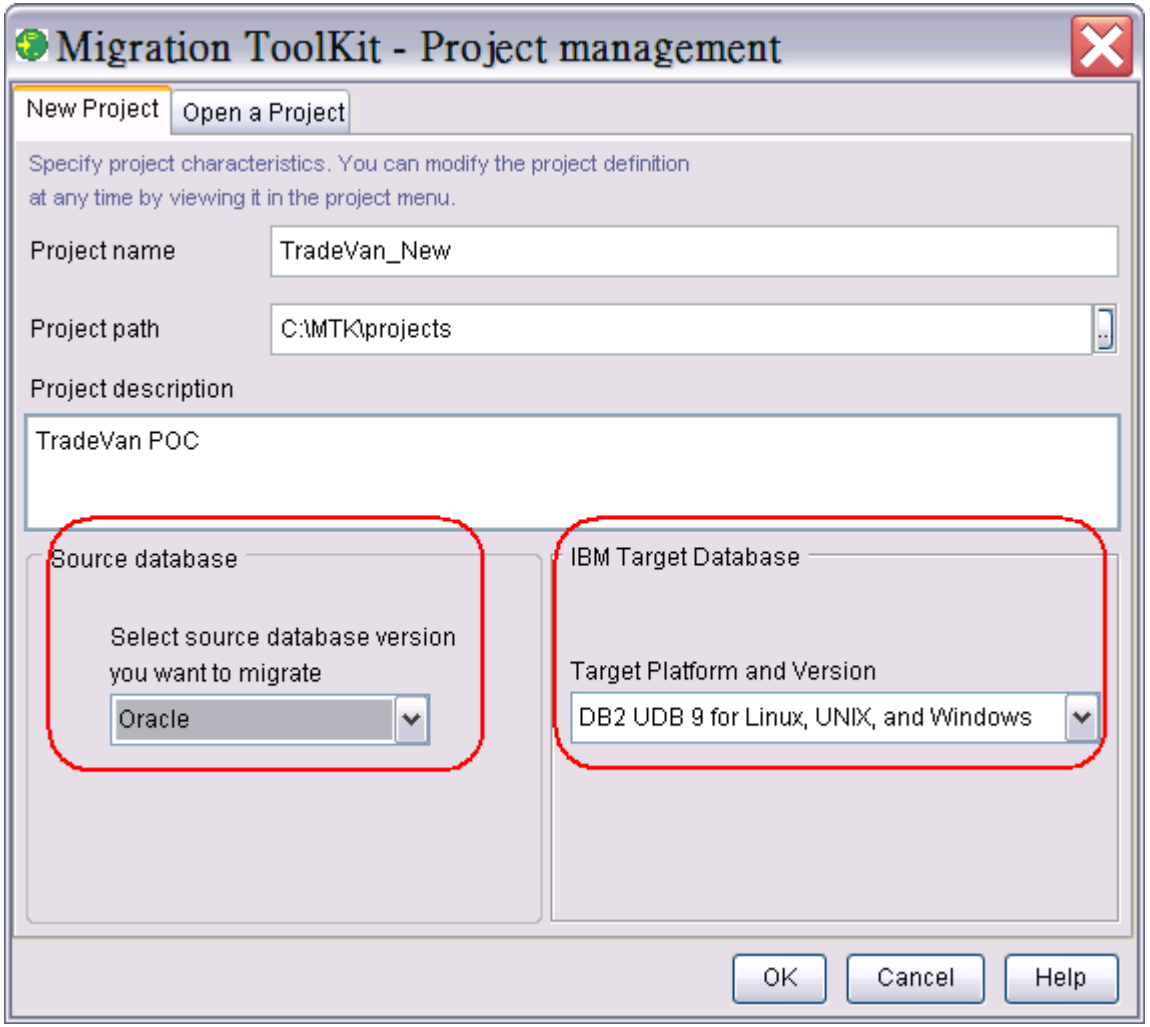
Using DB2 Migration ToolKit



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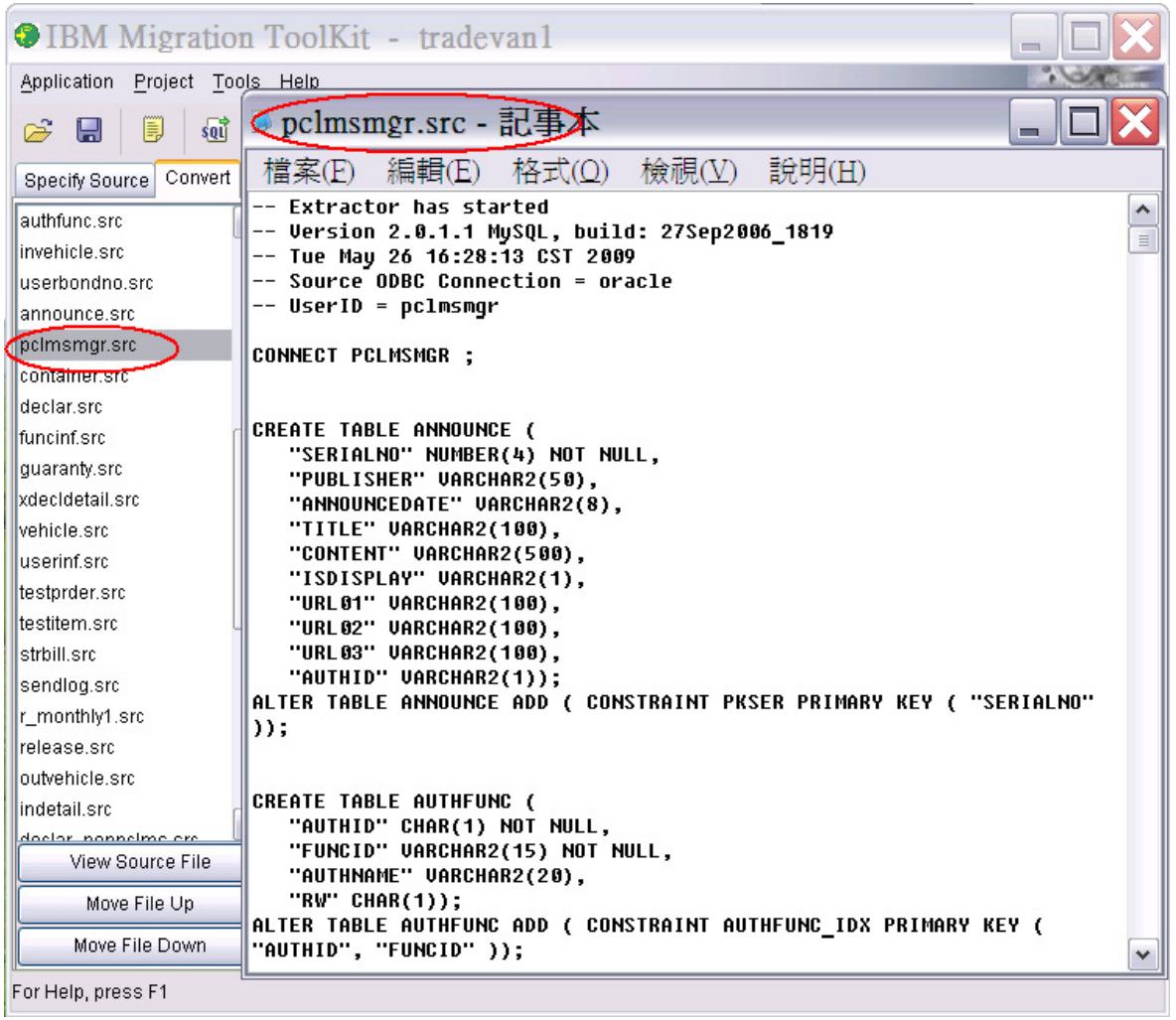
Extracting DDL from Oracle



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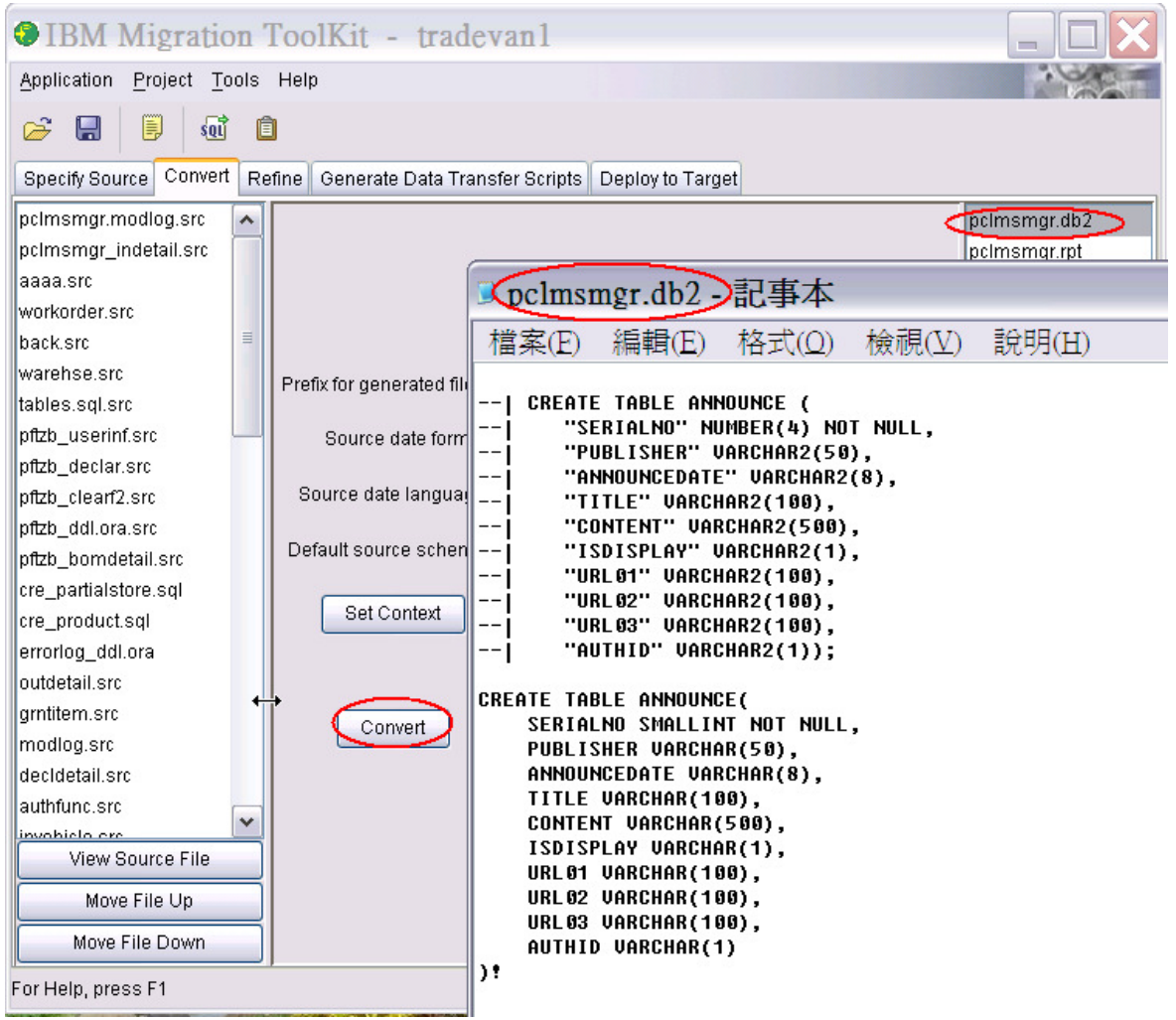
Convert DDLs into DB2



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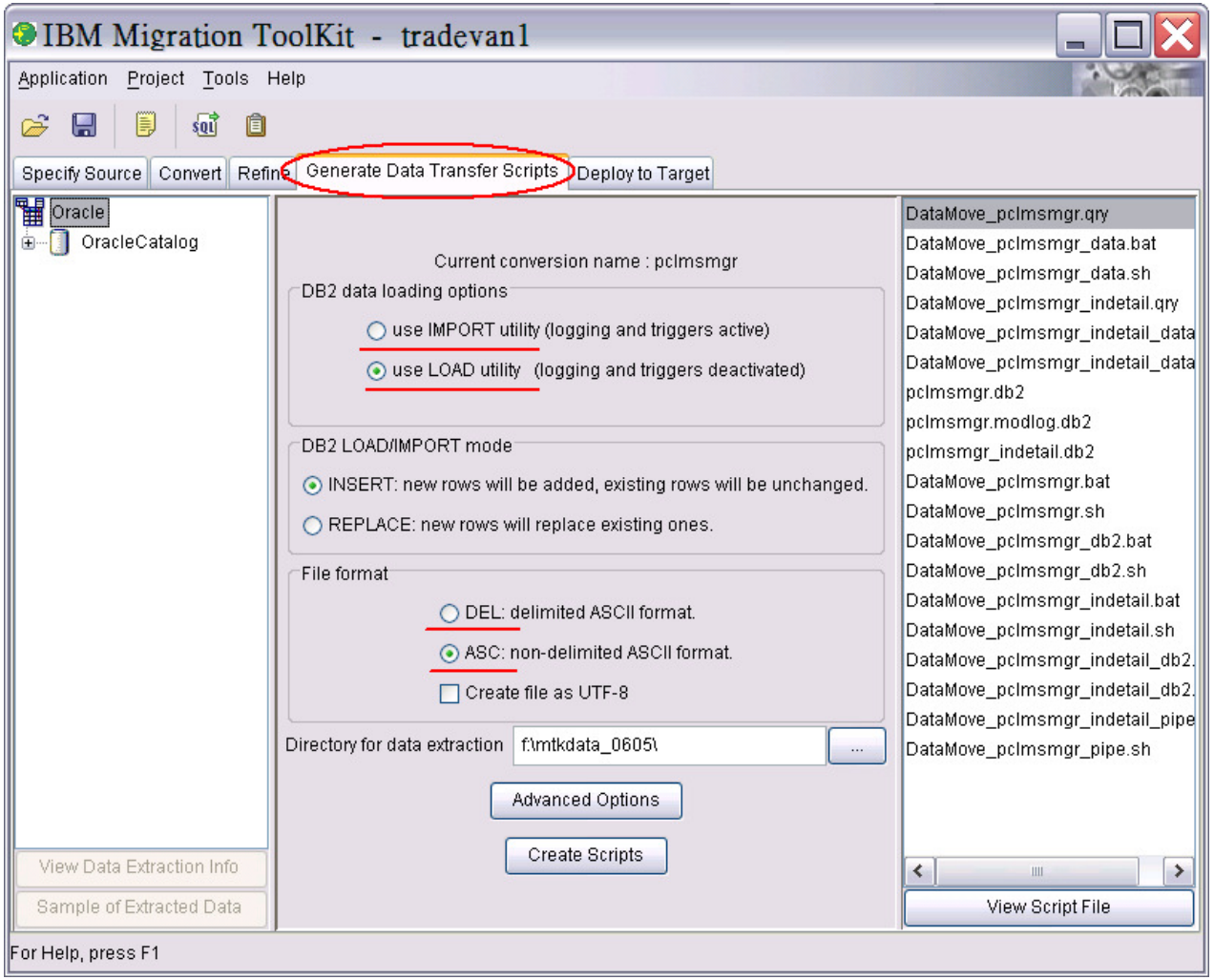
Generate Data Transfer Scripts



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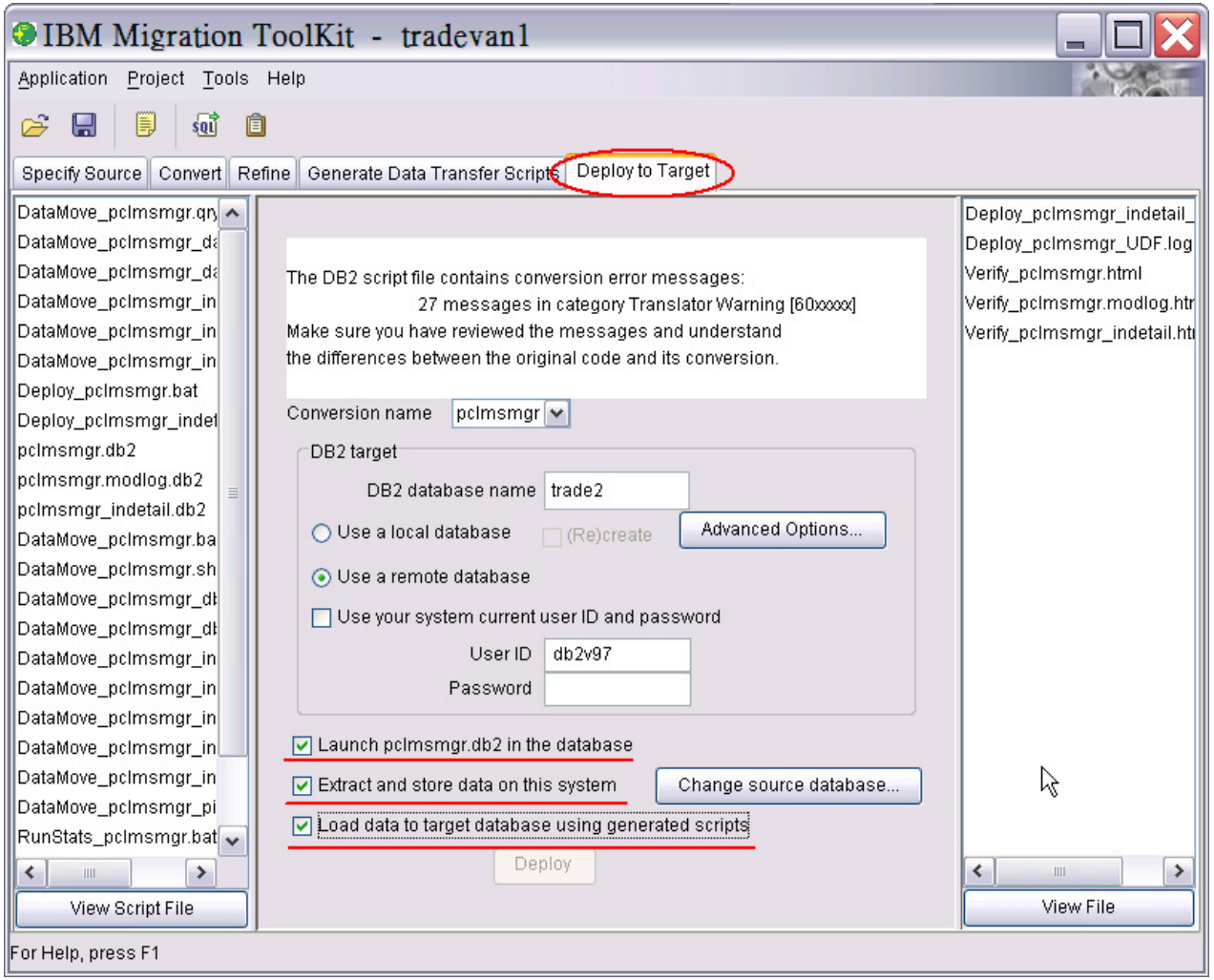
Deploy to DB2



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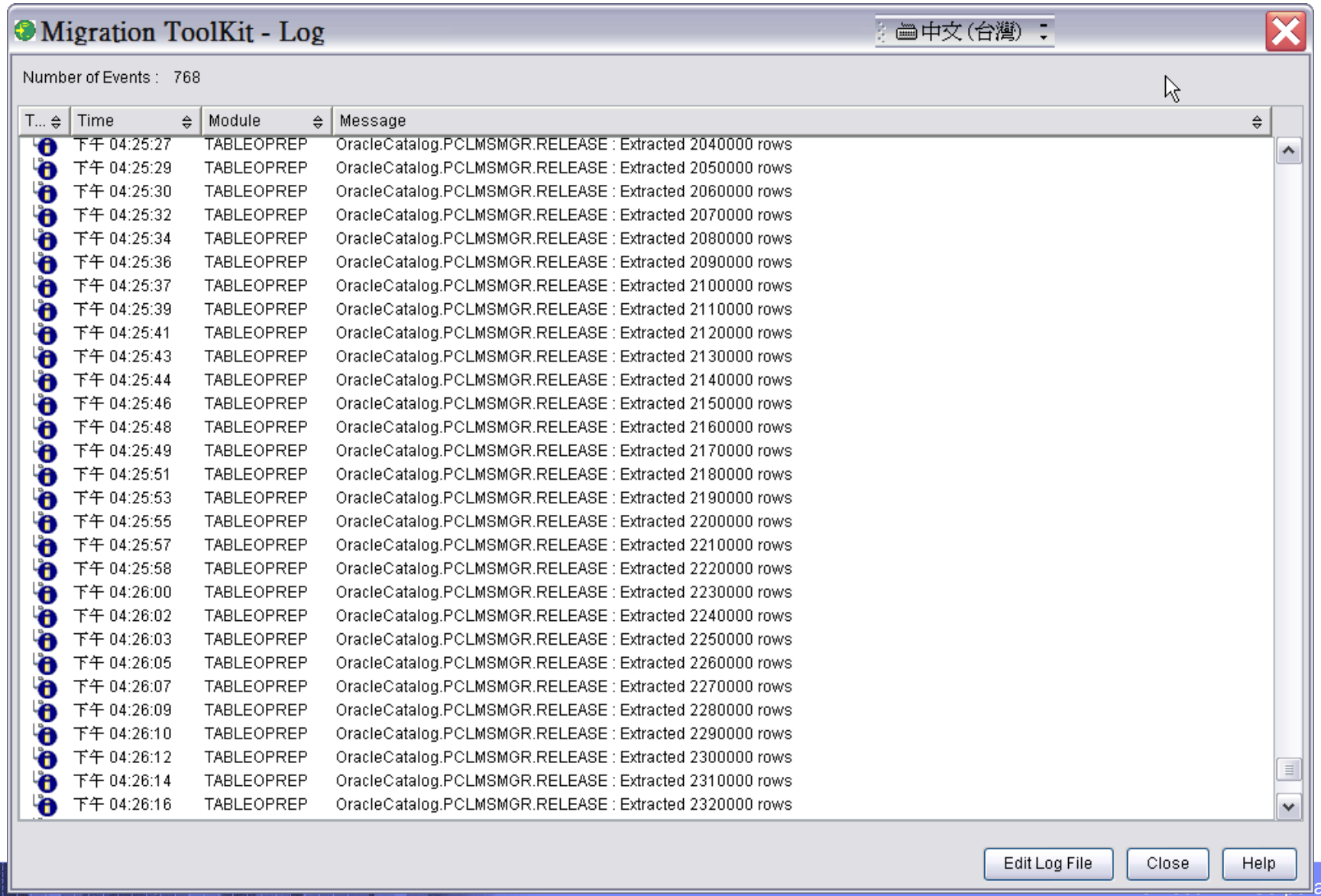
Extracting Data From Oracle



Load script generated by DB2 MTK

load_modlog.sql - 記事本

檔案(F) 編輯(E) 格式(O) 檢視(V) 說明(H)

```
LOAD FROM /mtkdata_asc/PCLMSMGR_MODLOG.out of ASC MODIFIED BY  reclen=443 striptblanks METHOD L(1 5,7 20,22
29,31 60,62 62,64 71,73 98,100 101,103 132,134 163,165 165,167 366,368 381,383 390,392 405,407 410)  NULL
INDICATORS (413,415,417,419,421,423,425,427,429,431,433,435,437,439,441,443)
messages modlog.msg replace INTO pclmsmgr.MODLOG;
```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