将 US7ASCII 字符集的 dmp 文件导入到 ZHS16GBK 字符集的数据库中

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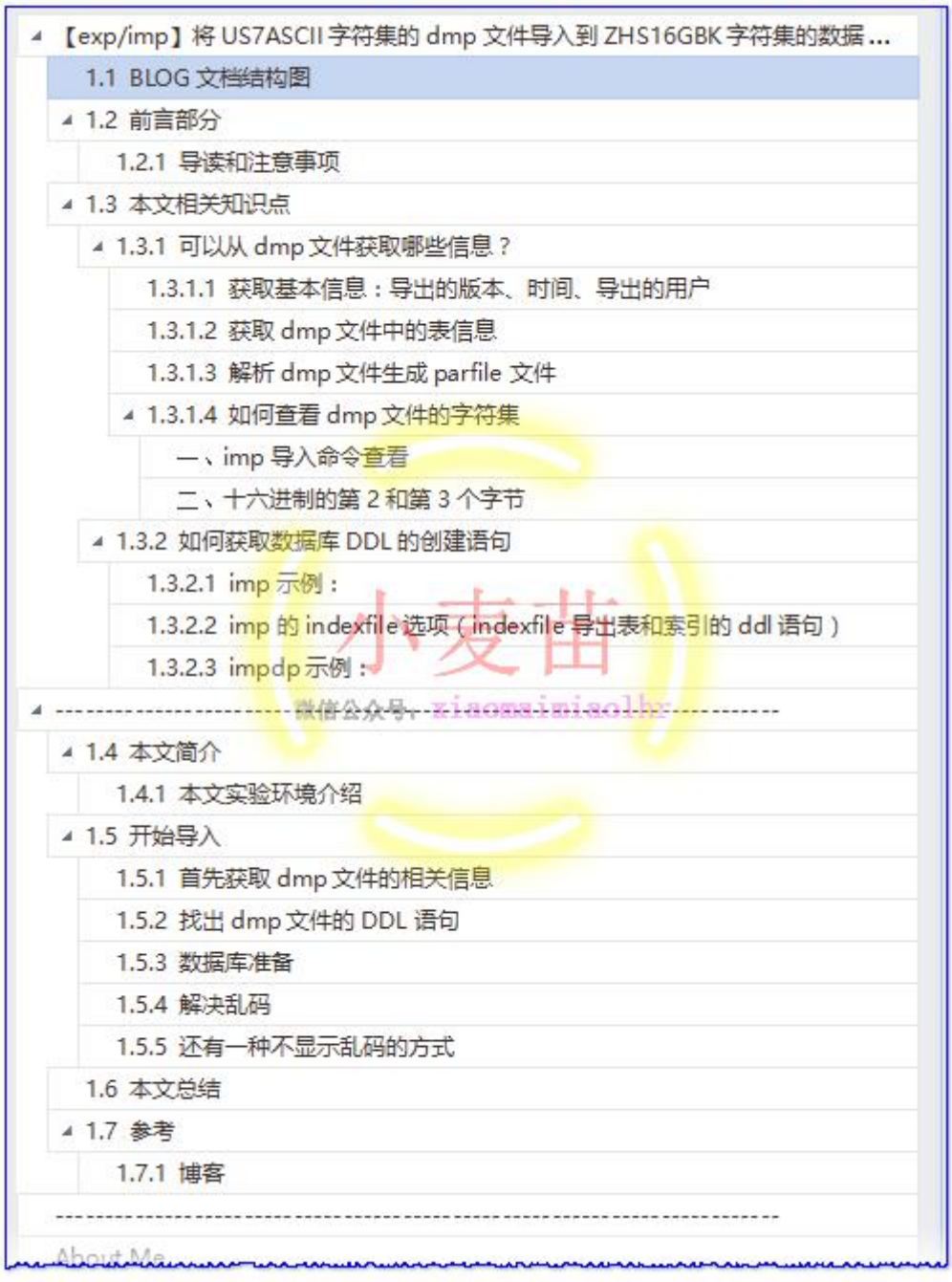
【exp/imp】将 US7ASCII 字符集的 dmp 文件导入到 ZHS16GBK 字符集的数据库中

1.1 BLOG 文档结构图



1.2 前言部分

1.2.1 导读和注意事项

各位技术爱好者，看完本文后，你可以掌握如下的技能，也可以学到一些其它你所不知道的知识，~O(∩_∩)O~：

① 如何将 US7ASCII 字符集的 dmp 文件导入到 ZHS16GBK 字符集的数据库中（重点，2 种方法）？

② 从 dmp 文件可以获取到哪些信息？如何从 dmp 文件获取到 dmp 文件的字符集（重点，N 种方法）？

③ 如何从 dmp 文件中获取到其中的 DDL 语句，例如建表、建索引语句等（2 种方法）

④ dmp 文件导入的一般步骤

⑤ imp 工具的 indexfile 选项的作用

⑥ 软件 UE、EditPlus、Pilotedit 软件的使用

Tips:

① 本文在 itpub（http://blog.itpub.net/26736162）、博客园（http://www.cnblogs.com/lhrbest）和微信公众号（xiaomaimiaolhr）上有同步更新。

② 文章中用到的所有代码、相关软件、相关资料及本文的 pdf 版本都请前往小麦苗的云盘下载，小麦苗的云盘地址见：http://blog.itpub.net/26736162/viewspace-1624453/。

③ 若网页文章代码格式有错乱，请下载 pdf 格式的文档来阅读。

④ 在本篇 BLOG 中，代码输出部分一般放在一行一列的表格中。

⑤ 本文适合于 Oracle 初中级人员阅读，Oracle 大师请略过本文。

本文若有错误或不完善的地方请大家多多指正，您的批评指正是我写作的最大动力。

1.3 本文相关知识点

1.3.1 可以从 dmp 文件获取哪些信息？

在开发中常常碰到，需要导入 dmp 文件到现有数据库。这里的 dmp 文件可能来自于其它系统，所以，一般情况下是不知道导出程序（exp）的版本、导出时间或者导出模式等信息的。那么如何从现有的 dmp 文件中获取到这些信息呢？下面作者将一一讲解。

1.3.1.1 获取基本信息：导出的版本、时间、导出的用户

下面的示例中 exp_ddl_lhr_02.dmp 是生成的 dmp 文件：

```
[ZFZHLHRDB1:oracle]:/tmp>strings exp_ddl_lhr_02.dmp | head -10
TEXPORT:V11.02.00  ====》版本号
DSYS    ====》使用 SYS 用户导出
RTABLES ====》基于表模式导出，RUSERS 表示基于用户模式，RENTIRE 表示基于全库模式
4096
Tue Aug 2 16:8:8 2016/tmp/exp_ddl_lhr_02.dmp====》生成的时间和文件地址
#C#G
#C#G
+00:00
BYTE
UNUSED
```

1.3.1.2 获取 dmp 文件中的表信息

下面的示例中，exp_ddl_lhr_02.dmp 是生成的 dmp 文件：

```
[ZFZHLHRDB1:oracle]:/tmp>strings exp_ddl_lhr_02.dmp | grep "CREATE TABLE"|awk '{print $3}'|sed 's/"//g'
EMP  ====》说明 exp_ddl_lhr_02.dmp 中只有一个 emp 表
```

1.3.1.3 解析 dmp 文件生成 parfile 文件

下面的示例中，exp_ddl_lhr_03.dmp 是生成的 dmp 文件：

```
[ZFZHLHRDB1:oracle]:/tmp>strings    exp_ddl_lhr_03.dmp   |   grep   "CREATE   TABLE"|awk   '{print   $3}'|sed
's/"//g'|awk '{ if (FNR==1) print "tables="$1 ; else print ","$1 }'
tables=DEF$_AQCALL
,DEF$_AQERROR
,DEF$_CALLDEST
,DEF$_DEFAULTDEST
,DEF$_DESTINATION
,DEF$_ERROR
,DEF$_LOB
,DEF$_ORIGIN
,DEF$_PROPAGATOR
,DEF$_PUSHED_TRANSACTIONS
,MVIEW$_ADV_INDEX
[ZFZHLHRDB1:oracle]:/tmp>
```

1.3.1.4 如何查看 dmp 文件的字符集

一、 imp 导入命令查看

有 2 种办法可以查看 dmp 文件的字符集，第一种办法为 imp 导入命令查看，示例如下所示：

```
[ZFLHRZHDB1:oracle]:/oracle>ORACLE_SID=lhrdb
[ZFLHRZHDB1:oracle]:/oracle>export NLS_LANG=AMERICAN_AMERICA.AL32UTF8
[ZFLHRZHDB1:oracle]:/oracle>exp    \'/  AS  SYSDBA\'    tables=scott.emp    file=/tmp/exp_ddl_lhr_03.dmp
log=/tmp/exp_table.log  buffer=41943040 rows=n compress=n
Export: Release 11.2.0.4.0 - Production on Tue Oct 25 17:14:49 2016
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Connected to: Oracle Database 11g Enterprise Edition Release 11.2.0.4.0 - 64bit Production
With the Partitioning, Real Application Clusters, Automatic Storage Management, OLAP,
Data Mining and Real Application Tes
Export done in AL32UTF8 character set and AL16UTF16 NCHAR character set<<<--当前的 NLS_LANG 环境变量的值，即生成的 dmp 文件的字符集
server uses ZHS16GBK character set (possible charset conversion)<<<<<<<--当前数据库的字符集
Note: table data (rows) will not be exported
About to export specified tables via Conventional Path ...
Current user changed to SCOTT
. . exporting table                          EMP
EXP-00091: Exporting questionable statistics.
EXP-00091: Exporting questionable statistics.
Export terminated successfully with warnings.
[ZFLHRZHDB1:oracle]:/oracle>ORACLE_SID=mydb <<---更换数据库
[ZFLHRZHDB1:oracle]:/oracle>export NLS_LANG=AMERICAN_AMERICA.ZHS16GBK
[ZFLHRZHDB1:oracle]:/oracle>imp  \'/ AS SYSDBA\'  tables=xxx.xx  file=/tmp/exp_ddl_lhr_03.dmp
Import: Release 11.2.0.4.0 - Production on Tue Oct 25 16:27:15 2016
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Data Mining and Real Application Tes
Export file created by EXPORT:V11.02.00 via conventional path<<<<<<<<<----dmp 文件的导出版本号
import done in ZHS16GBK character set and AL16UTF16 NCHAR character set<<<<<<--当前的 NLS_LANG 环境变量的值
import server uses WE8ISO8859P1 character set (possible charset conversion)<<<<<<---当前数据库的字符集
export client uses AL32UTF8 character set (possible charset conversion)<<<<<<--dmp 文件的字符集
IMP-00029: cannot qualify table name by owner (xxx.xx), use FROMUSER parameter
IMP-00000: Import terminated unsuccessfully
```

如果 NLS_LANG 的值和当前数据库的字符集相同，那么将不显示“server uses”和“import server uses”行。如果没有显示“export client”行，那么说明当前 dmp 文件的字符集和当前的 NLS_LANG 环境变量的值相同。无论是使用 exp 还是 imp 工具都会显示当前的 NLS_LANG 环境变量的值（表现为“Export done”、“import done”）。

二、 十六进制的第 2 和第 3 个字节

第二种查看 dmp 文件字符集的办法是，以十六进制的方式打开 dmp 文件，然后查看第 2 和第 3 个字节。如下所示：

```
[ZFLHRZHDB1:oracle]:/oracle>cat /tmp/exp_ddl_lhr_03.dmp |od -x|head -1|awk '{print $2 $3}'|cut -c 1-2,7-8
0369
[ZFLHRZHDB1:oracle]:/oracle>cat /tmp/exp_ddl_lhr_03.dmp |od -x|head -1
0000000 0303 4569 5058 524f 3a54 3156 2e30 3230
[oracle@rhel6lhr env_oracle]$
```

然后在数据库中可以查到十六进制 0369 代表的字符集：

```
SYS@lhrdb> SELECT NLS_CHARSET_NAME(TO_NUMBER('0369','XXXX')) FROM DUAL;
NLS_CHARSET_NAME(TO_NUMBER('0369','XXXX'
----------------------------------------
AL32UTF8
```

以上结果说明 dmp 文件的字符集是 UTF8。若 dmp 文件在 Windows 平台下，则可以使用软件 UltraEdit（UE）、

EditPlus 或 Pilotedit 等文本编辑工具以十六进制的方式打开 dmp 文件查看。其中，软件 Pilotedit 可以轻松打开上 G 的文件。示例如下：

```
00000000  03 03 69 45 58 50 4F 52  54 3A 56 31 30 2E 30 32  ..iEXPORT:V10.02
00000010  2E 30 31 0A 44 53 59 53  0A 52 54 41 42 4C 45 53  .01.DSYS.RTABLES
00000020  0A 38 31 39 32 0A 30 0A  33 32 0A 30 0A 03 69 03  .8192.0.32.0..i.
00000030  54 07 D0 00 01 00 00 00  00 00 00 00 00 00 17 00  T...............
00000040  20 20 20 20 20 20 20 20  20 20 20 20 20 20 20 20
00000050  20 20 20 20 20 20 20 20  20 20 20 20 20 20 20 20
00000060  20 20 20 20 20 20 20 20  20 54 75 65 20 4D 61 79           Tue May
00000070  20 39 20 31 36 3A 32 38  3A 35 34 20 32 30 31 37   9 16:28:54 2017
00000080  2F 74 6D 70 2F 65 78 70  5F 64 64 6C 5F 6C 68 72  /tmp/exp_ddl_lhr
00000090  5F 30 33 2E 64 6D 70 00  00 00 00 00 00 00 00 00  _03.dmp.........
```

需要注意的是，十六进制在 Linux 和 Windows 下顺序不同。

```
SELECT NLS_CHARSET_NAME(TO_NUMBER('0001', 'XXXX')) US7ASCII,
       NLS_CHARSET_NAME(TO_NUMBER('0354', 'XXXX')) ZHS16GBK,
       NLS_CHARSET_NAME(TO_NUMBER('0369', 'XXXX')) AL32UTF8,
       TO_CHAR(NLS_CHARSET_ID('US7ASCII'), 'XXXX') US7ASCII_ID,
       TO_CHAR(NLS_CHARSET_ID('ZHS16GBK'), 'XXXX') ZHS16GBK_ID,
       TO_CHAR(NLS_CHARSET_ID('AL32UTF8'), 'XXXX') AL32UTF8_ID
  FROM DUAL;
```

```
SYS@ora10g> SELECT NLS_CHARSET_NAME(TO_NUMBER('0001', 'XXXX')) US7ASCII,
  2         NLS_CHARSET_NAME(TO_NUMBER('0354', 'XXXX')) ZHS16GBK,
  3         NLS_CHARSET_NAME(TO_NUMBER('0369', 'XXXX')) AL32UTF8,
  4         TO_CHAR(NLS_CHARSET_ID('US7ASCII'), 'XXXX') ,
  5         TO_CHAR(NLS_CHARSET_ID('ZHS16GBK'), 'XXXX') ,
  6         TO_CHAR(NLS_CHARSET_ID('AL32UTF8'), 'XXXX')
  7    FROM DUAL;

US7ASCII                         ZHS16GBK                         AL32UTF8                         TO_CH TO_CH TO_CH
-------------------------------- -------------------------------- -------------------------------- ----- ----- -----
US7ASCII                         ZHS16GBK                         AL32UTF8                             1   354   369

SYS@ora10g>
```

	US7ASCII	ZHS16GBK	AL32UTF8	US7ASCII_ID	ZHS16GBK_ID	AL32UTF8_ID
1	US7ASCII	ZHS16GBK	AL32UTF8	1	354	369

1.3.2 如何获取数据库 DDL 的创建语句

数据泵工具（impdp）工具给我们提供了 SQLFILE 的命令行选项，只获取 DDL 语句，并未真正的执行数据导入。另外，若单纯为了导出 DDL 语句则可以在使用 expdp 导出的时候使用 CONTENT=METADATA_ONLY 和 EXCLUDE=STATISTICS 选项，这样导出的 DMP 文件比较小。如下所示：

```
expdp \'/ AS SYSDBA\' DIRECTORY=DATA_PUMP_DIR DUMPFILE=lhrsql20161215.dmp LOGFILE=lhrsql20161215.log
CONTENT=METADATA_ONLY SCHEMAS=SCOTT  EXCLUDE=STATISTICS
impdp  \'/ AS SYSDBA\'  DIRECTORY=DATA_PUMP_DIR DUMPFILE=lhrsql20161215.dmp  LOGFILE=imp_exptest.log
SQLFILE=expddl_lhr.sql
```

查看 expddl_lhr.sql 文件即可获取 DDL 语句。

imp 工具使用 SHOW=Y LOG=GET_DDL.sql 的方式，可以看到清晰的 DDL 脚本，同时也不会真正的执行数据导入。另外，若单纯为了导出 DDL 语句则可以在使用 exp 导出的时候使用 ROWS=N 选项，这样导出的 DMP 文件比较小。如下所示：

```
exp  \'/ AS SYSDBA\'  TABLES=SCOTT.EMP  FILE=/tmp/exp_ddl_lhr_01.dmp  LOG=/tmp/exp_table.log
BUFFER=41943040 ROWS=N COMPRESS=N
imp \'/ AS SYSDBA\' FILE=/tmp/exp_ddl_lhr_01.dmp SHOW=Y LOG=/tmp/get_ddl.sql BUFFER=20480000  FULL=Y
```

查看 get_ddl.sql 文件即可获取 DDL 语句。

```
---- 生成 DDL 语句不会导入数据
--expdp \'/ AS SYSDBA\' tables=lhr.exptest  directory=DATA_PUMP_DIR  dumpfile=exptest.dmp
logfile=exp_exptest.dmp  EXCLUDE=STATISTICS
--expdp \'/ AS SYSDBA\' directory=DATA_PUMP_DIR dumpfile=lhrsql20161215.dmp logfile=lhrsql20161215.log
content=metadata_only schemas=SCOTT  EXCLUDE=STATISTICS
impdp  \'/ AS SYSDBA\'  directory=DATA_PUMP_DIR dumpfile=lhrsql20161215.dmp  logfile=imp_exptest.log
sqlfile=exptest.sql

exp  \'/ AS SYSDBA\'  tables=scott.emp  file=/tmp/exp_ddl_lhr_01.dmp  log=/tmp/exp_table.log
buffer=41943040 rows=n compress=n
imp \'/ AS SYSDBA\' file=/tmp/exp_ddl_lhr_01.dmp show=y log=/tmp/get_ddl.sql buffer=20480000  full=y
```

1.3.2.1 imp 示例：

```
[ZFZHLHRDB1:oracle]:/oracle>exp  \'/ AS SYSDBA\'  tables=scott.emp  file=/tmp/exp_ddl_lhr_01.dmp
log=/tmp/exp_table.log  buffer=41943040 rows=n compress=n

Export: Release 11.2.0.4.0 - Production on Tue Aug 2 15:42:11 2016

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Export done in ZHS16GBK character set and AL16UTF16 NCHAR character set
Note: table data (rows) will not be exported

About to export specified tables via Conventional Path ...
Current user changed to SCOTT
. . exporting table                            EMP
Export terminated successfully without warnings.
[ZFZHLHRDB1:oracle]:/oracle>imp \'/ AS SYSDBA\' file=/tmp/exp_ddl_lhr_01.dmp show=y log=/tmp/get_ddl.sql
buffer=20480000  full=y

Import: Release 11.2.0.4.0 - Production on Tue Aug 2 15:42:44 2016

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Data Mining and Real Application Tes

Export file created by EXPORT:V11.02.00 via conventional path
import done in ZHS16GBK character set and AL16UTF16 NCHAR character set
. importing SYS's objects into SYS
. importing SCOTT's objects into SCOTT
 "ALTER SESSION SET CURRENT_SCHEMA= "SCOTT""
 "CREATE TABLE "EMP" ("EMPNO" NUMBER(4, 0), "ENAME" VARCHAR2(10), "JOB" VARCH"
 "AR2(9), "MGR" NUMBER(4, 0), "HIREDATE" DATE, "SAL" NUMBER(7, 2), "COMM" NUM"
 "BER(7, 2), "DEPTNO" NUMBER(2, 0))  PCTFREE 10 PCTUSED 40 INITRANS 1 MAXTRAN"
 "S 255 STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1 FREELISTS 1 FREELIST "
 "GROUPS 1 BUFFER_POOL DEFAULT) TABLESPACE "USERS" LOGGING NOCOMPRESS"
 "CREATE UNIQUE INDEX "PK_EMP" ON "EMP" ("EMPNO" )  PCTFREE 10 INITRANS 2 MAX"
```

```
 "TRANS 255 STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1 FREELISTS 1 FREEL"
 "IST GROUPS 1 BUFFER_POOL DEFAULT) TABLESPACE "USERS" LOGGING"
 "ALTER SESSION SET CURRENT_SCHEMA= "SCOTT""
 "ALTER TABLE "EMP" ADD  CONSTRAINT "PK_EMP" PRIMARY KEY ("EMPNO") USING INDE"
 "X PCTFREE 10 INITRANS 2 MAXTRANS 255 STORAGE(INITIAL 65536 NEXT 1048576 MIN"
 "EXTENTS 1 FREELISTS 1 FREELIST GROUPS 1 BUFFER_POOL DEFAULT) TABLESPACE "US"
 "ERS" LOGGING ENABLE "
 "ALTER TABLE "EMP" ADD CONSTRAINT "FK_DEPTNO" FOREIGN KEY ("DEPTNO") REFEREN"
 "CES "DEPT" ("DEPTNO") ENABLE NOVALIDATE"
 "ALTER TABLE "EMP" ENABLE CONSTRAINT "FK_DEPTNO""
Import terminated successfully without warnings.
[ZFZHLHRDB1:oracle]:/oracle>
```

由于格式比较混乱，直接运行会报错，建荣的书中给了一段代码来格式化：

```
[ZFZHLHRDB1:oracle]:/tmp>more /tmp/get_ddl.sql

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Data Mining and Real Application Tes

Export file created by EXPORT:V11.02.00 via conventional path
import done in ZHS16GBK character set and AL16UTF16 NCHAR character set
. importing SYS's objects into SYS
. importing SCOTT's objects into SCOTT
 "ALTER SESSION SET CURRENT_SCHEMA= "SCOTT""
 "CREATE TABLE "EMP" ("EMPNO" NUMBER(4, 0), "ENAME" VARCHAR2(10), "JOB" VARCH"
 "AR2(9), "MGR" NUMBER(4, 0), "HIREDATE" DATE, "SAL" NUMBER(7, 2), "COMM" NUM"
 "BER(7, 2), "DEPTNO" NUMBER(2, 0))  PCTFREE 10 PCTUSED 40 INITRANS 1 MAXTRAN"
 "S 255 STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1 FREELISTS 1 FREELIST "
 "GROUPS 1 BUFFER_POOL DEFAULT) TABLESPACE "USERS" LOGGING NOCOMPRESS"
 "CREATE UNIQUE INDEX "PK_EMP" ON "EMP" ("EMPNO" )  PCTFREE 10 INITRANS 2 MAX"
 "TRANS 255 STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1 FREELISTS 1 FREEL"
 "IST GROUPS 1 BUFFER_POOL DEFAULT) TABLESPACE "USERS" LOGGING"
 "ALTER SESSION SET CURRENT_SCHEMA= "SCOTT""
 "ALTER TABLE "EMP" ADD  CONSTRAINT "PK_EMP" PRIMARY KEY ("EMPNO") USING INDE"
 "X PCTFREE 10 INITRANS 2 MAXTRANS 255 STORAGE(INITIAL 65536 NEXT 1048576 MIN"
 "EXTENTS 1 FREELISTS 1 FREELIST GROUPS 1 BUFFER_POOL DEFAULT) TABLESPACE "US"
 "ERS" LOGGING ENABLE "
 "ALTER TABLE "EMP" ADD CONSTRAINT "FK_DEPTNO" FOREIGN KEY ("DEPTNO") REFEREN"
 "CES "DEPT" ("DEPTNO") ENABLE NOVALIDATE"
 "ALTER TABLE "EMP" ENABLE CONSTRAINT "FK_DEPTNO""
Import terminated successfully without warnings.
[ZFZHLHRDB1:oracle]:/tmp>more /tmp/gettabddl.sh
awk '
  / \"BEGIN /   { N=1; }
  / \"CREATE /   { N=1; }
  / \"CREATE INDEX/   { N=1; }
  / \"CREATE UNIQUE INDEX/  { N=1; }
  / \"ALTER /   { N=1; }
  / \" ALTER /   { N=1; }
  / \"ANALYZE /   { N=1; }
  / \"GRANT /    { N=1; }
  / \"COMMENT /   { N=1; }
  / \"AUDIT /    { N=1; }
  N==1 { printf "\n/\n"; N++ }
  /\"$/ {
    if (N==0) next;
    s=index( $0, "\"" );
    ln0=length( $0 )
    if ( s!=0 ) {
      lcnt++
      if ( lcnt >= 30 ) {
        ln=substr( $0,s+1,length( substr($0,s+1))-1)
        t=index( ln, ")," )
        if ( t==0 ) { t=index( ln, ", " ) }
        if ( t==0 ) { t=index( ln, ") " ) }
        if ( t > 0 ) {
          printf "%s\n%s",substr( ln,1,t+1), substr(ln, t+2)
          lcnt=0
        }
        else {
          printf "%s", ln
          if ( ln0 < 78 ) { printf "\n" ; lcnt=0 }
```

```
      }
    }
    else {
      printf "%s",substr( $0,s+1,length( substr($0,s+1))-1 )
      if ( ln0 < 78 ) { printf "\n" ; lcnt=0 }
    }
  }
}
END { printf "\n/\n"}
' $* |sed '1,2d; /^$/ d;
s/STORAGE *(INI/~    STORAGE (INI/g;
s/, "/,~    "/g;
s/ (\"/~   &/g;
s/PCT[FI]/~    &/g;
s/[( ]PARTITION /~&/g;
s/) TABLESPACE/)~    TABLESPACE/g;
s/   , / ,~/g;
s/ DATAFILE  /&~/' | tr "~" "\n"
[ZFZHLHRDB1:oracle]:/tmp>
[ZFZHLHRDB1:oracle]:/tmp>ksh /tmp/gettabddl.sh  /tmp/get_ddl.sql > /tmp/gen_tabddl.sql
[ZFZHLHRDB1:oracle]:/tmp>more /tmp/gen_tabddl.sql
ALTER SESSION SET CURRENT_SCHEMA= "SCOTT"
/
CREATE TABLE "EMP"
    ("EMPNO" NUMBER(4, 0),
    "ENAME" VARCHAR2(10),
    "JOB" VARCHAR2(9),
    "MGR" NUMBER(4, 0),
    "HIREDATE" DATE,
    "SAL" NUMBER(7, 2),
    "COMM" NUMBER(7, 2),
    "DEPTNO" NUMBER(2, 0))
    PCTFREE 10 PCTUSED 40 INITRANS 1 MAXTRANS 255
    STORAGE (INITIAL 65536 NEXT 1048576 MINEXTENTS 1 FREELISTS 1 FREELIST GROUPS 1 BUFFER_POOL DEFAULT)
    TABLESPACE "USERS" LOGGING NOCOMPRESS
/
CREATE UNIQUE INDEX "PK_EMP" ON "EMP"
    ("EMPNO" )
    PCTFREE 10 INITRANS 2 MAXTRANS 255
    STORAGE (INITIAL 65536 NEXT 1048576 MINEXTENTS 1 FREELISTS 1 FREELIST GROUPS 1 BUFFER_POOL DEFAULT)
    TABLESPACE "USERS" LOGGING
/
ALTER SESSION SET CURRENT_SCHEMA= "SCOTT"
/
ALTER TABLE "EMP" ADD  CONSTRAINT "PK_EMP" PRIMARY KEY
    ("EMPNO") USING INDEX
    PCTFREE 10 INITRANS 2 MAXTRANS 255
    STORAGE (INITIAL 65536 NEXT 1048576 MINEXTENTS 1 FREELISTS 1 FREELIST GROUPS 1 BUFFER_POOL DEFAULT)
    TABLESPACE "USERS" LOGGING ENABLE
/
ALTER TABLE "EMP" ADD CONSTRAINT "FK_DEPTNO" FOREIGN KEY
    ("DEPTNO") REFERENCES "DEPT"
    ("DEPTNO") ENABLE NOVALIDATE
/
ALTER TABLE "EMP" ENABLE CONSTRAINT "FK_DEPTNO"
/
[ZFZHLHRDB1:oracle]:/tmp>
```

这样运行起来就方便多了。

1.3.2.2 imp 的 indexfile 选项（indexfile 导出表和索引的 ddl 语句）

exp 和 imp 工具中可能存在把 table 从一个库 exp 然后 imp 到另一个数据库出现没有指定 tablespace 而无法 imp，imp 的 indexfile 参数中可以解决的。

Oracle 的 imp 工具指定 indexfile 参数后，可以不导入任何对象，而只把需要创建的 index 以 sql 语句的形式写入文本文件。创建库表等 sql 语句也会写入，但用 rem 注释屏蔽。

一、查看并修改导入对象的存储参数

如果原始库中有些表比较大，exp 导出对象的初始存储空间设置可能比较高，导入时需要先申请分配较大的存储空间，如果只进行逻辑结构的迁移耗时较长。这时可以用 indexfile 参数导出 sql 语句，筛选出初始空间较高的建表语句，手工创建。再次导入时使用 ignore 选项忽略对象创建错误。

如何解析 inexfile 文件：可以考虑用 sed 编辑器进行正则表达式替换，也可以写个程序解析出 initial 超出一定阈值的库表及其 sql。

示例如下所示：

```
[oracle@rhel6lhr tmp]$ exp  \'/ AS SYSDBA\'  TABLES=SCOTT.EMP  FILE=/tmp/exp_ddl_lhr_01.dmp
LOG=/tmp/exp_table.log  BUFFER=41943040 ROWS=N COMPRESS=N

Export: Release 11.2.0.3.0 - Production on Wed May 3 21:36:47 2017

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Connected to: Oracle Database 11g Enterprise Edition Release 11.2.0.3.0 - 64bit Production
With the Partitioning, Automatic Storage Management, OLAP, Data Mining
and Real Application Testing options
Export done in ZHS16GBK character set and AL16UTF16 NCHAR character set
Note: table data (rows) will not be exported

About to export specified tables via Conventional Path ...
Current user changed to SCOTT
. . exporting table                            EMP
Export terminated successfully without warnings.
[oracle@rhel6lhr tmp]$ imp  \'/ AS SYSDBA\' file=/tmp/exp_ddl_lhr_01.dmp FULL=Y
indexfile=/tmp/get_ti_ddl.sql rows=n

Import: Release 11.2.0.3.0 - Production on Wed May 3 21:38:10 2017

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Connected to: Oracle Database 11g Enterprise Edition Release 11.2.0.3.0 - 64bit Production
With the Partitioning, Automatic Storage Management, OLAP, Data Mining
and Real Application Testing options

Export file created by EXPORT:V11.02.00 via conventional path
import done in ZHS16GBK character set and AL16UTF16 NCHAR character set
Import terminated successfully without warnings.
[oracle@rhel6lhr tmp]$ more /tmp/get_ti_ddl.sql

REM  CREATE TABLE "SCOTT"."EMP" ("EMPNO" NUMBER(4, 0), "ENAME"
REM  VARCHAR2(10), "JOB" VARCHAR2(9), "MGR" NUMBER(4, 0), "HIREDATE" DATE,
REM  "SAL" NUMBER(7, 2), "COMM" NUMBER(7, 2), "DEPTNO" NUMBER(2, 0))
REM  PCTFREE 10 PCTUSED 40 INITRANS 1 MAXTRANS 255 STORAGE(INITIAL 65536
REM  NEXT 1048576 MINEXTENTS 1 FREELISTS 1 FREELIST GROUPS 1 BUFFER_POOL
REM  DEFAULT) TABLESPACE "USERS" LOGGING NOCOMPRESS ;
CONNECT SCOTT;
CREATE UNIQUE INDEX "SCOTT"."PK_EMP" ON "EMP" ("EMPNO" ) PCTFREE 10
INITRANS 2 MAXTRANS 255 STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1
FREELISTS 1 FREELIST GROUPS 1 BUFFER_POOL DEFAULT) TABLESPACE "USERS"
LOGGING ;
REM  ALTER TABLE "SCOTT"."EMP" ADD CONSTRAINT "PK_EMP" PRIMARY KEY
REM  ("EMPNO") USING INDEX PCTFREE 10 INITRANS 2 MAXTRANS 255
REM  STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1 FREELISTS 1 FREELIST
REM  GROUPS 1 BUFFER_POOL DEFAULT) TABLESPACE "USERS" LOGGING ENABLE ;
REM  ALTER TABLE "SCOTT"."EMP" ADD CONSTRAINT "FK_DEPTNO" FOREIGN KEY
REM  ("DEPTNO") REFERENCES "DEPT" ("DEPTNO") ENABLE NOVALIDATE ;
REM  ALTER TABLE "SCOTT"."EMP" ENABLE CONSTRAINT "FK_DEPTNO" ;
[oracle@rhel6lhr tmp]$
```

可以看到其中的创建表的 SQL 语句被注释掉了，这个可以用 vi 命令或者文本工具来处理，处理之后就可以直接使用了。

1.3.2.3 impdp 示例：

```
--expdp \'/ AS SYSDBA\' directory=DATA_PUMP_DIR schemas=SCOTT  dumpfile=exptest_sql.dmp
logfile=exp_exptest.dmp
impdp  \'/ AS SYSDBA\'  directory=DATA_PUMP_DIR dumpfile=exptest_sql.dmp  logfile=imp_exptest.log
sqlfile=exptest.sql
```

```
[ZFZHLHRDB1:oracle]:/oracle>expdp \'/ AS SYSDBA\' directory=DATA_PUMP_DIR schemas=SCOTT
dumpfile=exptest_sql.dmp logfile=exp_exptest.dmp

Export: Release 11.2.0.4.0 - Production on Wed Aug 3 15:14:55 2016

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Connected to: Oracle Database 11g Enterprise Edition Release 11.2.0.4.0 - 64bit Production
With the Partitioning, Real Application Clusters, Automatic Storage Management, OLAP,
Data Mining and Real Application Testing options
Starting "SYS"."SYS_EXPORT_SCHEMA_01":  "/******** AS SYSDBA" directory=DATA_PUMP_DIR schemas=SCOTT
dumpfile=exptest_sql.dmp logfile=exp_exptest.dmp
Estimate in progress using BLOCKS method...
Processing object type SCHEMA_EXPORT/TABLE/TABLE_DATA
Total estimation using BLOCKS method: 256 KB
Processing object type SCHEMA_EXPORT/USER
Processing object type SCHEMA_EXPORT/SYSTEM_GRANT
Processing object type SCHEMA_EXPORT/ROLE_GRANT
Processing object type SCHEMA_EXPORT/DEFAULT_ROLE
Processing object type SCHEMA_EXPORT/PRE_SCHEMA/PROCACT_SCHEMA
Processing object type SCHEMA_EXPORT/TABLE/TABLE
Processing object type SCHEMA_EXPORT/TABLE/INDEX/INDEX
Processing object type SCHEMA_EXPORT/TABLE/CONSTRAINT/CONSTRAINT
Processing object type SCHEMA_EXPORT/TABLE/INDEX/STATISTICS/INDEX_STATISTICS
Processing object type SCHEMA_EXPORT/TABLE/CONSTRAINT/REF_CONSTRAINT
Processing object type SCHEMA_EXPORT/TABLE/STATISTICS/TABLE_STATISTICS
. . exported "SCOTT"."DEPT"                              5.929 KB       4 rows
. . exported "SCOTT"."EMP"                               8.562 KB      14 rows
. . exported "SCOTT"."SALGRADE"                          5.859 KB       5 rows
. . exported "SCOTT"."TEST"                              5.007 KB       1 rows
. . exported "SCOTT"."BONUS"                                 0 KB       0 rows
Master table "SYS"."SYS_EXPORT_SCHEMA_01" successfully loaded/unloaded
******************************************************************************
Dump file set for SYS.SYS_EXPORT_SCHEMA_01 is:
  /oracle/app/oracle/admin/lhrdb/dpdump/exptest_sql.dmp
Job "SYS"."SYS_EXPORT_SCHEMA_01" successfully completed at Wed Aug 3 15:15:16 2016 elapsed 0 00:00:20

[ZFZHLHRDB1:oracle]:/oracle>impdp  \'/ AS SYSDBA\'  directory=DATA_PUMP_DIR dumpfile=exptest_sql.dmp
logfile=imp_exptest.log sqlfile=exptest.sql

Import: Release 11.2.0.4.0 - Production on Wed Aug 3 15:16:06 2016

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Connected to: Oracle Database 11g Enterprise Edition Release 11.2.0.4.0 - 64bit Production
With the Partitioning, Real Application Clusters, Automatic Storage Management, OLAP,
Data Mining and Real Application Testing options
Master table "SYS"."SYS_SQL_FILE_FULL_01" successfully loaded/unloaded
Starting "SYS"."SYS_SQL_FILE_FULL_01":  "/******** AS SYSDBA" directory=DATA_PUMP_DIR
```

```
dumpfile=exptest_sql.dmp logfile=imp_exptest.log sqlfile=exptest.sql
Processing object type SCHEMA_EXPORT/USER
Processing object type SCHEMA_EXPORT/SYSTEM_GRANT
Processing object type SCHEMA_EXPORT/ROLE_GRANT
Processing object type SCHEMA_EXPORT/DEFAULT_ROLE
Processing object type SCHEMA_EXPORT/PRE_SCHEMA/PROCACT_SCHEMA
Processing object type SCHEMA_EXPORT/TABLE/TABLE
Processing object type SCHEMA_EXPORT/TABLE/INDEX/INDEX
Processing object type SCHEMA_EXPORT/TABLE/CONSTRAINT/CONSTRAINT
Processing object type SCHEMA_EXPORT/TABLE/INDEX/STATISTICS/INDEX_STATISTICS
Processing object type SCHEMA_EXPORT/TABLE/CONSTRAINT/REF_CONSTRAINT
Processing object type SCHEMA_EXPORT/TABLE/STATISTICS/TABLE_STATISTICS
Job "SYS"."SYS_SQL_FILE_FULL_01" successfully completed at Wed Aug 3 15:16:09 2016 elapsed 0 00:00:02

[ZFZHLHRDB1:oracle]:/oracle>cd /oracle/app/oracle/admin/lhrdb/dpdump/
[ZFZHLHRDB1:oracle]:/oracle/app/oracle/admin/lhrdb/dpdump>more exptest.sql
-- CONNECT SYS
ALTER SESSION SET EVENTS '10150 TRACE NAME CONTEXT FOREVER, LEVEL 1';
ALTER SESSION SET EVENTS '10904 TRACE NAME CONTEXT FOREVER, LEVEL 1';
ALTER SESSION SET EVENTS '25475 TRACE NAME CONTEXT FOREVER, LEVEL 1';
ALTER SESSION SET EVENTS '10407 TRACE NAME CONTEXT FOREVER, LEVEL 1';
ALTER SESSION SET EVENTS '10851 TRACE NAME CONTEXT FOREVER, LEVEL 1';
ALTER SESSION SET EVENTS '22830 TRACE NAME CONTEXT FOREVER, LEVEL 192 ';
-- new object type path: SCHEMA_EXPORT/USER
-- CONNECT SYSTEM
 CREATE USER "SCOTT" IDENTIFIED BY VALUES
'S:268AB71B15071D81F19C6FC5041FA8F8E49397470FFE05458B8C90D9E7F8;F894844C34402B67'
      DEFAULT TABLESPACE "USERS"
      TEMPORARY TABLESPACE "TEMP"
      PASSWORD EXPIRE
      ACCOUNT LOCK;
-- new object type path: SCHEMA_EXPORT/SYSTEM_GRANT
GRANT UNLIMITED TABLESPACE TO "SCOTT";
-- new object type path: SCHEMA_EXPORT/ROLE_GRANT
 GRANT "CONNECT" TO "SCOTT";
 GRANT "RESOURCE" TO "SCOTT";
-- new object type path: SCHEMA_EXPORT/DEFAULT_ROLE
 ALTER USER "SCOTT" DEFAULT ROLE ALL;
-- new object type path: SCHEMA_EXPORT/PRE_SCHEMA/PROCACT_SCHEMA
-- CONNECT SCOTT

BEGIN
sys.dbms_logrep_imp.instantiate_schema(schema_name=>SYS_CONTEXT('USERENV','CURRENT_SCHEMA'),
export_db_name=>'LHRDB', inst_scn=>'4225469');
COMMIT;
END;
/
-- new object type path: SCHEMA_EXPORT/TABLE/TABLE
-- CONNECT SYS
CREATE TABLE "SCOTT"."DEPT"
   (    "DEPTNO" NUMBER(2,0),
        "DNAME" VARCHAR2(14 BYTE),
        "LOC" VARCHAR2(13 BYTE)
   ) SEGMENT CREATION IMMEDIATE
  PCTFREE 10 PCTUSED 40 INITRANS 1 MAXTRANS 255
 NOCOMPRESS LOGGING
  STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1 MAXEXTENTS 2147483645
  PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1
  BUFFER_POOL DEFAULT FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)
  TABLESPACE "USERS" ;
CREATE TABLE "SCOTT"."EMP"
   (    "EMPNO" NUMBER(4,0),
        "ENAME" VARCHAR2(10 BYTE),
        "JOB" VARCHAR2(9 BYTE),
        "MGR" NUMBER(4,0),
        "HIREDATE" DATE,
        "SAL" NUMBER(7,2),
        "COMM" NUMBER(7,2),
        "DEPTNO" NUMBER(2,0)
   ) SEGMENT CREATION IMMEDIATE
  PCTFREE 10 PCTUSED 40 INITRANS 1 MAXTRANS 255
 NOCOMPRESS LOGGING
  STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1 MAXEXTENTS 2147483645
  PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1
  BUFFER_POOL DEFAULT FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)
  TABLESPACE "USERS" ;
CREATE TABLE "SCOTT"."BONUS"
```

```
   (    "ENAME" VARCHAR2(10 BYTE),
        "JOB" VARCHAR2(9 BYTE),
        "SAL" NUMBER,
        "COMM" NUMBER
   ) SEGMENT CREATION DEFERRED
  PCTFREE 10 PCTUSED 40 INITRANS 1 MAXTRANS 255
 NOCOMPRESS LOGGING
  TABLESPACE "USERS" ;
CREATE TABLE "SCOTT"."SALGRADE"
   (    "GRADE" NUMBER,
        "LOSAL" NUMBER,
        "HISAL" NUMBER
   ) SEGMENT CREATION IMMEDIATE
  PCTFREE 10 PCTUSED 40 INITRANS 1 MAXTRANS 255
 NOCOMPRESS LOGGING
  STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1 MAXEXTENTS 2147483645
  PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1
  BUFFER_POOL DEFAULT FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)
  TABLESPACE "USERS" ;
CREATE TABLE "SCOTT"."TEST"
   (    "DUMMY" VARCHAR2(1 BYTE)
   ) SEGMENT CREATION IMMEDIATE
  PCTFREE 10 PCTUSED 40 INITRANS 1 MAXTRANS 255
 NOCOMPRESS LOGGING
  STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1 MAXEXTENTS 2147483645
  PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1
  BUFFER_POOL DEFAULT FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)
  TABLESPACE "USERS" ;
-- new object type path: SCHEMA_EXPORT/TABLE/INDEX/INDEX
-- CONNECT SCOTT
CREATE UNIQUE INDEX "SCOTT"."PK_DEPT" ON "SCOTT"."DEPT" ("DEPTNO")
  PCTFREE 10 INITRANS 2 MAXTRANS 255
  STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1 MAXEXTENTS 2147483645
  PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1
  BUFFER_POOL DEFAULT FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)
  TABLESPACE "USERS" PARALLEL 1 ;

  ALTER INDEX "SCOTT"."PK_DEPT" NOPARALLEL;
CREATE UNIQUE INDEX "SCOTT"."PK_EMP" ON "SCOTT"."EMP" ("EMPNO")
  PCTFREE 10 INITRANS 2 MAXTRANS 255
  STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1 MAXEXTENTS 2147483645
  PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1
  BUFFER_POOL DEFAULT FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)
  TABLESPACE "USERS" PARALLEL 1 ;

  ALTER INDEX "SCOTT"."PK_EMP" NOPARALLEL;
-- new object type path: SCHEMA_EXPORT/TABLE/CONSTRAINT/CONSTRAINT
-- CONNECT SYS
ALTER TABLE "SCOTT"."DEPT" ADD CONSTRAINT "PK_DEPT" PRIMARY KEY ("DEPTNO")
  USING INDEX "SCOTT"."PK_DEPT"  ENABLE;
ALTER TABLE "SCOTT"."EMP" ADD CONSTRAINT "PK_EMP" PRIMARY KEY ("EMPNO")
  USING INDEX "SCOTT"."PK_EMP"  ENABLE;
-- new object type path: SCHEMA_EXPORT/TABLE/INDEX/STATISTICS/INDEX_STATISTICS
DECLARE I_N VARCHAR2(60);
  I_O VARCHAR2(60);
  NV VARCHAR2(1);
  c DBMS_METADATA.T_VAR_COLL;
  df varchar2(21) := 'YYYY-MM-DD:HH24:MI:SS';
 stmt varchar2(300) := ' INSERT INTO "SYS"."IMPDP_STATS"
(type,version,flags,c1,c2,c3,c5,n1,n2,n3,n4,n5,n6,n7,n8,n9,n10,n11,n12,d1,c11) VALUES
(''I'',6,:1,:2,:3,:4,:5,
:6,:7,:8,:9,:10,:11,:12,:13,NULL,:14,:15,NULL,:16,:17)';
BEGIN
  DELETE FROM "SYS"."IMPDP_STATS";
  i_n := 'PK_DEPT';
  i_o := 'SCOTT';
  EXECUTE IMMEDIATE stmt USING 2,I_N,NV,NV,I_O,4,1,4,1,1,1,0,4,NV,NV,TO_DATE('2016-07-07 22:00:11',df),NV;

  DBMS_STATS.IMPORT_INDEX_STATS('"' || i_o || '"','"' || i_n || '"',NULL,'"IMPDP_STATS"',NULL,'"SYS"');
  DELETE FROM "SYS"."IMPDP_STATS";
END;
/
```

《《《《。。。。。。。篇幅原因，有省略,剩下的都是统计信息，生成 sqlfile 的时候也可以不用生成。。。。。。。》》》》

1.4 本文简介

一个网友找到我说，一个 dmp 文件导入数据库中，中文一直是乱码，看我能否帮忙解决一下。说真心话，一般情况下，乱码问题和安装问题，我一般不想接手，因为可能很简单的问题，有的人懒的动脑，碰到问题就问。尤其对于安装类问题，照着安装文档，一步一步来，一般都没有问题。在这里把一张网友分享的图片再分享一下：

可是，问字符集的的哥们，我能感觉到他自己是下了功夫的，都是自己摸索了，实在解决不了，才找到的我。这种情况下，我果断是要帮助的。好了，废话不多说了，且看整个处理过程吧。

1.4.1 本文实验环境介绍

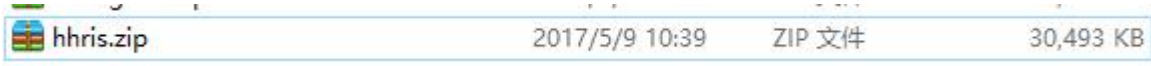
项目	source db	target db
db 类型		
db version	10.2.0.1.0	10.2.0.1.0
db 存储		
OS 版本及 kernel 版本		
字符集	**US7ASCII**	**GBK**

dmp 文件字符集	US7ASCII	US7ASCII

1.5 开始导入

1.5.1 首先获取 dmp 文件的相关信息

网友给的 dmp 文件：



大约 30M，解压后有 282M 左右：


```
[oracle@rhel6lhr ~]$ strings /tmp/hhris.dmp | head -10
EXPORT:V10.02.01
DHHRIS
RUSERS
8192
                                Wed Oct 16 5:0:14 2013/data/dbbackup/expdata/hhris.dmp
#G#G
#G#G
+08:00
BYTE
UNUSED
[oracle@rhel6lhr ~]$ strings /tmp/hhris.dmp  | grep "CREATE TABLE"|awk '{print $3}'|sed 's/"//g'
ADDTOHIS
APPOINT
APPOINTDETAIL
APPOINTMASTER
BACKUP_HISAPPOINT
BACKUP_R_DIAGNOSES
BACKUP_R_SERIES
BACKUP_R_STUDIES
DICT_CAPTION
DICT_CITY
DICT_CLASS
DICT_CLASSRULE
《《《《. . . . . 篇幅原因，有省略。. . . . . 》》》》
USER_PARAM
USER_RIS
USER_WEB
WEB_LOG
WEB_USER
WORK_FLOW
WORK_NODE
[oracle@rhel6lhr ~]$
[oracle@rhel6lhr ~]$ cat /tmp/hhris.dmp |od -x|head -1|awk '{print $2 $3}'|cut -c 1-2,7-8
0001
SYS@ora10g> SELECT NLS_CHARSET_NAME(TO_NUMBER('0001','XXXX')) FROM DUAL;

NLS_CHARSET_NAME(TO_NUMBER('0001','XXXX'))
----------------------------------------------------------------------------------------------------------------
----------------
US7ASCII
```

可以得出以下结论：

1、dmp 文件是由 10.02.01 的客户端导出的

2、基于 HHRIS 用户导出

3、该用户下有很多表

4、dmp 文件的字符集是 US7ASCII

1.5.2 找出 dmp 文件的 DDL 语句

主要查看是否有其它表空间导致不能导入的问题。

```
[oracle@rhel6lhr env oracle]$ imp \'/ AS SYSDBA\' file=/tmp/hhris.dmp show=y log=/tmp/get ddl.sql
buffer=20480000  full=y

Import: Release 10.2.0.1.0 - Production on Tue May 9 14:06:22 2017

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Connected to: Oracle Database 10g Enterprise Edition Release 10.2.0.1.0 - 64bit Production
With the Partitioning, OLAP and Data Mining options

Export file created by EXPORT:V10.02.01 via direct path

Warning: the objects were exported by HHRIS, not by you

import done in ZHS16GBK character set and AL16UTF16 NCHAR character set
export client uses US7ASCII character set (possible charset conversion)
. importing HHRIS's objects into SYS
 "BEGIN  "
 "sys.dbms_logrep_imp.instantiate_schema(schema_name=>SYS_CONTEXT('USERENV','"
《《《《. . . . . 篇幅原因，有省略。. . . . . 》》》》

[oracle@rhel6lhr env_oracle]$ sh gettabdd.sh /tmp/get_ddl.sql > /tmp/gen_tabddl.sql
[oracle@rhel6lhr env_oracle]$ more  /tmp/gen_tabddl.sql
BEGIN
sys.dbms_logrep_imp.instantiate_schema(schema_name=>SYS_CONTEXT('USERENV','CURRENT_SCHEMA'),
export_db_name=>'ORACLE', inst_scn=>'59161085');
COMMIT; END;
/
CREATE SEQUENCE "MICROSOFTSEQDTPROPERTIES" MINVALUE 1 MAXVALUE 9999999999999999999999999999 INCREMENT BY 1
START WITH 1 CACHE 50 NOORDER NOCYCLE
/
CREATE SEQUENCE "R_REPORTLOG_LOGID" MINVALUE 1 MAXVALUE 100000 INCREMENT BY 1 START WITH 1 CACHE 20 NOORDER
CYCLE
/
. . . . . .
《《《《. . . . . 篇幅原因，有省略。. . . . . 》》》》
```

查找关键字 tablespace，发现只有 1 个表空间 HHRIS。

1.5.3 数据库准备

```
dbca -silent -createDatabase -templateName General_Purpose.dbc -responseFile NO_VALUE \
-gdbname lhrdb  -sid lhrdb \
-sysPassword lhr -systemPassword lhr \
-datafileDestination '/cds/oradata' -recoveryAreaDestination '/cds/oradata' \
-storageType FS \
-characterset ZHS16GBK -nationalCharacterSet AL16UTF16 \
```

```
-sampleSchema false \
-memoryPercentage 20 \
-databaseType OLTP  \
-emConfiguration NONE
ORACLE_SID=lhrdb
export NLS_LANG=AMERICAN_AMERICA.ZHS16GBK
sqlplus / as sysdba
CREATE TABLESPACE HHRIS DATAFILE '/cds/oradata/mydg/HHRIS01.dbf' size 1G;
create user hhris identified by lhr;
grant dba to hhris;
exit
imp  hhris/lhr   file=/tmp/hhris.dmp full=Y log=/tmp/log_imp_hhrisgbk.dmp
```

```
[oracle@rhel6lhr mydg]$ imp  hhris/lhr   file=/tmp/hhris.dmp full=Y log=/tmp/log imp hhrisgbk.dmp

Import: Release 10.2.0.1.0 - Production on Tue May 9 14:17:55 2017

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Connected to: Oracle Database 10g Enterprise Edition Release 10.2.0.1.0 - 64bit Production
With the Partitioning, OLAP and Data Mining options

Export file created by EXPORT:V10.02.01 via direct path
import done in ZHS16GBK character set and AL16UTF16 NCHAR character set
export client uses US7ASCII character set (possible charset conversion)
. importing HHRIS's objects into HHRIS
. . importing table                  "ADDTOHIS"          0 rows imported
. . importing table                   "APPOINT"          0 rows imported
. . importing table              "APPOINTDETAIL"          0 rows imported
. . importing table              "APPOINTMASTER"          0 rows imported
《《《《. . . . . 篇幅原因，有省略。. . . . . 》》》》

Import terminated successfully with warnings.
[oracle@rhel6lhr mydg]$
[oracle@rhel6lhr mydg]$
```

可以成功导入，但是查询的时候，有中文乱码。

1.5.4 解决乱码

使用 UE 或 Pilotedit 软件，以 16 进制的格式打开 dmp 文件，修改 dmp 文件的第 4 行的第 1-4 个字节。

修改前：

```
00000001 03 00 01 44 0A 45 58 50 4F 52 54 3A 56 31 30 2E  ...D.EXPORT:V10.
00000002 30 32 2E 30 31 0A 44 48 48 52 49 53 0A 52 55 53  02.01.DHHRIS.RUS
00000003 45 52 53 0A 38 31 39 32 0A 30 0A 33 32 0A 30 0A  ERS.8192.0.32.0.
00000004 00 01 00 01 07 D0 00 01 00 00 00 00 00 00 00 00  .....Ð..........
00000005 00 20 00 20 20 20 20 20 20 20 20 20 20 20 20 20  . .
00000006 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20
00000007 20 20 20 20 20 20 20 20 20 20 57 65 64 20 4F 63              Wed Oc
00000008 74 20 31 36 20 35 3A 30 3A 31 34 20 32 30 31 33  t 16 5:0:14 2013
00000009 2F 64 61 74 61 2F 64 62 62 61 63 6B 75 70 2F 65  /data/dbbackup/e
00000010 78 70 64 61 74 61 2F 68 68 72 69 73 2E 64 6D 70  xpdata/hhris.dmp
```

修改后：

```
00000001 03 00 01 44 0A 45 58 50 4F 52 54 3A 56 31 30 2E  ...D.EXPORT:V10.
00000002 30 32 2E 30 31 0A 44 48 48 52 49 53 0A 52 55 53  02.01.DHHRIS.RUS
00000003 45 52 53 0A 38 31 39 32 0A 30 0A 33 32 0A 30 0A  ERS.8192.0.32.0.
00000004 00 01 03 54 07 D0 00 01 00 00 00 00 00 00 00 00  ...T.Ð..........
00000005 00 20 00 20 20 20 20 20 20 20 20 20 20 20 20 20  . .
00000006 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20
00000007 20 20 20 20 20 20 20 20 20 20 57 65 64 20 4F 63              Wed Oc
00000008 74 20 31 36 20 35 3A 30 3A 31 34 20 32 30 31 33  t 16 5:0:14 2013
00000009 2F 64 61 74 61 2F 64 62 62 61 63 6B 75 70 2F 65  /data/dbbackup/e
00000010 78 70 64 61 74 61 2F 68 68 72 69 73 2E 64 6D 70  xpdata/hhris.dmp
```

其实，也有资料显示需要把第一行的第 2 和第 3 字节，第 4 行的第 1-4 字节全部修改掉，如下所示：

```
00000001 03 03 54 44 0A 45 58 50 4F 52 54 3A 56 31 30 2E  ..TD.EXPORT:V10.
00000002 30 32 2E 30 31 0A 44 48 48 52 49 53 0A 52 55 53  02.01.DHHRIS.RUS
00000003 45 52 53 0A 38 31 39 32 0A 30 0A 33 32 0A 30 0A  ERS.8192.0.32.0.
00000004 03 54 03 54 07 D0 00 01 00 00 00 00 00 00 00 00  .T.T.Ð..........
00000005 00 20 00 20 20 20 20 20 20 20 20 20 20 20 20 20  . .
00000006 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20
00000007 20 20 20 20 20 20 20 20 20 20 57 65 64 20 4F 63              Wed Oc
00000008 74 20 31 36 20 35 3A 30 3A 31 34 20 32 30 31 33  t 16 5:0:14 2013
00000009 2F 64 61 74 61 2F 64 62 62 61 63 6B 75 70 2F 65  /data/dbbackup/e
00000010 78 70 64 61 74 61 2F 68 68 72 69 73 2E 64 6D 70  xpdata/hhris.dmp
```

经过小麦苗的测试，发现这 3 个地方全部修改掉，也可以成功导入。

修改后保存文件，上传服务器，重新导入，导入后查询，发现中文已经可以正常显示了。

	STUDYID	SERIESID	FEE	PRICE	FEENUM	FEENAME	MODETYPE	FEETYPE
1	16885	17762	520.0000	260.0000	2	碘化钠4		一次性收费
2	16885	17762	30.0000	30.0000	1	断层造影		检查费
3	16885	17762	31.9000	31.9000	1	富士激光干片		胶片费
4	16885	17762	12.0000	12.0000	1	床旁加收		其他费用
5	16887	17764	220.0000	110.0000	2	断层造影		检查费
6	16887	17764	60.0000	60.0000	1	泌尿造影		检查费
7	10077	10087	20.0000	20.0000	1	气管插管		其他费用
8	10076	10085	10.0000	10.0000	1	截瘫灌肠		其他费用
9	10058	10061	15.0000	15.0000	1	普通取活检		其他费用
10	10058	10061	20.0000	20.0000	1	气管插管		其他费用
11	10059	10062	1.2500	1.2500	1	BD注射器20ml		材料费
12	10057	10063	1.0700	1.0700	1	无菌注射器(大连10ml)		材料费
13	10076	10085	8.0000	8.0000	1	放置胃肠管		其他费用
14	10077	10087	10.0000	10.0000	1	截瘫灌肠		其他费用
15	10115	10148	174.8500	174.8500	1	CT增强补费3（套管针）		其他费用
16	10078	10092	15.0000	15.0000	1	普通取活检		其他费用
17	10043	10043	8.0000	8.0000	1	放置胃肠管		其他费用
18	10078	10092	15.0000	15.0000	1	普通取活检		其他费用
19	10110	10143	8.0000	8.0000	1	放置胃肠管		其他费用

1.5.5 还有一种不显示乱码的方式

还有一种不显示乱码的方式，那就是将 US7ASCII 字符集的 dmp 文件导入到 US7ASCII 字符集的数据库中。

```
dbca -silent -createDatabase -templateName General_Purpose.dbc -responseFile NO_VALUE \
-gdbname lhrdb  -sid lhrdb \
-sysPassword lhr -systemPassword lhr \
-datafileDestination '/cds/oradata' -recoveryAreaDestination '/cds/oradata' \
-storageType FS \
-characterset US7ASCII -nationalCharacterSet AL16UTF16 \
-sampleSchema false \
-memoryPercentage 20 \
```

```
-databaseType OLTP  \
-emConfiguration NONE
```

```
export NLS_LANG=AMERICAN_AMERICA.US7ASCII
imp  hhris/lhr   file=/tmp/hhris.dmp full=Y log=/tmp/log_imp_hhrisgbk.dmp
```

导入后,在 Windows 上设置客户端环境变量 NLS_LANG 为 AMERICAN_AMERICA.US7ASCII,然后重启 PL/SQL DEVELOPER 软件后就可以正常显示中文了。

本来想着，这样再采用 GBK 的字符集导出，然后导入 GBK 的数据库中，结果发现这种方法行不通，始终有乱码。其实，走到这一步，还可以将数据导出成文本格式的文件，然后将文本格式的文件再导入 GBK 字符集的数据库中仍然是可行的。

1.6 本文总结

有种办法处理将 US7ASCII 字符集的 dmp 文件导入到 ZHS16GBK 字符集的数据库中的中文乱码问题。第一，修改 dmp 文件中代表字符集的字符。第二，导入 US7ASCII 字符集的库中，然后导出成文本格式，再导入到 GBK 的库中。

1.7 参考

1.7.1 博客

- http://www.doc88.com/p-0863578397263.html
- http://www.eygle.com/archives/2004/09/nls_character_set_05.html
- http://www.itpub.net/thread-1129133-2-1.html
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- http://blog.itpub.net/26736162/viewspace-1686082/
- 【数据泵】EXPDP 导出表结构(真实案例) http://blog.itpub.net/26736162/viewspace-1657828/、http://blog.itpub.net/26736162/viewspace-1662344/

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