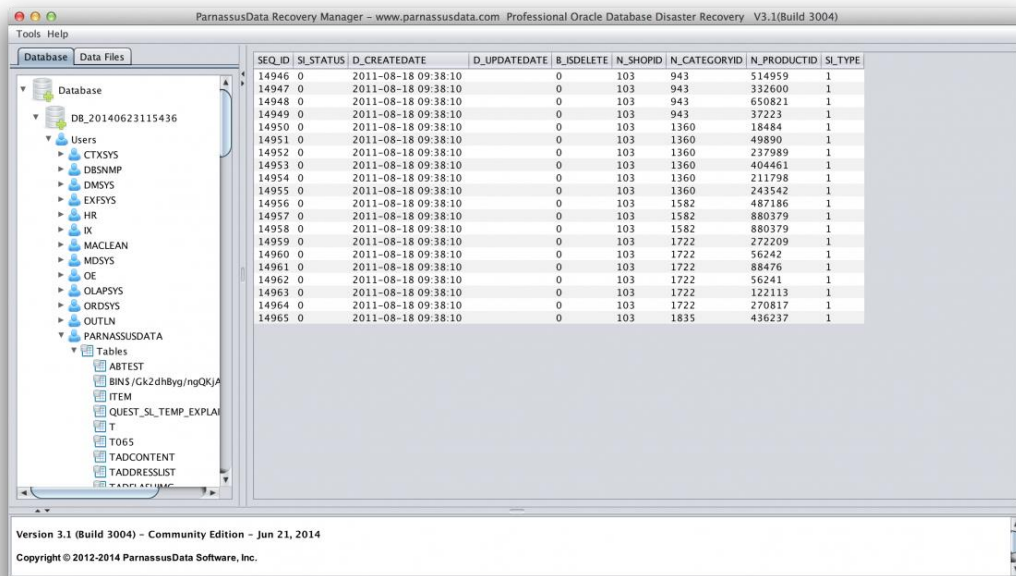


Case Study on PRM/DUL Recovery For Oracle Database

PRM is designed for Enterprise Database Recovery, which includes all Oracle DUL data recovery functionalities, and also easy-to-use GUI.

PRM For Oracle Database 3.1 GUI:



PRM almost can recovery Oracle database on all operating system, including:

Linux (RedHat, Centos, Oracle Linux, Suse), AIX, Solaris, HPUX, Windows 2003 Server/XP/2000/NT.

PRM Support Oracle database which starts from 9i, 10g, 11g to 12c.

Case 1, if there is no backup, on disk segment header is corrupted

```
SQL> create table prm_test tablespace users as select * from dba_objects;
```

Table created.

```
SQL> alter system checkpoint;
```

System altered.

```
SQL> select count(*) from prm_test;
```

```
      COUNT(*)
-----
      77940
```

```
SQL>
```

```
SQL> select header_file,header_block from dba_segments where
segment_name='PRM_TEST';
```

```
HEADER_FILE HEADER_BLOCK
```

```
-----
          4      1298483
```

```
SQL> select name from v$datafile where file#=4;
```

```
NAME
```

```
-----
/s01/oradata/G10R25/datafile/o1_mf_users_8nx5srgb_.dbf
```

```
BBED> set mode edit
```

```
      MODE          Edit
```

```
BBED> set blocksize 8192
```

```
      BLOCKSIZE     8192
```

```
BBED> set block 1298483
```

```
      BLOCK#        1298483
```

```
BBED> set offset 999
```

```
      OFFSET        999
```

```
BBED> modify /x 0xffff
```

```
Warning: contents of previous BIFILE will be lost. Proceed? (Y/N) y
```

```
File: /s01/oradata/G10R25/datafile/o1_mf_users_8nx5srgb_.dbf (0)
```

```
Block: 1298483          Offsets: 999 to 1510          Dba:0x00000000
```

```
-----
ffff0000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
```

```
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
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00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
```

<32 bytes per line>

```
BBED> sum
```

```
Check value for File 0, Block 1298483:
```

```
current = 0x18cc, required = 0xe733
```

```
SQL> select count(*) from prm_test;
```

```
select count(*) from prm_test
```

```
*
```

```
ERROR at line 1:
```

```
ORA-01578: ORACLE data block corrupted (file # 4, block # 1298483)
```

```
ORA-01110: data file 4:
```

```
'/s01/oradata/G10R25/datafile/o1_mf_users_8nx5srgb_.dbf'
```

```
SQL> alter session set events '10231 trace name context forever ,level 10';
```

```
Session altered.
```

```
SQL> select count(*) from prm_test;
```

```
select count(*) from prm_test
```

```
*
```

```
ERROR at line 1:
```

```
ORA-01578: ORACLE data block corrupted (file # 4, block # 1298483)
```

```
ORA-01110: data file 4:
```

```
'/s01/oradata/G10R25/datafile/o1_mf_users_8nx5srgb_.dbf'
```

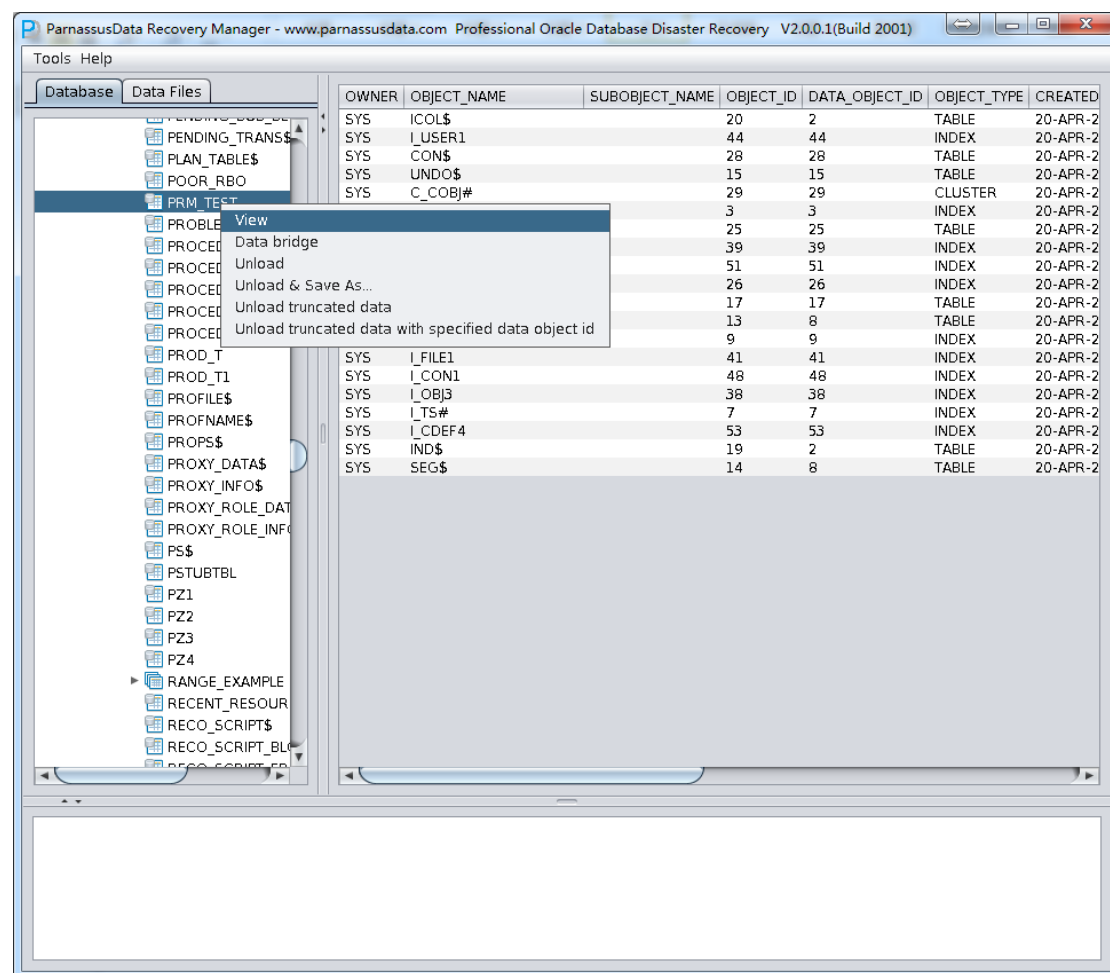
Start PRM

./prm.sh

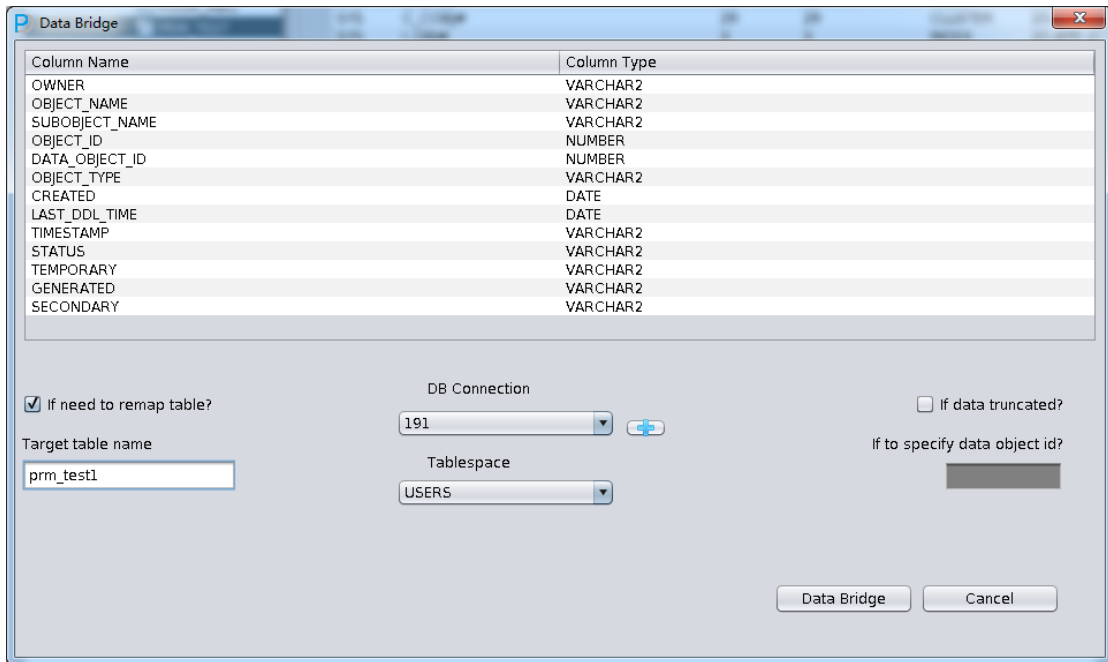
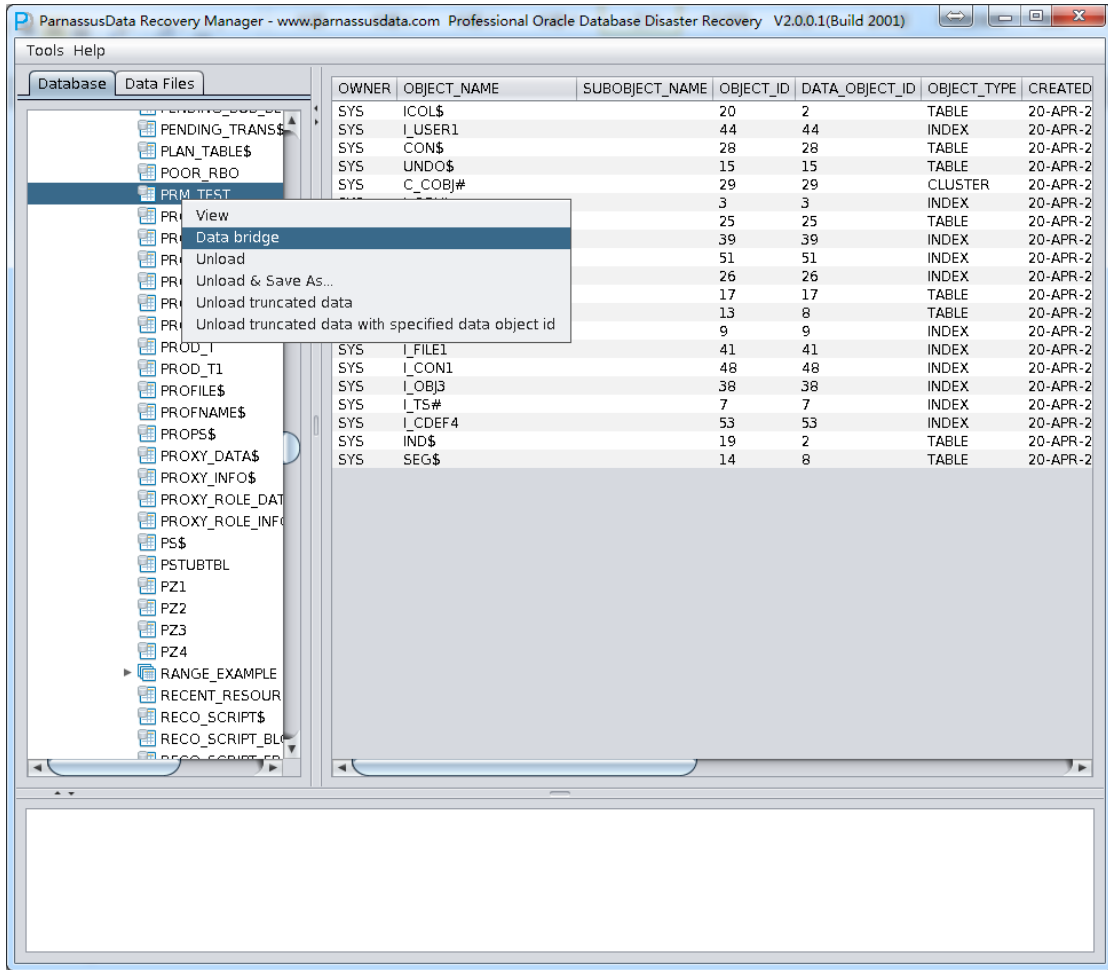
Recovery Wizard=» Dictionary Mode, if ASM, then choose Dictionary Mode(ASM)
=>select data files (at least including system tablespace datafile and datafile where data located), and click load.

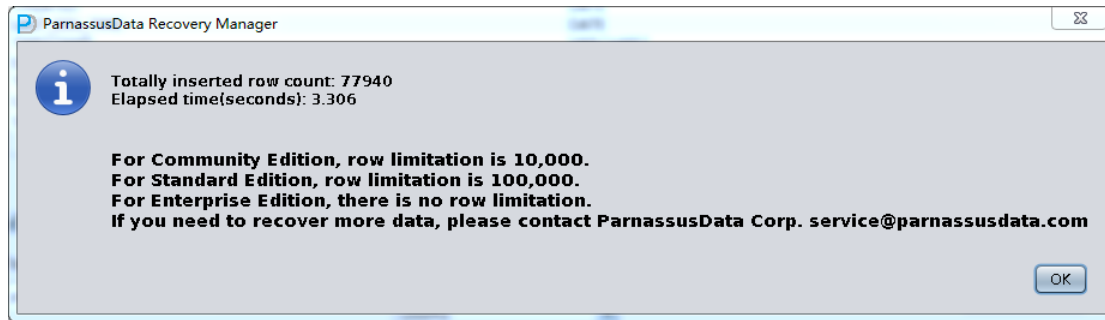
Attention: on AIX HPUX Sparc Solaris, and UNIX platform, choose Big Endian. Linux, Windows, X86 Solaris choose Little Endian

Find your table on the left and right click View



If we PRM show correct data, we recommend you to use DataBridge mode for inserting data back. Right click DataBridge and input connection info, and click DataBridge





As above, it has been successfully extract 77940 rows

CASE 2, No Archive Mode, a datafile has been offline, and related redo log has been overwritten. User can't online this datafile again.

```
SQL> archive log list
```

```
Database log mode           No Archive Mode
Automatic archival         Disabled
Archive destination        /s01/arch
Oldest online log sequence 343
Current log sequence       348
```

```
SQL> select file_name,file_id from dba_data_files where tablespace_name='TBS5';
```

FILE_NAME	FILE_ID
/oracleasm/TBS5.256.844175363.dbf	6

```
SQL> alter database datafile 6 offline drop;
```

Database altered.

```
SQL> alter system switch logfile;
```

System altered.

SQL> /

System altered.

SQL> /

System altered.

SQL> /

System altered.

SQL> /

System altered.

SQL> /

System altered.

SQL> recover datafile 6;

ORA-00279: change 34421776 generated at 04/19/2014 19:33:32 needed for thread 1

ORA-00289: suggestion : /s01/arch/1_354_831398352.dbf

ORA-00280: change 34421776 for thread 1 is in sequence #354

Specify log: {<RET>=suggested | filename | AUTO | CANCEL}

cancel

Media recovery cancelled.

[oracle@vrh8 ~]\$ rman target /

Recovery Manager: Release 10.2.0.5.0 - Production on Sat Apr 19 19:49:22 2014

Copyright (c) 1982, 2007, Oracle. All rights reserved.

connected to target database: G10R25 (DBID=2696593743)

RMAN> recover datafile 6;

Starting recover at 19-APR-14

using target database control file instead of recovery catalog

allocated channel: ORA_DISK_1
channel ORA_DISK_1: sid=147 devtype=DISK

starting media recovery

unable to find archive log
archive log thread=1 sequence=354

RMAN-00571:

```
=====
RMAN-00569:  ===== ERROR MESSAGE STACK FOLLOWS
=====
```

RMAN-00571:

```
=====
RMAN-03002: failure of recover command at 04/19/2014 19:49:29
RMAN-06054: media recovery requesting unknown log: thread 1 seq 354 lowscn
34421776
```

Here we can use PRM to extract all data which can not be online

```
SQL> select OWNER,SEGMENT_NAME,SEGMENT_TYPE from dba_segments where
tablespace_name='TBS5';
```

OWNER	SEGMENT_NAME	SEGMENT_TYPE
SYS	VVVV	TABLE
SYS	AVE2	TABLE
SYS	AVE	TABLE
SYS	ATEST1	TABLE
SYS	BIN\$2KcAMnnvGg/gQKjAvwEbRg== \$0	TABLE
hu	TAB1	TABLE

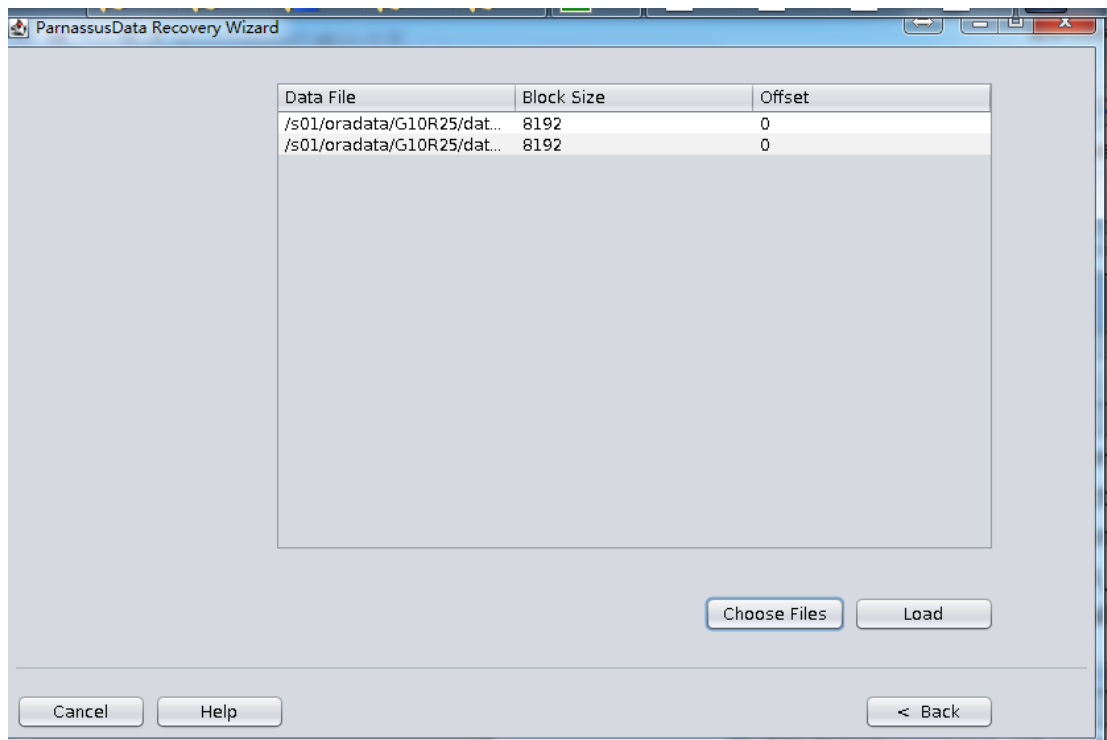
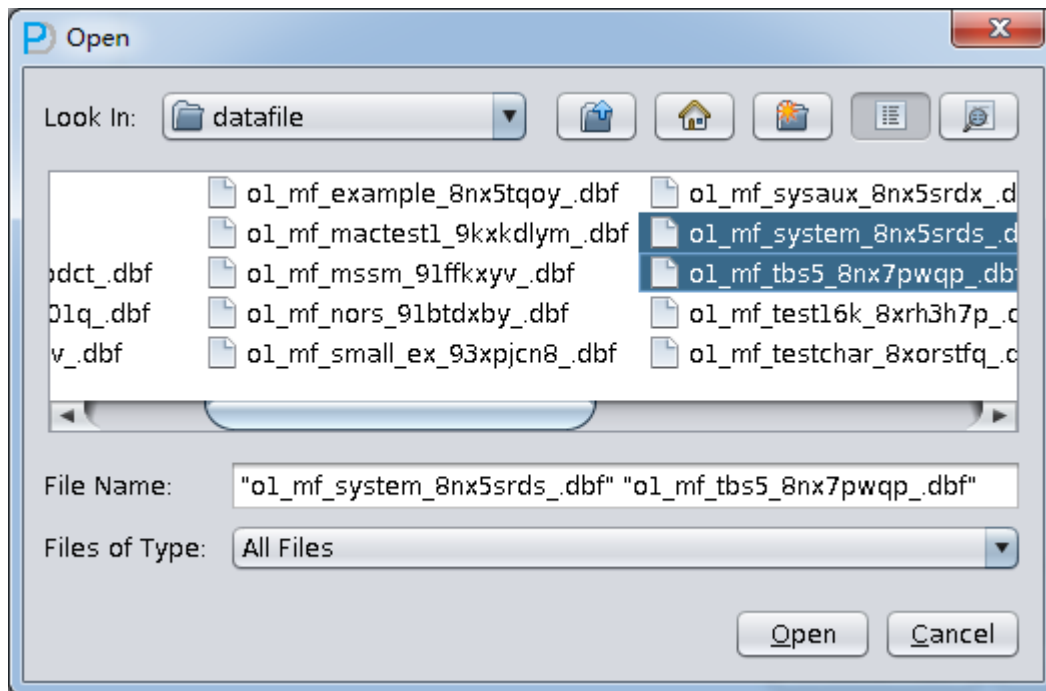
Start PRM

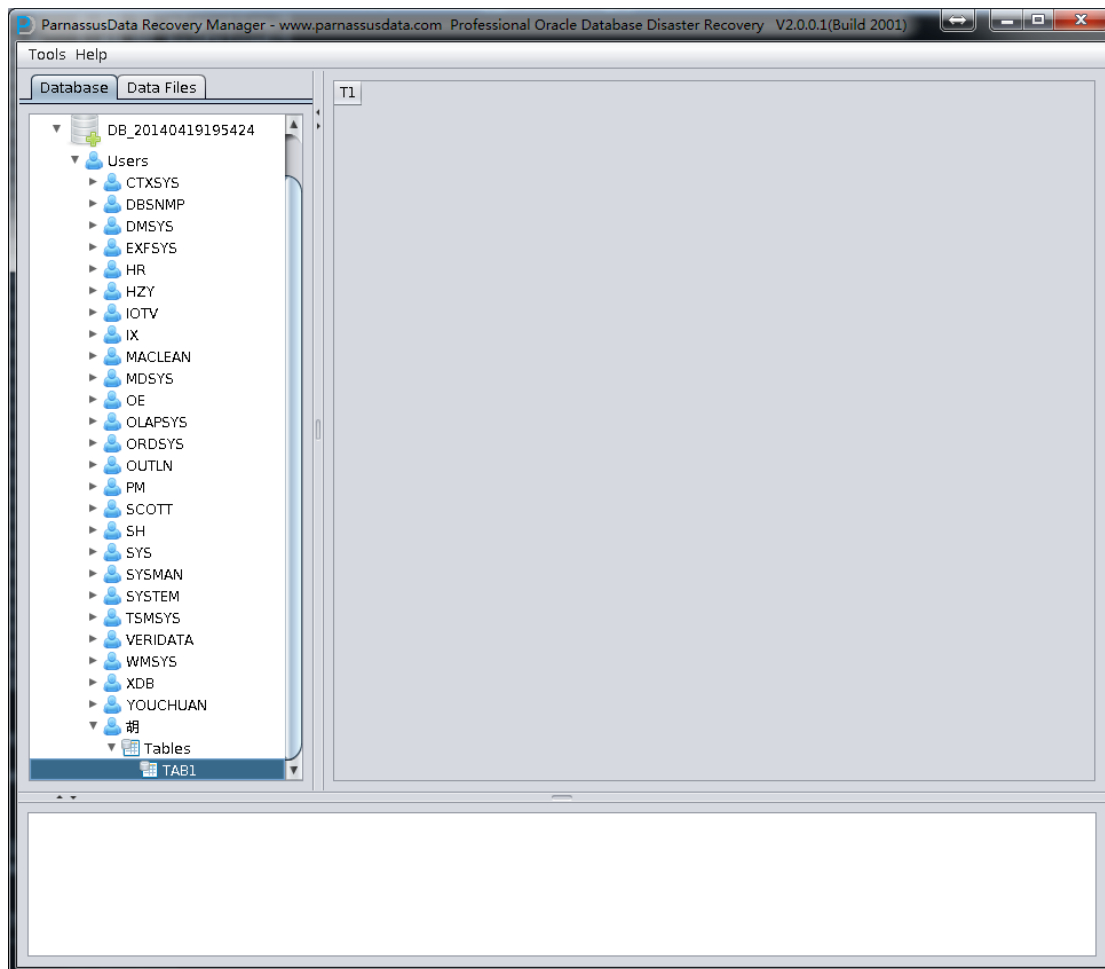
./prm.sh

Recovery Wizard=» Dictionary Mode, if ASM, then choose Dictionary Mode(ASM)
=>select data files (at least including SYSTEM.DBF and data file where data located), and click load.

Attention: on AIX HPUX Sparc Solaris, and UNIX platform, choose Big Endian. Linux,

Windows, X86 Solaris choose Little Endian





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