



**SANGFOR**

# **aCloud**

## **Linee guida per la migrazione di Oracle Database**

**Versione 5.8.8R1**



## Registro delle modifiche

Data	Cambia descrizione
Ott 3, 2019	Versione 5.8.8 Release del documento R1.

# CONTENUTO

Capitolo 1 Guida per la migrazione dei dati di Oracle database.....	1
1.1 Esportare i dati del database di produzione.....	1
1.2 Come controllare gli schemi del database del cliente.....	3
2 Creare una nuova VM ed installare il database Oracle. (Fare riferimento alla guida all'installazione di Oracle.) .....	5
3 Importare il database del cliente (oracle.soe) nella nuova VM.....	5

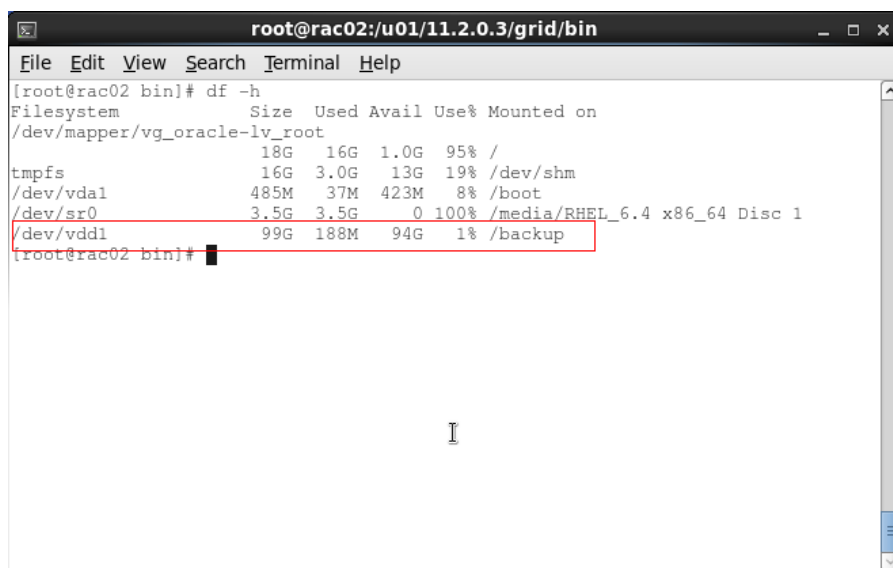
# Capitolo 1: Guida per la migrazione dei dati di Oracle database

Passaggi per la migrazione:

1. Accedere al database di produzione del cliente ed esportare il database come file dmp.
2. Completa l'installazione di Oracle VM in aCloud, insieme al software e al database Oracle. Si prega di fare riferimento alla guida all'installazione di Oracle per HCI.
3. Copiare il file dmp del database di produzione nella nuova macchina virtuale Oracle in aCloud .
4. Importare il file dmp nel database della nuova macchina virtuale Oracle.

## 1.1 Esportare i dati del database di produzione.

Si prega di assicurarsi che il server del cliente disponga di spazio sufficiente su disco. L'immagine sotto mostra che l'attuale spazio di archiviazione disponibile è 94G.



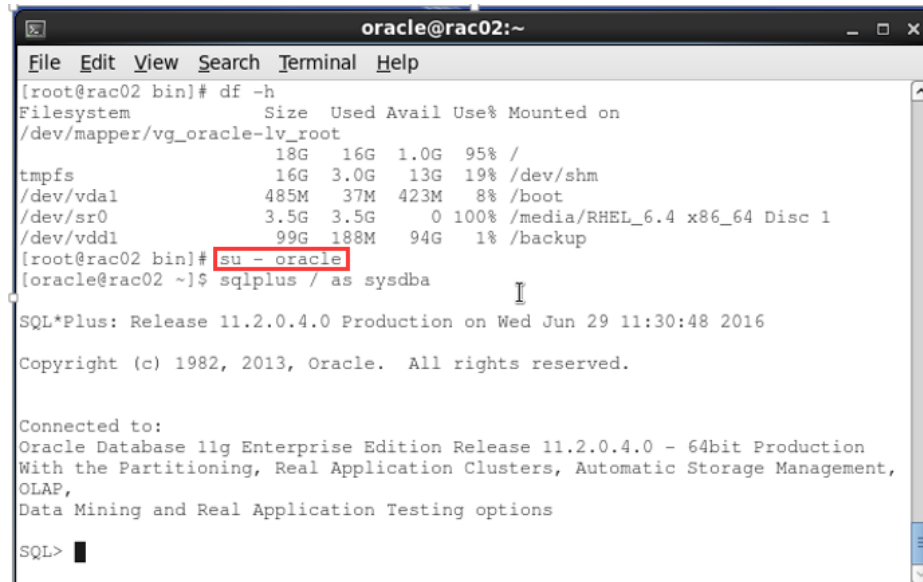
```
root@rac02:/u01/11.2.0.3/grid/bin
File Edit View Search Terminal Help
[root@rac02 bin]# df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/mapper/vg_oracle-lv_root
18G    16G   1.0G  95% /
tmpfs          16G    3.0G   13G   19% /dev/shm
/dev/vda1      485M    37M  423M    8% /boot
/dev/sr0        3.5G    3.5G    0 100% /media/RHEL_6.4_x86_64_Disc_1
/dev/vdd1      99G    188M   94G    1% /backup
[root@rac02 bin]#
```

1. Accedere con l'account Oracle e creare una directory per l'esportazione

Comando:

**su - oracle**

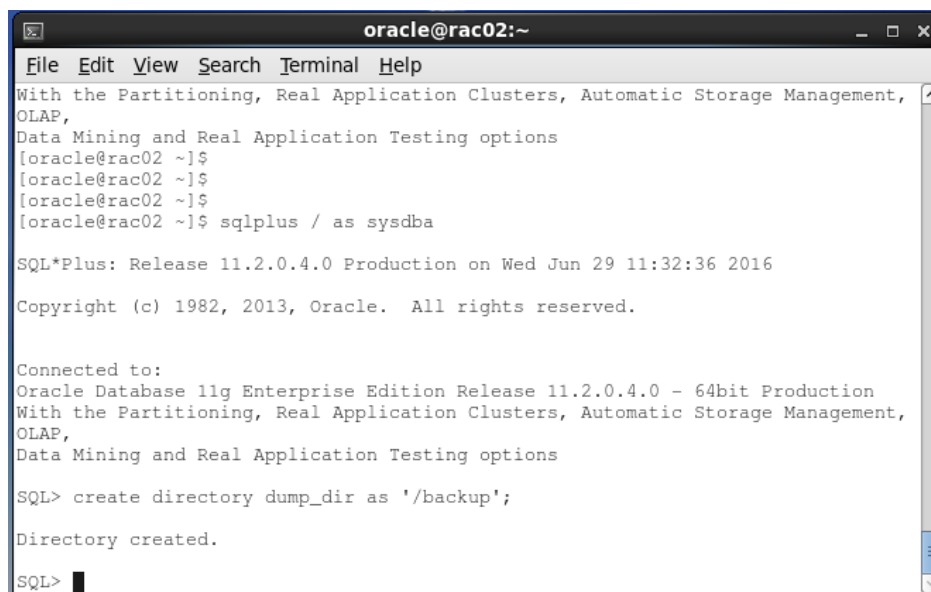
**sqlplus / as sysdba**



```
oracle@rac02:~  
File Edit View Search Terminal Help  
[root@rac02 bin]# df -h  
Filesystem      Size  Used Avail Use% Mounted on  
/dev/mapper/vg_oracle-lv_root  
18G  16G  1.0G  95% /  
tmpfs           16G  3.0G  13G   19% /dev/shm  
/dev/vdal       485M   37M  423M    8% /boot  
/dev/sr0        3.5G  3.5G    0 100% /media/RHEL_6.4 x86_64 Disc 1  
/dev/vddl       99G  188M   94G    1% /backup  
[root@rac02 bin]# su - oracle  
[oracle@rac02 ~]$ sqlplus / as sysdba  
  
SQL*Plus: Release 11.2.0.4.0 Production on Wed Jun 29 11:30:48 2016  
  
Copyright (c) 1982, 2013, Oracle. All rights reserved.  
  
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  
  
SQL>
```

Comando:

**Create directory dump\_dir as '/backup';**



```
oracle@rac02:~  
File Edit View Search Terminal Help  
With the Partitioning, Real Application Clusters, Automatic Storage Management,  
OLAP,  
Data Mining and Real Application Testing options  
[oracle@rac02 ~]$  
[oracle@rac02 ~]$  
[oracle@rac02 ~]$  
[oracle@rac02 ~]$ sqlplus / as sysdba  
  
SQL*Plus: Release 11.2.0.4.0 Production on Wed Jun 29 11:32:36 2016  
  
Copyright (c) 1982, 2013, Oracle. All rights reserved.  
  
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  
  
SQL> create directory dump_dir as '/backup';  
  
Directory created.  
  
SQL>
```

2. Modificare l'autorizzazione della directory di backup per consentire all'utente Oracle di disporre dell'autorizzazione di lettura e scrittura.



3. Eseguire il comando export.

**Expdp system/oracle directory=dump\_dir dumpfile=oracle.soe logfile=dump.log schemas=soe;**

**Nota:** "System/oracle" è il nome utente e password del database, necessario per modificare il comando in base al cliente.

## 1.2 Come controllare gli schemi del database del cliente

**Sqlplus / as sysdba**

**Select name from v\$tablespace;**

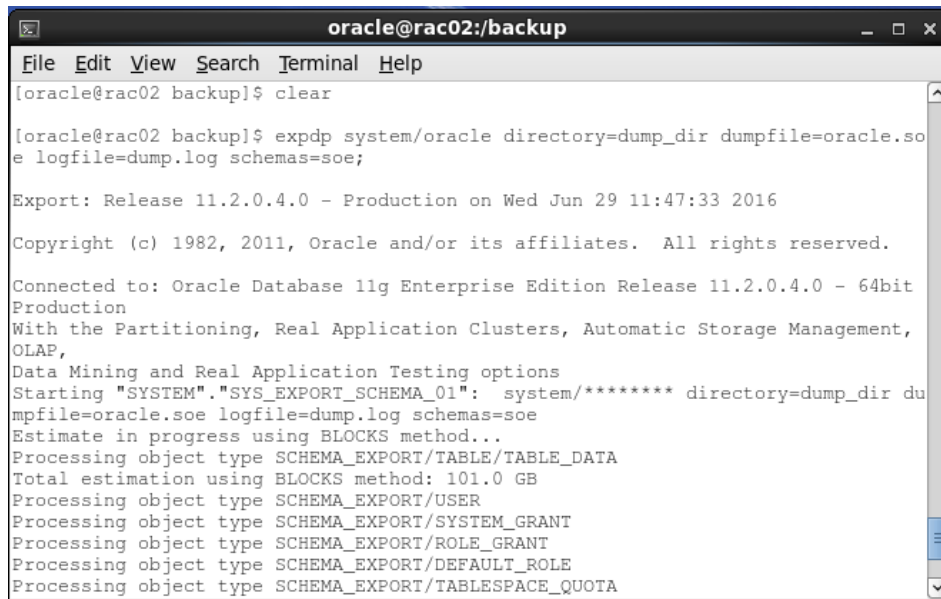
```
SQL> select name from v$tablespace;

NAME
-----
SYSTEM
SYSAUX
UNDOTBS1
TEMP
USERS
SH
SOE

7 rows selected.
```

1. Come da screenshot sopra, attualmente, il cliente ha 2 schema personalizzati che sono SH e SOE.

2. I parametri degli schema sono gli schema del cliente, questi sono necessari per effettuare delle modifiche al database del cliente.



```

oracle@rac02:/backup
File Edit View Search Terminal Help
[oracle@rac02 backup]$ clear

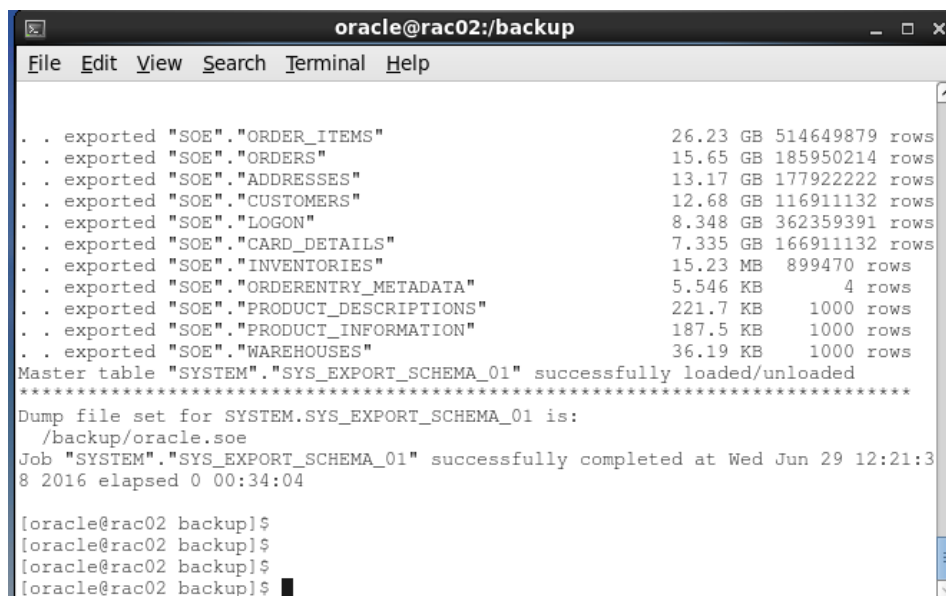
[oracle@rac02 backup]$ expdp system/oracle directory=dump_dir dumpfile=oracle.soe
e logfile=dump.log schemas=soe;

Export: Release 11.2.0.4.0 - Production on Wed Jun 29 11:47:33 2016

Copyright (c) 1982, 2011, Oracle and/or its affiliates. All rights reserved.

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 "SYSTEM"."SYS_EXPORT_SCHEMA_01": system/***** directory=dump_dir du
mpfile=oracle.soe logfile=dump.log schemas=soe
Estimate in progress using BLOCKS method...
Processing object type SCHEMA_EXPORT/TABLE/TABLE_DATA
Total estimation using BLOCKS method: 101.0 GB
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/TABLESPACE_QUOTA
  
```

3. Esportazione completata



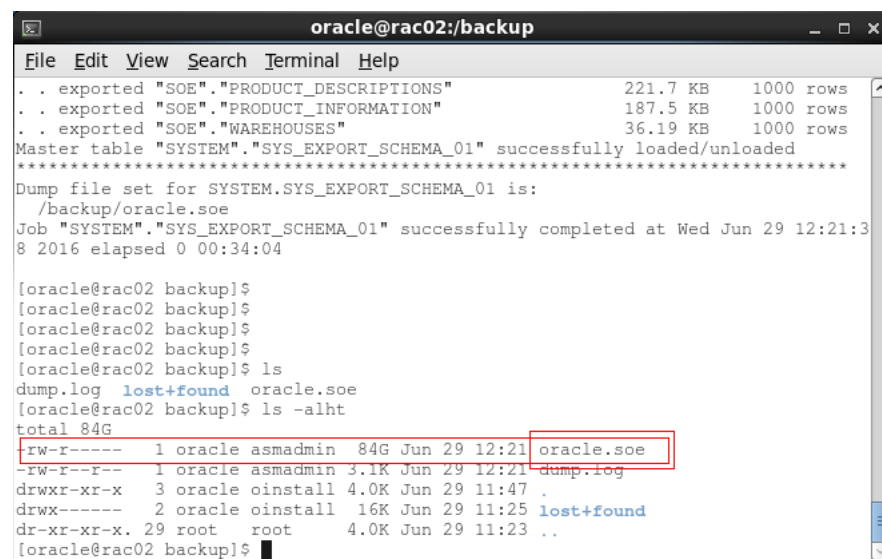
```

oracle@rac02:/backup
File Edit View Search Terminal Help

. . exported "SOE"."ORDER_ITEMS"                26.23 GB 514649879 rows
. . exported "SOE"."ORDERS"                      15.65 GB 185950214 rows
. . exported "SOE"."ADDRESSES"                   13.17 GB 177922222 rows
. . exported "SOE"."CUSTOMERS"                   12.68 GB 116911132 rows
. . exported "SOE"."LOGON"                       8.348 GB 362359391 rows
. . exported "SOE"."CARD_DETAILS"                 7.335 GB 166911132 rows
. . exported "SOE"."INVENTORIES"                 15.23 MB 899470 rows
. . exported "SOE"."ORDERENTRY_METADATA"          5.546 KB 4 rows
. . exported "SOE"."PRODUCT_DESCRIPTIONS"         221.7 KB 1000 rows
. . exported "SOE"."PRODUCT_INFORMATION"          187.5 KB 1000 rows
. . exported "SOE"."WAREHOUSES"                   36.19 KB 1000 rows
Master table "SYSTEM"."SYS_EXPORT_SCHEMA_01" successfully loaded/unloaded
*****
Dump file set for SYSTEM.SYS_EXPORT_SCHEMA_01 is:
  /backup/oracle.soe
Job "SYSTEM"."SYS_EXPORT_SCHEMA_01" successfully completed at Wed Jun 29 12:21:3
8 2016 elapsed 0 00:34:04

[oracle@rac02 backup]$
[oracle@rac02 backup]$
[oracle@rac02 backup]$
[oracle@rac02 backup]$
  
```

#### 4. Verificare il file esportato, viene mostrato il successo dell'esportazione.



```

oracle@rac02:/backup
File Edit View Search Terminal Help
. . exported "SOE"."PRODUCT_DESCRIPTIONS"          221.7 KB    1000 rows
. . exported "SOE"."PRODUCT_INFORMATION"          187.5 KB    1000 rows
. . exported "SOE"."WAREHOUSES"                   36.19 KB    1000 rows
Master table "SYSTEM"."SYS_EXPORT_SCHEMA_01" successfully loaded/unloaded
*****
Dump file set for SYSTEM.SYS_EXPORT_SCHEMA_01 is:
/backup/oracle.soe
Job "SYSTEM"."SYS_EXPORT_SCHEMA_01" successfully completed at Wed Jun 29 12:21:3
8 2016 elapsed 0 00:34:04

[oracle@rac02 backup]$
[oracle@rac02 backup]$
[oracle@rac02 backup]$
[oracle@rac02 backup]$
[oracle@rac02 backup]$ ls
dump.log  lost+found  oracle.soe
[oracle@rac02 backup]$ ls -alht
total 84G
-rw-r----- 1 oracle asmadmin 84G Jun 29 12:21 oracle.soe
-rw-r----- 1 oracle asmadmin 3.1K Jun 29 12:21 dump.log
drwxr-xr-x  3 oracle oinstall 4.0K Jun 29 11:47 .
drwx----- 2 oracle oinstall 16K Jun 29 11:25 lost+found
dr-xr-xr-x. 29 root root      4.0K Jun 29 11:23 ..
[oracle@rac02 backup]$

```

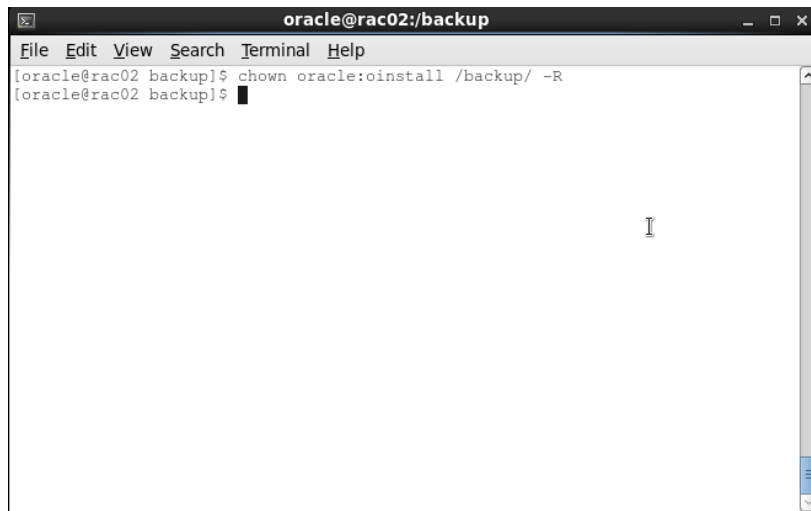
## 2 Creare una nuova VM ed installare il database Oracle. (Fare riferimento alla guida all'installazione di Oracle.)

## 3 Importare il database del cliente (oracle.soe) nella nuova VM

1. Creare una directory di backup nella nuova macchina virtuale Oracle.  
Successivamente, copiare il file esportato (Oracle.soe) nella nuova directory di backup di Oracle VM. Dopo modificare il permesso del file: **chmod 775 oracle.soe**
2. Utilizzare l'account utente Oracle per eseguire l'autorizzazione della directory di backup.

Comando: **chown oracle:oinstall /backup -R**





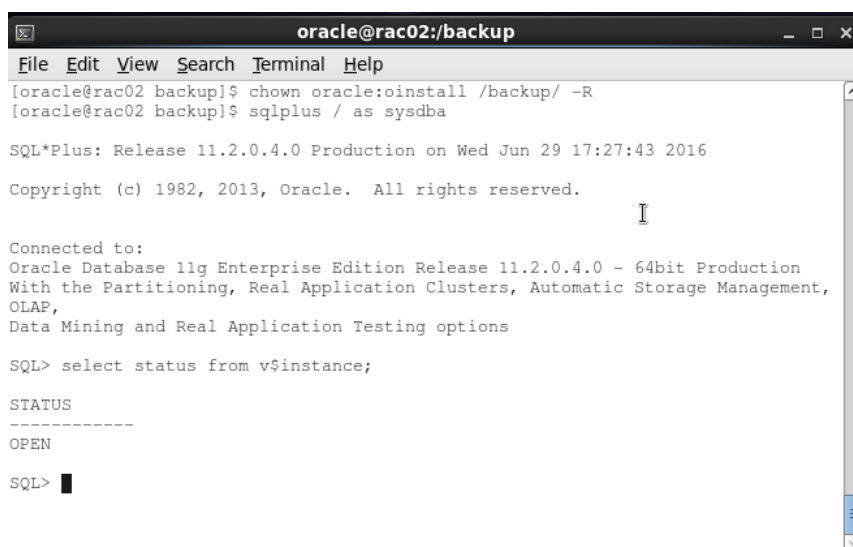
```
oracle@rac02:/backup
File Edit View Search Terminal Help
[oracle@rac02 backup]$ chown oracle:oinstall /backup/ -R
[oracle@rac02 backup]$
```

3. Controllare lo stato del database, è in stato "Aperto".

4. **Su - oracle**

5. **Sqlplus / as sysdba**

6. **Select status from v\$instance**



```
oracle@rac02:/backup
File Edit View Search Terminal Help
[oracle@rac02 backup]$ chown oracle:oinstall /backup/ -R
[oracle@rac02 backup]$ sqlplus / as sysdba

SQL*Plus: Release 11.2.0.4.0 Production on Wed Jun 29 17:27:43 2016
Copyright (c) 1982, 2013, Oracle. All rights reserved.

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

SQL> select status from v$instance;

STATUS
-----
OPEN

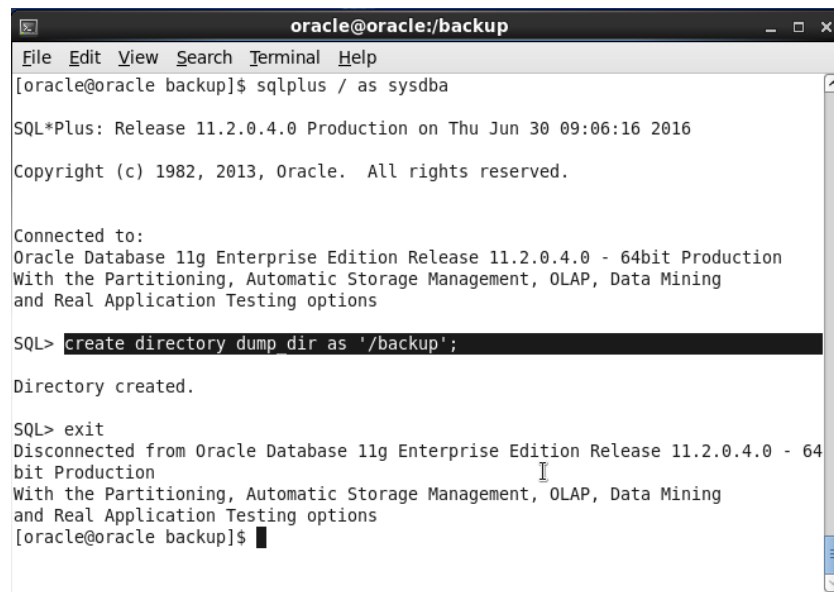
SQL>
```

7. Se il database è in stato "aperto", è possibile importare i dati tramite **impdp**.

```
oracle@oracle:~  
File Edit View Search Terminal Help  
-rw-r-----. 1 root root 41G Jun 29 18:37 oracle.soe  
drwxr-xr-x. 3 root root 4.0K Jun 29 18:21 .  
dr-xr-xr-x. 29 root root 4.0K Jun 29 17:43 ..  
drwx-----. 2 root root 16K Jun 29 17:33 lost+found  
[root@oracle backup]# ls  
lost+found oracle.soe  
[root@oracle backup]# su - oracle  
[oracle@oracle ~]$ sqlplus / as sysdba  
  
SQL*Plus: Release 11.2.0.4.0 Production on Wed Jun 29 21:17:46 2016  
  
Copyright (c) 1982, 2013, Oracle. All rights reserved.  
  
Connected to:  
Oracle Database 11g Enterprise Edition Release 11.2.0.4.0 - 64bit Production  
With the Partitioning, Automatic Storage Management, OLAP, Data Mining  
and Real Application Testing options  
  
SQL> create tablespace soe;  
  
Tablespace created.  
  
SQL> █
```

## 8. Creare una directory dump dir

Comando: **Create directory dump\_dir as '/backup';**



```
oracle@oracle:/backup
File Edit View Search Terminal Help
[oracle@oracle backup]$ sqlplus / as sysdba

SQL*Plus: Release 11.2.0.4.0 Production on Thu Jun 30 09:06:16 2016

Copyright (c) 1982, 2013, Oracle. All rights reserved.

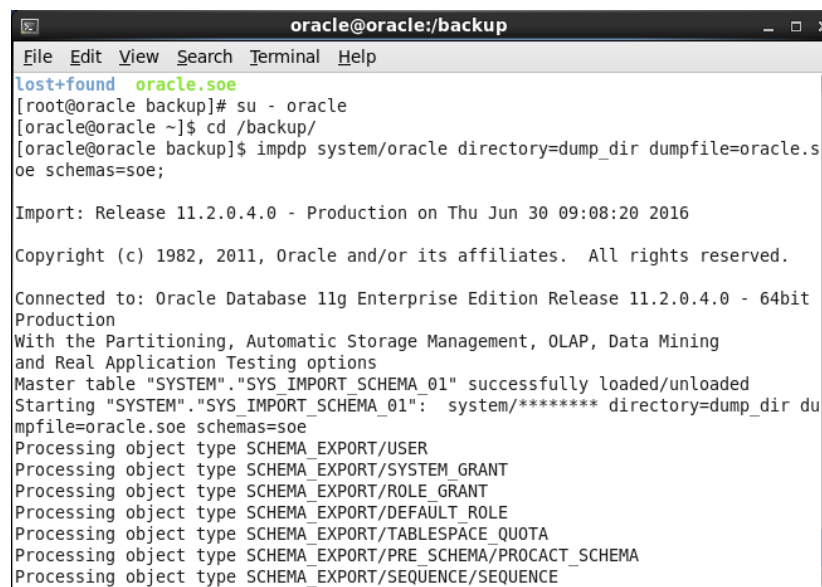
Connected to:
Oracle Database 11g Enterprise Edition Release 11.2.0.4.0 - 64bit Production
With the Partitioning, Automatic Storage Management, OLAP, Data Mining
and Real Application Testing options

SQL> create directory dump_dir as '/backup';

Directory created.

SQL> exit
Disconnected from Oracle Database 11g Enterprise Edition Release 11.2.0.4.0 - 64
bit Production
With the Partitioning, Automatic Storage Management, OLAP, Data Mining
and Real Application Testing options
[oracle@oracle backup]$
```

## 9. Eseguire l'operazione di importazione.



```
oracle@oracle:/backup
File Edit View Search Terminal Help
lost+found oracle.soe
[root@oracle backup]# su - oracle
[oracle@oracle ~]$ cd /backup/
[oracle@oracle backup]$ impdp system/oracle directory=dump_dir dumpfile=oracle.s
oe schemas=soe;

Import: Release 11.2.0.4.0 - Production on Thu Jun 30 09:08:20 2016

Copyright (c) 1982, 2011, Oracle and/or its affiliates. All rights reserved.

Connected to: Oracle Database 11g Enterprise Edition Release 11.2.0.4.0 - 64bit
Production
With the Partitioning, Automatic Storage Management, OLAP, Data Mining
and Real Application Testing options
Master table "SYSTEM"."SYS_IMPORT_SCHEMA_01" successfully loaded/unloaded
Starting "SYSTEM"."SYS_IMPORT_SCHEMA_01": system/***** directory=dump_dir du
mpfile=oracle.soe schemas=soe
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/TABLESPACE QUOTA
Processing object type SCHEMA_EXPORT/PRE_SCHEMA/PROCACT_SCHEMA
Processing object type SCHEMA_EXPORT/SEQUENCE/SEQUENCE
```



Copyright © SANGFOR Technologies Inc. All rights reserved.

No part of this document may be reproduced or transmitted in any form or by any means without prior written consent of SANGFOR Technologies Inc.

SANGFOR is the trademark of SANGFOR Technologies Inc. All other trademarks and trade names mentioned in this document are the property of their respective holders.

Every effort has been made in the preparation of this document to ensure accuracy of the contents, but all statements, information, and recommendations in this document do not constitute a warranty of any kind, express or implied. The information in this document is subject to change without notice. To obtain the latest version, contact the international service center of SANGFOR Technologies Inc

