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Oracle Secure Backup - eine Livedemo

Sven-Olaf Hilmer, Hilmer Informatik GmbH

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Nürnberg

Hilmer Informatik GmbH

- Oracle Solaris
- Oracle Solaris Cluster
- Oracle Enterprise Linux
- Oracle Virtualization (LDOM, OVM)
- Oracle Server (SPARC,x86)
- Oracle Engineered Systems (Exalogic, Exadata, ODA, SuperCluster)
- Oracle Storage (ZFS-SA, FS1)
- Oracle Secure Backup
- Oracle Hierarchical Storage Manager HSM (a.k.a SAM-FS)
- Oracle Database
- Oracle Enterprise Manager Cloud Control
- Oracle Enterprise Manager Ops Center

<http://www.hilmer-informatik.ch/>

https://www.xing.com/profile/SvenOlaf_Hilmer

<https://www.linkedin.com/in/svenhilmer>

Skype : shilmer

Twitter : @svenolafhilmer

Jurablickweg 19

3072 Ostermundigen

Email : shilmer@hilmer-informatik.ch

Tel. +41-31-914 1701, Mobile +41-76-572 8089

Licensing

License Metric : Stream

Stream

- Tape Drive
- Concurrent job to disk pool or cloud
- RMAN Channel

License Fee : \$ 3.500 / Stream

Term : Perpetual

Quantity : 1

Up to 75% less licensing fees compared to other Backup products.

Setup

- Admin / Media Server – OL6
- Linux Client - OL6
- Solaris Client - Solaris 10
- Oracle Database – 12.1.0.1
- VMs are implemented on Oracle VM VirtualBox 5.1.6

Steps

- Installation Linux Client
- Installation Solaris Client
- Installation Admin Server
- Configuration Media Server
- Register Clients at Admin Server
- Create Data Sets for Linux and Solaris
- Perform Filesystem Backups for Linux and Solaris
- Preauthorize user for DB backup
- Create Storage Selector for DB Backups
- Backup DB with RMAN

Installation Linux Client

```
[root@oel6 ~]# lsb_release -d
Description: Oracle Linux Server release 6.7
[root@oel6 ~]# pwd
/root
[root@oel6 ~]# ls -l osb*
-rw-r--r--. 1 root root 87124827 17. Sep 18:34 osb_12.1.0.2.1_linux.x64_release.zip
[root@oel6 ~]# unzip -q osb_12.1.0.2.1_linux.x64_release.zip
[root@oel6 ~]# mkdir -p /usr/local/oracle/backup
[root@oel6 ~]# cd /usr/local/oracle/backup
[root@oel6 backup]# ln -s /bin/gunzip uncompress
[root@oel6 backup]# /root/osb_12.1.0.2.1_linux.x64_release/setup
```

1. linux86_64
administrative server, media server, client

Choose from one of the following options. The option you choose defines the software components to be installed.

Configuration of this host is required after installation is complete. You can install the software on this host in one of the following ways:

- (a) administrative server and client
- (b) client

If you are not sure which option to choose, please refer to the Oracle Secure Backup Installation Guide. (a or b) [a]? : **b**

Do you want to change any advanced settings? (y or n) [n]: **n**

Oracle Secure Backup was installed

```
[root@oel6 backup]# ps -ef | grep ob
root      2895      1  0 10:29 ?        00:00:00 /usr/local/oracle/backup/etc/observed -b
```

Installation of Solaris Client

```
root@sol1113:~ # uname -r
5.11
root@sol1113:~ # pwd
/root
root@sol1113:~ # unzip -q osb_12.1.0.2.1_solaris.x64_release.zip
root@sol1113:~ # mkdir -p /usr/local/oracle/backup
root@sol1113:~ # cd /usr/local/oracle/backup
root@sol1113:/usr/local/oracle/backup # ln -s /bin/gunzip uncompress
root@sol1113:/usr/local/oracle/backup # /root/osb_12.1.0.2.1_solaris.x64_release/setup
...
This installation contains Oracle Secure Backup version 12.1.0.2.1.
...
  1. solarisx86_64 administrative server, media server, client
...
Choose from one of the following options. The option you choose defines
the software components to be installed.
...
  (a) administrative server and client
  (b) client

If you are not sure which option to choose, please refer to the Oracle
Secure Backup Installation Guide. (a or b) [a]? : b

Do you want to change any advanced settings? (y or n) [n]: <ENTER>

Oracle Secure Backup was installed
```

Preparation of Admin Server

- Oracle Linux 6.7
- iptables disabled

```
[root@osb ~]# lsb_release -d
Description: Oracle Linux Server release 6.7
[root@osb ~]# pwd
/root
[root@osb ~]# ls -l osb*
-rw-r--r--. 1 root root 87124827 17. Sep 17:21 osb_12.1.0.2.1_linux.x64_release.zip
[root@osb ~]# unzip -q osb_12.1.0.2.1_linux.x64_release.zip
[root@osb ~]# mkdir -p /usr/local/oracle/backup
[root@osb ~]# cd /usr/local/oracle/backup
[root@osb backup]# ln -s /bin/gunzip uncompress
```


Installation of Admin Server

```
[root@osb backup]# /root/osb_12.1.0.2.1_linux.x64_release/setup
```

This installation contains Oracle Secure Backup version 12.1.0.2.1.

1. linux86_64
administrative server, media server, client

Choose from one of the following options. The option you choose defines the software components to be installed.

- (a) administrative server and client
- (b) client

If you are not sure which option to choose, please refer to the Oracle Secure Backup Installation Guide. (a or b) [a]? : **<ENTER>**

You should now enter an email address for the Oracle Secure Backup 'admin' user. Oracle Secure Backup uses this email address to send job summary reports and to notify the user when a job requires input. If you leave this blank, you can set it later using the obtool's 'chuser' command.

Please enter the admin email address: **<ENTER>**

Do you want to change any advanced settings? (y or n) [n]: **<ENTER>**

Please enter keystore password:
Re-type password for verification:
Please enter admin password:
Re-type password for verification:
Oracle Secure Backup was installed

Gather Authentication Token for obtool

```
[root@osb ~]# obtool  
Oracle Secure Backup 12.1.0.2.1  
login: admin  
Password: <passwd>
```

```
ob> lshost  
osb                admin,client                (via OB)    in service  
ob> chhost --addrole mediaserver osb  
ob> chhost --rmrole client osb  
ob> lshost  
osb                admin,mediaserver          (via OB)    in service
```

Create Disk Pool for Filesystem Backups

```
[root@osb osb-pool-0]# df -h
Filesystem                Size      Used Avail Use% Mounted on
/dev/mapper/vg_osb-lv_root 43G       3.2G    38G   8% /
tmpfs                     1.9G           0  1.9G   0% /dev/shm
/dev/sda1                 477M       78M    371M  18% /boot
/dev/sdb1                 2.0T       71M    1.9T   1% /data/osb-pool-0 <-----
[root@osb osb-pool-0]# obtool
ob> mkdev --type disk --attach osb:/data/osb-pool-0/fs --inservice \
        --initialize --concurrentjobs 1 fs-pool-dev
ob> lsdev -l
fs-pool:
  Device type:          disk pool
  In service:          yes
  Debug mode:          no
  Capacity:            (not set)
  Consumption:         2.3 GB
  Free space goal:     (system default)
  Concurrent jobs:     1
  Blocking factor:     (default)
  Max blocking factor: (default)
  UUID:                af59a866-69fe-1034-97b2-08002752bc76
  Attachment 1:
    Host:              osb
    Directory:         /data/osb-pool-0/fs
```

Create Disk Pool for Filesystem Backups

```
ob> mkdev --type disk --attach osb:/data/osb-pool-0/fs --inervice \  
      --initialize --concurrentjobs 1 fs-pool-dev  
ob> lsdev -l  
fs-pool:  
  Device type:          disk pool  
  In service:          yes  
  Debug mode:         no  
  Capacity:           (not set)  
  Consumption:        2.3 GB  
  Free space goal:    (system default)  
  Concurrent jobs:    1  
  Blocking factor:    (default)  
  Max blocking factor: (default)  
  UUID:              af59a866-69fe-1034-97b2-08002752bc76  
  Attachment 1:  
    Host:             osb  
    Directory:       /data/osb-pool-0/fs
```


Create Datasets

```
ob> mkds --nq --input linux.ds
Input the new dataset contents.  Terminate with an EOF or a line
containing just a dot (".").
include host oel6
include path / {
exclude path /tmp
}
.
ob> mkds --nq --input solaris.ds
Input the new dataset contents.  Terminate with an EOF or a line
containing just a dot (".").
include host sol113
include path / {
exclude path /tmp
exclude name *.dbf
}
.
ob> lsds
Top level dataset directory:
OSB-CATALOG-DS
linux.ds
solaris.ds
```

Backup Filesystems

```
ob> backup --dataset linux.ds --restrict fs-pool@osb --go  
Info: backup request 1 (dataset linux.ds) submitted; job id is admin/1.  
ob> backup --dataset solaris.ds --restrict fs-pool@osb --go  
Info: backup request 2 (dataset solaris.ds) submitted; job id is admin/2.
```

Create Disk Pool for Database Backups

```
ob> mkdev --type disk --attach osb:/data/osb-pool-0/db --inservice \  
      --initialize --concurrentjobs 1 db-pool.dev  
ob> lsdev -l db-pool.dev  
db-pool.dev:  
  Device type:          disk pool  
  In service:          yes  
  Debug mode:          no  
  Capacity:            (not set)  
  Consumption:         0  
  Free space goal:     (system default)  
  Concurrent jobs:     1  
  Blocking factor:     (default)  
  Max blocking factor: (default)  
  UUID:                634ceca2-6ab3-1034-8576-08002752bc76  
  Attachment 1:  
    Host:               osb  
    Directory:          /data/osb-pool-0/db
```


Create Storage Selector for RMAN Backups

```
ob> mkssel --dbname * --host * --family RMAN-DEFAULT --restrict db-pool.dev@osb db.ssel
```

```
ob> lssel
```

Name	Database name	Database id	Host name	Content	Copy #	Media family	Device restriction	Resource wait time	Encryption
db.ssel	all	all	all	all	*	RMAN-DEFAULT	db-pool.dev@osb	1 hour	undefined

Preauth User oracle to allow RMAN Backups

```
ob> chuser admin --preauth *:oracle+rman  
ob> lsuser -l admin
```

Backup Database

```
RMAN> CONFIGURE DEFAULT DEVICE TYPE TO sbt_tape;
```

```
new RMAN configuration parameters:
```

```
CONFIGURE DEFAULT DEVICE TYPE TO 'SBT_TAPE';
```

```
new RMAN configuration parameters are successfully stored
```

```
RMAN> configure channel device type sbt parms 'ENV=(OB_DEVICE=db-pool.dev)';
```

```
old RMAN configuration parameters:
```

```
CONFIGURE CHANNEL DEVICE TYPE 'SBT_TAPE' PARMS 'env=(OB_DEVICE=db-pool.dev)';
```

```
new RMAN configuration parameters:
```

```
CONFIGURE CHANNEL DEVICE TYPE 'SBT_TAPE' PARMS 'ENV=(OB_DEVICE=db-pool.dev)';
```

```
new RMAN configuration parameters are successfully stored
```

Backup Database

```
RMAN> RMAN> backup database plus archivelog delete input;
```

```
Starting backup at 02-OCT-16  
using channel ORA_SBT_TAPE_1  
channel ORA_SBT_TAPE_1: starting full datafile backup set  
channel ORA_SBT_TAPE_1: specifying datafile(s) in backup set  
input datafile file number=00004 name=+DATA_DG/ORCL/DATAFILE/tbs_1.263.922808173  
input datafile file number=00001 name=+DATA_DG/ORCL/DATAFILE/system.259.922808157  
input datafile file number=00002 name=+DATA_DG/ORCL/DATAFILE/sysaux.260.922808165  
input datafile file number=00003 name=+DATA_DG/ORCL/DATAFILE/undotbs.261.922808169  
channel ORA_SBT_TAPE_1: starting piece 1 at 02-OCT-16  
channel ORA_SBT_TAPE_1: finished piece 1 at 02-OCT-16  
piece handle=05rhbuh1_1_1 tag=TAG20161002T143928 comment=API Version 2.0,MMS Version 12.1.0.2  
channel ORA_SBT_TAPE_1: backup set complete, elapsed time: 00:00:35  
Finished backup at 02-OCT-16
```

Oracle Secure Backup 12.1.0.2.1

Product Page

<https://www.oracle.com/database/secure-backup/index.html>

Oracle Secure Backup 12.1 on OTN (Overview, Downloads, Documentation, Community, Learn More)

<http://www.oracle.com/technetwork/database/database-technologies/secure-backup/overview/index.html>

Oracle Secure Backup 12.1 - Technical Overview

<http://www.oracle.com/technetwork/database/availability/osb-12-1-overview-2420295.pdf>

Oracle Optimized Solution for Oracle Secure Backup - A Technical Whitepaper

<http://www.oracle.com/technetwork/articles/systems-hardware-architecture/oo-soln-oracle-sb-350395.pdf>

Data Sheet

<http://www.oracle.com/technetwork/database/availability/osb-12-1-datasheet-2420469.pdf>

Downloads

<http://www.oracle.com/technetwork/testcontent/seckbackup-090231.html>

Documentation

http://docs.oracle.com/cd/E16926_01/index.html