Oracle Standard Edition with Dbvisit Standby

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Why Oracle Database Standard Edition?

- Cost Effective Enterprise-Grade RDBMS
- Fit for most use cases
- Can be easily enhanced by 3rd party software for additional features

Licensed per socket, 16 CPU Threads limit per instance, no database size or memory limitation, up to 3 Pluggable databases possible in single Container Database (starting with 19c), SEHA (Replacement for RAC since 19.7)

Dbvisit Company

- Dedicated software company with over 12 years experience
- Enterprise-class database continuity software = Gold Standard DR for Oracle Database Standard Edition
- Protecting thousands of customers databases in over 80 countries
- Global company with offices in North America, Europe & Asia Pacific
- Delivering fantastic world-class customer service & support
- Committed to an unequalled total cost of ownership.

Dbvisit partnership with Oracle

Oracle partner focused on Oracle replication for DR

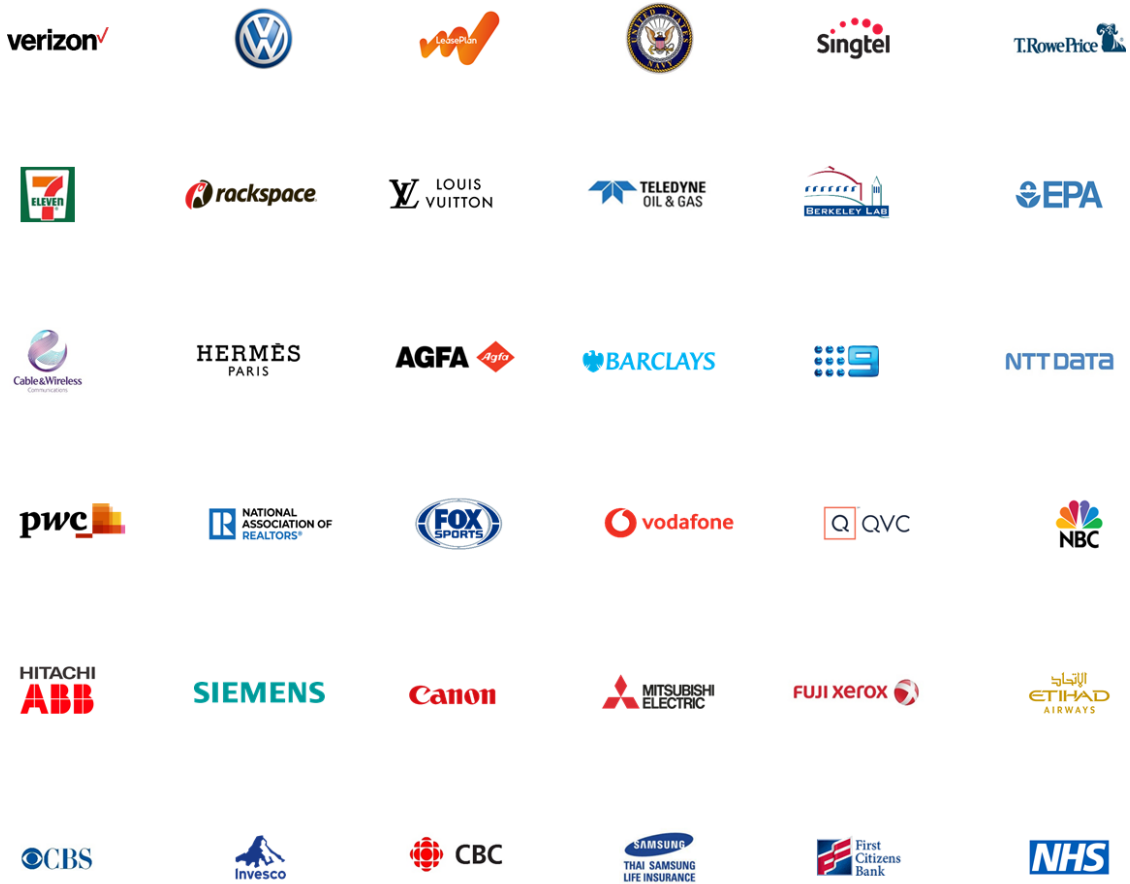
- Oracle Gold Partner
- Oracle Cloud Partner
- Oracle Database Appliance Optimized
- Complement Oracle solution

We care about all Oracle Standard Edition companies

ORACLE | Partner

Trusted by global brands

We're proud to work with organizations around the world, of all sizes, to keep their world in motion with our specialist database protection software.



WHAT IS STANDBY?

Enterprise-Class Disaster Recovery

- Provides remote synchronized Standby Database (transaction log synchronization)
- Deploy as Cloud, On-prem or Hybrid DR Solution
- Supports nearly all RDBMS versions
- Complete Standby database lifecycle is managed through web server GUI

Great RPO and RTO

RPO and RTO are counted in minutes

Oracle technology support

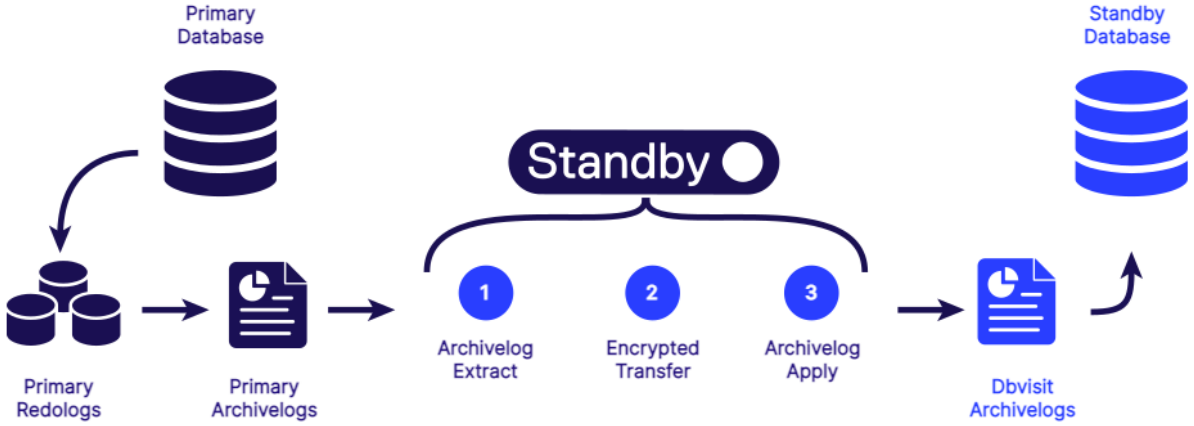
Standby™ supports ASM, RAC, SEHA*, PDBs

How Standby works

- Archived logs are transferred via Standby product to standby server and there applied to standby database

- Transfer is encrypted, can work with lower bandwidth and higher response time networks

- In case of network interruption archive logs transfers simply queue up and are sent one the standby site is available again



Automated operation

Archivelog shipping and apply are managed by daemon processes including forced logswitch on primary

Archivelog Apply Delay

It is possible to specify archivelog apply delay (transfer still happens immediately)

Standby in MOUNT

Standby database is at all times in MOUNT mode and can't be accessed for reading

Demo

Archivelog Synchronization

- Short Web server GUI tour
- Creating tablespace on Primary will get automatically synchronized with Standby

Standby

Standard Edition High Availability (SEHA)

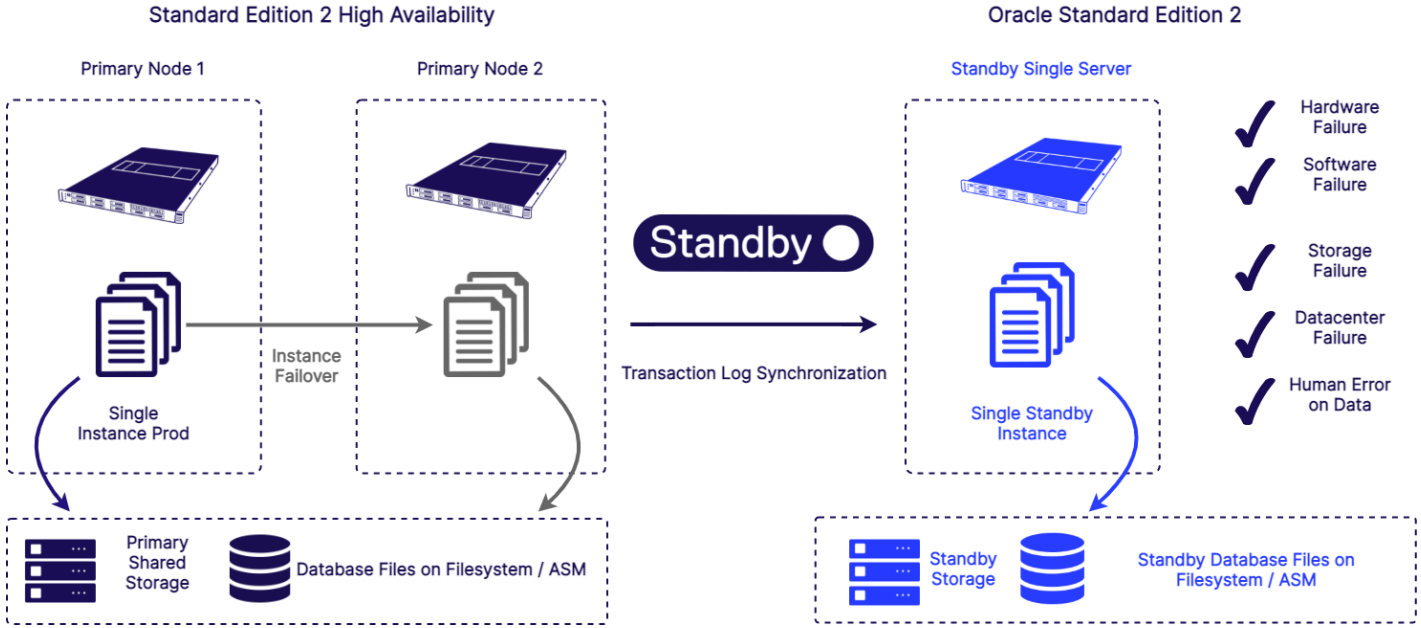
- No RAC allowed from 19c onwards for SE2
- Replacement is Standard Edition High Availability
- RAC = active / active, SEHA = active/passive
- Extremely easy to learn SEHA (same grid installation!)
- 10 day failover rule applicable for passive node!

```
(init parameter for SEHA database must be: cluster_database = false)


#this works in 19.7 and onwards - this is how to enable SEHA:
srvctl modify database -db PROD -node proddb1,proddb2


#throws an error in 19.3 and older versions:
srvctl modify database -db PROD -node proddb1,proddb2
PRKF-1125 : multiple values specified for the single value option "node":
proddb1,proddb2
```

Standby

Dbvisit & SEHA

- Perfect Combination of High Availability and Disaster Recovery
- Decide whether to use SEHA failover or Dbvisit failover
- Provides complete and most flexible protection including delay of archivelog apply on Standby database to prevent human errors



Pluggable Databases in 19c+ Standard Edition

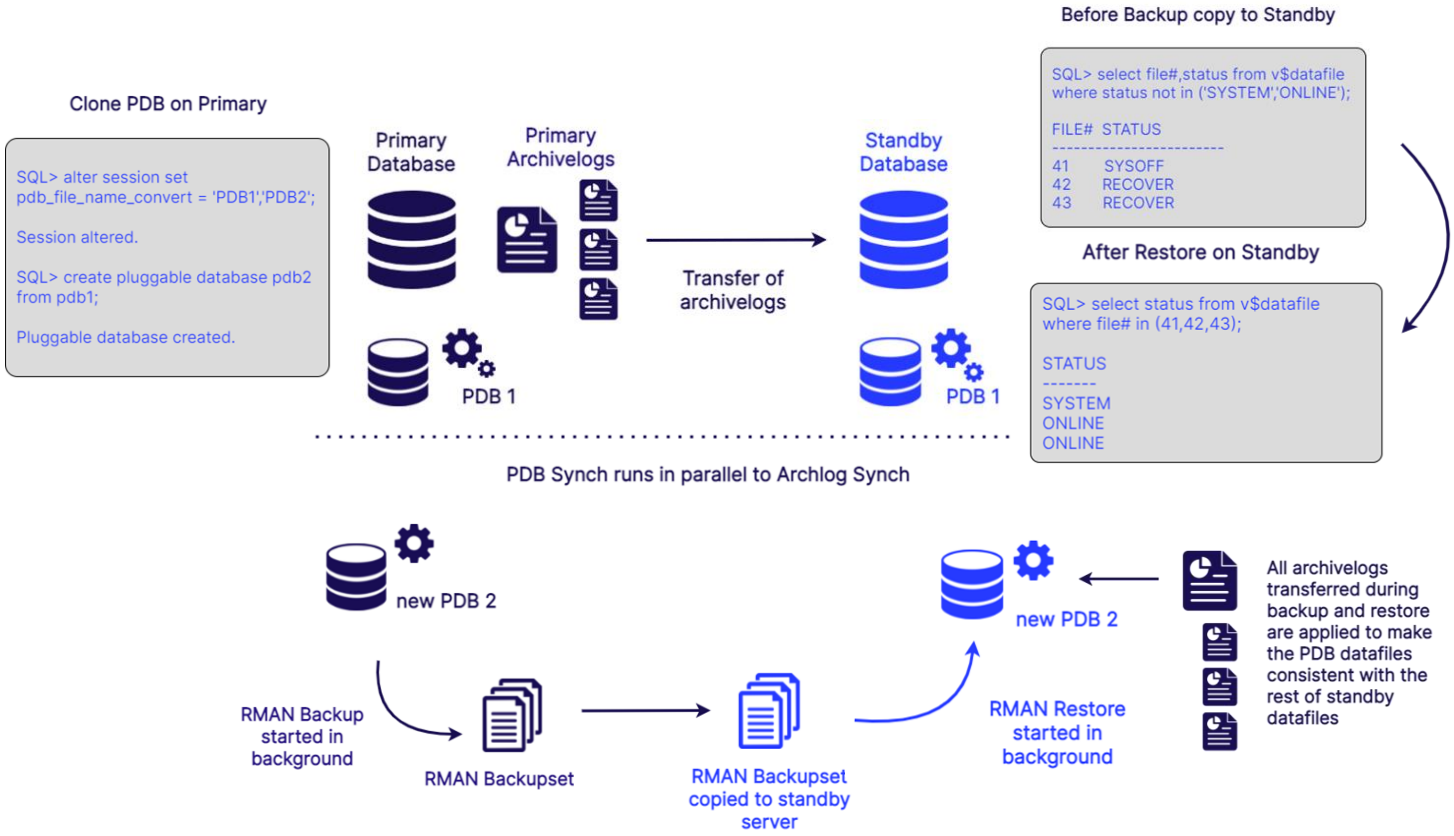
- Till 19c you were allowed only 1 PDB per CDB
- 19c onwards SE License allows 3 PDBs in 1 CDB
- Great consolidation tool (it’s free!)
- Early stages of adoption

Less effort for administration, better control for small sized applications schemas and less overhead, move data around.

Standby

PDB Synchronization

- PDB Synchronization happens in parallel to archivelog sync
- PDB is synchronized via compressed RMAN backup
- Until the PDB is fully restored on standby, the datafiles are on standby side in RECOVERY state



Using Standby Database for Other Purposes than DR

- It’s possible to use Standby database for reporting purpose
- Standby instance can be opened Read - Only (no archivelog apply possible!)

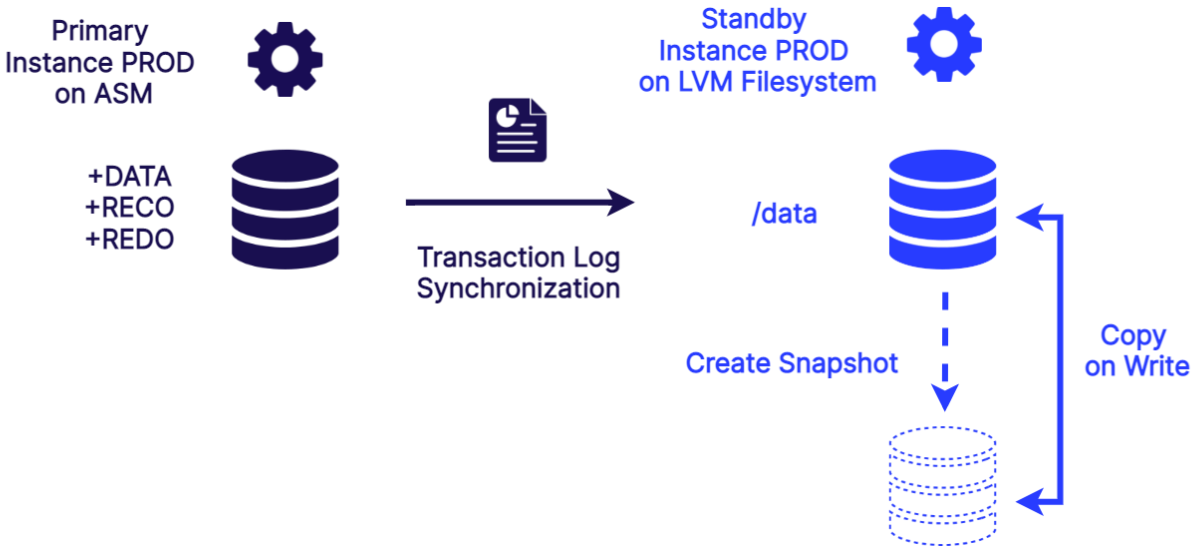
- It’s viable to activate Standby Database and use it for application upgrade testing
- Standby database has to be recreated after test is finished
- For duration of tests your primary is not protected

Although Standby database is only in recovery mode, full SE2 licence is needed for standby server. How to leverage this investment?

Standby

Standby Snapshots

- Create an almost instant ”copy” (snapshot) of your Standby Database and start Oracle Instance on it using Linux LVM
- Very Fast to create, use less storage than original
- Will use more space over time, Should be short Lived



✓ Snaphots on Linux only

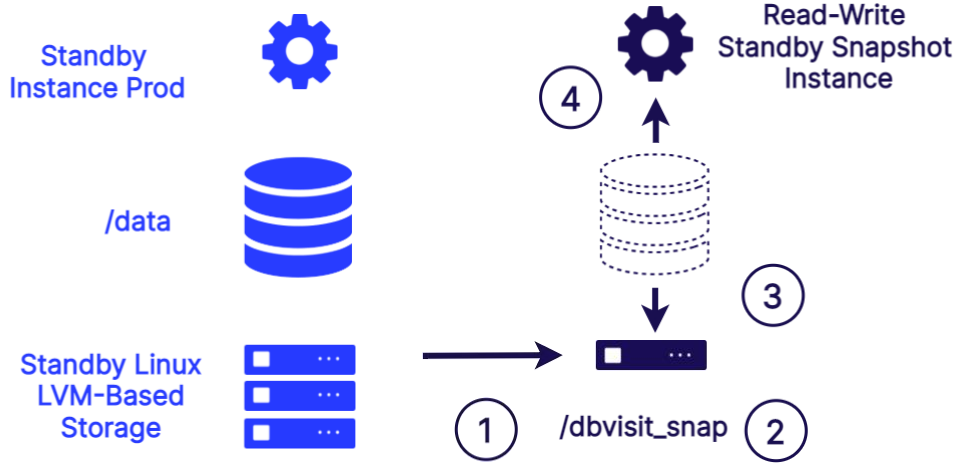
✓ Standby database files on single Logical volume

✓ Free Unallocated Space in Logical Volume Group

Standby

Standby Snapshots

- Snapshots creation and takes only minutes
- Effectively R/W copy of primary
- Easy create & delete
- Ideal for QA or for testing any DBA scripts



1. Create new snapshot type volume which is copy of /data (will contain all standby database files)
2. Mount new snapshot volume in new mountpoint ex. /dbvisit_snap
3. Recreate controlfile located on snapshot volume and point all paths to /dbvisit_snap
4. Activate Snapshot database and Open Snapshot Instance Read-Write

Conclusion

Standby Disaster Recovery

- With standard edition you get lot of features which can be enhanced further
- Standby provides you with DR solution which is easy to install and manage - install, setup & forget!
- Standby 10.1 supports fully PDB synchronization

Other features which we didn’t mention:

- ✔ Standby Snapshot (For Reporting – Linux Only)
- ✔ Switchover
- ✔ Incremental backup sync

Thank You

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