



THE SMART ALTERNATIVE

Why everyone talks about DR but so few have it?



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8/9/10g/11g OCP, RAC OCE, AS OCA, E-Business OCP, SQL/PLSQL OCA, Oracle 7 OCM

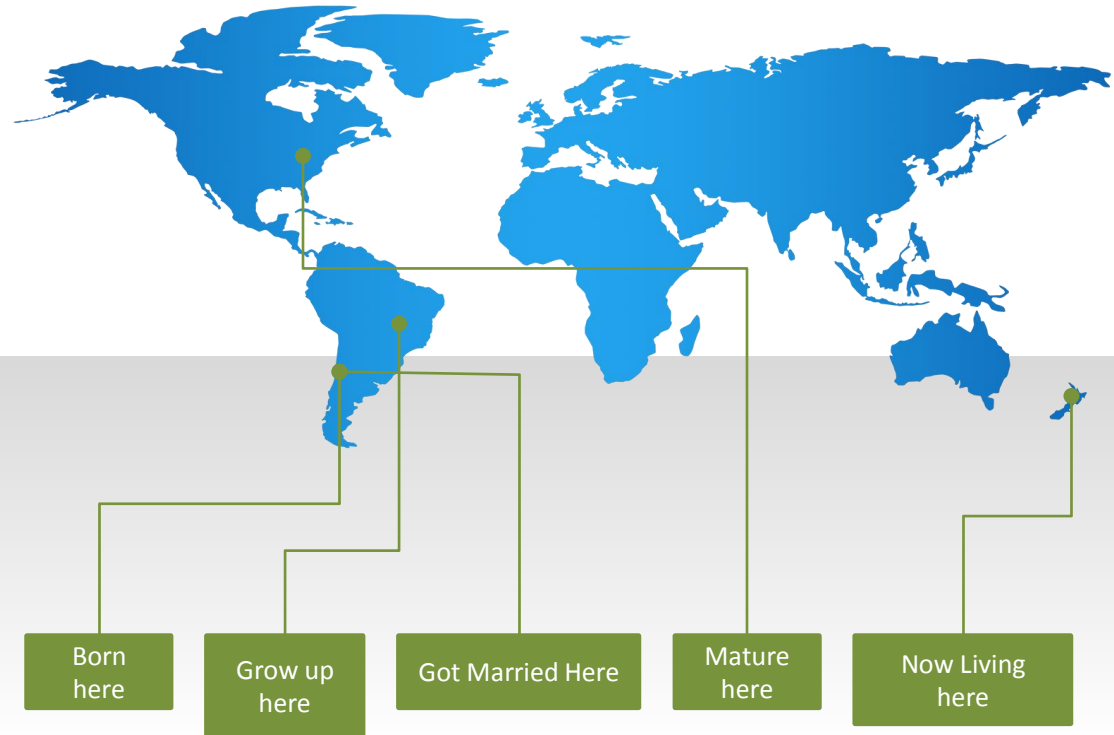
Oracle 7,11GR2, OVM 3 and 12cR1 Beta Tester

ITIL Certified

2010 ACE Director of the year by Oracle Magazine

Blog: www.oraclenz.org - Twitter : [fcomunoz](https://twitter.com/fcomunoz)

Ok, are you from ...?



Today's Agenda



- Disaster Recovery
- Options available?
- Why only few use it?
- Other Options/Solutions?
- Q&A

Disaster and Recovery

As a DBA, you are the person responsible for recovering the data and guard the business continuity of your organization. Consequently, you have the key responsibility for developing, deploying, and managing an efficient backup and recovery strategy for your institution or clients that will allow them to easily recover from any possible disastrous situation. Remember, data is one of the most important assets a company can have. Most organizations could not survive after the loss of this important asset.

Disaster Recovery

Disaster Recovery (DR) is seen as

- Process
- Policies
- Procedures

Established to ensure recovery and continuation of

- Infrastructure
- Applications
- Databases

All of which is critical to the **Business Continuation**

Why Bother With Disaster Recovery?

- Most critical asset of companies today: Database
- Must be protected against disaster:
 - Hardware Failure
 - Human Error
 - Natural Disasters
- To ensure business continuity

(93% of businesses that suffer significant data loss are out of business in 5 years – US Labor Department)

Best way to protect your database AND your business: **Standby Database**

The traditional options

OSE/OSEO

- For Oracle Standard Edition One/ Oracle Standard Edition
 - Implement a Home build Solution using scripts

Some side effects can include a combination of:

- Risk/Panic
- High Maintenance Costs
- High Management Costs

Building your own DR Solution

It seems easy so what is so hard about it?

Account for the following:

- Robustness, when all else fails this has to work
- Completeness handle all Oracle errors and network failures
- Differences in Oracle versions
- Automatic continuation of log shipping when some nodes are down (RAC)
- Documentation and training
- Automation of creation of standby database
- Complexities of ASM, OMF, RAC
- Graceful switchover

OEE

- For Oracle Enterprise Edition
 - Use of Data Guard

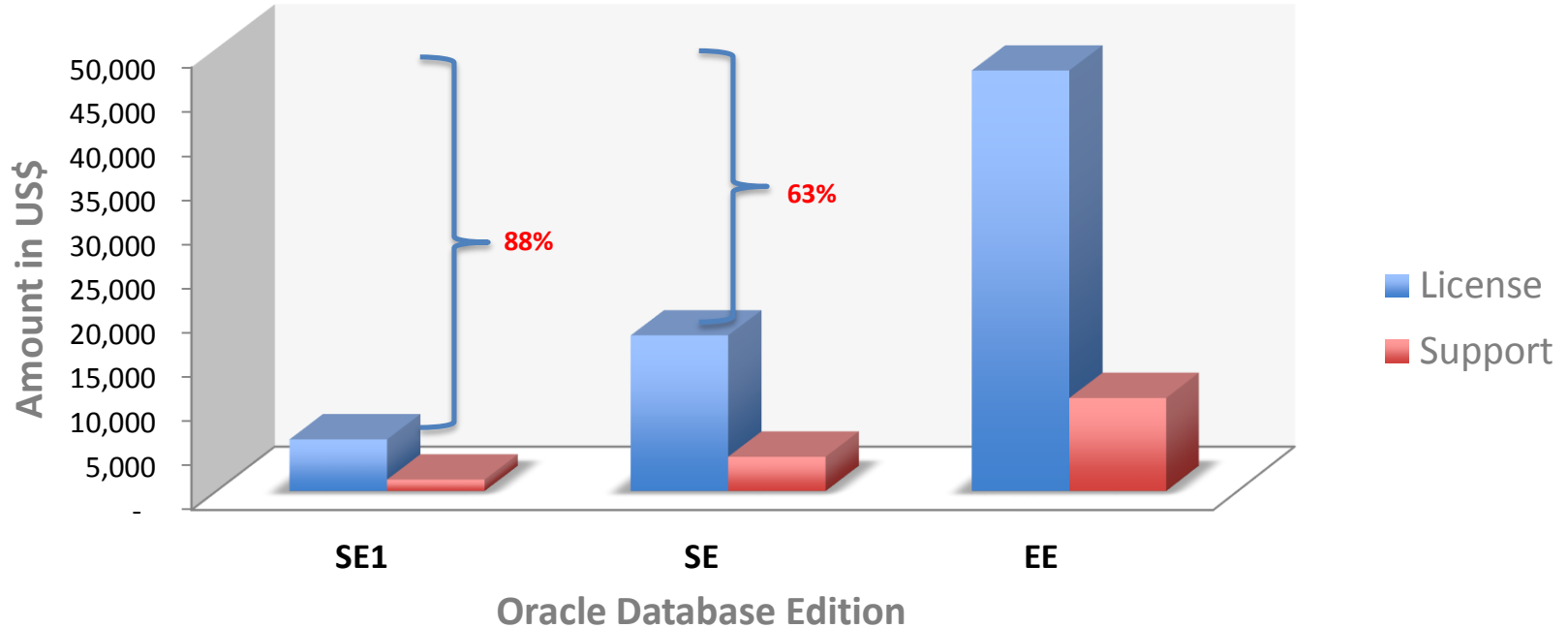
Some side effects can include a combination of:

- High Implementation Costs (Needs to have OEE on both sides – Primary and DR)
- High Maintenance Costs (Will need to pay support for two OEE environments for life)

Why only few use it?

License Cost

One Processor License Comparison



Cost Comparison



Database Option / Edition	Named User Plus License		Processor License	
	Per User	Support	Processor ¹	Support
Oracle Database SE1	180.00	39.60	5,800.00	1,276.00
Oracle Database SE	350.00	77.00	17,500.00	3,850.00
Oracle Database EE	950.00	209.00	47,500.00	10,450.00
Oracle Real Application Clusters	460.00	101.20	23,000.00	5,060.00
Active Data Guard	200.00	44.00	10,000.00	2,200.00

¹ For SE and SE1, one CPU socket = 1 Processor. For EE refer to the processor core factor table to establish correct processor count.
 For more details on pricing, see the Oracle Price lists available at: <http://www.oracle.com/us/corporate/pricing/price-lists/index.html>

Scenario 1

Primary

Production Environment:

- Server: 1 Quad core processors, 16 GB RAM
- Oracle: Oracle Database Enterprise Edition
- OS: RHEL 5.3

Costs:

- Production: 4 cores * 0.5= 2 cores to license
- Oracle License: US\$ 95,000.00 + 20,900.00

Secondary

DR Environment:

- Server: 1 Quad core processors, 16 GB RAM
- Oracle: Oracle Database Enterprise Edition
- OS: RHEL 5.3

Costs:

- Production: 4 cores * 0.5= 2 cores to license
- Oracle License: US\$ 95,000.00 + 20,900.00



US\$ 231,800.00

Scenario 2

Primary

Production Environment:

- Server: 2 Quad core processors, 32 GB RAM
- Oracle: Oracle Database Enterprise Edition
- OS: RHEL 5.3

Costs:

- Production: 8 cores * 0.5= 4 cores to license
- Oracle License: US\$ 190,000.00 + 41,800.00

Secondary

DR Environment:

- Server: 2 Quad core processors, 32 GB RAM
- Oracle: Oracle Database Enterprise Edition
- OS: RHEL 5.3

Costs:

- Production: 8 cores * 0.5= 4 cores to license
- Oracle License: US\$ 190,000.00 + 41,800.00



US\$ 463,600.00

Scenario 3

Primary

Production Environment:

- Server: 2 Quad core processors, 32 GB RAM
- Oracle: Oracle Database Standard Edition
- OS: RHEL 5.3

Costs:

- Production: 2 sockets to license
- Oracle License: US\$ 35,000.00 + 7,700.00

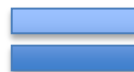
Secondary

DR Environment:

- Server: 2 Quad core processors, 32 GB RAM
- Oracle: Oracle Database Standard Edition
- OS: RHEL 5.3

Costs:

- Production: 2 sockets to license
- Oracle License: US\$ 35,000.00 + 7,700.00



US\$ 85,400.00

Scenario 4

Primary

Production Environment:

- Server: 2 Quad core processors, 32 GB RAM
- Oracle: Oracle Database Standard Edition One
- OS: RHEL 5.3

Costs:

- Production: 2 sockets to license
- Oracle License: US\$ 11,600.00 + 2,552.00



Secondary

DR Environment:

- Server: 2 Quad core processors, 32 GB RAM
- Oracle: Oracle Database Standard Edition One
- OS: RHEL 5.3

Costs:

- Production: 2 sockets to license
- Oracle License: US\$ 11,600.00 + 2,552.00



US\$ 28,304.00

Scenario 5 - RAC

Primary

Production Environment:

- Server: 2 Quad core processors, 32 GB RAM
- Oracle: Oracle Database Enterprise Edition
- 2 Nodes RAC
- OS: RHEL 5.3



Costs:

- Production: 16 cores * 0.5= 8 cores to license
- Oracle License: US\$ 380,000.00 + 83,600.00
- Oracle RAC License: US\$ 184,000.00 + 40,480.00



US\$ 919,880.00

Secondary

DR Environment:

- Server: 2 Quad core processors, 32 GB RAM
- Oracle: Oracle Database Standard Edition One
- OS: RHEL 5.3

Costs:

- Production: 2 sockets to license
- Oracle License: US\$ 190,000.00 + 41,800.00

Any Other Options?

Dbvisit



- Used in 80+ Countries
- Trusted by 600+ Companies
- Worldwide leader in disaster recovery solutions for Oracle Standard Edition
- Exceptional Product Engineers with “**real world**” DBA Experience
- Two Oracle 11g Certified Masters
- Regular presenters at Oracle events such as OOW and Collaborate
- Passionate about Oracle Technology





Model N



Mercedes-Benz



Alcatel-Lucent



Product Lineup



World-leading Disaster Recovery
Solution for the
Oracle SE database



Affordable Alternative to GoldenGate: –
Data Replication for
Oracle-sourced databases

Two Replication Types

Physical Replication



- “One on one” copy of the primary database in permanent recovery
- Use redo apply to keep up to date
- 100% binary copy, database are exact replicas
- Referred to as a standby database
- **Best suited for DR**

Logical Replication



- Independent 2nd database in sync by replication mechanism
- Uses SQL statements to keep up to date
- Subset of data is replicated
- Cross version, cross platform
- Separate physical database structure
- **Best suited for information sharing, migrations, real-time reporting etc**

Dbvisit Standby

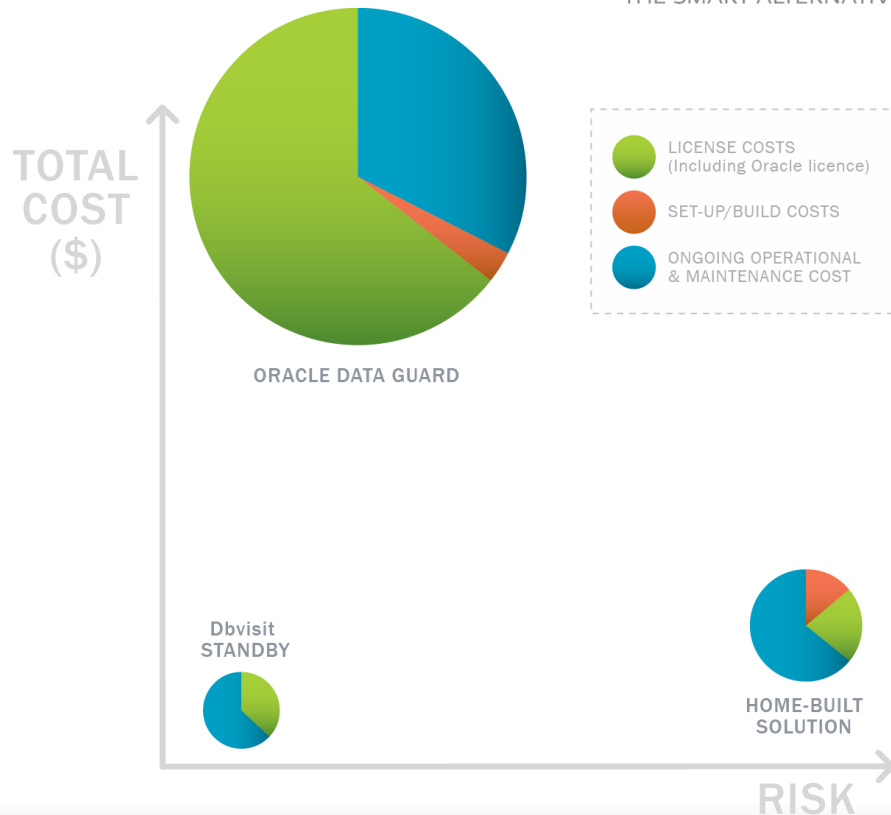


- Physical data replication
- “Oracle Data Guard” for Standard Edition
- Easy to install, configure, use and manage
- Creates the standby database
- Support for RAC, OMF and ASM
- Support for Oracle 8i forwards, EE, SE, SE One and XE
- Broad OS compatibility
 - Oracle Linux, Oracle Solaris, Windows, AIX, HP-UX, VM
- Cloud deployment on Amazon AWS

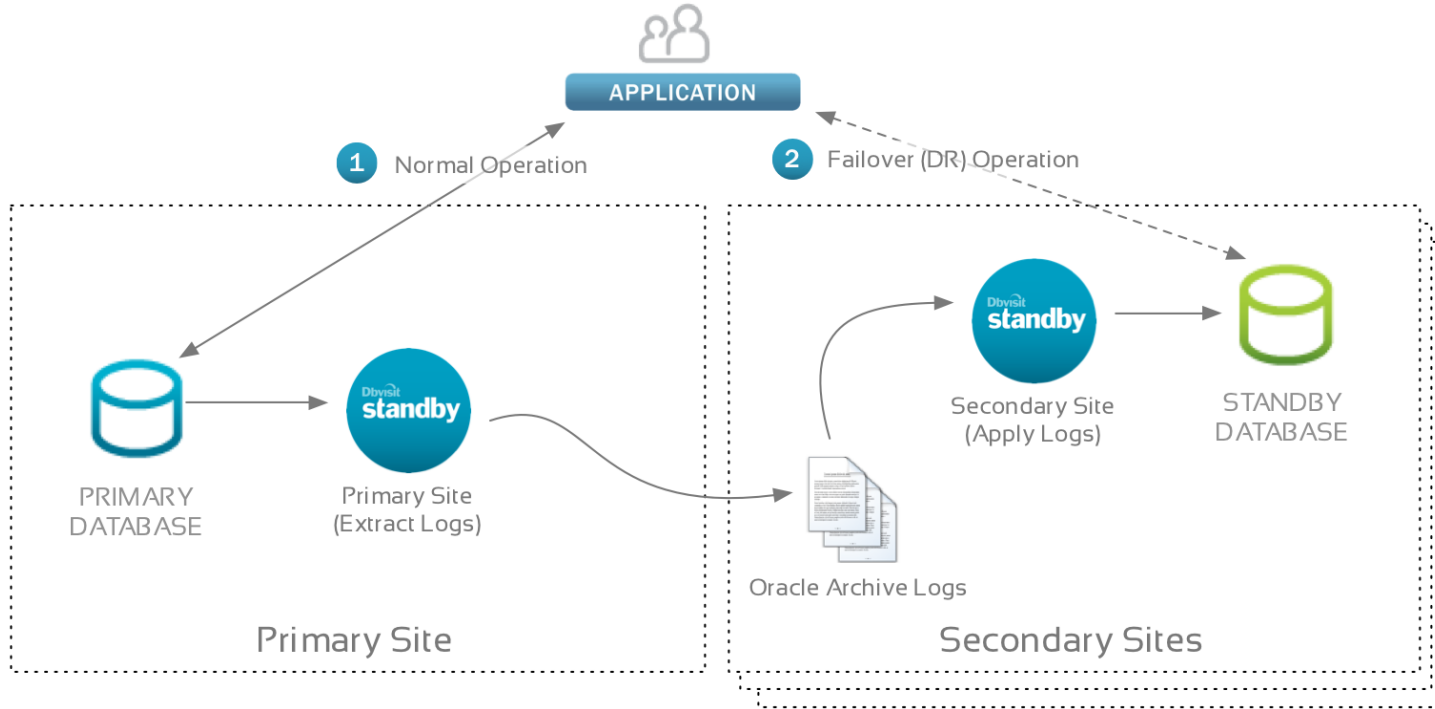


Standby Database options

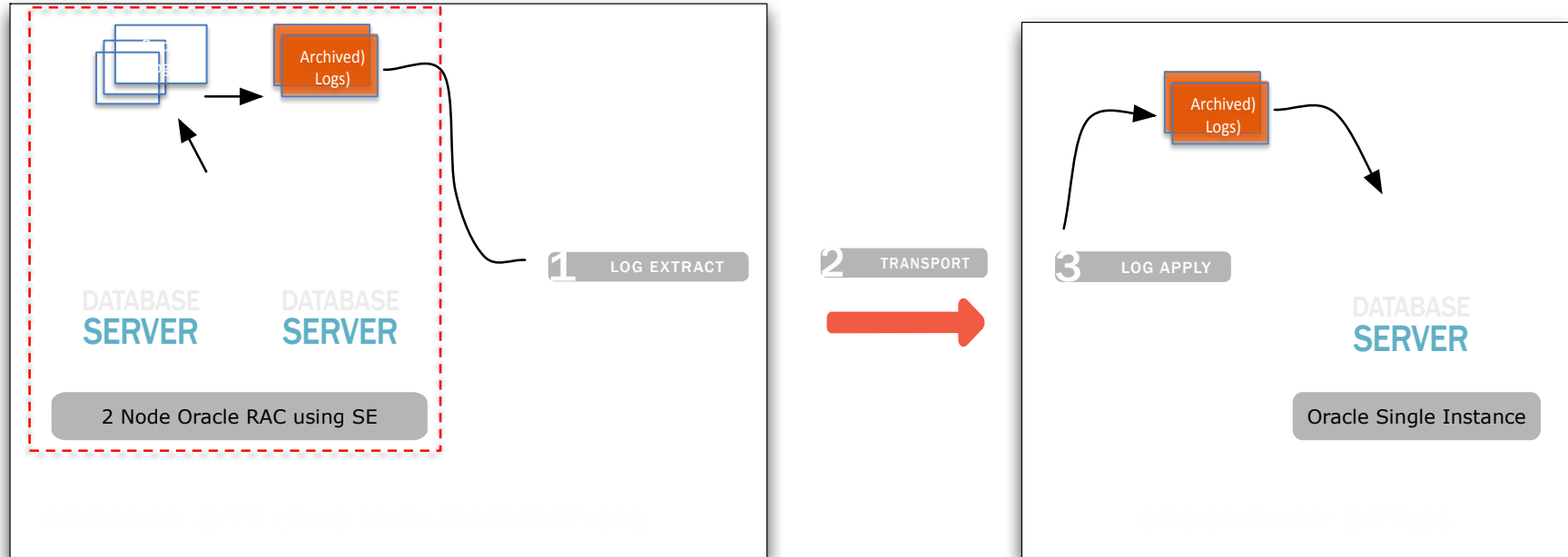
1. Data Guard (requires Oracle EE)
2. Do it yourself
 - sounds easier than it is
3. Third party products such as
 - Dbvisit Standby



Standby Database using Dbvisit Standby



Oracle RAC + Standby Database with SE



Dbvisit Standby



Advantages

- GUI or Command line interface
- Same underlying architecture as Data Guard
- Standby database is 100% copy, offload backups
- Efficient using redo recovery

Disadvantages

- No support for cross platform, cross databases versions
- At best standby is READ-ONLY (except with Active Data Guard)
- Not selective in replication, all or nothing.
- Failover is not done lightly

Standby Database Features



- Core Function – Send and Apply Redo
- Creates the standby database automatically
- Reporting standby database
 - Open Standby Read-Only
- Internal Dbvisit Standby Reporting
 - Archive / Transfer log gap reporting
- 20+ APIs
- Resynchronize Standby Database
 - Missing or Corrupt archive logs not yet applied to standby
 - Nologging operations was performed on Primary

Standby Database Features

Failover

- Activates the standby database in the event of DR
- Initiates a resetlogs (redo logs are created)
- There is no going back (unless using flashback - EE)
- Potential for dataloss

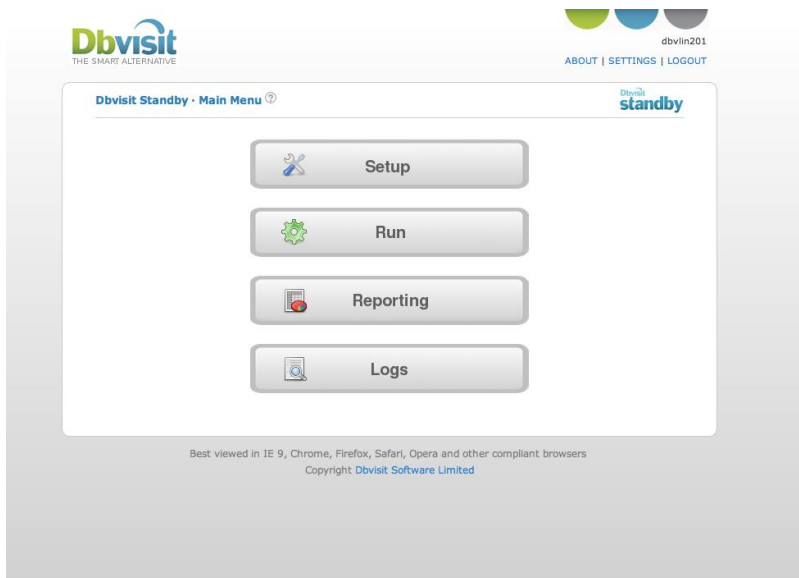
Switchover (role reversal)

- Is used for planned maintenance on primary server
- Switches database roles
- Increase availability on database
- Small outage required
- No data loss

Favored by DBAs

- Our customers are DBAs
- Our products are built specifically for DBAs
- Make their life easier
- Do more on a limited budget
- Add real value to Oracle Standard Edition
- Our support is provided by DBAs
- Built by DBAs for DBAs

Dbvisit Standby GUI Interface

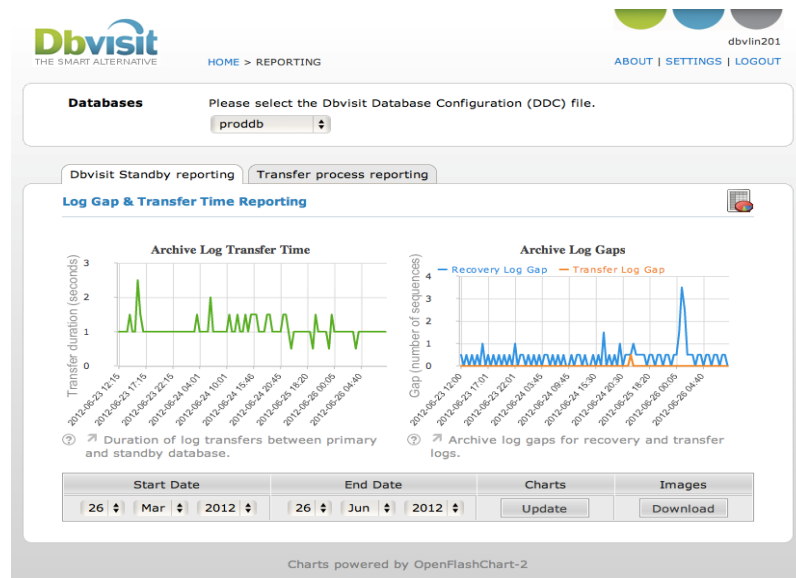


Dbvisit Standby · Main Menu [?]

Dbvisit standby

- Setup
- Run
- Reporting
- Logs

Best viewed in IE 9, Chrome, Firefox, Safari, Opera and other compliant browsers
Copyright Dbvisit Software Limited



Dbvisit Standby reporting | Transfer process reporting

Log Gap & Transfer Time Reporting

Databases Please select the Dbvisit Database Configuration (DC) file.
proddb

Archive Log Transfer Time

Transfer duration (seconds)

Archive Log Gaps

Gap (number of sequences)
Recovery Log Gap | Transfer Log Gap

Duration of log transfers between primary and standby database.

Archive log gaps for recovery and transfer logs.

Start Date	End Date	Charts	Images
26 Mar 2012	26 Jun 2012	Update	Download

Charts powered by OpenFlashChart-2

Any Other Option Now?

Scenario 1- Using OSE

Primary

Production Environment:

- Server: 2 Quad core processors, 32 GB RAM
- Oracle: Oracle Database Standard Edition
- OS: RHEL 5.3



Costs:

- Production: 2 sockets to license
- Oracle License: US\$ 35,000.00 + 7,700.00
- Dbvisit Standby: US\$ 4,176.00 + 1,044.00



Secondary

DR Environment:

- Server: 2 Quad core processors, 32 GB RAM
- Oracle: Oracle Database Standard Edition
- OS: RHEL 5.3

Costs:

- Production: 2 sockets to license
- Oracle License: US\$ 35,000.00 + 7,700.00

US\$ 90,620.00 vs. US\$ 463,600.00

Scenario 2 – Using OSE + OVM

Primary

Production Environment:

- Server: Guest with 8 vCPUs, 32 GB RAM
- Oracle: Oracle Database Standard Edition
- OS: RHEL 5.3

Costs:

- Production: 1 socket to license
- Oracle License: US\$ 17,500.00 + 3,850.00
- Dbvisit Standby: US\$ 4,176.00 + 1,044.00

Secondary

DR Environment:

- Server: Guest with 8 vCPUs, 32 GB RAM
- Oracle: Oracle Database Standard Edition
- OS: RHEL 5.3

Costs:

- Production: 1 socket to license
- Oracle License: US\$ 17,500.00 + 3,850.00



US\$ 47,920.00 vs. US\$ 90,620.00 vs. US\$ 463,600.00

Scenario 3 – Using OSEO

Primary

Production Environment:

- Server: 2 Quad core processors, 32 GB RAM
- Oracle: Oracle Database Standard Edition One
- OS: RHEL 5.3



Costs:

- Production: 2 sockets to license
- Oracle License: US\$ 11,600.00 + 2,552.00
- Dbvisit Standby: US\$ 4,176.00 + 1,044.00



Secondary

DR Environment:

- Server: 2 Quad core processors, 32 GB RAM
- Oracle: Oracle Database Standard Edition One
- OS: RHEL 5.3

Costs:

- Production: 2 sockets to license
- Oracle License: US\$ 11,600.00 + 2,552.00

US\$ 33,524.00 vs. US\$ 463,600.00

Scenario 4 – Using OSEO + OVM

Primary

Production Environment:

- Server: Guest with 8 vCPUs, 32 GB RAM
- Oracle: Oracle Database Standard Edition One
- OS: RHEL 5.3



Costs:

- Production: 1 socket to license
- Oracle License: US\$ 5,800.00 + 1,276.00
- Dbvisit Standby: US\$ 4,176.00 + 1,044.00



Secondary

DR Environment:

- Server: Guest with 8 vCPUs, 32 GB RAM
- Oracle: Oracle Database Standard Edition One
- OS: RHEL 5.3

Costs:

- Production: 1 socket to license
- Oracle License: US\$ 5,800.00 + 1,276.00

US\$ 19,372.00 vs. US\$ 33,524.00 vs. US\$ 463,600.00

Scenario 5- Using OSE + RAC

Primary

Production Environment:

- Server: 2 Quad core processors, 32 GB RAM
- Oracle: Oracle Database Standard Edition
- 2 nodes RAC
- OS: RHEL 5.3

Costs:

- Production: 2 sockets to license
- Oracle License: US\$ 70,000.00 + 15,400.00
- RAC License: FREE
- Dbvisit Standby: US\$ 9,514.00 + 2,379.00



Secondary

DR Environment:

- Server: 2 Quad core processors, 32 GB RAM
- Oracle: Oracle Database Standard Edition
- OS: RHEL 5.3

Costs:

- Production: 2 sockets to license
- Oracle License: US\$ 35,000.00 + 7,700.00



US\$ 139,993.00 vs. US\$ 919,880.00

Scenario 6 – Using OSE + OVM + RAC

Primary

Production Environment:

- Server: Guest with 8 vCPUs, 32 GB RAM
- Oracle: Oracle Database Standard Edition
- 2 Nodes RAC
- OS: RHEL 5.3

Costs:

- Production: 2 socket to license
- Oracle License: US\$ 35,000.00 + 7,700.00
- RAC License: FREE
- Dbvisit Standby: US\$ 9,514.00 + 2,379.00



Secondary

DR Environment:

- Server: Guest with 8 vCPUs, 32 GB RAM
- Oracle: Oracle Database Standard Edition
- OS: RHEL 5.3



Costs:

- Production: 1 socket to license
- Oracle License: US\$ 17,500.00 + 3,850.00

US\$ 75,943.00 vs. US\$ 139,993.00 vs. US\$ 919,880.00

Questions?

As you can see:

ORACLE =  ELCARO 

ELCARO in Spanish means,
the Expensive!

But, as we already saw,
with DBVISIT it becomes,
the UNEXPENSIVE!!

Take a Test Drive Today!



Dbvisit DATABASE REPLICATION

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Solutions Products Pricing Customers Partners Support Company Contact

Proven products, a dynamic team dedicated to helping to grow your business

Click here to learn about our Partner Program >

Ready for a Test Drive?

Disaster recovery
A complete tool to create and maintain Oracle standby databases

Data distribution
Keep your data synchronized across multiple databases & sites

Data migration
Efficiently migrate large databases with minimal downtime

Reporting databases
Create reporting environments in Oracle, MySQL and SQL Server

NEWS UPDATE: Dbvisit Replicate 2.5.12 release to website (4 Nov 2013) [READ MORE >](#)

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Dbvisit standby

Dbvisit Standby for Oracle Standard Edition disaster recovery

#1 Alternative to Data Guard

Save up to 80% on Oracle® licensing costs. Easily manage and create Oracle Standard Edition (SE) standby databases - [Data Guard alternative](#). It's simple and hassle free!

[TRY A FREE TEST DRIVE](#)

[FIND OUT MORE](#)



Other Resources

- Dbvisit Web Site – <http://www.dbvisit.com>
- Dbvisit Online Documentation - <http://www.dbvisit.com/support/resources/>
- Case studies - http://www.dbvisit.com/customers/case_studies/
- Dbvisit Forums - <http://www.dbvisit.com/forums/>
- Dbvisit Blog - <http://blog.dbvisit.com/>
- Dbvisit Service Desk - http://www.dbvisit.com/support/service_desk/

Other Resources



Oracle Database 12c Backup and Recovery Survival Guide

A comprehensive guide for every DBA to learn recovery and backup solutions

Francisco Munoz Alvarez
Aman Sharma

[PACKT] enterprise
PUBLISHING



THE SMART ALTERNATIVE