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Reducing Software License Costs

Disaster Recovery

and Oracle Technology Licensing

A License Consulting / Cerno White Paper

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Oracle clients frequently ask if/how they should license Disaster Recovery (DR) sites for Oracle Technology programs. This white paper aims to provide users of Oracle software with the variables to consider. Talking points are:

1. How Oracle answers the question

Clients who ask Oracle how to license DR sites are referred to this Oracle white paper[1]. This document however only refers to 'Data Recovery': indeed, the words 'Disaster Recovery' are not used.

It seeks to describe data recovery environments as either being deployment of a clustered environment with failover OR copying, synchronizing or remote mirroring of data.

This particular policy/guideline/white paper then appears to grant certain concessions to users: right to run a failover environment for up to 10 days; and a right to run the database up to 4 times per calendar year each for up to 2 days for testing purposes.

So, your assumption is naturally that, if Oracle has granted this concessionary usage, that (a) this represents the full usage available to the customer for DR environments and (b) that the conditions stated are legally binding on the customer.

This is what your account manager and Oracle LMS have been trained to assert (and believe): these views are then imposed on you - the customer.

But like a raft of other Oracle customer-facing statements, this document declares that it is for '*educational purposes only'* and only provides '*guidelines'* as to Oracle '*policies'*. And then, to be clear, it declares that it *'may not be incorporated into any contract and does not constitute a contract or a commitment to any specific terms'.*

So, in truth this document is a worthless distraction - no reliance can or should be placed on it by Oracle or by the customer. Similar to other [2] white papers[3] randomly created[4] by Oracle[5], clients should disregard this white paper. Oracle creates, and at random modifies or abandons such documents: in fact, the Oracle Software Investment Guide (SIG) -announced in 2002[6] – has always been promoted as *'the'* licensing guideline for Oracle software and received many updates. At the time of writing it can no longer be found on Oracle.com while still being referred to in Oracle's product documentation[7]. Rumours say the SIG may reappear.

1. https://www.oracle.com/assets/data-recovery-licensing-070587.pdf
2. https://www.oracle.com/assets/databaselicensing-070584.pdf
3. https://www.oracle.com/assets/partitioning-070609.pdf
4. https://www.oracle.com/assets/cloud-licensing-070579.pdf
5. https://www.oracle.com/assets/forms-reports-070602.pdf
6. http://www.scoop.co.nz/stories/SC0209/S00019.htm
7. https://docs.oracle.com/en/database/oracle/oracle-database/18/dblic/Licensing-Information.html#GUID-F796455D-C7EF-4836-9F69-2BCCDA49B7BD

2. What is defined in your License Agreement

Your rights (and indeed Oracle's rights) are solely determined by your license agreement together with any other documents that are correctly and obviously incorporated therein.

There are rules as to the requirements that other documents, incorporated only by reference in your agreement, must be sufficiently brought to your attention: a licensing guide or policy that simply sits on Oracle's website is not, by reason of that, adequately notified to the customer.

In particular, it is arguable that a simple link (for instancing to oracle.com/contracts and multiple links from there to numerous subsidiary web pages and 100s of documents and policies is not legally adequate to incorporate all those documents into the relationship between Oracle and the customer. In other words, they may not be binding.

For most clients, their agreement with Oracle consists principally of one or multiple **General Terms** as well as one or more **Ordering Documents.**

A. General terms

The General Terms can be found here[8]. They are referred to as the OMA (*Oracle Master Agreement*) and/or OLSA (*Oracle License and Services Agreement*). Multiple historic versions may exist. Schedule P is the schedule relating to programs.

It is important to note that the 'older versions' repository on Oracle's website is extremely incomplete, and that, regardless of what you read online or Oracle LMS assert, it is the OMA and/or OLSA that you executed (or accepted) when first ordering the relevant programs that exclusively determines your contract with Oracle.

So what is the position relating to DR? In the programs schedule (P), it says only this:

> *2.4 You may make a sufficient number of copies of each Program for Your licensed use and one copy of each Program media.*

Some versions of the OMA contain wording around testing backups. Unfortunately, and unlike Microsoft[9], Oracle has kept no central repository of all variations of terms that were included by default. However, many OMA / OLSA contracts (including those provided today) contain this additional wording:

> *"**Testing:** For the purpose of testing physical copies of backups, Your license for the Oracle Database (Enterprise Edition, Standard Edition or Standard Edition One) includes the right to run the database on an unlicensed computer for up to four times, not exceeding 2 days per testing, in any given calendar year. The aforementioned right does not cover any other data recovery method - such as remote mirroring - where the Oracle Program binary files are copied or synchronized. "*

So, what do we conclude from this?

First, this right is one that is '*included'* in your license: it is additional to your other rights. It is also additional to the rights granted to you by law (see: *Do copyright laws give additional permissions?* below). Your basic grant (see our discussion of the General Terms above) does not cross-reference to the Testing section nor is cut down by it.

This Testing section refers to testing of (undefined) '*physical copies of backups'* - the limited right to run the database on an unlicensed computer and, specifically, that this particular clause does not extend to other data recovery methods - such as remote mirroring.

However, nowhere is there agreed or defined:

a) what a '*physical copy' or 'backup'* is;
b) what the definition of '*remote mirroring'* is;
c) what the restrictions are for such remote mirroring environments.

Second, it could be interpreted that such usage is already permitted by the General Terms with usage permitted on (already) licensed computers. This particular section refers to '*unlicensed'* computers – not to licensed computers (or processors).

Oracle's position in audit situations is to maintain that remote mirroring (and/or DR) is not explicitly addressed in the General Terms and is not encompassed by their (non-binding) white paper: accordingly it must be fully licensed and paid-for. But as may be seen, there is considerable ambiguity here and, with a forensic and objective assessment of Oracle's own license wording, their position is not one that should be automatically accepted.

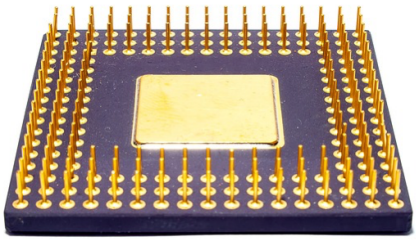
8. https://www.oracle.com/corporate/contracts/contract-documents/master-agreement.html
9. https://www.microsoft.com/en-us/licensing/product-licensing/products

B. Ordering Documents

Further definitions and restrictions are found in your Ordering Documents, which are not available online. The Ordering documents were signed while originally purchasing each licensed program, and contain the license fees and the first year support values.

The ordering document itself contains the definitions which mandate how to quantify the licenses required. These definitions are also part of the General Terms. Because NUP (Named User Plus) definitions relate to the underlying Processor counts (for the purpose of meeting minimum quantity requirements per Processor), we limit our discussion here to the Processor definition. In your ordering document there is invariably stated that:

> *'**Processor**: shall be defined as all processors where the Oracle Programs are installed and/or running'.*



Furthermore, the issue of the "Processor" quantity is (oddly) determined within the Definitions section:

> *'The number of required licenses shall be determined by multiplying the total number of cores of the processor* by a core processor licensing factor specified on the Oracle Processor Core Factor Table which can be accessed at http://oracle.com/contracts.'*
> **defined as: "all processors where the Oracle Programs are installed and/or running"*

And so, this provision is intended to be an instruction as to how to count the number of licenses for those '*Processors …where the Oracle Programs are installed and/or running".*

Oracle provides this definition despite:

- it being a circular definition (A Processor is a processor) and therefore arguably meaningless;
- no definition of '*installed'*;
- no definition of '*running'*; and
- the fact that Oracle software cannot be installed on a processor: indeed, Oracle's manual[10] requires users to install the Programs on a *disk* and not a '*Processor'*.

This leaves clients with only one possible definition of *Processor*:

> *'Processor: shall be defined as all processors where the Oracle Programs are ~~installed and/or~~ running*

And for the customer, it is of course readily possible to determine this '*running'* state for any operating system.

Once you have counted those processors that are running the program, then that determines the number of processor licenses required. If a processor is not running the program, no license fee is payable. This clearly allows cold standby.

10. https://docs.oracle.com/database/121/LADBI/inst_task.htm

3. Do copyright laws give additional permissions?

European Union laws have been successively harmonised over the last 20 years. Although there are occasional local variations the key permissions explicitly available are these:

- the making of a back-up copy; and
- observing, studying or testing the functioning of a program in order to determine the ideas or principles which underlie any element of the program whilst loading, displaying, running, transmitting or storing the program which the customer is entitled to do[1].

[1] Article 5 Directive 2009/24/EC of the *European* Parliament and of the Council of 23 April 2009 on the legal protection of computer programs

Exceptions to the restricted acts

These are set out in the EU 2009 Software Directive which covers all 28 member states and will also continue to apply to the United Kingdom. These provisions override contract wording eg in a licence agreement which seek to state that such actions are prohibited and require licensing.

As may be seen, these are very narrowly drafted but have to be considered in the context of the background wording which says:

> *'This means that the acts of loading and running necessary for the use of a copy of a program which has been lawfully acquired, and the act of correction of its errors, may not be prohibited by contract.'*

and that

> *'A person having a right to use a computer program should not be prevented from performing acts necessary to observe, study or test the functioning of the program, provided that those acts do not infringe the copyright in the program'*

There are also rights to allow reproduction (installation and running) of a program to achieve interoperability with another program[2].

Under US law, there are similar provisions. They also have a general 'fair use' exception but this is limited to '*the fair use of a copyrighted work, including such use … for purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research, is not an infringement of copyright.*.'

The question of fairness here also depends on a number of factors including commercial use and how substantial is the reproduction. It is doubtful that this might cover any usage of commercial software.

Separately, the US code has, in the context of computer programs, some quite archaic language referencing 'machines' but does explicitly allow the making of a copy provided it is an '*essential step in the utilization of the computer program...*' or making of a new copy is for archival purposes only. Nothing is said about running of the program eg in a DR context.

Australia's copyright act[3] has wider language including rights not only to create back-ups but also to run them. Canada, too, has provisions covering back-up copies and reproduction for interoperability needs. China's rules[4] do allow install and storage '*according to the needs of use'* and also to retain back-up copies against damage.

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1. In the absence of specific contractual provisions, the acts referred to in points (a) and (b) of Article 4(1) shall not require authorisation by the rightholder where they are necessary for the use of the computer program by the lawful acquirer in accordance with its intended purpose, including for error correction.

2. The making of a back-up copy by a person having a right to use the computer program may not be prevented by contract in so far as it is necessary for that use.

3. The person having a right to use a copy of a computer program shall be entitled, without the authorisation of the rightholder, to observe, study or test the functioning of the program in order to determine the ideas and principles which underlie any element of the program if he does so while performing any of the acts of loading, displaying, running, transmitting or storing the program which he is entitled to do.

[2] *Article 6, ibid*
[3] *https://www.legislation.gov.au/Details/C2017C00180*
[4] *Regulations on Computers Software Protection (Promulgated by Decree No. 339 of the State Council of the People's Republic of China on December 20, 2001, and effective as of January 1, 2002)*

It is possible that some of these legal provisions could be argued to be applicable to DR context. Certainly the making of back-up copies eg in cold standby must be permitted by most copyright laws. Continuous standby may not however be explicitly covered since this requires the running of the software rather than just its installation or occasional ad-hoc testing.

However given that back-up copies can (and should) be tested, and that they are specifically there for a recovery scenario, it is quite possible that, whatever Oracle's licenses may permit or deny, many forms of DR are lawful without need for additional licensing. The position however is uncertain with no prominent case law on this.

4. How your DR environment is configured

This white paper assumes that you are not *using* secondary site (and storage) at all, and that it is only configured to continue your business in case of a critical failure of your primary site. This entails that your DR environment is in a 'passive' state, meaning that you are not using the DR environment for your business, including but not limited to testing, development, read-only queries of databases etcetera.

The next important criteria is the software technology implemented to replicate your data.

5. Used technology to replicate data

Oracle Database replication

In order to replicate data from a database on the primary site to a secondary site (and secondary storage), clients can use different solutions. One is Oracle's own Active Data Guard, which is included within Oracle Database Enterprise Edition. This provides log shipping of archive log files.

In order to 'feed' the log files to the secondary site, a database instance is 'running' on both sites, which makes use of Oracle's proprietary software to enable replication at database level.

Note: the mere fact that ADG is included in Oracle Database does not, in itself, sanitise additional running of Oracle Database in a DR infrastructure.

Storage replication

At the storage level, replication is focused on a block of binary data. Replication may be done either on block devices or at the file-system level. In both cases, replication is dealing with unstructured binary data. The range of technologies for storage-level replication is very broad, from commodity RAID arrays to network file system, Storage Area Networks (SAN) and Network Attached Storage (NAS). Examples of software packages allowing this type of replication are:

- VMware Site Recovery Manager (SRM);
- EMC Recoverypoint ;
- VEEAM Backup & Replication

Contrary to Oracle's Active Data Guard solution, storage replication does not of itself require Oracle programs to be '*running'* on the primary *or* secondary site. It is the backup software that is synchronizing the entire data storage of the primary site, or the storage of specific file systems / virtual machines. The data may primarily be stored and managed within Oracle Database but the mirroring of that data – may not require parallel and remote running of another instance of Oracle database.

It will be seen from the above that there are clear permissions given by Oracle in its General Terms and also an overlay of laws that allow back-up /archival copies of Oracle technology and applications. Furthermore, Oracle's processor licensing is limited to processors which are running – not those just available for use.

Accordingly,

- a DR environment does not need to be licensed simply because it has a copy of Oracle software downloaded;
- Running of the software may also not be licensable if it is a natural and necessary part of archival and verification testing;
- Data exports from Oracle database to a DR set up that is constituted with other programs does not require Oracle licenses.

6. Conclusion

Our views here in this white paper will certainly not be accepted by Oracle – and, indeed, without a court adjudication cannot be determined as correct. Nevertheless, it demonstrates that much of Oracle's licensing is unstable and that Oracle's views as to its own 'rules' must always be examined to ascertain their correctness. Areas to consider in any discussion or audit scenario are therefore as follows:

1) The authors know of companies who have chosen not to license their Oracle cold standby environments.
2) The authors have also found no evidence that Oracle has indeed ever legally pursued any company for not licensing their Oracle cold standby environments.
3) Importantly, your rights and obligations in respect of Oracle licensing are properly determined by local laws and the courts – not by Oracle alone;
4) Many documents on which Oracle relies are '*for educational purposes only'* and so not binding;
5) Other documents cross–referenced to within its website may also not be legally binding since their applicability to the customer has not sufficiently been brought to the customer's attention in the General Terms or Ordering Documents;
6) The General Terms do not block archival and program testing;
7) EU and other copyright laws do endorse free use for back-up and testing purposes;
8) There is a distinction between data back-up derived from Oracle database and then delivered to other back-up programs as compared to parallel running (and thereby licensing) of Oracle software;
9) Oracle's licensing terms are ambiguous and, where there is any ambiguity or lack of precision then, under laws as to contract interpretation, such terms should be interpreted in favour of the customer.

7. About the authors.

Daniel Hesselink

Daniel is the founding partner of License Consulting and started working in the software licensing industry in 1995. He held positions at vendors, distributors and resellers whilst covering many software vendors, gaining a wealth of experience. His consultative nature resulted him training staff, partners and end users with regard to software licensing. As an auditor for Oracle License Management Services (LMS) he trained new LMS and Sales staff throughout EMEA. Due to his combination of technical and communicative skills, he is regarded as an industry expert for Oracle licensing and a frequent guest speaker at Software Asset Management venues throughout the world.

LICENSECONSULTING.COM

Established in 2007, License Consulting is the oldest consultancy firm dedicated to Oracle licensing today. Until License Consulting was founded, clients had nowhere to go to independently bring all skills to the table: There was no one-stop-shop for Oracle compliance auditing, negotiation, tactical and strategical advisory as well as ongoing compliance advisory. License Consulting has become a trusted partner for many organizations worldwide, enabling them to reduce complexities around Oracle licensing to a calculated decision and an informed choice.

To learn more about License Consulting, visit www.licenseconsulting.com

Robin Fry

Robin is a leading software licensing lawyer, having headed the Intellectual Property team at a major London city law firm for over 15 years. He has written extensively on software IP matters and is quoted in Computer Weekly, Financial Times, Computing, PC World, IT Pro, ITAM and CIO. His thought leadership and forensic analysis are highly influential for clients, in displacing apparently fixed positions of the global software vendors.

CERNO

Cerno is a consultancy comprised of a team of technical, contractual, and commercial experts in licensing software from the major software vendors – including IBM, Microsoft, Oracle, Informatica and SAP. Its team have all previously worked for or against these major software vendors, gaining a detailed understanding of their licenses, pricing and audits.

Unlike many other consultancies, it is uniquely independent and not affiliated with any major vendor: meaning you can be certain that the advice you receive is truly unbiased. Cerno was formed from the necessity to push back against the vendors' practices. It aims to provide not only clarity to clients, but practical support in reducing unnecessary fees post-audit.

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