

Virtualization and the Oracle database

Waiting for the knock
on the door?

Virtualization and the Oracle database—waiting for the knock on the door?

It will come as a surprise to many Oracle customers who run their database on soft-partitioned virtualization such as VMware, that they are in breach of Oracle's licensing rules. What's more, this could be a very expensive and career-limiting situation to remedy.

You can evaluate Tibero cost-free, risk-free and with zero obligation through our Tibero Proof program



Nobody is suggesting that Oracle users are intentionally running in breach, it simply is not clear what Oracle's contractual position is—with reference to virtualized hardware. But ignorance is no defense once Oracle decides to audit an organization's license agreement. The one sure result for non-Oracle Virtualization Machine (OVM) users such as VMware will be significant cost and disruption, and once the audit is complete they will be given 30 days to become compliant again.

**But what choice do Oracle enterprise customers have?
Well, there is an alternative.**

Tibero is a drop-in replacement for the Oracle database from a company that sees its customers as partners in its success. An Oracle database migration to Tibero takes about as long, and features similar risk to carrying out a major version upgrade of Oracle. Our commercial flexibility is designed to allow you to do what is right for your business so that we can be part of your success, and we see virtualization as an essential tool that ISVs and end users should be able to fully exploit without enormous financial penalty.

What's more, you can evaluate Tibero cost-free, risk-free and with zero obligation through our Tibero Proof program.

Read on ...

1

What is Oracle's policy on virtualization?



NOT SO ...

Oracle does publish an Oracle Partitioning Policy, although it is not widely publicized, in which it makes a distinction between hard- and soft-partitioning.

That's not an easy question to answer. Oracle's standard license agreement makes no reference to hardware partitioning whatsoever. Upon reviewing this otherwise comprehensive document, organizations may conclude that as long as they abide by the core and thread restrictions that they are licensed for, then they are running in accordance with the terms of the agreement.

Oracle does publish an Oracle Partitioning Policy, although it is not widely publicized, in which it makes a distinction between hard- and soft-partitioning.

In this document, dated August 2015, Oracle goes to great lengths to describe the soft-partitioning techniques that are not permitted as a means to determine their software license counts.

This list of non-conforming products will surprise many Oracle database users as it includes most of the common virtualization technologies:

- Solaris 9 resource containers
- Affinity management
- AIX workload manager
- Oracle VM
- HP process resource manager
- VMware

You would think that it is, therefore, clear from the policy document that soft-partitioned virtualization is not allowed and that its use would constitute a breach of Oracle's license agreement. But this is not the case. The policy document features a footer on every page that explicitly states that it cannot be included in any contract.

Despite the fact that Oracle goes to great lengths to describe its partitioning policy, it goes on to suggest that this very policy will not form part of any agreement or contract. This is very confusing.

Either through ignorance of the existence of this policy or because of the confusing legal situation, many users have concluded that Oracle's license position is flexible and that they can elect to run on soft-partitioned hardware as long as they manage the number of sockets and cores that is provided to the database.

The result is that the Oracle database has been widely deployed on soft-partitioned virtualization platforms such as VMware—in breach of Oracle's partitioning policy.



2

Does Oracle allow soft-partitioning?

While Oracle allows its users to misinterpret these confusing license and policy documents, it is clear that users running in breach will be pursued and will be made to get themselves 'compliant' again.

If Oracle suspects that a user may be in breach of its license agreement or its partitioning policy, it will issue a 45 days' notice in writing of its intention to come on site to audit the license estate.

These audit powers are all covered in Oracle's license agreement and users have no choice but to comply and at no cost to Oracle.

This may be a totally understandable commercial policy for Oracle to adopt against any organization knowingly operating in breach, but it has come as a massive surprise to many who were not aware of these virtualization restrictions.

3

What is involved in a software audit?



Given the immense power of servers used in virtualization solutions, the result can often be an enormous increase in license and ongoing support costs

The Oracle LMS team follows a thorough audit process which we will document fully in future publications. All Oracle software installed is audited—including non-database technology and even incidentals such as Oracle manuals. Any deviation from the technologies that the user is licensed to use will be documented and the user will be given 30 days to rectify the situation.

This means that all potential sockets and cores on any physical machine where a database instance is installed and/or running must be licensed. Given the immense power of servers used in virtualization solutions, the result can often be an enormous increase in license and ongoing support costs. The alternative is to reconfigure the physical server so that it is hard-partitioned or to implement smaller physical servers. Either of these approaches, however, is likely to involve significant disruption to the app in question as well as any other app—both Oracle and non are hosted on the physical server.

On top of all this, the benefits of High-Availability and Dynamic Resource Scheduling, which for many are the reasons to move to a virtualized environment in the first place, completely disappear. To enjoy these benefits using hard-partitioned servers will often mean extraordinary levels of expenditure and migration to Oracle's Enterprise Edition Database product.

4

Why doesn't Oracle communicate its position clearly?



Unclear policies such as those that surround virtualization have led many Oracle users to unwittingly operate in breach only to discover through an audit that they are out of compliance

A cynic might argue that it suits Oracle to create confusion, and in Oracle's defense, its policy on hardware partitioning is publically available—as long as you know where to look.

Oracle's database license revenue continues to decline in terms of on-premise licensing as users move away from Oracle or towards the Cloud. As a result, Oracle has invested in its license compliance team and relies on uncovering license non-compliance through its audit process to bolster declining database license revenue. These extreme tactics have forced many Oracle users to consider moving away from Oracle, only to decide to stay due to the complexity of migrating to another technology.

As a result, Oracle believes that it is too complex and costly for its ISVs and end users to migrate their applications away from the Oracle database, which means that it can aggressively pursue its existing customer-base in this way.

Unclear policies such as those that surround virtualization have led many Oracle users to unwittingly operate in breach only to discover through an audit that they are out of compliance.

5

What choice do Oracle users have?

The obvious choice that Oracle users have is to carry out an internal audit of Oracle-powered applications that are hosted on any of the soft-partitioned virtualization solutions mentioned above. From there, any applications that are hosted in a non-compliant environment will need to be moved to either hard-partition virtual servers or moved to smaller physical servers. The level of disruption involved means that none of these choices is particularly attractive.

There is another alternative ... migrate to Tiberio.

Tibero—a drop-in Oracle compatible database



NOT SO ...

Our performance is on par with Oracle on similar hardware ... and we often outperform Oracle's Standard Edition product line

Oracle's completely inflexible and draconian attitude towards pursuing its existing customer-base is based on a belief that its customers are locked into the Oracle database, and that they have little choice but to pay the Oracle tax. After all, staying with Oracle has to be more cost-effective because every other option would mean significant re-engineering of your application, right?

While migrating to a NoSQL database like MongoDB, Redis, Cassandra, etc. would likely involve massive engineering and testing effort, staying with a traditional RDBMS might be a more attractive an option. That said, if your application logic is distributed across the application code as well as using PL/SQL, then migrating would be an enormous undertaking.

However, Tibero isn't just another SQL database. It has been designed from first principles to be drop-in Oracle compatible. This means that all SQL and PL/SQL are 100% compatible with Oracle which in turn makes app migration far simpler. Our performance is on par with Oracle on similar hardware, and as we allow our users to harness all the available sockets and cores of their database server as well as providing many Enterprise Edition features as standard, we often outperform Oracle's Standard Edition product line.

Our customers describe a 'migration' to Tibero as being no more risky and requiring no more development and testing effort than would be required for a major Oracle version update.

TmaxSoft's attitude to virtualization:

- We are committed to our customers' success
- We, therefore, provide licensing flexibility that means end users and ISVs can fully exploit the configuration that best suits them, without severe financial penalty
- We allow our Tibero users to run on the virtualization platform of their choice
- We charge only for the virtualized part of the hardware you use
- We understand that disaster recovery and testing environments are essential, we recognize that they are not the same as full database licenses—so we offer a 50% discount
- We offer a no-nonsense, easy to understand pricing policy based on the usage of the specific Tibero instance

Tibero's licensing model allows enterprises to fully maximize their virtualization investment by only licensing the cores associated to a given VM, rather than Oracle's soft partition model of licensing 100% of the cores regardless of how much of the resources the database consumes. This leads to real savings both in CAPEX and OPEX resulting in drastically lower TCO.

7

Tibero Proof program—how can you find out more?

TRY BEFORE YOU BUY WITH NO OBLIGATION



As a drop-in replacement for Oracle Standard Edition, a typical Tibero Proof project takes between two and five days depending on the technology and complexity of the application

This Tibero Proof program is free of charge and afterwards, you have absolutely no obligation to proceed

If our claim of massively reduced ownership costs and drop-in compatibility with SE sounds too good to be true, we'd like to invite you to try our Tibero Proof program. To allow you to understand how your application would function when running on top of Tibero instead of Oracle SE or SE1, we will build a proof-of-concept port of a representative portion of your application. This Tibero Proof program is free of charge and afterwards, you have absolutely no obligation to proceed.

As a drop-in replacement for Oracle Standard Edition, a typical Tibero Proof project takes between two and five days depending on the technology and complexity of the application. TmaxSoft will carry out all of the work involved in providing proof of Tibero's abilities, but we will need access to your application and database team during that time. At the end of the Tibero Proof exercise, we will demonstrate your application running on top of Tibero and will also supply an estimate of the effort involved for you to 'port' the entire application.

If you are ready to explore the potential for enormous gains by choosing to run your business applications on Tibero instead of Oracle, we're ready to help kick off your Tibero Proof Project. Get in touch with us at **+1.312.525.8330** or send us an email **sales@tmaxsoft.com** and we'll be delighted to demonstrate the possibilities!



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