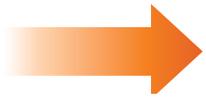


The Right Skills, at the Right Time, *at the Right Price*

Avout



Navigating the Complexities of Oracle Licensing





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Overview

There is no question, Oracle Corporation delivers world-class, best-of-breed technology—but it's difficult to sort through licensing requirements and support costs to determine your total cost of ownership. Keeping up with practices and requisite licensing is time consuming and almost mystically complex. This whitepaper outlines how Oracle handles licensing, what needs to be licensed, the circumstances under which licensing may change, and how to avoid shortfalls.

Oracle Software License Agreement

An important document you need to be concerned with as an Oracle customer is the Oracle Software License Agreement, which governs your entitlements to the software. It details the standard rights granted, ownership, restrictions, warranties, disclaimers, and confidentiality as they relate to your Oracle products and services. Every time you purchase a license from Oracle, you have to agree to the terms and conditions. Depending on your agreement, these terms were negotiated years ago, or new terms apply with each purchase. There are three different types of Oracle Software License Agreements.

Standard License and Service Agreement (SLSA)

The SLSA is a perpetual agreement that is no longer issued. If you purchased Oracle more than 20 years ago or so, you may be one of the lucky ones who has an SLSA, and you want to hold onto it. Other forms of Oracle License Agreements govern only the license that was most recently purchased, but an SLSA will govern all your licenses in perpetuity. Holders of this agreement have advantages that other customers don't, for example, their minimums are lower and there may be benefits that Oracle has now taken away that those customers are grandfathered into. The SLSA covers new purchases, and customers simply reference their SLSA Agreement number when they place a new license order.

Oracle License and Service Agreement (OLSA) and Oracle Master Agreement (OMA)

The OLSA has been the most common agreement over the past twenty years, however it has recently been replaced with the OMA. Even if you have existing licenses governed by an OLSA, when you buy new licenses you will have to sign the OMA, and possibly agree to additional terms that cover recent updates to the license definitions and rules (LDR).

While Oracle does not negotiate most of their terms, partners like Avout can negotiate addendums that will term the OMA for a set period of time, thereby extending its applicability. Usually we can secure a two- to five-year term, depending on the size of the purchase. Since Oracle updates the OLSA and OMA every couple of months with minor changes, this saves the need to go through a legal review and sign off on the new terms and conditions with every new purchase.

Oracle License Types

Perpetual License

For a one-time fee you may purchase a perpetual license and your rights to use that license continue as long as you honor your OLSA or OMA and pay your annual technical support. If you purchase a perpetual license but stop paying your annual technical support, Oracle may request that you officially terminate those licenses through a written statement. If you don't officially terminate, you still have rights to those licenses, but only at the version at which you last paid support. If you want the upgrades and patches to the new versions, you need to continue to maintain support and/or reinstate your annual support.

Term License

The other type of license is a term license. This may be a less expensive alternative to a perpetual license. For a one-year term license, you pay 20% of the perpetual license cost. You can buy one, two, three, four, or five year term licenses, but at the end of the term there is no value left in the license. Term licenses typically come into play for temporary environments, or in situations where companies can't expend the capital to make the larger investment in perpetual licenses. One thing to be aware of: annual technical support is still calculated at 22% of the perpetual license cost.

Oracle License Metrics and Measurement

Technology

Technology refers to the underlying Oracle technology that supports the front-end application, like your database, middleware, and development tools. Oracle has two main metrics: Named User Plus and Processor.

Named User Plus

With Named User Plus licenses, you need to account for both human and non-human operating devices that are accessing the program. An example of a non-human device may be a scanner that scans data going into the database, or a monitor that is collecting data and putting it into the database.

Oracle has minimum user requirements that vary based on the product and the edition. For example, the Oracle Database Enterprise Edition has a minimum of 25 named users per licensable processor. The Standard Edition, on the other hand, with fewer features and functions, and has a minimum of five named users per server—so there are a lot of nuances that you need to be aware of when you are licensing Oracle products. And the licensing requirements are based on minimum or actual users, whichever is greater.

Processor

The other way that Oracle licenses technology is by the processor metric. Usually this option is used in environments where it's not easy to count the users, for example an internet application. Licensing by processor allows for an unlimited number of users. Even if you can count the population, sometimes it's more cost-effective to license by processor, so be sure to calculate the break-even. On Database Enterprise Edition, for example, the break-even is 50 named users. Once you go over that, it's more cost effective to license by processor.



Factoring for Multi-Core

Oracle has changed its formulas to account for dual, quad, hexa-core, etc. processors. Instead of charging by the processor, these faster, more powerful processors have factors for each core. Different types of processors have different types of multi-core factors, as referenced in the table to the right (please check for a more recent version as Oracle updates these tables frequently).

For example, if you're running a two dual-core Intel chip server, we multiply the two servers by the two cores, which gives us four cores. Oracle and Intel and AMD factor multi-core in half, so we would still need to license just two processors in this example. However, some of the Sun boxes have a .75 factor. In that situation, with four cores, you would have to license three of them because of the different multi-core factor.

This table helps you reference by processor type so you can determine the number of licenses that need to be purchased for any given server.

Applications

Applications licensing gets complicated because there are so many different license types. In general, there are three different models, all with their own intricacies: component-based licensing, a custom application suite, and enterprise-based licensing.

What's different about application licensing is you typically don't have to worry about minimums per processor. There may be a 20 named user minimum for an application, but you can distribute it across as many processors as you want.

Component-Based Licensing

The majority of component-based licensing is per application user. However, there are some modules, like Expense Reports for example, that are usage-based. In other words, licensing is based on how many reports you generate

in a given year versus how many users interact with the Expense Reports application. It is important to understand the license metric under which you should be monitoring usage, as they may vary according to the module.

Vendor and Processor	Core Processor Licensing Factor
Sun and Fujitsu UltraSPARC T1 processor (1.0 or 1.2 GHz)	0.25
Only named servers including: Sun Fire T1000 Server, SPARC Enterprise T1000 Server*, with 6 or 8-core 1.0 GHz UltraSPARC T1 processor	
Sun Fire T2000 Server, SPARC Enterprise T2000 Server*, with 4, 6, or 8-core 1.0 GHz, or 8 core 1.2 GHz UltraSPARC T1 processor	
Sun Netra T2000, 1.0 or 1.2 GHz UltraSPARC T1 processor	
SPARC T3 processor	0.25
Sun and Fujitsu UltraSPARC T1 1.4 GHz	
Only named servers including: Sun Fire T2000 Server and SPARC Enterprise T2000 Server*, with 8-core, 1.4 GHz UltraSPARC T1 processor	0.5
Sun T6300, 1.4 GHz UltraSPARC T1 processor	0.5
AMD Opteron Models 13XX, 23XX, 24XX, 32XX, 41XX, 42XX, 43XX, 61XX, 62XX, 63XX, 83XX, 84XX or earlier Multicore chips	0.5
Intel Xeon Series 56XX, Series 65XX, Series 75XX, Series E7-28XX, E7-28XX v2, Series E7-48XX, E7-48XX v2, Series E7-88XX, E7-88XX v2, Series E5-24XX, Series E5-26XX, E5-26XX v2, Series E5-46XX, E5-46XX v2, Series E5-16XX, Series E3-12XX or earlier Multicore chips	0.5
Intel Itanium Series 93XX or earlier Multicore chips (For servers purchased prior to Dec 1st, 2010)	0.5
Intel or AMD Desktop, Laptop/Notebook, or Netbook Multicore chips	0.5
Sun UltraSPARC T2+	0.5
SPARC64 VII+	0.5
SPARC64 X, SPARC64 X+	0.5
SPARC T4 processor	0.5
SPARC T5	0.5
SPARC M5	0.5
SPARC M6	0.5
Sun and Fujitsu SPARC64 VI, VII	
Sun UltraSPARC IV, IV+, or earlier Multicore chips	0.75
Sun UltraSPARC T2	0.75
HP PA-RISC	0.75
IBM POWER5+ or earlier Multicore chips	0.75
All Single Core Chips	
Intel Itanium Series 93XX (For servers purchased on or after Dec 1st, 2010)	1.0
Intel Itanium Series 95XX	1.0
IBM POWER6	1.0
IBM POWER7	1.0
IBM POWER7+	1.0
IBM System z (z10 and earlier)	1.0
All Other Multicore chips	1.0

Custom Application Suite

Oracle may design custom application suites for an individual company. Some companies have all of their modules licensed in this manner. For example, in eBusiness Suite the Financials, Warehouse Management, etc. modules are based on number of employees. Others may own custom licensing based on tons of freight shipped per year, for instance. This type of licensing dictates terms that are unique to your company, and is often negotiated when there is a large-quantity purchase across an enterprise.

Enterprise Licensing

Enterprise licensing is an easier model than usage monitoring, because it's generally based on the annual revenue of a company. If revenue goes up by a certain percentage, there is usually a clause in the license agreement to purchase additional licensing. There may be other metrics outside of revenue that come into play in this license model, for example \$M in freight shipped, so be sure to verify how you are licensed to insure ongoing compliance.

Enterprise and component-based licensing can also be mixed. If you have all your existing licenses on an enterprise metric but you are going to be buying a new module that will have a small number of users, it may be more cost effective to buy licensing on a component basis. Case in point, a customer is considering an additional eBusiness Suite module, Accounts Receivable Settlement. The company is a \$600 million company, which would have resulted in \$390,000+ for the license under the Enterprise model. But when we compare the enterprise metric cost to the component metric cost, there is a potential savings of nearly \$200k. Similar to calculating the break-even between Named User Plus or Processor models with Oracle Technology, for Oracle Applications you want to compare the Enterprise and Component licensing methods to insure the lowest price for your license purchase.

Environments to License

Prerequisites

The Oracle Applications Licensing Table outlines prerequisites that Oracle requires for related application modules and/or underlying technology pieces. In other words, in some cases you may need to own one product before you can buy another. Let's say you buy the Oracle eBusiness Suite. That comes with a restricted use version of the Oracle Database Enterprise Edition and the Oracle Internet Application Server and/or Weblogic (depending on the eBS release number). These are the underlying Oracle technology products, and they're needed to run the applications. But, there are certain caveats where Oracle requires a full-use license (cost) rather than the restricted use (free), and this catches a lot of customers inadequately licensed. The trigger is generally making modifications to the application to suit their own needs, which requires the additional purchase of full-use licenses.

The way Oracle is structured as a sales organization, applications and technology are different profit centers, and we often find sales reps for one may not communicate the requirements for the other. 90+% of customers make modifications to their eBusiness Suite, so rather than getting a surprise bill down the road, it is beneficial to go through an Oracle partner that can help you see the full picture and clearly understand your license obligations.

Development, Testing, and Staging Environments

This is an area of license requirement often unclear to Oracle customers. Please be aware that there is a free license called an Oracle Technology Network (OTN) Development license, but it is very restrictive. Similar to the restricted use license we just talked about for the technology underlying Oracle applications, it is hard to stay within the confines of those restrictions. We generally recommend licensing the environment with full-use licenses under a named user basis, then asking Oracle to reduce the minimum from 25 to 10, for example on the database, and restrict its use for test and development only. In this way, we can get a customer a 60% discount off the top, plus any additional discount we can offer, and still correctly license their development environment.

Production

The most common environment that everyone thinks about licensing is the production environment. This does need to be appropriately licensed either on a Named User, Processor or Application basis (Component, Enterprise, or Custom suite).

Back-Up, Failover, and Stand-by

If you make a copy of the physical database structure and back it up to tape, there is no additional license requirement. Failover, however, does require licensing. In a failover environment, nodes are arranged in clusters and share one disk array. Oracle permits customers to run their technology products on an unlicensed spare computer for up to 10 days in a calendar year. That would allow you to fail over to that passive environment for testing, but only in one clustered environment.

Some customers confuse this with standby. Standby means that one or more copies of a primary database are maintained on a standby server that is fully loaded with Oracle and running using scripts or a tool like Data Guard to keep it in sync with the primary server. In a standby environment, both the primary server and the standby server must be licensed, and the metrics must match. In other words, if your primary server is licensed by processor, you cannot have your standby server licensed by named user. However, we can ask for special approval from Oracle to limit the use of that standby server license to standby only for disaster recovery. In that case, we may be able to secure an additional discount, depending on the size of the purchase, to reduce the burden of having to license a computer that is just sitting there waiting for a failure. Again, this type of negotiation is an advantage of working with an Oracle partner, like Avout.

Remote Mirroring

Solutions like Veritas Volume Replicator, EMC SRDF, Legato Replistor, and EMS StoreEdge are used to mirror the data stored on disk arrays. While data is going onto a different type of storage device, it is not seen by Oracle as a backup. You need to fully license both the primary and the mirrored database with matching metrics, just like a standby environment. Once again, we can negotiate a lower cost, limited use license for the remote mirrored database if that is its only purpose.

Partitioning a Server

Oracle distinguishes between hard partitioning and soft partitioning of servers. With hard partitioning, a box is physically partitioned with no ability to cross over, so you only have to license the part you're using. With soft partitioning, which includes virtualization, software designates the partitioning but the whole box is, in theory, still available to the application, even though it has been segmented off. Therefore, for soft partitioning, Oracle requires that the technology is fully licensed for the entire server. If you are using only one of 12 cores, this is not cost effective. Oracle does recognize one type of software partitioning

as hard partitioning: Oracle Virtual Machine (OVM). This product allows you to physically bind a core to a processor, thus falling into the “hard” partition category for determining license requirements.

Batching

Both automatic and manual batch data feeds require licensing. This is a situation where customers sometimes forget that they also need to license the non-human devices that are accessing the application. Typically these are technology licenses; either Processor or Named User Plus.

Flat File Import/Export

Flat file importing and exporting are treated just like a person using a database. There is human interaction and this requires a license.

Multiplexing

Especially in the earlier days of the Web, people would say ‘I have a Web server in the middle, so I don’t need to license the front-end users, I just need to license that one Web server that’s hitting the database.’ In response, Oracle established multiplexing. You always need to count users at what is termed the “multiplexing front-end,” regardless of the interface.

Top 10 Recommendations to Avoid Pitfalls

1. **Understand what you own.** If you are in doubt, your Oracle Support representative can provide you with a complete listing of the licensing you own. Still, keeping internal documentation and putting a system in place to track your licenses is very important. Although infrequent, there are instances where licenses sold through a partner may not show up in a support rep’s list, so always keep all documentation, including any clauses on limitations or restrictions that are part of a license purchase.
2. **Keep your ordering document.** This has all the pricing and details approved by Oracle and the licensing agreement that we discussed at the beginning of this paper (SLSA, OLSA, OMA). Terms like minimum license requirements may change over time, and these agreements govern your license rights for the licenses you own, so it’s important to keep these records.
3. **If you have >100 servers, use a software tool.** Oracle License Management Service (LMS)—Oracle’s audit group—has recognized several software tools as representing a valid audit. Avout helps customers keep track of their commitments using iQSonar, a cross-platform, Oracle LMS-approved inventory tool that generates a report showing installed Oracle products and which ones are in use. We recommend doing a comparison of installation and license entitlements every 6-12 months.
4. **If you have <100 servers, use Oracle’s manual tools.** If you don’t have the time and resources to run an internal audit of what is in use, turn to a partner like Avout for help.
5. **Monitor for hardware changes.** If you upgrade your hardware, for example replace two dual-core machines with four six-core ones, your licensing requirements—and

costs—will change considerably. You will want to factor this in to the total cost of ownership and be sure to adjust your licensing accordingly.

6. **Term your Oracle license agreements.** Term your agreements for as long as Oracle will grant it (two to five years typically) so you don't need to go through a legal review of the updated agreement with every new purchase.
7. **Repurpose licenses.** Conveniently, an Oracle license is not restricted to the server for which it was purchased, so if your audits identify licenses that you are not using, we can potentially allocate them to other servers.
8. **Add worldwide usage language.** If you have divisions worldwide, be sure to request the addition of worldwide usage rights to your license agreement to make sure you can maximize your investment by reallocating unused licenses to countries that may have a license need. For example, unless you have worldwide licensing rights, you may not be able to allocate unused licenses purchased in the U.S. to your operations abroad.
9. **Beware of dropping products at renewal time.** If you decide to drop one of the products you purchased because you are not using it anymore, the terms of Oracle's license agreements often state that the remaining products will be "repriced" based on the discounts that would have applied to a smaller purchase rather than the discounts you originally received. For example, intuitively it seems that dropping a line item from annual support would eliminate that cost. But instead, it may actually increase your overall annual support bill due to repricing.
10. **Centralized purchasing can maximize concessions and discounts.** Try to have a single person or group control/manage the purchasing and allocation of your licenses across all locations to insure tracking of usage, compliance with terms and conditions, and maximum discounts through volume purchasing.

Conclusion

From a license compliance perspective, Oracle does not require license keys and operates on the honor system with its customers, however licensing is still compulsory. Because of the complexities of Oracle licensing, the lack of keys, and the difficulty monitoring installation, we estimate that upwards of 90% of organizations are not in compliance with Oracle licensing requirements. Most of these shortfalls are unintentional—customers just don't realize that pieces of the software they install may require additional licensing. There are a couple of gifts that Oracle has given us—free backup-to-tape and the "10-day failover" provision, but 99% of the time, your environments need to be licensed in some manner. If you have a unique situation, a partner like Avout can present your case to Oracle anonymously and ask about licensing requirements.

Oracle References

- **Technical Support Policies** (re: repricing)
<http://www.oracle.com/us/support/policies/index.html>
- **Application Licensing Table** (for prerequisites and impact on tech licensing)
<http://www.oracle.com/us/corporate/pricing/application-licensing-table-070571.pdf>
- **Processor Multi-Core Factor Table** (for calculating “licensable” processors)
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- **Software Investment Guide**
<http://www.oracle.com/us/corporate/pricing/sig-070616.pdf>
- **Price Lists**
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