Rightsizing your Enterprise Application Software Costs

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During times of economic uncertainty and market volatility, many organizations look to implement cost savings to maintain business continuity. Gartner estimates that up to 30%[1] of IT spend could be wasted and, by supporting the organization in locating redundant spend and driving additional cost savings, IT Leaders can massively support in maintaining financial health and delivering real added value when it's needed most.

Given the criticality of the largest enterprise software applications, these are often overlooked when looking to cut spend, owing to the need to maintain business continuity and service. The costs for these applications are often highly complex.

This guide will focus on the four largest enterprise software vendors – IBM, Oracle, SAP and Microsoft – with guidance on ensuring purchased entitlements are being used in the most effective and cost-efficient way.

A perspective on IBM

Make the most of sub-capacity licensing

IBM provides various metrics for licensing and measuring deployment of its software programs, the most common and costly being the Processor Value Unit (PVU). The number of PVU entitlements required is based on the processor technology, the vendor, brand, type and model number of the server, as well as the number of processors made available to the program. For the purpose of PVU- based licensing, IBM defines a processor to be each processor core on a chip. A dual-core processor chip, for example, would have two processor cores.

IBM software licensed by PVU can be calculated in two ways; either physical, full-capacity, or virtualized, known by IBM as sub-capacity. If licensed at full capacity, there must be sufficient PVU licenses to cover all the physical, activated cores in the physical server where the software is installed, regardless of how that software is deployed and how much of that processing power is actually needed or used. Whereas sub-capacity licensing allows licensing a PVU-based software program for less than the full processor core capacity of the server when deployed in an eligible virtualization environment. This means that licensing can be fine-tuned to meet your exact requirements.

Typically, full-capacity licensing is five times as expensive so getting sub-capacity licensing right is fundamental to achieving significant savings on IBM software.

IBM has several rules which must be complied with for the use of sub-capacity licensing, one of which is that IBM's License Metric Tool (ILMT) is deployed in each virtualized environment. This can easily be missed as the team responsible for license management don't always know where the IBM PVU-based applications have been deployed and the people deploying IBM products may not have visibility of licensing, nor of the capacity level of the physical environments across the estate.

At the point when the locations of all PVU based products are identified, organizations can identify where there is potential to implement ILMT, optimize deployments and take advantage of sub- capacity licensing.

[1]2018-11-28 Gartner Research - Software Asset Management for the Cloud: Consumption Management and Optimization Take Center Stage

Check failover and backups

A top priority for every organization is to ensure business critical applications are always available, with the appropriate failover options and backups in place to ensure this happens. IBM has different ways to support this and classifies backup servers as being in one of three states – hot, warm or cold. A "hot" backup is typically where a replica system can be accessed concurrently, a "warm" backup tends to be where there is a backup system on standby ready to use if required, and a "cold" backup would be where the backup solution is turned off. Hot servers do require a license, so it's important to know what there is across the estate and how different failover environments are licensed. It's very easy to overspend on environments that don't require licenses.

Subscription and support

A way of making savings is to cut subscription costs if you are phasing out a product or replacing it with another application. IBM allows this but IT teams need to be aware of the "All or Nothing Rule".
This rule means that if a product is fully or partially deployed beyond the version entitled during the latest subscription and support period, then subscription and support must be reinstated for every single instance deployed within that IBM site. For example, if an organization has 5000 licenses for a product no longer in use but keeps 10 for internal support purposes, they could stop paying for support and maintenance on 4990 of them. However, if the organization then upgraded the 10 which were kept to a later version, they would be liable to reinstate support and maintenance for all 5000. Reinstatement is typically three times the cost of the annual renewal so in order to get the most cost savings, it is essential to see all installed IBM products and versions with their release dates, together with details of who is using them and in which IBM site. IT leaders can then identify where there are risks arising from the "All or Nothing Rule", proactively rectify them and protect against unnecessary costs.

A perspective on Oracle

Oracle licensing is notoriously complex - not least because it requires no license key so it's easy to install more than purchased entitlements. Without a clear understanding of deployment, there may be products installed that the IT team is unaware of, databases that are more costly than needed, and licenses that the organization is unintentionally liable for.

There is also not an overall document showing entitlements. Agreements refer to other documents and point to online files that may be regularly updated, for example the Core Factor table that Oracle uses to calculate the required number of processor licenses for a specific machine.

Hard and soft partitioning

One of the easiest ways to ramp up unexpected costs is with the use of virtualization technologies. Oracle differentiates between hard partitioning - where a technology they recognize, such as IBM LPAR, is used for partitioning the environment - and soft partitioning, where Oracle doesn't recognize the technology as valid. A common example is VMWare.

With hard partitioning, the number of cores that require licensing may be limited so that only the part of the server running Oracle needs to be licensed.

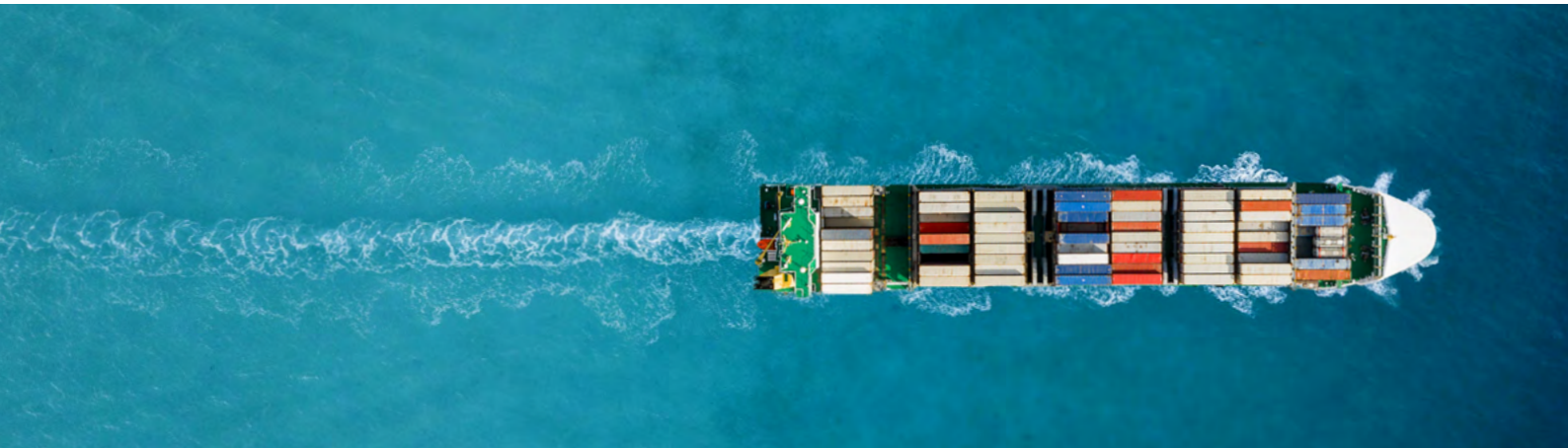
With soft partitioning, Oracle's policy is that all physical cores on all physical machines that could host the virtual machine must be licensed. If VMWare is installed on a shared server then all VMWare servers pointing to that image would have to be licensed. Knowing what there is and what is being used is fundamental to preventing excessive costs. It's easy to spin up a virtualized server for a piece of work and then not take it down again, incurring ongoing and spiralling costs.

Options and management packs

Options and Management Packs are a licensable extra cost option to provide greater flexibility, but they are easy to install in error. They are often enabled by default in a standard installation and if they are enabled, the organization is required to pay for them. An added complication is that some of the Oracle system software uses elements of these itself and this usage does not require licensing. Having full visibility of the Options and Management Packs in terms of their usage and cost can have a significant impact on the bottom line.

Database editions

Oracle distinguishes between its database editions. These are the Enterprise Edition, Oracle's flagship database product, and the cheaper Standard Editions. Their costs vary significantly – with the Enterprise Edition being significantly more expensive than the Standard Edition, as well as the way in which the number of processor licenses required are calculated. The cost impact here can be $100,000s so it's vital to ensure the organization is using the right database edition for its needs. The Enterprise Edition is installed by the standard installation so it's very easy to install the wrong edition.



A perspective on SAP

SAP licensing is incredibly complicated and can be open to misinterpretation. SAP is also unusual in that it asks its customers to self-audit by means of the annual LAW submission, so it really is important to understand entitlements and ensure they're being used in the most effective manner.

Ensuring the right user types

SAP has more than 130 named user licence types, ranging in price from $10 to $10,000 per licence and SAP puts the onus on the customer to assign the correct licence. If a user doesn't have a user license type assigned, then SAP will assume that a professional licence – the most expensive type – is required and charge accordingly. License types should be continuously evaluated as individual roles within an organization may change.

As a SAP environment typically comprises many systems, it is common to have users accessing several systems – often with different usernames on each. In this situation, they would be consuming more than the one license required and this could be very costly to the organization.

When Snow Software conduct a proof of concept, we discover that, on average, around 20% of licences are assigned to users who have been inactive for more than 90 days. Putting a system in place to find and remove duplicate and inactive licenses is key to staying on top of costs.

Indirect / digital access

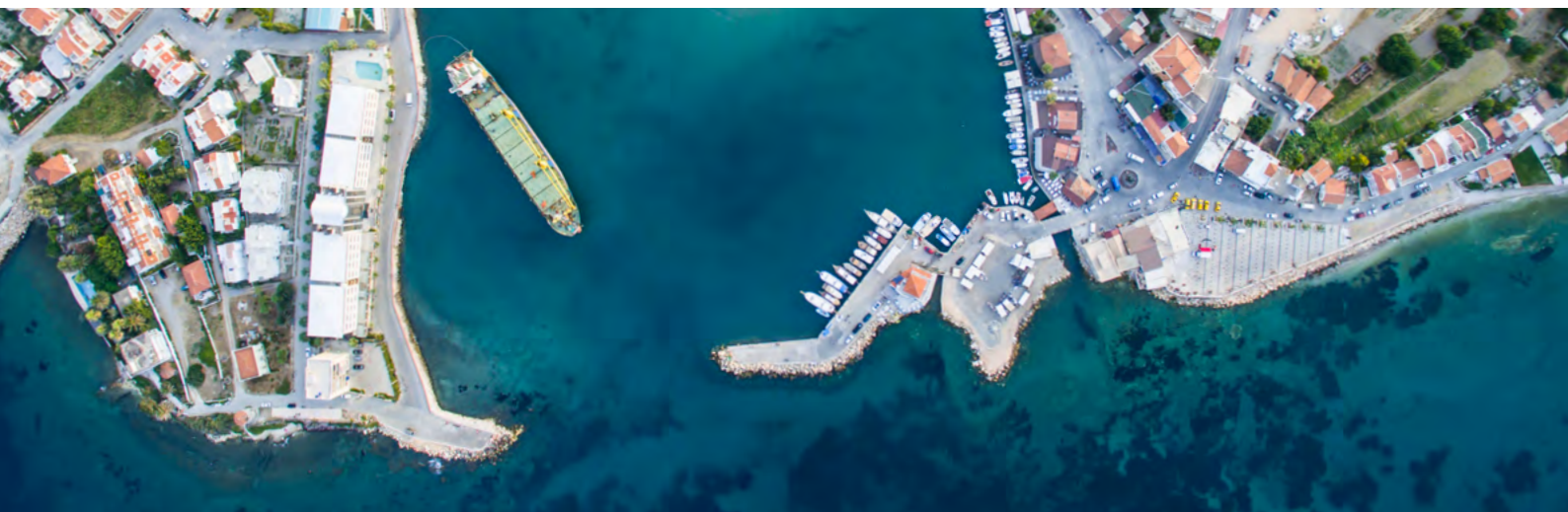
Over the last few years there has been a lot of concern over how SAP charges for indirect access and several high-profile court cases as a result. SAP has now made two options available – the legacy user-based method and the new method based on the number of digital documents created. While SAP is encouraging customers towards Digital Access, at the moment, customers can still choose which option to select.

To make the right decision, IT leaders need to know potential costs under both scenarios. Once the potential cost scenarios have been scoped, it's then possible to choose whether it is more cost-effective to buy user licenses for all users accessing SAP through third party systems or pay a fee depending on the number of digital documents created.

Engines

SAP engines are optional applications for which additional licences must be purchased. The metric used differs by engine and is either based on the objects that exist within the application, its CPU consumption, memory usage or activity types. For example, the metric for SAP Payroll is the number of master records while the metric for SAP e-recruiting is the number of employees.

To prevent hidden costs, usage should be monitored continuously to see how much of the various engines are being used and to ensure contracted values are not exceeded and consequently fall out of compliance.



A perspective on Microsoft

Microsoft makes up a large amount of software spend in most organizations and the principle is the same as for the other large enterprise vendors covered in this guide: Rightsizing licenses to cover only what is used is critical for maintaining a cost optimal position.

Office 365

A good place to start cost saving initiatives is to look at whether the organization is taking advantage of Office 365 licensing. An ever-increasing number of users have Office on more than one device. With Office 365, a user can run Office on up to 5 devices rather than having to pay separately for each one. Consider the number of devices each user has and verify whether a per-user or per-device based option is the cost-effective.

IT leaders should also look at what users are actually utilizing within the Office365 suite. If expensive applications like Visio or Project have been provisioned for users who don't need them or only need to be able to read their output, then those licenses could be made available to others and a free reader supplied. It is possible to save a significant amount of spend if Office licensing is mapped to real usage and requirements.

Unassigned licenses

It's important to know which licenses have entitlements that are not used. These could either be licenses purchased but not assigned, or where an organization has license entitlements that cover secondary use rights. If an organization builds up a catalog of unassigned licenses, cost reduction associated with additional purchases can be realized by using licenses already obtained to fulfil new software installation requests.

A vast amount of software is either under- utilized or completely unused. We estimate that $300 is wasted per year. Microsoft applications can be recycled and reassigned to different users, but not more than once every 90 days. An automated process can be established to automatically check for unused applications and remove them after a set period of time. The pool of licences can be reassigned after their 90 day quarantine period and used in addition to unassigned licences.

Data center configurations

Microsoft offers a huge range of products and associated licences for the data center and it's possible to create multiple configurations that achieve the same technical results but at vastly different prices. Even small changes to a deployment can make a substantial impact on financial exposure and if the structure is right, significant software savings can be realized.

With an overall view of all Microsoft applications within the data center, a complete picture can be built of where editions and versions of an application family are running and whether they are on a virtual machine or directly on physical servers. With this view different scenarios can be deployed to match the technical needs of the business in the most cost-effective way.

Conclusion

Cost optimization is a constant IT priority – whether in a positive economy when looking to accelerate growth and innovation, or when times are more challenging and the focus shifts to reduction. Seeing what an organization has and identifying usage and spend gives the visibility needed to optimize entitlements, protect against unnecessary costs and engage strategically in contract negotiations with the software vendors.

Snow can help by delivering the automated and detailed visibility needed to achieve essential cost optimization impacts quickly and with minimal disruption.

Software Savings Calculator

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