Key mitigation strategies to overcome licensing challenges during migration

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Deloitte Consulting LLP

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Introduction

Public cloud adoption has exceeded growth expectations over the past few years. A Forrester research report predicts that public cloud revenue for 2022 is at $411 billion[1] with a 21% compound annual growth rate between 2018–22. Covid-19 has accelerated clients' digitization journey from exploring cloud-native technological trends like IoT, serverless, and containers further towards migration. Increased cloud adoption and migration has led to complex licensing consideration as existing licenses generally support only on-premises infrastructure. This complexity is reflected in software costs incurred, a majority of which compose of licensing cost and maintenance.

> Organizations might have to spend millions of dollars if the licensing spend is not assessed accurately prior to cloud migrations.

Why should we consider licensing cost during migration?

Most organizations embark on their migration journey with a quick assessment of the application portfolio, and rough estimation of total cost of ownership (TCO), and migration costs, which are then used to assess budgetary requirements. When the actual migration starts, organizations experience a cost balloon partly due to inadequate knowledge of licensing requirements on cloud - this includes non portability of existing licenses, unanticipated purchase of new licenses, and lack of visibility into organization-wide licenses.

Deloitte conducted financial estimation exercises across internal engagements to estimate average costs associated with hosting virtual machines (VMs) and physical servers. The components considered were software, hardware, labor, and network costs. The overall licensing costs averaged at ~24% of the total Information Technology (IT) spend, making it an important component to be evaluated thoroughly before migrating applications to the cloud.

Commonly faced licensing challenges

Most organizations do not have a well-defined licensing strategy on cloud and are unaware of the complexities that may arise due to license deployments, terms, rules, and policies. Based on our extensive experience with Fortune 100 clients across industries, we have documented some of the commonly observed challenges below -

From our experience, we have observed that for a majority of the clients only a part of the existing application portfolio is deemed suitable for cloud migration, and a majority of their workloads are heavily dependent on third-party software. Clients usually roll out a multiyear migration plan, while anticipating to renew the licenses under an enterprise agreement for some of the applications.

They usually want to retain as many existing third-party vendors as they can to reap benefits of long-term contracts and avoid complications arising due to lock-in periods. As they embark on their cloud migration journey, they encounter following commonly faced challenges:

Limited portability of licenses without software assurance
OnPrem licenses purchased post October 1, 2019 without software assurance could not be deployed to dedicated hosted services. Licenses purchased before October 2019 or those added as true-up can be used on dedicated hosts, but were unable to scale up the resources.

License gap due to conversions of OnPrem license to cloud entitlement
Conversion ratio between OnPrem license to cloud entitlements is not 1:1, and client may be required to purchase additional licenses to support workloads on cloud.

Lack of unified license management system
During migration, ad hoc license purchases result into over-licensing of the product as the current licensing system cannot scale up to accommodate the increasing complexity.

Sunk costs due to modernization and contract termination
Clients sign multiple long-term contracts with "third-party" vendors for lucrative volume discounts, but during migration they realize sunk costs due to hefty penalties for early termination and no refund for unused licenses.

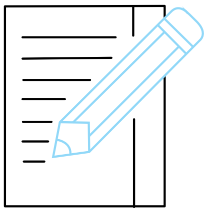
Contractual obligations for third-party license
Third-party licenses for applications identified as commercial off-the-shelf, sometimes do not allow movement from OnPrem to cloud as per their contracts. Even if they do, they prefer moving it to their managed cloud.

Opportunity loss of discount offered by dominant provider
Moving away from a provider cloud that offers additional benefits for its on-premise licenses under Bring-Your-Own-License (BYOL) arrangement might incur an opportunity loss.

1. Limited portability of Licenses without Software Assurance

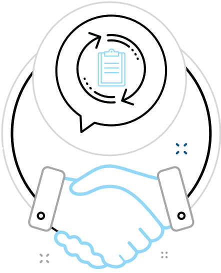
- As circulated in a recent news article[2] published by a leading cloud service provider (CSP) "**Beginning October 1, 2019, on-premises licenses purchased without Software Assurance and mobility rights cannot be deployed with dedicated hosted cloud services** offered by the major public cloud providers".
- The FAQs[4] page of a leading cloud service provider states that "There are specific BYOL scenarios that do not require Software Assurance or License Mobility benefits. To be eligible, the licenses must be purchased prior to October 1, 2019 or **added as a true-up under an active Enterprise Enrollment** that was effective prior to October 1, 2019." In such situations, organizations would need to purchase **additional**

licenses directly from the cloud service providers.



2. License compliance gap due to conversions of on-premises licenses to cloud entitlements

Clients often run workloads using OS datacenter licenses that allowed unlimited number of VMs to be provisioned on a single server. While calculating the TCO, they have to consider right-sizing of the instances. The total number of licenses required for these instances under BYOL program need to be calculated based on the number of cores utilized by the right-sized instances. **Clients usually assume that all on-premises licenses will be ported to cloud and savings are calculated accordingly**. When the clients start with the actual migration, they realize that **the conversion ratio between on-premises licenses to cloud entitlements is not 1:1 and they may be required to purchase additional cloud entitlements** to migrate their workloads to cloud. **For example**, a client has 20 core licenses that allow them to run five VM instances with four cores each on premises. The cloud entitlements suggest that irrespective of instance size provisioned on cloud, the licenses will be considered for either eight cores or 16 cores. The client provisioned same configuration (instance size of four core) on cloud; however, only two VMs (each covered under eight core license) could be licensed as per cloud entitlements stated in the agreement. This resulted in leaving three other VMs with potential licensing compliance gap. To overcome this gap, additional licenses were bought to complete the migration of remaining servers[3].



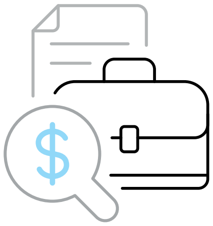
3. Contractual obligations for third-party license

Clients usually have a considerable portfolio of applications that are identified as commercial off-the-shelf. These applications use third-party licenses and have contracts in place to define the "use rights" for the licenses.

They realize that some of these third parties would not allow movement of licenses from on premises to cloud as part of their software license agreements, while others allowed it only to their managed cloud. Applications thus deemed suitable for cloud migration are dropped from the migration plan due to contractual obligations.

4. **Sunk costs due to modernization and contract termination**
The client had signed multiple long-term contracts with third-party software vendors to avail volume discounts and secure licenses at cheaper rates for future demand. These long-term contracts allowed them to operate at a rate lower than market and support their workloads at scale. Some of these workloads were identified for modernization, while some were deemed suitable for sunset. In both the cases, they had assumed savings due to termination of licenses.
However, during the migration process, the client realized that they must either pay hefty early termination penalty for the licenses that were part of long-term contract or retain the unused licenses without any refund. This invalidated the business case levers estimated during the financial analysis.

5. **Lack of unified license management system**
With so many ad hoc license purchases during migration, the client was finding it difficult to oversee license entitlements. For any new request, the procurement team struggled to find the appropriate licenses and their contracts. To save time and avoid project delays, the team ended up buying new licenses for the requestor. This resulted in over licensing of the product and added burden to their bottom line. **Client's current license management system could not scale up to accommodate this increasing complexity, resulting in poor software license management.**



6. **Opportunity loss of discount offered by dominant provider**
The client had a large portfolio of on-premises licenses that was purchased from a single provider. This provider offers huge discounts on the licenses under BYOL arrangement on their managed cloud. The client did not proactively analyze the projected license cost across various providers before finalizing their strategic partner. **They decided to move away from their current provider due to strategic priorities (e.g., potential competitor) and in turn incurred opportunity loss of benefits and discounts the provider could have offered.**

Mitigation strategies

To overcome the challenges faced during and/or postmigration of applications on cloud, Deloitte suggested following mitigation strategies:

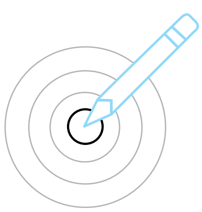
Have a well-defined strategy in place, beforehand
Licensing strategy must be built alongside cloud migration strategy to define target license model, processes, and to avoid roadblocks.

Renegotiate contract terms, find alternatives
Terminate fee and use rights on multiple CSPs, conversion of on-premise licenses to cloud licenses should be considered before finalizing on the CSP.

Analyze license portfolio even before migration
A detailed assessment of the contracts should be done 18 to 24 months prior to the license renewal date. Understanding current application portfolio, key initiatives, and capabilities can form key parameters for analysis.

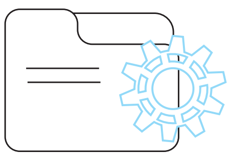
Optimize on-premise license portfolio before migration
Identify license optimization opportunities by leveraging automated discovery tools and financial best practices.

License purchases should be in line with strategic priorities of CSP
Cloud Service Providers often provide more incentives for use of their ongoing strategic services and products and tend to bundle these services to provide better pricing.



1. Have a well-defined licensing strategy in place

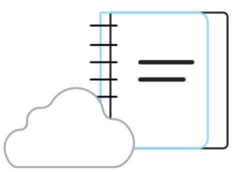
Before embarking on a cloud journey, having a well-defined strategy helps in preempting possible migration pitfalls. **Licensing strategy should be considered as an important pillar while developing the cloud migration strategy.** This includes target state license model, processes, license management systems, and metrics.



2. Analyze license portfolio even before migration

A detailed assessment of the contracts should be done 18 to 24 months prior to the license renewal date, to be able to negotiate on the table based on competitive offerings, and the Cloud Service Provider's strategic initiatives.

The detailed assessment should consider various factors such as pay-as-you-go versus BYOL, support for different product editions, sizing (in terms of numbers of licenses, users, or devices), and IaaS versus PaaS. Understanding your current application portfolio; key initiatives; and requirements across areas, such as low-code automation platforms, analytics capabilities, and cloud infrastructure services, can help define pivotal parameters for your analysis.

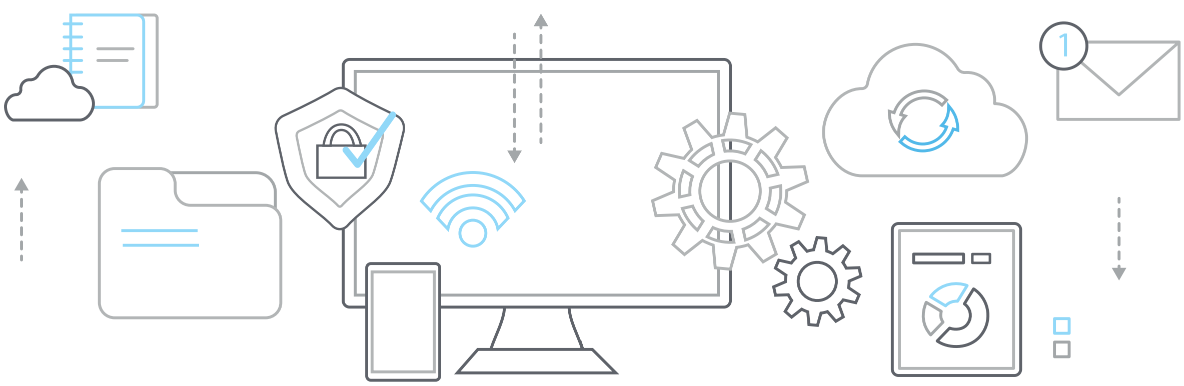


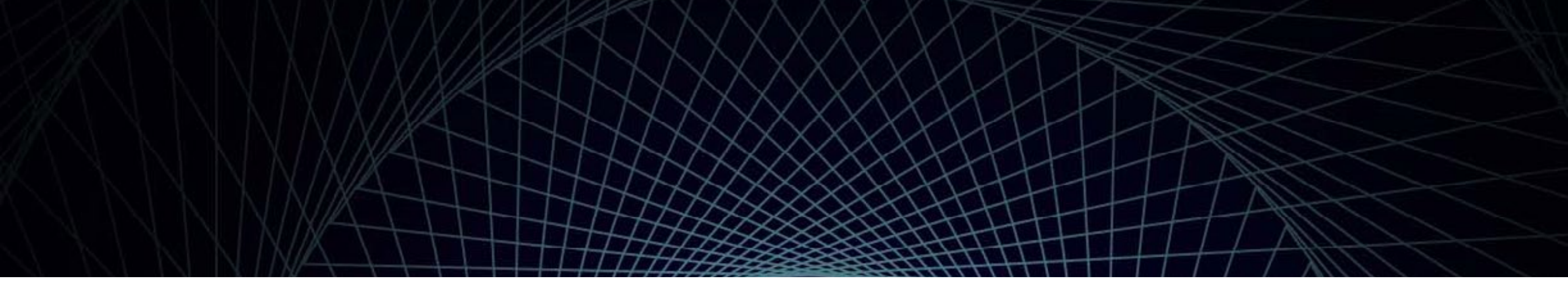
3. Optimize on-premises license portfolio before migration

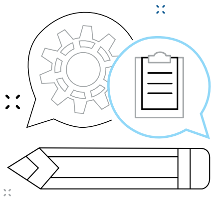
Leverage automated discovery tools to identify underlying infrastructure footprint (CPU, RAM, Utilization, IOPS), and in-use licenses. **Conduct TCO assessment on target cloud and identify cost-saving levers for licenses along with workload optimization.**

This could include identifying:

- **Surplus licenses** that are available and have been **inactive** since a long time
- Software usage to determine **accurate number of licenses** required
- **Unused license rights** that can be reused to avoid new license purchases

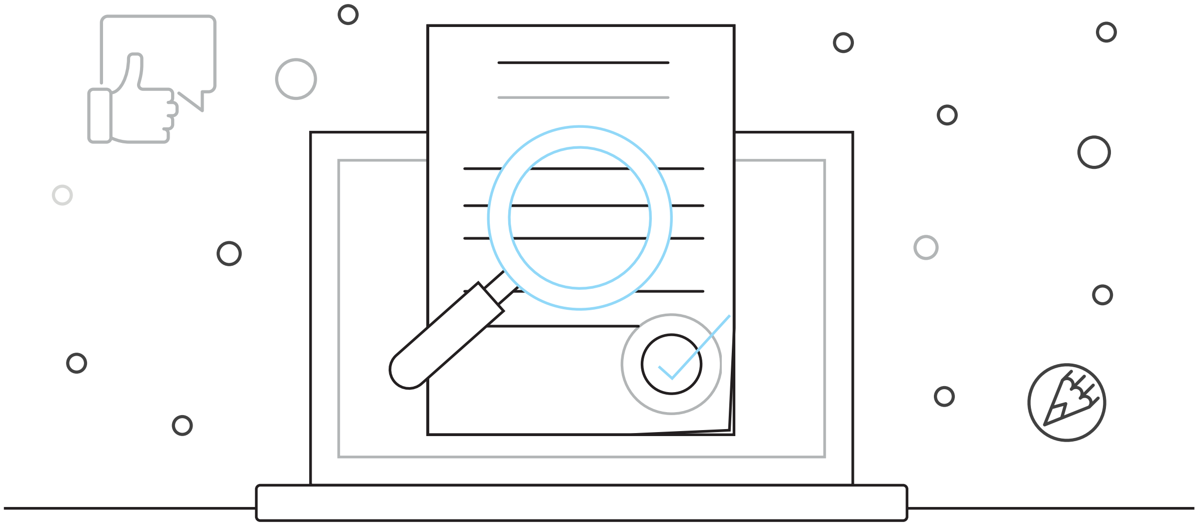






4. **Renegotiate contract terms or find alternatives before selecting target platform to preempt the financial impact**
Termination fees use rights on multiple Cloud Service Providers; **conversion of on-premises licenses to cloud licenses should be analyzed before finalizing on the strategic partner for migration.** This helps in revising the existing contracts, terms, and use rights for the current and new licenses prior to migrations and aids in preemption of financial implications. Financial implications should also consider the sunk costs involved due to nonportability of licenses wherever applicable. A shift from pay-per-device to pay-per-user can also lead to increased licensing costs.

5. **License and service purchases should be aligned with current strategic priorities of Cloud Providers**
Cloud providers generally offer more incentives for use of their ongoing strategic services and products and tend to bundle these services to provide better pricing. Increased investment in cloud could likely result in increased savings, and a like for like license renewal could potentially increase cost during renewal cycles. **Aligning license purchases to these strategic priorities will help organizations leverage the incentives offered.**



Conclusion

Licensing accounts for ~**24%** of an organization's IT spend and should be considered to determine the financial implications of moving workloads to cloud. **Not considering licensing complications,** such as limited license portability, contractual obligations, and penalty due to early contract terminations, **could lead to organizations overpaying in the long term**. To overcome these challenges, it is important to establish a robust licensing strategy, renegotiate contract terms before migration, and preempt any possible financial impact. Organizations that have already migrated to cloud and are facing these challenges should also **reassess their licensing strategy to accommodate the best practices**.

Deloitte's Managed Software Asset Optimization solution **addresses end-to-end software life cycle challenges**, helps achieve license compliance, and realizes stronger vendor negotiations. Deloitte's Cloud License Management solution offers a detailed view of all licensing software to support cloud economics and migration strategy, contract negotiations, modernization opportunities, cybersecurity, license compliance, and cost reductions. This analysis can also be used as an input to **Deloitte's Cloud Workbook tool**, which **aids in** conducting **in-depthfinancial analysis of all the cost components that are impacted by migration**.

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Contact us:

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