ESG SHOWCASE

# Reduce Licensing and Infrastructure Costs while on the Move to the AWS Cloud

**Date:** April 2022 **Author:** Rob Strechay, Senior Analyst

**ABSTRACT:** An Amazon Web Services (AWS) Optimization and Licensing Assessment (OLA) provides organizations with real-life information about their Microsoft workloads to map their journey to the AWS Cloud. This paper details Evolve's methodology for performing an AWS OLA. Performing these analyses requires special skills, tools, and methodologies for gathering the infrastructure utilization, configuration, and most importantly and often overlooked, licensing information. Having the right partner makes all the difference in seeing significant savings in compute, storage, and licensing as an organization moves to the cloud.

## Overview

An Evolve Cloud Services-delivered Amazon Web Services (AWS) Optimization and Licensing Assessment (OLA) provides data-driven answers to customers to inform sound planning and migration decisions. The data gathered in the AWS OLA includes the customer's actual infrastructure utilization patterns and licensing-specific implications. The OLA quantifies the customer's real costs and utilization of current on-premises resources. The purpose of the OLA is to identify any over- or under-provisioning of resources, examine current and future license compliance, and provide a migration strategy that meets an organization's TCO and ROI requirements, as well as move faster toward their digital transformation strategy. This paper examines how Evolve's method for providing an AWS OLA can provide organizations with an unbiased, detailed roadmap to the AWS cloud for an organization's Microsoft and Oracle workloads.

## Analysis

Today, organizations are looking to predict how much they will spend monthly with public cloud providers, while, at the same time, public cloud providers are struggling to expose these licensing costs upfront. Cloud providers and customers can struggle to understand how many resources they need when they move from an on-premises model to the cloud and how to be in compliance with licensing. Many software vendors use a carrot and stick approach, making their licensing a competitive advantage as a stick to incent or punish organizations in the cloud wars.

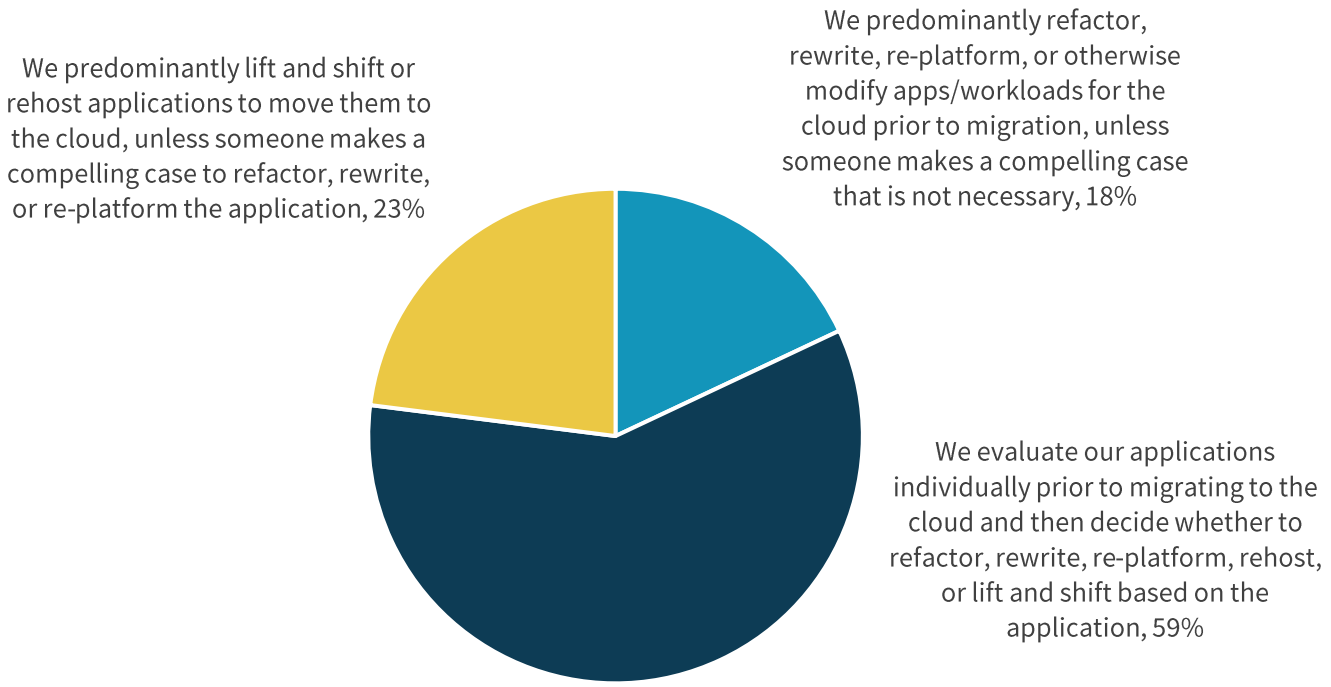
According to an ESG research survey, only 18% of organizations say that more than 40% of their business applications are currently public cloud-resident.[1] Those same organizations expect a major shift in the next 36 months, with 44% saying that more than 40% of their business applications will be public cloud-resident, signaling a massive migration of business applications to the cloud. But to make those migrations a success, organizations first have to get a handle on two important aspects: the application workload's utilization of the infrastructure and the licensing of the application and server.

[1] Source: ESG Complete Survey Results, *2022 Technology Spending Intentions Survey*, November 2021.

The first part of the application migration journey is to profile the application workload against the supporting infrastructure. Organizations are faced with a decision when migrating to the cloud: rewrite and re-platform or move the application as is to the cloud. According to ESG research, 82% of organizations do not predominantly rewrite, refactor, or re-platform an application, with 23% saying that they do not migrate applications in this manner unless a compelling case is made for it (see Figure 1).[2] This means that organizations must be able to gain an understanding of their current application workloads and how they will benefit from movement to the public cloud.

**Figure 1. Organizations Avoid Rewriting and Re-platforming Unless Necessary**

**When moving applications/workloads to the cloud, which of the following best aligns with your organization's approach (i.e., whether you refactor, rewrite, or otherwise modify the application) prior to migrating cloud? (Percent of respondents, N=363)**




*Source: ESG, a division of TechTarget, Inc.*

## Experience with Cloud Cost Disappoints

Only 35% of organizations say that the costs spent on their public cloud infrastructure provider(s) meet or surpass their expectations.[3]

It is not enough to look at what the configured capacity for storage is and how much CPU and memory are allocated. Costs can add up quickly if the instances physical or virtual machines are moved to from on-premises data centers are not "right-sized." Before migrating workloads, an inventory of the physical and virtual components needs to be collected by Evolve as a baseline to understand what the potential scope of the migration could be. Most organizations don't

[2] Source: ESG Complete Survey Results, *Distributed Cloud Series: Application Infrastructure Modernization Trends*, March 2022.
[3] Source: ESG Complete Survey Results, *2022 Technology Spending Intentions Survey*, November 2021.

understand how much CPU, memory, IOPS, and network throughput their applications consume. This information must be collected in a particular way in order to right-size the infrastructure, so that it is statistically significant and so the analysis of the usage can be used to determine the future cost when the application workload is migrated to the AWS cloud. In 2021, Evolve performed over 300 AWS OLAs, which identified an average of 43% in compute cost savings against standard assessment outputs through a combination of Amazon EC2 On-Demand, Reserved Instance, Shared Tenancy, Dedicated Hosts, and VMWare on AWS Cloud recommendations.[4]

The second part of the journey is to gain an understanding of the licensing of the application. This is particularly difficult for organizations that don't have a lot of experience with licensing and legalities, and it can be even more difficult to understand when an organization is looking for a "bring-your-own-license" experience.

Once again, when gaining an understanding of an application's license, an organization must start with the infrastructure inventory it collected and map it to the applications that are resident, such as databases like Microsoft SQL Server. Many times, multiple servers' worth of applications must move together as a group, as they are actually components of a larger application, such as an online sales system, and the best way to move these applications needs to be determined.

After the inventory and application mapping is complete, an analysis of the application to infrastructure component ratio is required to see if the license associated with the application for the given infrastructure is compliant based on the current infrastructure configuration. For example, an organization may need to determine how many CPU cores are needed and if the Microsoft SQL Server instances can be consolidated. This gap analysis is done to see if the configuration has more infrastructure than is needed to support the workload of the application. After this analysis is complete, a comparison is done to see if the licensing is below, meeting, or exceeding requirements, based on the application type and the required infrastructure.

After both steps are completed, possible savings from moving to the AWS cloud can be determined. The savings can be seen in two places: the right-sizing of compute infrastructure and the right-sizing of licensing compliance.

As the analysis is completed, an actual migration plan is then crafted. The migration of data to the cloud is key for organizations, where many options exist to transfer data or an entire server's worth of data. Migration can be performed using native services, such as AWS DataSync, AWS S3 Batch, AWS Application Migration Service (formerly CloudEndure), as well as many third-party ISVs in the marketplace, such as Komprise and RiverMeadow.

### 45% Reduction in Microsoft SQL Licensing Compared to On-premises

According to data collected by Evolve, their AWS OLA optimization recommendations for Microsoft SQL Server reduced customer SQL Server licensing requirements on AWS by an average of 45% compared to on-premises deployments, giving organizations the opportunity for significant cost savings at their next EA renewal.[5]

## Evolve Delivers Most Comprehensive AWS OLA

Performing all of the data collection and analysis takes special skills, tools, and methodologies, such as those we will discuss that Evolve has developed over many hundreds of assessments. In addition, organizations want to have a clear view of the cost of the migration before moving to the cloud. ESG research shows that only 35% of organizations reported that the costs they have spent on their public cloud infrastructure provider(s) meet or surpass their expectations.[6] Evolve provides an independent assessment from an unbiased software audit advisory expert. The Evolve team works with the

[4] Source: Evolve data based on the last 300 AWS OLAs delivered in 2021. See www.evolvecloudservices.com.
[5] Ibid.
[6] Source: ESG Complete Survey Results, *2022 Technology Spending Intentions Survey*, November 2021.

organization to review their existing licensing, such as Enterprise Agreements and other Microsoft Licensing Agreements, to create a baseline for comparison. In 2021, Evolve was able to help organizations right-size their licensing purchases and save over an estimated $100M. This covered the organizations' audited on-premises and AWS deployments.

With Evolve, data is collected using customer-provided data, such as from RVTools, and third-party ISVs, such as Cloudamize, AWS Migration Evaluator, and others. In Evolve's experience, 96% of customers can bring their Windows Server and SQL Server licenses to AWS.

Using these tools allows Evolve to conduct an evaluation of the type of licenses, the number of licenses, the utilization, scale, and software version, on the Microsoft SQL Server and Oracle software. Once the collection is completed, the data is automatically analyzed. Evolve's analysis then provides a roadmap to the organization about which licenses can be taken to the AWS cloud and which cannot. Through the OLA process, Evolve is able to recommend that organizations "right-size" their Microsoft Windows server deployments, leading to an average of 77% savings on licensing.[7]

This roadmap helps organizations determine the right number of CPU cores needed in the AWS cloud and whether there is an opportunity for consolidation of Microsoft SQL instances. Through its AWS OLA process, Evolve made recommendations in 2021 to reduce the number of CPU cores associated with Microsoft SQL that, if implemented, would save the usage costs of an average of 45 cores if migrated as is, with the possibility of saving the usage costs of 23 more cores if infrastructure and applications are optimized.

### 60% greater license efficiency in AWS through performing an OLA

While customers could be compliant in their current on-premises environment, by optimizing and rightsizing these extra infrastructure costs new investments in licensing can be prevented in 98% of the cases as they move to the cloud.

Evolve estimates that in 2021 this saved organizations a total of more than 13,000 cores, which would equate to $79M in potential usage costs had those Microsoft SQL instances migrated as is. Likewise, organizations would have saved an additional $28M from rightsizing an additional 7,300 cores. This shows that licensing cost savings can be almost 3x the savings of just resizing infrastructure alone.

The Evolve Microsoft Optimization and Licensing Assessment can be performed at no cost to the organization, through funding provided by AWS.

## The Bigger Truth

Evolve's AWS OLA takes all of the work out of figuring out how organizations move Microsoft and Oracle workloads to the AWS cloud. It not only provides an actionable roadmap to the organization for how to get there, but it also maps out how they will save money based on right-sizing the compute infrastructure and licensing. This is a very complicated process that must take into account real-life application workload utilization. Evolve understands that knowing the configuration and trying to do a one-for-one match to AWS cloud compute will not bring organizations the savings they are looking for. And there is little guarantee that the licensing will be compliant.

For most organizations, rewriting, re-platforming, or changing the application in any way, shape, or form is a non-starter for most of their applications. For example, if an average organization with 400 applications moved one application to the AWS cloud every two weeks, that alone would take them over 16 years. Instead of spending years moving applications to the

[7] Source: Evolve data based on the last 300 AWS OLAs delivered in 2021. See www.evolvecloudservices.com.

cloud, organizations should focus on optimizing deployment, right-sizing the infrastructure, and getting the licensing correct.

Organizations looking to migrate their applications to the cloud should engage a partner, such as Evolve, that can perform the necessary assessment; ensure that they are gathering real-life data for the utilization of CPU, memory, storage, and network; and ensure that they can collect the current license type, utilization, and version. Gathering data is important at all times, but if an organization is considering the legalities of a "bring-your-own-license" experience, gathering this data is crucial, as is an organization understanding their compliance status before and after the move to the cloud. And look for rebates or free assessment programs that are sponsored by the cloud provider, such as Evolve's AWS OLA. Evolve's AWS OLA is one of the best ways to ensure your cloud journey gets off to a good start.



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www.esg-global.com contact@esg-global.com 508.482.0188