

ESG Economic Validation

The Economic Benefits of Migrating and Modernizing Microsoft and Windows Workloads to Google Cloud

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Executive Summary

To become more agile, flexible, and efficient, organizations are migrating to the cloud, optimizing workloads, and modernizing applications. Many have invested in Microsoft operating systems, servers, and software, most of which were originally designed to run on-premises. As these companies migrate to the cloud, they should understand the costs and benefits associated with choosing their public cloud provider. Essential areas to consider include the portability and use of Microsoft licenses, how to support legacy applications, how to move large amounts of data efficiently, and what to expect in areas of cloud deployment, administration, maintenance, and application performance.



ESG found that the open Google Cloud Platform (GCP) provides the infrastructure, managed services, migration tools, support, and modernization path that enables organizations to move their on-premises Microsoft and Windows workloads to the cloud quickly and operate them securely and productively. Qualitative and quantitative findings confirmed numerous ways in which organizations on Google Cloud lowered cost, improved agility, and reduced risk. ESG's modeled scenarios predict that organizations can lower costs by moving on-premises Windows Server workloads to the cloud while saving up to 31% versus alternative cloud providers, and lower the expected cost of SQL workloads by 36% to 90% by migrating on-premises workloads to Google Cloud SQL managed databases.



Introduction

This ESG Economic Validation focuses on the quantitative and qualitative benefits organizations can expect by migrating and modernizing Windows-based workloads to Google Cloud (GC), including reduced costs, improved agility, and reduced risk to the organization.

Challenges

For decades, organizations have successfully trusted their businesses to and have come to rely on Microsoft Windows operating systems and business software solutions. Most of these solutions are designed to be run on-premises, and a majority of organizations have invested significantly in the technology. Long-term investments have been made in on-premises infrastructure, training and certifications for personnel, and the development of purpose-built software solutions that operate seamlessly with Microsoft products. Many organizations have been faced with the challenge of licensing agreements that are complex to comprehend, manage, and plan going forward. Many licenses are restricted in terms of portability, and end-of-life (EOL) products such as Windows Server 2008 can be very expensive to support and keep updated with patches in the future.

The value of the cloud is well known to most organizations that are tasked with modernizing operations and becoming more agile, flexible, and efficient. A recent ESG research study confirmed that, rather than continue to operate on-premises hardware and Windows 2008 Server instances to run applications, organizations will look to migrate applications to public cloud infrastructure or modernize by replacing them with a SaaS-based alternative (see Figure 1).¹

Figure 1. Organizations Show Significant Interest in Migrating Windows Applications to the Cloud

What are your organization's plans for upgrading from and/or migrating off of its Windows Server 2008 systems? Note: response options are not mutually exclusive, so more than one can be selected. (Percent of respondents, N=489, multiple responses accepted



Source: Enterprise Strategy Group

The benefits of the cloud are obvious to many, given that ESG research shows that 84% of IT executives increased or planned to increase the use of cloud applications and/or infrastructure as a cost containment strategy to counteract the economic impact of COVID-19,² and 74% of remaining on-premises workloads will be cloud candidates over the next five

¹ Source: ESG Research Report, <u>2020 Technology Spending Intentions Survey</u>, February 2020.

² Source: ESG Research Report, <u>The Impact of the COVID-19 Pandemic on Remote Work, 2020 IT Spending, and Future Tech Strategies</u>, June 2020.

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years.³ But some business leaders struggle with the fact that they need to continue to support legacy applications and move large amounts of data, and find it difficult to predict the costs of licensing and cloud resources. While Azure offers a hybrid cloud benefit that seems to make on-premises licenses more portable and cost-effective, it would be wise to understand all of the costs and benefits that should be considered when choosing a cloud provider to migrate and modernize Windows deployments and application environments.

The Solution: Microsoft and Windows on Google Cloud

Google Cloud provides the services, tools, support, infrastructure, and modernization path that enables organizations to seamlessly move their on-premises Microsoft and Windows workloads to the cloud quickly, securely, and cost effectively. Google helps legacy organizations along their paths to successful modernization through the three key phases of their journeys:

- **Migration to the Cloud:** Google provides tools like Migrate for Compute Engine that can help make migrating VMs and data from on-premises locations to the cloud a quick and painless experience. With Migrate for Compute Engine, organizations can easily test before migrating and perform stateful rollback if needed. Businesses also can automatically upgrade Windows Server 2008 R2 VMs to Windows Server 2012 while migrating, helping address end-of-life issues easily. Google Cloud VMware Engine enables users to lift and shift VMware VMs directly from on-premises into Google Cloud without friction. Organizations can choose to purchase license-included instances or bring-your-own licenses (BYOL). Migrating to the cloud reduces on-premises infrastructure and improves IT agility.
- **Optimization of Workloads:** Workloads running on the Google Cloud can leverage custom compute instances that provide cost savings and optimize use of available licenses without the need to overprovision. Virtual machines can also be overcommitted to further reduce resource cost. Running SQL Server on Linux can help further eliminate the need for Windows licenses while leveraging managed SQL Server, and Active Directory or .NET Core can help further reduce costs.
- Modernization of Applications: Modern applications can be developed cloud-natively, Windows Server can be containerized with Kubernetes, and Anthos can provide multi-cloud readiness for seamless serverless portability. Google can help accelerate the journey to application modernization while reducing the reliance on a single vendor. Organizations also can take workloads currently running on VMs and fully automate the conversion to containers running in Google Kubernetes Engine as well as the upgrading of Windows OS, IIS, and .NET framework with tools like Migrate for Anthos, which helps accelerate modernization journeys for existing workloads that are still critical to an organization's success.

³ Source: ESG Master Survey Results, <u>2020 Technology Spending Intentions Survey</u>, January 2020.

Figure 2. Microsoft and Windows on Google Cloud



Source: Enterprise Strategy Group

ESG Economic Validation

ESG's Economic Validation process is a proven method for understanding, validating, quantifying, and modeling the economic value propositions of a product or solution. The process leverages ESG's core competencies in market and industry analysis, forward-looking research, and technical/economic validation. ESG conducted in-depth interviews with end-users to better understand and quantify how migrating and modernizing their Windows on-premises workloads to Google Cloud has positively impacted their organizations. Customers were able to give detailed feedback on their experiences around deployment, administration, maintenance, support, and application performance before and after the move to Google Cloud. The qualitative and quantitative findings are used as the basis for a simple economic model comparing the expected costs of deploying on-premises versus on Google Cloud.

Microsoft and Windows on Google Cloud Economic Overview

ESG's economic analysis revealed that migrating Microsoft and Windows workloads to Google Cloud provided its customers with significant savings and benefits in the following categories:

- **Reduced cost** By moving to the cloud, organizations were able to eliminate the need to plan, purchase, install, deploy, maintain, and administer on-premises infrastructure. They also reduced or eliminated most operational expenses related to infrastructure and could reduce or eliminate some of their software license spending.
- Improved agility Running Microsoft and Windows workloads on Google Cloud provided organizations with faster time to value, greater business agility, improved cost flexibility, and the value-add of simplified interoperability with partner and Google offerings.
- **Reduced risk** Google Cloud provides built-in and improved high availability, reduces the risk of human error related to many operations, includes built-in enterprise grade security, improves compliance, and lowers risk of vendor lock-in.

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Reduced Costs

Running Windows workloads on-premises requires the deployment and operation of physical infrastructure along with all associated processes, labor, professional services, support contracts, and facilities-related costs. By running on Google Cloud, organizations can eliminate or reduce most of these costs significantly. In addition, the move to Google Cloud provides the opportunity to reduce or even eliminate Microsoft license costs and some or all administrative burden of running Microsoft software.

 Elimination of upfront on-premises infrastructure spending – By moving workloads to the cloud, organizations eliminate having to purchase servers, switches, hypervisors, or storage arrays and the associated software. This hardware usually needs to be sized and overprovisioned to meet the demands of potential growth and spikes in utilization, resulting in much higher unfront cos

"We were able to reduce our data center costs by 40% within three years."

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and spikes in utilization, resulting in much higher upfront costs. Also, they eliminate future technology refreshes by moving to the cloud, further reducing hardware costs.

- Elimination of hardware support/maintenance contracts Because no hardware needs to be purchased, costs associated with support, maintenance, and management software are eliminated. Additional savings accrue because companies aren't dealing with multiple vendors, which saves time, reduces complexity, and increases productivity.
- Reduced cost of hardware administration Since servers, switches, and storage arrays don't need to be deployed, ESG validated that organizations can eliminate many management tasks related to running the network, servers, and storage. For example, moving to the cloud eliminates the need for racking, cabling, provisioning storage, creating RAID groups, swapping out failed drives, upgrading servers, updating BIOS and firmware, and

"We moved from 12 data centers to one cloud and one data center."

troubleshooting. The experience of people who previously spent a lot of time administering hardware transfers to virtual infrastructure. They can work on higher level data center projects and learn new, marketable skills through cloud projects.

- Reduction in power/cooling/floorspace costs With no need to operate hardware, floorspace requirements are
 reduced or completely eliminated along with the electricity needed to power hardware and cool the data center.
- Reduction in solution administrative costs In addition to the savings resulting from going to a virtual infrastructure, ESG found that organizations can further reduce or eliminate administrative overhead for systems and database administrators, DevOps teams, and developers. Google Cloud's managed services (such as Cloud SQL for SQL Server and Managed Active Directory) can lower an organization's management burden and streamline workflows related to installing, updating, configuring, and optimizing the operating system, SQL
 "We were able to reduce the team Server, and Active Directory.
- Reduction or elimination of Microsoft licenses Microsoft licenses purchased to run on dedicated hardware can be reused for Google Cloud (BYOL for sole tenant nodes).
 Another level of savings occurs by time shifting licenses so

"We were able to reduce the team managing instances from 40 down to 24 – the others were able to focus on getting future products to the next level."

that multiple instances can run under one license or running on more powerful instance types to reduce the

number of virtual cores that must be licensed. Enterprises also can lease licenses from Google, which acts as the reseller, for on-demand instances and can further contain costs by leasing the license only for the time needed and taking advantage of committed use discounts over time. Or organizations can eliminate the need to manage licenses altogether by choosing Google's managed services for SQL or Active Directory because licensing is included. Another cost-saving strategy is to run SQL and .NET Core on Linux (generally free in the cloud) and eliminate the Microsoft Server operating system license and modernize to PostgreSQL or MySQL cloud databases that can eliminate costly SQL Server licenses and ongoing Software Assurance.

- Reduced costs associated with security spending per server Each physical or virtual server maintained onpremises has a security cost associated with it. Such cost items occur due to the need of enterprises to maintain protection from endpoint risks. The IT security budget associated with each server includes items such as virus and malware detection software, security auditing, and operational cost of constant updates to server OS and installed software based on the latest CVE reports. As an example, the cost of EDR software per server can reach to \$18 per month.⁴
- Additional savings provided through containerization By migrating Windows VMs through modern containerized services like Windows on GKE and Migrate For Anthos for Windows, organizations can lower the operational costs around managing Windows images and the applications going forward. Moving to declarative image-based builds of the migrated, containerized applications opens the door to use of modern CI/CD pipelines for image-based updates, plus the ability to leverage cluster level updates and avoid drifts in patch level and security stance of the deployed applications. In addition, with Windows containers on GKE, migrated and modernized applications can be deployed on shared cluster resources with greater density, benefiting from resource oversubscription.

Improved Agility

Without the burden of infrastructure and all it entails, organizations running workloads on Google Cloud report greater agility stemming from their ability to deploy faster and scale up almost instantly. Additionally, organizations increase control over on-premises and other clouds as well as where and how to spend. And they are able to respond more quickly to business opportunities and spend far less time on deciding where and how to focus team resources and on resolving performance issues or other problems. Companies that use cloud for seasonal operations exemplify agility by scaling up and down as needed and paying only for what they use instead of supporting a worst-case physical infrastructure year-round.

- Faster time to value for new deployments When organizations use managed services or license-included images, they don't need to dedicate resources and time to planning; purchasing hardware or licenses; installing licenses, software, and hardware; building business cases; or delaying deployments due to slow approval processes. Instead, ESG determined that organizations can be up and running in minutes instead of what is likely to be weeks on-premises.
- Ability to scale up or down quickly Near-instant scalability accommodates peak sales periods or unpredictable spikes in business, helping companies take advantage of opportunities to increase revenue while meeting end-user and customer performance expectations. The limitations of physical infrastructure

"Support for Windows workloads on Google Cloud brings flexibility that would otherwise be expensive to achieve." 6

⁴ <u>www.provendatarecovery.com</u>, June 2020.

can't be overcome easily or quickly, leading to lost opportunities. When peak periods end, businesses using the cloud can scale back, eliminating over-provisioning and the need for on-premises infrastructure that could take weeks or months to get up and running.

• **Cost agility** – Organizations can better manage costs by controlling certain aspects of cloud spending. For example, ESG confirmed the benefits of identifying and implementing CPU overcommit. Customers can get more value from their dedicated virtual CPU resources by packing underutilized, infrequently utilized, or time-shifted servers onto a sole tenant node, enabling more agile management of VM instances to meet specific workload requirements. Time shifting licenses allows customers to share Windows licenses across one or more servers as long as the number of users active at any one time doesn't exceed the number of licenses. Further, the Google

"Google gave us many more levers to implement – more options to save costs on Microsoft licenses that we just didn't have before." Anthos application modernization platform allows organizations to move workloads easily from on-premises to the Google Cloud to other clouds such as Microsoft Azure cloud and back. Whenever it makes sense to run a workload in one place or another, organizations can act swiftly to capitalize on favorable pricing and move faster along their path to modernization.

 Improved, predictable performance and end-user experience – Users can take advantage of flexible machine types and scaling based on performance needs, and low latency helps ensure consistent, reliable performance. Google customers found that Google Cloud's global DNS network outperforms other clouds and delivers a

superior end-user experience. One customer reported first byte load times improved immediately by 15% without any site optimization after moving to Google Cloud. Subsequently the customer reduced average time to first byte by another 50%, for a total reduction of 65%. Workloads run on a powerful set of resources that enhance end-user experience with speed and predictability.

"We improved customer first byte load times by 65% on average, increasing conversion rates and revenue."

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• Improved interoperability – Modernizing on Google Cloud enables organizations to develop cloud-native applications and services to ensure greater interoperability. Legacy applications running on Windows on-premises were developed for client-server functionality using .NET. By moving to Google Cloud, organizations can capitalize on .NET Core to develop cloud-native, portable applications without retooling. Containerization goes one step further, and along with Anthos, it helps ensure that software will run anywhere. Google Cloud enables users to integrate their applications easily with all areas of the Google ecosystem (BigQuery, AI/ML, storage, and so on) and Google Cloud's large partner ecosystem.

Reduced Risk

Organizations often struggle to keep up with risk management because it is a complex, time- and resource-intensive effort spanning people, processes, and technology. Risk profiles change significantly depending on the status of regulatory compliance, business continuity, technology updates, and vendor relationships. ESG found that Google Cloud reduces risk in critical areas through modern infrastructure, comprehensive security, managed services, and freedom of choice.

 Built-in high availability – The built-in, no-extra-cost high availability of Google Cloud eliminates risk associated with on-premises server and data center failures and mirrored disks. Users can easily create local or regional disaster recovery scenarios with fault tolerance spanning regions if desired. Google Cloud performs consistently and reliably without degradation, prompting one customer to comment that "our availability numbers are the highest they have ever been."

"Our services on Google Cloud are faster, more secure, and more flexible than ever. We can deliver new technologies and standards such as HTTP2 and full-site TLS/SSL...." 8

- Improved compliance and security Google Cloud provides excellent security, privacy, and compliance controls, which not only remove the risk of being out of compliance but also save significant administrative time and effort. Products are independently verified, and more than 20 standards, including ISO/IEC 27001, HIPAA, FedRAMP, PCI DSS, and FIPS 140-2, have received certification, attestation, or audit report. Google Cloud also aligns with more than 20 global frameworks, including FFIEC and NIST, and offers industry-specific compliance guidance. A customer noted that Google Cloud "makes compliance much easier and allows us to reprioritize time and effort used in the physical security of our colocation facility to other security initiatives."
- Lower risk of human error Errors can happen at any time, affecting hardware, storage, network, operating system, or databases. When organizations handle updates and patches on their own, someone needs to read the release notes, determine dependencies, and test everything prior to rollout. Depending on timing, updates may be out of date by the time they are implemented. Through preconfigured managed services and by working behind the scenes, Google Cloud reduces risk by making sure things are always up to date and configured correctly.
- Decreased risk associated with vendor lock-in Reducing reliance on Microsoft provides more options going forward. Organizations aligned with Microsoft already are committed to licenses, operating system, server, database, and so on, and moving workloads to Azure locks them in further. As one customer observed, "you sign up for a contract with Microsoft, then you end up with four contracts." While the Microsoft Azure hybrid benefit makes it easier to get to Azure, "all eggs in one basket" may not be the right short- or long-term strategy. Modernizing to containers and Anthos allows workloads to move between on-premises and any cloud easily, and Google Cloud users can access data stored anywhere. With the freedom to choose the solution that makes the most sense, business leaders can focus on optimal risk-reducing choices.

Through each phase of their modernization journeys, businesses need to evaluate the savings, advantages, and benefits discussed above:

"We looked at other service providers, but Google Cloud provides more value for the money – they were more flexible in meeting our server's requirements without overprovisioning."

- **Migrate Microsoft workloads** easily and quickly to Google Cloud with the potential to reuse licenses that were already paid for.
- **Optimize workloads and costs** by reducing license requirements, by taking advantage of managed services like Cloud SQL for SQL Server and Active Directory, and by moving to .NET Core and SQL on Linux.
- Modernize to increase agility and accelerate time to value by adopting containers, cloud-native development, and Anthos for multi-cloud readiness.

ESG Modeled Analysis

ESG leveraged the information collected through vendor-provided material, public and industry knowledge of economics and technologies, and the results of customer interviews to create two separate modeled TCO analyses that compare the costs and benefits of migrating on-premises Windows Server and BYOL licenses to the cloud and SQL Server instances to Google Cloud SQL managed services. ESG's interviews with customers who have recently made the transition, combined with experience and expertise in economic modeling and technical validation of Google Cloud solutions, helped to form the basis for our modeled scenarios.

Scenario #1: Migration and Optimization

The first scenario compared the expected cost of migrating onpremises Windows Server workloads and applications to each of three cloud service providers. ESG assumed that a modeled organization currently hosted 520 Windows Server workloads across a total of 40 virtualized servers, currently managed by two full-time systems administrators, a storage/virtualization specialist, and a portion of a full-time network adminsitrator. ESG assumed that each VM required 4 vCPUs, 24GB of memory, and 72GB of storage. ESG modeled the expected onpremises costs around administration, power, cooling, floorspace, support and maintenance, and virtualization for continuing to operate the existing deployment, and also for refreshing the technology. Although there would be a large upfront cost of acquisition for the refreshed scenario, ESG assumed minor savings in administration, power, cooling, and support for the refreshed solution, as well as a small cost to replace/grow components and pay for extended maintenance contracts when continuing to operate the existing solution.

Why This Matters

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ESG's model shows that migrating an organization's on-premises Windows BYOL workloads to Google Cloud sole tenant provides savings when compared to running on-premises and against alternative cloud providers. While the costs are in the same ballpark over a three-year period, this can be misleading, as this compares only the cost to **operate** the solutions.

There are significant **benefits** to migrating workloads to the cloud that should be considered, such as improved business agility, faster time to value, and reduced risk, that can provide your organization with millions of dollars in additional savings and benefits.

ESG then modeled the expected costs to migrate the deployment to each of three cloud service providers while transferring the existing Windows server licenses (BYOL) in accordance with Microsoft's guidelines. Cloud Provider 1 required running on dedicated hardware that matched up nearly 1:1 with the on-premises servers but required overprovisioning of memory based on available options. This cloud provider offered substantial savings to pay for the deployment three years in advance. Cloud Provider 2 offered substantial discounts and benefits for users bringing their Microsoft workloads to their cloud, and did not require that users run on dedicated hardware, but did also require overprovisioning of each VM based on the fact that vCPUs and memory could not be sized independently of each other, which raised the overall cost of the solution. The Google Cloud solution ran on sole-tenant hardware with 96 cores and 624GB of memory per machine. This allowed more VMs to be packed onto each sole-tenant instance. For administration, ESG assumed a 40% savings for the Google Cloud as reported by customers, slightly less savings for Cloud Provider 1 based on the fact that there would be dedicated instances to manage, and slightly higher savings for Cloud Provider 2 based on the fact that they would not have to run on dedicated hardware.

ESG found that by migrating on-premises workloads to Google Cloud, organizations would save 6% to 15% over three years. ESG also found that because the other Cloud Providers did not offer custom VMs and dedicated instances in which the vCPU and memory requirements could be right-sized independently, their offerings proved to be more expensive than Google Cloud's sole-tenant solution (12% to 32% savings). The results of the modeled scenario are shown in Figure 3.



Figure 3. Three-year Modeled Cost of Operating 520 Windows 2016 Server Workloads (with BYOL)

Modeled Scenario #2: Modernization

The second modeled scenario compared the expected cost to operate Microsoft SQL Server deployments on-premises against supporting the same application development, deployment, and maintenance on the Google Cloud SQL managed database service. Cloud SQL is a fully managed relational database service for SQL Server, MySQL, and PostgreSQL. The fully managed service eliminates most of the tasks around deploying, provisioning, managing, monitoring, tuning, and maintaining infrastructure, hypervisors, operating systems, and database software. ESG assumed the company was looking to deploy a mix of 160 virtualized and physical SQL Server instances, each with an average of 8 vCPUs and 30GB of memory. ESG modeled the typical on-premises costs including the cost to purchase, manage, and maintain the racks, servers, network, and storage array and license the Windows server and SQL Server Enterprise deployments. We assumed the on-premises deployment was managed by two full-time systems administrators and two full-time database administrators, as well as portions of time from network, security, and storage administrators. By far the highest cost was for the Windows and SQL Server license costs and maintenance, which are paid per core.

When lifting and shifting workloads to Google Cloud SQL, ESG built in an estimated cost of migration of \$3,000 per server. Administration savings were modeled to be roughly 70% lower for the fully managed database as all of the tasks around managing and maintaining physical and virtual infrastructure, operating systems, and database software were eliminated, and the network and security tasks were greatly simplified. ESG assumed that by moving or consolidating workloads to higher performing infrastructure, the organization was able to achieve roughly a 40% reduction in the number of vCPUs required to run the workloads. While this did not make as big of a difference in the cost of the instances, it made a large impact in the Windows and SQL Server licenses costs as they are billed per vCPU per month.

ESG's modeled results show that Google Cloud SQL can lower costs by 38% compared to on-premises Windows-based SQL Server deployments while saving millions of dollars in SQL Server licensing costs alone. ESG also modeled the same scenario assuming the organization decided to

Why This Matters

Organizations looking to develop modernized applications that are cloudready can benefit greatly from managed services like Cloud SQL.

While the operational and license savings provided may be enough to justify the service, the increased agility that developers and DevOps teams realize means faster product development and more frequent product updates that can result in millions of dollars per year in revenue for the business.

modernize workloads and save millions more in licencing costs by replacing Windows operating environments with Linux and SQL Server instances with MySQL databases. To better reflect the efforts required to move workloads to and optimize for MySQL, ESG did assume an increased cost of migration and administration for the MySQL deployment. ESG's model predicted up to 88% savings for the MySQL deployment versus the on-premises deployment. While in reality, not all SQL Server applications and workloads would be optimal to move, the two scenarios give us a range of savings that may be achievable by moving some workloads, and developing new workloads to take advantage of this savings. The results of ESG's modeled scenarios are shown in Figure 4.



Figure 4. Three-year modeled Cost Savings of Moving 160 SQL Server Deployments to Google CloudSQL

Source: Enterprise Strategy Group

While the requirements of every organization are different, and your particular savings may vary, ESG recommends that each organization consider the categories and potential benefits and savings outlined in this report to perform their own analysis to better understand the potential impact of making a change.

The Bigger Truth

Microsoft powers many organizations with technologies that are widely adopted but generally designed for on-premises use. These organizations also have invested in licenses, training, and certifications. As a result, they have strong ties to Microsoft at a time when most businesses are undergoing pervasive change: migrating to the cloud, figuring out how to optimize workloads, and modernizing applications. Simultaneously, Microsoft licensing has become complex, raising questions about portability and cost. One customer said that *"Microsoft has not made it easy to really benefit from the cloud in terms of the licensing of their software. That really has prevented us from making decisions and getting more substantial savings from the cloud."*

As business leaders invested in Microsoft think through which public cloud provider to choose, they will find compelling reasons to consider Google Cloud, which provides all the expected cloud benefits and much more. For example, part of eliminating on-premises infrastructure-related spending is reducing or eliminating Microsoft licenses and related costs. Google also has taken steps to streamline the cloud journey and simplify cloud operations in areas where it matters most—areas like new deployments, performance, end-user experience, security, and compliance.

ESG's modeled scenarios demonstrate that bringing your existing licenses to Google Cloud by migrating to and optimizing on sole-tenant instances can provide savings of up to 32% compared to alternative cloud service providers, even when substantial savings and benefits that may be offered are considered. In addition, modernizing to Cloud SQL managed database offerings can streamline development, deployment, and maintenance of cloud applications while saving 38% to 88% compared to running SQL Server on-premises.

The choice of public cloud provider is one of the most important decisions businesses make. Google has done an excellent job thinking through its cloud service for Microsoft workloads, including migration tools, Anthos, and managed services, to help organizations successfully modernize while retaining freedom of choice. If your Microsoft-based business is evaluating cloud providers, take a serious look at Google Cloud.

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