SILK

Top 3 Tips To Keep Up Cloud Momentum Post-Migration

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You've had your cloud strategy for a while now. And it served its purpose. Perhaps it got on-prem workloads into the cloud for you quickly. Or perhaps you decided which workloads needed to be refactored for the cloud vs lifting and shifting. Whatever your cloud strategy is, it's important to make sure that it evolves to continue offering you the best possible experience on the cloud. Whether that means boosting your cloud speeds, reducing your cloud spend, or rethinking how you originally got your workloads into the cloud.

In this eBook, we'll look at some ways you can optimize your cloud strategy to get the best cloud experience possible.

CHAPTER 01
BOOST PERFORMANCE

Having ultra-fast performance on the cloud is important. Especially if you've moved some of your mission-critical workloads like Oracle or Microsoft SQL Server to the cloud. However, the public cloud has limitations when it comes to performance. Because it is a shared environment, the cloud providers put throttles on how much performance each of its customers can get. Meaning unless you are willing to pay for additional cloud resources you don't need -- and don't plan to use -- you aren't going to get the speeds that these heavy workloads demand.

An Online Retailer's Story

An online furniture retailer needed to meet its company mandate to move out of its on-prem datacenter and into Google Cloud. However, in order to continue getting the fast speeds it needed for its Microsoft SQL Server workloads, the team was afraid it would have to refactor -- something there was no time for it to do.

With the Silk Cloud DB Virtualization Platform, the company was able to achieve 0.2ms faster performance on the cloud compared to its previous on-prem solution. Not only that, but it achieved up to 3.2 GB/s throughput per SQL host (with up to four SQL hosts living on a single Silk data pod resource). With performance issues eliminated, the company was able to successfully move all workloads to the cloud by the corporate deadline.

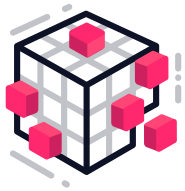
Ways to Boost Your Performance

Understand How You're Being Charged for IOPS – Cloud vendors typically charge IOPS in two ways: either by providing IOPS that vary depending on the amount of capacity or volume size you provision, or by letting you pay extra for provisioned IOPS. Both options may be expensive – especially for high-performance, mission-critical workloads -- and can result in wasted or stranded resources.

Learn More About IOPS Calculations – Cloud providers use a fixed I/O size and a baseline number to show a possible maximum number of IOPS that can be achieved... but the real number changes depending on your workload. As block sizes increase, IOPS decreases. When making performance comparisons, make sure you take into account these calculations.

Overprovision for Performance Fluctuations – Latency on a cloud volume can range from single-digit milliseconds into the hundreds of milliseconds. This fluctuation can lead to inconsistencies in application response time. Overprovisioning capacity will help drive IOPS and throughput higher. However, it won't solve latency problems.

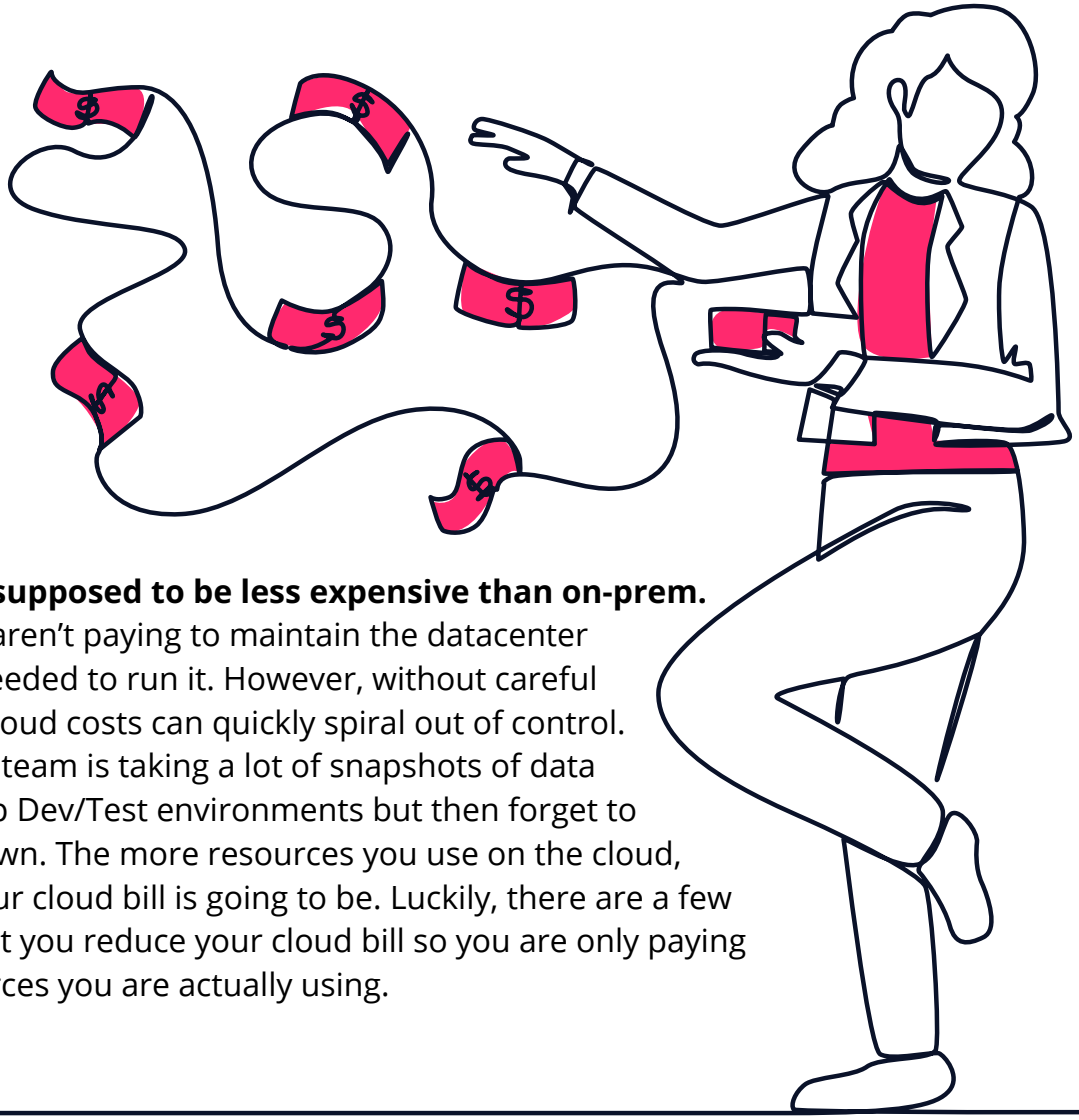
Configure SSDs with RAID0 – With multi-disk striping, you'll get additional aggregated performance in terms of IOPS and bandwidth, with the extra cost of each additional volume you connect. This is helpful when your volumes reach performance limits. But proceed with caution: a loss of any disk in the stripe results in total data loss of the entire volume.



Use Snapshots Wisely – Creating snapshots can impact your data performance. Normal snapshot and restore operations can take 30-60 minutes or longer depending on how much data you are restoring. Storing snapshots is not free either, with each snapshot costing you more.

Choose the Right Type of Compute Instance – This can be really difficult, but it will dramatically impact your performance. Compute instances have their own highly varied performance limitations. If you are hitting the caps on IOPS or throughput with your specific compute engine, you'll need to upgrade to a more powerful class.

CHAPTER 2
REDUCE YOUR CLOUD BILL



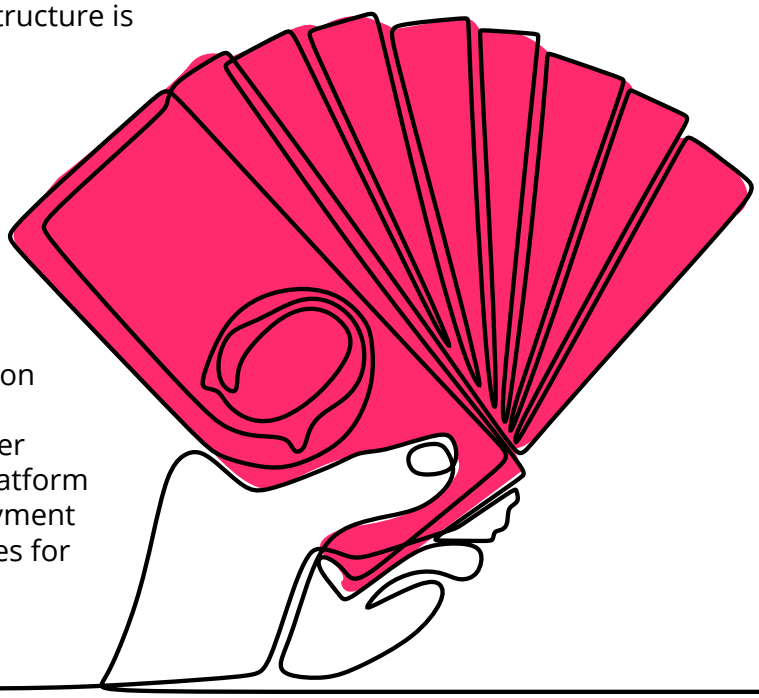
The cloud is supposed to be less expensive than on-prem. After all, you aren't paying to maintain the datacenter or the staff needed to run it. However, without careful monitoring, cloud costs can quickly spiral out of control. Perhaps your team is taking a lot of snapshots of data or you spin up Dev/Test environments but then forget to shut them down. The more resources you use on the cloud, the higher your cloud bill is going to be. Luckily, there are a few easy ways that you reduce your cloud bill so you are only paying for the resources you are actually using.

How to Lower Cloud Costs

1. **Leverage Machine Learning and Proactive Monitoring** – Taking advantage of policy-based automation and proactive monitoring functionalities can ensure your infrastructure is always optimized.

2. **Take Advantage of Rich Data Services** – Deduplication, data replication, thin provisioning, and zero-footprint clones can offer significant cost reductions by minimizing how much capacity you are using in the cloud.

3. **Avoid Overprovisioning** -- This isn't like the days of on-prem when you needed to overprovision hardware for future growth plans. But you might find yourself overprovisioning in order to get faster performance on the cloud. Investing in a cloud platform that decouples the performance and capacity payment model can help you right-size your cloud resources for your needs today.



priceline®

Priceline's Story

Priceline is a world leader in online travel deals. it had decided to move its workloads from on-prem to Google Cloud in order to deploy code faster, spin up infrastructure faster, and eliminate the overhead that comes from maintaining on-prem infrastructure. However, the team was concerned that it would blow through its cloud budget by overprovisioning to get the desired level of performance its workloads needed.

The Silk Cloud DB Virtualization Platform gave Priceline a major boost in performance. This made it possible to cut back on overprovisioning to achieve the desired level of performance their workloads demanded, helping to reduce their cloud bill to stay within budget.

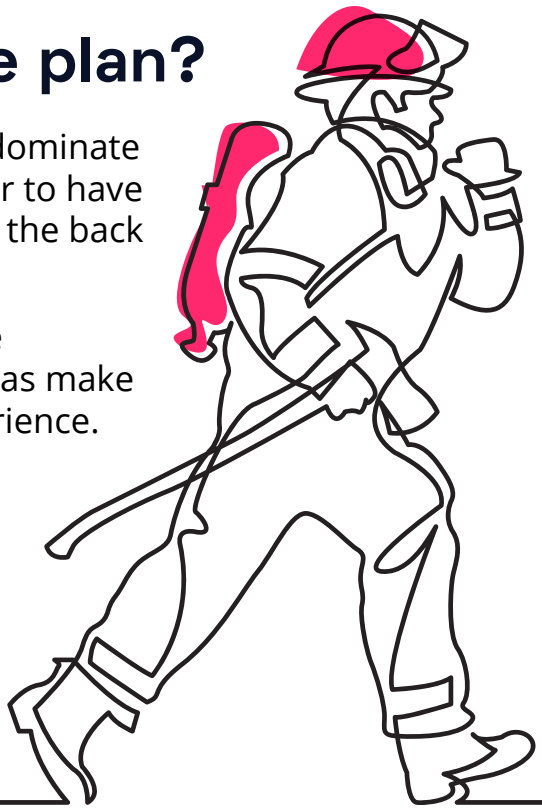
CHAPTER 3

IMPROVE RESILIENCY AND MANAGEABILITY

What is your cloud outage plan?

Breaking news of outages on the cloud seem to dominate our newsfeeds. If you've been lucky enough never to have gone through an outage, it is probably a worry in the back of your mind.

There are a few things you can do to improve the resiliency of your workloads on the cloud as well as make the cloud more manageable to get a better experience.



Ways to Improve Cloud Resiliency

1. Use Snapshots for DR

Having a Disaster Recovery plan in place is key to ensuring that you always have a back-up of your data if there is an outage or loss of data. However, making copies, or snapshots, of that data can cost you. By taking snapshots, you can ensure that you are able to make as many copies of your data as necessary and easily store it into your DR site for a rainy day. Investigate solutions like Silk that can offer zero-footprint snapshots -- giving you the ability to quickly recover in a disaster without paying to store redundant copies of your data.

2. Spread Data Across Cloud Zones

Usually in a cloud outage, only one zone or region is affected. By spreading your data across cloud zones, you can be sure that an outage in one region doesn't act as a single point of failure for all your workloads in the cloud.

3. Track to Avoid Maintenance Windows

Each cloud vendor has a maintenance window where they are able to make necessary updates, patches, and changes to your cloud setup. However, during these windows -- which can run anywhere from 30 minutes to an hour -- your workloads can be unavailable. A self-healing architecture can proactively track maintenance windows and move cloud resources around so that your data is always available and you can avoid falling victim to downtime.

Sentara Healthcare's Story

When adopting the cloud, Sentara Healthcare was looking for a way to reduce the downtime of the SQL reporting engine in its EHR system. Every night, the engine went into its ETL process which took roughly 7-10 hours. During that time, the database was inaccessible to providers and patients who needed it. With the Silk Cloud DB Virtualization Platform, the Sentara team was able to take a snapshot of the database every night and mount it to two other SQL Server hosts. This helped reduce downtime from 7-10 hours per night to less than 15 minutes, giving end users nearly 24/7 access to their data.

CHAPTER 4

THE SILK CLOUD DB VIRTUALIZATION PLATFORM

If you're looking to take your cloud strategy to the next level, the Silk Cloud DB Virtualization Platform can take you there. Silk is a virtualization layer that lives between your workloads and the underlying cloud infrastructure. Silk offers up to 10x faster performance on the cloud compared to native cloud alone. With enterprise data services such as data reduction and zero-footprint snapshots, users can reduce their cloud bill by limiting the number of cloud resources being used. Without refactoring, Silk makes it possible for mission-critical workloads such as Oracle, Microsoft SQL Server, and industry-specific applications such as EHR to move onto Google Cloud and Azure. All while continuing to maintain the same great user experience these workloads saw on-prem. With a self-healing, active-active architecture and machine learning based monitoring, Silk lets you rest easy knowing that disruptions are being proactively monitored and the risk of downtime is minimized.

Ready to start optimizing your cloud experience?

Visit **www.silk.us** to get a demo and see how Silk can help you get the fastest and most resilient cloud experience possible (without a hefty pricetag).