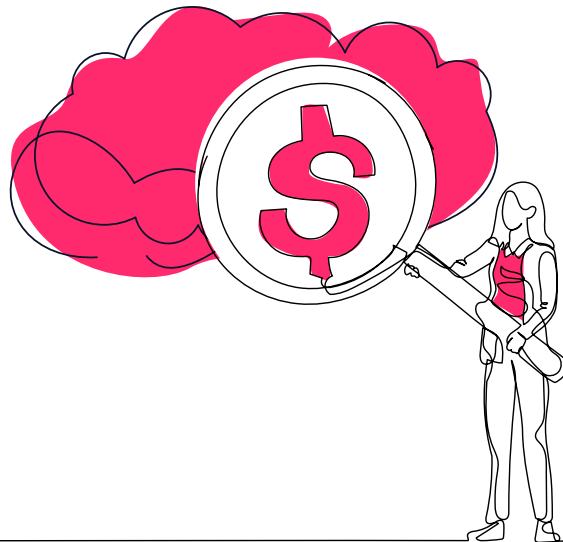# How Can Silk Make Your Cloud More Cost-Efficient

One-Pager

Moving to the cloud has many benefits. This includes the ability to reduce costs since you are outsourcing the set-up, maintenance, and management of your data infrastructure to your cloud provider. Offloading this cost can have dramatic cost savings, however the cloud comes with its own costs – unexpected costs when your cloud bill arrives.

The Silk Data Virtualization Platform lives between your applications and the underlying cloud infrastructure. It helps you get the fastest performance for your most mission-critical applications in the cloud – all while keeping cloud costs to a minimum.

Below are the ways that Silk helps you get the most out of your cloud resources.
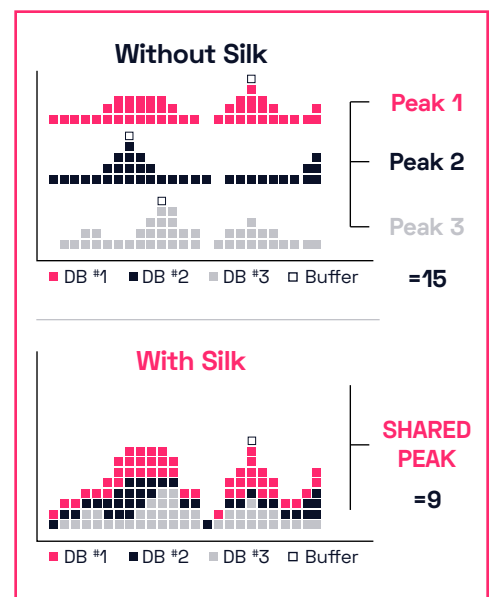
Performance Pooling

Most traditional cloud storage solutions only can support one workload. Organizations with multiple workloads need to separately provision resources for the peak performance of each workloads – along with separate buffers for each workload in case performance needs grow. This is expensive, wasteful, and unnecessary. Silk makes it possible to use a single Silk Data Pod for multiple workloads. The performance patterns of each workload is different, so you can provision Silk for the expected shared peak across the workloads, which is typically significantly more compact. In fact, Silk customers with multiple databases on a Silk Data Pod see a combined peak load that is 12-84% smaller than if customers provisioned each database separately.

In addition, Silk makes it possible to scale up and down to closely meet performance needs as they evolve, further reducing wasted spend on excess performance.

Enterprise Data Services

For companies with experience in on-premises infrastructure, enterprise data services are table stakes. These services – such as deduplication, zero-detection compression, and snapshots -- optimize data so they only take up the minimum amount of storage needed. In the cloud, however, these data services are near nonexistent. Most cloud providers store data in its original shape, with little or no data reduction.

Silk offers a full suite of enterprise data services that help to minimize cloud space usage, without reducing accuracy of data. With Silk, customers typically see up to 5.5:1 data reduction (meaning Silk customers can provision up to 80% fewer physical resources). Even better, the reduction rate leaps up to over 30:1 when using Silk's zero-footprint snapshots to seamlessly distribute data across workloads.

Without Silk

Peak 1
Peak 2
Peak 3

■ DB #1   ■ DB #2   ■ DB #3   □ Buffer   **=15**

With Silk

SHARED PEAK
=9

■ DB #1   ■ DB #2   ■ DB #3   □ Buffer

Visual Example of Performance Pooling

Right-Size VMs and Database Licenses

Cloud datacenters are built with two networks: a fast Compute Network connecting Virtual Machines (VMs) to each other and a much slower Storage Network connecting VMs to storage. Usually, the providers require customers connect to the slower Storage Network. In order to get faster performance, the customers must increase the number of their vCPUs in their database host VM. This incurs greater compute costs.

On top of that, since database licenses charge by vCPU, larger database VMs mean that you end up overprovisioning on database licenses – a double whammy of unnecessary costs.

Meanwhile, Silk connects cloud users through the faster Compute Network. This means that there is no need to overprovision database VMs to get the extra boost that they need. In fact, Silk goes one step further, with Silk's enterprise data services offloading some work from the database itself, shrinking the size of the required database VM even more. And with a smaller VM, Silk customers avoid unnecessary additional VM costs and database licenses. Some Silk customers have even seen dramatic cuts of up to 50% in their VMs (e.g. 32 vCPUs instead of 64).

Flexible and Precise Provisioning

Demand ebbs and flows. For example, the retail industry has seasonal changes in demand. Alternatively, for fast-growing companies, demands on mission-critical applications continue to grow exponentially over time. Having flexibility to meet needs – whether they grow or shrink – is important to keep costs down.

The cloud providers make it a bit difficult to scale up on demand – and then flex down when the need has subsided. Furthermore, they often provide storage and performance in a fixed ratio. Meaning if you need more performance, you'll have to pay for additional storage that you don't need.

Silk customers, meanwhile, avoid this plague of overprovisioning. With Silk, you can scale performance up and down on demand and grow capacity as needed with ease. Silk's two-tier virtualization means you can get the exact performance needed and, separately, the exact capacity required.

Zero-Footprint Instantaneous Snapshots

Sometimes you need to use the same set of data for multiple purposes: perhaps in production, in Dev/Test, or for Analytics. But storing multiple copies of the same data seriously eats into cloud resources, raising cloud bills when you consequently add additional resources. Unfortunately, the cloud providers have limited capabilities to snapshot data. Instead, you need to take full copies and deploy from cold storage. They are not thin-provisioned and have limited performance. Each of these factors increases the costs for using typical cloud snapshots

Silk provides the best snapshots in the cloud. Silk snapshots have zero-footprint meaning there is no capacity cost until the snapshot is written. They are also instantaneous, thin-provisioned and come with the full performance of Silk.

Want to see how Silk can make you more efficient in the cloud?

Visit https://silk.us/cost/.

Sentara Cuts ETL From 7-10 Hours to 15 Mins with Silk Snapshots

Sentara Healthcare is a not-for-profit healthcare organization serving Virginia and northeastern North Carolina. To better serve patients, the team decided to move its entire electronic health record (EHR) system onto Microsoft Azure. One challenge they wanted to overcome in the process: reducing downtime during ETL. Every night, the EHR's reporting engine would go offline for the ETL process for 7-10 hours. This was valuable time when important patient data was inaccessible.

With Silk, Sentara was able to take a snapshot of the database every night and mount it to two other hosts before the environment went into ETL. This helped the team reduce downtime from 7-10 hours a night to less than 15 minutes, giving end-users nearly 24/7 access to patient information. This not only increased the speed that doctors and patients received data, but streamlined the cost of providing data to these workloads.

About Silk

The Silk Data Virtualization Platform gives demanding workloads up to 10x faster performance in the cloud. Without refactoring, applications can move to the public cloud without compromising on performance or overspending to mitigate risk. Industry leaders in ecommerce, SaaS, FinTech, and healthcare trust Silk with their business-critical workloads to get the ultra-fast speeds their customers demand. Silk is headquartered outside of Boston, MA.

To learn more, visit silk.us.