Consolidating Your Datacenters?
Make the Exit a Smooth One!

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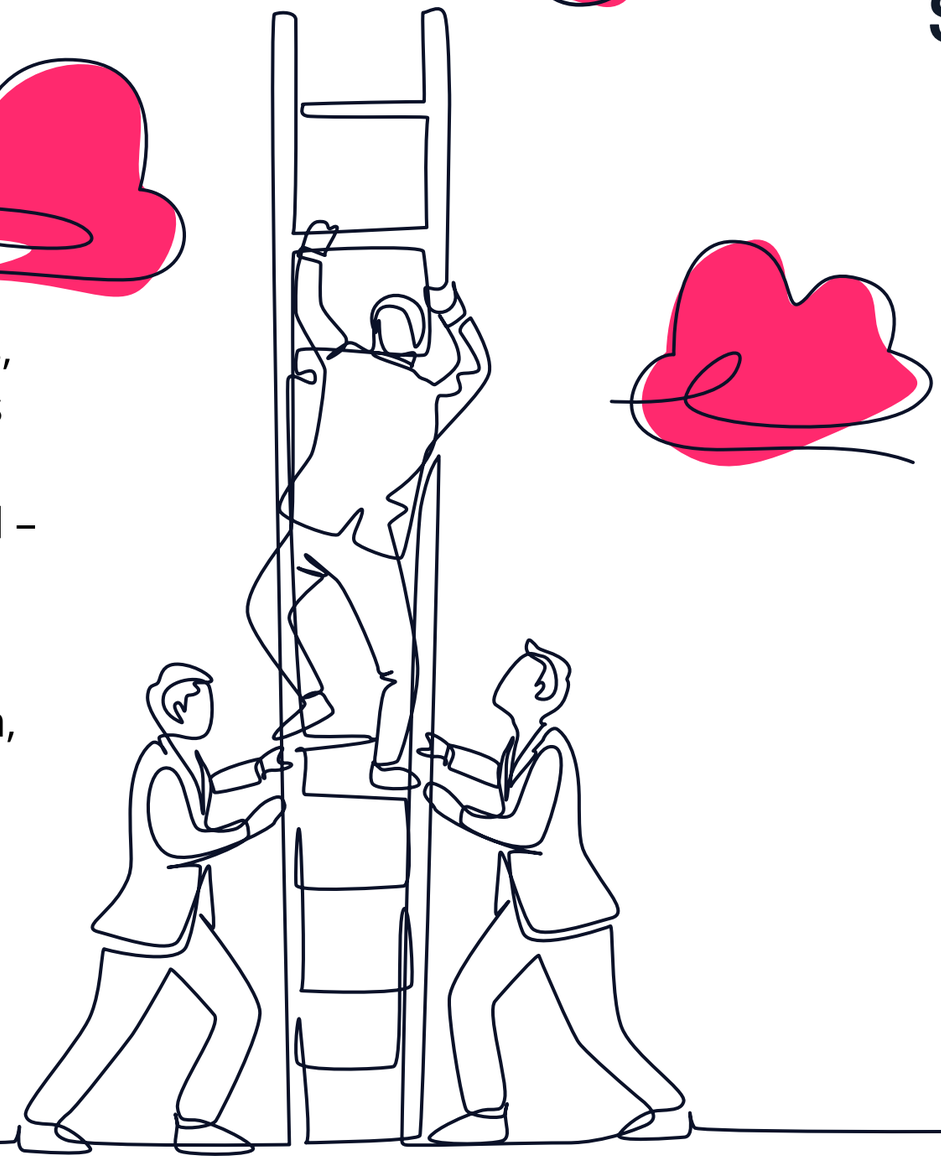
Companies are increasingly moving to the cloud and exiting the datacenter.

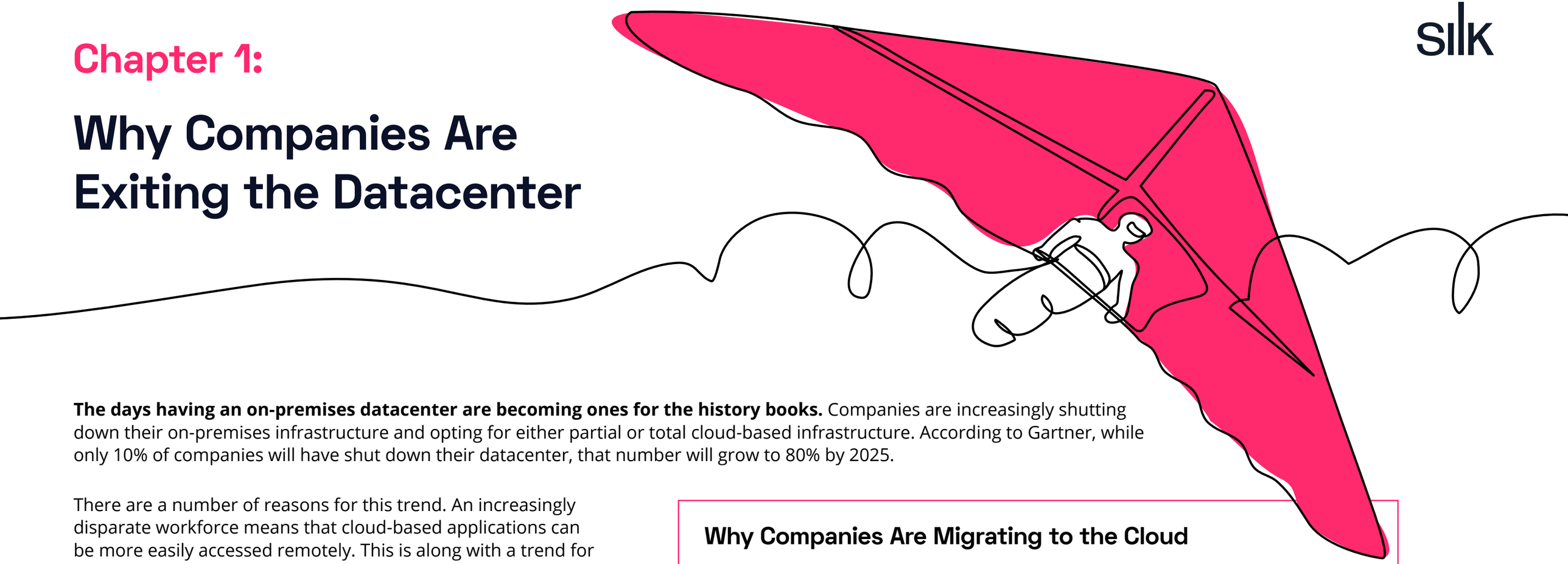
Yet some are finding that the road to cloud modernization does not always run smooth. Especially if they experience unexpected costs, performance lags, or are a victim of a cloud outage. In fact, about 16% of workloads on the cloud are being repatriated back to on-prem – a process that, while helpful to counteract any negative effects of the cloud – can still have serious implications on the business.

In this ebook, we'll look at why companies are repatriating workloads to on-premises datacenters, how to avoid repatriation, and how companies with datacenter consolidation initiatives are using Silk to successfully meet their exit deadlines.



Chapter 1:

Why Companies Are Exiting the Datacenter



The days having an on-premises datacenter are becoming ones for the history books. Companies are increasingly shutting down their on-premises infrastructure and opting for either partial or total cloud-based infrastructure. According to Gartner, while only 10% of companies will have shut down their datacenter, that number will grow to 80% by 2025.

There are a number of reasons for this trend. An increasingly disparate workforce means that cloud-based applications can be more easily accessed remotely. This is along with a trend for exciting new cloud-based technologies that organizations need to take advantage of in order to stay relevant. More practically, offloading the management and maintenance of storage and compute infrastructure to cloud providers reduces IT costs, improves business agility, and allows the team to focus on higher-value projects.

Why Companies Are Migrating to the Cloud

- Reduced IT costs
- Increased business agility
- Improved security
- Eliminate end-of-life-concerns for applications.
- Consolidate datacenters.
- Enable digital transformation.
- Accelerate growth.
- Leverage new technologies.

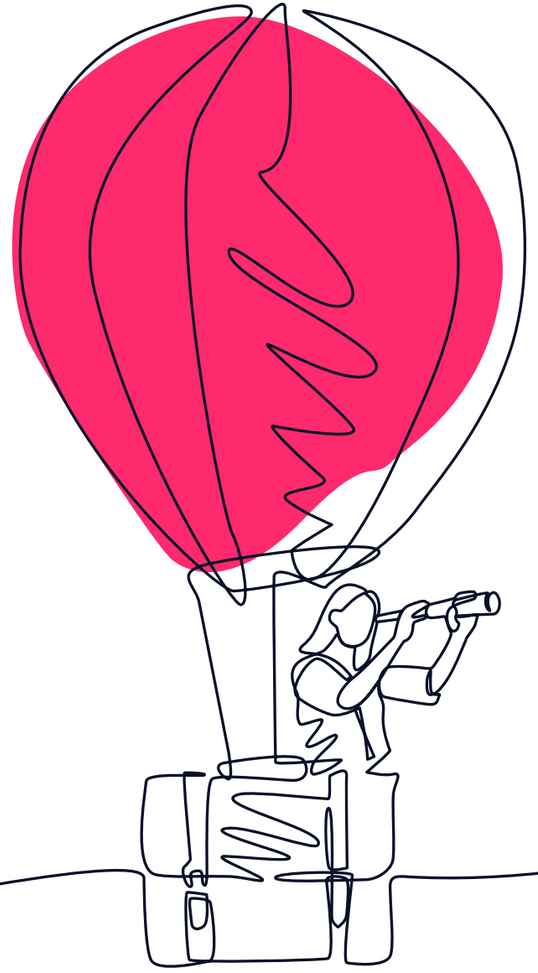
Chapter 2:

Why Companies Are Repatriating Back to the Datacenter

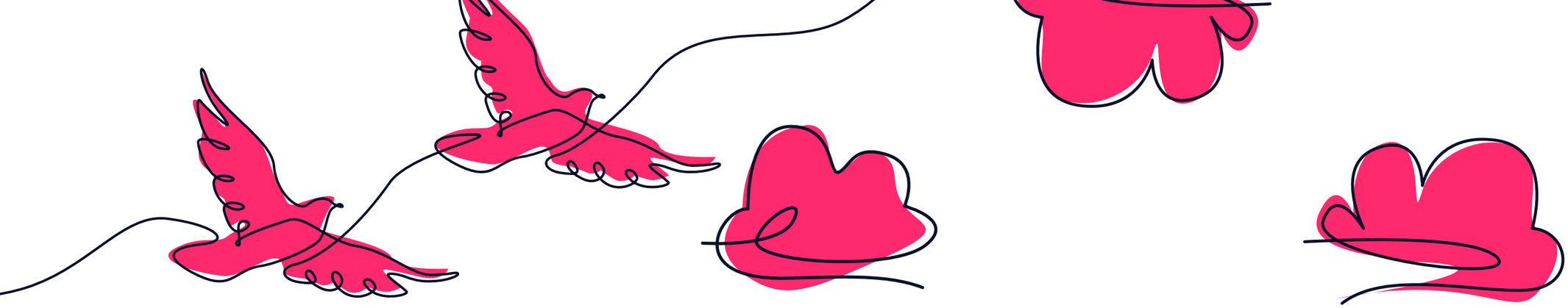
Yet despite this growing trend, it is estimated that 16% of workloads that were moved to the public cloud will eventually be moved back on-prem. The promise of the cloud does not hold true for all applications, it seems.

There are a number of reasons that companies may look to revert back to on-prem for their workloads:

1. **Unexpected Costs** – Lower costs is often the reason that companies move applications to the cloud in the first place. After all, cloud storage and computing are more cost efficient than buying, installing, operating, and maintain the infrastructure in-house. However, costs can easily get out of control as more cloud resources are being used and not turned off when they are no longer in use. For customers who are used to taking advantage of enterprise data services that help keep compute usage to a minimum, there is sticker shock that results from a lack of native data services on the cloud. And for workloads that rely on databases, such as Oracle Database or Microsoft SQL Server, there is a cost associated with additional databases license for every VM used.



2. **Lower Performance** – The performance achieved on the cloud might be lower than is desired – especially for latency-sensitive workloads like databases or other mission-critical applications. This is because the cloud providers set throttles that limit the performance that their customers can achieve. In order to get faster performance, you'll need to buy more cloud resources. Barring a limitless budget, getting the speeds that you need on the cloud could be impossible. For performances that see a massive slowdown on the cloud, repatriation might be the only option.



3. **Security and Compliance Concerns** – The cloud has become increasingly secure over the years – so much so that it is often seen as more secure than individual in-house infrastructure. However, if cloud customers don't have the details of their provider's security services, gaps in what the provider offers and what the customer supplements can leave companies vulnerable. On top of that, government and industry regulations are putting increased pressure on companies that look towards the cloud. They need to ensure that the way they store and access data remains compliant. For many companies, the additional pressure of navigating security and compliance on the cloud can be too much.

4. **Availability** – Having constant and immediate access to your most important data is critical. Unfortunately, cloud outages are all too common. Couple that with downtime during maintenance windows and businesses can find themselves stranded without their data. The consequences can range from customer dissatisfaction to lost revenue and compliance issues. In order to have complete control over the availability of their data, businesses may opt to move their most mission-critical applications back on-prem.

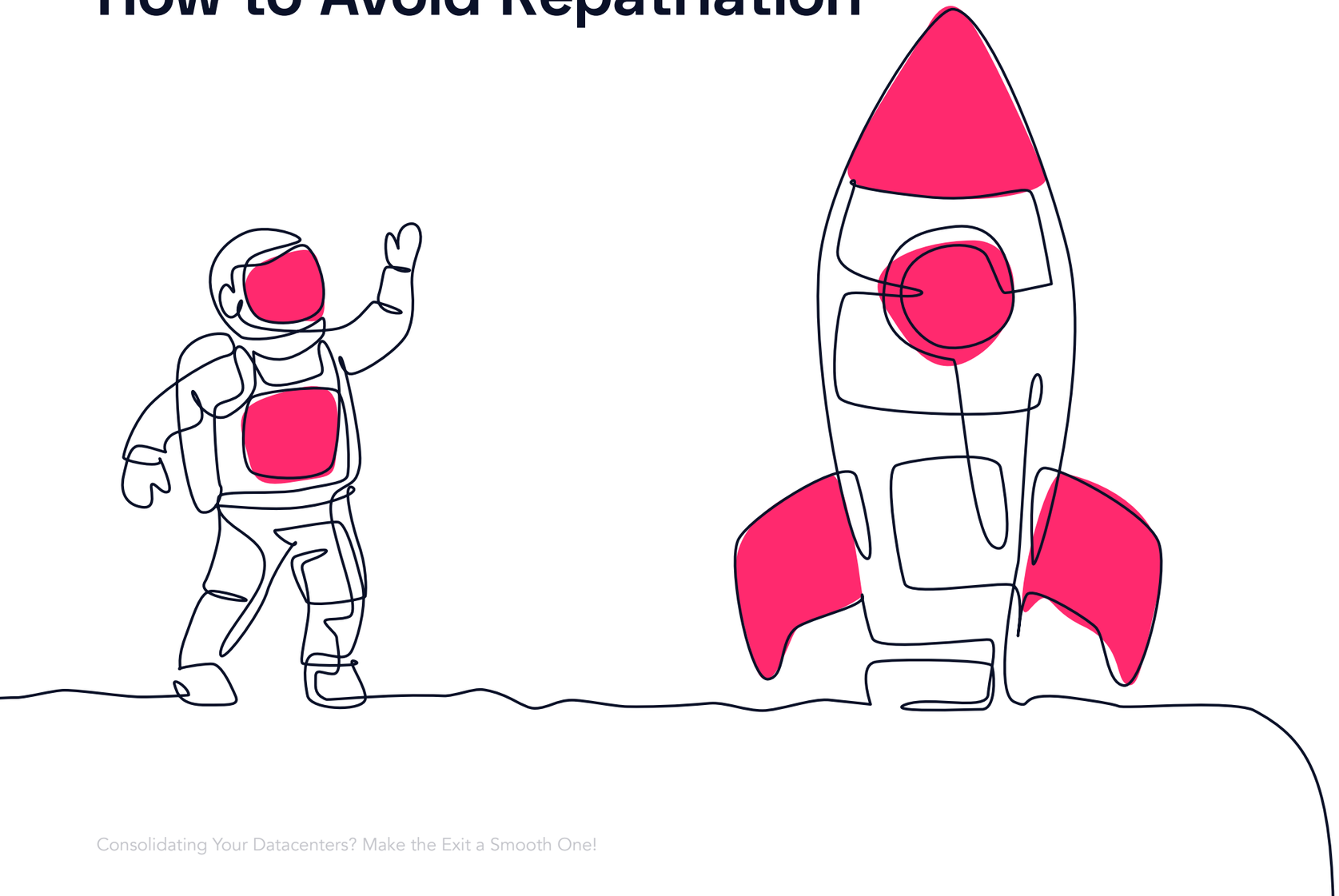
Side effects of Cloud Repatriation

- Increased infrastructure costs
- Reduced agility and flexibility.
- Increased IT management complexity
- Potential impact on innovation

Choosing to repatriate workloads back to on-prem infrastructure is not a decision that is taken lightly. Migrating to the cloud is a time-consuming and expensive process. Many CTOs stake their careers on leading their company into a cloud-based future. Avoiding repatriation in the first place is the best cloud strategy.

Chapter 3:

How to Avoid Repatriation



There are a few steps that companies can take when they begin their cloud journey to ensure that they do not end up repatriating their workloads to on-prem.

Develop a Clear Migration Strategy

Before migrating workloads to the cloud, companies should develop a clear migration strategy that includes goals, timelines, and success metrics. This will help ensure that the migration is well-planned and executed and that the company is able to achieve its desired outcomes.

Assess Cloud Readiness

Companies should assess their readiness for the cloud by evaluating their existing infrastructure, applications, and data to identify potential challenges and risks. Assessing cloud readiness can help identify areas that may require additional preparation or investment ahead of time. Perhaps your cornerstone application is an anchor workload, and you'll need to move many smaller, supporting workloads to the cloud simultaneously to completely support the main application in the cloud. Or maybe you realize that you won't achieve the performance levels you need natively for specific databases and that the additional cloud resources required to meet your performance needs aren't worth the budget.

Choose the Right Cloud Provider

Choose a cloud provider that aligns with your business needs, goals, and budget and can provide the security and compliance features that you need. The right provider can be a partner to ensure the migration is a success.

Prepare For Security and Compliance

From the onset of the migration process, begin implementing cloud security measures and developing a strong governance framework. Between what your cloud provider offers and what you additionally supplement, you should be able to adequate comply with relevant regulations and industry standards.

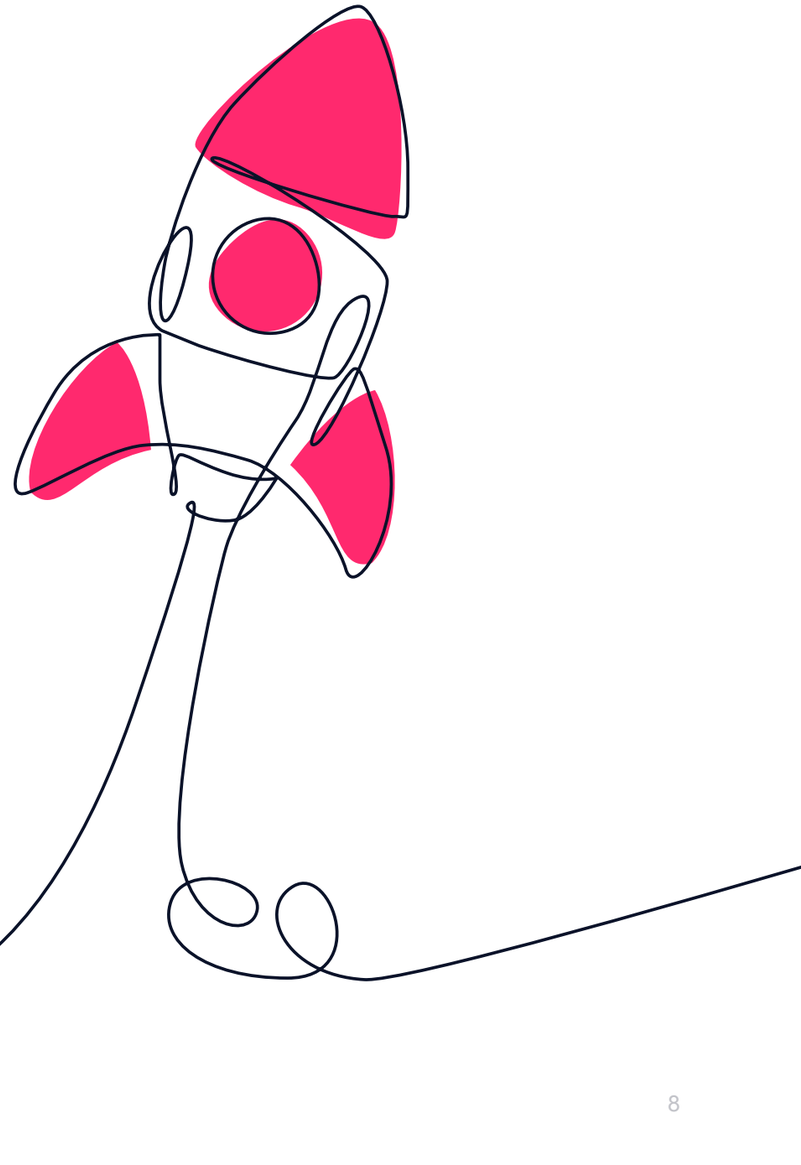
Develop a Cloud-First Culture

Encourage the use of cloud-based tools and services and train employees on how to use them effectively. This will help ensure that the benefits of the cloud are fully realized and that the company is enabled to take full advantage of new opportunities as they arise.

By following these best practices, you can ensure a successful cloud migration and avoid the need to repatriate workloads to on-prem. However, cloud migration is a complex process and companies should still prepare for challenges that arise along the way. It's best to approach cloud migration as a continuous process that requires ongoing monitoring, management, and optimization to ensure that your cloud implementation is continuing to work for you.

Silk can help with that. The Silk Data Virtualization Platform lives between your applications and the underlying cloud infrastructure. The platform connects with compute VMs over a higher performance compute network instead of the limited-capacity data network of cloud infrastructure. This makes it able to support more performance-intensive workloads and eliminates the need to oversize compute VMs for faster performance. Silk separates the layers for performance and capacity, so you never have to spend unnecessary budget dollars to hit IOPS or throughput targets. And by offloading tasks that typically occur on the network layer to the compute layer, Silk provides dramatic and consistent reductions in latency for maximum application responsiveness.

Silk offers greater resiliency with its self-healing architecture that tracks cloud maintenance windows to proactively avoid disruptions and an active-active architecture that spreads management across cloud zones, eliminating single points of failure. With enterprise data services, like zero-footprint snapshots, you can create copies of data for Dev/Test or Disaster Recovery efforts without a performance penalty or additional storage costs. Silk boasts greater flexibility so you can easily scale to meet the needs of a growing customer base without overextending your cloud budget. And with machine learning-based monitoring, Sil analyzes cloud usage patterns to ensure that you are getting the best cloud experience at the most cost-efficient price point.



Chapter 4:

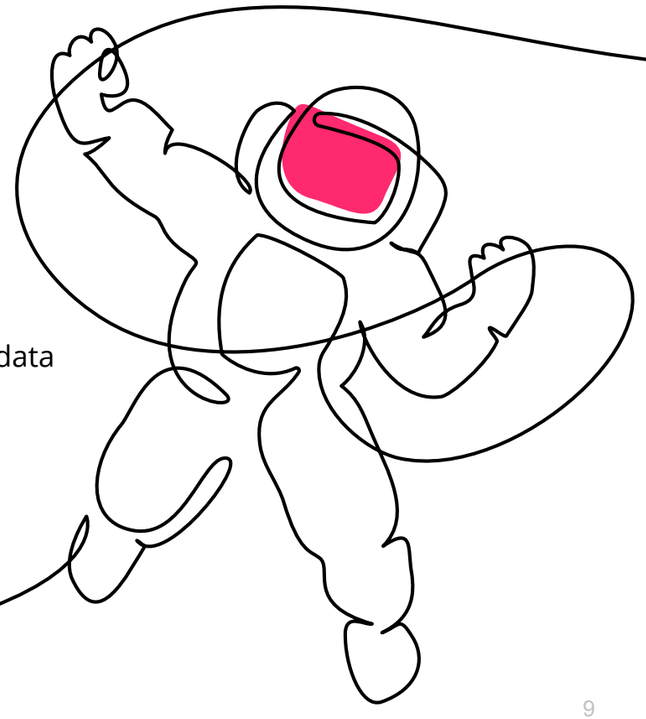
How Real Companies Are Forwarding Datacenter Consolidation Initiatives

Still concerned that datacenter consolidation is impossible? Many companies are already successfully closing their on-prem infrastructure and forwarding their cloud initiatives. Below are the stories of two customers who worked with Silk to achieve just that.

Online Furniture and Home Goods Company

A furniture and home goods e-commerce company had a corporate objective to get all its data out of on-premises datacenters on a strict deadline. The team had moved its 40 Microsoft SQL Server hosts to Google Cloud, but they kept hitting throughput limitations. With the deadline bearing down on them, the team knew they didn't have time to refactor and needed a way to get faster performance on Google Cloud as quickly as possible.

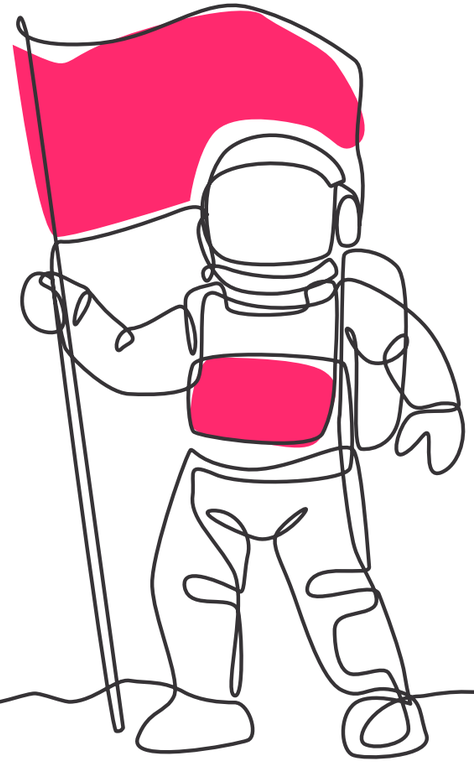
To help give the customer a performance boost, Google Cloud brought in Silk. 0.2 ms faster than the company's previous on-prem solution, the results from the test drive were so dramatic, the customer immediately pushed Silk into production. Not only that, Silk offered 3.2 GB/s throughput per SQL host (with up to 4 SQL hosts living on a single Silk Data Pod). All performance limitations on Google Cloud were eliminated and the customer was able to make their cloud resources more cost efficient. Silk's data services offered 3:1 data reduction allowing them to make the most of their cloud resources.



Communications Provider

One of the largest residential telephone providers in the United States had an initiative to exit many of its datacenters as well as move away from its Oracle Exadata licensing commitments. It was looking to move its Exadata workloads onto Microsoft Azure, yet it needed faster performance than could be achieved through native cloud without a serious refactor. In order to meet its deadline to be out of the datacenter, the company needed a solution to move the workloads to Azure quickly while getting fast performance.

Silk offered the company a 50% reduced runtime for reporting compared to its previous on-premise Exadata infrastructure, proving it offered the speeds the customer needed on Azure. In addition, Silk's enterprise data services allowed the company to reduce the number of resources in the cloud being used – helping to reduce the cloud spend. Silk's simplicity, scalability, and data reduction capabilities were the largest selling points for adopting Silk on Azure in its modernization efforts.



Curious to see how Silk works?

Click here to get a demo of the Silk Data Virtualization Platform in action!