SILK
Solution Brief

Silk for Hybrid Cloud

The Silk Platform Architecture

By completely decoupling data from the underlying infrastructure, Silk provides native mobility between private and public clouds. The Silk Platform consists of the following components:

SILK VisionOS

VisionOS turns the underlying public cloud infrastructure into the world's most capable scale-out data virtualization and mobility platform.

SILK CLARITY

Clarity delivers predictive analytics through a comprehensive set of management and monitoring functionalities including application-level intelligence, machine learning, and big data predictive analytics.

SILK FLEX

Flex delivers an on-demand ability to compose, optimize, manage, and decommission resources as needed to support application SLAs.

According to Gartner, about 80% of organizations who use the public cloud use more than one public cloud provider. This may be driven by fear of not being cloud-agnostic, the need for data redundancy, scalability, or unique cloud microservices. Regardless of the drivers, building a hybrid cloud environment is likely to drive up costs and complexity and be more difficult to manage.

This solution brief provides a high-level overview of how the Silk Platform overcomes limitations of the public cloud that can drive up costs and increase business risk.

The Silk Platform

The Silk Platform fits neatly between your full application stack and the cloud, separating your data from the underlying infrastructure. The platform makes your entire cloud environment run smarter without changing a thing. With real-time data reduction, thin provisioning, and continuous resource optimization, Silk automatically matches your cloud data spend to your actual data needs at every moment, so you can spend less and cloud more.

Use Cases

Data Mobility:

According to Gartner, over 70% of workloads currently live on the public cloud. But the road to getting to the cloud hasn't been smooth: most applications require rigorous reengineering in order to move to the public cloud — while also delivering consistent SLAs and customer experience. However, the re-engineering process often takes much longer than expected and results in significant unplanned costs.

Further complicating the process, more organizations are using multiple public clouds. There are several reasons why organizations are adopting a multi-cloud strategy, including: fear of not being cloud-agnostic, technology innovation, changing costs, security and regulations, and availability zone restrictions.

Finally, as organizations look to support a global customer base, there is a growing need to make applications and data available in local geographies. This globalization requires that applications meet local regulations and provide an improved customer experience for each geography.

The common hurdle across all the above scenarios is the challenge associated with moving data from one platform to another. Often times, this takes longer than expected, resulting in higher costs and increased business risk. The Silk Platform provides the data services needed to easily move data around manually or through policy-based automation. With the ability to move applications and data sets to any cloud environment, as needed, organizations can significantly accelerate cloud migrations and reduce costs while also de-risking the business.

Mitigate Costs:

Organizations often see their public cloud costs grow at an exponential rate due to a growing data footprint. Capacity and performance are directly proportional in the public cloud: if you have a small data set that needs high performance, you need to over-provision and overpay to achieve the desired level of performance.

Another drawback of the public cloud is that it only supports one-to-one mapping of applications and the underlying data set. This means that duplicate data pools need to be created for each new application. Plus public cloud platforms lack data services such as deduplication and compression, leading to unnecessary resource utilization and the associated costs.

Since Silk disaggregates performance from capacity, you can scale out without overprovisioning. In addition, the platform delivers enterprise-class data services in the public cloud, enabling data reduction resulting in significant cost savings. Finally, Silk enables a many-to-one mapping of data to applications, eliminating the unnecessary cost of creating duplicate data sets. As a result of partnering with Silk, most customers are able to realize a 30% cost savings in the public cloud spend.

De-Risking the Business:

The most important factor organizations need to account for when moving from one cloud to another is to minimize business risk. As workloads move in an intercloud environment, one area that increases risk is the inability to deliver a consistent user experience and SLAs. This is due to the varying level of performance from the underlying cloud infrastructure.

Silk helps organizations reduce business risk by providing a platform which sits on top of the underlying cloud infrastructure and across your cloud environment. This enables Silk to deliver consistent industry-leading performance levels. In addition, the platform delivers infinite automation and policy-based scalability for both performance and capacity requirements. This ensures organizations are always able to deliver better than expected SLAs. Flex also delivers the agility needed to quickly configure new resources so new products and services can be built and tested faster.

Silk + Tier 1 Cloud vs Tier 1 Public Cloud

	Silk + Tier 1 Public Clouds	Tier 1 Public Clouds
Performance configurations	**Consistent performance** on all configurations	Depends on disk size and on # of vCPUs
Shared Data	**Supported** R/W volume mapping to multiple hosts for clustered Apps Spare capacity consolidation	Not supported (single host mapped to single data set)
Performance limitations	**Unlimited Scalability for Performance:** Input/Output Operations per second: 70K x N* - 110 K x N* Bandwidth – 1.9 GB/s x N* - 2.7 GB/s x N* *N - number of compute nodes	Input/Output Operations per second: 30k – 110K Bandwidth: 0.4 GB/s – 1.2 GB/s
Pricing	Average of **60% cost reduction**	$0.17 per GB/ Month

The Silk Platform offers enterprises the flexibility they need to move their data to match business needs, drive down the costs of managing applications, and mitigate business risks typically associated with the public cloud. For a more in-depth discussion, visit www.silk.us to speak to a representative or schedule a demonstration of Silk's capabilities.

Silk is the database supercharger – the smart platform that delivers game-changing database performance without changing a thing about your underlying apps or database infrastructure, whether you're running real-time transactional workloads or analytical workloads – so your entire stack runs 10x faster. And with always-on availability across regions, zones, and clouds, your databases keep going strong no matter what the cloud throws at you. Industry leaders like Priceline, Cisco, and Telefonica rely on Silk for unlimited cloud flexibility, unbreakable data resiliency, and the greatest database performance of their lives.