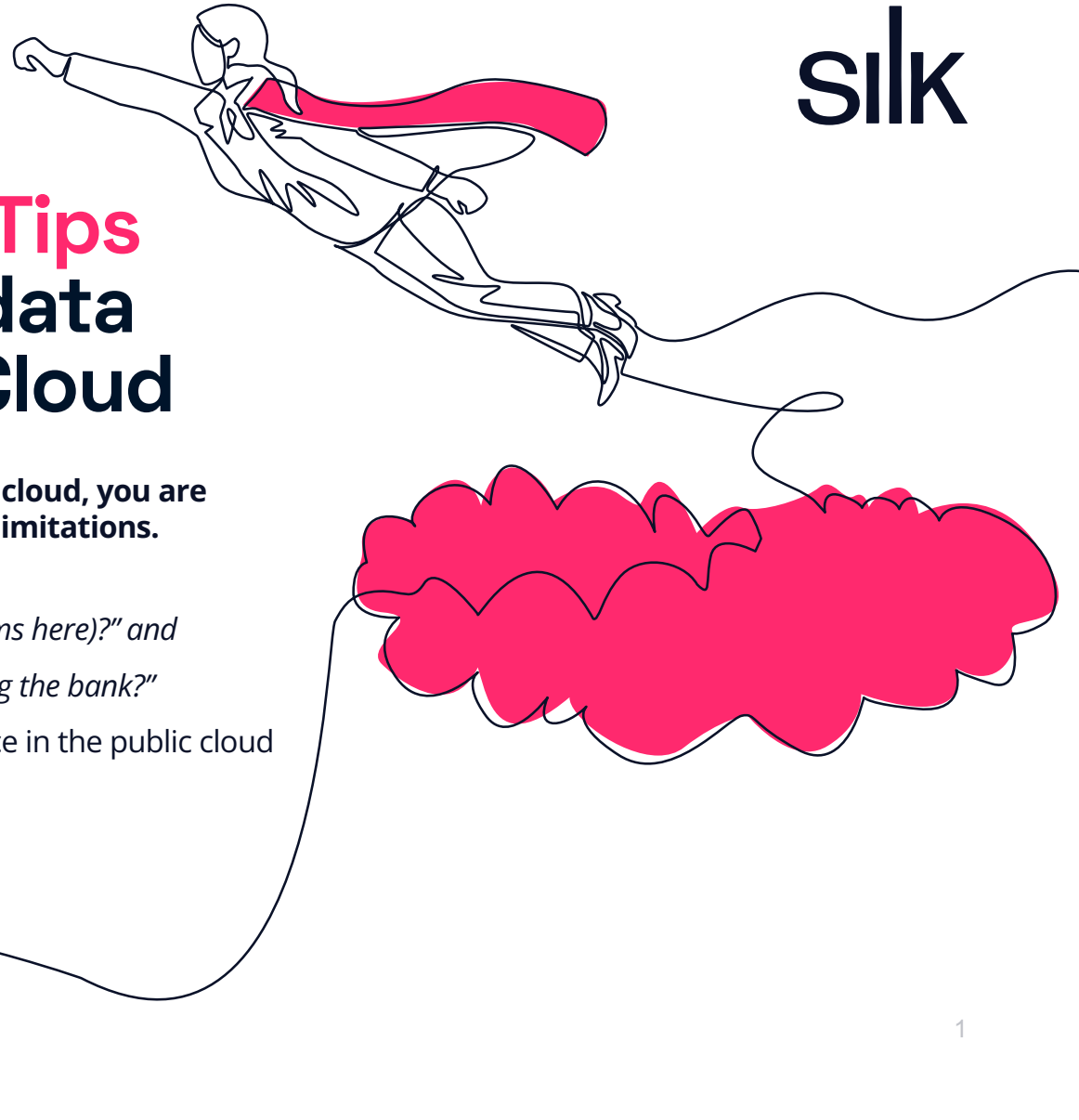

4 Database Performance Tips When Moving Oracle Exadata Workloads to the Public Cloud

If you are migrating Oracle databases from Exadata to the public cloud, you are likely concerned about performance, availability, and scalability limitations.

We often hear:

"Can I successfully migrate Exadata to Azure (or insert other cloud platforms here)?" and

"How can I achieve Exadata-like performance in the cloud without breaking the bank?"

Here are our 4 best tips to achieve high levels of database performance in the public cloud without a budget-busting cloud bill.

Tip #1

Remove the performance/capacity restraint

In the public cloud, database performance and capacity are linked together. To get the performance you need means provisioning enough cloud capacity to cover peak periods. You can end up over-provisioning cloud resources to hit performance levels, which is expensive and wastes IOPs that you don't use. We expound upon this conundrum in our eBook, How to Accelerate Cloud Performance.

By choosing a data platform like Silk that decouples performance from capacity, you can independently scale one without the need to scale the other – eliminating the need to overprovision.

Silk's unique scale-up, down, in, and out architecture covers both dimensions of scale: capacity and performance. Silk can linearly scale the number of CPU cores by adding c.nodes (compute nodes) and independently scale capacity by adding m.nodes (media nodes, or SSDs). The result? Oracle workloads receive 10x the database performance of cloud native alone with no limitations on throughput or IOPS with sub-millisecond latency to power variable workloads.

Tip #2

Avoid performance throttles

The nature of the public cloud as a shared, virtualized environment means that performance can be unpredictable with cloud providers setting “throttles” to place upper limits on the speed and volume of data. Oracle workloads moving off of Exadata need consistently high performance with low latency that the cloud providers struggle to provide. Your variable workloads (and other workloads leveraging shared components of the infrastructure, aka “noisy neighbors”) can cause latency fluctuations leading to inconsistencies in application response times.

By using the Silk Platform, which sits invisibly between your database and cloud infrastructure, you don’t have to worry about throttling performance. The architecture of Silk overcomes IaaS performance limitations with automatic I/O performance and resource optimization for consistently high performance.

Tip #3

Use data compression to minimize your cloud footprint

When moving Oracle workloads off of Exadata to the public cloud, you stop using Oracle's Hybrid Columnar Compression (HCC) built into Exadata for data reduction. Your data footprint can expand up to four times its size. Use data compression to prevent the footprint inflation associated with Oracle workloads and this will improve performance and cut your cloud bill.

Silk's inline data compression technology using resources on the data layer to compress and deduplicate your database to shrink your data footprint. Using data compression with Silk results in 2x – 4x cloud resource reduction. And, bonus, this is done without exposure to additional Oracle licensing costs.

TIP #4

Cut costs on Oracle database licensing

Speaking of Oracle license costs, they can get incredibly expensive when moving Oracle workloads to the public cloud. There are a few reasons for this.

Core Factoring: The Oracle Processor Core Factor Table is not applicable for Authorized Cloud Environments. This means that the required number of Oracle licenses will increase significantly in comparison to the number required when running on-prem.

Using larger VMs: Larger VMs are needed to deliver the performance required by your database, requiring more core licenses.

Cloud vendor limitations or throttles on capacity and performance: Often requires the need for more VMs and, therefore, more licenses.

Silk cuts your Oracle licensing costs by reducing the number of VMs and vCPUs that you need to hit mission-critical performance levels. Silk is able to offload certain operations to the data layer, alleviating the requirement for more vCPUs on the database server and the corresponding license requirements.

Silk is the leading platform for accelerating the performance of business-critical workloads in the cloud. Our virtualization platform gives Oracle workloads up to 10x faster performance on the cloud compared to native cloud alone. Moving from Exadata? Get the best performance you've ever seen all while keeping your cloud and licensing costs in check.

Visit www.silk.us for more information.