



Migrating Your Databases from Oracle Exadata to Microsoft Azure and Achieving High Performance

As enterprises continue their cloud migration, questions arise about how to effectively migrate database workloads off of Oracle’s Exadata Database Machine and onto the public cloud. Technology executives sizing up the risk are concerned about database performance, resiliency, and cost. No one wants to sponsor a cloud migration project that will fail.

This solution brief discusses how Silk supercharges the performance of Oracle workloads on Azure and accelerates cloud adoption.

Supercharging Database Performance

Silk is a data platform that sits invisibly between your Oracle databases and cloud infrastructure to deliver supercharged database performance on the cloud. We’re talking up to 10x the performance of cloud native alone, making Silk ideal for the most demanding real-time transactional processes or analytical workloads that you’re running on Exadata and moving to the cloud.

The Silk Platform does this by:

- Decoupling performance from cloud capacity
- Dynamically scaling out and in for performance elasticity on demand
- Reducing your data footprint with thin provisioning, inline compression, data deduplication, and instantaneous zero-footprint clones

I would recommend Silk to other companies because of the manageability and performance it provides. It reduces the costs and resources [being paid for] by your engineering team. Silk is a game changer for Priceline.

Frank Magaletta,
Sr. Director of Infrastructure



Rock-Solid Resiliency on the Cloud

Exadata is a clustered environment with multiple server instances working together to provide high availability, reliability, and scalability for Oracle workloads. When moving to Microsoft Azure, Oracle customers lose support for the Real Application Clusters (RAC) option for building highly available solutions across nodes. Customers must consider the transition from clustered Oracle on Exadata to single-instance Oracle in the cloud, which may require re-architecting applications for resilience.

A popular option to replace the high availability characteristics of RAC while running in the cloud is Oracle Data Guard. Through the use of synchronous log replication and transparent application failover, Data Guard can be configured to provide a zero RPO solution for single-instance Oracle. And because Data Guard is included in Oracle's Enterprise Edition license, it can be more cost-effective than Oracle RAC.

Horizontal Scalability on the Cloud

However, Oracle RAC is not just a high availability solution; Oracle's marketing literature also describes RAC as a solution for horizontal scalability. The ability to add cluster nodes, thereby incrementally adding performance to the database cluster, makes RAC an important option for scalability. So how do customers moving to Microsoft Azure, where single-instance is the only supported option for Oracle, give themselves the ability to grow as their performance demands increase?

This is where the Silk Platform provides a unique capability. With Silk, data performance can be dynamically and non-disruptively added or removed as it is required by your workloads. Running an intensive batch process over the weekend? No problem, just scale up. Need to plan for an upcoming sales season with 10x your usual number of customers? Simple, just add more Silk nodes. Finished with the additional resources and need to return to normal to cut your cloud costs? Silk lets you scale down as well as up. And, unlike with Oracle RAC, the process of adding or removing performance is straightforward, non-disruptive and designed to be possible many times a day. For Oracle RAC or Exadata administrators, who usually must plan months in advance for the process of adding a node, this opens a brave new world of possibilities.

Cost-Efficiency on the Cloud

The Silk Platform reduces cloud spend and exposure to licensing costs. Take the example above. When adding more performance (by adding more RAC nodes) to an Exadata or RAC database, many more Oracle core licenses must be activated. But with Silk, the number of database CPU cores remains the same, even as more data performance is added or removed on the Silk Platform.

For a customer moving from clustered Oracle on Exadata to single instance Oracle on the cloud, the data performance of cloud VMs is tied to the number of vCPUs, meaning very large VMs typically must be deployed to get the necessary level of performance for such critical workloads. And large VMs mean large numbers of expensive Oracle core licenses.

But with Silk on Azure, the dependency between CPU count and data performance is unlocked, meaning there's no need to deploy larger VMs for performance, so you can save on both your cloud bills and Oracle licensing costs.

How can Silk save you money?

Reduced exposure to licensing costs – Silk reduces the number of VMs and vCPUs needed to hit mission-critical performance levels and offloads operations to the data layer.

Real-time data reduction – Enterprise data services including thin provisioning, inline compression, and data deduplication keep your cloud footprint in check.

Instantaneous zero-footprint clones – Take unlimited snapshots of your database for development and testing without any impact on performance or cloud capacity.

Accelerate Cloud Adoption

Silk accelerates cloud adoption with full data mobility and the ability to lift-and-shift Oracle workloads to the cloud without a refactor. Many Oracle customers debate whether to migrate from Oracle to PostgreSQL because migration is risky and time-consuming. The Silk Platform enables a straightforward lift-and-shift to Oracle running on IaaS, but with the same levels of performance you were used to on prem. You do not need to change the application code or re-engineer the dataset to work with a new database product, so you can quickly take advantage of the benefits of the cloud while having time to consider the next steps of your cloud journey. You may still want to move to an open source database like PostgreSQL, or perhaps you dream of a fully managed PaaS solution. Silk gives you the freedom and flexibility to complete your journey to the cloud as fast as possible, without it having to be the end of the road for your digital transformation aspirations.

So, say goodbye to risk analysis paralysis and get your Oracle workloads on the cloud.

Contact us at www.silk.us for a demo!

About Silk

The Silk Cloud DB Virtualization Platform gives demanding workloads 10x faster performance on the cloud compared to native cloud alone. It is a virtualization layer that sits between the underlying cloud infrastructure and customers' workloads. Without refactoring, workloads such as Oracle, Microsoft SQL Server, and industry-specific applications can move onto the GCP and Azure cloud while massively improving user experience. Industry leaders in e-commerce, software publishing, FinTech, and healthcare trust Silk with their mission-critical workloads to get the ultra-fast speeds their customers demand. Silk is headquartered in Needham, MA.

To learn more, visit silk.us.