High-Availability Solutions Provide Cost Savings and Flexibility

Organizations facing the need to migrate Oracle databases from Standard to Enterprise Edition have less expensive and more flexible options.

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Migrating Oracle databases can be a tall order. The process is often complex and can be costly. Sometimes, however, migration is unavoidable. This is especially true when support and licensing considerations come together to make migration a necessity. And when migrating business-critical databases, it is important to provide high-availability protection to prevent downtime, which results in lost revenue and productivity.

Oracle has announced that support for Oracle Database 12c will soon end. Therefore, organizations running Oracle Database 12c will face the imminent requirement to migrate. According to Oracle statements, "Extended Support for Database 12c runs to July 31, 2021."

Oracle is revising its licensing parameters to let 12c users use Oracle clustering technology, but that arrangement will come to an end with the Standard Edition (SE) license in 19c. "Starting with Oracle Database 19c,

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Oracle Real Application Clusters (Oracle RAC) is not supported in Oracle Database Standard Edition 2 (SE2)," according to Oracle.

Once organizations migrate from Oracle Database 12c to Oracle Database 19c, they will no longer be able to use RAC for high availability unless they purchase the more expensive Enterprise Edition (EE) license. Companies using SE2 may not want to incur the significant added expense of EE just to use RAC, especially if they do not need the additional features of the EE.

However, migrating to Oracle Database 19c will be critical to ensure a long-term support commitment from Oracle. Migration scenarios can differ in many ways, and there are multiple methods promoted by Oracle that rely on its technology and processes to upgrade and migrate databases to Oracle 19c, most dependent on the specific license and edition. Organizations currently running SE may think they need to choose one of the following three migration paths, but there is indeed a fourth option to consider:

- Upgrade from SE to EE with RAC
- Convert the Oracle RAC database to a Single Instance database
- Migrate to the Oracle Cloud

Explore Other Options

There is a simple way to provide a more robust high-availability clustering capability than RAC for Oracle SE at a significantly lower cost than migrating to EE. SIOS LifeKeeper is a powerful, application-aware clustering software that provides automated resource monitoring and recovery via fully redundant cluster node failover. It also enables disaster recovery via geographically separate cluster nodes and managed failover among multiple nodes to deliver high availability and disaster recovery across

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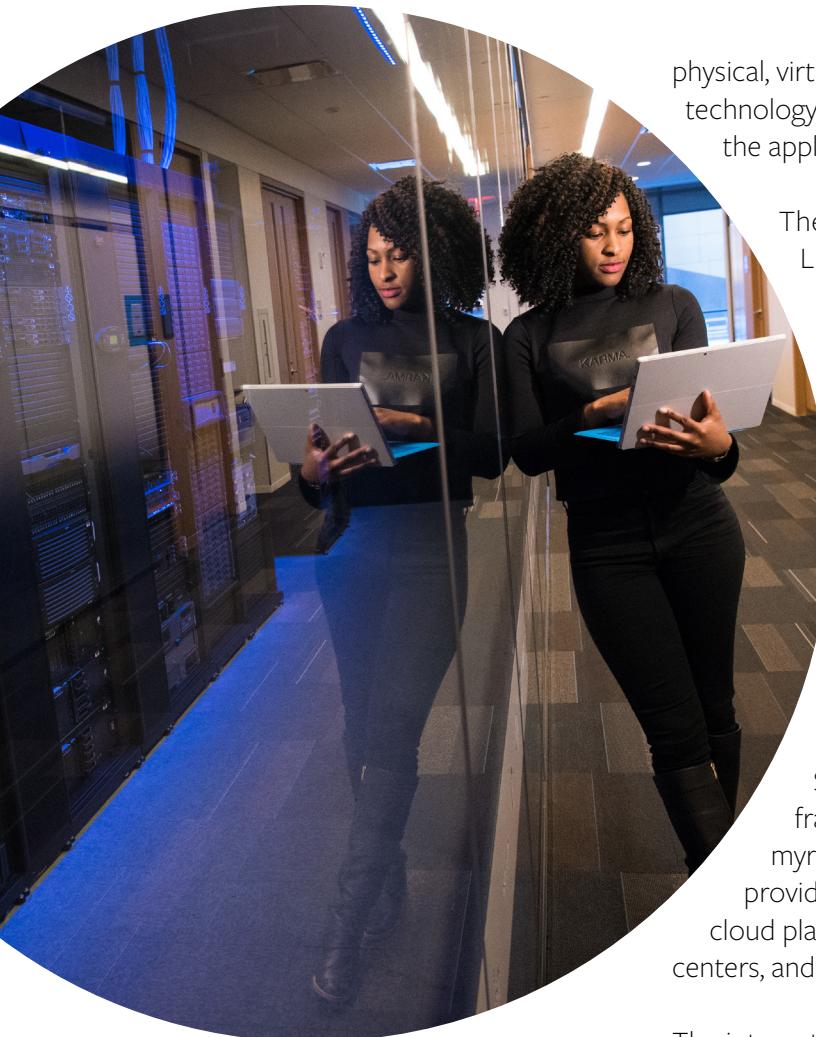
physical, virtual, and cloud platform environments. This application-aware technology monitors the entire infrastructure and manages failover of the application to standby nodes in the event of outage.

There are significant cost-benefit advantages to SIOS LifeKeeper. The current licensing migration path recommended by Oracle for Oracle 12c to 19c can increase licensing cost by as much as four times, from approximately $76,000 to $308,000, for example (for an average RAC clustering environment covering approximately 200 seats with 50 users per processor license, according to the Oracle Technology Global Price List, published Dec. 5, 2019). SIOS software will not only provide superior availability, features, and flexibility, but can also decrease annual expenditures for Oracle SE 12c from $76,000 for an average overall license to approximately $54,000, following the same example.

SIOS LifeKeeper implements high-availability clustering at a fraction of the cost and complexity of Oracle solutions across myriad operating systems, applications, and databases. It also provides greater flexibility by operating across cloud and hybrid cloud platforms, physical servers in traditional on-premises data centers, and virtual servers.

The integrated data replication, high-availability clustering, and disaster recovery functions provide protection for Oracle databases. Advanced, application-aware health-checking functions provide comprehensive monitoring of servers, network connections, storage, Oracle-specific processes, and the entire application portfolio. SIOS solutions can monitor and detect failures in application stack components not specifically addressed by RAC. While Oracle RAC does indeed provide high availability, SIOS provides high availability at a fraction of the cost of Oracle RAC.

High-Availability Clustering in the Cloud

SIOS clusters can be configured with either traditional shared storage or as a SANless cluster using SIOS DataKeeper host-based, block-level replication software. By synchronizing local storage in all cluster nodes, SIOS software provides a cost-efficient way to create a cluster in a cloud or other environment where shared storage is impossible or impractical. SIOS clusters can be used in Linux or Windows

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To summarize:

- Using SIOS LifeKeeper with Oracle SE provides a less complex, much less expensive, and more flexible alternative to migrating Oracle EE, providing high availability at a significantly lower cost than Oracle RAC.

- Organizations have choices when it comes to mapping out and executing the migration process. This process is imminent for organizations running Oracle 12c. They will face the challenge of migrating once the end of support is reached, so making plans now can give an organization more flexibility.

- Organizations can certainly maintain an on-premises database, but migrating all or some of the corporate data stores to the cloud while maintaining high-availability protection is an option, and SIOS supports all of these options.

Reduce Cost and Complexity

SIOS LifeKeeper enables a much-needed level of configuration flexibility—allowing companies to continue to use SE—and significant cost-savings for companies making difficult decisions about how to deal with the impending changes to Oracle Database 12c. SIOS provides high availability at a fraction of the cost of using Oracle RAC.

To learn more about SIOS LifeKeeper and SIOS DataKeeper as less expensive and more flexible options for migrating Oracle databases, please visit https://us.sios.com/solutions/oracle-high-availability/.