

7 OPTIONS FOR MIGRATING ORACLE SE2 & RAC TO 19c

Now that Real Application Clustering (RAC) is no longer supported on Oracle 19c, we have assembled 7 options for you to consider when migrating from Oracle SE2 & RAC to 19c.



XYNOMIX
THE DATABASE EXPERTS

xynomix.com

OVERVIEW

POINTS OF DISCUSSION

- 5.** Remain on Current Version of SE2 (18c)
- 7.** Upgrade to Enterprise Edition (EE)
- 9.** Utilise Dbvisit Standby
- 10.** Standard Edition High Availability (SEHA)
- 11.** Migrate to Oracle Cloud infrastructure (OCI)
- 12.** Move to Oracle Autonomous Database
- 13.** Oracle Database Appliance (ODA)



INTRODUCTION

Key Benefits of SE2

A benefit of having an Oracle Standard Edition 2 (SE2) licence is the ability to utilise Oracle Real Application Clusters (RAC), which allows you to achieve high availability as it binds together multiple servers to operate as a single system. Another benefit is that SE2 can be licenced for 2 sockets, which with current processing power is generally enough to run many workloads.

But since the release of Oracle Database 19c, Oracle RAC is no longer available with SE2.

Why Upgrade to Version 19c?

The latest database version (19c) comes with a range of vital security features. Increased database security is always welcome, but the removal of RAC does pose the question:

Do you stay on an older version for RAC's business continuity features, or do you look at other options?



SO, WHAT ARE THE OPTIONS?

At Xynomix we appreciate that every organisation's needs differ. Our expertise and flexibility mean that our consultants can find the solution that best suits your needs.

With this in mind, we've collated 7 options for migrating Oracle SE2 and RAC to 19c.



OPTION ONE



REMAIN ON THE CURRENT VERSION OF SE2 (18c)

- ❌ Oracle 18c still supports RAC, so you may wish to minimise the impact to your RAC configuration.
- ❌ However, consider that Oracle support for 18c ends in June 2021. This means no more quality of life additions or critical security updates.
- ❌ Consider converting your RAC database to a non-RAC database (single instance prior to upgrading to 19c).

WHAT FEATURES ARE AVAILABLE ON SE2 19c?

INCLUDED	JServer JAVA Virtual Machine
INCLUDED	Oracle Application Express
INCLUDED	Oracle Database Catalog Views
INCLUDED	Oracle Database Java Packages
INCLUDED	Oracle Database Packages and Types
INCLUDED	Oracle Multimedia
INCLUDED	Oracle Text
INCLUDED	Oracle Workspace Manager

INCLUDED	Oracle XDK
INCLUDED	Oracle XML Database
INCLUDED	Spatial
EXCLUDED	OLAP Analytic Workspace
EXCLUDED	Oracle Database Vault
EXCLUDED	Oracle Label Security
EXCLUDED	Oracle OLAP API
EXCLUDED	Oracle Real Application Clusters

UPGRADE TO ENTERPRISE EDITION (EE)

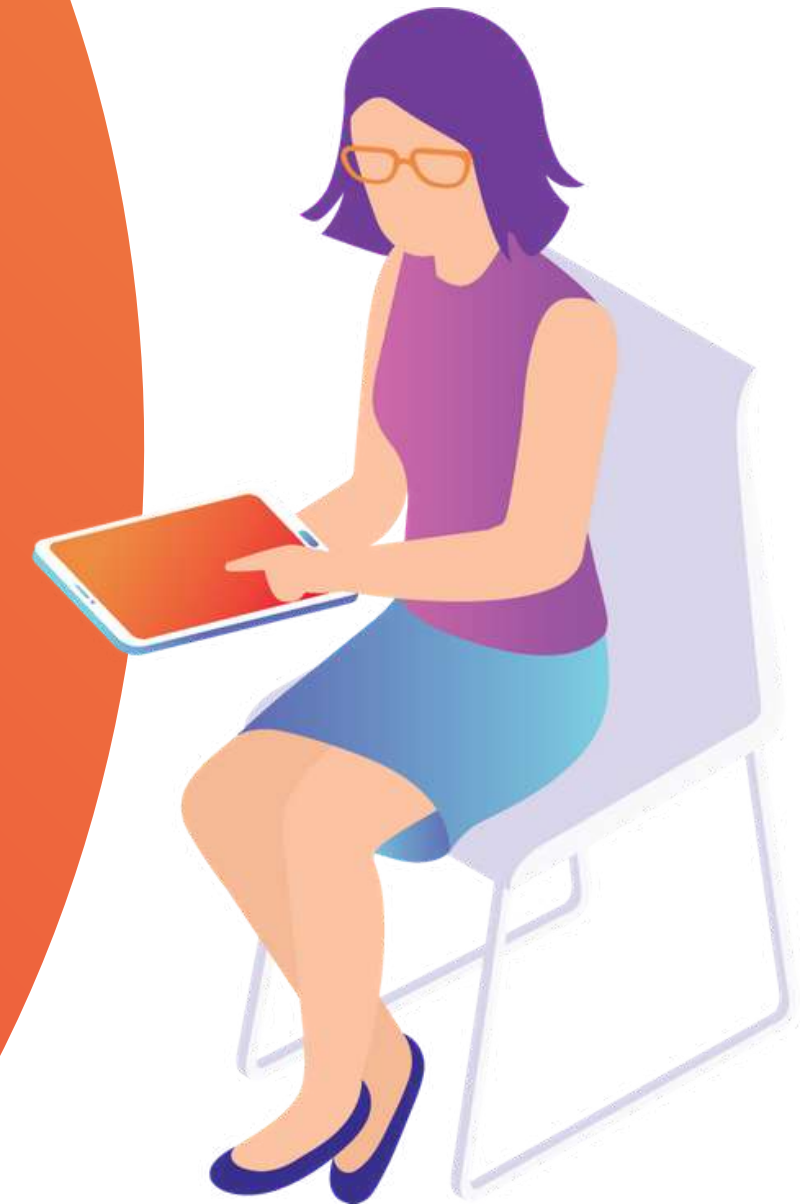
RAC now is available as a feature of the Oracle Enterprise Edition (EE) licence. You can do this by migrating to or purchasing EE licences to preserve your Oracle RAC database.

However upgrading to EE to take advantage of Real Application Clusters (RAC) should not be the only driver. EE has a host of other features, including no-cost options that that may equally provide the HA (High Availability) / DR (Disaster Recovery) strategy you are looking to achieve. RAC within EE is a chargeable addition.

Data Guard is arguably one of the most proficient features of EE, allowing for the creation and deployment of an advanced HA / DR solution, offering:

- Synchronised copy of production databases, transactionally consistent with primary
- Fast repair of computer outages, human intervention, data corruption, etc.
- Redo application, transport and transitions
- Configurable automatic failover configurations

OPTION TWO



RMAN (Oracle Recovery Manager) in conjunction with Data Guard will in the majority of cases provide a sophisticated HA / DR solution that guarantees zero data loss at the database level.

Other options:

Advanced Data Guard is a chargeable feature of EE that provides an advanced layer of database integrity, designed to improve production database performance for critical transactions. Featuring read-only access to a physical standby database while Redo Apply is active, queries and reports can be moved away from the production system to a synchronized physical standby database.

The Maximum Availability Architecture (MAA) is Oracle's best practice methodology in which all options can be discussed in conjunction with your company's Recovery Point Objectives (RPO) / Recovery Time Objectives (RTO) to ensure results are matched to budgets.



UTILISE DBVISIT STANDBY

OPTION THREE

Should you find that migrating to or purchasing EE licences is not your preferred option then you may wish to consider Dbvisit Standby.

Xynomix have worked with Dbvisit for years, using their software as an alternative to RAC on SE2.

Dbvisit Standby is a disaster recovery tool, allowing a standby Oracle database to mirror changes made to the primary database.

There are minor risks of data loss at database level, so guaranteeing zero data loss will require an alternative solution.



STANDARD EDITION HIGH AVAILABILITY (SEHA)

OPTION FOUR



Standard Edition High Availability (SEHA) was released in 2020 and allows for cluster-based failover for a single-instance Oracle Database utilising Oracle Clusterware.

SEHA uses existing cluster capabilities and storage solutions that already exist in Oracle Grid Infrastructure, such as Oracle Clusterware, Oracle Automatic Storage Management (Oracle ASM) and Oracle ASM Cluster File System (Oracle ACFS).

OPTION FIVE



MIGRATE TO ORACLE CLOUD INFRASTRUCTURE (OCI)

Oracle Cloud infrastructure (OCI) is scalable, faster, and reduces reliance on normal infrastructure, including RAC. Oracle Cloud can be seen as the easy upgrade path for a wide array of applications that need predictable costs, with state-of-the-art reliability from the hyperscaled Cloud operators.

When migrating with OCI, it's possible to spread the costs, ensuring that you only pay for the period that the systems are running. If after a while you would like to stop, you can just cancel the bill.

MOVE TO ORACLE AUTONOMOUS DATABASE

OPTION SIX

- ❌ Convert SE RAC database to an Autonomous Database
- ❌ Autonomous uses RAC-enabled Oracle EE by default
- ❌ SLA 99.995% uptime = less than 30 mins downtime per year

Self-repairing, self-securing, automated failure detection & failover, and straightforward scaling are just a handful of advantages offered by the Oracle Autonomous Database option.



OPTION SEVEN



ORACLE DATABASE APPLIANCE (ODA)

ODA is a great option for the company facing the dilemma of upgrading beyond SE2 18c with the removal of the RAC options. The release of Standard Edition High Availability for 19c combined with an Oracle ODA is the ideal solution.

Oracle ODA is a turnkey hardware solution engineered by Oracle, for Oracle. In our experience, it provides a greater price performance against other hardware options.

Optimise your Oracle licensing with The Database Experts.

**With over 20 years of licensing expertise behind us,
why go with anyone else?**

Take a moment

to review your database management



XYNOMIX
THE DATABASE EXPERTS



Gold
Microsoft Partner

ORACLE PARTNER

xynomix.com