Ensuring Continuity, Accessibility, and Reliability With Oracle

SAP ECC Through 2030 and Beyond

The end of support for SAP ECC is approaching and organizations face a pivotal moment in their ERP lifecycle. Businesses must prepare for migration to other ERP systems (not necessarily from SAP), while continuing to ensure uninterrupted SAP ECC operation—until 2030, but probably even beyond.

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The current ECC systems run the core business functions of many organizations. These systems need to operate effectively and efficiently to ensure the day-to-day business operation of the organization. The first thing to consider is continuity.

This refers to the assurance that the systems are under contractual maintenance by the vendors (e.g. SAP SE for the applications and/or databases), under standard maintenance, extended maintenance, or even customer specific maintenance. This would ensure that the ECC systems would have full support from SAP and the associated DB vendors for the database that ECC systems run on.

Accessing data

Depending on the type of license purchased, access to the data in the SAP ECC databases may be restricted. If, for example, a company has purchased the Oracle database license for use with SAP ECC as a bundle from SAP, this license is classified as ASFU (Application Specific Full Use).

Oracle databases with ASFU licenses are technically and functionally identical to Full Use (FU) databases, i.e., databases licensed directly from Oracle Corporation. However, there are important differences (see box on p. 49).

ASFU databases

If there is a need to access an ASFU database directly from non-SAP applications or third-party tools, the ASFU license must be converted to an FU license from Oracle. Alternatively, customers can use the database licenses in the subscription model of Exadata Cloud Service (public cloud) or Exadata Cloud@Customer (private cloud in the customer's data center). This allows them to migrate their SAP systems to Oracle Cloud Infrastructure (OCI) and cover their SAP databases with the database license subscription. This eliminates any additional capital expenditure (CAPEX) for the purchase of FU Oracle database licenses; instead, the costs can be recorded as operating expenses (OPEX) as part of a subscription for as long as necessary.

Increasing reliability

As the SAP ECC systems run the current business operations, it is imperative that these ECC systems have the highest reliability and resiliency required. However, due to the stage of the ECC lifecycle consideration, redesigning the architecture and upgrading the hardware may not be justifiable.

One of the best solutions is to migrate the SAP ECC systems to a cloud subscription model. However, not all cloud solutions are created equal. To achieve maximum reliability and fault tolerance, it is essential to use Oracle Real Application Clusters (RAC), which provides active-active clustering. Operating SAP with RAC in a public cloud environment is only possible with the Oracle Exadata Database Service, which includes both Oracle Exadata Cloud@Customer and Oracle Exadata Cloud Infrastructure (OCI).

The same cost considerations also apply to the Disaster Recovery Center (DRC) locations. Refreshing the DRC with new expensive hardware may not be cost justifiable, but being able to continue business operations in case of a disaster is still a critical business consideration for organizations. The use of subscription-based cloud infrastructure with supported hyperscalers as part of a disaster recovery plan effectively achieves the desired results without the high capital outlay required to renew DRC hardware.

Regulation Compliance

Every legal system has numerous regulations that companies must comply with—especially in regards to the storage of business data. Local laws may require extended data retention periods. In addition, auditors need quick access to older data when necessary. There are different types of legacy data that need to be retained, and they must be handled differently.

Complete backups of older ECC databases, which are used to reconstruct the data stock at a specific point in time: these can be stored in an external file system, on magnetic tapes, WORM drives, or in the cloud. However, subsequent recovery based on such backups can be problematic—for example, if the original platform has exceeded its end of support (i.e. HP-UX). To ensure access to the ECC system before it is finally decommissioned, it is therefore important to migrate the current ECC system to a platform with long-term support. Oracle Linux would be a good choice, since Oracle Linux is the only Linux distribution supported on all hyperscalers for running SAP ECC with the Oracle database. This combination offers companies the greatest possible flexibility and security for any future recovery of decommissioned ECC/NetWeaver systems that may be necessary.

Old, archived business data extracted using the SARA transaction and/or XML archiving: Accessing this archived data usually requires a functioning ECC system, as it was archived based on archiving objects and not through table-based data record extraction. In addition, many consulting firms recommend that their customers archive all legacy data when migrating to S/4 Hana so that only a reduced data set needs to be migrated. Accessing this archived data after migration to SAP S/4 Hana can cause problems, which is why a functioning ECC system should still be available after migration. A simple solution is to continue operating a minimal ECC system on a hyperscaler for as long as necessary. The archived data can then be easily accessed via this system.

Alternatively, companies can consider using Hybrid Columnar Compression (HCC) as part of Information Lifecycle Management (ILM). This can significantly reduce the size of the Oracle database (possibly by more than 10 times), eliminating the need for separate data archiving.

ASFU vs. FU

(1) ASFU licenses are subject to a fixed percentage of the SAP application contract, while FU license fees are generally calculated based on the number of processors/cores used by the database.
(2) ASFU databases may only be used by SAP ECC/NetWeaver applications, while the data in FU databases is also accessible to other applications or third-party tools.

Security is key

In the early days of SAP R/3, most systems were not connected to the internet. Security thus focused on physical security, network security, setting up authorization profiles, and segregation of duties. Today, however, systems are threatened by attacks from a wide variety of sources, with phishing and ransomware attacks in particular affecting companies of all sizes.

Hackers only need a single security hole to gain access to numerous systems and databases. However, the threat is reduced if the databases are encrypted. Even if attackers reach the physical level of the database, they cannot read any data that is useful to them because both the database itself and the communication between the database and SAP NetWeaver application server(s) are encrypted. Oracle Advanced Security (included in the SAP ASFU license) also supports the encryption of complete backups, so that all data at rest and in transit is protected.

And what happens if the SAP ECC systems are actually affected by a ransomware attack? If your SAP ECC database is from Oracle and a backup was created with the Oracle Zero Data Loss Recovery Appliance (ZDLRA), you can simply restore the database from the ZDLRA. Since SAP ECC stores all business data as well as business logic (Abap/configurations) in the database, ZDLRA ensures that all information remains protected even if the productive ECC system has been compromised.

The Future is AI

Artificial intelligence now influences all aspects of our IT systems. SAP ECC databases are a veritable treasure trove of business data that can be harnessed with the right tools and AI technologies.

Oracle helps you unlock the full potential of the data in your existing SAP ECC Oracle databases—even if you are already building a new greenfield ERP system. Don't miss out on the enormous benefits hidden in your SAP ECC databases. Talk to our AI data specialists to discover the many possibilities—from generative AI to AI services and GenAI solutions for data platforms to AI infrastructure. ■

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