IBM

Flash
IBM Oracle International Competency Center (ICC)

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Update on Oracle Database Standard Edition 2 licensing rules for IBM z Servers

This IBM and IBM Business Partners Internal Flash summarizes updated information that both the IBM z13s model N10 and Rockhopper model L10 can qualify for the 2-socket maximum requirement for the Oracle Database Standard Edition 2 (SE2). These are the only IBM z server models qualifying for SE2. When upgraded to an N20 or L20, the system no longer qualifies for SE2, and the customer must upgrade to Oracle Enterprise Edition (EE).

On September 1, 2015, Oracle announced the licensing terms and pricing for the new edition of its database, Oracle Database SE2. Oracle positions SE2 as a cost-effective license model, licensed per socket vs. cores, for deployment in small enterprises, line of business departments, and distributed branch environments. Starting with DB version 12.1.0.2, the new SE2 edition replaced the previous Oracle Database Standard Edition (SE) and Standard Edition One (SE One) offerings from Oracle.

There was little impact from the 2015 announcement for IBM z Servers. Experience shows that customers deploying Oracle Databases on IBM z Servers require the feature rich capabilities and options only available with Oracle Database Enterprise Edition (EE).

Customers should continue in directing licensing, pricing and questions on the status of available regional product offerings to the Oracle Corporation since Oracle owns these terms and conditions.

Summary:
- All processors types (SPARC, Intel, POWER, z Servers) were impacted
- Oracle introduced SE2 to replace SE and SE One starting with Database version 12.1.0.2
- SE2 reduces the number of sockets/chips in eligible systems from 4 in SE to 2
- The N10 & L10 have 2 processor chips and meet the SE2 requirement
- The N20 & L20 have a minimum of 4 processor chips and don't meet the SE2 requirement
- SE2 may not be the right solution for your z customer Oracle database requirements
- Customers continue to have the option to upgrade from Standard Edition's to Enterprise Edition which is available for traditional core-based or named user pricing

    Please reference the Oracle Feature Availability by Edition whitepaper for a comprehensive listing of available features and options.

    And these additional resources for more information on Oracle Database Solutions:

- [Oracle Database Product Family Whitepaper](#)
- [Oracle Database Standard Edition Two](#)
- [Oracle Database Enterprise Edition](#)

Details:

All CPU chips ("sockets") active, installed and/or running, must be licensed.

Oracle Database SE2 only can be licensed on single or clustered servers that have a maximum capacity of 2 sockets for a server to be eligible for its pricing.

When licensing Oracle programs with Standard Edition One, Standard Edition 2 or Standard Edition in the product name a processor is counted equivalent to an occupied socket; however, in the case of multi-chip modules, each chip in the multi-chip module is counted as one occupied socket:
- Each z Server CPU chip with an activated core is counted as a socket
- If any core is activated on a chip, it requires a Standard Edition 2 socket license

There is no "core factor" applied to the socket metric in Standard Edition 2.

Oracle Real Application Clusters (RAC) is included with SE2, however:
- The Oracle Database Instance cannot have more than 16 threads (8 per instance when running Oracle Database RAC)
- When the RAC feature is used with SE2, eligibility is determined by the total number of chips in the cluster, not simply by the number of chips in an individual system. The limit remains a maximum of two chips
- For the z13s N10 and Rockhopper L10 Models Running RAC across multiple LPARs on the same machine is allowed, but not allowed across multiple physical machines (CECs)
  - The number of chips across the LPARS on a single server would not exceed two
  - The total number of chips across multiple physical machines would exceed two
  - This is the case for both processor and named user based license metrics

Traditionally, customers looking to deploy Oracle Database 12cR1 solutions on IBM z Servers are interested in features only available (or as options), for the Oracle Database Enterprise Edition. The most commonly deployed include:

- Oracle RAC One Node
- Oracle Multi-Tenant feature, however:
  - You can do Oracle "Single Tenant". Oracle indicates you can have one active pluggable database within one container database at a time and does not require any additional licenses. Please reference this Oracle blog: [Can you have Oracle Multitenant in Oracle Standard Edition 12.1.0.2 SE2?](#)
- Oracle Data Guard
- Oracle Diagnostic & Tuning Packs
- Oracle RMAN point in time recovery

- Recovering tables and table partitions from RMAN backups, however:
  - RMAN Database recovery is available with SE2
- Oracle Table space online recovery, however:
  - Table level recovery is available with SE2
- Oracle Flashback recovery
- Oracle Rolling Upgrades—Patch Set, Database, and Operating System
- Online index rebuild and Online index-organized table organization
- Fine grained auditing

Please check My Oracle Support website (see additional information below), Document ID number 2027072.1 for the full text of the announcement of SE2.

Additional information may be found at these websites:

1. My Oracle Support (for the Oracle Certification Matrix)[1]:
   https://support.oracle.com/CSP/ui/flash.html
2. Oracle's website for download of the database:
   http://www.oracle.com/technetwork/database/enterprise-edition/downloads/index.html
3. Oracle's website for Database information:
   http://www.oracle.com/us/products/database/overview/index.html
4. Oracle's website for Database Standard Edition 2 information:
   https://www.oracle.com/database/standard-edition-two/index.html
5. Oracle's website for Database Editions comparison
   https://docs.oracle.com/database/121/DBLIC/editions.htm#DBLIC109
6. Visit the IBM LinuxONE website:
   https://www-03.ibm.com/systems/linuxone/
7. Visit the IBM z Systems website:
   http://www-03.ibm.com/systems/z/index.html

[1] A userid and password are required to access that website. This is available for Oracle customers and Oracle Business Partners.

For further information on this Flash, please e-mail the IBM Oracle International Competency Center at **ibmoracle@us.ibm.com** with any questions you may have on this topic.