

Oracle Real Application Clusters (RAC) Support on Third-Party Clouds

An Overview and Clarification – Revision 2018.08.12

18^c ORACLE[®]
Database

Why Oracle Cloud?

One of the key characteristics of cloud deployments is simplification. Based on this premise, many of Oracle's customers have moved or are considering moving into the cloud. The Oracle Cloud provides a rich choice of application suites as well as best-of-breed solutions as part of its strong Software-as-a-Service (SaaS) and Platform-as-a-Service (PaaS) offerings. In its Infrastructure-as-a-Service (IaaS) offering, the Oracle Cloud in addition enables independent software vendors and system integrators to showcase their services and applications¹.

The Oracle Cloud is currently the only cloud offering certified and supported to run Oracle Real Application Clusters (RAC) databases.

Oracle RAC Support on Third-Party Clouds

Licensing as well as missing infrastructure support currently restricts support for Oracle RAC on Third-Party Clouds.

The following two documents detail the licensing restriction:

1. "Licensing Oracle Software in the Cloud Computing Environment"²
2. "Oracle Programs" as referred to in the document mentioned above³

It needs to be noted that Oracle RAC is not listed as part of the Oracle programs that are eligible for Authorized Cloud Environments per the policy document listed under 1. above ("Licensing Oracle Software in the Cloud Computing Environment").

No Third-Party Cloud currently meets Oracle's requirements regarding natively provided shared storage. "Native" in this context means that the cloud provider must support shared storage as part of their infrastructure as per Oracle's support policy⁴:

"All storage products must be supported by the server (host) and storage vendors"

¹ <https://cloud.oracle.com/marketplace>

² <http://www.oracle.com/us/corporate/pricing/cloud-licensing-070579.pdf>

³ <http://www.oracle.com/us/corporate/pricing/authorized-cloud-environments-3493562.pdf>

⁴ <http://www.oracle.com/technetwork/database/clustering/tech-generic-linux-new-086754.html>

Frequently Asked Questions (FAQ)

1) Can I use my current license to run Oracle RAC on Third-Party Clouds?

Answer: For individual license reviews, contact your Oracle sales representative.

2) Who are the host and the storage vendors in a Third-Party Cloud?

Answer: The cloud provider is the host as well as the storage vendor in a Third-Party Cloud. The “hosts” are the instances provided by the cloud vendor, while the storage is typically inherent to the cloud solution and hence, provided by the cloud provider, too.

3) Can I use FlashGrid® to enable shared storage for Oracle RAC?

Answer: No, FlashGrid® is not supported to enable shared storage for Oracle RAC on Third-Party Clouds. The Oracle support policy⁵ states that: “All storage products must be supported by the server (host) and storage vendors.” Specifically, this requires the server and storage vendors who provide and support the hardware to directly support all components of the storage stack. The intent of this policy is to prevent the complexities of integration and multi-vendor support to lead to extended periods of downtime for Oracle RAC databases, which are typically used in high availability environments. This regulation particularly applies to any cluster-based storage software solution like FlashGrid®, which sits between the server, the storage and the database. Customers should also note that no such solution has ever been supported by Oracle for an Oracle RAC database.

4) What is the impact of using an unsupported solution?

Answer: Support decisions are at the discretion of Oracle. Using an unsupported solution for the Oracle Database means that Oracle can deny support for systems that use such a solution, if it is deemed that the unsupported solution is the cause of or contributes to a given problem and until the issue is reproduced in a fully supported environment. While this can affect current systems, the impact is more significant for future versions of Oracle’s products. Use cases that are declared unsupported are not considered during development. This means that future versions of Oracle’s products may introduce changes to improve supported configurations that inadvertently break some configurations that are unsupported, simply because Oracle would not have considered those as part of their development efforts.

5) Apart from licensing, can Oracle RAC be supported on Third-Party Clouds?

Answer: As the licensing restriction documented above currently restricts the use of Oracle RAC in either Amazon’s AWS or Microsoft Windows Azure or any other Third-Party Cloud for this matter, Oracle has ceased any supportability evaluation of Third-Party Clouds for Oracle RAC in general. That said, the lack of natively provided shared storage in addition to certain network restrictions that would need to be worked around on most Third-Party Clouds currently prevent Oracle from supporting any Third-Party Cloud for Oracle RAC presently and regardless of technical feasibility.

⁵ <http://www.oracle.com/technetwork/database/clustering/tech-generic-linux-new-086754.html>

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6) Can I test Oracle RAC on Third-Party Clouds?

Answer: Under the OTN License Agreement⁶ certain testing of Oracle RAC on Third-Party Clouds is permitted. Disclosing results of any program benchmark test is not permitted without Oracle's prior consent in this case. Oracle will also not accept the results of any individual test as a proof for the supportability of a Third-Party Cloud.

7) Can a third-party vendor such as FlashGrid® claim support for their solution?

Answer: Vendors can claim support for their own solution for the Oracle Database. For vendors providing infrastructural pieces (such as storage) to the Oracle Database, a support confirmation from Oracle is required. The absence of an explicit or implicit (by policy) support statement indicates that a given solution is not supported. Oracle explicitly recommends against using solutions that are not supported, particularly when those solutions utilize cluster frameworks that are co-hosted with Oracle Clusterware on the same servers, as those solutions are inherently subject to dueling cluster framework issues⁷. Certified or supported solutions undergo a rigorous set of defined tests of which the results are reviewed by Oracle prior to declaring support and in order to make sure that those solutions behave according to expectations. FlashGrid® uses an inherent cluster solution⁸ that has not been tested nor reviewed by Oracle.


⁶ <http://www.oracle.com/technetwork/licenses/standard-license-152015.html>

⁷ See MOS note "Using Oracle Clusterware with Vendor Clusterware FAQ (Doc ID 332257.1)"


⁸ https://www.flashgrid.io/wp-content/uploads/resources/FlashGrid_AWS_Provisioning_Guide_18.07.pdf p. 6

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