

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

An Overview and Clarification – Revision 2020.06.14

**19<sup>c</sup>** ORACLE<sup>®</sup>  
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 enables independent software vendors and system integrators to showcase their services and applications. Most importantly, the Oracle Cloud simplifies the deployment, maintenance and use of Oracle Real Application Clusters (RAC).

**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 restrictions**:

1. "Licensing Oracle Software in the Cloud Computing Environment"<sup>1</sup>
2. "Oracle Programs" as referred to in the document mentioned above<sup>2</sup>

It needs to be noted that Oracle RAC is not listed as part of the Oracle Programs that are eligible for Authorized Cloud Environments. Thus, Oracle RAC cannot be licensed in any Third-Party Cloud, including Amazon AWS and Microsoft Azure, regardless of the technology or container used to operate Oracle RAC in those environments.

In addition, **no Third-Party Cloud currently meets Oracle's technical requirements** to run Oracle RAC in a supported fashion. *One reason* is the lack of 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 policy<sup>3</sup>:

<sup>1</sup> <http://www.oracle.com/us/corporate/pricing/cloud-licensing-070579.pdf>

<sup>2</sup> <http://www.oracle.com/us/corporate/pricing/authorized-cloud-environments-3493562.pdf>

<sup>3</sup> <http://www.oracle.com/technetwork/database/clustering/tech-generic-linux-new-086754.html>

## Frequently Asked Questions (FAQ)

### 1) Is running Oracle RAC on VMware® on Third-Party Clouds supported?

**Answer:** No. The Oracle Cloud is currently the only cloud offering certified and supported to run Oracle Real Application Clusters (RAC) databases. Thus, VMware® cannot be used to obtain support for operating Oracle RAC in Third-Party Clouds.

### 2) 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 policy<sup>4</sup> 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 otherwise highly available Oracle RAC databases.

### 3) 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.

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

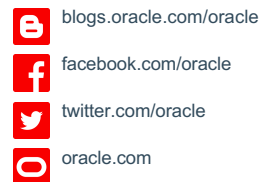
**Answer:** Support decisions are at the discretion of Oracle. Using an unsupported solution for the Oracle Database means that Oracle can deny support for systems that use such a solution, if it is deemed that the unsupported solution is the cause of or contributes to a given problem and until the issue 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) Is there a way to request support for Oracle RAC on Third-Party Clouds?

**Answer:** No. The licensing restrictions documented above currently restrict the use of Oracle RAC in Amazon AWS, Microsoft Azure or any other Third-Party Cloud. Thus, Oracle has ceased any supportability evaluation of Third-Party Clouds for Oracle RAC. The lack of natively provided shared storage in addition to certain network limitations that would need to be worked around on most Third-Party Clouds prevent Oracle from supporting Oracle RAC in any Third-Party Cloud regardless of technical feasibility.

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

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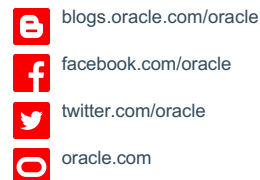
## 6) Can a third-party vendor such as FlashGrid® claim support for their solution?

**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. Certified and 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® offerings in support of Oracle RAC have not been tested nor reviewed by Oracle.

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

**Answer:** Under the OTN License Agreement<sup>5</sup> 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. Production use of Oracle RAC on Third-Party Clouds is not permitted. It needs to be noted that the transferability of test results gathered on Third-Party Clouds to on-premises environments or the Oracle Cloud is limited. Oracle will also not accept the results of any individual test as a proof for the supportability of a Third-Party Cloud. This includes testing of Oracle RAC in Third-Party Clouds in virtual environments like VMware®.

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<sup>5</sup> <http://www.oracle.com/technetwork/licenses/standard-license-152015.html>