

Oracle RAC Database Overview

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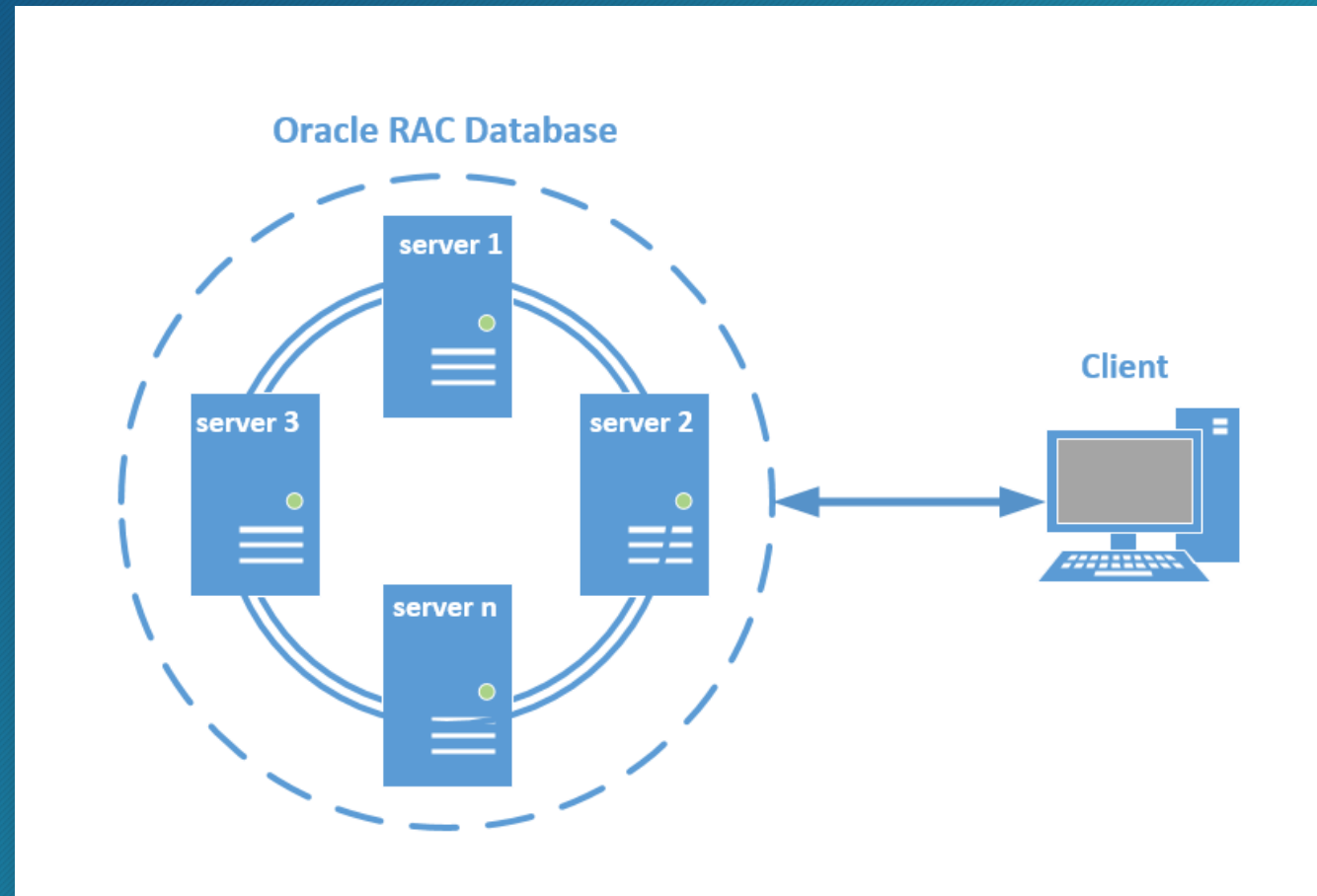
Objectives

In this lecture, you will learn how to describe the following:

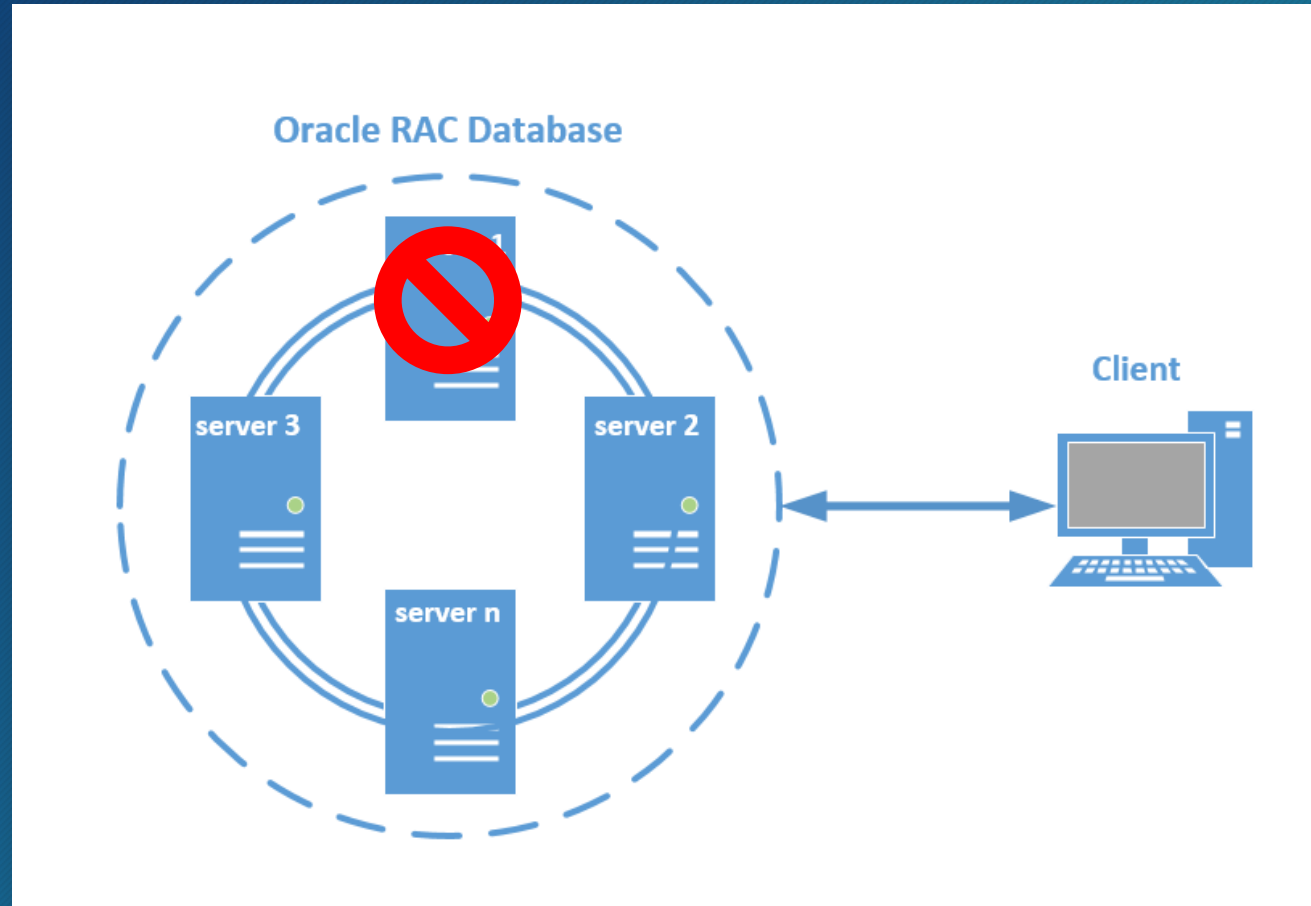
- What is Oracle RAC?
- What are the advantages of Oracle RAC database?
- What are the disadvantages of Oracle RAC database?
- Why you should learn Oracle RAC database administration skills?

What is Oracle RAC database?

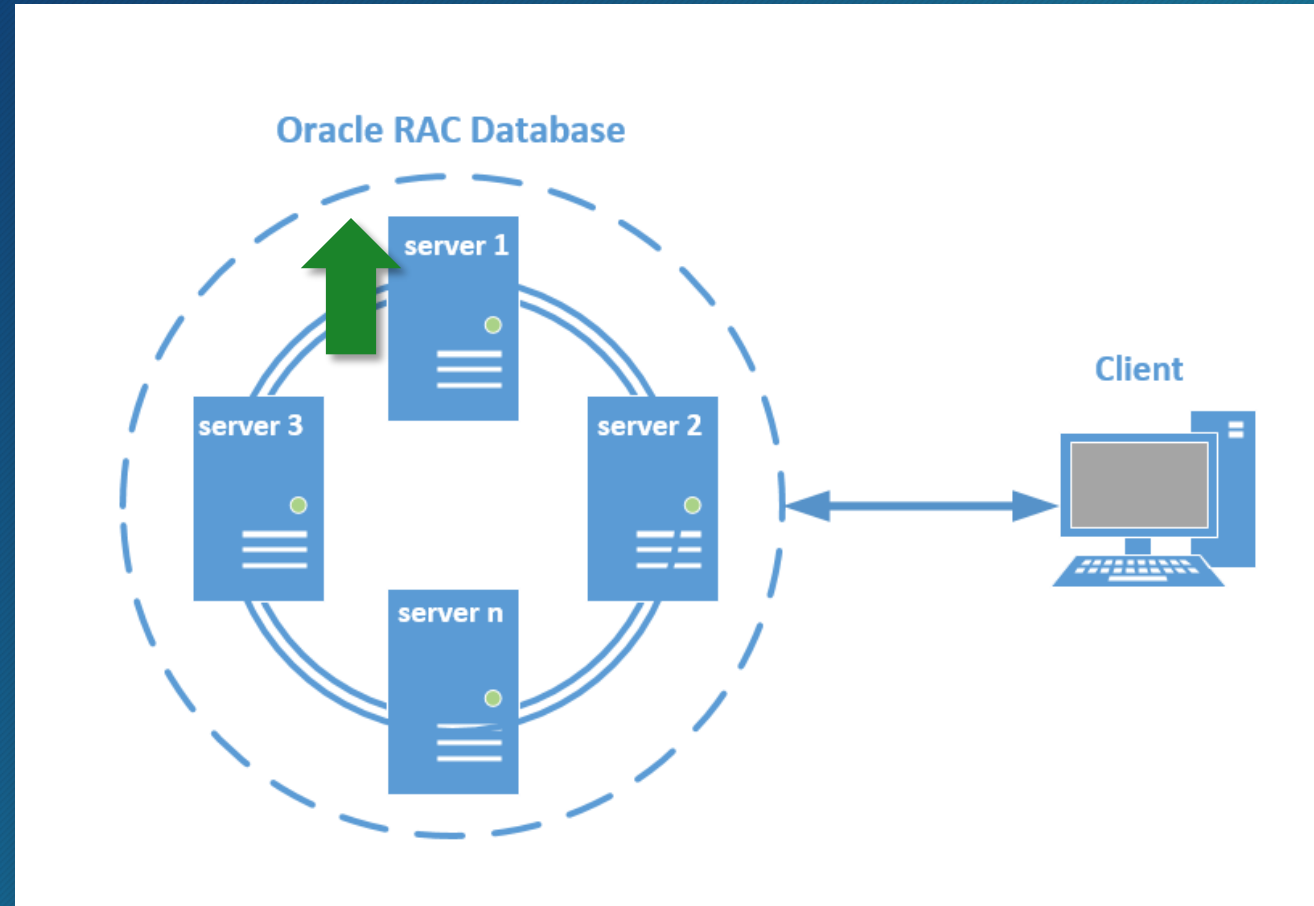
- A database running on a cluster of multiple servers that operate as a single database.
- This is opposed to a single-instance database



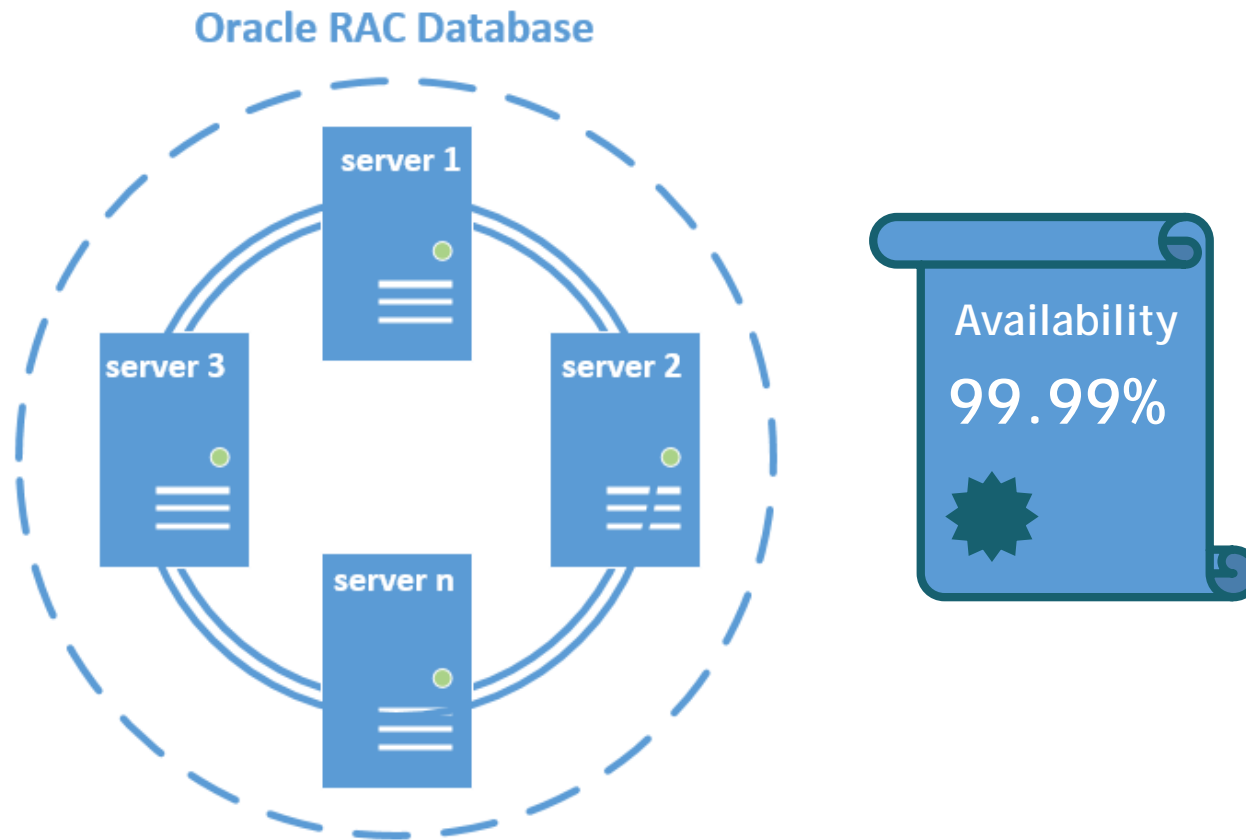
Unplanned Downtime



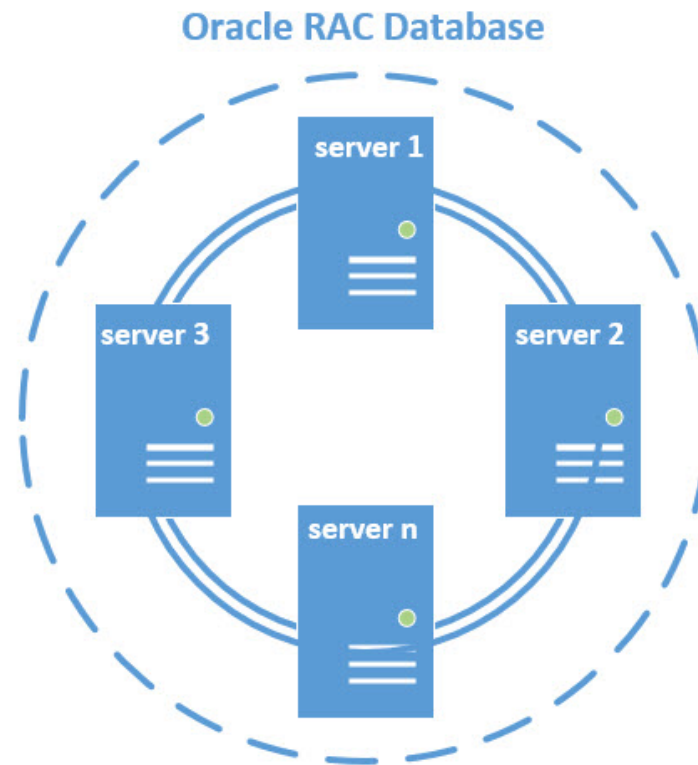
Planned Downtime



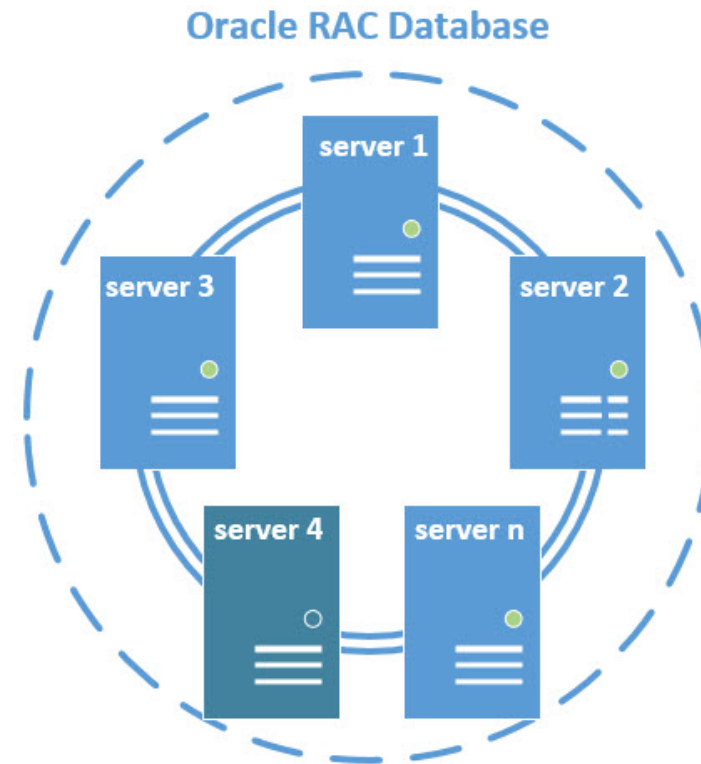
SLA Implementation



Horizontal Scalability



Horizontal Scalability



Oracle RAC Benefits

- High Availability
 - Unplanned downtime due to hardware and OS failures
 - Planned downtime due to hardware upgrade or fixing, OS patching or upgrade, Oracle Database patching or upgrade
 - Adhere to SLA that requires very high availability
- Database Scalability
- Load balancing
- Resource Utilization

Oracle RAC Drawbacks

- Additional license cost:
 - Oracle Database Enterprise Edition: Oracle RAC license is separate
 - Database Standard Edition: Oracle RAC license is included, if the total number of CPU sockets in all the servers in the cluster less than or equal to 4
- Complicated hardware architecture and requirements
- Not designed for Distaste Recovery
- More complex DBA administration skills compared to single-instance

Should the firm use it?

- If the server goes down, how long does it take you to recover?
- How much business loses when the application is not available during the recovery time?
- Cost of Oracle RAC:
 - Hardware infrastructure cost
 - Oracle Database and RAC licenses
 - Management cost
- Consider Oracle RAC One Node option

Should I learn it?

- Oracle RAC is highly used by the enterprises
- Highly demanded in the market

Summary

In this lecture, you should have learnt how to answer the following questions:

- What is Oracle RAC?
- What are the advantages of Oracle RAC database?
- What are the disadvantages of Oracle RAC database?
- Why you should learn Oracle RAC database administration skills?