

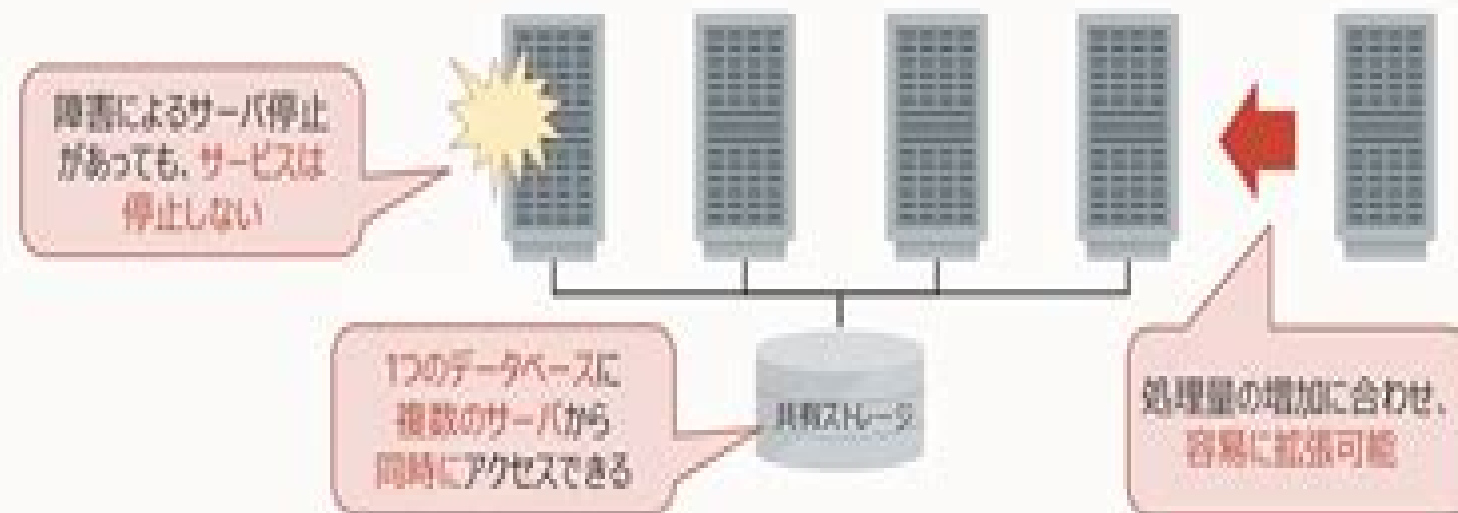
# Oracle Real Application Clusters (Oracle RAC) とは

## Oracle Real Application Clustersとは

- システム障害によるダウンタイムを最小に抑え、データ保護と連続的なサービス環境を実現する  
**Oracle Databaseのクラスタ技術**

## 特徴

- 高可用性：Active-Activeのクラスタ構成により、障害時にも継続してサービスを提供可能
- 高拡張性：サーバの追加によって容易にスケールアウトが可能



# Oracle Real Application Clusters

**Murali Vallath**



## **Oracle Real Application Clusters:**

**Oracle9i RAC** Michael R. Ault, Mike Ault, Madhu Tumma, 2003 Combining the expertise of two world renowned RAC experts Oracle9i RAC is the first of its kind reference for RAC and TAF technology

**Oracle 10g Grid and Real Application Clusters** Mike Ault, Madhu Tumma, Ranko Masic, 2004-08 Revealing the secrets for quickly implementing and tuning Oracle RAC database systems this book covers all areas of Oracle Real Application Clusters including Oracle10g new features Oracle DBAs who are charged with configuring and implementing a RAC clusters database will benefit from this complete guide to the installation as well as configuration and design of Oracle Real Application Clusters Information is supplied on expert internals of shared disk technology raw devices and RAID with RAC the internal concurrency resource coordination and the locking mechanism within RAC Also explained are Transparent Application Failover TAF and monitoring and tuning Oracle10g RAC applications

*Oracle 11gR2 RAC For Beginners* Arun Kumar, 2019-10-18 Oracle RAC technology is the advance level of database which is designed to provide high availability and scalability Oracle RAC is installed on multiple servers and it forms the foundation for database cloud Build a Strong Foundation in Oracle grid Clusterware Installation with this book for Beginners Introduction to clusterware technology Oracle cluster node setup Oracle 11g grid software installation Setup two node RAC Create first Oracle RAC database Oracle RAC and ASM administration A strong RAC Beginners eBook for IT Professionals World Wide Oracle RAC allows multiple computers to run Oracle RDBMS software simultaneously while accessing a single database thus providing clustering The main aim of Oracle RAC online course is to implement a clustered database to provide performance scalability and resilience It s a clustered version of Oracle Database based on a comprehensive high availability stack The Oracle 11gR2 Real Application Clusters Administration eBook describes the Oracle RAC architecture hands on experience and Oracle Real Application Clusters multi node installations This eBook is for people who have prior knowledge on Oracle database administration and covers knowledge on topics like Oracle RAC Cluster Oracle AMS Oracle RAC administration Oracle RAC Installation Oracle RAC on VirtualBox and many more

**Oracle 11gR2 RAC for Beginners** Arun Kumar, 2018-11-16 Oracle RAC technology is the advance level of database which is designed to provide high availability and scalability Oracle RAC is installed on multiple servers and it forms the foundation for database cloud Build a Strong Foundation in Oracle grid Clusterware Installation with this Video Course for Beginners Introduction to clusterware technology Oracle cluster node setup Oracle 11g grid software installation Setup two node RAC Create first Oracle RAC database Oracle RAC and ASM administration A strong RAC Beginners eBook for IT Professionals World Wide Oracle RAC allows multiple computers to run Oracle RDBMS software simultaneously while accessing a single database thus providing clustering The main aim of Oracle RAC online course is to implement a clustered database to provide performance scalability and resilience It s a clustered version of Oracle Database based on a comprehensive high availability stack The Oracle 11gR2 Real Application Clusters Administration eBook describes

the Oracle RAC architecture hands on experience and Oracle Real Application Clusters multi node installations This eBook is for people who have prior knowledge on Oracle database administration and covers knowledge on topics like Oracle RAC Cluster Oracle AMS Oracle RAC administration Oracle RAC Installation Oracle RAC on VirtualBox and many more     *Expert Oracle RAC 12c* Riyaj Shamsudeen, Syed Jaffar Hussain, Kai Yu, Tariq Farooq, 2013-08-13 Expert Oracle RAC 12c is a hands on book helping you understand and implement Oracle Real Application Clusters RAC and to reduce the total cost of ownership TCO of a RAC database As a seasoned professional you are probably aware of the importance of understanding the technical details behind the RAC stack This book provides deep understanding of RAC concepts and implementation details that you can apply toward your day to day operational practices You ll be guided in troubleshooting and avoiding trouble in your installation Successful RAC operation hinges upon a fast performing network interconnect and this book dedicates a chapter solely to that very important and easily overlooked topic All four authors are experienced RAC engineers with a wealth of hard won experience encountering and surmounting the challenges of running a RAC environment that delivers on its promise In Expert Oracle RAC 12c they provide you a framework in which to avoid repeating their hard won lessons Their goal is for you to manage your own RAC environment with ease and expertise Provides a deep conceptual understanding of RAC Provides best practices to implement RAC properly and match application workload Enables readers to troubleshoot RAC with ease What you ll learn Know when to apply RAC and when not to Design applications to take advantage of RAC Troubleshoot and solve clusterware problems Manage database backup and recovery in RAC Stay on top of locking issues and deadlock detection Harness the performance from parallel processing in RAC Support your RAC environment with a healthy network interconnect Who this book is for Expert Oracle RAC 12c is for experienced Oracle Database Administrators DBAs who are ready to take the next step in their career by expanding their skill set to include building and managing Oracle Real Application Clusters RAC DBAs and architects who are in the process of implementing RAC can immensely benefit from this book It s an excellent choice for DBAs to learn RAC conceptually understand best practices and become experts in troubleshooting RAC problems Table of Contents Overview of Oracle RAC Clusterware Management and Troubleshooting RAC Operational Practices RAC New Features Storage and ASM Practices Application Design Issues Managing and Optimizing a Complex RAC Environment Backup and Recovery in RAC Network Practices in RAC RAC Database Optimization Locks and Deadlocks Parallel Query in RAC Clusterware and Database Upgrades Oracle RAC One Node     *Oracle Database 11g Oracle Real Application Clusters Handbook, 2nd Edition* K Gopalakrishnan, 2011-08-10 Master Oracle Real Application Clusters Maintain a dynamic enterprise computing infrastructure with expert instruction from an Oracle ACE Oracle Database 11g Oracle Real Application Clusters Handbook Second Edition has been fully revised and updated to cover the latest tools and features Find out how to prepare your hardware deploy Oracle Real Application Clusters optimize data integrity and integrate seamless failover protection Troubleshooting performance tuning and application development are

also discussed in this comprehensive Oracle Press guide Install and configure Oracle Real Application Clusters Configure and manage diskgroups using Oracle Automatic Storage Management Work with services voting disks and Oracle Clusterware Repository Look under the hood of the Cache Fusion and Global Resource Directory operations in Oracle Real Applications Clusters Explore the internal workings of backup and recovery in Oracle Real Application Clusters Employ workload balancing and the Transparent Application Failover feature of an Oracle database Get complete coverage of Stretch Clusters also known as Metro Clusters Troubleshoot Oracle Clusterware using the most advanced diagnostics available Develop custom Oracle Real Application Clusters applications      Oracle Real Application Clusters Murali Vallath,2003-11-14

Clustered configuration first hit the scene nearly 20 years ago when Digital Equipment Corporation DEC introduced the VaxCluster Until now the topic of Real Application Clusters RAC implementation had never been fully explored For the first time Murali Vallath dissects RAC mysteries in his book Oracle Real Application Clusters to enlighten and educate readers on the internals of RAC operations cache fusion fusion recovery processes and the fast reconfiguration of RAC This book provides comprehensive coverage of the features technology and principles of RAC that is part of the Oracle9i release of Oracle's RDBMS product It is divided into three main parts application database design development and maintenance life cycles Compared to its predecessor OPS the architecture behind RAC implementation have changed significantly Vallath discusses Oracle9i features in a RAC implementation with respect to usage and design considerations as well as those parameters that are and are not applicable Areas covered include partitioning indexes tablespace management transaction management backup and recovery principles Performance tuning with examples troubleshooting and problem solving scenarios are covered in detail as well as discussions on the migration process from a single instance database to RAC and migration from an OPS implementation to RAC Oracle Real Application Clusters takes readers through a logical flow from RAC concepts to operations covering each facet with a fine tooth comb Vallath's skilled writing style makes each chapter entertaining and informative as only a true RAC connoisseur can provide New and experienced users of RAC as well as those seeking to expand their knowledge of this dynamic technology will find this book to be a necessity for both home and office reference libraries Focuses on implementing testing and tuning features of Real Application Clusters RAC Provides extensive coverage of usage day to day functions and operations Includes tips and techniques such as script samples to illustrate various features of RAC Unravels the internals of RAC architecture      **Oracle Real Application Cluster Field DBA**

**Admin Handbook** Flavia D'Souza,2008-09-22 This book provides practical guidelines to administer the Oracle Oracle Real Application Cluster It's a field guide to administer RAC in real life situation This book will improve your efficiency as an Oracle database administrator and enable you to master more daunting difficult administrative tuning and troubleshooting tasks than you ever thought possible Topics covered include Oracle RAC Architecture Cluster Administration Storage Instance and Service administration Adding deleting Nodes Managing Backup and Recovery Performance monitoring and

Workload Management and it also has useful Metalink note references This practical field guide also covers a section on useful Metalink Note References useful weblinks for easy reference and also the useful information search tips on Metalink

**Oracle 11g R1/R2 Real Application Clusters Essentials** Ben Prusinski, Syed Jaffer Hussain, 2011-05-23 Annotation  
Oracle RAC or Real Application Clusters is a grid computing solution that allows multiple nodes servers in a clustered system to mount and open a single database that resides on shared disk storage Should a single system node fail the database service will still be available on the remaining nodes Oracle RAC is an integral part of the Oracle database setup You have one database with multiple users accessing it in real time This book will enable DBAs to get their finger on the pulse of the Oracle 11g RAC environment quickly and easily This book will cover all areas of the Oracle RAC environment and is indispensable if you are an Oracle DBA who is charged with configuring and implementing Oracle 11g R1 with bonus R2 information included This book presents a complete method for the configuration installation and design of Oracle 11g RAC ultimately enabling rapid administration of Oracle 11g RAC environments This practical handbook documents how to administer a complex Oracle 11g RAC environment Packed with real world examples expert tips and troubleshooting advice the book begins by introducing the concept of Oracle RAC and High Availability It then dives deep into the world of RAC configuration installation and design enabling you to support complex RAC environments for real world deployments Chapters cover Oracle RAC and High Availability Oracle 11g RAC Architecture Oracle 11g RAC Installation Automatic Storage Management Troubleshooting Workload Management and much more By following the practical examples in this book you will learn every concept of the RAC environment and how to successfully support complex Oracle 11g R1 and R2 RAC environments for various deployments within real world situations This book is the updated release of our previous Oracle 11g R1 R2 Real Application Clusters Handbook If you already own a copy of that Handbook there is no need to upgrade to this book

**Oracle Database 10 G Real Application Clusters Handbook** Kandhasamy Gopalakrishnan, 2007 Maximize database availability scalability and efficiency using Oracle Real Application Clusters RAC and the in depth information contained in this official Oracle Press guide

[ORACLE REAL APPLICATION CLUSTERS TESTING AND TUNING](#) Murali Vallath, 2014-06 The Oracle Press guide to tuning Oracle Real Application Clusters RAC Written by an Oracle RAC expert and president of the Oracle RAC Special Interest Group Oracle Real Application Clusters Testing and Tuning provides comprehensive coverage of the features technology and principles of testing and tuning an Oracle RAC database by dissecting the various tiers of its implementation These include the operating system network application instance database and clusterware This book provides step by step advice for removing bottlenecks minimizing downtime and increasing overall system performance Oracle Real Application Clusters Testing and Tuning Includes practical step by step scenarios Contains real world examples and illustrations Outlines an effective analysis and approach to tuning the database Provides script samples that illustrate various Oracle RAC features This Oracle Press Guide covers Testing Methodology Testing Hardware

for Scalability Testing Hardware for Availability Testing Application for Scalability Tuning Tools and Utilities Cost Based Optimizer SQL Tuning Parallel Query Tuning Tuning the Database Tuning Recovery Tuning Oracle Net Tuning Storage Subsystem Block Size Optimization Tuning the Cluster Interconnect Tuning the Global Cache Management Optimization of Distributed Workload Tuning the Oracle Clusterware Tuning Third party Applications for RAC

*Oracle Database 10g Real Application Clusters Handbook* K. Gopalakrishnan, 2006-12-13 Learn cutting edge technology from Oracle experts Written by Oracle insiders this comprehensive guide covers everything you need to know about Real Application Clusters low cost hardware platforms that can rival and exceed the quality of service availability and scalability of the most expensive mainframe systems Concepts covered are applicable to all previous versions of Oracle Tuning and troubleshooting tips providing insight on the most advanced diagnostics available Detailed coverage of advanced RAC concepts Working code for all examples available online

*Creating Highly Available Database Solutions* Kristien Hens, Michael Loebmann, 2004 This book explains how to architect and deploy high availability HA solutions with Oracle Real Application Clusters Oracle RAC in a Sun<sup>™</sup> Cluster 3 x environment It presents information to help you decide when an Oracle RAC and Sun Cluster software solution is appropriate to satisfy the availability requirements of your business In addition this book explains the technology behind these products describes successful customer deployments and provides technical tips and preferred practice recommendations This book features detailed case studies including A large German bank that has implemented an Oracle RAC and Sun Cluster software solution to meet the ever increasing business demands of the banking industry One of the largest companies in Europe for alpine skiing that has implemented Oracle RAC and Sun Cluster software to support HA requirements in a consolidated environment A benchmark case that describes the use of Oracle RAC with Sun's Remote Shared Memory RSM technology to improve the performance of single instance databases A large financial institution that uses Sun Cluster's HA Oracle agent to provide the necessary level of HA required for their database

**Personal Oracle Real Application Clusters** Edward Stoeber, 2006 A guide for Oracle DBAs who are too busy to build a clustered server environment to learn about Oracle's Real Application Cluster technology this book allows DBAs to build and configure a Real Application Cluster quickly and inexpensively Covers how to find the right hardware to build an at home RAC where to get Linux and how to set it up how to install the Oracle Cluster Manager and how to create the RAC database

**Oracle Database 12c Release 2 Real Application Clusters Handbook: Concepts, Administration, Tuning & Troubleshooting** K. Gopalakrishnan, Sam R. Alapati, 2018-02-27 Publisher's Note Products purchased from Third Party sellers are not guaranteed by the publisher for quality authenticity or access to any online entitlements included with the product Master Oracle Database 12c Release 2 Real Application Clusters with this comprehensive fully updated guide Now you can maintain a dynamic enterprise computing infrastructure with expert instruction from an Oracle ACE Oracle Database 12c Release 2 Real Application Clusters Handbook Concepts Administration Tuning and Troubleshooting has been thoroughly

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Corporation RAC is a complex and powerful technology It demands expertise in its deployment You can't just wing it in creating a RAC solution Julian and Steve have earned the right to term themselves expert in Pro Oracle Database 11g RAC on Linux they offer a rigorous and technically correct treatment of RAC that helps you build a solid foundation of expertise and achieve success Rigorous and technically accurate content Complete coverage of RAC from planning to implementation to rollout to ongoing maintenance and troubleshooting Up to date with the very latest RAC features **Manage Oracle Real Application Clusters (Rac) 11gr2** Emrah Becer,2014-06-20

## **Oracle Real Application Clusters Book Review: Unveiling the Magic of Language**

In an electronic digital era where connections and knowledge reign supreme, the enchanting power of language has are more apparent than ever. Its ability to stir emotions, provoke thought, and instigate transformation is actually remarkable. This extraordinary book, aptly titled "**Oracle Real Application Clusters**," written by a highly acclaimed author, immerses readers in a captivating exploration of the significance of language and its profound impact on our existence. Throughout this critique, we shall delve to the book is central themes, evaluate its unique writing style, and assess its overall influence on its readership.

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