

Oracle® Database

SQL Tuning Guide

Figure 8-1 Direct Path Reads

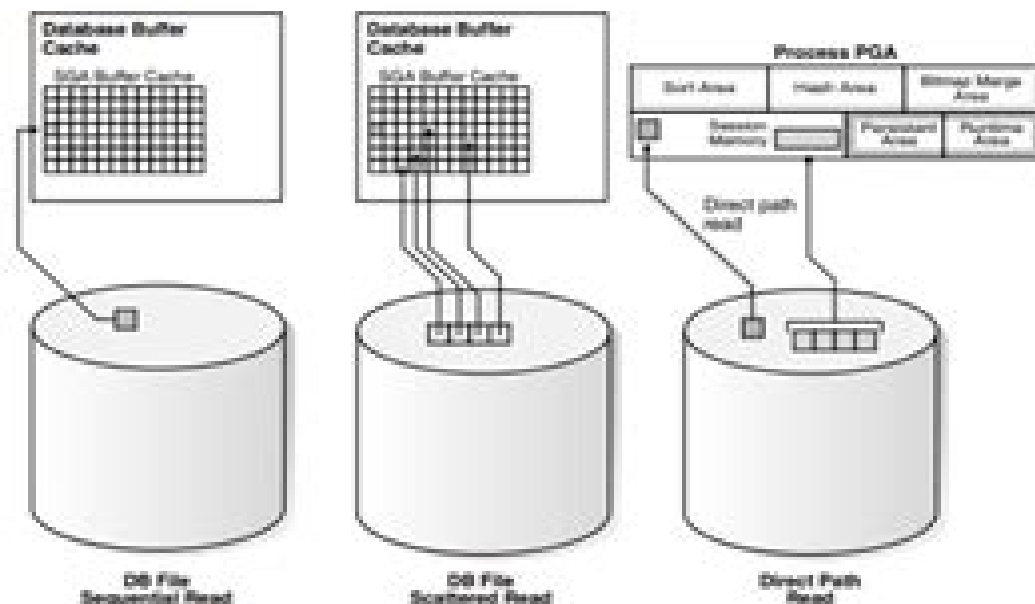
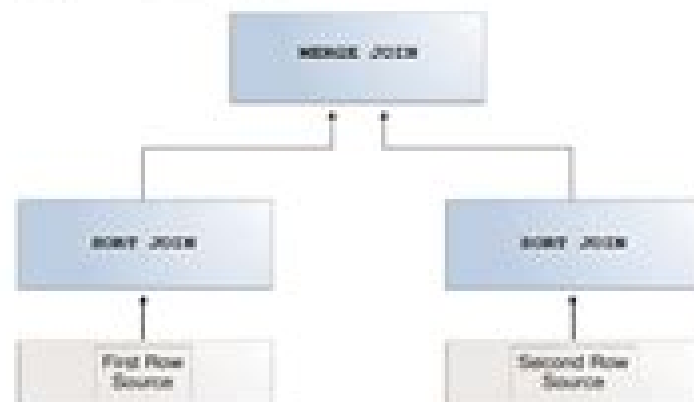


Figure 9-6 Sort Merge Join



SQL 쿼리 최적화 기본 사항

- 누락된 인덱스 추가
- 사용하지 않는 인덱스 확인
- FILTER 술어에 여러 OR를 사용하지 않는다.
- 구의 끝에만 와일드 카드 사용
- 너무많은 JOIN은 피해라
- SELECT DISTINCT를 사용하지마라
- SELECT * 대신 SELECT 필드 사용
- TOP을 사용하여 쿼리 결과 샘플링
- 사용량이 적은 시간에 쿼리 실행
- 쿼리 힌트 사용 최소화
- 대규모 쓰기 작업 최소화
- WHERE가 아닌 INNER JOIN으로 조인 생성

SQL 튜닝방법론

- 적절한 인덱스를 사용하여 Block I/O를 최소화 하라
- 조인방법과 조인순서를 최적화 하라.
- Table Access(Random Access)를 최소화하라
- Sort나 Hash 작업을 최소화하라
- 한 블록은 한번만 Scan하고 끝내라
- 온라인의 조회화면이라면 페이징 처리는 필수다.

Oracle Sql Tuning Guide

**Rick Greenwald,Robert
Stackowiak,Associate Fellow
Sustainable Development Programme
Royal Institute of International Affairs
Jonathan Stern,Jonathan Stern**

Oracle Sql Tuning Guide:

Oracle SQL High-performance Tuning Guy Harrison, Raymond Aron, 2001 Canada was young during the First World War and with as many as 20 000 underage soldiers leaving their homes to join the war effort the country's army was too Jim at 17 was one of them and he penned countless letters home But these weren't the writings of an ordinary boy They were the letters of a lad who left a small farming community for the city on July 15 1915 a boy who volunteered to serve with the 79th Queen's Own Cameron Highlanders Jim's letters home gloss over the horrors of war focusing instead on issues of the home front of harvesting training the horses and the price of hogs Rarely do these letters especially those to his mother and father mention the mud and rats the lice and stench of the trenches or the night duty of cutting barbed wire in no man's land For 95 years his letters remained in a shoebox decorated by his mother Jim was just 18 when he was wounded and died during the Battle of the Somme Hold the Oxo tells the story that lies between the lines of his letters filling in the historical context and helping us to understand what it was like to be Jim

Oracle Performance Survival Guide Guy Harrison, 2009-10-09 Oracle Performance Survival Guide A Systematic Approach to Database Optimization The fast complete start to finish guide to optimizing Oracle performance Oracle Performance Survival Guide offers a structured systematic start to finish methodology for optimizing Oracle performance as efficiently as possible Leading Oracle expert Guy Harrison shows how to maximize your tuning investment by focusing on causes rather than symptoms and by quickly identifying the areas that deliver the greatest bang for the buck Writing for DBAs and developers with all levels of experience Harrison covers every area of Oracle performance management from application design through SQL tuning contention management through memory and physical IO management He also presents up to the minute guidance for optimizing the performance of the Oracle 11g Release 2 You'll start by mastering Oracle structured performance tuning principles and tools including techniques for tracing and monitoring Oracle execution Harrison illuminates the interaction between applications and databases guides you through choosing tuning tools and introduces upfront design techniques that lead to higher performance applications He also presents a collection of downloadable scripts for reporting on all aspects of database performance Coverage includes Tuning by layers the most effective highest value approach to Oracle performance optimization Making the most of Oracle's core tools for tracing monitoring and diagnosing performance Highly efficient database logical and physical design indexing transaction design and API use SQL and PL SQL tuning including the use of parallel SQL techniques Minimizing contention for locks latches shared memory and other database resources Optimizing memory and physical disk IO Tuning Real Application Cluster RAC databases guyharrison.net/informit.com/ph

Oracle Essentials Rick Greenwald, Robert Stackowiak, Associate Fellow Sustainable Development Programme Royal Institute of International Affairs Jonathan Stern, Jonathan Stern, 2013-09-06 Written by Oracle insiders this indispensable guide distills an enormous amount of information about the Oracle Database into one compact volume Ideal for novice and experienced DBAs developers managers

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Oracle 10g Lutz Fröhlich, Carsten Czarski, Klaus Maier, 2005

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SQL Performance Tuning Peter Gulutzan, Trudy Pelzer, 2003 A very practical guide to making databases run faster and better A poorly performing database application can cost each user time and have an impact on other applications running on the same computer or the same network This book will help DBAs and programmers improve the performance of their databases

Effective Oracle by Design Thomas Kyte, 2003-09-12 Tom Kyte of Oracle Magazine's Ask Tom column has written the definitive guide to designing and building high performance scalable Oracle applications The book covers schema design SQL and PL SQL tables and indexes and much more From the exclusive publisher of Oracle Press books this is a must have resource for all Oracle developers and DBAs

Oracle SQL Performance Tuning and Optimization Kevin Meade, 2014-09-16 Written by a Senior Database Administrator who has worked with the Oracle RDBMS for thirty years this is a book which teaches the skill of SQL Tuning for the Oracle Database Not a list of one off tricks or tips nor a glossing over of topics this book offers an in depth process covering discovery analysis and problem resolution Learn the science behind SQL Tuning Learn and apply the FILTERED ROWS PERCENTAGE Cardinality based method of tuning Determine a query's Driving Table and Join Order Construct Query Diagrams Data Models and Join Trees Build and use Count Filter and Reconstruction Queries Identify Waste in a Query Execution Plan Zero in on Cardinality Divergence using Estimated vs Actuals Use the ACCESS FILTER COVERAGE strategy to build indexes for Problem Queries Exploit THE 2% RULE in analyzing Access method and Join method Classify queries as Precision Style or Warehouse Style Understand Hash Join mechanics and make Hash Joins go faster Make HINTS work as Detection Tools rather than clubs Avoid early Database Design flaws Manage Statistics and deal with common Statistics problems NDV Uniform Distribution Independence Dynamic Sampling Staleness Skew Dependence Defaulting Out Of Bounds Transiency Bloat Perfect your Question Based Analysis Technique and more Included are a special chapter for EXADATA a LAB which demonstrates the cardinality based process of SQL Tuning and twenty three magical SQL scripts that make the process of SQL Tuning easy to do Learn the skill of SQL Tuning as taught by an expert who does it for a living and become the go to specialist in your company Chapter 1 DRIVING TABLE and JOIN ORDER Chapter 2 Ways to Use a Query Execution Plan Chapter 3 The Best Indexes for a Query Chapter 4 JOINS Chapter 5 HINTS Chapter 6 BASICS Chapter 7 ROW COUNTS and RUN TIMES Chapter 8 EXADATA LAB Reverse Engineering the QEP Appendix Know Your Scripts Scripts for analyzing

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