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Generalization; 5.4 Resource Considerations; 5.5 Examples: The Good, the Bad, and the Ugly; 5.6 Usage Syntax and Examples; 5.7 Summary; 5.8 Literature Review; Chapter 6. Shared-nothing Partitioning; 6.1 Understanding Shared-nothing Partitioning; 6.2 More Key Concepts and Terms; 6.3 Hash Partitioning; 6.4 Pros and Cons of Shared Nothing; 6.5 Use in OLTP Systems; 6.6 Design Challenges: Skew and Join Collocation 6.7 Database Design Tips for Reducing Cross-node Data Shipping 6.8 Topology Design; 6.9 Where the Money Goes; 6.10 Grid Computing; 6.11 Summary; 6.12 Literature Summary; Chapter 7. Range Partitioning; 7.1 Range Partitioning Basics; 7.2 List Partitioning; 7.3 Syntax Examples; 7.4 Administration and Fast Roll-in and Roll-out; 7.5 Increased Addressability; 7.6 Partition Elimination; 7.7 Indexing Range Partitioned Data; 7.8 Range Partitioning and Clustering Indexes; 7.9 The Full Gestalt: Composite Range and Hash Partitioning with Multidimensional Clustering; 7.10 Summary; 7.11 Literature Summary Chapter 8. Multidimensional Clustering 8.1 Understanding MDC; 8.2 Performance Benefits of MDC; 8.3 Not Just Query Performance: Designing for Roll-in and Roll-out; 8.4 Examples of Queries Benefiting from MDC; 8.5 Storage Considerations; 8.6 Designing MDC Tables; 8.7 Summary; 8.8 Literature Summary; Chapter 9. The Interdependence Problem; 9.1 Strong and Weak Dependency Analysis; 9.2 Pain-first Waterfall Strategy; 9.3 Impact-.rst Waterfall Strategy; 9.4 Greedy Algorithm for Change Management; 9.5 The Popular Strategy (the Chicken Soup Algorithm); 9.6 Summary; 9.7 Literature Summary Chapter 10. Counting and Data Sampling in Physical Design Exploration

Sommario/riassunto

The rapidly increasing volume of information contained in relational databases places a strain on databases, performance, and maintainability: DBAs are under greater pressure than ever to optimize database structure for system performance and administration. Physical Database Design discusses the concept of how physical structures of databases affect performance, including specific examples, guidelines, and best and worst practices for a variety of DBMSs and configurations. Something as simple as improving the table index design has a profound impact on performance. Every form