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Nota di contenuto	DISTRIBUTED DATA MANAGEMENT FOR GRID COMPUTING; CONTENTS; FOREWORD; PREFACE; ACKNOWLEDGMENTS; PART I AN OVERVIEW OF GRID COMPUTING; 1 What is Grid Computing?; The Basics of Grid Computing; Leveling the Playing Field of Buzzword Mania; Paradigm Shift; Beyond the Client/Server; New Topology; 2 Why are Businesses Looking at Grid Computing; History Repeats Itself; Early Needs; Artists and Engineers; The Whys and Wherefores of Grid Computing; Financial Factors; Business Drivers; Technology's Role; 3 Service-Oriented Architecture; What is Service-Oriented Architecture (SOA)? Driving Forces Behind SOAMaturing Technology; Networking; Distributed Computing (Grid); Resource Provisioning; Web Services; Business; World Events; Enter Basic Supply-Demand Economics; Fundamental Shift in Computing; 4 Parallel Grid Planes; Using Art to Describe Life: Grid is the Borg; Grid Planes; Compute Grids; Data Grids;

Compute and Data Grids-Parallel Planes; True Grid Must Include Data Management; Basic Data Management Requirements; Coordinating the Compute and Data Grid Planes; Data Surfaces in a Data Grid Plane; Evolving the Data Grid; PART II DATA MANAGEMENT IN GRID COMPUTING
5 Scaling in the Grid TopologyEvolution in Data Management; Client/Server Evolution; Grid Evolution; Different Implementations of a Data Grid; Level 0 Data Grids; FTP in Grid; Distributed Filing Systems; Faster Servers; Metadata Hubs and Distributed Data Integration; Level 1 Data Grids; Foundations; Case Study: Integrasoft Grid Fabric (IGF); Application Characteristics for Grid; 6 Traditional Data Management; Data Management; History; Features; Mechanics; Data Structure; Access; Integrity; Transaction; Events; Backup/Recovery/Availability; Security; Key for Usability
7 Relational Data Management as a Baseline for Understanding the Data GridEvolution of the Relational Model; Parallels to Data Management in Grid Environments; Analysis of the Functional Tiers; Language Interface; Data Management Engines; Resource Management Engines; Engines Determine the Type of Data Grid; Data Management Features; 8 Foundation for Comparing Data Grids; Core Engine Determines Performance and Flexibility; Replicated versus Distributed; Centralized versus Peer-to-Peer Synchronization; Access to the Data Grid; User-Level APIs; Spring-Based Interfaces
Support for Traditional Data Management FeaturesSupport for Data Management Features Specific to Grid Computing; 9 Data Regionalization; What are Data Regions?; Data Regions in Traditional Terms; Data Management in a Data Grid; Data Distribution Policy; Data Distribution Policy Expression; Data Replication Policy; Data Replication Policy Expression; Synchronization Policy; Load-and-Store Policy; Data Load Policy Expression; Data Store Policy Expression; Event Notification Policy; Event Notification Policy Expression; Quality-of-Service (QoS) Levels; 10 Data Synchronization
Intraregion Synchronization

Sommario/riassunto

Discover grid computing-how to successfully build, implement, and manage widely distributed computing architectureWith technology budgets under increasing scrutiny and system architecture becoming more and more complex, many organizations are rethinking how they manage and use technology. Keeping a strong business focus, this publication clearly demonstrates that the current ways of tying applications to dedicated hardware are no longer viable in today's competitive, bottom line-oriented environment. This evolution in distributed computing is leading a paradigm shift in leveraging wide