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Nota di contenuto	Improving Concurrent Write Scheme in File Server Group -- A Comparative Performance Study of Distributed Mutual Exclusion Algorithms with a Class of Extended Petri Nets -- A Practical Comparison of Cluster Operating Systems Implementing Sequential and Transactional Consistency -- Clock Synchronization State Graphs Based on Clock Precision Difference -- A Recursive-Adjustment Co-allocation Scheme in Data Grid Environments -- Reducing the Bandwidth

Requirements of P2P Keyword Indexing -- A Deadline and Budget Constrained Scheduling Algorithm for eScience Applications on Data Grids -- A Survivability Model for Cluster System -- Localization Techniques for Cluster-Based Data Grid -- GridFTP and Parallel TCP Support in NaradaBrokering -- 2-Layered Metadata Service Model in Grid Environment -- pKSS: An Efficient Keyword Search System in DHT Peer-to-Peer Network -- A Comparative Study at the Logical Level of Centralised and Distributed Recovery in Clusters -- Toward Self Discovery for an Autonomic Cluster -- Mining Traces of Large Scale Systems -- Setup Algorithm of Web Service Composition -- Self Healing and Self Configuration in a WSRF Grid Environment -- Study on Life Cycle Model of Dynamic Composed Web Services -- Fault-Tolerant Dynamic Job Scheduling Policy -- An Efficient Dynamic Load-Balancing Algorithm in a Large-Scale Cluster -- Job Scheduling Policy for High Throughput Grid Computing -- High Performance Task Scheduling Algorithm for Heterogeneous Computing System -- Execution Environments and Benchmarks for the Study of Applications' Scheduling on Clusters -- Data Distribution Strategies for Domain Decomposition Applications in Grid Environments -- Inter-round Scheduling for Divisible Workload Applications -- Scheduling Divisible Workloads Using the Adaptive Time Factoring Algorithm -- Adaptive Policy Triggering for Load Balancing -- Parallel Algorithms for Fault-Tolerant Mobile Agent Execution -- Design and Multithreading Implementation of the Wave-Front Algorithm for Constructing Voronoi Diagrams -- A Proposal of Parallel Strategy for Global Wavelet-Based Registration of Remote-Sensing Images -- Performance Analysis of a Parallel Sort Merge Join on Cluster Architectures -- Parallel Clustering on the Star Graph -- Hierarchical Parallel Simulated Annealing and Its Applications -- Multi-color Difference Schemes of Helmholtz Equation and Its Parallel Fast Solver over 3-D Dodecahedron Partitions -- GridMD: Program Architecture for Distributed Molecular Simulation -- Visuel: A Novel Performance Monitoring and Analysis Toolkit for Cluster and Grid Environments -- to a New Tariff Mechanism for Charging for Computer Power in the Grid -- Host Load Prediction for Grid Computing Using Free Load Profiles -- Active Link: Status Detection Mechanism for Distributed Service Based on Active Networks -- Performance Monitoring for Distributed Service Oriented Grid Architecture -- Distributed Defense Against Distributed Denial-of-Service Attacks -- Security and Safety Assurance Architecture: Model and Implementation (Supporting Multiple Levels of Criticality) -- Modeling and Analysis of Worm and Killer-Worm Propagation Using the Divide-and-Conquer Strategy -- An Efficient Reliable Architecture for Application Layer Anycast Service -- A Distributed Approach to Estimate Link-Level Loss Rates -- Evaluation of Interconnection Network Performance Under Heavy Non-uniform Loads -- Analytical Models of Probability Distributions for MPI Point-to-Point Communication Times on Distributed Memory Parallel Computers -- Communication Data Multiplexing in Distributed Simulation -- Novel Adaptive Subcarrier Power and Bit Allocation Using Wavelet Packet Parallel Architecture -- A Low–Level Communication Library for Java HPC -- Object-Oriented Design and Implementations of 3G-324M Protocol Stack -- Efficient Techniques and Hardware Analysis for Mesh-Connected Processors.

Sommario/riassunto

There are many applications that require parallel and distributed processing to allow complicated engineering, business and research problems to be solved in a reasonable time. Parallel and distributed processing is able to improve company profit, lower costs of design, production, and deployment of new technologies, and create better

business environments. The major lesson learned by car and aircraft engineers, drug manufacturers, genome researchers and other specialist is that a computer system is a very powerful tool that is able to help them solving even more complicated problems. That has led computing specialists to new computer system architecture and exploiting parallel computers, clusters of clusters, and distributed systems in the form of grids. There are also institutions that do not have so complicated problems but would like to improve profit, lower costs of design and production by using parallel and distributed processing on clusters. In general to achieve these goals, parallel and distributed processing must become the computing mainstream. This implies a need for new architectures of parallel and distributed systems, new system management facilities, and new application algorithms. This also implies a need for better understanding of grids and clusters, and in particular their operating systems, scheduling algorithms, load balancing, heterogeneity, transparency, application deployment, which is of the most critical importance for their development and taking them by industry and business.