

1. Record Nr.	UNISA996465606703316
Titolo	Advances in Distributed Systems [[electronic resource]] : Advanced Distributed Computing: From Algorithms to Systems // edited by Sacha Krakowiak, Santosh Shrivastava
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2000
ISBN	3-540-46475-1
Edizione	[1st ed. 2000.]
Descrizione fisica	1 online resource (VIII, 516 p.)
Collana	Lecture Notes in Computer Science, , 0302-9743 ; ; 1752
Disciplina	005.36
Soggetti	Computers Computer communication systems Computer programming Operating systems (Computers) Algorithms Theory of Computation Computer Communication Networks Programming Techniques Operating Systems Algorithm Analysis and Problem Complexity
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	1 Distributed Algorithms -- Time in Distributed System Models and Algorithms -- Consensus in Asynchronous Distributed Systems: A Concise Guided Tour -- Group Communication in Partitionable Distributed Systems -- Enhancing Replica Management Services to Cope with Group Failures -- Recent Advances in Distributed Garbage Collection -- Topology-Aware Algorithms for Large-Scale Communication -- 2 Systems Architecture -- Responsive Protocols for Distributed Multimedia Applications? -- Programming Partition-Aware Network Applications? -- Deploying Distributed Objects on the Internet -- Integrating Group Communication with Transactions for Implementing Persistent Replicated Objects -- Replication of CORBA

Objects -- Constructing Dependable Web Services -- 3 Applications Support -- Support for Distributed CSCW Applications -- Component-Based Programming of Distributed Applications -- OPENflow: A CORBA Based Transactional Workflow System -- Improving the Effectiveness of Web Caching -- Mobility and Coordination for Distributed Java Applications -- 4 Case Studies -- PerDiS: Design, Implementation, and Use of a PERsistent Distributed Store -- The University Student Registration System: A Case Study in Building a High-Availability Distributed Application Using General Purpose Components -- Quality of Service and Electronic Newspaper: The Etel Solution -- FlexiNet: A Flexible, Component-Oriented Middleware System.

Sommario/riassunto

In 1992 we initiated a research project on large scale distributed computing systems (LSDCS). It was a collaborative project involving research institutes and universities in Bologna, Grenoble, Lausanne, Lisbon, Rennes, Rocquencourt, Newcastle, and Twente. The World Wide Web had recently been developed at CERN, but its use was not yet as common place as it is today and graphical browsers had yet to be developed. It was clear to us (and to just about everyone else) that LSDCS comprising several thousands to millions of individual computer systems (nodes) would be coming into existence as a consequence both of technological advances and the demands placed by applications. We were excited about the problems of building large distributed systems, and felt that serious rethinking of many of the existing computational paradigms, algorithms, and structuring principles for distributed computing was called for. In our research proposal, we summarized the problem domain as follows: "We expect LSDCS to exhibit great diversity of node and communications capability. Nodes will range from (mobile) laptop computers, workstations to supercomputers. Whereas mobile computers may well have unreliable, low bandwidth communications to the rest of the system, other parts of the system may well possess high bandwidth communications capability. To appreciate the problems posed by the sheer scale of a system comprising thousands of nodes, we observe that such systems will be rarely functioning in their entirety.
