

1. Fundamental Concepts. Definitions. Motivations and goals. Distributed system types ([T&S, 2007], chapter 1, 8)
2. Architectures. Software architectures for distributed system. Architectural styles. System architectures ([T&S, 2007], chapter 2)
3. Communication. Communication protocols. Communication types: RPC, message-oriented communication, multicasting ([T&S, 2007], chapter 4)
4. Naming. Definitions. Flat naming. Hierarchical naming. Attribute-based naming. Approaches to lookup ([T&S, 2007], chapter 5)
5. Time. Time in distributed systems. Clock synchronization. Logical clocks ([T&S, 2007], chapter 6)
6. Synchronization. Ordered multicasting, mutual exclusion, election ([T&S, 2007], chapter 6)
7. Consistency. Consistency models. Replica management. Consistency protocols ([T&S, 2007], chapter 7)
8. Fault Tolerance. Basic concepts, failure models, agreement ([T&S, 2007], chapter 8)
9. Fault Tolerance. Group communication. Virtual Synchrony. Distributed commit. Recovery ([T&S, 2007], chapter 8)