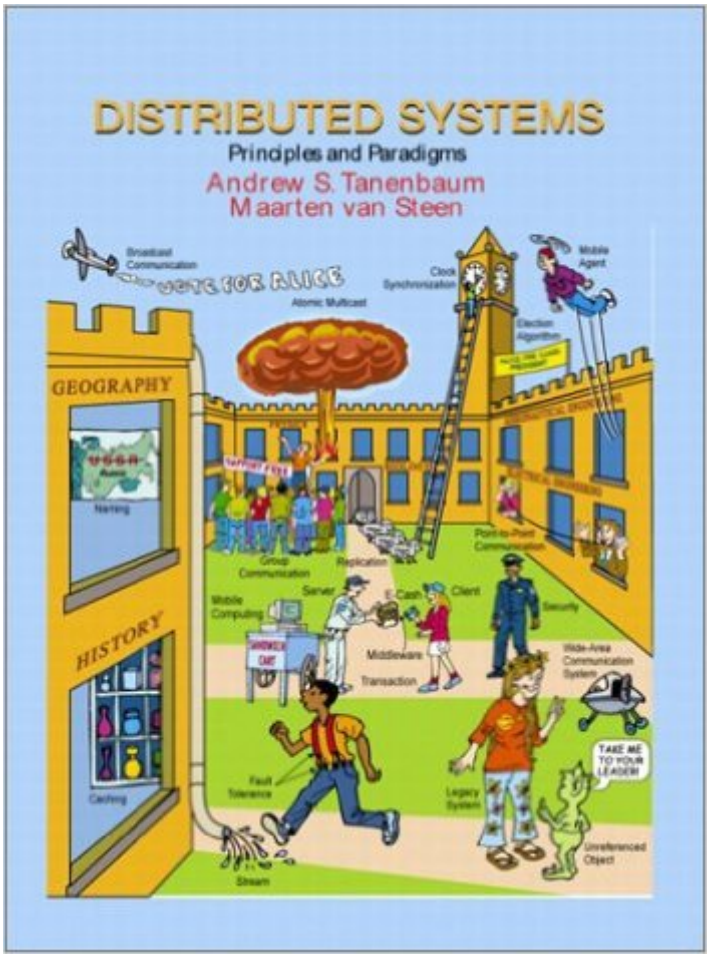
Distributed Systems: Principles And Paradigms



Synopsis

For courses on Distributed Systems, Distributed Operating Systems, and Advanced Operating Systems focusing on distributed systems found in departments of Computer Science, Computer Engineering and Electrical Engineering. Distributed systems are common. Computer scientists and engineers need to understand how the principles and paradigms underlying distributed systems software and be familiar with several real world examples. No other book systematically examines the underlying principles and how they are applied to a wide variety of distributed systems with the depth and clarity of this presentation.

Book Information

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Customer Reviews

I agree with another reviewer: this book is not worth reading for its prose. The cover got my hopes up--perhaps this would be an irreverant, clever review of the many mistakes and learnings as we have explored the strange new world of distributed computing over the last several years. Something like Gregory Pfister’s excellent "In Search of Clusters" (ASIN 0138997098).Instead, this is a very turgid, encyclopedic survey of the topic, without much to guide the reader. For instance, distributed object-based systems are very old, why doesn’t Tanenbaum mention their myriad problems? NFS, with its attempt to make remote filesystems look local, and extensive kernel hooks, can be very painful to use and operate. You would not want to write a distributed file system like NFS today! How was that not mentioned? Instead, this book treats all distributed systems as if they

had equal worth and utility, with dry comparisons of features, and no sense of what the core lessons of distributed computing have been.This is obviously one book in a chain aimed at the academic market. Perhaps it has a place there, but I wouldn't want to be a in a class that used this book.

Some people like Tanenbaum's writing style. Other people find his work tedious and boring.I belong to the latter group.Most of the book is just waffle... he explains neither the general principles nor the implementation specifics in great detail, but instead spends 10 pages explaining the obvious, follows that with a page with good technical information, then a page of insightful commentary, but then continues again with another 10 pages of pointless chatter.Some chapters provide practical information, but it is clearly aimed at the university student -- and has all the excitement of a monotonous lecturer.If you're after a to-the-point summary, try something else.

This book is the next after the adorable "Modern Operating Systems" by Tannenbaum. The book is well written with a widest and broad view of this area. No wonder because the authors are running a project of building one. The books indeed touches the basic important ideas behind a distributed systems very well and try in later chapters to give some practical view of how it is done. The descriptions at some point are too technical (i.e trivial) and sometimes repeating. a load of some 100 pages could be cut off this book. I am in junior class and I learn it by myself (I couldn't take the course) with no difficulties. On the other hand some other "ACADEMIC", but important aspect are not mentioned at all. For example: Self stabilization. You will not find knowledge on J2EE or Web services in this book, but after reading it all these ideas should look very natural for you - as after reading a good book on a subject. Read it and enjoy, just don't dig yourself too much into dull technical details.

Chapters 1 through 4 are a great introduction to Distributed Systems, in the case you have had less than optimal training on the subject in the past - I read these chapters at the beginning of a recent Distributed Systems graduate course since this was the situation I was in. Chapters 5 through 7, which were the main concentration in the course, are also the heart of the text: Synchronization, Consistency and Replication, and Fault Tolerance. The authors write very well, and the diagrams are among the best I have seen, especially if you think visually like me. In my opinion, some of the explanations are drawn out a bit much, or worded in a strange way, but this does not take away from the text's substance. What does subtract from my high opinion of the book is the cover art, which makes it look like a book one would read in grade school. At least one professor in the

graduate school I am attending is not interested in using the text for his DS courses for that very reason.

This is an introduction to the subject of distributed computing. From my personal point of view fails the book to address any of the two viewpoints I am interested on: 1) Distributed algorithms, or 2) Distributed computing tools and software (i.e. real life examples with some source code).Although, some people can find that the book is a good introduction to the subject, I feel that the book is not focused enough.For distributed algorithms I recommend "Distributed Systems: An algorithmc Approach" from Ghosh (I have not read yet the "Distributed algorithms" from Lynch et al).For the "practical" aspect... I have not found a good one. Do you know one?

Tanenbaum and van Steen have updated their textbooks on networks and distributed systems to include chapters on Distributed Document-Based Systems (examples: The World Wide Web / Lotus Notes) and Distributed Coordination-Based Systems (examples: TIBCO/Rendezvous / JINI). There are other good chapters as well, including; Security, Distributed Object-Based Systems, Distributed File Systems, Fault Tolerance, Consistency & Replication, and more. I have always liked Tanenbaum’s textbooks and picked this one up for a textbook discussion of TIBCO/Rendezvous because of my work in federated information systems. The chapter on TIBCO discusses the coordination model, architecture, messaging, events, processes, naming, synchronization, caching, replication, fault tolerance and security. There is a similar discussion on JINI and a follow-up comparative analysis of TIBCO/Rendezvous and JINI. In short, this book is an excellent reference for people of all experience and education levels working with distributed systems. Like all Tanenbaum’s books, Distributed Systems is well written and easy to read. Highly Recommended!

Distributed Systems, Volume 2 Distributed Shared Memory: Concepts and Systems Security Engineering: A Guide to Building Dependable Distributed Systems Distributed Algorithms (The Morgan Kaufmann Series in Data Management Systems) Distributed Operating Systems Developing Secure Distributed Systems with CORBA Distributed Virtual Worlds: Foundations and Implementation Techniques Using VRML, Java, and CORBA 3D Printing: The Next Technology Gold Rush - Future Factories and How to Capitalize on Distributed Manufacturing COM and DCOM: Micrsoft's Vision for Distributed Objects The Odbc Solution: Open Database Connectivity in Distributed Environments/Book and Disk (Mcgraw-Hill Series on Computer Communications) Java Programming with CORBA: Advanced Techniques for Building Distributed Applications (OMG) Distributed Virtual Worlds