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High-Performance IT Services
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"High-Performance IT Services" by Dr. Terry Critchley (Auerbach Publications, 2016) is an extensive and easy-to-read explanation of IT system performance issues and approaches where Critchley's four decades of IT experience are clearly evident. Most books on this topic dwell heavily on the mathematics behind system performance. This is perhaps useful for those specializing in performance enhancements, but they represent a level of detail that is over-the-head of line-of-business IT managers and their staffs.

Instead, Dr. Critchley focuses on explaining these concepts in simple English, supported by numerous figures. As he demonstrates, a clear figure can explain to the layman the meaning of a complex set of equations without needing to be a mathematical genius. This is not to say that he ignores the mathematics of system performance, such as the all-important theory of queues. Rather, he confines the math to a segregated set of chapters and appendices that are arbitrary reading for those that want to dig deeper.

He begins by discussing what is meant by performance. Performance can have many faces depending upon the application, whether it be transaction processing, batch processing, web services, or any one of a number of other uses. He points out that average response time is not a sufficient metric. Rather, the spread of response times is equally important. An average response time of one second is not very good if 90% of all responses complete in 20 seconds.

A major focus of the book is on networks and distributed systems since systems today do not operate in a private silo. They must interact with other systems, and overall performance is strongly impacted by these systems and the ability to efficiently communicate with them.

He dwells heavily on service level agreements (SLAs) and on the wide variety of formal benchmarks that are used in the industry. He includes in his discussions cloud computing, virtualization and high performance computing.

This book is for everyone in IT. It is especially useful for performance rookies who can learn a great deal from the book. It should be read by those who know quite a bit about system performance but who can always learn more. The book is for IT managers, IT staff, system operators, and system programmers. Even Chief Technical Officers in an organization can gain important insight into the performance of the systems their people manage and upon which the enterprise depends.

A very detailed Table of Contents (with several headings on each page) makes it easy to scan the book and decide which sections are of interest. Each section typically stands on its own, so that the book serves more as a reference library than as a treatise on performance.

All in all, Dr. Critchley's book is a complete discussion of system performance fundamentals with the added advantage that one can go directly to the issues that concern him or her.