

IP Routing Protocols

Uyless Black
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The TCP/IP protocol suite allows communication between computers of different sizes, produced by different vendors and run on different operating systems. What started in the late 1960s as a U.S.-government-financed research project on packet-switching networks has now become the most widely used form of networking, linking millions of computers worldwide. This amazing explosion of TCP/IP users, completely unexpected in the late 1960s, was substantially boosted in the 1990s with the Berners-Lee World Wide Web contribution. However, there are still some TCP/IP topics that remain obscure. One is routing. In that context this book appears at just the right time.

Uyless Black is a widely known expert in computer networks and data communications. He is author of more than ten books in the communication technologies field, which puts him in a good position to address this topic.

Here he starts by providing the background and concepts required for understanding TCP/IP technology. This is done clearly and assumes little prior knowledge of the area. As might be expected, he emphasizes the IP route discovery problem.

Later he details several routing protocols. He starts with the Routing Information Protocol (RIP); later he discusses the Open Shortest Path First (OSPF) Protocol, the Border Gateway Protocol (BGP), and some CISCO routing protocols. This part of the book ends with the Private Network–Network Interface (PNNI) Protocol. For each protocol Black gives a detailed technical description and also a brief history, which can help the reader get the full picture. The full chapter given to the CISCO routing protocols might be controversial; however, in my opinion this is completely justified in light of CISCO's dominance in the internetworking business.

The book ends with a set of appendices.

If I have one criticism to make, it is that, while the explanations are generally satisfactory, some sections probably deserve more detail. But this will always be a problem when one tries to address such a broad range of protocols in a single book.

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