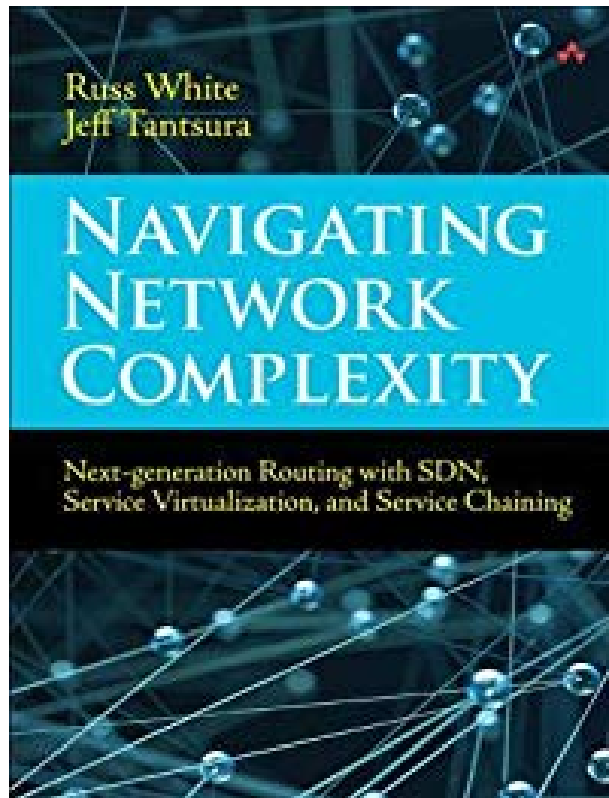


Navigating Network Complexity: Next-Generation Routing with SDN, Service Virtualization, and Service Chaining



Author:	Russ White
Genre:	Computer Science
ISBN13:	9780133989359
Goodreads Rating:	4.44
Published:	November 17th 2015 by Addison-Wesley Professional
Pages:	320
ISBN10:	0133989356

[Navigating Network Complexity: Next-Generation Routing with SDN, Service Virtualization, and Service Chaining.pdf](#)

[Navigating Network Complexity: Next-Generation Routing with SDN, Service Virtualization, and Service Chaining.epub](#)

Design your networks to successfully manage their growing complexity Network professionals have often been told that today's modern control planes would simplify their networks. The opposite has happened: Technologies like SDN and NFV, although immensely valuable, are exacerbating complexity instead of solving it. Navigating Network Complexity is the first comprehensive guide to managing this complexity in both deployment and day-to-day operations. Russ White and Jeff Tantsura introduce modern complexity theory from the standpoint of the working network engineer, helping you apply it to the practical problems you face every day. Avoiding complex mathematical models, they show how to characterize network complexity, so you can understand it and control it. The authors examine specific techniques and technologies associated with network control planes, including SDNs, fast reroute, segment routing, service chaining, and cloud computing. They reveal how each of these affects network design and complexity and help you anticipate causes of failure in highly complex systems. Next, they turn to modern control planes, examining the fundamental operating principles of SDNs, such as OpenFlow and I2RS, network and other service function virtualization, content distribution networks, Layer 2 fabrics, and service chaining solutions. You'll learn how each of these might both resolve and increase complexity in network design and operations and what you can do about it. Coverage includes: Defining complexity, understanding its components, and measuring it Mastering a straightforward "state, speed, and surface" model for analyzing complexity

Controlling complexity in design, deployment, operations, protocols, and programmable networks
Understanding how complex network systems begin to fail and how to prevent failure Recognizing
complexity tradeoffs in service virtualization and service chaining Managing new challenges of complexity in
virtualized and cloud environments Learning why constructs such as hierarchical design, aggregation, and
protocol layering work and when they work best Choosing the right models to contain complexity as your
network changes From start to finish, Navigating Network Complexity helps you assess the true impact of
new network technologies, so they can capture more value with fewer problems.