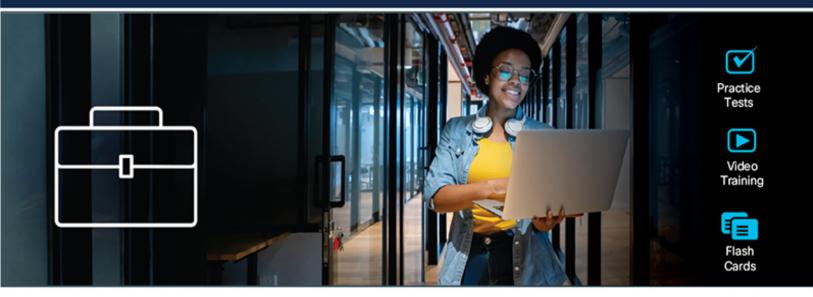
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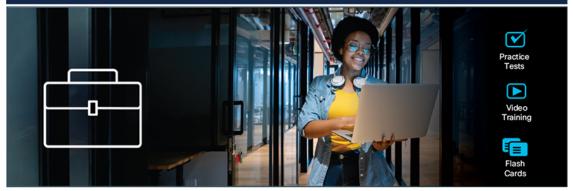


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About the Author

Wendell Odom, CCIE Enterprise No. 1624, was the first Cisco Press author for Cisco certification guides. He wrote all prior editions of this book, along with books on topics ranging from introductory networking to CCENT, CCNA R&S, CCNA DC, CCNP ROUTE, CCNP QoS, and CCIE R&S. In his four decades as a networker, he has worked as a network engineer, consultant, systems engineer, instructor, and course developer. He now spends his time focused on updating the CCNA books, his blog (www.certskills.com), building his new CCNA YouTube channel (www.youtube.com/@NetworkUpskill), and teaching online (www.certskills.com/courses). You can find him at www.LinkedIn.com/in/WendellOdom, Twitter (@WendellOdom), and at his blog, which provides a variety of free CCNA learning resources.

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Denise Donohue, CCIE No. 9566 (Routing and Switching), has worked with information systems since the mid-1990s and network architecture since 2004. During that time, she has worked with a wide range of networks, private and public, of all sizes, across most industries. Her focus is on aligning business and technology. Denise has authored several Cisco Press books and frequently shares her knowledge in webinars and seminars, and at conferences.

Dedications

For Fay York Odom (1938–2022), the best mom ever.

Acknowledgments

Brett Bartow and I have been a team for a few decades. He has had more to do with the successes of the Cisco Press product line than anyone else. More than ever, his insights and wisdom have been a key to navigating Cisco's big changes to certifications back in 2020. Now with Cisco's 2023 pivot to a lean development model for certifications, with the possibility of new exam content annually, Brett's leadership matters more than ever. (See "Your Study Plan" for more about what that new lean development cycle means.) He's always a great partner in working through big-picture direction as well as features to make the books the best they can be for our readers. It is always appreciated, but not voiced every time—so thanks, Brett, for your consistent leadership and wisdom!

Chris Cleveland did the development editing for the very first Cisco Press exam certification guide way back in 1998, and he still can't seem to get away from us! Seriously, when Brett and I first discuss any new book, my first priority is to ask whether Chris has time to develop the book—and lobby if there are any barriers! It's always a pleasure working with you, Chris.

The technical editors also have a meaningful positive impact on the books. And we got Denise Donohue to do it! Denise and I teamed up to write the *CCIE R&S Official Cert Guide* for two editions, and she has written extensively herself—which is why I wondered if we could get her help. Her deep technical skills, along with her unique insights into the book authoring process, have been a great help to both weed out the mistakes and get good advice on how to improve the chapters.

Cisco's move to an annual exam update cadence (they at least consider updating each exam once per year) has more impact on the production side of our publishing process than it does on the authoring side. Knowing early that both Sandra and Tonya are back at it, finding ways to continue the high quality while being creative with the new publication cycle sets me more at ease. When writing, I could rest knowing that the second half of the

process, which happens after I've finished 99 percent of my work, will be done well!

Thanks to all the production team for making the magic happen. I usually do not interact with you directly, beyond Sandra and Tonya, but I see your work, and the books truly improve through the process! From fixing all my grammar and passive-voice sentences to pulling the design and layout together, they do it all; thanks for putting it all together and making it look easy.

A special thank you to you readers who write in with suggestions and possible errors, and especially those of you who post online at the Cisco Learning Network and at my blog (www.certskills.com). More so than any edition I can remember, reader comments have had more to do with changes I made to improve existing content in these editions. The comments I received directly and those I overheard by participating at CLN made this edition a better book. (See the heading "Feedback Information" just a page or so back to see how to get in touch with us!)

My wonderful wife, Kris, and I reached our 25th anniversary while working on this edition. She makes this challenging work lifestyle a breeze, even happily scheduling our 25th-anniversary vacation around the book schedule! Thanks to my daughter Hannah for the perspectives on how 20-somethings think about learning and studying. And thanks to Jesus Christ, Lord of everything in my life.