Part II

IP Access Control Lists

The *CCNA 200-301 Official Cert Guide, Volume 2*, Second Edition, includes the topics that help you build an enterprise network so all devices can communicate with all other devices. Parts II and III of this book focus on how to secure that enterprise network so that only the appropriate devices and users can communicate.

Part II focuses on IP Version 4 (IPv4) access control lists (ACLs). ACLs are IPv4 packet filters that can be programmed to look at IPv4 packet headers, make choices, and either allow a packet through or discard the packet. Because you can implement IPv4 ACLs on any router, a network engineer has many options of where to use ACLs, without adding additional hardware or software, making ACLs a very flexible and useful tool.

Chapter 5 begins this part with an introduction to the TCP/IP Transport layer protocols TCP and UDP, along with an introduction to several TCP/IP applications. This chapter provides the necessary background to understand the ACL chapters.

Chapters 6, 7, and 8 get into details about ACLs. Chapter 6 discusses ACL basics, avoiding advanced topics to ensure that you master the basics. Chapter 7 explores named ACLs, which allow easier configuration and editing, and extended ACLs, which provide more options to match packets. Chapter 8 completes the ACL discussion by examining specific implementation issues, first regarding several overhead protocols, and then discussing some improved ACL features introduced by IOS XE.