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Sommario/riassunto

A hands-on resource for rigorous, state-of-the-art management of today's IP networks Effective IP address management (IPAM) is a key ingredient in an enterprise or service provider IP network management strategy. The practice entails the application of network management disciplines to Internet Protocol (IP) address space and associated network services, namely Dynamic Host Configuration Protocol (DHCP) and Domain Name System (DNS). As a natural follow-up to the author's previous book, Introduction to IP Address Management, this resource uniquely unifies all three foundational IP address management technologies, fully addressing their interrelationships and their cohesive management. It also describes the relevant protocols, configuration examples for the market-leading reference implementations from the Internet Systems Consortium (ISC), and techniques that can be employed to structure, monitor, secure, and manage them. The first part of the book provides a detailed overview of IPv4, IPv6, and IP allocation and subnetting techniques. In the second, DHCP for IPv4 and IPv6 is reviewed, with explanations of applications that rely on DHCP (such as VoIP device provisioning, broadband access provisioning, and PXE client initialization), DHCP server deployment strategies, and DHCP and relevant network access security. The third

part reviews the DNS protocol, DNS applications (such as name resolution, services location, ENUM, anti-spam techniques via black/white listing, and Sender ID), deployment strategies and associated configurations, and security. Finally, the text brings together the preceding parts, discussing techniques for cohesively managing IP address space, including impacts to DHCP and DNS. Everyday IP address management functions are described-including IP address allocation and assignment, renumbering, inventory assurance, fault management, performance monitoring, and disaster recovery-as are coexistence strategies. IP Address Management Principles and Practice utilizes realistic scenarios throughout to further enhance the learning process. It will educate readers responsible for managing IP address space and DHCP and DNS server configurations, such as IP network planners, engineers, and managers, including those who need to deploy IPv6 networks. It is also ideal for those responsible for managing an IP network with over 5,000 IP nodes, several DNS or DHCP servers, mixed DHCP and DNS vendor deployments, or IPv4 and IPv6.
