

<<自顶向下网络设计>>

图书基本信息

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<<自顶向下网络设计>>

内容概要

本书是围绕自顶向下网络设计步骤编写的，提供给网络设计者一种系统的结构化网络设计方法。

本书分为4个部分，即客户需求和目标、逻辑网络设计、物理网络设计，以及网络测试、优化和文档编写。

4个部分分别对应着网络

设计的各个重要阶段，每个阶段都提供给读者详细的设计指导原则，内容涵盖网络设计的方方面面。本书从用户商业和技术目标的分析入手，从而制定出相应的网络流量、负载和qos需求，进而开发网络的逻辑拓扑结构，然后进入地址规划、协议选择、网络安全和网络管理实施策略制定，最后是对网络设备的选型建议以及网络实施、测试和文档编写。

本书每章以复习题和设计环境作为一章的总结和回顾，理论与实践相结合，从而让读者更好地理解 and 掌握自顶向下网络设计的思想。

本书适合cisco代理商、网络运营商、其他网络设备商的网络部署人员、售后技术支持人员阅读；网络维护人员，以及网络技术爱好者也可以从本书中获益。

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章节摘录

版权页：插图：One advantage of private network numbers is security. Private network numbers are not advertised to the Internet. Private network numbers must not be advertised to the Internet because they are not globally unique. By not advertising private internal network numbers, a modicum of security is achieved. Additional security, including firewalls and intrusion detection systems, should also be deployed, as discussed in Chapter 5, “Designing a Network Topology,” and Chapter 8. Developing Network Security Strategies. Private addressing also helps meet goals for adaptability and flexibility. Using private addressing makes it easier to change ISPs in the future. If private addressing has been used, when moving to a new ISP, the only address changes required are in the router or firewall providing NAT services and in any public servers. You should recommend private addressing to customers who want the flexibility of easily switching to a different ISP in the future. Another advantage of private network numbers is that an enterprise network can advertise just one network number, or a small block of network numbers, to the Internet. It is good practice to avoid advertising many network numbers to the Internet. One of the goals of modern Internet practices is that Internet routers should not need to manage huge routing tables. As an enterprise network grows, the network manager can assign private addresses to new networks, rather than requesting additional public network numbers from an ISP or RIR. This avoids increasing the size of Internet routing tables. Private network numbers let a network designer reserve scarce Internet addresses for public servers. During the mid-1990s, as the Internet became commercialized and popularized, a scare rippled through the Internet community about the shortage of addresses. Dire predictions were made that no more addresses would be available by the turn of the century. Because of this scare, many companies (and many ISPs) were given a small set of addresses that needed to be carefully managed to avoid depletion. These companies recognize the value of private addresses for internal networks.

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编辑推荐

《自顶向下网络设计(英文版)(第3版)》：学习网络设计流程。

确保网络运作良好而且具有安全性，同时还可以进行扩展.以满足带宽的增长需求：制定网络设计.来为实时应用（比如多媒体、远程教学、视频会议、Teleprescene、虚拟通信和IP电话通讯）提供高带宽和低延迟：掌握用于检查现有网络健康状况的技术.并定制基线来测量新网络设计的性能；制定满足QOS需求的解决方案，其中包括IETF控制的负载和保障服务、IP组播、高级交换、队列和路由算法；识别各种交换和路由协议的优势和劣势。

其中包括RSTP、IEEE 802.1Q、EIGRP、OSPF和BGP4。

《自顶向下网络设计(英文版)(第3版)》是网络技术系列丛书之一。

该系列丛书可以为网络从业人员提供搭建高效网络、学习最新技术、打造辉煌职业生涯所需要的宝贵信息。

《自顶向下网络设计(英文版)(第3版)》新增并扩展了无线网络、VPN、网络安全、网络冗余性、模块化网络设计、IPv4和IPv6的动态寻址、以太网可扩展性选项包括10Gbit/S以太网、城域以太网和长距离以太网），以及承载语音 / 数据流量的网络等相关内容。

除此之外。

读者还将学到如何设计出符合CISCO SAFE安全参考架构的网络，使其能够支持实时视频、协同计算和社交网络工具。

Priscilla Oppenheimer自从1980年在密歇根大学获得信息科学硕士学位后，就投身于数据通信和网络系统的开发。

在以软件开发人员身份工作数年之后，她成为技术指导讲师和培训开发师，并教授过3000余名来自世界500强企业的网络工程师。

她曾先后供职于苹果公司、Network General和思科公司，这些工作经历使她有机会开发一套实用的方法来进行企业网络设计。

Priscilla在世界各地讲授网络设计、配置和排错课程，这使得她可以去实践她在网络咨询业务中的观点。

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