Nexus Lab Cisco

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A guide to computer networks cover such topics as hubs and switches, VLANs, trunking, routing and routers, tunnels, redundancy, Cisco Nexus, T1, and firewalls.

Implementing Cisco IP Switched Networks (SWITCH) Foundation Learning Guide: Foundation learning for SWITCH 642-813 Richard Froom, CCIE No. 5102 Balaji Sivasubramanian Erum Frahim, CCIE No. 7549 Implementing Cisco IP Switched Networks (SWITCH) Foundation Learning Guide is a Cisco® authorized learning tool for CCNP® and CCDP® preparation. As part of the Cisco Press foundation learning series, this book covers how to plan, configure, and verify the implementation of complex enterprise switching solutions using the Cisco Campus Enterprise Architecture. The Foundation Learning Guide also covers secure integration of VLANs, WLANs, voice, and video into campus networks. Each chapter opens with the list of topics covered to clearly identify the focus of that chapter. At the end of each chapter, a summary and review questions provide you with an opportunity to assess and reinforce your understanding of the material. Throughout the book detailed explanations with commands, configurations, and diagrams serve to illuminate theoretical concepts. Implementing Cisco IP Switched Networks (SWITCH) Foundation Learning Guide is ideal for certification candidates who are seeking a tool to learn all the topics covered in the SWITCH 642-813 exam. - Serves as the official book for the Cisco Networking Academy CCNP SWITCH course - Provides a thorough presentation of the fundamentals of multilayer switched network design - Explains the implementation of the design features such as VLAN, Spanning Tree, and inter-VLAN routing in the multilayer switched environment - Explains how to implement high-availability technologies and techniques - Covers security features in a switched network - Presents self-assessment review questions, chapter topics, summaries, command syntax explanations, network diagrams, and configuration examples to facilitate effective studying This book is in the Foundation Learning Guide Series. These guides are developed together with Cisco® as the only authorized, self-paced learning tools that help networking professionals build their understanding of networking concepts and prepare for Cisco certification exams.

Cisco has announced big changes to its certification program. As of February 24, 2020, all current certifications will be retired, and Cisco will begin offering new certification

programs. The good news is if you're working toward any current CCNA certification, keep going. You have until February 24, 2020 to complete your current CCNA. If you already have CCENT/ICND1 certification and would like to earn CCNA, you have until February 23, 2020 to complete your CCNA certification in the current program. Likewise, if you're thinking of completing the current CCENT/ICND1, ICND2, or CCNA Routing and Switching certification, you can still complete them between now and February 23, 2020. Complete theory and practice for the CCNA Data Center Technologies exam CCNA Data Center, Introducing Cisco Data Center Technologies Study Guide is your comprehensive study guide for exam 640-916. Authors Todd Lammle and Todd Montgomery, authorities on Cisco networking, guide you through 100% of all exam objectives with expanded coverage of key exam topics, and hands-on labs that help you become confident in dealing with everyday challenges. You'll get access to the free Nexus switch simulator that allows you to try your hand at what you've learned without expensive software, plus bonus study aids, such as electronic flashcards, a practice exam, and a searchable PDF glossary of terms. Coverage includes Data Center networking and virtualization, storage networking, unified fabric, Cisco UCS configuration, Data Center services, and much more, for complete exam preparation. This is your guide to study for the entire second (and final) exam required for certification Review networking principles, products, and technologies Understand Nexus 1000V and Data Center virtualization Learn the principles and major configurations of Cisco UCS Practice hands-on solutions you'll employ on the job Prepare for using Cisco's Unified Data Center, which unifies computing, storage, networking, and management resources

Provides an in-depth, objective guide to Arista's lineup of hardware, and explains why its network switches and Extensible Operating System (EOS) are so effective.

More Than 11 Hours of Video Instruction on NSX More than 11 hours of training on key NSX basics. Description VMware NSX Fundamentals LiveLessons is a unique video product that provides a solid understanding of NSX product components for security and network virtualization. This video course provides the perspective for network administrators, security practitioners, and virtualization administrators to feel confident in their ability to deploy NSX. VMware NSX Fundamentals LiveLessons contains 14 individual videos lessons, for a total of more than 14 hours of instruction. The videos consist of live teaching, screencasts, whiteboard instruction, animations, and more. Instruction throughout offers detailed explanations, tips, and configuration verifications. The video lessons cover the following topics: Lesson 1 Software-Defined Data Center Lesson 2 Networking Fundamentals Lesson 3 NSX Lab Lesson 4 NSX Manager and NSX Control Cluster Lesson 5 Logical Switch Networks Lesson 6 Distributed Logical Routing Lesson 7 Edge Routing and High Availability Lesson 8 Virtual Private Networks Lesson 9 NSX Edge Load Balancer Lesson 10 Distributed Firewalls Lesson 11 Automating the Security Architecture Lesson 12 Additional Edge Services Lesson 13 Multi-vCenter NSX Lesson 14 Operations About the Instructors Ron Fuller is a staff engineer in the Network and Security Business Unit (NSBU) focused on NSX for VMware. He has 21 years of experience in the industry and has held certifications from VMware, Novell, HP, Microsoft, ISC2, SNIA, and Cisco, including two CCIEs No. 5851 (Routing and Switching/Storage Networking). His focus is working with customers to address their challenges with comprehensive end-to-end data center architectures and

how they can best utilize VMware technology to their advantage. He is the co-author of both editions of the Cisco Press title NX-OS and Cisco Nexus Switching, as well as the Cisco Press NX-OS Configuration Fundamentals LiveLesson and Cisco IP Multicast Fundamentals video series. He has had the opportunity to speak at Cisco Live in Europe, Australia, and the United States on multiple topics. He lives in Ohio with his wife and four wonderful children and enjoys travel and auto racing. He can be found on Twitter ccie5851. Anthony Burke is a senior systems engineer in the Network and Security Business at VMware. He works with customers to see benefits of the software-defined data center and validates use cases in a technical presales...

Cisco networking essentials—made easy! Get a solid foundation in Cisco products and technologies from this fully updated bestseller. Covering the latest solutions, Cisco: A Beginner’s Guide, Fifth Edition shows you, step-by-step, how to design, build, and manage custom networks. Learn how to configure hardware, use IOS commands, set up wireless networks, and secure your systems. You’ll also get tips on preparing for Cisco certification exams. Brand-new voice and social networking features, Cisco TelePresence, the cloud-based Cisco Unified Computing System, and more are fully covered in this practical resource. Understand Cisco networking and Internet basics Connect and configure routers and switches Work with TCP/IP, Wi-Fi, and Ethernet technologies Maintain your network through IOS and IOS XR Handle security using firewalls, Adaptive Security Appliances, SecureX, TrustSec, and other tools Virtualize hardware and migrate resources to a private cloud Manage wireless networks with Aironet and Airespace Deliver VoIP, video, and social networking services Design, administer, and tune a Cisco enterprise network Identify and repair performance issues and bottlenecks

Do you want learn how to build a PenTest Lab but you don't know where to start?Do you want a practical book that explains step-by-step how to get going?Do you want to become an Ethical Hacker or PenTester?If the answer is yes to the above questions, this book is for you!Frequently Asked Questions-Question: I am new to IT, and I don't have any experience in the field of Hacking, should I get this book?-Answer: This book is designed to those interested in Penetration Testing aka Ethical Hacking, and having limited, or no experience in the realm of Cybersecurity.-Question: I am not a hacker. Are there any technical prerequisites for reading this book?-Answer: No. This book is written in everyday English, and no technical experience required.-Question: I have been reading similar books before, but I am still not sure if I should buy this book. How do I know this book is any good?-Answer: This book is written by a Security Architect, having over a decade of experience on platforms such as: Cisco Systems, Checkpoint, Palo Alto, Brocade, Back Track / Kali Linux, RedHat Linux, CentOS, Orion, Prime, DLP, IPS, IDS, Nexus, and much more... Learning from someone with real life experience is extremely valuable. You will learn about real life technologies and methodologies used in today's IT Infrastructure, and Cybersecurity Division.BUY THIS BOOK NOW, AND GET STARTED TODAY!IN THIS BOOK YOU WILL LEARN: What are the Foundations of Penetration TestingWhat are the Benefits of Penetration TestingWhat are the Frameworks of Penetration TestingWhat Scanning Tools you should be AwareWhat Credential Testing Tools you must UtilizeWhat Debugging & Software Assurance Tools are AvailableIntroduction to OSINT & Wireless ToolsWhat is a Web Proxy, SET & RDPWhat Mobile Tools you should be familiar withHow Communication must take

placeHow to Cover your BackHow to Setup a Lab in NPEHow to Setup Hyper-V on Windows 10How to Setup VMware on Windows 10How to Assemble the Required ResourcesHow to Install Windows Server in VMwareHow to Configure Windows Server in VMwareHow to Install Windows Server in Hyper-VHow to Configure Windows Server in Hyper-VHow to Install & Configure OWASP-BWA in VMwareHow to Install & Configure Metasploitable in VMwareHow to Install Kali Linux in VMwareHow to Install BlackArch in Hyper-VWhat Categories of Penetration Tests existsWhat Software & Hardware you must have as a PenTesterUnderstanding ConfidentialityWhat are the Rules of EngagementHow to set Objectives & DeliverablesWhat Type of Targets you must deal withSpecialized Systems for Pen TestersHow to Identify & Response to RiskHow to Prepare your Pen Test Team for an EngagementWhat are the Best Practices before Going LiveBUY THIS BOOK NOW, AND GET STARTED TODAY

This book discusses renewable energy systems and applications, and demonstrates how an accelerated transition to 100% renewable energy can be achieved. It examines the systems from a thermodynamic perspective, focusing on the irreversible aspects of the current energy system and highlighting the solutions developed to date. Presenting global research and developments, this book is intended for those working within the field of renewable energy research and policy who are interested in learning how they can contribute to the transition from fossil fuels to renewable resources.

The IBM HyperSwap® high availability (HA) function allows business continuity in a hardware failure, power failure, connectivity failure, or disasters, such as fire or flooding. It is available on the IBM SAN Volume Controller and IBM FlashSystem products. This IBM Redbooks publication covers the preferred practices for implementing Cisco VersaStack with IBM HyperSwap. The following are some of the topics covered in this book: Cisco Application Centric Infrastructure to showcase Cisco's ACI with Nexus 9Ks Cisco Fabric Interconnects and Unified Computing System (UCS) management capabilities Cisco Multilayer Director Switch (MDS) to showcase fabric channel connectivity Overall IBM HyperSwap solution architecture Differences between HyperSwap and Metro Mirroring, Volume Mirroring, and Stretch Cluster Multisite IBM SAN Volume Controller (SVC) deployment to showcase HyperSwap configuration and capabilities This book is intended for pre-sales and post-sales technical support professionals and storage administrators who are tasked with deploying a VersaStack solution with IBM HyperSwap.

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?CCNP Routing and Switching SWITCH 300-115

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Routing and Switching SWITCH 300-115 ??????????Cisco??????????????????Cisco????????????????????????Cisco Press??????????????????Cisco????????????????????????????????www.cisco.com? ??????????CCNP R&S SWITCH 300-115??????????? ??????? ?????? ??????? ?VLAN?Trunk?VTP ????????(STP)?RSTP???MSTP ???STP??? ???????? ????? ???DHCP ???????????SNMP????? ???????? ????? ?????????? ???Cisco Press?????????? ????????????????????????????????Cisco????????????????????????????????? ???????? #???? GOTOP Information Inc.

The VMware Certified Professional on vSphere 5—Datacenter Virtualization (VCP5-DCV) certification is the most desired certification for virtualization professionals, and this study guide covers all the requirements for the exam. Skill in virtualization is a top priority for companies when hiring IT staff, and VMware skills are in high demand. Part of the highly acclaimed Sybex Study Guide series, this comprehensive book guides you through planning, installing, and upgrading ESXi; configuring networking, storage, and vCenter Server; deploying and managing virtual machines, and much more. Virtualization skills are in high demand by employers, and the VCP5-DCV certification enhances your marketability as an IT professional This Sybex Study Guide helps prepare you to successfully complete all parts of the exam Covers all aspects of ESXi planning, installation, upgrading, configuration, troubleshooting, and alarm management Includes 100% coverage of the exam objectives, real world scenarios, hands-on exercises, challenging review questions, bonus practice exams, and electronic flashcards If you want the best preparation for the VCP5-DCV exam, this is the study guide you need.

CCNP Routing and Switching Foundation Learning Library: ROUTE¿300-101, SWITCH 300-115, TSHOOT 300-135¿contains three books that provide early and comprehensive foundation learning for the three new required exams for CCNP certification: Implementing Cisco IP Routing (ROUTE) Foundation Learning Guide: (CCNP ROUTE 300-101) Implementing Cisco IP Switched Networks (SWITCH) Foundation Learning Guide: (CCNP SWITCH 300-115) Troubleshooting and Maintaining Cisco IP Networks (TSHOOT) Foundation Learning Guide: (CCNP TSHOOT 300-135) This package is a comprehensive self-study tool for learning the material covered in the three new CCNP exams. The books are intermediate-level texts that assume that readers have been exposed to beginner-level networking concepts contained in the CCNA (ICND1 and ICND2) certification curriculum. No previous exposure to the CCNP level subject matter is required, so the books provide a great deal of detail on the topics covered. Within the Authorized Self-Study Guide series, each chapter opens with a list of objectives to help focus the reader's study. Real-world case studies sprinkled throughout help illuminate theoretical concepts. Key terms will be highlighted and defined as they are first used. Each chapter will conclude with a summary to help review key concepts, as well as review questions to reinforce the reader's understanding of what was covered.

"Cualquier persona al cargo de proyectos de infraestructura informática (DSI, administrador, arquitecto, jefe de proyecto, consultor, técnico...) está afectado por la virtualización de servidores. Esta tecnología, utilizada antes para pruebas y entornos de desarrollo, se despliega hoy para aplicaciones críticas. Es la piedra angular de la informática moderna, que abre la vía al Cloud Computing. Por tanto, es importante que cada uno comprenda todos los aspectos. Este libro detalla las funcionalidades de VMware vSphere 5, aunque no sólo eso. Su objetivo también es explicar cómo integrar de forma adecuada vSphere 5 en el seno de los sistemas de información del Datacenter. La comprensión de las interacciones que se crean entre esta tecnología y los distintos elementos tales como los servidores, el almacenamiento, la red, la copia de seguridad o el Plan de Recuperación ante Desastres es una apuesta importante para alcanzar el éxito en la transformación hacia una infraestructura virtualizada. Los primeros capítulos detallan la oferta vSphere 5 y cómo integrar correctamente esta tecnología en el Datacenter según las recomendaciones y directrices extraídas de la experiencia complementaria de ambos autores. Los siguientes capítulos son más prácticos, con una experiencia detallada acerca de la implantación de un proyecto en cuatro grandes fases. También se estudia una metodología eficaz, que da las claves para el éxito de dicho proyecto." -- ENI Ediciones.
Successfully create and manage your Hyper-V environment without any of the marketing fluff. This book's lab-driven, hands-on approach will get you up and running as quickly and efficiently as possible. Virtualization is the cornerstone of today’s data center. As a modern-day IT pro, you are required to manage environments that are in a regular state of flux and increasing in both size and complexity. To keep up, you need practical information in a format that is succinct, yet comprehensive and highly applicable. Pro Hyper-V 2019 breaks down critical and time-saving topics into a series of easy-to-digest chapters, showing you how to perform Hyper-V management tasks using both GUI and PowerShell-based tools. Building on your existing knowledge of Windows Server management, Active Directory, networking, and storage, experts and Microsoft MVPs Syrewicze and Siddaway begin with a foundation of why computing workloads are virtualized. This is followed by chapters covering the range of management tasks associated with virtualized environments, including: managing hosts and guest machines; networking, storage, and high availability (host and guest); disaster recovery and virtual machine migration; and monitoring. What You'll Learn Apply practical information to administer your Hyper-V environments Understand multiple administration styles (GUI, command line, and automation) Written by IT pros for IT pros – just the information you really need without the padding Administer and use containers Utilize hands-on labs to learn about storage, networking, and high availability Who This Book Is For IT administrators tasked with implementing Hyper-V environments or migrating from VMware. IT pros joining a team that is responsible for managing Hyper-V and “lone administrators” covering the gamut in smaller organizations

will also find this book indispensable.

In the 2012 edition of its flagship report, Worldwatch celebrates the twentieth anniversary of the 1992 Earth Summit with a far-reaching analysis of progress toward building sustainable economies. Written in clear language with easy-to-read charts, State of the World 2012 offers a new perspective on what changes and policies will be necessary to make sustainability a permanent feature of the world's economies. The Worldwatch Institute has been named one of the top three environmental think tanks in the world by the University of Pennsylvania's Think Tanks and Civil Societies Program.

Discover how to simplify your data center architecture, reduces costs, and improve speed and agility with Cisco UCS at your side About This Book Learn how to reduce equipment and operating costs, consolidate resources, and automate data center processes Eliminate manual, time-consuming tasks that were traditionally required to connect servers in data centers A practical hands-on guide that will help you to deploy servers and application stacks with ease Who This Book Is For This book is for system, network, and storage administrators who are responsible for Cisco UCS deployments. You need to have basic knowledge of server architecture, network, and storage technologies. What You Will Learn Set up your Lab using Cisco UCS Emulator Configure Cisco UCS, LAN, and SAN connectivity Create and manage Service profiles Perform various tasks using UCS Backup and restore Cisco UCS configuration Test various Cisco UCS scenarios Manage and automate multiple domains In Detail Cisco Unified Computer System (UCS) is a powerful solution for modern data centers and is responsible for increasing efficiency and reducing costs. This hands-on guide will take you through deployment in Cisco UCS. Using real-world examples of configuring and deploying Cisco UCS components, we'll prepare you for the practical deployments of Cisco UCS data center solutions. If you want to develop and enhance your hands-on skills with Cisco UCS solutions, this book is certainly for you. We start by showing you the Cisco UCS equipment options then introduce Cisco UCS Emulator so you can learn and practice deploying Cisco UCS components. We'll also introduce you to all the areas of UCS solutions through practical configuration examples. Moving on, you'll explore the Cisco UCS Manager, which is the centralized management interface for Cisco UCS. Once you get to know UCS Manager, you'll dive deeper into configuring LAN, SAN, identity pools, resource pools, and service profiles for the servers. You'll also get hands-on with administration topics including backup, restore, user's roles, and high availability cluster configuration. Finally, you will learn about virtualized networking, third-party integration tools, and testing failure scenarios. By the end of this book, you'll know everything you need to know to rapidly grow Cisco UCS deployments in the real world. Style and approach This hands-on book takes a tutorial-based approach to help you understand the practical methodologies and deployment of Cisco UCS components.

NX-OS and Cisco Nexus SwitchingNext-Generation Data Center ArchitecturesCisco Press

Cisco has announced big changes to its certification program. As of February 24, 2020, all current certifications will be retired, and Cisco will begin offering new certification programs. The good news is if you’re working toward any current CCNA certification, keep going. You have until February 24, 2020 to complete your current CCNA. If you already have CCENT/ICND1 certification and would like to earn CCNA, you have until

February 23, 2020 to complete your CCNA certification in the current program. Likewise, if you're thinking of completing the current CCENT/ICND1, ICND2, or CCNA Routing and Switching certification, you can still complete them between now and February 23, 2020. Increase the value of your organization's cloud network—and invest in your education The Cisco Cloud certification validates the skill set of individuals on industry-leading cloud solutions and best practices, as well as offering job role-based curricula for all levels of an IT staff. CCNA Cloud Complete Study Guide prepares you to take two required exams: 210-451, Understanding Cisco Cloud Fundamentals, and 210-455, Introducing Cisco Cloud Administration. It covers everything you can expect to encounter on the exams and also gives you a year of FREE access to Sybex's superior online interactive learning environment and test bank, including chapter tests, practice exams, a glossary of key terms, and electronic flashcards. Cisco's CCNA Cloud certification covers cloud characteristics and models, cloud deployment, and basic knowledge of cloud compute, cloud networking, and cloud storage. It also covers cloud infrastructure administration and reporting, chargeback and billing reports, cloud provisioning, cloud systems management and monitoring, and cloud remediation. With thorough coverage, practical instruction, and expert insight, this book provides an ideal resource for Exam 210-451 and Exam 210-455 preparation. • Includes an opening list of exam topics • Provides valuable hands-on exercises • Offers practical real-world examples • Distills in-depth perspective from cloud computing experts This book is the perfect resource for anyone seeking to earn the challenging, but rewarding CCNA Cloud certification.

Dynamic organizations want to accelerate growth while reducing costs. To do so, they must speed the deployment of business applications and adapt quickly to any changes in priorities. Organizations today require an IT infrastructure that is easy, efficient, and versatile. The VersaStack solution by Cisco and IBM® can help you accelerate the deployment of your data centers. It reduces costs by more efficiently managing information and resources while maintaining your ability to adapt to business change. The VersaStack solution combines the innovation of Cisco UCS Integrated Infrastructure with the efficiency of the IBM Storwize® storage system. The Cisco UCS Integrated Infrastructure includes the Cisco Unified Computing System (Cisco UCS), Cisco Nexus and Cisco MDS switches, and Cisco UCS Director. The IBM FlashSystem® V9000 enhances virtual environments with its Data Virtualization, IBM Real-time CompressionTM, and IBM Easy Tier® features. These features deliver extraordinary levels of performance and efficiency. The VersaStack solution is Cisco Application Centric Infrastructure (ACI) ready. Your IT team can build, deploy, secure, and maintain applications through a more agile framework. Cisco Intercloud Fabric capabilities help enable the creation of open and highly secure solutions for the hybrid cloud. These solutions accelerate your IT transformation while delivering dramatic improvements in operational efficiency and simplicity. Cisco and IBM are global leaders in the IT industry. The VersaStack solution gives you the opportunity to take advantage of integrated infrastructure solutions that are targeted at enterprise applications, analytics, and cloud solutions. The VersaStack solution is backed by Cisco Validated Designs (CVD) to provide faster delivery of applications, greater IT efficiency, and less risk. This IBM Redbooks® publication is aimed at experienced storage administrators who are tasked with deploying a VersaStack solution with Oracle Real Application

Clusters (RAC) and IBM SpectrumTM Protect.

Cisco expert Todd Lammle prepares you for the NEW Cisco CCNA certification exam! Cisco, the world leader in network technologies, has released the new Cisco Certified Network Associate (CCNA) exam. This consolidated certification exam tests a candidate's ability to implement and administer a wide range of modern IT networking technologies. The CCNA Certification Study Guide: Volume 2 Exam 200-301 covers every exam objective,including network components, IP connectivity and routing, network security, virtual networking, and much more. Clear and accuratechapters provide you with real-world examples, hands-on activities, in-depth explanations, and numerous review questions to ensure that you're fully prepared on exam day. Written by the leading expert on Cisco technologies and certifications, this comprehensive exam guide includes access to the acclaimed Sybex online learning system—an interactive environment featuring practice exams, electronic flashcards, a searchable glossary, a self-assessment test, and video tutorials on critical Cisco networking concepts and technologies. Covers 100% of all CCNA Exam 200-301 objectives Provides accurate and up-to-date information on core network fundamentals Explains a broad range of Cisco networking and IT infrastructure Features learning objectives, chapter summaries, 'Exam Essentials' and figures, tables, and illustrations The CCNA Certification Study Guide: Volume 2 Exam 200-301 is the ideal resource for those preparing for the new CCNA certification, as well as IT professionals looking to learn more about Cisco networking concepts and technologies.

Enterprise Network Testing Testing Throughout the Network Lifecycle to Maximize Availability and Performance Andy Sholomon, CCIE® No. 15179 Tom Kunath, CCIE No. 1679 The complete guide to using testing to reduce risk and downtime in advanced enterprise networks Testing has become crucial to meeting enterprise expectations of near-zero network downtime. Enterprise Network Testing is the first comprehensive guide to all facets of enterprise network testing. Cisco enterprise consultants Andy Sholomon and Tom Kunath offer a complete blueprint and best-practice methodologies for testing any new network system, product, solution, or advanced technology. Sholomon and Kunath begin by explaining why it is important to test and how network professionals can leverage structured system testing to meet specific business goals. Then, drawing on their extensive experience with enterprise clients, they present several detailed case studies. Through real-world examples, you learn how to test architectural "proofs of concept," specific network features, network readiness for use, migration processes, security, and more. Enterprise Network Testing contains easy-to-adapt reference test plans for branches, WANs/MANs, data centers, and campuses. The authors also offer specific guidance on testing many key network technologies, including MPLS/VPN, QoS, VoIP, video, IPsec VPNs, advanced routing (OSPF, EIGRP, BGP), and Data Center Fabrics. § Understand why, when, and how you should test your network § Use testing to discover critical network design flaws § Incorporate structured systems testing into enterprise architecture strategy § Utilize testing to improve decision-making throughout the network lifecycle § Develop an effective testing organization and lab facility § Choose and use test services providers § Scope, plan, and manage network test assignments § nLeverage the best commercial, free, and IOS test tools § Successfully execute test plans, including crucial low-level details § Minimize the equipment required to test large-scale networks § Identify gaps in network

readiness § Validate and refine device configurations § Certify new hardware, operating systems, and software features § Test data center performance and scalability § Leverage test labs for hands-on technology training This book is part of the Networking Technology Series from Cisco Press®, which offers networking professionals valuable information for constructing efficient networks, understanding new technologies, and building successful careers.

This IBM® RedpaperTM publication covers how to use the Cisco IBM VersaStack integrated infrastructure as a platform for IBM Middleware by using the IBM PureApplication® Software V2.1 product, which has the means to install, configure, and manage IBM Middleware on VersaStack. VersaStack can run many software stacks, and PureApplication Software can run on many integrated infrastructures. This paper gives specific design and implementation recommendations for integrating PureApplication Software Version 2.1 on to Cisco IBM VersaStack. Most of this paper focuses on PureApplication Software Version 2.1, but always in the context of VersaStack. It describes and gives the business values of PureApplication Software, provides an overview of VersaStack, shows the preparation of VersaStack for PureApplication Software, gives some hints about installing and configuring the PureApplication Software, and describe how to use PureApplication Software to deploy an IBM Middleware pattern on VersaStack. The target audience for this paper is IT professionals who are responsible for designing and implementing PureApplication Software on VersaStack.

Trust the best-selling Official Cert Guide series from Cisco Press to help you learn, prepare, and practice for exam success. This series is built with the objective of providing assessment, review, and practice to help ensure you are fully prepared for your certification exam. * Master Cisco CCNA Data Center DCICN 640-911 exam topics * Assess your knowledge with chapter-opening quizzes * Review key concepts with exam preparation tasks This is the eBook edition of the CCNA Data Center DCICN 640-911 Official Cert Guide. This eBook does not include the companion CD-ROM with practice exam that comes with the print edition. CCNA Data Center DCICN 640-911 Official Cert Guide from Cisco Press enables you to succeed on the exam the first time and is the only self-study resource approved by Cisco. Expert instructors and engineers Wendell Odom and Chad Hintz share preparation hints and test-taking tips, helping you identify areas of weakness and improve both your conceptual knowledge and hands-on skills. This complete, official study package includes * A test-preparation routine proven to help you pass the exam * "Do I Know This Already?" quizzes, which enable you to decide how much time you need to spend on each section * Chapter-ending and part-ending exercises, which help you drill on key concepts you must know thoroughly * A final preparation chapter that guides you through tools and resources to help you craft your review and test-taking strategies * A Nexus lab guide appendix, with advice for building hands-on Nexus labs * Study plan suggestions and templates to help you organize and optimize your study time Well regarded for its level of detail, study plans, assessment features, and challenging review questions and exercises, this

official study guide helps you master the concepts and techniques that ensure your exam success. CCNA Data Center DCICN 640-911 Official Cert Guide is part of a recommended learning path from Cisco that includes simulation and hands-on training from authorized Cisco Learning Partners and self-study products from Cisco Press. To find out more about instructor-led training, e-learning, and hands-on instruction offered by authorized Cisco Learning Partners worldwide, please visit www.cisco.com. The official study guide helps you master topics on the CCNA Data Center DCICN 640-911 exam, including * Networking fundamentals * Installing, operating, and configuring Nexus switches * VLANs and trunking concepts and configuration * Spanning Tree Protocol (STP) concepts and configuration * IP addressing and subnetting * IPv6 fundamentals * Cisco Nexus IPv4 routing configuration and routing protocol implementation * IPv4 access control lists (ACL) on Nexus switches

Offers information on exam topics along with real-world scenarios, written and hands-on labs, and review questions and answers.

This book is a concise one-stop desk reference and synopsis of basic knowledge and skills for Cisco certification prep. For beginning and experienced network engineers tasked with building LAN, WAN, and data center connections, this book lays out clear directions for installing, configuring, and troubleshooting networks with Cisco devices. The full range of certification topics is covered, including all aspects of IOS, NX-OS, and ASA software. The emphasis throughout is on solving the real-world challenges engineers face in configuring network devices, rather than on exhaustive descriptions of hardware features. This practical desk companion doubles as a comprehensive overview of the basic knowledge and skills needed by CCENT, CCNA, and CCNP exam takers. It distills a comprehensive library of cheat sheets, lab configurations, and advanced commands that the authors assembled as senior network engineers for the benefit of junior engineers they train, mentor on the job, and prepare for Cisco certification exams. Prior familiarity with Cisco routing and switching is desirable but not necessary, as Chris Carthern, Dr. Will Wilson, Noel Rivera, and Richard Bedwell start their book with a review of the basics of configuring routers and switches. All the more advanced chapters have labs and exercises to reinforce the concepts learned. This book differentiates itself from other Cisco books on the market by approaching network security from a hacker’s perspective. Not only does it provide network security recommendations but it teaches you how to use black-hat tools such as oclHashcat, Loki, Burp Suite, Scapy, Metasploit, and Kali to actually test the security concepts learned. Readers of Cisco Networks will learn How to configure Cisco switches, routers, and data center devices in typical corporate network architectures The skills and knowledge needed to pass Cisco CCENT, CCNA, and CCNP certification exams How to set up and configure at-home labs using virtual machines and lab exercises in the book to practice advanced Cisco commands How to implement networks of Cisco devices supporting WAN, LAN, and data center configurations How to implement secure

network configurations and configure the Cisco ASA firewall How to use black-hat tools and network penetration techniques to test the security of your network Every year, datacenter managers must deliver more services faster, with greater flexibility. They must efficiently handle soaring amounts of data, and unprecedented levels of complexity. And they must do all this with lower budgets and fewer resources. Datacenter virtualization with VMware's vSphere® 5 is the best way to achieve these goals and to accelerate your transition to cloud services. VMware vSphere® 5: Building a Virtual Datacenter brings together all the practical knowledge you need to evaluate, plan, implement, and manage vSphere 5 in your datacenter environment. Top datacenter virtualization consultants Eric Maillé and René-François Mennecier begin by introducing vSphere 5 from the viewpoint of the datacenter manager and professional. They present essential definitions, advantages, and functions; review vSphere 5's architecture; and introduce core components such as vCenter Server and ESXi 5.0. Next, Maillé and Mennecier turn to implementation, presenting detailed examples, schemas, and best practices drawn from their extensive experience. They share practical insights into budgeting, scheduling, and planning; choosing the right architecture; and integrating vSphere with existing datacenter elements, including servers, storage, clusters, network infrastructure, and business continuity plans. They conclude with a start-to-finish case study: a datacenter virtualization project designed to support specific business objectives. Coverage includes • Assessing the potential benefits of datacenter virtualization in your environment • Organizing and managing a smooth migration to the virtualized datacenter • Anticipating specific challenges and risks associated with datacenter virtualization • Making tradeoffs to optimize stability, elasticity, scalability, and cost • Choosing the best installation/configuration options for your environment • Effectively linking vSphere 5 virtualization to existing datacenter elements • Driving more value from vSphere 5's powerful new datacenter features • Providing storage to efficiently support your hosted VMs, now and in the future • Managing limited memory and other server constraints • Leveraging new options for service continuity and high availability • Using backup architecture as a lever to reduce costs

NX-OS and Cisco Nexus Switching Next-Generation Data Center Architectures Second Edition The complete guide to planning, configuring, managing, and troubleshooting NX-OS in the enterprise–updated with new technologies and examples Using Cisco Nexus switches and the NX-OS operating system, data center professionals can build unified core networks that deliver unprecedented scalability, resilience, operational continuity, flexibility, and performance. NX-OS and Cisco Nexus Switching, Second Edition, is the definitive guide to applying these breakthrough technologies in real-world environments. This extensively updated edition contains five new chapters addressing a wide range of new technologies, including FabricPath, OTV, IPv6, QoS, VSG, Multi-Hop FCoE, LISP, MPLS, Layer 3 on Nexus 5000, and Config sync. It also presents a start-to-

finish, step-by-step case study of an enterprise customer who migrated from Cisco Catalyst to a Nexus-based architecture, illuminated with insights that are applicable in virtually any enterprise data center. Drawing on decades of experience with enterprise customers, the authors cover every facet of deploying, configuring, operating, and troubleshooting NX-OS in today's data center. You'll find updated best practices for high availability, virtualization, security, L2/L3 protocol and network support, multicast, serviceability, provision of networking and storage services, and more. Best of all, the authors present all the proven commands, sample configurations, and tips you need to apply these best practices in your data center. Ron Fuller, CCIE No. 5851 (Routing and Switching/Storage Networking), Technical Marketing Engineer on Cisco's Nexus 7000 team, specializes in helping customers design end-to-end data center architectures. Ron has 21 years of industry experience, including 7 at Cisco. He has spoken at Cisco Live on VDCs, NX-OS multicast, and general design. David Jansen, CCIE No. 5952 (Routing/Switching), is a Cisco Technical Solutions Architect specializing in enterprise data center architecture. He has 20 years of industry experience, 15 of them at Cisco (6 as a solution architect); and has delivered several Cisco Live presentations on NX-OS and data center solutions. Matthew McPherson, senior systems engineer and solutions architect for the Cisco Central Select Operation, specializes in data center architectures. He has 12 years of experience working with service providers and large finance and manufacturing enterprises, and possesses deep technical knowledge of routing, switching, and security. Understand the NX-OS command line, virtualization features, and file system Utilize the NX-OS comprehensive Layer 2/Layer 3 support: vPC, Spanning Tree Protocol, Cisco FabricPath, EIGRP, OSPF, BGP, HSRP, GLBP, and VRRP Configure IP multicast with PIM, Auto-RP, and MSDP Secure your network with CTS, SGTs, ACLs, CoPP, and DAI Establish a trusted set of network devices with Cisco TrustSec Maximize availability with ISSU, stateful process restart/switchover, and non-stop forwarding Improve serviceability with SPAN, ERSPAN, configuration checkpoints/rollback, packet analysis, Smart Call Home, Python, and PoAP Unify storage and Ethernet fabrics with FCoE, NPV, and NPIV Take full advantage of Nexus 1000V in a virtualized environment Achieve superior QoS with MQ CLI, queuing, and marking Extend L2 networks across L3 infrastructure with Overlay Transport Virtualization (OTV) Deliver on SLAs by integrating MPLS application components such as L3 VPNs, traffic engineering, QoS, and mVPN Support mobility via the new Locator ID Separation Protocol (LISP) Walk step-by-step through a realistic Nexus and NX-OS data center migration

CCNA Data Center DCICT 640-916 Official Cert Guide CCNA Data Center DCICT 640-916 Official Cert Guide from Cisco Press enables you to succeed on the exam the first time and is the only self-study resource approved by Cisco. A team of leading Cisco data center experts shares preparation hints and test-taking tips, helping you identify areas of weakness and improve both your

conceptual knowledge and hands-on skills. This complete, official study package includes --A test-preparation routine proven to help you pass the exam --“Do I Know This Already?” quizzes, which enable you to decide how much time you need to spend on each section --Part-ending exercises, which help you drill on key concepts you must know thoroughly --The powerful Pearson IT Certification Practice Test software, complete with hundreds of well-reviewed, exam-realistic questions, customization options, and detailed performance reports --Study plan suggestions and templates to help you organize and optimize your study time --A final preparation chapter that guides you through tools and resources to help you craft your review and test-taking strategies Well regarded for its level of detail, study plans, assessment features, and challenging review questions and exercises, this official study guide helps you master the concepts and techniques that ensure your exam success. The official study guide helps you master topics on the CCNA Data Center DCICT 640-916 exam, including --Cisco data center concepts: architectures, devices, layers, modular design, vPC, FabricPath, Cisco Nexus switches, and more --Data center unified fabric: FCoE, multihop, VIFs, FEX, and setup --Storage networking: concepts, targets, verification, connectivity, zoning, setup, and configuration --Data center virtualization: servers, devices, and Nexus 1000V, including setup and operations --Cisco Unified Computing: concepts, discovery, connectivity, setup, and UCSM --Data center network services: ACE load balancing, virtual context, HA, management, global/local solutions, and WAAS The CD-ROM contains more than 450 practice questions for the exam, memory table exercises and answer keys, and a study planner tool. Includes Exclusive Offer for 70% Off Premium Edition eBook and Practice Test Pearson IT Certification Practice Test minimum system requirements: Windows XP (SP3), Windows Vista (SP2), Windows 7, or Windows 8; Microsoft .NET Framework 4.0 Client; Pentium class 1GHz processor (or equivalent); 512 MB RAM; 650 MB disk space plus 50 MB for each downloaded practice exam; access to the Internet to register and download exam databases

All you need to know to plan, deploy, and run virtual infrastructure with VMware vSphere 5 - including secrets nobody else will tell you! * *Fully covers planning, implementing, operating, and managing vSphere 5. *Brings together key techniques in a start-to-finish case study. *Offers expert guidance on overcoming common VMware pitfalls, problems, and obstacles to 100% virtualization. *By two leading experts, including one of the world's first holders of VMware's elite VCDX certification. To make the most of VMware's vSphere 5, IT professionals need knowledge, tips, and insights they'll never find in the manuals - or in any book, until now! In Managing and Optimizing vSphere Deployments, two world-class VMware experts offer start-to-finish lessons for vSphere planning, implementation, operation, management, and troubleshooting: expert insights drawn from their own unsurpassed 'in-the-trenches' consulting experience. The authors focus on the most crucial techniques VMware professionals need, providing guidance optimized for the new vSphere 5, and frameworks that will

support the evolution of virtual infrastructure for years to come. They present scenarios and case studies drawn from real-world data, addressing areas ranging from sizing and performance to redundancy. Coverage includes: * *Smoothly integrating vSphere 5 into current environments and considerations. *Overcoming roadblocks to 100% virtualization. *Establishing a more stable infrastructure. *Choosing hardware and making optimal configuration decisions. *Automating tasks and maximizing availability. *Efficiently managing updates, patches, and upgrades. *Monitoring vSphere 5 with tools provided by VMware and its community. *Planning for growth, and much more

Descripton NX-OS Configuration Fundamentals LiveLessons is a unique video product that provides a solid understanding of NX-OS technologies across five product families. The product takes the student from an introduction to the product families and operating system, to Layer 2 and 3 capabilities before moving on to multicast and security. High availability, unique embedded serviceability features, and Unified Fabric and the Nexus 1000v are covered. Finally, QoS, OTV, MPLS, and LISP conclude the lessons. The most current updates in products and technologies have been incorporated, including OTV VLAN translation, L2 MPLS VPNs, LISP IGP assist, FabricPath multi-topology, and anycast HSRP, among many others. NX-OS Configuration Fundamentals LiveLessons contains 13 individual video lessons, subdivided into 88 sublessons, for a total of 12 hours of instruction. The videos consist of audio instruction, animations, and video screencasts. Each video lab presents detailed objectives, lab diagrams, and video captures. Audio instruction throughout offers detailed explanations, tips, and configuration verifications. The 13 video lessons cover the following topics: * Introduction to NX-OS * Layer 2 Support and Configurations * Layer 3 Support and Configurations * IP Multicast Configuration * Security * High Availability * Embedded Serviceability Features * Unified Fabric * Nexus 1000v * Quality of Service (QoS) * Overlay Transport Virtualization (OTV) * MPLS * LISP About the Instructors Ron Fuller , CCIE No. 5851 (Routing and Switching/Storage Networking), is a technical marketing engineer (TME) on the Nexus 7000 team for Cisco. He has 21 years of experience in the industry and has held certifications from Novell, HP, Microsoft, ISC2, SNIA, and Cisco. His focus is working with customers worldwide to address their challenges with comprehensive end-to-end data center architectures and how they can best use Cisco technology to their advantage. He has had the opportunity to speak at Cisco Live on VDCs, NX-OS Multicast, and general design. He lives in Ohio with his wife and four wonderful children and enjoys traveling and auto racing. He can be found on Twitter ccie5851. David Jansen , CCIE No. 5952 (Routing/Switching) is a Distinguished Systems Engineer (DSE) for Cisco specializing in data center architectures. He has 20 years of experience in the industry and has held certifications from Novell, VMware, Microsoft, TOGAF, and Cisco. His focus is working with g...

Ben shu ti gong le yi xi lie wan zheng deLabshi zhan lian xi lai mo ni xu yao jiao gao dong shou

neng li deLabkao shi. shu zhong lie ju de 7 ge duan dao duan qing jing shi ti tong shi ju bei fu za xing he zhen shi xing, ti gong gei niLabkao shi de jing yan bing qie kai fa ni de ying ji si kao ji neng.

End-to-End QoS Network Design Quality of Service for Rich-Media & Cloud Networks Second Edition New best practices, technical strategies, and proven designs for maximizing QoS in complex networks This authoritative guide to deploying, managing, and optimizing QoS with Cisco technologies has been thoroughly revamped to reflect the newest applications, best practices, hardware, software, and tools for modern networks. This new edition focuses on complex traffic mixes with increased usage of mobile devices, wireless network access, advanced communications, and video. It reflects the growing heterogeneity of video traffic, including passive streaming video, interactive video, and immersive videoconferences. It also addresses shifting bandwidth constraints and congestion points; improved hardware, software, and tools; and emerging QoS applications in network security. The authors first introduce QoS technologies in high-to-mid-level technical detail, including protocols, tools, and relevant standards. They examine new QoS demands and requirements, identify reasons to reevaluate current QoS designs, and present new strategic design recommendations. Next, drawing on extensive experience, they offer deep technical detail on campus wired and wireless QoS design; next-generation wiring closets; QoS design for data centers, Internet edge, WAN edge, and branches; QoS for IPsec VPNs, and more. Tim Szigeti, CCIE No. 9794 is a Senior Technical Leader in the Cisco System Design Unit. He has specialized in QoS for the past 15 years and authored Cisco TelePresence Fundamentals. Robert Barton, CCIE No. 6660 (R&S and Security), CCDE No. 2013::6 is a Senior Systems Engineer in the Cisco Canada Public Sector Operation. A registered Professional Engineer (P. Eng), he has 15 years of IT experience and is primarily focused on wireless and security architectures. Christina Hattingh spent 13 years as Senior Member of Technical Staff in Unified Communications (UC) in Cisco's Services Routing Technology Group (SRTG). There, she spoke at Cisco conferences, trained sales staff and partners, authored books, and advised customers. Kenneth Briley, Jr., CCIE No. 9754, is a Technical Lead in the Cisco Network Operating Systems Technology Group. With more than a decade of QoS design/implementation experience, he is currently focused on converging wired and wireless QoS. n Master a proven, step-by-step best-practice approach to successful QoS deployment n Implement Cisco-validated designs related to new and emerging applications n Apply best practices for classification, marking, policing, shaping, markdown, and congestion management/avoidance n Leverage the new Cisco Application Visibility and Control feature-set to perform deep-packet inspection to recognize more than 1000 different applications n Use Medianet architecture elements specific to QoS configuration, monitoring, and control n Optimize QoS in rich-media campus networks using the Cisco Catalyst 3750, Catalyst 4500, and Catalyst 6500 n Design wireless networks to support voice and video using a Cisco centralized or converged access WLAN n Achieve zero packet loss in GE/10GE/40GE/100GE data center networks n Implement QoS virtual access data center designs with the Cisco Nexus 1000V n Optimize QoS at the enterprise customer edge n Achieve extraordinary levels of QoS in service provider edge networks n Utilize new industry standards and QoS technologies, including IETF RFC 4594, IEEE 802.1Q-2005, HQF, and NBAR2 This book is part of the Networking Technology Series from Cisco Press®, which offers networking professionals valuable information for constructing efficient networks, understanding new technologies, and building successful careers.

Power up your network applications with Python programming Key Features Master Python skills to develop powerful network applications Grasp the fundamentals and functionalities of SDN Design multi-threaded, event-driven architectures for echo and chat servers Book Description This Learning Path highlights major aspects of Python network programming such as writing simple networking clients, creating and deploying SDN and NFV systems, and

extending your network with Mininet. You'll also learn how to automate legacy and the latest network devices. As you progress through the chapters, you'll use Python for DevOps and open source tools to test, secure, and analyze your network. Toward the end, you'll develop client-side applications, such as web API clients, email clients, SSH, and FTP, using socket programming. By the end of this Learning Path, you will have learned how to analyze a network's security vulnerabilities using advanced network packet capture and analysis techniques. This Learning Path includes content from the following Packt products: Practical Network Automation by Abhishek Ratan Mastering Python Networking by Eric Chou Python Network Programming Cookbook, Second Edition by Pradeeban Kathiravelu, Dr. M. O. Faruque Sarker What you will learn Create socket-based networks with asynchronous models Develop client apps for web APIs, including S3 Amazon and Twitter Talk to email and remote network servers with different protocols Integrate Python with Cisco, Juniper, and Arista eAPI for automation Use Telnet and SSH connections for remote system monitoring Interact with websites via XML-RPC, SOAP, and REST APIs Build networks with Ryu, OpenDaylight, Floodlight, ONOS, and POX Configure virtual networks in different deployment environments Who this book is for If you are a Python developer or a system administrator who wants to start network programming, this Learning Path gets you a step closer to your goal. IT professionals and DevOps engineers who are new to managing network devices or those with minimal experience looking to expand their knowledge and skills in Python will also find this Learning Path useful. Although prior knowledge of networking is not required, some experience in Python programming will be helpful for a better understanding of the concepts in the Learning Path.

Become an expert in implementing advanced, network-related tasks with Python. About This Book Build the skills to perform all networking tasks using Python with ease Use Python for network device automation, DevOps, and software-defined networking Get practical guidance to networking with Python Who This Book Is For If you are a network engineer or a programmer who wants to use Python for networking, then this book is for you. A basic familiarity with networking-related concepts such as TCP/IP and a familiarity with Python programming will be useful. What You Will Learn Review all the fundamentals of Python and the TCP/IP suite Use Python to execute commands when the device does not support the API or programmatic interaction with the device Implement automation techniques by integrating Python with Cisco, Juniper, and Arista eAPI Integrate Ansible using Python to control Cisco, Juniper, and Arista networks Achieve network security with Python Build Flask-based web-service APIs with Python Construct a Python-based migration plan from a legacy to scalable SDN-based network. In Detail This book begins with a review of the TCP/ IP protocol suite and a refresher of the core elements of the Python language. Next, you will start using Python and supported libraries to automate network tasks from the current major network vendors. We will look at automating traditional network devices based on the command-line interface, as well as newer devices with API support, with hands-on labs. We will then learn the concepts and practical use cases of the Ansible framework in order to achieve your network goals. We will then move on to using Python for DevOps, starting with using open source tools to test, secure, and analyze your network. Then, we will focus on network monitoring and visualization. We will learn how to retrieve network information using a polling mechanism, ?ow-based monitoring, and visualizing the data programmatically. Next, we will learn how to use the Python framework to build your own customized network web services. In the last module, you will use Python for SDN, where you will use a Python-based controller with OpenFlow in a hands-on lab to learn its concepts and applications. We will compare and contrast OpenFlow, OpenStack, OpenDaylight, and NFV. Finally, you will use everything you've learned in the book to construct a migration plan to go from a legacy to a scalable SDN-based network. Style and approach An easy-to-follow guide packed with hands-on examples of using Python for network

device automation, DevOps, and SDN.

Covering the latest VMware vSphere software, an essential book aimed at solving vSphere performance problems before they happen VMware vSphere is the industry's most widely deployed virtualization solution. However, if you improperly deploy vSphere, performance problems occur. Aimed at VMware administrators and engineers and written by a team of VMware experts, this resource provides guidance on common CPU, memory, storage, and network-related problems. Plus, step-by-step instructions walk you through techniques for solving problems and shed light on possible causes behind the problems. Divulges troubleshooting methodologies, performance monitoring tools, and techniques and tools for isolating performance problems Details the necessary steps for handling CPU, memory, storage, and network-related problems Offers understanding on the interactions between VMware vSphere and CPU, memory, storage, and network VMware vSphere Performance is the resource you need to diagnose and handle VMware vSphere performance problems, and avoid them in the future.

A practical guide to building programmable networks using OpenDaylight About This Book Learn and understand how SDN controllers operate and integrate with networks; this book's step-by-step tutorials will give you a strong foundation in SDN, NVF, and OpenDayLight. Learn how to map legacy Layer 2/3 networking technologies in the SDN world Add new services and capabilities to your infrastructure and quickly adopt SDN and NFV within your organization with OpenDayLight. Integrate and manage software-defined networks efficiently in your organization. Build innovative network applications with OpenDayLight and save time and resources. Who This Book Is For This book targets network engineers, network programmers and developers, administrators, and anyone with some level of networking experience who'd like to deploy OpenDayLight effectively. Familiarity with the day-to-day operations of computer networks is expected What You Will Learn Transition from legacy networking to software-defined networking Learn how SDN controllers work and manage a network using southbound and northbound APIs Learn how to deploy the OpenDayLight SDN controller and integrate it with virtual switches Understand the basic design and operation of the OpenDaylight platform Build simple MD-SAL OpenDaylight applications Build applications on top of OpenDayLight to trigger network changes based on different events Integrate OpenStack with OpenDayLight to build a fully managed network Learn how to build a software-defined datacenter using NFV and service-chaining technologies In Detail OpenDaylight is an open source, software-defined network controller based on standard protocols. It aims to accelerate the adoption of Software-Defined Networking (SDN) and create a solid foundation for Network Functions Virtualization (NFV). SDN is a vast subject; many network engineers find it difficult to get started with using and operating different SDN platforms. This book will give you a practical bridge from SDN theory to the practical, real-world use of SDN in datacenters and by cloud providers. The book will help you understand the features and use cases for SDN, NFV, and OpenDaylight. NFV uses virtualization concepts and techniques to create virtual classes for node functions. Used together, SDN and NFV can elevate the standards of your network architecture; generic hardware-saving costs and the advanced and abstracted software will give you the freedom to evolve your network in the future without having to invest more in costly equipment. By the end of this book, you will have learned how to design and deploy OpenDaylight networks and integrate them with physical network switches. You will also have mastered basic network programming over the SDN fabric. Style and approach This is a step-by-step tutorial aimed at getting you up-to-speed with OpenDayLight and ready to adopt it for your SDN (Software-Defined Networking) and NFV (Network Functions Virtualization) ecosystem.