Campus Network For High Availability Design Guide Cisco

The all-in-one guide to the what, why, and how of modern campus network design.

This is the eBook version of the print title. Note that the eBook does not provide access to the practice test software that accompanies the print book. Trust the best selling Official Cert Guide series from Cisco Press to help you learn, prepare, and practice for exam success. They are built with the objective of providing assessment, review, and practice to help ensure you are fully prepared for your certification exam. Master the CCNP® SWITCH 642-813 exam with this official study guide Assess your knowledge with chapter-opening quizzes Review key concepts with Exam Preparation Tasks CCNP SWITCH 642-813 Official Certification Guide is a best-of-breed Cisco® exam study guide that focuses specifically on the objectives for the CCNP® SWITCH exam. Network architect and best-selling author Dave Hucaby shares preparation hints and test-taking tips, helping you identify areas of weakness and improve both your conceptual knowledge and hands-on skills. Material is presented in a concise manner, focusing on increasing your understanding and retention of exam topics. CCNP SWITCH 642-813 Official Certification Guide

presents you with an organized test preparation routine through the use of proven series elements and techniques. "Do I Know This Already?" quizzes open each chapter and allow you to decide how much time you need to spend on each section. The complete exam topic list makes referencing easy. Chapter-ending Exam Preparation Tasks sections help drill you on key concepts and commands you must know thoroughly. Well regarded for its level of detail, assessment features, and challenging review questions and exercises, this official study guide helps you master the concepts and techniques that will enable you to succeed on the exam the first time. CCNP SWITCH 642-813 Official Certification 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/go/authorizedtraining. This official study guide helps you master all the topics on the CCNP SWITCH exam, including Network design, implementation, and verification plans Switch operation and port configuration VLANs, trunks, and VLAN Trunking Protocol (VTP) Aggregating switch links Spanning Tree Protocol (STP) Multilayer switching Enterprise campus network design Router

and supervisor redundancy IP telephony Wireless LANs Switched network security This volume is part of the Official Certification Guide Series from Cisco Press. Books in this series provide officially developed exam preparation materials that offer assessment, review, and practice to help Cisco Career Certification candidates identify weaknesses, concentrate their study efforts, and enhance their confidence as exam day nears.

A Comprehensive, Thorough Introduction to High-Speed Networking Technologies and Protocols Network Infrastructure and Architecture: Designing High-Availability Networks takes a unique approach to the subject by covering the ideas underlying networks, the architecture of the network elements, and the implementation of these elements in optical and VLSI technologies. Additionally, it focuses on areas not widely covered in existing books: physical transport and switching, the process and technique of building networking hardware, and new technologies being deployed in the marketplace, such as Metro Wave Division Multiplexing (MWDM), Resilient Packet Rings (RPR), Optical Ethernet, and more. Divided into five succinct parts, the book covers: Optical transmission Networking protocols VLSI chips Data switching Networking elements and design Complete with case studies, examples, and exercises throughout, the book is complemented with chapter goals, summaries, and lists of key

points to aid readers in grasping the material presented. Network Infrastructure and Architecture offers professionals, advanced undergraduates, and graduate students a fresh view on high-speed networking from the physical layer perspective. Real-world solutions for Cisco IOS® Mobile IP configuration, troubleshooting, and management Understand the concept of mobility and the requirements of mobility protocols Learn necessary components of a Mobile IP network, including features, functions, and message flows Examine security concepts related to Mobile IP, including protocol authentication and dynamic keying Evaluate high availability solutions and integration with AAA servers in campus networks Explore the features of metro mobility, including reverse tunneling, firewall, NAT traversal, and integration with VPN technologies Configure IOS Mobile IP networks, including integration topics such as redundancy, QoS, and VPN Manage the Mobile IP infrastructure, including Home Address management, scalability considerations, and network management Take a look at the future of Mobile IP, including Layer 2 integration challenges, Mobile IPv6, unstructured mobility, and mobile ad-hoc networking Two of the world's most powerful technology trends, the Internet and mobile communications, are redefining how and when people access information. With the majority of information and new services being

deployed over IP, the use of devices such as cellular phones, PDAs, and laptops for accessing data networks is pushing the need for "always on" IP connectivity. The evolution of mobile computing points to a coming together of the best of desktop computing and cellular communications—the predictability and "always connected" experience of the desktop combined with the ease of use and mobility of the cell phone. One challenge to mobile data communication is moving data across different networks. The solution to this problem is a standards-based protocol: Mobile IP. Mobile IP is an open standard that allows users to keep the same IP address, stay connected, and maintain ongoing applications while roaming between IP networks. Mobile IP Technology and Applications is the first book to address the practical application of Mobile IP in real-world environments. Cisco IOS® Mobile IP configuration, troubleshooting, and management are covered in depth and supported by real-world examples. Mobility solutions addressed in this book include enterprise campus wireless LANs and metropolitan mobility for both individual devices and whole networks. Each example is designed to teach configuration, management, and troubleshooting in a manner that is directly applicable to common mobility needs. Whether you are looking for an introduction to IP mobility or detailed examples of Mobile IP technology in action, Mobile IP Technology and

Applications is your complete resource for reaping the benefits that secure, reliable mobile communications have to offer. "IP Mobility provides the capability not only for me to connect to the world at large, but for it to find and connect to me." —Fred Baker, Cisco Fellow, Cisco Systems, Inc. This book is part of the Cisco Press® Networking Technology Series, which offers networking professionals valuable information for constructing efficient networks, understanding emerging technologies, and building successful networking careers.

It is certain that, over the next few years, data traffic will dwarf voice traffic on telecommunications networks. Growth in data-traffic volumes far exceeds that for voice, and is driven by increased use of applications such as e-mail attachments, remote printing and fileserver access, and the now omnipresent World Wide Web. The growth of data networking to connect computers with each other and with their peripheral devices began in earnest in the 1970s, took off in the 1980s and exploded in the 1990s. The early 21st century will see ever faster, more cost effective networks providing flexible data access into ever more businesses and homes. Since the 1970s there have been great advances in technology. For the past twenty years the processing power of computers has continued to grow with no hint of slowing - recall the oft-cited Moore's Law claiming that this power doubles every 18 months.

Advances in the data networking equipment required to support the data traffic generated have been enormous. The pace of development from early X. 25 and modem technology through to some of the advanced equipment functionality now available is breathtaking - it is sometimes hard to believe that the practical router is barely ten years old! This book provides an overview of the advanced data networking field by bringing together chapters on local area networks, wide area networks and their application.

bull; Review topics in the CCDA 640-861 DESGN exam for comprehensive exam readiness bull; Prepare with proven study tools like foundation summaries, and pre- and postchapter quizzes to ensure mastery of the subject matter bull; Get into test-taking mode with a CD-ROM testing engine containing over 200 questions that measure testing readiness and provide feedback on areas requiring further study

Routing and Switching Essentials Companion Guide is the official supplemental textbook for the Routing and Switching Essentials course in the Cisco® Networking Academy® CCNA® Routing and Switching curriculum. This course describes the architecture, components, and operations of routers and switches in a small network. You learn how to configure a router and a switch for basic functionality. By the end of this course, you will be

able to configure and troubleshoot routers and switches and resolve common issues with RIPv1, RIPv2, single-area and multi-area OSPF, virtual LANs, and inter-VLAN routing in both IPv4 and IPv6 networks. The Companion Guide is designed as a portable desk reference to use anytime, anywhere to reinforce the material from the course and organize your time. The book's features help you focus on important concepts to succeed in this course: Chapter objectives–Review core concepts by answering the focus questions listed at the beginning of each chapter. Key terms–Refer to the lists of networking vocabulary introduced and highlighted in context in each chapter. Glossary–Consult the comprehensive Glossary with more than 200 terms. Summary of Activities and Labs–Maximize your study time with this complete list of all associated practice exercises at the end of each chapter. Check Your Understanding–Evaluate your readiness with the end-of-chapter questions that match the style of questions you see in the online course quizzes. The answer key explains each answer. Related Title: Routing and Switching Essentials Lab Manual How To–Look for this icon to study the steps you need to learn to perform certain tasks. Interactive Activities–Reinforce your understanding of topics by doing all the exercises from the online course identified throughout the book with this icon. Videos–Watch the videos embedded within the

online course. Packet Tracer Activities–Explore and visualize networking concepts using Packet Tracer exercises interspersed throughout the chapters. Hands-on Labs–Work through all the course labs and additional Class Activities that are included in the course and published in the separate Lab Manual.

Implementing Cisco IP Switched Networks (SWITCH) Foundation Learning Guide(CCNP SWITCH 300-115)Cisco Press
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.

Now fully updated for the new Cisco SWITCH 300-115 exam, Implementing Cisco IP Switched Networks (SWITCH) Foundation Learning Guide is your Cisco® authorized learning tool for CCNP® or CCDP® preparation. Part of the Cisco Press Foundation Learning Series, it teaches you how to plan, configure, verify, secure, and maintain complex enterprise switching solutions using Cisco Catalyst® switches and Enterprise Campus Architecture. The authors show you how to

Page 10/42

build scalable multilayer switched networks, create and deploy global intranets, and perform basic troubleshooting in environments using Cisco multilayer switches for client hosts and services. They begin by reviewing basic switching concepts, network design, and campus network architecture. Next, they present in-depth coverage of spanning-tree, inter-VLAN routing, first-hop redundancy, network management, advanced switch features, high availability, and campus network security. Each chapter opens with a list of topics that clearly identify its focus. Each chapter ends with a summary of key concepts for quick study, as well as review questions to assess and reinforce your understanding. Throughout, configuration examples, and sample verification outputs illustrate critical issues in network operation and troubleshooting. This guide is ideal for all certification candidates who want to master all the topics covered on the SWITCH 300-115 exam. Serves as the official textbook for version 7 of the Cisco Networking Academy CCNP SWITCH course Covers basic switching terminology and concepts, and the unique features of Cisco Catalyst switch designs Reviews campus network design, including network structure, roles of Cisco Catalyst switches, and differences between Layer 2 and multilayer switches Introduces VLANs, VTP, Trunking, and port-channeling Explains Spanning Tree Protocol configuration Presents concepts and modern best practices for interVLAN routing Covers first-hop redundancy protocols used by Cisco Catalyst switches Outlines a holistic approach to network management and Cisco Catalyst device security

with AAA, NTP, 802.1x, and SNMP Describes how to use advanced features to improve campus network resiliency and availability Shows how to establish switch physical redundancy using Stackwise, VSS, or redundant supervisors Explains advanced security features

The expert guide to high availability clusters for HP-UX, Linux, Windows 2000, and Windows NT. The start-to-finish guide to high availability clustering Includes ways to maximize enterprise application availability—and minimize cost Completely updated for the latest tools, technologies, and applications Describes high availability solutions in HP-UX, Linux, and Windows environments Business-critical applications require higher availability than ever before-and today's high availability systems rely on clustering as a key strategy for maximizing reliability and robustness. In Clusters for High Availability, Second Edition, Peter S. Weygant covers all three pillars of successful high availability computing: robust technology, sound computing processes, and proactive support. He addresses every aspect of delivering high availability clustered systems: terminology, architecture, implementation, management, monitoring, and beyond. Coverage includes: Fundamental concepts and components associated with high availability clustering A 14-step checklist for assessing your high availability needs Clustering techniques for HP-UX, Windows 2000, Windows NT, and Linux Clustered storage, backup, and network infrastructure solutions Practical techniques for building "disaster-tolerant" systems State-of-the-art cluster

replication, monitoring, and management tools Weygant presents several brand-new case studies, including an Oracle Parallel Server application providing 5nines:5minutes protection; a high availability brokerage application built using a continental cluster; and a storage area network solution designed for an Internet service provider. The book also contains an extensive glossary. If you're responsible for delivering high availability, Clusters for High Availability is the comprehensive, up-to-date blueprint you need. held from April 12 to 13, 2014 in Xi`an, China. The purpose of CSNS2014 is to provide a platform for researchers, engineers, and academicians, as well as industrial professionals, to present their research results and development on computer science and network security. The conference welcomes all the topics around Computer Science and Network Security. It provides enormous opportunities for the delegates to exchange new ideas and application experiences, to establish global business or research cooperation. The proceeding volume of CSNS2014 will be published by DEStech Publications. All the accepted papers have been selected according to their originality, structure, uniqueness and other standards of same importance by a peer-review group made up by 2–3 experts. The conference program is of great profoundness and diversity composed of keynote speeches, oral presentations and poster exhibitions. It is sincerely hoped that the conference would not only be regarded as a platform to provide an overview of the general situation in related area, but also a sound opportunity for

academic communication and connection.
Switched Networks Companion Guide is the official
supplemental textbook for the Switched Networks course
in the Cisco® Networking Academy® CCNA® Routing
and Switching curriculum. This course describes the
architecture, components, and operations of a converged
switched network. You will learn about the hierarchical
network design model and how to configure a switch for
basic and advanced functionality. By the end of this
course, you will be able to troubleshoot and resolve
common issues with Virtual LANs and inter-VLAN routing
in a converged network. You will also develop the
knowledge and skills needed to implement a WLAN in a
small-to-medium network. The Companion Guide is
designed as a portable desk reference to use anytime,
anywhere to reinforce the material from the course and
organize your time. The book's features help you focus
on important concepts to succeed in this course: Chapter
objectives–Review core concepts by answering the focus
questions listed at the beginning of each chapter. Key
terms–Refer to the lists of networking vocabulary
introduced and highlighted in context in each chapter.
Glossary–Consult the comprehensive Glossary more
than 300 terms. Summary of Activities and
Labs–Maximize your study time with this complete list of
all associated practice exercises at the end of each
chapter. Check Your Understanding–Evaluate your
readiness with the end-of-chapter questions that match
the style of questions you see in the online course
quizzes. The answer key explains each answer. Related
Title: Switched Networks Lab Manual ISBN-10:

1-58713-327-X ISBN-13: 978-1-58713-327-5 How To–Look for this icon to study the steps you need to learn to perform certain tasks. Interactive Activities–Reinforce your understanding of topics with all the different exercises from the online course identified throughout the book with this icon. Videos–Watch the videos embedded within the online course. Packet Tracer Activities–Explore and visualize networking concepts using Packet Tracer exercises interspersed throughout the chapters. Hands-on Labs–Work through all the course labs and Class Activities that are included in the course and published in the separate Lab Manual. Fast answers and reliable solutions for all widely-used Cisco Catalyst switch features - all in one time-saving guide! * *Organized for maximum efficiency: describes actual commands and options in the sequence they should be used. *Saves hours that would otherwise be spent searching Cisco documentation *Covers powerful new Catalyst features including blade switch configuration and VSS technology. *Provides 'at-a-glance' illustrations for quick reference and double-checking. Cisco Catalyst switches are a common ingredient in many campus, metropolitan, enterprise, and service provider networks. They are, however, complex devices that demand careful configuration. Locating reliable configuration command information can require extensive, time-consuming research. The solution: Cisco Catalyst Switch Configuration Handbook, Second Edition: a quick, portable, day-to-day reference guide to the most widely used Catalyst features and configurations. Designed to support all Catalyst IOS

platforms, this book covers general use of Catalyst s IOS
and rommonitor modes, and presents detailed design
and configuration guidelines. This edition is thoroughly
updated for powerful new Catalyst features, including
blade switch configuration and the Catalyst 6500's new
VSS technology. This book is organized for maximum
efficiency. Related features are covered together, and
features and options are covered in the sequence in
which they are typically used. Shaded tabs mark each
section for quick reference. Information on each feature
is presented in a concise one- or two-page format, with
sections presenting background, configuration
information, and examples. Each chapter begins with
common design overviews and best practices.
Provides information on using JUNOS OS to set up and
manage a network, covering such topics as migrating to
JUNOS, installing hardware and software, securing
devices, deploying a router, working with Border
Gateway Control, and enabling class of service.
All network designers and administrators want their
campus LANs torun efficiently. This book provides tips
and techniques for usingprotocol analyzers and other
tools to recognize problems for bothCisco and
multiprotocol traffic patterns. * Focuses on
troubleshooting problems that arise from the
Ciscorouters inter-operating with many other network
protocols * Covers both legacy and cutting-edge
technologies * Authors are respected in the field for their
teaching andtraining development skills in network
troubleshooting
A systems analysis approach to enterprise network

design Master techniques for checking the health of an existing network to develop a baseline for measuring performance of a new network design Explore solutions for meeting QoS requirements, including ATM traffic management, IETF controlled-load and guaranteed services, IP multicast, and advanced switching, queuing, and routing algorithms Develop network designs that provide the high bandwidth and low delay required for real-time applications such as multimedia, distance learning, and videoconferencing Identify the advantages and disadvantages of various switching and routing protocols, including transparent bridging, Inter-Switch Link (ISL), IEEE 802.1Q, IGRP, EIGRP, OSPF, and BGP4 Effectively incorporate new technologies into enterprise network designs, including VPNs, wireless networking, and IP Telephony Top-Down Network Design, Second Edition, is a practical and comprehensive guide to designing enterprise networks that are reliable, secure, and manageable. Using illustrations and real-world examples, it teaches a systematic method for network design that can be applied to campus LANs, remote-access networks, WAN links, and large-scale internetworks. You will learn to analyze business and technical requirements, examine traffic flow and QoS requirements, and select protocols and technologies based on performance goals. You will also develop an understanding of network performance factors

such as network utilization, throughput, accuracy, efficiency, delay, and jitter. Several charts and job aids will help you apply a top-down approach to network design. This Second Edition has been revised to include new and updated material on wireless networks, virtual private networks (VPNs), network security, network redundancy, modularity in network designs, dynamic addressing for IPv4 and IPv6, new network design and management tools, Ethernet scalability options (including 10-Gbps Ethernet, Metro Ethernet, and Long-Reach Ethernet), and networks that carry voice and data traffic. Top-Down Network Design, Second Edition, has a companion website at http://www.topdownbook.com, which includes updates to the book, links to white papers, and supplemental information about design resources. 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.

Connecting Networks Companion Guide is the official supplemental textbook for the Connecting Networks course in the Cisco® Networking Academy® CCNA® Routing and Switching curriculum. This course discusses the WAN technologies and network services required by converged applications in a complex network. The

course allows you to understand the selection criteria of network devices and WAN technologies to meet network requirements. You will learn how to configure and troubleshoot network devices and resolve common issues with data link protocols. You will also develop the knowledge and skills needed to implement IPSec and virtual private network (VPN) operations in a complex network. The Companion Guide is designed as a portable desk reference to use anytime, anywhere to reinforce the material from the course and organize your time. The book's features help you focus on important concepts to succeed in this course: Chapter objectives–Review core concepts by answering the focus questions listed at the beginning of each chapter. Key terms–Refer to the lists of networking vocabulary introduced and highlighted in context in each chapter. Glossary–Consult the comprehensive Glossary with 195 terms. Summary of Activities and Labs–Maximize your study time with this complete list of all associated practice exercises at the end of each chapter. Check Your Understanding–Evaluate your readiness with the end-of-chapter questions that match the style of questions you see in the online course quizzes. The answer key explains each answer. How To–Look for this icon to study the steps you need to learn to perform certain tasks. Interactive Activities–Reinforce your understanding of topics with all the different exercises from the

online course identified throughout the book with this icon. Videos–Watch the videos embedded within the online course. Packet Tracer Activities–Explore and visualize networking concepts using Packet Tracer exercises interspersed throughout the chapters. Hands-on Labs–Work through all the course labs and Class Activities that are included in the course and published in the separate Lab Manual.
If you're ready to build a large network system, this handy excerpt from Ethernet: The Definitive Guide, Second Edition gets you up to speed on a basic building block: Ethernet switches. Whether you're working on an enterprise or campus network, data center, or Internet service provider network, you'll learn how Ethernet switches function and how they're used in network designs. This brief tutorial also provides an overview of the most important features found in switches, from the basics to more advanced features found in higher-cost and specialized switches. Get an overview of basic switch operation, the spanning tree protocol, and switch performance issues Learn about switch management and some of the most widely used switch features Discover how a hierarchical design can help maintain stable network operations Delve into special-purpose switches, such as multi-layer, access, stacking, and wireless access-point switches Learn about advanced switch features designed for specific networking environments Dive deeper into

switches, with a list of protocol and package documentation

Cisco LAN Switching Configuration Handbook Second Edition A concise reference for implementing the most frequently used features of the Cisco Catalyst family of switches Steve McQuerry, CCIE® No. 6108 David Jansen, CCIE No. 5952 David Hucaby, CCIE No. 4594 Cisco LAN Switching Configuration Handbook, Second Edition, is a quick and portable reference guide to the most commonly used features that can be configured on Cisco® Catalyst® switches. Written to be used across all Catalyst IOS platforms, the book covers general use of Cisco IOS®, followed by a series of chapters that provide design and configuration guidelines. Each chapter starts with common design overviews and then describes the configuration of management features. Coverage includes Layer 2, Layer 3, multicast, high availability, and traffic management configurations. This book is organized by groups of common features, with sections marked by shaded tabs for quick reference. Information on each feature is presented in a concise format, with background, configuration, and example components. The format is organized for easy accessibility to commands and their proper usage, saving you hours of research time. From the first page, the authors zero in on quick facts, configuration steps, and explanations of

configuration options in each Cisco Catalyst switch feature. The quick reference format allows you to easily locate just the information you need without having to search through thousands of pages of documentation, helping you get your switches up and running quickly and smoothly. Whether you are looking for a handy, portable reference to more easily configure Cisco Catalyst switches in the field, or you are preparing for CCNA®, CCNP®, or CCIE® certification, you will find Cisco LAN Switching Configuration Handbook, Second Edition, to be an essential resource. Steve McQuerry, CCIE No. 6108, is a technical solutions architect with Cisco focused on data center solutions. Steve works with enterprise customers in the midwestern United States to help them plan their data center architectures. David Jansen, CCIE No. 5952, is a technical solutions architect (TSA) with Cisco focused on Data Center Architectures at Cisco. David has more than 20 years of experience in the IT industry. David Hucaby, CCIE No. 4594, is a lead network engineer for the University of Kentucky, where he works with healthcare networks based on the Cisco Catalyst, ASA/PIX/FWSM security, and VPN product lines. Implement switched campus network designs Configure switch prompts, IP addresses, passwords, switch modules, file management, and administrative protocols Understand how Layer 3 interfaces are used in a switch Configure Ethernet, Fast Ethernet,

Gigabit Ethernet, and EtherChannel interfaces Implement VLANs, trunking, and VTP Operate, configure, and tune Spanning Tree Protocol (STP) Handle multicast traffic and interact with multicast routers Streamline access to server and firewall farms with accelerated server load balancing Deploy broadcast suppression, user authentication, port security, and VLAN access lists Configure switch management features Implement QoS and high availability features Transport voice traffic with specialized voice gateway modules, inline power, and QoS features 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.

Now fully updated for the new Cisco SWITCH 300-115 exam, Implementing Cisco IP Switched Networks (SWITCH) Foundation Learning Guide is your Cisco® authorized learning tool for CCNP® or CCDP® preparation. Part of the Cisco Press Foundation Learning Series, it teaches you how to plan, configure, verify, secure, and maintain complex enterprise switching solutions using Cisco Catalyst® switches and Enterprise Campus Architecture. The authors show you how to build scalable multilayer switched networks, create and deploy global intranets, and perform basic troubleshooting in

environments using Cisco multilayer switches for client hosts and services. They begin by reviewing basic switching concepts, network design, and campus network architecture. Next, they present in-depth coverage of spanning-tree, inter-VLAN routing, first-hop redundancy, network management, advanced switch features, high availability, and campus network security. Each chapter opens with a list of topics that clearly identify its focus. Each chapter ends with a summary of key concepts for quick study, as well as review questions to assess and reinforce your understanding. Throughout, configuration examples, and sample verification outputs illustrate critical issues in network operation and troubleshooting. This guide is ideal for all certification candidates who want to master all the topics covered on the SWITCH 300-115 exam. Serves as the official textbook for version 7 of the Cisco Networking Academy CCNP SWITCH course Covers basic switching terminology and concepts, and the unique features of Cisco Catalyst switch designs Reviews campus network design, including network structure, roles of Cisco Catalyst switches, and differences between Layer 2 and multilayer switches Introduces VLANs, VTP, Trunking, and port-channeling Explains Spanning Tree Protocol configuration Presents concepts and modern best practices for interVLAN routing Covers first-hop redundancy protocols used by Cisco Catalyst

switches Outlines a holistic approach to network management and Cisco Catalyst device security with AAA, NTP, 802.1x, and SNMP Describes how to use advanced features to improve campus network resiliency and availability Shows how to establish switch physical redundancy using Stackwise, VSS, or redundant supervisors Explains advanced security features.

Cisco's authorized foundation learning self-study guide for the latest CCDP® ARCH exam • •Developed in conjunction with the Cisco certification team, creators of the newest CCDP ARCH exams and courses. •Fully covers Cisco network design to deliver fundamental infrastructure services. •Contains new coverage of network virtualization, voice, video, QoS, WAN services, and more. •Contains many self-assessment review questions, and a running case study. This is Cisco's authorized, self-paced, foundation learning tool for the latest version of the Cisco ARCH exam, required for the current CCDP certification. It brings together practical knowledge of the latest developments in network design and technologies, including network infrastructure, intelligent network services, and converged network solutions. Readers will gain a thorough understanding of the issues and considerations associated with designing networks that deliver fundamental infrastructure services. As an Authorized Self-Study Guide, this book fully

reflects the content of the newest version of the Cisco ARCH course. Each chapter ends with questions designed to help readers assess their understanding as they prepare for the exam. An ongoing case study illustrates and reinforces concepts presented throughout the book. Coverage also includes: network design in the context of Cisco's Preparing, Planning, Designing, Implementing, Operating, and Optimizing (PPDIOO) framework; enterprise campus network and data center design; e-commerce design; SAN design; security services design; IPsec and SSL VPN design; IP multicast design; and network management.

Authorized Self-Study Guide Designing Cisco Network Service Architectures (ARCH) Second Edition Foundation learning for ARCH exam 642-873 Keith Hutton Mark Schofield Diane Teare Designing Cisco Network Service Architectures (ARCH), Second Edition, is a Cisco®-authorized, self-paced learning tool for CCDP® foundation learning. This book provides you with knowledge of the latest developments in network design and technologies, including network infrastructure, intelligent network services, and converged network solutions. By reading this book, you will gain a thorough understanding of issues and considerations for fundamental infrastructure services, including security, network management, QoS, high

availability, bandwidth use optimization through IP multicasting, and design architectures for network solutions such as voice over WLAN and e-commerce. Whether you are preparing for CCDP certification or simply want to gain a better understanding of modular campus and edge network design and strategic solutions for enterprise networks such as storage area networking, virtual private networking, advanced addressing and routing, and data centers, you will benefit from the foundation information presented in this book. Designing Cisco Network Service Architectures (ARCH), Second Edition, 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/go/authorizedtraining. Keith Hutton is a lead architect for Bell Canada in the enterprise customer space. Keith still retains his certified Cisco instructor accreditation, as well as the CCDP, CCNP®, and CCIP® certifications. Mark Schofield has been a network architect at Bell Canada for the past six years. During the past five years, he has been involved in the design, implementation, and planning of large national networks for Bell Canada's federal government

customers. Diane Teare is a professional in the networking, training, project management, and e-learning fields. She has more than 20 years of experience in designing, implementing, and troubleshooting network hardware and software, and has been involved in teaching, course design, and project management. Learn about the Cisco SONA framework, enterprise campus architecture, and PPDIOO network life-cycle approach Review high availability designs and implement optimal redundancy Plan scalable EIGRP, OSPF, and BGP designs Implement advanced WAN services Evaluate design considerations in the data center core, aggregation, and access layers Design storage area networks (SANs) and extend the SAN with various protocols Design and tune an integrated e-commerce architecture Integrate firewall, NAC, and intrusion detection/prevention into your network design Design IPsec and SSL remote access VPNs Deploy IP multicast and multicast routing Incorporate voice over WLAN in the enterprise network Utilize the network management capabilities inherent in Cisco IOS® software This volume is in the Certification Self-Study Series offered by Cisco Press®. Books in this series provide officially developed self-study solutions to help networking professionals understand technology implementations and prepare for the Cisco Career Certifications examinations. Category: Network

Design Covers: ARCH exam 642-873
Whether your network is a complex carrier or just a few machines supporting a small enterprise, JUNOS High Availability will help you build reliable and resilient networks that include Juniper Networks devices. With this book's valuable advice on software upgrades, scalability, remote network monitoring and management, high-availability protocols such as VRRP, and more, you'll have your network uptime at the five, six, or even seven nines -- or 99.99999% of the time. Rather than focus on "greenfield" designs, the authors explain how to intelligently modify multi-vendor networks. You'll learn to adapt new devices to existing protocols and platforms, and deploy continuous systems even when reporting scheduled downtime. JUNOS High Availability will help you save time and money. Manage network equipment with Best Common Practices Enhance scalability by adjusting network designs and protocols Combine the IGP and BGP networks of two merging companies Perform network audits Identify JUNOScripting techniques to maintain high availability Secure network equipment against breaches, and contain DoS attacks Automate network configuration through specific strategies and tools This book is a core part of the Juniper Networks Technical Library™. Campus Network Architectures and Technologies begins by describing the service challenges facing

campus networks, and then details the intent-driven campus network architectures and technologies of Huawei Cloud Campus Solution. After reading this book, you will have a comprehensive understanding of next-generation campus network solutions, technical implementations, planning, design, and other know-how. Leveraging Huawei's years of technical expertise and practices in the campus network field, this book systematically describes the use of technical solutions such as virtualization, big data, AI, and SDN in campus networks. You will be able to reconstruct campus networks quickly and efficiently utilizing this informative description. Additionally, this book provides detailed suggestions for campus network design and deployment based on Huawei's extensive project implementation experience, assisting with the construction of automated and intelligent campus networks required to cope with challenges. This is a practical, informative, and easy-to-understand guide for learning about and designing campus networks. It is intended for network planning engineers, network technical support engineers, network administrators, and enthusiasts of campus network technologies. Authors Ningguo Shen is Chief Architect for Huawei's campus network solutions. He has approximately 20 years' experience in campus network product and solution design, as well as a wealth of expertise in network planning and design.

Mr. Shen previously served as a system engineer for the campus switch, data center switch, and WLAN product lines, and led the design of Huawei's intent-driven campus network solution. Bin Yu is an Architect for Huawei's campus network solutions. He has 12 years' experience in campus network product and solution design, as well as extensive expertise in network planning and design and network engineering project implementation. Mr. Yu once led the design of multiple features across various campus network solutions. Mingxiang Huang is a Documentation Engineer for Huawei's campus network solutions. He has three years of technical service experience, and four years of expertise in developing campus network product documentation. Mr. Huang was previously in charge of writing manuals for Huawei router and switch products. He has authored many popular technical series, including Be an OSPF Expert, Insight into Routing Policies, and Story behind Default Routes. Hailin Xu is a Documentation Engineer for Huawei's campus network solutions. He has two years of marketing experience in smart campus solutions, and six years of expertise in developing network products and solution documentation. Extremely familiar with Huawei's campus network products and solutions, Mr. Xu was previously in charge of writing manuals for Huawei routers, switches, and campus network solutions. In addition, he has participated in smart

campus marketing projects within such sectors as education, government, and real estate.

As data centers grow in size and complexity, enterprises are adopting server virtualization technologies such as VMware, VMotion, NIC teaming, and server clustering to achieve increased efficiency of resources and to ensure business resilience. However, these technologies often involve significant expense and challenges to deal with complex multisite interconnections and to maintain the high availability of network resources and applications. Interconnecting Data Centers Using VPLS presents Virtual Private LAN Service (VPLS) based solutions that provide high-speed, low-latency network and Spanning Tree Protocol (STP) isolation between data centers resulting in significant cost savings and a highly resilient virtualized network. The design guidance, configuration examples, and best practices presented in this book have been validated under the Cisco Validated Design (CVD) System Assurance program to facilitate faster, more reliable and more predictable deployments. The presented solutions include detailed information about issues that relate to large Layer 2 bridging domains and offer guidance for extending VLANs over Layer 3 networks using VPLS technology. Implementing this breakthrough Data Center Interconnect (DCI) strategy will evolve your network to support current server virtualization

techniques and to provide a solid foundation for emerging approaches. The book takes you from the legacy deployment models for DCI, problems associated with extending Layer 2 networks, through VPN technologies, to various MST-, EEM-, and GRE-based deployment models and beyond. Although this book is intended to be read cover-to-cover, it is designed to be flexible and allow you to easily move between chapters to develop the solution most compatible with your requirements. Describes a variety of deployment models to effectively transport Layer 2 information, allowing your virtualization solution to operate effectively Explains benefits and trade-offs of various solutions for you to choose the solution most compatible with your network requirements to ensure business resilience Provides detailed design guidance and configuration examples that follow Cisco best practice recommendations tested within the CVD 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.

Companies and institutions depend more than ever on the availability of their Information Technology, and most mission critical business processes are IT-based. Business Continuity is the ability to do business under any circumstances and is an

essential requirement faced by modern companies. Both concepts - High Availability and Disaster Recovery - are realized by redundant systems. This book presents requirements, concepts, and realizations of redundant systems on all abstraction levels, and all given examples refer to UNIX and Linux Systems.

Selecting MPLS VPN Services helps you analyze migration options, anticipate migration issues, and properly deploy IP/MPLS VPNs. Detailed configurations illustrate effective deployment while case studies present available migration options and walk you through the process of selecting the best option for your network. Part I addresses the business case for moving to an IP/MPLS VPN network, with a chapter devoted to the business and technical issues you should review when evaluating IP/MPLS VPN offerings from major providers. Part II inclues detailed deployment guidelines for the technologies used in the IP/MPLS VPN.

The practical guide to building resilient and highly available IP networks Learn from an all-in-one introduction to new features and developments in building a resilient IP network Enable your organization to meet internal service-level agreements (SLAs) for mission-critical resources Understand how a resilient IP network can help in delivering mission-critical information such as video and voice services Work with configuration examples

that are based on real-world issues and customer requirements Get tips and best practices from field personnel who have worked on some of the largest networks with stringent uptime requirements and SLAs More companies are building networks with the intention of using them to conduct business. Because the network has become such a strategic business tool, its availability is of utmost importance to companies and their service providers. The challenges for the professionals responsible for these networks include ensuring that the network remains up all the time, keeping abreast of the latest technologies that help maintain uptime, and reacting to ever-increasing denial-of-service (DoS) attacks. Building Resilient IP Networks helps you meet those challenges. This practical guide to building highly available IP networks captures the essence of technologies that contribute to the uptime of networks. You gain a clear understanding of how to achieve network availability through the use of tools, design strategy, and Cisco IOS® Software. With Building Resilient IP Networks, you examine misconceptions about five-nines availability and learn to focus your attention on the real issues: appreciating the limitations of the protocols, understanding what has been done to improve them, and keeping abreast of those changes. Building Resilient IP Networks highlights the importance of having a modular approach to building an IP network

and, most important, illustrates how a modular design contributes to a resilient network. You learn how an IP network can be broken down to various modules and how these modules interconnect with one another. Then you explore new network resiliency features that have been developed recently, categorized with respect to the design modules. Building Resilient IP Networks is relevant to both enterprise and service provider customers of all sizes. Regardless of whether the network connects to the Internet, fortifying IP networks for maximum uptime and prevention of attacks is mandatory for anyone's business. 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.

As a final exam preparation tool, the CCNP Switch Quick Reference provides a concise review of all objectives on the new CCNP Switch exam (642-813). This eBook provides you with detailed, graphical-based information, highlighting only the key topics in cram-style format. With this document as your guide, you will review topics on campus network design, advanced spanning tree, virtual LANs (VLAN) and inter-VLAN routing, high availability, wireless LANs, voice and video, and campus network security. This fact-filled Quick

Reference allows you to get all-important information at a glance, helping you to focus your study on areas of weakness and to enhance memory retention of essential exam concepts.

This proceedings book presents extended versions of papers on advanced intelligent systems for networks and system selected from the second edition of the International Conference on Advanced Intelligent Systems for Sustainable Development (AI2SD'2019), which was held on 8–11 July 2019 in Marrakech, Morocco. The book explores a number of aspects of networks and systems design issues, and focuses on the latest research developments in a number of areas, including various aspects of modern networking such as smart networked systems, network protocols and performance, security and privacy, mobile and wireless systems, Internet of things, artificial intelligence and expert systems, and cloud computing, as well as enabling technologies. The book also examines the area of intelligence, comprehensively examining a range of important topics like intelligent collaborative systems for work and learning, security, organization, management and autonomic computing for intelligent networking and collaborative systems, wireless and sensor systems for intelligent networking and collaborative systems, data mining and knowledge management for intelligent networking and collaborative systems, data for

Internet of things, and cloud computing. Each chapter presents the state of the art in a specific topic as well as the results of research and laboratory experiments, and successful applications. The book is intended for academic and industry researchers and telecommunication network engineers wanting to gain insights into these areas, particularly in the context of Industry 4.0. In past twenty years or so, information technology has influenced and changed every aspect of our lives and our cultures. Without various IT-based applications, we would find it difficult to keep information stored securely, to process information and business efficiently, and to communicate information conveniently. In the future world, ITs and information engineering will play a very important role in convergence of computing, communication, business and all other computational sciences and application and it also will influence the future world's various areas, including science, engineering, industry, business, law, politics, culture and medicine. The International Conference on Information Engineering and Applications (IEA) 2011 is intended to foster the dissemination of state-of-the-art research in information and business areas, including their models, services, and novel applications associated with their utilization. International Conference on Information Engineering and Applications (IEA) 2011 is organized by

Chongqing Normal University, Chongqing University, Shanghai Jiao Tong University, Nanyang Technological University, University of Michigan and the Chongqing University of Arts and Sciences, and is sponsored by National Natural Science Foundation of China (NSFC). The objective of IEA 2011 is to will provide a forum for engineers and scientists in academia, industry, and government to address the most innovative research and development . Information Engineering and Applications provides a summary of this conference including contributions for key speakers on subjects such as technical challenges, social and economic issues, and ideas, results and current work on all aspects of advanced information and business intelligence.

A definitive how-to guide to the Cisco security blueprint examines a wide variety of security issues and concepts, furnishes a broad overview of the ins and outs of implementing a comprehensive security plan--from identifying security threats to defending a network--and discusses specific solutions to a variety of security problems. (Beginner)

CCIE Collaboration Quick Reference provides you with detailed information, highlighting the key topics on the latest CCIE Collaboration v1.0 exam. This fact-filled Quick Reference allows you to get all-important information at a glance, helping you to focus your study on areas of weakness and to enhance memory retention of important concepts. With this book as your guide, you

will review and reinforce your knowledge of and experience with collaboration solutions integration and operation, configuration, and troubleshooting in complex networks. You will also review the challenges of video, mobility, and presence as the foundation for workplace collaboration solutions. Topics covered include Cisco collaboration infrastructure, telephony standards and protocols, Cisco Unified Communications Manager (CUCM), Cisco IOS UC applications and features, Quality of Service and Security in Cisco collaboration solutions, Cisco Unity Connection, Cisco Unified Contact Center Express, and Cisco Unified IM and Presence. This book provides a comprehensive final review for candidates taking the CCIE Collaboration v1.0 exam. It steps through exam objectives one-by-one, providing concise and accurate review for all topics. Using this book, exam candidates will be able to easily and effectively review test objectives without having to wade through numerous books and documents for relevant content for final review.

Learn about network security, including the threats and the ways a network is protected from them. The book also covers firewalls, viruses and virtual private networks.

& The revised edition of the all-time best-selling CCNP Switching book with new topical coverage & & Master advanced switching techniques and practices & & Prepare for the exam with the 200-plus question electronic testing engine on the enclosed CD-ROM & & Learn CCNP Switching topics with proven learning tools from the Exam Certification Guide product line

Trust the best-selling Official Cert Guide series from Cisco Press to help you learn, prepare, and practice for exam success. They are built with the objective of providing assessment, review, and practice to help ensure you are fully prepared for your certification exam. Master Cisco CCNP SWITCH 300-115 exam topics Assess your knowledge with chapter-opening quizzes Review key concepts with exam preparation tasks This is the eBook edition of the CCNP Routing and Switching SWITCH 300-115 Official Cert Guide. This eBook does not include the companion CD-ROM with practice exam that comes with the print edition. CCNP Routing and Switching SWITCH 300-115 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 engineer David Hucaby 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 Chapter-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 More than 60 minutes of personal video mentoring from the author on important exam topics A final preparation chapter, which guides you through tools and resources to help you craft

your review and test-taking strategies 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, challenging review questions and exercises, this official study guide helps you master the concepts and techniques that ensure your exam success. CCNP Routing and Switching SWITCH 300-115 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 CCNP R&S SWITCH 300-115 exam, including: Enterprise campus design Switch operation Switch port configuration VLANs, Trunks, and VLAN Trunking Protocol (VTP) Spanning Tree Protocol (STP), RSTP, and MSTP Protecting the STP topology Aggregating switch links Multilayer switching Configuring DHCP Logging switch activity and managing switches with SNMP Monitoring performance and traffic High availability Securing switched networks
Copyright: 12abedfdb6de75548d7ee26c83535b9b