Netflow Analytics For Splunk Network Monitoring Analysis

Explore the emerging definitions, protocols, and standards for SDN—software-defined, software-driven, programmable networks—with this comprehensive guide. Two senior network engineers show you what's required for building networks that use software for bi-directional communication between applications and the underlying network infrastructure. This vendor-agnostic book also presents several SDN use cases, including bandwidth scheduling and manipulation, input traffic and triggered actions, as well as some interesting use cases around big data, data center overlays, and network-function virtualization. Discover how enterprises and service providers alike are pursuing SDN as it continues to evolve. Explore the current state of the OpenFlow model and centralized network control Delve into distributed and central control, including data plane generation Examine the structure and capabilities of commercial and open source controllers Survey the available technologies for network programmability Trace the modern data center from desktop-centric to highly distributed models Discover new ways to connect instances of network-function virtualization and service chaining Get detailed information on constructing and maintaining an SDN network topology Examine an

idealized SDN framework for controllers, applications, and ecosystems

"A lively account . . . combines the derring-do of old-fashioned spycraft with thoughtful meditations on the future of warfare and intelligence work. It deserves to be read." —The Washington Post "Offer[s] an exceptionally deep glimpse into the CIA's counterterrorism operations in the last decade of the twentieth century." —Harper's A legendary CIA spy and counterterrorism expert tells the spellbinding story of his high-risk, action-packed career Revelatory and groundbreaking, The Art of Intelligence will change the way people view the CIA, domestic and foreign intelligence, and international terrorism. Henry A. "Hank" Crumpton, a twenty-four-year veteran of the CIA's Clandestine Service, offers a thrilling account that delivers profound lessons about what it means to serve as an honorable spy. From CIA recruiting missions in Africa to pioneering new programs like the UAV Predator, from running post–9/11 missions in Afghanistan to heading up all clandestine CIA operations in the United States, Crumpton chronicles his role—in the battlefield and in the Oval Office—in transforming the way America wages war and sheds light on issues of domestic espionage.

This comprehensive self-study guide offers complete coverage of the new CompTIA Cybersecurity Analyst+ certification exam Note: This guide has been updated to reflect CompTIA's exam acronym CySA+. This

highly effective self-study system provides complete coverage of every objective for the challenging CompTIA CySA+ Cybersecurity Analyst exam. You'll find learning objectives at the beginning of each chapter, exam tips, in-depth explanations, and practice exam questions. All questions closely mirror those on the live test in content, format, and tone. Designed to help you pass exam CS0-001 with ease, this definitive guide also serves as an essential on-the-job reference. Covers every topic on the exam, including: •Threat and vulnerability management
•Conducting and analyzing reconnaissance
•Responding to network-based threats •Securing a cooperate network •Cyber incident response
•Determining the impact of incidents •Preparing the incident response toolkit •Security architectures
•Policies, procedures, and controls •Assuring identity and access management •Putting in compensating controls •Secure software development Electronic content includes: •200 practice questions •Secured book PDF
This is the eBook version of the print title and might not provide access to the practice test software that accompanies the print book. Learn, prepare, and practice for CompTIA Cybersecurity Analyst (CSA+) exam success with this CompTIA Authorized Cert Guide from Pearson IT Certification, a leader in IT certification learning and a CompTIA Authorized Platinum Partner. · Master CompTIA Cybersecurity

Analyst (CSA+) exam topics · Assess your knowledge with chapter-ending quizzes · Review key concepts with exam preparation tasks · Practice with realistic exam questions CompTIA Cybersecurity Analyst (CSA+) Cert Guide is a best-of-breed exam study guide. Expert technology instructor and certification author Troy McMillan 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. The book presents you with an organized test-preparation routine through the use of proven series elements and techniques. Exam topic lists make referencing easy. Chapter-ending Exam Preparation Tasks help you drill on key concepts you must know thoroughly. Review questions help you assess your knowledge, and a final preparation chapter guides you through tools and resources to help you craft your final study plan. The companion website contains the powerful Pearson Test Prep practice test software, complete with hundreds of exam-realistic questions. The assessment engine offers you a wealth of customization options and reporting features, laying out a complete assessment of your knowledge to help you focus your study where it is needed most. Well regarded for its level of detail, assessment features, and challenging review questions and exercises, this

CompTIA authorized study guide helps you master the concepts and techniques that will enable you to succeed on the exam the first time. The CompTIA authorized study guide helps you master all the topics on the CSA+ exam, including · Applying environmental reconnaissance · Analyzing results of network reconnaissance · Implementing responses and countermeasures · Implementing vulnerability management processes · Analyzing scan output and identifying common vulnerabilities · Identifying incident impact and assembling a forensic toolkit · Utilizing effective incident response processes · Performing incident recovery and post-incident response · Establishing frameworks, policies, controls, and procedures · Remediating identity- and access-related security issues · Architecting security and implementing compensating controls · Implementing application security best practices · Using cybersecurity tools and technologies

Network Security with Netflow and IPFIX

Data-Driven Security

Proceedings of the Workshop on Visualization for Computer Security

Operationalizing VMware NSX

Enabling Technologies, Platforms, and Use Cases

Malware Forensics Field Guide for Windows Systems

The book "Data Intensive Computing Applications for Big Data" discusses the technical concepts of big data, data intensive computing through machine learning, soft

computing and parallel computing paradigms. It brings together researchers to report their latest results or progress in the development of the above mentioned areas. Since there are few books on this specific subject, the editors aim to provide a common platform for researchers working in this area to exhibit their novel findings. The book is intended as a reference work for advanced undergraduates and graduate students, as well as multidisciplinary, interdisciplinary and transdisciplinary research workers and scientists on the subjects of big data and cloud/parallel and distributed computing, and explains didactically many of the core concepts of these approaches for practical applications. It is organized into 24 chapters providing a comprehensive overview of big data analysis using parallel computing and addresses the complete data science workflow in the cloud, as well as dealing with privacy issues and the challenges faced in a data-intensive cloud computing environment. The book explores both fundamental and high-level concepts, and will serve as a manual for those in the industry, while also helping beginners to understand the basic and advanced aspects of big data and cloud computing.

Harness new techniques that let you see what is happening on your networks and take decisive action without getting lost in a sea of data.

Use data analytics to drive innovation and value throughout your network infrastructure Network and IT professionals capture immense amounts of data from their networks. Buried in this data are multiple opportunities to

solve and avoid problems, strengthen security, and improve network performance. To achieve these goals, IT networking experts need a solid understanding of data science, and data scientists need a firm grasp of modern networking concepts. Data Analytics for IT Networks fills these knowledge gaps, allowing both groups to drive unprecedented value from telemetry, event analytics, network infrastructure metadata, and other network data sources. Drawing on his pioneering experience applying data science to large-scale Cisco networks, John Garrett introduces the specific data science methodologies and algorithms network and IT professionals need, and helps data scientists understand contemporary network technologies, applications, and data sources. After establishing this shared understanding, Garrett shows how to uncover innovative use cases that integrate data science algorithms with network data. He concludes with several hands-on, Python-based case studies reflecting Cisco Customer Experience (CX) engineers' supporting its largest customers. These are designed to serve as templates for developing custom solutions ranging from advanced troubleshooting to service assurance. Understand the data analytics landscape and its opportunities in Networking See how elements of an analytics solution come together in the practical use cases Explore and access network data sources, and choose the right data for your problem Innovate more successfully by understanding mental models and cognitive biases Walk through common analytics use cases from many

industries, and adapt them to your environment Uncover new data science use cases for optimizing large networks Master proven algorithms, models, and methodologies for solving network problems Adapt use cases built with traditional statistical methods Use data science to improve network infrastructure analysisAnalyze control and data planes with greater sophistication Fully leverage your existing Cisco tools to collect, analyze, and visualize data Intensively hands-on training for real-world network forensics Network Forensics provides a uniquely practical guide for IT and law enforcement professionals seeking a deeper understanding of cybersecurity. This book is hands-on all the way—by dissecting packets, you gain fundamental knowledge that only comes from experience. Real packet captures and log files demonstrate network traffic investigation, and the learn-by-doing approach relates the essential skills that traditional forensics investigators may not have. From network packet analysis to host artifacts to log analysis and beyond, this book emphasizes the critical techniques that bring evidence to light. Network forensics is a growing field, and is becoming increasingly central to law enforcement as cybercrime becomes more and more sophisticated. This book provides an unprecedented level of hands-on training to give investigators the skills they need. Investigate packet captures to examine network communications Locate host-based artifacts and analyze network logs Understand intrusion detection systems—and let them do the legwork Have the right architecture and

systems in place ahead of an incident Network data is always changing, and is never saved in one place; an investigator must understand how to examine data over time, which involves specialized skills that go above and beyond memory, mobile, or data forensics. Whether you're preparing for a security certification or just seeking deeper training for a law enforcement or IT role, you can only learn so much from concept; to thoroughly understand something, you need to do it. Network Forensics provides intensive hands-on practice with direct translation to real-world application.

SDN: Software Defined Networks

Understanding Incident Detection and Response

CCNP Security Virtual Private Networks SVPN 300-730 Official Cert Guide

13th International Conference, NSS 2019, Sapporo, Japan, December 15–18, 2019, Proceedings

Building, Operating, and Maintaining your SOC

Cyber Security Innovation for the Digital Economy

Designed for all CCNP Security candidates, CCNP Security Virtual Private Networks SVPN 300‐730 Official Cert Guide covers every SVPN #300‐730 objective concisely and logically, with extensive teaching features designed to promote retention and understanding. You'll find: Pre‐chapter quizzes to assess knowledge upfront and focus your study more efficiently Foundation topics sections that explain concepts and configurations, and link theory to practice Key topics sections calling attention to every figure, table, and list you must know Exam Preparation

sections with additional chapter review features Final preparation chapter providing tools and a complete final study plan A customizable practice test library CCNP Security Virtual Private Networks SVPN 300-730 Official Cert Guide offers comprehensive, up-to-date coverage of all SVPN # 300-730 topics related to: Secure communications Architectures Troubleshooting Investigating the Cyber Breach The Digital Forensics Guide for the Network Engineer · Understand the realities of cybercrime and today's attacks · Build a digital forensics lab to test tools and methods, and gain expertise · Take the right actions as soon as you discover a breach · Determine the full scope of an investigation and the role you'll play · Properly collect, document, and preserve evidence and data · Collect and analyze data from PCs, Macs, IoT devices, and other endpoints · Use packet logs, NetFlow, and scanning to build timelines, understand network activity, and collect evidence · Analyze iOS and Android devices, and understand encryption-related obstacles to investigation · Investigate and trace email, and identify fraud or abuse · Use social media to investigate individuals or online identities · Gather, extract, and analyze breach data with Cisco tools and techniques · Walk through common breaches and responses from start to finish · Choose the right tool for each task, and explore alternatives that might also be helpful The professional's go-to digital forensics resource for countering attacks right now Today, cybersecurity and networking professionals know they can't possibly prevent every breach, but they can substantially reduce risk by quickly identifying and blocking breaches as they occur. Investigating the Cyber Breach: The Digital Forensics Guide for the

Network Engineer is the first comprehensive guide to doing just that. Writing for working professionals, senior cybersecurity experts Joseph Muniz and Aamir Lakhani present up-to-the-minute techniques for hunting attackers, following their movements within networks, halting exfiltration of data and intellectual property, and collecting evidence for investigation and prosecution. You'll learn how to make the most of today's best open source and Cisco tools for cloning, data analytics, network and endpoint breach detection, case management, monitoring, analysis, and more. Unlike digital forensics books focused primarily on post-attack evidence gathering, this one offers complete coverage of tracking threats, improving intelligence, rooting out dormant malware, and responding effectively to breaches underway right now. This book is part of the Networking Technology: Security Series from Cisco Press®, which offers networking professionals valuable information for constructing efficient networks, understanding new technologies, and building successful careers.

Implement a robust SIEM system Effectively manage the security information and events produced by your network with help from this authoritative guide. Written by IT security experts, Security Information and Event Management (SIEM) Implementation shows you how to deploy SIEM technologies to monitor, identify, document, and respond to security threats and reduce false-positive alerts. The book explains how to implement SIEM products from different vendors, and discusses the strengths, weaknesses, and advanced tuning of these systems. You'll also learn how to use SIEM capabilities for business intelligence. Real-world case studies are included in this comprehensive

resource. Assess your organization's business models, threat models, and regulatory compliance requirements Determine the necessary SIEM components for small- and medium-size businesses Understand SIEM anatomy—source device, log collection, parsing/normalization of logs, rule engine, log storage, and event monitoring Develop an effective incident response program Use the inherent capabilities of your SIEM system for business intelligence Develop filters and correlated event rules to reduce false-positive alerts Implement AlienVault's Open Source Security Information Management (OSSIM) Deploy the Cisco Monitoring Analysis and Response System (MARS) Configure and use the Q1 Labs QRadar SIEM system Implement ArcSight Enterprise Security Management (ESM) v4.5 Develop your SIEM security analyst skills As more and more devices become interconnected through the Internet of Things (IoT), there is an even greater need for this book,which explains the technology, the internetworking, and applications that are making IoT an everyday reality. The book begins with a discussion of IoT "ecosystems" and the technology that enables them, which includes: Wireless Infrastructure and Service Discovery Protocols Integration Technologies and Tools Application and Analytics Enablement Platforms A chapter on next-generation cloud infrastructure explains hosting IoT platforms and applications. A chapter on data analytics throws light on IoT data collection, storage, translation, real-time processing, mining, and analysis, all of which can yield actionable insights from the data collected by IoT applications. There is also a chapter on edge/fog computing. The second half of the book presents various IoT ecosystem use cases. One chapter

discusses smart airports and highlights the role of IoT integration. It explains how mobile devices, mobile technology, wearables, RFID sensors, and beacons work together as the core technologies of a smart airport. Integrating these components into the airport ecosystem is examined in detail, and use cases and real-life examples illustrate this IoT ecosystem in operation. Another in-depth look is on envisioning smart healthcare systems in a connected world. This chapter focuses on the requirements, promising applications, and roles of cloud computing and data analytics. The book also examines smart homes, smart cities, and smart governments. The book concludes with a chapter on IoT security and privacy. This chapter examines the emerging security and privacy requirements of IoT environments. The security issues and an assortment of surmounting techniques and best practices are also discussed in this chapter.

Security Information and Event Management (SIEM) Implementation

Data Intensive Computing Applications for Big Data

Artificial Intelligence for Business Optimization

Anomaly Detection as a Service

Data Analytics for IT Networks

Cisco Networks

The definitive guide to incident response--updated for the first time in a decade! Thoroughly revised to cover the latest and most effective tools and techniques, Incident Response & Computer Forensics, Third Edition arms you with the information you need to get your organization out of trouble when data

breaches occur. This practical resource
covers the entire lifecycle of incident
response, including preparation, data
collection, data analysis, and
remediation. Real-world case studies
reveal the methods behind--and remediation
strategies for--today's most insidious
attacks. Architect an infrastructure that
allows for methodical investigation and
remediation Develop leads, identify
indicators of compromise, and determine
incident scope Collect and preserve live
data Perform forensic duplication Analyze
data from networks, enterprise services,
and applications Investigate Windows and
Mac OS X systems Perform malware triage
Write detailed incident response reports
Create and implement comprehensive
remediation plans
Security Operations Center Building,
Operating, and Maintaining Your SOC The
complete, practical guide to planning,
building, and operating an effective
Security Operations Center (SOC) Security
Operations Center is the complete guide to
building, operating, and managing Security
Operations Centers in any environment.
Drawing on experience with hundreds of
customers ranging from Fortune 500
enterprises to large military
organizations, three leading experts

thoroughly review each SOC model, including virtual SOCs. You'll learn how to select the right strategic option for your organization, and then plan and execute the strategy you've chosen. Security Operations Center walks you through every phase required to establish and run an effective SOC, including all significant people, process, and technology capabilities. The authors assess SOC technologies, strategy, infrastructure, governance, planning, implementation, and more. They take a holistic approach considering various commercial and open-source tools found in modern SOCs. This best-practice guide is written for anybody interested in learning how to develop, manage, or improve a SOC. A background in network security, management, and operations will be helpful but is not required. It is also an indispensable resource for anyone preparing for the Cisco SCYBER exam. · Review high-level issues, such as vulnerability and risk management, threat intelligence, digital investigation, and data collection/analysis · Understand the technical components of a modern SOC · Assess the current state of your SOC and identify areas of improvement · Plan SOC strategy, mission, functions, and services

· Design and build out SOC infrastructure,
from facilities and networks to systems,
storage, and physical security · Collect
and successfully analyze security data ·
Establish an effective vulnerability
management practice · Organize incident
response teams and measure their
performance · Define an optimal governance
and staffing model · Develop a practical
SOC handbook that people can actually use
· Prepare SOC to go live, with
comprehensive transition plans · React
quickly and collaboratively to security
incidents · Implement best practice
security operations, including continuous
enhancement and improvement
This book constitutes the proceedings of
the 13th International Conference on
Network and System Security, NSS 2019,
held in Sapporo, Japan, in December 2019.
The 36 full papers and 7 short papers
presented together with 4 invited papers
in this book were carefully reviewed and
selected from 89 initial submissions. The
papers cover a wide range of topics in the
field, including authentication, access
control, availability, integrity, privacy,
confidentiality, dependability and
sustainability of computer networks and
systems.
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. Learn, prepare, and practice for CCNA Cyber Ops SECFND 210-250 exam success with this Cert Guide from Pearson IT Certification, a leader in IT Certification learning. Master CCNA Cyber Ops SECFND 210-250 exam topics Assess your knowledge with chapter-ending quizzes Review key concepts with exam preparation tasks CCNA Cyber Ops SECFND 210-250 Official Cert Guide is a best-of-breed exam study guide. Cisco enterprise security experts Omar Santos, Joseph Muniz, and Stefano De Crescenzo share 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. The book presents you with an organized test preparation routine through the use of proven series elements and techniques. Exam topic lists make referencing easy. Chapter-ending Exam Preparation Tasks help you drill on key concepts you must know thoroughly. Review questions help you assess your knowledge, and a final preparation chapter guides you

through tools and resources to help you craft your final study plan. Well-regarded for its level of detail, assessment features, and challenging review questions and exercises, this study guide helps you master the concepts and techniques that will allow you to succeed on the exam the first time. The study guide helps you master all the topics on the CCNA Cyber Ops SECFND exam, including: Fundamentals of networking protocols and networking device types Network security devices and cloud services Security principles Access control models Security management concepts and techniques Fundamentals of cryptography and PKI Essentials of Virtual Private Networks (VPNs) Windows-based Analysis Linux /MAC OS X-based Analysis Endpoint security technologies Network and host telemetry Security monitoring operations and challenges Types of attacks and vulnerabilities Security evasion techniques
Network Forensics
Outwitting the Adversary
The Practice of Network Security
Monitoring
CCNA Cyber Ops SECFND #210-250 Official
Cert Guide
Research and Applications
Ten Strategies of a World-Class

Cybersecurity Operations Center
Big data is presenting challenges to
cybersecurity. For an example, the
Internet of Things (IoT) will
reportedly soon generate a staggering
400 zettabytes (ZB) of data a year.
Self-driving cars are predicted to
churn out 4000 GB of data per hour of
driving. Big data analytics, as an
emerging analytical technology, offers
the capability to collect, store,
process, and visualize these vast
amounts of data. Big Data Analytics in
Cybersecurity examines security
challenges surrounding big data and
provides actionable insights that can
be used to improve the current
practices of network operators and
administrators. Applying big data
analytics in cybersecurity is critical.
By exploiting data from the networks
and computers, analysts can discover
useful network information from data.
Decision makers can make more
informative decisions by using this
analysis, including what actions need
to be performed, and improvement
recommendations to policies,
guidelines, procedures, tools, and

other aspects of the network processes. Bringing together experts from academia, government laboratories, and industry, the book provides insight to both new and more experienced security professionals, as well as data analytics professionals who have varying levels of cybersecurity expertise. It covers a wide range of topics in cybersecurity, which include: Network forensics Threat analysis Vulnerability assessment Visualization Cyber training. In addition, emerging security domains such as the IoT, cloud computing, fog computing, mobile computing, and cyber-social networks are examined. The book first focuses on how big data analytics can be used in different aspects of cybersecurity including network forensics, root-cause analysis, and security training. Next it discusses big data challenges and solutions in such emerging cybersecurity domains as fog computing, IoT, and mobile app security. The book concludes by presenting the tools and datasets for future cybersecurity research.
Network Security with Netflow and

IPFIXBig Data Analytics for Information SecurityCisco Press
Anomaly detection has been a long-standing security approach with versatile applications, ranging from securing server programs in critical environments, to detecting insider threats in enterprises, to anti-abuse detection for online social networks. Despite the seemingly diverse application domains, anomaly detection solutions share similar technical challenges, such as how to accurately recognize various normal patterns, how to reduce false alarms, how to adapt to concept drifts, and how to minimize performance impact. They also share similar detection approaches and evaluation methods, such as feature extraction, dimension reduction, and experimental evaluation. The main purpose of this book is to help advance the real-world adoption and deployment anomaly detection technologies, by systematizing the body of existing knowledge on anomaly detection. This book is focused on data-driven anomaly detection for software, systems, and networks against advanced exploits and

attacks, but also touches on a number of applications, including fraud detection and insider threats. We explain the key technical components in anomaly detection workflows, give in-depth description of the state-of-the-art data-driven anomaly-based security solutions, and more importantly, point out promising new research directions. This book emphasizes on the need and challenges for deploying service-oriented anomaly detection in practice, where clients can outsource the detection to dedicated security providers and enjoy the protection without tending to the intricate details.

Dissecting the dark side of the Internet with its infectious worms, botnets, rootkits, and Trojan horse programs (known as malware) is a treaterous condition for any forensic investigator or analyst. Written by information security experts with real-world investigative experience, Malware Forensics Field Guide for Windows Systems is a "tool" with checklists for specific tasks, case studies of difficult situations, and expert

analyst tips. *A condensed hand-held
guide complete with on-the-job tasks
and checklists *Specific for Windows-
based systems, the largest running OS
in the world *Authors are world-
renowned leaders in investigating and
analyzing malicious code
Applied Security Visualization
Tracking Hackers through Cyberspace
Digital Forensics Field Guides
Handbook of Digital Forensics and
Investigation
Intelligence-Driven Incident Response
The Digital Forensics Guide for the
Network Engineer

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. Learn, prepare, and practice
for CCNA Cyber Ops SECOPS #210-255 exam
success with this Official Cert Guide from
Pearson IT Certification, a leader in IT
Certification learning. Master CCNA Cyber Ops
SECOPS #210-255 exam topics Assess your
knowledge with chapter-ending quizzes
Review key concepts with exam preparation
tasks CCNA Cyber Ops SECOPS 210-255
Official Cert Guide is a best-of-breed exam
study guide. Best-selling authors and

internationally respected cybersecurity experts Omar Santos and Joseph Muniz share 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. The book presents you with an organized test preparation routine through the use of proven series elements and techniques. Exam topic lists make referencing easy. Chapter-ending Exam Preparation Tasks help you drill on key concepts you must know thoroughly. Review questions help you assess your knowledge, and a final preparation chapter guides you through tools and resources to help you craft your final study plan. Well-regarded for its level of detail, assessment features, and challenging review questions and exercises, this study guide helps you master the concepts and techniques that will allow you to succeed on the exam the first time. The study guide helps you master all the topics on the SECOPS #210-255 exam, including: Threat analysis Forensics Intrusion analysis NetFlow for cybersecurity Incident response and the incident handling process Incident response teams Compliance frameworks Network and

host profiling Data and event analysis Intrusion event categories Network security is not simply about building impenetrable walls—determined attackers will eventually overcome traditional defenses. The most effective computer security strategies integrate network security monitoring (NSM): the collection and analysis of data to help you detect and respond to intrusions. In The Practice of Network Security Monitoring, Mandiant CSO Richard Bejtlich shows you how to use NSM to add a robust layer of protection around your networks—no prior experience required. To help you avoid costly and inflexible solutions, he teaches you how to deploy, build, and run an NSM operation using open source software and vendor-neutral tools. You'll learn how to: –Determine where to deploy NSM platforms, and size them for the monitored networks –Deploy stand-alone or distributed NSM installations –Use command line and graphical packet analysis tools, and NSM consoles –Interpret network evidence from server-side and client-side intrusions –Integrate threat intelligence into NSM software to identify sophisticated adversaries There's no foolproof way to keep attackers out of your network. But when they get in, you'll be prepared. The Practice of

Network Security Monitoring will show you how to build a security net to detect, contain, and control them. Attacks are inevitable, but losing sensitive data shouldn't be.

This book highlights several gaps that have not been addressed in existing cyber security research. It first discusses the recent attack prediction techniques that utilize one or more aspects of information to create attack prediction models. The second part is dedicated to new trends on information fusion and their applicability to cyber security; in particular, graph data analytics for cyber security, unwanted traffic detection and control based on trust management software defined networks, security in wireless sensor networks & their applications, and emerging trends in security system design using the concept of social behavioral biometric. The book guides the design of new commercialized tools that can be introduced to improve the accuracy of existing attack prediction models. Furthermore, the book advances the use of Knowledge-based Intrusion Detection Systems (IDS) to complement existing IDS technologies. It is aimed towards cyber security researchers. Handbook of Digital Forensics and Investigation builds on the success of the

Handbook of Computer Crime Investigation, bringing together renowned experts in all areas of digital forensics and investigation to provide the consummate resource for practitioners in the field. It is also designed as an accompanying text to Digital Evidence and Computer Crime. This unique collection details how to conduct digital investigations in both criminal and civil contexts, and how to locate and utilize digital evidence on computers, networks, and embedded systems. Specifically, the Investigative Methodology section of the Handbook provides expert guidance in the three main areas of practice: Forensic Analysis, Electronic Discovery, and Intrusion Investigation. The Technology section is extended and updated to reflect the state of the art in each area of specialization. The main areas of focus in the Technology section are forensic analysis of Windows, Unix, Macintosh, and embedded systems (including cellular telephones and other mobile devices), and investigations involving networks (including enterprise environments and mobile telecommunications technology). This handbook is an essential technical reference and on-the-job guide that IT professionals, forensic practitioners, law enforcement, and attorneys will rely on when

confronted with computer related crime and digital evidence of any kind. *Provides methodologies proven in practice for conducting digital investigations of all kinds *Demonstrates how to locate and interpret a wide variety of digital evidence, and how it can be useful in investigations *Presents tools in the context of the investigative process, including EnCase, FTK, ProDiscover, foremost, XACT, Network Miner, Splunk, flow-tools, and many other specialized utilities and analysis platforms *Case examples in every chapter give readers a practical understanding of the technical, logistical, and legal challenges that arise in real investigations

Big Data Analytics for Information Security

Cisco Cyberops Associate Cbrops 200-201 Official Cert Guide

Network and System Security

Lessons from a Life in the CIA's Clandestine Service

CCNA Cyber Ops SECOPS 210-255 Official Cert Guide

Ten Strategies of a World-Class Cyber Security Operations Center conveys MITRE's accumulated expertise on enterprise-grade computer network defense. It covers ten key qualities of leading Cyber Security

Operations Centers (CSOCs), ranging from their structure and organization, to processes that best enable smooth operations, to approaches that extract maximum value from key CSOC technology investments. This book offers perspective and context for key decision points in structuring a CSOC, such as what capabilities to offer, how to architect large-scale data collection and analysis, and how to prepare the CSOC team for agile, threat-based response. If you manage, work in, or are standing up a CSOC, this book is for you. It is also available on MITRE's website, www.mitre.org.

A comprehensive guide for deploying, configuring, and troubleshooting NetFlow and learning big data analytics technologies for cyber security Today's world of network security is full of cyber security vulnerabilities, incidents, breaches, and many headaches. Visibility into the network is an indispensable tool for network and security professionals and Cisco NetFlow creates an environment where network administrators and security professionals have the tools to understand who, what, when, where, and how network traffic is flowing. Network Security with NetFlow and IPFIX is a key resource for introducing yourself to and understanding the power

behind the Cisco NetFlow solution. Omar Santos, a Cisco Product Security Incident Response Team (PSIRT) technical leader and author of numerous books including the CCNA Security 210-260 Official Cert Guide, details the importance of NetFlow and demonstrates how it can be used by large enterprises and small-to-medium-sized businesses to meet critical network challenges. This book also examines NetFlow's potential as a powerful network security tool. Network Security with NetFlow and IPFIX explores everything you need to know to fully understand and implement the Cisco Cyber Threat Defense Solution. It also provides detailed configuration and troubleshooting guidance, sample configurations with depth analysis of design scenarios in every chapter, and detailed case studies with real-life scenarios. You can follow Omar on Twitter: @santosomar NetFlow and IPFIX basics Cisco NetFlow versions and features Cisco Flexible NetFlow NetFlow Commercial and Open Source Software Packages Big Data Analytics tools and technologies such as Hadoop, Flume, Kafka, Storm, Hive, HBase, Elasticsearch, Logstash, Kibana (ELK) Additional Telemetry Sources for Big Data Analytics for Cyber Security Understanding big data scalability Big data

analytics in the Internet of everything Cisco Cyber Threat Defense and NetFlow Troubleshooting NetFlow Real-world case studies

Cyber Security Innovation for the Digital Economy considers possible solutions to the relatively new scientific-technical problem of developing innovative solutions in the field of cyber security for the Digital Economy. The solutions proposed are based on the results of exploratory studies conducted by the author in the areas of Big Data acquisition, cognitive information technologies (cogno-technologies), new methods of analytical verification of digital ecosystems on the basis of similarity invariants and dimensions, and "computational cognitivism," involving a number of existing models and methods. In practice, this successfully allowed the creation of new entities - the required safe and trusted digital ecosystems - on the basis of the development of digital and cyber security technologies, and the resulting changes in their behavioral preferences. Here, the ecosystem is understood as a certain system of organizations, created around a certain Technological Platform that use its services to make the best offers to customers and access to them to meet the ultimate needs

of clients - legal entities and individuals. The basis of such ecosystems is a certain technological platform, created on advanced innovative developments, including the open interfaces and code, machine learning, cloud technologies, Big Data collection and processing, artificial intelligence technologies, etc. The mentioned Technological Platform allows creating the best offer for the client both from own goods and services and from the offers of external service providers in real time. This book contains four chapters devoted to the following subjects: Relevance of the given scientific-technical problems in the cybersecurity of Digital EconomyDetermination of the limiting capabilitiesPossible scientific and technical solutionsOrganization of perspective research studies in the area of Digital Economy cyber security in Russia.
Uncover hidden patterns of data and respond withcountermeasures Security professionals need all the tools at their disposal toincrease their visibility in order to prevent security breaches andattacks. This careful guide explores two of the most powerful data analysis and visualization. You'll soon understand how toharness and wield data, from collection and storage to managementand analysis as well as

visualization and presentation. Using ahands-on approach with real-world examples, this book shows you howto gather feedback, measure the effectiveness of your securitymethods, and make better decisions. Everything in this book will have practical application forinformation security professionals. Helps IT and security professionals understand and use data, sothey can thwart attacks and understand and visualizevulnerabilities in their networks Includes more than a dozen real-world examples and hands-onexercises that demonstrate how to analyze security data andintelligence and translate that information into visualizationsthat make plain how to prevent attacks Covers topics such as how to acquire and prepare security data,use simple statistical methods to detect malware, predict roguebehavior, correlate security events, and more Written by a team of well-known experts in the field ofsecurity and data analysis Lock down your networks, prevent hacks, and thwart malware byimproving visibility into the environment, all through the power ofdata and Security Using Data Analysis, Visualization, andDashboards.
An Authoritative Review of Network Programmability Technologies
Information Fusion for Cyber-Security

Analytics
Incident Response & Computer Forensics, Third Edition
Cisco ASA
The Authoritative Guide to Understanding the Concepts Surrounding Logging and Log Management
Deploying ACI

This book explains how AI and Machine Learning can be applied to help businesses solve problems, support critical thinking and ultimately create customer value and increase profit. By considering business strategies, business process modeling, quality assurance, cybersecurity, governance and big data and focusing on functions, processes, and people's behaviors it helps businesses take a truly holistic approach to business optimization. It contains practical examples that make it easy to understand the concepts and apply them. It is written for practitioners (consultants, senior executives, decision-makers) dealing with real-life business problems on a daily basis, who are keen to develop systematic strategies for the application of AI/ML/BD technologies to business automation and optimization, as well as researchers who want to explore the industrial applications of AI and higher-level

students.

As the sophistication of cyber-attacks increases, understanding how to defend critical infrastructure systems—energy production, water, gas, and other vital systems—becomes more important, and heavily mandated. Industrial Network Security, Second Edition arms you with the knowledge you need to understand the vulnerabilities of these distributed supervisory and control systems. The book examines the unique protocols and applications that are the foundation of industrial control systems, and provides clear guidelines for their protection. This how-to guide gives you thorough understanding of the unique challenges facing critical infrastructures, new guidelines and security measures for critical infrastructure protection, knowledge of new and evolving security tools, and pointers on SCADA protocols and security implementation. All-new real-world examples of attacks against control systems, and more diagrams of systems Expanded coverage of protocols such as 61850, Ethernet/IP, CIP, ISA-99, and the evolution to IEC62443 Expanded coverage of Smart Grid security New coverage of signature-based detection, exploit-based vs.

vulnerability-based detection, and signature reverse engineering
Cisco® ASA All-in-One Next-Generation Firewall, IPS, and VPN Services, Third Edition Identify, mitigate, and respond to today''s highly-sophisticated network attacks. Today, network attackers are far more sophisticated, relentless, and dangerous. In response, Cisco ASA: All-in-One Next-Generation Firewall, IPS, and VPN Services has been fully updated to cover the newest techniques and Cisco technologies for maximizing end-to-end security in your environment. Three leading Cisco security experts guide you through every step of creating a complete security plan with Cisco ASA, and then deploying, configuring, operating, and troubleshooting your solution. Fully updated for today''s newest ASA releases, this edition adds new coverage of ASA 5500-X, ASA 5585-X, ASA Services Module, ASA next-generation firewall services, EtherChannel, Global ACLs, clustering, IPv6 improvements, IKEv2, AnyConnect Secure Mobility VPN clients, and more. The authors explain significant recent licensing changes; introduce enhancements to ASA IPS; and walk you through configuring IPsec, SSL VPN, and NAT/PAT. You''ll learn

how to apply Cisco ASA adaptive identification and mitigation services to systematically strengthen security in network environments of all sizes and types. The authors present up-to-date sample configurations, proven design scenarios, and actual debugs- all designed to help you make the most of Cisco ASA in your rapidly evolving network. Jazib Frahim, CCIE® No. 5459 (Routing and Switching; Security), Principal Engineer in the Global Security Solutions team, guides top-tier Cisco customers in security-focused network design and implementation. He architects, develops, and launches new security services concepts. His books include Cisco SSL VPN Solutions and Cisco Network Admission Control, Volume II: NAC Deployment and Troubleshooting. Omar Santos, CISSP No. 463598, Cisco Product Security Incident Response Team (PSIRT) technical leader, leads and mentors engineers and incident managers in investigating and resolving vulnerabilities in Cisco products and protecting Cisco customers. Through 18 years in IT and cybersecurity, he has designed, implemented, and supported numerous secure networks for Fortune® 500 companies and the U.S. government. He is

also the author of several other books and numerous whitepapers and articles. Andrew Ossipov, CCIE® No. 18483 and CISSP No. 344324, is a Cisco Technical Marketing Engineer focused on firewalls, intrusion prevention, and data center security. Drawing on more than 16 years in networking, he works to solve complex customer technical problems, architect new features and products, and define future directions for Cisco''s product portfolio. He holds several pending patents. Understand, install, configure, license, maintain, and troubleshoot the newest ASA devices Efficiently implement Authentication, Authorization, and Accounting (AAA) services Control and provision network access with packet filtering, context-aware Cisco ASA next-generation firewall services, and new NAT/PAT concepts Configure IP routing, application inspection, and QoS Create firewall contexts with unique configurations, interfaces, policies, routing tables, and administration Enable integrated protection against many types of malware and advanced persistent threats (APTs) via Cisco Cloud Web Security and Cisco Security Intelligence Operations (SIO) Implement high availability with failover and elastic scalability with

clustering Deploy, troubleshoot, monitor, tune, and manage Intrusion Prevention System (IPS) features Implement site-to-site IPsec VPNs and all forms of remote-access VPNs (IPsec, clientless SSL, and client-based SSL) Configure and troubleshoot Public Key Infrastructure (PKI) Use IKEv2 to more effectively resist attacks against VPNs Leverage IPv6 support for IPS, packet inspection, transparent firewalls, and site-to-site IPsec VPNs

"This is a must-have work for anybody in information security, digital forensics, or involved with incident handling. As we move away from traditional disk-based analysis into the interconnectivity of the cloud, Sherri and Jonathan have created a framework and roadmap that will act as a seminal work in this developing field." – Dr. Craig S. Wright (GSE), Asia Pacific Director at Global Institute for Cyber Security + Research. "It's like a symphony meeting an encyclopedia meeting a spy novel." –Michael Ford, Corero Network Security On the Internet, every action leaves a mark–in routers, firewalls, web proxies, and within network traffic itself. When a hacker breaks into a bank, or an insider smuggles secrets to a competitor, evidence of the crime is always left behind.

Learn to recognize hackers' tracks and uncover network-based evidence in Network Forensics: Tracking Hackers through Cyberspace. Carve suspicious email attachments from packet captures. Use flow records to track an intruder as he pivots through the network. Analyze a real-world wireless encryption-cracking attack (and then crack the key yourself). Reconstruct a suspect's web surfing history–and cached web pages, too–from a web proxy. Uncover DNS-tunneled traffic. Dissect the Operation Aurora exploit, caught on the wire. Throughout the text, step-by-step case studies guide you through the analysis of network-based evidence. You can download the evidence files from the authors' web site (lmgsecurity.com), and follow along to gain hands-on experience. Hackers leave footprints all across the Internet. Can you find their tracks and solve the case? Pick up Network Forensics and find out.
Developing Innovative Use Cases
Investigating the Cyber Breach
The complete guide to planning, configuring, and managing Application Centric Infrastructure
All-in-one Next-generation Firewall, IPS, and VPN Services

Big Data Analytics in Cybersecurity
VizSEC 2007

A practical, indispensable security guide that will navigate you through the complex realm of securely building and deploying systems in our IoT-connected world About This Book Learn to design and implement cyber security strategies for your organization Learn to protect cyber-physical systems and utilize forensic data analysis to beat vulnerabilities in your IoT ecosystem Learn best practices to secure your data from device to the cloud Gain insight into privacy-enhancing techniques and technologies Who This Book Is For This book targets IT Security Professionals and Security Engineers (including pentesters, security architects and ethical hackers) who would like to ensure security of their organization's data when connected through the IoT. Business analysts and managers will also find it useful. What You Will Learn Learn how to break down cross-industry barriers by adopting the best practices for IoT deployments Build a rock-solid security program for IoT that is cost-effective and easy to maintain Demystify complex topics such as cryptography, privacy, and penetration testing to improve your security posture See how the selection

of individual components can affect the security posture of the entire system Use Systems Security Engineering and Privacy-by-design principles to design a secure IoT ecosystem Get to know how to leverage the burdgening cloud-based systems that will support the IoT into the future. In Detail With the advent of Intenret of Things (IoT), businesses will be faced with defending against new types of threats. The business ecosystem now includes cloud computing infrastructure, mobile and fixed endpoints that open up new attack surfaces, a desire to share information with many stakeholders and a need to take action quickly based on large quantities of collected data. . It therefore becomes critical to ensure that cyber security threats are contained to a minimum when implementing new IoT services and solutions. . The interconnectivity of people, devices, and companies raises stakes to a new level as computing and action become even more mobile, everything becomes connected to the cloud, and infrastructure is strained to securely manage the billions of devices that will connect us all to the IoT. This book shows you how to implement cyber-security solutions, IoT design best practices and risk mitigation

methodologies to address device and infrastructure threats to IoT solutions. This book will take readers on a journey that begins with understanding the IoT and how it can be applied in various industries, goes on to describe the security challenges associated with the IoT, and then provides a set of guidelines to architect and deploy a secure IoT in your Enterprise. The book will showcase how the IoT is implemented in early-adopting industries and describe how lessons can be learned and shared across diverse industries to support a secure IoT. Style and approach This book aims to educate readers on key areas in IoT security. It walks readers through engaging with security challenges and then provides answers on how to successfully manage IoT security and build a safe infrastructure for smart devices. After reading this book, you will understand the true potential of tools and solutions in order to build real-time security intelligence on IoT networks.

Modern organizations rely on Security Operations Center (SOC) teams to vigilantly watch security systems, rapidly detect breaches, and respond quickly and effectively. To succeed, SOCs desperately need more qualified cybersecurity

professionals. Cisco's new Cisco Certified CyberOps Associate certification prepares candidates to begin a career working as associate-level cybersecurity analysts within SOCs. It demonstrates their knowledge about creating, operating, and working within computer security incident response teams (CSIRTs) and product security incident response teams (PSIRTs); the incident response lifecycle, and cyber forensics. To earn this valuable certification, candidates must pass the new Understanding Cisco Cybersecurity Operations Fundamentals (200-201 CBROPS) consolidated exam. Cisco CyberOps Associate CBROPS 200-201 Official Cert Guide is Cisco's official, comprehensive self-study resource for this exam. Designed for all exam candidates, it covers every exam objective concisely and logically, with extensive teaching features that promote retention and understanding. You'll find: Pre-chapter quizzes to assess knowledge upfront and focus your study more efficiently Foundation topics sections that explain concepts and configurations, and link theory to practice Key topics sections calling attention to every figure, table, and list you must know Exam Preparation sections with additional chapter review features Final

**preparation chapter providing tools and a
complete final study plan A customizable
practice test library This guide offers
comprehensive, up-to-date coverage of all
CBROPS #200-201 topics related to: Security
concepts Security monitoring Host-based
analysis Network intrusion analysis Security
policies and procedures
Networked computers are ubiquitous, and are
subject to attack, misuse, and abuse. One
method to counteracting this cyber threat is
to provide security analysts with better tools
to discover patterns, detect anomalies,
identify correlations, and communicate their
findings. Visualization for computer security
(VizSec) researchers and developers are
doing just that. VizSec is about putting
robust information visualization tools into the
hands of human analysts to take advantage
of the power of the human perceptual and
cognitive processes in solving computer
security problems. This volume collects the
papers presented at the 4th International
Workshop on Computer Security - VizSec
2007.
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 CompTIA CySA+ Cybersecurity Analyst Certification All-in-One Exam Guide (Exam CS0-001) The Internet of Things Securing Critical Infrastructure Networks for Smart Grid, SCADA, and Other Industrial

Control Systems
Industrial Network Security
Practical Internet of Things Security
The Art of Intelligence

Using a well-conceived incident response plan in the aftermath of an online security breach enables your team to identify attackers and learn how they operate. But, only when you approach incident response with a cyber threat intelligence mindset will you truly understand the value of that information. With this practical guide, you'll learn the fundamentals of intelligence analysis, as well as the best ways to incorporate these techniques into your incident response process. Each method reinforces the other: threat intelligence supports and augments incident response, while incident response generates useful threat intelligence. This book helps incident managers, malware analysts, reverse engineers, digital forensics specialists, and intelligence analysts understand, implement, and benefit from this relationship. In three parts, this in-depth book includes: The fundamentals: get an introduction to cyber threat intelligence, the intelligence process, the incident-response process, and how they all work together Practical application: walk through the intelligence-driven incident response (IDIR) process using the F3EAD process—Find, Fix Finish, Exploit, Analyze, and Disseminate The way forward: explore big-picture aspects of IDIR that go beyond individual incident-response investigations, including intelligence team building
Logging and Log Management: The Authoritative Guide

to Understanding the Concepts Surrounding Logging and Log Management introduces information technology professionals to the basic concepts of logging and log management. It provides tools and techniques to analyze log data and detect malicious activity. The book consists of 22 chapters that cover the basics of log data; log data sources; log storage technologies; a case study on how syslog-ng is deployed in a real environment for log collection; covert logging; planning and preparing for the analysis log data; simple analysis techniques; and tools and techniques for reviewing logs for potential problems. The book also discusses statistical analysis; log data mining; visualizing log data; logging laws and logging mistakes; open source and commercial toolsets for log data collection and analysis; log management procedures; and attacks against logging systems. In addition, the book addresses logging for programmers; logging and compliance with regulations and policies; planning for log analysis system deployment; cloud logging; and the future of log standards, logging, and log analysis. This book was written for anyone interested in learning more about logging and log management. These include systems administrators, junior security engineers, application developers, and managers. Comprehensive coverage of log management including analysis, visualization, reporting and more Includes information on different uses for logs -- from system operations to regulatory compliance Features case Studies on syslog-ng and actual real-world situations where logs came in handy in incident response Provides practical guidance in the areas of report, log analysis

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system selection, planning a log analysis system and log data normalization and correlation

Use ACI fabrics to drive unprecedented value from your data center environment With the Cisco Application Centric Infrastructure (ACI) software-defined networking platform, you can achieve dramatic improvements in data center performance, redundancy, security, visibility, efficiency, and agility. In Deploying ACI, three leading Cisco experts introduce this breakthrough platform, and walk network professionals through all facets of design, deployment, and operation. The authors demonstrate how ACI changes data center networking, security, and management; and offer multiple field-proven configurations. Deploying ACI is organized to follow the key decision points associated with implementing data center network fabrics. After a practical introduction to ACI concepts and design, the authors show how to bring your fabric online, integrate virtualization and external connections, and efficiently manage your ACI network. You'll master new techniques for improving visibility, control, and availability; managing multitenancy; and seamlessly inserting service devices into application data flows. The authors conclude with expert advice for troubleshooting and automation, helping you deliver data center services with unprecedented efficiency. Understand the problems ACI solves,and how it solves them Design your ACI fabric, build it, and interface with devices to bring it to life Integrate virtualization technologieswith your ACI fabric Perform networking within an ACI fabric (and understand how ACI changes data center networking) Connect external networks and

devices at Layer 2/Layer 3 levels Coherently manage unified ACI networks with tenants and application policies Migrate to granular policies based on applications and their functions Establish multitenancy, and evolve networking, security, and services to support it Integrate L4–7 services: device types, design scenarios, and implementation Use multisite designs to meet rigorous requirements for redundancy and business continuity Troubleshoot and monitor ACI fabrics Improve operational efficiency through automation and programmability

Challenges, Advances, and Opportunities
Engineers' Handbook of Routing, Switching, and Security with IOS, NX-OS, and ASA
Security Operations Center
Logging and Log Management
Analysis, Visualization and Dashboards
CompTIA Cybersecurity Analyst (CySA+) Cert Guide