

Nutanix Backup And Replication Best Practices With Veeam

Learn efficient ways to harness and manage your data storage networks Whether you're preparing for the CompTIA Storage+ exam or simply seeking a deeper understanding of data storage networks, this Sybex guide will help you get there. This book covers data storage from the basics to advanced topics, and provides practical examples to show you ways to deliver world-class solutions. In addition, it covers all the objectives of the CompTIA Storage+ exam (SG0-001), including storage components, connectivity, storage management, data protection, and storage performance. Focuses on designing, implementing, and administering storage for today's evolving organizations, getting under the hood of the technologies that enable performance, resiliency, availability, recoverability, and simplicity Covers virtualization, big data, cloud storage, security, and scalability as well as how storage fits in to the wider technology environments prevalent in today's cloud era Provides advice and real-world examples that storage administrators in the trenches can actually use An excellent study aid for the CompTIA Storage+ exam (SG0-001), covering all the exam objectives Data Storage Networking: Real World Skills for the CompTIA Storage+ Certification and Beyond provides a solid foundation for data storage administrators and a reference that can be consulted again and again. Veeam is an infrastructure backup solution for VMware vSphere or Hyper-V to enable VM and server backup. This book takes you through installation best practices, optimizations, and the 3-2-1 rule, before going on to examine repository and proxy-related topics and finally advanced topics such as DataLabs, Instant VM Recovery, and Veeam ONE.

Learn to code like a professional with Python – an open source, versatile, and powerful programming language About This Book Learn the fundamentals of programming with Python – one of the best languages ever created Develop a strong set of programming skills that you will be able to express in any situation, on every platform, thanks to Python's portability Create outstanding applications of all kind, from websites to scripting, and from GUIs to data science Who This Book Is For Python is the most popular introductory teaching language in U.S. top computer science universities, so if you are new to software development, or maybe you have little experience, and would like to start off on the right foot, then this language and this book are what you need. Its amazing design and portability will help you become productive regardless of the environment you choose to work with. What You Will Learn Get Python up and running on Windows, Mac, and Linux in no time Grasp the fundamental concepts of coding, along with the basics of data structures and control flow. Write elegant, reusable, and efficient code in any situation Understand when to use the functional or the object oriented programming approach Create bulletproof, reliable software by writing tests to support your code Explore examples of GUIs, scripting, data science and web applications Learn to be independent, capable of fetching any resource you need, as well as dig deeper In Detail Learning Python has a dynamic and varied nature. It reads easily and lays a good foundation for those who are interested in digging deeper. It has a practical and example-oriented approach through which both the introductory and the advanced topics are explained. Starting with the fundamentals of programming and Python, it ends by exploring very different topics, like GUIs, web apps and data science. The book takes you all the way to creating a fully fledged application. The book begins by exploring the essentials of programming, data structures and teaches you how to manipulate them. It then moves on to controlling the flow of a program and writing reusable and error proof code. You will then explore different programming paradigms that will allow you to find the best approach to any situation, and also learn how to perform performance optimization as well as effective debugging. Throughout, the book steers you through the various types of applications, and it concludes with a complete mini website

built upon all the concepts that you learned. Style and approach This book is an easy-to-follow guide that will take you from a novice to the proficient level at a comfortable pace, using a lot of simple but effective examples. Each topic is explained thoroughly, and pointers are left for the more inquisitive readers to dig deeper and expand their knowledge.

In today's hyper-connected society, understanding the mechanisms of trust is crucial. Issues of trust are critical to solving problems as diverse as corporate responsibility, global warming, and the political system. In this insightful and entertaining book, Schneier weaves together ideas from across the social and biological sciences to explain how society induces trust. He shows the unique role of trust in facilitating and stabilizing human society. He discusses why and how trust has evolved, why it works the way it does, and the ways the information society is changing everything.

This book follows a step-by-step tutorial approach with some real-world scenarios that vSphere businesses will be required to overcome every day. This book also discusses creating and configuring virtual machines and also covers monitoring virtual machine performance and resource allocation options. This book is for VMware administrators who want to build their knowledge of virtual machine administration and configuration. It's assumed that you have some experience with virtualization administration and vSphere.

This book constitutes the proceedings of the Second International Conference on Space Information Network, SINC 2017, held in Yinchuan, China, in August 2017. The 27 full and three short papers presented in this volume were carefully reviewed and selected from 145 submissions. The papers are organized in topical sections on system architecture and efficient networking mechanism; theory and method of high speed transmission; sparse representation and fusion processing.

This is the eBook version of the print title. Learn, prepare, and practice for Red Hat RHCSA 8 (EX200) exam success with this Cert Guide from Pearson IT Certification, a leader in IT Certification learning. Master Red Hat RHCSA 8 EX200 exam topics Assess your knowledge with chapter-ending quizzes Review key concepts with exam-preparation tasks Practice with four unique practice tests Learn from two full hours of video training from the author's Red Hat Certified System Administrator (RHCSA) Complete Video Course, 3rd Edition. Red Hat RHCSA 8 Cert Guide is a best-of-breed exam study guide. Leading Linux consultant, author, and instructor Sander van Vugt 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. 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 enable you to succeed on the exam the first time, including Basic system management: Installation, tools, file management, text files, RHEL8 connections, user/group management, permissions, and network configuration Operating running systems: Managing software, processes, storage, and advanced storage; working with systemd; scheduling tasks; and configuring logging Advanced system administration: Managing the kernel and boot procedures, essential troubleshooting, bash shell scripting Managing network services: Configuring SSH, firewalls, and time services; managing Apache HTTP services and SE Linux; and accessing network storage Unleash the benefits of VMware vSphere 6.7 to provide a powerful, flexible and secure digital infrastructure Key Features Deep dive into areas like management, security, scalability, availability and more with vSphere 6.7 Design, deploy and manage VMware vSphere virtual

datacenters Implement monitoring and security of VMware workloads with ease Book Description vSphere 6.7 is the latest release of VMware's industry-leading, virtual cloud platform. It allows organisations to move to hybrid cloud computing by enabling them to run, manage, connect and secure applications in a common operating environment. This up-to-date, 2nd edition provides complete coverage of vSphere 6.7. Complete with step-by-step explanations of essential concepts, practical examples and self-assessment questions, you will begin with an overview of the products, solutions and features of the vSphere 6.7 suite. You'll learn how to design and plan a virtual infrastructure and look at the workflow and installation of components. You'll gain insight into best practice configuration, management and security. By the end the book you'll be able to build your own VMware vSphere lab that can run even the most demanding of workloads. What you will learn Explore the immense functionality of vSphere 6.7 Design, manage and administer a virtualization environment Get tips for the VCP6-DCV and VCIX6-DCV exams Understand how to implement different migration techniques across different environments Explore vSphere 6.7s powerful capabilities for patching, upgrading and managing the configuration of virtual environments. Understand core vSphere components Master resource management, disaster recovery, troubleshooting, monitoring and security Who this book is for This book is for Administrators, Infrastructure Engineers, Architects, and Consultants with basic knowledge of VMware vSphere.

PRINCIPLES OF INCIDENT RESPONSE & DISASTER RECOVERY, 2nd Edition presents methods to identify vulnerabilities within computer networks and the countermeasures that mitigate risks and damage. From market-leading content on contingency planning, to effective techniques that minimize downtime in an emergency, to curbing losses after a breach, this text is the resource needed in case of a network intrusion. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Peer-to-peer has emerged as a promising new paradigm for large-scale distributed computing. The International Workshop on Peer-to-Peer Systems (IPTPS) aimed to provide a forum for researchers active in peer-to-peer computing to discuss the state of the art and to identify key research challenges. The goal of the workshop was to examine peer-to-peer technologies, applications, and systems, and also to identify key research issues and challenges that lie ahead. In the context of this workshop, peer-to-peer systems were characterized as being decentralized, self-organizing distributed systems, in which all or most communication is symmetric. The program of the workshop was a combination of invited talks, presentations of position papers, and discussions covering novel peer-to-peer applications and systems, peer-to-peer infrastructure, security in peer-to-peer systems, anonymity and anti-censorship, performance of peer-to-peer systems, and workload characterization for peer-to-peer systems. To ensure a productive workshop environment, attendance was limited to 55 participants. Each potential participant was asked to submit a position paper of 5 pages that exposed a new problem, advocated a specific solution, or reported on actual experience. We received 99 submissions and were able to accept 31. Participants were invited based on the originality, technical merit, and topical relevance of their submissions, as well as the likelihood that the ideas expressed in their submissions would lead to insightful technical discussions at the workshop.

The TOGAF® Standard, a standard of The Open Group, is a proven Enterprise Architecture methodology and framework used by the world's leading organizations to improve business efficiency. It is the most prominent and reliable Enterprise Architecture

standard, ensuring consistent standards, methods, and communication among Enterprise Architecture professionals. Those professionals fluent in the TOGAF approach enjoy greater industry credibility, job effectiveness, and career opportunities. The TOGAF approach helps practitioners avoid being locked into proprietary methods, utilize resources more efficiently and effectively, and realize a greater return on investment.

"Now that virtualization has blurred the lines between networking and servers, many VMware specialists need a stronger understanding of networks than they may have gained in earlier IT roles. Networking for VMware administrators fills this crucial knowledge gap. Writing for VMware professionals, Christopher Wahl and Steve Pantol illuminate the core concepts of modern networking, and show how to apply them in designing, configuring, and troubleshooting any virtualized network environment"--P. [4] of cover.

Building an Effective Security Program provides readers with a comprehensive approach to securing the IT systems in use at their organizations. This book provides information on how to structure and operate an effective cybersecurity program that includes people, processes, technologies, security awareness, and training. This program will establish and maintain effective security protections for the confidentiality, availability, and integrity of organization information. In this book, the authors take a pragmatic approach to building organization cyberdefenses that are effective while also remaining affordable. This book is intended for business leaders, IT professionals, cybersecurity personnel, educators, and students interested in deploying real-world cyberdefenses against today's persistent and sometimes devastating cyberattacks. It includes detailed explanation of the following IT security topics: IT Security Mindset—Think like an IT security professional, and consider how your IT environment can be defended against potential cyberattacks. Risk Management—Identify the assets, vulnerabilities and threats that drive IT risk, along with the controls that can be used to mitigate such risk. Effective Cyberdefense—Consider the components of an effective organization cyberdefense to successfully protect computers, devices, networks, accounts, applications and data. Cyber Operations—Operate cyberdefense capabilities and controls so that assets are protected, and intruders can be detected and repelled before significant damage can be done. IT Security Awareness and Training—Promote effective cybersecurity practices at work, on travel, and at home, among your organization's business leaders, IT professionals, and staff. Resilient IT Security—Implement, operate, monitor, assess, and improve your cybersecurity program on an ongoing basis to defend against the cyber threats of today and the future.

DISCOVER:: How to Add DOZENS of Positive Changes to Your Daily Routine Want to improve your life, but don't have enough time? Right now you could easily think of a dozen ways to instantly improve your life. Odds are, these ideas will only take a few minutes apiece to complete. The problem? You might feel like there's not enough time to do all of them. One solution can be found using the power of "habit stacking." One Routine + Multiple Habits = Habit Stacking We all know it's not easy to add dozens of new habits to your day. But what you might not realize is it's fairly easy to build a single new routine. The essence of habit stacking is to take a series of small changes (like eating a piece of fruit or sending a loving text message to your significant other) and build

a ritual that you follow on a daily basis. Habit stacking works because you eliminate the stress of trying to change too many things at once. Your goal is to simply focus on a single routine that only takes about 15 to 30 minutes to complete. Within this routine is a series of actions (or small changes). All you have to do is to create a checklist and follow it every single day. That's the essence of habit stacking. LEARN: 97 Small Habits that Can Change Your Life In the book "Habit Stacking: 97 Small Life Changes That Take Five Minutes Or Less," you will discover 97 quick habits that can instantly improve your life. Plus you'll discover how to create a simple routine (managed by a checklist) that you repeat on a daily basis. Even better, you'll discover a few tools that will keep you motivated and consistent. So even if you're completely stressed out, you'll still find the time and energy to complete these actions on a consistent basis. By completing dozens of small habits on a daily basis, you'll be able to make giant leaps forward in your business, strengthen your personal relationships, stay on top of your finances, get organized and improve your health. ORDER:: Habit Stacking: 97 Small Life Changes That Take Five Minutes Or Less "Habit Stacking" contains a catalog of ideas you can use to take action in your life. You will learn: ** How Habit Stacking Helps You Add MULTIPLE Small Changes ** 8 Elements of a Habit Stacking Routine ** Two Examples of a Habit Stacking Routine ** 8 Steps for Building a Habit Stacking Routine ** Productivity Small Changes (#1 to #17) ** Relationships Small Changes (#18 to #31) ** Finances Small Changes (#32 to #44) ** Organization Small Changes (#45 to #60) ** Spirituality & Mental Wellbeing Small Changes (#61 to #84) ** Health & Physical Fitness Small Changes (#76 to #85) ** Leisure (Small Changes #86 to #97) ** Habit Stacking Disruptions and Challenges: What to Do! It is to add multiple changes to your life all at once. All you need to do is to add habit stacking routines to your day. Would You Like To Know More? Order and start building powerful habits into your day. Scroll to the top of the page and select the buy button. This is a step-by-step example-oriented tutorial aimed at showing the reader how to troubleshoot a variety of vSphere storage problems, and providing the reader with solutions that can be completed with minimal effort and time in order to limit damage to work. If you are a vSphere administrator, this is the book for you. This book will provide you with 'need to know' information about the various storage transports that ESXi utilizes, the tools and techniques we can use to identify problems, and the fundamental knowledge and steps to take to troubleshoot storage-related issues. Prior knowledge of the VMWare environment is assumed. Master SDDC Operations with proven best practices About This Book Understand the drawbacks of the traditional paradigm and management that make operations difficult in SDDC Master performance and capacity management in Software-Defined Data Center Operationalize performance and capacity monitoring with proven dashboards Who This Book Is For This book is primarily for any system administrator or cloud infrastructure specialist who is interested in performance management and capacity management using VMware technologies. This book will also help IT professionals whose area of responsibility is not VMware, but who work with the VMware team. You can be Windows, Linux, Storage, or Network team; or application architects. Note that prior exposure to the VMware platform of data-center and cloud-based solutions is expected. What You Will Learn Simplify the task of performance and capacity management Master the counters in vCenter and vRealize Operations and understand their dependency on one another Educate your peers and management on SDDC Operations Complete your SDDC monitoring to

include non-VMware components Perform SDDC performance troubleshooting Explore real-life examples of how super metric and advanced dashboards Introduce and implement a Performance SLA Accomplish your Capacity Management by taking into service tiering and performance SLA In Detail Performance management and capacity management are the two top-most issues faced by enterprise IT when doing virtualization. Until the first edition of the book, there was no in-depth coverage on the topic to tackle the issues systematically. The second edition expands the first edition, with added information and reorganizing the book into three logical parts. The first part provides the technical foundation of SDDC Management. It explains the difference between a software-defined data center and a classic physical data center, and how it impacts both architecture and operations. From this strategic view, it zooms into the most common challenges—performance management and capacity management. It introduces a new concept called Performance SLA and also a new way of doing capacity management. The next part provides the actual solution that you can implement in your environment. It puts the theories together and provides real-life examples created together with customers. It provides the reasons behind each dashboard, so that you get the understanding on why it is required and what problem it solves. The last part acts as a reference section. It provides a complete reference to vSphere and vRealize Operations counters, explaining their dependencies and providing practical guidance on the values you should expect in a healthy environment. Style and approach This book covers the complex topic of managing performance and capacity in an easy-to-follow style. It relates real-world scenarios to topics in order to help you implement the book's teachings on the go.

Plan, design, deploy, and administer the solutions available in VxRail Appliance Key Features Learn how to plan and design the VxRail HCI system Understand VxRail's administration, lifecycle management, and cluster scale-out Explore migration methodologies for VxRail systems Book Description Hyper-converged infrastructure (HCI) can help you simplify the provisioning and daily operations of computing and storage. With this book, you'll understand how HCI can offload the day 0 deployment and day-to-day operations of a system administrator. You'll explore the VxRail Appliance, which is an HCI solution that provides lifecycle management, automation, and operational simplicity. Starting with an overview of the VxRail Appliance system architecture and components, you'll understand the benefits of the VxRail system and compare it with the environment of traditional servers and storage. As you advance, the book covers topics such as disaster recovery and active-active and active-passive solutions for VxRail. By the end of this book, you'll have gained the confidence to manage the deployment, administration, planning, and design of a VxRail system. What you will learn Set up the hardware and software requirements for a VxRail installation Monitor the status of VxRail appliances with the VxRail Manager plugin Get to grips with all the administration interfaces used to manage the VxRail appliance Understand vCenter roles and permissions management in the VxRail cluster Discover best practices for vSAN configuration in the VxRail cluster Find out about VxRail cluster scale-out rules and how to expand the VxRail cluster Deploy active-passive solutions for VxRail with VMware Site Recovery Manager (SRM) Who this book is for If you are a system architect, system administrator, or consultant involved in planning and deploying VxRail HCI or want to learn how to use VxRail HCI, then this book is for you. Equivalent knowledge and administration experience with ESXi and

vCenter Server will be helpful.

Learn how to virtualize your network and discover the full potential of a Software Defined Data Center. A smarter way to use network resources begins here About This Book Experience the dynamism and flexibility of a virtualized software defined data center with NSX Find out how to design your network infrastructure based on what your organization needs From security to automation, discover how NSX's impressive range of features can unlock a more effective and intelligent approach to system administration Who This Book Is For If you're a network administrator and want a simple but powerful solution to your network virtualization headaches, look no further than this fast-paced, practical guide. What You Will Learn Deep dive into NSX-v Manager, Controller deployment, and design decisions Get to know the strategies needed to make decisions on each mode of VXLAN that is based on physical network design Deploy Edge Gateway and leverage all the gateway features and design decisions Get to grips with NSX-v Security features and automate security Leverage Cross VC, identify the benefits, and work through a few deployment scenarios Troubleshoot an NSX-v to isolate problems and identify solutions through a step-by-step process In Detail VMware NSX is at the forefront of the software-defined networking revolution. It makes it even easier for organizations to unlock the full benefits of a software-defined data center – scalability, flexibility – while adding in vital security and automation features to keep any sysadmin happy. Software alone won't power your business – with NSX you can use it more effectively than ever before, optimizing your resources and reducing costs. Getting started should be easy – this guide makes sure it is. It takes you through the core components of NSX, demonstrating how to set it up, customize it within your current network architecture. You'll learn the principles of effective design, as well as some things you may need to take into consideration when you're creating your virtual networks. We'll also show you how to construct and maintain virtual networks, and how to deal with any tricky situations and failures. By the end, you'll be confident you can deliver, scale and secure an exemplary virtualized network with NSX. Style and approach This book provides you with an introduction to software-defined networking with VMware NSX. Focusing on the most essential elements, so you can put your knowledge into practice quickly, it's a guide dedicated to anyone who understands that sometimes real-world problems require virtualized solutions.

Master your virtual environment with the ultimate vSphere guide Mastering VMware vSphere 6.7 is the fully updated edition of the bestselling guide to VMware's virtualization solution. With comprehensive coverage of this industry-leading toolset, this book acts as an informative guide and valuable reference. Step-by-step instruction walks you through installation, configuration, operation, security processes, and much more as you conquer the management and automation of your virtual environment. Written by certified VMware vExperts, this indispensable guide provides hands-on instruction and detailed conceptual explanations, anchored by practical applications and real-world examples. This book is the ultimate guide to vSphere, helping administrators master their virtual environment. Learn to: Install, configure, and manage the vCenter Server components Leverage the Support Tools to provide maintenance and updates Create and configure virtual networks, storage devices, and virtual machines Implement the latest features to ensure compatibility and flexibility Manage resource allocation and utilization to meet application needs Monitor

infrastructure performance and availability Automate and orchestrate routine administrative tasks Mastering VMware vSphere 6.7 is what you need to stay up-to-date on VMware's industry-leading software for the virtualized datacenter.

Mastering Veeam Backup & Replication 10 Protect your virtual environment and implement cloud backup using Veeam technology Packt Publishing Ltd

If you are not already one of the 4 million plus users of the MySQL database, you will want to become one after reading this book. MySQL Administrator's Guide is the official guide to installing, administering and working with MySQL 5.0 and MySQL databases. Starting with the basics, you will learn to store, manage and retrieve data in a MySQL database and to eventually manipulate the code behind MySQL 5.0 to customize your database. With the clear examples and tips provided in this comprehensive learning guide, you can become a MySQL expert in no time.

This book looks at various application and data demand drivers, along with data infrastructure options from legacy on premise, public cloud, hybrid, software-defined data center (SDDC), software data infrastructure (SDI), container as well as serverless along with infrastructure as a Service (IaaS), IT as a Service (ITaaS) along with related technology, trends, tools, techniques and strategies. Filled with example scenarios, tips and strategy considerations, the book covers frequently asked questions and answers to aid strategy as well as decision-making.

The inside guide to the next generation of data storage technology VMware Software-Defined Storage, A Guide to the Policy Driven, Software-Defined Storage Era presents the most in-depth look at VMware's next-generation storage technology to help solutions architects and operational teams maximize quality storage design. Written by a double VMware Certified Design Expert, this book delves into the design factors and capabilities of Virtual SAN and Virtual Volumes to provide a uniquely detailed examination of the software-defined storage model. Storage-as-a-Service (STaaS) is discussed in terms of deployment through VMware technology, with insight into the provisioning of storage resources and operational management, while legacy storage and storage protocol concepts provide context and demonstrate how Virtual SAN and Virtual Volumes are meeting traditional challenges. The discussion on architecture emphasizes the economies of storage alongside specific design factors for next-generation VMware based storage solutions, and is followed by an example in which a solution is created based on the preferred option identified from a selection of cross-site design options. Storage hardware lifecycle management is an ongoing challenge for IT organizations and service providers. VMware is addressing these challenges through the software-defined storage model and Virtual SAN and Virtual Volumes technologies; this book provides unprecedented detail and expert guidance on the future of storage. Understand the architectural design factors of VMware-based storage Learn best practices for Virtual SAN stretched architecture implementation Deploy STaaS through vRealize Automation and vRealize Orchestrator Meet traditional storage challenges with next-generation storage technology Virtual SAN and Virtual Volumes are leading the way in efficiency, automation, and simplification, while maintaining enterprise-class features and performance. As organizations around the world are looking to cut costs without sacrificing performance, availability, or scalability, VMware-based next-generation storage solutions are the ideal

platform for tomorrow's virtual infrastructure. VMware Software-Defined Storage provides detailed, practical guidance on the model that is set to transform all aspects of vSphere data center storage.

Give your organization the data protection it deserves, without the uncertainty and cost overruns experienced by your predecessors or other companies. System and network administrators today have their work cut out for them to protect physical and virtual machines in the data center and the cloud, mobile devices including laptops and tablets, SaaS services like Microsoft 365, Google Workspace, and Salesforce, and any persistent data created by Kubernetes and container workloads. To help you navigate the breadth and depth of this challenge, this book presents several solutions so you can determine which one is right for your company. You'll learn the unique requirements that each workload presents, then explore various categories of commercial backup hardware, software, and services available to protect these data sources, including the advantages and disadvantages of each approach. Learn the workload types that your organization should be backing up Explore the hardware, software, and services you can use to back up your systems Understand what's wrong with your current data protection system Pair your backed-up workloads to the appropriate backup system Learn the adjustments you need to make to make your backups better, without wasting money

Drive Even More Value from Virtualization: Write VMware® Applications that Automate Virtual Infrastructure Management Companies running VMware have already achieved enormous gains through virtualization. The next wave of benefits will come when they reduce the time and effort required to run and manage VMware platforms. The VMware Infrastructure Software Development Kit (VI SDK) includes application programming interfaces (APIs) that allow developers and administrators to do just that. Until now, there has been little documentation for the APIs. In VMware VI and vSphere SDK, software architect Steve Jin demystifies the entire VMware VI and new vSphere SDK and offers detailed, task-based coverage of using the APIs to manage VMware more efficiently and cost-effectively. Jin walks you through using the VI SDK and cloud-computing vSphere SDK to manage ESX servers, ESX clusters, and VirtualCenter servers in any environment—no matter how complex. Drawing on his extensive expertise working with VMware strategic partners and enterprise customers, he places the VI SDK in practical context, presenting realistic samples and proven best practices for building robust, effective solutions. Jin demonstrates how to manage every facet of a VMware environment, including inventory, host systems, virtual machines (VMs), snapshots, VMotion, clusters, resource pools, networking, storage, data stores, events, alarms, users, security, licenses, and scheduled tasks. Coverage includes Understanding how the VI SDK fits into your VMware VI and Cloud Ready vSphere Environment Discovering the VI and vSphere SDK from the bottom up Using the author's new VI Java API to write shorter, faster, and more maintainable code Managing VI and vSphere inventory and configurations Moving running VMs and storages across different physical platforms without disruption Optimizing system resources, hardening system securities, backing up VMs and other resources Leveraging events, alarms, and scheduled tasks to automate the system management Developing powerful applications that integrate multiple API features and run on top of or alongside VMware platforms Using the VI SDK to monitor performance Scripting with the VI

SDK: building solutions with VI Perl, PowerShell, and Jython Avoiding the pitfalls that trip up VMware VI developers Integrating with and extending VMware platforms using VI SDK This book is an indispensable resource for all VMware developers and administrators who want to get more done in less time; for hardware vendors who want to integrate their products with VMware; for ISV developers building new VMware applications; and for every professional and student seeking a deeper mastery of virtualization.

Improve Manageability, Flexibility, Scalability, and Control with Hyperconverged Infrastructure Hyperconverged infrastructure (HCI) combines storage, compute, and networking in one unified system, managed locally or from the cloud. With HCI, you can leverage the cloud's simplicity, flexibility, and scalability without losing control or compromising your ability to scale. In Hyperconverged Infrastructure Data Centers, best-selling author Sam Halabi demystifies HCI technology, outlines its use cases, and compares solutions from a vendor-neutral perspective. He guides you through evaluation, planning, implementation, and management, helping you decide where HCI makes sense, and how to migrate legacy data centers without disrupting production systems. The author brings together all the HCI knowledge technical professionals and IT managers need, whether their background is in storage, compute, virtualization, switching/routing, automation, or public cloud platforms. He explores leading solutions including the Cisco HyperFlex platform, VMware vSAN, Nutanix Enterprise Cloud, Cisco Application-Centric Infrastructure (ACI), VMware's NSX, the open source OpenStack and Open vSwitch (OVS) / Open Virtual Network (OVN), and Cisco CloudCenter for multicloud management. As you explore discussions of automation, policy management, and other key HCI capabilities, you'll discover powerful new opportunities to improve control, security, agility, and performance. Understand and overcome key limits of traditional data center designs Discover improvements made possible by advances in compute, bus interconnect, virtualization, and software-defined storage Simplify rollouts, management, and integration with converged infrastructure (CI) based on the Cisco Unified Computing System (UCS) Explore HCI functionality, advanced capabilities, and benefits Evaluate key HCI applications, including DevOps, virtual desktops, ROBO, edge computing, Tier 1 enterprise applications, backup, and disaster recovery Simplify application deployment and policy setting by implementing a new model for provisioning, deployment, and management Plan, integrate, deploy, provision, manage, and optimize the Cisco HyperFlex hyperconverged infrastructure platform Assess alternatives such as VMware vSAN, Nutanix, open source OpenStack, and OVS/OVN, and compare architectural differences with HyperFlex Compare Cisco ACI (Application-Centric Infrastructure) and VMware NSX approaches to network automation, policies, and security 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. Deliver great business value by adopting the virtualization platform VMware vSphere 6.5, from the design to the deployment About This Book This new edition is based on vSphere 6.5 and has described new features in different areas, including management, security, scalability, availability and so on. Design, deploy and manage VMware datacenters Implement monitoring and security of VMware workloads with ease. Who This Book Is For If you are an administrator, infrastructure engineer, IT architect, or an IT

consultant and analyst who has basic knowledge of VMware vSphere and now wants to master it, then this book is for you. What You Will Learn Get a deep understanding of vSphere 6.5 functionalities Design and plan a virtualization environment based on vSphere 6.5 Manage and administer a vSphere 6.5 environment and resources Get tips for the VCP6-DCV and VCIX6-DCV exams (along with use of the vSphere 6 documentation) Implement different migration techniques to move your workload across different environments. Save your configuration, data and workload from your virtual infrastructure. In Detail VMware vSphere 6.5 provides a powerful, flexible and secure foundation for next-generation applications which helps you create an effective digital transformation. This book will be based on VMware vSphere 6.5 which empowers you to virtualize any complex application with ease. You'll begin by getting an overview of all the products, solutions and features of the vSphere 6.5 suite, comparing the evolutions with the previous releases. Next ,you'll design and plan a virtualization infrastructure to drive planning and performance analysis. Following this , you will be proceeding with workflow and installation of components. New network trends are also covered which will help you in optimally designing the vSphere environment. You will also learn the practices and procedures involved in configuring and managing virtual machines in a vSphere infrastructure. With vSphere 6.5, you'll make use of significantly more powerful capabilities for patching, upgrading, and managing the configuration of the virtual environment. Next we'll focus on specific availability and resiliency solutions in vSphere. Towards the end of the book you will get information on how to save your configuration, data and workload from your virtual infrastructure. By the end of the book you'll learn about VMware vSphere 6.5 right from design to deployment and management. Style and Approach This book acts as a reference guide providing real-world scenarios and a possible baseline for each virtualization project based on VMware vSphere.

The purpose of this book is to showcase the amazing expertise of our guest speakers at the North American MVPDays Community Roadshow. They have so much passion, expertise, and expert knowledge that it only seemed fitting to write it down in a book. MVPDays was founded by Cristal and Dave Kawula back in 2013. It started as a simple idea; "There's got to be a good way for Microsoft MVPs to reach the IT community and share their vast knowledge and experience in a fun and engaging way" I mean, what is the point in recognizing these bright and inspiring individuals, and not leveraging them to inspire the community that they are a part of. We often get asked the question "Who should attend MVPDays"? Anyone that has an interest in technology, is eager to learn, and wants to meet other like-minded individuals. This Roadshow is not just for Microsoft MVP's it is for anyone in the IT Community. Make sure you check out the MVPDays website at: www.mvpdays.com. You never know maybe the roadshow will be coming to a city near you. The goal of this particular book is to give you some amazing Master PowerShell tips from the experts you come to see in person at the MVPDays Roadshow. Each chapter is broken down into a unique tip and we really hope you find some immense value in what we have written.

Offers techniques, tips, and insights into squeezing maximum performance out of a virtualized database.

Understand and implement VMware Virtual SAN: the heart of tomorrow's Software-Defined Datacenter (SDDC) VMware's breakthrough Software-Defined Datacenter (SDDC) initiative can help you virtualize your entire datacenter: compute, storage,

networks, and associated services. Central to SDDC is VMware Virtual SAN (VSAN): a fully distributed storage architecture seamlessly integrated into the hypervisor and capable of scaling to meet any enterprise storage requirement. Now, the leaders of VMware's wildly popular Virtual SAN previews have written the first authoritative guide to this pivotal technology. You'll learn what Virtual SAN is, exactly what it offers, how to implement it, and how to maximize its value. Writing for administrators, consultants, and architects, Cormac Hogan and Duncan Epping show how Virtual SAN implements both object-based storage and a policy platform that simplifies VM storage placement. You'll learn how Virtual SAN and vSphere work together to dramatically improve resiliency, scale-out storage functionality, and control over QoS. Both an up-to-the-minute reference and hands-on tutorial, Essential Virtual SAN uses realistic examples to demonstrate Virtual SAN's most powerful capabilities. You'll learn how to plan, architect, and deploy Virtual SAN successfully, avoid gotchas, and troubleshoot problems once you're up and running. Coverage includes Understanding the key goals and concepts of Software-Defined Storage and Virtual SAN technology Meeting physical and virtual requirements for safe Virtual SAN implementation Installing and configuring Virtual SAN for your unique environment Using Storage Policy Based Management to control availability, performance, and reliability Simplifying deployment with VM Storage Policies Discovering key Virtual SAN architectural details: caching I/O, VASA, witnesses, pass-through RAID, and more Ensuring efficient day-to-day Virtual SAN management and maintenance Interoperating with other VMware features and products Designing and sizing Virtual SAN clusters Troubleshooting, monitoring, and performance optimization

A comprehensive, practical guide to accessing virtual desktops, applications, and services through a unified platform About This Book This is the first book on the market that delivers desktops and applications through a single Virtual Desktop Infrastructure platform Reduce enterprise costs by dynamically allocating resources with virtual storage, compute and networking This comprehensive guide provides simplified operations, improved security, and accelerated time-to-value using VMware Horizon 7 Who This Book Is For If you are a newcomer to system administration, and you wish to implement the Horizon environment, then this book is for you. Prior knowledge of Horizon is beneficial. What You Will Learn Walk through the configuration of VMware Horizon, including the new Horizon Access Point appliance Implement a multi-site VMware Horizon pod using the Cloud Pod Architecture feature Understand the integration between VMware Horizon and VSAN, and see how they are deployed together Explore how to implement and maintain Microsoft RDS and Linux and Windows Desktop Pools Create and optimize desktop master images. Understand how to manage the SSL certificates for each of the VMware Horizon components. In Detail VMware Horizon 7 has been a buzz since it was announced. One of the major reasons is the introduction of the new Instant Clones feature. This book will complement the product documentation by providing real-life examples of how it is implemented along with the latest features and components of the platform. We'll explore the latest features of the platform, including those added through product acquisitions such as User Environment Manager and App Volumes. Further on, you will also be introduced to the new capabilities added to the core product such as Linked-Clone RDS pools. Upon completion of this book, you will have an understanding of the capabilities and benefits VMware Horizon can provide to your organization, and how each of its components are implemented.

Style and approach This comprehensive guide focuses on the practicality of VMware Horizon and how you can implement it in your organization.

Prepare to succeed at your VCDX panel defense and gain world-class knowledge for designing complex VMware environments VMware Certified Design Expert (VCDX) is the highest level of VMware certification, achieved by dedicated professionals who have demonstrated exceptional skill in VMware enterprise deployments. To earn a VCDX, professionals must create a complete enterprise VMware design and undergo an arduous defense at the hands of some of the world's most sophisticated VMware experts. Now, for the first time, there's a comprehensive guide to VCDX defense: VCDX Boot Camp. Based on the legendary standing-room-only boot camps led by VCDX co-creator John Arrasjid, this guide captures the unsurpassed personal experience of three pioneering VCDX certification holders, program developers, and defense panelists. John Arrasjid, Ben Lin, and Mostafa Khalil cover everything you need to know to prepare for certification. They demystify the entire VCDX defense process, clearly explain its format and prerequisites, and offer indispensable tips for maximizing your likelihood of success. Detailed chapters on both design and troubleshooting offer four complete scenarios explaining exactly what VCDX panelists will expect from your defense. Learn how to think like a VCDX, discovering powerful insights and best practices for designing your own world-class virtualized environment. Coverage includes • Authoritative preparation guidance (including expert insights into scheduling your preparation and defense) • Tips for conducting mock defenses, boot camps, and study sessions with your colleagues • How to select, create, and document a superior, defensible design • How to make design choices and incorporate design patterns that support the VCDX blueprint • How to confidently defend your skills in architecture, designing new solutions, and troubleshooting design or implementation flaws • Proven tips for responding to tough questions from panelists • Detailed example defenses of designs incorporating VCDX-DCV, VCDX-Cloud, and VCDX-DT vmwarepress.com vmware.com/go/vcdx

Along with servers and networking infrastructure, networked storage is one of the fundamental components of a modern data center. Because storage networking has evolved over the past two decades, the industry has settled on the basic storage networking technologies. These technologies are Fibre Channel (FC) storage area networks (SANs), Internet Small Computer System Interface (iSCSI)-based Ethernet attachment, and Ethernet-based network-attached storage (NAS). Today, lossless, low-latency, high-speed FC SANs are viewed as the high-performance option for networked storage. iSCSI and NAS are viewed as lower cost, lower performance technologies. The advent of the 100 Gbps Ethernet and Data Center Bridging (DCB) standards for lossless Ethernet give Ethernet technology many of the desirable characteristics that make FC the preferred storage networking technology. These characteristics include comparable speed, low latency, and lossless behavior. Coupled with an ongoing industry drive toward better asset utilization and lower total cost of ownership, these advances open the door for organizations to consider consolidating and converging their networked storage infrastructures with their Ethernet data networks. Fibre Channel over Ethernet (FCoE) is one approach to this convergence, but 10-Gbps-enabled iSCSI also offers compelling options for many organizations with the hope that their performance can now rival that of FC. This IBM® Redbooks® publication is written for experienced systems, storage, and network administrators who want to integrate the IBM System Networking and Storage technology successfully into new and existing networks. This book provides an overview of today's options for storage networking convergence. It

reviews the technology background for each of these options and then examines detailed scenarios for them by using IBM and IBM Business Partner convergence products.

If you are a Citrix® engineer, a virtualization consultant, or an IT project manager with prior experience of using Citrix XenApp® and related technologies for desktop virtualization and want to further explore the power of XenApp® for flawless desktop virtualization, then this book is for you.

Learn all you need to know about seven key innovations disrupting business analytics today. These innovations—the open source business model, cloud analytics, the Hadoop ecosystem, Spark and in-memory analytics, streaming analytics, Deep Learning, and self-service analytics—are radically changing how businesses use data for competitive advantage. Taken together, they are disrupting the business analytics value chain, creating new opportunities. Enterprises who seize the opportunity will thrive and prosper, while others struggle and decline: disrupt or be disrupted. *Disruptive Business Analytics* provides strategies to profit from disruption. It shows you how to organize for insight, build and provision an open source stack, how to practice lean data warehousing, and how to assimilate disruptive innovations into an organization. Through a short history of business analytics and a detailed survey of products and services, analytics authority Thomas W. Dinsmore provides a practical explanation of the most compelling innovations available today. What You'll Learn Discover how the open source business model works and how to make it work for you See how cloud computing completely changes the economics of analytics Harness the power of Hadoop and its ecosystem Find out why Apache Spark is everywhere Discover the potential of streaming and real-time analytics Learn what Deep Learning can do and why it matters See how self-service analytics can change the way organizations do business Who This Book Is For Corporate actors at all levels of responsibility for analytics: analysts, CIOs, CTOs, strategic decision makers, managers, systems architects, technical marketers, product developers, IT personnel, and consultants.

Learn the intricacies of managing Azure AD, Azure AD Connect as well as Active Directory for administration on cloud and Windows Server 2019 Key Features Expert solutions for the federation, certificates, security, and monitoring with Active Directory Explore Azure AD and AD Connect for effective administration on cloud Automate security tasks using Active Directory and PowerShell Book Description Active Directory is an administration system for Windows administrators to automate network, security and access management tasks in the Windows infrastructure. This book starts off with a detailed focus on forests, domains, trusts, schemas and partitions. Next, you learn how to manage domain controllers, organizational units and the default containers. Going forward, you deep dive into managing Active Directory sites as well as identifying and solving replication problems. The next set of chapters covers the different components of Active Directory and discusses the management of users, groups and computers. You also go through recipes that help you manage your Active Directory domains, manage user and groups objects and computer accounts, expiring group memberships and group Managed Service Accounts with PowerShell. You learn how to work with Group Policy and how to get the most out of it. The last set of chapters covers federation, security and monitoring. You will also learn about Azure Active Directory and how to integrate on-premises Active Directory with Azure AD. You learn how Azure AD Connect synchronization works, which will help you manage Azure AD. By the end of the book, you have learned in detail about Active Directory and Azure AD, too. What you will learn Manage new Active Directory features, such as the Recycle Bin, group Managed Service Accounts, and fine-grained password policies Work with Active Directory from the command line and use Windows PowerShell to automate tasks Create and remove forests, domains, and trusts Create groups, modify group scope and type, and manage memberships Delegate control, view and modify permissions Optimize Active Directory and Azure AD in terms of security Who this book is

for This book will cater to administrators of existing Active Directory Domain Services environments and/or Azure AD tenants, looking for guidance to optimize their day-to-day effectiveness. Basic networking and Windows Server Operating System knowledge would come in handy.

Learn virtualization skills by building your own virtual machine Virtualization Essentials, Second Edition provides new and aspiring IT professionals with immersive training in working with virtualization environments. Clear, straightforward discussion simplifies complex concepts, and the hands-on tutorial approach helps you quickly get up to speed on the fundamentals. You'll begin by learning what virtualization is and how it works within the computing environment, then you'll dive right into building your own virtual machine. You'll learn how to set up the CPU, memory, storage, networking, and more as you master the skills that put you in-demand on the job market. Each chapter focuses on a specific goal, and concludes with review questions that test your understanding as well as suggested exercises that help you reinforce what you've learned. As more and more companies are leveraging virtualization, it's imperative that IT professionals have the skills and knowledge to interface with virtualization-centric infrastructures. This book takes a learning-by-doing approach to give you hands-on training and a core understanding of virtualization. Understand how virtualization works Create a virtual machine by scratch and migration Configure and manage basic components and supporting devices Develop the necessary skill set to work in today's virtual world Virtualization was initially used to build test labs, but its use has expanded to become best practice for a tremendous variety of IT solutions including high availability, business continuity, dynamic IT, and more. Cloud computing and DevOps rely on virtualization technologies, and the exponential spread of these and similar applications make virtualization proficiency a major value-add for any IT professional. Virtualization Essentials, Second Edition provides accessible, user-friendly, informative virtualization training for the forward-looking pro. This is the fundamental truth about data protection: backup is dead. Or rather, backup and recovery, as a standalone topic, no longer has relevance in IT. As a standalone topic, it's been killed off by seemingly exponential growth in storage and data, by the cloud, and by virtualization. So what is data protection? This book takes a holistic, business-based approach to data protection. It explains how data protection is a mix of proactive and reactive planning, technology and activities that allow for data continuity. It shows how truly effective data protection comes from a holistic approach considering the entire data lifecycle and all required SLAs. Data protection is neither RAID nor is it continuous availability, replication, snapshots or backups—it is all of them, combined in a considered and measured approach to suit the criticality of the data and meet all the requirements of the business. The book also discusses how businesses seeking to creatively leverage their IT investments and to drive through cost optimization are increasingly looking at data protection as a mechanism to achieve those goals. In addition to being a type of insurance policy, data protection is becoming an enabler for new processes around data movement and data processing. This book arms readers with information critical for making decisions on how data can be protected against loss in the cloud, on-premises, or in a mix of the two. It explains the changing face of recovery in a highly virtualized data center and techniques for dealing with big data. Moreover, it presents a model for where data recovery processes can be integrated with IT governance and management in order to achieve the right focus on recoverability across the business.

A clear, comprehensive guide to VMware's latest virtualization solution Mastering VMware NSX for vSphere is the ultimate guide to VMware's network security virtualization platform. Written by a rock star in the VMware community, this book offers invaluable guidance and crucial reference for every facet of NSX, with clear explanations that go far beyond the public documentation. Coverage includes NSX architecture, controllers, and edges; preparation and deployment; logical switches; VLANs and VXLANs; logical routers; virtualization; edge

network services; firewall security; and much more to help you take full advantage of the platform's many features. More and more organizations are recognizing both the need for stronger network security and the powerful solution that is NSX; usage has doubled in the past year alone, and that trend is projected to grow—and these organizations need qualified professionals who know how to work effectively with the NSX platform. This book covers everything you need to know to exploit the platform's full functionality so you can: Step up security at the application level Automate security and networking services Streamline infrastructure for better continuity Improve compliance by isolating systems that handle sensitive data VMware's NSX provides advanced security tools at a lower cost than traditional networking. As server virtualization has already become a de facto standard in many circles, network virtualization will follow quickly—and NSX positions VMware in the lead the way vSphere won the servers. NSX allows you to boost security at a granular level, streamline compliance, and build a more robust defense against the sort of problems that make headlines. Mastering VMware NSX for vSphere helps you get up to speed quickly and put this powerful platform to work for your organization.

Explore the benefits of VMware vSphere 6.7 to provide a powerful, flexible, and secure virtual infrastructure, and secure apps. Next, you'll pick up on how to enhance your infrastructure with high-performance storage access, such as remote direct memory access (RDMA) and Persistent Key Features Design, deploy and manage VMware vSphere virtual data centers Implement monitoring and security of VMware workloads with ease Explore tips and techniques for designing a robust virtual infrastructure Book Description vSphere 6.7 is the latest release of VMware's industry-leading virtual cloud platform. By understanding how to manage, secure, and scale apps with vSphere 6.7, you can easily run even the most demanding of workloads. This Learning Path begins with an overview of the features of the vSphere 6.7 suite. You'll learn how to plan and design a virtual infrastructure. You'll also gain insights into best practices to efficiently configure, manage, and secure apps. Next, you'll pick up on how to enhance your infrastructure with high-performance storage access, such as remote direct memory access (RDMA) and Persistent memory. The book will even guide you in securing your network with security features, such as encrypted vMotion and VM-level encryption. Finally, by learning how to apply Proactive High Availability and Predictive Distributed Resource Scheduler (DRS), you'll be able to achieve enhanced computing, storage, network, and management capabilities for your virtual data center. By the end of this Learning Path, you'll be able to build your own VMware vSphere lab that can run high workloads. This Learning Path includes content from the following Packt products: VMware vSphere 6.7 Data Center Design Cookbook - Third Edition by Mike Brown and Hersey Cartwright Mastering VMware vSphere 6.7 - Second Edition by Martin Gavanda, Andrea Mauro, Karel Novak, and Paolo Valsecchi What you will learn Understand how to patch, upgrade, and manage a virtual environment with vSphere 6.7 Identify key factors related to a vSphere design Mitigate security risks and meet compliance requirements in a vSphere design Create a vSphere conceptual design by identifying technical and business requirements Map the logical resource design into the physical vSphere design Create professional vSphere design documentation Who this book is for This Learning Path is for administrators, infrastructure engineers, consultants, and architects who want to design virtualized data center environments using VMware vSphere 6.x (or previous versions of vSphere and the supporting components). Basic knowledge of VMware vSphere is required to get the most out of this Learning Path.

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