

## Windows Server 2012 Hyper V Deploying The Hyper V Enterprise Server Virtualization Platform Shah Zahir Hussain

This is a Packt Cookbook, full with over 75 recipes for VMM users to carry out vital tasks quickly and easily. This book is written for solutions architects, technical consultants, administrators, and any other virtualization lover who needs to use Microsoft System Center Virtual Machine Manager in a real world environment.

Fully updated for Windows Server 2012 R2! Prepare for Microsoft Exam 70-410 - and help demonstrate your real-world mastery of implementing and configuring core services in Windows Server 2012 R2. Designed for experienced IT professionals ready to advance their status, Exam Ref focuses on the critical thinking and decision making acumen needed for success at the MCSA level. Focus on the expertise measured by these objectives: Install and configure servers Configure server roles and features Configure Hyper-V Deploy and configure core network services Install and administer Active Directory Create and manage Group Policy This Microsoft Exam Ref: Organizes its coverage by exam objectives. Features strategic, what-if scenarios to challenge you.

Focused technical guidance from System Center experts Part of a series of specialized guidance on System Center--this book provides a single end-to-end resource on Microsoft's software-defined datacenter solution built upon Windows Server 2012 R2 Hyper-V and System Center 2012 R2 Virtual Machine Manager. The book walks you through a proof of concept (POC) deployment of a software-defined compute, storage, and networking infrastructure, starting from racking bare-metal servers through to the streamlined deployment of virtual machines.

Part of a series of specialized guides on System Center - this book provides focused drilldown into building a virtualized network solution. Series editor Mitch Tulloch and a team of System Center experts provide concise technical guidance as they step you through key build, configuration, and implementation tasks.

"Windows Server 2012 Hyper-V Cookbook" is a practical cookbook packed with recipes showing and explaining all the features and components of Hyper-V. You'll learn from best practices, tips and tricks and examples of how to automate daily and common tasks. If you are an administrator who wants to master Microsoft Server Virtualization with Windows Server 2012 Hyper-V, then this book is for you. You should be comfortable with virtualization concepts and practices, and knowledge of previous versions of Windows Server would be an advantage.

This book is great for administrators who are new to automating Hyper-V administration tasks using PowerShell. If you are familiar with the PowerShell command line and have some experience with the Windows Server, this book is perfect for you.

This book is written in a friendly and practical style with numerous tutorials centred on common as well as atypical Hyper-V cluster designs. This book also features a sample cluster design throughout to help you learn how to design a Hyper-V in a real-world scenario. Microsoft Hyper-V Cluster Design is perfect for the systems administrator who has a good understanding of Windows Server in an Active Directory domain and is ready to expand into a highly available virtualized environment. It only expects that you will be familiar with basic hypervisor terminology.

This book focuses on readers starting their journey with Hyper-V, and assumes they have minimal or no knowledge of virtualization.

Get practical information on configuring Hyper-V in Windows Server 2012 R2. This course breaks Hyper-V into three areas: virtual machines, virtual machine storage, and virtual networks. In each section, Timothy Pintello provides the information you need to create these services in Hyper-V, get the settings configured so your system runs smoothly, and optimize performance so no hardware is idle.

This book takes a comprehensive tutorial approach with plenty of screenshots and detailed step-by-step instructions. This book is for Windows server administrators, who may not necessarily be familiar with Hyper-V, and also for existing Hyper-V administrators who want to advance their skills in Windows Server 2012 Hyper-V.

Build a seamless, flexible, full-service datacenter solution Microsoft Windows Server 2016 Hyper-V is the IT administrator's guide to this rising datacenter solution. Hyper-V has already surpassed VMWare in datacenter management, identity service for multiple devices, and more; this book shows you how to harness the power of this hypervisor to simplify the infrastructure, reduce costs, improve productivity, and better manage system resources. From a tour of the technology through architecture, deployment, and integration of System Center, Microsoft Azure, and Microsoft Azure Stack, the discussion illustrates the skills you need to create a complete solution for optimum enterprise management. Coverage includes Windows Azure capabilities for virtual machines, managing a hybrid cloud, IaaS, storage capabilities, PowerShell, and more, with practical real-world guidance from a leading authority in the field. Hyper-V has recently undergone improvements in scalability and features that have positioned it as an ideal solution in the Small/Medium Business and Enterprise markets. This book shows you how to exploit these new capabilities to build a robust data solution for your organization. Discover the capabilities of Microsoft Hyper-V Architect a Hyper-V datacenter solution Plan and manage a deployment or migration Integrate complementary technologies for full scalability Data is everywhere—on desktops, laptops, phones, and multiple operating systems, accessed through email, text messages, web searches, online services, and more. All of this data must be stored, accessible, updated, backed up, secured, managed, sorted, and analyzed—sometimes instantly. Hyper-V is the rising star in the virtualization space, and Microsoft Windows Server 2016 Hyper-V shows you how to turn greater capabilities into better datacenter solutions.

Successfully create and manage your Hyper-V environment without any of the marketing fluff. This book's lab-driven, hands-on approach will get you up and running as quickly and efficiently as possible. Virtualization is the cornerstone of today's data center. As a modern-day IT pro, you are required to manage environments that are in a regular state of flux and increasing in both size and complexity. To keep up, you need practical information in a format that is succinct, yet comprehensive and highly applicable. Pro Hyper-V 2019 breaks down critical and time-saving topics into a series of easy-to-digest chapters, showing you how to perform Hyper-V management tasks using both GUI and PowerShell-based tools. Building on your existing knowledge of Windows Server management, Active Directory, networking, and storage, experts



learning disaster recovery Use the best practices of network and storage Master the performance and scalability of storage virtualization Migrate your existing virtualization workloads to Hyper-V 2016 Manage your Hyper-V stack with System Center and Azure Bridge the gap between the Hyper-V lab and production environment In Detail Hyper-V Server and Windows Server 2016 with Hyper-V provide best-in-class virtualization capabilities. Hyper-V is a Windows-based, very cost-effective virtualization solution with easy-to-use and well-known administrative consoles. This book will assist you in designing, implementing, and managing highly effective and highly available Hyper-V infrastructures. With an example-oriented approach, this book covers all the different tips and suggestions to configure Hyper-V and provides readers with real-world proven solutions. This book begins by deploying single clusters of High Availability Hyper-V systems including the new Nano Server. This is followed by steps to configure the Hyper-V infrastructure components such as storage and network. It also touches on necessary processes such as backup and disaster recovery for optimal configuration. The book does not only show you what to do and how to plan the different scenarios, but it also provides in-depth configuration options. These scalable and automated configurations are then optimized via performance tuning and central management ensuring your applications are always the best they can be. Style and approach This book covers Hyper-V best practices in a step-by-step manner with clear and concise examples.

The only book to take an in-depth look at deploying Hyper-V Now in its second generation, the popular Hyper-V boasts technical advances that create even more dynamic systems than ever before. This unique resource serves an authoritative guide to deploying Windows Server 2008 R2 Hyper-V comprehensively. Step-by-step instructions demonstrate how to design a Hyper-V deployment, build a Hyper-V host environment, and design a management system with System Center Virtual Machine Manager 2008 R2. Features real-world examples that show you how to design a Hyper-V deployment, build a Hyper-V host environment, and design a management system Walks you through incorporating System Center Operations Manager 2008 R2, System Center Data Protection Manager 2010, and System Center Essentials 2010 Offers authoritative coverage of Hyper-V security, business continuity, and an array of VM roles, including domain controllers, Exchange Server, SQL Server, and System Center This in-depth guide is the ultimate resource for system administrators, engineers, and architects, and IT consultants deploying Hyper-V.

Get practical information on configuring virtual machines, virtual machine storage, and virtual networks with Hyper-V in Windows Server 2012 R2.

Hyper-V Security is intended for administrators with a solid working knowledge of Hyper-V Server, Windows Server, and Active Directory. An administrator with a functional environment will be able to use the knowledge and examples present in this book to enhance security.

Implement a Hyper-V virtualization solution Microsoft Virtualization with Hyper-V shows you how to deploy Microsoft's next-generation hypervisor-based server virtualization technology in a corporate environment. You'll get step-by-step guidelines for getting Hyper-V up and running, followed by best practices for building a larger, fault-tolerant solution using System Center Virtual Machine Manager 2008. This hands-on guide explains how to migrate physical systems to the virtual environment; use System Center Operations Manager; and secure, back up, and restore your Hyper-V solution. Plan and implement a Hyper-V installation Configure Hyper-V components Install and configure System Center Virtual Machine Manager 2008 Create and manage virtual machines Back up and restore virtual machines Monitor, back up, and restore the virtual solution Secure your Hyper-V environment Understand the virtual desktop infrastructure Use third-party virtualization tools for Hyper-V

Virtualization of workloads is no longer a new concept, and organizations are willingly adopting and promoting server and desktop virtualization. OS and software vendors have already realized the drift and efforts that are being made to develop workloads that can be ported seamlessly to a virtual machine platform, other than being hosted on a physical server. The latest server virtualization platform (Hypervisor) release from Microsoft, Windows Server 2012 R2 Hyper-V, is not only economical and user-friendly but also a robust and resilient solution. Hyper-V is now one of the top contenders in the server virtualization area, and is already leading in some markets. This book is a handy and easy-to-follow guide that describes the concepts of virtualization and the Hyper-V design approach. Each topic is explained sequentially to help you build an understanding of Hyper-V and thereafter deploy a fully functional and robust solution, alongside a disaster recovery failover plan. I'm looking forward to all of you becoming Hyper-V experts!

Go-to guide for using Microsoft's updated Hyper-V as a virtualization solution Windows Server 2012 Hyper-V offers greater scalability, new components, and more options than ever before for large enterprises and small/medium businesses. Windows Server 2012 Hyper-V Installation and Configuration Guide is the place to start learning about this new cloud operating system. You'll get up to speed on the architecture, basic deployment and upgrading, creating virtual workloads, designing and implementing advanced network architectures, creating multi-tenant clouds, backup, disaster recovery, and more. The international team of expert authors offers deep technical detail, as well as hands-on exercises and plenty of real-world scenarios, so you thoroughly understand all features and how best to use them.

Explains how to deploy, use, manage, and maintain the Windows Server 2012 Hyper-V virtualization solutions in large enterprises and small- to medium-businesses Provides deep technical detail and plenty of exercises showing you how to work with Hyper-V in real-world settings Shows you how to quickly configure Hyper-V from the GUI and use PowerShell to script and automate common tasks Covers deploying Hyper-V hosts, managing virtual machines, network fabrics, cloud computing, and using file servers Also explores virtual SAN storage, creating guest clusters, backup and disaster recovery, using Hyper-V for Virtual Desktop Infrastructure (VDI), and other topics Help make your Hyper-V virtualization solution a success with Windows Server 2012 Hyper-V Installation and Configuration Guide.

This text does not include a MOAC Labs Online access code. This 70-410 Installing and Configuring Windows Server 2012 textbook prepares certification students for the first of a series of three exams which validate the skills and knowledge necessary to

implement a core Windows Server 2012 Infrastructure into an existing enterprise environment. This Microsoft Official Academic Course is mapped to the 70-410 Installing and Configuring Windows Server 2012 exam objectives. This textbook focuses on real skills for real jobs and prepares students to prove mastery of core services such as Active Directory and networking services. In addition, this book also covers such valuable skills as:

- Managing Active Directory Domain Services Objects
- Automating Active Directory Domain Services Administration
- Implementing Local Storage
- Implementing File and Print Services
- Implementing Group Policy
- Implementing Server Virtualization with Hyper-V

This book is a step-by-step guide packed with recipes that cover architecture design and planning. The book is also full of deployment tips, techniques, and solutions. If you are a solutions architect, technical consultant, administrator, or any other virtualization enthusiast who needs to use Microsoft System Center Virtual Machine Manager in a real-world environment, then this is the book for you. We assume that you have previous experience with Windows 2012 R2 and Hyper-V.

Conquer Windows Server 2012 R2 virtualization--from the inside out! Dive into Windows Server 2012 R2 virtualization--and really put your systems expertise to work. Focusing on both virtual desktop infrastructure and virtualized applications, this supremely organized reference packs hundreds of timesaving solutions, tips, and workarounds. Discover how the experts tackle Windows virtualization--and challenge yourself to new levels of mastery. Use virtualization to prevent business disruption, help improve security, simplify upgrades, and support mobile users Plan and deploy User State Virtualization for a consistent experience across locations and devices Define users, applications, and scenarios for any virtualization project Compare and deploy both session-based and virtual machine-based (VM-based) desktops Configure Client Hyper-V and work with VMs in a Client Hyper-V environment Install, design, configure, and administer Microsoft Application Virtualization (App-V) infrastructure and clients Sequence applications for efficient and reliable deployment Help secure remote access to virtual desktops with Remote Desktop Gateway (RD Gateway) Plan and implement pooled and personal desktops Monitor virtualized apps and desktops for health and performance

Check out the new Hyper-V, find new and easier ways to remotely connect back into the office, or learn all about Storage Spaces—these are just a few of the features in Windows Server 2012 R2 that are explained in this updated edition from Windows authority Mark Minasi and a team of Windows Server experts led by Kevin Greene. This book gets you up to speed on all of the new features and functions of Windows Server, and includes real-world scenarios to put them in perspective. If you're a system administrator upgrading to, migrating to, or managing Windows Server 2012 R2, find what you need to do the job in this complete resource. Learn all about: Installing or upgrading to and managing Windows Server 2012 R2 Understanding Microsoft NIC teams 2012 and PowerShell Setting up via GUI or updated Server Core 2012 Migrating, merging, and modifying your Active Directory Managing address spaces with IPAM Understanding new shared storage, storage spaces, and better tools Controlling access to file shares—a new and improved approach Using and administering Remote Desktop, Virtual Desktop, and Hyper-V®

This scenario-focused title provides concise technical guidance and insights for troubleshooting and optimizing networking with Hyper-V. Written by experienced virtualization professionals, this little book packs a lot of value into a few pages, offering a lean read with lots of real-world insights and best practices for Hyper-V networking optimization in Windows Server 2012. Focused guide extends your knowledge and capabilities with Hyper-V networking in Windows Server 2012 Shares hands-on insights from a team of Microsoft virtualization experts Provides pragmatic troubleshooting and optimization guidance from the field

Discusses how to configure and manage Microsoft Server 2012's expanded capabilities, covering data management, user permissions, networking tools, and data integrity.

If you are a virtualization architect, engineer, or administrator who wants to leverage Hyper-V to create virtual networks (virtual data centers), this is the book for you. Prior knowledge of Hyper-V or a similar solution and a good understanding of the end goals of creating a virtual network is required.

Master Windows Server installation and configuration with hands-on practice and interactive study aids for the MCSA: Windows Server 2012 R2 exam 70-410 MCSA: Windows Server 2012 R2 Installation and Configuration Study Guide: Exam 70-410 provides complete preparation for exam 70-410: Installing and Configuring Windows Server 2012 R2. With comprehensive coverage of all exam topics and plenty of hands-on practice, this self-paced guide is the ideal resource for those preparing for the MCSA on Windows Server 2012 R2. Real-world scenarios demonstrate how the lessons are applied in everyday settings. Readers also get access to the interactive practice tests, electronic flashcards, and video demonstration of the more difficult tasks, which help readers fully understand the scope of principles at work. Exam 70-410 is one of three exams MCSA candidates must take to obtain their MCSA: Windows Server 2012 R2. The test is aligned with the 2012 update to the Windows server operating system, and so is the book. This study guide contains everything users need to know for the exam, including the 2012 update's changes to Hyper-V and Active Directory. Avoid surprises on exam day, and master the material while learning to: Install and configure Windows Server 2012 R2 Configure Hyper-V and server roles and features Install and administer Active Directory Manage Group Policy Exam prep is about more than passing the test—it helps you gain hands-on experience performing more complex operations, giving you the confidence you need to successfully apply what you've learned in a work environment. If you're looking to triumph over the MCSA exam 70-410, MCSA: Windows Server 2012 R2 Installation and Configuration Study Guide: Exam 70-410 provides the information and practice you need.

Deploy Microsoft Virtualization and VDI solutions using real-world Hyper-V configurations About This Book Get acquainted with the basics of Windows Server Hyper-V 2012 R2 and understand how to efficiently design a highly available virtualization solution Assess your physical server environment and understand the fundamentals of server consolidation and sizing of Hyper-V hosts Design practical solutions for common design patterns with explanations of these design decisions Who This Book Is For This book is aimed at IT admins, consultants, and architects alike who wish to deploy, manage, and maintain Hyper-V solutions in organizations of various sizes. Readers are expected to have a working knowledge of managing Windows Servers and a fair understanding of networking and storage concepts. What You Will Learn Set up independent and highly available clustered Hyper-V hosts via GUI and PowerShell Acquire knowledge about Generation 1 and 2 Virtual Machines, their creation and management, and also look at the VM Conversion process Understand NIC Teaming, Extensible Virtual Switch, and other networking advancements Gain insight into virtual machine storage changes and its follow-up benefits Discover backup and recovery patterns for Hyper-V Familiarize yourself with the essentials of Hyper-V Replica Leverage the benefits of Microsoft VDI In Detail The IT community has already experienced the benefits of server virtualization. However, they were limited to one option primarily until Microsoft released its flagship Hypervisor platform. Windows Server Hyper-V 2012 and R2 along with Hyper-V Server 2012 and R2 present a cost effective yet robust virtualization solution to enterprises who wish to consolidate their physical server workloads or migrate their pre-existing VMware workloads to Hyper-V. Hyper-V has proven to be a stable and an economical virtualization solution and with its high availability, live migration, and new

network virtualization and storage enhancement features, enterprises will never feel the need to consider another alternative. This book is a practical, example-oriented tutorial that will guide you through the basics and architecture of the Hyper-V platform and thereafter help you understand how to build your Virtualization infrastructure from the ground up. The book then goes on to focus on scalability and high availability aspects and trains you in setting up highly available Hyper-V clusters and the live migration of virtual machines. You will also learn about the advancements in virtual networking and storage in Windows Server 2012. After the implementation guidance, the book then advises you on how to set up backup and recovery and how to prepare a disaster recovery plan via Hyper-V Replica. The book concludes with a good insight into Microsoft VDI implementation guidance. Style and approach This is a handy and easy-to-follow guide that describes virtualization concepts and the Hyper-V design approach. Each topic is explained sequentially and is enhanced with real-world scenarios, practical examples, screenshots, and step-by-step explanations to help readers understand clearly.

Designed to help enterprise administrators develop real-world, job-role-specific skills—this Training Guide focuses on deploying and managing core infrastructure services in Windows Server 2012. Build hands-on expertise through a series of lessons, exercises, and suggested practices—and help maximize your performance on the job. This Microsoft Training Guide: Provides in-depth, hands-on training you take at your own pace Focuses on job-role-specific expertise for deploying and managing Windows Server 2012 core services Creates a foundation of skills which, along with on-the-job experience, can be measured by Microsoft Certification exams such as 70-410 Coverage includes: Deploying Servers and Domain Controllers Remote Management Administering Active Directory Network Administration Using Group Policy Provisioning and Managing Storage Deploying Hyper-V Hosts Deploying and Managing Virtualized Workloads Deploying File Servers Managing Print Services

This book is intended to provide you with an overview of the new features and enhancements introduced in Windows Server 2012 R2. The intended audience for this book is IT pros who deploy, manage, and maintain Windows Server workloads in data center, private cloud, and hosting provider environments. We assume that you are at least somewhat familiar with the features and capabilities of the previous platform Windows Server, but it is not strictly necessary. Managers and Windows Server users may find this book a useful support in their work. The most important content is as follows: News of the replication DFS and de-duplication across Windows Server 2012 R2 News in active directory in Windows Server 12 R2 News in certificate services, bitlocker and authenticated wired access in Windows Server 2012 R2 News in DHCP and DNS in Windows Server 2012 R2 News in failover clustering in Windows Server 12 R2 News file services and storage and resource management in Windows Server 2012 R2 News of the resource manager in Windows Server 2012 R2 file server Hyper V roll in Windows Server 2012 Virtual machine generation Virtual machine automatic activation Hyper-V networks. Features new and modified New features of hyper-V in Windows Server 2012 R2 virtual switch Developments of networks in Windows Server 2012 R2 Technologies new and improved networks Windows Server 2012 R2 What's new in IP network management (IPAM IN) Windows Server 2012 R2 Features new of remote access in Windows Server 2012 R2 Adjustment scale on side of Windows Server 2012 R2 virtual reception News in printing and document services in Windows Server 2012 R2 What's new in security and protection in Windows Server 2012 R2 Security in Windows Server 2012 R2

NOTE: This title is also available as a free eBook on the Microsoft Download Center. It is offered for sale in print format as a convenience. Get a head start evaluating Windows Server 2012 R2 - with technical insights from a Microsoft MVP and members of the Windows Server product team. Based on final Windows Server 2012 R2 release-to-manufacturing (RTM) software, this guide introduces new features and capabilities, with scenario-based advice on how the platform can meet the needs of your business. Get the high-level overview you need to begin preparing your deployment now.

Coverage includes: Server virtualization and cloud solutions Availability and scalability Provisioning and storage management Security features, access, and data protection Infrastructure options Server management and automation Cookbook with recipes based on real life examples. This book is written to assist the daily tasks for systems administrators, engineers, and architects working with Windows Server 2012.

Windows Server 2012 Security from End to Edge and Beyond shows you how to architect, design, plan, and deploy Microsoft security technologies for Windows 8/Server 2012 in the enterprise. The book covers security technologies that apply to both client and server and enables you to identify and deploy Windows 8 security features in your systems based on different business and deployment scenarios. The book is a single source for learning how to secure Windows 8 in many systems, including core, endpoint, and anywhere access. Authors Tom Shinder and Yuri Diogenes, both Microsoft employees, bring you insider knowledge of the Windows 8 platform, discussing how to deploy Windows security technologies effectively in both the traditional datacenter and in new cloud-based solutions. With this book, you will understand the conceptual underpinnings of Windows 8 security and how to deploy these features in a test lab and in pilot and production environments. The book's revolutionary "Test Lab Guide" approach lets you test every subject in a predefined test lab environment. This, combined with conceptual and deployment guidance, enables you to understand the technologies and move from lab to production faster than ever before. Critical material is also presented in key concepts and scenario-based approaches to evaluation, planning, deployment, and management. Videos illustrating the functionality in the Test Lab can be downloaded from the authors' blog [http://blogs.technet.com/b/security\\_talk/](http://blogs.technet.com/b/security_talk/). Each chapter wraps up with a bullet list summary of key concepts discussed in the chapter. Provides practical examples of how to design and deploy a world-class security infrastructure to protect both Windows 8 and non-Microsoft assets on your system Written by two Microsoft employees who provide an inside look at the security features of Windows 8 Test Lab Guides enable you to test everything before deploying live to your system