

active directory designing deploying and running active directory

active directory designing deploying and running active directory is a cornerstone of modern IT infrastructure, enabling secure and centralized management of users, computers, and resources. This comprehensive guide delves into the critical aspects of Active Directory, from the initial conceptualization and architectural planning to the practical steps involved in implementation and ongoing operational management. We will explore best practices for designing a robust and scalable Active Directory environment, the intricacies of a successful deployment, and the essential strategies for running Active Directory efficiently and securely. Whether you're a seasoned IT professional or embarking on your first Active Directory project, understanding these phases is paramount to leveraging its full potential for your organization.

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Designing Your Active Directory Architecture

The foundation of a successful Active Directory implementation lies in meticulous design. This phase involves understanding your organization's current needs and future growth projections to create a scalable, resilient, and secure directory structure. A well-designed Active Directory (AD) environment will streamline user authentication, authorization, and resource access, ultimately improving operational efficiency and reducing administrative overhead. Key considerations include determining the optimal forest and domain structure, planning for sites and subnets, and establishing a clear organizational unit (OU) hierarchy. The choices made during the design phase have long-lasting implications, so investing ample time and expertise here is crucial for long-term success.

Understanding Forest and Domain Structures

The forest is the highest level of logical grouping in Active Directory, and it establishes a security boundary. Within a forest, you can have one or more domains. A single domain model is suitable for smaller organizations with a unified administrative structure. However, larger or geographically dispersed organizations might benefit from a multi-domain forest to delegate administrative control, manage different security policies, or represent distinct business units. When designing your domain structure, consider factors like administrative autonomy, security requirements, and the need for replication efficiency. The careful selection of your forest and domain topology directly impacts the manageability and scalability of your AD deployment.

Planning for Sites and Subnets

Active Directory Sites and Services is a critical component for optimizing network traffic and logon performance, especially in organizations with multiple physical locations. A site in Active Directory represents a physical location or a group of IP subnets that are well-connected by a high-speed, reliable network. Defining sites accurately allows Active Directory to manage replication traffic efficiently, ensuring that domain controllers exchange information in a timely manner. It also dictates how clients locate the nearest domain controller for authentication and service requests. Proper site and subnet configuration is essential for ensuring a responsive and efficient user experience across your entire network, especially when managing distributed environments. Incorrectly configured sites can lead to increased network latency and a poor user experience.

Establishing an Organizational Unit (OU) Hierarchy

Organizational Units (OUs) are fundamental to the effective administration of Active Directory. They provide a hierarchical structure within a domain that allows administrators to delegate control and apply Group Policy Objects (GPOs). A well-defined OU structure should mirror your organization's operational and administrative structure. This might involve creating OUs for different departments, geographical locations, or types of user accounts and computer objects. The strategic use of OUs simplifies the application of security settings, software deployments, and user environment configurations, making it easier to manage large numbers of users and computers. Planning your OU strategy upfront will prevent administrative headaches down the line and ensure that your GPOs are applied precisely where they are needed.

Planning Your Active Directory Deployment

Once the design is finalized, the next crucial step is comprehensive deployment planning. This phase bridges the gap between the architectural blueprint and the tangible implementation of Active Directory services. Thorough planning minimizes disruptions, reduces the risk of errors, and ensures a smooth transition to the new or updated directory environment. Key elements of deployment planning include hardware and software requirements, network considerations, security protocols, and a phased rollout strategy. Without a well-defined deployment plan, even the best-designed Active Directory can falter during implementation, leading to delays and potential security vulnerabilities.

Hardware and Software Requirements Assessment

Before deploying any domain controllers or related services, it's vital to accurately assess the hardware and software requirements. This includes determining the appropriate server specifications (CPU, RAM, disk space) for domain controllers based on the expected number of users, objects, and authentication requests. Compatibility with your chosen operating system versions is also paramount. Furthermore, consider the need for additional infrastructure components such as DNS servers, DHCP servers, and potentially Certificate Authority services, all of which are closely intertwined with Active Directory functionality. Proper resource allocation prevents performance bottlenecks and ensures the stability of your directory services.

Network Considerations and Readiness

A robust and reliable network infrastructure is the backbone of a healthy Active Directory. During the planning phase, thoroughly assess your network's readiness. This includes ensuring sufficient bandwidth between sites for replication, verifying DNS resolution capabilities, and confirming that necessary ports are open for communication between domain controllers and clients. Network segmentation and security policies should also be reviewed to ensure they align with your Active Directory security model. Proactive identification and remediation of network issues before deployment can prevent significant troubleshooting challenges later on.

Developing a Phased Rollout Strategy

For larger or more complex environments, a phased rollout strategy is highly recommended. This involves implementing Active Directory in stages, perhaps starting with a pilot group or a specific location, before expanding to the

entire organization. A phased approach allows for testing and validation of configurations, identification of any unforeseen issues, and provides an opportunity to train IT staff on new procedures. It also minimizes the impact of potential problems on the entire user base. Documenting each phase of the rollout, including rollback plans, is an essential part of this strategy.

Deploying Active Directory Services

The deployment phase is where the theoretical plans are translated into a functional Active Directory environment. This involves the installation and configuration of server roles, the promotion of servers to domain controllers, and the initial setup of critical services. Attention to detail and adherence to best practices are paramount during this stage to ensure a secure and stable deployment. Rushing through this process can lead to critical misconfigurations that are difficult to rectify and can compromise the integrity of your directory services.

Installing and Configuring Domain Controllers

The core of Active Directory is the domain controller (DC). The deployment process typically begins with installing the necessary server roles on designated machines, followed by promoting them to domain controllers. This involves running the Active Directory Domain Services (AD DS) installation wizard, specifying crucial information like the domain name, forest functional level, and replication options. Careful consideration should be given to the placement of your initial domain controllers and the subsequent addition of DCs for redundancy and load balancing. Ensuring that DNS is correctly configured before promoting a server is a critical prerequisite.

Configuring DNS and DHCP Integration

Domain Name System (DNS) and Dynamic Host Configuration Protocol (DHCP) are indispensable services for Active Directory. DNS is responsible for resolving hostnames to IP addresses, a function that domain controllers heavily rely on. It's best practice to install and configure the DNS server role on your domain controllers. Similarly, DHCP provides IP addresses and other network configuration parameters to clients, ensuring they can communicate with domain controllers. The integration between AD DS, DNS, and DHCP needs to be seamless for proper functioning. Incorrect DNS or DHCP configuration can lead to client connectivity issues and an inability to join the domain.

Setting Up Initial Group Policy Objects (GPOs)

Group Policy Objects (GPOs) are powerful tools for managing user and computer settings. During the deployment, it's essential to set up initial GPOs that enforce baseline security settings, configure essential software, and define user environments. This might include policies for password complexity, screen saver lockouts, software installation restrictions, and mapped drives. Organizing these GPOs logically and linking them to the appropriate OUs is crucial for effective management. Starting with a few essential GPOs provides immediate benefits and lays the groundwork for more granular control later on.

Running and Managing Your Active Directory Environment

The deployment is just the beginning; effectively running and managing your Active Directory environment is an ongoing process that requires continuous attention to security, performance, and maintenance. Proactive management prevents issues, ensures the integrity of your data, and maximizes the return on your investment in Active Directory. This involves regular monitoring, diligent patching, robust backup strategies, and swift incident response. A well-managed AD environment is a secure and efficient environment.

Monitoring Performance and Health

Continuous monitoring of your Active Directory environment is vital for identifying potential issues before they impact users. This includes tracking key performance indicators (KPIs) such as replication latency, authentication success rates, domain controller CPU and memory utilization, and disk space. Utilizing built-in Windows Server tools and third-party monitoring solutions can provide valuable insights into the health of your AD. Regular performance tuning can ensure optimal responsiveness and prevent service degradations. Proactive monitoring allows administrators to address issues such as replication failures or domain controller overload before they cause significant downtime.

Implementing a Robust Backup and Recovery Strategy

Active Directory contains the credentials and access rights for your entire organization, making it a prime target for data loss. A comprehensive backup and recovery strategy is non-negotiable. This involves regularly backing up your Active Directory database, ideally performing system state backups or

full server backups of your domain controllers. Testing your restore procedures regularly is just as important as performing the backups themselves. In the event of a catastrophic failure or a security incident, a well-tested recovery plan will be the difference between a swift return to operations and prolonged downtime.

Security Best Practices and Patch Management

Securing your Active Directory environment is paramount. This involves implementing strong password policies, enforcing multi-factor authentication where possible, and regularly auditing access logs for suspicious activity. Patch management is a critical component of security. Keeping your domain controllers and related infrastructure patched with the latest security updates from Microsoft is essential to protect against known vulnerabilities. A structured patch management process, including testing patches in a non-production environment before widespread deployment, helps maintain a secure and stable Active Directory.

Ongoing Administration and User Management

Day-to-day administration of Active Directory involves managing user accounts, computer objects, groups, and permissions. This includes creating, modifying, and disabling user accounts, resetting passwords, and assigning users to appropriate groups for resource access. Establishing clear procedures for user and group management, along with a well-defined OU structure, streamlines these tasks and ensures consistency. Regular review of group memberships and permissions helps maintain the principle of least privilege, further enhancing security. Automating routine administrative tasks where possible can free up IT staff to focus on more strategic initiatives.

Frequently Asked Questions

What are the key considerations for designing a hybrid Active Directory (AD) environment to integrate with cloud services like Azure AD?

Key considerations include selecting the right synchronization method (Azure AD Connect is common), planning for identity governance and access management across on-premises and cloud, defining password policies and synchronization, and establishing robust security controls for both environments. It's crucial to understand how authentication and authorization will flow and how to manage user lifecycles consistently.

How can I optimize Active Directory performance and scalability for a growing organization?

Optimization involves several strategies: regular health checks and monitoring of Domain Controllers (DCs), ensuring adequate hardware resources (CPU, RAM, disk I/O), distributing DCs logically across the network and geographically, implementing proper DNS configurations, and regularly reviewing and cleaning up stale objects. Designing an efficient OU structure and Group Policy Objects (GPOs) also plays a significant role.

What are the best practices for securing Active Directory against modern threats like ransomware and sophisticated attacks?

Best practices include implementing Privileged Access Management (PAM) solutions, employing multi-factor authentication (MFA) for administrative accounts, regularly patching DCs and member servers, enforcing the principle of least privilege, segmenting the network, auditing critical changes, using security baselines and GPOs for hardened configurations, and implementing a robust backup and disaster recovery strategy for AD.

What are the advantages and disadvantages of using Read-Only Domain Controllers (RODCs) in a remote or branch office deployment?

Advantages of RODCs include enhanced security by preventing local credential storage, reduced WAN bandwidth usage for authentication, and faster login times for users in remote locations. Disadvantages are that they cannot host certain FSMO roles, require AD replication from a writable DC, and might have limitations with certain applications or services that require direct DC write access.

How do I plan for and execute a successful Active Directory domain upgrade or migration to a newer Windows Server version?

A successful upgrade/migration requires thorough planning: assess current AD health, identify all applications and services that rely on AD, plan the new AD structure (e.g., domain/forest functional levels), create a detailed test plan, perform extensive testing in a lab environment, have a rollback strategy, and schedule the migration during a maintenance window with minimal user impact. Phased deployments are often recommended.

What are the key metrics and tools to monitor the

health and performance of an Active Directory environment?

Key metrics include DC replication latency, DNS resolution times, authentication success/failure rates, DC CPU and memory utilization, disk I/O, and event log errors (especially security and directory service logs). Essential tools include Performance Monitor (Perfmon), Event Viewer, `repadmin`, `dcdiag`, PowerShell cmdlets for AD management, and dedicated third-party AD monitoring solutions.

Additional Resources

Here are 9 book titles related to Active Directory design, deployment, and operation, along with their descriptions:

1. *Active Directory: Designing, Deploying, and Managing a Complete Solution*

This comprehensive guide offers a deep dive into the entire lifecycle of an Active Directory infrastructure. It covers essential aspects like planning your forest and domain structure, implementing robust security measures, and configuring services like Group Policy and DNS. The book emphasizes best practices for scalability and maintainability, making it ideal for administrators tasked with building and running large AD environments.

2. *Mastering Active Directory: The Definitive Guide to Designing, Deploying, and Managing Microsoft Directory Services*

Billed as definitive, this title delves into the intricacies of Active Directory, moving beyond the basics to advanced configurations and troubleshooting. It explores strategic design considerations for modern IT needs, including cloud integration and hybrid environments. The book provides practical, step-by-step instructions for deployment and offers invaluable insights for day-to-day management and performance optimization.

3. *The Art of Active Directory Administration: Principles for Design, Deployment, and Operations*

Focusing on the "art" of AD management, this book highlights the principles behind effective design and operational excellence. It guides readers through the strategic decisions involved in architecting AD for security, performance, and resilience. The content stresses the importance of proactive management, including monitoring, auditing, and disaster recovery planning, to ensure a stable and reliable directory service.

4. *Designing and Deploying Active Directory for Enterprise Networks*

This title specifically targets the complexities of implementing Active Directory within large-scale enterprise environments. It addresses the unique challenges of multi-site deployments, complex trust relationships, and integration with existing enterprise applications. The book offers practical advice on planning for growth, managing user and computer objects efficiently, and establishing clear administrative boundaries.

5. Active Directory Cookbook: Practical Recipes for Design, Deployment, and Management

Presented as a "cookbook," this book provides actionable, step-by-step solutions for common and advanced Active Directory tasks. It covers a wide range of scenarios, from initial setup and configuration to more complex deployments like Read-Only Domain Controllers and advanced Group Policy management. The recipe-based approach makes it an excellent resource for administrators looking for quick, practical answers and solutions.

6. Running a Successful Active Directory Environment: Best Practices for Design, Implementation, and Ongoing Management

This book centers on the practicalities of running a healthy and efficient Active Directory environment. It emphasizes best practices for initial design and deployment, but places a strong focus on the ongoing operational aspects. Readers will learn about effective monitoring strategies, security hardening techniques, and methods for maintaining performance and availability over time.

7. Active Directory Design Patterns and Best Practices: Architecting for Scalability and Security

This title delves into the architectural principles and design patterns that contribute to a robust and secure Active Directory. It explores how to structure your AD to accommodate future growth and evolving security threats. The book provides guidance on making informed decisions about forest design, domain naming conventions, and OU structure for optimal manageability and performance.

8. The Complete Active Directory Deployment Guide: From Planning to Production

This book offers a comprehensive, end-to-end guide to deploying Active Directory, covering every stage from initial planning through to a fully operational production environment. It details the crucial steps involved in gathering requirements, designing the logical and physical topology, and executing the deployment process smoothly. The content also touches upon post-deployment best practices for ongoing administration and support.

9. Active Directory Secrets: Advanced Techniques for Design, Deployment, and Troubleshooting

This title aims to uncover "secrets" and advanced methodologies for working with Active Directory. It goes beyond the standard documentation to explore nuanced design considerations and sophisticated deployment strategies. The book also dedicates significant attention to effective troubleshooting techniques for complex AD issues, making it a valuable resource for experienced administrators seeking to deepen their expertise.

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Designing, Deploying, and Running Active Directory: A Comprehensive Guide to Microsoft's Identity and Access Management Solution

This ebook provides a thorough understanding of Active Directory (AD), encompassing its design principles, deployment strategies, and ongoing management, crucial for securing and efficiently managing modern IT infrastructures. We'll cover everything from initial planning and implementation to troubleshooting and optimization, ensuring readers gain the knowledge and skills necessary for successful AD administration.

Ebook Title: Mastering Active Directory: Design, Deployment, and Administration

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Chapter 5: Securing Your Active Directory Environment: Implementing best practices for security

Chapter 6: Group Policy Management: Centralized configuration and policy enforcement

Chapter 7: Monitoring and Troubleshooting Active Directory: Maintaining system health and resolving issues

Chapter 8: Advanced Active Directory Features: Exploring additional capabilities and integrations

Chapter 9: Migrating to and Managing Azure Active Directory: Connecting on-premises to the cloud

Conclusion: Best Practices and Future Trends in Active Directory Management

Detailed Outline Explanation:

Introduction: This section establishes the foundational importance of Active Directory in modern IT, highlighting its role in identity management, access control, and overall network security. It will also briefly introduce the core concepts and benefits of using AD.

Chapter 1: Planning Your Active Directory Deployment: This chapter emphasizes the critical initial steps of planning, including defining business requirements, assessing existing infrastructure, determining the scope of the deployment (single domain, multiple domains, forest), and choosing appropriate hardware. It will cover needs analysis and resource allocation.

Chapter 2: Designing Your Active Directory Structure: This chapter delves into the design considerations for creating an efficient and scalable AD structure. It covers the strategic use of Organizational Units (OUs) for delegation of administration, the creation of Sites for optimal replication and performance, and the decision-making process for single-domain vs. multi-domain

environments and forest topologies. Best practices for structuring based on departments, locations, or other organizational needs will be discussed.

Chapter 3: Deploying Active Directory: This chapter provides a step-by-step guide to the installation and configuration of domain controllers, including DNS server configuration, Active Directory Domain Services installation, and the promotion of domain controllers. It will discuss different deployment models and considerations for high availability and disaster recovery. The importance of proper schema management will also be detailed.

Chapter 4: Managing Users, Groups, and Computers: This chapter covers user and computer account management within AD, including creating, modifying, and deleting accounts. It will cover the creation and management of security groups, distribution groups, and the crucial role of these groups in implementing fine-grained access control. Best practices for password management and account lockout policies will also be covered.

Chapter 5: Securing Your Active Directory Environment: This chapter focuses on securing the AD infrastructure against threats. It will cover topics such as password policies, account lockout thresholds, auditing, and the implementation of security best practices including multi-factor authentication (MFA) integration, privileged account management, and regular security assessments. Recent advancements in AD security will be highlighted, including the use of advanced threat protection tools.

Chapter 6: Group Policy Management: This chapter explains how to leverage Group Policy Objects (GPOs) to centrally manage and enforce settings across the network. It will cover the creation, deployment, and management of GPOs for controlling user configurations, software installations, security settings, and other critical aspects of the computing environment. Best practices for effective GPO management and troubleshooting will be addressed.

Chapter 7: Monitoring and Troubleshooting Active Directory: This chapter details essential monitoring techniques, including using built-in tools and third-party monitoring solutions, to ensure the health and performance of the Active Directory environment. It provides troubleshooting strategies for common AD issues, such as replication problems, account lockouts, and permission conflicts. Effective logging and event analysis will be explained.

Chapter 8: Advanced Active Directory Features: This chapter explores more advanced AD features, such as Read-Only Domain Controllers (RODCs), Active Directory Certificate Services (AD CS), Active Directory Rights Management Services (AD RMS), and integration with other Microsoft services. The use of PowerShell for automation and management will be a key focus.

Chapter 9: Migrating to and Managing Azure Active Directory: This chapter will explain how to plan and execute a migration strategy from on-premises Active Directory to Azure Active Directory (Azure AD) or hybrid deployments which utilize both on-premises and cloud-based AD infrastructure. It will cover the benefits and challenges of cloud-based identity management and the integration of on-premises systems with Azure AD Connect.

Conclusion: This section summarizes key best practices for designing, deploying, and managing Active Directory, emphasizing the ongoing need for monitoring, security updates, and proactive maintenance. It will also briefly discuss future trends and developments in Active Directory technology.

FAQs:

1. What are the key differences between Active Directory and Azure Active Directory? Azure AD is a cloud-based identity and access management service, while Active Directory is an on-premises solution. Azure AD offers greater scalability and integration with other cloud services.
2. How do I choose the right Active Directory structure for my organization? Consider factors like organizational structure, geographical location, and security requirements. A well-planned structure enhances management efficiency and scalability.
3. What are the best practices for securing Active Directory? Implement strong password policies, multi-factor authentication, regular security audits, and robust access control mechanisms.
4. How can I monitor the performance of my Active Directory? Utilize built-in tools like Active Directory Users and Computers, and consider third-party monitoring solutions for comprehensive oversight.
5. What are the common troubleshooting steps for Active Directory replication issues? Check DNS resolution, network connectivity, and the replication status of domain controllers. Review event logs for clues.
6. How can I automate Active Directory management tasks? Utilize PowerShell scripting to automate repetitive tasks, improve efficiency, and reduce manual errors.
7. What are the benefits of using Group Policy Objects (GPOs)? GPOs provide centralized management of user and computer settings, ensuring consistency and simplifying configuration across the network.
8. How do I migrate my on-premises Active Directory to Azure Active Directory? A phased approach using Azure AD Connect is recommended, ensuring a smooth transition and minimal disruption.
9. What are the future trends in Active Directory management? Expect increased integration with cloud services, greater emphasis on security, and further automation capabilities through AI and machine learning.

Related Articles:

1. Active Directory Domain Services (AD DS) Installation Guide: A step-by-step guide to installing and configuring AD DS.
2. Optimizing Active Directory Performance: Tips and techniques for improving the speed and efficiency of AD.
3. Active Directory Security Best Practices: A comprehensive guide to securing your AD environment against various threats.
4. Troubleshooting Active Directory Replication Problems: A detailed guide to resolving common replication issues.
5. Mastering Active Directory Group Policy: Advanced techniques for managing and utilizing Group

Policy Objects.

6. Migrating to Azure Active Directory: A practical guide to migrating your on-premises AD to the cloud.
7. Active Directory Schema Management: Understanding and managing the Active Directory schema.
8. Implementing Multi-Factor Authentication in Active Directory: Secure your environment with robust MFA.
9. Automating Active Directory with PowerShell: Scripts and techniques for automating AD management tasks.

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active directory designing deploying and running active directory: Active Directory For Dummies Steve Clines, Marcia Loughry, 2009-02-18 Your guide to learning Active Directory the quick and easy way Whether you're new to Active Directory (AD) or a savvy system administrator looking to brush up on your skills, *Active Directory for Dummies* will steer you in the right direction. Since its original release, Microsoft's implementation of the lightweight directory access protocol (LDAP) for the Windows Server line of networking software has become one of the most popular directory service products in the world. If you're involved with the design and support of Microsoft directory services and/or solutions, you're in the right place. This comprehensive guide starts by showing you the basics of AD, so you can utilize its structures to simplify your life and secure your digital environment. From there, you'll discover how to exert fine-grained control over groups, assets, security, permissions, and policies on a Windows network and efficiently configure, manage, and update the network. With coverage of security improvements, significant user interface changes, and updates to the AD scripting engine, password policies, accidental object deletion protection, and more, this plain-English book has everything you need to know. You'll learn how to: Navigate the functions and structures of AD Understand business and technical requirements to determine goals Become familiar with physical components like site links, network services, and site topology Manage and monitor new features, AD replication, and schema management Maintain AD databases Avoid common AD mistakes that can undermine network security With chapters on the ten most important points about AD design, ten online resources, and ten troubleshooting tips, this user-friendly book really is your one-stop guide to setting up, working with, and making the most of Active Directory. Get your copy of *Active Directory For Dummies* and get to work.

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What You Will Learn Explore the new features in Active Directory Domain Service 2016 Automate AD tasks with PowerShell Get to know the advanced functionalities of the schema Learn about Flexible Single Master Operation (FSMO) roles and their placement Install and migrate Active directory from older versions to Active Directory 2016 Manage Active Directory objects using different tools and techniques Manage users, groups, and devices effectively Design your OU structure in the best way Audit and monitor Active Directory Integrate Azure with Active Directory for a hybrid setup In Detail Active Directory is a centralized and standardized system that automates networked management of user data, security, and distributed resources and enables interoperation with other directories. If you are aware of Active Directory basics and want to gain expertise in it, this book is perfect for you. We will quickly go through the architecture and fundamentals of Active Directory and then dive deep into the core components, such as forests, domains, sites, trust relationships, OU, objects, attributes, DNS, and replication. We will then move on to AD schemas, global catalogs, LDAP, RODC, RMS, certificate authorities, group policies, and security best practices, which will help you gain a better understanding of objects and components and how they can be used effectively. We will also cover AD Domain Services and Federation Services for Windows Server 2016 and all their new features. Last but not least, you will learn how to manage your identity infrastructure for a hybrid-cloud setup. All this will help you design, plan, deploy, manage operations on, and troubleshoot your enterprise identity infrastructure in a secure, effective manner. Furthermore, I will guide you through automating administrative tasks using PowerShell cmdlets. Toward the end of the book, we will cover best practices and troubleshooting techniques that can be used to improve security and performance in an identity infrastructure. Style and approach This step-by-step guide will help you master the core functionalities of Active Directory services using Microsoft Server 2016 and PowerShell, with real-world best practices at the end.

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Administration Cookbook Sander Berkouwer, 2019-05-03 Learn the intricacies of managing Azure AD and Azure AD Connect, as well as Active Directory for administration on cloud and Windows Server 2019 Key FeaturesExpert solutions for the federation, certificates, security, and monitoring with Active DirectoryExplore Azure AD and AD Connect for effective administration on cloudAutomate security tasks using Active Directory and PowerShellBook 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'll learn how to manage domain controllers, organizational units and the default containers. Going forward, you'll explore 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'll also work through recipes that help you manage your Active Directory domains, manage user and group objects and computer accounts, expiring group memberships and group Managed Service Accounts (gMSAs) with PowerShell. You'll understand 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'll discover how Azure AD Connect synchronization works, which will help you manage Azure AD. By the end of the book, you have learned about Active Directory and Azure AD in detail. What you will learnManage new Active Directory features, such as the Recycle Bin, group Managed Service Accounts, and fine-grained password policiesWork with Active Directory from the command line and use Windows PowerShell to automate tasksCreate and remove forests, domains, and trustsCreate groups, modify group scope and type, and manage membershipsDelegate control, view and modify permissionsOptimize Active Directory and Azure AD in terms of securityWho 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.

active directory designing deploying and running active directory: Active Directory Cookbook Brian Svidergol, Robbie Allen, 2013-05-29 Take the guesswork out of deploying, administering, and automating Active Directory. With hundreds of proven recipes, the updated edition of this popular cookbook provides quick, step-by-step solutions to common (and not so common) problems you might encounter when working with Microsoft's network directory service. This fourth edition includes troubleshooting recipes for Windows Server 2012, Windows 8, and Exchange 2013, based on valuable input from Windows administrators. You'll also find quick solutions for the Lightweight Directory Access Protocol (LDAP), Active Directory Lightweight Directory Services (AD LDS), multi-master replication, DNS, Group Policy, and many other features. Manage new AD features, such as the Recycle Bin, Group Managed Service Accounts, and fine-grained password policies Work with AD from the command line and use Windows PowerShell to automate tasks Remove and create forests, domains, and trusts Create groups, modify group scope and type, and manage membership Delegate control, view and modify permissions, and handle Kerberos tickets Import and export data with LDAP Data Interchange Format (LDIF) Synchronize multiple directories and enforce data integrity within a single or multiple stores Back up AD, and perform authoritative and non-authoritative restores

active directory designing deploying and running active directory: Modern Authentication with Azure Active Directory for Web Applications Vittorio Bertocci, 2015-12-17 Build advanced authentication solutions for any cloud or web environment Active Directory has been transformed to reflect the cloud revolution, modern protocols, and today's newest SaaS paradigms. This is an authoritative, deep-dive guide to building Active Directory authentication solutions for these new environments. Author Vittorio Bertocci drove these technologies from initial concept to general availability, playing key roles in everything from technical design to documentation. In this book, he delivers comprehensive guidance for building complete solutions. For each app type,

Bertocci presents high-level scenarios and quick implementation steps, illuminates key concepts in greater depth, and helps you refine your solution to improve performance and reliability. He helps you make sense of highly abstract architectural diagrams and nitty-gritty protocol and implementation details. This is the book for people motivated to become experts. Active Directory Program Manager Vittorio Bertocci shows you how to: Address authentication challenges in the cloud or on-premises Systematically protect apps with Azure AD and AD Federation Services Power sign-in flows with OpenID Connect, Azure AD, and AD libraries Make the most of OpenID Connect's middleware and supporting classes Work with the Azure AD representation of apps and their relationships Provide fine-grained app access control via roles, groups, and permissions Consume and expose Web APIs protected by Azure AD Understand new authentication protocols without reading complex spec documents

active directory designing deploying and running active directory: Kerberos Jason Garman, 2003 Kerberos, the single sign-on authentication system originally developed at MIT, deserves its name. It's a faithful watchdog that keeps intruders out of your networks. But it has been equally fierce to system administrators, for whom the complexity of Kerberos is legendary. Single sign-on is the holy grail of network administration, and Kerberos is the only game in town. Microsoft, by integrating Kerberos into Active Directory in Windows 2000 and 2003, has extended the reach of Kerberos to all networks large or small. Kerberos makes your network more secure and more convenient for users by providing a single authentication system that works across the entire network. One username; one password; one login is all you need. Fortunately, help for administrators is on the way. Kerberos: The Definitive Guide shows you how to implement Kerberos for secure authentication. In addition to covering the basic principles behind cryptographic authentication, it covers everything from basic installation to advanced topics like cross-realm authentication, defending against attacks on Kerberos, and troubleshooting. In addition to covering Microsoft's Active Directory implementation, Kerberos: The Definitive Guide covers both major implementations of Kerberos for Unix and Linux: MIT and Heimdal. It shows you how to set up Mac OS X as a Kerberos client. The book also covers both versions of the Kerberos protocol that are still in use: Kerberos 4 (now obsolete) and Kerberos 5, paying special attention to the integration between the different protocols, and between Unix and Windows implementations. If you've been avoiding Kerberos because it's confusing and poorly documented, it's time to get on board! This book shows you how to put Kerberos authentication to work on your Windows and Unix systems.

active directory designing deploying and running active directory: Active Directory Infrastructure Self-Study Training Kit William Stanek Training Solutions, 2016-01-06 190,000 words... 2 Full-length Personal Training Guides in 1 Convenient Kit! Includes the full contents of: Active Directory Administration: The Personal Trainer Windows Group Policy: The Personal Trainer Read this training kit to learn everything you need to manage Active Directory and Group Policy effectively. This training kit gives you practical hands-on advice. By working step by step through essential tasks, you can learn to: Install forests, domain trees, and child domains Add and remove writable domain controllers Deploy and manage read-only controllers Configure, maintain, and troubleshoot global catalog servers Maintain directory and data integrity using operations masters Evaluate sites, subnets, and replication before expanding a network Establish a trust relationship between domains and between forests Maintain and recover Active Directory Domain Services Employ essential tools and command-line utilities Configure Local GPOs and Active Directory-based GPOs Manage policy preferences and settings Model policy changes through the console Maintain the SYSVOL Diagnose and troubleshoot replication issues Know when to enforce, block, or override inheritance Filter policy settings, search GPOs, and manage permissions Implement change control and advanced management Manage operating system-specific deployment issues This book is designed for anyone who manages Active Directory infrastructure, including those who manage or support computers running Windows 7, Windows 8.1, Windows Server 2012 and Windows Server 2012 R2. Inside, you'll find comprehensive overviews, step-by-step procedures, frequently used tasks, documented examples, and much more. One of the goals is to keep the content so concise that

the book remains compact and easy to navigate while at the same time ensuring that the book is packed with as much information as possible--making it a valuable resource.

active directory designing deploying and running active directory: Training Guide Configuring Advanced Windows Server 2012 R2 Services (MCSA) Orin Thomas, 2014-05-06 Fully updated for Windows Server 2012 R2! Designed to help enterprise administrators develop real-world, job-role-specific skills - this Training Guide focuses on configuration of advanced services in Windows Server 2012 R2. 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: Focuses on job-role-specific expertise for advanced configuration tasks Fully updated for Windows Server 2012 R2, including new practices Provides in-depth, hands-on training you take at your own pace Creates a foundation of skills which, along with on-the-job experience, can be measured by Microsoft Certification exams such as 70-412 Topics include: Advanced Active Directory Infrastructure Active Directory Sites and Replication Advanced DHCP and DNS Active Directory Certificate Services Backup and Recovery Advanced File Services and Storage High Availability Site Resilience Dynamic Access Control and Active Directory Rights Management Services Active Directory Federation Services

active directory designing deploying and running active directory: Windows 2000 Active Directory Edgar Brovick, Doug Hauger, 2000 Annotation Windows 2000 is one of most anticipated software releases in history and is a realization of a vision for desktop computing that Microsoft has been articulating for the past six years. The keystone and most eagerly anticipated new feature in the new administrative power inherent in the Windows 2000 Active Directory (AD). Windows 2000 Active Directory will provide the ideal foundation for achieving synergy between information about users, network infrastructure elements, and applications. Active Directory will provide the means to manage the entire network infrastructure from a single application. Active Directory will be a huge stumbling block for most administrators who need to get Windows 2000 up and running. Windows 2000 Active Directory will offer hands-on insight into the workings of the new and complex world of Active Directory. Through the use of case studies, troubleshooting tips, check lists, mitigation recommendations, and technological explanations, the reader will receive the expert advice of experienced authors and beta testers.

active directory designing deploying and running active directory: Windows Server 2012 R2 Inside Out William R. Stanek, 2014 This supremely organized reference packs hundreds of timesaving solutions, troubleshooting tips, and workarounds for Windows Server 2012 R2 - with a focus on infrastructure, core services, and security features. Coverage includes: TCP/IP networking Managing DHCP DNS infrastructure and management Implementing and managing DNS and WINS Active Directory architecture, sites, replication, domain services Read-only domain controllers Managing users, groups, and computers Managing Group Policy Active Directory site administration Deploying and managing print services

active directory designing deploying and running active directory: Exam Ref 70-414 Implementing an Advanced Server Infrastructure (MCSE) Steve Suehring, 2014-07-22 Prepare for Exam 70-414—and help demonstrate your real-world mastery of advanced server design, planning, and implementation. Designed for experienced, MCSA-certified professionals ready to advance their status—Exam Ref focuses on the critical-thinking and decision-making acumen needed for success at the MCSE level. Optimize your exam-prep by focusing on the expertise needed to: Manage and Maintain a Server Infrastructure Plan and Implement a Highly Available Enterprise Infrastructure Plan and Implement a Server Virtualization Infrastructure Design and Implement Identity and Access Solutions

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users and computers throughout the enterprise—from servers running Windows Server 2008, Windows Server 2003 or Windows 2000 Server, to workstations running Windows Vista, Windows XP Professional, or Windows 2000 Professional. This essential resource provides in-depth technical information and expert insights for simplifying and automating administrative tasks, including policy enforcement, system updates, and software installations, as well as how to centralize the management of network resources. The CD provides essential utilities, job aids, and more. It's everything you need to help increase your efficiency while bolstering user productivity, security services, and system reliability. For customers who purchase an ebook version of this title, instructions for downloading the CD files can be found in the ebook.

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Administration Gerald Carter, 2003-03-20 Be more productive and make your life easier. That's what LDAP System Administration is all about. System administrators often spend a great deal of time managing configuration information located on many different machines: usernames, passwords, printer configurations, email client configurations, and network filesystem configurations, to name a few. LDAPv3 provides tools for centralizing all of the configuration information and placing it under your control. Rather than maintaining several administrative databases (NIS, Active Directory, Samba, and NFS configuration files), you can make changes in only one place and have all your systems immediately see the updated information. Practically platform independent, this book uses the widely available, open source OpenLDAP 2 directory server as a premise for examples, showing you how to use it to help you manage your configuration information effectively and securely. OpenLDAP 2 ships with most Linux® distributions and Mac OS® X, and can be easily downloaded for most Unix-based systems. After introducing the workings of a directory service and the LDAP protocol, all aspects of building and installing OpenLDAP, plus key ancillary packages like SASL and OpenSSL, this book discusses: Configuration and access control Distributed directories; replication and referral Using OpenLDAP to replace NIS Using OpenLDAP to manage email configurations Using LDAP for abstraction with FTP and HTTP servers, Samba, and Radius Interoperating with different LDAP servers, including Active Directory Programming using Net::LDAP If you want to be a master of your domain, LDAP System Administration will help you get up and running quickly regardless of which LDAP version you use. After reading this book, even with no previous LDAP experience, you'll be able to integrate a directory server into essential network services such as mail, DNS, HTTP, and SMB/CIFS.

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Mitch Tulloch, 2014 Fully updated for Windows Server 2012 R2! 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 R2. 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 core infrastructure services Creates a foundation of skills which, along with on-the-job experience, can be measured by Microsoft Certification exams such as 70-410 Topics include: Preparing for Windows Server 2012 R2 Deploying servers Server remote management New Windows PowerShell capabilities Deploying domain controllers Active Directory administration Network administration Advanced networking capabilities

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2012 Security from End to Edge and Beyond Yuri Diogenes, Debra Littlejohn Shinder, Thomas W Shinder, 2013-04-18 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/. 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

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active directory designing deploying and running active directory: *Exam Ref MCSE 70-413* Steve Suehring, 2012-11-15 Prepare for Exam 70-413—and help demonstrate your real-world mastery of enterprise server design and implementation. Designed for experienced, MCSA-certified professionals ready to advance their status—Exam Ref focuses on the critical-thinking and decision-making acumen needed for success at the MCSE level. Optimize your exam-prep by focusing on the expertise needed to: Plan and Deploy a Server Infrastructure Design and Implement Network Infrastructure Services Design and Implement Network Access Services Design and Implement an Active Directory Infrastructure (Logical) Design and Implement an Active Directory Infrastructure (Physical)

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active directory designing deploying and running active directory: Microsoft System Center Designing Orchestrator Runbooks David Ziembicki, Aaron Cushner, Andreas Rynes, Mitch Tulloch, 2013-09-15 Part of a series of specialized guides on System Center - this book delivers a focused drilldown into designing runbooks for Orchestrator workflow management solutions. Series editor Mitch Tulloch and a team of System Center experts provide concise technical guidance as they step you through key design concepts, criteria, and tasks.

active directory designing deploying and running active directory: *Windows Server 2016 Unleashed* Rand Morimoto, Jeffrey R. Shapiro, Guy Yardeni, Omar Droubi, Andrew Abbate, Michael Noel, Chris Amaris, 2017 This is the most comprehensive and realistic guide to Windows Server 2016 planning, design, prototyping, implementation, migration, administration, and support. Extensively updated, it contains unsurpassed independent and objective coverage of Windows Server 2016's key innovations, including the cloud, containers, and Windows 10 integration. Windows Server 2016 Unleashed reflects the authors' extraordinary experience implementing Windows Server 2016 in large-scale environments since its earliest alpha releases, reaching back more than two years prior to its official launch. Microsoft MVP Rand Morimoto and his colleagues fully address every aspect of deploying and operating Windows Server 2016, including Active Directory, networking and core application services, security, migration from Windows Server 2003/2008, administration, fault tolerance, optimization, troubleshooting, and much more. Valuable for Windows professionals at all skill levels, this book will be especially indispensable for intermediate-to-advanced level professionals seeking expert, in-depth solutions. Every chapter contains tips, tricks, best practices, and lessons learned from actual deployments: practical information for using Windows Server 2016 to solve real business problems.

active directory designing deploying and running active directory: *Mastering Windows Server 2016* Brian Svidergol, Vladimir Meloski, Byron Wright, Santos Martinez, Doug Bassett, 2018-06-13 The IT pro's must-have guide to Windows Server 2016 Mastering Windows Server 2016 is a complete resource for IT professionals needing to get quickly up to date on the latest release. Designed to provide comprehensive information in the context of real-world usage, this book offers expert guidance through the new tools and features to help you get Windows Server 2016 up and running quickly. Straightforward discussion covers all aspects, including virtualization products, identity and access, automation, networking, security, storage and more, with clear explanations and immediately-applicable instruction. Find the answers you need, and explore new solutions as Microsoft increases their focus on security, software-defined infrastructure, and the cloud; new capabilities including containers and Nano Server, Shielded VMs, Failover Clustering, PowerShell, and more give you plenty of tools to become more efficient, more effective, and more productive. Windows Server 2016 is the ideal server for Windows 10 clients, and is loaded with new features that IT professionals need to know. This book provides a comprehensive resource grounded in real-world application to help you get up to speed quickly. Master the latest features of Windows Server 2016 Apply new tools in real-world scenarios Explore new capabilities in security,

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active directory designing deploying and running active directory: Mastering Windows Server 2012 R2 Mark Minasi, Kevin Greene, Christian Booth, Robert Butler, John McCabe, Robert Panek, Michael Rice, Stefan Röth, 2013-12-03 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®

active directory designing deploying and running active directory: Microsoft Windows Server 2008 R2 Administrator's Reference Dustin Hannifin, 2010-08-07 Microsoft Windows Server 2008 R2: The Administrators Essential Reference introduces the Windows Server 2008 R2, which is Microsofts flagship server operating systems latest release. The book explores its features; describes differences between the available editions; and discusses its deployment. After introducing Windows Server 2008 R2, the book explains its installation and configuration processes followed by its networking. It also examines different features, such as the active directory, internet information services 7.5, Hyper-V, and PowerShell V2. It discusses securing Windows Server 2008 R2 files and its print services, remote desktop services, high-availability and recovery features, and monitoring and troubleshooting; in addition, their delta changes are discussed in the final chapter. The book also explores the features that influence both Windows Server 2008 R2 and Windows 7. These features allow the server operating system to work with Windows 7. One feature is the BranchCache, which offers users who open files across a Wide Area Network a better end-user experience by caching copy in the branch office when a document or intranet Web site is opened for the first time. Another feature is DirectAccess, which is the new remote connectivity solution for Windows networks. - Features information on how to plan, deploy, and administrate Windows Server 2008 R2 using best practice guidance - Provides in-depth coverage of Hyper-V, DirectAccess, Remote Desktop Services, Active Directory, and BranchCache - Includes Delta Changes to allow experienced administrators to quickly gain insight to changes between Windows Server 2008 and Windows Server 2008 R2

active directory designing deploying and running active directory: The Best Damn Windows Server 2003 Book Period Debra Littlejohn Shinder, Thomas W Shinder, 2004-06-18 In keeping with past trends, full migration to this latest Microsoft Server Operating System will begin in earnest 12 months after its release, in mid-to-late 2004. This book will hit the market just as large enterprises begin the process of moving from Windows 2000 Server to Windows Server 2003. The title says everything you need to know about this book. No other book on the market combines this breadth and depth of coverage with the kind of product expertise and quality standard expected from Syngress. Every aspect of Planning, Installing, Configuring and Troubleshooting a Windows Server 2003 network is distilled and documented, with plenty of examples and illustrations. An unlike its competition, this is a book that was written from the ground up for Windows Server 2003.* Everything a System Administrator will ever need to know about running a Windows Server 2003

network.* This is the book that meets the needs of today's Windows Server 2003 professional.* Every aspect of Planning, Installing, Configuring and Troubleshooting a Windows Server 2003 network is distilled and documented, with plenty of examples and illustrations.

active directory designing deploying and running active directory: Group Policy Jeremy Moskowitz, 2015-08-11 Get up to speed on the latest Group Policy tools, features, and best practices Group Policy, Fundamentals, Security, and the Managed Desktop, 3rd Edition helps you streamline Windows and Windows Server management using the latest Group Policy tools and techniques. This updated edition covers Windows 10 and Windows Server vNext, bringing you up to speed on all the newest settings, features, and best practices. Microsoft Group Policy MVP Jeremy Moskowitz teaches you the major categories of Group Policy, essential troubleshooting techniques, and how to manage your Windows desktops. This is your complete guide to the latest Group Policy features and functions for all modern Windows clients and servers, helping you manage more efficiently and effectively. Perform true desktop and server management with the Group Policy Preferences, ADMX files, and additional add-ons Use every feature of the GPMC and become a top-notch administrator Troubleshoot Group Policy using tools, enhanced logs, Resource Kit utilities, and third-party tools Manage printers, drive maps, restrict hardware, and configure Internet Explorer Deploy software to your desktops, set up roaming profiles, and configure Offline Files for all your Windows clients—and manage it all with Group Policy settings Secure your desktops and servers with AppLocker, Windows Firewall with Advanced Security, and the Security Configuration Manager This is your comprehensive resource to staying current, with expert tips, techniques, and insight.

active directory designing deploying and running active directory: Active Directory William R. Stanek, 2009 Provides information on the administration of Active Directory in Windows Server 2008, covering such topics as adding and removing writable domain controllers, configuring catalog servers, evaluating sites, and employing command-line utilities.

active directory designing deploying and running active directory: Data Communications and Networking Behrouz A. Forouzan, 2007 Annotation As one of the fastest growing technologies in our culture today, data communications and networking presents a unique challenge for instructors. As both the number and types of students are increasing, it is essential to have a textbook that provides coverage of the latest advances, while presenting the material in a way that is accessible to students with little or no background in the field. Using a bottom-up approach, Data Communications and Networking presents this highly technical subject matter without relying on complex formulas by using a strong pedagogical approach supported by more than 700 figures. Now in its Fourth Edition, this textbook brings the beginning student right to the forefront of the latest advances in the field, while presenting the fundamentals in a clear, straightforward manner. Students will find better coverage, improved figures and better explanations on cutting-edge material. The bottom-up approach allows instructors to cover the material in one course, rather than having separate courses on data communications and networking

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active directory designing deploying and running active directory: Microsoft System Center Configuration Manager Field Experience Manoj Pal, Manish Raval, 2013-10-15 Part of a series of specialized guides on System Center - this book shares real-world expertise for using Configuration Manager capabilities to deliver more effective IT services. Series editor Mitch Tulloch

and a team of System Center experts provide concise technical guidance as they step you through key deployment and management scenarios.

active directory designing deploying and running active directory: Mastering Identity and Access Management with Microsoft Azure Jochen Nickel, 2016-09-30 Start empowering users and protecting corporate data, while managing Identities and Access with Microsoft Azure in different environments About This Book Deep dive into the Microsoft Identity and Access Management as a Service (IDaaS) solution Design, implement and manage simple and complex hybrid identity and access management environments Learn to apply solution architectures directly to your business needs and understand how to identify and manage business drivers during transitions Who This Book Is For This book is for business decision makers, IT consultants, and system and security engineers who wish to plan, design, and implement Identity and Access Management solutions with Microsoft Azure. What You Will Learn Apply technical descriptions and solution architectures directly to your business needs and deployments Identify and manage business drivers and architecture changes to transition between different scenarios Understand and configure all relevant Identity and Access Management key features and concepts Implement simple and complex directory integration, authentication, and authorization scenarios Get to know about modern identity management, authentication, and authorization protocols and standards Implement and configure a modern information protection solution Integrate and configure future improvements in authentication and authorization functionality of Windows 10 and Windows Server 2016 In Detail Microsoft Azure and its Identity and Access Management is at the heart of Microsoft's Software as a Service, including Office 365, Dynamics CRM, and Enterprise Mobility Management. It is an essential tool to master in order to effectively work with the Microsoft Cloud. Through practical, project based learning this book will impart that mastery. Beginning with the basics of features and licenses, this book quickly moves on to the user and group lifecycle required to design roles and administrative units for role-based access control (RBAC). Learn to design Azure AD to be an identity provider and provide flexible and secure access to SaaS applications. Get to grips with how to configure and manage users, groups, roles, and administrative units to provide a user- and group-based application and self-service access including the audit functionality. Next find out how to take advantage of managing common identities with the Microsoft Identity Manager 2016 and build cloud identities with the Azure AD Connect utility. Construct blueprints with different authentication scenarios including multi-factor authentication. Discover how to configure and manage the identity synchronization and federation environment along with multi-factor authentication, conditional access, and information protection scenarios to apply the required security functionality. Finally, get recommendations for planning and implementing a future-oriented and sustainable identity and access management strategy. Style and approach A practical, project-based learning experience explained through hands-on examples.

active directory designing deploying and running active directory: Microsoft System Center Deploying Hyper-V with Software-Defined Storage & Networking Mitch Tulloch, 2015-03-12 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.

active directory designing deploying and running active directory: Microsoft Windows Server Administration Essentials Tom Carpenter, 2011-07-18 The core concepts and technologies you need to administer a Windows Server OS Administering a Windows operating system (OS) can be a difficult topic to grasp, particularly if you are new to the field of IT. This full-color resource serves as an approachable introduction to understanding how to install a server, the various roles of a server, and how server performance and maintenance impacts a network. With a special focus placed on the new Microsoft Technology Associate (MTA) certificate, the straightforward,

easy-to-understand tone is ideal for anyone new to computer administration looking to enter the IT field. Each chapter offers a clear and concise look at the core Windows administration concepts you need to know to gain an understanding of these difficult topics. Offers a clear, no-nonsense approach to administering a Windows operating system and presents it in such a way that IT beginners will confidently comprehend the subject matter Targets the MTA 98-365 exam by covering Windows Server installation, server roles, storage, and active directory infrastructure Provides you with a solid foundation of various networking topics so that you can gain a strong understanding of Windows Server administration concepts Includes review questions and suggested labs to further enhance your learning process With this book by your side, you will be armed with the core concepts and technologies needed to administer a Windows Server operating system.

active directory designing deploying and running active directory: Mastering Windows Server 2016 Jordan Krause, 2016-10-25 A comprehensive and practical guide to Windows Server 2016 About This Book In-depth coverage of new features of Windows Server 2016 Gain the necessary skills and knowledge to design and implement Microsoft Server 2016 in enterprise environment Know how you can support your medium to large enterprise and leverage your experience in administering Microsoft Server 2016, A practical guide to administering Windows server 2016 Who This Book Is For The book is targeted at System Administrators and IT professionals who would like to design and deploy Windows Server 2016 (physical and logical) Enterprise infrastructure. Previous experience of Windows Server operating systems and familiarity with networking concepts is assumed. System administrators who are upgrading or migrating to Windows Server 2016 would also find this book useful. What You Will Learn Familiarize yourself with Windows Server 2016 ideology, the core of most datacenters running today New functions and benefits provided only by the new Windows Server 2016 Get comfortable working with Nanoserver Secure your network with new technologies in Server 2016 Harden your Windows Servers to help keep those bad guys out! Using new built-in integration for Docker with this latest release of Windows Server 2016 Virtualize your datacenter with Hyper-V In Detail Windows Server 2016 is the server operating system developed by Microsoft as part of the Windows NT family of operating systems, developed concurrently with Windows 10. With Windows Server 2016, Microsoft has gotten us thinking outside of the box for what it means to be a system administration, and comes with some interesting new capabilities. These are exciting times to be or to become a server administrator! This book covers all aspects of administration level tasks and activities required to gain expertise in Microsoft Windows Server 2016. You will begin by getting familiar and comfortable navigating around in the interface. Next, you will learn to install and manage Windows Server 2016 and discover some tips for adapting to the new server management ideology that is all about centralized monitoring and configuration. You will deep dive into core Microsoft infrastructure technologies that the majority of companies are going to run on Server 2016. Core technologies such as Active Directory, DNS, DHCP, Certificate Services, File Services, and more. We will talk about networking in this new operating system, giving you a networking toolset that is useful for everyday troubleshooting and maintenance. Also discussed is the idea of Software Defined Networking. You will later walk through different aspects of certificate administration in Windows Server 2016. Three important and crucial areas to cover in the Remote Access role -- DirectAccess, VPN, and the Web Application Proxy -- are also covered. You will then move into security functions and benefits that are available in Windows Server 2016. Also covered is the brand new and all-important Nano Server! We will incorporate PowerShell as a central platform for performing many of the functions that are discussed in this book, including a chapter dedicated to the new PowerShell 5.0. Additionally, you will learn about the new built-in integration for Docker with this latest release of Windows Server 2016. The book ends with a discussion and information on virtualizing your datacenter with Hyper-V. By the end of this book, you will have all the ammunition required to start planning for and implementing Windows Server 2016. Style and approach This book offers a practical and wide coverage of all features of brand new Microsoft Server 2016 along with tips on daily administration tasks.

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