

# Cloud Computing Lab Manual

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[Remote Sensing and Digital Image Processing with R - Lab Manual](#) John Wiley & Sons

Cloud computing continues to emerge as a subject of substantial industrial and academic interest. Although the meaning and scope of “cloud computing” continues to be debated, the current notion of clouds blurs the distinctions between grid services, web services, and data centers, among other areas. Clouds also bring considerations of lowering the cost for relatively bursty applications to the fore. Cloud Computing: Principles, Systems and Applications is an essential reference/guide that provides thorough and timely examination of the services, interfaces and types of applications that can be executed on cloud-based systems. The book identifies and highlights state-of-the-art techniques and methods for designing cloud systems, presents mechanisms and schemes for linking clouds to economic activities, and offers balanced coverage of all related technologies that collectively contribute towards the realization of cloud computing. With an emphasis on the conceptual and systemic links between cloud computing and other distributed computing approaches, this text also addresses the practical importance of efficiency, scalability, robustness and security as the four cornerstones of quality of service. Topics and features: explores the relationship of cloud computing to other distributed computing paradigms, namely peer-to-peer, grids, high performance computing and web services; presents the principles, techniques, protocols and algorithms that can be adapted from other distributed computing paradigms to the development of successful clouds; includes a Foreword by Professor Mark Baker of the University of Reading, UK; examines current cloud-practical applications and highlights early deployment experiences; elaborates the economic schemes needed for clouds to become viable business models. This book will serve as a comprehensive reference for researchers and students engaged in cloud computing. Professional system architects, technical managers, and IT consultants will also find this unique text a practical guide to the application and delivery of commercial cloud services. Prof. Nick Antonopoulos is Head of the School of Computing, University of Derby, UK. Dr. Lee Gillam is a Lecturer in the Department of Computing at the University of Surrey, UK.

*Lab Manual for Andrews' A+ Guide to IT Technical Support, 9th Edition* John Wiley & Sons

This book has been written for the candidates who want to learn and use the Microsoft Azure cloud platform, candidates who have just started his career with Cloud services, who is already working with Azure cloud services. This is also dedicated for those who are preparing themselves for one of the most popular cloud certifications Implementing Microsoft Azure Infrastructure Solutions Exam.This is mainly focused on the

hands-on lab exercises and real-world best practices rather than deep theoretical and conceptual lectures. However, we have covered enough concept and theory part of each of the mentioned topic. There are hundreds of theoretical documentations are available on the Microsoft Azure official documentation site and few other sites on the Internet community. But, there are very few articles on the step by step how to guide to implement, use, and configure Azure Cloud services. This guide will help you to become handy and expert on most of the Microsoft Azure Cloud services that will help you start your career with Cloud technologies. However, this guide also contains various real world, enterprise-level, best practices to implement and use for the production services. These step by step lab exercises will help you to design a highly-secure, scalable, and well-architecture enterprise-level Cloud solutions and designs.We have covered the following topics in this guide along with step by step lab exercises:01. Cloud Computing Introduction02. Cloud Service Providers03. Types of Cloud04. Cloud Offering Classes05. Microsoft Azure Introduction06. Getting Started with Free Azure Subscription07. Getting Familiarized with Azure Portal Options08. Getting Azure Subscription Details09. Creating Administrative Users for Azure Cloud Management10. Enable Multi-Factor Authentication for Azure Accounts11. Azure Pricing Calculator12. Introduction Azure Virtual Network (vNet)13. Creating an Azure Virtual Network14. Introduction to Azure Resource Groups15. Managing Resource Groups16. Introduction Azure Virtual Machines17. Understanding Azure VM Series Types18. Creating Azure Virtual Machine19. Connecting Azure Virtual Machines20. Detailed Explanation of Azure Virtual Machine Options21. Configure Disk in Azure Virtual Machine22. Capturing VM Image in Azure Cloud23. Creating Azure VM from Captured Image24. Importing and Exporting Azure Virtual Machine25. Azure Network Security Group (NSG) 6726. Creating and Applying NSG for Azure Virtual Network27. Managing Azure Storage Services28. Working with Azure Storage Explorer29. Managing Azure Storage Using Azure CLI30. Working with Azure Files Share31. Mounting Azure Files Share32. Azure Database Storage Services33. Creating and Using Azure SQL Database34. Restoring Azure SQL Database35. Exporting Importing SQL Databases36. Azure Active Directory37. Azure Marketplace38. Working with Azure VPN Gateways39. Creating a Windows Server Virtual Machine40. Connecting Your Windows VM Using P2S VPN Gateway Securely41. Configuring vNet Peering Between Azure Virtual Networks42. Working with Load Balancers in Azure Cloud43. Configuring Azure Load Balancer44. Configuring VM Scale Set in Azure Cloud45. Configuring Application Gateway in Azure Cloud46. Configuring WAF in Azure Cloud47. Working with Azure Cloud Management Tools48. Managing Azure Account Using PowerShell49. Scheduling Auto and Stop Azure VMs

[CompTIA Network+ Lab Manual](#) John Wiley & Sons

This book describes the key concepts, principles and implementation options for creating high-assurance cloud computing solutions. The guide starts with a broad technical overview and basic introduction to cloud computing, looking at the overall architecture of the cloud, client systems, the modern Internet and cloud computing data centers. It then delves into the core challenges of showing how reliability and fault-tolerance can be abstracted, how the resulting questions can be solved, and how the solutions can be leveraged to create a wide range of practical cloud applications. The author ’ s style is practical, and the guide should be readily understandable without any special background. Concrete examples are often drawn from real-world settings to illustrate key insights. Appendices show how the most important reliability models can be formalized, describe the API of the Isis2 platform, and offer more than 80 problems at varying levels of difficulty.

[Cloud Computing Made Simple](#) Packt Publishing Ltd

This book describes the landscape of cloud computing from first principles, leading the reader step-by-step through the process of building and configuring a cloud environment. The book not only considers the technologies for designing and creating cloud computing platforms, but also the business models and frameworks in real-world implementation of cloud platforms. Emphasis is placed on “learning by doing,” and readers are encouraged to experiment with a range of different tools and approaches. Topics and features: includes review questions, hands-on exercises, study activities and discussion topics throughout the text; demonstrates the approaches used to build cloud computing infrastructures; reviews the social, economic, and political aspects of the on-going growth in cloud computing use; discusses legal and security concerns in cloud computing; examines techniques for the appraisal of financial investment into cloud computing; identifies areas for further research within this rapidly-moving field.

[Lab Manual](#) Cengage Learning

Get Prepared for CompTIA Advanced Security Practitioner (CASP) Exam Targeting security professionals who either have their CompTIA Security+ certification or are looking to achieve a more advanced security certification, this CompTIA Authorized study guide is focused on the new CompTIA Advanced Security Practitioner (CASP) Exam CAS-001. Veteran IT security

expert and author Michael Gregg details the technical knowledge and skills you need to conceptualize, design, and engineer secure solutions across complex enterprise environments. He prepares you for aspects of the certification test that assess how well you apply critical thinking and judgment across a broad spectrum of security disciplines. Featuring clear and concise information on crucial security topics, this study guide includes examples and insights drawn from real-world experience to help you not only prepare for the exam, but also your career. You will get complete coverage of exam objectives for all topic areas including: Securing Enterprise-level Infrastructures Conducting Risk Management Assessment Implementing Security Policies and Procedures Researching and Analyzing Industry Trends Integrating Computing, Communications and Business Disciplines Additionally, you can download a suite of study tools to help you prepare including an assessment test, two practice exams, electronic flashcards, and a glossary of key terms. Go to [www.sybex.com/go/casp](http://www.sybex.com/go/casp) and download the full set of electronic test prep tools.

[Guide to Reliable Distributed Systems](#) McGraw Hill Professional

A guide to cloud computing for students, scientists, and engineers, with advice and many hands-on examples. The emergence of powerful, always-on cloud utilities has transformed how consumers interact with information technology, enabling video streaming, intelligent personal assistants, and the sharing of content. Businesses, too, have benefited from the cloud, outsourcing much of their information technology to cloud services. Science, however, has not fully exploited the advantages of the cloud. Could scientific discovery be accelerated if mundane chores were automated and outsourced to the cloud? Leading computer scientists Ian Foster and Dennis Gannon argue that it can, and in this book offer a guide to cloud computing for students, scientists, and engineers, with advice and many hands-on examples. The book surveys the technology that underpins the cloud, new approaches to technical problems enabled by the cloud, and the concepts required to integrate cloud services into scientific work. It covers managing data in the cloud, and how to program these services; computing in the cloud, from deploying single virtual machines or containers to supporting basic interactive science experiments to gathering clusters of machines to do data analytics; using the cloud as a platform for automating analysis procedures, machine learning, and analyzing streaming data; building your own cloud with open source software; and cloud security. The book is accompanied by a website, Cloud4SciEng.org, that provides a variety of supplementary material, including exercises, lecture slides, and other resources helpful to readers and instructors.

[Microsoft Azure Cloud - Complete Practical Guide for Ultimate Beginners](#) Newnes

Getting familiar with cloud computing features from scratch to advanced. \_ KEY FEATURES \_ Detailed coverage on Cloud fundamentals, Cloud Service Models, and deployment models. \_ Easy, detailed, and practical approach to develop skills on working with Cloud Computing. \_ Includes charts, diagrams, and graphical illustrations for better visual learning on complex topics of cloud computing. DESCRIPTION \_ Cloud computing is a technology that allows you to store, access data and programs over the internet instead of the hard drive or a server. In this book, you will gain knowledge about the fundamentals of cloud computing. This book includes a detailed description of the features of the cloud, the importance of cloud in today’s era, and uses of cloud computing. This book provides you with a deep knowledge of the basics of cloud computing. You will learn about the characteristics, architecture, and uses and importance of cloud computing. This book also explores the concept of scalability and redundancy regarding cloud computing. You will learn about the various cloud deployment and service models. You will also gain knowledge of virtualization technology. You will also have a guided tour of concepts related to cloud management, data storage and security, and cloud operations and technologies. At the end of the book, you will learn about the advanced concepts of cloud computing and also learn about mobile cloud \_ computing. WHAT YOU WILL LEARN \_ In-depth understanding on the fundamentals of cloud computing. \_ Explore the role and importance of cloud computing across businesses and enterprises. \_ Learn about cloud deployment models and service models. \_ Gain knowledge on cloud storage, cloud security, administration of cloud and mobile cloud computing. \_ WHO THIS BOOK IS FOR \_ This book is open to all graduates, beginners and working professionals to help them understand everything about cloud computing and how to operate in a cloud environment. TABLE OF CONTENTS 1. Introduction 2. Architecture and Applications \_ 3. Scalability and Redundancy 4. Cloud Services 5. Cloud Deployment Models 6. Virtualization 7. Management 8. Data Storage and Security 9. Operations and Challenges 10. Technologies and Service Providers 11. Cloud Cube Model 12. Mobile Cloud Computing

[Build Your Own Cybersecurity Testing Lab: Low-cost Solutions for Testing in Virtual and Cloud-based Environments](#) John Wiley & Sons

Practice the Skills Essential for a Successful Career in Cybersecurity! This hands-on guide contains more than 90 labs that challenge you to solve real-world problems and help you to master key cybersecurity concepts. Clear, measurable lab results map to exam objectives, offering direct correlation to Principles of Computer Security: CompTIA Security+™ and Beyond, Sixth Edition (Exam SY0-601). For each lab, you will get a complete materials list, step-by-step instructions and scenarios that require you to think critically. Each chapter concludes with Lab

Analysis questions and a Key Term quiz. Beyond helping you prepare for the challenging exam, this book teaches and reinforces the hands-on, real-world skills that employers are looking for. In this lab manual, you ’ ll gain knowledge and hands-on experience with Linux systems administration and security Reconnaissance, social engineering, phishing Encryption, hashing OpenPGP, DNSSEC, TLS, SSH Hacking into systems, routers, and switches Routing and switching Port security, ACLs Password cracking Cracking WPA2, deauthentication attacks, intercepting wireless traffic Snort IDS Active Directory, file servers, GPOs Malware reverse engineering Port scanning Packet sniffing, packet crafting, packet spoofing SPF, DKIM, and DMARC Microsoft Azure, AWS SQL injection attacks Fileless malware with PowerShell Hacking with Metasploit and Armitage Computer forensics Shodan Google hacking Policies, ethics, and much more

Mastering Cloud Computing Vijay Madisetti

Practice the Skills Essential for a Successful IT Career 80+ lab exercises challenge you to solve problems based on realistic case studies Step-by-step scenarios require you to think critically Lab Analysis tests measure your understanding of lab results Key Term Quizzes help build your vocabulary Mike Meyers ’ CompTIA Network+™ Guide to Managing and Troubleshooting Networks Lab Manual, Sixth Edition covers: Network models Cabling and topology Ethernet basics Ethernet standards Installing a physical network TCP/IP basics Routing TCP/IP applications Network naming Securing TCP/IP Switch features IPv6 WAN connectivity Wireless networking Virtualization and cloud computing Data centers Integrating network devices Network operations Protecting your network Network monitoring Network troubleshooting

Internet Infrastructure Springer Science & Business Media

The auditor's guide to ensuring correct security and privacy practices in a cloud computing environment Many organizations are reporting or projecting a significant cost savings through the use of cloud computing—utilizing shared computing resources to provide ubiquitous access for organizations and end users. Just as many organizations, however, are expressing concern with security and privacy issues for their organization’s data in the "cloud." Auditing Cloud Computing provides necessary guidance to build a proper audit to ensure operational integrity and customer data protection, among other aspects, are addressed for cloud based resources. Provides necessary guidance to ensure auditors address security and privacy aspects that through a proper audit can provide a specified level of assurance for an organization’s resources Reveals effective methods for evaluating the security and privacy practices of cloud services A cloud computing reference for auditors and IT security professionals, as well as those preparing for certification credentials, such as Certified Information Systems Auditor (CISA) Timely and practical, Auditing Cloud Computing expertly provides information to assist in preparing for an audit addressing cloud computing security and privacy for both businesses and cloud based service providers. Cloud Computing John Wiley & Sons

Publisher’s Note: Products purchased from Third Party sellers are not guaranteed by the publisher for quality, authenticity, or access to any online entitlements included with the product. Manage your own robust, inexpensive cybersecurity testing environment This hands-on guide shows clearly how to administer an effective cybersecurity testing lab using affordable technologies and cloud resources. Build Your Own Cybersecurity Testing Lab: Low-cost Solutions for Testing in Virtual and Cloud-based Environments fully explains multiple techniques for developing lab systems, including the use of Infrastructure-as-Code, meaning you can write programs to create your labs quickly, without manual steps that could lead to costly and frustrating mistakes. Written by a seasoned IT security professional and academic, this book offers complete coverage of cloud and virtual environments as well as physical networks and automation. Included with the book is access to videos that demystify difficult concepts. Inside, you will discover how to: • Gather network requirements and build your cybersecurity testing lab • Set up virtual machines and physical systems from inexpensive components • Select and configure the necessary operating systems • Gain remote access through SSH, RDP, and other remote access protocols • Efficiently isolate subnets with physical switches, routers, and VLANs • Analyze the vulnerabilities and challenges of cloud-based infrastructures • Handle implementation of systems on Amazon Web Services, Microsoft Azure, and Google Cloud Engine • Maximize consistency and repeatability using the latest automation tools

Laboratory Training Guide BookRix

Download TOC & Sample Chapter https://app.box.com/s/hj5bgktpx8rm8ujcbjpuvogkbt770qmf Summary Azure provides Virtual Datacenter in the Cloud. You can scale up or scale down resources in Virtual Datacenter on demand. In Azure cloud you get managed resources which don't require skilled manpower for deployment. You pay for what you use. Where as on-premises Datacenter requires lot of skilled resources, time and money for deployment and management. On Premises Data Center are also hard to scale up. Azure Study & lab Guide for Beginners helps you get started in Administration and Management of Azure Cloud. Coverage includes Topic lessons & Lab Exercises. Azure Study & lab Guide for Beginners also prepares you for Exam AZ-900 Certification. The Book uses self-paced approach to learning Azure Cloud Topics. This approach works both for Beginners in IT and Experienced IT Professionals. Author Harinder Kohli is a Cloud and Virtual Data Centre Architect. Table of Contents Cloud Computing Azure Cloud Architecture and Services Azure Free Trial Account and Basic

Configuration Azure Resource Groups Azure Virtual Network (VNET) Azure Compute Azure Storage Azure Active Directory Role Based Access Control (RBAC) Azure Security Azure SQL Database Azure App Services Web App Load Balancing Azure Backup and Recovery Azure Management Cloud Computing Simplified McGraw Hill Professional

The cloud can be regarded as services and software residing and operating on the Internet rather than on a local computer or on-premise network of servers. Cloud adoption is a strategy utilized by companies to enhance the scalability of Internet-based data base capabilities while minimizing risk and cost. To accomplish this, businesses implement cloud computing or utilize remote servers hosted on the internet to store, manage, and process data. Here's what makes this book • special: • Introduction to Cloud Computing • The Main Types of Cloud • Computing • Network Cloud Services & Cloud Networking Services • Cloud Platforms and Infrastructure • Advantages • of the "Public Cloud": Productivity, Time-To-Market, Modernization • How to Choose the • Best Solution: Tips for A Conscious Selection • Much, much more! A cloud provider assessment framework will be proposed as a tool analyzing public cloud providers. The research will conclude with a comparison of four of the top cloud providers, using the assessment framework.

Cloud Computing: A Comprehensive Guide to Cloud Computing (Your Roadmap to Cloud Computing, Big Data and Linked Data) Springer

Practice the Skills Essential for a Successful IT Career • 80+ lab exercises challenge you to solve problems based on realistic case studies • Lab analysis tests measure your understanding of lab results • Step-by-step scenarios require you to think critically • Key term quizzes help build your vocabulary Mike Meyers ’ CompTIA Network+® Guide to Managing and Troubleshooting Networks Lab Manual, Fifth Editioncovers: • Network models • Cabling and topology • Ethernet basics and modern Ethernet • Installing a physical network • TCP/IP • Routing • Network naming • Advanced networking devices • IPv6 • Remote connectivity • Wireless networking • Virtualization and cloud computing • Mobile networking • Building a real-world network • Managing risk • Protecting your network • Network monitoring and troubleshooting Developing and Securing the Cloud MIT Press

This manual is intended for the all-year students of Computer engineering branch in the subject of Data Structure Lab, Computer Graphics Lab, Computer Network Lab, Artificial Intelligence Lab and Skill base Lab Course: Cloud Computing etc. This manual typically contains practical/Lab Sessions related various concepts related to computer network, computer graphics and Programming Language covering various aspects related the subject to enhanced understanding. Although, as per the syllabus, concepts and algorithms are prescribed, we have made the efforts to cover various aspects of related all specific laboratories. Students are advised to thoroughly go through this manual rather than only topics mentioned in the syllabus as practical aspects are the key to understanding and conceptual visualization of theoretical aspects covered in the manuals. Good Luck for your Enjoyable Laboratory Sessions. AWS Certified Solutions Architect - Lab Manual Guide Springer Science & Business Media The easy way to understand and implement cloud computing technology written by a team of experts Cloud computing can be difficult to understand at first, but the cost-saving possibilities are great and many companies are getting on board. If you've been put in charge of implementing cloud computing, this straightforward, plain-English guide clears up the confusion and helps you get your plan in place. You'll learn how cloud computing enables you to run a more green IT infrastructure, and access technology-enabled services from the Internet ("in the cloud") without having to understand, manage, or invest in the technology infrastructure that supports them. You'll also find out what you need to consider when implementing a plan, how to handle security issues, and more. Cloud computing is a way for businesses to take advantage of storage and virtual services through the Internet, saving money on infrastructure and support This book provides a clear definition of cloud computing from the utility computing standpoint and also addresses security concerns Offers practical guidance on delivering and managing cloud computing services effectively and efficiently Presents a proactive and pragmatic approach to implementing cloud computing in any organization Helps IT managers and staff understand the benefits and challenges of cloud computing, how to select a service, and what's involved in getting it up and running Highly experienced author team consults and gives presentations on emerging technologies Cloud Computing For Dummies gets straight to the point, providing the practical information you need to know.

Azure Study and Lab Guide for Beginners Walnut Publication

The Laboratory Manual is a valuable tool designed to enhance your lab experience. Lab activities, objectives, materials lists, step-by-step procedures, illustrations, and review questions are commonly found in a Lab Manual.

Guide to Cloud Computing Springer

NOTE: The exam this book covered, CASP: CompTIA Advanced Security Practitioner (Exam CAS-002), was retired by CompTIA in 2019 and is no longer offered. For coverage of the current exam CASP+ CompTIA Advanced Security Practitioner: Exam CAS-003, Third Edition, please look for the latest edition of this guide: CASP+ CompTIA Advanced Security Practitioner Study Guide: Exam CAS-003, Third Edition (9781119477648). CASP: CompTIA Advanced Security

Practitioner Study Guide: CAS-002 is the updated edition of the bestselling book covering the CASP certification exam. CompTIA approved, this guide covers all of the CASP exam objectives with clear, concise, thorough information on crucial security topics. With practical examples and insights drawn from real-world experience, the book is a comprehensive study resource with authoritative coverage of key concepts. Exam highlights, end-of-chapter reviews, and a searchable glossary help with information retention, and cutting-edge exam prep software offers electronic flashcards and hundreds of bonus practice questions. Additional hands-on lab exercises mimic the exam's focus on practical application, providing extra opportunities for readers to test their skills. CASP is a DoD 8570.1-recognized security certification that validates the skillset of advanced-level IT security professionals. The exam measures the technical knowledge and skills required to conceptualize, design, and engineer secure solutions across complex enterprise environments, as well as the ability to think critically and apply good judgment across a broad spectrum of security disciplines. This study guide helps CASP candidates thoroughly prepare for the exam, providing the opportunity to: Master risk management and incident response Sharpen research and analysis skills Integrate computing with communications and business Review enterprise management and technical component integration Experts predict a 45-fold increase in digital data by 2020, with one-third of all information passing through the cloud. Data has never been so vulnerable, and the demand for certified security professionals is increasing quickly. The CASP proves an IT professional's skills, but getting that certification requires thorough preparation. This CASP study guide provides the information and practice that eliminate surprises on exam day. Also available as a set, Security Practitioner & Cryptography Set, 9781119071549 with Applied Cryptography: Protocols, Algorithms, and Source Code in C, 2nd Edition.

CASP CompTIA Advanced Security Practitioner Study Guide Rick Spair

Gain street-smart skills in network administration Think of the most common and challenging tasks that network administrators face, then read this book and find out how to perform those tasks, step by step. CompTIA Network + Lab Manual provides an inside look into the field of network administration as though you were actually on the job. You'll find a variety of scenarios and potential roadblocks, as well as clearly mapped sections to help you prepare for the CompTIA Network+ Exam N10-005. Learn how to design, implement, configure, maintain, secure, and troubleshoot a network with this street-smart guide. Provides step-by-step instructions for many of the tasks network administrators perform on a day-to-day basis, such as configuring wireless components; placing routers and servers; configuring hubs, switches, and routers; configuring a Windows client; and troubleshooting a network Addresses the CompTIA Network+ Exam N10-005 objectives and also includes a variety of practice labs, giving you plenty of opportunities for hands-on skill-building Organized by the phases of network administration: designing a network, implementing and configuring it, maintenance and security, and troubleshooting Study, practice, and review for the new CompTIA Network+ N10-005 Exam, or a networking career, with this practical, thorough lab manual.

Cloud Computing, A Practical Approach McGraw Hill Professional

This book has been written for BE/B.Tech students of All University with latest syllabus for ECE, EEE, CSE, IT, Bio Medical, Mech, Civil Departments & also it is very useful for Diploma, Arts & Science Students.. The basic aim of this book is to provide a basic knowledge in Grid and Cloud Computing Laboratory Program for engineering students of degree, diploma & AMIE courses and a useful reference for these preparing for competitive examinations. All Experiments have excellent output results. All the concepts are explained in a simple, clear and complete manner to achieve progressive learning. This book Contains grid computing programs using gridsim, use globus toolkit or equivalent, Program on SaaS and Program on PaaS programs with results of all experiments. Each Programs is well supported with the necessary illustration practical output explanations.