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## **WIGGINS ZOE**

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OpenStack Networking  
Cookbook Packt  
Publishing Ltd  
Master the objectives  
required to pass the  
Certified OpenStack  
Administrator exam.

About This Book Focuses  
on providing a clear,  
concise strategy so you  
gain the specific skills  
required to pass the  
Certified OpenStack  
Administrator exam  
Includes exercises and  
performance-based tasks  
to ensure all exam  
objectives can be  
completed via the Horizon  
dashboard and command-

line interface Includes a  
free OpenStack Virtual  
Appliance to practice the  
objectives covered  
throughout the book  
Includes a practice exam  
to put your OpenStack  
skills to the test to prove  
you have what it takes to  
conquer the live exam  
Updated for the 2017  
exam featuring  
OpenStack Newton Who

This Book Is For This book is for IT professionals, system administrators, DevOps engineers, and software developers with basic Linux command-line and networking knowledge. It's also a great guide for those interested in an entry-level OpenStack position but have limited real-world OpenStack experience. After passing the exam, Certified OpenStack Administrators will prove they have the required skills for the job.

What You Will Learn  
Manage the Keystone

identity service by creating and modifying domains, groups, projects, users, roles, services, endpoints, and quotas. Upload Glance images, launch new Nova instances, and create flavors, key pairs, and snapshots. Discover Neutron tenant and provider networks, security groups, routers, and floating IPs. Manage the Cinder block storage service by creating volumes and attaching them to instances. Create Swift containers and set access control lists to

allow read/write access to your objects. Explore Heat orchestration templates and create, list, and update stacks. In Detail This book provides you with a specific strategy to pass the OpenStack Foundation's first professional certification: the Certified OpenStack Administrator. In a recent survey, 78% of respondents said the OpenStack skills shortage had deterred them from adopting OpenStack. Consider this an opportunity to increase employer and customer

confidence by proving you have the skills required to administrate real-world OpenStack clouds. You will begin your journey by getting well-versed with the OpenStack environment, understanding the benefits of taking the exam, and installing an included OpenStack all-in-one virtual appliance so you can work through objectives covered throughout the book. After exploring the basics of the individual services, you will be introduced to strategies to accomplish

the exam objectives relevant to Keystone, Glance, Nova, Neutron, Cinder, Swift, Heat, and troubleshooting. Finally, you'll benefit from the special tips section and a practice exam to put your knowledge to the test. By the end of the journey, you will be ready to become a Certified OpenStack Administrator! Style and approach Clear, concise, and straightforward with supporting diagrams and lab environment tutorials, this book will help you confidently pass Certified

OpenStack Administrator objectives on the Horizon dashboard and command-line interface.  
[OpenStack for Architects](#)  
Packt Publishing Ltd  
Leverage the best SDN technologies for your OpenStack-based cloud infrastructure About This Book Learn how to leverage critical SDN technologies for OpenStack Networking APIs via plugins and drivers Champion the skills of achieving complete SDN with OpenStack with specific use cases and capabilities

only covered in this title  
 Discover exactly how you could implement cost-effective OpenStack SDN integration for your organization  
 Who This Book Is For  
 Administrators, and cloud operators who would like to implement Software Defined Networking on OpenStack clouds. Some prior experience of network infrastructure and networking concepts is assumed.  
 What You Will Learn  
 Understand how OVS is used for Overlay networks  
 Get familiar with SDN Controllers with

Architectural details and functionalities  
 Create core ODL services and understand how OpenDaylight integrates with OpenStack to provide SDN capabilities  
 Understand OpenContrail architecture and how it supports key SDN functionality such as Service Function Chaining (SFC) along with OpenStack  
 Explore Open Network Operating System (ONOS) – a carrier grade SDN platform embraced by the biggest telecom service providers  
 Learn about upcoming

SDN technologies in OpenStack such as Dragonflow and OVN  
 In Detail  
 Networking is one of the pillars of OpenStack and OpenStack Networking are designed to support programmability and Software-Defined Networks.  
 OpenStack Networking has been evolving from simple APIs and functionality in Quantum to more complex capabilities in Neutron.  
 Armed with the basic knowledge, this book will help the readers to explore popular SDN

technologies, namely, OpenDaylight (ODL), OpenContrail, Open Network Operating System (ONOS) and Open Virtual Network (OVN). The first couple of chapters will provide an overview of OpenStack Networking and SDN in general. Thereafter a set of chapters are devoted to OpenDaylight (ODL), OpenContrail and their integration with OpenStack Networking. The book then introduces you to Open Network Operating System (ONOS) which is fast becoming a

carrier grade SDN platform. We will conclude the book with overview of upcoming SDN projects within OpenStack namely OVN and Dragonflow. By the end of the book, the readers will be familiar with SDN technologies and know how they can be leveraged in an OpenStack based cloud. Style and approach A hands-on practical tutorial through use cases and examples for Software Defined Networking with OpenStack. [OpenStack Orchestration](#) "O'Reilly Media, Inc."

If you are an OpenStack-based cloud operator with experience in OpenStack Compute and nova-network but are new to Neutron networking, then this book is for you. Some networking experience is recommended, and a physical network infrastructure is required to provide connectivity to instances and other network resources configured in the book. *OpenStack Cloud Security* John Wiley & Sons Design, deploy, and maintain your own private or public Infrastructure as

a Service (IaaS), using the open source OpenStack platform. In this practical guide, experienced developers and OpenStack contributors show you how to build clouds based on reference architectures, as well as how to perform daily administration tasks. Designed for horizontal scalability, OpenStack lets you build a cloud by integrating several technologies. This approach provides flexibility, but knowing which options to use can be bewildering. Once you

complete this book, you'll know the right questions to ask while you organize compute, storage, and networking resources. If you already know how to manage multiple Ubuntu machines and maintain MySQL, you're ready to: Set up automated deployment and configuration Design a single-node cloud controller Use metrics to improve scalability Explore compute nodes, network design, and storage Install OpenStack packages Use an example architecture to help

simplify decision-making Build a working environment to explore an IaaS cloud Manage users, projects, and quotas Tackle maintenance, debugging, and network troubleshooting Monitor, log, backup, and restore *OCA: Oracle Database 12c Administrator Certified Associate Study Guide* Packt Publishing Ltd Harness the power of OpenStack Networking for public and private clouds using 90 hands-on recipes About This Book Build and manage virtual switching, routing, and firewall-



based networks in OpenStack using Neutron Develop plugins and drivers for Neutron to enhance the built-in networking capabilities Monitor and automate OpenStack networks using tools like Ceilometer and Heat Who This Book Is For This book is aimed at network and system administrators who want to deploy and manage OpenStack-based cloud and IT infrastructure. If you have basic knowledge of OpenStack and virtualization, this book will help you leverage the

rich functionality of OpenStack Networking in your cloud deployments. What You Will Learn Operate OpenStack Networking for public and private clouds Configure advanced routing services for your workloads Secure data traffic using firewall-as-a-service capabilities of OpenStack Discover how to leverage VXLAN to implement SDN in your OpenStack cloud Monitor the virtual networks using Ceilometer Develop plugins to enhance and customize OpenStack Networking Provide HA

and VPN connectivity for your virtual machines Troubleshoot and solve common problems with OpenStack Networking In Detail Networking in OpenStack has evolved from Nova Network to Neutron. This has resulted in a rich suite of networking services available to OpenStack users and administrators. Advanced services such as routers, firewall, and load balancers use building blocks such as network and subnets. Recent improvements support powerful

customization using plugins. The evolution of Neutron continues as it integrates with tools like Ceilometer and Heat. This book will explore the built-in capabilities of Neutron to effectively deploy cloud solutions. You will begin with the most fundamental constructs of OpenStack Networking for switching and routing. You will then learn how to provide your tenants with services like firewalls and load-balancers. The step-by-step recipes will help you configure and troubleshoot networking

problems in your cloud. This book will also introduce you to advanced topics like Ceilometer, Heat, and other upcoming tools in OpenStack Style and approach. The book is full of step-by-step recipes to configure and manage the networking aspects of your OpenStack cloud. In addition to covering basic configuration involved in OpenStack Networking, the book also shares various troubleshooting tips and techniques. As much as possible the book uses OpenStack

dashboard (Horizon) to help the user get a feel of real OpenStack Networking  
**OpenStack Administration with Ansible 2** Packt Publishing Ltd  
Summary OpenStack in Action offers the real world use cases and step-by-step instructions you can take to develop your own cloud platform from inception to deployment. This book guides you through the design of both the physical hardware cluster and the infrastructure

services you'll need to create a custom cloud platform. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology OpenStack is an open source framework that lets you create a private or public cloud platform on your own physical servers. You build custom infrastructure, platform, and software services without the expense and vendor lock-in associated with proprietary cloud platforms like Amazon

Web Services and Microsoft Azure. With an OpenStack private cloud, you can get increased security, more control, improved reliability, and lower costs. About the Book OpenStack in Action offers real-world use cases and step-by-step instructions on how to develop your own cloud platform. This book guides you through the design of both the physical hardware cluster and the infrastructure services you'll need. You'll learn how to select and set up virtual and physical

servers, how to implement software-defined networking, and technical details of designing, deploying, and operating an OpenStack cloud in your enterprise. You'll also discover how to best tailor your OpenStack deployment for your environment. Finally, you'll learn how your cloud can offer user-facing software and infrastructure services. What's Inside Develop and deploy an enterprise private cloud Private cloud technologies from an IT perspective

Organizational impact of self-service cloud computing About the Reader No prior knowledge of OpenStack or cloud development is assumed. About the Author Cody Bumgardner is the Chief Technology Architect at a large university where he is responsible for the architecture, deployment, and long-term strategy of OpenStack private clouds and other cloud computing initiatives. Table of Contents PART 1 GETTING STARTED Introducing OpenStack

Taking an OpenStack test-drive Learning basic OpenStack operations Understanding private cloud building blocks PART 2 WALKING THROUGH A MANUAL DEPLOYMENT Walking through a Controller deployment Walking through a Networking deployment Walking through a Block Storage deployment Walking through a Compute deployment PART 3 BUILDING A PRODUCTION ENVIRONMENT Architecting your OpenStack Deploying

Ceph Automated HA OpenStack deployment with Fuel Cloud orchestration using OpenStack Cloud Computing Packt Publishing Ltd This IBM® Redpaper™ publication describes our newest product for helping businesses enter the world of cloud technology: IBM SmartCloud® Entry, Version 3.1. This software includes the IBM Common Cloud Stack, which is powered by open source OpenStack from the OpenStack Foundation.

These products work together to help you move your business to the cloud. This paper explains the ways that you can take advantage of this extensive and powerful technology. With the power of cloud computing, you can enhance your existing services, extend your market reach, and create new markets for your services. IBM SmartCloud Entry V3.1 is easy to use, even for first-time cloud service users. It can enable you to benefit from cloud technology in

less time and with less effort than you might think. This Redpaper features two scenarios that demonstrate the ease of carrying out processes with IBM SmartCloud Entry software. The information is directed to two primary audiences. Chapter 1 is directed mainly to decision-makers, such as CEOs, CIOs, and CFOs, who need to know about cloud technology and the power that it offers. The remainder of the paper is directed to IT professionals, such as

information architects, business intelligence administrators, and database administrators, who need to know about the functions and capabilities of SmartCloud Entry and Common Cloud Stack.

### **Scheduling of Large-scale Virtualized Infrastructures**

Packt Publishing Ltd

Exploit the power of dynamic cloud formation and auto-scaling features to fully implement OpenStack orchestration  
About This Book Set up, manage, and troubleshoot

Heat and effectively automate your datacenter and cloud-based services. Achieve high availability, minimize down-time, and automate the deployment of cloud-based services and resources with minimum effort. Upgrade your skills and manipulate resources on virtual machines in an unattended fashion using Heat. Who This Book Is For If you are a System Engineer, System Administrator, Cloud Administrator, or a Cloud Engineer, then this book is for you. You should

have a background of working in a Linux-based setup. Any knowledge of OpenStack-based cloud infrastructure will help you create wonders using this book. What You Will Learn Install an orchestration service for a private cloud environment Tackle errors that show up during the installation and configuration of heat Configure a template for orchestration using the native HOT format Configure a template for orchestration using the AWS cloud formation format Deploy a stack

using the HOT template Deploy a test stack using the AWS CloudFormation template Automate and orchestrate cloud-based services with OpenStack Heat In Detail This book is focused on setting up and using one of the most important services in OpenStack orchestration, Heat. First, the book introduces you to the orchestration service for OpenStack to help you understand the uses of the templating mechanism, complex control groups of cloud resources, and huge-

potential and multiple-use cases. We then move on to the topology and orchestration specification for cloud applications and standards, before introducing the most popular IaaS cloud framework, Heat. You will get to grips with the standards used in Heat, overview and roadmap, architecture and CLI, heat API, heat engine, CloudWatch API, scaling principles, JeOS and installation and configuration of Heat. We wrap up by giving you some insights into

troubleshooting for OpenStack. With easy-to-follow, step-by-step instructions and supporting images, you will be able to manage OpenStack operations by implementing the orchestration services of Heat. Style and approach The book is a step-by-step guide to implementing an orchestration (cloud formation) service for OpenStack-based cloud environments. This book uses real-world scenarios and examples to demonstrate the procedures in an easy-to-

understand language with plenty of screenshots to help you get a better understanding.

### **IBM Software Defined Environment** Packt

Publishing Ltd

Discover the basics of virtual networking in OpenStack to implement various cloud network architectures Key Features Learn the difference between Open vSwitch and Linux bridge switching technologies Connect virtual machine instances to virtual networks, subnets, and ports Implement virtual

load balancers, firewalls, and routers in your network. Book Description OpenStack Networking is a pluggable, scalable, and API-driven system to manage physical and virtual networking resources in an OpenStack-based cloud. Like other core OpenStack components, OpenStack Networking can be used by administrators and users to increase the value and maximize the use of existing datacenter resources. This third edition of Learning OpenStack Networking

walks you through the installation of OpenStack and provides you with a foundation that can be used to build a scalable and production-ready OpenStack cloud. In the initial chapters, you will review the physical network requirements and architectures necessary for an OpenStack environment that provide core cloud functionality. Then, you'll move through the installation of the new release of OpenStack using packages from the Ubuntu repository. An overview of Neutron

networking foundational concepts, including networks, subnets, and ports will segue into advanced topics such as security groups, distributed virtual routers, virtual load balancers, and VLAN tagging within instances. By the end of this book, you will have built a network infrastructure for your cloud using OpenStack Neutron. What you will learn Get familiar with Neutron constructs, including agents and plugins Build foundational Neutron resources to



provide connectivity to instances Work with legacy Neutron routers and troubleshoot traffic through them Explore high-availability routing capabilities utilizing Virtual Router Redundancy Protocol (VRRP) Create and manage load balancers and associated components Manage security groups as a method of securing traffic to and from instances Who this book is for If you are an OpenStack-based cloud operator and administrator who is new

to Neutron networking and wants to build your very own OpenStack cloud, then this book is for you. Prior networking experience and a physical server and network infrastructure is recommended to follow along with concepts demonstrated in the book. *Deploying OpenStack* IBM Redbooks A focused and systematic introduction to OpenStack, the largest open source cloud platform, using practical examples and hands-on problems. About This

Book\* Explore all the new features of OpenStack's Mikata, Ocata, and Newton releases and get up to speed with OpenStack in no time\* Learn something new each day to successfully build a private cloud platform\* A fast-paced guide filled with best practices that will help you manage your virtual private cloud efficiently Who This Book Is For This book is for those who are already familiar with OpenStack's supporting technologies. It's ideal for cloud system

engineers, system administrators, and technical architects who are moving from a virtualized environment to a cloud environment. Prior knowledge of cloud computing platforms and virtualization would be beneficial. If you are a system or cloud engineer, this is your go-to book! What You Will Learn\* Understand the functions and features of each core component of OpenStack and a real-world comparison\* Develop an understanding of the components of IaaS

and PaaS clouds built with OpenStack\* Get a high-level understanding of architectural design in OpenStack\* Discover how you can use OpenStack Horizon with all of the OpenStack core components\* Understand network traffic flow with Neutron\* Build an OpenStack private cloud from scratch\* Get hands-on training with the OpenStack command line, administration, and deployment In Detail OpenStack is developed by a thriving community of individual

developers around the globe and is backed by most of the leading players in the cloud space today. OpenStack is a free and open source software platform for cloud computing, mostly deployed as an infrastructure-as-a-service (IaaS). This book begins with the design principles of OpenStack and the available OpenStack distributions. You'll start by getting a fundamental understanding of the core concepts and then move on to a comparison of OpenStack components

with real-life examples. Then, we'll show you the typical architecture of OpenStack clouds, how to configure each OpenStack component, and debugging techniques. Later, we focus on the latest releases of OpenStack: Mikata, Newton, and Ocata. You'll be introduced to identity, image, networking, and the compute service. You'll also get a complete understanding of how to install, configure, and administrate your entire virtual private cloud. You

will also be provided with hands-on exercises to unleash the power of each component in OpenStack. Finally, you'll see an overview of all the optional projects available under the Openstack umbrella. Style and approach This fast-paced book delivers comprehensive hands-on training, so you can jump straight into the practical exercises along with in-depth coverage of OpenStack technologies. It also provides hands-on exercises, analysis of real-world cloud use cases and

operation scenarios, covering design, customization and optimization. [IBM Cloud Private System Administrator's Guide](#) Packt Publishing Ltd OpenStack is a system that controls large pools of computing, storage, and networking resources, allowing its users to provision resources through a user-friendly interface. OpenStack helps developers with features such as rolling upgrades, federated identity, and software reliability. You will begin

with basic security policies, such as MAC, MLS, and MCS, and explore the structure of OpenStack and virtual networks with Neutron. Next, you will configure secure communications on the OpenStack API with HTTP connections. You will also learn how to set OpenStack Keystone and OpenStack Horizon and gain a deeper understanding of the similarities/differences between OpenStack Cinder and OpenStack Swift. By the end of this book, you will be able to

tweak your hypervisor to make it safer and a smart choice based on your needs.

*Preparing for the Certified OpenStack Administrator Exam* John Wiley & Sons System virtualization has become increasingly common in distributed systems because of its functionality and convenience for the owners and users of these infrastructures. In *Scheduling of Large-scale Virtualized Infrastructures*, author Flavien Quesnel examines the management of large-

scale virtual infrastructures with an emphasis on scheduling up to 80,000 virtual machines on 8,000 nodes. The text fills a need for updated software managing to meet the increasing size of virtual infrastructures. Virtual machine managers and virtual operators will appreciate this guide to improvement in cooperative software management.

**Troubleshooting OpenStack** Springer Design and implement successful private clouds

with OpenStack About This Book Explore the various design choices available for cloud architects within an OpenStack deployment Craft an OpenStack architecture and deployment pipeline to meet the unique needs of your organization Create a product roadmap for Infrastructure as a Service in your organization using this hands-on guide Who This Book Is For This book is written especially for those who will design OpenStack clouds and lead their implementation.

These people are typically cloud architects, but may also be in product management, systems engineering, or enterprise architecture. What You Will Learn Familiarize yourself with the components of OpenStack Build an increasingly complex OpenStack lab deployment Write compelling documentation for the architecture teams within your organization Apply Agile configuration management techniques to deploy OpenStack Integrate OpenStack with

your organization's identity management, provisioning, and billing systems Configure a robust virtual environment for users to interact with Use enterprise security guidelines for your OpenStack deployment Create a product roadmap that delivers functionality quickly to the users of your platform In Detail Over the last five years, hundreds of organizations have successfully implemented Infrastructure as a Service (IaaS) platforms based on

OpenStack. The huge amount of investment from these organizations, industry giants such as IBM and HP, as well as open source leaders such as Red Hat have led analysts to label OpenStack as the most important open source technology since the Linux operating system. Because of its ambitious scope, OpenStack is a complex and fast-evolving open source project that requires a diverse skill-set to design and implement it. This guide leads you through each of the major

decision points that you'll face while architecting an OpenStack private cloud for your organization. At each point, we offer you advice based on the experience we've gained from designing and leading successful OpenStack projects in a wide range of industries. Each chapter also includes lab material that gives you a chance to install and configure the technologies used to build production-quality OpenStack clouds. Most importantly, we focus on ensuring that your

OpenStack project meets the needs of your organization, which will guarantee a successful rollout. Style and approach This is practical, hands-on guide to implementing OpenStack clouds, where each topic is illustrated with real-world examples and then the technical points are proven in the lab.

### **Learning OpenStack Networking (Neutron)**

"O'Reilly Media, Inc."  
Untangle the complexity of OpenStack clouds through this practical tutorial About This Book

Navigate through the complex jungle of components in OpenStack using practical instructions This book helps administrators, cloud engineers, and even developers to consolidate and control pools of compute, networking, and storage resources Learn to use the centralized dashboard and administration panel to monitor large-scale deployments Who This Book Is For This book is perfect for administrators, cloud engineers, and operators who want to get

started with OpenStack, solve basic problems encountered during deployment, and get up to speed with the latest release of OpenStack. Familiarity with the Linux command line and experience with Linux system administration is expected. What You Will Learn Brush up on the latest release, and how it affects the various components Install OpenStack using the Packstack and RDO Manager installation tool Learn to convert a computer node that

supports Docker containers Implement Ceph Block Device images with OpenStack Create and allocate virtual networks, routers and IP addresses to OpenStack Tenants. Configuring and Launching a Docker container. In Detail OpenStack is a widely popular platform for cloud computing. Applications that are built for this platform are resilient to failure and convenient to scale. This book, an update to our extremely popular OpenStack Essentials (published in

May 2015) will help you master not only the essential bits, but will also examine the new features of the latest OpenStack release - Mitaka; showcasing how to put them to work straight away. This book begins with the installation and demonstration of the architecture. This book will teach you the core 8 topics of OpenStack. They are Keystone for Identity Management, Glance for Image management, Neutron for network management, Nova for instance management,

Cinder for Block storage, Swift for Object storage, Ceilometer for Telemetry and Heat for Orchestration. Further more you will learn about launching and configuring Docker containers and also about scaling them horizontally. You will also learn about monitoring and Troubleshooting OpenStack. Style and approach This book offers step-by-step practical instructions to help you quickly navigate through the complexities of OpenStack  
Mastering OpenStack IBM

Redbooks  
Get unstuck and start stacking! About This Book Easily fix the nagging problems that commonly plague OpenStack and become the go-to person in your organization Get better equipped to troubleshoot and solve common problems in performance, availability, and automation that confront production-ready OpenStack environments Save time and decrease frustration by solving significant issues that arise from OpenStack deployments pertaining to



storage and networking  
Who This Book Is For You  
will need a basic  
understanding of  
OpenStack, Linux, and  
Cloud computing. If you  
have an understanding of  
Linux, this book will help  
you leverage that  
knowledge in the world of  
OpenStack, giving you  
confidence to tackle most  
issues that may arise.  
What You Will Learn  
Diagnose and remediate  
authentication and  
authorization problems in  
Keystone Fix common  
issues with images served  
through Glance Master

the art of troubleshooting  
Neutron networking  
Navigate and overcome  
problems with Nova  
Troubleshoot and resolve  
Cinder block storage  
issues Identify and correct  
Swift object storage  
problems Isolate and fix  
issues caused by Heat  
orchestration Leverage  
Ceilometer and other  
metering and monitoring  
tools for effective  
troubleshooting In Detail  
OpenStack is a collection  
of software projects that  
work together to provide  
a cloud fabric. OpenStack  
is one of the fastest

growing open source  
projects in history that  
unlocks cloud computing  
for everyone. With  
OpenStack, you are able  
to create public or private  
clouds on your own  
hardware. The flexibility  
and control afforded by  
OpenStack puts the cloud  
within reach of anyone  
willing to learn this  
technology. Starting with  
an introduction to  
OpenStack  
troubleshooting tools,  
we'll walk through each  
OpenStack service and  
how you can quickly  
diagnose, troubleshoot,

and correct problems in your OpenStack. Understanding the various projects and how they interact is essential for anyone attempting to troubleshoot an OpenStack cloud. We will start by explaining each of the major components and the dependencies between them, and move on to show you how to identify and utilize an effective set of OpenStack troubleshooting tools and fix common Keystone problems. Next, we will expose you to common errors and problems you

may encounter when using the OpenStack Block Storage service (Cinder). We will then examine Heat, the OpenStack Orchestration Service, where you will learn how to trace errors, determine their root cause, and effectively correct the issue. Finally, you will get to know the best practices to architect your OpenStack cloud in order to achieve optimal performance, availability, and reliability. Style and approach This is straight-to-the-point guide to fixing your OpenStack

cluster. Common problems are identified and suggestions to resolve these problems are presented in a simple, easy-to-understand manner.

Mastering OpenStack John Wiley & Sons

"A stereotype of computer science textbooks is that they are dry, boring, and sometimes even intimidating. As a result, they turn students' interests off from the subject matter instead of enticing them into it. This textbook is the opposite of such a stereotype. The

author presents the subject matter in a refreshing story-telling style and aims to bring the Internet-generation of students closer to her stories." --Yingcai Xiao, The University of Akron  
Introduction to Middleware: Web Services, Object Components, and Cloud Computing provides a comparison of different middleware technologies and the overarching middleware concepts they are based on. The various major paradigms of middleware are

introduced and their pros and cons are discussed. This includes modern cloud interfaces, including the utility of Service Oriented Architectures. The text discusses pros and cons of RESTful vs. non-RESTful web services, and also compares these to older but still heavily used distributed object/component middleware. The text guides readers to select an appropriate middleware technology to use for any given task, and to learn new middleware technologies

as they appear over time without being greatly overwhelmed by any new concept. The book begins with an introduction to different distributed computing paradigms, and a review of the different kinds of architectures, architectural styles/patterns, and properties that various researchers have used in the past to examine distributed applications and determine the quality of distributed applications. Then it includes appropriate

background material in networking and the web, security, and encoding necessary to understand detailed discussion in this area. The major middleware paradigms are compared, and a comparison methodology is developed. Readers will learn how to select a paradigm and technology for a particular task, after reading this text. Detailed middleware technology review sections allow students or industry practitioners working to expand their knowledge to achieve practical skills

based on real projects so as to become well-functional in that technology in industry. Major technologies examined include: RESTful web services (RESTful cloud interfaces such as OpenStack, AWS EC2 interface, CloudStack; AJAX, JAX-RS, ASP.NET MVC and ASP.NET Core), non-RESTful (SOAP and WSDL-based) web services (JAX-WS, Windows Communication Foundation), distributed objects/ components (Enterprise Java Beans, .NET Remoting, CORBA).

The book presents two projects that can be used to illustrate the practical use of middleware, and provides implementations of these projects over different technologies. This versatile and class-tested textbook is suitable (depending on chapters selected) for undergraduate or first-year graduate courses on client server architectures, middleware, and cloud computing, web services, and web programming. *Introduction to Middleware* John Wiley &

Sons  
CLOUD COMPUTING  
SOLUTIONS The main purpose of this book is to include all the cloud-related technologies in a single platform, so that researchers, academicians, postgraduate students, and those in the industry can easily understand the cloud-based ecosystems. This book discusses the evolution of cloud computing through grid computing and cluster computing. It will help researchers and practitioners to understand grid and distributed computing cloud infrastructure, virtual machines, virtualization, live migration, scheduling techniques, auditing concept, security and privacy, business models, and case studies through the state-of-the-art cloud computing countermeasures. This book covers the spectrum of cloud computing-related technologies and the wide-ranging contents will differentiate this book from others. The topics treated in the book include: The evolution of cloud computing from grid computing, cluster computing, and distributed systems; Covers cloud computing and virtualization environments; Discusses live migration, database, auditing, and applications as part of the materials related to cloud computing; Provides concepts of cloud storage, cloud strategy planning, and management, cloud security, and privacy issues; Explains complex concepts clearly and covers information for

advanced users and beginners. Audience The primary audience for the book includes IT, computer science specialists, researchers, graduate students, designers, experts, and engineers who are occupied with research. *OpenStack Operations Guide* Packt Publishing Ltd Cisco has announced big changes to its certification program. As of February 24, 2020, all current certifications will be retired, and Cisco will begin offering new certification programs.

The good news is if you're working toward any current CCNA certification, keep going. You have until February 24, 2020 to complete your current CCNA. If you already have CCENT/ICND1 certification and would like to earn CCNA, you have until February 23, 2020 to complete your CCNA certification in the current program. Likewise, if you're thinking of completing the current CCENT/ICND1, ICND2, or CCNA Routing and Switching certification,

you can still complete them between now and February 23, 2020. Increase the value of your organization's cloud network—and invest in your education The Cisco Cloud certification validates the skill set of individuals on industry-leading cloud solutions and best practices, as well as offering job role-based curricula for all levels of an IT staff. CCNA Cloud Complete Study Guide prepares you to take two required exams: 210-451, Understanding Cisco Cloud Fundamentals, and

210-455, Introducing Cisco Cloud Administration. It covers everything you can expect to encounter on the exams and also gives you a year of FREE access to Sybex's superior online interactive learning environment and test bank, including chapter tests, practice exams, a glossary of key terms, and electronic flashcards. Cisco's CCNA Cloud certification covers cloud characteristics and models, cloud deployment, and basic knowledge of cloud

compute, cloud networking, and cloud storage. It also covers cloud infrastructure administration and reporting, chargeback and billing reports, cloud provisioning, cloud systems management and monitoring, and cloud remediation. With thorough coverage, practical instruction, and expert insight, this book provides an ideal resource for Exam 210-451 and Exam 210-455 preparation. • Includes an opening list of exam topics • Provides valuable

hands-on exercises • Offers practical real-world examples • Distills in-depth perspective from cloud computing experts This book is the perfect resource for anyone seeking to earn the challenging, but rewarding CCNA Cloud certification.

### **AWS System**

**Administration** Packt Publishing Ltd

The complete guide to Cisco® Intercloud: use cases, planning, and deployment Using Cisco Intercloud technologies, you can seamlessly

integrate private, hybrid, and public clouds—securely providing the right resources at will, with consistent control. Now, four leading experts thoroughly introduce these powerful new technologies. Writing for CTOs, IT/network managers, security architects, product managers, application owners, service architects, and consultants, they explain both underlying Intercloud concepts and practical use cases. Sharing deep architectural insight, the

authors focus on key technical enablers, from virtualization to autonomic management and advanced protocols. They also address the business challenges service providers will face in federated Intercloud relationships. Illuminating the Intercloud with cutting-edge customer examples, they also describe a phased pathway towards coherent deployment. You'll discover how the Intercloud can improve agility, portability, cost, and speed—and how to

start transforming its potential into reality. Explore the Intercloud from both a technical and business standpoint Understand the role of Intercloud federations, exchanges, and brokers Review models for architecture and deployment Plan for effective service and customer management Manage workload portability without compromising service levels Handle service provisioning, assurance, and billing Implement best practices for



federated security,  
privacy, and compliance  
Understand cloud APIs  
from “network up” and  
“application down” views  
Preview emerging  
standards for  
interoperability across  
disparate clouds  
Overcome challenges at  
IaaS, PaaS, SaaS, and  
other service layers  
Define user-to-network  
service contracts (UNCs)  
that permit dynamic cloud  
service mashups  
Understand microservices  
architectures and  
overlays for porting  
Intercloud applications

Use the Intercloud to  
cooperatively engage  
resources from multiple  
cloud domains, and solve  
real business problems  
This book is part of the  
Networking Technology  
Series from Cisco Press®,  
which offers networking  
professionals valuable  
information for  
constructing efficient  
networks, understanding  
new technologies, and  
building successful  
careers.  
*Containers in OpenStack*  
Packt Publishing Ltd  
IBM® Cloud Private is an  
application platform for

developing and managing  
containerized applications  
across hybrid cloud  
environments, on-  
premises and public  
clouds. It is an integrated  
environment for  
managing containers that  
includes the container  
orchestrator Kubernetes,  
a private image registry, a  
management console, and  
monitoring frameworks.  
This IBM Redbooks covers  
tasks performed by IBM  
Cloud Private system  
administrators such as  
installation for high  
availability, configuration,  
backup and restore, using

persistent volumes, networking, security, logging and monitoring. Istio integration, troubleshooting and so on. As part of this project we also developed several code examples and you can download those from the IBM Redbooks GitHub location:

<https://github.com/IBMRedbooks>. The authors team has many years of experience in implementing IBM Cloud Private and other cloud solutions in production environments, so throughout this document we took the approach of providing you the recommended practices

in those areas. If you are an IBM Cloud Private system administrator, this book is for you. If you are developing applications on IBM Cloud Private, you can see the IBM Redbooks publication IBM Cloud Private Application Developer's Guide, SG24-8441.