

Ansible Automation For Everyone

Leverage the power of Ansible to gain complete control over your systems and automate application deployment

Key Features

Use Ansible 2.9 to automate and control your infrastructure

Delve into advanced functionality such as plugins and custom modules in Ansible Automate and orchestrate major cloud platforms such as OpenStack, AWS, and Azure using Ansible

Book Description Ansible enables you to automate software provisioning, configuration management, and application roll-outs, and can be used as a deployment and orchestration tool. While Ansible provides simple yet powerful features to automate multi-layer environments using agentless communication, it can also solve other critical IT challenges, such as ensuring continuous integration and continuous deployment (CI/CD) with zero downtime. In this book, you'll work with Ansible 2.9 and learn to solve complex issues quickly with the help of task-oriented scenarios. You'll start by installing and configuring Ansible on Linux and macOS to automate monotonous and repetitive IT tasks and get to grips with concepts such as playbooks, inventories, and network modules. As you progress, you'll gain insight into the YAML syntax and learn how to port between Ansible versions. In addition to this, you'll also understand how Ansible enables you to orchestrate multi-layer environments such as networks, containers, and the cloud. By the end of this Ansible book, you'll be well - versed in writing playbooks and other related Ansible code to overcome just about all of your IT challenges, from infrastructure-as-code provisioning to application deployments, and even handling the mundane day-to-day maintenance tasks that take up so much valuable time. What you will learn

Become familiar with the

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fundamentals of the Ansible framework Set up role-based variables and dependencies Avoid common mistakes and pitfalls when writing automation code in Ansible Extend Ansible by developing your own modules and plugins Contribute to the Ansible project by submitting your own code Follow best practices for working with cloud environment inventories Troubleshoot issues triggered during Ansible playbook runs Who this book is for If you are a DevOps engineer, administrator, or any IT professional looking to automate IT tasks using Ansible, this book is for you. Prior knowledge of Ansible is not necessary.

Ansible is an IT automation and configuration management tool widely used for infrastructure, cloud, and network automation. Trends and surveys say that Ansible is the choice of tool among system administrators as it is so easy to use. In this book, you'll learn how to integrate Ansible into your day-to-day role as a system administrator, ...

Ansible is a simple, but powerful, server and configuration management tool. Learn to use Ansible effectively, whether you manage one server--or thousands.

Design automation blueprints using Ansible's playbooks to orchestrate and manage your multi-tier infrastructure About This Book Get to grips with Ansible's features such as orchestration, automatic node discovery, and data encryption Create data-driven, modular and reusable automation code with Ansible roles, facts, variables, and templates A step-by-step approach to automating and managing system and application configurations effectively using Ansible's playbooks Who This Book Is For If you are a systems or automation engineer who intends to automate common infrastructure tasks, deploy applications, and use orchestration to configure systems in a co-ordinated manner, then this book is for you. Some understanding of the Linux/UNIX command line interface is expected. What You

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Will Learn Write simple tasks and plays Organize code into a reusable, modular structure Separate code from data using variables and Jinja2 templates Run custom commands and scripts using Ansible's command modules Control execution flow based on conditionals Integrate nodes and discover topology information about other nodes in the cluster Encrypt data with ansible-vault Create environments with isolated configurations to match application development workflow Orchestrate infrastructure and deploy applications in a coordinated manner In Detail Ansible combines configuration management, orchestration, and parallel command execution into a single tool. Its batteries-included approach and built-in module library makes it easy to integrate it with cloud platforms, databases, and notification services without requiring additional plugins. Playbooks in Ansible define the policies your systems under management enforce. They facilitate effective configuration management rather than running ad hoc scripts to deploy complex applications. This book will show you how to write a blueprint of your infrastructure encompassing multi-tier applications using Ansible's playbooks. Beginning with the basic concepts such as plays, tasks, handlers, inventory, and the YAML syntax that Ansible uses, you will see how to organize your code into a modular structure. Building on this, you will master techniques to create data-driven playbooks with variables, templates, logical constructs, and encrypted data. This book will also take you through advanced clustering concepts such as discovering topology information, managing multiple environments, and orchestration. By the end of this book, you will be able to design solutions to your automation and orchestration problems using playbooks quickly and efficiently. Style and approach This book follows a step-by-step approach, with the concepts explained in a conversational and easy-to-follow style. Each topic is

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explained sequentially in the process of creating a course. A comprehensive explanation of the basic and advanced features of Ansible playbooks is also included.

Anyone with responsibility for an IT infrastructure will benefit from the increased efficiency and reliability that can be delivered through automation with Ansible, an open-source, agentless tool that automates cloud provisioning, configuration management, application deployment, and many other infrastructures and application-related tasks.

Study the material in this book to prepare for the RHCE exam EX294 and to learn how using Ansible within your own environment improves system administration productivity.

This book covers all of the objectives of the exam and extends further, ensuring that you know how to use Ansible to manage Linux. The book uses CentOS, a Red Hat-based distribution, and Ubuntu instead of using a single Red Hat distribution. By using the two distributions, you will

understand the power of Ansible and how easily you can deal with multiple platforms, which is crucial for your understanding of Ansible in the real world. The book assumes no previous knowledge of Ansible but some knowledge of Linux system administration from the command line. You will

learn how to manage Linux systems that are installed with different distributions, including CentOS Enterprise Linux 8 and Ubuntu 18.04. You will be able to manage these systems using ad hoc commands from the command line as well as creating Ansible playbooks that can be replayed reliably many times. To save on the code that you have to create, you will

learn how to use Ansible Galaxy to search for and download roles and collections that are pre-written to manage elements of your Linux installations. By the end of this book, you will be able to write efficient and effective YAML playbooks to manage your entire estate. What You Will Learn Prepare systems so that password-less access can be used with

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Ansible remotely Use ad hoc commands to quickly configure systems Use and format YAML files correctly Create playbooks that grow in their complexity as your experience develops Ensure that services are restarted on configuration changes Who This Book Is For Those who want to prepare for the RHCE exam EX294 and readers who want to learn how to use Ansible to improve the productivity of their system administration. This book will help you prepare yourself for the exam as well as your real-life administration needs. Discover how to efficiently deploy and customize Ansible in the way your platform demands About This Book- Get the first book on the market that maximizes the functionalities of Ansible- Master the skill of extending Ansible by deep diving into its modules and plugins- Work through this step-by-step guide to customizing Ansible according to your requirements Who This Book Is For This book is perfect for developers and administrators who are familiar with Ansible and Python programming, but have no knowledge of how to customize Ansible. What You Will Learn- Get a thorough understanding of Ansible modules- Find out everything about plugins that fit in the Ansible architecture- Get to grips with designing modules and handling errors- Work with data structures- Distribute Ansible extensions using PyPi and Git submodules- Get to know the various distribution methods of modules and plugins In Detail Ansible is an IT automation tool that lets you manage your Infrastructure as a Code. It helps you deploy your applications and manage configurations, thus making life easier. Ansible, in most ways, is self sufficient to address most of your requirements. Ideally, standard modules, libraries, or plugins are used to automate a given IT platform. Customizing Ansible can be done by custom module and plugin development. This book shows you how to automate most of the tasks in your IT environment, thus minimizing the need to manually perform scheduled

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tasks and extend your Ansible implementation by developing customized modules and plugins. You'll begin by getting an understanding of the fundamental aspects of extending the Ansible framework, such as custom functions and reusable modules. You'll then progress to building custom plugins and extensions using the fundamental building blocks explained earlier. We'll also show you how to automate some tasks using scripts. Finally, we'll demonstrate how these extensions can be seamlessly integrated into existing Ansible installations and explain how to conduct unit testing on these extensions to ensure they work as desired.

Style and approach This book is a learning book on the fundamentals of Ansible framework and how it can be leveraged to extend it using the modules and plugins.

Network automation is one of the hottest topics in Information Technology today. This revolutionary book aims to illustrate the transformative journey towards full enterprise network automation. This book outlines the tools, technologies and processes required to fully automate an enterprise network. Automated network configuration management is more than converting your network configurations to code. The benefits of source control, version control, automated builds, automated testing and automated releases are realized in the world of networking using well established software development practices. The next-generation network administrative toolkit is introduced including Microsoft Team Foundation Server, Microsoft Visual Studio Code, Git, Linux, and the Ansible framework. Not only will these new technologies be covered at length, a new and continuously integrated / continuously delivered pipeline is also introduced. Starting with safe, simple, non-intrusive, non-disruptive information gathering organizations can ease into network automation while building a dynamic library of documentation and on-demand utilities for network operations. Once

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comfortable with the new ecosystem, administrators can begin making fully automated, orchestrated, and tactical changes to the network. The next evolutionary leap occurs when fully automated network configuration management is implemented. Important information from the network running-configurations is abstracted into data models in a human readable format. Device configurations are dynamically templated creating a scalable, intent-based, source of truth. Much like in the world of software development, full automation of the network using a CI/CD pipeline can be realized. Automated builds, automated testing and automated scheduled releases are orchestrated and executed when changes are approved and checked into the central repository. This book is unlike any on the market today as it includes multiple Ansible playbooks, sample YAML data models and Jinja2 templates for network devices, and a whole new methodology and approach to enterprise network administration and management. The CLI no longer cuts it. Readers should take away from this book a new approach to enterprise network management and administration as well as the full knowledge and understanding of how to use TFS, VS Code, Git, and Ansible to create an automation ecosystem. Readers should have some basic understanding of modern network design, operation, and configuration. No prior programming or software development experience is required. John Capobianco has over 20 years of IT experience and is currently a Technical Advisor for the Canadian House of Commons. A graduate of St. Lawrence College's Computer Programmer Analyst program, John is also a former Professor at St. Lawrence College in the Computer Networking and Technical Support (CNTS) program. John has achieved CCNP, CCDP, CCNA: Data Center, MCITP: EA/SA, CompTIA A+ / Network+, and ITIL Foundation certifications. Having discovered a new way to

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interface with the network John felt compelled to share this new methodology in hopes of revolutionizing the industry and bringing network automation to the world.

As networks grow ever more complex, network professionals are seeking to automate processes for configuration, management, testing, deployment, and operation. Using automation, they aim to lower expenses, improve productivity, reduce human error, shorten time to market, and improve agility. In *Network Automation Made Easy*, expert practitioner Ivo Pinto presents all the concepts and techniques you'll need to move your entire physical and virtual infrastructure towards greater automation, and maximize the value it delivers.

Writing for experienced professionals, Ivo Pinto reviews today's leading use cases for automation, compares leading tools, and presents a deep dive into using the open source Ansible engine to automate common tasks. You'll find everything you need: from practical code snippets to real-world case studies to a complete methodology for planning strategy. Coverage includes: Exploring modern use cases for network automation, and comparing today's most widely used automation tools Capturing essential data for use in network automation, using standard formats such as JSON, XML, and YAML Getting more value from the data your network can capture Installing Ansible and mastering its building blocks, including plays, tasks, modules, variables, conditionals, loops, and roles Performing common networking tasks with Ansible playbooks: managing files, devices, VMs, cloud constructs, APIs, and more Discovering how Ansible can be used to automate even the largest global network architectures Using NetDevOps to transform your approach to automation Creating a new NetDevOps pipeline, step by step Building a network automation strategy from the ground up, reflecting enterprise lessons

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Achieve enterprise automation in your Linux environment with this comprehensive guide

Key Features Automate your Linux infrastructure with the help of practical use cases and real-world scenarios

Learn to plan, build, manage, and customize OS releases in your environment Enhance the scalability and efficiency of your infrastructure with advanced Linux system administration concepts

Book Description Automation is paramount if you want to run Linux in your enterprise effectively. It helps you minimize costs by reducing manual operations, ensuring compliance across data centers, and accelerating deployments for your cloud infrastructures. Complete with detailed explanations, practical examples, and self-assessment questions, this book will teach you how to manage your Linux estate and leverage Ansible to achieve effective levels of automation. You'll learn important concepts on standard operating environments that lend themselves to automation, and then build on this knowledge by applying Ansible to achieve standardization throughout your Linux environments. By the end of this Linux automation book, you'll be able to build, deploy, and manage an entire estate of Linux servers with higher reliability and lower overheads than ever before. What you will learn

Perform large-scale automation of Linux environments in an enterprise Overcome the common challenges and pitfalls of extensive

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automation Define the business processes needed to support a large-scale Linux environment Get well-versed with the most effective and reliable patch management strategies Automate a range of tasks from simple user account changes to complex security policy enforcement Learn best practices and procedures to make your Linux environment automatable Who this book is for This book is for anyone who has a Linux environment to design, implement, and maintain. Open source professionals including infrastructure architects and system administrators will find this book useful. You're expected to have experience in implementing and maintaining Linux servers along with knowledge of building, patching, and maintaining server infrastructure. Although not necessary, knowledge of Ansible or other automation technologies will be beneficial.

Go from the basics of using Ansible to becoming proficient at implementing configuration management in your projects. This book uses a unique approach to teaching Ansible and configuration management while including realistic examples in its day-to-day use from server-based infrastructure to Amazon cloud-based deployments. Practical Ansible is separated into seven chapters that allow you to build your knowledge with each chapter, developing further as we move through the examples provided. It begins with the basics of

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Ansible, providing you with details on how to install and configure your environment while working with different Ansible modules from the command line. Next, it introduces you to working with Ansible tasks and organizing configuration code into playbooks. The book then shows you how to extend playbooks further, using roles and templates within the configuration code. Then, it extends your knowledge further by covering custom Ansible modules using Python and Linux shell scripts, and demonstrating how you can start to keep your secret values encrypted and secure using Ansible Vault. You'll also extend Ansible roles with the use of Ansible Galaxy to reuse existing roles other users have created. The second half of the book moves configuration management to the Amazon cloud providing an introduction on what Amazon Web Services are, and how you can start to work with Ansible roles in AWS. The AWS examples use EC2 and CloudFormation services with Ansible template functions, Ansible Pull, and Ansible Git code deployment. The final part of the book includes a demonstration on how to use the numerous tools available to both Ansible and supporting libraries and modules to allow you to troubleshoot and test your configuration code before you deploy your changes to production systems. By the end of this book, you will have the skills for managing technology configuration management. You will be ready to

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work on real-world projects and be able to implement Ansible in your own technology projects. What You Will Learn Understand the basics of Ansible and how to install and configure the application on your system Make changes to your system using Ansible directly in the command line using some of the more common Ansible modules Group your modules together as tasks in Ansible playbooks for more efficient deployment of configuration changes Use Ansible roles to help group and reuse configuration management changes and deployments Search for community-created roles using Ansible Galaxy and how you can also host your own Ansible roles Deploy code to Amazon Web Services and how to utilize different AWS services in your deployment projects Use external modules and libraries such as Molecule and Ansible Lint to help test your configurations before the configuration code is deployed Who This Book Is For System administrators, DevOps engineers, software engineers, and developers wanting to extend their current knowledge of computer systems and incorporate Ansible as a configuration management tool within them.

Expert solutions to automate routine IT tasks using Ansible. KEY FEATURES ? Single handy guide for all IT teams to bring automation throughout the enterprise. ? In-depth practical demonstration of various automation use-cases on the IT

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infrastructure. ? Expert-led guidelines and best practices to write Ansible playbooks without any errors. DESCRIPTION This book deals with all aspects of Ansible IT infrastructure automation. While reading this book, you should look for automation opportunities in your current role and automate time-consuming and repetitive tasks using Ansible. This book contains Ansible fundamentals assuming you are totally new to Ansible. Proper instructions for setting up the laboratory environment to implement each concept are explained and covered in detail. This book is equipped with practical examples, use-cases and modules on the network. The system and cloud management are practically demonstrated in the book. You will learn to automate all the common administrative tasks throughout the entire IT infrastructure. This book will help establish and build the proficiency of your automation skills, and you can start making the best use of Ansible in enterprise automation. WHAT WILL YOU LEARN ? Install Ansible and learn the fundamentals. ? Use practical examples and learn about the loop, conditional statements, and variables. ? Understand the Ansible network modules and how to apply them in our day-to-day network management. ? Learn to automate the Windows and Linux infrastructure using Ansible. ? Automate routine administrative tasks for AWS, Azure, Google Cloud. ? Explore how to use Ansible

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for Docker and Kubernetes. WHO THIS BOOK IS FOR This book is for all IT students and professionals who want to manage or plan to administer the IT infrastructure. Knowing the basic Linux command-line would be good although not mandatory. TABLE OF CONTENTS 1. Up and Running with Ansible 2. Ansible Basics 3. Ansible Advance Concepts 4. Ansible for Network Administration 5. Ansible for System Administration 6. Ansible for Cloud Administration 7. Ansible Tips and Tricks

Operators are a way of packaging, deploying, and managing Kubernetes applications. A Kubernetes application doesn't just run on Kubernetes; it's composed and managed in Kubernetes terms. Operators add application-specific operational knowledge to a Kubernetes cluster, making it easier to automate complex, stateful applications and to augment the platform. Operators can coordinate application upgrades seamlessly, react to failures automatically, and streamline repetitive maintenance like backups. Think of Operators as site reliability engineers in software. They work by extending the Kubernetes control plane and API, helping systems integrators, cluster administrators, and application developers reliably deploy and manage key services and components. Using real-world examples, authors Jason Dobies and Joshua Wood demonstrate how to use Operators today and how to

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create Operators for your applications with the Operator Framework and SDK. Learn how to establish a Kubernetes cluster and deploy an Operator Examine a range of Operators from usage to implementation Explore the three pillars of the Operator Framework: the Operator SDK, the Operator Lifecycle Manager, and Operator Metering Build Operators from the ground up using the Operator SDK Build, package, and run an Operator in development, testing, and production phases Learn how to distribute your Operator for installation on Kubernetes clusters

Left hand column Explore modern use cases for network automation, and compare today's most widely used automation tools Capture essential data for use in network automation, using standard formats such as JSON, XML, and YAML Get more value from the data your network can capture Install Ansible and master its building blocks, including plays, tasks, modules, variables, conditionals, loops, and roles Perform common networking tasks with Ansible playbooks: manage files, devices, VMs, cloud constructs, APIs, and more See how Ansible can be used to automate even the largest global network architectures Discover how NetDevOps can transform your approach to automation-and create a new NetDevOps pipeline, step by step Build a network automation strategy from the ground up, reflecting lessons from the world's largest

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enterprises 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. Right hand column Practical strategies and techniques for automating network infrastructure As networks grow ever more complex, network professionals are seeking to automate processes for configuration, management, testing, deployment, and operation. Using automation, they aim to lower expenses, improve productivity, reduce human error, shorten time to market, and improve agility. In this guide, expert practitioner Ivo Pinto presents all the concepts and techniques you'll need to move your entire physical and virtual infrastructure towards greater automation, and maximize the value it delivers. Writing for experienced professionals, Ivo Pinto reviews today's leading use cases for automation, compares leading tools, and presents a deep dive into using the open source Ansible engine to automate common tasks. You'll find everything you need: from practical code snippets to real-world case studies to a complete methodology for planning strategy. This guide is for everyone seeking to improve network operations and productivity, including system, network, storage, and virtualization administrators, network and security engineers, and many other technical professionals and managers.

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You can apply its vendor-neutral concepts throughout your entire environment—from servers to the cloud, switches to security.

Among the many configuration management tools available, Ansible has some distinct advantages—it's minimal in nature, you don't need to install anything on your nodes, and it has an easy learning curve.

This practical guide shows you how to be productive with this tool quickly, whether you're a developer deploying code to production or a system administrator looking for a better automation solution. Author Lorin Hochstein shows you how to write playbooks (Ansible's configuration management scripts), manage remote servers, and explore the tool's real power: built-in declarative modules. You'll discover that Ansible has the functionality you need and the simplicity you desire.

Understand how Ansible differs from other configuration management systems Use the YAML file format to write your own playbooks Learn Ansible's support for variables and facts Work with a complete example to deploy a non-trivial application Use roles to simplify and reuse playbooks Make playbooks run faster with ssh multiplexing, pipelining, and parallelism Deploy applications to Amazon EC2 and other cloud platforms Use Ansible to create Docker images and deploy Docker containers

Understand how Ansible differs from other configuration management systems Use the YAML file format to write your own playbooks Learn Ansible's support for variables and facts Work with a complete example to deploy a non-trivial application Use roles to simplify and reuse playbooks Make playbooks run faster with ssh multiplexing, pipelining, and parallelism Deploy applications to Amazon EC2 and other cloud platforms Use Ansible to create Docker images and deploy Docker containers

This book is your concise guide to Ansible, the

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simple way to automate apps and IT infrastructure. In less than 250 pages, this book takes you from knowing nothing about configuration management to understanding how to use Ansible in a professional setting. You will learn how to create an Ansible playbook to automatically set up an environment, ready to install an open source project. You'll extract common tasks into roles that you can reuse across all your projects, and build your infrastructure on top of existing open source roles and modules that are available for you to use. You will learn to build your own modules to perform actions specific to your business. By the end you will create an entire cluster of virtualized machines, all of which have your applications and all their dependencies installed automatically. Finally, you'll test your Ansible playbooks. Ansible can do as much or as little as you want it to. Ansible: From Beginner to Pro will teach you the key skills you need to be an Ansible professional. You'll be writing roles and modules and creating entire environments without human intervention in no time at all – add it to your library today. What You Will Learn Learn why Ansible is so popular and how to download and install it Create a playbook that automatically downloads and installs a popular open source project Use open source roles to complete common tasks, and write your own specific to your business Extend Ansible by writing your own modules Test your infrastructure using

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Test Kitchen and ServerSpec Who This Book Is For Developers that currently create development and production environments by hand. If you find yourself running apt-get install regularly, this book is for you. Ansible adds reproducibility and saves you time all at once. Ansible: From Beginner to Pro is great for any developer wanting to enhance their skillset and learn new tools.

Ansible is an open source automation platform that assists organizations with tasks. This book will teach you to create and deploy playbooks to automate some simple tasks that you already perform on a daily basis. You will also learn to debug and test Ansible to ensure that your playbooks will always work. Towards the end, you will learn how to ...

Design, build, and automate 10 real-world OpenStack administrative tasks with Ansible About This Book Automate real-world OpenStack cloud operator administrative tasks Construct a collection of automation code to save time on managing your OpenStack cloud Use this step-by-step tutorial to automate such tasks with Ansible Who This Book Is For If you are an OpenStack-based cloud operator and/or infrastructure administrator and are interested in automating administrative functions, then this book is exactly what you are looking for. Having a functioning OpenStack environment is helpful, but most certainly not necessary. What You Will Learn Efficiently execute OpenStack administrative tasks

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Familiarize yourself with how Ansible works and assess the defined best practices Create Ansible playbooks and roles Automate tasks to customize your OpenStack cloud Review OpenStack automation considerations when automating administrative tasks Examine and automate advanced OpenStack tasks and designated use cases Get a high-level overview of OpenStack and the current production-ready projects Deep dive into OpenStack CLI tools and find out how to use them In Detail Most organizations are seeking methods to improve business agility because they have realized just having a cloud is not enough. Being able to improve application deployments, reduce infrastructure downtime, and eliminate daily manual tasks can only be accomplished through some sort of automation. Packed with real-world OpenStack administrative tasks, this book will walk you through working examples and explain how these tasks can be automated using one of the most popular open source automation tools—Ansible. We will start with a brief overview of OpenStack and Ansible and highlight some best practices. Each chapter will provide an introduction to handling various Cloud Operator administration tasks such as creating multiple users/tenants, setting up Multi-Tenant Isolation, customizing your clouds quotas, taking instance snapshots, evacuating compute hosts for maintenance, and running cloud health checks, and

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a step-by-step tutorial on how to automate these tasks with Ansible. Style and approach This easy-to-follow reference guide is packed with examples of real-world OpenStack administration tasks; each task is explained in detail and then subsequently turned into automation code.

Learn how to work with the Automate feature of CloudForms, the powerful Red Hat cloud management platform that lets you administer your virtual infrastructure, including hybrid public and private clouds. This practical hands-on introduction shows you how to increase your operational efficiency by automating day-to-day tasks that now require manual input. Throughout the book, author Peter McGowan provides a combination of theoretical information and practical coding examples to help you learn the Automate object model. With this CloudForms feature, you can create auto-scalable cloud applications, eliminate manual decisions and operations when provisioning virtual machines and cloud instances, and manage your complete virtual machine lifecycle. In six parts, this book helps you: Learn the objects and concepts for developing automation scripts with CloudForms Automate Customize the steps and workflows involved in provisioning virtual machines Create and use service catalogs, items, dialogs, objects, bundles, and hierarchies Use CloudForm's updated workflow to retire and delete virtual machines and

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services Orchestrate and coordinate with external services as part of a workflow Explore distributed automation processing as well as argument passing and handling

Red Hat RHCE(TM) 8 Cert Guide is designed to help you pass the newest version of the Hat Certified Engineer exam for Red Hat Enterprise Linux 8, and master the skills you need to automate Linux and execute common system administration tasks with Red Hat(R) Ansible(R) Engine. The most comprehensive and time-efficient RHCE 8 prep guide available, it's also an extraordinarily cost-effective complement to other training, including the author's own RHCE Complete Video Course.

Authored by a leading Red Hat trainer, consultant, and speaker, it presents focused, straight-to-the-point coverage of every exam topic, including:

- Performing Core Red Hat system administration tasks
- Understanding Ansible core components
- Installing and configuring Ansible control nodes
- Configuring Ansible managed nodes
- Administering scripts
- Performing system administration tasks with Ansible modules
- Working with roles
- Using advanced Ansible features such as templates and Ansible Vault

From start to finish, this guide is organized to help you focus your study time where you need the most help, so you can retain more, and earn higher scores. It offers:

- Step-by-step chapter labs to help you practice what you've just learned
- Pre-exam

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theoretical exam to help you decide if you're ready for the real exam Two realistic RHCE sample exams delivered through Pearson's state-of-the-art test engine Pre-chapter "Do I Know This Already" (DIKTA) quizzes to assess your knowledge of each chapter's content, so you can decide how much time to spend on each section Foundation Topics sections thoroughly explaining concepts and theory, and linking them to real-world configurations and commands Key Topics icons flagging every figure, table, or list you absolutely must understand and remember End of chapter Glossary terms Chapter-ending Exam Preparation sections delivering even more exercises and troubleshooting scenarios Take your network automation skills to the next level with practical recipes on managing network devices from a variety of vendors like Cisco, Juniper, and Arista Key Features Use Ansible to automate network infrastructure with the help of step-by-step instructions Implement network automation best practices to save cost, avoid critical errors, and reduce downtime Deliver a robust automation framework by integrating Ansible with NAPALM, NetBox, and Batfish Book Description Network Automation Cookbook is designed to help system administrators, network engineers, and infrastructure automation engineers to centrally manage switches, routers, and other devices in their organization's network. This book will help you gain hands-on

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experience in automating enterprise networks and take you through core network automation techniques using the latest version of Ansible and Python. With the help of practical recipes, you'll learn how to build a network infrastructure that can be easily managed and updated as it scales through a large number of devices. You'll also cover topics related to security automation and get to grips with essential techniques to maintain network robustness. As you make progress, the book will show you how to automate networks on public cloud providers such as AWS, Google Cloud Platform, and Azure. Finally, you will get up and running with Ansible 2.9 and discover troubleshooting techniques and network automation best practices. By the end of this book, you'll be able to use Ansible to automate modern network devices and integrate third-party tools such as NAPALM, NetBox, and Batfish easily to build robust network automation solutions. What you will learn

- Understand the various components of Ansible
- Automate network resources in AWS, GCP, and Azure cloud solutions
- Use IaC concepts to design and build network solutions
- Automate network devices such as Cisco, Juniper, Arista, and F5
- Use NetBox to build network inventory and integrate it with Ansible
- Validate networks using Ansible and Batfish

Who this book is for This Ansible network automation book is for network and DevOps engineers interested in automating complex network

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tasks. Prior understanding of networking and basic Linux knowledge is required.

Master Ansible Automation and learn how to automate your apps deployment and IT infrastructure operations. Ansible is one of the most popular DevOps tools available in the IT market. Key Features Run Ansible Ad-Hoc commands. Deploy Files with Jinja2 templates. Create and run Ansible Playbooks. Use Ansible Vault to protect sensitive information. Use Ansible Galaxy to install and use Ansible roles. Learn various Ansible troubleshooting techniques. Book Description Learn Ansible Quickly is a fully practical hands-on guide for learning Ansible Automation. It will get you up and running with Ansible in no time. First, you will break the ice with Ansible by running very simple Ad-Hoc commands. Then, you will dive into the world of Ansible playbooks, variables, facts, registers, and loops. Also, you will learn how to use conditional statements in your Ansible playbooks. Moreover, you will explore how to use blocks to handle exceptions and failures in Ansible. In addition, you will get to install and use Ansible roles, so your playbooks look clean and unrepetitive. Finally, you will learn various troubleshooting techniques in Ansible. By the end of this book, you will have all the skills necessarily to develop state of the art Ansible playbooks that can automate any repetitive task you may encounter while working on Linux systems. What you will learn

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Run Ansible Ad-Hoc commands and Playbooks. Understand how to work with Ansible variables, Facts, Registers, and Loops. Make your Ansible Playbooks smarter with conditional statements. Use Blocks to handle exceptions and failures. Use Handlers to trigger tasks upon change. Who This Book Is For This book is an amazing preparation guide for anyone wants to pass the EX294 certification exam and become a Red Hat Certified Engineer (RHCE). If you are tired of spending countless hours doing the same tedious task on Linux over and over again then this book is for you! Learn Ansible Quickly will teach you all the skills you need to automate boring tasks in Linux. You will be much more efficient working on Linux after reading this book, more importantly, you will get more sleep, I promise you! Learn Ansible Quickly does assume prior Linux knowledge (RHCSA Level) and that you have experience working on the Linux command line.

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- RHEL System Roles
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- Ansible Troubleshooting
- Final Sample Exam
- Knowledge Check
- Solutions

Design, develop, and solve real-world automation and orchestration problems by unlocking Ansible's automation capabilities

Key Features: Completely

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revised and updated for Ansible 4.0 and beyond Tackle complex automation challenges with the newly added features in Ansible Learn about the rapidly expanding field of network automation using Ansible, with the help of practical examples for configuring network devices Book Description: Ansible is a modern, YAML-based automation tool (built on top of Python, one of the world's most popular programming languages) with a massive and ever-growing user base. Its popularity and Python underpinnings make it essential learning for all in the DevOps space. This fourth edition of Mastering Ansible provides complete coverage of Ansible automation, from the design and architecture of the tool and basic automation with playbooks to writing and debugging your own Python-based extensions. You'll learn how to build automation workflows with Ansible's extensive built-in library of collections, modules, and plugins. You'll then look at extending the modules and plugins with Python-based code and even build your own collections - ultimately learning how to give back to the Ansible community. By the end of this Ansible book, you'll be confident in all aspects of Ansible automation, from the fundamentals of playbook design to getting under the hood and extending and adapting Ansible to solve new automation challenges. What You Will Learn: Gain an in-depth understanding of how Ansible works under the hood Get to grips with

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Ansible collections and how they are changing and shaping the future of Ansible Fully automate the Ansible playbook executions with encrypted data Use blocks to construct failure recovery or cleanup Explore the playbook debugger and Ansible console Troubleshoot unexpected behavior effectively Work with cloud infrastructure providers and container systems Who this book is for: If you are an Ansible developer or operator who has a detailed understanding of its core elements and applications but are now looking to enhance your skills in applying automation using Ansible, this book is for you. Prior experience working with core system administration tasks on Linux and basic familiarity with concepts such as cloud computing, containers, network devices, and fundamentals of a high-level programming language will help you make the most of this book.

Reveals and illustrates the awesome power and flexibility of the command line, and the design and usage philosophies that support those traits. This understanding of how to extract the most from the Linux command line can help you become a better SysAdmin. Understand why many things in the Linux and Unix worlds are done as they are, and how to apply the Linux Philosophy to working as a SysAdmin. The original Unix/Linux Philosophy presented foundational and functional tenets - rules, guidelines, and procedural methods - that worked

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well. However, it was intended for the developers of those operating systems. Although System Administrators could apply many of the tenets to their daily work, many important tenets were missing. Over the years that David Both has been working with Linux and Unix, he has formulated his own philosophy – one which applies more directly to the everyday life of the System Administrator. This book defines a philosophy, and then illuminates the practical aspects of that philosophy with real-world experiments you can perform. Inspired by David's real mentors, and dedicated to them, *The Linux Philosophy for System Administrators* is a mentor to SysAdmins everywhere; remember - "If you fail you learn." What You Will Learn Apply the Linux philosophy to working as a SysAdmin Unlock the power of the knowledge you already have Fully understand and access the vast power of the command line Review the power of Linux as a function of the philosophies that built it Who This Book Is For If you want to learn the secrets that make the best Linux SysAdmins powerful far beyond that of mere mortals; if you want to understand the concepts that unlock those secrets; if you want to be the SysAdmin that everyone else turns to when the bytes hit the fan – then this book is for you.

Leverage the power of Ansible 2 and related tools and scale DevOps processes About This Book Learn how to use Ansible playbooks along with YAML and

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JINJA to create efficient DevOps solutions Use Ansible to provision and automate Docker containers and images Learn the fundamentals of Continuous Integration and Continuous Delivery and how to leverage Ansible to implement these modern DevOps Learn the fundamentals of creating custom Ansible modules Learn the fundamentals of Ansible Galaxy Follow along step-by-step as we teach you to scale Ansible for your DevOps processes Who This Book Is For If you are a DevOps engineer, administrator, or developer and want to implement the DevOps environment in your organization using Ansible, then this book is for you. What You Will Learn Get to the grips with the fundamentals of Ansible 2.2 and how you can benefit from leveraging Ansible for DevOps. Adapt the DevOps process and learn how Ansible and other tools can be used to automate it. Start automating Continuous Integration and Continuous Delivery tasks using Ansible Maximize the advantages of tools such as Docker, Jenkins, JIRA, and many more to implement the DevOps culture. Integrate DevOps tools with Ansible Extend Ansible using Python and create custom modules that integrate with unique specific technology stacks Connect and control the states of various third-party applications such as GIT, SVN, Artifactory, Nexus, Jira, Hipchat, Slack, Nginx, and others In Detail Thinking about adapting the DevOps culture for your organization using a very simple, yet

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powerful automation tool, Ansible 2? Then this book is for you! In this book, you will start with the role of Ansible in the DevOps module, which covers fundamental DevOps practices and how Ansible is leveraged by DevOps organizations to implement consistent and simplified configuration management and deployment. You will then move on to the next module, Ansible with DevOps, where you will understand Ansible fundamentals and how Ansible Playbooks can be used for simple configuration management and deployment tasks. After simpler tasks, you will move on to the third module, Ansible Syntax and Playbook Development, where you will learn advanced configuration management implementations, and use Ansible Vault to secure top-secret information in your organization. In this module, you will also learn about popular DevOps tools and the support that Ansible provides for them (MYSQL, NGINX, APACHE and so on). The last module, Scaling Ansible for the enterprise, is where you will integrate Ansible with CI and CD solutions and provision Docker containers using Ansible. By the end of the book you will have learned to use Ansible to leverage your DevOps tasks. Style and approach A step-by-step guide to automating all DevOps stages with ease using Ansible Design, develop, and solve real world automation and orchestration needs by unlocking the automation capabilities of Ansible About This Book Discover

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how Ansible works in detail Explore use cases for Ansible's advanced features including task delegation, fast failures, and serial task execution Extend Ansible with custom modules, plugins, and inventory sources Who This Book Is For This book is intended for Ansible developers and operators who have an understanding of the core elements and applications but are now looking to enhance their skills in applying automation using Ansible. What You Will Learn Understand Ansible's code and logic flow Safeguard sensitive data within Ansible Access and manipulate complex variable data within Ansible playbooks Handle task results to manipulate change and failure definitions Organize Ansible content into a simple structure Craft a multi-tier rollout playbook utilizing load balancers and manipulating your monitoring system Utilize advanced Ansible features to orchestrate rolling updates with almost no service disruptions Troubleshoot Ansible failures to understand and resolve issues Extend Ansible with custom modules, plugins, or inventory sources In Detail Automation is critical to success in the world of DevOps. How quickly and efficiently an application deployment can be automated, or a new infrastructure can be built up, can be the difference between a successful product or a failure. Ansible provides a simple yet powerful automation engine. Beyond the basics of Ansible lie a host of advanced features which are available to help you increase

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efficiency and accomplish complex orchestrations with ease. This book provides you with the knowledge you need to understand how Ansible works at a fundamental level and leverage its advanced capabilities. You'll learn how to encrypt Ansible content at rest and decrypt data at runtime. You will master the advanced features and capabilities required to tackle the complex automation challenges of today and beyond. You will gain detailed knowledge of Ansible workflows, explore use cases for advanced features, craft well thought out orchestrations, troubleshoot unexpected behaviour, and extend Ansible through customizations. Finally, you will discover the methods used to examine and debug Ansible operations, helping you to understand and resolve issues. Style and approach A clear, practical guide that covers best practise, system architecture and design aspects that will help you master Ansible with ease.

Sneak Peek The Sneak Peek program provides early access to Pearson video products and is exclusively available to Safari subscribers. Content for titles in this program is made available throughout the development cycle, so products may not be complete, edited, or finalized, including video post-production editing. 10+ Hours of Video Instruction Overview In Automating with Ansible LiveLessons we will be building on the Ansible Fundamentals

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LiveLessons foundation. To make sure that you don't miss anything essential, this course starts with an Ansible Basics getting started lab, which will involve setting up an environment where all of the Ansible basic skills will be reviewed. We will then move on to using DevOps. You will learn how Vagrant can be used to set up an environment with virtual machines, and set up an IT Infrastructure with Ansible that you can follow along through the author demonstrations. We will also discuss how to manage Windows, network equipment, as well as cloud infrastructure with Ansible. Next, we'll have a look at some of the more advanced Ansible features, such as working with roles, task control, and using Ansible Vault. Then we will discuss Ansible optimization and troubleshooting with walk-through examples. In the last lesson, we'll learn how to work with Ansible Tower, which helps you to efficiently use Ansible in a datacenter environment. This course compliments the Ansible Fundamentals LiveLessons course and can also be used as a secondary resource to get you started studying for the Red Hat Certificate of Expertise in Ansible Automation (exam 407). Topics include:

- Module 1: Setting up Ansible-based DevOps Environment
- Module 2: Advanced Ansible Features
- Module 3: Ansible Optimization and Troubleshooting
- Module 4: Ansible Tower

About the Instructor
Sander van Vugt has been teaching Linux classes since 1995 and has written more than 60 books

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about different Linux-related topics. Sander is a Red Hat Certified Instructor and has deep knowledge and understanding of Red Hat Enterprise Linux, including the upcoming Red Hat Enterprise Linux 7. He has been teaching Linux since 1994, and as a Red Hat Certified Examiner he is authorized to proctor different Red Hat exams. He is also a regular speaker on major Linux conferences all over the world. Skill Level Intermediate/Advanced Learn How To Review the basics of Ansible, including running Ad-hoc Commands and implementing Playbooks Implement DevOps using Vagrant, including s...

Get More from your Network with Automation tools to increase its effectiveness. About This Book Get started with network automation (and different automation tasks) with relevant use cases Apply software design principles such as Continuous Integration and DevOps to your network toolkit Guides you through some best practices in automation Who This Book Is For If you are a network engineer looking for an extensive guide to help you automate and manage your network efficiently, then this book is for you. What You Will Learn Get the detailed analysis of Network automation Trigger automations through available data factors Improve data center robustness and security through specific access and data digging Get an Access to APIs from Excel for dynamic reporting Set up a communication with SSH-based devices using netmiko Make full use of practical use cases and best practices to get accustomed with the various aspects of network automation In Detail Network automation is the use of IT controls to supervise and carry out every-day network management functions. It plays a key role in network virtualization technologies and network functions. The book

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starts by providing an introduction to network automation, SDN, and its applications, which include integrating DevOps tools to automate the network efficiently. It then guides you through different network automation tasks and covers various data digging and reporting methodologies such as IPv6 migration, DC relocations, and interface parsing, all the while retaining security and improving data center robustness. The book then moves on to the use of Python and the management of SSH keys for machine-to-machine (M2M) communication, all followed by practical use cases. The book also covers the importance of Ansible for network automation including best practices in automation, ways to test automated networks using different tools, and other important techniques. By the end of the book, you will be well acquainted with the various aspects of network automation. Style and approach A clear, concise, and straightforward book that will enable you to automate networks and improve performance.

Orchestrate your cloud infrastructure Key Features Recipe-based approach to install and configure cloud resources using Ansible Covers various cloud-related modules and their functionalities Includes deployment of a sample application to the cloud resources that we create Learn the best possible way to manage and automate your cloud infrastructure Book Description Ansible has a large collection of inbuilt modules to manage various cloud resources. The book begins with the concepts needed to safeguard your credentials and explain how you interact with cloud providers to manage resources. Each chapter begins with an introduction and prerequisites to use the right modules to manage a given cloud provider. Learn about Amazon Web Services, Google Cloud, Microsoft Azure, and other providers. Each chapter shows you how to create basic computing resources, which you can then use to deploy an application. Finally, you will be able to deploy a

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sample application to demonstrate various usage patterns and utilities of resources. What you will learn Use Ansible Vault to protect secrets Understand how Ansible modules interact with cloud providers to manage resources Build cloud-based resources for your application Create resources beyond simple virtual machines Write tasks that can be reused to create resources multiple times Work with self-hosted clouds such as OpenStack and Docker Deploy a multi-tier application on various cloud providers Who this book is for If you are a system administrator, infrastructure engineer, or a DevOps engineer who wants to obtain practical knowledge about Ansible and its cloud deliverables, then this book is for you. Recipes in this book are designed for people who would like to manage their cloud infrastructures efficiently using Ansible, which is regarded as one of the best tools for cloud management and automation.

This book is for IT professionals working hard to keep up with new technology whilst retaining old skills learnt. Extremely useful as an office or interview preparation reference, it is a condensed deep dive and refresher into network security on numerous vendor devices giving detailed information in a format easy to remember. It covers configuration on network security technologies such as Ansible modules, playbooks, command line tools and network orchestration. Furthermore it is very quick to read and avoids any necessary explanations focusing exactly on what you need to know.

This document is intended to facilitate the deployment of Red Hat Ansible for IBM® FlashSystem. The document showcases the automation and orchestration of storage provisioning and copy services, such as Global Mirror, Global Mirror with change volumes, Metro Mirror for IBM FlashSystem® in hybrid cloud environments. The Ansible-based automation and orchestration for managing high availability environments by using HyperSwap for IBM

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FlashSystem storage also is described. To complete the tasks that are described, you must understand IBM FlashSystem and Red Hat Ansible. The information in this document is distributed on an "as is" basis without any warranty that is either expressed or implied. Support assistance for the use of this material is limited to situations where IBM FlashSystem storage devices are supported and entitled and where the issues are specific to a blueprint implementation.

Learn everything you need to manage and handle your systems with ease with Ansible 2 using this comprehensive guide About This Book Simplify the automation of applications and systems using the newest version of Ansible Get acquainted with fundamentals of Ansible such as playbooks, modules, and various testing strategies A comprehensive, learning guide that provides you with great skills to automate your organization's infrastructure using Ansible 2 Who This Book Is For The book is for sys admins who want to automate their organization's infrastructure using Ansible 2. No prior knowledge of Ansible is required. What You Will Learn Set up Ansible 2 and an Ansible 2 project in a future-proof way Perform basic operations with Ansible 2 such as creating, copying, moving, changing, and deleting files, and creating and deleting users Deploy complete cloud environments using Ansible 2 on AWS and DigitalOcean Explore complex operations with Ansible 2 (Ansible vault, e-mails, and Nagios) Develop and test Ansible playbooks Write a custom module and test it In Detail Ansible is an open source automation platform that assists organizations with tasks such as configuration management, application deployment, orchestration, and task automation. With Ansible, even complex tasks can be handled easier than before. In this book, you will learn about the fundamentals and practical aspects of Ansible 2 by diving deeply into topics

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such as installation (Linux, BSD, and Windows Support), playbooks, modules, various testing strategies, provisioning, deployment, and orchestration. In this book, you will get accustomed with the new features of Ansible 2 such as cleaner architecture, task blocks, playbook parsing, new execution strategy plugins, and modules. You will also learn how to integrate Ansible with cloud platforms such as AWS. The book ends with the enterprise versions of Ansible, Ansible Tower and Ansible Galaxy, where you will learn to interact Ansible with different OSes to speed up your work to previously unseen levels. By the end of the book, you'll be able to leverage the Ansible parameters to create expeditious tasks for your organization by implementing the Ansible 2 techniques and paradigms. Style and approach This book is a step-by-step learning guide on the all new Ansible 2, which is an ideal configuration management tool.

Learn Ansible Quickly Master All Ansible Automation Skills Required to Pass EX294 Exam and Become a Red Hat Certified Engineer

Design, develop, and solve real-world automation and orchestration problems by unlocking Ansible's automation capabilities Key Features Completely revised and updated for Ansible 4.0 and beyond Tackle complex automation challenges with the newly added features in Ansible Learn about the rapidly expanding field of network automation using Ansible, with the help of practical examples for configuring network devices Book Description Ansible is a modern, YAML-based automation tool (built on top of Python, one of the world's most popular programming languages) with a massive and ever-growing user base. Its popularity and Python underpinnings make it essential learning for all in the DevOps space. This fourth edition of Mastering Ansible provides complete coverage of Ansible automation, from the design and architecture of the tool and basic automation with

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playbooks to writing and debugging your own Python-based extensions. You'll learn how to build automation workflows with Ansible's extensive built-in library of collections, modules, and plugins. You'll then look at extending the modules and plugins with Python-based code and even build your own collections — ultimately learning how to give back to the Ansible community. By the end of this Ansible book, you'll be confident in all aspects of Ansible automation, from the fundamentals of playbook design to getting under the hood and extending and adapting Ansible to solve new automation challenges. What you will learn Gain an in-depth understanding of how Ansible works under the hood Get to grips with Ansible collections and how they are changing and shaping the future of Ansible Fully automate the Ansible playbook executions with encrypted data Use blocks to construct failure recovery or cleanup Explore the playbook debugger and Ansible console Troubleshoot unexpected behavior effectively Work with cloud infrastructure providers and container systems Who this book is for If you are an Ansible developer or operator who has a detailed understanding of its core elements and applications but are now looking to enhance your skills in applying automation using Ansible, this book is for you. Prior experience working with core system administration tasks on Linux and basic familiarity with concepts such as cloud computing, containers, network devices, and fundamentals of a high-level programming language will help you make the most of this book.

Use Vagrant to easily build complete development environments Key Features Implement DevOps with Vagrant effectively Integrate Vagrant with different tools such as Puppet, Chef, and Docker Manage infrastructure with a practical approach Book Description Hands-On DevOps with Vagrant teaches you how to use Vagrant as a powerful

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DevOps tool and gives an overview of how it fits into the DevOps landscape. You will learn how to install VirtualBox and Vagrant in Windows, macOS, and Linux. You will then move on to understanding Vagrant commands, discovering its boxes and Vagrant Cloud. After getting to grips with the basics, the next set of chapters helps you to understand how to configure Vagrant, along with networking. You will explore multimachine, followed by studying how to create multiple environments and the communication between them. In addition to this, you will cover concepts such as Vagrant plugins and file syncing. The last set of chapters provides insights into provisioning shell scripts, also guiding you in how to use Vagrant with configuration management tools such as Chef, Ansible, Docker, Puppet, and Salt. By the end of this book, you will have grasped Vagrant's features and how to use them for your benefit with the help of tips and tricks. What you will learn

- Explore what development features Vagrant offers
- Install Vagrant and VirtualBox on Windows, macOS and Linux
- Harness the power of Vagrant to create powerful development environments
- Utilize DevOps tools such as Docker, Chef, and Puppet
- Understand everything about Vagrant, including networking, plugins, and provisioning
- Use the Vagrant Cloud to install and manage Vagrant boxes
- Who this book is for

Hands-On DevOps with Vagrant is for you if you are a system administrator, DevOps engineer, DevOps architect, or any stakeholder working with DevOps and wanting to explore Vagrant. Experience in system administration is needed to enjoy this book.

Design, develop, and solve real-world automation and orchestration problems by unlocking the automation capabilities of Ansible. Key Features

- Tackle complex automation challenges with the newly added features in Ansible 2.7

Book Description Automation is essential for success in the modern world of DevOps. Ansible provides a

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simple, yet powerful, automation engine for tackling complex automation challenges. This book will take you on a journey that will help you exploit the latest version's advanced features to help you increase efficiency and accomplish complex orchestrations. This book will help you understand how Ansible 2.7 works at a fundamental level and will also teach you to leverage its advanced capabilities. Throughout this book, you will learn how to encrypt Ansible content at rest and decrypt data at runtime. Next, this book will act as an ideal resource to help you master the advanced features and capabilities required to tackle complex automation challenges. Later, it will walk you through workflows, use cases, orchestrations, troubleshooting, and Ansible extensions. Lastly, you will examine and debug Ansible operations, helping you to understand and resolve issues. By the end of the book, you will be able to unlock the true power of the Ansible automation engine and tackle complex, real-world actions with ease. What you will learn

- Gain an in-depth understanding of how Ansible works under the hood
- Fully automate Ansible playbook executions with encrypted data
- Access and manipulate variable data within playbooks
- Use blocks to perform failure recovery or cleanup
- Explore the Playbook debugger and the Ansible Console
- Troubleshoot unexpected behavior effectively
- Work with cloud infrastructure providers and container systems
- Develop custom modules, plugins, and dynamic inventory sources

Who this book is for This book is for Ansible developers and operators who have an understanding of its core elements and applications but are now looking to enhance their skills in applying automation using Ansible.

The Sneak Peek program provides early access to Pearson video products and is exclusively available to Safari subscribers. Content for titles in this program is made available throughout the development cycle, so products may

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not be complete, edited, or finalized, including video post-production editing. 10+ Hours of Video Instruction Description Red Hat Certified Engineer (RHCE) EX294 Complete Video Course, 3/e: Red Hat Ansible Automation provides a solid understanding of all the topics required to pass the RHCE exam, including how to perform common automation tasks using Ansible and management of a Linux environment Overview Red Hat Certified Engineer (RHCE) EX294 Complete Video Course, 3/e: Red Hat Ansible Automation is all new and fully updated. This 10-hour video course provides a solid understanding of all the topics required to pass the RHCE exam and includes live demos, exam question walk-throughs and dynamic lightboard teaching. The student learns how to perform common automation tasks using Ansible as well as how to use common Ansible components to automate the management of a Linux environment. RHCE EX294 Complete Video Course covers all facets of the newly-updated RHCE exam. Instructor Sander van Vugt walks you through the topics using demos and labs to test the student's knowledge with real world scenarios. Each video lesson ends with a lab that provides an exercise so you can test your skills. Sander then provides a detailed solution to each lab, explaining how to solve for the exam objectives so you can get the experience you need to pass the test. Audio instruction throughout offers detailed explanations, tips, and configuration verifications. This engaging self-paced video training solution provides learners with more than 10 hours of video instruction from an expert trainer with more than 20 years of practical Linux teaching experience. Through the use of topic-focused instructional videos, you will gain an in-depth understanding of all topics on the Red Hat Certified Engineer (RHCE) exam, as well as a deeper understanding of Red Hat Enterprise Linux and Ansible. The combination of video, labs, and practice exams provides a unique offering that gives you

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a full toolkit to learn and excel on your exam. Topics include:
Module 1: Introduction to Ansible
Module 2: Using Advanced Ansible Solutions
Module 3: Managing Systems with Ansible
Module 4: Sample Exam
About the Instructor Sander van Vugt has been teaching Linux classes sinc...

Automate security-related tasks in a structured, modular fashion using the best open source automation tool available
About This Book Leverage the agentless, push-based power of Ansible 2 to automate security tasks
Learn to write playbooks that apply security to any part of your system
This recipe-based guide will teach you to use Ansible 2 for various use cases such as fraud detection, network security, governance, and more
Who This Book Is For If you are a system administrator or a DevOps engineer with responsibility for finding loop holes in your system or application, then this book is for you. It's also useful for security consultants looking to automate their infrastructure's security model.
What You Will Learn Use Ansible playbooks, roles, modules, and templating to build generic, testable playbooks
Manage Linux and Windows hosts remotely in a repeatable and predictable manner
See how to perform security patch management, and security hardening with scheduling and automation
Set up AWS Lambda for a serverless automated defense
Run continuous security scans against your hosts and automatically fix and harden the gaps
Extend Ansible to write your custom modules and use them as part of your already existing security automation programs
Perform automation security audit checks for applications using Ansible
Manage secrets in Ansible using Ansible Vault
In Detail Security automation is one of the most interesting skills to have nowadays. Ansible allows you to write automation procedures once and use them across your entire infrastructure. This book will teach you the best way to use Ansible for seemingly complex tasks by using the various building blocks available

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and creating solutions that are easy to teach others, store for later, perform version control on, and repeat. We'll start by covering various popular modules and writing simple playbooks to showcase those modules. You'll see how this can be applied over a variety of platforms and operating systems, whether they are Windows/Linux bare metal servers or containers on a cloud platform. Once the bare bones automation is in place, you'll learn how to leverage tools such as Ansible Tower or even Jenkins to create scheduled repeatable processes around security patching, security hardening, compliance reports, monitoring of systems, and so on. Moving on, you'll delve into useful security automation techniques and approaches, and learn how to extend Ansible for enhanced security. While on the way, we will tackle topics like how to manage secrets, how to manage all the playbooks that we will create and how to enable collaboration using Ansible Galaxy. In the final stretch, we'll tackle how to extend the modules of Ansible for our use, and do all the previous tasks in a programmatic manner to get even more powerful automation frameworks and rigs. Style and approach This comprehensive guide will teach you to manage Linux and Windows hosts remotely in a repeatable and predictable manner. The book takes an in-depth approach and helps you understand how to set up complicated stacks of software with codified and easy-to-share best practices.

Configure Ansible and start coding YAML playbooks using the appropriate modules
Key Features Create and use Ansible Playbook to script and organise management tasks
Benefit from the Ansible community roles and modules to resolve complex and niche tasks
Write configuration management code to automate infrastructure
Book Description Configuration Management (CM) tools help administrators reduce their workload. Ansible is one of the best Configuration Management tools, and can act as an

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orchestrator for managing other CMs. This book is the easiest way to learn how to use Ansible as an orchestrator and a Configuration Management tool. With this book, you will learn how to control and monitor computer and network infrastructures of any size, physical or virtual. You will begin by learning about the Ansible client-server architecture. To get started, you will set up and configure an Ansible server. You will then go through the major features of Ansible: Playbook and Inventory. Then, we will look at Ansible systems and network modules. You will then use Ansible to enable infrastructure automated configuration management, followed by best practices for using Ansible roles and community modules. Finally, you will explore Ansible features such as Ansible Vault, Ansible Containers, and Ansible plugins. What you will learn Implement Playbook YAML scripts and its capacities to simplify day-to-day tasks Setup Static and Dynamic Inventory Use Ansible predefined modules for Linux, Windows, networking, and virtualisation administration Organize and configure the host filesystem using storage and files modules Implement Ansible to enable infrastructure automated configuration management Simplify infrastructure administration Search and install new roles and enable them within Ansible Secure your data using Ansible Vault Who this book is for This book is targeted at System Administrators and Network Administrators who want to use Ansible to automate an infrastructure. No knowledge of Ansible is required.

This book describes the essential components of the SCION secure Internet architecture, the first architecture designed foremost for strong security and high availability. Among its core features, SCION also provides route control, explicit trust information, multipath communication, scalable quality-of-service guarantees, and efficient forwarding. The book includes functional specifications of the network elements,

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communication protocols among these elements, data structures, and configuration files. In particular, the book offers a specification of a working prototype. The authors provide a comprehensive description of the main design features for achieving a secure Internet architecture. They facilitate the reader throughout, structuring the book so that the technical detail gradually increases, and supporting the text with a glossary, an index, a list of abbreviations, answers to frequently asked questions, and special highlighting for examples and for sections that explain important research, engineering, and deployment features. The book is suitable for researchers, practitioners, and graduate students who are interested in network security.

If you create, manage, operate, or configure systems running in the cloud, you're a cloud engineer--even if you work as a system administrator, software developer, data scientist, or site reliability engineer. With this book, professionals from around the world provide valuable insight into today's cloud engineering role. These concise articles explore the entire cloud computing experience, including fundamentals, architecture, and migration. You'll delve into security and compliance, operations and reliability, and software development. And examine networking, organizational culture, and more. You're sure to find 1, 2, or 97 things that inspire you to dig deeper and expand your own career.

"Three Keys to Making the Right Multicloud Decisions," Brendan O'Leary "Serverless Bad Practices," Manases Jesus Galindo Bello "Failing a Cloud Migration," Lee Atchison "Treat Your Cloud Environment as If It Were On Premises," Iyana Garry "What Is Toil, and Why Are SREs Obsessed with It?", Zachary Nickens "Lean QA: The QA Evolving in the DevOps World," Theresa Neate "How Economies of Scale Work in the Cloud," Jon Moore "The Cloud Is Not About the Cloud," Ken Corless "Data Gravity: The Importance of Data Management

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in the Cloud," Geoff Hughes "Even in the Cloud, the Network Is the Foundation," David Murray "Cloud Engineering Is About Culture, Not Containers," Holly Cummins

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