

Red Hat Open Shift Enterprise Administration

This IBM® Redbooks® publication delivers a Site Reliability Engineering (SRE) solution for cloud workloads that uses Red Hat OpenStack for Infrastructure as a Service (IaaS), Red Hat OpenShift for Platform as a Service (PaaS), and IT operations management that uses open source tools. Today, customers are no longer living in a world of licensed software. Curiosity increased the demand for investigating the Open Source world for Community Open Source and Enterprise grade applications. IBM as one of the contributors to the Open Source community is interested in helping the software be maintained and supported. Having companies, such as IBM, support the evolution of Open Source software helps to keep the Open Source community striving for enterprise grade open source solutions. Lately, companies are working on deciphering how to take advantage of Enterprise and Community Open Source to implement in their enterprises. The business case for open source software is no longer a mystery and no surprise that most of the new positions in IT enterprises are related to open source projects. The ability of a large enterprise to manage this sort of implementations is to engage in a hypertrophied cooperation, where the ability to not only cooperate with teams and people outside your organization, but also to find new ways of working together and devise new ways to improve the software and its code. A goal for this publication is to help the client's journey into the open source space and implement a private Cloud Container-based architecture with the ability to manage the entire IT Service Management processes from the open source framework. This publication describes the architecture and implementation details of the solution. Although not every piece of this solution is documented here, this book does provide instructions for what was achieved incorporating open source technologies. Moreover, with this publication, the team shares their collaboration experiences working in a team of technologists, open source developers, Red Hat, and the open source community. This publication is for designers, developers, managers, and anyone who is considering starting a Cloud open source project, or users who started that journey. This book also can be a manual to guide the implementation of a technical viable architecture and help those enterprises participate in an open source project but have not done so before. The reader must be familiar with principles in programming and basic software engineering concepts, such as source code, compilers, and patches.

This is the eBook version of the print title. Learn, prepare, and practice for Red Hat RHCSA 8 (EX200) exam success with this Cert Guide from Pearson IT Certification, a leader in IT Certification learning. Master Red Hat RHCSA 8 EX200 exam topics Assess your knowledge with chapter-ending quizzes Review key concepts with exam-preparation tasks Practice with four unique practice tests Learn from two full hours of video training from the author's Red Hat Certified System Administrator (RHCSA) Complete Video Course, 3rd Edition. Red Hat RHCSA 8 Cert Guide is a best-of-breed exam study guide. Leading Linux consultant, author, and instructor Sander van Vugt shares preparation hints and test-taking tips, helping you identify areas of weakness and improve both your conceptual knowledge and hands-on skills. Material is presented in a concise manner,

focusing on increasing your understanding and retention of exam topics. The book presents you with an organized test-preparation routine through the use of proven series elements and techniques. Exam topic lists make referencing easy. Chapter-ending Exam Preparation Tasks help you drill on key concepts you must know thoroughly. Review questions help you assess your knowledge, and a final preparation chapter guides you through tools and resources to help you craft your final study plan. Well regarded for its level of detail, assessment features, and challenging review questions and exercises, this study guide helps you master the concepts and techniques that will enable you to succeed on the exam the first time, including Basic system management: Installation, tools, file management, text files, RHEL8 connections, user/group management, permissions, and network configuration Operating running systems: Managing software, processes, storage, and advanced storage; working with systemd; scheduling tasks; and configuring logging Advanced system administration: Managing the kernel and boot procedures, essential troubleshooting, bash shell scripting Managing network services: Configuring SSH, firewalls, and time services; managing Apache HTTP services and SE Linux; and accessing network storage

Get an in-depth tour of OpenShift, the container-based software deployment and management platform from Red Hat that provides a secure multi-tenant environment for the enterprise. This practical guide describes in detail how OpenShift, building on Kubernetes, enables you to automate the way you create, ship, and run applications in a containerized environment. Author Graham Dumpleton provides the knowledge you need to make the best use of the OpenShift container platform to deploy not only your cloud-native applications, but also more traditional stateful applications. Developers and administrators will learn how to run, access, and manage containers in OpenShift, including how to orchestrate them at scale. Build application container images from source and deploy them Implement and extend application image builders Use incremental and chained builds to accelerate build times Automate builds by using a webhook to link OpenShift to a Git repository Add configuration and secrets to the container as project resources Make an application visible outside the OpenShift cluster Manage persistent storage inside an OpenShift container Monitor application health and manage the application lifecycle This book is a perfect follow-up to OpenShift for Developers: A Guide for Impatient Beginners (O'Reilly).

Selling your CTO on the merits of OpenShift and Kubernetes is only the beginning. To operate and scale OpenShift, you also need to know how to manage and expose resources to application teams and continuously deliver changes to the applications running in these environments. With this practical book, new and experienced developers and operators will learn specific techniques for operationalizing OpenShift and Kubernetes in the enterprise. Industry experts Michael Elder, Jake Kitchener, and Brad Topol show you how to run OpenShift and Kubernetes in production and deliver your applications to a highly available, secure, and scalable platform. You'll learn how to build a strong foundation in advanced cluster operational topics, such as tenancy management, scheduling and capacity management, cost management, continuous delivery, and more. Examine the fundamental concepts of Kubernetes architecture Get different Kubernetes and OpenShift

environments up and running Dive into advanced resource management topics, including capacity planning Learn how to support high availability inside a single cluster Use production-level approaches for continuous delivery and code promotion across clusters Explore hybrid cloud use cases, including multicluster provisioning, upgrading, and policy support Devise and deliver disaster recovery strategies

Red Hat OpenShift on IBM Z Installation Guide

DevOps with OpenShift

IBM Storage for Red Hat OpenShift Container Platform V3.11 Blueprint Version 1 Release 1

Red Hat OpenShift Deployment with IBM Storage Enabler for Containers

1000+ Commands for Fedora, CentOS and Red Hat Power Users

DevOps with OpenShift Cloud Deployments Made Easy"O'Reilly Media, Inc."

Keen to build web applications for the cloud? Get a quick hands-on introduction to OpenShift, the open source Platform as a Service (PaaS) offering from Red Hat. With this practical guide, you'll learn the steps necessary to build, deploy, and host a complete real-world application on OpenShift without having to slog through long, detailed explanations of the technologies involved. OpenShift enables you to use Docker application containers and the Kubernetes cluster manager to automate the way you create, ship, and run applications. Through the course of the book, you'll learn how to use OpenShift and the Wildfly application server to build and then immediately deploy a Java application online. Learn about OpenShift's core technology, including Docker-based containers and Kubernetes Use a virtual machine with OpenShift installed and configured on your local environment Create and deploy your first application on the OpenShift platform Add language runtime dependencies and connect to a database Trigger an automatic rebuild and redeployment when you push changes to the repository Get a working environment up in minutes with application templates Use commands to check and debug your application Create and build Docker-based images for your application

Build end-to-end AI solutions with IBM Cloud Pak for Data to operationalize AI on a secure platform based on cloud-native reliability, cost-effective multitenancy, and efficient resource management Key Features Explore data virtualization by accessing data in real time without moving it Unify the data and AI experience with the integrated end-to-end platform Explore the AI life cycle and learn to build, experiment, and operationalize trusted AI at scale Book Description Cloud Pak for Data is IBM's modern data and AI platform that includes strategic offerings from its data and AI portfolio delivered in a cloud-native fashion with the flexibility of deployment on any cloud. The

platform offers a unique approach to addressing modern challenges with an integrated mix of proprietary, open-source, and third-party services. You'll begin by getting to grips with key concepts in modern data management and artificial intelligence (AI), reviewing real-life use cases, and developing an appreciation of the AI Ladder principle. Once you've gotten to grips with the basics, you will explore how Cloud Pak for Data helps in the elegant implementation of the AI Ladder practice to collect, organize, analyze, and infuse data and trustworthy AI across your business. As you advance, you'll discover the capabilities of the platform and extension services, including how they are packaged and priced. With the help of examples present throughout the book, you will gain a deep understanding of the platform, from its rich capabilities and technical architecture to its ecosystem and key go-to-market aspects. By the end of this IBM book, you'll be able to apply IBM Cloud Pak for Data's prescriptive practices and leverage its capabilities to build a trusted data foundation and accelerate AI adoption in your enterprise. What you will learn

Understand the importance of digital transformations and the role of data and AI platforms
Get to grips with data architecture and its relevance in driving AI adoption using IBM's AI Ladder
Understand Cloud Pak for Data, its value proposition, capabilities, and unique differentiators
Delve into the pricing, packaging, key use cases, and competitors of Cloud Pak for Data
Use the Cloud Pak for Data ecosystem with premium IBM and third-party services
Discover IBM's vibrant ecosystem of proprietary, open-source, and third-party offerings from over 35 ISVs

Who this book is for
This book is for data scientists, data stewards, developers, and data-focused business executives interested in learning about IBM's Cloud Pak for Data. Knowledge of technical concepts related to data science and familiarity with data analytics and AI initiatives at various levels of maturity are required to make the most of this book.

Summary

OpenShift in Action is a full reference to Red Hat OpenShift that breaks down this robust container platform so you can use it day-to-day. Combining Docker and Kubernetes, OpenShift is a powerful platform for cluster management, scaling, and upgrading your enterprise apps. It doesn't matter why you use OpenShift—by the end of this book you'll be able to handle every aspect of it, inside and out!

Foreword by Jim Whitehurst, Red Hat. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Containers let you package everything into one neat place, and with Red Hat OpenShift you can build, deploy, and run those packages all in one place!

Combining Docker and Kubernetes, OpenShift is a powerful platform for cluster management, scaling, and upgrading your enterprise apps. About the Book OpenShift in Action is a full reference to Red Hat OpenShift that breaks down this robust container platform so you can use it day-to-day. Starting with how to deploy and run your first application, you'll go deep into OpenShift. You'll discover crystal-clear explanations of namespaces, cgroups, and SELinux, learn to prepare a cluster, and even tackle advanced details like software-defined networks and security, with real-world examples you can take to your own work. It doesn't matter why you use OpenShift—by the end of this book you'll be able to handle every aspect of it, inside and out! What's Inside

Written by lead OpenShift architects Rock-solid fundamentals of Docker and Kubernetes Keep mission-critical applications up and running Manage persistent storage About the Reader For DevOps engineers and administrators working in a Linux-based distributed environment. About the Authors Jamie Duncan is a cloud solutions architect for Red Hat, focusing on large-scale OpenShift deployments. John Osborne is a principal OpenShift architect for Red Hat. Table of Contents

PART 1 - FUNDAMENTALS Getting to know OpenShift Getting started Containers are Linux PART 2 - CLOUD-NATIVE APPLICATIONS Working with services Autoscaling with metrics Continuous integration and continuous deployment PART 3 - STATEFUL APPLICATIONS Creating and managing persistent storage Stateful applications PART 4 - OPERATIONS AND SECURITY Authentication and resource access Networking Security

Using the IBM Block Storage CSI Driver in a Red Hat OpenShift Environment

Master Linux administration skills and prepare for the RHCSA certification exam

An enterprise platform to operationalize data, analytics, and AI Software Defined Data Center with Red Hat Cloud and Open Source IT Operations Management

Red Hat RHCSA/RHCE 7 Cert Guide

OpenShift in Action is a full reference to Red Hat OpenShift that breaks down this robust container platform so you can use it day-to-day. Combining Docker and Kubernetes, OpenShift is a powerful platform for cluster management, scaling, and upgrading your enterprise apps. It doesn't matter why you use OpenShift by the end of this book you'll be able to handle every aspect of it, inside and out! About the Technology Containers let you package everything into one neat place, and with Red Hat OpenShift you can build, deploy, and run those packages all in one place! Combining Docker and Kubernetes, OpenShift is a powerful platform for cluster management, scaling, and upgrading your enterprise apps. About the Book OpenShift in Action is a full reference to Red Hat OpenShift that breaks down this robust container platform so you can use it day-to-day. Starting with how to deploy and run your first application, you'll go deep into OpenShift. You'll

discover crystal-clear explanations of namespaces, cgroups, and SELinux, learn to prepare a cluster, and even tackle advanced details like software-defined networks and security, with real-world examples you can take to your own work. It doesn't matter why you use OpenShift by the end of this book you'll be able to handle every aspect of it, inside and out! What's inside Written by lead OpenShift architects Rock-solid fundamentals of Docker and Kubernetes Keep mission-critical applications up and running Manage persistent storage About the Reader For DevOps engineers and administrators working in a Linux-based distributed environment. About the Author Jamie Duncan is a cloud solutions architect for Red Hat, focusing on large-scale OpenShift deployments. John Osborne is a principal OpenShift architect for Red Hat.

For many organizations, a big part of DevOps' appeal is software automation using infrastructure-as-code techniques. This book presents developers, architects, and infra-ops engineers with a more practical option. You'll learn how a container-centric approach from OpenShift, Red Hat's cloud-based PaaS, can help your team deliver quality software through a self-service view of IT infrastructure. Three OpenShift experts at Red Hat explain how to configure Docker application containers and the Kubernetes cluster manager with OpenShift's developer- and operational-centric tools. Discover how this infrastructure-agnostic container management platform can help companies navigate the murky area where infrastructure-as-code ends and application automation begins. Get an application-centric view of automation—and understand why it's important Learn patterns and practical examples for managing continuous deployments such as rolling, A/B, blue-green, and canary Implement continuous integration pipelines with OpenShift's Jenkins capability Explore mechanisms for separating and managing configuration from static runtime software Learn how to use and customize OpenShift's source-to-image capability Delve into management and operational considerations when working with OpenShift-based application workloads Install a self-contained local version of the OpenShift environment on your computer

The easy way to understand and implement cloud computing technology written by a team of experts Cloud computing can be difficult to understand at first, but the cost-saving possibilities are great and many companies are getting on board. If you've been put in charge of implementing cloud computing, this straightforward, plain-English guide clears up the confusion and helps you get your plan in place. You'll learn how cloud computing enables you to run a more green IT infrastructure, and access technology-enabled services from the Internet ("in the cloud") without having to understand, manage, or invest in the technology infrastructure that supports them. You'll also find out what you need to consider when implementing a plan, how to handle security issues, and more. Cloud computing is a way for businesses to take advantage of storage and virtual services through the Internet, saving money on infrastructure and support This book provides a clear definition of cloud computing from the utility computing standpoint and also addresses security concerns Offers practical guidance on delivering and managing cloud computing services effectively and efficiently Presents a proactive and pragmatic approach to implementing cloud computing in any organization Helps IT managers and staff understand the benefits and challenges of cloud computing, how to select a service, and what's involved in getting it up and running Highly experienced author team consults and gives presentations on emerging technologies Cloud Computing For Dummies gets

straight to the point, providing the practical information you need to know. This IBM® Redpaper publication documents how to containerize and deploy SAP software into Red Hat OpenShift 4 Kubernetes clusters on IBM Power Systems by using predefined Red Hat Ansible scripts, different configurations, and theoretical knowledge, and it documents the findings through sample scenarios. This paper documents the following topics: Running SAP S/4HANA, SAP HANA, and SAP NetWeaver on-premises software in containers that are deployed in Red Hat OpenShift 4 on IBM Power Systems hardware. Existing SAP systems running on IBM Power Systems can be repackaged at customer sites into containers that use predefined Red Hat Ansible scripts. These containers can be deployed multiple times into Red Hat OpenShift 4 Kubernetes clusters on IBM Power Systems. The target audiences for this paper are Chief Information Officers (CIOs) that are interested in containerized solutions of SAP Enterprise Resource Planning (ERP) systems, developers that need containerized environments, and system administrators that provide and manage the infrastructure with underpinning automation. This paper complements the documentation that is available at IBM Knowledge Center, and it aligns with the educational materials that are provided by IBM Garage™ for Systems Education.

Building a Red Hat OpenShift Environment on IBM Z

Red Hat Enterprise Linux 8 Administration

OpenShift in Action

Hybrid Cloud Apps with OpenShift and Kubernetes

Enterprise Java Microservices

Gain hands-on experience of installing OpenShift Origin 3.9 in a production configuration and managing applications using the platform you built Key Features Gain hands-on experience of working with Kubernetes and Docker Learn how to deploy and manage applications in OpenShift Get a practical approach to managing applications on a cloud-based platform Explore multi-site and HA architectures of OpenShift for production **Book Description** Docker containers transform application delivery technologies to make them faster and more reproducible, and to reduce the amount of time wasted on configuration. Managing Docker containers in the multi-node or multi-datacenter environment is a big challenge, which is why container management platforms are required. OpenShift is a new generation of container management platforms built on top of both Docker and Kubernetes. It brings additional functionality to the table, something that is lacking in Kubernetes. This new functionality significantly helps software development teams to bring software development processes to a whole new level. In this book, we'll start by explaining the container architecture, Docker, and CRI-O overviews. Then, we'll look at container orchestration and Kubernetes. We'll cover OpenShift installation, and its basic and advanced components. Moving on, we'll deep dive into concepts such as

deploying application OpenShift. You'll learn how to set up an end-to-end delivery pipeline while working with applications in OpenShift as a developer or DevOps. Finally, you'll discover how to properly design OpenShift in production environments. This book gives you hands-on experience of designing, building, and operating OpenShift Origin 3.9, as well as building new applications or migrating existing applications to OpenShift. What you will learn

Understand the core concepts behind containers and container orchestration tools
Understand Docker, Kubernetes, and OpenShift, and their relation to CRI-O
Install and work with Kubernetes and OpenShift
Understand how to work with persistent storage in OpenShift
Understand basic and advanced components of OpenShift, including security and networking
Manage deployment strategies and application's migration in OpenShift
Understand and design OpenShift high availability
Who this book is for
The book is for system administrators, DevOps engineers, solutions architects, or any stakeholder who wants to understand the concept and business value of OpenShift.
Develop the skill to manage and administer Red Hat Enterprise Linux and get ready to achieve the RHCSA certification
Key Features
Learn the most common administration and security tasks and manage enterprise Linux infrastructures efficiently
Assess your knowledge using self-assessment questions based on real-world examples
Understand how to apply the concepts of core systems administration in the real world
Book Description
Whether in infrastructure or development, as a DevOps or site reliability engineer, Linux skills are now more relevant than ever for any IT job, forming the foundation of understanding the most basic layer of your architecture. With Red Hat Enterprise Linux (RHEL) becoming the most popular choice for enterprises worldwide, achieving the Red Hat Certified System Administrator (RHCSA) certification will validate your Linux skills to install, configure, and troubleshoot applications and services on RHEL systems. Complete with easy-to-follow tutorial-style content, self-assessment questions, tips, best practices, and practical exercises with detailed solutions, this book covers essential RHEL commands, user and group management, software management, networking fundamentals, and much more. You'll start by learning how to create an RHEL 8 virtual machine and get to grips with essential Linux commands. You'll then understand how to manage users and groups on an RHEL 8 system, install

software packages, and configure your network interfaces and firewall. As you advance, the book will help you explore disk partitioning, LVM configuration, Stratis volumes, disk compression with VDO, and container management with Podman, Buildah, and Skopeo. By the end of this book, you'll have covered everything included in the RHCSA EX200 certification and be able to use this book as a handy, on-the-job desktop reference guide. This book and its contents are solely the work of Miguel Perez Colino, Pablo Iranzo Gomez, and Scott McCarty. The content does not reflect the views of their employer (Red Hat Inc.). This work has no connection to Red Hat, Inc. and is not endorsed or supported by Red Hat, Inc. What you will learn Deploy RHEL 8 in different footprints, from bare metal and virtualized to the cloud Manage users and software on local and remote systems at scale Discover how to secure a system with SELinux, OpenSCAP, and firewalld Gain an overview of storage components with LVM, Stratis, and VDO Master remote administration with passwordless SSH and tunnels Monitor your systems for resource usage and take actions to fix issues Understand the boot process, performance optimizations, and containers Who this book is for This book is for IT professionals or students who want to start a career in Linux administration and anyone who wants to take the RHCSA 8 certification exam. Basic knowledge of Linux and familiarity with the Linux command-line is necessary.

Summary Enterprise Java Microservices is an example-rich tutorial that shows how to design and manage large-scale Java applications as a collection of microservices. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. **About the Technology** Large applications are easier to develop and maintain when you build them from small, simple components. Java developers now enjoy a wide range of tools that support microservices application development, including right-sized app servers, open source frameworks, and well-defined patterns. Best of all, you can build microservices applications using your existing Java skills. **About the Book** Enterprise Java Microservices teaches you to design and build JVM-based microservices applications. You'll start by learning how microservices designs compare to traditional Java EE applications. Always practical, author Ken Finnigan introduces big-picture concepts along with the tools and techniques you'll need to implement them. You'll discover ecosystem

components like Netflix Hystrix for fault tolerance and master the Just enough Application Server (JeAS) approach. To ensure smooth operations, you'll also examine monitoring, security, testing, and deploying to the cloud. What's inside The microservices mental model Cloud-native development Strategies for fault tolerance and monitoring Securing your finished applications About the Reader This book is for Java developers familiar with Java EE. About the Author Ken Finnigan leads the Thorntail project at Red Hat, which seeks to make developing microservices for the cloud with Java and Java EE as easy as possible. Table of Contents PART 1 MICROSERVICES BASICS Enterprise Java microservices Developing a simple RESTful microservice Just enough Application Server for microservices Microservices testing Cloud native development PART 2 - IMPLEMENTING ENTERPRISE JAVA MICROSERVICES Consuming microservices Discovering microservices for consumption Strategies for fault tolerance and monitoring Securing a microservice Architecting a microservice hybrid Data streaming with Apache Kafka As a market-leading, free, open-source Linux operating system (OS), Fedora 10 is implemented in Red Hat Enterprise Linux and serves as an excellent OS for those who want more frequent updates. Bestselling author Christopher Negus offers an ideal companion resource for both new and advanced Linux users. He presents clear, thorough instructions so you can learn how to make Linux installation simple and painless, take advantage of the desktop interface, and use the Linux shell, file system, and text editor. He also describes key system administration skills, including setting up users, automating system tasks, backing up and restoring files, and understanding the latest security issues and threats. Included is both a DVD distribution of Fedora Linux 10 and a bootable Fedora LiveCD. Note: CD-ROM/DVD and other supplementary materials are not included as part of eBook file.

IBM Storage for Red Hat OpenShift Blueprint Version 1 Release 1
Cloud Computing For Dummies

Learning OpenShift
IBM Storage for Red Hat OpenShift Blueprint Version 1 Release 3

This IBM® Redpaper publication describes how to deploy Red Hat OpenShift V4.3 on IBM Power Systems servers. This book presents

reference architectures for deployment, initial sizing guidelines for server, storage, and IBM Cloud® Paks. Moreover, this publication delivers information about initial supported Power System configurations for Red Hat OpenShift V4.3 deployment (bare metal, IBM PowerVM® LE LPARs, and others). This book serves as a guide for how to deploy Red Hat OpenShift V4.3 and provide start guidelines and recommended practices for implementing it on Power Systems and completing it with the supported IBM Cloud Paks. The publication addresses topics for developers, IT architects, IT specialists, sellers, and anyone who wants to implement a Red Hat OpenShift V4.3 and IBM Cloud Paks on IBM Power Systems. This book also provides technical content to transfer how-to skills to the support teams, and solution guidance to the sales team. This book compliments the documentation that is available at IBM Knowledge Center, and also aligns with the educational offerings that are provided by the IBM Systems Technical Education (SSE).

In this handy, compact guide, you'll explore a ton of powerful Fedora Linux commands while you learn to use Fedora Linux as the experts do: from the command line. Try out more than 1,000 commands to find and get software, monitor system health and security, and access network resources. Then, apply the skills you learn from this book to use and administer desktops and servers running Fedora, CentOS, Red Hat Enterprise Linux, or any other Linux distribution.

This IBM® Blueprint is intended to facilitate the deployment of IBM Storage for Red Hat OpenShift Container Platform by using detailed hardware specifications to build a system. It describes the associated parameters for configuring persistent storage within a Red Hat OpenShift Container Platform environment. To complete the tasks, you must understand Red Hat OpenShift, IBM Storage, the IBM block storage Container Storage Interface (CSI) driver, and the IBM Spectrum Scale CSI driver. 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 Storwize® or IBM FlashSystem® storage devices, Enterprise Storage Server®, and IBM Spectrum® Scale are supported and entitled, and where the issues are not specific to a blueprint implementation. IBM Storage Suite for IBM Cloud® Paks is an offering bundle that includes software-defined storage from IBM and Red Hat. Use this document for more information about how to deploy IBM Storage product licenses that are obtained through Storage Suite for Cloud Paks (IBM Spectrum Virtualize and IBM Spectrum Scale).

IBM Storage for Red Hat OpenShift Container Platform is a comprehensive container-ready solution that includes all the hardware & software components necessary to setup and/or expand your Red Hat OpenShift Container Platform V3.11 environment. IBM Storage, bringing enterprise data services to containers. In this blueprint, learn how to:

- Combine the benefits of IBM Systems with the performance of IBM Storage solutions so that you can deliver the right services to your clients today!
- Build a 24 by

7 by 365 enterprise class private cloud with Red Hat OpenShift Container Platform • Leverage enterprise class services such as NVMe based flash performance, high data availability, and advanced container security IBM Storage for Red Hat OpenShift Container Platform: designed for your DevOps environment for on-premises deployment with easy-to-consume components built to perform and scale for your enterprise. Simplify your journey to cloud with pre-tested and validated blueprints engineered to enable rapid deployment and peace of mind as you move to a hybrid multicloud environment. You now have the capabilities.

Deployment and Usage Guide for Running AI Workloads on Red Hat OpenShift and NVIDIA DGX Systems with IBM Spectrum Scale IBM Cloud Pak for Data

Deploying SAP Software in Red Hat OpenShift on IBM Power Systems A Guide for Busy Developers

Fedora 10 and Red Hat Enterprise Linux Bible

IBM Storage for Red Hat OpenShift is a comprehensive container-ready solution that includes all the hardware & software components necessary to setup and/or expand your Red Hat OpenShift environment. This blueprint includes Red Hat OpenShift Container Platform and uses Container Storage Interface (CSI) standards. IBM Storage brings enterprise data services to containers. In this blueprint, learn how to:

- Combine the benefits of IBM Systems with the performance of IBM Storage solutions so that you can deliver the right services to your clients today!
- Build a 24 by 7 by 365 enterprise class private cloud with Red Hat OpenShift Container Platform utilizing new open source Container Storage interface (CSI) drivers
- Leverage enterprise class services such as NVMe based flash performance, high data availability, and advanced container security IBM Storage for Red Hat OpenShift Container Platform is designed for your DevOps environment for on-premises deployment with easy-to-consume components built to perform and scale for your enterprise. Simplify your journey to cloud with pre-tested and validated blueprints engineered to enable rapid deployment and peace of mind as you move to a hybrid multicloud environment. You now have the capabilities.

Kubernetes has become the dominant container orchestrator, but many organizations that have recently adopted this system are still struggling to run actual production workloads. In this practical book, four software engineers from VMware bring their shared experiences running Kubernetes in production and provide insight on key challenges and best practices. The brilliance of Kubernetes is how configurable and extensible the system is, from pluggable runtimes to storage integrations. For platform engineers, software developers, infosec, network engineers, storage engineers, and others, this book examines how the path to success with Kubernetes involves a variety of technology, pattern, and abstraction considerations. With this book, you will:

- Understand what the path to production looks like when using Kubernetes
- Examine where gaps exist in your current Kubernetes strategy
- Learn Kubernetes's essential building blocks--and their trade-offs
- Understand what's involved in making Kubernetes a viable location for applications
- Learn better ways to navigate the cloud native landscape

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

The OpenShift Security Guide was created to help those in cloud infrastructure and security engineering roles address the many security challenges facing them. Cloud security is complex, and Red Hat understands that users need more than just guidance in technical system configurations. The authors have identified approaches that aid in the triaging of security trade-offs and risk, policy enforcement, reporting, and the validation of system configuration. Cloud infrastructure and security engineering roles are central to establishing and preserving security postures. It is the book's intent to support these roles by providing the proper mixture of conceptual, organizational, and technical guidance, thereby increasing the security vigilance and effectiveness of those with such responsibilities. For the cloud security auditor, whether in an internal role or as a third-party assessment organization, this book intends to provide the technical guidance needed to verify, validate, and enforce security controls. For technology professionals charged with security policy management, this book should offer insight into related organizational policy, functional testing, and data stewardship tasks while augmenting knowledge in these areas. While the book speaks to OpenShift from a holistic infrastructure perspective, it does cover areas that application developers and reliability engineers may find valuable. With the ever evolving trends in container-based microservices, baking security into the continuous integration and delivery pipelines is a fundamental requirement. Build and runtime security features are discussed, and advantages of a secure container baseline image are covered as well. Readers are not expected to have expert-level knowledge of core OpenShift concepts. However, basic knowledge of Linux, Containers, and Kubernetes from a user or administrative perspective will certainly be useful, especially when reading through some of the technical implementation described in the chapters.

Kubernetes Operators

Red Hat RHCSA 8 Cert Guide

OpenShift Security Guide

OpenShift for Developers

DevOps Culture and Practice with OpenShift

This IBM® Redpaper publication describes the architecture, installation procedure, and results for running a typical training application that works on an automotive data center in an orchestrated and secured environment that provides horizontal scalability of compute resources across physical node boundaries for deep neural network (DNN) workloads. This paper is mostly relevant for systems engineers, system administrators, or system architects that are responsible for data center infrastructure management and day-to-day operations such as system monitoring, operational control, asset management, and security audits. This paper also describes IBM Spectrum® LSF® as a workload manager and IBM Spectrum Discover as a metadata search engine to find the right data for an inference job and automate the data science workflow. With the help of this solution, the data location, which may be on different storage systems, and time-to-data availability for the AI job can be fully abstracted, which provides valuable information for data scientists.

Cybersecurity is the most important arm of defense against cyberattacks. With the increase in cyberattacks, corporations must focus on how they are combating these high-tech threats. When establishing best practices, a corporation must focus on controlling employees' access to specific workspaces and information. IBM Z® focuses on a secure high processing virtual environments while maintaining a high level of security in the workspace. Organizations not only need to adjust their approach to security, but also their approach to IT environments. To meet new customer needs and expectations, organizations must take a more agile approach to their business. IBM® Z allows companies to work with hybrid and multi-cloud environments that allows more efficient use for the user and efficiency overall. Working with IBM Z, organizations can also work with many databases that are included in IBM Cloud Pak® for Data. IBM Cloud Pak for Data allows organizations to make more informed decisions with improved data usage. Along with the improved data usage, organizations can see the effects from working in a Red Hat OpenShift environment. Red Hat OpenShift is compatible across many hardware services and allows the user to run applications in the most efficient manner. The goal of this IBM Redbooks® publication is to: Introduce IBM Z and LinuxONE platform and how they work with the Red Hat OpenShift environment and IBM Cloud Pak for Data. Provide examples and the uses of IBM Z with Cloud Paks for Data that show data gravity, consistent development experience, and consolidation and business resilience. The target audience for this book is IBM Z Technical Specialists, IT Architects, and System Administrators.

While containers, microservices, and distributed systems dominate discussions in the world, the majority of applications in use today still run monolithic architectures and follow traditional development processes. This practical book helps developers extend long-established Java-based models and demonstrates how to bring these monolithic applications successfully into the future. Relying on their years of experience modernizing applications, authors Markus Eisele and Natale Vinto walk you through the steps necessary to update your organization's Java applications. You'll discover how to dismantle your monolithic application and move to an up-to-date software stack.

works across cloud and on-premises installations. Learn cloud native application to understand what parts of your organization's Java-based applications and plan need to migrate and modernize Understand how enterprise Java specifications can you transition projects and teams Build a cloud native platform that supports development without falling into buzzword traps Find a starting point for your projects by identifying candidates and staging them through modernization steps Discover how to complement a traditional enterprise Java application with components on top of containers and Kubernetes

This IBM® Redpaper publication provides all the necessary steps to successfully install Red Hat OpenShift 4.4 on IBM Z® or LinuxONE servers. It also provides an introduction to OpenShift nodes, Red Hat Enterprise Linux CoreOS, and Ansible. The steps that are described in this paper are taken from the official pages of the Red Hat website. This Redpaper publication was written for IT architects, IT specialists, and others who are interested in installing Red Hat OpenShift on IBM Z.

IBM Storage for Red Hat OpenShift Blueprint

Learn OpenShift

An Essential Guide for Cloud Administrators

Deploy, Build, Manage, and Migrate Applications with OpenShift Origin 3.9

Cloud Deployments Made Easy

Ready to build cloud native applications? Get a hands-on introduction to daily life as a developer crafting code on OpenShift, the open source container application platform from Red Hat. Creating and packaging your apps for deployment on modern distributed systems can be daunting. Too often, adding infrastructure value can complicate development. With this practical guide, you'll learn how to build, deploy, and manage a multitiered application on OpenShift. Authors Joshua Wood and Brian Tannous, principal developer advocates at Red Hat, demonstrate how OpenShift speeds application development. With the Kubernetes container orchestrator at its core, OpenShift simplifies and automates the way you build, ship, and run code. You'll learn how to use OpenShift and the Quarkus Java framework to develop and deploy apps using proven enterprise technologies and practices that you can apply to code in any language. Learn the development cycles for building and deploying on OpenShift, and the tools that drive them Use OpenShift to build, deploy, and manage the ongoing lifecycle of an n-tier application Create a continuous integration and deployment pipeline to build and deploy application source code on OpenShift Automate scaling decisions with metrics and trigger lifecycle events with webhooks

This book is ideal for you if you're a developer experienced with the PHP or Java programming languages and have a basic understanding of using the command line.

Red Hat, Inc. is an American foreign code corporation that is involved in delivering open-source code articles to the organization group. Founded in 1993, Red Hat has its business head offices in Raleigh, North Carolina with orbiter bureaus international. There has never been a Red Hat Guide like this. It contains 75 answers, much

more than you can imagine; comprehensive answers and extensive details and references, with insights that have never before been offered in print. Get the information you need--fast! This all-embracing guide offers a thorough view of key knowledge and detailed insight. This Guide introduces what you want to know about Red Hat. A quick look inside of some of the subjects covered: List of mergers and acquisitions by Red Hat - Dogtail, List of mergers and acquisitions by Red Hat - OpenShift, Red Hat Enterprise Linux, Red Hat Enterprise Linux derivatives - History, Red Hat Network - Architecture, Red Hat OpenShift - Supported frameworks, Red Hat Enterprise Virtualization, Red Hat Cluster Suite - History, Red Hat - Red Hat India, Red Hat Enterprise Linux - Life-cycle dates, Red Hat - One Laptop per Child, Red Hat Enterprise Linux - RHEL 3, Red Hat Enterprise Linux - RHEL 7, Red Hat Enterprise Linux - Relationships, Red Hat Enterprise Linux - RHEL 5, Red Hat Enterprise Linux - Rebuilds, Red Hat - opensource.com, Red Hat Enterprise Linux - Commercial products, Joyce Young - Red Hat, Inc., Red Hat Linux - Fedora, Red Hat Enterprise Linux - RHEL 6, List of mergers and acquisitions by Red Hat - Other projects, Red Hat - Mergers and acquisitions, Red Hat Directory Server - Features, Red Hat OpenShift - Competitors, Red Hat Cluster Suite - High-availability cluster, Red Hat Enterprise Linux derivatives - Legal aspects, SCO-Linux controversies - Red Hat v. SCO, Red Hat Enterprise Linux derivatives - Motivations, Red Hat - History, List of mergers and acquisitions by Red Hat - Fedora Project, Red Hat OpenShift, and much more...

A practical guide to making the best use of the OpenShift container platform based on the real-life experiences, practices, and culture within Red Hat Open Innovation Labs Key Features Learn how modern software companies deliver business outcomes that matter by focusing on DevOps culture and practices Adapt Open Innovation Labs culture and foundational practices from the Open Practice Library Implement a metrics-driven approach to application, platform, and product, understanding what to measure and how to learn and pivot Book Description DevOps Culture and Practice with OpenShift features many different real-world practices - some people-related, some process-related, some technology-related - to facilitate successful DevOps, and in turn OpenShift, adoption within your organization. It introduces many DevOps concepts and tools to connect culture and practice through a continuous loop of discovery, pivots, and delivery underpinned by a foundation of collaboration and software engineering. Containers and container-centric application lifecycle management are now an industry standard, and OpenShift has a leading position in a flourishing market of enterprise Kubernetes-based product offerings. DevOps Culture and Practice with OpenShift provides a roadmap for building empowered product teams within your organization. This guide brings together lean, agile, design thinking, DevOps, culture, facilitation, and hands-on technical enablement all in one book. Through a combination of real-world stories, a practical case study, facilitation guides, and technical implementation details, DevOps Culture and Practice with OpenShift

provides tools and techniques to build a DevOps culture within your organization on Red Hat's OpenShift Container Platform. What you will learnImplement successful DevOps practices and in turn OpenShift within your organizationDeal with segregation of duties in a continuous delivery worldUnderstand automation and its significance through an application-centric viewManage continuous deployment strategies, such as A/B, rolling, canary, and blue-greenLeverage OpenShift's Jenkins capability to execute continuous integration pipelinesManage and separate configuration from static runtime softwareMaster communication and collaboration enabling delivery of superior software products at scale through continuous discovery and continuous deliveryWho this book is for This book is for anyone with an interest in DevOps practices with OpenShift or other Kubernetes platforms. This DevOps book gives software architects, developers, and infra-ops engineers a practical understanding of OpenShift, how to use it efficiently for the effective deployment of application architectures, and how to collaborate with users and stakeholders to deliver business-impacting outcomes.

IBM Storage for Red Hat OpenShift Blueprint Version 1 Release 4

Mastering CloudForms Automation

Version 1, Release 1

Deliver continuous business value through people, processes, and technology

Modernizing Enterprise Java

Summary OpenShift in Action is a full reference to Red Hat OpenShift that breaks down this robust container platform so you can use it day-to-day. Combining Docker and Kubernetes, OpenShift is a powerful platform for cluster management, scaling, and upgrading your enterprise apps. It doesn't matter why you use OpenShift--by the end of this book you'll be able to handle every aspect of it, inside and out! Foreword by Jim Whitehurst, Red Hat. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Containers let you package everything into one neat place, and with Red Hat OpenShift you can build, deploy, and run those packages all in one place! Combining Docker and Kubernetes, OpenShift is a powerful platform for cluster management, scaling, and upgrading your enterprise apps. About the Book OpenShift in Action is a full reference to Red Hat OpenShift that breaks down this robust container platform so you can use it day-to-day. Starting with how to deploy and run your first application, you'll go deep into OpenShift. You'll discover crystal-clear explanations of namespaces, cgroups, and SELinux, learn to prepare a cluster, and even tackle advanced details like software-defined networks and security, with real-world examples you can take to your own work. It doesn't matter why you use OpenShift--by the end of this book you'll be able to handle every aspect of it, inside and out! What's Inside Written by lead OpenShift architects Rock-solid fundamentals of Docker and Kubernetes Keep mission-critical applications up and running Manage persistent storage About the Reader For DevOps engineers and administrators working in a Linux-based distributed environment. About the Authors Jamie Duncan is a cloud solutions architect for Red Hat, focusing on large-scale

OpenShift deployments. John Osborne is a principal OpenShift architect for Red Hat. Table of Contents PART 1 - FUNDAMENTALS Getting to know OpenShift Getting started Containers are Linux PART 2 - CLOUD-NATIVE APPLICATIONS Working with services Autoscaling with metrics Continuous integration and continuous deployment PART 3 - STATEFUL APPLICATIONS Creating and managing persistent storage Stateful applications PART 4 - OPERATIONS AND SECURITY Authentication and resource access Networking Security 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 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

RedHat OpenShift container platform is one of the leading enterprise-grade container orchestration platforms. It is designed for rapid deployment of web applications, databases, and microservices. Categorized as a container orchestration Platform as a Service (PaaS), it is based on open industry standards, such as the Container Runtime Interface - Open (CRI-O) and Kubernetes. OpenShift allow developers to focus on the code, while the platform manages the complex IT operations and processes. Although open-source, community-driven container orchestration platforms are available, such as OKD and Kubernetes, this IBM® Redpaper® publication focuses on Red Hat OpenShift. It describes the basic concepts of OpenShift persistent storage architecture and its integration into IBM Cloud® Paks. The deployment of the IBM block storage CSI driver also is discussed. This publication also describes the concepts, technology and current working practices for installing the Container Storage Interface (CSI) plug-in for Kubernetes to use IBM Enterprise Storage platforms for persistent storage coupled with Red Hat OpenShift Container Platform (OCP). This publication also provides an overview of containers, Kubernetes, and Openshift for context (it is expected that the reader has a working knowledge of these underlying technologies). It also includes architectural examples of the orchestration platform will be given. This paper serves as a guide about how to deploy the CSI driver for block storage by using

the DS8000® and Spectrum Virtualize platforms as persistent storage in a Red Hat OpenShift platform. The publication is intended for storage administrators, IT architects, OpenShift technical specialists and anyone who wants to integrate IBM Enterprise storage on OpenShift V4.3/4.4/4.5 on IBM Power, IBM Z®, and x86 systems.

Trust the best-selling Cert Guide series from Pearson IT Certification to help you learn, prepare, and practice for exam success. Cert Guides are built with the objective of providing assessment, review, and practice to help ensure you are fully prepared for your certification exam. Master Red Hat RHCSA (EX200) and RHCE (EX300) exam topics Assess your knowledge with chapter-opening quizzes Review key concepts with exam preparation tasks Test yourself with 4 practice exams (2 RHCSA and 2 RHCE) Gain expertise and knowledge using the companion website, which contains over 40 interactive exercises, 4 advanced CLI simulations, 40 interactive quizzes and glossary quizzes (one for each chapter), 3 virtual machines and more. Red Hat RHCSA/RHCE 7 Cert Guide presents you with an organized test preparation routine through the use of proven series elements and techniques. “Do I Know This Already?” quizzes open each chapter and allow you to decide how much time you need to spend on each section. Exam topic lists make referencing easy. Chapter-ending labs help you drill on key concepts you must know thoroughly. Red Hat RHCSA/RHCE 7, Premium Edition eBook and Practice Test focuses specifically on the objectives for the newest Red Hat RHCSA (EX200) and RHCE (EX300) exams reflecting Red Hat Enterprise Linux 7. Expert Linux trainer and consultant Sander van Vugt shares preparation hints and test-taking tips, helping you identify areas of weakness and improve both your conceptual knowledge and hands-on skills. Material is presented in a concise manner, focusing on increasing your understanding and retention of exam topics. Well-regarded for its level of detail, assessment features, comprehensive design scenarios, and challenging review questions and exercises, this study guide helps you master the concepts and techniques that will allow you to succeed on the exam the first time. This study guide helps you master all the topics on the new RHCSA (EX200) and RHCE (EX300) exams, including Part 1: RHCSA Basic System Management: Installation, tools, text files, server connections; user, group, and permissions management; network configuration Operating Running Systems: Process management, VMs, package installation, task scheduling, logging, managing partitions and LVM logical volumes Advanced System Administration: Basic kernel management, basic Apache server configuration, boot procedures/troubleshooting Managing Network Services: Using Kickstart; managing SELinux; configuring firewalls, remote mounts, FTP, and time services Part 2: RHCE System Configuration/Management: External authentication/authorization, iSCSI SANs, performance reporting, optimization, logging, routing/advanced networking, Bash scripting System Security: Configuring firewalls, advanced Apache services, DNS, MariaDB, NFS, Samba, SMTP, SSH, and time synchronization EX200

Fedora Linux Toolbox

Automating the Container Orchestration Platform

***Red Hat 75 Success Secrets - 75 Most Asked Questions on Red Hat - What You Need to Know
A Guide for Impatient Beginners***