

## 10 Virtual Machine Monitoring Zabbix

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### RabbitMQ in Action

This open access book constitutes the refereed proceedings of the 17th International Conference on String Processing and Information Retrieval, ICOST 2019, held in New York City, NY, USA, in October 2019. The 15 full papers and 5 short papers presented in this volume were carefully reviewed and selected from 24 submissions. They cover topics such as: e-health technology design; well-being technology; biomedical and health informatics; and smart environment technology.

### Mastering VMware vSphere 5.5

Over past few years, technologies have experienced boundaries getting blurred and concept of convergence to gain prominence. Harnessing from this, two main tracks for information processing management and communication are held, covering both research and application works of information management, intelligent information processing, interaction management, networking/telecommunications, and social interaction. This book creates unique opportunity for research convergence among truly diverse technology domains of computer science. Leveraging from this diversity of topics, researchers get to generate novel research ideas by seeking application of their research in a different technology domain. This volume represents the collection of papers presented at the 13th International Conference on Ubiquitous Information Management and Communication (IMCOM 2019), held on 4-6 January 2019 in Phuket, Thailand. Out of 228 papers submitted from all around the world 88 papers were accepted for presentations. The 88 contributions to this volume are organized into 5 chapters: Chapter 1. Network Evolution, Chapter 2. Intelligent and Secure Network, Chapter 3. Image and Video Processing, Chapter 4. Information Technology and Society,

and Chapter 5. Data Mining and Learning. Our editors wish readers to find this volume informative and enjoyable.

## **Advances in Decision Sciences, Image Processing, Security and Computer Vision**

Gather detailed statistics and deploy impressive business solutions with Zabbix 4.0  
Key Features Experience the full impact of Zabbix 4.0, a useful and increasingly popular tool  
Enhance your network's performance and manage hosts and systems  
A step-by-step guide to smarter network monitoring  
Book Description Zabbix 4 Network Monitoring is the perfect starting point for monitoring the performance of your network devices and applications with Zabbix. Even if you've never used a monitoring solution before, this book will get you up and running quickly. You'll learn to monitor more sophisticated operations with ease and soon feel in complete control of your network, ready to meet any challenges you might face. Starting with the installation, you will discover the new features in Zabbix 4.0. You will then get to grips with native Zabbix agents and Simple Network Management Protocol (SNMP) devices. You will also explore Zabbix's integrated functionality for monitoring Java application servers and VMware. This book also covers notifications, permission management, system maintenance, and troubleshooting, so you can be confident that every potential challenge and task is under your control. If you're working with larger environments, you'll also be able to find out more about distributed data collection using Zabbix proxies. Once you're confident and ready to put these concepts into practice, you will understand how to optimize and improve performance. Troubleshooting network issues is vital for anyone working with Zabbix, so the book also helps you work through any technical snags and glitches you might face. By the end of this book, you will have learned more advanced techniques to fine-tune your system and make sure it is in a healthy state. What you will learn  
Install Zabbix server and an agent from source  
Manage hosts, users, and permissions while acting upon monitored conditions  
Visualize data with the help of ad hoc graphs, custom graphs, and maps  
Simplify complex configurations and learn to automate them  
Monitor everything from web pages to IPMI devices and Java applications to VMware stats  
Configure Zabbix to send alerts including problem severity and time periods  
Troubleshoot any network issue  
Who this book is for  
If you're new to Zabbix look no further than this book. Zabbix 4 Network Monitoring is for system and network administrators who are looking to put their knowledge to work with Zabbix 4.0.

## **Zabbix: Enterprise Network Monitoring Made Easy**

Adopt Nginx for your web applications to make the most of your infrastructure and serve pages faster than ever.

## **Learning Hadoop 2**

Use DevOps principles with Google Cloud Platform (GCP) to develop applications and services. This book builds chapter by chapter to a complete real-life scenario, explaining how to build, monitor, and maintain a complete application using DevOps in practice. Starting with core DevOps concepts, continuous integration,

and continuous delivery, you'll cover common tools including Jenkins, Docker, and Kubernetes in the context of a real microservices application to deploy in the cloud. You will also create a monitor for your cloud and see how to use its data to prevent errors and improve the stability of the system. By the end of Pro DevOps with Google Cloud Platform, you will be able to deploy, maintain, and monitor a real application with GCP. What You Will Learn Build and deploy applications and services using DevOps on Google Cloud Platform Maintain a complete continuous integration (CI) and continuous delivery (CD) pipeline Use containerization with Docker and Kubernetes Carry out CD with GCP and Jenkins Create microservices with Jenkins, Docker, and Kubernetes Monitor your newly deployed application and its deployment and performance Set up security and manage your network with GCP Who This Book Is For Developers and software architects who want to implement DevOps in practice. Some prior programming experience is recommended as well as a basic knowledge of a Linux command-line environment.

### **Algorithms and Architectures for Parallel Processing**

Monitor your Docker containers and their apps using various native and third-party tools with the help of this exclusive guide! About This Book Get the only book that covers multiple methods to monitoring Docker Containers -your one-stop solution to all your Docker monitoring needs Learn how to implement third-party tools such as Datalog, cAdvisor, and more with this example-rich, hands-on guide Learn how to efficiently monitor Docker containers and get an edge over other administrators while maintaining apps on these containers Who This Book Is For This book is for DevOps engineers and system administrators who manage Docker containers and want to better manage these containers using expert techniques and methods and better maintain applications built on Docker. What You Will Learn Discover the tools built into Docker to gain an insight into your containers' performance Augment Docker's built-in tools with modern tools such as cAdvisor from Google, SysDig by Draios, and Soundcloud's Prometheus Integrate the monitoring of your containers with more traditional monitoring solutions such as Zabbix Take advantage of the various SaaS offerings from third parties to move monitoring away from your local infrastructure and into the cloud Discover the various ways to ship your applications' logs from the container to a central logging service Get the most out of your application and resources with the right implementation of your monitoring method In Detail This book will show you how monitoring containers and keeping a keen eye on the working of applications helps improve the overall performance of the applications that run on Docker. With the increased adoption of Docker containers, the need to monitor which containers are running, what resources they are consuming, and how these factors affect the overall performance of the system has become the need of the moment. This book covers monitoring containers using Docker's native monitoring functions, various plugins, as well as third-party tools that help in monitoring. Well start with how to obtain detailed stats for active containers, resources consumed, and container behavior. We also show you how to use these stats to improve the overall performance of the system. Next, you will learn how to use SysDig to both view your containers performance metrics in real time and record sessions to query later. By the end of this book, you will have a complete knowledge of how to implement monitoring for your containerized applications and make the most of the metrics you are collecting Style and approach This is an easy-to-follow guide with plenty of hands-

on examples that can be executed both on your local machine and externally hosted services.

### **Monitoring Docker**

Achieve the performance, scalability, and ROI your business needs What can you do at the start of a virtualization deployment to make things run more smoothly? If you plan, deploy, maintain, and optimize vSphere solutions in your company, this unique book provides keen insight and solutions. From hardware selection, network layout, and security considerations to storage and hypervisors, this book explains the design decisions you'll face and how to make the right choices. Written by two virtualization experts and packed with real-world strategies and examples, VMware vSphere Design, Second Edition will help you design smart design decisions. Shows IT administrators how plan, deploy, maintain, and optimize vSphere virtualization solutions Explains the design decisions typically encountered at every step in the process and how to make the right choices Covers server hardware selection, network topology, security, storage, virtual machine design, and more Topics include ESXi hypervisors deployment, vSwitches versus dvSwitches, and FC, FCoE, iSCSI, or NFS storage Find out the "why" behind virtualization design decisions and make better choices, with VMware vSphere Design, Second Edition, which has been fully updated for vSphere 5.x.

### **Zabbix 1.8 Network Monitoring**

Design and implement successful private clouds with OpenStack About This Book Explore the various design choices available for cloud architects within an OpenStack deployment Craft an OpenStack architecture and deployment pipeline to meet the unique needs of your organization Create a product roadmap for Infrastructure as a Service in your organization using this hands-on guide Who This Book Is For This book is written especially for those who will design OpenStack clouds and lead their implementation. These people are typically cloud architects, but may also be in product management, systems engineering, or enterprise architecture. What You Will Learn Familiarize yourself with the components of OpenStack Build an increasingly complex OpenStack lab deployment Write compelling documentation for the architecture teams within your organization Apply Agile configuration management techniques to deploy OpenStack Integrate OpenStack with your organization's identity management, provisioning, and billing systems Configure a robust virtual environment for users to interact with Use enterprise security guidelines for your OpenStack deployment Create a product roadmap that delivers functionality quickly to the users of your platform In Detail Over the last five years, hundreds of organizations have successfully implemented Infrastructure as a Service (IaaS) platforms based on OpenStack. The huge amount of investment from these organizations, industry giants such as IBM and HP, as well as open source leaders such as Red Hat have led analysts to label OpenStack as the most important open source technology since the Linux operating system. Because of its ambitious scope, OpenStack is a complex and fast-evolving open source project that requires a diverse skill-set to design and implement it. This guide leads you through each of the major decision points that you'll face while architecting an OpenStack private cloud for your organization. At each point, we offer you advice based on the experience we've gained from designing and leading

successful OpenStack projects in a wide range of industries. Each chapter also includes lab material that gives you a chance to install and configure the technologies used to build production-quality OpenStack clouds. Most importantly, we focus on ensuring that your OpenStack project meets the needs of your organization, which will guarantee a successful rollout. Style and approach This is practical, hands-on guide to implementing OpenStack clouds, where each topic is illustrated with real-world examples and then the technical points are proven in the lab.

### **Proxmox Cookbook**

Good system administrators recognize problems long before anyone asks, "Hey, is the Internet down?" Nagios, an open source system and network monitoring tool, has emerged as the most popular solution for sys admins in organizations of all sizes. It's robust but also complex, and Nagios: System and Network Monitoring, 2nd Edition, updated to address Nagios 3.0, will help you take full advantage of this program. Nagios, which runs on Linux and most \*nix variants, can be configured to continuously monitor network services such as SMTP, POP3, HTTP, NNTP, SSH, and FTP. It can also supervise host resources (processor load, disk and memory usage, running processes, log files, and so on) and environmental factors, such as temperature and humidity. This book is your guide to getting the most out of this versatile and powerful monitoring tool. Inside Nagios, you'll learn how to:

- Install and configure the Nagios core, all standard plugins, and selected third-party plugins
- Configure the notification system to alert you of ongoing problems—and to alarm others in case of a serious crisis
- Program event handlers to take automatic action when trouble occurs
- Write Perl plugins to customize Nagios for your unique needs
- Quickly understand your Nagios data using graphing and visualization tools
- Monitor Windows servers, SAP systems, and Oracle databases

The book also includes a chapter that highlights the differences between Nagios versions 2 and 3 and gives practical migration and compatibility tips. Nagios: System and Network Monitoring, 2nd Edition is a great starting point for configuring and using Nagios in your own environment.

### **The Art of Monitoring**

A hands-on and introductory guide to the art of modern application and infrastructure monitoring and metrics. We start small and then build on what you learn to scale out to multi-site, multi-tier applications. The book is written for both developers and sysadmins. We focus on building monitored and measurable applications. We also use tools that are designed to handle the challenges of managing Cloud, containerised and distributed applications and infrastructure. In the book we'll deliver:

- \* An introduction to monitoring, metrics and measurement.
- \* A scalable framework for monitoring hosts (including Docker and containers), services and applications built on top of the Riemann event stream processor.
- \* Graphing and metric storage using Graphite and Grafana.
- \* Logging with Logstash.
- \* A framework for high quality and useful notifications
- \* Techniques for developing and building monitorable applications
- \* A capstone that puts all the pieces together to monitor a multi-tier application.

## **How AI Impacts Urban Living and Public Health**

If you are a system or application developer interested in learning how to solve practical problems using the Hadoop framework, then this book is ideal for you. You are expected to be familiar with the Unix/Linux command-line interface and have some experience with the Java programming language. Familiarity with Hadoop would be a plus.

## **Nginx HTTP Server**

The 2013 edition of the bestselling vSphere book on the market Virtualization remains the hottest trend in the IT world, and VMware vSphere is the industry's most widely deployed virtualization solution. The demand for IT professionals skilled in virtualization and cloud-related technologies is great and expected to keep growing. This comprehensive Sybex guide covers all the features and capabilities of VMware vSphere, showing administrators step by step how to install, configure, operate, manage, and secure it. This perfect blend of hands-on instruction, conceptual explanation, and practical application is reinforced with real-world examples. Led by Scott Lowe and Nick Marshall, both VMware vExperts, the author team provides expertise that will prepare IT professionals to excel in using this virtualization technology. Virtualization is seen as a "best practice" for high availability and disaster recovery solutions, as well as for applications such as Exchange Server and SharePoint IDC estimates that there are as many as 7 million jobs available worldwide in virtualization and cloud technology Provides hands-on instruction in all the latest features and capabilities of VMware vSphere, with both conceptual explanations and practical applications Author team is lead by Scott Lowe and Nick Marshall, well-known VMware experts and popular bloggers Mastering VMware vSphere provides what every virtualization professional needs to know.

## **Nagios, 2nd Edition**

Today's global organizations depend on being able to unlock business insights from massive volumes of data. Now, with IBM® FlashSystem 900, powered by IBM FlashCore™ technology, they can make faster decisions based on real-time insights and unleash the power of the most demanding applications, including online transaction processing (OLTP) and analytics databases, virtual desktop infrastructures (VDIs), technical computing applications, and cloud environments. This IBM Redbooks® publication introduces clients to the IBM FlashSystem® 900. It provides in-depth knowledge of the product architecture, software and hardware, implementation, and hints and tips. Also illustrated are use cases that show real-world solutions for tiering, flash-only, and preferred-read, and also examples of the benefits gained by integrating the FlashSystem storage into business environments. This book is intended for pre-sales and post-sales technical support professionals and storage administrators, and for anyone who wants to understand how to implement this new and exciting technology. This book describes the following offerings of the IBM Spectrum™ Storage family: IBM Spectrum Storage™ IBM Spectrum Control™ IBM Spectrum Virtualize™ IBM Spectrum Scale™ IBM Spectrum Accelerate™

## **Mastering Zabbix**

A practical book filled with advanced recipes as well as plenty of code and real-life examples which will make your learning curve quick and easy. If you are a software developer who wants to develop distributed applications based on messaging [BISAC]; then this book is for you. It's assumed that you have some experience with multithreading applications and distributed applications. You are also expected to know the basic concepts of Web and cloud applications in order to follow the recipes effectively.

## **Zabbix 4 Network Monitoring**

The Cloud Computing Bible is a complete reference to cloud computing that presents the technologies, protocols, platforms and infrastructure that make cloud computing possible and desirable. Many of the cloud computing books on the market today are small books of 300 pages or less and the larger books tend to be programming books or security titles. A longer format book such as Cloud Computing Bible allows a complete definition of the topic as well as in-depth introductions to essential technologies and platforms. Additionally it allows significant technologies to be presented in a form that provides enough detail for the reader to determine if it is something that they are interested in learning more about. It is important to stress platform and technologies as the main subject and intersperse that with products in order to provide an extended life span, but have current appeal. The book will be divided into five parts: The Value Proposition, Platforms, Infrastructure, Services and Applications, and The Mobile Cloud.

## **VMware vSphere Performance**

If you have some experience with Zabbix and wish to take your infrastructure to the next level, then this book is for you. Before you start with Zabbix, or monitoring in general, it is best to have some basic Linux knowledge and a good understanding of snmp, virtualization, and scripting.

## **OpenStack for Architects**

Not a new version - included warning for self signed X509 certificates - see section 5.2 This IBM® Redbooks® publication describes the concepts, architecture, and implementation of the IBM XIV® Storage System. The XIV Storage System is a scalable enterprise storage system that is based on a grid array of hardware components. It can attach to both Fibre Channel Protocol (FCP) and IP network Small Computer System Interface (iSCSI) capable hosts. This system is a good fit for clients who want to be able to grow capacity without managing multiple tiers of storage. The XIV Storage System is suited for mixed or random access workloads, including online transaction processing, video streamings, images, email, and emerging workload areas, such as Web 2.0 and cloud storage. The focus of this edition is on the XIV Gen3 running Version 11.5.x of the XIV system software, which brings enhanced value for the XIV Storage System in cloud environments. It offers multitenancy support, VMware vCloud Suite integration, more discrete performance classes, and RESTful API enhancements that expand cloud

automation integration. Version 11.5 introduces support for three-site mirroring to provide high availability and disaster recovery. It also enables capacity planning through the Hyper-Scale Manager, mobile push notifications for real-time alerts, and enhanced security. Version 11.5.1 supports 6TB drives and VMware vSphere Virtual Volumes (VVOL). In the first few chapters of this book, we describe many of the unique and powerful concepts that form the basis of the XIV Storage System logical and physical architecture. We explain how the system eliminates direct dependencies between the hardware elements and the software that governs the system. In subsequent chapters, we explain the planning and preparation tasks that are required to deploy the system in your environment by using the intuitive yet powerful XIV Storage Manager GUI or the XIV command-line interface. We also describe the performance characteristics of the XIV Storage System and present options for alerting and monitoring, including enhanced secure remote support. This book is for IT professionals who want an understanding of the XIV Storage System. It is also for readers who need detailed advice on how to configure and use the system.

### **Implementing the IBM Storwize**

The IBM® Elastic Storage Server GUI provides an easy way to configure and monitor various features that are available with the IBM ESS system. It is a web application that runs on common web browsers, such as Chrome, Firefox, and Edge. The ESS GUI uses Java Script and Ajax technologies to enable smooth and desktop-like interfacing. This IBM Redpaper publication provides a broad understanding of the architecture and features of the ESS GUI. It includes information about how to install and configure the GUI and in-depth information about the use of the GUI options. The primary audience for this paper includes experienced and new users of the ESS system.

### **Monitoring and Managing the IBM Elastic Storage Server Using the GUI**

This book constitutes the refereed proceedings of the 13th International Conference on Evaluation of Novel Approaches to Software Engineering, ENASE 2018, held in Funchal, Madeira, Portugal, in March 2018. The 17 revised full papers and 5 revised short papers presented were carefully reviewed and selected from 95 submissions. The papers are organized in topical sections on service science and business information systems and software engineering.

### **Proceedings of the 13th International Conference on Ubiquitous Information Management and Communication (IMCOM) 2019**

If you are an experienced network administrator looking for a comprehensive monitoring solution that will keep a watchful eye on networks, then this book is for you.

### **Zabbix Network Monitoring Essentials**

Learn how to monitor your large IT environments using Zabbix with this one-stop, comprehensive guide to the Zabbix world About This Book Create a tailor-made monitoring solution based on your specific needs Learn advanced techniques of Zabbix to monitor networks, performances, and other critical features in large environments Integrate, customize, and extend your monitoring solutions with external components and software Who This Book Is For This book is intended for system administrators and IT architects who need to better integrate their Zabbix installation with their surrounding environment. A basic, working knowledge of Zabbix and Linux is assumed so that the book can focus on how to use every component to its full advantage. It will also be helpful to be familiar with programming concepts and languages but if not, all the content in the book is thorough and well documented. What You Will Learn Efficiently collect data from a large variety of monitoring objects Organize your data in graphs, charts, maps, and slide shows Build intelligent triggers and alarms to monitor your network proactively Write your own custom probes and monitoring scripts to extend Zabbix Configure Zabbix and its database to be high available and fault-tolerant Automate repetitive procedures using Zabbix's API Integrate Zabbix with external systems Understand the protocol and how to interact with it by writing your own custom agent In Detail Nowadays monitoring systems play a crucial role in any IT environment. They are extensively used to not only measure your system's performance, but also to forecast capacity issues. This is where Zabbix, one of the most popular monitoring solutions for networks and applications, comes into the picture. With an efficient monitoring system in place you'll be able to foresee when your infrastructure runs under capacity and react accordingly. Due to the critical role a monitoring system plays, it is fundamental to implement it in the best way from its initial setup. This avoids misleading, confusing, or, even worse, false alarms which can disrupt an efficient and healthy IT department. This new edition will provide you with all the knowledge you need to make strategic and practical decisions about the Zabbix monitoring system. The setup you'll do with this book will fit your environment and monitoring needs like a glove. You will be guided through the initial steps of choosing the correct size and configuration for your system, to what to monitor and how to implement your own custom monitoring component. Exporting and integrating your data with other systems is also covered. By the end of this book, you will have a tailor-made and well configured monitoring system and will understand with absolute clarity how crucial it is to your IT environment. Style and approach This book is an easy to follow, step-by-step guide to monitoring network and performance in large environments with Zabbix. It is designed for real-world Zabbix administrators, and is comprised of a perfect mix of theoretical explanations and practical applications, making it your perfect companion.

## **Economics of Grids, Clouds, Systems, and Services**

Summary RabbitMQ in Action is a fast-paced run through building and managing scalable applications using the RabbitMQ messaging server. It starts by explaining how message queuing works, its history, and how RabbitMQ fits in. Then it shows you real-world examples you can apply to your own scalability and interoperability challenges. About the Technology There's a virtual switchboard at the core of most large applications where messages race between servers, programs, and services. RabbitMQ is an efficient and easy-to-deploy queue that handles this message

traffic effortlessly in all situations, from web startups to massive enterprise systems. About the Book RabbitMQ in Action teaches you to build and manage scalable applications in multiple languages using the RabbitMQ messaging server. It's a snap to get started. You'll learn how message queuing works and how RabbitMQ fits in. Then, you'll explore practical scalability and interoperability issues through many examples. By the end, you'll know how to make Rabbit run like a well-oiled machine in a 24 x 7 x 365 environment. Written for developers familiar with Python, PHP, Java, .NET, or any other modern programming language. No RabbitMQ experience required. Purchase of the print book comes with an offer of a free PDF, ePub, and Kindle eBook from Manning. Also available is all code from the book. What's Inside Learn fundamental messaging design patterns Use patterns for on-demand scalability Glue a PHP frontend to a backend written in anything Implement a PubSub-alerting service in 30 minutes flat Configure RabbitMQ's built-in clustering Monitor, manage, extend, and tune RabbitMQ  
===== Table of Contents Pulling RabbitMQ out of the hat Understanding messaging Running and administering Rabbit Solving problems with Rabbit: coding and patterns Clustering and dealing with failure Writing code that survives failure Warrens and Shovels: failover and replication Administering RabbitMQ from the Web Controlling Rabbit with the REST API Monitoring: Houston, we have a problem Supercharging and securing your Rabbit Smart Rabbits: extending RabbitMQ

## **Implementing IBM FlashSystem 900**

This book constitutes the refereed proceedings of the 15th International Conference on Economics of Grids, Clouds, Systems, and Services, GECON 2018, held in Pisa, Italy, in September 2018. The 21 full papers and 9 short papers presented together with 1 invited talk were carefully reviewed and selected from 40 submissions. This GECON 2018 proceedings was structured in three special sessions on selected topics, namely: IT service ecosystems enabled through emerging digital technologies; machine learning, cognitive systems and data science for system management; and blockchain technologies and economics.

## **Mastering Proxmox**

Apache Ignite is one of the most widely used open source memory-centric distributed, caching, and processing platform. This allows the users to use the platform as an in-memory computing framework or a full functional persistence data stores with SQL and ACID transaction support. On the other hand, Apache Ignite can be used for accelerating existing Relational and NoSQL databases, processing events & streaming data or developing Microservices in fault-tolerant fashion. This book addressed anyone interested in learning in-memory computing and distributed database. This book intends to provide someone with little to no experience of Apache Ignite with an opportunity to learn how to use this platform effectively from scratch taking a practical hands-on approach to learning. Please see the table of contents for more details.

## **IBM XIV Storage System Architecture and Implementation**

This book constitutes the refereed proceedings of the 14th International Conference on Economics of Grids, Clouds, Systems, and Services, GECON 2017, held in Biarritz, France, in September 2017. The 10 full papers and 10 short papers presented together with 3 invited talks were carefully reviewed and selected from 38 submissions. This volume of the GECON 2017 proceedings has been structured in sections following the sessions that comprised the conference program: Section 1: Pricing in Cloud and Quality of Service Session 2: Work in Progress on Service Management I" >Session 3: Work in Progress on Business models and Community Cooperation Session 4: Work in Pro gress on Energy Efficiency and Resource Management Session 5: Resource Management Session 6: Edge Computing Session 7: Cloud Federation Session 8: Work in Progress on Service Selection and Coordination

## **Applied Physics, System Science and Computers III**

Organizations of all sizes are faced with the challenge of managing massive volumes of increasingly valuable data. However, storing this data can be costly, and extracting value from the data is becoming more and more difficult. IT organizations have limited resources, but must stay responsive to dynamic environments and act quickly to consolidate, simplify, and optimize their IT infrastructures. The IBM® Storwize® V3700 system provides a solution that is affordable, easy to use, and self-optimizing, which enables organizations to overcome these storage challenges. Storwize V3700 delivers efficient, entry-level configurations that are specifically designed to meet the needs of small and midsize businesses. Designed to provide organizations with the ability to consolidate and share data at an affordable price, Storwize V3700 offers advanced software capabilities that are usually found in more expensive systems. Built on innovative IBM technology, Storwize V3700 addresses the block storage requirements of small and midsize organizations, Storwize V3700 is designed to accommodate the most common storage network technologies. This design enables easy implementation and management. Storwize V3700 includes the following features: Web-based GUI provides point-and-click management capabilities. Internal disk storage virtualization enables rapid, flexible provisioning and simple configuration changes. Thin provisioning enables applications to grow dynamically, but only use space they actually need. Enables simple data migration from external storage to Storwize V3700 storage (one-way from another storage device). Remote Mirror creates copies of data at remote locations for disaster recovery. IBM FlashCopy® creates instant application copies for backup or application testing. This IBM Redbooks® publication is intended for pre-sales and post-sales technical support professionals and storage administrators. The concepts in this book also relate to the IBM Storwize V3500. This book was written at a software level of version 7 release 4.

## **Evaluation of Novel Approaches to Software Engineering**

Written as a practical step-by-step tutorial, this book is full of engaging examples to help you learn in a practical context. If you are a system administrator or an IT architect and want to know how to better integrate your Zabbix installation with your surrounding environment, this book is ideal for you. A basic, working knowledge of Zabbix is assumed, so that the book can focus on how to take full

advantage of every component. The code in the later chapter will be explained in its functionality, but basic programming skills are assumed as well.

## **Docker in Practice**

Summary Docker in Practice, Second Edition presents over 100 practical techniques, hand-picked to help you get the most out of Docker. Following a Problem/Solution/Discussion format, you'll walk through specific examples that you can use immediately, and you'll get expert guidance on techniques that you can apply to a whole range of scenarios. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Docker's simple idea-wrapping an application and its dependencies into a single deployable container-created a buzz in the software industry. Now, containers are essential to enterprise infrastructure, and Docker is the undisputed industry standard. So what do you do after you've mastered the basics? To really streamline your applications and transform your dev process, you need relevant examples and experts who can walk you through them. You need this book. About the Book Docker in Practice, Second Edition teaches you rock-solid, tested Docker techniques, such as replacing VMs, enabling microservices architecture, efficient network modeling, offline productivity, and establishing a container-driven continuous delivery process. Following a cookbook-style problem/solution format, you'll explore real-world use cases and learn how to apply the lessons to your own dev projects. What's inside Continuous integration and delivery The Kubernetes orchestration tool Streamlining your cloud workflow Docker in swarm mode Emerging best practices and techniques About the Reader Written for developers and engineers using Docker in production. About the Author Ian Miell and Aidan Hobson Sayers are seasoned infrastructure architects working in the UK. Together, they used Docker to transform DevOps at one of the UK's largest gaming companies. Table of Contents PART 1 - DOCKER FUNDAMENTALS Discovering Docker Understanding Docker: Inside the engine room PART 2 - DOCKER AND DEVELOPMENT Using Docker as a lightweight virtual machine Building images Running containers Day-to-day Docker Configuration management: Getting your house in order PART 3 - DOCKER AND DEVOPS Continuous integration: Speeding up your development pipeline Continuous delivery: A perfect fit for Docker principles Network simulation: Realistic environment testing without the pain PART 4 - ORCHESTRATION FROM A SINGLE MACHINE TO THE CLOUD A primer on container orchestration The data center as an OS with Docker Docker platforms PART 5 - DOCKER IN PRODUCTION Docker and security Plain sailing: Running Docker in production Docker in production: Dealing with challenges

## **OSSEC Host-Based Intrusion Detection Guide**

The four-volume set LNCS 11334-11337 constitutes the proceedings of the 18th International Conference on Algorithms and Architectures for Parallel Processing, ICA3PP 2018, held in Guangzhou, China, in November 2018. The 141 full and 50 short papers presented were carefully reviewed and selected from numerous submissions. The papers are organized in topical sections on Distributed and Parallel Computing; High Performance Computing; Big Data and Information Processing; Internet of Things and Cloud Computing; and Security and Privacy in Computing.

## Mastering Zabbix

### The Apache Ignite Book

Learn how to gather detailed statistics and data with this one-stop, comprehensive course along with hands-on recipes to get your infrastructure up and running with Zabbix. About This Book Monitor your network and deploy impressive business solutions with Zabbix Get practical recipes to automate your Zabbix infrastructure and create impressive graphs Integrate, customize, and extend your monitoring solutions with external components and software. Who This Book Is For This course is for System Administrators who have been managing and monitoring infrastructure. You do not need any knowledge about Zabbix. What You Will Learn Efficiently collect data from a large variety of monitoring objects Organize your data in graphs, charts, maps, and slide shows Write your own custom probes and monitoring scripts to extend Zabbix Configure Zabbix and its database to be high available and fault-tolerant Automate repetitive procedures using Zabbix's API Find out how to monitor SNMP devices Manage hosts, users, and permissions while acting upon monitored conditions Set up your Zabbix infrastructure efficiently Customize the Zabbix interface to suit your system needs Monitor your VMware infrastructure in a quick and easy way with Zabbix In Detail Nowadays, monitoring systems play a crucial role in any IT environment. They are extensively used to not only measure your system's performance, but also to forecast capacity issues. This is where Zabbix, one of the most popular monitoring solutions for networks and applications, comes into the picture. With an efficient monitoring system in place, you'll be able to foresee when your infrastructure runs under capacity and react accordingly. Due to the critical role a monitoring system plays, it is fundamental to implement it in the best way from its initial setup. This avoids misleading, confusing, or, even worse, false alarms that can disrupt an efficient and healthy IT department. This course is for administrators who are looking for an end-to-end monitoring solution. It will get you accustomed with the powerful monitoring solution, starting with installation and explaining the fundamentals of Zabbix. Moving on, we explore the complex functionalities of Zabbix in the form of enticing recipes. These recipes will help you to gain control of your infrastructure. You will be able to organize your data in the form of graphs and charts along with building intelligent triggers for monitoring your network proactively. Toward the end, you will gain expertise in monitoring your networks and applications using Zabbix. This Learning Path combines some of the best that Packt has to offer in one complete, curated package. It includes content from the following Packt products: Zabbix Network Monitoring-Second Edition Zabbix Cookbook Mastering Zabbix-Second Edition Style and approach This course is a compact practical guide that starts from the fundamentals of Zabbix and takes you all the way to building a monitoring solution that gathers data from a large variety of systems. Along the way, we will discuss the low-level operational details that should benefit you even if you have used Zabbix for a while. It also follows a step-by-step approach that is easy to follow, full of engaging examples, and will help you apply the theory to practice.

### Managing Microsoft Hybrid Clouds

Monitor your network hardware, servers, and web performance effectively and efficiently.

### **Economics of Grids, Clouds, Systems, and Services**

This book constitutes the proceedings of the First International Conference on Emerging Trends in Engineering (ICETE), held at University College of Engineering and organised by the Alumni Association, University College of Engineering, Osmania University, in Hyderabad, India on 22-23 March 2019. The proceedings of the ICETE are published in three volumes, covering seven areas: Biomedical, Civil, Computer Science, Electrical & Electronics, Electronics & Communication, Mechanical, and Mining Engineering. The 215 peer-reviewed papers from around the globe present the latest state-of-the-art research, and are useful to postgraduate students, researchers, academics and industry engineers working in the respective fields. Volume 2 presents papers on the theme "Advances in Decision Sciences, Image Processing, Security and Computer Vision - International Conference on Emerging Trends in Engineering (ICETE)". It includes state-of-the-art technical contributions in the areas of electronics and communication engineering and electrical and electronics engineering, discussing the latest sustainable developments in fields such as signal processing and communications; GNSS and VLSI; microwaves and antennas; signal, speech and image processing; power systems; and power electronics.

### **Zabbix Cookbook**

Over 60 hands-on recipes to perform server virtualization and manage virtualized server solutions with Proxmox About This Book Learn the process of installing, configuring, and managing Proxmox clusters Explore ways of integrating various storage systems with Proxmox Step-by-step and easy-to-learn instructions to build virtual environments of any size using Proxmox Who This Book Is For This book is perfect for system administrators who want to learn to implement and administer Proxmox VE environments. Since this book will not cover the basics of Proxmox, a basic understanding of virtualization and networking with Proxmox VE is required. What You Will Learn Install and configure an enterprise grade, cluster-based virtual environment using Proxmox Manage a cluster with Graphical User Interface using datacenter, node, KVM, and OpenVZ menus among others Learn different ways of configuring your network and clusters to create complex cloud services Configure and manage the built-in Proxmox firewall to protect your virtual environment Integrate storage systems such as Ceph, Sheepdog, and ZFS for virtual machine management to suit your business needs Backup and restore your data via stop suspend, and snapshot modes Upgrade a Proxmox node with new releases and apply update patches through GUI or CLI Monitor the resources and virtual machines to maintain performance and uptime Explore commands used for Proxmox and Ceph cluster through CLI In Detail Proxmox VE goes head to head with big virtualization platforms without bearing the overheads of high costs and vendor lock-ins. Rock solid stability and extremely easy manageability gives Proxmox VE an edge in the world of virtualization. The Proxmox cluster file system (pmxcfs) is designed uniquely for storage of configuration files with high security and reliability. Its simplicity and robustness make it easy for system administrators to manage their systems efficiently. Proxmox VE's intuitive interface, high

availability, and unique central management system puts it on par with the world's best virtualization platforms. Its simplicity and high quality of service is what makes it the foremost choice for most system administrators. Starting with a step-by-step installation of Proxmox nodes along with an illustrated tour of Proxmox graphical user interface where you will spend most of your time managing a cluster, this book will get you up and running with the mechanisms of Proxmox VE. Various entities such as Cluster, Storage, and Firewall are also covered in an easy to understand format. You will then explore various backup solutions and restore mechanisms, thus learning to keep your applications and servers safe. Next, you will see how to upgrade a Proxmox node with a new release and apply update patches through GUI or CLI. Monitoring resources and virtual machines is required on an enterprise level, to maintain performance and uptime; to achieve this, we learn how to monitor host machine resources and troubleshoot common issues in the setup. Finally, we will walk through some advanced configurations for VM followed by a list of commands used for Proxmox and Ceph cluster through CLI. With this focused and detailed guide you will learn to work your way around with Proxmox VE quickly and add to your skillset. Style and approach This book is an inclusive and extensive handbook. It takes a pragmatic approach to complement your system admin skills and accomplish tasks within the Proxmox environment. It consists of illustrations and code-files to help you work with the data as you go from one recipe to the other.

### **Cloud Computing Bible**

Use this in-depth guide to correctly design benchmarks, measure key performance metrics of .NET applications, and analyze results. This book presents dozens of case studies to help you understand complicated benchmarking topics. You will avoid common pitfalls, control the accuracy of your measurements, and improve performance of your software. Author Andrey Akinshin has maintained BenchmarkDotNet (the most popular .NET library for benchmarking) for five years and covers common mistakes that developers usually make in their benchmarks. This book includes not only .NET-specific content but also essential knowledge about performance measurements which can be applied to any language or platform (common benchmarking methodology, statistics, and low-level features of modern hardware). What You'll Learn Be aware of the best practices for writing benchmarks and performance tests Avoid the common benchmarking pitfalls Know the hardware and software factors that affect application performance Analyze performance measurements Who This Book Is For .NET developers concerned with the performance of their applications

### **How to Accelerate Your Internet**

This is not an instructional guide, but a practical, scenario-based book which guides you through everything you need to know in a practical manner by letting you build your own cluster. By the end of the book, you will have a fully functional Proxmox cluster setup at your disposal and have the knowledge to replicate virtualization solutions. If you already know what the word "virtualization" means and you are ready to stand out from the crowd equipped with the unique ability to design and implement a rock-solid virtualized network environment using Proxmox, then you have just picked up the only book you will need. Linux system

administration experience together with knowledge of networking and virtualization concepts is assumed. This book is also useful if you are already using Proxmox and simply want to master its advanced features.

### **RabbitMQ Cookbook**

This book reports on advanced theories and methods in three related fields of research: applied physics, system science and computers. The first part covers applied physics topics, such as lasers and accelerators; fluid dynamics, optics and spectroscopy, among others. It also addresses astrophysics, security, and medical and biological physics. The second part focuses on advances in computers, such as those in the area of social networks, games, internet of things, deep learning models and more. The third part is especially related to systems science, covering swarm intelligence, smart cities, complexity and more. Advances in and application of computer communication, artificial intelligence, data analysis, simulation and modeling are also addressed. The book offers a collection of contributions presented at the 3rd International Conference on Applied Physics, System Science and Computers (APSAC), held in Dubrovnik, Croatia on September 26–28, 2018. Besides presenting new methods, it is also intended to promote collaborations between different communities working on related topics at the interface between physics, computer science and engineering.

### **VMware vSphere Design**

If you're an IT professional, manager, consultant, or architect who wants to learn about hybrid cloud computing using Azure, then this is the book for you.

### **Pro .NET Benchmarking**

Covering the latest VMware vSphere software, an essential book aimed at solving vSphere performance problems before they happen VMware vSphere is the industry's most widely deployed virtualization solution. However, if you improperly deploy vSphere, performance problems occur. Aimed at VMware administrators and engineers and written by a team of VMware experts, this resource provides guidance on common CPU, memory, storage, and network-related problems. Plus, step-by-step instructions walk you through techniques for solving problems and shed light on possible causes behind the problems. Divulges troubleshooting methodologies, performance monitoring tools, and techniques and tools for isolating performance problems Details the necessary steps for handling CPU, memory, storage, and network-related problems Offers understanding on the interactions between VMware vSphere and CPU, memory, storage, and network VMware vSphere Performance is the resource you need to diagnose and handle VMware vSphere performance problems, and avoid them in the future.

### **Pro DevOps with Google Cloud Platform**

This book is the definitive guide on the OSSEC Host-based Intrusion Detection system and frankly, to really use OSSEC you are going to need a definitive guide. Documentation has been available since the start of the OSSEC project but, due to

time constraints, no formal book has been created to outline the various features and functions of the OSSEC product. This has left very important and powerful features of the product undocumented until now! The book you are holding will show you how to install and configure OSSEC on the operating system of your choice and provide detailed examples to help prevent and mitigate attacks on your systems. -- Stephen Northcutt OSSEC determines if a host has been compromised in this manner by taking the equivalent of a picture of the host machine in its original, unaltered state. This "picture" captures the most relevant information about that machine's configuration. OSSEC saves this "picture" and then constantly compares it to the current state of that machine to identify anything that may have changed from the original configuration. Now, many of these changes are necessary, harmless, and authorized, such as a system administrator installing a new software upgrade, patch, or application. But, then there are the not-so-harmless changes, like the installation of a rootkit, trojan horse, or virus. Differentiating between the harmless and the not-so-harmless changes determines whether the system administrator or security professional is managing a secure, efficient network or a compromised network which might be funneling credit card numbers out to phishing gangs or storing massive amounts of pornography creating significant liability for that organization. Separating the wheat from the chaff is by no means an easy task. Hence the need for this book. The book is co-authored by Daniel Cid, who is the founder and lead developer of the freely available OSSEC host-based IDS. As such, readers can be certain they are reading the most accurate, timely, and insightful information on OSSEC. \* Nominee for Best Book Bejtlich read in 2008! \* <http://taosecurity.blogspot.com/2008/12/best-book-bejtlich-read-in-2008.html> • Get Started with OSSEC Get an overview of the features of OSSEC including commonly used terminology, pre-install preparation, and deployment considerations. • Follow Step-by-Step Installation Instructions Walk through the installation process for the "local", "agent", and "server" install types on some of the most popular operating systems available. • Master Configuration Learn the basic configuration options for your install type and learn how to monitor log files, receive remote messages, configure email notification, and configure alert levels. • Work With Rules Extract key information from logs using decoders and how you can leverage rules to alert you of strange occurrences on your network. • Understand System Integrity Check and Rootkit Detection Monitor binary executable files, system configuration files, and the Microsoft Windows registry. • Configure Active Response Configure the active response actions you want and bind the actions to specific rules and sequence of events. • Use the OSSEC Web User Interface Install, configure, and use the community-developed, open source web interface available for OSSEC. • Play in the OSSEC VMware Environment Sandbox • Dig Deep into Data Log Mining Take the "high art" of log analysis to the next level by breaking the dependence on the lists of strings or patterns to look for in the logs.

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