

Learning Kibana 5 0

Ten Strategies of a World-Class Cyber Security Operations Center conveys MITRE's accumulated expertise on enterprise-grade computer network defense. It covers ten key qualities of leading Cyber Security Operations Centers (CSOCs), ranging from their structure and organization, to processes that best enable smooth operations, to approaches that extract maximum value from key CSOC technology investments. This book offers perspective and context for key decision points in structuring a CSOC, such as what capabilities to offer, how to architect large-scale data collection and analysis, and how to prepare the CSOC team for agile, threat-based response. If you manage, work in, or are standing up a CSOC, this book is for you. It is also available on MITRE's website, www.mitre.org.

Integrate Elasticsearch into Hadoop to effectively visualize and analyze your data About This Book Build production-ready analytics applications by integrating the Hadoop ecosystem with Elasticsearch Learn complex Elasticsearch queries and develop real-time monitoring Kibana dashboards to visualize your data Use Elasticsearch and Kibana to search data in Hadoop easily with this comprehensive, step-by-step guide Who This Book Is For This book is targeted at Java developers with basic knowledge on Hadoop. No prior Elasticsearch experience is expected. What You Will Learn Set up the Elasticsearch-Hadoop environment Import HDFS data into Elasticsearch with MapReduce jobs Perform full-text search and aggregations efficiently using Elasticsearch Visualize data and create interactive dashboards using Kibana Check and detect anomalies in streaming data using Storm and Elasticsearch Inject and classify real-time streaming data into Elasticsearch Get production-ready for Elasticsearch-Hadoop based projects Integrate with Hadoop eco-system such as Pig, Storm, Hive, and Spark In Detail The Hadoop ecosystem is a de-facto standard for processing terra-bytes and peta-bytes of data. Lucene-enabled Elasticsearch is becoming an industry standard for its full-text search and aggregation capabilities. Elasticsearch-Hadoop serves as a perfect tool to bridge the worlds of Elasticsearch and Hadoop ecosystem to get best out of both the worlds. Powered with Kibana, this stack makes it a cakewalk to get surprising insights out of your massive amount of Hadoop ecosystem in a flash. In this book, you'll learn to use Elasticsearch, Kibana and Elasticsearch-Hadoop effectively to analyze and understand your HDFS and streaming data. You begin with an in-depth understanding of the Hadoop, Elasticsearch, Marvel, and Kibana setup. Right after this, you will learn to successfully import Hadoop data into Elasticsearch by writing MapReduce job in a real-world example. This is then followed by a comprehensive look at Elasticsearch essentials, such as full-text search analysis, queries, filters and aggregations; after which you gain an understanding of creating various visualizations and interactive dashboard using Kibana. Classifying your real-world streaming data and identifying trends in it using Storm and Elasticsearch are some of the other topics that we'll cover. You will also gain an insight about key concepts of Elasticsearch and Elasticsearch-hadoop in distributed mode, advanced configurations along with some common configuration presets you may need for your production deployments. You will have "Go production checklist" and high-level view for cluster administration for post-production. Towards the end, you will learn to integrate Elasticsearch with other Hadoop eco-system tools, such as Pig, Hive and Spark. Style and approach A concise yet comprehensive approach has been adopted with real-time examples to help you grasp the concepts easily.

Summary Elasticsearch in Action teaches you how to build scalable search applications using Elasticsearch. You'll ramp up fast, with an informative overview and an engaging introductory example. Within the first few chapters, you'll pick up the core concepts you need to implement basic searches and efficient indexing. With the fundamentals well in hand, you'll go on to gain an organized view of how to optimize your design. Perfect for developers and administrators building and managing search-oriented applications. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Modern search seems like magic—you type a few words and the search engine appears to know what you want. With the Elasticsearch real-time search and analytics engine, you can give your users this magical experience without having to do complex low-level programming or understand advanced data science algorithms. You just install it, tweak it, and get on with your work. About the Book Elasticsearch in Action teaches you how to write applications that deliver professional quality search. As you read, you'll learn to add basic search features to any application, enhance search results with predictive analysis and relevancy ranking, and use saved data from prior searches to give users a custom experience. This practical book focuses on Elasticsearch's REST API via HTTP. Code snippets are written mostly in bash using cURL, so they're easily translatable to other languages. What's Inside What is a great search application? Building scalable search solutions Using Elasticsearch with any language Configuration and tuning About the Reader For developers and administrators building and managing search-oriented applications. About the Authors Radu Gheorghe is a search consultant and software engineer. Matthew Lee Hinman develops highly available, cloud-based systems. Roy Russo is a specialist in predictive analytics. Table of Contents PART 1 CORE ELASTICSEARCH FUNCTIONALITY Introducing Elasticsearch Diving into the functionality Indexing, updating, and deleting data Searching your data Analyzing your data Searching with relevancy Exploring your data with aggregations Relations among documents PART 2 ADVANCED ELASTICSEARCH FUNCTIONALITY Scaling out Improving performance Administering your cluster Search, analyze, and manage data effectively with Elasticsearch 7 Key Features Extend Elasticsearch functionalities and learn how to deploy on Elastic Cloud Deploy and manage simple Elasticsearch nodes as well as complex cluster topologies Explore the capabilities of Elasticsearch 7 with easy-to-follow recipes Book Description Elasticsearch is a Lucene-based distributed search server that allows users to index and search unstructured content with petabytes of data. With this book, you'll be guided through comprehensive recipes on what's new in Elasticsearch 7, and see how to create and run complex queries and analytics. Packed with recipes on performing index mapping, aggregation, and scripting using Elasticsearch, this fourth edition of Elasticsearch Cookbook will get you acquainted with numerous solutions and quick techniques for performing both every day and uncommon tasks such as deploying Elasticsearch nodes, integrating other tools to Elasticsearch, and creating different visualizations. You will install Kibana to monitor a cluster and also extend it using a variety of plugins. Finally, you will integrate your Java, Scala, Python, and big data applications such as Apache Spark and Pig with Elasticsearch, and create efficient data applications powered by enhanced functionalities and custom plugins. By the end of this book, you will have gained in-depth knowledge of implementing Elasticsearch architecture, and you'll be able to manage, search, and store data efficiently and effectively using Elasticsearch. What you will learn Create an efficient architecture with Elasticsearch Optimize search results by executing analytics aggregations Build complex queries by managing indices and documents Monitor the performance of your cluster and nodes Design advanced mapping to take full control of index steps Integrate Elasticsearch in Java, Scala, Python, and big data applications Install Kibana to monitor clusters and extend it for plugins Who this book is for If you're a software engineer, big data infrastructure engineer, or Elasticsearch developer, you'll find this book useful. This Elasticsearch book will also help data professionals working in the e-commerce and FMCG industry who use Elastic for metrics evaluation and search analytics to get deeper insights for better business decisions. Prior experience with Elasticsearch will help you get the most out of this book.

Learn to use some of the most exciting and powerful tools to deliver world-class quality software with continuous delivery and DevOps About This Book Get to know the background of DevOps so you understand the collaboration between different aspects of an IT organization and a software developer Deploy top-quality software and ensure software maintenance and release management with this practical guide This course covers some of the most exciting technology available to DevOps engineers, and demonstrates multiple techniques for using them Real-world and realistic examples are provided to help you as you go about the implementation and adoption of continuous delivery and DevOps Who This Book Is For This course is for developers who want to understand how the infrastructure that builds today's enterprises works, and how to painlessly and regularly ship quality software. What You Will Learn Set up and familiarize yourself with all the tools you need to be efficient with DevOps Design an

application that is suitable for continuous deployment systems with DevOps in mind Test the code using automated regression testing with Jenkins Selenium Managing the lifecycle of hosts, from creation to ongoing management using Puppet Razor Find out how to manage, use, and work with Code in the Git version management system See what traps, pitfalls, and hurdles to look out for as you implement continuous delivery and DevOps In Detail Harness the power of DevOps to boost your skill set and make your IT organization perform better. If you're keen to employ DevOps techniques to better your software development, this course contains all you need to overcome the day-to-day complications of managing complex infrastructures the DevOps way. Start with your first module – Practical DevOps - that encompasses the entire flow from code from testing to production. Get a solid ground-level knowledge of how to monitor code for any anomalies, perform code testing, and make sure the code is running smoothly through a series of real-world exercise, and develop practical skills by creating a sample enterprise Java application. In the second module, run through a series of tailored mini-tutorials designed to give you a complete understanding of every DevOps automation technique. Create real change in the way you deliver your projects by utilizing some of the most commendable software available today. Go from your first steps of managing code in Git to configuration management in Puppet, monitoring using Sensu, and more. In the final module, get to grips with the continuous delivery techniques that will help you reduce the time and effort that goes into the delivery and support of software. 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: Practical DevOps by Joakim Verona DevOps Automation Cookbook by Michael Duffy Continuous Delivery and DevOps : A Quickstart Guide - Second Edition by Paul Swartout Style and approach This course is an easy to follow project based guide for all those with a keen interest in deploying world-class software using some of the most effective and remarkable technologies available.

Build mesmerizing visualizations, analytics, and logs from your data using Elasticsearch, Logstash, and Kibana About This Book Solve all your data analytics problems with the ELK stack Explore the power of Kibana4 search and visualizations built over Elasticsearch queries and learn about the features and plugins of Logstash Develop a complete data pipeline using the ELK stack Who This Book Is For If you are a developer or DevOps engineer interested in building a system that provides amazing insights and business metrics out of data sources, of various formats and types, using the open source technology stack that ELK provides, then this book is for you. Basic knowledge of Unix or any programming language will be helpful to make the most out of this book. What You Will Learn Install, configure, and run Elasticsearch, Logstash, and Kibana Understand the need for log analytics and the current challenges in log analysis Build your own data pipeline using the ELK stack Familiarize yourself with the key features of Logstash and the variety of input, filter, and output plugins it provides Build your own custom Logstash plugin Create actionable insights using charts, histograms, and quick search features in Kibana4 Understand the role of Elasticsearch in the ELK stack In Detail The ELK stack—Elasticsearch, Logstash, and Kibana, is a powerful combination of open source tools. Elasticsearch is for deep search and data analytics. Logstash is for centralized logging, log enrichment, and parsing. Kibana is for powerful and beautiful data visualizations. In short, the Elasticsearch ELK stack makes searching and analyzing data easier than ever before. This book will introduce you to the ELK (Elasticsearch, Logstash, and Kibana) stack, starting by showing you how to set up the stack by installing the tools, and basic configuration. You'll move on to building a basic data pipeline using the ELK stack. Next, you'll explore the key features of Logstash and its role in the ELK stack, including creating Logstash plugins, which will enable you to use your own customized plugins. The importance of Elasticsearch and Kibana in the ELK stack is also covered, along with various types of advanced data analysis, and a variety of charts, tables ,and maps. Finally, by the end of the book you will be able to develop full-fledged data pipeline using the ELK stack and have a solid understanding of the role of each of the components. Style and approach This book is a step-by-step guide, complete with various examples to solve your data analytics problems by using the ELK stack to explore and visualize data.

This book highlights the different types of data architecture and illustrates the many possibilities hidden behind the term "Big Data", from the usage of No-SQL databases to the deployment of stream analytics architecture, machine learning, and governance. Scalable Big Data Architecture covers real-world, concrete industry use cases that leverage complex distributed applications , which involve web applications, RESTful API, and high throughput of large amount of data stored in highly scalable No-SQL data stores such as Couchbase and Elasticsearch. This book demonstrates how data processing can be done at scale from the usage of NoSQL datastores to the combination of Big Data distribution. When the data processing is too complex and involves different processing topology like long running jobs, stream processing, multiple data sources correlation, and machine learning, it's often necessary to delegate the load to Hadoop or Spark and use the No-SQL to serve processed data in real time. This book shows you how to choose a relevant combination of big data technologies available within the Hadoop ecosystem. It focuses on processing long jobs, architecture, stream data patterns, log analysis, and real time analytics. Every pattern is illustrated with practical examples, which use the different open sourceprojects such as Logstash, Spark, Kafka, and so on. Traditional data infrastructures are built for digesting and rendering data synthesis and analytics from large amount of data. This book helps you to understand why you should consider using machine learning algorithms early on in the project, before being overwhelmed by constraints imposed by dealing with the high throughput of Big data. Scalable Big Data Architecture is for developers, data architects, and data scientists looking for a better understanding of how to choose the most relevant pattern for a Big Data project and which tools to integrate into that pattern.

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Modern organizations rely on Security Operations Center (SOC) teams to vigilantly watch security systems, rapidly detect breaches, and respond quickly and effectively. To succeed, SOCs desperately need more qualified cybersecurity professionals. Cisco's new Cisco Certified CyberOps Associate certification prepares candidates to begin a career working as associate-level cybersecurity analysts within SOCs. It demonstrates their knowledge about creating, operating, and working within computer security incident response teams (CSIRTs) and product security incident response teams (PSIRTs); the incident response lifecycle, and cyber forensics. To earn this valuable certification, candidates must pass the new Understanding Cisco Cybersecurity Operations Fundamentals (200-201 CBROPS) consolidated exam. Cisco CyberOps Associate CBROPS 200-201 Official Cert Guide is Cisco's official, comprehensive self-study resource for this exam. Designed for all exam candidates, it covers every exam objective concisely and logically, with extensive teaching features that promote retention and understanding. You'll find: Pre-chapter quizzes to assess knowledge upfront and focus your study more efficiently Foundation topics sections that explain concepts and configurations, and link theory to practice Key topics sections calling attention to every figure, table, and list you must know Exam Preparation sections with additional chapter review features Final preparation chapter providing tools and a complete final study plan A customizable practice test library This guide offers comprehensive, up-to-date coverage of all CBROPS #200-201 topics related to: Security concepts Security monitoring Host-based analysis Network intrusion analysis Security policies and procedures

A comprehensive introduction to help you get up and running with creating interactive dashboards to visualize and monitor time-series data in no time Key Features Install, set

up, and configure Grafana for real-time data analysis and visualization Visualize and monitor data using data sources such as InfluxDB, Prometheus, and Elasticsearch Explore Grafana's multi-cloud support with Microsoft Azure, Amazon CloudWatch, and Google Stackdriver Book Description Grafana is an open-source analytical platform used to analyze and monitoring time-series data. This beginner's guide will help you get to grips with Grafana's new features for querying, visualizing, and exploring metrics and logs no matter where they are stored. The book begins by showing you how to install and set up the Grafana server. You'll explore the working mechanism of various components of the Grafana interface along with its security features, and learn how to visualize and monitor data using, InfluxDB, Prometheus, Logstash, and Elasticsearch. This Grafana book covers the advanced features of the Graph panel and shows you how Stat, Table, Bar Gauge, and Text are used. You'll build dynamic dashboards to perform end-to-end analytics and label and organize dashboards into folders to make them easier to find. As you progress, the book delves into the administrative aspects of Grafana by creating alerts, setting permissions for teams, and implementing user authentication. Along with exploring Grafana's multi-cloud monitoring support, you'll also learn about Grafana Loki, which is a backend logger for users running Prometheus and Kubernetes. By the end of this book, you'll have gained all the knowledge you need to start building interactive dashboards. What you will learn Find out how to visualize data using Grafana Understand how to work with the major components of the Graph panel Explore mixed data sources, query inspector, and time interval settings Discover advanced dashboard features such as annotations, templating with variables, dashboard linking, and dashboard sharing techniques Connect user authentication to Google, GitHub, and a variety of external services Find out how Grafana can provide monitoring support for cloud service infrastructures Who this book is for This book is for business intelligence developers, business analysts, data analysts, and anyone interested in performing time-series data analysis and monitoring using Grafana. Those looking to create and share interactive dashboards or looking to get up to speed with the latest features of Grafana will also find this book useful. Although no prior knowledge of Grafana is required, basic knowledge of data visualization and some experience in Python programming will help you understand the concepts covered in the book.

Store, search, and analyze your data with ease using Elasticsearch 5.x About This Book Get to grips with the basics of Elasticsearch concepts and its APIs, and use them to create efficient applications Create large-scale Elasticsearch clusters and perform analytics using aggregation This comprehensive guide will get you up and running with Elasticsearch 5.x in no time Who This Book Is For If you want to build efficient search and analytics applications using Elasticsearch, this book is for you. It will also benefit developers who have worked with Lucene or Solr before and now want to work with Elasticsearch. No previous knowledge of Elasticsearch is expected. What You Will Learn See how to set up and configure Elasticsearch and Kibana Know how to ingest structured and unstructured data using Elasticsearch Understand how a search engine works and the concepts of relevance and scoring Find out how to query Elasticsearch with a high degree of performance and scalability Improve the user experience by using autocomplete, geolocation queries, and much more See how to slice and dice your data using Elasticsearch aggregations. Grasp how to use Kibana to explore and visualize your data Know how to host on Elastic Cloud and how to use the latest X-Pack features such as Graph and Alerting In Detail Elasticsearch is a modern, fast, distributed, scalable, fault tolerant, and open source search and analytics engine. You can use Elasticsearch for small or large applications with billions of documents. It is built to scale horizontally and can handle both structured and unstructured data. Packed with easy-to- follow examples, this book will ensure you will have a firm understanding of the basics of Elasticsearch and know how to utilize its capabilities efficiently. You will install and set up Elasticsearch and Kibana, and handle documents using the Distributed Document Store. You will see how to query, search, and index your data, and perform aggregation-based analytics with ease. You will see how to use Kibana to explore and visualize your data. Further on, you will learn to handle document relationships, work with geospatial data, and much more, with this easy-to-follow guide. Finally, you will see how you can set up and scale your Elasticsearch clusters in production environments. Style and approach This comprehensive guide will get you started with Elasticsearch 5.x, so you build a solid understanding of the basics. Every topic is explained in depth and is supplemented with practical examples to enhance your understanding.

Exploit the visualization capabilities of Kibana and build powerful interactive dashboards About This Book Introduction to data-driven architecture and the Elastic stack Build effective dashboards for data visualization and explore datasets with Elastic Graph A comprehensive guide to learning scalable data visualization techniques in Kibana Who This Book Is For If you are a developer, data visualization engineer, or data scientist who wants to get the best of data visualization at scale then this book is perfect for you. A basic understanding of Elasticsearch and Logstash is required to make the best use of this book. What You Will Learn How to create visualizations in Kibana Ingest log data, structure an Elasticsearch cluster, and create visualization assets in Kibana Embed Kibana visualization on web pages Scaffold, develop, and deploy new Kibana & Timelion customizations Build a metrics dashboard in Timelion based on time series data Use the Graph plugin visualization feature and leverage a graph query Create, implement, package, and deploy a new custom plugin Use PreAlert to solve anomaly detection challenges In Detail Kibana is an open source data visualization platform that allows you to interact with your data through stunning, powerful graphics. Its simple, browser-based interface enables you to quickly create and share dynamic dashboards that display changes to Elasticsearch queries in real time. In this book, you'll learn how to use the Elastic stack on top of a data architecture to visualize data in real time. All data architectures have different requirements and expectations when it comes to visualizing the data, whether it's logging analytics, metrics, business analytics, graph analytics, or scaling them as per your business requirements. This book will help you master Elastic visualization tools and adapt them to the requirements of your project. You will start by learning how to use the basic visualization features of Kibana 5. Then you will be shown how to implement a pure metric analytics architecture and visualize it using Timelion, a

very recent and trendy feature of the Elastic stack. You will learn how to correlate data using the brand-new Graph visualization and build relationships between documents. Finally, you will be familiarized with the setup of a Kibana development environment so that you can build a custom Kibana plugin. By the end of this book you will have all the information needed to take your Elastic stack skills to a new level of data visualization. Style and approach This book takes a comprehensive, step-by-step approach to working with the visualization aspects of the Elastic stack. Every concept is presented in a very easy-to-follow manner that shows you both the logic and method of implementation. Real world cases are referenced to highlight how each of the key concepts can be put to practical use.

Become a master at penetration testing using machine learning with Python Key Features Identify ambiguities and breach intelligent security systems Perform unique cyber attacks to breach robust systems Learn to leverage machine learning algorithms Book Description Cyber security is crucial for both businesses and individuals. As systems are getting smarter, we now see machine learning interrupting computer security. With the adoption of machine learning in upcoming security products, it's important for pentesters and security researchers to understand how these systems work, and to breach them for testing purposes. This book begins with the basics of machine learning and the algorithms used to build robust systems. Once you've gained a fair understanding of how security products leverage machine learning, you'll dive into the core concepts of breaching such systems. Through practical use cases, you'll see how to find loopholes and surpass a self-learning security system. As you make your way through the chapters, you'll focus on topics such as network intrusion detection and AV and IDS evasion. We'll also cover the best practices when identifying ambiguities, and extensive techniques to breach an intelligent system. By the end of this book, you will be well-versed with identifying loopholes in a self-learning security system and will be able to efficiently breach a machine learning system. What you will learn Take an in-depth look at machine learning Get to know natural language processing (NLP) Understand malware feature engineering Build generative adversarial networks using Python libraries Work on threat hunting with machine learning and the ELK stack Explore the best practices for machine learning Who this book is for This book is for pen testers and security professionals who are interested in learning techniques to break an intelligent security system. Basic knowledge of Python is needed, but no prior knowledge of machine learning is necessary.

This book is designed to help newcomers and experienced users alike learn about Kubernetes. Its chapters are designed to introduce core Kubernetes concepts and to build on them to a level where running an application on a production cluster is a familiar, repeatable, and automated process. From there, more advanced topics are introduced, like how to manage a Kubernetes cluster itself.

Search, analyze, and manage data effectively with Elasticsearch 7 Key Features Extend Elasticsearch functionalities and learn how to deploy on Elastic Cloud Deploy and manage simple Elasticsearch nodes as well as complex cluster topologies Explore the capabilities of Elasticsearch 7 with easy-to-follow recipes Book Description Elasticsearch is a Lucene-based distributed search server that allows users to index and search unstructured content with petabytes of data. With this book, you'll be guided through comprehensive recipes on what's new in Elasticsearch 7, and see how to create and run complex queries and analytics. Packed with recipes on performing index mapping, aggregation, and scripting using Elasticsearch, this fourth edition of Elasticsearch Cookbook will get you acquainted with numerous solutions and quick techniques for performing both every day and uncommon tasks such as deploying Elasticsearch nodes, integrating other tools to Elasticsearch, and creating different visualizations. You will install Kibana to monitor a cluster and also extend it using a variety of plugins. Finally, you will integrate your Java, Scala, Python, and big data applications such as Apache Spark and Pig with Elasticsearch, and create efficient data applications powered by enhanced functionalities and custom plugins. By the end of this book, you will have gained in-depth knowledge of implementing Elasticsearch architecture, and you'll be able to manage, search, and store data efficiently and effectively using Elasticsearch. What you will learn Create an efficient architecture with Elasticsearch Optimize search results by executing analytics aggregations Build complex queries by managing indices and documents Monitor the performance of your cluster and nodes Design advanced mapping to take full control of index steps Integrate Elasticsearch in Java, Scala, Python, and big data applications Install Kibana to monitor clusters and extend it for plugins Who this book is for If you're a software engineer, big data infrastructure engineer, or Elasticsearch developer, you'll find this book useful. This Elasticsearch book will also help data professionals working in the e-commerce and FMCG industry who use Elastic for metrics evaluation and search analytics to get deeper insights for better business decisions. Prior experience with Elasticsearch will help you get the most out of this book.

A step-by-step guide that will teach you how to use Elasticsearch in your application effectively KEY FEATURES ? Get familiar with the core concepts of Elasticsearch. ? Understand how the search engine works and how Elasticsearch is different from other similar tools. ? Learn to install Elasticsearch on different operating systems. ? Get familiar with the components of Elastic Stack such as Kibana, Logstash, and Beats, etc. ? Learn how to import data from different sources such as RDBMS, and files, etc DESCRIPTION In the modern Information Technology age, we are flooded with loads of data so we should know how to handle those data and transform them to fetch meaningful information. This book is here to help you manage the data using Elasticsearch. The book starts by covering the fundamentals of Elasticsearch and the concept behind it. After the introduction, you will learn how to install Elasticsearch on different platforms. You will then get to know about Index Management where you will learn to create, update, and delete Elasticsearch indices. Then you will understand how the Query DSL works and how to write some complex search queries using the Query DSL. After completing these basic features, you will move to some advanced topics. Under advanced topics, you will learn to handle Geodata which can be used to plot the data on a map. The book then focuses on Data Analysis using Aggregation. You will then learn how to tune Elasticsearch performance. The book ends with a chapter on Elasticsearch administration. WHAT

YOU WILL LEARN ? Learn how to create and manage a cluster ? Work with different components of Elastic Stack ? Review the list of top Information Security certifications. ? Get to know more about Elasticsearch Index Management. ? Understand how to improve the performance by tuning Elasticsearch WHO THIS BOOK IS FOR This book is for developers, architects, DBA, DevOps, and other readers who want to learn Elasticsearch efficiently and want to apply that in their application whether it is a new one or an existing one. It is also beneficial to those who want to play with their data using Elasticsearch. Basic computer programming is a prerequisite. TABLE OF CONTENTS 1 Getting started with Elasticsearch 2 Installation Elasticsearch 3 Working with Elastic Stack 4 Preparing your data 5 Importing Data into Elasticsearch 6 Managing Your Index 7 Apply Search on Your Data 8 Handling Geo with Elasticsearch 9 Aggregating Your Data 10 Improving the Performance 11 Administer Elasticsearch

Whether you're a software engineer aspiring to enter the world of deep learning, a veteran data scientist, or a hobbyist with a simple dream of making the next viral AI app, you might have wondered where to begin. This step-by-step guide teaches you how to build practical deep learning applications for the cloud, mobile, browsers, and edge devices using a hands-on approach. Relying on years of industry experience transforming deep learning research into award-winning applications, Anirudh Koul, Siddha Ganju, and Meher Kasam guide you through the process of converting an idea into something that people in the real world can use. Train, tune, and deploy computer vision models with Keras, TensorFlow, Core ML, and TensorFlow Lite Develop AI for a range of devices including Raspberry Pi, Jetson Nano, and Google Coral Explore fun projects, from Silicon Valley's Not Hotdog app to 40+ industry case studies Simulate an autonomous car in a video game environment and build a miniature version with reinforcement learning Use transfer learning to train models in minutes Discover 50+ practical tips for maximizing model accuracy and speed, debugging, and scaling to millions of users This book constitutes extended, revised and selected papers from the 22nd International Conference on Enterprise Information Systems, ICEIS 2020, held online during May 5-7, 2020. The 41 papers presented in this volume were carefully reviewed and selected for inclusion in this book from a total of 255 submissions. They were organized in topical sections as follows: database and information systems integration; artificial intelligence and decision support systems; information systems analysis and specification; software agents and internet computing; human-computer interaction; and enterprise architecture.

A new book designed for SysAdmins, Operations staff, Developers and DevOps who are interested in deploying a log management solution using the open source tool Logstash. In this book we will walk you through installing, deploying, managing and extending Logstash. We'll teach you how to: * Install and deploy Logstash. * Ship events from a Logstash Shipper to a central Logstash server. * Filter incoming events using a variety of techniques. * Output those events to a selection of useful destinations. * Use Logstash's awesome web interface Kibana. * Scale out your Logstash implementation as your environment grows. * Quickly and easily extend Logstash to deliver additional functionality you might need. By the end of the book you should have a functional and effective log management solution that you can deploy into your own environment.

Take the guesswork out of using regular expressions. With more than 140 practical recipes, this cookbook provides everything you need to solve a wide range of real-world problems. Novices will learn basic skills and tools, and programmers and experienced users will find a wealth of detail. Each recipe provides samples you can use right away. This revised edition covers the regular expression flavors used by C#, Java, JavaScript, Perl, PHP, Python, Ruby, and VB.NET. You'll learn powerful new tricks, avoid flavor-specific gotchas, and save valuable time with this huge library of practical solutions. Learn regular expressions basics through a detailed tutorial Use code listings to implement regular expressions with your language of choice Understand how regular expressions differ from language to language Handle common user input with recipes for validation and formatting Find and manipulate words, special characters, and lines of text Detect integers, floating-point numbers, and other numerical formats Parse source code and process log files Use regular expressions in URLs, paths, and IP addresses Manipulate HTML, XML, and data exchange formats Discover little-known regular expression tricks and techniques

ElasticSearch is an open source search server built on Apache Lucene. It was built to provide a scalable search solution with built-in support for near real-time search and multi-tenancy. Jumping into the world of ElasticSearch by setting up your own custom cluster, this book will show you how to create a fast, scalable, and flexible search solution. By learning the ins-and-outs of data indexing and analysis, "ElasticSearch Server" will start you on your journey to mastering the powerful capabilities of ElasticSearch. With practical chapters covering how to search data, extend your search, and go deep into cluster administration and search analysis, this book is perfect for those new and experienced with search servers. In "ElasticSearch Server" you will learn how to revolutionize your website or application with faster, more accurate, and flexible search functionality. Starting with chapters on setting up your own ElasticSearch cluster and searching and extending your search parameters you will quickly be able to create a fast, scalable, and completely custom search solution. Building on your knowledge further you will learn about ElasticSearch's query API and become confident using powerful filtering and faceting capabilities. You will develop practical knowledge on how to make use of ElasticSearch's near real-time capabilities and support for multi-tenancy. Your journey then concludes with chapters that help you monitor and tune your ElasticSearch cluster as well as advanced topics such as shard allocation, gateway configuration, and the discovery module.

Master the intricacies of Elasticsearch 7.0 and use it to create flexible and scalable search solutions Key Features Master the latest distributed search and analytics capabilities of Elasticsearch 7.0 Perform searching, indexing, and aggregation of your data at scale Discover tips and techniques for speeding up your search query performance Book Description Building enterprise-grade distributed applications and executing systematic search operations call for a strong understanding of Elasticsearch and expertise in using its core APIs and latest features. This book will help you master the advanced functionalities of Elasticsearch and understand how you can develop a sophisticated, real-time search engine confidently. In addition to this, you'll also learn to run machine learning jobs in Elasticsearch to speed up routine tasks. You'll get started by learning to use Elasticsearch features on Hadoop and Spark and make search results faster, thereby improving the speed of query results and enhancing the customer experience. You'll then get up to speed with performing analytics by building a metrics pipeline, defining queries, and using Kibana for intuitive visualizations that help provide decision-makers with better insights. The book will later guide you through using Logstash with examples to collect, parse, and enrich logs before indexing them in Elasticsearch. By the end of this book, you will have comprehensive knowledge of advanced topics such as Apache Spark support, machine learning using Elasticsearch and scikit-learn, and real-time analytics, along with the expertise you need to increase business productivity, perform analytics, and get the very best out of Elasticsearch. What you will learn Pre-process documents before indexing in ingest pipelines Learn how to model your data in the real world Get to grips with using Elasticsearch for exploratory data analysis Understand how to build analytics and RESTful services Use Kibana, Logstash, and Beats for dashboard applications Get up to speed with Spark and Elasticsearch for real-time analytics Explore the basics of Spring Data Elasticsearch, and understand how to index, search, and query in a Spring application Who this book is for This book is for Elasticsearch developers and data engineers who want to take their basic knowledge of Elasticsearch to the next level and use it to build enterprise-grade distributed search applications. Prior experience of working with Elasticsearch will be useful to get the most out of this book.

Deliver end-to-end real-time distributed data processing solutions by leveraging the power of Elastic Stack 6.0 Key Features - Get to grips with the new features introduced in Elastic Stack 6.0 - Get valuable insights from your data by working with the different components of the Elastic stack such as Elasticsearch, Logstash, Kibana, X-Pack, and Beats - Includes handy tips and techniques to build, deploy and manage your Elastic applications efficiently on-premise or on the cloud Book Description The Elastic Stack is a powerful combination of tools for distributed search, analytics, logging, and visualization of data from medium to massive data sets. The newly released Elastic Stack 6.0 brings new features and capabilities that empower users to find unique, actionable insights through these techniques. This book will give you a fundamental understanding of what the stack is all about, and how to use it efficiently to build powerful real-time data processing applications. After a quick overview of the newly introduced features in Elastic Stack 6.0, you'll learn how to set up the stack by installing the tools, and see their basic configurations. Then it shows you how to use Elasticsearch for distributed searching and analytics, along with Logstash for logging, and Kibana for data visualization. It also demonstrates the creation of custom plugins using Kibana and Beats. You'll find out about Elastic X-Pack, a useful extension for effective security and monitoring. We also provide useful tips on how to use the Elastic Cloud and deploy the Elastic Stack in production environments. On completing this book, you'll have a solid foundational knowledge of the basic Elastic Stack functionalities. You'll also have a good understanding of the role of each component in the stack to solve different data processing problems. What you will learn - Familiarize yourself with the different components of the Elastic Stack - Get to know the new functionalities introduced in Elastic Stack 6.0 - Effectively build your data pipeline to get data from terabytes or petabytes of data into Elasticsearch and Logstash for searching and logging - Use Kibana to visualize data and tell data stories in real-time - Secure, monitor, and use the alerting and reporting capabilities of Elastic Stack - Take your Elastic application to an on-premise or cloud-based production environment Who this book is for This book is for data professionals who want to get amazing insights and business metrics from their data sources. If you want to get a fundamental understanding of the Elastic Stack for distributed, real-time processing of data, this book will help you. A fundamental knowledge of JSON would be useful, but is not mandatory. No previous experience with the Elastic Stack is required.

Summary Relevant Search demystifies relevance work. Using Elasticsearch, it teaches you how to return engaging search results to your users, helping you understand and leverage the internals of Lucene-based search engines. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Users are accustomed to and expect instant, relevant search results. To achieve this, you must master the search engine. Yet for many developers, relevance ranking is mysterious or confusing. About the Book Relevant Search demystifies the subject and shows you that a search engine is a programmable relevance framework. You'll learn how to apply Elasticsearch or Solr to your business's unique ranking problems. The book demonstrates how to program relevance and how to incorporate secondary data sources, taxonomies, text analytics, and personalization. In practice, a relevance framework requires softer skills as well, such as collaborating with stakeholders to discover the right relevance requirements for your business. By the end, you'll be able to achieve a virtuous cycle of provable, measurable relevance improvements over a search product's lifetime. What's Inside Techniques for debugging relevance? Applying search engine features to real problems? Using the user interface to guide searchers? A systematic approach to relevance? A business culture focused on improving search About the Reader For developers trying to build smarter search with Elasticsearch or Solr. About the Authors Doug Turnbull is lead relevance consultant at OpenSource Connections, where he frequently speaks and blogs. John Berryman is a data engineer at Eventbrite, where he specializes in recommendations and search. Foreword author, Trey Grainger, is a director of engineering at CareerBuilder and author of Solr in Action. Table of Contents The search relevance problem Search under the hood Debugging your first relevance problem Taming tokens Basic multifield search Term-centric search Shaping the relevance function Providing relevance feedback Designing a relevance-focused search application The relevance-centered enterprise Semantic and personalized search

Elastic has announced the integration of PreAlert machine learning technology within its ecosystem allowing real-time generation of business insights from the Elasticsearch data without it leaving the cluster at all. This book will demonstrate these unique features and teach you to perform machine learning on the Elastic Stack without any hassle.

Get the most out of Elasticsearch 7's new features to build, deploy, and manage efficient applications Key Features Discover the new features introduced in Elasticsearch 7 Explore techniques for distributed search, indexing, and clustering Gain hands-on knowledge of implementing Elasticsearch for your enterprise Book Description Elasticsearch is one of the most popular tools for distributed search and analytics. This Elasticsearch book highlights the latest features of Elasticsearch 7 and helps you understand how you can use them to build your own search applications with ease. Starting with an introduction to the Elastic Stack, this book will help you quickly get up to speed with using Elasticsearch. You'll learn how to install, configure, manage, secure, and deploy Elasticsearch clusters, as well as how to use your deployment to develop powerful search and analytics solutions. As you progress, you'll also understand how to troubleshoot any issues that you may encounter along the way. Finally, the book will help you explore the inner workings of Elasticsearch and gain insights into queries, analyzers, mappings, and aggregations as you learn to work with search results. By the end of this book, you'll have a basic understanding of how to build and deploy effective search and analytics solutions using Elasticsearch. What you will learn Install Elasticsearch and use it to safely store data and retrieve it when needed Work with a variety of analyzers and filters Discover techniques to improve search results in Elasticsearch Understand how to perform metric and bucket aggregations Implement best practices for moving clusters and applications to production Explore various techniques to secure your Elasticsearch clusters Who this book is for This book is for software developers, engineers, data architects, system administrators, and anyone who wants to get up and running with Elasticsearch 7. No prior experience with Elasticsearch is required.

Elastic security offers enhanced threat hunting capabilities to build active defense strategies. Complete with practical examples and tips, this easy-to-follow guide will help you enhance your security skills by leveraging the Elastic Stack for security monitoring, incident response, intelligence analysis, or threat hunting.

Leverage Kubernetes for the rapid adoption of emerging technologies. Kubernetes is the future of enterprise platform development and has become the most popular, and often considered the most robust, container orchestration system available today. This book focuses on platforming technologies that power the Internet of Things, Blockchain, Machine Learning, and the many layers of data and application management supporting them. Advanced Platform Development with Kubernetes takes you through the process of building platforms with these in-demand capabilities. You'll progress through the development of Serverless, CI/CD integration, data processing pipelines, event queues,

distributed query engines, modern data warehouses, data lakes, distributed object storage, indexing and analytics, data routing and transformation, query engines, and data science/machine learning environments. You'll also see how to implement and tie together numerous essential and trending technologies including: Kafka, NiFi, Airflow, Hive, Keycloak, Cassandra, MySQL, Zookeeper, Mosquitto, Elasticsearch, Logstash, Kibana, Presto, Mino, OpenFaaS, and Ethereum. The book uses Golang and Python to demonstrate the development integration of custom container and Serverless functions, including interaction with the Kubernetes API. The exercises throughout teach Kubernetes through the lens of platform development, expressing the power and flexibility of Kubernetes with clear and pragmatic examples. Discover why Kubernetes is an excellent choice for any individual or organization looking to embark on developing a successful data and application platform. What You'll Learn Configure and install Kubernetes and k3s on vendor-neutral platforms, including generic virtual machines and bare metal Implement an integrated development toolchain for continuous integration and deployment Use data pipelines with MQTT, NiFi, Logstash, Kafka and Elasticsearch Install a serverless platform with OpenFaaS Explore blockchain network capabilities with Ethereum Support a multi-tenant data science platform and web IDE with JupyterHub, MLflow and Seldon Core Build a hybrid cluster, securely bridging on-premise and cloud-based Kubernetes nodes Who This Book Is For System and software architects, full-stack developers, programmers, and DevOps engineers with some experience building and using containers. This book also targets readers who have started with Kubernetes and need to progress from a basic understanding of the technology and "Hello World" example to more productive, career-building projects.

Get the most out of the Elastic Stack for various complex analytics using this comprehensive and practical guide About This Book Your one-stop solution to perform advanced analytics with Elasticsearch, Logstash, and Kibana Learn how to make better sense of your data by searching, analyzing, and logging data in a systematic way This highly practical guide takes you through an advanced implementation on the ELK stack in your enterprise environment Who This Book Is For This book cater to developers using the Elastic stack in their day-to-day work who are familiar with the basics of Elasticsearch, Logstash, and Kibana, and now want to become an expert at using the Elastic stack for data analytics. What You Will Learn Build a pipeline with help of Logstash and Beats to visualize Elasticsearch data in Kibana Use Beats to ship any type of data to the Elastic stack Understand Elasticsearch APIs, modules, and other advanced concepts Explore Logstash and it's plugins Discover how to utilize the new Kibana UI for advanced analytics See how to work with the Elastic Stack using other advanced configurations Customize the Elastic Stack and plugin development for each of the component Work with the Elastic Stack in a production environment Explore the various components of X-Pack in detail. In Detail Even structured data is useless if it can't help you to take strategic decisions and improve existing system. If you love to play with data, or your job requires you to process custom log formats, design a scalable analysis system, and manage logs to do real-time data analysis, this book is your one-stop solution. By combining the massively popular Elasticsearch, Logstash, Beats, and Kibana, elastic.co has advanced the end-to-end stack that delivers actionable insights in real time from almost any type of structured or unstructured data source. If your job requires you to process custom log formats, design a scalable analysis system, explore a variety of data, and manage logs, this book is your one-stop solution. You will learn how to create real-time dashboards and how to manage the life cycle of logs in detail through real-life scenarios. This book brushes up your basic knowledge on implementing the Elastic Stack and then dives deeper into complex and advanced implementations of the Elastic Stack. We'll help you to solve data analytics challenges using the Elastic Stack and provide practical steps on centralized logging and real-time analytics with the Elastic Stack in production. You will get to grip with advanced techniques for log analysis and visualization. Newly announced features such as Beats and X-Pack are also covered in detail with examples. Toward the end, you will see how to use the Elastic stack for real-world case studies and we'll show you some best practices and troubleshooting techniques for the Elastic Stack. Style and approach This practical guide shows you how to perform advanced analytics with the Elastic stack through real-world use cases. It includes common and some not so common scenarios to use the Elastic stack for data analysis.

Gain hands-on experience with industry-standard data analysis and machine learning tools in Python Key Features Learn techniques to use data to identify the exact problem to be solved Visualize data using different graphs Identify how to select an appropriate algorithm for data extraction Book Description Data Science Projects with Python is designed to give you practical guidance on industry-standard data analysis and machine learning tools in Python, with the help of realistic data. The book will help you understand how you can use pandas and Matplotlib to critically examine a dataset with summary statistics and graphs, and extract the insights you seek to derive. You will continue to build on your knowledge as you learn how to prepare data and feed it to machine learning algorithms, such as regularized logistic regression and random forest, using the scikit-learn package. You'll discover how to tune the algorithms to provide the best predictions on new and, unseen data. As you delve into later chapters, you'll be able to understand the working and output of these algorithms and gain insight into not only the predictive capabilities of the models but also their reasons for making these predictions. By the end of this book, you will have the skills you need to confidently use various machine learning algorithms to perform detailed data analysis and extract meaningful insights from unstructured data. What you will learn Install the required packages to set up a data science coding environment Load data into a Jupyter Notebook running Python Use Matplotlib to create data visualizations Fit a model using scikit-learn Use lasso and ridge regression to reduce overfitting Fit and tune a random forest model and compare performance with logistic regression Create visuals using the output of the Jupyter Notebook Who this book is for If you are a data analyst, data scientist, or a business analyst who wants to get started with using Python and machine learning techniques to analyze data and predict outcomes, this book is for you. Basic knowledge of computer programming and data analytics is a must. Familiarity with mathematical concepts such as algebra and basic statistics will be useful.

A beginner's guide to storing, managing, and analyzing data with the updated features of Elastic 7.0 Key Features Gain access to new features and updates introduced in Elastic Stack 7.0 Grasp the fundamentals of Elastic Stack including Elasticsearch, Logstash, and Kibana Explore useful tips for using Elastic Cloud and deploying Elastic Stack in production environments Book Description The Elastic Stack is a powerful combination of tools for techniques such as distributed search, analytics, logging, and visualization of data. Elastic Stack 7.0 encompasses new features and capabilities that will enable you to find unique insights into analytics using these techniques. This book will give you a fundamental understanding of what the stack is all about, and help you use it efficiently to build powerful real-time data processing applications. The first few sections of the book will help you understand how to set up the stack by installing tools, and exploring their basic configurations. You'll then get up to speed with using Elasticsearch for distributed searching and analytics, Logstash for logging, and Kibana for data visualization. As you work through the book, you will discover the technique of creating custom plugins using Kibana and Beats. This is followed by coverage of the Elastic X-Pack, a useful extension for effective security and monitoring. You'll also find helpful tips on how to use Elastic Cloud and deploy Elastic Stack in production environments. By the end of this book, you'll be well versed with the fundamental Elastic Stack functionalities and the role of each component in the stack to solve different data processing problems. What you will learn Install and configure an Elasticsearch architecture Solve the full-text search problem with Elasticsearch Discover powerful analytics capabilities through aggregations using Elasticsearch Build a data pipeline to transfer data from a variety of sources into Elasticsearch for analysis Create interactive dashboards for effective storytelling with your data using Kibana Learn how to secure, monitor and use Elastic Stack's alerting and reporting capabilities Take applications to an on-premise or cloud-based production environment with Elastic Stack Who this book is for This book is for entry-level data professionals, software engineers, e-commerce developers, and full-stack developers who want to learn about Elastic Stack and how the real-time processing and search engine works for business analytics and enterprise search applications. Previous experience with Elastic Stack is not required, however knowledge of data warehousing and database concepts will be helpful.

Design RPA solutions to perform a wide range of transactional tasks with minimal cost and maximum ROI Key Features A beginner's guide to learn Robotic Process Automation and its impact on the modern world Design, test, and perform enterprise automation task with UiPath Create Automation apps and deploy them to all the computers in your department. Book Description Robotic Process Automation (RPA) enables automating business processes using software robots. Software robots interpret, trigger responses, and communicate with other systems just like humans do. Robotic processes and intelligent automation tools can help businesses improve the effectiveness of services faster and at a lower cost than current methods. This book is the perfect start to your automation journey, with a special focus on one of the most popular RPA tools: UiPath. Learning Robotic Process Automation takes you on a journey from understanding the basics of RPA to advanced implementation techniques. You will become oriented in the UiPath interface and learn about its workflow. Once you are familiar with the environment, we will get hands-on with automating different applications such as Excel, SAP, Windows and web applications, screen and web scraping, working with user events, as well as understanding exceptions and debugging. By the end of the book, you'll not only be able to build your first software bot, but also you'll wire it to perform various automation tasks with the help of best practices for bot deployment. What you will learn Understand Robotic Process Automation technology Learn UiPath programming techniques to deploy robot configurations Explore various data extraction techniques Learn about integrations with various popular applications such as SAP and MS Office Debug a programmed robot including logging and exception handling Maintain code version and source control Deploy and control Bots with UiPath Orchestrator Who this book is for If you would like to pursue a career in Robotic Process Automation or improve the efficiency of your businesses by automating common tasks, then this book is perfect for you. Prior programming knowledge of either Visual Basic or C# will be useful.

Use the functionalities of Kibana to discover data and build attractive visualizations and dashboards for real-world scenarios About This Book Perform real-time data analytics and visualizations, on streaming data, using Kibana Build beautiful visualizations and dashboards with simplicity and ease without any type of coding involved Learn all the core concepts as well as detailed information about each component used in Kibana Who This Book Is For Whether you are new to the world of data analytics and data visualization or an expert, this book will provide you with the skills required to use Kibana with ease and simplicity for real-time data visualization of streaming data. This book is intended for those professionals who are interested in learning about Kibana, its installations, and how to use it . As Kibana provides a user-friendly web page, no prior experience is required. What You Will Learn Understand the basic concepts of elasticsearch used in Kibana along with step by step guide to install Kibana in Windows and Ubuntu Explore the functionality of all the components used in Kibana in detail, such as the Discover, Visualize, Dashboard, and Settings pages Analyze data using the powerful search capabilities of elasticsearch Understand the different types of aggregations used in Kibana for visualization Create and build different types of amazing visualizations and dashboards easily Create, save, share, embed, and customize the visualizations added to the dashboard Customize and tweak the advanced settings of Kibana to ensure ease of use In Detail With the increasing interest in data analytics and visualization of large data around the globe, Kibana offers the best features to analyze data and create attractive visualizations and dashboards through simple-to-use web pages. The variety of visualizations provided, combined with the powerful underlying elasticsearch capabilities will help professionals improve their skills with this technology. This book will help you quickly familiarize yourself to Kibana and will also help you to understand the core concepts of this technology to build visualizations easily. Starting with setting up of Kibana and elasticsearch in Windows and Ubuntu, you will then use the Discover page to analyse your data intelligently. Next, you will learn to use the Visualization page to create beautiful visualizations without the need for any coding. Then, you will learn how to use the Dashboard page to create a dashboard and instantly share and embed the dashboards. You will see how to tweak the basic and advanced settings provided in Kibana to manage searches, visualizations, and dashboards. Finally, you will use Kibana to build visualizations and dashboards for real-world scenarios. You will quickly master the functionalities and components used in

Kibana to create amazing visualizations based on real-world scenarios. With ample screenshots to guide you through every step, this book will assist you in creating beautiful visualizations with ease. Style and approach This book is a comprehensive step-by-step guide to help you understand Kibana. It's explained in an easy-to-follow style along with supporting images. Every chapter is explained sequentially, covering the basics of each component of Kibana and providing detailed explanations of all the functionalities of Kibana that appeal.

A beginner's guide to analyzing and visualizing your Elasticsearch data using Kibana 7 and Timelion Key Features Gain a fundamental understanding of how Kibana operates within the Elastic Stack Explore your data with Elastic Graph and create rich dashboards in Kibana Learn scalable data visualization techniques in Kibana 7 Book Description Kibana is a window into the Elastic Stack, that enables the visual exploration and real-time analysis of your data in Elasticsearch. This book will help you understand the core concepts of the use of Kibana 7 for rich analytics and data visualization. If you're new to the tool or want to get to grips with the latest features introduced in Kibana 7, this book is the perfect beginner's guide. You'll learn how to set up and configure the Elastic Stack and understand where Kibana sits within the architecture. As you advance, you'll learn how to ingest data from different sources using Beats or Logstash into Elasticsearch, followed by exploring and visualizing data in Kibana. Whether working with time series data to create complex graphs using Timelion or embedding visualizations created in Kibana into your web applications, this book covers it all. It also covers topics that every Elastic developer needs to be aware of, such as installing and configuring Application Performance Monitoring (APM) servers and agents. Finally, you'll also learn how to create effective machine learning jobs in Kibana to find anomalies in your data. By the end of this book, you'll have a solid understanding of Kibana, and be able to create your own visual analytics solutions from scratch. What you will learn Explore the data-driven architecture of the Elastic Stack Install and set up Kibana 7 and other Elastic Stack components Use Beats and Logstash to get input from different data sources Create different visualizations using Kibana Build enterprise-grade Elastic dashboards from scratch Use Timelion to play with time series data Install and configure APM servers and APM agents Work with Dev Tools, Spaces, Graph, and other important tools Who this book is for If you're an aspiring Elastic developer or data analysts, this book is for you. You'll also find it useful if you want to get up to speed with the new features of Kibana 7 and perform data visualization on enterprise data. No prior knowledge of Kibana is expected, but some experience with Elasticsearch will be helpful.

Whether you need full-text search or real-time analytics of structured data—or both—the Elasticsearch distributed search engine is an ideal way to put your data to work. This practical guide not only shows you how to search, analyze, and explore data with Elasticsearch, but also helps you deal with the complexities of human language, geolocation, and relationships. If you're a newcomer to both search and distributed systems, you'll quickly learn how to integrate Elasticsearch into your application. More experienced users will pick up lots of advanced techniques. Throughout the book, you'll follow a problem-based approach to learn why, when, and how to use Elasticsearch features. Understand how Elasticsearch interprets data in your documents Index and query your data to take advantage of search concepts such as relevance and word proximity Handle human language through the effective use of analyzers and queries Summarize and group data to show overall trends, with aggregations and analytics Use geo-points and geo-shapes—Elasticsearch's approaches to geolocation Model your data to take advantage of Elasticsearch's horizontal scalability Learn how to configure and monitor your cluster in production

A quick start guide to visualize your Elasticsearch data Key Features Your hands-on guide to visualizing the Elasticsearch data as well as navigating the Elastic stack Work with different Kibana plugins and create effective machine learning jobs using Kibana Build effective dashboards and reports without any hassle Book Description The Elastic Stack is growing rapidly and, day by day, additional tools are being added to make it more effective. This book endeavors to explain all the important aspects of Kibana, which is essential for utilizing its full potential. This book covers the core concepts of Kibana, with chapters set out in a coherent manner so that readers can advance their learning in a step-by-step manner. The focus is on a practical approach, thereby enabling the reader to apply those examples in real time for a better understanding of the concepts and to provide them with the correct skills in relation to the tool. With its succinct explanations, it is quite easy for a reader to use this book as a reference guide for learning basic to advanced implementations of Kibana. The practical examples, such as the creation of Kibana dashboards from CSV data, application RDBMS data, system metrics data, log file data, APM agents, and search results, can provide readers with a number of different drop-off points from where they can fetch any type of data into Kibana for the purpose of analysis or dashboarding. What you will learn Explore how Logstash is configured to fetch CSV data Understand how to create index patterns in Kibana Become familiar with how to apply filters on data Discover how to create ML jobs Explore how to analyze APM data from APM agents Get to grips with how to save, share, inspect, and edit visualizations Understand how to find an anomaly in data Who this book is for Kibana 7 Quick Start Guide is for developers new to Kibana who want to learn the fundamentals of using the tool for visualization, as well as existing Elastic developers.

Learn the art of efficient web scraping and crawling with Python About This Book Extract data from any source to perform real time analytics. Full of techniques and examples to help you crawl websites and extract data within hours. A hands-on guide to web scraping and crawling with real-life problems and solutions Who This Book Is For If you are a software developer, data scientist, NLP or machine-learning enthusiast or just need to migrate your company's wiki from a legacy platform, then this book is for you. It is perfect for someone, who needs instant access to large amounts of semi-structured data effortlessly. What You Will Learn Understand HTML pages and write XPath to extract the data you need Write Scrapy spiders with simple Python and do web crawls Push your data into any database, search engine or analytics system Configure your spider to download files, images and use proxies Create efficient pipelines that shape data in precisely the form you want Use Twisted Asynchronous API to process hundreds of items concurrently Make your crawler super-fast by learning how to tune Scrapy's performance Perform large scale distributed crawls with scrapyd and scrapinghub In Detail This book covers the long awaited Scrapy v 1.0 that empowers you to extract useful data from virtually any source with very little effort. It starts off by explaining the fundamentals of Scrapy framework, followed by a thorough description of how to extract data from any source, clean it up, shape it as per your requirement using Python and 3rd party APIs. Next you will be familiarised with the process of storing the scrapped data in databases as well as search engines and performing real time analytics on them with Spark Streaming. By the end of this book, you will perfect the art of scarping data for your applications with ease Style and approach It is a hands on guide, with first few chapters written as a tutorial, aiming to motivate you and get you started quickly. As the book progresses, more advanced features are explained with real world examples that can be referred while developing your own web applications.

Master the intricacies of Elasticsearch 5 and use it to create flexible and scalable search solutions About This Book Master the searching, indexing, and aggregation features in Elasticsearch Improve users' search experience with Elasticsearch's functionalities and develop your own Elasticsearch plugins A comprehensive, step-by-step guide to master the intricacies of Elasticsearch with ease Who This Book Is For If you have some prior working experience with Elasticsearch and want to take your knowledge to the next level, this book will be the perfect resource for you. If you are a developer who wants to implement scalable search solutions with Elasticsearch, this book will also help you. Some basic knowledge of the query DSL and data indexing is required to make the best use of this book. What You Will Learn Understand Apache Lucene and Elasticsearch 5's design and architecture Use and configure the new and improved default text scoring mechanism in Apache Lucene 6 Know how to overcome the pitfalls while handling relational data in Elasticsearch Learn about choosing the right queries according to the use cases and master the scripting module including new default scripting language, painlessly Explore the right way of scaling production clusters to improve the performance of Elasticsearch Master the searching, indexing, and aggregation features in Elasticsearch Develop your own Elasticsearch plugins to extend the functionalities of Elasticsearch In Detail Elasticsearch is a modern, fast, distributed, scalable, fault tolerant, and open source search and analytics engine. Elasticsearch leverages the capabilities of Apache Lucene, and provides a new level of control over how you can index and search even huge sets of data. This book will give you a brief recap of the basics and also introduce you to the new features of Elasticsearch 5. We will guide you through the intermediate and advanced functionalities of Elasticsearch, such as querying, indexing, searching, and modifying data. We'll also explore advanced concepts, including aggregation, index control, sharding, replication, and clustering. We'll show you the modules of monitoring and administration available in Elasticsearch, and will also cover backup and recovery. You will get an understanding of how you can scale your Elasticsearch cluster to contextualize it and improve its performance. We'll also show you how you can create your own analysis plugin in Elasticsearch. By the end of the book, you will have all the knowledge necessary to master Elasticsearch and put it to efficient use. Style and approach This comprehensive guide covers intermediate and advanced concepts in Elasticsearch as well as their implementation. An easy-to-follow approach means you'll be able to master even advanced querying, searching, and administration tasks with ease.

This book is for Elasticsearch users who want to extend their knowledge and develop new skills. Prior knowledge of the Query DSL and data indexing is expected.

A beginner's guide to storing, managing, and analyzing data with the updated features of Elastic 7.0 Key Features Gain access to new features and updates introduced in Elastic Stack 7.0 Grasp the fundamentals of Elastic Stack including Elasticsearch, Logstash, and Kibana Explore useful tips for using Elastic Cloud and deploying Elastic Stack in production environments Book Description The Elastic Stack is a powerful combination of tools for techniques such as distributed search, analytics, logging, and visualization of data. Elastic Stack 7.0 encompasses new features and capabilities that will enable you to find unique insights into analytics using these techniques. This book will give you a fundamental understanding of what the stack is all about, and help you use it efficiently to build powerful real-time data processing applications. The first few sections of the book will help you understand how to set up the stack by installing tools, and exploring their basic configurations. You'll then get up to speed with using Elasticsearch for distributed searching and analytics, Logstash for logging, and Kibana for data visualization. As you work through the book, you will discover the technique of creating custom plugins using Kibana and Beats. This is followed by coverage of the Elastic X-Pack, a useful extension for effective security and monitoring. You'll also find helpful tips on how to use Elastic Cloud and deploy Elastic Stack in production environments. By the end of this book, you'll be well versed with the fundamental Elastic Stack functionalities and the role of each component in the stack to solve different data processing problems. What you will learn Install and configure an Elasticsearch architecture Solve the full-text search problem with Elasticsearch Discover powerful analytics capabilities through aggregations using Elasticsearch Build a data pipeline to transfer data from a variety of sources into Elasticsearch for analysis Create interactive dashboards for effective storytelling with your data using Kibana Learn how to secure, monitor and use Elastic Stack's alerting and reporting capabilities Take applications to an on-premise or cloud-based production environment with Elastic Stack Who this book is for This book is for entry-level data professionals, software engineers, e-commerce developers, and full-stack developers who want to learn about Elastic Stack and how the real-time processing and search engine works for business analytics and enterprise search applications. Previous experience with Elastic Stack is not required, however knowledge of data warehousing and database concepts will be helpful.

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