
Hadoop Application Architectures Designing Real World Big Data Applications

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CIERRA CARDENAS

Designing Real-World Big Data Applications

"O'Reilly Media, Inc."

While many companies ponder implementation details such as distributed processing engines and algorithms for data analysis, this practical book takes a much wider view of big data development, starting with initial planning and moving diligently toward

execution. Authors Ted Malaska and Jonathan Seidman guide you through the major components necessary to start, architect, and develop successful big data projects. Everyone from CIOs and COOs to lead architects and developers will explore a variety of big data architectures and applications, from massive data pipelines to web-scale applications. Each chapter addresses a piece of the software development life cycle and identifies patterns to maximize long-term

success throughout the life of your project. Start the planning process by considering the key data project types Use guidelines to evaluate and select data management solutions Reduce risk related to technology, your team, and vague requirements Explore system interface design using APIs, REST, and pub/sub systems Choose the right distributed storage system for your big data system Plan and implement metadata collections for your data architecture Use data pipelines to ensure data

integrity from source to final storage Evaluate the attributes of various engines for processing the data you collect

Learn by example

"O'Reilly Media, Inc."

Let Hadoop For Dummies help harness the power of your data and rein in the information overload Big data has become big business, and companies and organizations of all sizes are struggling to find ways to retrieve valuable information from their massive data sets with becoming overwhelmed. Enter Hadoop and this easy-to-understand For Dummies guide. Hadoop For Dummies helps readers understand the value of big data, make a business case for using Hadoop, navigate the Hadoop ecosystem, and build and manage Hadoop applications and clusters. Explains the origins of Hadoop, its economic benefits, and its functionality and practical applications Helps you find your way around the Hadoop ecosystem, program MapReduce, utilize design patterns, and get your Hadoop cluster up and running quickly and easily Details how to use Hadoop applications for data mining, web analytics and personalization, large-

scale text processing, data science, and problem-solving Shows you how to improve the value of your Hadoop cluster, maximize your investment in Hadoop, and avoid common pitfalls when building your Hadoop cluster From programmers challenged with building and maintaining affordable, scaleable data systems to administrators who must deal with huge volumes of information effectively and efficiently, this how-to has something to help you with Hadoop.

MapReduce Design

Patterns World Scientific

Publishing Company

More and more data-driven companies are looking to adopt stream processing and streaming analytics. With this concise ebook, you'll learn best practices for designing a reliable architecture that supports this emerging big-data paradigm. Authors Ted Dunning and Ellen Friedman (Real World Hadoop) help you explore some of the best technologies to handle stream processing and analytics, with a focus on the upstream queuing or message-passing layer. To illustrate the effectiveness of these technologies, this book

also includes specific use cases. Ideal for developers and non-technical people alike, this book describes: Key elements in good design for streaming analytics, focusing on the essential characteristics of the messaging layer New messaging technologies, including Apache Kafka and MapR Streams, with links to sample code Technology choices for streaming analytics: Apache Spark Streaming, Apache Flink, Apache Storm, and Apache Apex How stream-based architectures are helpful to support microservices Specific use cases such as fraud detection and geo-distributed data streams Ted Dunning is Chief Applications Architect at MapR Technologies, and active in the open source community. He currently serves as VP for Incubator at the Apache Foundation, as a champion and mentor for a large number of projects, and as committer and PMC member of the Apache ZooKeeper and Drill projects. Ted is on Twitter as @ted_dunning. Ellen Friedman, a committer for the Apache Drill and Apache Mahout projects, is a solutions consultant and well-known speaker

and author, currently writing mainly about big data topics. With a PhD in Biochemistry, she has years of experience as a research scientist and has written about a variety of technical topics. Ellen is on Twitter as

@Ellen_Friedman.

Practical Hadoop Ecosystem "O'Reilly Media, Inc."

This book presents unique techniques to conquer different Big Data processing and analytics challenges using Hadoop. Practical examples are provided to boost your understanding of Big Data concepts and their implementation. By the end of the book, you will have all the knowledge and skills you need to become a true Big Data expert.

ZooKeeper Springer

For many students, doing research is often a joyless struggle. This book provides practical advice on how to do research in a concise way. It uses classic examples to show how experts conduct their research in different fields, allowing this book to be used in different disciplines. *Research Methods: A Practical Guide for Students and Researchers* provides a practical guide to students and researchers

on how to do their research systematically and professionally. The book begins by distinguishing between causal and interpretive sciences. It then guides the reader on how to formulate the research question, review the literature, develop the hypothesis or theoretical framework, select a suitable research methodology, and analyze both quantitative and qualitative data. The book emphasizes integration. It does not merely provide a smorgasbord of research designs, data collection methods, and ways to analyze data. Instead, it shows how one can integrate these elements into a coherent research strategy.

Big Data Application Architecture Q&A

Lulu.com

Hadoop Application Architectures Designing Real-World Big Data Applications "O'Reilly Media, Inc."

[The Architecture of Open Source Applications](#) Packt Publishing Ltd

The book contains the latest trend in IT industry 'BigData and Hadoop'. It explains how big is 'Big Data' and why everybody is trying to implement this into their IT project. It includes research work on

various topics, theoretical and practical approach, each component of the architecture is described along with current industry trends. Big Data and Hadoop have taken together are a new skill as per the industry standards. Readers will get a compact book along with the industry experience and would be a reference to help readers. **KEY FEATURES**
 Overview Of Big Data, Basics of Hadoop, Hadoop Distributed File System, HBase, MapReduce, HIVE: The Dataware House Of Hadoop, PIG: The Higher Level Programming Environment, SQOOP: Importing Data From Heterogeneous Sources, Flume, Ozzie, Zookeeper & Big Data Stream Mining, Chapter-wise Questions & Previous Years Questions
Big Data Computing "O'Reilly Media, Inc." Unleash the power of cloud computing using Azure, AWS and Apache Hadoop. Key features Provides a sound understanding of the Cloud computing concepts, architecture and its applications Explores the practical benefits of Cloud computing services and deployment models in details Cloud Computing Architecture, Cloud

Computing Life Cycle (CCLC), Load balancing approach, Mobile Cloud Computing (MCC), Google App Engine (GAE) Virtualization and Service-Oriented Architecture (SOA) Cloud Computing applications - Google Apps, Dropbox Cloud and Apple iCloud and its uses in various sectors - Education, Healthcare, Politics, Business, and Agriculture Cloud Computing platforms - Microsoft Azure, Amazon Web Services (AWS), Open Nebulla, Eucalyptus, Open Stack, Nimbus and The Apache Hadoop Architecture Adoption of Cloud Computing technology and strategies for migration to the cloud Cloud computing adoption case studies - Sub-Saharan Africa and India Chapter-wise Questions with Summary and Examination Model Question papers Description With the advent of internet, there is a complete paradigm shift in the manner we comprehend computing. Need to enable ubiquity, convenient and on-demand access to resources in highly scalable and resilient environments that can be remotely accessed, gave birth to the concept of Cloud computing. The

acceptance is so rapid that the notion influences sophisticated innovations in academia, industry and research world-wide and hereby change the landscape of information technology as we thought of. Through this book, the authors tried to incorporate core principles and basic notion of cloud computing in a step-by-step manner and tried to emphasize on key concepts for clear and thorough insight into the subject. This book begins with the fundamentals of cloud computing, its service and deployment models, architecture, as well as applications and platforms. It presents some key enterprise strategies and models for the adoption of and migration to cloud. Privacy and security issues and challenges also form a major part of our discussion in the book as well as case studies of cloud computing adoption in Sub-Saharan Africa and India. The book concludes with a discussion of several advanced topics, such as Amazon Web Services (AWS), Open Nebulla, Microsoft Azure, Apache Hadoop and Google App Engine (GAE). What will you learn Learn about the Importance of Cloud Computing in

Current Digital Era Understand the Core concepts and Principles of Cloud Computing with practical benefits Learn about the Cloud Deployment models and Services Discover how Cloud Computing Architecture works Learn about the Load balancing approach and Mobile Cloud Computing (MCC) Learn about the Virtualization and Service-Oriented Architecture (SOA) concepts Learn about the various Cloud Computing applications, Platforms and Security concepts Understand the adoption Cloud Computing technology and strategies for migration to the cloud Case Studies for Cloud computing adoption - Sub-Saharan Africa and India Who this book is for This book is intended for students of B.E., B.Tech., B.Sc., M.Sc., M.E., and M.Tech. as a text book. The content is designed keeping in mind the bench marked curriculum of various universities (both National and International). The book covers not only the technical details of how cloud works but also exhibits the strategy, technical design, and in-depth knowledge required to migrate existing

applications to the cloud. Therefore, it makes it relevant for the beginners who wants to learn cloud computing right from the foundation. Aspiring Cloud Computing Researchers Instructors, Academicians and Professionals, if they are familiar with cloud, can use this book to learn various open source cloud computing tools, applications, technologies. They will also get a flavor of various international certification exams available. Table of contents

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About the author
 Kamal Kant Hiran is working as Associate Professor & Head IT in the BlueCrest University College, Liberia, West Africa as well as Research Fellow, Aalborg University, Copenhagen, Denmark. He has rich experience of

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 Dr. Fagbola Temitayo is currently a Post-Doctoral Fellow (PDF) at Durban University of Technology, South Africa and an Assistant Professor in the

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[fagbola-5941a2169](https://www.linkedin.com/in/temitayo-fagbola-5941a2169) Mehul Mahrishi is currently working as an Associate Professor in the Faculty of Computer Science & Engineering at the Swami Keshvanand Institute of Technology, Management and Gramothan, Jaipur, India. He is a life member of International Association of Engineers and has published several research articles in National/International Journals, Conferences including Global Journals, ICCCTAM-Dubai, ICMLC-Singapore, IACC and chapters in books. He is also an active technical reviewer of Journal of Parallel and Distributed Computing (SCI & Scopus-Elsevier). His research activities are currently twofold: while the first research activity is set to explore the developmental enhancements video processing and analysis; the second major research theme is focused on the emerging capabilities of cloud computing. Mr. Mahrishi is rewarded at number of occasions in various domains including Recognition as an active reviewer by Journal of Parallel and Distributed Computing (JPDC, Elsevier, SCI & Scopus Indexed), IEEE continuing

education certification for "e;Cloud Computing Enable Technologies and Recognition for outstanding performance in Campus Connect Program by Infosys, India. His LinkedIn profile: <https://www.linkedin.com/in/mehuk-mahrishi-30979026> Architecting Modern Data Platforms "O'Reilly Media, Inc."

This is a practical guide for software developers, and different than other software architecture books. Here's why: It teaches risk-driven architecting. There is no need for meticulous designs when risks are small, nor any excuse for sloppy designs when risks threaten your success. This book describes a way to do just enough architecture. It avoids the one-size-fits-all process tar pit with advice on how to tune your design effort based on the risks you face. It democratizes architecture. This book seeks to make architecture relevant to all software developers. Developers need to understand how to use constraints as guiderails that ensure desired outcomes, and how seemingly small changes can affect a system's properties. It cultivates

declarative knowledge. There is a difference between being able to hit a ball and knowing why you are able to hit it, what psychologists refer to as procedural knowledge versus declarative knowledge. This book will make you more aware of what you have been doing and provide names for the concepts. It emphasizes the engineering. This book focuses on the technical parts of software development and what developers do to ensure the system works not job titles or processes. It shows you how to build models and analyze architectures so that you can make principled design tradeoffs. It describes the techniques software designers use to reason about medium to large sized problems and points out where you can learn specialized techniques in more detail. It provides practical advice. Software design decisions influence the architecture and vice versa. The approach in this book embraces drill-down/pop-up behavior by describing models that have various levels of abstraction, from architecture to data structure design.

Hadoop Application Architectures "O'Reilly

Media, Inc."

We seem to be living in the age of A.I. Everywhere you look, companies are touting their most recent A.I., machine learning, and deep learning breakthroughs, even when they are far short of anything that could be touted as a "breakthrough." "A.I." has eclipsed "Blockchain" and "Crypto" as the buzzword of today. Indeed, one of the best ways to raise VC funding is to stick 'AI' or 'ML' at the front of your prospectus and ".ai" at the end of your website. Separating fact from fiction is more important than it has ever been. The A.I. Marketer breaks down A.I., machine learning, and deep learning into five unique use cases—sound, time series, text, image, and video—and also reveals how marketing executives can utilize this powerful technology to help them more finely tune their marketing campaigns, better segment their customers, increase lead generation, and foster strong customer loyalty. Today, "Personalization"—the process of utilizing mobile, social, geo-location data, web morphing, context and even affective computing

to tailor messages and experiences to an individual interacting with them—is becoming the optimum word in a radically new customer intelligence environment. The A.I. Marketer explains this complex technology in simple to understand terms and then shows how marketers can utilize the psychology of personalization with A.I. to both create more effective marketing campaigns as well as increase customer loyalty. Pearson shows companies how to avoid Adobe's warning of not using industrial-age technology in the digital era. Pearson also reveals how to create a platform of technology that seamlessly integrates EDW and real-time streaming data with social media content. Analytical models and neural nets can then be built on both commercial and open source technology to better understand the customer, thereby strengthening the brand and, just as importantly, increasing ROI.

Hadoop: The Definitive Guide Packt Publishing Ltd

Learn advanced analytical techniques and leverage existing tool kits to make your analytic applications more powerful, precise,

and efficient. This book provides the right combination of architecture, design, and implementation information to create analytical systems that go beyond the basics of classification, clustering, and recommendation. *Pro Hadoop Data Analytics* emphasizes best practices to ensure coherent, efficient development. A complete example system will be developed using standard third-party components that consist of the tool kits, libraries, visualization and reporting code, as well as support glue to provide a working and extensible end-to-end system. The book also highlights the importance of end-to-end, flexible, configurable, high-performance data pipeline systems with analytical components as well as appropriate visualization results. You'll discover the importance of mix-and-match or hybrid systems, using different analytical components in one application. This hybrid approach will be prominent in the examples. What You'll Learn Build big data analytic systems with the Hadoop ecosystem Use libraries, tool kits, and algorithms to make

development easier and more effective Apply metrics to measure performance and efficiency of components and systems Connect to standard relational databases, noSQL data sources, and more Follow case studies with example components to create your own systems Who This Book Is For Software engineers, architects, and data scientists with an interest in the design and implementation of big data analytical systems using Hadoop, the Hadoop ecosystem, and other associated technologies. *Distributed Process Coordination* Apress Summary *Hadoop in Practice, Second Edition* provides over 100 tested, instantly useful techniques that will help you conquer big data, using Hadoop. This revised new edition covers changes and new features in the Hadoop core architecture, including MapReduce 2. Brand new chapters cover YARN and integrating Kafka, Impala, and Spark SQL with Hadoop. You'll also get new and updated techniques for Flume, Sqoop, and Mahout, all of which have seen major new versions recently. In short, this is the most practical, up-to-date

coverage of Hadoop available anywhere. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Book It's always a good time to upgrade your Hadoop skills! *Hadoop in Practice, Second Edition* provides a collection of 104 tested, instantly useful techniques for analyzing real-time streams, moving data securely, machine learning, managing large-scale clusters, and taming big data using Hadoop. This completely revised edition covers changes and new features in Hadoop core, including MapReduce 2 and YARN. You'll pick up hands-on best practices for integrating Spark, Kafka, and Impala with Hadoop, and get new and updated techniques for the latest versions of Flume, Sqoop, and Mahout. In short, this is the most practical, up-to-date coverage of Hadoop available. Readers need to know a programming language like Java and have basic familiarity with Hadoop. What's Inside Thoroughly updated for Hadoop 2 How to write YARN applications Integrate real-time technologies like Storm, Impala, and Spark

Predictive analytics using Mahout and RR Readers need to know a programming language like Java and have basic familiarity with Hadoop.

About the Author Alex Holmes works on tough big-data problems. He is a software engineer, author, speaker, and blogger specializing in large-scale Hadoop projects.

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A Problem - Solution Approach

"O'Reilly Media, Inc."

In the race to compete in today's fast-moving markets, large enterprises are busy adopting new technologies for creating new products, processes, and business models. But one obstacle on the road

to digital transformation is placing too much emphasis on technology, and not enough on the types of processes technology enables. What if different lines of business could build their own services and applications—and decision-making was distributed rather than centralized? This report explores the concept of a digital business platform as a way of empowering individual business sectors to act on data in real time. Much innovation in a digital enterprise will increasingly happen at the edge, whether it involves business users (from marketers to data scientists) or IoT devices. To facilitate the process, your core IT team can provide these sectors with the digital tools they need to innovate quickly. This report explores: Key cultural and organizational changes for developing business capabilities through cross-functional product teams

A platform for integrating applications, data sources, business partners, clients, mobile apps, social networks, and IoT devices

Creating internal API programs for building innovative edge services in low-code or

no-code environments

Tools including Integration Platform as a Service, Application Platform as a Service, and Integration Software as a Service

The challenge of integrating microservices and serverless architectures

Event-driven architectures for processing and reacting to events in real time

You'll also learn about a complete pervasive integration solution as a core component of a digital business platform to serve every audience in your organization.

Big Data Processing with Apache Spark

"O'Reilly Media, Inc."

Data is at the center of many challenges in system design today. Difficult issues need to be figured out, such as scalability, consistency, reliability, efficiency, and maintainability. In addition, we have an overwhelming variety of tools, including relational databases, NoSQL datastores, stream or batch processors, and message brokers. What are the right choices for your application? How do you make sense of all these buzzwords? In this practical and comprehensive guide, author Martin Kleppmann helps you navigate this

diverse landscape by examining the pros and cons of various technologies for processing and storing data. Software keeps changing, but the fundamental principles remain the same. With this book, software engineers and architects will learn how to apply those ideas in practice, and how to make full use of data in modern applications. Peer under the hood of the systems you already use, and learn how to use and operate them more effectively. Make informed decisions by identifying the strengths and weaknesses of different tools. Navigate the trade-offs around consistency, scalability, fault tolerance, and complexity. Understand the distributed systems research upon which modern databases are built. Peek behind the scenes of major online services, and learn from their architectures.

Innovations in Big Data Mining and Embedded Knowledge Apress

Until now, design patterns for the MapReduce framework have been scattered among various research papers, blogs, and books. This handy guide brings together a

unique collection of valuable MapReduce patterns that will save you time and effort regardless of the domain, language, or development framework you're using. Each pattern is explained in context, with pitfalls and caveats clearly identified to help you avoid common design mistakes when modeling your big data architecture. This book also provides a complete overview of MapReduce that explains its origins and implementations, and why design patterns are so important. All code examples are written for Hadoop. Summarization patterns: get a top-level view by summarizing and grouping data. Filtering patterns: view data subsets such as records generated from one user. Data organization patterns: reorganize data to work with other systems, or to make MapReduce analysis easier. Join patterns: analyze different datasets together to discover interesting relationships. Metapatterns: piece together several patterns to solve multi-stage problems, or to perform several analytics in the same job. Input and output patterns: customize the way you use Hadoop to

load or store data "A clear exposition of MapReduce programs for common data processing patterns—this book is indispensable for anyone using Hadoop." --Tom White, author of *Hadoop: The Definitive Guide*

[Research Methods](#) IGI Global

Use Hadoop to solve business problems by learning from a rich set of real-life case studies. About This Book Solve real-world business problems using Hadoop and other Big Data technologies. Build efficient data lakes in Hadoop, and develop systems for various business cases like improving marketing campaigns, fraud detection, and more. Power packed with six case studies to get you going with Hadoop for Business Intelligence. Who This Book Is For If you are interested in building efficient business solutions using Hadoop, this is the book for you. This book assumes that you have basic knowledge of Hadoop, Java, and any scripting language. What You Will Learn Learn about the evolution of Hadoop as the big data platform. Understand the basics of Hadoop architecture. Build a 360

degree view of your customer using Sqoop and Hive Build and run classification models on Hadoop using BigML Use Spark and Hadoop to build a fraud detection system Develop a churn detection system using Java and MapReduce Build an IoT-based data collection and visualization system Get to grips with building a Hadoop-based Data Lake for large enterprises Learn about the coexistence of NoSQL and In-Memory databases in the Hadoop ecosystem In Detail If you have a basic understanding of Hadoop and want to put your knowledge to use to build fantastic Big Data solutions for business, then this book is for you. Build six real-life, end-to-end solutions using the tools in the Hadoop ecosystem, and take your knowledge of Hadoop to the next level. Start off by understanding various business problems which can be solved using Hadoop. You will also get acquainted with the common architectural patterns which are used to build Hadoop-based solutions. Build a 360-degree view of the customer by working with different types of data, and build an efficient fraud detection system for

a financial institution. You will also develop a system in Hadoop to improve the effectiveness of marketing campaigns. Build a churn detection system for a telecom company, develop an Internet of Things (IoT) system to monitor the environment in a factory, and build a data lake - all making use of the concepts and techniques mentioned in this book. The book covers other technologies and frameworks like Apache Spark, Hive, Sqoop, and more, and how they can be used in conjunction with Hadoop. You will be able to try out the solutions explained in the book and use the knowledge gained to extend them further in your own problem space. Style and approach This is an example-driven book where each chapter covers a single business problem and describes its solution by explaining the structure of a dataset and tools required to process it. Every project is demonstrated with a step-by-step approach, and explained in a very easy-to-understand manner. **Intelligencia** This book addresses the usefulness of knowledge discovery through data mining. With this aim,

contributors from different fields propose concrete problems and applications showing how data mining and discovering embedded knowledge from raw data can be beneficial to social organizations, domestic spheres, and ICT markets. Data mining or knowledge discovery in databases (KDD) has received increasing interest due to its focus on transforming large amounts of data into novel, valid, useful, and structured knowledge by detecting concealed patterns and relationships. The concept of knowledge is broad and speculative and has promoted epistemological debates in western philosophies. The intensified interest in knowledge management and data mining stems from the difficulty in identifying computational models able to approximate human behaviors and abilities in resolving organizational, social, and physical problems. Current ICT interfaces are not yet adequately advanced to support and simulate the abilities of physicians, teachers, assistants or housekeepers in domestic spheres. And unlike in industrial contexts where abilities are routinely

applied, the domestic world is continuously changing and unpredictable. There are challenging questions in this field: Can knowledge locked in conventions, rules of conduct, common sense, ethics, emotions, laws, cultures, and experiences be mined from data? Is it acceptable for automatic systems displaying emotional behaviors to govern complex interactions based solely on the mining of large volumes of data? Discussing multidisciplinary themes, the book proposes computational models able to approximate, to a certain degree, human behaviors and abilities in resolving organizational, social, and physical problems. The innovations presented are of primary importance for: a. The academic research community b. The ICT market c. Ph.D. students and early stage researchers d. Schools, hospitals, rehabilitation and assisted-living centers e. Representatives from multimedia industries and standardization bodies

Hadoop For Dummies John Wiley & Sons
Ready to use statistical and machine-learning

techniques across large data sets? This practical guide shows you why the Hadoop ecosystem is perfect for the job. Instead of deployment, operations, or software development usually associated with distributed computing, you'll focus on particular analyses you can build, the data warehousing techniques that Hadoop provides, and higher order data workflows this framework can produce. Data scientists and analysts will learn how to perform a wide range of techniques, from writing MapReduce and Spark applications with Python to using advanced modeling and data management with Spark MLlib, Hive, and HBase. You'll also learn about the analytical processes and data systems available to build and empower data products that can handle—and actually require—huge amounts of data. Understand core concepts behind Hadoop and cluster computing Use design patterns and parallel analytical algorithms to create distributed data analysis jobs Learn about data management, mining, and warehousing in a distributed context using Apache Hive and HBase

Use Sqoop and Apache Flume to ingest data from relational databases Program complex Hadoop and Spark applications with Apache Pig and Spark DataFrames Perform machine learning techniques such as classification, clustering, and collaborative filtering with Spark's MLlib

Kafka: The Definitive Guide "O'Reilly Media, Inc."
Get Started Fast with Apache Hadoop® 2, YARN, and Today's Hadoop Ecosystem With Hadoop 2.x and YARN, Hadoop moves beyond MapReduce to become practical for virtually any type of data processing. Hadoop 2.x and the Data Lake concept represent a radical shift away from conventional approaches to data usage and storage. Hadoop 2.x installations offer unmatched scalability and breakthrough extensibility that supports new and existing Big Data analytics processing methods and models. Hadoop® 2 Quick-Start Guide is the first easy, accessible guide to Apache Hadoop 2.x, YARN, and the modern Hadoop ecosystem. Building on his unsurpassed experience teaching Hadoop and Big Data,

author Douglas Eadline covers all the basics you need to know to install and use Hadoop 2 on personal computers or servers, and to navigate the powerful technologies that complement it. Eadline concisely introduces and explains every key Hadoop 2 concept, tool, and service, illustrating each with a simple “beginning-to-end” example and identifying trustworthy, up-to-date resources for learning more. This guide is ideal if you want to learn about Hadoop 2 without getting mired in technical details. Douglas Eadline will bring you up to speed quickly, whether you’re a user, admin, devops specialist, programmer, architect, analyst, or data scientist. Coverage Includes Understanding what Hadoop 2 and YARN do, and how they improve on Hadoop 1 with MapReduce Understanding Hadoop-based Data Lakes versus RDBMS Data Warehouses Installing Hadoop 2 and core services on Linux machines, virtualized sandboxes, or clusters Exploring the Hadoop Distributed File System (HDFS) Understanding the essentials of MapReduce and YARN application

programming Simplifying programming and data movement with Apache Pig, Hive, Sqoop, Flume, Oozie, and HBase Observing application progress, controlling jobs, and managing workflows Managing Hadoop efficiently with Apache Ambari—including recipes for HDFS to NFSv3 gateway, HDFS snapshots, and YARN configuration Learning basic Hadoop 2 troubleshooting, and installing Apache Hue and Apache Spark New Designs Using Apache Kafka and MapR Streams Addison-Wesley Professional The go-to guidebook for deploying Big Data solutions with Hadoop Today's enterprise architects need to understand how the Hadoop frameworks and APIs fit together, and how they can be integrated to deliver real-world solutions. This book is a practical, detailed guide to building and implementing those solutions, with code-level instruction in the popular Wrox tradition. It covers storing data with HDFS and Hbase, processing data with MapReduce, and automating data processing with Oozie.

Hadoop security, running Hadoop with Amazon Web Services, best practices, and automating Hadoop processes in real time are also covered in depth. With in-depth code examples in Java and XML and the latest on recent additions to the Hadoop ecosystem, this complete resource also covers the use of APIs, exposing their inner workings and allowing architects and developers to better leverage and customize them. The ultimate guide for developers, designers, and architects who need to build and deploy Hadoop applications Covers storing and processing data with various technologies, automating data processing, Hadoop security, and delivering real-time solutions Includes detailed, real-world examples and code-level guidelines Explains when, why, and how to use these tools effectively Written by a team of Hadoop experts in the programmer-to-programmer Wrox style Professional Hadoop Solutions is the reference enterprise architects and developers need to maximize the power of Hadoop.