Hyperledger Fabric Documentation Read The Docs

An enterprise blockchain or distributed ledger technology (DLT) is very much like a shared document stored on a cloud drive. There are just two differences. First, there is no master copy of this document stored with an escrow or arbiter, and second, any change to the document happens only after it has been signed off by all required stakeholders. This allows businesses to form a peer-to-peer network and establish a common ground of truth without giving up its control in hands of a single organization. The decentralized nature of the ledger combined with version control or immutability of the stored data is perfect for fast account reconciliation, secure tracking and tracing of products, and transparent records with no costly third-party auditing. This book teaches you how to build such decentralized applications.What's Inside:* Covers v2.O of Fabric. Examples written in TypeScript and JavaScript* Deploying to production across multiple nodes using Docker* Securing communications with TLS* Handling Data Privacy* Comprehensive coverage of Fabric CA Server and Client* Bonus chapters on Bitcoin and LDAPThe author has done justice to it by really starting from the basics and explaining with wit the core concepts and taking the reader slowly to the core of Fabric.- Satej Sahu, Senior Enterprise Architect, HoneywellA very beginner friendly introduction to a massive amount of data needed to operate in the blockchain world.- Gregory Reshetniak, Product Owner, Ocado TechnologyA detailed bible about Hyperledger Fabric. This book is mandatory in the blockchain world. - Krzysztof Kamyczek, Architect Software Developer, Luxoft
The internet is making our daily life as digital as possible and this new era is called the Internet of Everything (IoE). Edge computing is an emerging data analytics concept that addresses the challenges associated with IoE. More specifically, edge computing facilitates data analysis at the edge of the network instead of interacting with cloud-based servers. Therefore, more and more devices need to be added in remote locations without any substantial monitoring strategy. This increased connectivity and the devices used for edge computing will create more room for cyber criminals to exploit the system's vulnerabilities. Ensuring cyber security at the edge should not be an afterthought or a huge challenge. The devices used for edge computing are not designed with traditional IT hardware protocols. There are diverse-use cases in the context of edge computing and Internet of Things (IoT) in remote locations. However, the cyber security configuration and software updates are often overlooked when they are most needed to fight cyber crime and ensure data privacy. Therefore, the threat landscape in the context of edge computing becomes wider and far more challenging. There is a clear need for collaborative work throughout the entire value chain of the network. In this context, this book addresses

the cyber security challenges associated with edge computing, which provides a bigger picture of the concepts, techniques, applications, and open research directions in this area. In addition, the book serves as a single source of reference for acquiring the knowledge on the technology, process and people involved in next generation computing and security. It will be a valuable aid for researchers, higher level students and professionals working in the area.

In recent years, the surge of blockchain technology has been rising due to is proven reliability in ensuring secure and effective transactions, even between untrusted parties. Its application is broad and covers public and private domains varying from traditional communication networks to more modern networks like the internet of things and the internet of energy crossing fog and edge computing, among others. As technology matures and its standard use cases are established, there is a need to gather recent research that can shed light on several aspects and facts on the use of blockchain technology in different fields of interest. Enabling Blockchain Technology for Secure Networking and Communications consolidates the recent research initiatives directed towards exploiting the advantages of blockchain technology for benefiting several areas of applications that vary from security and robustness to scalability and privacy-preserving and more. The chapters explore the current applications of blockchain for networking and communications, the future potentials of blockchain technology, and some not-yet-prospected areas of research and its application. This book is ideal for practitioners, stakeholders, researchers, academicians, and students interested in the concepts of blockchain technology and the potential and pitfalls of its application in different utilization domains.

This book constitutes the refereed proceedings of the 10th International Conference on Applications and Techniques in Information Security, ATIS 2019, held in Tamil Nadul, India, in November 2019. The 22 full papers and 2 short papers presented in the volume were carefully reviewed and selected from 50 submissions. The papers are organized in the following topical sections: information security; network security; intrusion detection system; authentication and key management system; security centric applications.

Blockchain with Hyperledger Fabric
Self-Sovereign Identity
Blockchain Enabled Applications
Mobile Edge Computing
Hands-On IoT Solutions with Blockchain

16th European, Mediterranean, and Middle Eastern Conference, EMCIS 2019, Dubai, United Arab Emirates, December 9–10, 2019, Proceedings

Blockchain technology continues to disrupt a wide variety of organizations, from small businesses to the Fortune 500. Today hundreds of blockchain networks are in production, including many built with Hyperledger Fabric. This practical guide shows developers how the latest version of this blockchain infrastructure provides an ideal foundation for developing enterprise blockchain applications or solutions. Authors Matt Zand, Xun Wu, and Mark Anthony Morris demonstrate how the versatile design of Hyperledger Fabric 2.0 satisfies a broad range of industry use cases. Developers with or without previous Hyperledger experience will discover why no other distributed ledger technology framework enjoys such wide adoption by cloud service providers such as Amazon, Alibaba, IBM, Google, and Oracle. Walk through the architecture and components of Hyperledger Fabric 2.0 Migrate your current Hyperledger Fabric projects to version 2.0 Develop blockchain applications on the Hyperledger platform with Node.js Deploy and integrate Hyperledger on Amazon Managed Blockchain, IBM Cloud, and Oracle Cloud Develop blockchain applications with Hyperledger Aries, Avalon, Besu, and Grid Build end-to-end blockchain supply chain applications with Hyperledger Work with blockchain and understand its potential application beyond cryptocurrencies in the domains of healthcare, Internet of Things, finance, decentralized organizations, and open science. Featuring case studies and practical insights generated from a start-up spun off from the author's own lab, this book covers a unique mix of topics not found in others and offers insight into how to overcome real hurdles that arise as the market and consumers grow accustomed to blockchain based start-ups. You'll start with a review of the historical origins of blockchain and explore the basic cryptography needed to make the blockchain work for Bitcoin. You will then learn about the technical advancements made in the surrounded ecosystem: the Ethereum virtual machine, Solidity, Colored Coins, the Hyperledger Project, Blockchain-as-a-service offered through IBM, Microsoft and more. This book looks at the consequences of machine-to-machine transactions using the blockchain socially, technologically, economically and politically. Blockchain Enabled Applications provides you with a clear perspective of the ecosystem that has developed around the blockchain and the various industries it has penetrated. What You'll Learn Implement the code-base from Fabric and Sawtooth, two open source blockchain-efforts being developed under the Hyperledger Project Evaluate the benefits of integrating blockchain with emerging technologies, such as machine learning and artificial intelligence in the cloud Use the practical insights provided by the case studies to your own projects or start-up ideas Set up a development environment to compile and manage projects Who This Book Is For Developers who are interested in learning about the blockchain as a data-structure, the recent advancements being made and how to implement the code-base. Decision makers within large corporations (product managers, directors or CIO level executives) interested in implementing the blockchain who need more practical insights and not just theory.

A radical shift in perspective to transform your organization to become more innovative The Design Thinking Playbook is an actionable guide to the future of business. By stepping back and questioning the current mindset, the faults of the status quo stand out in stark relief—and this guide gives you the tools and frameworks you need to kick off a digital transformation. Design Thinking is about approaching things differently with a strong user orientation and fast iterations with multidisciplinary teams to solve wicked problems. It is equally applicable to (re-)design products, services, processes, business models, and ecosystems. It inspires radical innovation as a matter of course, and ignites capabilities beyond mere potential. Unmatched as a source of competitive advantage, Design Thinking is the driving force behind those who will lead industries through transformations and evolutions. This book describes how Design Thinking is applied across a variety of industries, enriched with other proven approaches as well as the necessary tools, and the knowledge to use them effectively. Packed with solutions for common challenges including digital transformation, this practical, highly visual discussion shows you how Design Thinking fits into agile methods within management, innovation, and startups. Explore the digitized future using new design criteria to create real value for the user Foster radical innovation through an inspiring framework for action Gather the right people to build highly-motivated teams Apply Design Thinking, Systems Thinking, Big Data Analytics, and Lean Start-up using new tools and a fresh new perspective Create Minimum Viable Ecosystems (MVEs) for digital processes and services which becomes for example essential in building Blockchain applications Practical frameworks, real-world solutions, and radical innovation wrapped in a whole new outlook give you the power to mindfully lead to new heights. From systems and operations to people, projects, culture, digitalization, and beyond, this invaluable mind shift paves the way for organizations—and individuals—to do great things. When you're ready to give your organization a big step forward, The Design Thinking Playbook is your practical guide to a more innovative future.
This book constitutes the proceedings of the 15th International Workshop on Security and Trust Management, STM 2019, held in Luxembourg City, Luxembourg, in September 2019, and co-located with the 24th European Symposium Research in Computer Security, ESORICS 2019. The 9 full papers and 1 short paper were carefully reviewed and selected from 23 submissions. The papers present novel research on all theoretical and practical aspects of security and trust in ICTs.
Programming Hyperledger Fabric
Hands-On Smart Contract Development with Hyperledger Fabric V2
Applications and Techniques in Information Security
Understand the Blockchain Ecosystem and How to Make it Work for You
Hands-On Blockchain with Hyperledger
Building next-generation financial applications using Ethereum, Hyperledger Fabric, and Stellar
A Non-Technical Introduction in 25 Steps

Leverage the power of Hyperledger Fabric to develop Blockchain-based distributed ledgers with ease Key Features Write your own chaincode/smart contracts using Golang on hyperledger network Build and deploy decentralized applications (DApps) Dive into real world blockchain challenges such as integration and scalability Book Description Blockchain and Hyperledger technologies are hot topics today. Hyperledger Fabric and Hyperledger Composer are open source projects that help organizations create private, permissioned blockchain networks. These find application in finance, banking, supply chain, and IoT among several other sectors. This book will be an easy reference to explore and build blockchain networks using Hyperledger technologies. The book starts by outlining the evolution of blockchain, including an overview of relevant blockchain technologies. You will learn how to configure Hyperledger Fabric and become familiar with its architectural components. Using these components, you will learn to build private blockchain networks, along with the applications that connect to them. Starting from principles first, you'll learn to design and launch a network, implement smart contracts in chaincode and much more. By the end of this book, you will be able to build and deploy your own decentralized applications, handling the key pain points encountered in the blockchain life cycle. What you will learn Discover why blockchain is a game changer in the technology landscape Set up blockchain networks using basic Hyperledger Fabric deployment Understand the considerations for creating decentralized applications Learn to integrate business networks with existing systems Write Smart Contracts quickly with Hyperledger Composer Design transaction model and chaincode with Golang Deploy Composer REST Gateway to access the Composer transactions Maintain, monitor, and govern your blockchain solutions Who this book is for The book benefits business leaders as it provides a comprehensive view on blockchain business models, governance structure, and business design considerations of blockchain solutions. Technology leaders stand to gain a lot from the detailed discussion around the technology landscape, technology design, and architecture considerations in the book. With model-driven application development, this guide will speed up understanding and concept development for blockchain application developers. The simple and well organized content will put novices at ease with blockchain concepts and constructs.

Demystify architecting complex blockchain applications in enterprise environments Architecting Enterprise Blockchain Solutions helps engineers and IT administrators understand how to architect complex blockchain applications in enterprise environments. The book takes a deep dive into the intricacies of supporting and securing blockchain technology, creating and implementing decentralized applications, and incorporating blockchain into an existing enterprise IT infrastructure. Blockchain is a technology that is experiencing massive growth in many facets of business and the enterprise. Most books around blockchain primarily deal with how blockchains are related to cryptocurrency or focus on pure blockchain development. This book teaches what blockchain technology is and offers insights into its current and future uses in high performance networks and complex ecosystems. • Provides a practical, hands-on approach • Demonstrates the power and flexibility of enterprise blockchains such as Hyperledger and R3 Corda • Explores how blockchain can be used to solve complex IT support and infrastructure problems • Offers numerous hands-on examples and diagrams Get ready to learn how to harness the power and flexibility of enterprise blockchains! Mastering Hyperledger Fabric. A one-stop solution to become Master in the

Hyperledger Fabric Key Features Detailed Explanation of One way TLS and mutual TLS Detailed Explanation of docker sockets (docker.sock) Exposed functionalities of Fabric CLI's and SDK's Enterprise-level chaincode development A glimpse of Hyperledger Fabric 2.0 Advanced examples of Node and golang Fabric SDK Onboard new organization using Node.js SDK (No more CLI) CI/CD for chaincode (Install chaincode directly onto peers from GitHub using Node.js) Fabric setup explanation with Different real-time use cases Deployment of Hyperledger Fabric using docker swarm and Kubernetes Setup and configure caliper to check benchmarks Monitor consortium with Prometheus and grafana Monitor docker and docker swarm using swarmpit and logspout Logging consortium with ELK/EFK stack Some interesting open-source tools and some Bonus concepts Table of Contents Chapter1: Introduction to the Hyperledger Landscape Chapter2: The Disruptive Potential of TLS Chapter3: All about docker sockets Chapter4: Installation Guide Of Prerequisites Chapter5: All about fabric CLI Chapter6: All about SDK's (go lang and Node.js) Chapter7: Advanced Chaincode Development Chapter8: End to End fabric consortium with Solo consensus using docker with one use case Chapter9: End to End fabric Consortium with Kafka consensus using docker swarm with one use case Chapter10: End to End fabric Consortium with Raft consensus using Kubernetes with one use case Chapter11: Private Data Concepts, Consortium level ACL(Access Control Lists) and raft consensus mechanism Chapter12: Setup and Benchmark Blockchain Consortium Using Caliper Chapter13: Monitoring Consortium with Prometheus and grafana Chapter14: Logging Consortium with ELK Stack Chapter15: Glimpse of Hyperledger fabric 2.0 Chapter16: Some Interesting tools Who this Book is For This Book benefits Software Engineers who are ready to shift their focus to distributed technologies and Blockchain. This book provides a comprehensive view of Solution Architecture, so it will be easy for architects to architect their solution. CTO's around the world want to add hyperledger fabric to their technology stack. Managers to cope up with the latest trend. Faculty Professors in order to get industry insights. Even Engineering Students who want to be ready with the latest technologies. Book Description Mastering Hyperledger Fabric is a craving topic for all Hyperledger Fabric Developers around the world. Hyperledger Fabric is an open-source project that helps organizations create and maintain permissioned distributed Blockchain consortiums. This book is for readers who are looking for Hyperledger offerings to build end-to-end projects with growing complexity and functionalities. This book will be a one-stop solution for all developers who want to build blockchain consortiums using Hyperledger Fabric. Topics include TLS, Unix sockets, caliper(Benchmark tool), raft consensus, advanced chaincode development, key collision and MVCC, chaincode access controls, chaincode encryption, node.js SDK, golang SDK, docker daemon API, private data concepts, onboarding organizations using node.js SDK, deploy hyperledger fabric using Kubernetes, deploy hyperledger fabric using docker swarm, monitoring hyperledger fabric, monitoring Kubernetes, monitoring docker swarm, logging hyperledger fabric. After reading this book the reader will be able to set up Production grade hyperledger fabric consortium using raft consensus mechanisms with monitoring using Prometheus and grafana, even logging. This book explains so many key concepts of hyperledger fabric including 2.0 and written with three years of hyperledger fabric production experience. Explore the entire Hyperledger blockchain family, including frameworks such as Fabric, Sawtooth, Indy, Burrow, and Iroha; and tools such as Composer, Explorer, and Caliper. Key FeaturesPlan, design, and create a full-fledged private

decentralized application using Hyperledger services Master the ins and outs of the Hyperledger network using real-world examples Packed with problem-solution-based recipes to tackle pain areas in the blockchain development cycleBook Description Hyperledger is an open-source project and creates private blockchain applications for a range of domains. This book will be your desk reference as you explore common and not-so-common challenges faced while building blockchain networks using Hyperledger services. We'll work through all Hyperledger platform modules to understand their services and features and build end-to-end blockchain applications using various frameworks and tools supported by Hyperledger. This book's independent, recipe-based approach (packed with real-world examples) will familiarize you with the blockchain development cycle. From modeling a business network to integrating with various tools, you will cover it all. We'll cover common and not-so-common challenges faced in the blockchain life cycle. Later, we'll delve into how we can interact with the Hyperledger Fabric blockchain, covering all the principles you need to master, such as chaincode, smart contracts, and much more. We'll also address the scalability and security issues currently faced in blockchain development. By the end of this book, you will be able to implement each recipe to plan, design, and create a full-fledged, private, decentralized application to meet organizational needs. What you will learnCreate the most popular permissioned blockchain network with Fabric and ComposerBuild permissioned and permission-less blockchains using SawtoothUtilize built-in Iroha asset/account management with role-based permissionsImplement and run Ethereum smart contracts with Burrow Get to grips with security and scalability in HyperledgerExplore and view blockchain data using Hyperledger ExplorerProduce reports containing performance indicators and benchmarks using CaliperWho this book is for This book is for blockchain developers who want to understand how they can apply Hyperledger services in their day-to-day projects. This book uses a recipe-based approach to help you use Hyperledger to build powerful, decentralized autonomous applications. We assume the reader has a basic knowledge of the Blockchain technology and cryptography concepts
Secure Edge Computing
Mastering Hyperledger Fabric
Blockchain for Distributed Systems Security
Mastering Corda
Hyperledger Fabric In-Depth
Architecting Enterprise Blockchain Solutions
Build decentralized applications with Hyperledger Fabric and Composer

Learn the most powerful and primary programming language for writing smart contracts and find out how to write, deploy, and test smart contracts in Ethereum. Key Features Get you up and running with Solidity Programming language Build Ethereum Smart Contracts with Solidity as your scripting language Learn to test and deploy the smart contract to your private Blockchain Book Description Solidity is a contract-oriented language whose syntax is highly influenced by JavaScript, and is designed to compile code for the Ethereum Virtual Machine. Solidity Programming Essentials will be your guide to understanding Solidity programming to build smart contracts for Ethereum and blockchain from ground-up. We begin with a brief run-through of blockchain, Ethereum, and their most important concepts or components. You will learn how to install all the necessary tools to write, test, and debug Solidity contracts on Ethereum. Then, you will explore the layout of a Solidity source file and work with the different data types. The next set of recipes will help you work with operators, control structures, and data

structures while building your smart contracts. We take you through function calls, return types, function modifers, and recipes in object-oriented programming with Solidity. Learn all you can on event logging and exception handling, as well as testing and debugging smart contracts. By the end of this book, you will be able to write, deploy, and test smart contracts in Ethereum. This book will bring forth the essence of writing contracts using Solidity and also help you develop Solidity skills in no time. What you will learn Learn the basics and foundational concepts of Solidity and Ethereum Explore the Solidity language and its uniqueness in depth Create new accounts and submit transactions to blockchain Get to know the complete language in detail to write smart contracts Learn about major tools to develop and deploy smart contracts Write defensive code using exception handling and error checking Understand Truffle basics and the debugging process Who this book is for This book is for anyone who would like to get started with Solidity Programming for developing an Ethereum smart contract. No prior knowledge of EVM is required.

Distributed ledgers, decentralization and smart contracts explained About This Book Get to grips with the underlying technical principles and implementations of blockchain. Build powerful applications using Ethereum to secure transactions and create smart contracts. Explore cryptography, mine cryptocurrencies, and solve scalability issues with this comprehensive guide. Who This Book Is For This book appeals to those who wish to build fast, highly secure, transactional applications. This book is for those who are familiar with the concept of blockchain and are comfortable with a programming language. What You Will Learn Master the theoretical and technical foundations of blockchain technology Fully comprehend the concept of decentralization, its impact and relationship with blockchain technology Experience how cryptography is used to secure data with practical examples Grasp the inner workings of blockchain and relevant mechanisms behind Bitcoin and alternative cryptocurrencies Understand theoretical foundations of smart contracts Identify and examine applications of blockchain technology outside of currencies Investigate alternate blockchain solutions including Hyperledger, Corda, and many more Explore research topics and future scope of blockchain technology In Detail Blockchain is a distributed database that enables permanent, transparent, and secure storage of data. The blockchain technology is the backbone of cryptocurrency – in fact, it's the shared public ledger upon which the entire Bitcoin network relies – and it's gaining popularity with people who work in finance, government, and the arts. Blockhchain technology uses cryptography to keep data secure. This book gives a detailed description of this leading technology and its implementation in the real world. This book begins with the technical foundations of blockchain, teaching you the fundamentals of cryptography and how it keeps data secure. You will learn about the mechanisms behind cryptocurrencies and how to develop applications using Ethereum, a decentralized virtual machine. You will explore different blockchain solutions and get an exclusive preview into Hyperledger, an upcoming blockchain solution from IBM and the Linux Foundation. You will also be shown how to implement blockchain beyond currencies, scability with blockchain, and the future scope of this fascinating and powerful technology. Style and approach This comprehensive guide allows you to build smart blockchain applications and explore the power of this database. The book will let you quickly brush up on the basics of the blockchain database, followed by advanced implementations of blockchain in currency, smart contracts, decentralization, and so on.

Develop real-time practical DApps using Ethereum and JavaScript About This Book Create powerful, end-to-end applications for Blockchain using Ethereum Write your first program using the Solidity programming language Change the way you think and

design your applications by using the all new database-Blockchain Who This Book Is For This book is for JavaScript developers who now want to create tamper-proof data (and transaction) applications using Blockchain and Ethereum. Those who are interested in cryptocurrencies and the logic and database empowering it will find this book extremely useful. What You Will Learn Walk through the basics of the Blockchain technology Implement Blockchain's technology and its features, and see what can be achieved using them Build DApps using Solidity and Web3.js Understand the geth command and cryptography Create Ethereum wallets Explore consortium blockchain In Detail Blockchain is a decentralized ledger that maintains a continuously growing list of data records that are secured from tampering and revision. Every user is allowed to connect to the network, send new transactions to it, verify transactions, and create new blocks, making it permission-less. This book will teach you what Blockchain is, how it maintains data integrity, and how to create real-world Blockchain projects using Ethereum. With interesting real-world projects, you will learn how to write smart contracts which run exactly as programmed without any chance of fraud, censorship, or third-party interference, and build end-to-end applications for Blockchain. You will learn about concepts such as cryptography in cryptocurrencies, ether security, mining , smart contracts, solidity, and more. You will also learn about web sockets, various API services for Ethereum, and much more. The blockchain is the main technical innovation of bitcoin, where it serves as the public ledger for bitcoin transactions. Style and approach This is a project-based guide that not only gets you up and running with Blockchain, but also lets you create intuitive real-world applications that will make you an independent Blockchain developer.

Integrate an end-to-end logistic chain using IBM Blockchain and IoT platforms Key Features Explore practical implementation of ledger technology in the IoT architecture Study security best practices for your smart devices Understand Blockchain implementation for end-to-end IoT solutions Book Description Blockchain has been the hot topic of late thanks to cryptocurrencies. To make matters more interesting, the financial market is looking for ways to reduce operational costs and generate new business models, and this is where blockchain solutions come into the picture. In addition to this, with Internet of Things (IoT) trending and Arduino, Raspberry Pi, and other devices flooding the market, you can now create cheap devices even at home. Hands-On IoT Solutions with Blockchain starts with an overview of IoT concepts in the current business scenario. It then helps you develop your own device on the IBM Watson IoT platform and create your fi rst IoT solution using Watson and Intel Edison.Once you are familiar with IoT, you will learn about Blockchain technology and its use cases. You will also work with the Hyperledger framework and develop your own Blockchain network. As you progress through the chapters, you'll work with problem statements and learn how to design your solution architecture so that you can create your own integrated Blockchain and IoT solution. The next set of chapters will explain how to implement end-to-end Blockchain solutions with IoT using the IBM Cloud platform. By the end of this book, you will have mastered the convergence of IoT and Blockchain technology and exploited the best practices and drivers to develop a bulletproof integrated solution. What you will learn Understand the key roles of IoT in the current market Study the different aspects of IBM Watson IoT platform Create devices, gateways, and applications connected to the platform Explore the fundamentals of Blockchain Define good use cases for Blockchain Discover the Hyperledger Fabric and Composer frameworks Develop an IBM Watson IoT application using a Intel Edison Integrate IoT with the Blockchain platform Who this book is for Hands-On IoT Solutions with Blockchain is for you if you are an Internet of Things (IoT)

analyst, architect, engineer, or any stakeholder responsible for security mechanisms on an IoT infrastructure. This book is also for IT professionals who want to start developing solutions using Blockchain and IoT on the IBM Cloud platform. Basic understanding of IoT will assist you in understanding key concepts covered in the book.
2019 10th International Conference on Computing, Communication and Networking Technologies (ICCCNT)
Building Blockchain Projects
Understanding Blockchain and Cryptocurrencies
Information Systems
Blockchain Basics
10th International Conference, ATIS 2019, Thanjavur, India, November 22–24, 2019, Proceedings
Blockchain By Example

Whether you are a project manager looking to lead blockchain projects, a developer who would like to create blockchain-based applications, or a student with an interest, this book will provide you with the foundational understanding that you need. You have probably noticed that blockchains are growing in popularity. Governments are investigating Digital Currencies, supply chains are adopting Digital Ledgers, games makers and artists are developing NFTs (Non-Fungible Tokens), and new use-cases are emerging regularly. With such growth many people will find themselves needing to understand how these technologies work. There will be new project teams, with technical leads managing blockchain projects and developers creating distributed applications. This book is great for them as it explains the concepts on which blockchain technologies are based, in simple terms. We will discuss and explain topics such as hashing, Merkle trees, nodes, mining, proof of work and proof of stake, consensus mechanisms, encryption, vulnerabilities, and much more. The structures and principles described will be relevant for developers and managers alike, and will be demonstrated through relevant examples throughout the text. If you are looking to understand this exciting new technology, this is the book for you. Blockchain has emerged as a disruptive technology in the areas of trading assets and sharing information. It has the capability to transform many industries, professions, and aspects of life. The focus of this IBM® Redbooks® publication to help developers build blockchain solutions and use IBM Blockchain Platform start, test, and move applications into production. This publication covers some blockchain for business use cases. It also describes how to get started in defining, developing, and deploying a Hyperledger Composer business network to Hyperledger Fabric, both locally on a workstation and remotely on the IBM Blockchain Starter Plan.A fund clearing business network is used as an example scenario for blockchain and this source code is available for download, testing, and use. The Redpaper contains detailed information on how we put it together and more, so grab a copy of it via the download link on this page as well. This paper is part one of a series of papers and educational materials. Later material will describe how to use IBM Blockchain Platform to test and scale your business network, to integrate more completely with a COBOL business application

running in IBM CICS®, and to manage changes to your business network in a production environment.

This book, written jointly by an engineer and artificial intelligence expert along with a lawyer and banker, is a glimpse on what the future of the financial serv will look like and the impact it will have on society. The first half of the book provides a detailed yet easy to understand educational and technical overview FinTech, artificial intelligence and cryptocurrencies including the existing indust pain points and the new technological enablers. The second half provides a practical, concise and engaging overview of their latest trends and their impac on the future of the financial services industry including numerous use cases a practical examples. The book is a must read for any professional currently working in finance, any student studying the topic or anyone curious on how future of finance will look like.

Learn quick and effective techniques for developing blockchain-based distribute ledgers with ease Key Features Discover why blockchain is a game changer in the technology landscape Set up blockchain networks using Hyperledger Fabric Write smart contracts at speed with Hyperledger Composer Book Description Blockchain and Hyperledger are open source technologies that power the development of decentralized applications. This Learning Path is your helpful reference for exploring and building blockchain networks using Ethereum, Hyperledger Fabric, and Hyperledger Composer. Blockchain Development with Hyperledger will start off by giving you an overview of blockchain and demonstrating how you can set up an Ethereum development environment for developing, packaging, building, and testing campaign-decentralized applications. You'll then explore the de facto language Solidity, which you can use to develop decentralized applications in Ethereum. Following this, you'll be able to configure Hyperledger Fabric and use it to build private blockchain networks and applications that connect to them. Toward the later chapters, y learn how to design and launch a network, and even implement smart contrac in chain code. By the end of this Learning Path, you'll be able to build and deple your own decentralized applications by addressing the key pain points encountered in the blockchain life cycle. This Learning Path includes content from the following Packt products: Blockchain Quick Start Guide by Xun (Brian Wu and Weimin Sun Hands-On Blockchain with Hyperledger by Nitin Gaur et al. What you will learn Understand why decentralized applications are necessary Develop and test a decentralized application with Hyperledger Fabric and Hyperledger Composer Write and test a smart contract using Solidity Design transaction models and chain code with Golang Deploy the Composer REpresentational State Transfer (REST) Gateway to access Composer transactions Maintain, monitor, and manage your blockchain solutions Who thi book is for This Learning Path is designed for blockchain developers who want build decentralized applications and smart contracts from scratch using Hyperledger. Basic familiarity with or exposure to any programming language v

be useful to get started with this course.
Building decentralized applications with Hyperledger Fabric and Composer
Developing a Blockchain Business Network with Hyperledger Composer using
the IBM Blockchain Platform Starter Plan
Solidity Programming Essentials
Trust Models for Next-Generation Blockchain Ecosystems
Hyperledger Cookbook
Over 40 recipes implementing the latest Hyperledger blockchain frameworks a
tools
Creating Enterprise Blockchain Applications

This book presents the outcomes of the Intelligent Communication Technologies and
Virtual Mobile Networks Conference (ICICV 2019) held in Tirunelveli, India, on February
14–15, 2019. It presents the state of the art in the field, identifying emerging research
topics and communication technologies and defining the future of intelligent
communication approaches and virtual computing. In light of the tremendous growth
ICT, it examines the rapid developments in virtual reality in communication technology
and high-quality services in mobile networks, including the integration of virtual mobile
computing and communication technologies, which permits new technologies based on
the resources and services of computational intelligence, big data analytics, Internet of
Things (IoT), 5G technology, automation systems, sensor networks, augmented reality,
data mining, and vehicular ad hoc networks with massive cloud-based backend. These
services have a significant impact on all areas of daily life, like transportation, e-
commerce, health care, secure communication, location detection, smart home, smart
city, social networks and many more.
Deepen your understanding of blockchain technology and develop your own blockchain
applications. This book provides a thorough review of distribution-based systems on
blockchain technology, starting from the fundamental concepts that underlie it, all the
way through the implementation of a blockchain network for business purposes. Author
Joseph Thachil George begins by introducing you to blockchain and some basic
concepts of technology, including distributed systems, systems of systems, cyber-
physical systems, the Byzantine Consensus, the CAP theorem, and cryptographic
techniques. Next, he analyzes the structure of blocks and smart contracts and the
mother of all blockchain platforms, Bitcoin. That sets the stage for an examination of
transaction structure, validation, and flow, from creation to registration in the ledger and
structure of the blocks, the Nakamoto consensus, and finally forks. From there, you'll
experience a deep dive into Ethereum; including the concepts of Gas and Message,
smart contracts and the Ethereum virtual machine. From there, you'll learn about the
Ethereum consensus protocol, Ethereum Casper, and the Ethereum Proof-of-Stake
algorithm. You'll then see how blockchain can be connected to a distributed system,
followed by a demonstration of how you can model a distributed system using
Blockly4SoS and Kilobots. The concluding chapters offer a practical example that
combines distributed systems with blockchain technology. After reading this book, you
will understand how to implement blockchain technology in a distributed system and be
able to leverage this knowledge in your own projects. What You Will Learn Learn the
concept of blockchains by way of a practical example Grasp the connection between

distributed systems and blockchain technology Learn the design of blockchain with hyperledger fabric Learn the design of cyber-physical systems in a distributed environment Who Is This Book For Developers who are enthusiastic about the design and implementation of distributed systems.

A practical blockchain handbook designed to take you through implementing and re-engineering banking and financial solutions and workflows using eight step-by-step projects Key FeaturesImplement various end-to-end blockchain projects and learn to enhance present-day financial solutionsUse Ethereum, Hyperledger, and Stellar to build public and private decentralized applicationsAddress complex challenges faced in the BFSI domain using different blockchain platform servicesBook Description Blockchain technology will continue to play an integral role in the banking and finance sector in the coming years. It will enable enterprises to build transparent and secure business processes. Experts estimate annual savings of up to 20 billion dollars from this technology. This book will help you build financial apps using blockchain, guiding you through enhancing popular products and services in the banking and finance sector. The book starts by explaining the essential concepts of blockchain, and the impact of blockchain technology on the BFSI sector. Next, you'll delve into re-designing existing banking processes and building new financial apps using blockchain. To accomplish this, you'll work through eight blockchain projects. By demonstrating the entire process, the book helps you understand everything from setting up the environment and building frontend portals to system integration and testing apps. You will gain hands-on experience with the Ethereum, Hyperledger Fabric, and Stellar to develop private and public decentralized apps. Finally, you'll learn how to use ancillary platforms and frameworks such as IPFS, Truffle OpenZeppelin, and MetaMask. By the end of this blockchain book, you'll have an in-depth understanding of how to leverage distributed ledgers and smart contracts for financial use cases. What you will learnDesign and implement blockchain solutions in a BFSI organizationExplore common architectures and implementation models for enterprise blockchainDesign blockchain wallets for multi-purpose applications using EthereumBuild secure and fast decentralized trading ecosystems with BlockchainImplement smart contracts to build secure process workflows in Ethereum and Hyperledger FabricUse the Stellar platform to build KYC and AML-compliant remittance workflowsMap complex business workflows and automate backend processes in a blockchain architectureWho this book is for This book is for blockchain and Dapps developers, or anyone looking for a guide to building innovative and highly secure solutions in the fintech domain using real-world use cases. Developers working in financial enterprises and banks, and solution architects looking to build brand new process flows using blockchain technology will also find the book useful. Experience with Solidity programming and prior knowledge of finance and trade are required to get the most out of this book.

In 25 concise steps, you will learn the basics of blockchain technology. No mathematical formulas, program code, or computer science jargon are used. No previous knowledge in computer science, mathematics, programming, or cryptography is required. Terminology is explained through pictures, analogies, and metaphors. This book bridges the gap that exists between purely technical books about the blockchain and purely business-focused books. It does so by explaining both the technical concepts that make up the blockchain and their role in business-relevant applications.

What You'll Learn What the blockchain is Why it is needed and what problem it solves Why there is so much excitement about the blockchain and its potential Major components and their purpose How various components of the blockchain work and interact Limitations, why they exist, and what has been done to overcome them Major application scenarios Who This Book Is For Everyone who wants to get a general idea of what blockchain technology is, how it works, and how it will potentially change the financial system as we know it

Understand and Develop Blockchain Applications Through Distributed Systems

Blockchain Development for Finance Projects

The Design Thinking Playbook

Build decentralized applications using Hyperledger Fabric 2, 2nd Edition

IFIP WG 11.4 International Workshop, iNetSec 2015, Zurich, Switzerland, October 29, 2015, Revised Selected Papers

Applications, Techniques and Challenges

Enabling Blockchain Technology for Secure Networking and Communications

Implement decentralized blockchain applications to build scalable Dapps Key FeaturesUnderstand the blockchain ecosystem and its terminologiesImplement smart contracts, wallets, and consensus protocolsDesign and develop decentralized applications using Bitcoin, Ethereum, and HyperledgerBook Description The Blockchain is a revolution promising a new world without middlemen. Technically, it is an immutable and tamper-proof distributed ledger of all transactions across a peer-to-peer network. With this book, you will get to grips with the blockchain ecosystem to build real-world projects. This book will walk you through the process of building multiple blockchain projects with different complexity levels and hurdles. Each project will teach you just enough about the field's leading technologies, Bitcoin, Ethereum, Quorum, and Hyperledger in order to be productive from the outset. As you make your way through the chapters, you will cover the major challenges that are associated with blockchain ecosystems such as scalability, integration, and distributed file management. In the concluding chapters, you'll learn to build blockchain projects for business, run your ICO, and even create your own cryptocurrency. Blockchain by Example also covers a range of projects such as Bitcoin payment systems, supply chains on Hyperledger, and developing a Tontine Bank Every is using Ethereum. By the end of this book, you will not only be able to tackle common issues in the blockchain ecosystem, but also design and build reliable and scalable distributed systems. What you will learnGrasp decentralized technology fundamentals to master blockchain principlesBuild blockchain projects on Bitcoin, Ethereum, and HyperledgerCreate your currency and a payment application using BitcoinImplement decentralized apps and supply chain systems using HyperledgerWrite smart contracts,

run your ICO, and build a Tontine decentralized app using EthereumImplement distributed file management with blockchainIntegrate blockchain into existing systems in your organizationWho this book is for If you are keen on learning how to build your own blockchain decentralized applications from scratch, then this book is for you. It explains all the basic concepts required to develop intermediate projects and will teach you to implement the building blocks of a blockchain ecosystem.

This book provides a comprehensive view of blockchain business models, governance structure, technology landscape, and architecture considerations. It will speed up your understanding and concept development for distributed ledgers.

Blockchain with Hyperledger FabricBuild decentralized applications using Hyperledger Fabric 2, 2nd EditionPackt Publishing Ltd

With new technologies constantly being created, implemented, and sold, it is a robust opportunity for companies to hop on board with the latest digital trends. With the business world undergoing rapid changes and advancements in current times, the transformation process has been rapid and the disruptions significant. This has created a culture of innovation and a plethora of available business opportunities, especially when focused on Central Asia, Southeast Asia, and East Asia. Along with these innovative technologies and new opportunities in the business world comes challenges and trends within the Asian region that require more attention and advanced research to fully understand this digital transformation era and the resulting impacts, challenges, and solutions. The Handbook of Research on Disruptive Innovation and Digital Transformation in Asia addresses key topics for understanding business opportunities in Asia, covering a variety of challenges and nations in the Asian region from technological disruption and innovation to connectivity and economic corridors in Asia, Islamic finance and tourism, and more. Due to its innovative topics and approaches, geographical focus, and methodologies, the chapters provide readers with a unique value in bringing new perspectives to understanding emerging businesses and challenges in Asia. This book is ideal for professors in academia, deans, students, politicians, policymakers, corporate heads of firms, senior general managers, managing directors, information technology directors and managers, and researchers.

A developer's guide to creating decentralized applications using Bitcoin, Ethereum, and Hyperledger

Open Problems in Network Security

Security and Trust Management

Intelligent Communication Technologies and Virtual Mobile Networks

Master The Art of Hyperledger Fabric on Kubernetes

A beginner's guide to build smart contracts for Ethereum and blockchain

On the Move to Meaningful Internet Systems: OTM 2018 Workshops

In Self-Sovereign Identity: Decentralized digital identity and verifiable credentials, you'll learn how SSI empowers us to receive digitally-signed credentials, store them in private wallets, and securely prove our online identities. Summary In a world of changing privacy regulations, identity theft, and online anonymity, identity is a precious and complex concept. Self-Sovereign Identity (SSI) is a set of technologies that move control of digital identity from third party "identity providers" directly to individuals, and it promises to be one of the most important trends for the coming decades. Personal data experts Drummond Reed and Alex Preukschat lay out a roadmap for a future of personal sovereignty powered by the Blockchain and cryptography. Cutting through technical jargon with dozens of practical cases, it presents a clear and compelling argument for why SSI is a paradigm shift, and how you can be ready to be prepared for it. About the technology Trust on the internet is at an all-time low. Large corporations and institutions control our personal data because we've never had a simple, safe, strong way to prove who we are online. Self-sovereign identity (SSI) changes all that. About the book In Self-Sovereign Identity: Decentralized digital identity and verifiable credentials, you'll learn how SSI empowers us to receive digitally-signed credentials, store them in private wallets, and securely prove our online identities. It combines a clear, jargon-free introduction to this blockchain-inspired paradigm shift with interesting essays written by its leading practitioners. Whether for property transfer, ebanking, frictionless travel, or personalized services, the SSI model for digital trust will reshape our collective future. What's inside The architecture of SSI software and services The technical, legal, and governance concepts behind SSI How SSI affects global business industry-by-industry Emerging standards for SSI About the reader For technology and business readers. No prior SSI, cryptography, or blockchain experience required. About the authors Drummond Reed is the Chief Trust Officer at Evernym, a technology leader in SSI. Alex Preukschat is the co-founder of SSIMeetup.org and AlianzaBlockchain.org. Table of Contents PART 1: AN INTRODUCTION TO SSI 1 Why the internet is missing an identity layer—and why SSI can finally provide one 2 The basic building blocks of SSI 3 Example scenarios showing how SSI works 4 SSI Scorecard: Major features and benefits of SSI PART 2: SSI TECHNOLOGY 5 SSI architecture: The big picture 6 Basic cryptography techniques for SSI 7 Verifiable credentials 8 Decentralized identifiers 9 Digital wallets and digital agents 10 Decentralized key management 11 SSI governance frameworks PART 3: DECENTRALIZATION AS A MODEL FOR LIFE 12 How open source

software helps you control your self-sovereign identity 13 Cypherpunks: The origin of decentralization 14 Decentralized identity for a peaceful society 15 Belief systems as drivers for technology choices in decentralization 16 The origins of the SSI community 17 Identity is money PART 4: HOW SSI WILL CHANGE YOUR BUSINESS 18 Explaining the value of SSI to business 19 The Internet of Things opportunity 20 Animal care and guardianship just became crystal clear 21 Open democracy, voting, and SSI 22 Healthcare supply chain powered by SSI 23 Canada: Enabling self-sovereign identity 24 From eIDAS to SSI in the European Union

AN ESSENTIAL GUIDE TO USING BLOCKCHAIN TO PROVIDE FLEXIBILITY, COST-SAVINGS, AND SECURITY TO DATA MANAGEMENT, DATA ANALYSIS, AND INFORMATION SHARING Blockchain for Distributed Systems Security contains a description of the properties that underpin the formal foundations of Blockchain technologies and explores the practical issues for deployment in cloud and Internet of Things (IoT) platforms. The authors—noted experts in the field—present security and privacy issues that must be addressed for Blockchain technologies to be adopted for civilian and military domains. The book covers a range of topics including data provenance in cloud storage, secure IoT models, auditing architecture, and empirical validation of permissioned Blockchain platforms. The book's security and privacy analysis helps with an understanding of the basics of Blockchain and it explores the quantifying impact of the new attack surfaces introduced by Blockchain technologies and platforms. In addition, the book contains relevant and current updates on the topic. This important resource: Provides an overview of Blockchain-based secure data management and storage for cloud and IoT Covers cutting-edge research findings on topics including invariant-based supply chain protection, information sharing framework, and trust worthy information federation Addresses security and privacy concerns in Blockchain in key areas, such as preventing digital currency miners from launching attacks against mining pools, empirical analysis of the attack surface of Blockchain, and more Written for researchers and experts in computer science and engineering, Blockchain for Distributed Systems Security contains the most recent information and academic research to provide an understanding of the application of Blockchain technology.

IBM Blockchain Platform for Multicloud enables users to deploy the platform across public and private clouds, such as the IBM CloudTM, your own data center, and third-party public clouds, such as AWS and Microsoft Azure. It provides a blockchain console user interface that you can use to deploy and manage blockchain components on an IBM Cloud Private cluster. This IBM RedbooksTM publication discusses the major features, use case scenarios, deployment options, configuration details, performance and scalability considerations of IBM Blockchain Platform for Multicloud. We also cover step-by-step implementation details for both Secure Service Container and non-Secure Service Container environments. You also learn about the benefits of deploying and using a blockchain environment on LinuxONE. The target

audience for this book is blockchain deployment specialists, developers and solution architects.

This volume constitutes the refereed proceedings of the Confederated International International Workshop on Enterprise Integration, Interoperability and Networking (EI2N), Fact Based Modeling (FBM), Industry Case Studies Program (ICSP), and International Workshop on Methods, Evaluation, Tools and Applications for the Creation and Consumption of Structured Data for the e-Society (Meta4eS), held as part of OTM 2018 in October 2018 in Valletta, Malta. As the three main conferences and the associated workshops all share the distributed aspects of modern computing systems, they experience the application pull created by the Internet and by the so-called Semantic Web, in particular developments of Big Data, increased importance of security issues, and the globalization of mobile-based technologies.

Discover how converging IoT and blockchain can help you build effective solutions

Mindful Digital Transformation of Teams, Products, Services, Businesses and Ecosystems

Implementation Guide for IBM Blockchain Platform for Multicloud

Confederated International Workshops: EI2N, FBM, ICSP, and Meta4eS 2018, Valletta, Malta, October 22–26, 2018, Revised Selected Papers

Introducing Blockchain Applications

Blockchain Development with Hyperledger

Mastering Blockchain

Create real-world applications using Hyperledger Fabric with ease Key Features a- Understand the importance of Blockchain in an Enterprise. a- Master the core characteristics of Blockchain, i.e., Decentralization, Cryptography, and Consensus Algorithms. a- Get yourself acquainted with Hyperledger Fabric's core concepts and the design philosophy behind it. a- Learn how to work with network configurations, TLS, PDC, ACL, RAFT, monitoring using Prometheus, and Grafana. Description Hyperledger Fabric is an open-source Enterprise Blockchain project. It is best suited for Enterprise Solutions, where the aim is to deliver Blockchain ready solutions in a closed environment between multiple parties. This book aims to cover Hyperledger Fabric in-depth and its role in enterprise applications. This book is divided into two parts. The first part talks about Blockchain in general, decentralization, consensus algorithms, and various cryptographic primitives in Blockchain. It takes a cue from Bitcoin and Ethereum wherever required. This section aims to cement foundational concepts of Blockchain. The second section focuses on Hyperledger Fabric. It helps you to get a deep level understanding of its key core concepts, main constituents, architecture internals, and transaction flow. It is then followed by examples that will help you set up a network. A detailed explanation of Chaincode will help you understand how to write a Smart Contract, unit test, and deploy them in the dev network. This book also covers Network Configurations, ACLs, RAFT, and Monitoring so that you can start thinking about making production-grade applications. What will you learn a- Get familiar with the fundamentals of Blockchain. a- Understand the core concepts of Hyperledger's system architecture. a- Create Fabric based blockchain networks with different configurations. a- Learn to write, test and deploy smart contracts (chaincode) in Hyperledger a- Get familiar with the Security and Privacy aspect in Blockchain. Who this book is for This book is for anyone who wants to get

started on blockchain. This book is for developers and architects who want to learn how to develop a fabric based blockchain application and apply advanced concepts that help them build enterprise grade applications. Table of Contents 1. Understanding Blockchain 2. World of Decentralization 3. Cryptography - a pillar 4. Consensus Algorithms 5. Blockchain in Enterprises 6. Hyperledger Fabric 7. Hyperledger Architecture and Transaction Flow 8. Setting up Fabric Network 9. Smart Contracts 10. Privacy and Security 11. Hyperledger Fabric v 2.0 About the Author Ashwani Kumar is a technologist by profession having 19+ years of experience working in large enterprise-grade solutions. He was instrumental in architecting, designing, developing, and delivering multiple solutions for numerous industry verticals. His area of expertise involves J2EE and cloud computing technologies. Ashwani holds a Bachelor of Engineering Degree in Computer Technology from Nagpur University. Though Ashwani has worked on several technologies throughout his tenure, however chancing upon Blockchain a couple of years ago brought up an interesting point in his zeal of learning new and emerging technologies. Blockchain and specifically Hyperledger Fabric was till then into nascent stages from understanding and application perspective. Ashwani has spent considerable time working and exploring Hyperledger Fabric, which is most sought after permissioned blockchain and has seen it evolve release after releases. Ashwani is a firm believer in sharing knowledge and believes sharing increases your own outlook and hence this book. Your Blog links: https://medium.com/@asharora78 Your LinkedIn Profile: https://www.linkedin.com/in/ashwani-kumar-719b722/ Mastering Corda provides you with a consistent, linear, and paced path to learning Corda and building modern enterprise-grade decentralized applications. Using this book, anyone from a complete blockchain beginner to an experienced blockchain or enterprise architect can rapidly understand and write applications like a pro while exploring the technical nuances and intricacies of the Corda platform. Corda is designed for use cases such as finance and investments, supply chain, healthcare, trade finance, insurance, and real estate that require a high-volume of transactions, scalability, and data privacy. If you have basic Java skills, this book will help you understand blockchain and show how you can get started immediately and be involved in the disruption of the future. With this book, you will: Understand Corda's value proposition and alignment with business strategies--particularly relevant to business executives and architects Dive deep into Corda's architecture and blockchain fundamentals Rapidly gain extensive knowledge of and hands-on experience with building Corda applications Compare and contrast Corda with Bitcoin, Ethereum, and Hyperledger Effectively prepare for the Corda certification exam and job interviews involving blockchain Perform data analytics and machine learning on Corda nodes This book constitutes the thoroughly refereed post-conference proceedings of the IFIP WG 11.4 International Workshop on Open Problems in Network Security, iNetSec 2015, held in Zurich, Switzerland, in October 2015. iNetSec is the main workshop of the IFIP working group WG 11.4; its objective is to present and discuss open problems and new research directions on all aspects related to network security. The 9 revised full papers presented in this volume were carefully reviewed and selected from 13 submissions. They were organized in topical sections named: network security; intrusion detection; anonymous communication; and cryptography.
This book constitutes selected papers from the 16th European, Mediterranean, and Middle Eastern Conference, EMCIS 2019, held in Dubai, UAE, in October 2019. EMCIS is dedicated to the definition and establishment of Information Systems as a discipline of high impact for the methodical community and IS professionals, focusing on approaches that facilitate the identification of innovative research of significant

relevance to the IS discipline. The 48 full papers presented in this volume were carefully reviewed and selected from a total of 138 submissions. They were organized in topical sections named: Big Data and Analytics; Blockchain Technology and Applications; Cloud Computing; Digital Services and Social Media; e-Government; Enterprise Information Systems; Health-Care Information Systems; Information Systems Security and Information Privacy Protection; Innovative Research Projects; IT Governance; and Management and Organizational Issues in Information Systems.
Can Blockchain Revolutionize International Trade?
The Impact of FinTech, AI, and Crypto on Financial Services
A Primer for Implementing and Developing Blockchain Projects
15th International Workshop, STM 2019, Luxembourg City, Luxembourg, September 26–27, 2019, Proceedings
Handbook of Research on Disruptive Innovation and Digital Transformation in Asia
The Future of Finance
ICICV 2019

Trade has always been shaped by technological innovation. In recent times, a new technology, Blockchain, has been greeted by many as the next big game-changer. Can Blockchain revolutionize international trade? This publication seeks to demystify the Blockchain phenomenon by providing a basic explanation of the technology. It analyses the relevance of this technology for international trade by reviewing how it is currently used or can be used in the various areas covered by WTO rules. In doing so, it provides an insight into the extent to which this technology could affect cross-border trade in goods and services, and intellectual property rights. It discusses the potential of Blockchain for reducing trade costs and enhancing supply chain transparency as well as the opportunities it provides for small-scale producers and companies. Finally, it reviews various challenges that must be addressed before the technology can be used on a wide scale and have a significant impact on international trade.
The 10th International Conference on Computing, Communication and Networking Technologies (ICCCNT) aims to provide a forum that brings together International researchers from academia and practitioners in the industry to meet and exchange ideas and recent research work on all aspects of Information and Communication Technologies including Computing, communication, IOT, LiDAR, Image Analysis, wireless communication and other new technologies